

General Bulletins
1970-1975

B U L L E T I N

N O. 4 9 9

March 13, 1974

REGIONAL MEMBERSHIP - JURID WERKE, FRANCISCO STEDILE

This is to advise that the Institute has added two Regional Members.

Jurid Werke, GmbH, of Reinbek, West Germany, was reinstated as a Regional Member in the Institute. Jurid had been a Regional Member prior to this, having resigned from the Institute in 1970. The vote of the Membership for reinstatement was 18 Yes - 0 No - 2 Abstaining. Jurid Werke's reinstatement was effective January 1, 1974.

Francisco Stedile, S.A. of Caxias do Sul, Brazil applied for Regional Membership in January 1974. Francisco Stedile, S.A. is an established manufacturer of friction materials who market their products as "Fras-Le." The vote of the Membership for Francisco Stedile, S.A.'s Regional Membership was 16 Yes - 1 No - 3 Abstaining. Francisco Stedile, S.A.'s Regional Membership will be effective April 1, 1974.

Our Constitution requires an affirmative vote of three-fourths of the Membership for election of a new member. As we now have 20 members, 15 affirmative votes were required.

EWD:11z
cc: Active Members

E. W. Drislane
Executive Director

BULLETIN

NO 498

March 6, 1974

ORDERS FOR THE 1974 BRAKE SHOE IDENTIFICATION CATALOG

The contract for printing the 1974 BRAKE SHOE IDENTIFICATION CATALOG has been awarded to:

Success, Inc.
1345 West 16th Street
Indianapolis, Indiana 46202

Because of the additional disc brake coverage in the 1974 BRAKE SHOE IDENTIFICATION CATALOG, and economics with a page count multiple of 16 pages, we are projecting a 64 page book, plus cover. We are estimating a total order of 50,000 Catalogs which projects a price as follows:

Catalogs	\$234.48/M
Punching	9.60/M

If there is a change in the price per thousand due to a change in number of pages or to changes in order quantities, or for author's alterations, you will be notified.

Please forward all orders to the Institute Office. Do not send them to the printer. This is our only means of checking the total quantities ordered and the price charged, as well as whether only members are ordering.

The orders are to be made out to Success, Inc. and are to state punching and shipping instructions.

REMEMBER - The orders in duplicate are to be sent to the Institute Office.

Kindly forward your orders so that they may reach the Institute Office by April 15, 1974.

E. W. Drislane
Executive Director

Distribution: Active Members
Regional Members
Licensees

B U L L E T I N

N O. 4 9 7

February 15, 1974

TO: Delegates and Alternates

SUBJECT: J. W. Greenen - Open Heart Surgery

We were advised late Friday afternoon that Joseph W. Greenen, one of our Directors, and our recent President, had just received open heart surgery. Joe underwent surgery at:

Cedars of Lebanon Hospital
Fountain Street
Hollywood, California 90027

Joe had earlier been transferred from Eisenhower Hospital in Palm Springs, California to Cedars of Lebanon for this surgery. The Doctors indicated after surgery that Joe was doing very well.

Joe's residence in the Palm Springs area is:

43-175 Delaware
Palm Desert, California 92260

We will send a note to Joe from the Office wishing him a speedy recovery.

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 9 6

February 12, 1974

DECLARATION RE PRODUCT CATEGORIES

FOR

FEE FORMULA BASIS

According to the Constitution and By-Laws, the Fee Formula for the Active Members must be reviewed annually and then presented to the Board of Directors who make recommendations to the membership.

Inasmuch as a member may be engaged in a category one year and not the following, or the reverse, it is necessary to have a confidential declaration filed annually in order to arrive at a proper assessment for each category.

Therefore, would you kindly return one of the attached to Mr. L. D. Stickles, Counsel, who will prepare a summary to aid the Board of Directors in determining the fee formula for the fiscal year starting July 1, 1974.

Please note that the filing categories are unchanged from those on the declarations in recent years. Please refer to the "Explanation of Category Filing" attached to the Form. If you have questions, please give me a call.

Kindly return your declaration to Mr. Stickles by March 15, 1974.

EWD:11z
Distribution: Delegates and Alternates

E. W. Drislane
Executive Director

cc: L. D. Stickles, Esq.

CONFIDENTIAL

Mr. L. D. Stickles
Stickles, Kennedy & Van Steenburgh
36 West 44 Street
New York, N.Y. 10036

Dear Mr. Stickles:

In response to Bulletin #496 of February 12, 1974 concerning the declaration of confidential information to be used in determining the fees, our company is engaged as follows:

<u>Category</u>	<u>We sell to the replacement market:</u>
Brake Linings - Under 3/4" Nominal, Including Disc Brake Linings	☐
Brake Blocks - 3/4" Nominal or Over	☐
Clutch Facings	☐
Brake Shoes - New Unlined, Including New Unlined Disc Brake Shoes	☐

Affix an "X" in the square to the right of the category or categories your company is engaged in.

Signature _____

Company _____

Date _____

Kindly return declaration to Mr. Stickles by March 15, 1974.

EXPLANATION OF CATEGORY FILING

General - A member must be engaged in at least one of the first three categories, in order to be a member. The number of categories checked is used to determine the fees paid during the next fiscal year. Any member not filing this information correctly will be assessed the full fee for all categories.

Confidential - This fee category information is confidential and is not available to other members. The data is reviewed by Counsel and by the Secretary for purposes of determining its reasonableness.

"Our Company is Engaged as follows:" If a member manufactures and sells, purchases and sells, or both purchases and manufactures, and sells the product indicated in the replacement market, he is "engaged" in that category. In other words, if he sells that product he is engaged in that category. Further, the replacement market includes automotive, industrial, and off road equipment - where Friction Materials Standards Institute, Inc. performs a service, either through cataloging, assignment of copyrighted FMSI numbers, or the maintaining of prints. If a member sells a certain product type, but only to a market where FMSI does not provide services, he does not report that category. Where a member sells a certain product only to a market where there are FMSI services available, but he declines to use these services, he must report that category.

Brake Lining - Under 3/4" Nominal, Including Disc Brake Linings

This includes linings whether loose, attached to shoes, or in roll form, sold to market where the FMSI numbering system is available.

Brake Blocks and Disc Brake Linings - 3/4" Nominal and Over

This includes brake blocks, whether loose or attached to shoes, sold to markets where the FMSI numbering system is available. The 3/4" nominal includes tapered blocks with a maximum thickness of approximately .700", with minimum thickness below .500". This also includes disc brake linings 3/4" and over, measuring lining thickness only at its thickest point. When measuring a lined shoe, to determine lining thickness, measure from the top of the shoe.

Clutch Facings

This includes loose facings or facings attached to plates, sold to markets where the FMSI numbering system is available.

Brake Shoes - New Unlined, Including New Unlined Disc Brake Shoes

This category includes new and unlined shoes (whether drum or disc type) which are sold as new and unlined shoes in the replacement market. If all the new and unlined shoes are sold as lined shoe assemblies, do not report this category.

B U L L E T I N

N O. 4 9 5

February 8, 1974

Mr. M.B. TERRY, ABEX CORPORATION

Mr. M.B. (Bill) Terry, who was President of the American Brakeblok Division of Abex Corporation for 17 years, died suddenly on February 3, 1974. Mr. Terry was known by many of the Members of the Institute while with the American Brakeblok Division. He had retired in June 1970.

Memorial services were held on February 6, 1974. Mr. Terry's home address was 4 Grayvik Drive, Key Largo, Florida 33037. Mrs. Terry (Doris) lives at that address. The family had expressed a preference for donations to any local Heart Association for those wishing to honor Mr. Terry.

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 9 4

January 31, 1974

TO: ACTIVE MEMBERS, REGIONAL MEMBERS, AND LICENSEES

SUBJECT: SUCCESS, INC.--SHIPMENTS FREIGHT COLLECT

I received the attached letter from Success, Inc. They have been our printer on several catalogs and are currently preparing the 1974 SUPPLEMENT TO THE 1973 AUTOMOTIVE DATA BOOK.

They are asking to ship Catalogs Freight Collect. In their letter they ask for customers to send them a letter authorizing their implementation of this program. They ask to advise of your bank and freight payment plan number.

I have no idea of the difficulties, if any, that this plan might involve. It does not appear to be practical for overseas shipments. However, it may not be a problem for North American shipments. Would you kindly contact your Purchasing Department to take the necessary steps to permit Success, Inc. to ship Freight Collect.

If this is not satisfactory, please let me know. If it is no problem, please contact Success, Inc., and advise them per the attached letter.

EWD:11z
Enc.

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 9 3

January 24, 1974

NUMERICAL LISTING OF FMSI CLUTCH FACINGS

The Institute has assembled a 34 page booklet listing all FMSI Clutch Facing assignments through December 31, 1973. This is an up-date of a similar listing printed in 1965.

In addition to the full listing, this booklet includes the following:

1. A "cover"
2. An explanation of sequence of the CLUTCH FACINGS Listing
3. Drilling Diagrams
4. Revised entries in the numerical listing to agree with the Drilling Diagrams
5. A list of Members, Officers and Directors

We are enclosing a copy of this CLUTCH FACING Listing. Additional copies are available from the Institute Office for 75¢/copy. Members are of course free to reproduce this data for their own distribution. If this is done, please be sure to include acknowledgment of the Institute's copyright.

EWD:11z

Enc.

cc: Active Members
Regional Members

E. W. Drislane

Executive Director

B U L L E T I N

N O. 4 9 2

January 23, 1974

ORDERS FOR THE 1974 SUPPLEMENT TO THE 1973 AUTOMOTIVE DATA BOOK

The contract for the printing of the 1972 Supplement has been awarded to:

Success, Inc.
1345 West 16 Street
Indianapolis, Indiana 46202

It is believed that it will contain 32 pages including cover.

On an estimate of the total order being 80,000 copies of a 32 page book,
the price is:

\$94.88 per M
\$ 4.80 per M additional for five hole punching

If there is a change in the price per thousand due to a change in number of
pages or to changes in order quantities, or for author's alterations, you
will be notified.

Please forward all orders to the Institute Office in Duplicate. Do not send
them to the printer. This is our only means of checking the total quantities
ordered and the price charged, as well as whether only members are ordering.

The orders are to be made out to Success, Inc. and are to state punching and
shipping instructions.

REMEMBER - The orders in duplicate are to be sent to the Institute Office.

Kindly forward your orders so that they reach the Institute Office by March 1,
1974.

E. W. Drislane
Executive Director

Distribution: Active Members
Regional Members

EWD:11z

B U L L E T I N

N O. 4 9 1

January 15, 1974

APPLICATION FOR REGIONAL MEMBERSHIP - FRANCISCO STEDILE, SA (BRAZIL)

This is to advise the Membership that the Institute has received an application from Francisco Stedile, SA of Caxias do Sul, Brazil for Regional Membership. Their application, with data concerning qualifications, is now being reviewed by the Membership Committee. Assuming they act favorably, and the Directors agree, the Membership will be asked to vote on this application.

Francisco Stedile, SA is an established manufacturer of a full line of conventional friction materials - linings, blocks, clutch facings - under the "Fras Le" name. Based on information received from a Member, I contacted Francisco Stedile, SA concerning Regional Membership. They were using our copyrighted FMSI Numbers in their catalog. This application may have resulted from this correspondence.

In addition, Francisco Stedile, SA has an agent in the United States - Mr. H. Roy Landesberg. Prudential International Corporation, 122 East 42 Street, New York, N.Y. 10017. I advised Francisco Stedile, SA that if they were using the copyrighted FMSI Numbers to market their products in the United States that they would pay the same dues as United States Active Members.

The foregoing background is for your information.

E. W. Drislane
Executive Director

EWD:11z

B U L L E T I N

N O. 490

January 11, 1974

HISTORICAL SALES PROGRAM

Consistent with our program over the past years, we're making a January start for reporting for the year ending December 31, 1973. There will be no change in the reporting details from that requested in Bulletin 481 of July 6, 1973.

To repeat some of the reporting details, the following items should be considered:

1. Quantities will be reported in pieces (not units). For roll lining, each foot of length will be one piece.
2. Our accountants will report the names of the members from whom reports are received, and the number of members reporting in each of the four groups.
3. Total pieces in each group will be reported (average will not be shown).

As in the past, this data will be confidential, and as totals for each group will be shown, there is no way of determining quantities by individual member.

Please review the form and the descriptions, as they apply to this year's reporting. The Delegate or Alternate will be receiving from Marshall-Granger & Company, Certified Public Accountants, a form for completing this information. Please return it to:

Marshall Granger & Co., C.P.A.
Lincoln Building
New York, New York 10017

If you do not wish to report these figures, please advise Marshall Granger. Only those reporting figures will receive the industry totals when the data is summarized. A sample form and definitions are attached.

EWD:11z
Enc.
Distribution: Active Members

E. W. Drislane
Executive Director

EXHIBIT "A"

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.

Mail to:

Marshall Granger & Co.
Lincoln Building
42nd Street
New York, N. Y. 10017

Pieces sold to domestic distributors, direct consumers, rebuilders and private
brands for use in the replacement market:

12 months
(January 1 - December 31, 1973)

Brake linings up to 3/4" nominal
thickness (See explanation for roll
lining.)

Brake blocks, nominal thickness of
3/4" and over

Disc brake linings

Clutch facings

Total pieces:

By: _____
Signature

Company

Date

DEFINITION FOR HISTORICAL SALESPIECES

The reports will show pieces of friction material, in groups as shown:

<u>Group</u>	<u>Description</u>	<u>Normal Usage</u>
Brake Lining	Friction materials up to a nominal 3/4" thickness (See note on roll lining)	Normally, <u>one piece</u> to a shoe.
Brake Blocks	Friction materials with a nominal thickness of 3/4" and over.	Normally, <u>two pieces</u> to a shoe.
Disc Brake Linings	Friction materials sold (for disc brakes) to be attached to the shoe, or sold as a unit molded, bonded or riveted to the shoe.	Normally, <u>one piece</u> to a shoe.
Clutch Facing	Friction materials of annular shape, or segments thereof.	Normally, <u>two annular pieces</u> for clutch plate.

Note: For roll lining only, consider each foot of length equals one piece.

REPLACEMENT SALES

This reporting is for domestic sales to the replacement field. Do not include export sales. This includes sales under the friction material manufacturer's own name or brand name, or brand name used by the customer, to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

Where one friction material manufacturer member purchases from another member of the Institute, each member who purchases will deduct the number of pieces purchased from the number of pieces sold in arriving at pieces sold. Purchases from non-members will not be deducted.

When a friction material manufacturer is shipping to a vehicle manufacturer, but has no reasonable way of determining if the pieces are for original equipment or replacement purposes, estimates will not be used - these pieces will not be reported. However, where a friction material manufacturer is shipping to a point known to be used for replacement, or where he stencils or otherwise identifies the pieces as being for replacement purposes, or where the shipments otherwise are obviously known to be for replacement, these pieces will be reported.

BULLETIN
NO. 489

October 23, 1973

TO: ACTIVE MEMBERS

SUBJECT: DOCKET 1-4 "BRAKE SHOE & PAD ASSEMBLIES"

On October 4, 1973 I issued a memo to all Active Members concerning the NHTSA Safety Systems Laboratory recommendation that an inertia dynamometer be used "...to demonstrate a braking performance similar to that exhibited by the vehicle with original equipment brake lining materials." In essence, when the Federal Motor Vehicle Safety Standard 105a (FMVSS 105a) for hydraulic brake systems takes effect, the NHTSA Safety Systems Laboratory is recommending an inertia dynamometer procedure for replacement brake lining materials for insuring safety related performance at least the equivalent to the original equipment brake lining which allowed the brake system to pass FMVSS 105a.

I have been questioned on this by several members. Apparently, my earlier memo caused some misunderstanding and/or confusion. I hope this Bulletin will help clarify things.

Mr. Nelson, and the members of the Brake Performance Study Committee, have been aware of the Safety Systems Laboratory (Bob Forthofer and John Preston) position for some time. The Committee has ^{as}one assignment the goal of recommending a procedure for evaluating replacement brake lining so that the Institute might be able to make a constructive recommendation to the National Highway Traffic Safety Administration (NHTSA). In other words, the Institute, through its Brake Performance Study Committee, has been and will continue to present industry viewpoints to the NHTSA concerning Docket 1-4.

The point of the October 4, 1973 memorandum is that the Safety Systems Laboratory would welcome individual comments concerning their recommendations. I talked with Mr. Preston after his presentation at our October 3, 1973 SAE Meeting in Detroit. He had received 6-8 letters concerning his recommendations - primarily from SAE Members. I indicated to Mr. Preston that these comments might not represent a good cross section of the brake lining manufacturers, and that perhaps he would be interested in additional viewpoints. He agreed that it would be worthwhile to receive the views of other manufacturers not directly involved with SAE.

If additional brake lining manufacturers wish to express their views, we suggest you write:

Mr. Robert J. Forthofer
Chief - Brake Systems Division
Safety Systems Laboratory
National Highway Traffic Safety Administration
Washington, D.C. 20590

There is no sudden time limit facing the Industry. It also might be mentioned that the Safety Systems Laboratory does not write the replacement brake lining standard. Another group writes the standard; the Laboratory is a consulting service to those writing standards.

October 23, 1973

If you wish to go on record with NHTSA write Mr. Forthofer. If you do not wish to go on record, there is no need for you to do so. The Institute, through Mr. Nelson's Committee, will continue contact with all NHTSA personnel involved in any way in writing the replacement brake lining standard.

Also, the Institute does not wish to coach its Members on what to say to the Safety Systems Laboratory. Any comments should represent a legitimate viewpoint. The most common complaints the Institute has received concern the industry-wide lack of inertia dynamometers, and the difficulties in distributing several different brake lining formulae for specific end use in the after-market.

ewd:llz

E. W. Drislane
Executive Director

BULLETIN

NO. 488

October 16, 1973

ENVIRONMENTAL PROTECTION AGENCY (EPA) STUDY OF ECONOMIC
IMPACT OF 1972 FEDERAL WATER POLLUTION CONTROL AMENDMENTS

In August 1973 we issued Bulletin No. 485 concerning the Sverdrup and Parcel engineering study on waste water effluents from the manufacture of asbestos-bearing friction materials. This time we have been contacted by Arthur D. Little, Inc., Cambridge, Mass., concerning an EPA sponsored study on the "economic impact of the 1972 Federal Water Pollution Control Amendments on the asbestos products manufacturing industry."

I have discussed this request with Mr. I. H. Weaver, Chairman of our Asbestos Study Committee. He concurs that it would be in the best interest of the friction materials industry to give industry's positions to representatives of the EPA. (In this case Arthur D. Little.)

I have attached a copy of the October 12, 1973 letter from Arthur D. Little, Inc. Based on my conversation with Mr. Weaver and Mr. Igwe we agreed to cooperate to the extent indicated below:

1. By this memo we are advising our Membership of Arthur D. Little's wishes to contact our Membership.
 - 1.1 We are listing a person and location to contact for each Member.
2. We are providing Arthur D. Little a list of our Membership.
 - 2.1 No statistics will be provided.
 - 2.2 We are also providing a listing of friction materials manufacturers who are not Members of the Institute.

Mr. Igwe indicated that they hoped to visit some manufacturing plants. Any arrangements for such meetings will be made by Mr. Igwe. While it is felt that industry input to the EPA is desirable, it is most obviously up to each Member to determine how much information he wishes to give to Arthur D. Little. For your company, the Institute gave the following name and address:

October 16, 1973

The information attached to the Arthur D. Little letter is not a questionnaire as such. It is an outline of the information that EPA is seeking. If contact is to be made with your plant, the initiative will be with Arthur D. Little, Inc.

E. W. DRISLANE
Executive Director

END:11z
Enc.

Arthur D. Little, Inc. ACORN PARK • CAMBRIDGE MASSACHUSETTS 02140 • (617) 864-5770

October 12, 1973

Mr. Edward W. Drislane
Executive Secretary
Friction Materials Standards Institute
East 210 Route 4
Paramus, New Jersey 07652

Dear Mr. Drislane:

Thank you for your kind cooperation in connection with my inquiry regarding the Friction Materials Standards Institute and my desire to obtain FMSI's cooperation in our EPA-sponsored study of the economic impact of the 1972 Federal Water Pollution Control Amendments on the asbestos products manufacturing industry.

To give you some idea of the scope of our investigation and the possible areas where the cooperation of your organization could be of immense mutual benefit, I am attaching hereto a copy of the relevant sections of the Request for Proposal from the EPA. It is particularly in connection with the Industry Characterization that I would need your help by (a) appraising your membership of our desire to visit a number of manufacturing facilities primarily for the purpose of deriving a current perspective of the manufacturing processes and process economics, and (b) furnishing us any plant listings and statistics you may have (of a non-proprietary nature) which will assist us in presenting a true picture of the structural and economic characteristics of the industry.

I may indicate that in the course of this series of studies for the EPA and other Federal agencies, we have built up a certain expertise on the pollution (air and water) problems of virtually all segments of the asbestos industry and the necessary interfacing between industry and these agencies. If we can bring this expertise to bear

CAMBRIDGE, MASSACHUSETTS

ATHENS BRUSSELS CARACAS CHICAGO LONDON MEXICO CITY NEW YORK PARIS RIO DE JANEIRO SAN FRANCISCO TORONTO WASHINGTON ZÜRICH

FMSI 18037

Arthur D. Little, Inc.

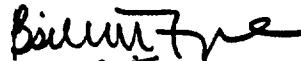
October 12, 1973

-2-

Mr. Edward W. Drislane
Friction Materials Standards Institute

on any studies on behalf of your organization, you can be sure we will be delighted to work with you. Meanwhile, I look forward to hearing from you.

Sincerely yours,



Basil U. N. Igwe

:amm
Enclosure

Abstracted from EPA's Request for Proposal

The EPA desires that we characterize the industry along the following lines, thus establishing the necessary framework for subsequent analysis of the economic impacts of the proposed water pollution control regulations:

I. Industry Segments

A. Types of plants in the industry

1. Firms

- size
- level of integration
- number of plants
- number of products
- level of diversification

2. Plants

- size
- age
- location
- level of technology
- efficiency
- level of integration (production)

B. Number of plants and employees in each segment

C. Percent of total industry for each segment studied

- by number of plants
- production
- employment

D. Segments likely to be significantly impacted and why

II. Financial Profiles

A. For plants in each segment and to the extent possible using information in the public domain:

1. Annual profit before taxes
2. Annual cash flow
3. Market (salvage) value of assets
4. Cost structure
 - fixed assets
 - variable costs

B. The likely distribution of each of the above financial parameters within the industry segments.

C. Discussion of potential constraints on financing additional capital assets for any of the industry segments.

-2-

III. Price Effects

- A. Price determination process in the industry
- B. Likely price changes as a result of the proposed water pollution standards, any secondary effects, and identification of those segments of the industry that are probably sensitive to such price changes.

FRICION MATERIALS STANDARDS INSTITUTE, INC.

BERGEN MALL OFFICE CENTER

E. 210 ROUTE 4

PARAMUS, N. J. 07652

October 16, 1973

Mr. Basil U. N. Igwe
Arthur D. Little, Inc.
Acorn Park
Cambridge, Mass. 02140

Dear Mr. Igwe:

In line with our conversation of last week, I am forwarding you the names and addresses of the member companies of the Friction Materials Standards Institute, Inc. In addition, I am enclosing a list of other companies - not members of the Institute - who manufacture friction materials.

In the meanwhile, I will contact our Membership advising that your firm is doing contract work for EPA concerning the economic impact of the 1972 Federal Water Pollution Control Amendments. While the Institute wishes to cooperate with the U. S. Government in the study, I suggest that you contact these manufacturers directly and not involve the Institute in your study.

I would suggest that if you wish to categorize these companies for size, number of employees, number of factories, etc., that you do it through the Thomas Register, Dun & Bradstreet, or other such source. I do not have such information available.

Sincerely,

FRICION MATERIALS STANDARDS INSTITUTE

EWD:llz
Encs.

E. W. Drislane
Executive Director

Mr. E. H. Feierabend
American Brakeblok Division
Abex Corporation
Winchester, Va. 22601

Mr. C. N. Menz
Friction Materials Division
Bendix Corporation
P. O. Box 238
Troy, N.Y. 12181

Mr. William Simon
Brassbestos Manufacturing Corporation
45 East 5 Street
Paterson, N. J. 07524

Mr. E. R. Zacharias
Carlisle Corporation
Molded Materials Division
P. O. Box P
Ridgway, Pa. 15853

Mr. L. Carreras
Forcee Manufacturing Corporation
P. O. Box 607
Tappahannock, Va. 22560

Mr. W. M. Sleeth
Royal Industries Brake Products
Stewart Lane
Danville, Ky. 40422

Mr. C. J. Weber
World Bestos Company, Division of
The Firestone Tire & Rubber Company
1112 South 25 Street
New Castle, Ind. 47362

Mr. F. W. Barton, Jr.
Reddaway Mfg. Co., Inc.
32 Euclid Avenue
Newark, N.J. 07105

Mr. M. I. Frazier
Molded Industrial Friction Corporation
327 Walnut Street
Prattville, Ala. 36707

Mr. J. Clegg
The S. K. Wellman Corporation
200 Egbert Road
Bedford, Ohio 44146

Mr. J. W. Greenen
Grizzly Brake Division
Maremont Corporation
168 North Michigan Avenue
Chicago, Ill. 60601

Mr. Thomas Bell
H. K. Porter Co., Inc.
Thermoid Division
1849 East Sabine Street
Huntington, Ind. 46750

Mr. J. H. Marsh
Raybestos-Manhattan, Inc.
205 Middle Street
Bridgeport, Conn. 06603

Mr. L. Burgess
Wheeling Brake Block Mfg. Co.
100 West Boyd Avenue
Bridgeport, Ohio 43912

Mr. R. J. Kick
Staff Engineer Products Service
Delco-Moraine Division
General Motors Corporation
1420 Wisconsin Boulevard
Dayton, Ohio 45401

Mr. J. Gallagher
Thiokol Chemical Corporation
Panelyte Industrial Division
Enterprise Avenue
Trenton, N.J. 08604

Mr. S. Comins
Auto Friction Corporation
651 Andover Street
Lawrence, Mass. 01842

Mr. E. R. Koss
Chemical Division
Chrysler Corporation
5437 W. Jefferson
Trenton, Mich. 48183

Mr. F. T. Gatke
Gatke Corporation
228 North La Salle Street
Chicago, Ill. 60601

Mr. T. J. Laher
Lasco Brake Products Corporation, Ltd.
2615 Magnolia Street
Oakland, Calif. 94607

NON-MEMBER FRICTION MATERIALS MANUFACTURERS

Auto Specialties Manufacturing Co.
643 Graves Street
St. Joseph, Michigan 49085

Standco Industries, Inc.
2701 Clinton Drive
Houston, Texas 77001

Inland Division
General Motors Corp.
P. O. Box 1224
Dayton, Ohio 45401

National Friction Products Corp.
1441 Holland Street
P. O. Box 327
Logansport, Indiana 46947

Spring Division
Borg Warner Corp.
700 South 25 Avenue
Bellwood, Illinois 60104

Cali Blok
15930 South Figueroa Street
Gardena, California 90247

BULLETIN

N O. 4 8 7

September 27, 1973

TO: Active Members

Subject: Selection of Palmetto Dunes, Hilton Head Island,
South Carolina, For The June 1974 Meeting

At the Annual Membership Meeting in June 1973 the following Resolution was passed:

Resolved: That the June 1974 Annual Meeting of the Institute
be held in the Hilton Head, South Carolina area
assuming reservations can be made.

Based on this resolution, the Annual Meeting Committee has made plans to hold our June 1974 Annual Membership Meeting at the Palmetto Dunes Inn, Hilton Head Island, South Carolina. The meeting will be held June 24-27, 1974.

Essentially, the type space we will be taking is typical of what is available on Hilton Head. That is, we occupy condominiums or villas. The condominiums are generally two-bedroom homes owned by individuals, and managed by the Palmetto Dunes Corporation. Essentially a two-bedroom condominium will rent for \$30 daily on a single occupancy and will rent for \$38 on a double occupancy. Meals, of course, are not included. The Palmetto Dunes Inn is nearby the condominiums that we would be occupying and breakfast, lunch and dinner are available at the Inn. We would plan our meetings and other functions at the Palmetto Dunes Inn. Our Hospitality Room would be in one of the condominiums located near the pool. Golf is available at two courses nearby, one designed by Robert Trent Jones, and the other by a gentleman named Fazio. There are five other courses on the Island. These courses are owned and operated by competitors of Palmetto Dunes but we understand that arrangements can be made to play these courses. The Atlantic Ocean, with a beautiful long sandy beach, is about 100 yards from the condominiums.

Transportation to Hilton Head Island is either of two ways:

- (1) Flight to Savannah, Georgia by commercial airlines and rent a car at the Savannah Airport, which is about a one hour drive from Hilton Head;
- (2) Flight into Atlanta, Georgia by commercial airline and flight on Air South, a small commuter type airline, in 13-passenger Beechcraft, directly to Hilton Head Island. Car rental arrangements can be made on Hilton Head with Hertz, Avis, or the largest car rental on the Island, Island Aviation, on which I have more information.

Selection of this Palmetto Dunes, on Hilton Head Island, was essentially the only way we could plan our June 1974 meeting at Hilton Head. The ideal spot for a meeting like ours would have been the Hilton Head Inn. However, the Hilton Head Inn will not take groups or conventions after June 15, and even if they could they are booked solid with conventions through mid-June of 1975. In order for us to ever use the Hilton Head Inn we would have to plan at least two years ahead of time and move our convention back to before June 15. All other arrangements on Hilton Head Island were unsatisfactory because of the lack of meeting rooms and restaurants.

EWD/erc

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 8 6

September 13, 1973

MR. C.R. CAWLEY, H.K. PORTER CO.

Mr. C. R. Cawley, formerly Manager of Sales at Thermoid Division, H. K. Porter Co., died in Upper St. Clair, Pennsylvania, on September 11, 1973. Mr. Cawley had been active in the affairs of the Friction Materials Standards Institute.

The funeral will be from the Albert Freyvogel Funeral Home, 112 Fort Couch Road, Bethel Park, Pennsylvania, at 1:00 p.m. Friday, September 14, 1973. Mr. Cawley's home address was 523 Clair Drive, Upper St. Clair, Pennsylvania 15228.

The Friction Materials Standards Institute, Inc. sent a floral arrangement in the name of the Directors and Members of the Institute.

E. W. Drislane
Executive Director

END:11z

Distribution: General Active Members

B U L L E T I N

N O. 485

August 28, 1973

ENVIRONMENTAL PROTECTION AGENCY (EPA) STUDY OF WASTE
WATER EFFLUENTS FROM FRICITION MATERIALS PLANTS

The Institute has been contacted by a consulting engineering firm on behalf of the EPA. The firm is:

Sverdrup & Parcel
800 North 12 Street
St. Louis, Missouri 63101
Telephone (314) 436-7600
Contact: Mr. James Buzzell

Before issuing this bulletin, I contacted Mr. I. H. Weaver, Chairman of our Asbestos Study Committee. He is aware of past work done by Sverdrup & Parcel. He in turn checked with others concerning this firm and an earlier EPA study on waste water from other asbestos-using manufacturers. In line with our Constitution ("To cooperate with the United States Government...") and so that the industry can give realistic input to this study, we feel it in our best interests to cooperate with the EPA. Accordingly, we gave the names and addresses of the member firms of the Institute. For your company, we gave the following:

We also gave the names and addresses of other friction materials manufacturers, not members of the Institute.

WHAT IS SVERDRUP & PARCEL LOOKING FOR?

The EPA is not looking for asbestos that may get discharged in the waste water. They are looking for other possible pollutants - solvents, chemicals, materials that may increase oxygen demands in water (biochemical oxygen demand, chemical oxygen demand), products that affect pH factors, etc. Sources of the waste products might be wet collectors, discharge from steam presses, from benders, cooling water, solvent discharge, etc.

The personnel of Sverdrup & Parcel are interested not only in the technical questions on discharge, but in recirculation efforts, recovery of used water, the economics of reducing or eliminating pollutants, etc. They are interested in the economics of installation of recovery or recirculation equipment, where these might put an excessive burden on a manufacturer. In general, it was

Bulletin No. 485

-2-

August 28, 1973

suggested that the time to advise and complain is now, before regulations are drawn which might be one-sided without input from industry.

Incidentally, Sverdrup & Parcel will contact no more than ten manufacturers. They have used questionnaires on other industry segments, but apparently feel the information so gathered was unsatisfactory. They will most likely make direct contact by phone or mail. This is simply to alert you to this study.

END:11z

E. W. Drislane
Executive Director

cc: Delegates & Alternates
Asbestos Study Committee

FRICION MATERIALS STANDARDS INSTITUTE, INC.

BERGEN MALL OFFICE CENTER

E. 210 ROUTE 4

PARAMUS, N. J. 07652

August 28, 1973

Mr. J. C. Buzzell
Sverdrup & Parcel
800 North 12 Street
St. Louis, Missouri 63101

Dear Mr. Buzzell:

In line with our conversations of this past week, I am forwarding you the names and addresses of the member companies of the Friction Materials Standards Institute, Inc. In addition, I am enclosing a list of other companies - not members of the Institute - who manufacture friction materials.

In the meanwhile, I will contact our Membership advising that your firm is doing contract work for EPA in the area of waste water effluents. While the Institute wishes to cooperate with the U.S. Government in the study, I suggest that you contact these manufacturers directly and not involve the Institute in your study.

I would suggest that if you wish to categorize these companies for size, number of employees, number of factories, etc., that you do it through the Thomas Register, Dun & Bradstreet, or other such source. I do not have such information available.

Sincerely,

FRICION MATERIALS STANDARDS INSTITUTE

EWD:llz
Encs.

E. W. Drislane
Executive Director

FMSI 18048

NON-MEMBER FRICTION MATERIALS MANUFACTURERS

Auto Specialties Manufacturing Co.
643 Graves Street
St. Joseph, Michigan 49085

Standco Industries, Inc.
2701 Clinton Drive
Houston, Texas 77001

Inland Division
General Motors Corp.
P. O. Box 1224
Dayton, Ohio 45401

National Friction Products Corp.
1441 Holland Street
P. O. Box 327
Logansport, Indiana 46947

Spring Division
Borg Warner Corp.
700 South 25 Avenue
Bellwood, Illinois 60104

Cali Blok
15930 South Figueroa Street
Gardena, California 90247

NON-MEMBER FRICTION INDUSTRIES MANUFACTURING

Auto Specialties Manufacturing Co.
643 Graves Street
St. Joseph, Michigan 49085

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Cali Blok
15930 South Figueroa Street
Gardena, California 90247

B U L L E T I N

N O. 484

August 15, 1973

TO: ACTIVE MEMBERS

SUBJECT: STANDCO INDUSTRIES, INC., HOUSTON, TEXAS

The Institute has received notification from Standco Industries, Inc. that they have "...closed out their Industrial Friction Material Division and Industrial Product Line." They will no longer "be in the FMSI market" and will not renew their membership.

This is to advise that Standco Industries, Inc. has resigned as an Active Member of the Friction Materials Standards Institute, Inc.

EWD:11z

E. W. Drislane
Executive Director

BULLETIN

NO. 483

July 16, 1973

TO: Active Members

FREE PRINTS FOR NEW RELEASES

The Institute has reduced costs of prints (with an in-house Xerox machine) and now plans to reduce paper work for both the Institute and its Members. At the Board of Directors Meeting on June 26, 1973, it was decided that effective July 1, 1973 a new policy would be used as regards distribution of prints to Members.

With every new Data Book or Shoe Bulletin, the Institute will mail, free of charge, one copy of all new releases to the Members. However, the distribution will be based on category reporting for fee formula purposes:

1. If a Member declares all four categories, he will receive prints on all newly released linings, blocks, clutch facings and shoes.
2. If a Member declares brake linings and brake blocks, he will receive all newly released brake lining and brake block prints.
3. If a Member declares clutch facings, he will receive all newly released clutch facing prints.

One individual at your Company can be designated to receive these prints. To start the program, I've selected the following member of your company:

If you prefer to change it to someone else please advise. Also, if you prefer not to receive these free prints on an automatic basis please advise.

This in no way effects orders of other prints. They will continue to be billed at .75¢ per copy as in the past. If there are any questions, please advise.

EWD/erc

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 8 2

July 11, 1973

QUESTIONNAIRE - PLANT OPERATIONS SEMINAR

BACKGROUND

The Friction Materials Standards Institute is considering sponsoring a seminar concerning safety, health and compliance with Federal Regulations in friction material plant operations. Members of the Asbestos Study Committee requested such a seminar. Committee members have discussed OSHA and EPA and means for compliance with the various regulations.

We need your help and input to determine the subject matter and types of programs that would best suit the members' needs. The enclosed questionnaire is included for this purpose. Please complete and add your specific requirements.

At times, helpful suggestions have been made as regards disposal of asbestos-bearing dust, medical examinations, etc. A seminar as suggested could go beyond the scope of Asbestos Study Committee and include overall pollution control, discharge of solvents, and other relevant problems.

If the Institute is to sponsor such a seminar, it would like at least 20 attendees. Those attending should have plant responsibilities and be able to participate in discussions that might be on the agenda.

WHAT TO INCLUDE?

A questionnaire is enclosed suggesting some topics to be covered. We would attempt to hold to a planned agenda.

There is a question as to whether we should invite outsiders who might attempt to peddle their wares. Examples: International Compumedics (Their mobile OSHA exams); Stuart Glapat Corp. (bag - opening machinery), etc.

WHERE?

The Institute would consider any reasonable location -- preferably in the East to Mid-West between New York and Chicago.

Please indicate your company's preference, but only if someone from your firm plans to attend.

WHEN?

Arriving at a specific date by vote would be difficult, but if a seminar is held, it would probably be in the fall (November-December). The Committee members will decide on a date.

Please indicate if you prefer a one day or two day seminar.

EWD/erc

E.W. Drislane
Executive Director

QUESTIONNAIRE - INSTITUTE SEMINAR

Return to: Friction Materials Standards Institute, Inc.
E-210 Route 4
Paramus, New Jersey #07652

WHAT TO INCLUDE?

Air sampling and asbestos concentration determination
The pulmonary function test and X-ray
Noise and heat stress in the factory
Asbestos bag opening machinery
Management - labor cooperation for OSHA Compliance
Asbestos dust disposal
Other problem materials - lead, silica, solvents
Asbestos Labeling requirements
EPA Emissions Standards
(Other) _____

YES

NO

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

WHO TO INVITE?

Matt Swetonic, Asbestos Information Association
(Asbestos regulation - general)
Ike Weaver, Raybestos-Manhattan
(Asbestos Study Committee Chairman)
Bill Reitze, Johns-Manville Corp.
(air sampling and asbestos counting)
(Others:) _____

YES

NO

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

WHERE? (1st choice 1, second choice 2, third choice 3)

Chicago _____
Detroit _____
Cleveland _____

Pittsburg _____
Paramus _____
New York _____

HOW MANY?

How many days should seminar take? one day _____
two days _____

How many people from your Company would attend? _____

Company: _____
Member Company Name

Signed _____
(Delegate or Alternate) Date

BULLETIN

NO. 481

July 6, 1973

HISTORICAL SALES PROGRAM

Consistent with our program over the past years, we're making a July start for reporting for the 6 months ending June 30, 1973. There will be no change in the reporting details from that requested earlier (Bulletin 466 of January 8, 1973).

To repeat some of the reporting details, the following items should be considered:

1. Quantities will be reported in pieces (not units). For roll lining, each foot of length will be one piece.
2. Our accountants will report the names of the members from whom reports are received, and the number of members reporting in each of the four groups.
3. Total pieces in each group will be reported (average will not be shown).

As in the past, this data will be confidential, and as totals for each group will be shown, there is no way of determining quantities by individual member.

Please review the form and the descriptions, as they apply to this year's reporting. You will be receiving from Marshall-Granger & Company, Certified Public Accountants, a form for completing this information. Please return it to:

Marshall Granger & Co., C.P.A.
Lincoln Building
New York, New York #10017

If you do not wish to report these figures, please advise Marshall Granger. Only those reporting figures will receive the industry totals when the data is summarized. A sample form and definitions are attached.

EWD/erc
Distribution: Active Members

E. W. Drislane
Executive Director

Exhibit "A"

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.

BERGEN MALL OFFICE CENTER
East 210 Route 4
Paramus, N. J. 07652

Pieces sold to distributors, direct consumers, rebuilders and private brands:

6 months
(January 1 - June 30, 1973)

Brake linings up to 3/4" nominal thickness
See explanation for roll lining.

Brake blocks, nominal thickness of 3/4"
and over

Disc brake linings

Clutch facings

Total pieces:

DEFINITION FOR HISTORICAL SALESPIECES

The reports will show pieces of friction material, in groups as shown:

<u>Group</u>	<u>Description</u>	<u>Normal Usage</u>
Brake Lining	Friction materials up to a nominal 3/4" thickness (See note on roll lining)	Normally, <u>one piece</u> to a shoe.
Brake Blocks	Friction materials with a nominal thickness of 3/4" and over.	Normally, <u>two pieces</u> to a shoe.
Disc Brake Linings	Friction materials sold (for disc brakes) to be attached to the shoe, or sold as a unit molded, bonded or riveted to the shoe.	Normally, <u>one piece</u> to a shoe.
Clutch Facing	Friction materials of annular shape, or segments thereof.	Normally, <u>two annular pieces</u> for clutch plate.

Note: For roll lining only, consider each foot of length equals one piece.

REPLACEMENT SALES

This reporting is for domestic sales to the replacement field. Do not include export sales. This includes sales under the friction material manufacturer's own name or brand name, or brand name used by the customer, to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

Where one friction material manufacturer member purchases from another member of the Institute, each member who purchases will deduct the number of pieces purchased from the number of pieces sold in arriving at pieces sold. Purchases from non-members will not be deducted.

When a friction material manufacturer is shipping to a vehicle manufacturer, but has no reasonable way of determining if the pieces are for original equipment or replacement purposes, estimates will not be used - these pieces will not be reported. However, where a friction material manufacturer is shipping to a point known to be used for replacement, or where he stencils or otherwise identifies the pieces as being for replacement purposes, or where the shipments otherwise are obviously known to be for replacement, these pieces will be reported.

BULLETIN

NO. 480

July 5, 1973

TO: ACTIVE MEMBERS, REGIONAL MEMBERS, LICENSEES

SUBJECT: 1973 SUPPLEMENT to the 1972 BRAKE SHOE IDENTIFICATION CATALOG

Shipments of the 1973 Supplement to the 1972 Brake Shoe Identification Catalog are now being made.

As there are 24 pages instead of the 32 planned, there will be a price reduction as follows:

Basic Price	\$98.00/M (was \$118.26/M)
Punching	3.12/M (no change)

In addition freight and customs charges (if any) will be billed by the Printer. Please advise your Purchasing Department or Accounts Payable Sections of this change.

EWD/erc

E. W. Drislane
Executive Director

B U L L E T I N

N O. 479

July 2, 1973

To: Active Members, Regional Members

Subject: 1973 Data Book, 1973 Brake Shoe Supplement

Under separate cover we are forwarding one copy each of the two recently published Catalogs.

1973 Automotive Data Book

1973 Supplement to the 1972 Brake Shoe Identification Catalog

These Catalogs are now being shipped by the Printer to those who had ordered them.

EWD/erc

E. W. Drislane
Executive Director

B U L L E T I N

N O. 478

June 14, 1973

Subject: ASBESTOS STUDY COMMITTEE ACTIVITIES

At the June 1, 1973 meeting of the Asbestos Study Committee, it was recommended that the following information be distributed to the Membership.

1. OSHA Labeling Requirements
2. In-plant CAUTION Sign (W. H. Brady Co.)
3. EPA Emissions Standards - A Discussion

OSHA Labeling Requirements

Attached is Exhibit I, a display of four different OSHA CAUTION labels. One is with a gummed backing to attach to packaging. Another is in the form of a tag. Others are imprinted on the cartons or boxes when purchased from the box manufacturer.

The Committee adopted a resolution at an earlier meeting which essentially recommended that Members obey the law. That resolution stated:

That (1) where asbestos containing materials do not have their asbestos fiber completely locked in, or (2) where subsequent operations may be performed on asbestos containing materials, the hazardous labeling practice be adhered to in accordance with the Label Specifications in the OSHA Standards for Exposure to Asbestos Dust.

The Committee has decided to make no recommendations on style, minimum dimensions, etc. It recommends that the manufacturer comply with the requirements of the act, demonstrating "good faith" in their observation of the requirements. In other words, printing a miniature CAUTION label on the bottom of a large box would not be demonstrating "good faith." According to the Standards the labels "shall be printed in letters of sufficient size and contrast as to be readily visible and legible."

In-plant CAUTION sign (W.H.Brady Co.)

Enclosed also is a copy of a letter from the W.H.Brady Co., Milwaukee, Wisconsin, to which we've added a CAUTION sign as manufactured by the Brady Co. This sign conforms to the requirements of the OSHA Standards. Several Committee members feel the cost of these signs is attractive.

See Exhibit II.

EPA Emissions Standards - A Discussion

At this recent Committee meeting, the new EPA Emissions Standards were discussed. As there were several different interpretations by Members and Regional EPA personnel, a digest of the minutes of the meeting are enclosed.

It will be noted that there are different interpretations concerning several items: (1) "new source" versus "existing source," (2) whether to quantify machines under "Process Description," and (3) whether "Amount of Pollutant" - if given total into each Process - will then be construed as being 5 to 10 times the total asbestos entered into the process.

See Exhibit III.

EWD/erc
Enclosures:

E. W. Drislane
Executive Director

To: Active Members
Regional Members

FRICTION MATERIALS STANDARDS INSTITUTE, INC.

CAUTION

**Contains Asbestos Fibres
Avoid Creating Dust
Breathing Asbestos Dust May
Cause Serious Bodily Harm**

CAUTION

**CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
BREATHING ASBESTOS DUST MAY CAUSE
SERIOUS BODILY HARM**

- CAUTION -

Contains Asbestos Fibers

Avoid Creating Dust

**Breathing Asbestos Dust
May Cause Serious Bodily Harm**

CAUTION

**Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May
Cause Serious Bodily Harm**

REPRESENTATIVE OSHA CAUTION LABELS - ASBESTOS PRODUCTS

EXHIBIT I

Attention: Plant Engineer

Dear Sir:

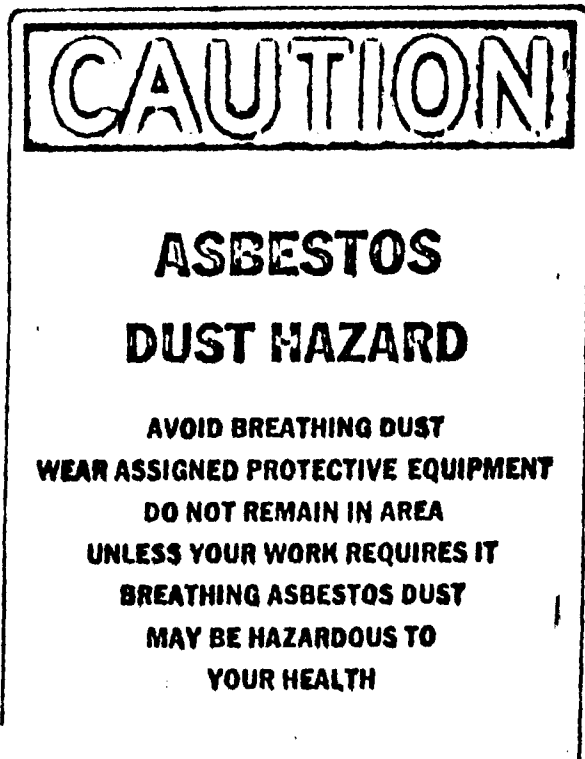
As a supplier of asbestos materials to industry and commerce, we thought you'd like to know Brady has asbestos hazard signs in stock, ready for immediate shipment. The sign complies in color, and size and wording with OSHA 1910.93a(g). A reproduction of the sign is attached.

Stock #CAU-PP-11-5 signs are made of non-corrosive, non-conductive Brady B-450 linear polyethylene. The contrasting color black and yellow signs can be used indoors or outdoors and have built-in ultraviolet light inhibitor for long life. They are mechanically mounted with fasteners.

These 14"x20" tough, durable signs are priced at \$3.99 ea. (10-40 quantity) and \$3.79 each in 50-99 quantities, F.O.B. Milwaukee, Wisc. or from any Brady Distributor listed on the enclosed sheet.

A copy of our latest catalog MS-520 is also enclosed for your review of OSHA marking requirements.

We look forward to receiving orders for your OSHA marking needs.



Yours truly,

W. H. BRADY CO.

P. G. Gengler
Sales Manager
Industrial Products Division

EXHIBIT II

EPA EMISSIONS STANDARDS FOR ASBESTOS - A DISCUSSION

The following comments are digested from a June 1973 discussion of an Asbestos Study Committee meeting at the Institute. These comments may be of some interest to those filing the EPA Source Reports.

While the new EPA emissions standards appear to be reasonable, there is some difficulty in interpretation. For example, the standards are not simply "No visible emissions," but (1) there could be no visible emissions even if they do not meet the air cleaning requirements, or (2) one could even have visible emissions if they were using a collector with the specifications recommended by the EPA. In other words, if you have the EPA's recommended collector you could possibly have visible emissions and still be complying with the EPA requirements. It goes without saying, that interpretation of the requirements by individuals in the different EPA regions may vary quite a bit.

The EPA is saying in their Standards that the wet collector is not as efficient as the dry-bag collector. If an EPA Enforcement Officer sees a vapor from the stack where a wet collector is used, the source best be able to prove there is no asbestos being discharged. In other words, it can be inferred that if a source has wet collectors they may more likely be cited for visible emissions.

While it is apparent that the EPA's emissions standards promote the dry collection of asbestos in bags, many problems have been indicated with these collectors. One of the problems was repeated fires in the collection system. Another member stated that he too had this problem until cigarette smoking was banned in the factory. Since discontinuing smoking in the factory, he claims they have not had more than one or two fires in the last 25 years. Another member said that may be, but they have had the No Smoking rule for many years and they still have fires. This party blames the fires on the incentive program where the workers receive a bonus for exceeding certain work standards. This promotes the taking of heavier cuts with grinding wheels and creates sparks which apparently promote the fires in the system. The operation that has not had any fires for the past 25 years does not have an incentive system and does not permit smoking in the work place. Where the wet collectors are now in use, apparently the EPA is permitting their use as complying with the requirements.

At this point, the disposal of the materials picked up by the collectors was brought up. One member sent the dust to a pelletizing machine. In this process they add 5%-10% cement to the pelletizer. A volume reduction in the order of 3 to 1 was developed. The pellets are taken by truck and dumped as land fill. While the pellets could be broken down into a powder, if they receive reasonable handling they can be readily moved from the pelletizing machine to the land fill operation. It is this member's intention to install a vacuum system from the collecting areas to go to a central pelletizing machine. One member described his handling of dust from (1) a central collector, to (2) a screw conveyor, to (3) a truck, and to (4) the land fill. The workers in this case use respirators.

The pelletizing operation not only reduces the transportation cost by three times but eliminates the need for the watering truck and an individual to wet down the land fill. However, the costs of this pelletizing equipment are substantial. A manufacturer of pelletizing equipment is Ferro Tech Inc., 1231 Banksville Road, Pittsburgh, Pa. 15216.

Several members mentioned that in dealing with the EPA Regional Offices they were having difficulties deciding what was a "new source" and what was an "existing source." Also, where one manufacturer adds one machine to an existing collection system he may not be in compliance without getting a Waiver of Compliance. Apparently the EPA will not give a Waiver of Compliance that will take more than 12 months to complete. An applicant must give the steps to be taken and the schedule to be met. When each date arrives, the applicant must advise EPA concerning completion of that stage of the schedule.

One member felt that we should review the EPA source report form to get a better understanding of what they were calling for. Page one of the report would be used for each factory. As there would most likely be several points of emission, page 2 would be completed for each stack or collector that emits asbestos.

If a manufacturer wished to make an addition or modification in his plant with equipment that might put asbestos into the atmosphere, he must file with the EPA. On page 1 of the report he would cross off the words "Source Report" and type in either "Application to Construct a New Source," or "Application to Modify Existing Source." In reviewing page 2 of the report under "Process Description," some questions came up as to how to complete this section. One member who had worked on this report with the EPA said you should enter here the type of machinery used without quantifying. Another member indicated that the EPA insisted that he list the type of equipment and the numbers of each piece of equipment. If the EPA specifically said to list the numbers and types of equipment in this section it was suggested that they would have said so on page 2 of the report. The question of putting down the numbers and types of equipment could become very cumbersome where a manufacturer wished to move a grinding machine from a location with one collector to another location where it would be hooked into another collector. The member who filed with the EPA worked on reports in 2 different jurisdictions: New York and Tennessee. He indicated that at neither location did he enter the number of pieces of equipment on this form. (Since the meeting he called to advise that the application filed in Tennessee without quantities was accepted by the EPA. His application in New York State had not been either accepted or rejected as of June 4, 1973.) It would appear that Regional Offices are not in agreement as regards quantification of the equipment under the "Process Description."

The question came up concerning interpretation of question 3, the "Amount of Pollutant." In many factories a set of dry mix brake blocks could emit into a collection system at the mixer, at the briquette press, at the cut-off wheels, at grinding, at drilling, and at inspection and boxing. The problem is that this is the same original asbestos which entered the process and might be counted 6-8 times. So, in effect, a factory taking in one million pounds of asbestos might list one million pounds of asbestos going into 8 different collection systems. This, in turn, would make it appear that eight million pounds of asbestos is going into the operation. From the wording of the form, it would appear that this is exactly what the EPA wants. However, another member was told that this is not what the EPA wants. He suggests that if a factory takes in one million pounds of asbestos into the process that it should not report in total more than one million pounds of asbestos. If he had 10 different emission points, he would divide the one million pounds of asbestos by 10 to give the "amount of pollutant." Again, there apparently has been a difference in interpretation from different Regional Offices of the EPA.

On page 3 of the report, under "Waiver of Compliance," it was stated that Sections 2a and 2b did not have to be completed unless EPA specifically requests this information.

B U L L E T I N

N O. 4 7 7

June 11, 1973

ADDITIONS TO CROSS REFERENCES

This cross reference listing is the first additional listing since the data published in Bulletin #437 of May 22, 1972.

Cross reference listings put out by the Institute to date are:

<u>Item</u>	<u>Date</u>	<u>Pages</u>
Master List - Cross Reference	September 1963	52
Bulletin 366	February 1970)	27
Bulletin 400	April 1971)	
Bulletin 437	May 1972	7
Bulletin 477	June 1973	9

Additional copies of the Master List or of these supplements are available at \$.05 per page.

E. W. Drislane
Executive Director

Distribution: Active Members
Regional Members

BENDIX PART NUMBERS

<u>Part No.</u>	<u>FMS. No.</u>	<u>Part No.</u>	<u>FMS. No.</u>	<u>Part No.</u>	<u>FMS. No.</u>
307,818	2041	323,805	Shoe 399	3,200,496	2141ATT (sec.)
320,845	Shoe 398	323,806	Shoe 399	3,200,599	2129TT (pri.)
320,878	Shoe 402	324,570	Shoe 362	3,200,602	2129TT (sec.)
321,266	Shoe 33-R	324,988	2146AT (s)	3,200,613	2075A (pri.)
321,267	Shoe 33-R	324,990	2146AT (1)	3,200,616	2075A (sec.)
321,494	2041	324,992	2140BT (s)	3,200,685	2152T (s)
321,495	2041	2,235,036	7013A (1)	3,200,686	2152T (s)
321,497	Shoe 22	3,200,481	2143ATT (s)	3,200,688	2152T (1)
321,707	2130TT	3,200,484	2143ATT (1)	3,200,689	2152T (1)
321,710	2130TT(sec.)	3,200,493	2141ATT (pri.)		
322,294	2153T (1)			3,200,694	2059AT (1)
322,302	2153T (1)			3,200,695	2059AT (1)
				3,200,696	2059AT (s)
				3,200,697	2059AT (s)
				3,201,785	2140BT (1)

CHRYSLER

<u>Part No.</u>	<u>FMS. No.</u>	<u>Part No.</u>	<u>FMS. No.</u>
280-8451	2032	369-9507	7018 (O)
291-0138	Shoe 402	369-9508	7018 (I)
291-0139	Shoe 402	369-9509	7018 (O)
		369-9512	7019* (I)
346-1954	D-85 (O)	369-9513	7019* (O)
358-0788	Shoe D-84 (I)	369-9514	7019* (I)
358-0789	Shoe D-84 (O)	369-9516	7019* (O)
358-0812	Shoe D-86 (I)	369-9956	7017* (I)
358-0813	Shoe D-86 (O)	369-9958	7018 (I)
358-0946	Shoe D-85 (I)	369-9959	7018 (O)
363-7560	D-86 (O)	369-9960	7019* (I)
363-7561	D-86 (I)	369-9961	7019* (O)
363-8329	D-86 (O)	7,506,1059	Shoe 397
363-8330	70-A (O)	7,506,1059	8113
363-8331	D-86 (I)		
363-8332	70-A (I)		
369-9500	7017* (I)		
369-9501	7017* (O)		
369-9502	7017* (I)		
369-9503	7017* (O)		
369-9506	7018 (I)		

CHEVROLET

<u>Part No.</u>	<u>FMS. No.</u>	<u>Part No.</u>	<u>FMS. No.</u>
9,402,073	Shoe 403	94,021,483	2155* (1)
9,402,073	145*	94,021,483	Shoe 404
94,021,482	Shoe #404	94,021,484	Shoe 404
94,021,482	2155* (s)	94,021,484	2155* (1)

FORD

<u>Part No.</u>	<u>FMS. No.</u>
C8RZ-2200-A	8112
C8RZ-2200-A	Shoe 394
DORY-2007-A (KIT)	8112
D1UZ-2284-A	2012GT (s)
D1TZ-2021-A	2146AT (s)
D1TZ-2021-B	2140BT (s)
D1TZ-2022-A	2146AT (1)
D2TZ-2001-A	8114
D2TZ-2001-A	Shoe 395
D20A-2021-CA	788 (O)
D20A-2022-CA	788 (I)
D2UZ-2285-A	2012GT (1)

<u>Part No.</u>	<u>FMS. No.</u>
D3AA-2284-GB	2080TT (s)
D3AA-2284-HB	2080TT (s)
D3AA-2284-JB	2080TT (s)
D3AA-2284-KA	2121TT (s)
D3AA-2284-LA	2121TT (s)
D3AA-2284-MA	2121TT (s)
D3AA-2285-GA	2080TT (1)
D3AA-2285-HA	2080TT (1)
D3AA-2285-JA	2080TT (1)
D3AA-2285-LA	2121TT (1)
D3AA-2285-LA	2121TT (1)
D3AA-2285-MA	2121TT (1)
D32A-2284-AA	2154T (s)
D32A-2284-BA	2154T (s)
D32A-2284-CA	2154T (s)
D32A-2285-AA	2154T (1)
D32A-2285-BA	2154T (1)
D32A-2285-CA	2154T (1)
D35A-2021-BB	7013A (O)
D35A-2022-BB	7013A (I)

KELSEY HAYES

<u>Part No.</u>	<u>FMS. No.</u>
D91123	D-87 (I)
D91127	7020A (I)
D91129	D-87 (O)
D91131	7020A (O)
E55933	Shoe 401
E55934	Shoe 401
E55935	Shoe 400
E55936	Shoe 400
E91124	D-87 (I)
E91130	D-87 (O)

VOLKSWAGEN

<u>Part No.</u>	<u>FMS. No.</u>
111-698151-B	7022**
211-609521	Shoe 397
211-609522	Shoe 397
411-698151-A, B, C	796**
411-698151-D	7023**

WAGNER

<u>Part No.</u>	<u>FMS. No.</u>
FF 57771	Shoe 325
FF 71725	Shoe 367

MACK PART NUMBERS202 SERIES

For example, Mack #202-SM-47 is FMS #1142.

<u>PART NO.</u>	<u>FMS NO.</u>	<u>PART NO.</u>	<u>FMS NO.</u>	<u>PART NO.</u>	<u>FMS NO.</u>
SM 1066	4379	SM 1106	4513	SM 1150	4618
SM 1067	4380	SM 1107	4514A	SM 1151	4619
SM 1068	4390	SM 1108	4575A	SM 1152	4620
SM 1069	4396	SM 1109	4517	SM 1153	4622
SM 1070	4397	SM 1110	4523	SM 1154	4626
SM 1071	4398	SM 1112	4525	SM 1155	4627
SM 1072	4398A	SM 1113	4526	SM 1156	4628
SM 1073	4398B	SM 1114	4527	SM 1157	4629
SM 1074	4410B	SM 1115	4527A	SM 1158	4631
SM 1075	4410	SM 1116	4540	SM 1159	1245A
SM 1076	4423A	SM 1117	4541	SM 1160	1252
SM 1077	4424	SM 1118	4541A	SM 1161	1254
SM 1078	4442	SM 1119	4541B	SM 1162	1255
SM 1079	4444	SM 1120	4541C		
SM 1080	4446	SM 1121	4542		
SM 1081	4450	SM 1122	4543		
SM 1082	4451	SM 1123	4546		
SM 1083	4452	SM 1124	4548		
SM 1084	4460	SM 1125	4549		
SM 1085	4461	SM 1126	4550		
SM 1086	4468C	SM 1127	4551		
SM 1087	4468A	SM 1128	4552		
SM 1088	4468B	SM 1129	4557		
SM 1089	4469	SM 1130	4561		
SM 1090	4473	SM 1131	4563		
SM 1091	4475	SM 1132	4564		
SM 1092	4476	SM 1133	4564A		
SM 1093	4480	SM 1134	4568		
SM 1094	4481	SM 1135	4570		
SM 1095	4488	SM 1136	4592		
SM 1096	4489	SM 1137	1139		
SM 1097	4498	SM 1138	4567		
SM 1098	4501	SM 1141	4056B		
SM 1099	4503	SM 1143	4462		
SM 1100	4504	SM 1144	4527B		
SM 1101	4505	SM 1145	4592A		
SM 1102	4507	SM 1146	4592B		
SM 1103	4508	SM 1147	4594		
SM 1104	4509	SM 1148	4595		
SM 1105	4511	SM 1149	4617		

MACK PART NUMBERS

202 SERIES

For example, Mack #202-SM-47 is FMS #1142.

<u>PART NO.</u>	<u>FMS NO.</u>	<u>PART NO.</u>	<u>FMS NO.</u>	<u>PART NO.</u>	<u>FMS NO.</u>
SM 47	1142	SM 149	4611	SM 1023	4228B
SM 50	1170	SM 150	659	SM 1024	4237
SM 58	1144	SM 151	1193	SM 1025	4242
SMT 61	4185	SM 152	1195	SM 1026	4258
SM 62	4233	SM 153	1199	SM 1027	4284
SMM 67	1207	SM 154	1230	SM 1028	4286
SMH 68A	4316	SM 155	1239	SM 1029	4286A
SM 71A	1212	SM 156	1241	SM 1030	4286B
SM 72	1107	SM 159	4602	SM 1031	4289
SMM 73	1131	SM 167	4610	SM 1032	4289B
SM 75	1143	SM 171	4153A	SM 1033	4289C
SM 79	4064	SM 172	4637	SM 1034	4289
SM 80A	4427A	SMH 173	4317C	SM 1035	4299
SM 82A	4268B	SMH 174	4311B	SM 1036	4305A
SM 83A	4311	SMH 175	4307	SM 1037	4307A
SM 86A	4366	SMH 179	4152A	SM 1038	4311A
SM 90A	4490	SMM 194	4549	SM 1039	4311C
SM 91A	4492	SM 1000	4327	SM 1041	4317G
SM 92A	1226	SM 1001	4328	SM 1042	4321
SM 97A	4312	SM 1002	4358	SM 1043	4321A
SMH 98	1239	SMH 1003	4376B	SM 1044	4326
SMT 102	1241	SMM 1004	4468	SM 1045	4327A
SMT 104	1230	SM 1005	4056C	SM 1046	4328A
SM 105	4317F	SM 1006	4109	SM 1047	4330
SM 106	4312B	SM 1007	4102	SM 1048	4331
SMM 111	4254	SM 1008	4138	SM 1049	4335A
SM 112	659	SM 1009	4151	SM 1050	4336
SMT 117	4471	SM 1010	4190	SM 1051	4337
SM 119	4268	SM 1011	4195B	SM 1052	4343
SMM 120	1261	SM 1012	4195B	SM 1053	4343A
SMM 121	4515	SM 1013	4197A	SM 1054	4343C
SMM 123	1260	SM 1014	4206	SM 1055	4343S
SMT 124	4514A	SM 1015	4224	SM 1056	4350
SM 130	4055	SM 1016	4227	SM 1057	4354A
SM 131	4106	SM 1017	4227A	SM 1060	4364
SM 132	4315	SM 1018	4227B	SM 1061	4364B
SM 133	4317E	SM 1019	4227B	SM 1062	4365A
SM 134	4465	SM 1020	4227G	SM 1063	4367
SM 135	4516	SM 1021	4228	SM 1064	4375
SMH 145	4516A	SM 1022	4228A	SM 1065	4376

ROCKWELL

<u>Part No.</u>	<u>FMS. No.</u>	<u>Part No.</u>	<u>FMS. No.</u>	<u>Part No.</u>	<u>FMS. No.</u>
<u>2240 Series</u>		<u>2740 Series (Cont'd)</u>		<u>2740 Series (Cont'd)</u>	
B-1536	4514G	F-1280	4549	S-2879	4592
C-1537	4514G	-3542	17,732	-3269	4515
Y-1377	4514G	-3646	1131	-4803	4592
Z-1378	4514G	-4816	4592	T-2880	4592
		-5024	4515	-3270	4515
		-5102	4549	-4804	4592
<u>2740 Series</u>					
A-2887	4592				
-3277	4515	G-1281	4549	U-2881	4592
-4187	4592	-3543	17,732	-3271	4515
-4811	4592	-3647	1131	-4805	4592
-5071	4515E	-5025	4515	V-2882	4592
-5097	4549	-5103	4549	-3272	4515
-5097	4549C			-4806	4592
		H-1282	4549		
		-3648	1131	W-1921	4524B
B-2888	4592	J-1284	4549	-2883	4592
-3278	4515	-3650	1131	-3273	4515
-4188	4592	-4898	17,736	-4807	4592
-4812	4592				
-5020	4515	K-1285	4549	X-1922	4524B
-5098	4549	-1311	4514G	-3274	4515
		-1675	1303	-4808	4592
C-341	4514G	-2871	4592	-5146	
-1277	4549	-3651	1131		
		-4899	17,736	Y-1377	4514G
-2889	4592	-5081	4471B	-3275	4515
-3643	1131			-3275	4515E
-4813	4592	L-1286	4549	-4185	4592
-5021	4515	-1312	4514G	-4809	4592
-5099	4549	-2872	4592	-4965	1303
		-4796	4592		
D-342	4514G	-4900	17,736		
-1278	4549	-5082	4471B	Z-2886	4592
-2578	4524B			-3276	4515
-3644	1131	M-1287	4549	-3276	4515E
-4814	4592	-4797	4592	-3848	4618A
-5022	4515	-4901	17,736		
-5100	4549	N-4798	4592	Z-4186	4592
		P-926	1131	-4810	4592
E-551	1131	-2876	4592	-5070	4515E
-1279	4549	-4800	4592	-5096	4549
-2579	4524B			-5096	4549C
-3645	1131	Q-2877	4592		
-4815	4592	-3267	4515		
-5023	4515	-4801	4592		
-5101	4549	R-2878	4592		
		-3268	4515		
		-4802	4592		

FRICION MATERIALS STANDARDS INSTITUTE, INC., E-210 ROUTE 4, PARAMUS, N.J. 07652

BULLETIN

NO. 476

June 4, 1973

COPYRIGHT ENFORCEMENT

We have recently polled Members on up-dating their Copyright authorization. Several questions have arisen concerning the procedure for authorizing customers to use the copyrighted FMSI numbers. To answer these questions I am forwarding the text of a suggested authorization letter similar to that made in a July 1964 Bulletin to the Membership.

Following is the form letter to be used by the members - on their own stationery - when granting a customer the right to reprint the F. M. S. I. numbers, carbon copy of which is to be filed with the Institute Office.

Dear _____:

The Friction Materials Standards Institute, Inc. numbering system for the clutch facing, brake lining, unlined shoes and lined shoes are copyrighted and the unauthorized use of F.M.S.I. numbers in any manner, including price sheets, catalogs and other literature is a violation of the copyright.

As an Active Member (Regional Member-outside the U.S.) of the Friction Materials Standards Institute, Inc., we are authorized to grant permission to our customers to use the F. M. S. I. numbering systems in their literature and price sheets. The following copyright line must be imprinted on any literature or price sheets you print which contain an F. M. S. I. numbering system.

"All F. M. S. I. numbers set forth herein are the property of and copyrighted by Friction Materials Standards Institute, Inc., Paramus, N.J."

Your name has been submitted to the F. M. S. Institute as having been granted permission to reproduce F.M.S.I. numbers with the copyright line in your literature and price sheets.

This permission is granted only during the term of our supplier/customer relationship and is limited to use in literature covering products purchased from _____. It does not extend to products of your own manufacture. You can secure similar permission for use on other lining manufacturer's products by writing your suppliers, provided your supplier is an Active Member (Regional Member - outside the U.S.) of the Friction Materials Standards Institute, Inc.

Yours very truly,

As you grant an authorization, kindly forward the carbon of your letter to this Office.

EWD/erc

E. W. Drislane
Executive Director

Distribution: Active Members
Regional Members

FMSI 18074

B U L L E T I N

N O. 4 7 5

May 25, 1973

TO: ACTIVE MEMBERS
REGIONAL MEMBERS

SUBJECT: LONAFLEX, S.A. (BRAZIL)

By vote of the Membership, Lonaflex, S.A. (Brazil) has been accepted as a Regional member in the Friction Materials Standards Institute, Inc.

Lonaflex, S.A. (Brazil) has been in the friction material business since 1949. They are represented in the U.S. by the Fallar Company (George Fallar) Mamaroneck, N.Y.

To clarify some questions, if Lonaflex, S.A. (Brazil) uses the copyrighted FMSI numbers on their products, cartons, or literature for sale in the United States, their fee schedule will be the same as that for Active Members.

E. W. Drislane
Executive Director

B U L L E T I N N O. 474

May 9, 1973

TO: ACTIVE MEMBERS, REGIONAL MEMBERS AND LICENSEES

SUBJECT: ORDERS FOR THE 1973 SUPPLEMENT TO THE 1972
 BRAKE SHOE IDENTIFICATION CATALOG

The contract for the printing of the 1973 SUPPLEMENT TO THE 1972 BRAKE SHOE IDENTIFICATION CATALOG has been awarded to:

Success, Inc.
1345 West Sixteenth Street
Indianapolis, Indiana 46202

Ordinarily, this Supplement would take about 20 pages. However, this year we are expanding it to include the following foreign passenger cars: Datsun, Opel, Toyota, Volkswagen and Volvo. As we will be including many earlier imported models - some back to 1962 - this may be a more desirable Supplement than some of our earlier ones.

It is believed with this additional data that the Supplement will contain 32 pages. On an estimate of the total order being 50,000 copies of a 32 page book, the price is:

\$118.26 per M
\$ 3.12 per M additional for 5 hole punching

If there is a change in the price per thousand due to a change in number of pages or to changes in order quantities, or for author's alterations, you will be notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. This is our only means of checking the total quantities ordered and the price charged, as well as whether only members are ordering.

The orders are to be made out to Success, Inc. and are to state punching and shipping instructions.

REMEMBER - THE ORDERS IN DUPLICATE ARE TO BE SENT TO THE INSTITUTE OFFICE.

Kindly forward your orders so that they reach the Institute Office by June 15.

E. W. Drislane
Executive Director

EWD:11z

B U L L E T I N N O . 473

April 13, 1973

TO: ALL ACTIVE MEMBERS, REGIONAL MEMBERS

SUEJECT: CERTIFICATION OF BRAKE LINING THROUGH THE AMERICAN
 ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS (AAMVA)

In Bulletin 460 of December 5, 1972 we advised the membership concerning "grandfathering" brake lining certifications with AAMVA. That is, brake linings already certified in New York or North Carolina would be certified by AAMVA for a five-year period with a \$50 fee, and without new tests being required.

However, there was a January 1, 1973 cut-off for grandfathering.

I have talked with AAMVA recently, and it was indicated that they might consider applications for grandfathering brake lining certifications past this original January 1, 1973 cut-off date. However, they cannot assure me of this, as their Board of Directors establishes these policies.

However, if your company is concerned (considering the recent Pennsylvania and Maryland participation in the AAMVA Equipment Approval Program) and if you wish to "grandfather" existing certification with the AAMVA, I suggest you file for "grandfathering."

Enclosed are:

- (1) Copies of AAMVA Brake Lining "Grandfather" Policy
- (2) Copies of Form EA-3

If you were applying for grandfathering, change line 7 in Form EA-3 as follows:

- (1) Above "Certificate of Approval Fee," insert "Grandfather."
- (2) Change fee amount to \$50.00.

Again, I cannot warrant that AAMVA will accept these certification applications, but for those concerned, I suggest you try.

E. W. Drislane
Executive Director

EWD:11z
Encs.

FRICTION MATERIALS STANDARDS INSTITUTE, INC., E-210 ROUTE 4, PARAMUS, N.J. 07652

B U L L E T I N

NO. 472

March 12, 1973

To: Active Members, Regional Members, Licensees

Subject: Automotive Brake Diagnostics

In Bulletin #477 of January 16, 1973 we advised the membership of the availability of Automotive Brake Diagnostics at .10¢ a copy, plus shipping, in minimum lots of 100 copies.

Our original supply of these books is exhausted. All orders in the office before March 15, will be shipped at the .10¢ price.

However re-print costs for this book have forced us to increase the price to .12¢ a copy (shipping costs extra) in minimum lots of 100 copies.

The copy, incidentally, will be exactly like the original quality with the difficulties we indicated on Exhibits 7 and 8. We appreciate the unusual interest in this Booklet.

EWD/erc

E. W. Drislane
Executive Director

BULLETIN

No. 471

March 9, 1973

To: Delegates and Alternates

Subject: Recommendation of Asbestos Study Committee

This Bulletin concerns Asbestos and related subjects (primarily in-plant problems). Please route this to those responsible for this work.

Labeling Practices

The Asbestos Study Committee, after considerable discussion and debate, and careful selection of the wording, unanimously passed the following resolution at the February 16, 1973 meeting:

RESOLVED: That (1) where asbestos containing materials do not have their asbestos fiber completely locked in, or (2) where subsequent operations may be performed on asbestos containing materials, the hazardous labeling practice be adhered to in accordance with the Label Specifications in the OSHA Standards for Exposure to Asbestos Dust.

In essence, the Committee is saying that the members should comply with the OSHA regulations. At the next meeting, the Committee plans to make a recommendation on the size and style of the label.

Enclosed are the final results of the survey which was made of the membership concerning labeling by members. We received 15 replies from an original canvass of 25 members.

Automatic Bag Opening Machinery

In earlier bulletins we have advised the membership of the availability of asbestos bag opening machinery. Among those listed earlier were:

Fairmount Engineering, Hackettstown, N. J.
Stuart Glópat Corporation, Zanesville, Ohio
Fourier Steel Works, Quebec, Canada
Vanco Machine Company, Van Wert, Ohio

Another firm which has capabilities in the asbestos bag opening field is:

Taunton Engineering Company, Inc.
700 West Water Street
Taunton, Mass. #02780

Laboratories for Sampling and/or Counting Airborne Asbestos Fibers

A list of laboratories who will do sampling and/or counting of airborne asbestos fibers is attached. Contacts and phone numbers are listed where available.

March 9, 1973

Medical Examinations for OSHA Asbestos Regulations

In the OSHA Standard for Exposure to Asbestos Dust, medical examination requirements are spelled out for workers who may be exposed to airborne asbestos fibers. Most firms with members on the Committee have already instituted the required medical examinations.

There is an interesting service available from International Compumedics Corporation (ICM) where they offer to do the examinations, maintain records, etc., on what appears to be a reasonable fee basis. Please refer to their letter to the Institute of February 6, 1973. The costs indicated were for a contract with the Institute - something that was not requested and which the Institute could not directly sponsor. Any work would have to be on an individual manufacturer basis. The contact is:

Mr. Don Iverson
International Compumedics Corporation
14 Washington Road
Princeton Junction, N. J. 08550

Incidentally, we are in no position to judge the quality of ICM's work. One member plans to use their services.

At the meeting one member mentioned that they have received the cooperation of the local TB and Respiratory Disease Association. The Association brings in their mobile unit and runs the X-ray and pulmonary function examinations. From this point the Company Physician conducts the balance of the exam.

EWD/erc
Enclosure:

E. W. Drislane
Executive Director

Final Results - Institute Labeling Survey
Laboratories - Sampling/Counting Airborne Asbestos Fibers
International Compumedics Corporation

B U L L E T I N

N O. 470

March 5, 1973

DECLARATION RE PRODUCT CATEGORIES

FOR

FEE FORMULA BASIS

According to the Constitution and By-Laws, the Fee Formula for the Active Members must be reviewed annually and then presented to the Board of Directors who make recommendations to the membership.

Inasmuch as a member may be engaged in a category one year and not the following, or the reverse, it is necessary to have a confidential declaration filed annually in order to arrive at a proper assessment for each category.

Therefore, would you kindly return one of the attached to Mr. L. D. Stickles, Counsel, who will prepare a summary to aid the Board of Directors in determining the fee formula for the fiscal year starting July 1, 1973.

Please note that the filing categories are changed for this declaration from those on the declarations sent in past years. Please refer to the "Explanation of Category Filing" attached to the Form. If you have questions, please give me a call.

Kindly return your declaration to Mr. Stickles by March 31, 1973.

EWD:11z
Distribution: Delegates and
Alternates
Encs.

E. W. Drislane
Executive Director

EXPLANATION OF CATEGORY FILING

General - A member must be engaged in at least one of the first three categories, in order to be a member. The number of categories checked is used to determine the fees paid during the next fiscal year. Any member not filing this information correctly will be assessed the full fee for all categories.

Confidential - This fee category information is confidential and is not available to other members. The data is reviewed by Counsel and by the Secretary for purposes of determining its reasonableness.

"Our Company is Engaged as follows:" If a member manufactures and sells, purchases and sells, or both purchases and manufactures, and sells the product indicated in the replacement market, he is "engaged" in that category. In other words, if he sells that product he is engaged in that category. Further, the replacement market includes automotive, industrial, and off road equipment - where Friction Materials Standards Institute, Inc. performs a service, either through cataloging, assignment of copyrighted FMSI numbers, or the maintaining of prints. If a member sells a certain product type, but only to a market where FMSI does not provide services, he does not report that category. Where a member sells a certain product only to a market where there are FMSI services available, but he declines to use these services, he must report that category.

Brake Lining - Under 3/4" Nominal, Including Disc Brake Linings

This includes linings whether loose, attached to shoes, or in roll form, sold to market where the FMSI numbering system is available.

Brake Blocks and Disc Brake Linings - 3/4" Nominal and Over

This includes brake blocks, whether loose or attached to shoes, sold to markets where the FMSI numbering system is available. The 3/4" nominal includes tapered blocks with a maximum thickness of approximately .700", with minimum thickness below .500". This also includes disc brake linings 3/4" and over, measuring lining thickness only at its thickest point. When measuring a lined shoe, to determine lining thickness, measure from the top of the shoe.

Clutch Facings

This includes loose facings or facings attached to plates, sold to markets where the FMSI numbering system is available.

Brake Shoes - New Unlined, Including New Unlined Disc Brake Shoes

This category includes new and unlined shoes (whether drum or disc type) which are sold as new and unlined shoes in the replacement market. If all the new and unlined shoes are sold as lined shoe assemblies, do not report this category.

CONFIDENTIAL

Mr. L. D. Stickles
Stickles, Hayden, Kennedy,
Hort & Van Steenburgh
36 West 44 Street
New York, N.Y. 10036

Dear Mr. Stickles:

In response to Bulletin #470 of March 5, 1973 concerning the declaration of confidential information to be used in determining the fees, our company is engaged as follows:

<u>Category</u>	<u>We sell to the replacement market:</u>
Brake Linings - Under 3/4" Nominal, Including Disc Brake Linings	☐
Brake Blocks - 3/4" Nominal or Over	☐
Clutch Facings	☐
Brake Shoes - New Unlined, Including New Unlined Disc Brake Shoes	☐

Affix an "X" in the square to the right of the category or categories your company is engaged in.

Signature _____

Company _____

Date _____

Kindly return declaration to Mr. Stickles by March 31, 1973.

B U L L E T I N

N O. 4 6 9

January 26, 1973

TO: ACTIVE MEMBERS

SUBJECT: ADDITIONAL BACKGROUND ON ASBESTOS

There has been considerable activity in the asbestos field over the past several months. It is suggested that this bulletin be forwarded to those in your organization most concerned with asbestos in the work place.

1. ASBESTOS STUDY COMMITTEE

Members of the Committee have been advised that a Committee meeting is planned for February 16, 1973. Among items to be discussed are labelling practices for brake linings and the EPA asbestos emissions standards.

2. ASBESTOS BAG OPENING MACHINERY

In Bulletin #459 the membership was advised that there was a machine for opening asbestos bags available from Fairmount Engineering. Mr. Weaver, Chairman of the Committee recommended that the membership be advised of others in this field. Among those listed are:

Stuart Glapat Corp., 1639 Moxahala Ave.
Zanesville, Ohio 43701
Fournier Steel Works, Box 460 - Black Lake
Quebec, Canada
Vanco Machine Co., Inc., 1059 West Main St.
Van Wert, Ohio 45891

3. EPA ASBESTOS EMISSIONS STANDARDS

We expect the EPA Standards for asbestos emissions to be published in the Federal Register about February 15, 1973. When these are published, we plan to send copies to the membership.

4. NEW YORK TIMES MAGAZINE ARTICLE "ASBESTOS, THE SAVER OF LIVES, HAS A DEADLY SIDE"

There was a feature article published in the New York Times magazine section on Sunday, January 21, 1973. The article emphasized medical histories of asbestos workers as concerns lung cancer, mesothelioma and asbestosis. The article relied heavily on data supplied by Dr. Selikoff of Mt. Sinai Hospital. One conclusion reached by the author (and of course by Dr. Selikoff) was that the 5 fibers/cc (TWA) concentration of asbestos fibers in the work place was too lenient. This is the standard that will be reduced to 2 fibers/cc on July 1, 1976. The Institute will provide a copy of this article to any member requesting one.

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 6 8

January 22, 1973

(NOTE: Bulletin #467
should have been issued
on 1/16/73. By error,
we assigned Bulletin
#477. Please correct.)

ORDERS FOR THE 1973 AUTOMOTIVE DATA BOOK

The contract for the printing of the 1973 Automotive Data Book has been awarded to:

Tweddle Litho Company
24000 Harper Avenue
St. Clair Shores, Michigan 48080

It is believed that it will contain 120 pages.

On an estimate of the total order being 80,000 copies of a 120 page book, the price is:

\$293.82 per M
\$ 11.00 per M additional for five hole punching
(This will be the only type punching.)

If there is a change in the price per thousand due to a change in number of pages or to changes in order quantities, or for author's alterations, you will be notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. This is our only means of checking the total quantities ordered and the price charged, as well as whether only members are ordering.

The orders are to be made out to Tweddle Litho Company and are to state punching and shipping instructions.

REMEMBER - The orders in duplicate are to be sent to the Institute Office.

Kindly forward your orders so that they reach the Institute Office before March 1, 1973.

E. W. Drislane
Executive Director

Distribution: Active Members
Regional Members

B U L L E T I N

N O. 477 467

January 16, 1973

TO: ACTIVE MEMBERS, REGIONAL MEMBERS, LICENSEES

SUBJECT: AUTOMOTIVE BRAKE DIAGNOSTICS

Based on diagnostics and trouble-shooting developed by engineers at Delco-Moraine Division, the Friction Materials Standards Institute has assembled the enclosed booklet "Automotive Brake Diagnostics." We are indebted to Mr. M. F. (Red) Jones of Delco-Moraine Division for his original work in this area.

PRINTING QUALITY

If you will refer to the booklet, you will note that we did not use professional typesetting and that some of the exhibits (particularly Exhibits 7 and 8 on Power Brakes) are border-line for legibility. The Board of Directors, acting on recommendation of the Institute Development Committee, recommended that we reproduce - without additional typesetting - from the charts we had at that time. This is the best clean-up that could be done on the original data.

USE OF "AUTOMOTIVE BRAKE DIAGNOSTICS"

Our "Automotive Brake Diagnostics" is not copyrighted. The Institute and Delco-Moraine Division express their permission for your reproduction in booklet form, flip charts, slides, or other means of display, of the contents of "Automotive Brake Diagnostics." This permission is granted provided the contents are not published for direct monetary profit - that is, selling the booklets in the market at a price set with the intention of making a profit therefrom.

Other than the foregoing, Members are encouraged to use this work as a reference for brake servicing in the field.

REPRODUCTION

The form in which the "Automotive Brake Diagnostics" is attached (borderline printing on some pages, 8-1/2 x 11 white, unpunched) is as far as we will go. To get clearer charts, it would take fresh art work.

Members are free to use as is, or redraw for improved clarity and style.

DISTRIBUTION OF THESE COPIES

One copy is being enclosed with each Member's Bulletin. We will provide on a no-charge basis 10 additional copies to each Member Company on request.

TO: Active Members, Regional Members
and Licensees

-2-

January 16, 1973

DISTRIBUTION (Continued)

If specifically ordered, we can ship in minimum 100 copy lots as directed by Members at 10¢ a copy (plus shipping). This will be the booklet as shown, with print in the condition shown, reproduced by an outside printer. If you should wish to order in minimum 100 copy lots, please send your Purchase Order to the Institute Office.

EWD:llz

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 6 6

January 8, 1973

HISTORICAL SALES PROGRAM

Consistent with our program over the past year, we're making a January start for reporting for the 12 months ending December 31, 1972. There will be no change in the reporting details from that requested earlier (Bulletin #447 of July 14, 1972 and Bulletin #424 of January 21, 1972).

To repeat some of the reporting details, the following items should be considered:

1. Quantities will be reported in pieces (not units). For roll lining, each foot of length will be one piece.
2. Our accountants will report the names of the members from whom reports are received, and the number of members reporting in each of the four groups.
3. Total pieces in each group will be reported (average will not be shown).

As in the past, this data will be confidential, and as totals for each group will be shown, there is no way of determining quantities by individual member.

Please review the form and the descriptions, as they apply to this year's reporting. You will be receiving from Marshall-Granger & Company, Certified Public Accountants, a form for completing this information. Please return it to:

Marshall Granger & Co., C.P.A.
Lincoln Building
New York, New York 10017

If you do not wish to report these figures, please advise Marshall Granger. Only those reporting figures will receive the industry totals when the data is summarized. A sample form and definitions are attached.

E. W. Drislane
Executive Director

EWD:lmc
Distirbution: Active Members

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.

Bergen Mall Office Center
East 210 Route #4
Paramus, N.J. 07652

Pieces sold to distributors, direct consumers, rebuilders and private
brands:

12 months
(January 1 - December 31, 1972)

Brake linings up to 3/4" nominal thickness
See explanation for roll lining.

Brake blocks, nominal thickness of 3/4"
and over

Disc brake linings

Clutch facings

Total pieces:

DEFINITION FOR HISTORICAL SALESPIECES

The reports will show pieces of friction material, in groups as shown:

<u>Group</u>	<u>Description</u>	<u>Normal Usage</u>
Brake Lining	Friction materials up to a nominal 3/4" thickness (See note on roll lining)	Normally, <u>one piece</u> to a shoe.
Brake Blocks	Friction materials with a nominal thickness of 3/4" and over.	Normally, <u>two pieces</u> to a shoe.
Disc Brake Linings	Friction materials sold (for disc brakes) to be attached to the shoe, or sold as a unit molded, bonded or riveted to the shoe.	Normally, <u>one piece</u> to a shoe.
Clutch Facing	Friction materials of annular shape, or segments thereof.	Normally, <u>two annular pieces</u> for clutch plate.

Note: For roll lining only, consider each foot of length equals one piece.

REPLACEMENT SALES

This reporting is for domestic sales to the replacement field. Do not include export sales. This includes sales under the friction material manufacturer's own name or brand name, or brand name used by the customer, to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

Where one friction material manufacturer member purchases from another member of the Institute, each member who purchases will deduct the number of pieces purchased from the number of pieces sold in arriving at pieces sold. Purchases from non-members will not be deducted.

When a friction material manufacturer is shipping to a vehicle manufacturer, but has no reasonable way of determining if the pieces are for original equipment or replacement purposes, estimates will not be used - these pieces will not be reported. However, where a friction material manufacturer is shipping to a point known to be used for replacement, or where he stencils or otherwise identifies the pieces as being for replacement purposes, or where the shipments otherwise are obviously known to be for replacement, these pieces will be reported.

B U L L E T I N

N O. 4 6 5

January 2, 1973

TO: ACTIVE MEMBERS

SUBJECT: SURVEY--OSHA LABELING PEQUIREMENTS

On December 6, 1972 we issued Bulletin No. 462 concerning the results of a survey of the membership concerning interpretation of OSHA regulations where subsequent machining (cutting, grinding, drilling, chamfering, grooving) was likely to be done on asbestos containing brake lining and clutch facing.

Earlier we had 11 replies to the 25 questionnaires. We have now received 3 more replies with a more negative approach than the earlier sample. It is felt that in order to give balance to the results that this updated summary should be sent to the membership.

E. W. Drislane
Executive Director

CC: Asbestos Study Committee

ASBESTOS STUDY COMMITTEE - LABELING SURVEY

(25 Requests 11/6/72, 14 replies 1/3/73)

<u>Question</u>	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	<u>Not Applicable</u>	<u>Comment</u>
1.1 Now label replacement shipments	1	13			
1.2 Now label O.E.M. shipments	1	11		2	
2.1 Plan to label replacement shipments?	5	5	4		A,B
2.2 Plan to label O.E.M. shipments?	5	3	4	2	
3.1 Interpret OSHA to require labeling where subsequent machining is expected?	9	4	1		C

- A. Member replying YES, states: "If such practice is required and/or adopted by FMSI."
- B. Member replying NO, states: "Our material has been treated with a binder - therefore no raw asbestos is present."
- C. Member replying YES, states: "We will label if it is determined that our bonding or binding material does not meet the standard."

BULLETIN

NO. 464

December 18, 1972

TO: ACTIVE MEMBERS, LICENSEES

SUBJECT: Automotive Parts Rebuilders Association (APRA).

An Institute member has contacted me requesting the Friction Materials Standards Institute to seek a speaker from our industry when the Brake Systems Institute of APRA holds its annual meeting in Memphis, Tennessee from April 8 to April 10, 1973.

SPEAKER

The APRA is looking for someone to address a technical meeting. While this is a rebuilders meeting, they are looking for someone with an original equipment orientation who can discuss disc brakes:

1. The advantages and disadvantages of bonding,
(or bond molding, or integral molding) and
riveting with disc brakes.
 - 1.1 Economic factors
 - 1.2 Wear
 - 1.3 Noise
 - 1.4 Performance
2. The future of disc brakes.
 - 2.1 All U.S. cars front?
 - 2.1.1 When?
 - 2.2 All U.S. cars front and rear?
 - 2.2.1 When?
 - 2.3 Attachment (bond vs rivet)

MEETING

Brake Systems Institute of APRA
Rivermont Holiday Inn
Memphis, Tennessee
April 8 - 10, 1973

ACTION

Please advise if you (or someone in your company) would accept APRA's invitation to address this technical meeting. If there are several willing speakers, this meeting could take the form of a clinic.

It would appear that those members with some original equipment business who are knowledgeable on disc brakes, and who also serve rebuilders, might find this a worthwhile invitation.

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 6 3

December 8, 1972

TO: ACTIVE MEMBERS AND REGIONAL MEMBERS

SUBJECT: AAMVA FORM EA-3

Because of several inquiries concerning Bulletin #460 of December 5, 1972, I am attaching a copy of AAMVA Form EA-3.

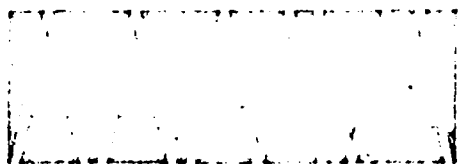
On the original used for copying, there is a note that "This Form Can Be Reproduced". It is suggested that any member wishing to "Grandfather" linings already certified in New York or North Carolina change Line 7 to \$50.00, and insert the word "Grandfather" above "Certificate of Approval Fee".

This copy can be used as a master for additional copies by a member wishing to "Grandfather" certifications with AAMVA.

EWD:lmc
Encs.

E. W. Drislane
Executive Director

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS



An Association of State and Provincial Officials Responsible
for the Administration and Enforcement of Motor Vehicle
and Traffic Laws in the United States and Canada.

1828 L STREET, N.W., SUITE 500 • WASHINGTON, D. C. 20036 • TELEPHONE 202/296-1955

Application for Approval of Motor Vehicle Safety Equipment Devices, Parts, Materials or Assemblies

1. Description and Model Number of Device
2. Manufacturer's Catalog Number of Device
3. (Original Equipment) Dealer Component Part Number of Device
4. Initial Approval Request () ; or Amended Approval () .
5. Make of Vehicle and Year Model on Which Device Will Be Used
6. Laboratory Test Reports Submitted Herewith:YesNo
Name of Laboratory Test Report No.
(Reports Must Cover Actual Sizes Submitted)
7. Certificate of Approval Fee for \$250.00 included. (Refunded if approval denied)
8. Set of Complete Samples Sent 19.....
Name of Applicant
(Person, Firm or Corporation)
Place of Business
City State Zip Code

FOR USE OF AAMVA—DO NOT WRITE IN SPACES BELOW

Application Number
Fee Enclosed \$.....
A—Approval Denied

Date Test Report Received
Date Application Received
Date Sample Received

Reason
Returned to Applicant on
With Test Report Without Test Report

B—Certificate of Approval No. Issued.....

For F A 7

B U L L E T I N

N O. 462

December 6, 1972

TO: ACTIVE MEMBERS

SUBJECT: SURVEY - OSHA LABELING REQUIREMENTS

On November 6, 1972 we sent out a request for information and interpretation of the OSHA regulations concerning labeling requirements for asbestos type brake lining and clutch facing shipments, where subsequent machining (cutting, grinding, drilling, chamfering, grooving) was likely to be done on these products.

Twenty-five questionnaires were sent out. Eleven replies were received. Replies were received from a reasonable cross-section of the membership. As the replies were confidential, the forms submitted by the members have been destroyed.

The survey will be a tool used at the next Asbestos Study Committee Meeting. It is suggested that members of the Committee attending the next meeting be versed in their own Company's position on labeling.

E. W. Drislane
Executive Director

EWD:llz

cc: Asbestos Study Committee

ASBESTOS STUDY COMMITTEE - LABELING SURVEY

(25 Requests 11/6/72, 11 replies 12/6/72)

<u>Question</u>	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	<u>Not Applicable</u>	<u>Comment</u>
1.1 Now label replacement shipments	1	10			
1.2 Now label O.E.M. shipments	1	9		1	
2.1 Plan to label re- placement shipments?	5	3	3		A,B
2.2 Plan to label O.E.M. shipments?	5	2	3	1	
3.1 Interpret OSHA to require labeling where subsequent machining is expected?	9	2			C

- A. Member replying YES, states: "If such practice is required and/or adopted by FMSI."
- B. Member replying NO, states: "Our material has been treated with a binder - therefore no raw asbestos is present."
- C. Member replying YES, states: "We will label if it is determined that our bonding or binding material does not meet the standard."

BULLETIN

NO. 461

December 6, 1972

TO: ACTIVE MEMBERS

SUBJECT: 1972 Census of Manufacturers---Asbestos Products, etc.

The U.S. Department of Commerce has asked us to advise our members on the forthcoming "Census of Manufacturers---Asbestos Products; Gaskets and Packing; Hard Surface Floor Covering." Most manufacturers will receive their questionnaires directly from the Department of Commerce in early 1973.

If you do not receive the questionnaires it is suggested you should contact:

Public Information Office
U.S. Bureau of the Census
Washington, D. C. 20233
(Area Code 301) 763-7273

You should ask for:

Form MC-32K (1972 Census of Manufacturers---
Asbestos Products; Gaskets and Packing; Hard
Surface Floor Covering.)

Enclosed is a copy of a bulletin sent to us by the Department of Commerce.

E. W. Drislane
Executive Director

UNITED STATES DEPARTMENT OF
COMMERCE
NEWS
WASHINGTON, D.C. 20230

MC-32K

Social and Economic
Statistics Administration

CENSUS

For Release at Will

MANUFACTURERS OF ASBESTOS PRODUCTS, GASKETS AND PACKING, AND HARD SURFACE FLOOR COVERINGS WILL GET '72 CENSUS QUESTIONNAIRES

Manufacturers of asbestos products, gaskets and packing, and hard surface floor coverings are among the various types of manufacturing firms which will help provide an overall picture of the Nation's economy by taking part in the 1972 Census of Manufactures according to the Bureau of the Census.

Firms being canvassed in the census will receive forms by mail early in 1973. Completion of these questionnaires is required under terms of an Act of Congress (13 U.S. Code). All answers on census questionnaires are confidential and are used only to produce statistical totals such as those for industries and geographic areas.

The Census Bureau, part of the U.S. Department of Commerce's Social and Economic Statistics Administration, says the questions for 1972 are generally the same as those asked in the last census of manufactures which covered 1967. Most firms will fill out one questionnaire which has been specially prepared for their industry, although companies with more than one establishment will be asked to file a separate form for each location.

Manufacturers of asbestos products, gaskets and packing, and hard surface floor coverings will use Census Form MC-32K. It seeks information on materials used such as asbestos (crude); portland cement; vegetable oils; vinyl and vinyl copolymer resins; and pigment (organic and inorganic).

Products to be reported include asbestos friction materials; asbestos-cement shingles and clapboard; asbestos textiles and other asbestos and asbestos-cement products; gaskets and packing of all types; insulation materials containing asbestos; linoleum; and asbestos-felt-base and supported plastic floor coverings.

B U L L E T I N

N O. 460

December 5, 1972

TO: ACTIVE MEMBERS AND REGIONAL MEMBERS

SUBJECT: CERTIFICATION OF BRAKE LININGS THROUGH THE AMERICAN
ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS (AAMVA)

At the June 1972 meeting of the Board of Directors and the Membership the problem with the requirement of certification - and five year recertification - of brake lining through AAMVA was a major agenda item. The Brake Performance Study Committee, in meetings with AAMVA, worked out several compromises on the certification requirements such as:

- (1) 5 year certification period versus original 2 year.
- (2) "Grandfathering" of original certifications now on file with states for \$50 fee without new tests.
- (3) Verbally, AAMVA indicated they would not require additional certification for different edge brands of the same lining.
- (4) Verbally, AAMVA indicated that only current production linings would require certification rather than all linings - such as old shelf lining in the distribution network.

Several members indicated their opposition to any certification requirements through AAMVA. After a lengthy discussion at the Board of Directors Meeting on October 26, 1972, the following resolution was passed:

RESOLVED: That the Board of Directors of the Friction Materials Standards Institute does hereby go on record that it is unanimously opposed to the requirement of certification of brake linings, and their recertification, where these certifications must be processed through the American Association of Motor Vehicle Administrators (AAMVA) rather than through the individual states.

Further, the Secretary was directed to advise the AAMVA of this resolution. A copy of the letter to Mr. Warner Mills of AAMVA is enclosed. See EXHIBIT A.

AAMVA CERTIFICATION POLICY

A copy of AAMVA's memorandum of October 11, 1972 to the Brake Lining Manufacturers is enclosed which specifies the policies and procedures for approval of brake linings. This includes a page entitled "Motor Vehicle Brake Lining" and a page entitled "Brake Lining Grandfather Policy." See EXHIBIT B.

As regards the procedures required by the states, there are now four states requiring certification of new brake linings through AAMVA: New York,

December 5, 1972

North Carolina, Rhode Island, and Pennsylvania. See EXHIBIT C.

Pennsylvania is the newest addition to those requiring certification through AAMVA, using the V-3 Procedure. With reference to Pennsylvania's requirements, you will note that they still require the \$25.00 fee for approval - in addition to the \$250.00 AAMVA fee.

"GRANDFATHERING" WITH AAMVA

It is the position of many members that linings that are already certified in New York, North Carolina and Rhode Island remain certified and there is no need to "grandfather" these linings with AAMVA.

However, the Pennsylvania requirement may indicate that to certify for the five year period in Pennsylvania, that it may be desirable to "grandfather" with AAMVA.

COURSE OF ACTION

It appears obvious that new brake linings - not already certified - will only be certified in four states by filing through AAMVA.

As regards "grandfathering," if a member wishes to "grandfather" through AAMVA, they must do this before January 1, 1973.

E. W. Drislane
Executive Director

EWD:llz

FRICTION MATERIALS STANDARDS INSTITUTE, INC.

BERGEN MALL OFFICE CENTER

E. 210 ROUTE 4

PARAMUS, N. J. 07652

December 5, 1972

Mr. Warner C. Mills
American Association of Motor Vehicle Administrators
1828 L Street, N.W.
Suite 500
Washington, D.C. 20036

Dear Mr. Mills:

This concerns the meetings and correspondence we've had over the past year concerning the requirements for certification and recertification of brake linings through the American Association of Motor Vehicle Administrators (AAMVA).

Two Board of Directors meetings were held on the subject. At the most recent meeting, after a lengthy discussion, a resolution was passed to put the Board of Directors on record that it is unanimously opposed to the requirement of certification of brake linings, and their recertification, where these certifications must be processed through the American Association of Motor Vehicle Administrators (AAMVA) rather than through the individual states.

As I believe we indicated to you at our meetings in Washington in March and June of this year, the Friction Materials Standards Institute cannot speak for or bind the individual brake lining manufacturers. While the individual manufacturers will process their certifications as they see fit, we have advised them of your October 11, 1972 certification procedures for brake lining.

We wish to express our appreciation to you and Mr. Cardarelli for your time and efforts in considering the problems of the brake lining industry.

Sincerely,

FRICTION MATERIALS STANDARDS INSTITUTE

END:11z

E. W. Drislane
Executive Director

EXHIBIT A

FMSI 18102

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS

1828 L STREET, N.W., SUITE 500, WASHINGTON, D. C. 20036, TELEPHONE 202 — 296-1955

October 11, 1972

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North Carolina

1st Vice President

RAYMOND A. JACKSON
Utah

2nd Vice President

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*Executive Director
and Treasurer*

LOUIS P. SPITZ
Washington, D. C.

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R. H. HUMPHRIES
Ontario

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Maryland

JAMES L. KARNS
Wisconsin

ROBERT C. LEUBA
Connecticut

CLAUDE R. McCAMMENT
Kansas

JACK G. NELSON
Washington

VINCENT L. TOFANY
New York

COL. FRED J. WICKAM
Wyoming

As the authorized approvals agent for certifying motor vehicle safety equipment for the enclosed list of States and Provinces, we are enclosing for your information the Policies and Procedures necessary for obtaining states approval of your motor vehicle brake friction material.

AAMVA recommends that you take the necessary steps to obtain certification of any unapproved motor vehicle brake friction material in accordance with AAMVA jurisdictional requirements.

Should you have any questions please do not hesitate to write.

Yours very truly,

LOUIS P. SPITZ
Executive Director



by Herbert W. Johnson
Associate Engineer

HWJ:lw

Enc.

Exhibit B

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS

An Association of State and Provincial Officials Responsible
for the Administration and Enforcement of Motor Vehicle
and Traffic Laws in the United States and Canada.

1828 L STREET, N.W., SUITE 500 • WASHINGTON, D. C. 20036 • TELEPHONE 202/296-195

Claud R. McCammet
President

Louis P. Spitz
Executive Director

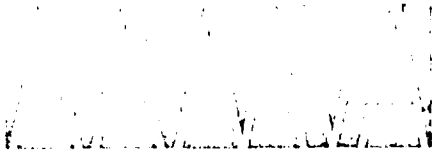
MOTOR VEHICLE BRAKE LINING

In order to obtain an approval for motor vehicle brake lining, the following is required:

- * (1) Submission to AAMVA of a laboratory test report from an AAMVA approved laboratory showing the brake lining to be in compliance with the Vehicle Equipment Safety Commission Regulation V-3. (NOTE: Certification expiration date, five (5) years from laboratory report date.)
- (2) Submission of one completed AAMVA application for approval form EA-3 per device approval.
- (3) Submission of one sample of the brake lining being approved, properly marked.
- (4) Submission of the required approval fee of \$250.00 per device approval.

* For approval in Pennsylvania, compliance with the applicable SAE Safety Standard as specified in the Pennsylvania Motor Vehicle Code Section 8-49 is required.

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS



An Association of State and Provincial Officials Responsible
for the Administration and Enforcement of Motor Vehicle
and Traffic Laws in the United States and Canada.

1828 L STREET, N.W., SUITE 500 • WASHINGTON, D. C. 20036 • TELEPHONE 202/296-1955

Claud R. McCammet
President

Louis P. Spitz
Executive Director

BRAKE LINING "GRANDFATHER POLICY"

The limited "Grandfather Policy" for previously approved brake lining by AAMVA equipment approval member jurisdictions will apply when the following conditions have been met:

- (1) Submission to AAMVA of one copy of the original or an updated laboratory test report for the brake lining being approved, showing the brake lining to be in compliance with the applicable VESC-3 Safety Standard. Also, submission of one copy of the jurisdictional certificate of approval for the brake lining, if available.
- (2) Submission of one completed AAMVA Application for Approval Form EA-3.
- (3) Submission of one sample of the device is waived.
- (4) Submission of the approval fee of \$50.00 per certification.

Under the above policy established specifically for the purpose of certifying previously approved brake lining by member jurisdictions, the AAMVA Certificate of Approval will be valid for a period of five years from the date of issuance by AAMVA, after which time the brake lining must be recertified in accordance with the standard approval procedure for motor vehicle brake lining. This limited policy for certifying previously approved brake lining will expire January 1, 1973. All brake lining submitted after January 1, 1973, must be in compliance with the current motor vehicle safety equipment approval procedure.

Friction-Materials Standards Institute, Inc.

AAMVA STATES

REQUIRE CERTIFICATION THROUGH AAMVA

New York	(Sept. 21, 1972)
North Carolina	(Nov. 19, 1972)
Pennsylvania	(Nov. 22, 1972)
Rhode Island	(June 19, 1972)

WILL ACCEPT CERTIFICATION THROUGH AAMVA OR DIRECTLY TO STATE

Kentucky
New Jersey

REQUIRE CERTIFICATION DIRECTLY TO STATE

Massachusetts (not participating in AAMVA program)
Ohio

Friction Materials Standards Institute, Inc., E. 210 Route #4, Paramus, N.J. 07652.

Exhibit C



STATE OF NEW YORK
DEPARTMENT OF MOTOR VEHICLES

(New York)

VINCENT L. TOFANY
COMMISSIONER
BASIL V. SCOTT
ADMINISTRATIVE DIRECTOR

THE SOUTH MALL - ALBANY, NEW YORK 12228

474-0951 Vehicle Inspection

September 21, 1972

This letter is in reference to our recent telephone conversation regarding your inquiry concerning New York State's participation in the AAMVA's Equipment Approval Program.

We are now requiring that all future requests for equipment approval must be directed to the AAMVA Equipment Approval Division. However, any items which were approved directly by this office and that were not submitted to the AAMVA are not subject to the AAMVA's reapproval program.

Therefore, any brake linings on which you received permanent approval directly from this office do not have to be submitted to the AAMVA for reapproval.

If you have any questions, please feel free to contact this office.

Very truly yours,

Carl C. McConnell, Director
Auto. Safety Standards Bureau

By: *Henry J. Ashline*
Henry J. Ashline
Auto. Safety Equipment Analyst

HJA:c

No. Carolina

State of North Carolina

Department of Motor Vehicles

Raleigh 27511

F. V. GARRETT
COMMISSIONER

JOHN N. LOCKAMY
J. M. PENNY
ASST. COMMISSIONERS

November 19, 1971

MEMORANDUM TO: All Manufacturers and Distributors of Automotive Brake Lining

FROM: Ollis D. Griffin, Assistant Director
Driver Education and Accident Records Division

SUBJECT: North Carolina State Approval of Brake Lining

This office, which acts as the approving agency for motor vehicle equipment requiring the approval of the Commissioner of Motor Vehicles, has been informed by the American Association of Motor Vehicle Administrators that they are now in a position to act as our agent in approving brake linings in accordance with the agreement entered into with them by this state and others.

We hereby notify each manufacturer and distributor that as of this date, November 22, 1971, that all brake lining formulas, samples and test reports should be directed to AAMVA, 1823 L St., N.W., Suite 500, Washington, D.C. 20036, attention Mr. Armond Cardarelli, for approval of such formulas.

Upon receiving a confirming certificate of approval from AAMVA, this office will issue a certificate of approval for the State of North Carolina.

Very truly yours,

Ollis D. Griffin
Assistant Director
Driver Education and
Accident Records Division

ODG/sb

FMSI 18108



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF TRAFFIC SAFETY
HARRISBURG
17123

Pennsylvania

Room 407
Transportation & Safe

IN YOUR REPLY PLEASE
REFER TO

November 22, 1972

O. R. 372
Phone. Area Code 717
787-2899

Dear Mr.

Since we have adopted the AAMVA Approval Program, it was decided to change our requirements for approval of brake linings.

Enclosed is a copy of our new regulations and you will note that they no longer require the on-the-vehicle tests.

Since our law requires the renewal of brake lining approvals every two years, we will continue our renewal program until our Vehicle Code can be amended to coincide with the AAMVA renewal program of every five years

The fee for approval of brake linings will continue to be \$25.00.

When you have received the approval from the AAMVA, a copy of that Certificate in its entirety should be submitted to this office together with a check to cover the approval fee. The copy of the AAMVA Certificate will be validated and returned to you. Samples are no longer required to be submitted.

If you have any questions, please do not hesitate to contact us.

Very truly yours,

Mrs. Caroline Gardner
Automotive Equipment Technician
Automotive Equipment Section

CG/sf
Enc.



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
EXECUTIVE DEPARTMENT
REGISTRY OF MOTOR VEHICLES
STATE OFFICE BUILDING, PROVIDENCE, R. I. 02903

Rhode Island

EUGENE P. PETIT, JR.
REGISTRAR

June 19, 1972

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York 10017

RE: BRAKE LINING AND MOTORCYCLE HELMET APPROVALS

EFFECTIVE JULY 1, 1972

Gentlemen:

All brake lining material and motorcycle helmets shall be approved by the American Association of Motor Vehicle Administrator's Equipment Approval Program.

Brake lining approvals will be based on satisfactory compliance with the Vehicle Equipment Safety Commission Regulation V-3.

Motorcycle helmet approvals will be based on satisfactory compliance with the American National Standards Institute, Inc., Z.90 Standard.

Please submit all approval requests to:

The American Association of
Motor Vehicle Administrators
Equipment Approval Program
1828 L Street, Suite 500
Washington, D. C. 20036

Eugene P. Petit Jr.
EUGENE P. PETIT, JR., REGISTRAR
DEPARTMENT OF TRANSPORTATION

FMSI 18110

B U L L E T I N

N O. 4 5 9

November 17, 1972

TO: ACTIVE MEMBERS

SUBJECT: MACHINE FOR OPENING ASBESTOS BAGS

The Institute was contacted recently by Fairmount Engineering of Hackettstown, N.J., concerning their contacting our members. They state that they have done some work for some members and are marketing a machine for breaking asbestos bags in a totally enclosed environment. If your plant people are interested, they could contact:

Mr. C. E. Walton
Marketing Manager
Fairmount Engineering
Hackettstown, N.J. 07840

The Institute has no background data on Fairmount Engineering other than that they feel they have a machine suitable for the purpose indicated.

E. W. Drislane
Executive Director

B U L L E T I N

N O. 4 5 8

November 13, 1972

TO: ACTIVE MEMBERS
REGIONAL MEMBERS
LICENSEES

SUBJECT: 1972 BRAKE SHOE IDENTIFICATION CATALOG

The Johns-Manville Corporation has indicated to me that they received 1,000 of the new 1972 Brake Shoe Identification Catalogs for which they will have no use. They have asked me to contact other Members of the Institute to attempt to dispose of these catalogs.

If you have any additional requirements for these catalogs, please place your orders with the Institute and we will handle the order, billing at the recently established final price.

Catalogs, with punching \$188.50/M.

E. W. Drislane
Executive Director

BULLETIN

NO. 457

October 20, 1972

TO: ACTIVE MEMBERS
ASBESTOS STUDY COMMITTEE
LICENSEES

SUBJECT: Occupational Safety and Health Standards (OSHA)

In the October 18, 1972 issue of the Federal Register, the Department of Labor issued a complete set of Rules and Regulations for the OSHA Standards.

As regards asbestos, the section (1910.93a) pertaining thereto is unchanged from that sent to the membership with our Bulletin 442 of June 20, 1972.

The Department published these to bring in all amendments to the standards through September 22, 1972. The purpose was (1) to publish the OSHA Standards fully and reflect changes made during the year, (2) to correct typographical and clerical errors in the original standards, and (3) to publish an index with the standards.

As these full standards are a bulky 250 page issue, it is suggested that members interested in acquiring up-dated standards request them from:

Superintendent of Documents
U. S. Government Printing Office
Washington, D. C. 20402

If interested, order the Federal Register of October 18, 1972, with payment of 20 cents payable to Superintendent of Documents.

E. W. Drislane
Executive Director

BULLETIN

N O. 4 5 6

September 25, 1972

TO: Active Members
Regional Members
Licensees

SUBJECT: ADDRESS CHANGE - YOUR ACCOUNTS PAYABLE DEPARTMENT OR CASH DISBURSEMENTS
DEPARTMENT

While practically all correspondence of a general nature has been directed to our Paramus address, in many cases we are still receiving checks addressed to 370 Lexington Avenue.

In most cases, the checks are drawn to FMSI at 370 Lexington Avenue and mailed in window envelopes, which are then sent to New York and later forwarded to Paramus.

If you have not already done so, would you advise your Accounting Department to change our address for payments to:

Friction Materials Standards Institute
Bergen Mall Office Center
E-210 Route 4
Paramus, N.J. 07652

E. W. Drislane
Executive Director

BULLETIN

N O. 4 5 5

August 28, 1972

TO: ACTIVE MEMBERS

SUBJECT: BRAKE BLOCK IDENTIFICATION CATALOG

Shipments of the new Brake Block Identification Catalog (1972 Edition) are now being completed.

As the quantity actually ordered was 30,000 (instead of 20,000) and Author Alteration costs were under budget, there is a price reduction to members. Those who ordered the Catalogs will pay:

Basic Price	\$150.00/M (was \$203.00/M)
Punching	4.50/M (no change)

In addition freight and customs changes (if any) will be billed by the Printer. Please advise your Purchasing Department or Accounts Payable Sections of this change.

E. W. Drislane
Executive Director

B U L L E T I N #454

August 23, 1972

TO: ACTIVE MEMBERS

SUBJECT: FMVSS #121 (AIR BRAKES)

During a recent meeting of the Brake Performance Study Committee, the burnish used in the Standard was discussed. In FMVSS #121, the vehicle burnish (Section 6.1.8) is controlled by mileage and speed. The dynamometer burnish (Section 6.2.6), on the other hand, is temperature controlled.

There was concern expressed by some Committee Members about the difference in conditioning linings that could be developed from differences in burnish conditions.

Mr. R. E. Nelson, Chairman, is requesting that any Member who already has information on these temperature conditions on burnish send information in to the Institute:

- (1) Temperatures developed running the FMVSS #121 (or SAE J786) vehicle burnish.
- (2) Temperatures developed running a simulated FMVSS #121 (or SAE J786) vehicle burnish on the dynamometer.

E. W. Drislane
Executive Director

EWD:11z

B U L L E T I N #453

August 23, 1972

TO: ACTIVE MEMBERS

SUBJECT: QUALITY CONTROL SUB-COMMITTEE, BRAKE PERFORMANCE STUDY COMMITTEE

At the Annual Meeting, Mr. Nelson, Chairman of the Brake Performance Study Committee, discussed the formation of a Sub-Committee to deal with quality control. The Sub-Committee's purpose would be to provide guidance to the Members on compliance sampling to defend a brake lining manufacturer should he be charged with not exercising "due care" in the manufacture of his products. Further, since the Brake Performance Study Committee has dealt with NHTSA on safety regulations, it was felt that this Sub-Committee might represent the Industry should NHTSA propose regulations in the quality control area.

Mr. Nelson is requesting that Members nominate individuals from their company to serve on this Sub-Committee. He would be looking for individuals with experience in quality control. As Mr. Nelson points out, service on this Sub-Committee would not be for the purpose of training someone in the field. Rather, the individual nominated should have some expertise and we are suggesting that along with the nomination of individuals, that a brief background on the individual's work history be forwarded so that Mr. Nelson can staff this Committee properly.

Please send any nominations, with brief backgrounds, to my attention.

E. W. Drislane
Executive Director

EWD:11z

BULLETIN

NO. 452

August 22, 1972

BRAKE BLOCK IDENTIFICATION CATALOG

Enclosed is a copy of the Institute's new Brake Block Identification Catalog (1972 Edition). This, of course, is the first such Catalog on Brake Block Identification issued by the Institute.

Orders are now being shipped by the Printer to those whose orders we had earlier received. Details were covered in Bulletin #441 of June 19, 1972.

The projected price was \$203.00/M with punching \$4.50/M extra. We may have a slight decrease in the price when the Printer advises of author alteration and art work costs.

If any other member--who has not ordered--wishes copies we may be able to fill orders placed on the Institute (not the Printer) at prices not to exceed those shown above. However, we cannot promise quick delivery on such catalogs, as we do not yet know how many Catalogs will be left in the Institute's inventory.

E. W. Drislane
Executive Director

Distribution: Active Members (Delegates & Alternates)
Regional Members

B U L L E T I N #451

August 10, 1972

TO: ALL ACTIVE MEMBERS

SUBJECT: BERGEN MALL OFFICE CENTER

Over the past months, the Institute has distributed directions on getting to the Paramus Office to those members who had meetings scheduled here.

When we took space in January, the Building was about 30% occupied. It is now 100% occupied. The Parking Lot seems to be 110% occupied. It is suggested that members visiting the Office park in the area to the south of the Building - the Food Fair parking area, or any parking area normally used by shoppers at the Bergen Mall Shopping Center.

From this parking area there is a walk-way over the highway directly into the Second Floor of the Building. Our Offices are on the Third Floor.

E. W. Drislane
Executive Director

EWD:11z

B U L L E T I N #450

August 10, 1972

TO: ALL ACTIVE MEMBERS
REGIONAL MEMBERS
LICENSEES

SUBJECT: EXTRA COPIES OF OLD BRAKE SHOE IDENTIFICATION CATALOGS

The new 1972 Brake Shoe Identification Catalog is now at the printers, and we expect shipment to members late in September or early October.

We have on hand the following, which will be obsolete when the new catalog is finished:

<u>No. of Copies</u>	<u>Catalog</u>	<u>Original Price (Includes Punching)</u>
8500 Copies	1970 Brake Shoe Catalog	\$191.26/M
3500 Copies	1971 Supplement to 1970 Brake Shoe Catalog	\$ 88.44/M

In order to clear out this inventory, we are reducing prices on these Catalogs as follows:

1970 Brake Shoe Catalog \$150.00/M

1971 Supplement to the Brake Shoe Catalog \$ 70.00/M

These will be sold on a "First come - First sold" basis. Incidentally - for Active Members and Regional Members - we have over 4,000 copies of the 1971 Automotive Data Book on hand, which are available at the original price of \$278.48/M (includes punching).

E. W. Drislane
Executive Director

EWD:11z

BULLETIN #449

July 25, 1972

ORDERS FOR THE 1972 BRAKE SHOE IDENTIFICATION CATALOG

The contract for the printing of the 1972 Brake Shoe Identification Catalog has been awarded to:

Success, Inc.
1345 West Sixteenth Street
Indianapolis, Indiana 46202

It is believed that it will contain 56 pages.

On an estimate of the total order being 50,000 copies of a 56 page book, the price is:

\$171.20 per M
\$ 7.50 per M additional for five hole punching
(This will be the only type punching).

If there is a change in the price per thousand due to a change in number of pages or to changes in order quantities, or for author's alterations, you will be notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. This is our only means of checking the total quantities ordered and the price charged, as well as whether only members are ordering.

The orders are to be made out to Success, Inc. and are to state punching and shipping instructions.

REMEMBER - The orders in duplicate are to be sent to the Institute Office.

Kindly forward your orders so that they reach the Institute Office by August 20.

E. W. Drislane
Executive Director

EWD:llz
Distribution: Active Members
Regional Members
Licensees

BULLETIN #448

July 24, 1972

REPUESTOS COLOMBIANOS, LTDA. - REGIONAL MEMBER

This is to advise that Repuestos Colombianos, Ltda. of Colombia, South America, has been voted into Regional Membership in the Friction Materials Standards Institute, Inc.

The full address is:

Repuestos Colombianos, Ltda.
Apartado Aereo 4563
Medellin, Colombia
South America

E. W. Drislane
Executive Director

EWD:llz

Distribution:

Active Members
Regional Members

BULLETIN NO. 447

July 14, 1972

HISTORICAL SALES PROGRAM

The Board of Directors wishes to get an early start on the historical sales reporting for the 6 months ending June 30, 1972. There will be no change in the reporting details from that requested earlier (Bulletin #410 of September 9, 1971 and Bulletin 424 of January 21, 1972).

To repeat some of the reporting details, the following items should be considered:

1. Quantities will be reported in pieces (not units). For roll lining, each foot of length will be one piece.
2. Our accountants will report the names of the members from whom reports are received, and the number of members reporting in each of the four groups.
3. Total pieces in each group will be reported (average will not be shown).

As in the past, this data will be confidential, and as totals for each group will be shown, there is no way of determining quantities by individual member.

Please review the form and the descriptions, as they apply to this year's reporting. You will be receiving from Marshall-Granger & Company, Certified Public Accountants, a form for completing this information. Please return it to:

Marshall Granger & Co., C.P.A.
Lincoln Building
New York, New York 10017

If you do not wish to report these figures, please advise Marshall Granger. Only those reporting figures will receive the industry totals when the data is summarized. A sample form and definitions are attached.

E. W. Drislane
Executive Director

EWD:11z
Distribution: Active Members

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.

Bergen Mall Office Center
East 210 Route #4
Paramus, N.J. 07652

=====

Pieces sold to distributors, direct consumers, rebuilders and private brands:

6 Months
January 1 - June 30, 1972

Brake linings up to 3/4" nominal thickness
See explanation for roll lining.

Brake blocks, nominal thickness of 3/4"
and over

Disc brake linings

Clutch facings

Total pieces:

=====

DEFINITION FOR HISTORICAL SALESPIECES

The reports will show pieces of friction material, in groups as shown:

<u>Group</u>	<u>Description</u>	<u>Normal Usage</u>
Brake Lining	Friction materials up to a nominal 3/4" thickness (See note on roll lining)	Normally, <u>one piece</u> to a shoe.
Brake Blocks	Friction materials with a nominal thickness of 3/4" and over.	Normally, <u>two pieces</u> to a shoe.
Disc Brake Linings	Friction materials sold (for disc brakes) to be attached to the shoe, or sold as a unit molded, bonded or riveted to the shoe.	Normally, <u>one piece</u> to a shoe.
Clutch Facing	Friction materials of annular shape, or segments thereof.	Normally, <u>two annular pieces</u> for clutch plate.

Note: For roll lining only, consider each foot of length equals one piece.

REPLACEMENT SALES

This reporting is for domestic sales to the replacement field. Do not include export sales. This includes sales under the friction material manufacturer's own name or brand name, or brand name used by the customer, to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

Where one friction material manufacturer member purchases from another member of the Institute, each member who purchases will deduct the number of pieces purchased from the number of pieces sold in arriving at pieces sold. Purchases from non-members will not be deducted.

When a friction material manufacturer is shipping to a vehicle manufacturer, but has no reasonable way of determining if the pieces are for original equipment or replacement purposes, estimates will not be used - these pieces will not be reported. However, where a friction material manufacturer is shipping to a point known to be used for replacement, or where he stencils or otherwise identifies the pieces as being for replacement purposes, or where the shipments otherwise are obviously known to be for replacement, these pieces will be reported.

BULLETIN

NO. 446

July 11, 1972

TO: ALL MEMBERS

SUBJECT: EQUIPMENT/TRAINING FOR ASBESTOS MEASUREMENTS

At the recent Annual Membership Meeting it was brought to my attention that many members had not received information on equipment for measuring airborne asbestos in the work place. Most of the following information is a re-hash of earlier information - particularly Bulletin #428 of February 18, 1972.

OSHA STANDARDS, OTHER PAPERS RELATIVE TO ASBESTOS IN THE WORK PLACE

1. Occupational Safety & Health Administration (OSHA)
Standards per Williams - Steiger OSHA Act of 1970.
Federal Register, May 29, 1971
2. OSHA Standards for Exposure to Asbestos Dust,
Federal Register, June 7, 1972
3. "Measurement of Airborne Asbestos Fiber by the
Membrane Filter Method".
Asbestos Textile Institute
P.O. Box 239
Pompton Lakes, New Jersey 07442
(Price \$1.00/copy)

The Institute distributed copies of these to the members during the past year. The most pertinent are Item 2 (OSHA Standards for Asbestos) and Item 3 (Measurement of Airborne Asbestos...").

GENERAL METHOD (MEMBRANE FILTER METHOD)

A pick-up is worn by a worker in the area to be measured. A battery operated vacuum pump draws in air over a specified period--say 60 minutes, 90 minutes or four hours. Asbestos fiber is trapped by the filter and then sealed and sent to the laboratory. The sample is examined using an optical microscope where asbestos fibers are counted.

Details on the optical count are given in the book "Measurement of Airborne Asbestos Fiber by the Membrane Filter Method".

EQUIPMENT & SUPPLIES

Depending on the size of operation, at least two pumps costing about \$150 each are required:

- (a) Mine Safety Appliance Co., Pittsburgh, Pa.
15208
- (b) Willson Products Div., Reading, Pa. 19603
- (c) Unico Environmental Instruments, Fall River, Mass.
02720

A battery charger (one for each 2 pumps) is suggested. The charger would cost about \$50.

Pad and filter inserted run about 70¢ a piece, and are available from the Millipore Corporation, Bedford, Mass., 01730.

A binocular microscope with phase contrast illumination set for 400/430X magnification is required. While a Bausch & Lomb microscope costing \$1,200/1,500 is basic, binocular microscopes with additional fixtures should be worth the additional cost. (Seek professional advice on this.)

Most of the above information is verbatim from the book "Measurement of Airborne Asbestos Fiber by the Membrane Filter Method."

OUTSIDE SERVICES AND TRAINING

It may be feasible to have outsiders do the full job - from sampling through examination and reporting. Others will do the analysis work only where the samples are mailed to the laboratories.

Tracerlabs in California will do analysis work for about \$50.-60. per analysis.

Johns-Manville will do the full job for a fee (Contact Mr. W. Reitze, Manager Industrial Hygiene Engineering Service, Johns-Manville Corporation, P.O. Box #5108, Denver, Colorado #80217)

George Clayton Labs, Southfield, Michigan will do the full job for a fee.

There are other labs that may do the entire package or the analysis work only.

Johns-Manville indicated it would be willing to train personnel in the technique in a two day period. They would take one trainee or at most two trainees, to one instructor for \$200. a day. These sessions would be at Phindern (Somerville) New Jersey or Waukegan, Illinois. Again, the contact would be with Mr. Reitze in Denver.

It is most important that those concerned with the OSHA Standards enforcement receive this basic information. Should additional information be required, please advise.

E. W. Drislane
Executive Director

BULLETIN #445

July 6, 1972

AUTO SPECIALTIES MANUFACTURING CO., ST. JOSEPH, MICHIGAN

The membership voted to accept Auto Specialties Manufacturing Co. as an Active Member of the Institute. They became an Active Member as of July 1, 1972.

Their address is:

643 Graves Street
St. Joseph, Michigan 49085

Their Delegate is:

Cleo F. Ansteth

Their Alternate is:

Al E. Weimann

E. W. Drislane
Executive Secretary

EWD:llz

Distribution: Active Members
Regional Members

BULLETIN #444

July 6, 1972

APPLICATION FOR MEMBERSHIP - REPUESTOS COLOMBIANOS, LTDA.

An application for Regional Membership was received from Repuestos Colombianos Ltda. ("Reco"), of Colombia, S.A. Your Membership Committee recommended acceptance of their application. The Board of Directors has similarly recommended acceptance of Repuestos Colombianos Ltda. as a Regional Member.

Ballots are attached to Delegates' copies only. Will the delegate kindly record his vote, on the attached ballot, and return to my attention.

E. W. Drislane
Executive Secretary

EWD:llz

Distribution: Active Members

MEMBERS' BALLOT

BULLETIN #444

July 6, 1972

FRICTION MATERIALS STANDARDS INSTITUTE, INC.
E. 210 Route 4
Paramus, N.J. 07652

Gentlemen:

My vote on the acceptance of the application for Regional
Membership by Repuestos Colombianos Ltda is:

Yes (☐)

No (☐)

Signature _____

Company _____

Date _____

Delegate's Ballot Only

B U L L E T I N

NO. 443

June 22, 1972

TO: ALL ACTIVE AND REGIONAL MEMBERS

SUBJECT: AAMVA CERTIFICATION OF BRAKE LINING

North Carolina and Rhode Island now require certification of brake lining through the AAMVA (American Association of Motor Vehicle Administrators). There are indications that New York State may follow suit.

Certification through AAMVA will cost a \$250 fee. Also, AAMVA will require a recertification with new tests and a \$250 fee every five years.

The problem of "grandfathering" linings already certified in the States has been discussed and the Institute suggests that if you have any new formulae that you are getting ready to certify, that you rush it to New York State so that it might possibly qualify as having been certified under a "Grandfather Clause."

E. W. Drislane
Executive Secretary

EWD:11z

B U L L E T I N

NO. 442

June 20, 1972

TO: ACTIVE MEMBERS
ASBESTOS STUDY COMMITTEE MEMBERS

SUBJECT: STANDARDS FOR EXPOSURE TO ASBESTOS DUST

Because of a strong response to our Bulletin 439 concerning the new OSHA Standards for Asbestos Dust Exposure, we are distributing a copy for all Active Members.

Included are:

1. Copy of the Standards as they appeared in the Federal Register.
2. Copy of Department of Labor Bulletin on the new Standards (these have been underlined by our Committee Chairman, Mr. I. H. Weaver of Raybestos-Manhattan).

E. W. Drislane
Executive Secretary

EWD:11z

tions for an Occupational Exposure Standard for Asbestos by the National Institute for Occupational Safety and Health (NIOSH). Public notice was given of the receipt of the recommendations and their availability for inspection and copying. On or about February 25, 1972, the Advisory Committee on Asbestos Dust submitted its written recommendations to the Assistant Secretary of Labor for Occupational Safety and Health.

Pursuant to the notice of rule making, a hearing was held on March 14 through 17, 1972, for the purpose of receiving oral data, views, and arguments concerning the proposed standard. On or about March 31, 1972, the presiding hearing examiner certified to the Assistant Secretary of Labor for Occupational Safety and Health the record of the proceeding. The record includes prehearing written comments, a transcript of the oral presentations made at the hearing, and numerous exhibits received during the course of the hearing or within the period allowed after the close of the hearing.

The proposed standard dealt with (1) permissible concentrations of asbestos fibers; (2) methods of compliance; (3) warning signs; (4) monitoring; (5) medical examinations; and (6) recordkeeping. Each of these major proposals elicited comments, arguments, objections, and counterproposals. They all have been examined and considered.

1. *Acceptable concentrations of asbestos dust.* The proposed standard would limit occupational exposure to 8-hour time-weighted average (TWA) airborne concentrations of asbestos dust not exceeding five fibers longer than five micrometers per milliliter. Concentrations above five fibers but not to exceed 10 fibers (ceiling concentration) would be permitted up to 15 minutes in an hour, but for not more than 5 hours in any one 8-hour day.

NIOSH in effect has recommended that the five-fiber TWA and 10-fiber peak concentrations be permitted only for 2 years; thereafter, TWA concentrations should be not more than 2 fibers per cubic centimeter (cm.³) of air, and peak concentrations should not exceed 10 fibers/cm.³, with no time restriction. Numerous objections and counterproposals have been made, with regard to both the limits of asbestos fiber concentrations and the time periods to comply with them. Some, for example, have recommended return to a 12-fiber standard of an earlier day; i.e., a level adopted under the Walsh-Healey Public Contracts Act in 1969. Others have recommended a two-fiber standard to become effective in 6 months, then a one-fiber standard for 2 years, and finally a zero-fiber standard after 3 years. These recommendations give a fair indication of the wide spread of the counterproposals.

No one has disputed that exposure to asbestos of high enough intensity and long enough duration is causally related to asbestosis and cancers. The dispute is as to the determination of a specific level below which exposure is safe. Various studies attempting to establish quantitative relations between specific levels of

exposure to asbestos fibers and the appearance of adverse biological manifestations, such as asbestosis, lung cancers, and mesothelioma, have given rise to controversy as to the validity of the measuring techniques used and the reliability of the relations attempted to be established. Because of the long lapse of time between onset of exposure and biological manifestations, we have now evidence of the consequences of exposure, but we do not have, in general, accurate measures of the levels of exposure occurring 20 or 30 years ago, which have given rise to these consequences. There are also controversies concerning the relative toxicity of the various kinds of asbestos, and varying hazards in different workplaces.

It is fair to say that the controversy has centered in the area between a two-fiber TWA concentration and five-fiber TWA concentration, with variations on the time needed for compliance. Many employers support a five-fiber TWA. Most medical opinion is divided between a two-fiber standard and a five-fiber standard.

In view of the undisputed grave consequences from exposure to asbestos fibers, it is essential that the exposure be regulated now, on the basis of the best evidence available now, even though it may not be as good as scientifically desirable. An asbestos standard can be re-evaluated in the light of the results of ongoing studies, and future studies, but cannot wait for them. Lives of employees are at stake.

It is concluded that there should be one minimum standard of exposure to asbestos applicable to all workplaces exposed to any kind, or mixture of kinds, of asbestos. Reasons of practical administration preclude a variety of standards for different kinds of asbestos and of workplaces. Also, while the evidence tends to show that crocidolite, for instance, is more harmful than chrysotile, the evidence is not sufficient to establish separate standards for varieties of asbestos.

Because there must be one standard governing exposure to all varieties of asbestos, and in workplaces apparently more hazardous than others; because some present employees with regular exposure to asbestos have probably already accumulated great doses of asbestos fibers, due to higher levels of exposure in the past; because it appears that levels of exposure which may be safe with regard to asbestosis are not safe with regard to mesothelioma; because the statute requires the protection of every employee, even of one who may have regular exposure to asbestos during a working life which may reach, or even exceed, 40 years; and because of several other considerations which have been urged and are reflected in the record of the proceeding, the conflict in the medical evidence is resolved in favor of the health of employees. As of July 1, 1976, TWA concentrations of asbestos fibers longer than 5 micrometers will not be allowed to exceed two fibers/cc., with a ceiling value of 10 fibers/cc. The current TWA concentrations of five fibers, and

Title 29—LABOR

Chapter XVII—Occupational Safety and Health Administration, Department of Labor

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

Standard for Exposure to Asbestos Dust

On December 7, 1971, an emergency temporary standard concerning exposure to asbestos fibers was published in the FEDERAL REGISTER (36 F.R. 23207). In accordance with section 6(c) (3) of the Williams-Steiger Occupational Safety and Health Act of 1970, a notice of proposed rulemaking regarding a permanent standard for exposure to asbestos fibers was published in the FEDERAL REGISTER on January 12, 1972 (37 F.R. 466). The notice invited interested persons to submit both orally and in writing, data, views, and arguments concerning the proposal.

On or about January 24, 1972, the Advisory Committee on Asbestos Dust was established and requested to make written recommendations with regard to the proposed standard on asbestos. On or about February 1, 1972, the Department of Health, Education, and Welfare transmitted to the Secretary of Labor a criteria document containing Recommendations

§ 1910.93 Air contaminants.

TABLE G-8—MINERAL DUSTS

Substance	Mppcf	Mg/M ³
Silica:		
Crystalline:		
Quartz (respirable).....	250 ¹	10mg/M ³ = %SiO ₂ +2 80mg/M ³
Quartz (total dust).....		%SiO ₂ +2
Cristobalite: Use $\frac{1}{2}$ the value calculated from the count or mass formulae for quartz.		
Tridymite: Use $\frac{1}{2}$ the value calculated from the formulae for quartz.		
Amorphous, including natural diatomaceous earth.....	30	30mg/M ³ %SiO ₂
Silicates (less than 1% crystalline silica):		
Mica.....	20	
Soapstone.....	20	
Talc.....	20	
Portland cement.....	30	
Graphite (natural).....	15	
Coat dust (respirable fraction less than 8% SiO ₂).....		2.4mg/M ³ or 10mg/M ³ %SiO ₂ +2
For more than 8% SiO ₂		
Inert or Nuisance Dust:		
Respirable fraction.....	15	5mg/M ³
Total dust.....	30	15mg/M ³

Note: Conversion factors—
mppcf×35.8 = million particles per cubic meter
= particles per c.c.

¹Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

The percentage of crystalline silica in the formula is the amount determined from air-borne samples, except in those instances in which other methods have been shown to be applicable.

²As determined by the membrane filter method at 430× phase contrast magnification.

³Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an APC instrument. If the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 Mg/M³ in the table for coal dust is 4.5 Mg/M³.

2. A new § 1910.93a is added to Part 1910, reading as follows:

§ 1910.93a Asbestos.

(a) **Definitions.** For the purpose of this section, (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) **Permissible exposure to airborne concentrations of asbestos fibers—**(1) **Standard effective July 7, 1972.** The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) **Standard effective July 1, 1976.** The 8-hour time-weighted average airborne concentrations of asbestos fibers

to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) **Ceiling concentration.** No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) **Methods of compliance—**(1) **Engineering methods.** (i) **Engineering controls.** Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) **Local exhaust ventilation.** (a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2-1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) **Particular tools.** All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) **Work practices—**(i) **Wet methods.** Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) **Particular products and operations.** No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) **Spraying, demolition, or removal.** Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d) (2) (iii) of this section and with special clothing in accordance with paragraph (d) (3) of this section.

(d) **Personal protective equipment—**(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) **Air purifying respirators.** A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) **Powered air purifying respirators.** A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) **Type "C" supplied-air respirators, continuous flow or pressure-demand class.** A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) **Establishment of a respirator program.** (a) The employer shall establish a respirator program in accordance with

the requirements of the American National Standards Practices for Respiratory Protection, ANSI Z88.2-1969, which is incorporated by reference herein.

b. See § 1910.6 concerning the availability of ANSI Z88.2-1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) Special clothing: The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) Change rooms: (i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at the place.

(ii) Clothes lockers: The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) Laundering: (a) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(b) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in (a) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

(e) Method of measurement. All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400-450 X (magnification) (4 millimeter objective) with phase contrast illumination.

(f) Monitoring—(1) Initial determinations. Within 6 months of the publication of this section, every employer shall cause every place of employment

where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) Personal monitoring—(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) Sampling frequency and patterns. After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be done at intervals greater than 6 months for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) Environmental monitoring—(i) samples shall be collected from areas of a work environment which are representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) Sampling frequency and patterns. After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees. In no case shall sampling be at intervals greater than 6 months for employees whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) Employee observation of monitoring. Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) Caution signs and labels. (1) Caution signs. (i) Posting. Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(ii) Sign specifications. The warning signs required by subdivision (1) of this

subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), and to this subdivision. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision.

Legend	Notation
Asbestos	1" Sans Serif, Gothic or Block.
Dust Hazard	¾" Sans Serif, Gothic or Block.
Avoid Breathing Dust...	¼" Gothic.
Wear Assigned Protective Equipment.	¼" Gothic.
Do Not Remain In Area Unless Your Work Requires It.	¼" Gothic.
Breathing Asbestos Dust May Be Hazardous To Your Health.	14 point Gothic.

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(2) Caution labels—(i) Labeling. Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section will be released.

(ii) Label specifications. The caution labels required by subdivision (1) of this subparagraph shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION
Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause
Serious Bodily Harm

(h) Housekeeping—(1) Cleaning. All external surfaces in any place of employment shall be maintained free of accumulations of asbestos fibers if, with their dispersion, there would be an excessive concentration.

(2) Waste disposal. Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(i) Recordkeeping—(1) Exposure records. Every employer shall maintain records of any personal or environmental monitoring required by this section. Records shall be maintained for a period of at least 3 years and shall be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National

ACCORDING TO
N.Y. TIMES 6/6/72

Institute for Occupational Safety and Health, and to authorized representatives of either.

(2) *Employee access.* Every employee and former employee shall have reasonable access to any record required to be maintained by subparagraph (1) of this paragraph, which indicates the employee's own exposure to asbestos fibers.

(3) *Employee notification.* Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

(j) *Medical examinations—(1) General.* The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) *Preplacement.* The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(3) *Annual examinations.* On or before January 31, 1973, and at least annually thereafter, every employer shall provide, or make available, comprehensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers. Such annual examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(4) *Termination of employment.* The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(5) *Recent examinations.* No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(6) *Medical records—(1) Maintenance.* Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations.

tions. Records shall be retained by employers for at least 20 years.

(ii) *Access.* The contents of the records of the medical examinations required by this paragraph shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of NIOSH, to authorized physicians and medical consultants of either of them, and, upon the request of an employee or former employee, to his physician. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

3. A new § 1910.19 is added to Subpart B of Part 1910, reading as follows:

§ 1910.19 Asbestos dust.

Section 1910.93a shall apply to the exposure of every employee to asbestos dust in every employment and place of employment covered by § 1910.12, § 1910.13, § 1910.14, § 1910.15, or § 1910.16, in lieu of any different standard on exposure to asbestos dust which would otherwise be applicable by virtue of any of those sections.

Effective date. Paragraph (b)(2) of § 1910.93a shall become effective July 1, 1976. All other provisions of §§ 1910.93a, 1910.93, and 1910.19 shall become effective July 7, 1972. The current emergency temporary standard remains in effect until July 7, 1972.

(Secs. 8, 84 Stat. 1593, 1598; 29 U.S.C. 655, 657; 29 CFR 1910.4; Secretary of Labor's Order No. 12-71, 36 F.R. 8754)

Signed at Washington, D.C., this 2d day of June 1972.

G. C. GUENTHER,
Assistant Secretary of Labor.

(FR Doc.72-6574 Filed 6-6-72; 8:48 am)

ASBESTOS CODE KEPT DESPITE A WARNING

Special to The New York Times

WASHINGTON, June 6—The Occupational Safety and Health Administration ordered today a continuation of asbestos dust exposure limits for four more years despite the recommendations by a scientific panel that they be cut by more than half.

On the basis of mounting medical evidence of asbestos-caused cancer in the vicinity of plants using the material, Secretary of Labor James D. Hodgson had issued a temporary emergency standard of five fibres of asbestos per cubic centimeter of air for workers using the substance. A ceiling of 10 fibres per cubic centimeter was set the maximum exposure for workers in an eight-hour day.

The so-called consensus standard originally promulgated under the new safety and health law set a standard of 12 fibres per cubic centimeter and double that for an eight-hour day.

After setting the emergency standard on an appeal from the Industrial Union Department of the American Federation of Labor and Congress of Industrial Organizations, the Secretary named a scientific advisory committee that included doctors, industrial hygienists and engineers to recommend a permanent standard.

This group proposed a standard of two fibres per cubic centimeter of air and a maximum exposure limit of five fibres for an eight-hour day. The Secretary ruled today that the two-fibre limit would become effective July 1, 1976. The eight-hour exposure limit was to remain at 10 fibres.



USDL 72-366

(202) 961-3914

FOR RELEASE: Immediate
Wednesday, June 7, 1972OSHA ESTABLISHES NEW STANDARD FOR EMPLOYEE EXPOSURE TO ASBESTOS DUST

A new standard for employee exposure to asbestos dust, limiting concentrations to 2 fibers, which are longer than 5 micrometers, per cubic centimeter of air on a time-weighted average, effective July 1, 1976, was announced today by the Occupational Safety and Health Administration (OSHA).

The current permissible time-weighted average concentration of 5 fibers of asbestos longer than 5 micrometers, established originally in an emergency temporary standard last December 7, will be continued until July 1, 1976.

The standard also establishes a ceiling concentration of 10 fibers, not to be exceeded at any time.

George C. Guenther, Assistant Secretary of Labor for OSHA, said the new standard was adopted after consideration of recommendations from the National Institute for Occupational Safety and Health (NIOSH) of the Department of Health, Education, and Welfare; of the OSHA Advisory Committee on Asbestos Dust, and of comments from interested persons, including presentations in a four-day public hearing.

The new standard provides the following:

Acceptable concentrations -- As of July 1, 1976, time-weighted average concentrations of asbestos fibers longer than 5 micrometers will not be allowed to exceed 2 fibers per cubic centimeter of air. The current time-weighted average concentrations of 5 fibers will be permitted until July 1, 1976.

- MORE -

Methods of compliance -- Feasible technological controls and appropriate work practices are required as the primary means of compliance. Rotation of employees to reduce their exposures is allowed only in "exceptional circumstances." Personal protective equipment, such as respirators, cannot be relied upon, in large part because such devices are so uncomfortable as to be burdensome except for short periods.

The standard includes these other compliance requirements:

-- Hand tools that may produce or release asbestos fibers in excess of the limits must be provided with local exhaust ventilation systems.

-- Insofar as practicable, asbestos must be handled, mixed, applied, removed, cut, scored or otherwise worked in a wet state to reduce fiber emissions unless this would diminish the usefulness of the product.

-- No asbestos cement, mortar, coating, grout, plaster or similar material containing asbestos can be removed from shipping bags or other containers without being either wetted, enclosed or ventilated.

-- Where respirators are permitted, they must be selected from among the types approved by the Bureau of Mines or NIOSH. Extensive details are given on types of respirators and conditions for their use. No employee may be assigned to a task requiring a respirator if a physician determines it would affect his job functioning or his health.

-- The employer must provide and require the use of special protective clothing, change rooms, and two separate lockers for the employee's street and work clothes. The employer also must exercise care in laundering and other handling of contaminated clothing.

-- External work area surfaces must be kept free of excessive accumulations of asbestos fibers. Waste must be collected in sealed, impermeable bags or other such containers.

- MORE -

Monitoring -- Employers must establish monitoring systems to make certain every employee's exposure to asbestos fibers is below the prescribed limits. If the limits are exceeded, the employer must undertake a compliance program. Therefore, the standard also requires monitoring at intervals no longer than 6 months and gives employees or their representatives the opportunity to observe the monitoring and to have access to such records.

Warning signs -- Caution signs are to be displayed in areas where asbestos concentrations may exceed the exposure limits. Caution labels must be affixed to all raw materials, mixtures, scrap, waste, debris and other products containing asbestos fibers, or to their containers. However, no label is required where asbestos has been modified by a bonding agent, coating, binder or other material that would prevent release of above-limit concentrations.

Recordkeeping -- Employers must maintain records of personal or environmental monitoring, keep them for at least 3 years, and make them available upon request to OSHA or NIOSH. Every current and former employee is given opportunity for reasonable access to any records indicating their exposure to asbestos dust. Any employee found to have been exposed at any time to airborne concentrations in excess of the limits must be notified in writing no later than 5 days after the finding, and informed as to corrective action being taken.

Medical examinations -- The employer must provide, or make available at his cost, medical examinations. Within 30 days of an employee's first employment in a job involving asbestos exposure, the employer must provide a comprehensive medical examination, including a chest X-ray and pulmonary tests. By January 31, 1973, and at least annually thereafter, every employer shall provide or make available comprehensive medical examinations to employees in asbestos exposure areas. A similar examination is to be provided within 30 days before or after termination of employment.

- MORE -

Medical records -- Employers whose employees have been examined under the standard must maintain complete records of these examinations and retain them for at least 20 years. The contents of the records are to be made available for inspection and copying to the Assistant Secretary of Labor for OSHA, the Director of NIOSH, authorized physicians and medical consultants of either agency, and, upon request of an employee or former employee, to his physician. Any physician who conducts an examination under the standard must furnish the employer all information required by the standard, and any other medical information related to occupational exposure to asbestos fibers.

Affected employment -- This general standard covers also employees in construction, ship repairing, shipbuilding, shipbreaking and longshoring who normally are subject to construction and maritime standards.

All parts of the new standard go into effect July 7 of this year except for the reduction from 5 fibers to 2, which takes effect July 1, 1976. The standards is scheduled for publication in the Federal Register June 7.

B U L L E T I N

N O. 4 4 1

June 19, 1972

SUBJECT: BRAKE BLOCK IDENTIFICATION CATALOG

Earlier in the year it was decided to proceed with publication of a Brake Block Identification Catalog.

Based on publication of a 32 page book plus cover, and total orders of 20,000, the price to the members is \$203.00/M. While the 32 pages seems relatively firm, if we should have total orders exceeding 20,000 the price will be reduced accordingly. Please price your orders at:

Catalogs	\$203.00/M
Punching	4.50/M

(1) Please make out your Purchase Order on Success, Inc., 1345 West 14th Street, Indianapolis, Indiana, 46202.

(2) BUT MAIL THE ORDER TO: Friction Materials Standards Institute, E-210 Route #4, Paramus, N. J. 07652.

I am enclosing the Table of Contents for this Catalog. It will come with a Black cover (with white printing). Content will be as shown on the Table of Contents.

The book should be ready for mailing in August 1972. We would appreciate it if those companies who will be ordering the Catalog would forward their orders soon so we can arrive at a final order quantity.

E. W. Drislane
Executive Secretary

S
Distribution: Active Members
Regional Members

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CUSTOMER ALERT
PLANTER ERROR

B U L L E T I N

N O. 4 4 0

June 13, 1972

APPLICATION FOR MEMBERSHIP - AUTO SPECIALTIES MFG. CO.

An application for Active Membership was received from Auto Specialties Manufacturing, Co., St. Joseph, Missouri. Your Membership Committee recommended acceptance of their application,--The Board of Directors has similarly recommended acceptance of Auto Specialties as an Active Member.

Ballots are attached to Delegates' copies only. Will the delegate kindly record his vote, on the attached ballot, and return to my attention.

E. W. Drislane
Executive Secretary

Distribution: Active Members

BULLETIN

NO. 439

June 12, 1972

SUBJECT: Occupational Safety & Health Administration -
Standard for Exposure to Asbestos Dust.

On June 7, 1972, OSHA published their standard on exposure to asbestos dust in the work-place.

Exposure Limitations

The standard remains at 5 fibers (a fiber being longer than 5 micrometers) per cc of air as measured by the membrane filter method--for an 8 hour time weighted average. This is effective July 7, 1972.

As of July 1, 1976 the 8 hour time weighted average will be reduced to 2 fibers per cc of air.

There is a ceiling concentration of 10 fibers per cc at any time.

This new standard has details on the use of respirators, ventilation, wetting down of asbestos, clothing, lockers, laundering, caution signs, medical exams, etc. are covered in this standard.

The Institute would be happy to send a copy of this Standard to members on request.

E. W. Drislane
Executive Secretary

Distribution: Active Members

BULLETIN

NO. 438

May 30, 1972

PRICE REDUCTION

for

1971 DATA BOOK SUPPLEMENT

Bulletin No. 430 of March 20, 1972 advised that the price of the 1972 Data Book Supplement would be \$86.32/M based on 36 pages and 80,000 copies.

This bulletin announces a price reduction to \$70.80/M (based on 88,000 orders for a 32 page Catalog). The \$6.00/M for punching remains unchanged.

Would you please advise your Purchasing Department to change their records to the new price, a decrease of \$15.22/M.

E. W. Drislane
Executive Secretary

Distribution: Active Members
Regional Members

BULLETIN

NO. 437

May 22, 1972

ADDITIONS TO CROSS REFERENCES

The original master list of cross references was issued by the Institute in 1963 (52 pages).

- (1) Bulletin 366 (21 pages) of February 1970 consists of all additions to cross reference since issuance of the master list.
- (2) Bulletin 400 (6 pages) of April 1971 added new cross reference data since issuance of Bulletin 366.
- (3) This Bulletin lists corrections to Bulletin 400 plus all additions since that date.

Additional copies of the master list or these Supplemental Bulletins are available at \$.05 per page.

E. W. Drislane
Executive Secretary

Distribution: C (Active and
Regional Members)

Corrections to Bulletin 400 (Addition to Cross References)
(Released April 1971)

Ford C8TZ-2007-L, M & N. Change to:

C8TZ-2007-L 4647 (kit)
-M 4639 (kit)
-N 4646 (kit)

D1AA-2022-AB Change to D1DA-2022-AB

White 893, 616 should read 894, 616.

Footnotes Pages 1 & 2. Should read:

*Clutch Facing
Bonded Lining*
Integrally Molded**

May 1972

AMERICAN MOTORS

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
3,213,677	2089AT(s)	3,213,678	2089AT(1)

DENDIX

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
309,254	2086	323,903	2146T(s)
316,414	4615 (adj)	323,904	2146T(1)
316,419	4605 (adj)	323,906	2140AT(s)
316,854	2121ET(1)	323,907	2140AT(1)
316,930	4602B(adj)	324,530	2145AT(1)
316,947	4615(anc)	1,150,898	787(1)
316,948	4605(anc)	1,150,899	787(0)
316,949	4602B(anc)	3,200,369	2089AT(s)
317,156	4602B	3,200,372	2089AT(1)
322,490	2146T(s)	3,200,375	2012FT(s)
322,492	2146T(1)	3,200,378	2012FT(1)
322,511	2140AT(s)	3,200,685	2152(s)
322,513	2140AT(1)	3,200,686	2152(1)
322,591	4605	3,200,688	2070A(1)
322,884	2097AT(s)	3,201,329	Shoe 391
322,886	2097AT(1)	3,201,330	Shoe 391
323,252	4615	3,201,332	2151T(s)
		3,201,335	2151T(1)

BORG & BECK

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
16,510,176	1142J		

CHRYSLER

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
2,072,752	2070A(s)		

May 1972

DELCO-MORaine

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
5,468,643	Shoe D-52(1)	5,472,369	Shoe D-52(1)
5,472,307	Shoe D-52(0)	5,472,647	Shoe D-52(0)
5,472,361	Shoe D-52(1)	5,474,512	Shoe D-52(0)

FORD

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
C5AA-2285-D	2121ET(1)	D20A-2B114-AA	Shoe D-50(0)
D1DA-2284-AA	2072AT(s)	D20A-2B300-AA	Shoe D-50(1)
D1DA-2285-AA	2072AT(1)	D20A-7550-BA	Facing 1037F
D12A-2285-AB	2145AT(1)	D22A-2021-AA	779A
D20A-2018-CA	788(0)	D22A-2220-AA	Shoe 391
D20A-2019-CB	788(1)	D22A-2220-BA	Shoe 391
D20A-2021-BB	788(0)	D22A-2284-AA	2151T(s)
D20A-2022-BB	788(1)	D22A-2285-AC	2151T(1)

FWD CORPORATION

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
196,505	4651	197,054	4650
196,506	4651	197,055	4650

GENERAL MOTORS

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
2,473,918	2086		

GIRLING

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
64,320,499	784**	64,932,570	Shoe D-49
64,326,961	789**	64,932,571	793**
64,932,422	790**	64,932,571	Shoe D-49
64,932,570	786**	64,932,576	792**

May 1972

** Integrally molded

KELSEY HAYES

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
49,135	2060T(s)	88,136	787(1)
49,138	2060T(1)	88,137	787(1)
87,437	Shoe D-53(1)	89,839	Shoe D-55(0)
87,852	Shoe D-53(0)	89,840	781A
87,853	Shoe D-53(0)	89,841	Shoe D-55(0)
87,856	Shoe D-53(1)	90,112	Shoe D-55(1)
88,108	787(0)	90,113	Shoe D-55(1)
88,109	787(0)		

LIPE ROLLWAY

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
C-18-99	1372	C-18-447	1372-A
C-18-287	1325-C	C-18-466	1372
C-18-377	1372	C-18-506	1372

LONG

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
65--10006	8025A	C-42-130	1372B
C-4590	1325	C-42-187	1142H
C-5225	1325A	C-42-213	1276A
C-15-812	1325B	C-42-293	1325D

TEVES

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
13.8107-4801.2	736**	13.8107-8001.2	D-56**
13.8107-8001.2	791**		

May 1972

**Integrally Molded

TRUCK

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
2000-E-447	4524	✓ 2740-J-400	4592A
2000-N-482	4524	✓ 2740-J-5184	4471
2000-P-172 (Kit)	4249	✓ 2740-K-5185	4471
2000-W-621	4524	2740-L-5186	4471
		2740-M-1131	4592A
2240-A-391	4541B		
2240-A-1015	4398B	2740-M-2873	4592A
2240-Q-1343	4398B	✓ 2740-M-5187	4471
2240-W-1349	4398B	2740-N-430	4227G
		2740-N-482	4524
2740-A-3147	4524	2740-N-2874	4592A
✓ 2740-B-2576	4524	2740-P-926	4211
2740-B-3148	4524	✓ 2740-Q-3839	4514F
2740-C-2577	4524	✓ 2740-R-3840	4514F
✓ 2740-C-3149	4524	✓ 2740-R-4048	4514F
		2740-S-435	4541B
✓ 2740-D-2578	4524	✓ 2740-S-4049	4514F
✓ 2740-D-3150	4524		
2740-E-447	4524	✓ 2740-T-436	4541B
✓ 2740-E-3151	4524	✓ 2740-W-1921	4524
✓ 2740-E-2579	4524	2740-X-1922	4524
		✓ 2740-Z-3146	4524
✓ 2740-F-3152	4524		
✓ 2740-F-2580	4524		
✓ 2740-G-2581	4524		
2740-G-3153	4524		
2740-G-5181	4471		
2740-H5182	4471		

VOLKSWAGEN

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
113-609-237G	Shoe 392	211-609-537J	Shoe 374
		211-609-537J	Lining 8080

WAGNER

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
FD-70520	2150(s)	FE-70321	Shoe 386
✓ FD-70521	2150(l)	✓ FE-70330	Shoe 376
FD-71108	2150(l)	FE-70331	Shoe 379
✓ FD-71109	2150(l)	FE-75319	2012GT(s)
✓ FD-71178	2150(s)		

May 1972

WACNER

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
FD-71179	2150(s)	FE-75749)	2072AT(s)
FE-19143	Shoe 377	75750)	
FE-19535	Shoe 384	75751)	
FE-26270	Shoe 380	75752)	
FE-31197	Shoe 382	75753)	
FE-57513	Shoe 375	FE-75760)	2072AT(1)
FE-70310	Shoe 346	75761)	
FE-70311	Shoe 381	75762)	
FE-70312	Shoe 383	75763)	
FE-70320	Shoe 385	75764)	
		FE-76755	2012GT(1)
		FE-76760	Shoe 393

May 1972

B U L L E T I N

NO. 436

May 18, 1972

TO: ACTIVE MEMBERS

SUBJECT: AUTOMOTIVE INFORMATION COUNCIL (AIC)

The Institute has supported AIC's efforts to help defend the automotive industry with a balanced information program.

We know that in many cases Corporate Headquarters or others handle these solicitations. Further, we are in no ways an agent of AIC, but are passing these along to our members for whatever action they deem appropriate.

Enclosed, with the Delegate's copy only, are:

- (1) AIC "Tell It Like It Is" Campaign Card.
- (2) Reply Envelope.

The foregoing is for your information. No further solicitation appeals from AIC will be forwarded to our membership.

EWD:llz
Enc.

E. W. Drislane
Executive Secretary

B U L L E T I N

N O. 435

April 25, 1972

APPLICATION FOR REGIONAL MEMBERSHIP

An application for Regional Membership was received from:

Pasta Clutch, S.A.
San Andres Atoto 9-CYD
Naucalpan, Edo de Mexico
Mexico

This application was reviewed by the Membership Committee who recommended to the Board of Directors the acceptance of Pasta Clutch, S.A. as a Regional Member. The Board of Directors concurs, and recommends that Pasta Clutch, S.A. be accepted as a Regional Member of the Friction Materials Standards Institute, Inc.

Will you kindly record your vote, on the attached ballot, and return to my attention.

E. W. Drislane
Executive Secretary

EWD:11z

Distribution: Active Members

MEMBERS' BALLOT

(Bulletin #435)
April 25, 1972

Friction Materials Standards Institute, Inc.
E. 210 Route #4
Paramus, N. J. 07652

Gentlemen:

My vote on the acceptance of the application for Regional Membership
by Pasta Clutch, S.A. is:

☐ Yes

☐ No

Signature _____

Company _____

Date _____

B U L L E T I N

N O. 434

April 19, 1972

FMSI COPYRIGHT

In recent weeks I have examined several catalogs where FMSI numbers are used and where the proper acknowledgment of FMSI ownership of the copyrighted numbers has not been shown. These were all - except one - in members' catalogs.

The following - or similar - statement must be shown in any catalog using the FMSI numbers:

FMSI numbers used herein are the property of and
are copyrighted by Friction Materials Standards
Institute, Inc., Paramus, New Jersey.

Please see that whoever is responsible for your catalogs is aware of this requirement.

E. W. Drislane
Executive Secretary

Distribution: All Active Members
All Licensees
All Regional Members

EWD:11z

BULLETIN

NO. 433

April 10, 1972

AUTOMOTIVE INFORMATION COUNCIL

As you may know, your Institute, along with 35 other of the industry's trade associations, has become affiliated with the AIC and endorses its planned three year national "Million Voices - Tell America" public relations program in support of all segments of the automotive industry.

The campaign to raise the first year's annual budget of \$500,000 is now underway with advance gifts already in hand of over \$200,000.

Jack Martin, chairman of Dana Corporation, is heading the drive and has enlisted an outstanding group of industry leaders to sponsor and carry on the campaign. They are now at work writing and calling on thousands of companies in the industry to support the effort. The AIC can only be successful if it has widespread financial and moral support from the industry. Small and medium size companies, as well as the large ones, must subscribe if AIC is not to be considered by governmental bodies, consumer groups and the press as being merely another voice of "big business."

The Council's Public Relations Committee and the Farley Manning organization of New York are now developing plans for the first year's activities. It is expected that the program will commence this spring.

We urge all of our members to consider the AIC request and to mail in their membership subscriptions. Whether large or small, the important thing is that your company's voice be joined with thousands of other in the "Tell America" campaign.

Note: Checks should be made payable to Automotive Information Council, Inc., and sent to 342 Madison Avenue., New York City, N.Y. 10017.

E. W. Drislane
Executive Secretary

Distribution: All Active Members
All Licensees
All Regional Members

FRICTION MATERIALS STANDARDS INSTITUTE, INC., E-210 ROUTE 4, PARAMUS, N.J.

BULLETIN

NO. 432

April 6, 1972

TO: ALL MEMBERS

SUBJECT: STATE OF OHIO REGULATIONS ON BRAKE LININGS

I have just received word from Mr. Fred Vierow, Deputy Director of the Department of Highway Safety in Ohio, that their new regulations carry an effective date of May 15, 1972.

Their basic brake lining test procedure is the V-3 procedure used by New York and other states. I am attaching to this Bulletin excerpts from their regulations as follows:

- HS-19-07 - Requirements for Approval
- HS-19-08 - Identification Requirements
- HS-19-09 - Submission of Certified Laboratory Reports
- HS-19-10 - Effective Date

I am also attaching a copy of the letter from Mr. Vierow should you wish to get in touch with him directly. I would be happy to send full copies of the regulations should you be interested.

EWD:11z

E. W. Drislane
Executive Secretary

Distribution: Active Members

B U L L E T I N

N O. 4 3 1

April 4, 1972

TO: ALL MEMBERS

SUBJECT: QUALITY CONTROL AND CERTIFICATION

A copy of a Special Report by Motor & Equipment Manufacturers Association (MEMA) entitled "Compliance Sampling and Certification Responsibilities of Automotive Manufacturers" is enclosed with the Delegate's copy of this bulletin.

At a recent meeting of the Institute's Brake Performance Study Committee, this report was reviewed to determine its applicability to brake lining (and possibly clutch facing) manufacturers.

In summary, it was agreed, concerning compliance sampling and certification responsibilities:

- (1) They apply to brake lining (and probably clutch facing) manufacturers.
- (2) A formal quality control procedure using sampling is necessary if manufacturers are to have a substantial defense should the NHTSA allege that "due care" was not exercised by the manufacturer of safety-related equipment (brake linings).
- (3) The burden of proof is on the manufacturer to assure that his product was designed to conform to applicable standards and that he has a satisfactory quality control program to support his certification.

It is suggested that your personnel involved in the development of products and in quality control be advised of these responsibilities.

E. W. Drislane
Executive Secretary

Distribution: Active Members

B U L L E T I N

N O. 4 3 0

March 20, 1972

ORDERS FOR THE 1972 SUPPLEMENT TO THE 1971 AUTOMOTIVE DATA BOOK

The contract for the printing of the 1972 Supplement has been awarded to:

Tweddle Litho Company
24000 Harper Avenue
St. Clair Shores, Michigan #48080

It is beleived that it will contain 36 pages.

On an estimate of the total order being 80,000 copies of a 36 page book,
the price is:

\$86.32 per M
\$ 6.00 per M additional for five hole punching
(This will be the only type punching).

If there is a change in the price per thousand due to a change in number of pages
or to changes in order quantities, or for author's alterations, you will be
notified.

Please forward all orders to the Institute Office in Duplicate. Do not send
them to the printer. This is our only means of checking the total quantities
ordered and the price charged, as well as whether only members are ordering.

The orders are to be made out to Tweddle Litho Company and are to state punching
and shipping instructions.

REMEMBER - The orders in duplicate are to be sent to the Institute Office.

Kindly forward your orders so that they reach the Institute Office by April
15th.

E. W. Drislane
Executive Secretary

Distributions: Active Members
Regional Members

BULLETIN

NO. 429

March 6, 1972

HISTORICAL SALES PROGRAM

The historical sales data for the year ending December 31, 1971, is now being assembled by Marshall Granger & Co., Certified Public Accountants. They advise that several members have not replied as of yet.

If your firm is among those which have not replied, it would be appreciated if you would report your data to Marshall Granger & Co. Reporting details were sent with our Bulletin No. 424, of January 21, 1972.

CUT-OFF DATE - March 31, 1972

The report for this year will be cut-off as of March 31, 1972. Any replies not in the hands of the Accountants by March 31, 1972, will not be included. The Accountants will distribute their report as soon after this date as possible.

E. W. Drislane
Executive Secretary

CC: Active Members
L. D. Stickles
Marshall Granger & Co.

BULLETIN

NO. 428

February 18, 1972

To: ALL MEMBERS

SUBJECT: Demonstration - Membrane Filter Method for Airborne Asbestos Measurement
By: W. Reitze, Johns-Manville Corporation.

By earlier bulletins, the membership had been advised that Mr. W. Reitze of Johns-Manville Corporation would give a demonstration on the standard method for measuring airborne asbestos fibers. Mr. Reitze made this presentation on Thursday, February 10, 1972 at the Institute Office in Paramus, New Jersey.

Those Attending:

J. Greenen, President of F.M.S.I.)	)	Maremont Corporation
R. Hermelgarn)	)	Grizzly Brake Division
K. Barnhardt)	)	
J. Henning)	)	World Bestos Company, Division of
	)	The Firestone Tire & Rubber Company
J. Graham)	)	Carlisle Corporation
	)	Molded Materials Division
M. Jacko)	)	Bendix Corporation
	)	Friction Materials Division
W. Richards)	)	Thiokol Chemical Corporation
W. Reitze)	)	Johns-Manville Corporation
E. W. Drislane)	)	Friction Materials Standards Institute, Inc.

MEASURING AIRBORNE ASBESTOS FIBERS

Mr. Reitze discussed the earlier Impinger Method (no longer accepted) where the air sample is passed through a glass tube bubbler and the fiber is trapped with a subsequent count of fibers.

The currently accepted method calls for measurement of airborne asbestos fiber by the membrane filter method. Briefly, the pick-up is worn by a worker in the area to be measured with a small battery operated vacuum pump taking in air over a specified period - of different times, say 60 minutes, 90 minutes, or four hours. The asbestos fiber is trapped by the membrane filter and then carefully sealed and sent to the laboratory. The sample is examined using an optical microscope where a count of fibers is made.

The details of the test are described in:

"Measurement of Airborne Asbestos Fiber by the Membrane Filter Method" published by the Asbestos Textile Institute.

Asbestos Textile Institute
P. O. Box #239
Pompton Lakes, New Jersey #07442
(Price \$1.00 per copy)

The Institute has ordered copies and will send one to each Delegate. If additional copies are desired, it is suggested that the member order the copies directly from the Asbestos Textile Institute.

Mr. Reitze's demonstration will not be detailed as the booklet mentioned covers the equipment and procedures in detail.

COMMENTS AND SUGGESTIONS

The cost of pad and filters inserted are 70¢ per piece, from Millipore Corporation, Bedford, Massachusetts #01730.

It is suggested that four to six pumps (costing about \$150. each) be used so that a supervisor can monitor more than one test at a time. A battery charger will cost about \$50. One should have one charger for every two pumps.

Seeding (or sabotage) when a worker throws additional asbestos to the intake may ordinarily be detected when the sample is counted under the microscope, but additional tests may be necessary in the same area with different workers.

A pump could be mounted in a fixed position near the work place but the proper method is to have the pump attached with the intake facing down near where the worker breathes.

A binocular microscope with phase contrast illumination set for 400/430X magnification is required. A Bausch and Lomb microscope costing about \$1,200.-1,500. is the basic instrument. Binocular microscopes with additional features could well be worth the additional cost, but professional advice should be used in the selection of equipment.

OUTSIDE SERVICES AND TRAINING

It may be feasible to have outsiders do the full job - from sampling through examination and reporting. Others will do the analysis work only where the samples are mailed to the laboratories.

Tracerlabs in California will do analysis work for about \$50.-60. per analysis.

• Johns-Manville will do the full job for a fee (Contact Mr. W. Reitze, Manager Industrial Hygiene Engineering Service, Johns-Manville Corporation, P. O. Box #5108, Denver, Colorado #80217)

George Clayton Labs, Southfield, Michigan will do the full job for a fee.

There are other labs that may do the entire package or the analysis work only.

Johns-Manville indicated it would be willing to train personnel in the technique in a two day period. They would take one trainee, or at most two trainees, to one instructor for \$200. a day. These sessions would be at Phindern (Somerville) New Jersey or Waukegan, Illinois. Again, the contact would be with Mr. Reitze in Denver.

It is suggested that the members familiarize themselves with OSHA's proposed standards. A copy of these standards, as issued in the Federal Register on January 12, 1972, is enclosed with Bulletin #427.

E. W. DRISLANE
Executive Secretary

Asbestos Study Committee
Delegates & Alternates
British Friction Materials Council
AIA/NA and L. D. Stickles, Counsel

BULLETIN

NO. 427

February 18, 1972

STANDARDS FOR EXPOSURE TO ASBESTOS DUST

At last week's meeting of the Asbestos Study Committee, regulations concerning asbestos were discussed.

ILLINOIS POLLUTION CONTROL BOARD

It was felt that there would not be further action in the near future to ban asbestos in brake linings, as proposed by the Illinois Pollution Control Board.

ENVIRONMENTAL PROTECTION AGENCY

The proposed emissions standards by the Environmental Protection Agency emphasize control practices (i.e., filters, traps, etc.) rather than numerical emission values. These appear to be reasonable standards. Manufacturers of asbestos brake linings and clutch facings should be familiar with these regulations. Copies are available to Institute members on request.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

This group (referred to as OSHA) is working with numerical standards, and they are rough standards. They will be enforcing a 5 fibers per cc time weighted average limit for asbestos exposure. The regulators would like to reduce it to two fibers per cc time weighted average. Such a reduction (to 2 fibers per cc) will be a most ~~serious~~ challenge to the asbestos brake lining and clutch facing manufacturers.

A copy of the January 12, 1972 Standard for Exposure to Asbestos Dust is enclosed. You will note that it is too late for written comments. However, should representatives of members wish to present oral views, that can be done at a Washington hearing on March 14, 1972. Persons wishing to appear at the hearing must file with OSHA notice of intention no later than March 3, 1972. For details, see enclosure.

METHODS TO MEASURE ASBESTOS CONCENTRATIONS

Along with this bulletin, the Institute is forwarding to members instructions and suggestions on the approved method for measuring airborne concentrations of asbestos dust.

INSTITUTE CONTACT WITH MEMBERS

Rather than forward this information routinely to Delegates and Alternates, we plan to forward bulletins on asbestos to one representative of each member only. Unless advised to the contrary, these will be sent to the Delegate. Should you prefer to have some other representative of your company receive these bulletins, please advise.

Asbestos Study Committee
Delegates and Alternates
British Friction Materials Council
AIA/NA and L. D. Stickles, Counsel

E. W. DRISLANE
Executive Secretary

DEPARTMENT OF LABOR
Occupational Safety and Health
Administration

[29 CFR Part 1910]

**STANDARD FOR EXPOSURE TO
ASBESTOS DUST**

Notice of Proposed Rule Making

Section 6(c) of the Williams-Steiger Occupational Safety and Health Act of 1970 (84 Stat. 1596; 29 U.S.C. 655) provides that upon the publication of an emergency temporary standard in the FEDERAL REGISTER the Secretary of Labor shall commence a rule making proceeding in accordance with section 6(b) of the Act, and that the emergency standard as published shall also serve as a proposed rule for the proceeding. An emergency temporary standard concerning exposure to asbestos dust was published in the FEDERAL REGISTER on December 7, 1971 (36 F.R. 23207). Accordingly, pursuant to section 6 (b) and (c) of the Williams-Steiger Occupational Safety and Health Act of 1970 (84 Stat. 1593, 1596; 29 U.S.C. 655), 29 CFR 1910.4, and Secretary of Labor's Order No. 12-71 (36 F.R. 8754), it is hereby proposed to amend 29 CFR Part 1910 as set forth below. The proposals include the emergency temporary standard and additional proposed rules on subsidiary issues.

Interested persons are invited to submit, both orally and in writing, data, views, and arguments concerning these proposals.

Written data, views, and arguments may be mailed to the Office of Safety and Health Standards, Room 305, 400 First Street NW., Washington, DC 20210, within 30 days after the publication of this notice in the FEDERAL REGISTER. The data, views, and arguments will be available for public inspection and copying at the Office of Safety and Health Standards, except as to matters the disclosure of which is prohibited by law.

Oral data, views, and arguments will be received by Hearing Examiner Arthur Goldberg, at a hearing beginning at 10 a.m. on March 14, 1972, in Conference Room B, Departmental Auditorium, 14th Street and Constitution Avenue NW., Washington, DC. Persons desiring to appear at the hearing must file with the Office of Safety and Health Standards a notice of intention to appear, no later than March 3, 1972. The notice must state the name and address of the person to appear, the capacity in which he will appear, and the approximate amount of time required for his presentation. The notice must also include, or be accompanied by, a statement of the position to be taken with regard to the proposed rules.

The oral proceedings shall be reported verbatim, and transcripts shall be available for inspection to any interested person on such conditions as the presiding

JAN 12, 1972

wheels, and drills, shall be provided with local exhaust ventilation and dust collectors in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems; ANSI Z9.2—1971.

(3) Employees exposed to the spraying of asbestos, to the demolition of pipes, structures, or equipment covered or insulated with asbestos, or to the demolition of insulating strippings, shall be provided with respiratory protective devices in accordance with paragraph (c) (3) of this section.

(4) Asbestos cement, mortar, coatings, grout, and plaster shall be mixed in closed bags or other closed containers.

(5) Asbestos waste and scrap shall be collected and disposed of in sealed bags or other closed containers.

(6) Accumulation of asbestos dust shall be removed, as soon as practicable, and only by vacuum cleaners.

(e) **Warning signs.**—(1) **Posting.** Warning signs shall be provided and displayed at each location where asbestos dust hazards are present. Signs shall be posted at least 50 feet in each direction from the location where the hazard is present, and at intervals of not more than 100 feet along each edge of the area where the hazard is present.

(2) **Sign specifications.** The warning signs shall conform to the requirements for 20" x 14" vertical format signs specified in § 1910.145(d) (2), and to this paragraph. The signs shall display the following legend in the white panel, with letter sizes and styles of a visibility at least equal to that specified in the notation in the following column to the right:

Legend:	Notation
Asbestos	1" Sans Serif Gothic or Block.
Dust Hazard	¾" Sans Serif Gothic or Block.
Follow these	½" Gothic.
Safety and Health Rules	¾" Sans Serif Gothic or Block.
1. Avoid breathing dust.	¾" Gothic.
2. Wear your respirator.	¾" Gothic.
3. Do not remain in area unless your work requires it.	½" Gothic.
Asbestos dust may cause asbestosis, a severe lung disease, and is implicated in the development of certain cancers. Control of exposure to asbestos dust helps protect against these hazards.	14 point Gothic.

(3) **Spacing.** Spacing between lines shall be at least equal to the height of the upper of any two lines, except that the spacing between "Following these" and "Safety and Health Rules" shall be at least ¾".

(f) **Monitoring.**—(1) **Personal.** Employees engaged in the particular operations or using the particular tools specified in paragraph (d) of this section, or exposed to concentrations of asbestos

dust in excess of the limits specified in paragraph (c) (3) of this section shall be monitored in accordance with this paragraph.

(i) **Method.** Dust samples shall be collected from within the normal breathing zone of the employees in their normal working posture. Employees wearing respiratory protective devices shall have the sample taken from a point located on the exterior of the respirator facepiece.

(ii) **Procedure.** The sampling procedure shall be such as to permit the determinations required by paragraph (a) of this section.

(iii) **Sampling duration.** The sampling duration shall be for a period of not less than 15 consecutive minutes.

(iv) **Sampling frequency.** Sampling periods shall be of such number and pattern as to represent accurately the exposure of the employees over their working period.

(2) **Environmental.** Environmental monitoring shall be conducted in all areas in which employees are exposed to concentrations of asbestos dust in excess of the limits specified in paragraph (a) of this section.

(i) **Method.** Asbestos dust samples shall be collected from areas which are representative of the concentration of airborne asbestos dust which may reach the breathing zone of exposed employees.

(ii) **Procedure.** Sampling procedure shall be such as to permit the determinations required by paragraph (a) of this section.

(iii) **Sampling duration.** Sampling duration shall be for a period of not less than 15 consecutive minutes.

(iv) **Sampling frequency.** Sampling periods shall be of such number and pattern as to represent accurately the exposure of the employees over their working period.

(g) **Medical examinations.** The employer shall provide, or make available at his cost, appropriate medical examinations on a periodic basis to any employee who is exposed to asbestos dust in excess of the limits specified in paragraph (a) of this section.

(h) **Records.** (1) Every employer shall maintain records of the personal and environmental monitoring, and of the medical examinations, required by paragraphs (f) and (g) of this section. Such records shall be maintained for at least 20 years.

(2) The records of monitoring shall be made available for inspection and copying to the Secretary of Labor and to his designated representatives.

(3) The records of medical examinations shall be made available only to the Secretary of Labor, to the Secretary of Health, Education and Welfare, to designated representatives of either of them, and, at the request of the employee or former employee examined, to his physician.

3. A new § 1910.19 is proposed to be added to Subpart B, reading as follows:
§ 1910.19 Asbestos dust.

Section 1910.93a shall apply to the exposure of every employee to asbestos dust

in every employment and place of employment covered by § 1910.12, 1910.13, 1910.14, 1910.15, or 1910.16 of this Subpart B, in lieu of any different standard on exposure to asbestos dust which would otherwise be applicable by virtue of any of those sections.

(Sec. 6, 84 Stat. 1593; 29 U.S.C. 655, 29 CFR 1910.4; Secretary of Labor's Order No. 12-71, 38 F.R. 8754)

Signed at Washington, D.C., this 6th day of January 1972.

G. C. GUENTHER,
Assistant Secretary of Labor.
[FR Doc. 72-402 Filed 1-11-72; 8:45 am]

11/12/72

hearing examiner may prescribe. The hearing examiner shall regulate the course of the oral proceedings, dispose of procedural requests, objections, and similar matters, regulate the conduct of those present at the hearing by appropriate means, and shall exclude to the extent practicable irrelevant, immaterial, and unduly repetitious data or arguments. The hearing examiner shall have discretion to keep the record of the hearing open for a reasonable, stated time to receive oral representations, and affidavits, data, views, and arguments from any person who has participated in the oral proceedings. Upon completion of the oral proceedings, the transcript thereof, together with written submissions on the proposed rules, exhibits filed during the hearing, and any posthearing data, views, arguments, and recommendations shall be certified by the hearing examiner to the Assistant Secretary of Labor for Occupational Safety and Health for his decision. The Assistant Secretary may adopt the proposals with or without changes, or determine not to issue a rule.

Under the authority of section 6(b) (1) and section 7(b) of the Act, the Assistant Secretary of Labor for Occupational Safety and Health will request the recommendations of an advisory committee with regard to the proposed rules. The committee will be provided with copies of these proposals, together with all pertinent factual information which is, or may become, available to the Assistant Secretary, including any information submitted by the National Institute for Occupational Safety and Health. The advisory committee will be asked to submit to the Assistant Secretary written recommendations regarding these proposed rules within 45 days after the publication of this notice. The recommendations will be available for public inspection and copying. No other advisory committee will be consulted with regard to these proposed rules.

Part 1910 of Title 29 of the Code of Federal Regulations is proposed to be amended as follows:

§ 1910.93 (Amended)

1. Table G-3 in § 1910.93 (36 F.R. 15104, August 13, 1971) is proposed to be amended by deleting the following:

Asbestos—10 fibers per milliliter greater than 5 microns in length or . . . 2 Mppcf.
Tremolite . . . 5 Mppcf. $\frac{20 \text{ mg/M}^3}{\% \text{SiO}_2}$

If so amended, Table G-3 would read as follows:

TABLE G-3—MINERAL DUSTS		
Substance	Mppcf	Mg/M ³
Silica, crystalline:		
Quartz (crystalline)	250 ¹	10 mg/M ³ or $\frac{20 \text{ mg/M}^3}{\% \text{SiO}_2+5}$
Quartz (total dust)		$\frac{50 \text{ mg/M}^3}{\% \text{SiO}_2+2}$
Graphite (natural)		$\frac{15 \text{ mg/M}^3}{\% \text{SiO}_2+2}$

¹ For more than 5% SiO₂.

² For more than 5% SiO₂.

³ For more than 5% SiO₂.

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⁹⁹ For more than 5% SiO₂.

¹⁰⁰ For more than 5% SiO₂.

Substance	Mppcf	Mg/M ³
Amorphous, including natural diatomaceous earth	20	50 mg/M ³
Silicates (less than 1% crystalline silica):		
Alumina	20	
Serpentine	20	
Talc	20	
Ferrous cement	50	
Graphite (natural)	15	
Coal dust (respirable fraction less than 5% SiO ₂)		2.4 mg/M ³ or 10 mg/M ³
For more than 5% SiO ₂		$\frac{15 \text{ mg/M}^3}{\% \text{SiO}_2+2}$
Inert or Nuisance Dust:		
Respirable fraction	15	5 mg/M ³
Total dust	50	15 mg/M ³

NOTE: Conversion factors—
mppcf $\times 35.3$ =million particles per cubic meter
=particles per c.c.
Millions of particles per cubic foot of air, based on sampler samples counted by light-field techniques.
The percentage of crystalline silica in the formula is the amount determined from air-borne samples, except in those instances in which other methods have been shown to be applicable.
As determined by the membrane filter method at 430 $\times$ phase contrast magnification.
Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC instrument. If the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 Mg/M³ in the table for coal dust is 4.5 Mg/M³.

2. A new § 1910.93a is proposed to be added to Part 1910, reading as follows:

§ 1910.93a Asbestos dust.

(a) *8-hour time-weighted average.* The 8-hour time-weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 5 fibers longer than 5 microns per milliliter, as determined by the membrane filter method at 400-450 $\times$ (magnification) (4 millimeter objective) phase contrast illumination. Concentrations above 5 fibers per milliliter, but not to exceed 10 fibers per milliliter, may be permitted up to a total of 15 minutes in an hour, but for not more than 5 hours in an 8-hour day.

(b) *Methods of compliance.* (1) *Engineering methods.* Engineering methods, such as, but not limited to, enclosure, vacuum sweeping, and local exhaust ventilation, shall be used to meet the exposure limits prescribed in paragraph (a) of this section. Where such engineering methods are not feasible, or do not reduce the concentrations below the limits prescribed in paragraph (a) of this section, respiratory protective devices shall be provided and used in accordance with subparagraph (2) of this paragraph.

(2) *Other methods.* (i) When the limits of exposure to asbestos dust prescribed in paragraph (a) of this section are exceeded, and engineering controls required by subparagraph (1) of this

paragraph are not feasible, the employer shall reduce the concentration of asbestos dust below the limits prescribed in paragraph (a) of this section, and shall require the use of respiratory protective devices. The selection of respiratory protective devices shall be in accordance with the specifications in paragraph (c) of this section.

(ii) The employer shall require each employee test his or her respiratory protective device before each use in order to insure a proper fit according to the manufacturer's instructions. The employer shall further provide for the training or supervision of employees in the testing of respiratory protective devices for fit before their use.

(c) *Allowable respirator use.* (1) When the 8-hour time-weighted average concentration of asbestos dust is projected to exceed 5 fibers longer than 5 microns per milliliter, but not to exceed 10 fibers, and when a concentration over a period of 15 minutes does not exceed 50 such fibers, a powered or single use filter type respirator, operating with negative pressure during the inhalation phase of breathing, approved by the U.S. Bureau of Mines under the provisions of 30 CFR Part 14 (Bureau of Mines Schedule 1B), shall be used.

(2) When the 8-hour time-weighted average concentration of asbestos dust is projected to exceed 10 fibers longer than 5 microns per milliliter but not to exceed 250 such fibers, and when a concentration over a period of 15 minutes exceeds 50 fibers longer than 5 microns per milliliter but does not exceed 250 such fibers, a powered filter type pressure respirator approved by the U.S. Bureau of Mines under the provisions of 30 CFR Part 14 (Bureau of Mines Schedule 21B) shall be used.

(3) When the 2-hour time-weighted average concentration of asbestos dust is projected to exceed 250 fibers longer than 5 microns per milliliter, a powered positive pressure supplied air respirator approved by the U.S. Bureau of Mines under the provisions of 30 CFR Part 14 (Bureau of Mines Schedule 100) shall be used.

(4) The employer shall establish a respirator program in accordance with the requirements of American National Standard Practice for Respiratory Protection Z38.2-1959.

(5) The respirators provided each employee shall be properly inspected, cleaned, repaired, and stored.

(d) *Particular operations and products.* (1) When an employer has employees who are exposed to asbestos dust resulting from the operation of the use of tools described in the remaining subparagraphs of this paragraph, the employer shall comply with the requirements of this paragraph. The requirements of this paragraph shall apply at all times, and, in addition, the requirements of paragraph (b) of this section may also apply, according to the limits thereof.

(2) All hand- or power-operated tools which produce asbestos dust, such as but not limited to, saws, scrapers, abraders

11/2/72

B U L L E T I N

N O. 4 2 6

January 26, 1972

MEASUREMENT OF ASBESTOS FIBERS IN THE AIR

This is a follow-up to our Bulletin #417 of November 10, 1971 in which we advised that Mr. W. B. Reitze of Johns-Manville would be willing to give a talk and demonstration, including a discussion of materials, methods, cost, personnel requirements and legal aspects involved with the Occupational Safety & Health Act's requirements on monitoring asbestos fiber in the work-place.

Our replies indicated that we should expect 8 to 10 individuals to attend this session. For that reason it has been scheduled at the Institute's new office in Paramus, N. J. Those replying have already received instructions on how to find our new office.

THE SESSION WILL BE HELD THURSDAY, FEBRUARY 10, 1972 AT 1:30 P.M. AT FRICTION MATERIALS STANDARDS INSTITUTE OFFICE, BERGEN MALL OFFICE CENTER, THIRD FLOOR, E-210 ROUTE 4, PARAMUS, NEW JERSEY.

Should individuals other than those who already indicated an interest want to attend this session, please let me know.

E. W. Drislane
Executive Secretary

Distribution: Active Members
Asbestos Study Committee

B U L L E T I N

N O. 4 2 5

January 25, 1972

DECLARATION RE PRODUCT CATEGORIES

FOR

FEE FORMULA BASIS

According to the Constitution and By-Laws, the Fee Formula for the Active Members must be reviewed annually and then presented to the Board of Directors who make recommendations to the membership.

Inasmuch as a member may be engaged in a category one year and not the following, or the reverse, it is necessary to have a confidential declaration filed annually in order to arrive at a proper assessment for each category.

Therefore, would you kindly return one of the attached to Mr. L. D. Stickles, Counsel, who will prepare a summary to aid the Board of Directors in determining the fee formula for the fiscal year starting July 1, 1972.

Please note that the filing categories are changed for this declaration from those on the declarations sent in past years. Please refer to the "Explanation of Category Filing" attached to the Form. If you have questions, please give me a call.

Kindly return your declaration to Mr. Stickles by February 29, 1972.

E. W. Drislane
Executive Secretary

Distribution: Active Members (B)
Enclosures: 2

EXPLANATION OF CATEGORY FILING

General - A member must be engaged in at least one of the first three categories, in order to be a member. The number of categories checked is used to determine the fees paid during the next fiscal year. Any member not filing this information correctly will be assessed the full fee for all categories.

Confidential - This fee category information is confidential and is not available to other members. The data is reviewed by Counsel and by the Secretary for purposes of determining its reasonableness.

"Our Company is Engaged as follows:" If a member manufactures and sells, purchases and sells, or both purchases and manufactures, and sells the product indicated in the replacement market, he is "engaged" in that category. In other words, if he sells that product he is engaged in that category. Further, the replacement market includes automotive, industrial, and off road equipment - where Friction Materials Standards Institute, Inc. performs a service, either through cataloging, assignment of copyrighted F.M.S.I. numbers, or the maintaining of prints. If a member sells a certain product type, but only to a market where F.M.S.I. does not provide services, he does not report that category. Where a member sells a certain product only to a market where there are F.M.S.I. services available, but he declines to use these services, he must report that category.

Brake Lining - Under 3/4" Nominal, Including Disc Brake Linings

This includes linings whether loose, attached to shoes, or in roll form, sold to markets where the F.M.S.I. numbering system is available.

Brake Blocks and Disc Brake Linings - 3/4" Nominal and Over

This includes brake blocks, whether loose or attached to shoes, sold to markets where the F.M.S.I. numbering system is available. The 3/4" nominal includes tapered blocks with a maximum thickness of approximately .700", with minimum thickness below .500". This also includes disc brake linings 3/4" and over, measuring lining thickness only at its thickest point. When measuring a lined shoe, to determine lining thickness, measure from the top of the shoe.

Clutch Facings

This includes loose facings or facings attached to plates, sold to markets where the F.M.S.I. numbering system is available.

Brake Shoes - New Unlined, Including New Unlined Disc Brake Shoes

This category includes new and unlined shoes (whether drum or disc type) which are sold as new and unlined shoes in the replacement market. If all the new and unlined shoes are sold as lined shoe assemblies, do not report this category.

CONFIDENTIAL

Mr. L. D. Stickles
Stickles, Hayden, Kennedy,
Hort & Van Steenburgh
36 West 44th Street
New York, New York 10036

Dear Mr. Stickles:

In response to Bulletin 425 of January 25, 1972 concerning the declaration of confidential information to be used in determining the fees, our company is engaged as follows:

<u>Category</u>	<u>We sell to the replacement market:</u>
Brake Linings - Under 3/4" Nominal, Including Disc Brake Linings	☐
Brake Blocks - 3/4" Nominal or Over	☐
Clutch Facings	☐
Brake Shoes - New Unlined, Including New Unlined Disc Brake Shoes.	☐

Affix an "X" in the square to the right of the category or categories your company is engaged in.

Signature_____

Company_____

Date_____

Kindly return declaration to Mr. Stickles by February 29, 1972.

B U L L E T I N

N O. 4 2 4

January 21, 1972

HISTORICAL SALES PROGRAM

The Board of Directors wishes to get an early start on the historical sales reporting for the 12 months ending December 31, 1971. There will be no change in the reporting details from that requested for the first six months of 1971 (Bulletin #410 of September 9, 1971).

To repeat some of the reporting details, the following items should be considered:

- (1) Quantities will be reported in pieces (not units). For roll lining, each foot of length will be one piece.
- (2) Our accountants will report the names of the members from whom reports are received, and the number of members reporting in each of the four groups.
- (3) Total pieces in each group will be reported (average will not be shown).

As in the past, this data will be confidential, and as totals for each group will be shown, there is no way of determining quantities by individual member.

Please review the form and the descriptions, as they apply to this year's reporting. You will be receiving from Marshall-Granger & Company, Certified Public Accountants, a form for completing this information. Please return it to:

Marshall Granger & Co., C.P.A.
Lincoln Building
New York, New York 10017

If you do not wish to report these figures, please advise Marshall Granger. Only those reporting figures will receive the industry totals when the data is summarized. A sample form and definitions are attached.

E. W. Drislane
Secretary

Distribution: Active Members

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.

Bergen Mall Office Center
East 210 Route #4
Paramus, N.J. 07652

=====

Pieces sold to distributors, direct consumers, rebuilders and private brands:

12 Months
January 1 - December 31, 1971

Brake linings up to 3/4" nominal thickness.
See explanation for roll lining.

Brake blocks, nominal thickness of 3/4" and over

Disc brake linings

Clutch facings

Total pieces:

DEFINITION FOR HISTORICAL SALESPIECES

The reports will show pieces of friction material, in groups as shown:

<u>Group</u>	<u>Description</u>	<u>Normal Usage</u>
Brake Lining	Friction materials up to a nominal 3/4" thickness (See note on roll lining)	Normally, <u>one piece</u> to a shoe.
Brake Blocks	Friction materials with a nominal thickness of 3/4" and over.	Normally, <u>two pieces</u> to a shoe.
Disc Brake Linings	Friction materials sold (for disc brakes) to be attached to the shoe, or sold as a unit molded, bonded or riveted to the shoe.	Normally, <u>one piece</u> to a shoe.
Clutch Facing	Friction materials of annular shape, or segments thereof.	Normally, <u>two annular pieces</u> for clutch plate.

Note: For roll lining only, consider each foot of length equals one piece.

REPLACEMENT SALES

This reporting is for domestic sales to the replacement field. Do not include export sales. This includes sales under the friction material manufacturer's own name or brand name, or brand name used by the customer, to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

Where one friction material manufacturer member purchases from another member of the Institute, each member who purchases will deduct the number of pieces purchased from the number of pieces sold in arriving at pieces sold. Purchases from non-members will not be deducted.

When a friction material manufacturer is shipping to a vehicle manufacturer, but has no reasonable way of determining if the pieces are for original equipment or replacement purposes, estimates will not be used - these pieces will not be reported. However, where a friction material manufacturer is shipping to a point known to be used for replacement, or where he stencils or otherwise identifies the pieces as being for replacement purposes, or where the shipments otherwise are obviously known to be for replacement, these pieces will be reported.

BULLETIN

NO. 423

January 5, 1972

SUBJECT: BRAKE BLOCK IDENTIFICATION CATALOG

The Data Book & Technical Committee has been working on a Brake Block Identification Catalog for over two years and have approved a format and style as shown by the attached work. Art work will have to be cleaned up and block diagrams made uniform. Only a few pages of the contents are shown. These are distributed for two reasons:

- (1) To demonstrate the format approved by the Committee.
- (2) To show the estimated price for this Catalog.

It is now up to the membership to decide--on a basis of dollars and cents--whether the Institute should proceed with this Catalog.

The Catalog would have a black cover (same cover material as the red Data Book and ^{blue}Shoe Book) with white printing. An estimate of the prices for this catalog follows.

Total Quantity	<u>Price per Thousand</u>		Average
	<u>36 pages</u>	<u>44 pages</u>	
<u>Ordered</u>			<u>Unit Price</u>
10,000	\$478.75	\$585.00	53¢
20,000	273.50	334.00	30¢
50,000	166.35	203.50	19¢
100,000	131.65	161.00	15¢

Right now, it is estimated that we may take between 36 and 44 pages. It appears we will need near 50,000 total to make this an economic reality.

Would you please indicate on the enclosed return form the quantities you would consider ordering so that we could be more definitive on the price.

While your estimate would not be binding, we would like it to be realistic. Also, if because of format or price, you would not order, we'd appreciate your so indicating.

As the Committee put many hours on this project, the recommended format came about by compromise and hard work. This is not the time for any drastic changes, but if you have suggestions for improvement of the Catalog, within the general framework for the Catalog as shown, these would be welcome.

E. W. Drislane
Executive Secretary

Distribution: Active Members
Regional Members
Members of Data Book & Technical Committee

Friction Materials Standards Institute, Inc.
Bergen Mall Office Center
E-210 Route #4
Paramus, N. J. 07652

Subject: Brake Block Identification Catalog

Gentlemen:

In reply to Bulletin 423 of January 5, 1972, we estimate our order for a
Brake Block Identification Catalog as:

<u>If price is:</u>	<u>Estimated Order Quantity</u>
53¢	_____
30¢	_____
19¢	_____
15¢	_____

If not ordering, please indicate the reason:

- (1) Do not merchandise brake blocks _____
- (2) Do not like format _____
- (3) Price is too high _____

By _____
Date _____

B U L L E T I N

N O. 4 2 2

December 17, 1971

MOLDED INDUSTRIAL FRICTION CORPORATION

This is to advise that Molded Industrial Friction Corporation
has become an Active Member of the Friction Materials Standards
Institute, Inc. The address is:

Molded Industrial Friction Corporation
327 Walnut Street
Prattville, Alabama 36067
(205)365-3324

E. W. Drislane
Executive Secretary

BULLETIN

NO. 421

December 14, 1971

ASBESTOS REGULATIONS - ILLINOIS POLLUTION CONTROL BOARD
AND U.S. ENVIRONMENTAL PROTECTION AGENCY

There have been two significant actions taken relative to asbestos during the past several weeks. This bulletin is being sent to the members for their information only. No action is necessary.

ILLINOIS POLLUTION CONTROL BOARD

The proposed Illinois regulation banning the use of asbestos-containing brake linings in new cars sold in Illinois after January 1, 1975 has been eliminated. To quote from the Illinois Pollution Control Board's explanation for revisions of the proposed regulations:

The original proposal to ban asbestos brake lining has been dropped for the time being. While the evidence shows that brake lining decomposition is a significant source of background levels of asbestos, these ambient air levels are quite small and have not been shown to be a health hazard (although they have not been shown not to be). In addition, adequate alternatives to asbestos-lined brakes are not yet available, although closed braking systems, preventing the emission of asbestos dust are possible. The Board will follow the medical and engineering aspects of the problem and, possibly, may return to it.

ENVIRONMENTAL PROTECTION AGENCY

This Federal Agency spelled out their proposed standards for what are considered hazardous materials: Asbestos, Mercury and Beryllium. These standards were in the Federal Register of December 7, 1971.

The proposed asbestos standards apply essentially to the work place and its surroundings and not the general environment. The standards are set with control practices (filters and traps) rather than by numerical emission values for concentration in the air. A copy of the proposed standards applying to asbestos are available from the Institute Office on request.

E. W. Drislane
Executive Secretary

Distribution: Active Members

B U L L E T I N

N O. 4 2 0

December 8, 1971

APPLICATION FOR MEMBERSHIP

An application for Active Membership was received from:

Molded Industrial Friction Corporation
327 Walnut Street
Prattville, Alabama 36067

This application was reviewed by the Membership Committee who recommended to the Board of Directors the acceptance of Molded Industrial Friction Corporation as an Active Member. The Board of Directors concurs, and recommends that Molded Industrial Friction Corporation be accepted as an Active Member of the Friction Materials Standards Institute, Inc.

Will you kindly record your vote, on the attached ballot, and return to my attention.

E. W. Drislane
Executive Secretary

Distribution: Active Members

B A L L O T

(Bulletin #420
December 8, 1971)

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York #10017

Gentlemen:

My vote on the acceptance of the application for membership, by Molded
Industrial Friction Corporation, is:

☐ Yes

☐ No

Signature _____

Company _____

Date _____

B U L L E T I N

N O. 4 1 9

December 7, 1971

1971 SUPPLEMENT TO THE 1970 BRAKE SHOE IDENTIFICATION CATALOG

The 1971 Supplement to the 1970 Brake Shoe Identification Catalog is now being printed by Success, Inc., 1345 West 16th Street, Indianapolis, Indiana. We have received our first copies and are sending one copy under separate cover to each Active Member, Regional Member and Licensee.

If your order was not placed, or you wish to increase the quantity all future orders should be placed on the Institute.

E. W. Drislane
Executive Secretary

Active Members (1)
Regional Members (1)
Licensees (1)

B U L L E T I N

N O. 4 1 8

November 29, 1971

INSTITUTE OFFICE MOVE TO NEW JERSEY

We have just signed a five year lease to occupy modern office space in Northern New Jersey. The location is approximately seven miles West of the George Washington Bridge. It is about one mile East of the Intersection of Routes #4 and #17. It is about 30 minutes by car from either La Guardia Airport or Newark Airport.

We will send more details on location in the near future, but this is a preliminary notice to advise you that a move will be made during the last week of 1971, and we will be occupying our new space as of January 1, 1972. The address for the new location will be as follows:

Friction Materials Standards Institute, Inc.
Bergen Mall Office Center
E. 210 Route #4
Paramus, N. J. 07652

It is our intention to be working here at the New York City address through Christmastime, so if you should need to contact us during this early part of December, there will be no change. I will try to get information on our new phone number and when it can be used by you as soon as that installation is made. I have been advised that it is foolhardy to advise of the assigned number until the installers actually hook it up. Should there be any questions on this, please contact us.

E. W. Drislane
Executive Secretary

Distribution: Active Members
Regional Members
Licensee Members
Delegates & Alternates
Committee Members

BULLETIN

NO. 417

November 10, 1971

MEASUREMENT OF ASBESTOS FIBERS IN THE AIR

Since the organization of the Asbestos Study Committee it has been suggested that all members be advised on monitoring asbestos fiber concentrations in the work place. This should be of interest since the Occupational Safety and Health Act of 1970 was effective on April 28, 1971. Mr. William Reitze of Johns-Manville addressed the June meeting on this Act and subsequently we distributed literature concerning the Act and Threshold Limit Values.

Mr. Reitze advised that there was a guide published by the Asbestos Textile Institute:

"Measurement of Airborne Asbestos Fiber by the Membrane Filter Method."

Source: Asbestos Textile Institute
P.O. Box 239
Pompton Lakes, N. J. 07442
Price: \$1.00

Mr. Reitze cautioned, however, that this document might be misleading if personnel doing the work do not have the proper background or training.

For this reason, Mr. Reitze would be willing to give a talk and demonstration, including a discussion of materials, methods, costs, personnel requirements, and legal aspects. This would not be a training course but would be an information session where those responsible for making decisions could be given enough information to decide which course their firm should follow. There would, of course, be no charge for this presentation.

If there are members of your firm who would be interested in such a session please advise. It generally would be planned to have the session, if interest is sufficient, sometime after mid-January in the New York metropolitan area. As Mr. Reitze now must travel in from Denver, it would be important for those interested to indicate rather positively their intentions as regards attending such a session.

E. W. Drislane
Executive Secretary

Distribution: Active Members
Asbestos Study Committee

BULLETIN

NO. 416

October 28, 1971

PROPOSED ILLINOIS BAN ON ASBESTOS IN BRAKE LINING

There has been considerable activity by members of the Asbestos Study Committee as regards the proposed Illinois regulations on "Asbestos and Spray Insulation". To quote from Part VII, Section 702 of the regulations proposed by the Illinois Pollution Control Board:

"The use of asbestos in the brake lining of vehicles manufactured after January 1, 1975, and sold for use in Illinois is prohibited."

In the Board's explanation it notes that the prohibition is worded to avoid the necessity of fitting vehicles manufactured prior to 1975 with "non-asbestos" brakes. However, there is no question but that the ban includes original equipment linings, and there can be little doubt but that replacement linings on these vehicles must also be of a "non-asbestos" type. Further, interpretation of the proposed regulations indicates that all vehicles are included: Passenger Cars, Trucks, Off Highway Equipment, Farm Tractors and the like. Also, the Board apparently considers "clutch facings to be the same as brake linings". While the immediate effect would be on those supplying original equipment linings, the secondary effect would be felt by all friction material manufacturers.

In the Board's explanation they state: "These prohibitions have been made with full consideration given to the available alternative materials."

From the Illinois hearings this past month, the Institute has received several articles of interest:

- (1) Johns-Manville memorandum, October 20, 1971, by Mr. Swetonic summarizing the Chicago hearings on October 15, 1971.
- (2) Written presentation by Dr. F. Pundsack of Johns-Manville as given at the Chicago hearings.
- (3) Dr. W. J. Nicholson, Mt. Sinai Hospital, a presentation in support of the Board's regulations, at the Chicago hearings.
- (4) Chicago Sun-Times October 18, 1971 report on the Chicago hearings.
- (5) Waukegan newspaper report of October 20, 1971 concerning the hearings in Waukegan.
- (6) Johns-Manville memorandum, October 20, 1971, by W. Raines summarizing the Waukegan hearings on October 19, 1971.

Attached to the delegates copies only of this Bulletin are excerpts:

- (1) Entire J-M summary of the Chicago Hearings.

- Continued -

October 28, 1971

(2) Entire J-M summary of the Waukegan Hearings.

(3) Pages 20, 21 of Dr. Pundsack's presentation at the Chicago Hearings.

All those who have appeared at the hearings feel it is most urgent that the brake lining manufacturers advise the Control Board of their position on this proposed ban. It has been learned that the Control Board was surprised over the lack of response to the brake lining ban from friction material manufacturers.

Realizing the unreasonable deadline you must work against, comments should be in the hands of the Pollution Control Board by November 10, 1971. Please write:

Mr. Samuel T. Lawton
State of Illinois Pollution Control Board
189 West Madison Street
Suite 900
Chicago, Illinois 60602

The comments must be your own. We suggest that the primary force of these comments might be the lack of availability of known substitutes at this time. A secondary point might be that the Federal EPA (Environmental Protection Agency) is currently having studies made concerning the extent of emissions in the general environment from brake linings, and these results will not be known till mid 1972. Unless you have specific medical background, we suggest you not question the proposed safety standards on asbestos concentrations. Further, as is the case with most government bureaus, any pleading on cost or economics should be avoided. Please note that the portion of the proposed regulations that we are concerned with at this time is the general environment from brake lining emissions on vehicles in use. While the in-plant environment is also covered in the proposed regulations, we are advising our members primarily on the proposed ban on brake lining on vehicles.

Should you write Mr. Lawton, it would be appreciated if you would send a copy to the Institute. If there are any questions, please give me a call.

E. W. Drislane
Executive Secretary

Distribution: Active

B U L L E T I N

N O. 4 1 5

October 8, 1971

HISTORICAL SALES PROGRAM

We have been advised by Marshall Granger & Co. that they have not had a good response to date on the Six Months of 1971 Sales Figures. Eight of the 23 members have replied as of now.

It would be most helpful if your data could be sent in to Marshall Granger within the next few weeks, so that their report can be made on a timely basis.

If any member has not as yet received the request for information, please advise. Also, it would be appreciated if those members who are not going to submit their figures advise our Accountants of that fact.

E. W. Drislane
Executive Secretary

Distribution: Active Members
Marshall Granger & Co.
Mr. L. D. Stickles

B U L L E T I N

N O. 4 1 4

September 28, 1971

MAILING LIST - BRAKE LINING PREFORM MACHINERY

We have been approached on several occasions to give out a mailing list of our members. It has been our policy not to pass out such a list.

The latest to contact us is a designer and possibly a manufacturer of machinery to automate the briquette process to disc brake preforms: Move mix from hopper to scales, weigh, move required mix to mold cavity, press, eject and stack. The name:

W. Wolniansky
W. A. Technical Corporation
3 South Main Street
Allentown, N.J. 08501

While we are passing this information along, we have no background on this gentleman and of course, have no idea as to whether his claims are reasonable.

E. W. Drislane
Executive Secretary

Distribution:Active Members

BULLETIN

N O. 413

September 27, 1971

PRICE CHANGE

for

1971 SHOE SUPPLEMENT

Bulletin No. 408 of August 17, 1971 advised that the price of the 1971 Brake Shoe Supplement would be \$70.68/M, if we were to sell 65,000 copies.

However, orders for the new book ran substantially less, and we are now establishing a final price of \$86.04/M, based on our commitment for 50,000 copies. The \$2.40/M for punching remains unchanged.

Would you please advise your Purchasing Department to change their records to the new price, an increase of \$15.36/M. (This new price, incidentally, is less than the \$94.96/M charged for the equivalent 1969 Supplement.)

E. W. Drislane
Executive Secretary

Distribution: Active Members
Regional Members
Licensees

B U L L E T I N

N O. 4 1 2

September 21, 1971

MR. C. BROWN WHITLEY, SCANDURA, INC.

Mr. C. Brown Whitley, formerly President and General Manager of Scandura, Inc., died in Charlotte, North Carolina, on September 19, 1971. Mr. Whitley had been active in the affairs of the Friction Materials Standards Institute.

The funeral was at the Hopewell Presbyterian Church, Charlotte, North Carolina on Tuesday, September 21, 1971.

The Friction Materials Standard Institute, Inc. sent a floral arrangement in the name of the Directors and Members of the Institute.

E. W. Drislane
Executive Secretary

Distribution: General Active Members

BULLETIN

NO. 411

September 9, 1971

ASBESTOS STUDY COMMITTEE FORMATION

Mr. J. W. Greenen, wishes to announce the formation of a new Committee, the Asbestos Study Committee within the Friction Materials Standards Institute, Inc.

The members of this Committee are as follows:

Asbestos Study Committee

Dr. E. P. Stefl, Chairman	Raybestos-Manhattan, Inc.
M. J. C. Henning	World Bestos Company
Dr. W. Spurgeon	Bendix Corporation
Mr. W. B. Reitze	Johns-Manville Corporation
Mr. J. B. Graham	Carlisle Corporation
<i>E. H. Zierabend</i>	<i>Johns-Manville</i>

E. W. DRISLANE
Executive Secretary

Distribution: General Active Members
" Regional Members

B U L L E T I N

N O. 4 1 0

September 9, 1971

HISTORICAL SALES PROGRAM

A committee has been active since the June meeting, on revising historical sales reporting. Among the changes from past reporting are the following:

- (1) Quantities will be reported in pieces (not units). For roll lining, each foot of length will be one piece.
- (2) There will be changes in the description of the four groups, but only for purposes of clarification.
- (3) Our accountants will report the names of the members from whom reports are received, and the number of members reporting in each of the four groups.
- (4) Total pieces in each group will be reported (averages will not be shown).

As in the past, this data will be confidential, and as totals for each group will be shown, there is no way of determining quantities by individual member.

Please review the form and the descriptions, as they apply to this year's reporting. You will be receiving from Marshall-Granger & Company, Certified Public Accountants, a form for completing this information. Please return it to:

Marshall Granger & Co., C.P.A.
Lincoln Building
New York, New York 10017

The sample form and descriptions are attached as Exhibits A and B.

E. W. Drislane
Secretary

Distribution: Active Members

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.
370 Lexington Avenue - New York, New York 10017

Pieces sold to distributors, direct consumers, rebuilders and private brands:

Six Months from
January 1 thru June 30, 1971

Brake linings up to 3/4" nominal thickness.
See explanation for roll lining.

Brake blocks, nominal thickness of 3/4" and over

Disc brake linings

Clutch facings

Total pieces:

DEFINITION FOR HISTORICAL SALESPIECES

The reports will show pieces of friction material, in groups as shown:

<u>Group</u>	<u>Description</u>	<u>Normal Usage</u>
Brake Lining	Friction materials up to a nominal 3/4" thickness (See note on roll lining)	Normally, <u>one piece</u> to a shoe.
Brake Blocks	Friction materials with a nominal thickness of 3/4" and over.	Normally, <u>two pieces</u> to a shoe.
Disc Brake Linings	Friction materials sold (for disc brakes) to be attached to the shoe, or sold as a unit molded, bonded or riveted to the shoe.	Normally, <u>one piece</u> to a shoe.
Clutch Facing	Friction materials of annular shape, or segments thereof.	Normally, <u>two annular pieces</u> for clutch plate.

Note: For roll lining only, consider each foot of length equals one piece.

REPLACEMENT SALES

This reporting is for domestic sales to the replacement field. Do not include export sales. This includes sales under the friction material manufacturer's own name or brand name, or brand name used by the customer, to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

Where one friction material manufacturer member purchases from another member of the Institute, each member who purchases will deduct the number of pieces purchased from the number of pieces sold in arriving at pieces sold. Purchases from non-members will not be deducted.

When a friction material manufacturer is shipping to a vehicle manufacturer, but has no reasonable way of determining if the pieces are for original equipment or replacement purposes, estimates will not be used - these pieces will not be reported. However, where a friction material manufacturer is shipping to a point known to be used for replacement, or where he stencils or otherwise identifies the pieces as being for replacement purposes, or where the shipments otherwise are obviously known to be for replacement, these pieces will be reported.

B U L L E T I N

N O . 4 0 9

August 31, 1971

COPYRIGHT PROTECTION

We have been informed that there is the possibility of a violation of our copyrighted F.M.S.I. numbering system by a non-member and in order to have substantiating evidence, we would like certain literature.

Molded Industrial Friction Corporation of Prattville, Alabama has been reported as using the numbers on certain products of their manufacture. They had requested membership information in November 1969 but have never joined the Institute.

Do you have any of their literature such as price lists, catalogs or advertisements on which the F.M.S.I. number(s) appear? If so, would you kindly forward copies. If you do not have such information, please so advise.

E. W. DRISLANE
Secretary

Distribution: Active Members

BULLETIN

NO. 408

August 17, 1971

The contract for the printing of the 1971 Supplement to the 1970 Brake Shoe Identification Catalog has been awarded to:

Success, Inc.
1345 West 16th Street
Indianapolis, Indiana 46202

It is estimated to have 20 pages.

On an estimate of 65,000 copies of a 20 page book, the price is projected at:

\$70.68 per M
2.40 per M additional for 5 hole punching

If there is a change in the price per thousand due to more or fewer pages or to the total number of books ordered being more or less than 65,000 copies, you will be immediately notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. It is requested that you follow these instructions as it is the only means of checking whether only members are ordering as well as to check the total quantities ordered and the price charged.

The orders are to be made out to Success, Inc. and are to state punching and shipping instructions. If you state ship "cheapest way" this involves two or three transfer points which will delay your shipment. "Best way" is the most direct.

REMEMBER - The orders in duplicate are to be sent to the Institute Office!

Kindly forward your orders so that they reach the Institute Office by September 15th.

E. W. Drislane
Secretary

Distribution: Active Members
Regional Members
Licensees

BULLETIN

NO. 407

July 28, 1971

COMMITTEE APPOINTMENTS

The following committee appointments have been made for the year July 1, 1971 through June 30, 1972.

ANNUAL MEETING COMMITTEE

F. E. Messier, Chairman	Bendix Corporation Friction Materials Division
L. Carreras	Forcee Manufacturing Corporation
T. P. O'Hagan	Johns-Manville Corporation
J. W. Greenen (ex-officio)	Maremont Corporation Grizzly Brake Division

BRAKE PERFORMANCE STUDY COMMITTEE

R. E. Nelson, Chairman	Abex Corporation American Brakeblok Division
D. Evans	Bendix Corporation Friction Materials Division
W. W. Matthes	Carlisle Corporation Molded Materials Division
P. Saari	Johns-Manville Corporation
F. Skelton	Maremont Corporation Grizzly Brake Division
J. C. Black	H. K. Porter Company, Inc. Thermoid Division
R. R. Moalli	Raybestos-Manhattan, Inc. International Division
V. J. Garthwaite	Manhattan Rubber Division
J. W. Greenen (ex-officio)	Maremont Corporation Grizzly Brake Division

BUDGET COMMITTEE

C. J. Weber, Chairman	World Bestos Company, Division of The Firestone Tire & Rubber Company
A. Laus	Maremont Corporation Grizzly Brake Division
A. E. Daly	Scandura, Inc.
J. W. Greenen (ex-officio)	Maremont Corporation Grizzly Brake Division

DATA BOOK AND TECHNICAL COMMITTEE

R. R. Moalli, Chairman	Raybestos-Manhattan, Inc. International Division
P. H. Grim, Jr.	Abex Corporation American Brakeblok Division
J. L. Bailey	Bendix Corporation Friction Materials Division
E. Rysso	Maremont Corporation Grizzly Brake Division
A. E. Daly	Scandura, Inc.
J. W. Greenen (ex-officio)	Maremont Corporation Grizzly Brake Division

FEE FORMULA COMMITTEE

R. C. Brigleb, Chairman	Abex Corporation
S. A. Comins	S. K. Wellman Division
W. Simon	Auto Friction Corporation
F. Gatke	Brassbestos Manufacturing Corporation
J. W. Greenen (ex-officio)	Gatke Corporation
	Maremont Corporation
	Grizzly Brake Division

INSTITUTE DEVELOPMENT COMMITTEE

J. H. Kelly, Chairman	Bendix Corporation
R. C. Brigleb	Friction Materials Division
E. R. Zacharias	Abex Corporation
D. Gow	S. K. Wellman Division
J. W. Greenen (ex-officio)	Carlisle Corporation
	Molded Materials Division
	Raybestos-Manhattan, Inc.
	Maremont Corporation
	Grizzly Brake Division

LEGISLATIVE ACTIVITY COMMITTEE

N. Comins, Chairman	Auto Friction Corporation
A. J. Roentgen	Silver Line Products, Inc.
J. W. Greenen (ex-officio)	Maremont Corporation
	Grizzly Brake Division

MEMBERSHIP COMMITTEE

F. Gatke, Chairman	Gatke Corporation
D. J. Ogilvie	Royal Industries - Brake Products
C. J. Weber	World Bestos Company, Division of
J. W. Greenen (ex-officio)	The Firestone Tire & Rubber Company
	Maremont Corporation
	Grizzly Brake Division

NOMINATING COMMITTEE

J. L. McGovern, Jr., Chairman	Raybestos-Manhattan, Inc.
W. Simon	Brassbestos Manufacturing Corporation
J. W. Greenen (ex-officio)	Maremont Corporation
	Grizzly Brake Division

PUBLIC RELATIONS COMMITTEE

W. Simon, Chairman	Brassbestos Manufacturing Corporation
J. W. Greenen (ex-officio)	Maremont Corporation
	Grizzly Brake Division

E. W. DRISLANE
Secretary

Distribution: General Active Members
" Regional Members

BULLETIN

NO. 406

July 16, 1971

ASBESTOS STUDY COMMITTEE

This notice is being sent to all Active Members concerning the President's intention to form a new committee within F.M.S.I. We are considering the establishment of an "Asbestos Study Committee", to consist of a chairman and probably four members.

BACKGROUND

While the talk delivered by Mr. W. B. Reitze of Johns-Manville at the June meeting dwelt mostly on in-plant environment, there was some discussion relating to asbestos factory environments and brake lining particulates in the air. Well before this talk, there had been concern expressed on an Illinois Law which would eliminate the use of asbestos in brake linings.

ASBESTOS INFORMATION ASSOCIATION OF NORTH AMERICA

This association was recently formed by the asbestos companies of North America. It would be our intention to work with them through our new committee, and essentially speak for the brake lining and clutch facing manufacturers. Obviously, our committee would review and comment on rules and regulations proposed by the State and the Federal Government. There would be no costs to the Institute in any of our work with this association.

STAFFING THE COMMITTEE

We would like to staff this committee with experienced and skilled personnel, preferably from the manufacturing, or Industrial Hygiene areas. Please give this bulletin your careful review. If you feel there is someone in your Company with the background necessary to serve as a member of this Committee, please advise with a brief description of this person's background.

E. W. Drislane
Secretary

Distribution: B

B U L L E T I N

N O. 4 0 5

July 8, 1971

CHARGES ON MAILING OF PRINTS

Because of increased mailing costs in the United States, and the fact that overseas air mail has increased substantially, we must institute a nominal charge for postage.

Where a member requests shipment by other than first class, we will bill him the difference. Thus a print sent air mail rather than first class will cost 75¢ plus the added postage cost.

Where a mailing weighs 1/2 oz. or less, we will continue using overseas air mail at no charge, but where the mailing weighs over 1/2 oz. we will charge the difference if air mail is requested.

The decision to charge for the extra postage costs was made to avoid an increase in the 75¢ print charge to members.

E. W. Drislane
Secretary

Distribution: Active Members
Regional Members
Licensees

B U L L E T I N

N O. 4 0 4

July 1, 1971

1971 AUTOMOTIVE DATA BOOK

The 1971 Automotive Data Book is now being printed, by Tweddle Litho Co., 24000 Harper Avenue, St. Clair Shores, Michigan. We have received our first copies and are sending one copy, under separate cover, to each Active Member, and Regional Member.

If your order was not placed, or you wish to increase the quantity, all future orders should be placed on the Institute.

E. W. Drislane
Secretary

Distribution: Active Members (1)
Regional " (1)

BULLETIN

N O. 4 0 3

June 30, 1971

OCCUPATIONAL SAFETY AND HEALTH ACT, IN PLANT-ENVIRONMENT

Mr. W. B. Reitze of the Industrial Hygiene Engineering Services of Johns-Manville addressed our membership meeting on June 23, 1971. He discussed the implications of the new law which became effective April 28, 1971 covering environmental conditions in the work place.

Several members indicated that they were interested in getting more details on this act. The Institute office will secure copies of the below-listed literature and distribute it to the membership.

1. Copy of the Act, P.L. 91-596 of December 29, 1970
Government Printing Office,
Superintendent of Documents
2. Copy of Threshold Limit Values (TLV)
ACIGH,
1014 Broadway
Cincinnati, Ohio 45202
3. Copy of Federal Register of May 29, 1971
Government Printing Office
Superintendent of Documents

Will you please indicate the number of copies of each publication you wish us to forward. We will bill you at cost at the end of the month in which we make shipment. Please use the attached order form.

E. W. Drislane
Executive Secretary

Distribution: C

ORDER FORM, PUBLICATIONS ON IN-PLANT ENVIRONMENT

Please send the copies indicated:

Quantity	Item
	Copy of the Act, P.L. 91-596
	Copy of Threshold Limit Values
	Copy of Federal Register, May 29, 1971

Please send to:

_____ Name, Title

_____ Company

_____ Street

_____ City, Zip

Authorized by _____

Date _____

B U L L E T I N

N O. 4 0 2

June 1, 1971

PRICE REDUCTION

for

1971 AUTOMOTIVE DATA BOOK

In Bulletin #397 of March 24, 1971 we announced a price for the 1971 Automotive Data Book of \$292.10 per M (exclusive of punching), for a 116 page book.

The printer has advised that the Data Book will take 112 pages. Also, we firmed up the total order at 105,000 copies, a 5,000 copy reduction from the original estimate.

The new price will be \$267.48 per M, plus the \$11.00 per M charge for five hole punching.

Please advise your purchasing departments, and whoever else has responsibility for catalog ordering so that they may change their records accordingly.

E W. Drislane
Executive Secretary

Distribution: "C" Active Members
Regional Members

BULLETIN

NO. 401

May 11, 1971

NEW MEMBERS

This is to advise that the following two applicants have been accepted as Institute Members, by mail ballot.

Active Membership	-	Delco Moraine Division General Motors Corporation Dayton, Ohio
Regional Membership	-	Franco-Mex S. A. Naucalpan, Edo. of Mexico Mexico

Reddaway Manufacturing Company, Inc. of Newark, New Jersey, who applied for reinstatement as an Active Member, has been accepted, by the Board of Directors.

H. G. Duschek
Secretary

Distribution: Active Members (8)

B U L L E T I N

N O. 4 0 0

April 28, 1971

ADDITIONS TO CROSS REFERENCES

The attached are new additions to the master list of cross references, dated September 1963.

These are for your master file for quick reference as well as for re-production, on your copying machines, of those listings which are of special interest to you and your representatives. From time to time, as new numbers are identified, a listing will appear in a data book bulletin for transferral to these sheets. In that way, your file will be kept up-to-date.

May I suggest, also, that you make a note, as blue prints are received, of the drawing number and any other part numbers shown thereon together with the F.M.S.I. number as an aid in keeping your references current.

E. W. Drislane
Executive Secretary

Distribution: C (Active and
Regional Members)

Additions to Cross-Reference

April 28, 1971

BENDIX

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
43,100	(1002 (1)	318,108 & 9	4562	322,492	2146-T (s)
	(2132-TT (sec)	318,130	1290	322,511	2140-AT (1)
48,700	2132-TT (pri)	318,133 (kit)	4562	322,513	2140-AT (s)
307,836	220-AT (s)	319,092 (kit)	4602	322,903	2146-T (1)
312,085	2135-T (1)	319,132 (kit)	4605	322,904	2146-T (s)
312,086	2135-T (1)	319,152	2137 (1)	322,906	2140-AT (s)
312,902	2097	319,160	2131 (s)	322,907	2140-AT (1)
317,339	2097	319,331	2137 (s)	323,903	2146-T (s)
317,708	4615	320,475 (kit)	4615	323,904	2146-T (1)
317,709	4605	321,309	2135-T(1)	323,906	2140-AT (s)
317,710	4602	321,310	2135-T(s)	323,907	2140-AT (1)
317,898	2131 (s)	321,344	220-AT(1)	324,425	220-AT (s)
317,900	2131 (1)	322,490	2146-T (1)	324,427	220-AT (1)
				324,805	4603-B

BORG & BECK

6,471	(1166-A	9,061	10,009	12,944	1142-E
	(1169-A	9,063	10,010	13,363	(11004
9,057	10,007	12,472	1142-E	13,821	(1148-D
9,059	10,008	12,942	1236-A		
				165-10124	1169-B
				165-10126	1169-B
				383,833	1173-A

CHEVROLET

2,405,959	2040	3,969,289	2105-T	3,976,628	778**
3,758,987	*1236-C	3,969,352	2065*	3,982,220	1300
3,770,220	2073	3,969,214	728-A	3,982,221	330 shoe
3,789,734	*1166-A	3,976,625	D-35**	5,452,536 & 7	S-727

April 1971

* Bonded lining
 ** Integrally molded

FMSI 18207

Additions to Cross-References

April 28, 1971

CHRYSLER

<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
58,332	2012-T	(s)	1,798,466	1125	3,492,631	2146-T (s)
316,770	2053-T	(s)	2,072,752 & 3	2070 & T	3,492,642	2146-T (1)
316,774	2053-T	(1)	2,260,836	2126-T (s)	3,492,817	2140-AT(s)
1,668,243&4	4560		2,260,882	2025&T (s)	3,492,828	2140-AT(1)

EATON

43,224 4195-B

FORD

<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>	
AF-2284-N	2002-AT	(s)	C8TZ-2007-L,M,N	(4639	(kit)
AF-2285-C	2002-AT	(1)		(4646	
CI AA-2021-AE	(2083-AT	(s)		(4647	
	(2083-CT	(s)	D12A-2018-CC	779	
-Y	(2080-AT	(s)	D12A-2021-BA	2144-T	(s)
	(2080-CT	(s)	-CA	2144-T	(s)
CIDD-2021-A,B,C	(2071-T	(s)	-DB	779	
	(2071-AT	(s)	-2022-BA	2144-T	(1)
CIDD-2021-A & C	2071-T	(s)	-CA	2144-T	(1)
-2284-A,C & D	2072-T	(s)	-2284-BA	2145-T	(s)
-7550-C	*857-B		-CA	2145-T	(s)
CIUU-2285-A,B,C	(2012-AT	(1)	-2285-BA	2145-T	(1)
	(2012-CT	(1)	-CA	2145-T	(1)
C3DA-2022-A & B	2071-T	(1)	DI AA-2022-AA	2080-CT	(1)
C3DA-2285-A & B	2072-T	(1)	-BA	2083-CT	(1)
			-AB	2071-AT	(1)

FRUEHAUF

A-CD-2230	4649	(anchor)
-2231	4649	(cam)

April, 1971

*Bonded lining

Additions to Cross References

April 28, 1971

G.M.C.

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
2,475,366	S-1560	5,464,614	2110	5,464,906	2077
2,407,789	4580	5,464,616	2107	5,465,246	2102
2,443,320	4580	5,464,904	2102	5,465,248	2077

INTERNATIONAL HARVESTER

93,927-31	4515	316,197091	*1388
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JEEP (FORMERLY KAISER JEEP)

807283,4	2011	925902,3	220-A	937210	2038
912476,7	2011	936985,6	2045	937213,4	2038
917515,6	2038	937159	2045	937215,6	2038
918099	2042	937160	2045	938140	2038
918100	2042	937209	2038		

KELSEY-HAYES

B-17,023 & 4)	4646	D-42,541 & 2	2060 (s)	E-36,535 & 6	2032
-55,536)		-42,543 & 4	2060 (1)	-37,094 thru 7	2032
-55,742	4647	-47,800	728	-55,536	4646
-55,799	4646	-59,169	730	-55,538	4647
-77,021	4647	-82,019 & 20	776-0	-55,799	4646
C-59,164	730	-86,730 & 1	D-33-0	-56,678 & 9	2128
-82,017	776-1	-86,737 & 8	D-33-1	-59,553 & 5	728
-82,145	773-1	-86,789	D-34-0	-70,420	728
-82,241	773-0	-86,793 & 4	D-34-1	-79,030	768
				-79,042	769
				-80,437-9	4639 (kit)

LIPE-ROLLWAY

C-18-506	1372*
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April, 1971

*Clutch Facing

Additions to Cross References

April 28, 1971

LONG

<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>	<u>Part #</u>	<u>Cat. #</u>
C-42-130	1372-B	C-42-208-91	1276	C-42-304	1276*
C-42-136	749-A	C-42-235	9029	C-42-X-67-75	902-B
C-42-160	1170-A	C-42-246	1174-A	C-46-680	1170-A
C-42-198	1277	C-42-293-91	1325-D	C-58-581	1628

MACK

101HBA374C	*1333-B	151HB410	1628	151HB410P8 202SM63	*1628-A 4152-A
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MORaine

5,460,617	2114-TT (s)	5,471,666	2134-ATT(s)	5,471,672	2114-TT(s)
5,465,931	1299	5,471,667	2134-ATT(1)	5,471,673	2114-TT(1)
5,467,573	2139-TT (s)				

SHULER

FX-1	4563	T18C-267	(4468-B (4591
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TIMKEN2000 Series

A-287	(kit)	4580
C-549	(kit)	1295
D-550	(kit)	589
T-202	(kit)	4580

2240 Series

A-1223	(4515 (4644
B-1224	(4515 8" (4644 8"

2240 Series (Con't)

T-1892	4549-B
U-1893	4549-B
V-594	4305
X-1792	4621

April, 1971

*Clutch Facing

FMSI 18210

TIMKEN (Continued)

2240 Series (Con't)

Y-1221 (4515
(4644

Z-1924 is short
of " 4515

2740 Series

A-2861 4562-A
-4057 580

2740 Series (Con't)

B-1198 1295
-1692 1297
-2862 4562-A
-1199 1295
-1693 1297
D-758 4580
-1200 1295
E-759 4580
-1201 1295
F-786 4604

2740 Series (Con't)

F-1202 1295
G-917 1296
P-1810 4619 & A
Z-5018 17,334

4222V594)
4222W595) 4511
4222X596)
4222Y597)

WAGNER

FD24,349 4596

FD20,327 & 8 1273

FD33,494 (2015-TT(s)
(2136-T (s)

WHITE

545,066 *1312
545,067 (*1312
(*1367
545,068 *1367

566,667 *1312
569,966 *1312
673,934 *1329-A
819,192 (*1312
(*1367

853,129 *1329-A
893,616 4625

April, 1971

*Clutch Facing

COMBINED: BULLETIN No. 366, 2/16/70
BULLETIN No. 400, 4/28/71

ADDITIONS TO CROSS REFERENCES

This Cross Reference listing simply combines Bulletins #366 and #400.

Bulletin #366 covered all additional cross reference data to February 1970 acquired since the Cross Reference Master List was published in September 1963.

Bulletin #400 carried cross reference additions up through April 1971.

Since issuance of Bulletins #366 and #400, there was additional cross reference data published in Bulletin #437 of May 22, 1972.

E. W. Drislane
Executive Director

EWD:11z
12/72

BENDIX PART NUMBERS

<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>
40,800	2103-TT	(S)	317,898	2131	(S)	321,398&9	2141-T (L)
40,900	2103-TT	(L)	317,900	2131	(L)	321,502	768
41,100	2104		318,108&9	4562		321,574&5	2075 (PRI.)
43,100	1002	(S)	318,130	1290		321,576&7	2075 (SEC)
	2132-TT	(SEC.)	318,133 (kit)	4562		321,688	769
48,700	2132-TT	(PRI.)	318,557	2132		322,490	2146-T (L)
306,214	1244		318,923	2070-T	(L)	322,492	2146-T (S)
306,816	2032		318,925	2059-T	(L)	322,511	2140-AT (L)
307,807&8	2026-T		319,092 (kit)	4602		322,513	2140-AT (S)
307,817	2041		319,132 (kit)	4605		322,565	1236
307,836	220-AT	(S)	319,152	2137	(L)	322,903	2146-T (L)
308,766&7	220-A		319,160	2131	(S)	322,904	2146-T (S)
310,792	2066-A		319,331	2137	(S)	322,906	2140-AT (S)
312,085	2135-T	(L)	319,590	767		322,907	2140-AT (L)
312,086	2135-T	(L)	320,475 (kit)	4615		323,278&9	2140-T (S)
312,902	2097		320,526	2137		323,282&3	2131-T (S)
314,104	220		320,545	767		323,903	2146-T (S)
314,824	2002-A	(S)	320,681&2	2141-T	(S)	323,904	2146-T (L)
314,827	2002-A	(L)	320,697&8	2143-T	(S)	323,906	2140-AT (S)
314,838	2012-C	(L)	320,700&1	2143-T	(L)	323,907	2140-AT (L)
314,852	2038	(S)	320,919&20	1293	(FOR.)	324,425	220-AT (S)
314,855	2038	(L)	320,922&3	1293	(REV.)	324,427	220-AT (L)
315,266	2066-A	(S)	321,171&2	2131-T	(L)	324,805	4603-B
315,268	2012-C	(L)	321,236&7	2140-T	(L)	1,150,062	1292 (REV)
316,918	2070-T	(S)	321,271	1293		1,150,408	2103-TT (L)
317,339	2097		321,309	2135-T	(L)	1,150,409	2103-TT (L)
317,616	2059-T	(S)	321,310	2135-T	(S)	1,150,411	2104
317,708	4615		321,344	220-AT	(L)	1,150,453	1192 (FOR)
317,709	4605		321,389	766		2,535,984	770
317,710	4602						

BCRG & BECK (Clutch Facings)

<u>Part #</u>	<u>Cat. #</u>
6,471	1166-A
	1169-A
8,416	11008
8,425	806-E
8,451	1003-E
8,488	9012-C
8,566	1173-A
9,057	10007
9,059	10008
9,061	10009
9,063	10010
11,653	1233-B
12,472	1142-E
12,559	1142-E
12,824	1236-C
12,942	1236-A
12,944	1142-E
13,195	1057-H
13,363	11004
13,364	1236-A
13,423	1161-C
13,450	1185-A
13,519	1166-A
13,539	1003-C
13,711	1057-H
13,734	1236-C
13,821	1148-D
13,946	11004
14,015	1056-B
14,017 & 18	1142-E
14,067	1373
52,696	11009
165-10124	1169-B
165-10126	1169-B
383,833	1173-A

CHEVROLET

<u>Part #</u>	<u>Cat. #</u>	
900,018	*11004	
904,765	*1236-C	
907,052	**909-C	
909,442	*1056-E	
	*1166-A	
941,804	*1236-C	
2,405,959	2040	
3,742,566	*1051-A	
3,758,987	*1236-C	
3,770,220	2073	
3,771,264	2040	(S)
3,771,265	2040	(L)
3,773,503 & 4	1245	
3,779,138	*1056-E	
3,789,734	*11004	
	*1166-A	
3,792,369	*1056-E	
3,799,355	*10000	
3,805,675	*1166-A	
3,828,056	*909-C	
3,828,848	*1166-A	
3,828,909	*11004	
3,829,996	2108-T	
3,832,875	2109-T	(S)
3,832,876	2109-T	(L)
3,832,892	2108-T	(S)
3,832,893	2108-T	(L)
3,845,292	2109	
3,862,220 & 2	*1166-A	
3,862,742	*1142-E	
3,867,220	*1166-A	
3,873,473 & 6	4639	
3,875,770	4640	
3,892,502	2065	(S)
3,892,503	2065	(L)
3,969,214	728-A	
3,969,289	2105-T	
3,969,352	2065	
3,976,625	D-35	
3,976,628	778	
3,982,220	1300	
3,982,221	330	SHOE
5,452,536 & 7	S-727	

*Clutch Facing

CHRYSLER

<u>Part #</u>	<u>Cat. #</u>
58,332	2012-T (S)
316,770	2053-T (S)
316,774	2053-T (L)
1,500,741	1125
1,668,243 & 4	4560
1,798,466	1125
2,072,752 & 3	2070 & T
2,233,164	*1007-A
2,260,836	2126-T (S)
2,260,882	2025 & T (S)
2,409,865	2065 (L)
2,460,640	2065 & T (S)
2,512,838	2053 (PRI.)
2,512,841	2053 (SEC.)
2,525,190	774
2,530,144	2006-T (PRI.)
2,530,146	2006-T (SEC.)
2,534,712	2065 (L)
2,534,715	2006 (S)
2,534,718	2006 (L)
2,534,761	2012-T (L)
2,534,767	2051-T (L)
2,534,863	2065 (S)
2,768,032 & 6	730
2,781,034	2055-T (L)
2,781,089	2025-T (L)
2,781,160	2070-T
2,781,178	2126-T (L)
2,781,193	2089-T (L)
2,781,229-31	2065-T (L)
2,781,238	2006-T (SEC.)
2,781,625 & 36	732
2,808,442	1276
2,823,219	751
2,825,996 & 9	1276
2,925,189 & 90	774
2,944,824	2065-T (S)
2,944,828	2055-T (S)
2,955,065	2042
3,461,574	2065-T (L)
3,492,631	2146-T (S)
3,492,642	2146-T (L)
3,492,817	2140-AT (S)
3,492,828	2140-AT (L)

*Clutch Facing

Additions to Cross-References

EATON

30-DS	4327	1,791	4311-C	20,000	4056-B
	4594	1,800	4514		4311-A
	4596	1,863	4317-G	20,220	4311-C
32-M	4195-B	1,893	4311-C	20,437	4308
	4311-C	1,910	4602	20,441-3	4056-B
	4317-G	1,911	4311-A	& 5	
32-MFA, MRA	4317-G		4317-G	20,448 & 9	4286
34-D	4195-B		4452	20,500	4311-A & C
	4311-C & G	1,918	4602		4525
	4317-G	1,919	4311-A & C	20,501	4317-C, E & G
34-DA	4595		4452		4525
34-M	4595	2,011	4311-C	20,503)	4311-C
	4597	2,731	4311-C	20,801)	
34-R	4195-B		4317-G		
	4311-C & G	13,802	2032	40,871	4195-B
34-D, DT	4317-G	16,600	4195-B	40,880	4195-B
	4605	16,800	4327		4317-G
35-F	4286	16,802	4596	43,224	4195-B
36-M	4311-A & C	17,800	4595	43,909	4317-G
36-MA, MFA &)	4311-C & G		4597	44,609	4317-G
MRA)	4317-G	17,801	1254	45,238	4311-C
38-D & DS	4452		4195-B	45,321	4410-B
38-D, DTA & R)	4311-C		4317-G	45,334	4195-B
42-D)	4317-G	17,810	4317-G	45,350 & 1	4311-C
42-M	4311-C	18,802	4602	45,500 & 1	4502
	4527-B	18,803	4195-B	48,727 & 8	4317-G
42-MA	4311-C	18,808&12	4317-G	51,086	4311-C
42-MFA, MRA	4311-C	19,501	4311-C	52,193	4311-C
	4527-B		4317-G	53,467	4311-C
42-R	4311-C	19,502	4602	53,736	4526
	4317-G		4605	53,748	4317-G
45-AR	4311-C	19,503	4311-A & C	53,750	4317-G
50-M	4311-A		4317-G	53,762	4311-C
	4527-B		4452	55,551	4311-C
56-M	4525	19,507)	4311-C	57,556	4317-G
57-F	4286	19,512)		60,510&11	4195-B
	4366-B	19,801	4311	62,085	4631
1,615	4195-B	19,803	4311-A	64,156 & 7	4311-G
1,618	4596		4452	65,048-HE	4286
1,790-A	4595			147,015	4311-A
	4597				

FORD

<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>	
AF-2284-N	2002-AT	(S)	C5AA-2285-A, B, C	2121-ATT	(L)
-2285-C	2002-AT	(L)	-2285-D	2121-T	(L)
C1AA-2021-AE	2083-AT	(S)		2121-ATT	(L)
	2083-CT	(S)	-7550-A	*10000-A	
-C	2080-AT	(S)	-F	*1174	
-S	2083-T	(S)	-J	*990-B	
-Y	2080-AT	(S)	-K)	*1170-A	
	2080-CT	(S)	-L)		
-2022-B	2083-AT	(L)	C5DA-7550-B	*857-B	
	2083-BT	(L&S)	C5MA-2284-A, B, C	2121-BT	(S)
-C	2080-AT	(L)	-2285-A, B, C	2121-BT	(L)
-J	2080-AT	(L)	C5TA-2021-D	2129-TT	(PRI.)
-S	2083-T	(L)	-4001-VA	2075	
-2284-B	2080-T	(S)	-4005-VA	2042	
-D	2121-ATT	(S)		2075	
-2285-D	2121-ATT	(L)	C5TA-7550-D	*1142-H	
-S	2080-T	(L)	C5TZ-2007-L	4317-G	
	2083-T	(S)	-2284-C	4317-G	
C1DD-2021-A, B, C	2071-T	(S)	C6AA-2285-A	2121-T	(L)
	2071-AT	(S)	-7550-E	*1170-A	
-2022-K, L, M	2071-T	(L)	-F	*1174&A	
-2284-A, C, D	2072-T	(S)	C6DA-7550-D	*9021	
-7550-C, EL&2	*857-B		C6MA-7550-D	*1170-A	
C1TT-4005-V	2042		C6TA-2022-K	2129-TT	(SEC.)
C1TZ-2007-A	1276			2130-TT	(SEC.)
-D	4625		-3002-AB	2075	
C1UU-2285-A, B, C	2012-AT	(L)	-AK	2038-TT	
	2012-CT	(L)	-AN	2129-TT	
C3AA-2018-K	2083-T	(S)	C6T-4001-F	2022-ATT	
-2019-K	2083-T	(L)	-H	2066-ATT	
-2020-E	2083-T		-U	2002-ATT	
-2218-S	2080-T	(S)	C6TZ-2007-A	2032	
-2219-F	2080-T	(L)	C6U-4001-C	2006-AT	
-7550-A	*1142-H		-U	2012-BT	
-E	*1174		C7AA-2021-A	2092-T	(S)
-G&H	*10000-A		-7550-A	*1005-A	
-N	*990-B		C7DA-7550-A	*1005-A	
C3DA-2022-A&B	2071-T	(L)	C7VA-2021-A	773	
-2285-A&B	2072-T	(L)	C7ZA-2284-A	2012-BT	(S)
C3MA-7750-A	*1174		-2285-A, B	2012-BT	(L)
C3SA-2284-G, H&J	2100-G	(S)	-7550-B	*10000-A	
C3TZ-2007-F	4626		C8AA-2010&11-J	2080-AT	
C4AA-7550-A	*1181		-2021-C	768	
C4TA-2021-A, B, C	2002-ATT	(S)	-2022-A	2083-AT	(L)
	2083-TT	(S)	-2209&10-D	2121-T	
-2022-A	2002-ATT	(L)	C8DA-2009&10-A	2072-T	
	2038-TT	(L)	-2010&11-C	2071-T	
-2284-A, B, C	2038-TT	(L)	C8TA-2010-AG	2075	
C4UA-2284-A	2012-CT	(S)	-2010-AU	2141-T	(L)
C5A-2284-A, B, C	2121-T	(S)	-2011-AG	2075	
-D	2121-T	(S)	-2011-AU	2141-T	(S)
	2121-A	(S)	-2209-AG	2141-T	(L)
-2285-D, E, F	2121-T	(L)	-2209-AS	2141-T	(L)
C5AA-2284-D	2121-T	(S)	-2210-AG	2141-T	(S)
-D, E, F	2121-ATT	(S)	-2210-AS	2141-T	(S)

* Clutch Facing

FORD-CONT INUED

<u>Part</u>	<u>Cat.</u>		<u>Part</u>	<u>Cat.</u>	
C8TZ-2007-L	4647	(KIT)	C30A-7550-E,F,H	*10000-A	
-M	4639	(KIT)	-L	*1005-A	
-N	4646	(KIT)	C60A-2021-A	2089-T	(S)
C8UA-2010-C	2143-T	(L)	-2284-D	2135-T	(S)
-2011-C	2143-T	(S)	-7550-D	*1005-A	
-2209-D	2141-T	(L)	-G	*1170-A	
-2210-D	2141-T	(S)	-H	9021-A	
C8VA-2B118019F	773		C70A-2021-D	2092-T	(S)
C8ZA-2209&10-A	2012-BT		-2022-A,B	2092-T	(L)
C9AA-2010&11-C	2083-AT		-7550-B	*1170-A	
-2021-B,C	773-0		-C,D	*9021-A	
-2022-B	773-I		-E	*9027-A	
-2284-A	2121-BT	(S)	C80A-2010&11-J	2089-T	
-2285-A	2121-BT	(L)	-2010&11-K	2092-T	
C9DM-2007-A	2051-BT		-2018-F	769	
-2007-B	2012-ET		-2021-E	769-0	
C9TA-2010-D	2131-T		-F	769-I	
-2209-D	2131-T	(L)	-2209&10-A	2089-T	
-2209-E	2131-T	(L)	-B,C,D	2135-T	
-2210-D	2131-T	(S)	-E	2012-BT	
-2210-E	2131-T	(S)	C90A-2010&11-C	2089-T	
			-D	2092-T	
C9UA-2010-C	2140-T	(L)	-2021-A	776-0	
-2011-C	2140-T	(S)	-2022-A	769-I&776-I	
-2209-A	2131-T	(L)	-2209&10-A	2072-T	
-2210-A	2131-T	(S)		2089-T	
C9ZA-2209-D	2012-BT		-B,D	2135-T	
-2209-E	2135-T		-2210-H	2135-T	
-2210-C	2012-BT		D12A-2018-CC	779	
C20A-2021-A	2051-AT	(S)	-2021-BA	2144-T	(S)
-G	2092-T	(S)	-CA	2144-T	(S)
-M	2092-T	(S)	-DB	779	
-2022-6	2051-AT	(L)	-2022-BA	2144-T	(L)
-AA	2012-BT	(S)	-CA	2144-T	(L)
-M	2090-T	(L)	-2284-BA	2145-T	(S)
-N	2089-T	(L)	-CA	2145-T	(S)
-2284-AA	2012-BT	(S)	-2285-BA	2145-T	(L)
-M	2091-T	(S)	-CA	2145-T	(L)
-2285-G	2012-BT	(L)	D1AA-2022-AA	2080-CT	(L)
-M	2091-T		-BA	2083-CT	(L)
-N	2135-T	(L)	D1DA-2022-AB	2071-AT	(L)
-7550-A	*1005-A		FC-1646-A	2012-ET	(L)
-E,F	*10000-A		-1650-A	2051-BT	(L)
-H	*857-B		-1709-B	2012-ET	(S)
C30A-2021-R	2089-TT	(S)	-1710-A	2051-BT	(S)
-2285-A	2089-TT	(L)			
-7550-A	*1005-A				

* Clutch Facing

FRUEHAUF

Part #
A-CD-2230
-2231

Cat. #
4649 (ANC.)
4649 (CAM)

<u>Part</u>	<u>Qty.</u>	
92,724)	6061	
94,677)		
106,729	*1325-C	
1,293,643	*11004	
1,382,336	767	
2,329,893	*1236-B	
2,393,293	*1095	
2,393,340	*1166-A	
2,395,340	*1248	
	*1236-B	
2,407,789	4580	
2,416,234	1193	
2,416,236	1252	
	4639	
2,416,240	1193	
2,416,242	1252	
	4639	
2,425,357	1150	
2,425,359	4593	
2,429,329	*1374	
2,443,320	4580	
2,468,528	4524	
2,470,622	1289	
2,471,307)	*1325-C	
2,471,948)		
2,475,366	S1560	
2,485,756	*1248	
2,485,758	*1236-B	
2,489,328	*1374	
2,492,006	*1248	
2,492,076&7	*1374	
3,513,019	2044-A	
3,513,521	2044-A	
3,771,264&5	2040	
3,789,762	*11004	
3,799,136	*10000	
3,799,138	*1056-E	
3,805,629	*1095	
3,805,675	*1166-A	
3,828,054	*909-C	
3,832,875	2105-T	(S)
3,832,876	2105-T	(L)
3,832,890	2106-T	(L)
3,832,892	2106-T	(S)
3,835,629	*1166-A	
3,881,551	4640	
5,464,614	2110	
5,464,616	2107	
5,464,904	2102	
5,464,906	2077	
5,465,246	2102	
5,465,248	2077	

*Clutch Facing

INTERNATIONAL HARVESTER

<u>Part #</u>	<u>Cat. #</u>
40,883DC	*1527
93,927-31	4515
98,747R1	1247
99,058R1	6048
108,954R2	4311-C
316,197C91	*1388
346,639R91	4629

*Clutch Facing

JEEP CORPORATION
(FORMERLY KAISER JEEP)

<u>Part #</u>	<u>Cat. #</u>
807,283&4	2011
912,476&7	2011
917,515&6	2038
918,099	2042
918,100	2042
925,902&3	220-A
936,985&6	2045
937,159	2045
937,160	2045
937,209	2038
937,210	2038
937,213&14	2038
937,215&16	2038
938,140&1	2038

KILDEY - HAYES

<u>Part</u>	<u>Qty.</u>	
3-17,022&4)	4646	
-55,526)		
-55,742	4647	
-55,799	4646	
-77,021	4647	
D-59,164	730	
-82,017	776-1	
-82,241 -82,145	773-0	773-1
D-42,541&2	2060	(G)
-42,543&4	2060	(L)
-47,800	728	
-59,169	730	
-82,019&20	776-0	
-86,730&1	D-33-0	
-86,737&8	D-33-1	
-86,789	D-34-0	
-86,793&4	D-34-1	
E-36,535&6	2032	
-37,094-7	2032	
-55,536	4646	
-55,538	4647	
-55,799	4646	
-56,678&9	2123	
-59,553&5	728	
-70,420	726	
-79,030	768	
-79,042	769	
-80,437-9	4639	(KIT)

LIPE-ROLL AW (CLUTCH FACINGS)

<u>Part</u>	<u>Qat.</u>
C-18-287	1325-C
-18-329	1235
-18-409	1312-B
-18-432	1626
-18-437	1361-A
-18-438	1317-D
-18-445	1427-A
-18-447	1372-A
-18-488	1589
-18-450	1274
-18-462	1553-A
-18-484	1561
-18-495	1312-C
-18-506	1372
140-19-1012	1372-A

LONG (CLUTCH FACINGS)

<u>Part #</u>	<u>Cat. #</u>
C-42-130	1372-B
-42-136	749-A
-42-160	1170-A
-42-198	1277
-42-208-91	1276
-42-235	9029
-42-246	1174-A
-42-293-91	1325-D
-42-304	1276*
-42-X-67-75	902-B
-46-680	1170-A
-58-581	1628
65-10006	8025-A

Bonded *

MACK

<u>Part #</u>	<u>Cat. #</u>
3-QD-2148	4637
101-HBA-374C	*1333-B
-3181	*1372-A
151-HB-410	*1628
-410P8	*1628-A
-3102	*1371-A
202-SM- 63	4152-A
- 64	4314
-137	4600
-139	4605
-140	4610
-144	4602
-147	4635
-1140	4615

* Clutch Facing

MORaine

<u>Part. #</u>	<u>Cat. #</u>		<u>Part. #</u>	<u>Cat. #</u>
1,150,411	2104		5,464,214&5	2102-ATT (L)
5,452,337	2132-TT	(PRI.)	5,464,216&7	2077-TT (L)
5,452,398	2102-ATT	(S)	5,464,455&6	2025-CTT (S)
5,454,419	2025-TT	(S)	5,464,458&9	2025-CTT (L)
5,454,421	2025-TT	(L)	5,464,466&7	2006-BTT (S)
5,454,423	2006-TT	(S)	5,464,468&9	2006-BTT (L)
5,454,425	2006-TT	(L)	5,464,485&6	2116-TT (S)
5,454,491	2125	(S)	5,464,488&9	2116-TT (L)
5,456,513	2125	(L)	5,464,495	2103-TT (S)
5,456,828	2025-TT	(S)	5,464,498	2103-TT (L)
	2116-TT	(S)	5,464,526&7	2077-AT (S)
5,456,829	2025-TT	(L)	5,464,520	2077-AT (L)
	2116-TT	(L)	5,464,534	2077-AT (L)
5,456,896	2006-TT	(S)	5,464,536&7	2102-T (S)
	2103-TT	(S)	5,464,539	2102-T (L)
5,456,897	2006-TT	(L)	5,464,544	2102-T (L)
	2103-TT	(L)	5,464,660&1	2103 (S)
5,456,969	2005-BTT	(S)	5,464,668&9	2103 (L)
	2113-TT	(S)	5,464,711&12	2104
5,459,004	2113-TT	(L)	5,464,758	2132-TT (SEC.)
5,459,017	2114-TT	(L)	5,464,827	2077-TT (S)
5,459,434	2102-ATT	(S)	5,465,014&16	2110-TT (PRI.)
5,459,553	2117-ATT	(S)	5,464,018&19	2110-TT (SEC.)
5,459,554	2117-ATT	(L)	5,465,026&7	2107-TT (SEC.)
5,459,628	2096-TT		5,465,030&1	2107-TT (PRI.)
5,459,847	2005-BTT	(L)	5,465,263	2102-BT (S)
5,459,876	2078-TT	(S)	5,465,273	2103-BTT (L)
5,459,883	2078-TT	(L)	5,465,295&6	2005-BTT (L)
5,460,090&1	296-BTT	(L)		2113-TT (L)
5,460,096	296-BTT	(S)	5,465,298	296-BTT (L)
	2114-TT	(S)		2114-TT (L)
5,460,098	296-BTT	(L)	5,465,299	2114-TT (L)
5,460,122	2084-TT	(S)	5,465,599	2124 (S)
5,460,126	2096-TT	(L)	5,465,653	2124 (L)
5,460,173	2005-BTT	(L)	5,465,666	2119-TT (S)
5,460,250	2125	(S)	5,465,667	2119-TT (L)
5,460,513	2077-TT	(S)	5,465,672&3	2119-TT (S)
5,460,514	2077-TT	(L)	5,465,676&7	2119-TT (L)
5,460,515	2078-TT	(S)	5,465,754-6	2118-TT (S)
5,460,516	2078-TT	(L)	5,465,575-9	2118-TT (L)
5,460,617	2114-TT	(S)	5,465,931	1299
5,460,618&9	2113-TT	(S)	5,465,987	2102-BT (S)
5,460,803	762		5,465,988&9	2102-BT (L)
5,460,829	762		5,466,842	2118-TT (S)
5,462,658	2077-TT	(S)	5,466,843	2142-TT (L)
5,462,963&4	2105-T		5,467,004	2120-TT (S)
5,462,973	2102-ATT	(S)	5,467,033	2120-TT (L)
5,462,981	2102-ATT	(S)	5,467,039&40	2120-TT (S)
5,463,133	762		5,467,051&2	2120-TT (L)
5,463,134	766		5,467,135	2102-BT (S)
5,463,153	762		5,467,136	2102-BT (L)
5,463,952&3	728-A		5,467,137	2117-ATT (S)
5,464,094	296-BTT	(S)	5,467,138	2117-ATT (L)
	2114-TT	(S)	5,467,141&2	2117-ATT (S)
			5,467,143	2102-BT (S)

MORaine (CONT'D)

<u>Part #</u>	<u>Cat. #</u>	
5,467,144&5	2117-ATT	(L)
5,467,160	2102-T	(L)
5,467,161-3	2102-T	(S)
5,467,164&5	2102-T	(L)
5,467,166-8	2117-TT	(S)
5,467,169	2117-TT	(L)
	2102-BT	(L)
5,467,170&1	2117-TT	(L)
5,467,179	2102-BT	(L)
5,467,194	2117-TT	(S)
5,467,195	2117-TT	(L)
5,467,196	2102-T	(S)
5,467,197	2102-T	(L)
5,467,517	2125	(L)
5,467,573	2125	(S)
	2139-TT	(S)
5,467,673	2125-T	(S)
5,467,693	2125-T	(L)
5,467,886	2118-TT	(S)
5,467,887	2118-TT	(L)
5,467,888	2142-TT	(S)
5,467,889	2142-TT	(L)
5,467,894	2118-TT	(S)
5,467,896	2142-TT	(S)
5,468,080&1	762	
5,468,645&6	728-A	
5,468,704	728-A	
5,468,863	2139-TT	(S)
5,468,864	2139-TT	(L)
5,471,666	2134-ATT	(S)
5,471,667	2134-ATT	(L)
5,471,672	2114-TT	(S)
5,471,673	2114-TT	(L)

ROCKFORD (CLUTCH FACINGS)

<u>Part #</u>	<u>Cat. #</u>
CL-11,301-107	1335
-11,945	1388
-12,403	1390

ROCKWELL
(FORMERLY TIMKEN)

<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>
<u>2000 Series</u>			<u>2740 Series (Cont.)</u>	
A- 287	4580	(KIT)	B- 860	1245-B
365	4629	(KIT)	-1198	1295
C- 549	1295	(KIT)	-1199	1295
D- 238	4610	(KIT)	-1666	4398-B
298	4636		-1692	1297
316	No # Metallic	(KIT)	-1693	1297
550	589	(KIT)	-1770	4629
E- 239	4615	(KIT)	-1822	4642
G- 137	4515		-2602	4601-A
K- 375	1280-A	(KIT)	-2862	4562-A
973	1245-B		C- 29	4538
T- 202	4580	(KIT)	- 757	4580
436	1245-B	(KIT)	-1251	4633-A
U- 307	4619		-1300	4643
437	1290		-1771	4629
V- 256	4515		-1795&7	4635
W- 439	4562-A		-1823	4644
Z- 130	6050		-2603	4601-A
			-4111	4514-F
<u>2240 Series</u>			D- 758	4580
A-1223	4515		-1200	1295
	4644		-1772	4629
B-1224	4515		-1798	4635
	4644		-1824	4644
C-1953	4515		-2604	4601-A
R-1250-V	4601-A		-4112	4514-F
-1630	4515		E- 759	4580
-1890	4514-E		- 889	1259
S-1631	4515		-1201	1295
-1891	4514-E		-1253	4633-A
T-1892	4549-B		-1669	4541-B
U-1893	4549-B		-1721	4618
V- 594	4305		-1773	4629
-1894	4515		-1798	4635
W-1791	4621		-1825	4644
-1895	4515		-1877	1245
X-1792	4621			1280-A
Y-1221	4515		-2604	4601-A
	4644		-2667	17731
-1793	4621		-3307	4513
-1923	4515		-3515	17735
Z-1794	4621		F- 786	4604
-1924&5	4515		- 852	1239-A
			-1202	1295
<u>2740 Series</u>			-1254	4633
A- 859	1245-B		-1607	4541-B
-1665-F	4398-B		-1800	4635
-1769	4629		-1826	4644
-1821	4642		-1878	1280-A
-2601	4601-A		-2268	17731
-2861	4562-A		-3308	4513
-1057	580		-4114	4514-F
B- 756	4580		G- 917	1296

ROCKWELL (CONT'D)
(FORMERLY TIMKEN)

<u>Part #</u>	<u>Cat. #</u>
<u>2740 Series (Cont.)</u>	
G-1827	4642
-1879	1280-A
-2815	1290
-3309	4513
-4063	4610
H- 398	4592
-1828	4642
-1880	1280-A
J- 400	4592
- 686	4628-A
-1128	4515
-1466	4633
-1882	1280-A
-2818	1290
-3442	1276
K-1129	4515
-1883	1280-A
-1987	4602
-2819	1290
-3261	1131
-3443	1276
L- 168	6050
-2118	4602
-3262	1131
-3444	1276
M-2119	4602
-3263	1131
-3445	1276
N-3212	17732
-3264	1131
-3446	1276
-3524	4602
P-1810	4619&A
-3162	1289
-3214	17732
-3448	1276
Q- 849	1234-A
-1421	4627
-1889	4626
-3163	1289
-3215	17732
-3449	1276
R- 980	4610
-1240	4627
-1422	4627
-1890	4626
-2150	4601-A
-3216	17732
-3450	1276
S- 253	330
	1256
-1241	4627
-1423	4627

(S)

<u>Part #</u>	<u>Cat. #</u>
<u>2740 Series (Cont.)</u>	
S-1891	4626
-2151	4601-A
-2853	4562-A
-3451	1276
T- 695	4628&A
- 696	4628
-1018	580
-1424	4627
-1892-X	4626
-2022	580
-2152	4601-A
-2854	4562-A
U- 255	330
	1258
- 437	4343-C
- 567	4470
-1425	4627
-1763	4619
-1893	4626
-2153	4601-A
-2387	17733
-2855	4562-A
-3323	1289
V- 256	330
- 568	4470
-1244	4625
-1426	4627
-1894-X	4626
-1998	4629
-2154	4601-A
-2856	4562-A
-3324	4524-A
W- 569	4470
- 855	1286
-1245	4625
-1297	4636 & 4643
-1427	4627
-1895-X	4626
-1999	4629
-2155	4601-A
-2266	17731
-2857	4562-A
-3325	4524-A
-3351	4610
X- 570	4470
- 856	1286
-1297	4643
-1298	4636
-1350	4592-B
-1428	4637
-1896-X	4626
-2000	4629
-2598	4601-A

(L)

ROCKWELL (CONT'D)
(FORMERLY TIMKEN)

<u>Part #</u>	<u>Cat. #</u>
<u>2740 Series (Cont.)</u>	
X-2858	4562-A
-3378	17731
Y-1299	4636
-2599	4601-A
-2859	4562-A
-3379	17731
-3847	4618-A
Z- 26	1247
- 858	1245-B
-1300	4636
-1690	4398
-1768	4629
-2600	4601-A
-2860	4562-A
-3380	17731
-5018	17334
 <u>2840 Series</u>	
X- 154	4249
 <u>3222 Series</u>	
E- 707	4513
 <u>3722 Series</u>	
A- 495	4541
B- 496	4398
D- 368	4398
P- 432	4592-B
- 640	4398
- 822	4572
 32,550	 189 659-B
4222V594)	
4222W595)	4511
4222X596)	
4222Y597)	

SHULER

<u>Part #</u>	<u>Cat. #</u>
B-1,663	4542-A
-1,727-A,C	4552
-1,778-A,C	4524
-1,794	4375
-1,909-A,C	4551
-2,064-384	4602-A
FE-10A-43	4563
-12A-34	4563
FX-1	4563
T-14-265	4464
T-18C-267	4468-B
	4591

SPICER (CLUTCH FACINGS)

Part #

Cat. #

114-C-174

946-A

STUDEBAKER

Part //

Cat. //

684,842&3

1191

WAGNER

<u>Part #</u>	<u>Cat. #</u>		<u>Part #</u>	<u>Cat. #</u>	
FC- 7,762&3	153-A		FD-72,324&5	2097-T	(SEC.)
-13,760	1191		FE-35,507	2066-T	(S)
-14,890	1225	(L)	-35,513	2066-T	(L)
-14,892	1225	(S)		2066-AT	(L)
-22,431	1234		-40,909&14	2071-T	(S)
-23,831&2	1245-A		-40,925&30	2071-T	(L)
-33,126	1245-A		-44,629	2066-AT	(S)
-33,248	4598		-49,309&10	2072-T	(S)
-49,793	1245-C		-49,322&3	2072-T	(L)
-49,803	1280-B		-57,268	4638	(S)
-55,409	1294		-57,291	4638	(S)
-55,410	1294&A		FF-33,491&2	2015-TT	(L)
-56,346-A	1216-TT	(S)	-57,777&8	4602-A	
-56,493-A	1216-TT	(L)			
-56,495-A	1216-TT	(S)			
-59,395	1294-A				
FD- 8,852&3	1245-A				
9,723&4	1245-A				
-18,722	2042	(S)			
-18,731	2042	(L)			
-20,327&8	1273				
-22,343	2026	(S)			
-22,346	2026	(L)			
-22,426	4564				
-24,349	4596				
-27,060	1288				
-28,830&2	1245				
	1278				
-29,052	2015	(L)			
-32,101	2015				
-33,246	1150				
-33,494	2015-TT	(S)			
	2136-T	(S)			
-33,495&6	2015				
-33,498	2015	(S)			
-34,196&7	1219				
-36,554	1150				
-36,570	4598				
-45,884	2112	(L)			
-45,886	2111-T	(L)			
-45,888	2111-T	(S)			
	2112-T	(S)			
-45,890	2115-T	(S)			
-45,892	2115-T				
-55,226&8	4602-A				
-55,408	296				
-56,316	2136-T	(L)			
-57,229-31	2045				
-57,269	4638				
-57,511&512	4645-A				
-59,444	1245-C				
-59,445	1280-B				
-72,321&2	2097-T	(PRI.)			

WHITE

<u>Part "</u>	<u>Cat. "</u>
545,066	*1312
545,067	*1312
	*1367
545,068	*1367
566,667	*1312
569,966	*1312
673,934	*1329-A
819,192	*1312
	*1367
853,129	*1329-A
894,616	4625

* Clutch Facing

B U L L E T I N

N O. 3 9 9

April 13, 1971

APPLICATIONS FOR MEMBERSHIP

On March 15th, in Bulletin #396, the following applications were announced:

Active Membership	-	Delco Moraine Division General Motors Corporation Dayton, Ohio
Regional Membership	-	Franco-Mex S.A. Naucalpan, Edo. of Mexico Mexico

These applications were very carefully reviewed by the Membership Committee and by the Board of Directors who now recommend the acceptance of these two applicants.

Will you kindly record your vote, on the attached ballot, and return without delay.

H. G. Duschek
Secretary

Distribution: Active Members (B)

Friction Materials Standards Institute, Inc., 370 Lexington Avenue, New York, N.Y.

B A L L O T

(Re Bulletin #399 dated
April 13, 1971)

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York #10017

Attention: Secretary

Gentlemen:

My vote on the acceptance of the following applications for
membership is:

Delco-Moraine Division
General Motors Corporation

☐ Yes

☐ No

Franco-Mex, S.A.

☐ Yes

☐ No

Signature _____

Company _____

Date _____

FMSI 18240

B U L L E T I N

N O. 3 9 8

March 24, 1971

PROPOSED STATE LEGISLATION - OHIO

Mr. R. E. Nelson, Chairman of the Brake Performance Study Committee, has advised that there has been legislation introduced in Ohio which would affect the members of our Institute.

Under proposed legislation in the Ohio House (H 150) by Pemberton et al, the following is listed: "BRAKES - to prohibit the sale of sub-standard replacement linings and brake lining assemblies for motor vehicles."

We particularly request those members from Ohio to gather whatever information they can on this proposed legislation, and forward that information to me at the Institute.

E. W. Drislane
Executive Secretary

Distribution: Active Members (B)
Licensees

BULLETIN

NO. 397

March 24, 1971

ORDERS FOR THE 1971 AUTOMOTIVE DATA BOOK

The contract for the printing of the 1971 Data Book has been awarded to:

Tweddle Litho Company
24000 Harper Avenue
St. Clair Shores, Michigan 48080

It is believed that it will contain 116 pages.

On an estimate of the total order being 110,000 copies of a 116 page book, the price is:

\$ 292.10 per M
11.00 " " additional for five hole punching
(This will be the only type punching).

If there is a change in the price per thousand due to more or fewer pages or to the total number of books ordered being more or less than 110,000 copies, you will be immediately notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. It is requested that you follow these instructions as it is the only means of checking whether only members are ordering as well as to check the total quantities ordered and the price charged.

The orders are to be made out to Tweddle Litho Company and are to state punching and shipping instructions. If you state ship "cheapest way" this involves two or three transfer points which will delay your shipment. "Best way" is the most direct.

REMEMBER - The orders in duplicate are to be sent to the Institute Office!

Kindly forward your orders so that they reach the Institute Office by April 15th.

E. W. Drislane
Executive Secretary

Distribution: Active Members (B)
Regional Members

B U L L E T I N

N O. 3 9 6

March 15, 1971

APPLICATIONS FOR MEMBERSHIP

The following applications for membership are being submitted to the Membership Committee for their review and recommendation to the Board of Directors. If you have any information which you feel would be of interest to the Committee, kindly forward it immediately.

Active Membership - Delco Moraine Division
General Motors Corporation

Regional Membership - Franco-Mex, S.A.
Naucalpan, Edo. of Mexico
Mexico

H. G. Duschek
Secretary

Distribution: Active Members (B)

B U L L E T I N

N O. 3 9 5

February 8, 1971

HISTORICAL SALES PROGRAM

On July 29th 1970 (Bulletin #376), the definitions as well as the form of reporting your historical sales - in units - was submitted to you. The ballots returned indicated that the definitions and the form were accepted and that reports were to be filed for a six (6) month and a twelve (12) month period. After the initial report for the twelve (12) months ending December 31, 1970, we will be on a semi-annual basis.

Very shortly, you will receive the form from Marshall Granger & Company, the accounting firm selected and your report is to be returned to them at the following address:

Lincoln Building
New York, New York #10017

Inasmuch as we are now in 1971 and embarking on this program at this time, the initial report will give the total for the year 1970. If your records are not kept in units but in some other form such as pounds, cubic inches, etc., kindly contact Miss Duschek, Secretary, who will help you in determining the conversion into units.

Attached, hereto, is a sample of the form which you will receive, and the definitions of the classifications.

S. S. Conway, Jr.
President

Distribution: Active Members (B)
Enclosures: 2

FMSI 18244

STATISTICAL PROGRAM OF THE
FRICTION MATERIALS STANDARDS INSTITUTE, INC.
370 Lexington Avenue - New York, New York 10017

Units sales to distributors, direct consumers, rebuilders and private brands:

Twelve Months from
January 1 thru December 31, 1970

Brake linings (up to 3/4" nominal thickness)

Brake blocks (nominal thickness of 3/4"
and over)

Disc brake linings

Clutch facings

Total units

DEFINITIONS RE HISTORICAL SALES

1. Brake linings. Friction materials requiring one piece to cover a shoe up to a nominal 3/4" in thickness.
2. Brake blocks. Friction materials requiring two pieces to cover a shoe with a nominal thickness of 3/4" and over.
3. Disc brake linings. Friction materials sold to be attached to the friction plate (shoe) or sold as a unit with the backing plate.
4. Clutch facings. Friction materials of an annular shape or segments thereof.
5. Buyers: Distributors,)
Direct Consumers &)
Rebuilders and Pri-)
vate Brands.) Sales under the friction material manufacturer's own name or brand name or brand name used by the customer to automotive warehouse distributors, brake specialists, jobbers, direct consumers of automotive friction materials, government agencies and re-manufacturers of brakes, clutches and automatic transmissions.

BULLETIN

NO. 394

January 29, 1971

MAILING INSTRUCTIONS

In order to be sure that all of our mailing records are in order, please record the name or names of those who are to receive the following and the number of copies they are to receive.

Company _____

Address _____

MINUTES & BALLOTS

Forward to:

No. of Copies:

Delegate: _____

Alternate: _____

BULLETINS & MENOS

Forward to:

No. of Copies:

DATA BOOK BULLETINS

Forward to:

No. of Copies:

January 29, 1971

BRAKE SHOE BULLETINS

Forward to:

No. of Copies:

Please return one of these copies and retain the other for your file.

Signature _____

Company _____

Date _____

H. G. DUSCHEK
Secretary

Distribution: C

B U L L E T I N

N O. 3 9 3

January 20, 1971

ANNUAL MEMBERSHIP MEETING

This is to advise that the annual meeting of the membership is scheduled for

Tuesday and Wednesday, June 22nd and 23rd 1971

at

Mount Airy Lodge, Mount Pocono, Pennsylvania

The Board of Directors will meet on Monday, June 21st.

This advance notice is being sent at this time so that you might mark your calendar to reserve these dates. Details as regards transportation, rates, etc. will be announced later.

H. G. Duschek
Secretary

Distribution: Active Members (B)

B U L L E T I N

N O. 3 9 2

January 18, 1971

ESTIMATED ORDER FOR 1971 DATA BOOK

In view of the fact that many members failed to correctly estimate their requirements of the 1969 Data Book, the Institute's inventory of over 4,000 copies was completely gone within four months after release. For this reason, and especially since the large edition has to last two years, I am requesting an estimate of your requirements at this time for the 1971 Data Book. This information is also necessary so that the proper quantity of paper may be ordered by the printer who receives the printing contract.

Would you therefore advise your approximate requirements? As soon as the size of the book as well as the name of the printer who is to do the work is known, the price per thousand, etc. will be announced and orders requested.

H. G. Duschek
Secretary

Distribution: Active and Regional Members (C)

BULLETIN

NO. 391

December 15, 1970

You have been informed previously that Harriet Duschek, our Executive Secretary, has presented her resignation to take effect as of September 1, 1971. Her efforts on behalf of the industry and our membership have been outstanding and her accomplishments have been such that your Board of Directors realized it would be difficult to find someone qualified to replace her.

We have, however, been fortunate enough to locate an Engineer and a Certified Public Accountant who was willing to accept the assignment. Therefore, at this time on behalf of the Board of Directors, I wish to inform you of his background and experience, so that when you meet him you will know he has all the necessary qualifications to continue the progressive efforts from which we all have benefited in the past.

There are many details in running the busy office of Friction Materials Standards Institute, Inc., and Harriet Duschek was the first to recognize that in order to be able to absorb the information required to properly handle the numerous duties of this position, it would be essential to have the new replacement spend time with her prior to having him put "on his own".

The new Executive Secretary is Edward W. Drislane of Teaneck, New Jersey. He was born in Albany, New York, is married and the father of five children. He has two degrees in engineering from Rensselaer Polytechnic Institute, has also received his M.B.A. in accounting from Siena College and is a registered Certified Public Accountant in the State of New York.

He served as a pilot in the United States Army Air Corps from December 1942 to June 1945 and was assigned to the Mediterranean Theater of Operations.

He is a member of the Society of Automotive Engineers; American Institute of Certified Public Accountants and the New York State Society of Public Accountants. He has been employed continuously, except when in the military service, by the following companies - Bendix Corporation, Western Electric Company, and for the past five years as an accountant and as a Management Consultant with Haskins & Sells, Certified Public Accountants.

He has presented several papers at various technical meetings and the same have been published, including one on "Cerametalix Clutch Material", and was issued a U. S. Patent in 1965 for cushioning engagements of clutch material, "Clutch Plates and the Like".

Mr. Drislane has been working at the office of the Institute with Harriet Duschek since the middle of October and is dedicated to his work. I am sure he looks forward to meeting the members of the Institute. I know that you will cooperate with him in every way and will find that he is most capable in furthering the interests of the industry, not alone for your benefit but also for the benefit of the ultimate user.

Stephen S. Conway, Jr.
President

Distribution: Group "C"
(Active & Regional Members)
(Licensees)

B U L L E T I N

N O. 3 9 0

November 24, 1970

G.M.C. BRAKE SHOES

Over the years an excellent working arrangement has been developed between the Institute Office and the General Motors Corporation and now they are asking for the cooperation of our membership with regard to the problem of servicing their inboard and outboard shoes. They know that the replacement field when difficulties are encountered in servicing brakes will ask the advice of the Institute member whose linings or unlined or lined shoes they are purchasing.

They are now requesting our members to advise the field of certain aspects of servicing the shoes referred to above. Rather than summarize their request, I am presenting their letter together with the attachment in its entirety.

H. G. DUSCHEK
Secretary

Distribution: "C"
Enclosures: 2

FMSI 18253

GENERAL MOTORS CORPORATION

October 28, 1970

Friction Materials Standards
Institute, Inc.
370 Lexington Avenue
New York, New York 10017

Gentlemen:

We felt that your organization should be advised relative to important servicing requirements relating to General Motors 1968 through 1971 single piston disc brake assemblies. We understand that you are in a position to disseminate important technical information relating to brake systems to brake shops and/or rebuilders throughout the country.

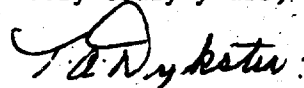
These outlets should be informed that the outboard shoes for the single piston disc brake are individually fitted to the caliper and are designed for original installation only. For this reason, under no circumstances should used outboard disc brake shoes be relined and installed in 1968 through 1971 General Motors vehicle products. In addition, it is recommended that the inboard shoes, which require a high degree of flatness for proper function, also not be re-used.

For your further information, the attached schematic drawing shows rivet detail of the first type disc brake outboard shoes (Item #1) which were used on GM vehicles from 1968 through 1970 and early 1971 models. You will note that this first type shoe has counter bores on the back surface to accommodate hollow brake lining rivet upset rolls, which provide an uninterrupted surface to operate on a flat brake caliper surface.

Running changes during the 1971 model year will eliminate the counter bores on the back face of outboard brake shoes as illustrated on the attached drawing (Item #2). This design change results in rivet roll protrusions above the back surface of the shoe face which requires a recess in corresponding areas of the brake caliper.

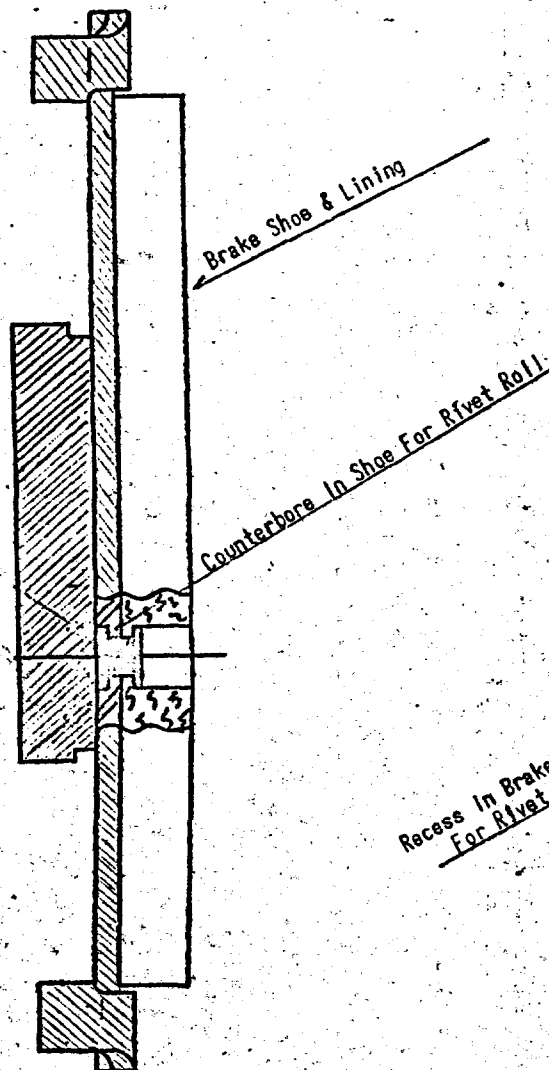
The first type design should be used as replacements for all models 1968 through 1971, and will be the only shoes available in the GM parts distribution system for service replacement.

Very truly yours,



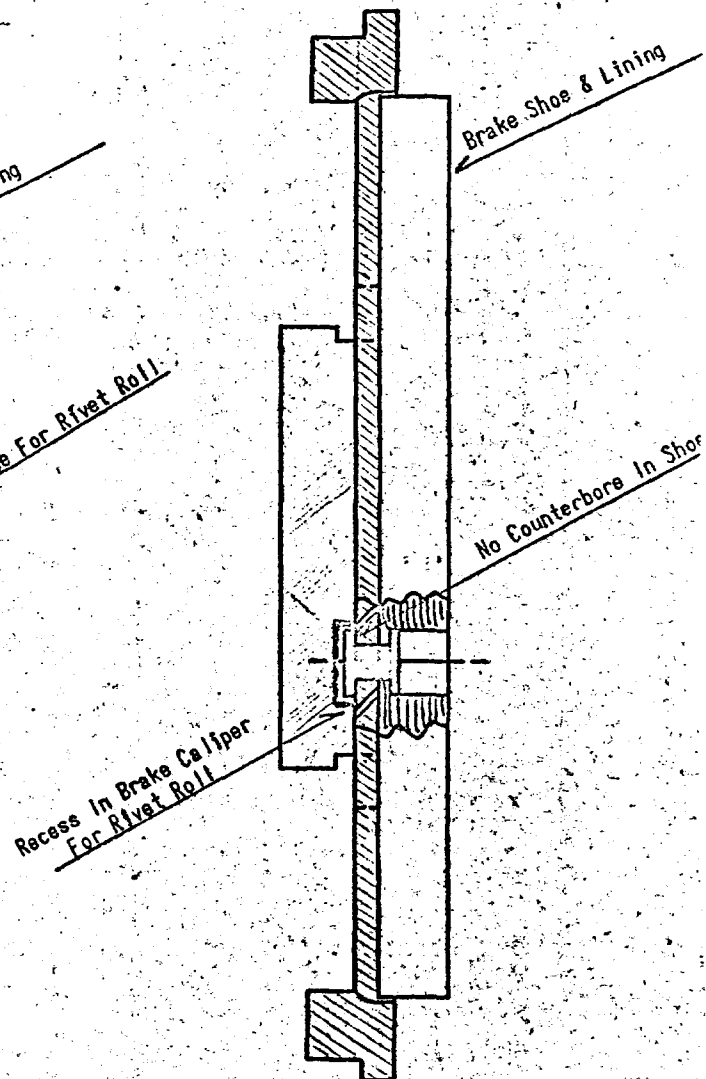
T. A. Dykstra
Service Section

Attachment



1968 thru 1970
and 1971 first-type

(Item #1)



1971 Second-type

(Item #2)

BULLETIN

NO. 389

November 16, 1970

1970 BRAKE SHOE IDENTIFICATION CATALOG

Enclosed herewith, is an advance copy of the 1970 Brake Shoe Identification Catalog, for reference until the quantity you have ordered is received. Shipments have already started.

H. G. Duschek
Secretary

Distribution: Active Members
Regional "
Licensees

Enclosure

B U L L E T I N

N O. 3 8 8

October 19, 1970

STANDCO INDUSTRIES, INC.

This is to advise that Standco Industries, Inc. of Houston, Texas, has been accepted as an Active Member of the Institute. The vote was taken by mail ballot.

The delegate is Mr. J. M. Dunn and the alternate is Mr. James S. Allen.

H. G. Duschek
Secretary

Distributions: Active Members (B)

BULLETIN

NO. 387

October 19, 1970

INTERIM FEDERAL SPECIFICATION
#HH-L-0036 d. (GSA-FSS)

Attached, hereto, is a copy of this specification on brake lining which the Defense Supply Agency intends re-writing. The objective is to add definition to the acceptability criteria for material and to add provisions whereby suppliers will furnish test data in accordance with Brake Lining Quality Control Test Procedure-SAE J661a.

The Brake Performance Study Committee has not had the time to make a study of these specifications and to file comments as they have been and are unusually busy on revised safety regulations issued by the Government. The Committee, therefore, would appreciate any comments or suggestions which you wish to offer. If the Standardization Office contacted you, would you be kind enough to forward a copy of your reply to me?

It would be appreciated if your comments, suggestions or a copy of your reply to the Defense Agency reaches me by October 30th at the latest. If you have no comments, please so advise.

H. G. Duschek
Secretary

Distribution: Active Members (8)
Enclosure: 1

B U L L E T I N

N O. 3 8 6

October 15, 1970

DECLARATION RE PRODUCT CATEGORIES

FOR

FEE FORMULA BASIS

According to the Constitution and By-Laws, the Fee Formula for the Active Members must be reviewed annually and then presented to the Board of Directors who make recommendations to the membership.

Inasmuch as a member may be engaged in a category one year and not the following, or the reverse, it is necessary to have a confidential declaration filed annually in order to arrive at a proper assessment for each category.

Therefore, would you kindly return one of the attached to Mr. L. D. Stickles, Counsel, who will prepare a summary to aid the Board of Directors in determining the fee formula for the fiscal year starting July 1, 1971.

ANY MEMBER NOT FILING THIS INFORMATION CORRECTLY WILL BE ASSESSED THE FULL FEE FOR ALL CATEGORIES.

Kindly return your declaration to Mr. Stickles by October 31st 1970.

H. G. Duschek
Secretary

Distribution: Active Members (B)
Enclosures: 2

C O N F I D E N T I A L

Mr. L. D. Stickles
Stickles, Hayden, Kennedy,
Hort & Van Steenburgh
36 West 44th Street
New York, New York 10036

Dear Mr. Stickles:

In response to Bulletin No. 386 dated October 15, 1970, my
declaration of confidential information to be used in determining
the fees, our company is engaged as follows:

Brake Linings - Under 5/8"	Mfg. ☐	Buy ☐
Brake Blocks - 5/8" and Over	Mfg. ☐	Buy ☐
Clutch Facings	Mfg. ☐	Buy ☐
Brake Shoes (New Unlined)	Mfg. ☐	Buy ☐

Affix an "X" in the square to the right of the category or categories
your company is engaged in.

Signature _____

Company _____

Date _____

P. S. Kindly return your declaration to Mr. Stickles by October 31, 1970.

INTERIM FEDERAL SPECIFICATION

LINING FRICTION AND LINING MATERIAL FRICTION, (BRAKE) (AUTOMOTIVE - USE)

This Interim Federal Specification was developed by Standardization Division, Federal Supply Service, General Services Administration, Washington, D. C. 20407, based upon currently available technical information. It is recommended that Federal agencies use it in procurement and forward recommendations for changes to the preparing activity at the address shown above.

1. SCOPE AND CLASSIFICATION

1.1 Scope. - This specification covers brake lining materials for automotive use not including industrial or aeronautical use. The test methods are designed to determine coefficients of friction and wear properties of the material.

1.1.1 Federal specification coverage. - Federal specifications do not include all varieties of the commodity as indicated by the title of the specification, or which are commercially available, but are intended to cover only those generally used by the Federal Government.

1.2 Classification.

1.2.1 Types, styles and classes. - Brake linings covered by this specification shall be furnished in accordance with the following types, styles, and classes, as specified (see 6.1):

Type I. - Rigid.

Style 1. - Rigid ¹ molded sets for bonding (with or without wire backing).

Class A. - Heavy duty, single or dual friction.

Class B. - Light duty, single or dual friction.

Style 2. - Rigid ¹ molded sets for riveting (with or without wire backing).

Class A. - Heavy duty, single or dual friction.

Class B. - Light duty, single or dual friction.

Type II. - Flexible ² molded rolls or sets, high friction.

Type III. - Woven, ³ rigid or flexible rolls or sets.

Class A. - Medium friction.

Class B. - High Friction.

NOTE: ¹ A rigid lining is formed to fit a specific drum diameter.

² A flexible lining is one that is adaptable to brake drums from 10 inches to 18 inches in diameter and may be furnished in rolls.

³ A woven lining is one which is made with woven fabric as a base. The principal ingredient of the fabric shall be asbestos.

1.2.2 Sizes. - Brake linings shall be of the thickness and width shown in table I as specified (see 6.1).

2. APPLICABLE SPECIFICATIONS, STANDARDS AND OTHER PUBLICATIONS

2.1 Specifications and standards. - The following specifications and standards, of the issues in effect on date of invitation for bids, form a part of this specification:

Federal Specifications:

PPP-B-566 - Boxes, Folding, Paperboard.

PPP-B-585 - Boxes, Wood, Wirebound.

PPP-B-591 - Boxes, Fiberboard, Wood-Cleated.

PPP-B-601 - Boxes, Wood, Cleated - Plywood.

PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.

PPP-B-636 - Box, Fiberboard.

PPP-B-640 - Boxes, Fiberboard, Corrugated, Triple, Wall.

PPP-B-665 - Boxes, Paperboard, Metal Stayed (Including Stay Material).

PPP-B-676 - Boxes, Set-Up, Paperboard.

Federal Standards:

Fed. Std. No. 102 - Preservation, Packaging, and Packing Levels.

Fed. Std. No. 123 - Marking for Domestic Shipment (Civilian Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, D.C., Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, San Francisco, Los Angeles, and Seattle, Wash.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

MIL-P-116 - Preservation, Methods of.

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.

MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. - The following document forms a part of this specification. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply.

Nongovernmental:

Society of Automotive Engineers Handbook

Recommended Practice - J661, Brake Lining Quality Control Test Procedure.

(Application for copies should be addressed to the Society of Automotive Engineers, Inc. 485 Lexington Avenue, New York, N. Y. 10017).

3. REQUIREMENTS

3.1 Preproduction sample. - When specified, (see 6.1), a preproduction sample of two linings, or a sample of two linings from the first ten units of production shall be furnished for preproduction inspection in accordance with section 4 hereof. The sample shall be representative of the linings proposed to be furnished under the contract. Approval of a preproduction sample shall not relieve the supplier of the responsibility to furnish linings in accordance with the requirements of this specification.

3.2 Materials. - The lining shall have uniform characteristics throughout the wearing portion and shall be of a quality which will meet the requirements specified hereinafter.

3.2.1 Sets and rolls. - The brake lining covered by this specification may be supplied in sets (1) drilled with rivet holes for attachment to specific brake shoes, (2) undrilled and coated with the necessary bonding agent required for bonding the lining to the brake shoe by the purchaser, or (3) may be supplied in sets or rolls without rivet holes or bonding agent as specified, (see 6.1).

3.2.1.1 Bonding agent. - When brake lining is ordered for bonding, the bonding agent shall be of the thermo-setting type. It must maintain a shear strength greater than the shear strength of the lining, at all temperatures up to and including 400°F. When properly cured, the bonding agent shall not be affected whatsoever by grease, oil, brake fluid or cleaning fluid that might be used around a brake assembly.

3.3 Stability. - The lining shall show no deleterious changes in properties during storage up to one year.

3.3.1 Bonding agent. - The bonding agent on linings ordered for bonding shall show no deleterious changes in properties during storage up to one year.

3.4 Strength. - The lining shall have sufficient mechanical strength to permit it to be securely attached to brake shoes without damage during attachment or use.

3.5 Sizes. - Unless otherwise specified, (see 6.1), brake lining shall comply with the requirements of table I.

3.5.1 Surfaces. - The surfaces of the lining shall be essentially parallel. The maximum variation in thickness across the width of the lining shall be not greater than 0.008 inch and for rigid linings, the concavity shall not exceed 0.008 inch on either side.

3.5.2 Radius of curvature. - The radius of curvature of rigid lining shall be as required to fit the brake specified (see 6.1), with a tolerance of plus or minus 1/4 inch.

3.6 Coefficients of friction.

3.6.1 Baseline. - Baseline coefficients of friction of the lining shall be within the minimum and maximum limits as specified in table II, (see 4.4.3).

3.6.2 Fade and recovery. - Fade and recovery coefficients of friction recorded at temperatures up to 500°F. Shall be not less than the minimum allowable coefficient of friction as specified in table II, (see 4.4.4; 4.4.5; 4.4.7; 4.4.8).

3.6.3 Wear test. - Wear test coefficients of friction of the lining shall be not less than the minimum allowable coefficient of friction as specified in table II (see 4.4.6).

3.7 Wear. - The loss due to wear, in thickness of the lining shall not exceed the maximum limits as specified in table II (see 4.4.10).

3.8 Oven-heat test. - The lining after the oven heat test, shall show no evidence of blistering and shall not change more than 0.010 inch in thickness (see 4.5).

3.9 Identification. - Brake lining sets shall be marked with a number, letter or symbol and name or trademark which will adequately identify the manufacturer and catalog number; segments of combination sets shall be identified for the brake shoes on which they are to be used. Identification marks shall appear on every piece of lining and in the case of lining furnished in rolls, shall appear at intervals not exceeding 24 inches throughout the length of the roll. The material of all linings submitted under the same identification mark shall have the same properties as closely as the best commercial practices will permit.

3.10 Workmanship. - Workmanship shall be first class. The finished brake lining shall be of the proper dimensions and free from all defects which may impair its serviceability.

4. SAMPLING, INSPECTION, AND TEST PROCEDURES

4.1 Responsibility for inspection. - Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specifications where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Inspection.

4.2.1 Preproduction inspection. - When specified, a preproduction sample of two linings, or a sample of two linings from the first ten units of production shall be furnished for preproduction inspection. The sample shall be representative of the linings proposed to be furnished under the contract. The preproduction inspection shall be conducted by the Government at a place designated by the Government.

4.2.1.1 Failure. - Failure of a preproduction sample to pass any of the inspection specified herein may be cause for the Government to refuse to conduct additional inspection until the faults revealed by the inspection have been corrected.

4.3 Preparation of test sample. - A minimum of three segments of linings shall be selected at random from the lining shipment. The test sample shall be taken from the center of each of the lining segments, equidistant from either end. The sample shall be 1 inch square, flat on the bottom. The radius of the working surface shall conform to the radius of the test drum. Remove not less than 0.010 inch nor more than 0.020 inch from the working surface of a curved sample. Sample thickness (or sample plus shim) must be approximately 0.240 inch measured in center of sample. Excess of material must be removed from the bottom side of a sample cut from 0.250 inch or greater nominal thickness linings. In cases where nominal lining thickness is less than 0.210 inch, remove minimum amount of material from the bottom to produce flatness. Working surface of sample should not be handled and should be kept free of foreign material.

4.4 Tests. - Tests shall be made on the machine and following the procedure hereinafter described. The friction of the lining is calculated by using the recorded value (R), taken at the end of application, in the formula:

$$E = \frac{R \times A}{P}$$

E = Coefficient of friction.
R = Pressure to strip chart recorder in lbs. per sq. inch.
P = Pressure on the sample in lbs. per sq. inch.
A = Area of balanced air diaphragm.

4.4.1 Test machine and procedure. - The lining shall be tested on a friction materials test machine such as that described in the Society of Automotive Engineers Recommended Practice SAE J561, "Brake Lining Quality Control Test Procedure." The test machine consists essentially of a heat-controlled, 11-inch diameter test drum, a means of applying variable pressure to the lining sample and the necessary mechanisms to operate the test drum and apply the test sample. In operation, the test drum is brought up to and maintained at the prescribed speeds and temperatures and the test sample applied to the test drum. The action of the sample in the drum sets up a torque which is recorded through a balanced air diaphragm on a strip chart pressure recorder.

4.4.1.1 New or re-surfaced drum. - After grinding the drum surface (in position on the test machine) and prior to each test, remove all grinder marks and finish with No. 320 grit (wet or dry) sandpaper only. Remove dust from drum with clean dry air and/or wipe with a clean cheesecloth or equivalent. Complete the surface preparation by running a reference sample of the material to be tested continuously at 100 p.s.i., 417 r.p.m. (20 f.p.s.) and not over 200°F. until the coefficient of friction has stabilized.

4.4.1.2 Conditioning of test sample. - Another sample is selected and run-in at 312 r.p.m. (15 f.p.s.), 100 p.s.i., and a maximum drum temperature of 200°F., for 20 minutes. If sample does not show at least 95 percent contact after 20 minutes, the sample is to be discarded and another prepared and conditioned.

4.4.2 Initial thickness measurements. - Take sample thickness measurement in three places (at both edges and center) along the center line parallel to the drum axis and record. Reset sample by running continuously for 5 minutes at 50 p.s.i., and 208 r.p.m. (10 f.p.s.). Initial clearance between sample and drum should be 0.010 to 0.015 inches in the load "OFF" position.

4.4.3 Baseline run. - Run 10 seconds "ON" (load applied) and 20 seconds "OFF" (load removed), at 150 p.s.i. and 417 r.p.m. for 20 applications. Start run at drum temperature of 200°F. and maintain average of 200°F. throughout run. The average of the test sample coefficients of friction obtained, shall be known as the baseline coefficient of friction, E_b. The value of E_b thus determined shall be the reference for determining compliance with the limiting values and allowable variations given in table II.

4.4.4 First fade run. - Run continuous drag at 150 p.s.i. and 417 r.p.m. with the heater on. Start run at 200°F. and run for either (a) 10 minutes or (b) until 550°F. is attained, whichever occurs first.

4.4.5 First recovery run. - Immediately following completion of above fade run (4.4.4), turn off heater, turn on blower (or cooling air) and make a 10-second application at each 100°F. interval during cooling from 500°F to 200°F.

4.4.6 Wear run. - Run 20 seconds "ON", 10 seconds "OFF", at 150 p.s.i., and 417 rpm for 100 applications. Start run at drum temperature of 400°F. and maintain average of 400°F. throughout run.

4.4.7 Second fade run. - Run continuous drag at 150 p.s.i. and 417 r.p.m. with heater on, blower (or cooling air) off. Start run at 200°F. and run for either (a) 10 minutes or (b) until 650°F. is reached, whichever occurs first.

4.4.8 Second recovery run. - Immediately following completion of second fade run (4.4.7) turn off heater, turn on blower (or cooling air) and make a 10 second application of each 100°F. interval during cooling from 600°F. to 200°F.

4.4.9 Baseline re-run. - Repeat 4.4.3.

4.4.10 Final wear measurement. - Repeat 4.4.2.

4.5. Oven-heat test. - The lining shall be heated in an oven for two hours at 400°F. Thickness measurements shall be made with the lining at room temperature.

Table I, Width and Thickness Requirements

Thickness						
Thickness, inch	3/16	1/4	5/16	3/8	7/16	1/2
MOLDED						
Tolerance, inch	.1975/.1775	.260/.240	.3225/.3025	.385/.365	.4475/.4275	.510/.490
WOVEN						
Tolerance, inch	.195/.185	.260/.240	.320/.300	.385/.365	.450/.425	.515/.480
Width						
Width	Tolerance		Width	Tolerance		
1 to 5 inches	+.030 to -.030 inch		5 to 8 inches	+.062 to -.062 inch		

Table II. Coefficients of Friction

TYPE, STYLE, CLASS	Lining Position	Limits of coefficient of friction for E _a ②		Minimum allowable coefficient of friction E _a ① at temperatures up to: 400°F - Wear test. 500°F Second fade & Rec.	Limits of coefficient of friction for E _a ②	Maximum total wear (inches)
Type I, Style 1, class A		First Baseline		Wear Test	Second fade and recovery	Baseline rerun
		Min.	Max.			
Type I, Style 2, class A	Primary	.35	.55	.20	.13	.035
	Secondary	.28	.45	.28	.24	.030
	Forward	.32	.48	.28	.22	.050
	Reverse	.30	.45	.30	.26	.070
Type I, Style 1, class B	All Positions	.25	.45	.25	.18	.035
Type I, Style 2, class B						
Type II	All Positions	.25	.45	.25	.18	.035
Type III, class A	All Positions	.30	.45	.05	.05	.030
Type III, class B	All Positions	.30	.60	.30	.25	.060

E is defined in 4.4 ①
E_a is defined in 4.4.3 ②

4.6 Inspection of preparation for delivery requirements. - An inspection shall be made to determine that the packaging, packing and marking comply with the requirements in section 5 of this specification. Defects shall be scored in accordance with table III. The sample unit shall be one shipping container fully prepared for delivery. Sampling shall be in accordance with MIL-STD-105. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 4.0 defects per hundred units.

Table III Classification of preparation for delivery defects

Examine	Defects
Markings (exterior and interior)	Omitted; incorrect; illegible; improper size, location, sequence, or method of application.
Materials	Any component missing, or damaged.
Workmanship	Inadequate application of components such as incomplete closure of container flaps, loose strapping, inadequate stapling. Distortion of container.

5. PREPARATION FOR DELIVERY

(For civil agency procurement the definitions and application of levels of packaging and packing shall be in accordance with Fed. Std. No. 102).

5.1 Packaging. Packaging shall be level A, B, or C as specified (see 6.1).

5.1.1 Level A.

5.1.1.1 Unit packaging.

5.1.1.1.1 Sets. Each set of linings shall be packaged in accordance with method IC-2 of MIL-P-116.

5.1.1.1.2 Rolls. Each roll of lining in lengths and widths as specified (see 6.1) shall be packaged in accordance with method IC-2 of MIL-P-116.

5.1.2 Level B.

5.1.2.1 Sets. - Each set of linings shall be packaged in a close-fitting box conforming to PPP-B-566, PPP-B-665 or PPP-B-676.

5.1.2.2 Rolls. - Each roll of lining in lengths and widths as specified (see 6.1) shall be packaged in a close-fitting box conforming to PPP-B-566, PPP-B-665, or PPP-B-676.

5.1.3 Level C. - The sets of rolls shall be packaged in accordance with the suppliers commercial practice.

5.2 Packing. - Packing shall be level A, B or C as specified (see 6.1).

5.2.1 Level A. - Unit packages of sets or rolls of like description in quantities as specified (see 6.1) shall be packed in a close-fitting box conforming to PPP-B-585, class 3; PPP-B-591, class II; PPP-B-601, type III; PPP-B-621, class 2; PPP-B-636, class weather-resistant or PPP-B-640, class 2, grade A. The boxes shall be closed and strapped in accordance with the applicable specification or appendix thereto. The gross weight of the triple wall box or the wood boxes shall not exceed 200 pounds. The gross weight of the PPP-B-636 box shall not exceed the weight limitations of the box specification.

5.2.2 Level B. - Unit packages of sets or rolls of like description in quantities as specified (see 6.1) shall be packed in a close-fitting box conforming to PPP-B-636, class domestic. The box shall be closed in accordance with the appendix to the box specification. The gross weight shall not exceed the weight limitations of the box specification.

5.2.3 Level C. - The sets or rolls of lining shall be packed to insure carrier acceptance and safe delivery at destination in containers complying with the rules and regulations applicable to the mode of transportation.

5.3 Marking.

5.3.1 Civil agencies. - In addition to markings required by the contract or order (see 6.1), the packages and shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.3.2 Military activities. - In addition to markings required by the contract or order, (see 6.1), the packages and shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Ordering data. - Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Type, style, class and size of lining (see 1.2).
- (c) Specify when lining size is other than table I (see 3.5).
- (d) For rigid linings, the outside radius of curvature (see 3.5.2).
- (e) Whether rolls or sets are required, where applicable (see 3.2.1).
- (f) Any special provisions for attachment of lining to brake shoe (see 3.2.1).
- (g) Whether preproduction samples are required (see 3.1).
- (h) For replacement purchases, Friction Materials Standards Institute (FMSI) number for brake lining, or:
 - 1. Manufacturers' part number.
 - 2. Make, model and year of vehicle.
- (i) Level of packaging and packing required (see 5.1 and 5.2).
- (j) Special marking if required (see 5.3).

6.2 Transportation Description.

6.2.1 Transportation descriptions and minimum weights applicable to this commodity are:

TYPE I

Rail:

Brake linings, non-flexible, asbestos.
Carload minimum weight 30,000 pounds.

Motor:

Brake linings, non-flexible, asbestos.
Truckload minimum weight 30,000 pounds, subject to Rule 115,
National Motor Freight Classification.

TYPE II

Rail:

Brake linings, flexible, not otherwise indexed by name.
Carload minimum weight 30,000 pounds.

Motor:

Brake linings, flexible, not otherwise indexed,
Truckload minimum weight 30,000 pounds, subject to Rule 115,
National Motor Freight Classification.

TYPE III

Rail:

Brake linings, fabric, impregnated.
Carload minimum weight 30,000 pounds.

Motor:

Brake linings, fabric.
Truckload minimum weight 30,000 pounds, subject to Rule 115,
National Motor Freight Classification.

B U L L E T I N

N O. 3 8 5

October 15, 1970

AMENDED CONSTITUTION AND BY-LAWS

The amendment to Article II Section (c) of the Constitution was accepted by the membership by mail ballot. Would you kindly attach the enclosed first page, on which the change was made, to your copy of the Constitution.

H. G. Duschek
Secretary

Distribution: Active Members (B)
Regional Members

CONSTITUTION AND BY-LAWS

of

FRICTION MATERIALS STANDARDS INSTITUTE, INC.

CONSTITUTION

ARTICLE I

NAME

The name of this Institute shall be Friction Materials Standards Institute, Inc.

ARTICLE II

OBJECTS

The objects of this Institute shall be:

(a) To maintain and raise the standards of all products manufactured by the members of this corporation and by the brake lining, brake shoe and friction materials industry as a whole.

(b) To prevent unfair and fraudulent practices and methods and to cause the observance of a high standard of ethics by all members of the said industry.

(c) To encourage and support research in sources of supply, materials and manufacturing processes.

(d) To collect, assemble and disseminate to members of the said industry, scientific, engineering, technological, statistical and other relevant information pertaining to brake linings and clutch facings and pertaining to the said industry.

(e) To cooperate with the United States Government through its various departments and bureaus and with the respective States and Municipalities through their various departments and bureaus for the general benefit of the public and the enhancement of the industry.

(f) To acquire property for the corporate purposes by grant, gift, purchase, devise or bequest, and to hold and to dispose of the same subject to such limitations as are prescribed by statute.

(g) To carry on all or any of its activities and to purchase or acquire, hold and dispose of such property, real personal and mixed, as may be requisite for the transaction of its business or the conduct of its affairs, in any of the states, districts, territories or possessions of the United States, and in any and all foreign countries, subject to the laws of such state, district, territory, possession or country.

BULLETIN

NO. 384

October 15, 1970

CLUTCH FACING MODEL APPLICATIONS

Starting with the 1969 Automotive Data Book, a separate section was set up for clutch facings. In this section, only the sizes of the facings, the drill diagram and the F.M.S.I. numbers were shown under the vehicle manufacturer's name.

The Chairman of the Data Book Committee had reported, at the previous annual meeting, that this arrangement was recommended for reasons of saving space and, thereby, reducing the size of the large editions. In addition to this reason, the majority of the members are engaged in the manufacture of linings and blocks and the field orders clutch facings by size rather than by model applications.

It has now come to the attention of the Committee that model applications for clutch facings are being requested, therefore, starting with Data Book Bulletin #309, facings will be shown for each model. However, since the data book format, established with the 1969 edition, will be continued, it will be necessary for the members to keep their own records as the information is released.

In the near future, a bulletin will be issued in which the facing applications for the 1969 and 1970 models will be listed. Retain that bulletin for your master file to which you should add facing information as released.

H. G. Duschek
Secretary

Distribution: Groups "B" and "G"

B U L L E T I N

N O. 3 8 3

October 9, 1970

PRICE CHANGE

for

1970 BRAKE SHOE IDENTIFICATION CATALOG

In Bulletin #379 dated August 24, 1970, I announced the price of the 1970 catalog as being \$198.37 per M (exclusive of punching) for a fifty-two (52) page book.

The printer has now informed me that the book will be only forty-eight (48) pages. With the decrease in the number of pages as well as in the orders received, the price will be \$185.26 per M plus the \$6.00 charge per M for five hole punching.

Kindly advise your purchasing department, or whomever has charge of ordering catalogs, to change their records accordingly.

H. G. Duschek
Secretary

Distributions: Active Members (C)

B U L L E T I N

N O. 3 8 2

October 6, 1970

APPLICATION FOR ACTIVE MEMBERSHIP

filed by

STANDCO INDUSTRIES, INC.

On August 10th, Bulletin #377, announced that Standco Industries, Inc. of Houston, Texas had filed an application for Active Membership. This was very carefully reviewed by the Membership Committee and by the Board of Directors who now recommend the acceptance of this company.

Will you kindly record your vote, on the attached ballot, and return it without delay.

H. G. Duschek
Secretary

Distribution: Active Members (B)

B A L L O T

(Re Bulletin #382 dated
October 6, 1970)

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York 10017

Attention: Secretary

Gentlemen:

My vote on the acceptance of Standco Industries, Inc.
of Houston, Texas to Active Membership is:

Yes (☐)

No (☐)

Signature _____

Company _____

Date _____

B U L L E T I N

N O. 3 8 1

September 17, 1970

NATIONAL HIGHWAY SAFETY BUREAU

DOCKETS #70-16 AND #70-17

The Brake Performance Study Committee held a meeting on Thursday and Friday, September 10th and 11th to discuss the proposals of Dockets #70-16 and #70-17.

Comments had to be filed with the Bureau by September 21st. In order to keep you up-to-date on the Committee's response to the Bureau's proposals, a copy of the letters sent to the Bureau are attached hereto for your information.

H. G. Duschek
Secretary

Distribution: Active Members (B)
Enclosures: 2

Friction Materials Standards Institute, Inc.

370 LEXINGTON AVENUE
NEW YORK, N. Y. 10017

September 14, 1970

Docket Section
National Highway Safety Bureau
Room 4223
400 Seventh Street, S. W.
Washington, D. C. 20591

Subject: Docket No. 70-16; Notice #1
Air Brake Systems On Trailers

The Friction Materials Standards Institute, Incorporated submits the following comments to the subject docket:

The scope of this Proposed Motor Vehicle Safety Standard is broad and requires such significant changes from current air brake systems, that time did not permit specific tests to be run to the proposed procedures. It has not been possible to evaluate the proposed requirements from existing data, therefore an extension to January 1, 1971 is requested for compiling supporting data. This supporting data will be a prerequisite to meaningful comments on costs and lead time required to comply with this proposal.

There are questions regarding interpretation of the proposal and comments which can be made at this time based on experience and available data.

Is it the intent of this proposal to apply only to new vehicles manufactured after the effective date?

The proposal refers to "each brake and drum assembly" being placed on an inertia dynamometer. Is the intent to dynamometer test all brakes from the vehicle or only one of each brake that may differ in size or components?

- S3 "Curb Weight" definition is not applicable to trailers as stated.
- S4.2.1 Stopping capability, "Vehicle at curb weight" is subject to interpretation. Does this refer to trailer only or also include towing motor vehicle. If weight of towing motor vehicle is included what provision is made for stopping this additional weight?
- S4.2.4 Brake Retardation Force. To meet the proposed requirements will necessitate a significant increase in brake torque over brakes in current use. This torque increase can be obtained by brake design, higher coefficient of friction lining, or both. However, development of such friction material will require more time than permitted by the effective date of January 1, 1972.
- S4.2.4.1. Clarification is needed on the torque value to be used in this calculation. Torque output during a given stop may vary as much as 25% from minimum to maximum.

September 14, 1970

- S4.2.5. Brake Power. We are not in full agreement with this requirement as it overlooks basic functions of brake fade which warns the driver and protects the braking system from destructive temperatures. These requirements can not be fully evaluated from the standpoint of ultimate brake temperature as current brakes will not meet these unrealistic fade requirements.
- S4.2.5.2. We would prefer to have specific data before making final comment, but it is our opinion that a 14 fpsps deceleration requirement is unrealistic within one minute following any test which results in destructive brake temperatures.
- S4.2.6. Brake Recovery. We recommend ten stops at two minute intervals to promote better cooling and a more meaningful recovery check. One minute intervals generally result in a stabilized drum and lining temperature.
- S5.1.1. The term Gross Vehicle Weight Rating (GVWR) when applied to a trailer is subject to interpretation as written. If the GVWR includes the towing vehicle the Gross Axle Weight Rating (GAWR) of the trailer does not comply with GAWR definition in S3. If the vehicle is loaded to comply with GAWR definition, what provision is made for stopping additional weight of towing vehicle, to prevent penalizing the trailer brakes?
- S5.1.6. Conditions for burnishing trailer brakes are subject to clarifications requested in S5.1.1. It is suggested the following trailer brake burnish procedure be considered as solution to the clarification needed in S5.1.1.: 200 trailer brake applications 40 MPH to 20 MPH at 10 fpsps maintaining lining temperatures between 315° F and 385° F. Make 200 additional applications 40 MPH to 20 MPH at 10 fpsps maintaining lining temperature between 400° F and 500° F. This will necessitate installation of a plug type thermocouple as specified in SAE J843a.
- S5.2.1. A tolerance should be established for equivalent wheel load as the inertia weights on dynamometers vary and it is seldom possible to achieve the exact equivalent in inertia loading. Additional time will be required to determine what tolerances would be reasonable.
- We also believe that the dynamometer loading ought to reflect various friction losses in a vehicle not encountered on the dynamometer. Time, again, would be required to determine a realistic value. Current passenger car studies indicate this factor is .86. We believe the correction factor for trucks should be greater.
- S5.2.2. On ambient temperature, we recommend a range of 60° F to 95° F.

Docket Section
National Highway Safety Bureau
Washington, D. C. #20591

-3-

September 14, 1970

S5.2.3. We would suggest that this be changed to "air at ambient temperature be directed to the drum at the rate of 2200 feet per minute." Due to variations in the shape of the air chamber which surrounds the drum, it is impossible to comply with the "uniformly and continuously" conditions.

Docket 70-16 does not specify thermocouples. As both drum and lining temperatures are referenced, S5.2.5. and S5.2.6. suggest specifying lining thermocouple per SAE J843a and drum thermocouple per SAE J667.

In summarizing, our immediate concern is an extension of the date for filing supporting data on these comments to January 1, 1971. It will be necessary to run tests in accordance with the proposed procedures before the full significance of this safety standard can be evaluated as to cost and particularly lead time.

Respectfully submitted,

S. S. Conway, Jr.
President

Friction Materials Standards Institute, Inc.

370 LEXINGTON AVENUE
NEW YORK, N. Y. 10017

September 14, 1970

Docket Section
National Highway Safety Bureau
Room 4223
400 Seventh Street S.W.
Washington, D.C. #20591

Subject: Docket No. 70-17. Notice #1
Air Brake Systems; Trucks and Buses

The Friction Materials Standards Institute, Incorporated submits the following comments to the subject docket:

The scope of this Proposed Motor Vehicle Safety Standard is broad and requires such significant changes from current air brake systems, that time did not permit specific tests to be run to the proposed procedures. It has not been possible to evaluate the proposed requirements from existing data, therefore an extension to January 1, 1971 is requested for compiling supporting data. This supporting data will be a prerequisite to meaningful comments on costs and lead time required to comply with this proposal.

There are questions regarding interpretation of the proposal and comments which can be made at this time based on experience and available data.

Is it the intent of this proposal to apply only to new vehicles manufactured after the effective date?

The proposal refers to "each brake and drum assembly" being placed on an inertia dynamometer. Is the intent to dynamometer test all brakes from the vehicle or only one of each brake that may differ in size or components? Will this require a double ended dynamometer?

- S4.2.1 Stopping Distance. The stopping distances specified require unrealistically high average deceleration rates, up to 17.9 fpsps at 60 MPH. To achieve these stopping distances it will be necessary to attain deceleration rates as high as 24 fpsps for sustained periods. These are not possible with current brakes systems. Again additional time will be required for study and solutions.
- S4.2.2 Stopping distances specified with partial failure are at substantially 75% of full brake system. If a split air system is acceptable (S4.1.3) we assume a 50-50 split and would expect stopping distances to reflect the same percentage. A clarification as to what constitutes a split service brake system is requested.
- S4.2.5 Brake Retardation Force. To meet the proposed requirements will necessitate a significant increase in brake torque over those in current use. This torque increase can be

obtained by brake design, higher coefficient of friction lining or both. However, development of such friction material will require more time than permitted by the effective date of January 1, 1972.

- S4.5.1 Should be S4.2.5.1. Also reference to S5.2.5 for burnish should be S5.2.6. Clarification is needed on the torque value to be used in this calculation. Torque output during a given stop may vary as much as 25% from minimum to maximum.
- S4.2.6 Brake Power. We are not in full agreement with this requirement as it overlooks a basic function of brake fade which warns the driver and also protects the braking system from destructive temperatures. These requirements can not be fully evaluated from the standpoint of ultimate brake temperature as current brakes will not meet these unrealistic fade requirements.
- S4.2.6.2 We would prefer to have specific data before making final comment, but it is our opinion that a 14 fpsps deceleration requirement is unrealistic within one minute following any test which results in destructive brake temperatures.
- S4.2.7 Brake Recovery - we recommend ten stops at two minute intervals to promote better cooling and a more meaningful recovery check. One minute intervals generally result in a stabilized drum and lining temperature.
- S5.1.8 It is suggested that a revised vehicle burnish procedure be considered for purposes of greater consistency for correlation and repeatability of these tests. 200 brake applications from 40 to 20 mph at 10 fpsps maintaining lining temperatures between 315°F and 385°F. Make 200 additional applications 40 to 20 mph at 10 fpsps maintaining lining temperatures between 400°F and 500°F. This will necessitate installation of plug type thermocouples as specified in SAE J843a.
- S5.2.1 A tolerance should be established for equivalent wheel load as the inertia weights on dynamometers vary and it is seldom possible to achieve the exact equivalent in inertia loading. Additional time will be required to determine what tolerances would be reasonable. We also believe that the dynamometer loading ought to reflect various friction losses in a vehicle not encountered on the dynamometer. Time, again, would be required to determine a realistic value. Current passenger car studies indicate this is .86. We believe the correction factor for trucks should be greater.
- S5.2.2 On ambient temperature, we recommend a range of 60°F to 95°F.
- S5.2.3 We would suggest that this be changed to "air at ambient temperature be directed to the drum at the rate of 2200 feet per minute". Due to variations in the shape of the air

September 14, 1970

chamber which surrounds the drum it is impossible to comply with the "uniformly and continuously" conditions.

- S5.2.4 The lining temperature is measured by a plug type thermocouple installed according to SAE J843a. The drum temperature is measured by a thermocouple installed per SAE J667.

In summarizing, our immediate concern is an extension of the date for filing supporting data on these comments to January 1, 1971. It will be necessary to run tests in accordance with the proposed procedure before the full significance of this safety standard can be evaluated as to cost and particularly lead time.

Respectfully submitted,

S. S. Conway, Jr.
President

SSC/cit

B U L L E T I N

N O. 3 8 0

September 15, 1970

ANNOUNCEMENT OF REVISION

to the

CONSTITUTION AND BY-LAWS (as amended July 18, 1967)

Counsel has recommended amending Article II Section (c) of the Constitution and By-Laws which now reads as follows:

"To encourage and support research in sources of supply, materials, manufacturing processes and domestic markets and to coordinate such research so as to eliminate unnecessary duplication of such research by members of the said industry".

TO BE CHANGED TO READ:

"To encourage and support research in sources of supply, materials and manufacturing processes".

Rather than call a special meeting of the membership to vote upon this revision, it is being presented for vote by mail ballot. At the June meeting, the revision will be read for confirmation of the ballot vote.

H. G. Duschek
Secretary

Distribution: Active Members (B)

HGDuschek/icb

B A L L O T

(Re Bulletin #380
dated September 15, 1970)

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York #10017

Attention: Secretary

Gentlemen:

My vote on amending Article II Section (c) of the Constitution
and By-Laws to read:

"To encourage and support research in sources
of supply, materials and manufacturing processes".

is

YES ☐

NO ☐

Signature _____

Company _____

Date _____

B U L L E T I N

N O. 3 7 9

August 24 1970

ORDERS FOR THE 1970 BRAKE SHOE IDENTIFICATION CATALOG

The contract for the printing of the 1970 Brake Shoe Identification Catalog has been awarded to:

Tweddle Litho Company
24000 Harper Avenue
St. Clair Shores, Michigan 48080

It is believed that it will contain 52 pages.

On an estimate of the total order being 70,000 copies of a 52 page book, the price is:

\$198.37 per M
6.00 " " additional for five hole punching (This will be the only type punching)

If there is a change in the price per thousand due to more or fewer pages or to the total number of books ordered being more or less than 70,000 copies, you will be immediately notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. It is requested that you follow these instructions as it is the only means of checking whether only members are ordering as well as to check the total quantities ordered and the price charged.

The orders are to be made out to Tweddle Litho Company and are to state punching and shipping instructions. If you state ship "cheapest way" this involves two or three transfer points which will delay your shipment. "Best way" is the most direct.

REMEMBER - The orders in duplicate are to be sent to the Institute Office!

Kindly forward your orders so that they reach the Institute Office by September 15th.

H. G. Duschek
Secretary

Distribution: Active Members (B)
Regional Members
Licensee Members

BULLETIN

NO. 378

August 20, 1970

COMMITTEE APPOINTMENTS

The following committee appointments have been made for the year July 1, 1970 through June 30, 1971.

ANNUAL MEETING COMMITTEE

Robert C. Brigleb, Chairman	Abex Corporation S. K. Wellman Division
William D. Schneck	H. K. Porter Company, Inc. Thermoid Division
John H. Kelly	Royal Industries Krasne Division
Stephen S. Conway, Jr. (ex-officio)	Abex Corporation American Brakeblok Division

BRAKE PERFORMANCE STUDY COMMITTEE

Robert E. Nelson, Chairman	Abex Corporation American Brakeblok Division
Derek Evans	Bendix Corporation Friction Materials Division
Wayne W. Matthes	Carlisle Corporation Molded Materials Division
Carl E. Gillberg	Johns-Manville Corporation
John C. Black	H. K. Porter Company, Inc. Thermoid Division
Vincent J. Garthwaite	Raybestos-Manhattan, Inc. Manhattan Rubber Division
Ronald R. Moalli	International Division
Stephen S. Conway, Jr. (ex-officio)	Abex Corporation American Brakeblok Division

BUDGET COMMITTEE

Joseph W. Greenen, Chairman	Maremont Corporation Grizzly Brake Division
Allan E. Daly	Scandura, Inc.
Arthur J. Roentgen	Silver Line Products, Inc.
Stephen S. Conway, Jr. (ex-officio)	Abex Corporation American Brakeblok Division

DATA BOOK AND TECHNICAL COMMITTEE

Ronald R. Moalli, Chairman	Raybestos-Manhattan, Inc. International Division
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Krasne Division

World Bestos Company, Division of

The Firestone Tire & Rubber Co.

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Chrysler Corporation

Chemical Division

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PUBLIC RELATIONS COMMITTEE

William Simon, Chairman
Stephen S. Conway, Jr. (ex-officio)

Brassbestos Manufacturing Corp.
Abex Corporation
American Brakeblok Division

H. G. DUSCHEK
Secretary

Distribution: Active Members (B)
Regional Members

BULLETIN

NO. 377

August 10, 1970

APPLICATION FOR ACTIVE MEMBERSHIP

filed by

STANDCO INDUSTRIES, HOUSTON, TEXAS

This is announcing the receipt of Standco Industries, Inc. application for Active Membership now being reviewed by the Membership Committee.

If you have any information which you deem will be helpful to the Committee in its deliberations, kindly forward it to the Institute Office for receipt by August 28, 1970.

H. G. Duschek
Secretary

Distribution: Active Members (8)

BULLETIN

NO. 376

July 29, 1970

HISTORICAL SALES PROGRAM

At the annual meeting, the collection of historical sales figures and the proposed definitions as well as the buyer classifications was discussed.

It was decided that:

1. The definitions as well as the form be submitted to the membership for their consideration and recommendation.
2. The sales be reported as units, not in dollars.
3. The sales, in units, be filed only for the replacement field.
4. The reports be rendered semi-annually.
5. The reporting start with the first six months of 1970.

The definitions are as follows:

1. Brake linings. Friction materials requiring one piece to cover a shoe up to a nominal 3/4" in thickness.
2. Brake blocks. Friction materials requiring two pieces to cover a shoe with a nominal thickness of 3/4" and over.
3. Disc brake linings. Friction materials sold to be attached to the friction plate (shoe) or sold as a unit by being integrally molded to the shoe.
4. Clutch facings. Friction materials of an annular shape or segments thereof.
5. Buyers: Distributors,) Sales under the friction material manufacturer's
Direct Consumers () own name or brand name to automotive warehouse dis-
Rebuilders and Private) tributors, brake specialists, jobbers, direct con-
Brands.) sumers of automotive friction materials, government
agencies and re-manufacturers of brakes, clutches
and automatic transmissions.

The suggested form, to be used in reporting unit sales follows:

Unit Sales to Distributors, Direct Consumers, Rebuilders & Private Brand

<u>Six Months Ended</u>	<u>Twelve Months Ended</u>
_____	_____
<u> </u>	<u> </u>

July 29, 1970

Brake Linings

Brake Blocks

Dis Brake Linings

Clutch Facings

Total

The foregoing, after consideration by the Board, has been prepared by Mr. Stickles and your Secretary and is submitted for your recommendations, if any. Kindly review the foregoing and advise, by August 27th, on the attached ballot.

H. G. Duschek
Secretary

Distribution: Active Members (B)

Enclosure: Ballot

B A L L O T

(Re Bulletin #376)

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York #10017

Attention: Secretary

Gentlemen:

Attached, hereto, is my ballot on the collection of historical sales figures,
in units:

- | | Yes | No |
|---|-----|-----|
| 1. Approve the definitions and form | () | () |
| 2. Suggest changes, as attached | () | () |
| 3. Will file reports semi-annually with
the accounting firm (to be selected) | () | () |

Signature _____
Title

Company _____

Date _____

B U L L E T I N

N O. 3 7 5

July 14, 1970

1970 BRAKE SHOE IDENTIFICATION CATALOG

Bids, on the contract for the printing of the 1970 large edition of the shoe catalog, have been received and the quotations will be submitted to the Data Book and Technical Committee for awarding the contract.

Since the members' requirements vary, from time to time, it is requested that you kindly advise your estimated requirements at this time. Kindly advise by July 30th at the latest.

H. G. Duschek
Secretary

Distribution: Active Members)
Regional ") Code "C"
Licensees)

B U L L E T I N

N O. 3 7 4

July 2, 1970

At the annual meetings held from June 17th through June 19th 1970, Mr. Nelson, Chairman of the Brake Performance Study Committee mentioned a talk given by Mr. Roy M. Terry.

A copy of this is enclosed herewith as it outlines the position of the V.E.S.C. with respect to the Federal Government program on used vehicle standards.

H. G. Duschek
Secretary

Distribution: Active Members (A)

Gentlemen

In looking back through the history of our Nation, it is interesting to note that when the people of this country faced a widespread problem common to all peoples, we would join together to solve that problem. Today we are faced with just such a situation. We have at our disposal a mechanized nation that can travel from place to place in motor vehicles in a manner faster than we have ever known. Unfortunately, with that great advantage come many tragic disadvantages associated with the motor vehicle.

And so it is that the Congress of the United States passed legislation permitting the states of the United States to join together in a compact to solve this problem common to all the states of the nation. With this Congressional authority the legislatures of 43 States and the District of Columbia passed laws forming the compact. The result of this compact was the organization of the Vehicle Equipment Safety Commission. Actually, then, the Commission is the only organization recognized and authorized by the United States Congress and the states with broad powers not found in other safety oriented associations or groups.

You might ask: What is this Commission? What is its relationship to the Federal Government? Can it really contribute to safer highways? And, how does it relate to other safety oriented organizations.

The answer to these questions and many others must be based on the premise that safer vehicles must be developed and safely maintained for those millions of people who will operate them on the highways of this country.

Over the past decade motorized vehicles in the United States have become so prevalent as to pose problems never before conceived in this Nation. We are adding

THE VEHICLE EQUIPMENT SAFETY COMMISSION'S STORY

by :

ROY M. TERRY, CHAIRMAN

at the

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS

EXECUTIVE COMMITTEE MEETING

in

SCOTTSDALE, ARIZONA

APRIL 27, 1970

some 10 million new vehicles annually enough to reach around the earth and then some. These are now covered by Federal standards but maintenance remains an individual matter.

Add to this 85 million passenger cars in use that now perform the major transportation service of the nation but lack safety features found in the 10 million new cars and you can readily see the extent of the problem.

Furthermore, as we add new cars we develop allied problems such as polluting the air an equipment problem that will require major legislation because people are demanding it. The states are faced with enforcing any such legislation.

It must be remembered that states and/or cities cannot enforce Federal law. Therefore, the states must adopt their own standards. Consequently the V.E.S.C. is the only legal facility upon which the states can rely for recommended performance requirements, codes and regulations.

Today, as never before, the nation's highways are used to move the major portion of the nation's goods. Consequently we are introducing a new breed of heavy vehicles requiring a new type of interstate regulation with increased licensing problems as well as equipment problems. On the opposite end of the vehicle problem, as cars become faster and trucks heavier, we are confronted with an influx of 2-wheel vehicles the motorcycle, a safety factor that cannot be ignored.

Given this situation and adding to it such elements as an affluent society that has money to travel and does a pollution that knows no geographic boundaries and requires new vehicle equipment and a Federal government that has acted positively to provide solutions to the problems but is

inexperienced in solving the problems because it has not had to face this kind of situation before and you can see why the states have a major task confronting them.

After all, it is in the states and local jurisdictions where people are killed and injured not in Washington, D.C.

Therefore, the states and cities must have some facility by which they can solve their problems. They must move into this "one nation" concept regarding motor vehicles. The rules, regulations and laws enacted at the Federal level must be practical, enforceable, and financially realistic for the states. Equally important these regulations must provide the results sought by the Federal government and each member state. This is what the public was promised when the National Motor Vehicle Safety Acts of 1966 were adopted.

Herein lies the answer to the first question what is the V.E.S.C.? It is a compact of states for the purpose of having a voice in the development of practical, enforceable, and financially realistic regulations or standards.

Put another way it is the role of the V.E.S.C. to "bridge-the-gap" by representing the member states in all matters pertaining to vehicles operated within the states.

In short vehicles have become a national problem and one that is being handled on a national basis because of the fluid society in which we live. We cannot dispute this need. We can, however, serve to mold the pattern of national reaction to this need so that action taken will meet every state's individual needs, requirements and limitations.

Congress first recognized the need for the V.E.S.C. when, through the Beamer Resolution, it permitted the states to enter into safety compacts. This

action was obviously for the benefit of all the states as well as the Federal government.

While Congress recognized the need for unified action of the states by permitting safety compacts, they also gave the V.E.S.C. the role of consultant to the Department of Transportation in matters relating to safety equipment. This was done by the passage of the National Traffic and Motor Vehicle Safety Act of 1966 (P.L. 89-563) in which the V.E.S.C. is the only safety agency specifically named in the Act.

Thus, the V.E.S.C. has legal status not given to any other organization or agency at both the state and national level. This, again, fortifies the impact that the states can have in cooperatively developing regulations and standards for motor vehicle equipment.

Regarding "safety standards" the V.E.S.C. has provided recommended standards in the area of new tires, retreaded tires, brake linings, glazing, and hitching and towing devices. As you know V-1 and V-2 (new tires and retreaded tires) were developed prior to the creation of the Federal Department of Transportation. These standards were adopted by five states. Upon the creation of the Department of Transportation, one of the first equipment standards promulgated by them was "new tires". While this standard was not identical with V.E.S.C.'s V-1, it is so nearly identical that there can be no question that the work of the V.E.S.C. influenced the action of the Department of Transportation in establishing the standard. In fact V.E.S.C. had raised certain test requirements - accepted by industry - which are embodied in the Federal standard for new tires. My point is, that had the V.E.S.C. not developed a recommended performance requirement adopted by member states, we might have had a Federal standard that would be absolutely unacceptable to the states. So it is with the other standards the V.E.S.C. has promulgated. A current example

the Federal department is working on a proposal for hitching and towing devices. What are they using as a basis? The V.E.S.C. V-5 recommended standard. This is another indication of the influence or "voice of the states" through V.E.S.C. In other words the V.E.S.C. has clearly demonstrated its leadership in the area of vehicle safety equipment regulations. So much for the past let's take a look at the present and future.

What is the V.E.S.C. doing to make highways safer? Presently the V.E.S.C. is developing two performance requirements First, eye/windscreen for motor-cycles and Second, performance requirements for school buses which are not presently covered at the Federal level. Here again, we continue to provide the leadership role and point the direction.

Even more important, the V.E.S.C. is deeply involved in a program for safety equipment for the car in use. Suffice it to be said here, that not only are we working cooperatively at staff level with the Federal people but the Chairman of the V.E.S.C. "Car in Use Committee" has also conferred with those responsible for the program at the Federal level. This program is a most complex one and at the same time most vital from a safety viewpoint.

In regard to "car in use" standards, permit me to emphasize one important point. I refer to a meeting of the National Motor Vehicle Advisory Council of March 24, 1969 where they were discussing the Vehicle in Use problem. The then chief counsel for the Federal Highway Administration told the Committee there is one difference between new and used car standards. He explained the used car standards and I quote "do not preempt state law so that if the government were tomorrow to issue a long string of used vehicle standards state law, state standards,

state inspection requirements would continue in existence as before."

The V.E.S.C. will most certainly continue to concentrate on this problem with the aim that any "car-in-use-standards" will be ones with which the states can live.

To merely discuss some of our specific problems is not enough. The V.E.S.C. has taken a broad view of the safety picture and as you know has accepted some additional responsibilities.

When the Federal government entered the safety field in 1966 with the passage of the Highway Safety Acts, (P.L. 89-563 and P.L. 89-564) general confusion seemed to be created. Consequently, the V.E.S.C. accepted upon request some responsibilities in the overall field of safety to assist in bringing order to what seemed to be a chaotic situation.

To be specific, the Commission was influential in having modifications made to the original 15 highway safety standards which would have imposed unrealistic burdens on the states' regulatory bodies. Every state was the beneficiary of the V.E.S.C. action. This cooperative effort continues through our representation on the Advisory Committee and close cooperation with the National Highway Safety Bureau personnel.

I am sure you are all aware of our legal efforts. When one of the manufacturers challenged three of our member states' authority to prohibit an item of lighting equipment, the V.E.S.C. served to coordinate the resistance to the challenge and was instrumental in persuading the Federal government in respect to the state's position in development of its amicus curiae brief. As a consequence of the cooperative effort of the states involved and the V.E.S.C., the circuit court of appeals upheld the states and protected

them from unwarranted invasion of their authority. This is a fundamental responsibility of the V.E.S.C. and one that will most certainly continue in the days ahead.

Another area in the broad spectrum of safety is, of course, legislation. The V.E.S.C. is continually aware of these activities and maintains virtually daily contact with key personnel dealing with legislative matters. We feel that it is one of our jobs to be aware of any legislative developments that have a bearing on the states' interest and, of course, advise the states of these developments

Whether they are directly concerned with vehicle equipment or are merely related to safety matters.

A case in point to our knowledge we were the one organization which supported the states' position in trying to persuade the Senate Appropriations Committee to provide "matching funds" for on-going state programs as opposed to only new programs. The fact that we were not persuasive enough does not alter the fact that an effort was made and the voice of the states was heard.

Probably the question most often asked is about the relationship of V.E.S.C. and A.A.M.V.A. A partial answer is found in the structure and purpose of the two organizations. The V.E.S.C. is a legally constituted organization of states dealing with matters in the area of motor vehicle equipment. The A.A.M.V.A. is a voluntary non-profit association of states dealing with matters of motor vehicle administration in the broad areas of licensing, registration, inspection, driver training and equipment approval.

There is a common interest particularly in the inspection and equipment approval programs. There is, also, a less direct but still common interest in the related areas of vehicle safety.

In fact, this common interest may be one of the reasons for confusion in the minds of some of us who are "wearing two hats" as representatives of the states that are members of both organizations. Therefore, permit me to suggest the role we at V.E.S.C. have as it relates to the two organizations.

First, the V.E.S.C. is charged with writing recommended performance requirements for vehicle safety equipment that the member states can adopt as law.

Second, the V.E.S.C. is charged with responsibility of counseling the Department of Transportation in their development of Federal standards.

Third, Congress intended that the V.E.S.C. be the facility to recommend performance requirements in those areas affecting the car in use after market products which are not covered by Federal standards directed toward the original manufacturer of new cars or equipment.

These are the principal services which have been given the V.E.S.C. The A.A.M.V.A. has the responsibility of guiding its members in the Administration of Federal and state standards in the areas of licensing, registration, inspection, driver training and equipment approval.

As a result the states through their Commissioners or appointed representatives have a dual role particularly if the same person is serving as a representative to both organizations.

Further, I suggest there are joint responsibilities. These are found in two principal areas, namely, Federal legislation and studies affecting the vehicle. I sincerely believe this joint effort must be expanded for there is much that both organizations can do not only for each other but, also, to better serve our members.

Time does not permit a discussion of internal "headaches" which confront both organizations such things as financing, staffing and many daily operational problems. Suffice it to say the V.E.S.C. is cognizant of these problems as you are with A.A.M.V.A. problems and are taking corrective action.

In summary, let me reemphasize one overall important function of the V.E.S.C. We are living in a time when the Federal government has seen fit to step into a problem area highway safety and vehicle regulation. They have indicated through legislative action that each state contribute to the solution of the problems at hand and have established the mechanics for doing this.

The V.E.S.C. has one major role today which incorporates all the functions just mentioned.

That major role is to bring about a better understanding of Federal/State relationship. This is gradually being done in the areas of legislation, and standards. We continue to consult with the Federal government on behalf of the member states, and provide legal assistance to member states when conflicts arise.

In short, your V.E.S.C. is the voice of each member state speaking collectively to the Federal government for the mutual benefit of each state.

In conclusion, then, I suggest to you that at both state and Federal level there is a vital need for our two organizations and it behooves us individually and collectively to support one another to the end that we dispel in the minds of everyone that there is conflict or duplication of effort.

Then and only then will the two organizations prosper and our members benefit.

B U L L E T I N

N O. 3 7 3

June 29, 1970

PRICE CHANGE FOR 1970 SUPPLEMENT

On April 6th, Bulletin #369, I announced that the price of the 1970 Data Book Supplement would be \$125.11 per M. This quotation was predicated on a total order of 120,000 copies.

The final orders were received during the week of June 15th and the total is not as high as anticipated, which estimate was based on the order for the large edition printed for 1969.

The total run of the 1970 Supplement will be 100,000 copies and the basic price will be

\$129.14 per M

Please advise your purchasing and accounting departments of this change. There is no change in the punching price.

H. G. Duschek
Secretary

Distribution: Active Members (B)
Regional Members

B U L L E T I N

N O. 3 7 2

June 8, 1970

MEETING ROOMS, ETC.

ASSIGNED FOR

BOARD AND ANNUAL MEMBERSHIP SESSIONS

Skytop Lodge has advised that their bulletin board does not list the location of the rooms to be used by industry groups for their sessions. To avoid confusion, listed below are the special rooms assigned to our Institute.

South Windsor Room

This is the private dining room assigned to our Institute for breakfast, luncheon and dinner.

The annual dinner to be held on Thursday evening at 7:00 P.M. will also be in this room.

West Laurel Room

All meetings will be held here. On Wednesday from 2:00 P.M. on, the Board of Directors will be in session. On Thursday and Friday at 9:30 A.M. the membership will convene

The Club Room

This will be the hospitality room, and will be opened at 4:00 P.M. on Wednesday. The annual reception, scheduled for Thursday evening at 6:00 P.M. will also be held here.

May I suggest that you make a note of the above so that the meetings, etc. may start promptly and leave plenty of time for your enjoyment of the recreational facilities.

H. G. DUSCHEK
Secretary

Distribution: Active Members (B)

B U L L E T I N

N O. 3 7 1

May 11, 1970

REGIONAL MEMBERSHIP APPLICATION

filed by

RUSCO DE COLOMBIA, COLOMBIA, SOUTH AMERICA

This company, located in Barranquilla, Colombia, South America has filed an application for Regional Membership in the Institute.

If you have any information concerning this organization that will aid the Membership Committee in their deliberations, kindly forward it to the Institute Office prior to May 30th, 1970.

H. G. Duschek
Secretary

H.G.Duschek/clt
Distribution: Active Members (B)

BULLETIN

NO. 370

April 14, 1970

RE: NOTICE OF ANNUAL MEETING

After release of the notice of annual meeting, under date of April 9th, I was advised by Skytop Lodge that the rates were changed as follows:

Twin-bedded rooms with private bath occupied by two persons including meals	\$27.50 per person or \$55.00 for two.
Twin-bedded rooms with private bath for single occupancy	\$50.00

These rates are also subject to change without notice.

When filing your reservation blank, please bracket the names listed to indicate double occupancy.

H. G. Duschek
Secretary

Distribution: Active Members (B)

BULLETIN

NO. 369

April 6, 1970

ORDERS FOR THE 1970 AUTOMOTIVE DATA BOOK SUPPLEMENT

The contract for the printing of the 1970 Automotive Data Book Supplement has been awarded to:

Advertising Printers, Inc.
116 Walton Street
New Haven, Connecticut #06510

It is believed that the supplement will contain approximately 32 pages including the self cover.

On an estimate of the total order being 120,000 copies of a 32 page book, the price is:

\$125.11 per M
16.00 " " additional for five hole punching
(This will be the only type punching)

If there is a change in the price per thousand due to more or fewer pages or to the total number of books ordered being more or less than 120,000 copies, you will be immediately notified.

Please forward all orders to the Institute Office in Duplicate. Do not send them to the printer. It is requested that you follow these instructions as it is the only means of checking whether only members are ordering as well as to check the total quantities ordered and the price charged.

The orders are to be made out to Advertising Printers, Inc. and are to state punching and shipping instructions. If you state ship "cheapest way" this involves two or three transfer points which will delay your shipment. "Best way" is the most direct.

REMEMBER - The orders in duplicate are to be sent to the Institute Office!

Kindly forward your orders so that they reach the Institute Office by April 22nd.

H. G. DUSCHEK
Secretary

Distribution: Active Members (B)
Regional Members

B U L L E T I N

N O. 3 6 8

March 13, 1970

WHEELING BRAKE BLOCK MANUFACTURING CO.

This is to advise that the Wheeling Brake Block Manufacturing Co. of Bridgeport, Ohio has been accepted as an Active Member of the Institute. The vote was taken by mail ballot.

The delegate is Mr. Lee Burgess.

H. G. Duschek
Secretary

Distribution: Active Members (B)

B U L L E T I N

N O. 3 6 7

February 24, 1970

4000 SERIES NUMBER ASSIGNMENTS

The Data Book and Technical Committee has established new guide lines in assigning numbers in the 4000 series.

Modern trucks are undergoing rapid evolution in brake sizes and the Committee felt it was necessary to change the original parameters for assigning numbers to linings used in this category.

From this point on, only blocks $3/4$ " thick or over will be assigned 4000 series numbers.

H. G. DUSCHEK
Secretary

Distribution: C (Active & Regional Members)

B U L L E T I N

N C. 3 6 6

February 16, 1970

ADDITIONS TO CROSS REFERENCES

The attached additions to the master list of cross references, dated September 1963, consist of the additions released in Bulletin #343 dated June 1968 and all new numbers that have been identified and collected since then.

These are for your master file and placed on separate sheets for quick reference as well as for re-production, on your copying machines, of those listings which are of special interest to you and your representatives. From time to time, as new numbers are identified, a listing will appear in a data book bulletin for transferal to these sheets. In that way, your file will be kept up-to-date.

May I suggest, also, that you make a note, as blue prints are received, of the drawing number and any other part numbers shown thereon together with the F.M.S.I. number as an aid in keeping your references current.

H. G. Duschek
Secretary

Distribution: C (Active and Regional
Members).

Additions to Cross-References

February 3, 1970

BENDIX

40,800	2103-TT	(s)	315,268	2012-C	(1)	321,271	1293
40,900	2103-TT	(1)	316,918	2070-T	(s)	321,389	766
41,100	2104		317,616	2059-T	(s)	321,398 & 9	2141-T (1)
306,214	1244		318,557	2132		321,502	768
306,816	2032		318,923	2070-T	(1)	321,574 & 5	2075 (p)
307,807&8	2026-T		318,925	2059-T	(1)	321,576 & 7	2075 (sec)
307,817	2041		319,590	767**		321,688	769
308,766&7	220-A		320,526	2137		322,565	1236
310,792	2066-A	(1)	320,545	767**		323,278 & 9	2140-T (s)
314,104	220		320,681&2	2141-T	(s)	323,282 & 3	2131-T (s)
314,824	2002-A	(s)	320,697&8	2143-T	(s)	1,150,062	1292 (r)
314,827	2002-A	(1)	320,700&1	2143-T	(1)	1,150,408	2103-TT(1)
314,838	2012-C	(1)	320,919-20	1293	(f)	1,150,409	2103-TT(1)
314,852	2038	(s)	320,922&3	1293	(r)	1,150,411	2104
314,855	2038	(1)	321,171&2	2131-T	(1)	1,150,453	1192 (f)
315,266	2066-A	(s)	321,236&7	2140-T	(1)	2,535,984	770

February 1970

**|Integrally molded

FMSI 18307

BORG & BECK

8,416	11008	13,195	1057-H	13,711	1057-H
8,425	806-E	13,363	11004	13,734	1236-C
8,451	1003-E	13,364	1236-A	13,946	11004
8,488	9012-C	13,423	1161-C	14,015	1056-B
8,566	1173-A	13,450	1185-A	14,017&18	1142-E
11,653	1233-B	13,519	1166-A	14,067	1373
12,559	1142-E	13,539	1003-C	52,696	11009
12,824	1236-C				

February 1970

CHEVROLET

900,018	*11004	3,779,138	* 1056-E	3,832,876	2109-T	(1)
904,765	* 1236-C	3,789,734	*11004	3,832,892	2108-T	(s)
907,052	* 909-C	3,792,369	* 1056-E	3,832,893	2108-T	(1)
909,442	(* 1056-E	3,799,355	*10000	3,845,292	2109	
	(* 1166-A	3,805,675	* 1166-A	3,852,220&2	*1166-A	
941,804	* 1236-C	3,828,056	* 909-C	3,862,742	*1142-E	
3,773,503&4	1245	3,828,848	* 1166-A	3,867,220	*1166-A	
3,742,566	* 1051-A	3,828,909	*11004	3,873,473&6	4639	
3,771,264	2040 (s)	3,829,996	2108-T	3,875,770	4640	
3,771,265	2040 (1)	3,832,875	2109-T (s)	3,892,502	2065	(s)
				3,892,503	2065	(1)

February 1970

*Clutch facing

CHRYSLER

1,500,741	1125		2,534,718	2006 (1)	2,781,238	2006-T(sec)
2,233,164	*1007-A		2,534,761	2012-T (1)	2,781,625 & 636	732
2,409,865	2065	(1)	2,534,767	2051-T (1)	2,808,442	1276
2,460,640	2065 & T	(s)	2,534,863	2065 (s)	2,823,219	751**
2,512,838	2053	(p)	2,768,032 & 36	730	2,825,996 & 9	1276
2,512,841	2053	(sec)	2,781,034	2055-T (1)	2,925,189 & 90	774**
2,525,190	774		2,781,089	2025-T (1)	2,944,824	2065-T (s)
2,530,144	2006-T	(p)	2,781,160	2070-T	2,944,828	2055-T (s)
2,530,146	2006-T	(s)	2,781,178	2126-T (1)	2,955,065	2042
2,534,712	2065	(1)	2,781,193	2089-T (1)	3,461,574	2065-T (1)
2,534,715	2006	(s)	2,781,229-31	2065-T (1)		

February 1970

*Clutch facing

**Integrally molded

Additions to Cross-References

February 3, 1970

EATON

30-DS	4327	1,791	4311-C	20,000	4056-B
	4594	1,800	4514		4311-A
	4596	1,863	4317-G	20,220	4311-C
32-M	4195-B	1,893	4311-C	20,437	4308
	4311-C	1,910	4602	20,441-3	4056-B
	4317-G	1,911	4311-A	& 5	
32-MFA, MRA	4317-G		4317-G	20,448 & 9	4286
34-D	4195-B		4452	20,500	4311-A & C
	4311-C & G	1,918	4602		4525
	4317-G	1,919	4311-A & C	20,501	4317-C, E & G
34-DA	4595		4452		
34-M	4595	2,011	4311-C		4525
	4597	2,731	4311-C	20,503)	4311-C
34-R	4195-B		4317-G	20,801)	
	4311-C & G	13,802	2032	40,871	4195-B
34-D, DT	4317-G	16,600	4195-B	40,880	4195-B
	4605	16,800	4327		4317-G
35-F	4286	16,802	4596	43,224	4195-B
36-M	4311-A & C	17,800	4595	43,909	4317-G
36-MA, MFA &)	4311-C & G		4597	44,609	4317-G
MRA)	4317-G	17,801	1254	45,238	4311-C
38-D & DS	4452		4195-B	45,321	4410-B
38-D, DTA & R)	4311-C		4317-G	45,334	4195-B
42-D)	4317-G	17,810	4317-G	45,350 & 1	4311-C
42-M	4311-C	18,802	4602	45,500 & 1	4502
	4527-B	18,803	4195-B	48,727 & 8	4317-G
42-MA	4311-C	18,808&12	4317-G	51,086	4311-C
42-MFA, MRA	4311-C	19,501	4311-C	52,193	4311-C
	4527-B		4317-G	53,467	4311-C
42-R	4311-C	19,502	4602	53,736	4526
	4317-G		4605	53,748	4317-G
45-AR	4311-C	19,503	4311-A & C	53,750	4317-G
50-M	4311-A		4317-G	53,762	4311-C
	4527-B		4452	55,551	4311-C
56-M	4525	19,507)	4311-C	57,556	4317-G
57-F	4286	19,512)		60,510&11	4195-B
	4366-B	19,801	4311	62,085	4631
1,615	4195-B	19,803	4311-A	64,156 & 7	4311-G
1,618	4596		4452	65,048-HF	4286
1,790-A	4595			147,015	4311-A
	4597				

February 3, 1970

FMSI 18311

FORD

CIAA-2021-AE	2083-AT (s)	C5AA-2285-D	2121-T (1)	C8TA-2210-AG	2141-T (s)
-C	2080-AT (s)		2121-ATT(1)	-2210-AS	2141-T (s)
-S	2083-T (s)	C5AA-7550-A	*10000-A	C8TZ-2007-L,M,N	4639 (kit)
-Y	2080-AT (s)	-F	* 1174	C8UA-2010-C	2143-T (1)
-2022-B	2083-AT (1)	-J	* 990-B	-2011-C	2143-T (s)
	2083-BT (1&s)	-K)	* 1170-A	-2209-D	2141-T (1)
-C	2080-AT (1)	-L)		-2210-D	2141-T (s)
-J	2080-AT (1)	C5DA-7550-B	* 857-B	C8VA-2B118019F	773
-S	2083-T (1)	C5MA-2284-A)	2121-BT (s)	C8ZA-2209&10-A	2012-BT
-2284-B	2080-T (s)	B&C)		C9AA-2010&11-C	2083-AT
-D	2121-ATT(s)	-2285-A)	2121-BT (1)	-2021-B&C	773 (0)
-2285-D	2121-ATT(1)	B&C)		-2022-B	773 (1)
-S	2080-T (1)	C5TA-2021-D	2129-TT (p)	-2284-A	2121-BT(s)
	2083-T (s)	-4001-VA	2075	-2285-A	2121-BT(1)
CIDD-2021-A,B,C	2071-T (s)	-4005-VA	2042	C9DM-2007-A	2051-BT
-2022-K,L,M	2071-T (1)		2075	-2007-B	2012-ET
-2284-C	2072-T (s)	C5TA-7550-D	* 1142-H	C9TA-2010-D	2131-T
-7550-EL& 2*	857-B	C5TZ-2007-L	4317-G	-2209-D	2131-T (1)
CITT-4005-V	2042	-2284-C	4317-G	-2209-E	2131-T (1)
CITZ-2007-A	1276	C6AA-2285-A	2121-T (1)	-2210-D	2131-T (s)
-D	4625	-7550-E	* 1170-A	-2210-E	2131-T (s)
C3AA-2018-K	2083-T (s)	-F	* 1174&A	C9UA-2010-C	2140-T (1)
-2019-K	2083-T (1)	C6DA-7550-D	* 9021	-2011-C	2140-T (s)
-2020-E	2083-T	C6MA-7550-D	* 1170-A	-2209-A	2131-T (1)
-2218-S	2080-T (s)	C6TA-2022-K	2129-TT (sec)	-2210-A	2131-T (s)
-2219-F	2080-T (1)		2130-TT (sec)	C9ZA-2209-D	2012-BT
-7550-A	* 1142-H	-3002-AB	2075	-2209-E	2135-T
-E	* 1174	-AK	- 2038-TT	-2210-C	2012-BT
-G& H	*10000-A	-AN	2129-TT	C20A-2021-A	2051-AT(s)
C3AA-7550-N	* 990-B	C6TW-4001-F	2022-ATT	-G	2092-T (s)
C3DA-2022-B	2071-T (1)	-H	2066-ATT	-M	2092-T (s)
-2285-B	2072-T (1)	-U	2002-ATT	-2022-6	2051-AT(1)
C3MA-7550-A	* 1174	C6TZ-2007-A	2032	-AA	2012-BT(s)
C3SA-2284-G)	2100-G (s)	C6UW-4001-C	2006-AT	-M	2090-T (1)
H&J)		-U	2012-BT	-N	2089-T (1)
C3TZ-2007-F	4626	C7AA-2021-A	2092-T (s)	-2284-AA	2012-BT(s)
C4AA 7550-A	* 1181	-7550-A	* 1005-A	-M	2091-T (s)
C4TA-2021-A)	2002-ATT (s)	C7DA-7550-A	* 1005-A	-2285-G	2012-BT(1)
B&C)	2083-TT (s)	C7VA-2021-A	773	-M	2091-T (1)
-2022-A	2002-ATT (1)	C7ZA-2284-A	2012-BT (s)	-N	2135-T (1)
	2038-TT (1)	-2285-A&B	2012-BT (1)	-7550-A	* 1005-A
-2284-A)	2038-TT (1)	-7550-B	*10000-A	-E)	* 10000-A
B&C)		C8AA-2010&11-J	2080-AT	-F)	
C4UA-2284-A	2012-CT (s)	-2021-C	768	-H	* 857-B
C5A-2284-A,)	2121-T (s)	-2022-A	2083-AT (1)	C30A-2021-R	2089-TT(s)
B&C)		-2209&10-D	2121-T	-2285-A	2089-TT(1)
-D	2121-T (s)	C8DA-2009&10-A	2072-T	-7550-A	* 1005-A
	2121-ATT (s)	-2010&11-C	2071-T	-E)	* 10000-A
-2285-D,)	2121-T (1)	C8TA-2010-AG	2075	F&H)	
E&F)		-2010-AU	2141-T (1)	-L	* 1005-A
C5AA-2284-D	2121-T (s)	-2011-AG	2075	C60A-2021-A	2089-T (s)
-D&E&F	2121-ATT (s)	-2011-AU	2141-T (s)	-2284-D	2135-T (s)
-2285-A)	2121-ATT (1)	-2209-AG	2141-T (1)	-7550-D	* 1005-A
B&C)		-2209-AS	2141-T (1)	-G	* 1170-A

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*Clutch facing

(Continued)

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FORD (Continued)

C60A-7550-H	9021-A	C80A-2021-E	769	(0)	C90A-2209&10-A(2072-T
C70A-2021-D	2092-T (s)	-F	769	(1)	(2089-T
-2022-A&B	2092-T (1)	-2209&10-A	2089-T		-2209&10-B)2135-T
-7550-B *	1170-A	-B)	2135-T		&D)
-C) *	9021-A	C&D)			-2210-H 2135-T
-D)		-E	2012-BT		FC-1646-A 2012-ET(1)
-E *	9027-A	C90A-2010&11-C	2089-T		-1650-A 2051-BT(1)
C80A-2010&11-J	2089-T	-2010&11-D	2092-T		-1709-B 2012-ET(s)
-2010&11-K	2092-T	-2021-A	776	(0)	-1710-A 2051-BT(s)
-2018-F	769	-2022-A	(769	(1)	
			(776	(1)	

February, 1970

*Clutch facing

G.M.C.

92,724)	6061	2,416,242 (	1252	3,513,019	2044-A	
94,677)		(	4639	3,513,521	2044-A	
106,729	* 1325-C	2,425,357	1150	3,771,264.5	2040	
1,293,643	*11004	2,425,359	4598	3,789,762	*11004	
1,382,336	767**	2,429,329 *	1374	3,799,136	*10000	
2,329,893	* 1236-B	2,468,528	4524	3,799,138	* 1056-E	
2,393,293	* 1095	2,470,622	1289	3,805,629	* 1095	
2,393,340	* 1166-A	2,471,307)*	1325-C	3,805,675	* 1166-A	
2,395,340	(* 1248	2,471,948)		3,828,054	* 909-C	
	(* 1236-B	2,485,756 *	1248	3,832,875	2105-T	(s)
2,416,234	1193	2,485,758 *	1236-B	3,832,876	2105-T	(1)
2,416,236	(1252	2,489,328 *	1374	3,832,890	2106-T	(1)
	(4639	2,492,036 *	1248	3,832,892	2106-T	(s)
2,416,240	1193	2,492,376**	1374	3,835,629	* 1166-A	
				3,881,551	4640	

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*Clutch facing

**Integrally molded disc

INTERNATIONAL HARVESTER

40,883DC	*	1527	99,058R1	6048	346,639R91	4629
98,747R1		1247	108,954R2	4311-C		

February 1970

*Clutch facing

LIPE-ROLLWAY

C18-287	1325-C	C18-438	1317-D	C18-462	1553-A
C18-329	1235	C18-445	1427-A	C18-484	1561
C18-409	1312-B	C18-447	1372-A	C18-495	1312-C
C18-432	1626	C18-488	1389	140-19-1012	1372-A
C18-437	1361-A	C18-450	1374		

February 1970

Additions to Cross References

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MACK

30D2148		4637	202-SM-137	4600	202-SM-144	4602
101HBA3181	*	1372-A	-139	4605	-147	4635
151HB3102	*	1372-A	-140	4610	-1140	4615
202-SM-64		4314				

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*Clutch Facing

FMSI 18317

MORaine

1,150,411	2104	5,460,516	2078-TT (1)	5,465,263	2102-BT (s)
5,452,337	2132-TT (p)	5,460,618&9	2113-TT (s)	5,465,273	2103-BTT(1)
5,452,398	2102-ATT (s)	5,460,803	762	5,465,295&6	2005-BTT(1)
5,454,419	2025-TT (s)	5,460,829	762		2113-TT (1)
5,454,421	2025-TT (1)	5,462,658	2077-TT (s)	5,465,298	296-BTT(1)
5,454,423	2006-TT (s)	5,462,963&4	2105-T		2114-TT (1)
5,454,425	2006-TT (1)	5,462,973	2102-ATT (s)	5,465,299	2114-TT (1)
5,454,491	2125 (s)	5,462,981	2102-ATT (s)	5,465,599	2124 (s)
5,456,513	2125 (1)	5,463,133	762**	5,465,653	2124 (1)
5,456,828	2025-TT (s)	5,463,134	766**	5,465,666	2119-TT (s)
	2116-TT (s)	5,463,153	762	5,465,667	2119-TT (1)
5,456,829	2025-TT (1)	5,463,952&3	728-A	5,465,672&3	2119-TT (s)
	2116-TT (1)	5,464,094	296-BTT (s)	5,465,676&7	2119-TT (1)
5,456,896	2006-TT (s)		2114-TT (s)	5,465,754-6	2118-TT (s)
	2103-TT (s)	5,464,214&5	2102-ATT (1)	5,465,575-9	2118-TT (1)
5,456,897	2006-TT (1)	5,464,216&7	2077-TT (1)	5,465,987	2102-BT (s)
	2103-TT (1)	5,464,455&6	2025-CTT (s)	5,465,988&9	2102-BT (1)
5,456,969	2005-BTT (s)	5,464,458&9	2025-CTT (1)	5,466,842	2118-TT (s)
	2113-TT (s)	5,464,466&7	2006-BTT (s)	5,466,843	2142-TT (1)
5,459,004	2113-TT (1)	5,464,468&9	2006-BTT (1)	5,467,004	2120-TT (s)
5,459,017	2114-TT (1)	5,464,485&6	2116-TT (s)	5,467,033	2120-TT (1)
5,459,434	2102-ATT (s)	5,464,488&9	2116-TT (1)	5,467,039&40	2120-TT (s)
5,459,553	2117-ATT (s)	5,464,495	2103-TT (s)	5,467,051&2	2120-TT (1)
5,459,554	2117-ATT (1)	5,464,498	2103-TT (1)	5,467,135	2102-BT (s)
5,459,628	2096-TT	5,464,526&7	2077-AT (s)	5,467,136	2102-BT (1)
5,459,847	2005-BTT (1)	5,464,520	2077-AT (1)	5,467,137	2117-ATT(s)
5,459,876	2078-TT (s)	5,464,534	2077-AT (1)	5,467,138	2117-ATT(1)
5,459,883	2078-TT (1)	5,464,536&7	2102-T (s)	5,467,141&2	2117-ATT(s)
5,460,090&1	296-BTT (1)	5,464,539	2102-T (1)	5,467,143	2102-BT (s)
5,460,096	296-BTT (s)	5,464,544	2102-T (1)	5,467,144&5	2117-ATT(1)
	2114-TT (s)	5,464,660&1	2103 (s)	5,467,160	2102-T (1)
5,460,098	296-BTT (1)	5,464,668&9	2103 (1)	5,467,161-3	2102-T (s)
5,460,122	2084-TT (s)	5,464,711&2	2104	5,467,164&5	2102-T (1)
5,460,126	2096-TT (1)	5,464,758	2132-TT (sec.)	5,467,166-8	2117-TT (s)
5,460,173	2005-BTT (1)	5,464,827	2077-TT (s)	5,467,169	2117-TT (1)
5,460,250	2125 (s)	5,465,014&6	2110-TT (p)		2102-BT (1)
5,460,513	2077-TT (s)	5,465,018&19	2110-TT (sec.)	5,467,170&1	2117-TT (1)
5,460,514	2077-TT (1)	5,465,026&7	2107-TT (sec.)	5,467,179	2102-BT (1)
5,460,515	2078-TT (s)	5,465,030&1	2107-TT (p)	5,467,194	2117-TT (s)

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*Clutch facing

**Integrally molded

(Continued)

LORRAINE (Cont'd.)

5,467,195	2117-TT	(1)	5,467,593	2125-T	(1)	5,467,896	2142-TT	(s)
5,467,196	2102-T	(s)	5,467,886	2118-TT(s)		5,468,080.1	762**	
5,467,197	2102-T	(1)	5,467,887	2118-TT(1)		5,468,645.6	728-A	
5,467,517	2125	(1)	5,467,888	2142-TT(s)		5,468,704	728-A	
5,467,573	2125	(s)	5,467,889	2142-TT(1)		5,468,862	2139-TT	(s)
5,467,673	2125-T	(s)	5,467,894	2118-TT(s)		5,468,864	2139-TT	(1)

Additions to Cross-References

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ROCKFORD

CL-11,301-107	1335	CL-12,403	1390	11,945	1388
CL-11,945	1388				

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Additions to Cross-References

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SHULER

B-1,663	4542-A	B-1,794	4375	FE-10A-43	4563
-1,727-A&C	4552	-1,909 A&C	4551	-12A-34	4563
-1,778-A&C	4524	-2,064-3&4	4602-A	T -14-265	4464

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Additions to Cross-References

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SPICER

114-C-174

946-A

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Additions to Cross-References

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STUDEBAKER

684,842 & 3 1191

February 3, 1970

FMSI 18323

TIMKEN (Rockford Standard)

A-3722-N-222	1266	R-140-P	4515	V-1894	4632 (p)
-P-224	1267	-170-P	4515	W-1791	4621
-V-100	4560	-350-P	4515	-1895	4632 (p)
	238 (shoe)	SFA	4452	Y-1793	4621
A-2-3722T300 & 306	1276		4534	-1923	4632 (p)
A-4-3222M429	4356	SFD-4640	4452	Z-1794	4621
A-5-3222M429	4356		4515	-1924 & 5	4632 (sec)
P432	4356	-4741	4471		
A-7-3222M429	4356	SFDD	4452	<u>2740 Series</u>	
A-8-3222M429	4356		4534	A-859	1245-B
ELHD	4605	SFDD-4640	4452	-1665-F	4398-B
ERLHD	4605	SHDD	4327	-1769	4629
ERQHD	4602	SLDD	1261	-1821	4642
F-145	1198	SLHD	1261	-2601	4601-A
-235	4211		4515	B-756	4580
-2094	4211		4605	-860	1245-B
FC-901	1234	SQD-P	4515	-1666	4398-B
	659-B	SQDD-P	4515	-1770	4629
FD-901	1280-A	SQHD	4515	-1822	4642
FE-900	1139		4602	-2602	4601-A
	1280-A	SRHD	4602	C-757	4580
-900TW	4561	SSHDD	4602	-1251	4633-A
-901	1280-A	STDD	4452	-1300	4643
-907	1280-A		4534	-1771	4629
-970	1280-A	SVDD	4452	-1795 & 7	4635
	4561		4534	-1823	4644
FF-901	1280-A	TK-560-P	4514	-2603	4601-A
FG-900	4580	U	4452	-4111	4514-F
FH-901	4524 & 4515	U-200-P	4515	D-1772	4629
	4615			-1798	4635
FL-901	4524	<u>2000 Series</u>		-1824	4644
H-140	4615	A-365 (kit)	4629	-2604	4601-A
	1198	D-238 (kit)	4610	-4112	4514-F
	1261	-298	4636	E-889	1259
	4594	D-316 (kit)	no # Metallic	-1253	4633-A
	4596	E-239 (kit)	4615	-1669	4541-B
H-162	4594	G-137	4515	-1721	4618
	4596	K-375 (kit)	1280-A	-1773	4629
-240	4327	-973	1245-B	-1798	4635
-340	4327	T-202	4580	-1825	4644
	4594	-436 (kit)	1245-B	-1877	1245
	4596	U-307	4619		1280-A
-362	4594	-437	1290	-2667	17731
	4596	V-256	4515	-2604	4601-A
K-570-P	4515	W-439	4562-A	-3307	4513
L-145	1261	Z-130	6050	-4113	4514-F
	4327			F-852	1239-A
	4452	<u>2240 Series</u>		-1254	4633
-245	1261	C-1953	4632 (s)	-1607	4541-B
	4605	R-1250-V	4601-A	-1800	4635
-345	4605	-1630	4515	-1826	4644
Q	4602	-1890	4514-E	-1878	1280-A
	4605	S-1631	4515	-2268	17731
R & RT	4602	-1891	4514-E		

TIMKEN (Continued)
(Rock ~~and~~ Standard)

2740 Series (Cont.)

F-3308	4513	R-1890	4626	U-1999	4629
-4114	4514-F	-2150	4601-A	-2155	4601-A
G-1827	4642	-3216	17732	-2266	17731
-1879	1280-A	-3450	1276	-2857	4562-A
-2815	1290	S- 253	330	-3325	4524-A
-3309	4513		1256 (s)	-3351	4610
-4063	4610	-1241	4627	X- 570	4470
H- 398	4592	-1423	4627	- 856	1286
-1828	4642	-1891	4626	-1297	4643
-1880	1280-A	-2151	4601-A	-1298	4636
J- 400	4592	-2853	4562-A	-1350	4592-B
- 686	4628-A	-3451	1276	-1428	4637
-1128	4515	T- 695	4628 & A	-1896-X	4626
-1466	4633	- 696	4628	-2000	4629
-1882	1280-A	-1018	580	-2598	4601-A
-2818	1290	-1424	4627	-2858	4562-A
-3442	1276	-1892-X	4626	-3378	17731
K-1129	4515	-2022	580	Y-1299	4636
-1883	1280-A	-2152	4601-A	-2599	4601-A
-1987	4602	-2854	4562-A	-2859	4562-A
-2819	1290	U- 255	330	-3379	17731
-3261	1131		1258 (1)	-3847	4618-A
-3443	1276	- 437	4343-C	Z- 26	1247
L- 168	6050	- 567	4470	- 858	1245-B
-2118	4602	-1425	4627	-1300	4636
-3262	1131	-1763	4619	-1690	4398
-3444	1276	-1893	4626	-1768	4629
M-2119	4602	-2153	4601-A	-2600	4601-A
-3263	1131	-2387	17733	-2860	4562-A
-3445	1276	-2855	4562-A	-3380	17731
N-3212	17732	-3323	1289		
-3264	1131	V- 256	330	<u>2840 Series</u>	
-3446	1276	- 568	4470	X-154	4249
-3524	4602	-1244	4625		
P-3162	1289	-1426	4627	<u>3222 Series</u>	
-3214	17732	-1894-X	4626	E-707	4513
-3448	1276	-1998	4629		
Q- 849	1234-A	-2154	4601-A	<u>3722 Series</u>	
-1421	4627	-2856	4562-A	A-495	4541
-1889	4626	-3324	4524-A	B-496	4398
-3163	1289	W- 569	4470	D-368	4398
-3215	17732	- 855	1286	P-432	4592-B
-3449	1276	-1245	4625	-640	4398
R- 980	4610	-1297	4636&4643	-822	4572
-1240	4627	-1427	4627		
-1422	4627	-1895-X	4626	32,550	189
					659-B

February 1970

WAGNER

FC- 7,76223	153-A		FD-22,346	2026	(1)	FD-56,316	2136-T (1)
-13,760	1191		-22,426	4564		-57,229-31	2045
-14,890	1225	(1)	-27,060	1288		-57,269	4638
-14,892	1225	(s)	-28,8302	1245		-57,5112.12	4645-A
-22,431	1234			1278		-59,444	1245-C
-28,8310.2	1245-A		-29,052	2015	(1)	-59,445	1280-B
-33,126	1245-A		-32,101	2015		-72,3210.2	2097-T (pri)
-33,248	4598		-33,246	1150		-72,3240.5	2097-T (sec)
-49,793	1245-C		-33,4950.6	2015		FE-35,507	2066-T (s)
-49,803	1280-B		-33,498	2015	(s)	-35,513	2066-T (1)
-55,409	1294		-34,1960.7	1219			2066-AT (1)
-55,410	1294&A		-36,554	1150		-40,9090.14	2071-T (s)
-56,346-A	1216-TT	(s)	-36,570	4598		-40,9250.30	2071-T (1)
-56,493-A	1216-TT	(1)	-45,884	2112	(1)	-44,629	2066-AT (s)
-56,495-A	1216-TT	(s)	-45,886	2111-T	(1)	-49,3090.10	2072-T (s)
-59,395	1294-A		-45,888	2111-T	(s)	-49,3220.3	2072-T (1)
FD-8,8520.3	1245-A		-45,888	2112-T	(s)	-57,268	4638 (s)
-9,7230.4	1245-A		-45,890	2115-T	(s)	-57,291	4638 (s)
-18,722	2042	(s)	-45,892	2115-T		FF-33,4910.2	2015-TT (1)
-18,731	2042	(1)	-55,2260.8	4602-A		-57,7770.8	4602-A
-22,343	2026	(s)	-55,408	296			

February 1970

B U L L E T I N

N O. 2 6 5

February 6, 1970

APPLICATION FOR ACTIVE MEMBERSHIP

filed by

WHEELING BRAKE BLOCK MANUFACTURING COMPANY

In Bulletin #357, dated August 5, 1969, it was announced that this company wished Active Membership in the Institute.

The Membership Committee, after reviewing the information submitted, recommended to the Board of Directors that it be accepted. After due consideration, the Board has also approved and is now recommending the acceptance of Wheeling Brake Block Manufacturing Company as an Active Member.

A mail ballot, on which to record your vote, is attached hereto. Kindly return the ballot immediately so that the applicant may be advised.

H. G. DUSCHEK
Secretary

Distribution: Active Members (B)

FMSI 18327

February 6, 1970

(Re: Bulletin #365)

Friction Materials Standards Institute, Inc.
370 Lexington Avenue
New York, New York 10017

Attention: Secretary

Gentlemen:

My vote on the acceptance, as an Active Member, of
the Wheeling Brake Block Manufacturing Company of Wheeling,
West Virginia is:

Yes ☐

No ☐

Signature _____

Company _____

Date _____

B U L L E T I N

N O. 3 6 4

January 8, 1970

DECLARATION RE PRODUCT CATEGORIES

FOR

FEE FORMULA BASIS

According to the Constitution and By-Laws, the Fee Formula for the Active Members must be reviewed annually and then presented to the Board of Directors who make recommendations to the membership.

Inasmuch as a member may be engaged in a category one year and not the following, or the reverse, it is necessary to have a confidential declaration filed annually in order to arrive at a proper assessment for each category.

Therefore, would you kindly return one of the attached to Mr. L. D. Stickles, Counsel, who will prepare a summary to aid the Board of Directors in determining the fee formula for the fiscal year starting July 1, 1970.

ANY MEMBER NOT FILING THIS INFORMATION CORRECTLY WILL BE ASSESSED THE FULL FEE FOR ALL CATEGORIES.

Kindly return your declaration to Mr. Stickles by January 31, 1970.

H. G. DUSCHEK
Secretary

Distribution: Active Members (A)
Enclosures: 2

C O N F I D E N T I A L

Mr. L. D. Stickles
Stickles, Hayden, Kennedy
Hort & Van Steenburgh
36 West 44th Street
New York, New York #10036

Dear Mr. Stickles:

In response to Bulletin No. 364 dated January 8, 1970 and my declaration of confidential information to be used in determining the fees, our company is engaged as follows:

Brake Linings - Under 5/8"	Mfg. ☐	Buy ☐
Brake Blocks - 5/8" and over	Mfg. ☐	Buy ☐
Clutch Facings	Mfg. ☐	Buy ☐
Brake Shoes (New Unlined)	Mfg. ☐	Buy ☐

Affix an "X" in the square to the right of the category or categories your company is engaged in.

Signature _____

Company _____

Date _____

P. S. Kindly return your declaration to Mr. Stickles by January 31, 1970.

C O N F I D E N T I A L

Mr. L. D. Stickles
Stickles, Hayden, Kennedy
Hort & Van Steenburgh
36 West 44th Street
New York, New York #10036

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Clutch Facings	Mfg. (☐)	Buy (☐)
Brake Shoes (New Unlined)	Mfg. (☐)	Buy (☐)

Affix an "X" in the square to the right of the category or categories your company is engaged in.

Signature_____

Company_____

Date_____

P. S. Kindly return your declaration to Mr. Stickles by January 31, 1970.