



STATE OF OHIO
THE INDUSTRIAL COMMISSION OF OHIO
DIVISION OF SAFETY AND HYGIENE
2325 WEST FIFTH AVENUE
P.O. BOX 1745
COLUMBUS, OHIO 43216

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Industrial Commission
GREGORY J. STEBBINS
Chairman
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Vice Chairman
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Member

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Governor

Division of Safety and Hygiene
WILLIAM C. MURPHY
Superintendent

DEC 19 1975

PLAINTIFF'S
EXHIBIT
BRK-278

Legal Section
Industrial Commission of Ohio
Ohio Departments Building
Columbus, Ohio 43215

Re: O.D. 11669-22
Robert Bianca

Attn: James Clymer
Room 223

Gentlemen:

On September 25 and 30, 1975, visits were made to Fisher Body Division, General Motors Corporation, Elyria Plant, Elyria, Ohio, to evaluate the conditions under which the claimant worked.

The section of the plant in which the claimant worked produces various types of automobile seats. The operations include metal fabrication, die-cast operations and the production of polyurethane foam seat cushions. The foam operations involve the use of toluene diisocyanate (TDI).

The claimant held several different jobs, including foam line attendant, die cast trim press operator, machine operator and buffer, all of which are adjacent to the foam lines with no intervening walls, before he was transferred away from the area. A copy of the claimant's complete work history at this plant is attached since it is too lengthy to reproduce in this report.

Before transferring to this plant, the claimant worked at another Fisher Body plant in Cleveland which had similar operations. In a conversation with the claimant, it was learned that he worked briefly in the foam department, but worked mainly in the die cast area. At the Cleveland plant, whose operation has been discontinued by the company, the die cast area was not immediately adjacent to the foam operations as it is in the Elyria plant.

Air samples were collected in the areas where the claimant worked using personal sampling pumps, midjet impingers, and Marcali absorbing solution. These samples were then submitted to the laboratory where they were analyzed using a standard technique. The results of these analyses are listed in the accompanying Table.

Also listed in the Table is the threshold limit value (TLV) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) of 0.02 parts per million parts of air (ppm) for TDI. It is also of interest to note that the National Institute for Occupational Safety and Health (NIOSH) has published a recommended standard which is different from that of the ACGIH, NIOSH recommends a limit of 0.005 ppm for an 8-hour workday

and 0.02 ppm for any twenty minute period.

In addition to the sample results listed in the Table, a copy of the log containing the results of the company's sampling program from 1970 through 1973 was obtained. While too voluminous to read entirely, scanning this log indicates that while TDI concentrations are either not detectable or very low most of the time, spills and other situations do occur which allow considerable quantities of TDI to enter the plant atmosphere. The highest level noted was 0.15 ppm TDI. These records are contained in the company file and available for review, if desired.

Enclosed are copies of material dealing with the effects of exposure to TDI. This includes the effects of continuous exposure to low levels, intermittent or sporadic short term exposures to higher levels, and the effects of individual susceptibility to sensitization. Careful reading of this material should be of considerable value in the disposition of this case.

Richard M. Maykowski

Richard M. Maykowski
Industrial Hygienist

Enclosures:

NIOSH Criteria Document on TDI
Pages 16-50
56-66

Job Safety & Health -

Article: "TDI: Job Health Hazard"
by George Clark

TABLE #1

**FISHER BODY DIVISION,
G.M. CORP.
TEST RESULTS**

INDIVIDUAL OR SITE TESTED	CONTAMINANT	CONCENTRATION DETERMINED (mg/M ³)*	ACGIH** 8-HOUR TLV***
Die Cast Area #66 Die Cast Trim Press #32 Die Cast Trim Press #54 Die Cast Trim Press	TDI TDI TDI	N.D. N.D. N.D.	See Body of Report
Bucket Seat Foam Line Stripping Cleaning Foam Gun Support Wire Insert	TDI TDI TDI TDI	N.D. N.D. N.D. N.D.	
Punch Press TE 7174 (Machine Operator Light) (Near Bench Seat Line)	TDI ..	N.D.	
Arm Rest Line Foam Gun Stripping	TDI TDI	N.D. N.D.	
Bench Seat Line Foam Gun Stripping	TDI TDI	0.006 ppm N.D.	
Back Pad Line Manual Foam Gun Stripping	TDI TDI	N.D. N.D.	
Buffing Buffer area Column F- 14,15 Buffer #565	TDI TDI	N.D. N.D.	

(1) *MILLIGRAMS PER CUBIC METER OF AIR

(2) **AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

(3) ***THRESHOLD LIMIT VALUE

N.D. - None Detected

PAGE NO:

S. S. NO. 286-32-0290

MCA R. L.

Sen. Date: 1-18-65

MARRIED

9-30-38

MARRIED

MARRIED

MARRIED

MARRIED

DATE	BADGE NUMBER	ACTION	CODE	OCCUPATION	DATE	REASON FOR ACTION
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07 31 72	034 1020	TR		MISCELLANEOUS MACHINE OPERATOR	4.33	1500 1	286 32
07 31 72	031 1020	TR		MISCELLANEOUS MACHINE OPERATOR	4.33	1500 1	286 32
09 11 72	041 1328	TR		MISCELLANEOUS MACHINE OPERATOR	4.33	1500 1	286 32
09 25 72	041 1328	SFT		MISCELLANEOUS MACHINE OPERATOR	4.33	1500 A	286 32
10 02 72	30 0052	TR		MISCELLANEOUS MACHINE OPERATOR	4.33	1500 1	286 32
10 16 72	30 0052	TR		DRIVER POWER TRUCK-INSIDE	4.33	5530 1	286 32
11 06 72	30 0052	COR		DRIVER POWER TRUCK-INSIDE	4.33	5530 3	286 32
11-13-72	30-52	COR		Driver Power Truck Inside	4.38	5530 3	286-32
11 13 72	30 0052	COR		DRIVER POWER TRUCK-INSIDE	4.38	5530 3	286 32
11 20 72	30 0052	COR		DRIVER POWER TRUCK-INSIDE	4.51	5530 2	286 32
11 20 72	30 0052			IMPROVEMENT FACTOR EFF 11-20-72	4.57	5530 2	286 32
11 20 72	30 0052	COR		DRIVER POWER TRUCK-INSIDE	4.51	5530 2	286 32
04 16 73	30 0052	COR		DRIVER POWER TRUCK-INSIDE	4.51	5530 1	286 32
12 03 73	022 1311	TR		MACHINE OPERATOR-LIGHT	4.46	1501 1	286 32
09 15 73	022 1311			GEN INCR-PAR 101A EFF 09-15-73	4.71	1501 1	286 32
12 10 73	022 1311			COLA ADJ-PAR 101G EFF 12-10-73	5.06	1501 1	286 32
04 13 74	044 1374	SFT		ROUGH POLISH DISC AND GRIND	5.13	1101 B	286 32
05 29 74	044 1374	TR		ROUGH POLISH DISC AND GRIND	5.13	1101 A	286 32
05 06 74	044 1374	SFT		ROUGH POLISH DISC AND GRIND	5.13	1101 A	286 32
05 13 74	041 1374	TR		DIE CAST OPER-SEMI AUTO	5.23	1001 A	286 32
05 13 74	041 1374	COR		DIE CAST OPER-SEMI AUTO	5.33	1001 A	286 32
06 17 74	024 1209	TR		BENCH HAND HEAVY	5.06	1600 2	286 32
06 17 74	024 1209	SFT		BENCH HAND HEAVY	5.06	1600 1	286 32
07 29 74	012 1010	TR		MACHINE OPERATOR-LIGHT	5.06	1501 2	286 32
03 05 74	041 1328	TR		MACHINE OPERATOR-LIGHT	5.06	1501 A	286 32
08 12 74	022 1070	TR		MACHINE OPERATOR-LIGHT	5.05	1501 1	286 32
09 23 74	022 1070			GEN INCR - PAR 101A EFF 9-23-74	5.21	1501 1	286 32
10 07 74	30 0127	TR		CARTON MAKING OPERATOR	5.21	5910 1	286 32

S. S. NO.: 206 32 0290

PAGE NO: 012

MEDICAL STATUS:

SEX: MALE

DEPENDENT CHILDREN:

OTHER DEPENDENTS:

BIRTHPLACE:

DATE:

IND. PAPERS:

DATE:

HIGH SCHOOL: 1-2-3-4 OTHER EDUCATION:

DATE	BADGE NUMBER	NOTES	CODE	OCCUPATION	RATE	REASON FOR ACTION
01-19-70	012 1153		N-H	INSP PACK C STEN C/OR ASSEMBLER	3.44	1606 1
02-16-70	058 1031		TR	FOAM LINE ATTENDANT	3.49	1907 1
03-16-70	05-1031		COR	Foam Line Attendant	3.59	1907 1
04-16-70	058 1031		COR	FOAM LINE ATTENDANT	3.59	1907 1
08-31-70	014 1014		TR	BENCH HAND LIGHT	3.44	1602 2
09-07-70	043 1069		TR	BENCH HAND LIGHT	3.44	1602 1
09-07-70	046 1069		TR	BENCH HAND LIGHT	3.44	1602 1
09-13-70	046 1069			TRANSFER 026 COLA EFF 09-13-70	3.70	1602 1
11-23-70	046 1069			IMPROVEMENT FACTOR EFF 11-23-70	3.93	1602 1
11-23-70	046 1069			TRANSFER 016 COLA EFF 11-23-70	4.09	1602 1
01-11-71	031 1124		TR	MISCELLANEOUS MACHINE OPERATOR	4.20	1500 2
01-18-71	031 1124		SFT	MISCELLANEOUS MACHINE OPERATOR	4.20	1500 1
02-01-71	034 1124		TR	MISCELLANEOUS MACHINE OPERATOR	4.20	1500 1
02-01-71	022 1310		TR	MACHINE OPERATOR-LIGHT	4.12	1901 2
02-08-71	031 1277		TR	DIE CAST OPER-SEMI AUTO	4.45	1001 1
03-29-71	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.45	1001 3
05-03-71	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.45	1001 1
06-21-71	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.45	1001 2
09-13-71	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.45	1001 1
10-04-71	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.45	1001 3
11-01-71	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.45	1001 1
11-22-71	031 1277		SFT	IMPROVEMENT FACTOR EFF 11-22-71	4.58	1001 0
01-03-72	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.58	1001 3
01-31-72	031 1277		SFT	DIE CAST OPER-SEMI AUTO	4.58	1001 2
04-17-72	031 1277		SFT	MISCELLANEOUS MACHINE OPERATOR	4.33	1500 2
05-17-72	034 1124		TR	NEW HAND LIGHT	4.33	1602 2
04-04-73	031 1277		SFT	NEW LIGHT	4.33	1602 1
04-10-73	031 1277		SFT	NEW LIGHT	4.33	1602 1
04-20-73	031 1277		SFT	NEW LIGHT	4.33	1602 1

18 65
MARRIED
09 30 38

S.S.N.O.: 286 32 0290
OFFICIAL STATUS:
DEPENDENT CHILDREN:

036 1172
MALE

DATE:		BIRTHPLACE:		2ND PAYMENT:	
HIGH SCHOOL: 1-2-3-4		OTHER EDUCATION:			

DATE	BADGE NUMBER	ACTION	CODE	OCCUPATION	RATE	REASON FOR ACTION
09 05 66	036 1172		FWD	DIE CAST OPERATOR-SEMI-AUTOMAT	13.08	
	036 1172		COR	DIE CAST OPERATOR-SEMI-AUTOMAT	13.19	ANNUAL IMPROVEMENT INCREASE 286 33
01-09-67	014-1092		TR	MACHINE OPERATOR-LT.	2.89	
05 01 67	021 1007		TR	DIE CAST OPER-SEMI AUTO	3.19	286
06 19 67	016 1092		TR	MACHINE OPERATOR-LIGHT	2.89	286
07 10 67	036 1012		TR	DIE CAST OPER-SEMI AUTO	3.19	286
08 14 67	021 1085		TR	DIE CAST OPER-SEMI AUTO	3.19	286
12 04 67	014 1092		TR	INSPECT AND PACK-HEAVY	2.91	286
12 25 67	021 1085		TR	DIE CAST OPER-SEMI AUTO	3.19	286
01 01 68	021 1085		COR	GEN WAGE INC .20 EFF 10-16-67	3.39	286
01 01 68	021 1085		COR	COLA .18 ACD TO BASE 1-1-68	3.57	286
03 04 68	021 1085		TR	MISCELLANEOUS MACHINE OPERATOR	3.34	286
03 11 68	017 1200		TR	INSPECT AND PACK-HEAVY	3.29	286
04 22 68	043 1276		TR	INSPECT AND PACK-HEAVY	3.29	286
04 29 68	036 1018		TR	DIE CAST OPER-SEMI AUTO	3.57	286
07 08 68	026 1318		TR	INSPECT AND PACK-HEAVY	3.29	286
08 26 68	043 1099		TR	STRIP TRIM CLEAN AND INSP	3.29	286
09 16 68	026 1318		TR	FINISH SPRAY BY HAND	3.39	286
09 23 68	026 1318		TR	INSPECT AND PACK-HEAVY	3.29	286
09 30 68	026 1318		TR	STRIP TRIM CLEAN AND INSP	3.29	286
10 28 68	026 1318		COR	STRIP TRIM CLEAN AND INSP	3.34	286
11 25 68	026 1318			ANNUAL IMPROVEMENT EFF 11-25-68	3.44	286
01 13 69	044 1099		TR	ASSEMBLER-SEAT BACK	3.44	286
01 27 69	026 1310		TR	STRIP TRIM CLEAN AND INSP	3.44	286
11 24 69	026 1310			ANNUAL IMPROVEMENT EFF 11-24-69	3.54	286
01 19 70	99 1000		T-O	STRIP TRIM CLEAN AND INSP	3.54	286