CC: Mr. James E. Boudreau

ETHYL CORPORATION

INTER-OFFICE
CORRESPONDENCE

Returned as of July 26, 1957, w letter 4 Rel 1976

TO	Dr. Robert A. Kehoe	ADDRESS	Cincinnati
FROM	William G. Ball, Jr.	ADDRESS	New York
SUBJECT	Technical Papers of Dr. Edgar	DATE	May 10, 1957

Dear Dr. Kehoe:

In the course of the New York Office filing system revision, Dr. Edgar's files were about to be discarded.

It is quite possible that many of these papers (technical and otherwise) are the only ones in existence in the Company.

Would you kindly have someone in Medical review this list and return it to me with the papers marked in red that should be saved as part of our archives. Possibly this person could also indicate which copies should be sent to Cincinnati for permanent filing.

Sincerely,

William G. Ball Jr.

William G. Ball, Jr.

WGB:cm
Att.

KE 0092

REPRINTS AND PREPRINTS

TITLE	AUTHOR	
tion Fuels and Engines	Banks, F. R.	SAE Jour.
ssory Knock Suppressors	Kimball, L. B. (Fuel Devel.Corp.)	SAE Meeti
Aviation Fuels - Present and Future Developments	Heron & Beatty (Supply room 35th)	A.P.I. Ne
Y Aircraft Operation with Fuels of 100 octane Number and Higher	Heron, S. D.	A.P.I., C
Y Aircraft Engine Performance with 100 octane Fuel	Klein, F.D. (Air Corps)Wright Field)	
Aircraft Fuels	Heron & Beatty (Supply room 35th)	IAES Ju
Y Aircraft Fuels of the Future	Edgar, Graham	Presented
Y Anti-Knock Fuels	Edgar, Graham	Reprint f
Anti-Knock Research Coordinates Laboratory and Road Tests	Veal, Best, Campbell & Holaday	S.A.E. Jo
Anti-Knock Compounds	Calingaert, George	Science o
Anti-Knock and Mixture Distribution Problem in the Multi-Cylinder Engine	Blackwood, Lewis & Kass (See Mrs. Mittnacht)	A. P. I.
Aviation Fuels	Aeronautical Research Staff of Ethyl Gasoline Corp.	October 2,
An Appraisal of the Lead Hazards Associated with the Distribution and use of Gasoline Containing tetraethyl lead. II. The Occupational Lead exposure of filling station attendants and Garage Mechanics.	Kehoe, Thamann and Cholak Kettering Lab. of Applied Physiology	Jan, 1936 Journal o

Better Fuels for Better Engines

Boyd (Various papers) see folder

X Y Bromine from the Sea "The Voyage of the Good Ship "ETHYL".

Bulletin No. 163 ("The Use of Tetraethyllead Gasoline in its Relation to Public Health)

Hubner, William H. (see Miss Koster)	S.A.E. Journal, October, 1940
Engineering Foundation	July 15, 1929
see Dr. Edgar's Library	June, 1926

KE 0002483

Carburetion, Manifolding and Fuel Anti-Knock Values	[illegible]	S.A.E. Journal, April, 1938
Chemical Nature of Gum-Forming Constituents in Gasoline	Flood, Hardy and Leger	Industrial & Eng. Chem. Nov,
Cold Corrosion of Aircraft Engines and its Prevention	Research Lab. (G. M. C.)	Detroit, Nov. 27, 1935
Commercial Extraction of Bromine from Seawater	Stewart, LaMer C. (U.S. Bureau of Chem.)	April, 1934, Indust. & Eng.
Corrosion Die-Cast Metals	(Coll Dr. Peterson Standard of N.J.)	
Constant Temperature High-Pressure Laboratory Autoclave	D'Astra and Callingert	September 15, 1934
Correlated Analysis of Tractor Engine Fuels by Theoretical Values by Laboratory Tests and Field Tests	Earlholtzer, Olin and Krieger (Supply room 38th)	September 9, 1938
Correlation of Knocking Characteristics in an Engine having a Hemispherical Combustion Chamber	Rothrock and Eberhardt	(se Langley Memorial Aero. Lab. Mi
Chemical Composition and Road Antiknock Performance of Postwar Motor Fuels	John F. Jordan	from - Technical Section "National Petroleum News Oct. 3, 1945"

KE 0002484

Determination of Tetraethyllead in Ethyl Fluid (Analysis of Gasoline for Lead Tetraethyl)

Deposits in White Metal Carburetors

Determination of Sulfur in Gasoline

Defeating the Gasoline Knock

Determination of Dissolved Gum and Potential Gum in Gasoline

[illegible] Industrial & Engineering Chemistry, 1929

Baldeschwieler, [illegible] & Hudson — U.S.A. Jour. October, 1935

Collingwood and [illegible] — Indust. & Engg. Chem. January 15, 1

Elgar, Graham — "Scientific American", January, 1

R.D.C. (Walker Bros.) — June 20, 1930

[illegible]

KE 00002485

Effects of Engine Speed and Mixture Temperature on the Knocking Characteristics of Several Fuels	[illegible]	Langley (s
Effect of Increased Carburetor Pressure on Engine Performance at Several Compression Ratios (1 copy)	Coley & Rollin	Lan
Engine Performance and Knock Rating of Fuels For High-output aircraft engines (1 copy)	Rothrock & Biermann	"
Effect of Spark-timing Regularity on the Knock Limitations of engine performance	A. Biermann (1 copy)	"
Electrolytic Cleaning of Exhaust Valves	Horner, Gallingaert & Eglestron	(Copy
Effect of Test Conditions on Fuel Rating	Barker, L. E. (report from C.F.R. Committee)	A. Pe
"Ethyl". (Some information on the use and advantages gained by the employment of tetraethyllead in fuels for Aviation Engines)	Rocha, F. P.	1934
Effect of Carburation and Manifolding on the Relative Antiknock Value of Fuels in Multicylinder Engines	Marshall, Smith & Brewster (See Aberdeen Department for copies of this paper)	
Engine Performance with High Octane Fuels (2)	[illegible] (prepared for Science of Petro by Oxford Unive	
Exhaust Valve Materials for Internal-Combustion Engines (1) copy	S. E. Hoover, O. L. Barker, and A. R. Mumford	Symposium tation. P

Fuel Quality Requirements as Affected by Type of Motor Maintenance (1 copy)

Fuel Consumption of a Carburetor Engine at Various Speeds and Torques (1 copy)

Five Papers covering Fuels for Automobile Engines, Combustion and Engine Efficiency

Further Studies of Flame Movement and Pressure Development in an engine cylinder

Factors Affecting Heat Transfer in the Internal Combustion Engine

Factors Affecting the Antiknock Performance of Fuel-ver Gasolines (1 copy)

(illegible Co.)

Army ... Chief

Carbondale, Ill.

(1 copy) Harvey, Wilcox & Powder

Ft. M. E. (Mass. Inst. of Tech.)

Reprint from NATIONAL PHYSICAL NEWS - Issue of March 1, 1944

A.F.F. Chicago, Nov. 15, 1940

Library, National Aero. Lab. (Aero Library U.S.)

(1 copy) Telescope)

National Bureau of Standards (1 c

National Advisory Com.for Aero (Sec G.E. Library)

KE 0002487

Gasoline Formation

Y Gasoline (a Pamphlet on) (See Mrs. Whitmore)

Gasoline Engine Combustion

Y Gasoline--Past, Present, and Future

[illegible]	Medical Bulletin University of Cin
[illegible]	[illegible] 23, 1933
[illegible]	Nov. 10, 1933 (Automotive Industr
	6/21/12 Kirburg Lecture

KF 0002438

Higher Anti-Knock Fuels are Affecting Commercial Car Engine Design	[illegible]	Oil & Gas Journal, 1934
High Octane Fuels and Commercial Operation (not to be published)	Moran, S. D.	
Heavy-Duty Motor Oils (see Mrs. M.)	M. C. Mougey	Presented at A.P.I. Chicago, No
Hexamethylethane	Flood and Callingaert	J. Am. Chem. Soc. 1934
Homologous Series of Alkanes	Callingaert, Beatty, Baker and Thomson	Industrial and Eng. Chemistry January, 1941
Hlg. Motion-Picture Study of Normal Combustion, Knock, and Preignition in a spark-ignition engine.	Rothrock, Spreuer and Miller	Restricted Copy (National Advisory Committee f see G. E. Library
How will the 100 octane aviation gasoline program affect post-war motor gasoline	Evans E. Brown and W.P. Barnard Asst. Deputy Administrator P. A. W.	S.A.E. Meeting December 2, 194

KE 0002439

Isomerization of Normal Heptane

Investigation of Some of the Fundamentals of Supercharging (See Mrs. Mittnacht)

Interrelation of Exhaust-Gas Constituents (1 copy)

Ionization in the Knock Zone of An Internal Combustion Engine (RESTRICTED)

Collaborator	Journ. A.C.S. 10/31/35
Collaborator	Journ. A.C.S. 1/18/33
Richard H. Stead (E.C.C.)	Presented S.A.E. March, 1933
Curtis & Voss	Langley Memorial Aeron. Lab (see Library N. E.)
Charles Hastings	Ditto

KF 0002490

Jacket & Cylinder-Head Temperatures
Effects Upon Relative Knock Ratings — Edgar, Gibson

Knocking Characteristics of Fuels in Relation to Maximum Permissible Performance of aircraft engines — Rothrock & Biermann (1 copy)

Knock Testing--In the Laboratory and in Service — Edgar, Gibson (Supp

July, 1941

Langley Memorial Aeronautical Laborat
(see Library)

S.A.E. Journal, September, 1938

KE 00024491

Liquid Cooled Aero Engines	[illegible]
Laboratory Knock Testing with C.F.R. Engines	[illegible]
Lead Poisoning	Reprint - Journal of Industrial Hygi
Meaning of the Gasoline Distillation Curve	Edgar, Hill and Boyd
Measurement of Knock Characteristics of Gasoline in terms of Standard Fuel	Edgar
Method of Comparison & Critical Analysis of Physical Properties of Homologs and Isomers. The Molecular Volume of Alkanes	Collingwood, Bladby & Marker
Modified Weighing Pipet	Edgar
Manufacture and Use of Tetraethyllead	Edgar, Graham (Ass'n of Chemical Engineers)
Motor Fuels from Polymerization	Egloff, Morrell, Nelson (Universal Oil Prods.)
Mutual Adaptation of Aircraft Fuels and Aircraft Engines	S. D. Heron
More Efficient Utilization of Fuels	Charles F. Kettering Vice-Pres. Gen. Motors

KE 0002403

New high Octane Blending Chart (Bottom back top drawer)	Durland Lloyd	
Nature of the Octane Scale	Moore, Cook, Carter	
1940 ROAD DETONATION TESTS (Bale small file)	Cory Kelly, Greenshields & Holaday	
OCCUPATIONAL LEAD HIPCOUNS AND LEAD POISONING	American Public Health Association	(1 copy)
On The Mathematics of Committees, Boards and Panels	Bruce D. Old	
Prospects of Fuels of Higher Octane Number in the Transport Field	Rubber, W. H.	
Paraffin Hydrocarbons Isolated from Crude Synthetic Iso-Octane (2,2,4 - Trimethyl-pentane)	Brooks Cook & Carter	
Preparation and Properties of the Isomeric Heptanes	Ethyl and Gilligand	
Practical Pointers on Engine Maintenance (see Mrs. Mintmark)	Ethyl Gasoline Corporation	
Photographic Study of Combustion and Knock in a Spark-Ignition Engine (1 copy)	[illegible]	
Test Results of a Fuel-Injection Engine Using a Hydrogenated Safety Fuel	[illegible] (1 copy)	
Precision in Motor Fuel Testing;	Lund Brooks & Roberts Gleaton	
Problem + Research + Capital = Progress	Inman Midgley, Sr.	
Correlation of Gas Flow Study in the Design of Passenger Car Engines	Boyd, Voss	

Power Units for Future Aircraft

[illegible]

From Journal of the Royal Aeronautical Society - Jan. 1947

KE 0002494

Relation of Hydrogen & Methane to Carbon Monoxide in Exhaust Gases from Internal Combustion engine (1 copy)	[illegible]	Ind. Eng. Chem. May, 1928
X Y Recovery of Bromine from Sea Water	Kirby, Grace (Ga. Tech.)	Industrial and Eng. Chem. May, 1928
Y Rating Aviation Fuels--in Full-Scale Aircraft Engines	Neal, C. B.	S.A.E. Journal May, 1936
Relation of Fuel Octane Number to Engine Compression Ratio	Huxley, Bartholomew	Petrol. Engr. 6/24/34
Research in Relation to Motor Vehicle Fuels and Lubricants	Cramer	Journ. of Inst. of Techn. October,
Road Knock Tests (1937) report from C. F. R. Committee) 2 copies	Boyd, T. A.	A. P. I. meeting, November 12, 193
Redistribution Reaction IV. Interchange between Triethyllead chlorids and Radioactive Tetraethyllead	Calingaert, Beatty and Ross	Journ. Am. Chem. Soc., 1938
Relation of Aircraft Engine Performance to Fuel Octane Number (stockroom 36th)	H. D. Barrow	(booklet - supply in Advertising
Results of Recent Road and Laboratory Tests on commercial engines	Ethyl Gasoline Corporation	A.P.I. (Refining Fall Meeting) June 2-3 1937, St. Louis, Mi
(A) Refiners Look At Gasoline Quality (1 copy)	A. F. Faust	

KE 0002405

Some Factors Affecting Combustion in ... Internal-Combustion Engine (1 copy)

Some Problems of Modern High-Duty Aero Engines and their Fuels

Spontaneous Ignition Temperature of Liquid Hydrocarbons at Atmospheric Pressure

Status of Research on Fuel and Lubricating Oil for Spark-Ignition Aircraft Engines (1 copy)

Small-Plant Scale Liquid Phase Hydrogenation Under High Pressure

Studies of Alkyl Lead Compounds

Spark Plugs (see Mrs. Mittmacht)

Shape of Things to Come

Standards for Discharge Measurement with standardized nozzles and orifices

Synthetic Key for Our War Horses (See Item 2)

Synthetic Chemicals from Petroleum

Summary of the Effects on Oil Stability and Bearing Corrosion caused by Ethyl Fluid in Gasoline, additives agents in ... and cleaning of New and Used Engines (can get more copies from Mr. ...

Some Problems in Creating a New Industry 1 copy

[illegible] ... Navy Material Lab. Lab (...

[illegible], F. R. ... Unpublished report June 18, 1937

Lykken and [illegible] ... Industrial & Eng. Chem, May, 1934

[illegible], S. T.

[illegible]mport & [illegible] ... Indus. & Eng. Chem. August, 1934

[illegible]gaard & [illegible] ... Jour. of Organic Chem. Jan, 1938

[illegible]yl Chlorine Co. ... July, 1, 1934

[illegible], J. B. ... May, 13, 1938 A. P. I. meeting

[illegible] ... National Advisory Committee for Aeronautics (Jan. 1938) ... library

[illegible] E. Wilson ... Presented A.P.I. Chicago, Nov. 18, 1

I. [illegible] ... " " " "

[illegible] ... Jan. 8, 1942

[illegible]

[illegible] ... Special for [illegible] American ... 1941, 1942

Tests for the Accuracy of Vapor [illegible] Equilibrium Data	[illegible] & Carlson	Univ. Wash. Publ.
Trends in Automobile Design Match Evolution in Fuels	Boyd & Revell	A.P.I. Chicago, Nov. 25, 1940
Theory of Knock in Internal-Combustion Engines	Boyd & Edgar	"The Science of Petroleum" reprint
Tetraethyl Lead Industry (See small file for further copies)	Graham Edgar	December 1, 1941

Tetraethyl Lead

Graham Edgar

Ind. Eng. Chem.

KE 0002497

Using Gasoline to Best Advantage	[illegible]	Producers Conservancy of Fish-Life Publishing Co. Conference November 8, 1950
Use of Lecithin in Gasoline	Texas Quality Petroleums (No Author Cited)	A. P. Brown and Chicago, Nov. 8,

KE 0002498

Vapor-Liquid Equilibrium of [illegible]
Mixtures

Vapor Phase Oxidation of Isomeric Octanes — Pope,

Vapor Phase Oxidation of Hydrocarbons (I) — Blacet

" " " " " (II) "

" " " " " (III) "

What Will We Do With Post War Fuels — G. A.

[illegible]	[illegible], 19[illegible]
[illegible], [illegible]	[illegible] S[illegible] June, 1929
[illegible]	July, 19[illegible] Jour. of A.C.S.
	Ditto

[illegible] Motor Div. S.A.E. Meeting Dec. 2, 1943

E 0002499

TITLE

Normal Absorption and Excretion of Lead

Tetraethyl Lead Intoxication and Poisoning by Related Compounds of Lead

Final Report of the Departmental Committee on Ethyl Petrol

Use of Tetraethyl Lead Gasoline in its Relation to Public Health (Public Health Bulletin No. 138) (also pamphlets on changes in regulation)

Determination of Lead in Extracts & Tissues

Behavior of Lead in the Animal Organism

Quantitative Spectrographic Determination of Lead in Urine

*On Normal Absorption and Excretion of Lead

*An Appraisal of the Lead Hazards Associated with the Distribution and Use of Gasoline Containing Tetraethyl Lead

An appraisal of the Lead Hazards Associated with the distribution and use of Gasoline containing tetraethyl lead. II. The occupational lead exposure of Filling Station Attendants and Garage Mechanics.

A spectrochemical study of the normal ranges of concentration of certain trace metals in biological materials

Spectral Lines Manganese, lead, tin, [illegible], copper and silver in normal biological materials.

*Most frequently used.

Experimental Studies on the Ingestion of Lead Compounds

, Thomson & Chalmers	Journ. Industrial Hyg. Jan. 12, 1935
, L. & Mill. J. & S.	" " " " Aug. 24, 1935
ory of Dusts - London, 1940	
al General	June, 1923
, Thomson	Journ. Clinical Pathology - Jan, 19
& Thomson	" Lab. & Clinical Medicine - Nov. 19
Chalmers	Journ. of Am. Chem. Soc. - May, 19
, Thomson & Chalmers	" Industrial Hygiene - Sept. 1
, Thomson & Chalmers	Journ. Industrial Hygiene - Mar. 1
, Drinker & Warren	Journ. of Industrial Hygiene & Toxicology Vol. 16 No. 1 January, 1934
, Drinker & Hatch-Story	Journal of Industrial Hygiene June 1940
, Drinker & Hatch-Story	Journal of Industrial Hygiene July, 1940
, Drinker, Warren, Bloomfield & Drinker	Journ. Industrial Hygiene and Toxicology 11/1940

0002500

KE

[illegible] (See Miscellaneous Folder)

TITLE	AUTHOR	
An Accurate Ebulliscopic Method for Determining the Molecular weights of non-volatile Petroleum fractions	[illegible] K. Hale	Jour. of Research of the Nat Bureau of Standards, Mar, 19
Isolation of Ethylcyclohexane from a Mid-Continent Petroleum	[illegible] & Tilt	" August, 1935
Present Status of the Isolation and Identification of the Volatile Hydrocarbons in a Mid-continent Petroleum	[illegible] & Tilt	" Sept.1935
Separation of Petroleum Hydrocarbons with Silica Gel	Mair & Tilt	" July 1935
An Apparatus for Measuring the boiling points of Lubricating Oils and Other compounds of high Molecular Weight at reduced Pressures	Edmister T. Schluetans	" June, 1935
Separation of Methylcyclohexane Fraction from a Mid-continent Petroleum	Robert T. Haslam	" July 1935
The Kohlrausch-Debye-Onsager Factors for the Conductivities of Acids.	Professor Lars	
Mutual Solubility Data in Salt-Water Systems	[illegible], C. F.	Annual meeting A.P.I. Nov. 1
Butane - a modern Agent of the Petroleum Industry	[illegible], P. C.	Meeting A.P. I. May 24, 1934
Conservation of Volatile Gasoline Hydrocarbons	Woodhouse and Manley	"
The Preparation of Aldehydes	[illegible] Berlin Germany	July, 1935
Direct Measurement of the Primary, Secondary and total medium effects of Weak Acid	[illegible] Brooks Crum	May 2, 1932. Jour. A. C. S.
The Thermodynamic Properties of Weak Acids and bases in Salt solutions and an Exact Method of Determining their dissociation Constants.	Harned & Ehlers	Dec, 1932 - Jour. A. C. S.
The Medium Effect of Various Solvents upon Silver Bromate at 25°	Benton Brooks Crum	1935, Jour. A. C. S.

KE 0002501

TITLE	AUTHOR	
The Acid and Base constants of Glycine from Cells without liquid Junction.	Harned & Owen	Jour.
The Stereochemistry of Diphenyls and Analogous Compounds	Adams & Yuan	Chemic
Pneumatic Tires - Old and New	Bergman Bernier	S.A.E.
Progress in Aeronautical Engineering	Loudale, Dr D.	Dec. 5
The Knock rating of Olefines. A contribution to the study of significance of olefines in cracked petrol	Cramer, Wilkinson & Koch	Jour.
The Knock rating of Naphthene & Aromatic Hydrocarbons	Cramer - Evans	Jour.
Molecular Rearrangements	Whitmore & Collaborator	Jour.
Combustion Processes in Aircraft Engines	Cowdrey, (Washington,D.C.)	Aero.
Engineering Control of Airtransport Operation	Allen, Edmund T.	
The Methyl Tenses	Calkgeert & Sarcos	Jour.