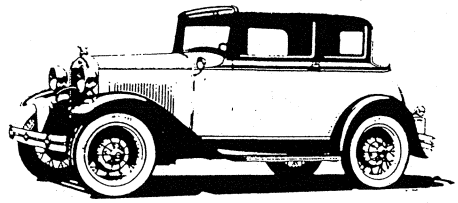
Victoria Association



Vol.6 No.4 NEWSLETTER October 1991

THIS NEWSLETTER IS THE LAST FOR THIS YEAR, 1991. I HOPE THAT EACH AND EVERY ONE OF YOU ENJOYED RECEIVING THEM AND THE CONTENTS. REMEMBER, I AM ALWAYS OPEN TO CRITICISM WHETHER GOOD OR BAD. IF YOU HAVE AND SUGGESTIONS, I WILL LISTEN AND IF FEASIBLE I WILL IMPLEMENT THEM. OVER THE YEARS SINCE I HAVE STARTED THE VICTORIA ASSOCIATION, I HAVE HAD MANY COMPLIMENTS WHICH I CERTAINLY APPRECIATED. I HAVE HAD MANY SUGGESTIONS AND IMPLEMENTED MOST OF THEM. SO, PLEASE KEEP THE LETTERS COMING, I NEED ALL THE HELP I CAN GET. IT IS HARD TO COME UP WITH NEW THINGS FOR THE VICTORIA THAT HAS NOT BEEN COVERED. THERE WILL BE A LOT OF REPEAT ITEMS FROM NOW ON BUT WHEN SOMEONE COMES UP WITH SOMETHING NEW, THE NEWSLETTER WILL SURELY COVER IT.

ROSTER

I WILL PRINT A NEW ROSTER IN THE MARCH NEWSLETTER. IN THE PAST, A LOT OF MEMBERS HAVE NOT RENEWED THEIR DUES ON TIME AND IF THIS IS THE CASE IN 1992, YOU WILL NOT BE INCLUDED IN THE ROSTER.

DUES TIME AGAIN

ACTUALLY, THE DUES IN NOT DUE UNTIL JANUARY 1, 1992. SINCE THIS IS THE LAST NEWSLETTER THIS YEAR, IT IS TIME FOR ME TO REMIND YOU TO PLEASE GET YOUR DUES IN BEFORE THEN. I WILL ONLY MAIL THE JANUARY '92 NEWSLETTER TO THOSE PAYING BY THEN. SO MAKE A NOTE TO SEND IN YOUR DUES BEFORE JANUARY. YOU CAN SEND IT ANYTIME BEFORE THEN. I ALREADY HAVE TWO MEMBERS THAT HAVE PAID EARLY.

FOR THOSE OF YOU THAT HAVE JUST JOINED, PLEASE REMEMBER THAT YOU HAVE GOTTEN EVERYTHING THAT THE MEMBERS HAVE, THAT PAID IN JANUARY. THE DUES GOES FOR THE NEWSLETTER AND POSTAGE. EACH OF YOU SHOULD HAVE GOTTEN THE THREE PAST NEWSLETTERS AND THIS ONE. IF NOT, PLEASE LET ME KNOW AND I'LL SEND ANY THAT YOU MISSED.

WANT AD"S - NEWSLETTER

THE AD'S YOU PLACE AND THE NEWSLETTER ARE JUST TWO OF THE SERVICES YOU GET FROM THE ASSOCIATION. REMEMBER, WHEN YOU HAVE A PROBLEM AND NEED SOME HELP, I AM ALWAYS READY TO HELP YOU. YOU CAN CALL OR WRITE AND IF I DO NOT HAVE THE ANSWER, I'LL GET IT FOR YOU.

PHOTOS - PHOTOS

I HAVE RECEIVED MANY PHOTOS SINCE THE LAST

NEWSLETTER. PLEASE DON'T FORGET TO SEND THEM IN. WE ARE INTERESTED IN PHOTOS FROM A PIECE OF JUNK TO THE FINISHED PRODUCT AND ANYTHING IN BETWEEN.

A NEW MEMBER, BILLY MC DONALD FROM MESQUITE, TEXAS HAS SENT ME SOME GREAT PICTURES SHOWING THE PASSENGER SEAT ATTACHMENTS. THESE ARE USED WHEN THE DRIVERS SEAT IS THE SLIDING TYPE AS USED IN THE LATE VICTORIA. MOST VICTORIA'S WITH THIS SEAT ARRANGEMENT WILL PROBABLY HAVE THE INDENTED FIREWALL.

ANOTHER NEW MEMBER, LYLE DE HUSE SENT TWO PHOTOS OF HIS VERY NICE VICTORIA LEATHERBACK.

JOHN AND JAMES ICENHOWER HAVE TAKEN SOME FINE PHOTOS SHOWING THE VICTORIA FRAME AND THE ANGLE BRACKET.

REFER TO PHOTO SECTION.

PLEASE PRINT YOUR NAME ON THE BACK OF YOUR PHOTO. IF YOU WANT THEM RETURNED, PLEASE TELL ME AND I WILL COMPLY.

I THANK ALL OF YOU FOR SENDING THESE PHOTOS FOR THE MEMBERS TO ENJOY.

NEWSLETTER INDEX

MRS. JOYCE BARNARD HAS SENT A COPY OF THE NEWSLETTER INDEX THAT SHE HAS COMPILED OF ALL PAST NEWSLETTERS. I AM INCLUDING IT IN THIS ISSUE. I HAVE USED IT AND IT SURE MAKES IT EASY TO LOOK UP SOMETHING IN A PAST NEWSLETTER. MY THANKS TO JOYCE ON BEHALF OF ALL OF THE VICTORIA ASSOCIATION MEMBERS. WE REALLY APPRECIATE ALL OF YOUR TIME AND WORK.

WINDOW ANTI RATTLERS

NORM CROSS, A MEMBER, CAME UP WITH AN ANSWER FOR OUR WINDOW ANTI RATTLERS THAT WAS ADDRESSED IN A PAST NEWSLETTER. HE SENT A PIECE OF WINDSHIELD WIPER RUBBER FROM A 1977 OLDS 98. THIS CUT IN PIECES CORRESPONDING TO THE SLOT IN THE DOOR AND WINDOW FRAME WORK AS HE SAID. HE SUGGESTS USING SUPER GLUE SO THAT THEY DO NOT COME OUT DUE TO FRICTION ON THE DRY GLASS. TRY THIS, YOU'LL LIKE IT. THANKS FOR THE TIP, NORM.

ARTICLES

I HAVE RECEIVED TWO ARTICLES FOR THE NEWSLETTER. I WILL PRINT ONE THIS NEWSLETTER FROM DEAN LARSON AND IN THE JANUARY NEWSLETTER, I WILL PRINT ONE WITH PHOTOS FROM JOHN SPORTUN OF WESTON, ONTARIO, CANADA.

MANY THANKS FOR THESE ARTICLES. I ENCOURAGE ALL OF YOU TO SEND IN SOME ARTICLE OF INTEREST ON YOUR VICTORIA.

OIL AND LUBRICATION

FOR SOME TIME NOW, I HAVE WANTED TO RUN TWO ARTICLES BY MR. BOB RENTZ OF ALBUQUERQUE, NM. I AM INCLUDING ARTICLE NUMBER ONE IN THIS NEWSLETTER AND WILL RUN NUMBER TWO IN THE JANUARY NEWSLETTER. I HOPE YOU GET AS MUCH OUT OF THESE ARTICLES AS I DID. I KNOW THAT SOME OF YOU WILL NOT AGREE WITH THIS ARTICLE BUT I WILL SAY THAT I HAVE SWITCHED TO DETERGENT OIL BECAUSE OF THIS ARTICLE. I HAVE BEEN USING DETERGENT OIL FOR SEVERAL YEARS AND HAVE HAD NO BAD EFFECTS. I THINK THIS ARTICLE

QUELLS MOST OF THE OLD THOUGHTS ABOUT USING DETERGENT OIL IN AN ENGINE WITH BABBIT.

THESE ARTICLES ARE REPRINTED FROM BACK ISSUES OF THE **RESTORER** MAGAZINE WHICH IS THE OFFICIAL MAGAZINE OF THE MODEL A FORD CLUB OF AMERICA.

VICTORIA "T" SHIRTS ????

AWHILE BACK, I RECEIVED A VERY NICE "T" SHIRT FROM A MEMBER AND I WAS WONDERING IF THE MEMBERSHIP WOULD LIKE TO HAVE SOME MADE? IF YOU DO, PLEASE LET ME KNOW AND I WILL ASK THE FELLOW THAT MADE THE "T" SHIRTS FOR THE '92 NATIONAL CONVENTION HOW MUCH THEY WOULD RUN. I AM GOING TO TAKE A WILD GUESS AT 5 OR 6 BUCKS EACH. THE SHIRT HAS A LARGE VICTORIA ON THE BACK. WE CAN USE THE SAME VICTORIA AS APPEARS ON THIS NEWSLETTER COVER SHEET. IF I HEAR FROM ENOUGH OF YOU, I WILL FOLLOW UP ON THIS AND ADVISE IN THE JANUARY NEWSLETTER.

NATIONAL CLUBS

BOTH NATIONAL CLUBS, MODEL A FORD CLUB OF AMERICA AND MODEL A RESTORERS CLUB ARE ACCEPTING THE DUES FOR 1992.

DUES FOR MAFCA IS $20 PR YEAR AND MARC IS $15 PR YEAR.

FOR THOSE OF YOU THAT BELONG TO ONLY ONE OF THE NATIONAL CLUBS, I SUGGEST THAT YOU JOIN THE OTHER. BOTH OF THEM HAVE EXCELLENT ORGANIZATIONS AND BOTH HAVE EXCELLENT PUBLICATIONS IN THEIR OFFICIAL MAGAZINES.

THE ADDRESSES ARE AS FOLLOWS:

MAFCA, 250 SOUTH CYPRESS, LA HABRA, CA. 90631.

MARC, 24822 MICHIGAN AVE., DEARBORN, MI. 48124.

JOIN TODAY, YOU'LL BE GLAD YOU DID.

1992 NATIONAL CONVENTION

AS MENTIONED IN PREVIOUS NEWSLETTERS, THE MAFCA NATIONAL CONVENTION WILL BE HELD IN ARLINGTON, TEXAS FROM JUNE 22 - 26TH. ARLINGTON IS LOCATED HALF WAY BETWEEN DALLAS AND FT. WORTH.

FOR THOSE OF YOU PLANNING TO COME, I RECOMMEND THAT YOU JOIN THE DALLAS '92 EARLY BIRD WHICH IS A NEWSLETTER TELLING ALL ABOUT THE UP COMING EVENTS ETC. EVEN IF YOU JOIN NOW, YOU GET THE PAST ISSUES. SEND $7.50 TO: DALLAS '92 EARLY BIRD, DALLAS MODEL A FORD CLUB, INC., P.O.BOX 797402, DALLAS, TEXAS 75379-7402.

WE WILL HAVE A VICTORIA ASSOCIATION MEETING ON WEDNESDAY, JUNE 24 FROM 1 PM TO 3 PM. IF YOU PLAN TO BE HERE, LET ME KNOW SO I CAN HAVE A COUNT ON THE NUMBER THAT WILL ATTEND THE MEETING.

JUDGING STANDARDS REVISIONS

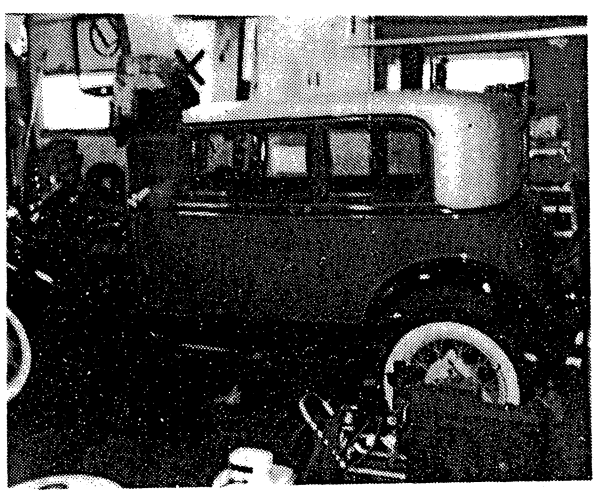
ONCE AGAIN, I AM APPEALING TO THE MEMBER THAT WROTE ME ABOUT ORIGINAL VICTORIA'S WITH THE REVEALS PAINTED LOWER BODY COLOR. PLEASE CONTACT ME ABOUT THIS. I AM SORRY I LOST YOUR ORIGINAL LETTER BUT I WANT TO FOLLOW UP ON THIS TO SEE THAT

THE JUDGING STANDARDS ARE CORRECT. WE NEED PROOF OF THIS AND IF ANY OTHER MEMBERS HAVE PROOF OF THIS, PLEASE LET ME KNOW SO THAT WE CAN GET SOMETHING DONE ON THIS. ALSO, DO WE HAVE ANY VOLUNTEERS THAT COULD TAKE A SECTION OF THE JUDGING STANDARDS SUCH AS UPHOLSTERY, PAINT ETC. AND EACH ONE DO A PARTICULAR SECTION AND LIST THE DIFFERENCES IN THE VICTORIA. WE CAN GET THIS DONE IN A VICTORIA SECTION. ANYONE INTERESTED, LET ME KNOW.

JOHN BRUTCHER TOLD ME THAT HE HAS SEEN AN ORIGINAL VICTORIA THAT HAS THE LOWER SKIRT PAINTED MAROON LIKE THE BODY. HE IS TRYING TO GET PHOTOS AND SOME PEOPLE TO VERIFY THIS SO WE CAN PRESENT IT TO THE JUDGING STANDARDS COMMITTEE. I'LL KEEP YOU ADVISED.

ITEMS FOR SALE

ALL ORIGINAL VICTORIA, $18,000. IT WAS AT THE 1990 SAN DIEGO NATIONAL CONVENTION. IT IS A FEBRUARY 1931 VICTORIA, CHICLE DRAB LOWER AND COPRA -UPPER. THIS IS A STRAIGHT STEELBACK. IF INTERESTED CONTACT RUDY PEREZ, MEETS EARLY AUTO, 29885 2ND ST., UNIT D, LAKE ELSENOR, CA. 95330, PHONE (714) 674-5171.



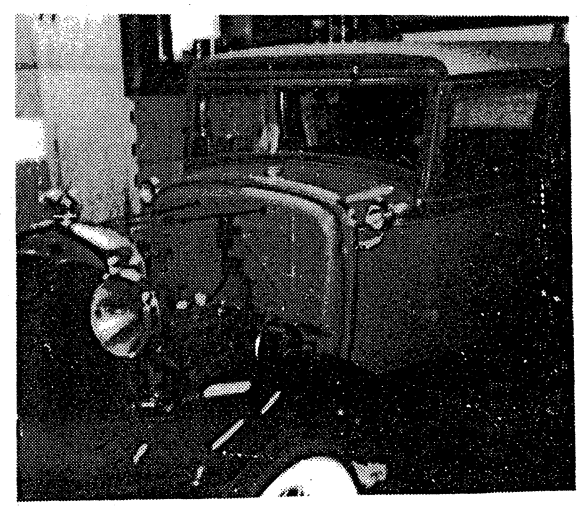
WANTED - WANTED

MEMBER, GEORGE GOODRIDGE, 21 CEDAR RIDGE DR., FARMINGTON, CT. 06032, (203) 677-4861, NEEDS A VICTORIA MIRROR BRACKET FOR HIS LEATHERBACK. IF YOU HAVE ONE FOR SALE, PLEASE CONTACT HIM.

I HAVE LOCATED TWO WINDOW CRANK HANDLES, BUTLER FINISH READY TO INSTALL. IF INTERESTED, LET ME KNOW. I DO NOT HAVE A PRICE BUT I WILL IN ABOUT A WEEK. SHOULD BE REASONABLE.

MRS. KAY LEE HAS BEEN DOING THE LABELS FOR THE NEWSLETTER THIS PAST YEAR. SHE DOES IT FREE FOR THE VICTORIA ASSOCIATION. ON BEHALF OF THE ENTIRE MEMBERSHIP, I WANT TO THANK KAY FOR THIS HELPFUL SERVICE. WE SURELY DO APPRECIATE IT AS WELL AS HER THOUGHTFULNESS.

UNTIL JANUARY,



TWO NICE PHOTOS OF LYLE DE HUES VERY NICE VICTORIA. IS IT READY TO DRIVE LYLE?

OIL & LUBRICATION

–AN ANSWER TO THE "OIL QUESTION"–

by Bob Rentz, Albuquerque, NM

Let's look at some of the history and development of oil. Man's first recorded knowledge of petroleum can be traced to 330 B.C. when Alexander the Great marched into the Soviet Union. There they found pools of a black substance bubbling from fissures in the ground which burned readily when torches set them aflame. It wasn't until 1857 that the first oil well was drilled in Titusville, Pennsylvania and this is considered the true beginning of modern development. Ironically this coincides very closely with the development of the automobile. The first practical gas engine was built in France in 1860 using illumination gas for fuel. The granddaddy of the four cycle engine was built by N. A. Otto in Deutz, Germany in 1878.

The petroleum pumped–as from the underground reservoirs–must be highly refined to separate it into thousands of different compounds, or constituents. Refining is a heating process. As the temperature increases, the more volatile parts evaporate. These vapors flow to cooling chambers where condensation forms gasoline and fuels. The less volatile parts form engine oil and other heavier products.

The importance of oil might best be seen in its relationship to failure as compared to the other two liquids used in an engine. Most of us have run out of gas, and the engine stops. Also many of us have run low or out of water with the probable same result. However, running too low on oil can mean some serious damage to the engine. A poor lubricant can destroy rubbing surfaces in seconds.

FUNCTIONS OF OIL

It is nearly fifty years since the Model A was introduced and at that time there were four basic lubrication factors which were to be considered in analyzing the lubricating requirements of an engine:

1. Operating temperatures
2. Method of oil distribution
3. Piston ring seal
4. Carbon sensitiveness

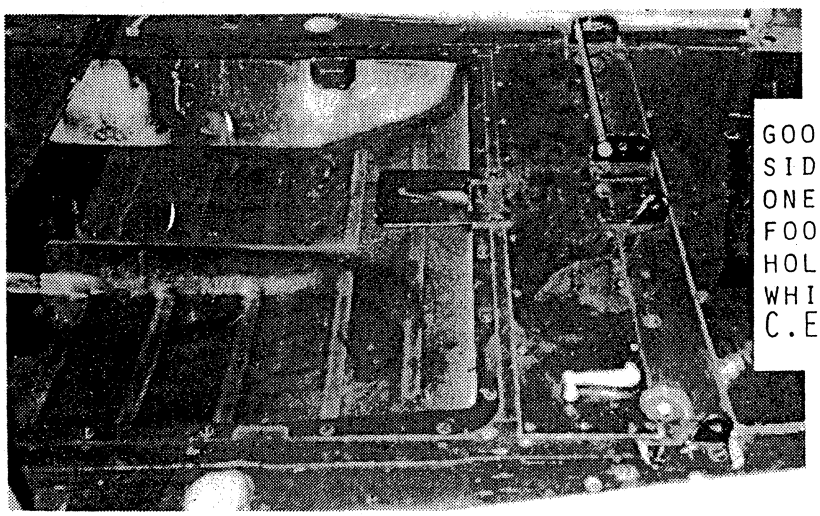
make it a lubricant. That is, it can adhere to a metal surface, regardless of surface condition, by molecular attraction. This attraction, one molecule thick, is absorbed so that it can be considered chemically bonded and removal may be accomplished only by machining or grinding. This absorbed film cannot be squeezed out under highly loaded conditions, or conditions of extreme pressure (EP). Since it is chemically bonded to the steel, it provides the ultimate protection. Compounds that do not react chemically and create the absorbed film are considered contaminants and then clean oil behaves like dirty oil in their presence. The result is an increase in molecular temperature due to a lack of enough good lubricant to cool the surfaces and carry away the debris.

COMPOUNDING OIL

Depending on the requirements for a specific oil, the manufacturing process consists of combining differing mixtures of four ingredients, called neutral stock, bright stock, polymer stock and a highly specific additive package. As you read on, keep one eye on these additives because they may very well be the most important part of the oil.

VISCOSITY

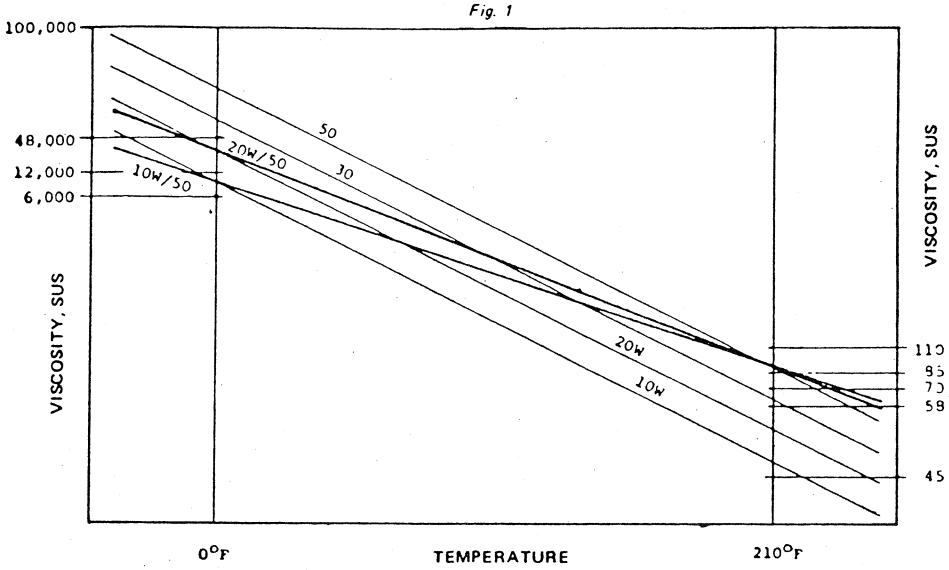
The combination of bright stock, neutral stock and polymer stock determines the viscosity of the oil. Viscosity is sometimes expressed as the number of seconds required for a measured volume of oil to flow thru a specified orifice at a standard temperature. The most common method of making this measurement is the number of seconds it takes an oil sample to flow a given distance. This time is called Saybolt Universal Seconds (SUS). Bright stock is a highly refined paraffin oil of about 150 viscosity, while neutral stock is about 5 weight viscosity. By varying the proportions of the two, the desired weight oil can be produced. Multi-viscosity oils are produced with the addition of polymer stock. A polymerized oil is not so thick at lower temperatures, but retains its viscosity at higher



GOOD PHOTO OF THE FLOOR PAN, DRIVER SIDE THREE HOLE BRACKETS AND PASSENGER ONE HOLE BRACKETS. ASLO THE REAR SEAT FOOT REST BRACKET. THE ROD IN THE THREE HOLE BRACKET LACKS THE CORRECT KNOB WHICH IS THE WINDSHIELD SLIDE KNOB. C.E.BAUMAN

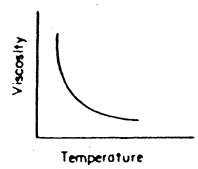
temperatures. Figure 1 shows the relationship between viscosity and temperature. Notice how the multiviscosity oils become more temperature stable as the viscosity range increases.

Fig. 1



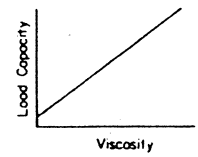
supported on the oil film and any friction is due to the viscosity of the oil, not rubbing friction between metal surfaces. This says the oil must have sufficient viscosity and the oil temperature must be controlled so it doesn't thin out and lose too much viscosity.

Fig. 3



Temperature

Increasing temperature lowers oil viscosity. A high-viscosity oil can support a heavy load, especially at low temperatures. High-viscosity oils also have more internal friction.



Load Capacity

Viscosity of an oil must be matched to the application. The oil must have enough viscosity to handle the load, yet increasing the viscosity causes an increase in fluid friction, which heats the oil and lowers the viscosity.

One of the additive ingredients used with base oils which controls viscosity is called a viscosity index improver. This tends to make the oil more resistant to changes in viscosity, more on the higher end of the temperature scale with little effect at low operating temperatures.

The Society of Automotive Engineers (SAE) has established a viscosity range classification system for crankcase lubricating oils. All motor oils are classified according to this system, which is used worldwide. Each oil is assigned an SAE grade, or grades, signifying the range into which it falls. The motor oil grades in common use today are SAE 5W, 10W, 20W, 20, 30, 40, and 50. Thick slow flowing oils have high numbers while thin, free flowing oils have low numbers. The W (winter) denotes oils that are suitable for use at ambient (atmospheric) temperatures below 32 °F (0 °C). To ensure that W oils do, in fact, have proper flow characteristics at low temperatures, their viscosities are defined at 0 °F (−18 °). Those without the W designation are measured for viscosity at 210 °F (99 °C) to ensure adequate viscosity at normal engine operating temperatures. With the use of selective base stocks along with the viscosity index improver, mixed in the appropriate proportions, multiviscosity oils are developed. These will vary from 5W-20 to 10W-50 with other combinations between. Not all companies make every combination. Depending upon your selection, maximum engine protection can be attained with the use of these oils which are light enough for easy starting at low temperatures and heavy enough for satisfactory performance at higher operating temperatures. See figure 2.

Fig. 2 **Guide to SAE Grades of Motor Oil**

Lowest Atmospheric Temperature Expected	Single-Grade Oils	Multi-Grade Oils
32°F(0°C)	20, 20W, 30	10W-30, 10W-40, 10W-50, 20W-40, 20W-50
0°F(—18°C)	10W	10W-30, 10W-40
Below 0°F (—18°C)	5W*	5W-20*, 5W-30, 5W-40

*SAE 5W and 5W-20 grade oils are not recommended for sustained high-speed driving.

When all conditions are right there will be no metal-to-metal contact between the journal and bearing. The entire load is

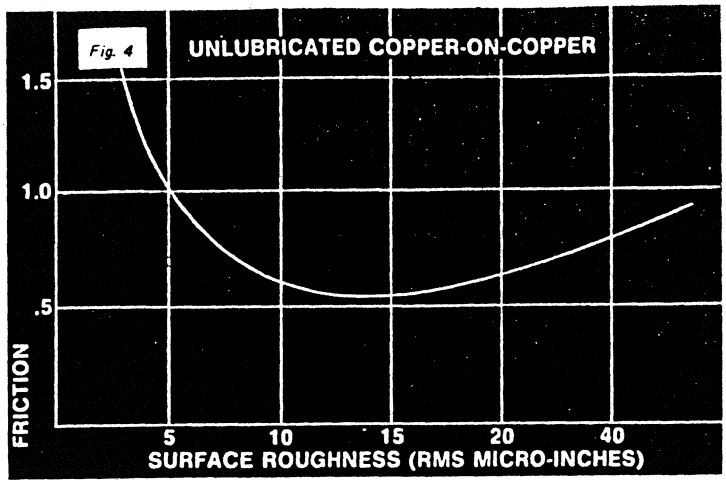
TEMPERATURE

In the selection and application of lubricating oils careful attention must be given to the temperature in the critical operating area and its effect on oil properties. Many oil selections are found to result in excessive operating temperatures because of a viscosity that is initially too high, which raises the friction losses. During cold weather, for example, using oil that is too thick reduces cranking speed and imposes a drag on the moving parts in an engine, which increases friction and wear. Never rev an engine under these conditions. As a general rule, the lightest oil which can carry the maximum load should be used. These relationships can be seen in figure 3.

FRICTION

Friction is the resistance to motion between two solids in contact with each other. The amount of force required to overcome this resistance to motion depends on the load, surface finish or roughness, and lubrication, if any. Friction can be divided into three classes: dry, greasy, and viscous. Dry friction is caused by surface irregularities that catch against each other under relative motion. These irregularities catch on each other and begin tearing off material particles. The particles increase in size as the rubbing, scratching, and gouging continues, thereby increasing the surface temperature, possibly high enough for potential welding. Scoring is prevented by adequate lubrication flow, by having the proper material of the proper hardness and proper surface finish. This means the surface should not be too smooth or too rough, usually about 10-2-RMS (root mean squares microinches). Figure 4 shows the increase in friction when the surfaces are too rough or too smooth. Steel and other metals exhibit test results similar to copper.

Greasy friction is the friction between two solids that have been coated with a very thin film of oil. The nature of greasy friction is not very well understood. It is assumed that the film of oil fills the surface irregularities of the solids so that the two moving surfaces are almost perfectly smooth. When greasy friction exists, the resistance to motion between surfaces is much



less than with dry friction. In automotive engines, greasy friction may exist in bearings and between piston rings and cylinder walls when the engine is first started. At this time, most of the lubricating oil may have drained from the surfaces so that only a thin film remains. After the engine has been started and the lubrication system has gone to work the surfaces have only greasy friction. With greasy friction, resistance to motion is less than with dry friction, but wear still takes place at a relatively fast rate when compared with wear during full lubrication.

Viscous friction is the friction, or resistance to relative motion, between adjacent layers of liquid. As applied to machines, viscous friction occurs during relative motion between two lubricated surfaces. With a layer of oil adhering to the two surfaces, the two objects in relative motion are held apart by a film, or layers, of oil. Thus, there is friction only between moving layers of oil, rather than between the actual objects. Viscous friction is much less than dry friction. The primary mechanism of lubrication is one of reducing the area of contact and of healing the wear of this contact as it occurs. Some materials are much more difficult to lubricate than others. But there is a rule in lubrication that friction is reduced 90% when oiled. In other words, the friction becomes 10% of what it was. There are some unusually good oils that may drop the friction down as low as 5%, but they are rare.

CHANGING OIL

If there is a classic question about oil, it probably is, does oil wear out? The most common answer, it seems, is that is does not. The appropriate answer probably depends on what your definition of wearing out is. Certainly it does retain its oily characteristics, but if you are using a good oil, it does wear out as its additives are used up in performing their function and as oxidation reduces its effectiveness. It must be changed regularly to assure maximum protection by the additives.

The primary reason for changing oil is to eliminate harmful deposits which have formed in the engine. These consist of moisture, acids, sludge, and varnish, the formation of which depend upon the type of driving and quality of oil used: Stop and go driving usually doesn't allow the engine to reach efficient operating temperature and the rate of oil contamination is high. Low temperature operation resulting from prolonged idling, short runs, and light load conditions results in forming acids, sludge and varnish, as well as fuel dilution and water accumulation. This causes engine wear which continues after the engine reaches normal operating temperature.

Prolonged high speed driving in hot weather virtually eliminates the possibility of fuel dilution and water accumulation. It also reduces the formation of soot caused by rich air-fuel mixtures at low temperatures. Engine operation at extremely high temperatures promotes oxidation resulting in varnish deposit formation and oil thickening. Additives, or chemical inhibitors, added to modern motor oil can prevent most of these problems if it is replaced at the proper time.

OIL CLASSIFICATIONS

The use of straight mineral oils began in 1877 and it wasn't until 1935 when oxidation inhibitors and metallic detergents were added. In 1947 the APE developed a system establishing three types of engine oils: regular, premium, and heavy duty. In 1952 the API Engine Service Classification System was developed changing the three previous designations to ML, MM, and MS, respectively. The letter M designated gasoline engine classification and L was light, M medium, and S severe service. Then in 1970 the latest classification system was developed by the API, The American Society for Testing Materials (ASTM) and the SAE. There are now five classes of service summarized in figure 5.

In studying this you can see the progressive improvement of oils from SA to SE. These designations are usually found on the top of the oil can. It is very probable that a new classification SF will be available in the near future. Other designation letters, such as CC or CD, are not of concern for use in automobile engines. They are diesel engine classifications.

Modern oils are as carefully designed as the engines they are to protect. Solutions to the different and raised problems of engines have come through the development of chemical compounds (additives) blended into selected, high quality base oils. Laboratory and field tests which have been conducted in all weather conditions, demonstrate the necessity of using chemical additives in motor oil. They also show the signification improvement in performance achieved by using fortified oils. It has taken a great deal of time, money and research to develop these additives and to determine the correct additive balance for today's oils. These chemical additives have different functions, are of different types and vary from one manufacturer to another. It should be clear by now that of all the oil stocks and available additives from the various manufacturers, that many of them are not compatible when mixed together. Mixing different oils, then, can result in a poor lubricant. It is possible that a mixture of only a few drops of different oils can produce a bad lubricant.

ADDITIVES

Pour Point Depressants

Probably the most critical time for an engine is the first few minutes after start-up. This is when it is most important to have the lowest viscosity oil consistent with ambient temperatures. If the viscosity is too high, the oil has a tendency to congeal and resist circulation until the engine temperature has increased enough to thin the oil. Without an adequate oil supply, bearings and other critical parts would fail almost immediately. Almost 100% of engine wear takes place at start-up. This additive lowers the temperature at which oil will pour or flow. With respect to engine bearing wear, the crankshaft lies on the lower part of the bearings. At start-up, a wedge of oil forms just ahead of the crankshaft which lifts the crankshaft off the bearings at a rate depending upon the oil viscosity. The lower the viscosity, the faster the oil wedges between the parts to form a protective film of oil. This can be seen in figure 6.

Fig. 5

CASTROL MOTOR OIL RECOMMENDATIONS

For SAE/API/ASTM Engine Oil Performance and Engine Service Classifications

SAE Letter Designation	Former API Symbol	API Engine Service Description	ASTM Engine Oil Description	Auto Mfrs and MIL Specifications
SE	MS (1972)	Service typical of gasoline engines in 1972 and certain 1971 cars and trucks. SE oils provide greater protection against oxidation, high temperature deposits, rust, and corrosion than SD or SC oils. May be used where SD or SC oils recommended.	Oils meeting auto manufacturers 1972 requirements. Primarily for passenger cars, oils provide high temperature anti-oxidation, low temperature anti-sludge, and anti-rust performance.	Ford ESE-M2C101-C GM 6136-M Chrysler Corp. American Motors MIL-L-46152*
SD	MS (1968)	Service typical of gasoline engines in 1968-1970 cars and some trucks, also certain 1971 or later models as specified. SD oils provide greater protection against high and low temperature deposits, wear, rust, and corrosion than SC oils. May be used where SC oils recommended.	Oils meeting 1968-1971 auto manufacturers requirements. Primarily for passenger cars, oils provide low temperature anti-sludge and anti-rust performance.	Ford ESE-M2C101-B GM 6041-M
SC	MS (1964)	Service typical of gasoline engines in 1964-1967 cars and trucks. SC oils provide control of high and low temperature deposits, wear, rust, and corrosion.	Oils meeting 1964-1967 auto manufacturers requirements. Primarily for passenger cars, oils provide low temperature anti-sludge and anti-rust performance.	Ford ESE-M2C101 GM 4745-M MIL-L-2104C**
SB	MM	Service typical of gasoline engines operated under such mild conditions that only minimum protection is desired. SB oils used since 1930's, provide only anti-scuff capability, and resistance to oil oxidation and bearing corrosion.	SB oils provide some anti-oxidant and anti-scuff capabilities.	
SA	ML	Service typical of gasoline engines operated under such mild conditions that protection of compounded oils is not required. No performance requirements.	SA oils are without additives, but may contain pour and/or foam depressants.	

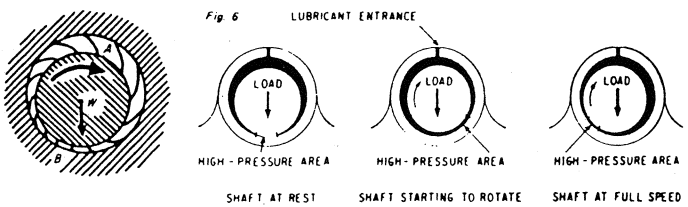


Fig. 6

Shaft rotation causes layers of clinging oil to be dragged around with it so that oil moves from the wide space A to the narrow space B and thus supports the shaft weight W on an oil film. The high-pressure area, or area of maximum loading, varies with shaft speed. The clearance between the shaft and journal is exaggerated.

Rust and Corrosion Inhibitors

Water gets into the crankcase through the crankcase ventilating system when the engine is not running. After starting, but when the engine is cold, moisture in the air drawn through the crankcase by the ventilating system is apt to condense on the cold engine parts and thus stay in the crankcase. Water also forms during the combustion process by the uniting of the hydrogen in the fuel with oxygen in the air at the rate of a little more than one gallon of water for every gallon of gas used. Most of this water is exhausted from the engine as vapor in the exhaust gases. However, some of this water condenses on the cold engine parts, then works past the rings into the crankcase where it is churned up with the oil to form sludge. If you drive the car long enough this water will evaporate. The distance required for this varies from car to car and also with the weather. During winter months the engine is colder and about fourteen miles is required, but during the summer it takes only three to six miles on the average. Studies of car operation in the U.S. show about 60% of car trips in the summer and about 80% in the winter too short. Sludge formation can lead to engine failure by blocking oil circulation.

At high temperature acids may form in the oil which can cause corrosion of engine parts, especially bearings. Inhibitors are added to oil to prevent the formation of these products. The chemicals in these inhibitors work by completely encircling the individual water and acid molecules, thus preventing the water and acids from contact with metal. This is one of the additives that provides a big advantage for SE class oils over SA and SB, or non-detergent oils.

Foam Inhibitors

The churning action in the engine crankcase also tends to cause the oil to foam. The foaming oil is not able to provide normal lubrication, cannot support bearing loads and does not provide good cooling. Because it contains air, oil foam is compressible, which impairs its ability to prevent wear. High quality oils contain foam inhibitors that weaken the tiny air

bubbles and cause them to collapse almost as soon as they are formed in oil.

Extreme Pressure Additives

The automobile engine subjects lubricating oil to very high pressures, not only in the bearings but also in the valve train. During moments of extreme pressure, the oil may be squeezed out from between the metal surfaces. Under this pressure, with normal lubrication lacking, bearing temperatures increase. Certain chemical additives have the ability to establish tough films on engine parts and to reduce friction, heat generation and metal-to-metal contact. These chemicals are known as friction modifiers, friction reducing agents, or anti-wear compounds. They react chemically with metal adhesive surface coatings that serve as boundary lubricants. The compounds that are formed by extreme pressure additives prevent the welding together of metal surfaces and the destruction of smooth surfaces. SA and SB oils do not have this ability to protect bearing surfaces.

Detergent/Dispersant Additives

During combustion, carbon is deposited on rings, valves and other parts. Other dirt particles enter the engine through the carburetor despite filters, but particularly in the absence of them. As the engine wears, metallic particles are also released into the oil. These deposits build up on engine parts and reduce performance as well as cause additional wear. The build-up of contaminants depends on their reaction with oxygen from the air. The detergent/dispersant works by interrupting this oxidation process. Once sludge and varnish deposits have formed in an engine they are seldom removed except by the use of solvents during mechanical overhaul. The purpose of detergent/dispersant additives is not so much to clean up already existing deposits, but to prevent their formation. Oil manufacturers now place more emphasis on the dispersant qualities of the additive than on its detergent qualities. If the contaminants can be kept suspended in the oil as small particles, they will not deposit on engine parts, so there is less need for detergent action.

A number of misconceptions arose after the introduction of detergent/dispersant oil:

1. Rapidly darkened additive oils were viewed with alarm. Darkening seen after an oil change is normal with today's high quality oil, indicating that the additive properties are keeping contaminants in suspension.
2. It was feared that the ability of the new oils to disperse combustion and oxidation products would lead to the dispersion and suspension of abrasive materials, causing more wear than non-detergent oils. This is not true. It has been shown that the additive oils markedly decrease corrosive wear. Abrasive material is removed by the oil filter, if used. Corrosive substances are so fine that they are held in suspension until the additive is exhausted.
3. Another common misconception is that high detergent oils rapidly dislodge sludge deposits in dirty engines and ruin them by clogging oil filters and lubrication systems. This fear has been proved groundless by fleet owners, by the military, and by hundreds of tests performed by the oil industry.

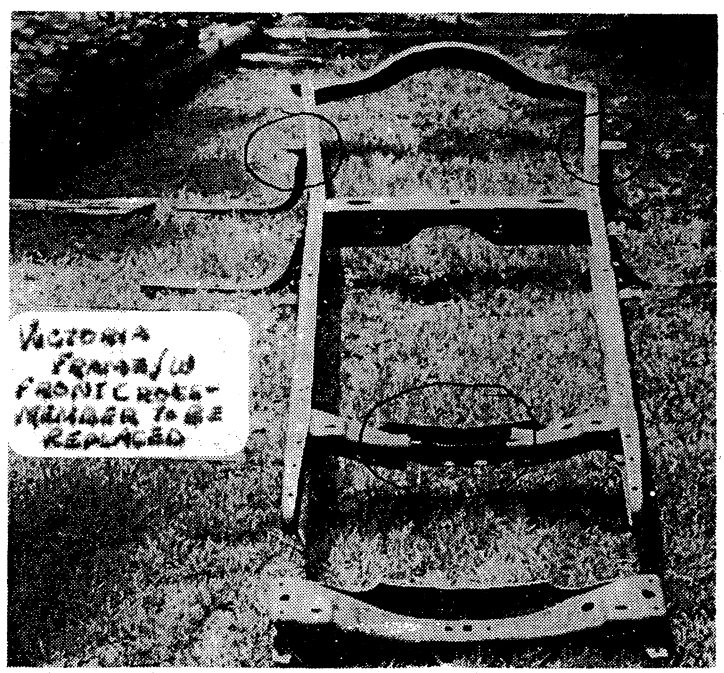
Oxygen and Bearing Corrosion Inhibitors

When oil is heated to fairly high temperatures and then agitated so that considerable air is mixed with it, the oxygen in the air combines with the oil and oxidizes it. A slight amount of oxidation will do no particular harm, but if excessive, serious troubles arise. As oil oxidizes, it forms various harmful substances. Some of the products of oil oxidation coat engine parts with extremely sticky, tar like material. This material may clog oil channels and tend to restrict the action of piston rings and valves. It may also produce corrosive materials that will erode the bearings and other surfaces which can cause bearing failure and damage other parts. The rate of oxidation remains relatively constant up to 150°. Thereafter, for every 10° rise in oil temperature, the rate of oxidation doubles. The rate at 170° is twice that at 160°. At 230° it more than doubles, it begins to triple. The best advice here is to cool it. Oxidation inhibitors slow down the high temperature oil deterioration process and bearing corrosion inhibitors form a protective coating on sensitive bearing metals.

All additives are used up doing their job. The only feasible way to maintain the proper level of additives in motor oil is to drain and refill the crankcase regularly with new oil. The most important thing to understand about oil additives is not their chemical makeup or their scientific names, but that they are only effective for a certain period of time. These SE class oils, whether single or multi-viscosity must pass five sequence tests which qualify them for reliability up to 6000 miles, or 6 months, depending on the type of driving conditions.

Solutions to the difficult and varied problems of today's engines have come through the development of these chemical compounds blended into selected, high quality base oils. A close study of the history of this development shows the progressive improvement of oils from the SA straight mineral oils, to the SB, so called non-detergent oils, on to the present fully compounded SE class oils. Since a detergent is only one of the chemical compounds used since 1935 in the SC and SD classes and particularly since the development of the sequence tests in 1958, a more descriptive differentiation would be compounded versus non-compounded oils. This, then, would recommend the inclusion of all the compounds designed for more complete engine protection than only a detergent can provide.

(To be continued . . . next issue.)



VICTORIA FRAME SHOWING ANGLE BRACKETS AND FRONT CROSS MEMBER TO BE REPLACED. JOHN & JAMES ICENHOWER

1931 MODEL A FORD
VICTORIA LEATHERBACK

While hunting for Model A chassis parts at the Amhearst N.H. flea market in October of 1984 I saw it! Perched atop a trailer along the back of the flea market, up against the trees. It was a ... a ... a ... a ... what was it anyway?

I knew of course it was a Model A Ford but I hadn't seen a Victoria before. Judging by the price written across the windshield I figured it was in better condition than my eyes were telling me it was or... it was a relatively desireable body style.

There was no room for negotiation. The asking price was the bottom line. The only decision that I needed to make was where I was going to get the money and how to break the news to my wife!!!!! After a long week of agonizing over the questions, I purchased the car in the fall of 1984 and with a friend's help (and his car trailer) brought the car home.

Work started immediately to complete a mechanical rebuilding of the motor, drive train, brakes and electrical system. Bud Hicks of Custom Automotive was very helpful and some of his "Used-Old-Stock" as well as new parts helped me finish by the spring of 1985. With repair plates borrowed from the same good friend who helped me all along the way, we took our maiden voyage without incident. We used the car as much as possible that year. A parade in Hanson, the 4TH of July parade in Squantum MA., a tour to the Codman House, a car show at the Endicott Estate all topped off with participation in the New England Model A Meet in September.

The car was disassembled in the fall of 1985 for a complete restoration. Work proceeded at a fast pace. It's amazing how fast a Model A comes apart and how much space it occupies! Work was going so well (at first) that I renewed the Massachusetts automobile registration in January 1986. What a dreamer I was. **FOUR YEARS** later the car was together for a parade in Hanson.

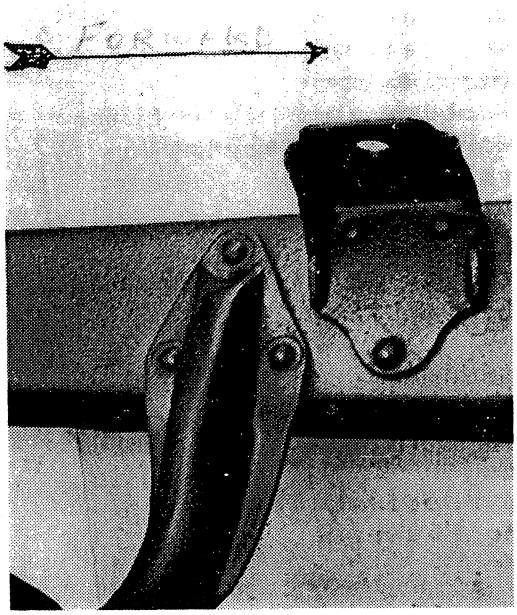
It was a long four years and while I'm satisfied with the finished product I'm not that anxious to start another one just yet. I'll wait until my 3 and 8 year old boys can lend a hand!

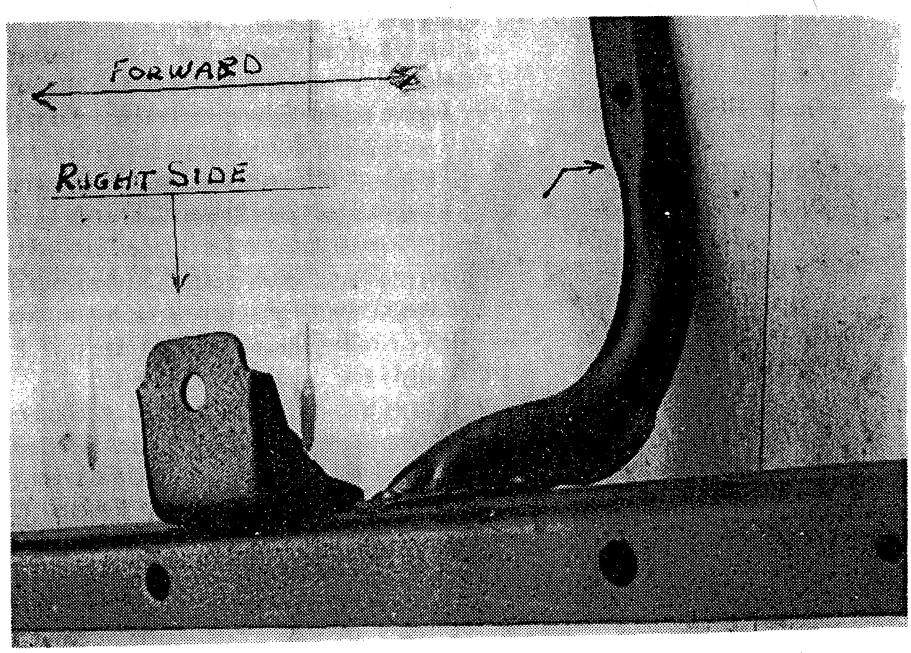
During that long four year period I gained a great number of memories. I couldn't go out to the garage without my two year old son Nathan crying out MOD-DEE-A ... MOD-DEE-A.... while holding onto the pant leg of my coveralls. He helped sand the frame, all decked out in dust mask, goggles, gloves and a sanding block. He was there to help Dad pull out all the tacks from the interior and to put tooth picks dipped in Elmers glue in the top wood tack holes. He even collected the empty nut shells from the seat backs left there by hungry squirrels.

My second son Andrew, who is now three, was only a month old when he made his first trip to LeBaron Bonney to help dad and older brother Nathan pick up the interior and top kits for the Model A Victoria. He was not easily impressed and slept through most of this memorable occasion.

The boys love the Model A and want to go with dad all the time. Up until last year the 8 year old wanted a Model A when he grew up but he now wants a HOT ROD. I guess I have taken him to too many Hot Rod Club Cruise nights! The little guy still thinks like his dad and can't wait to get behind the wheel of the Model A Ford and GO.....!

THREE PHOTOS SHOWING VARIOUS VIEWS OF THE VICTORIA ANGLE BRACKET. THIS SHOULD BE ON ALL VICTORIA FRAMES.
JOHN & JAMES ICENHOWER





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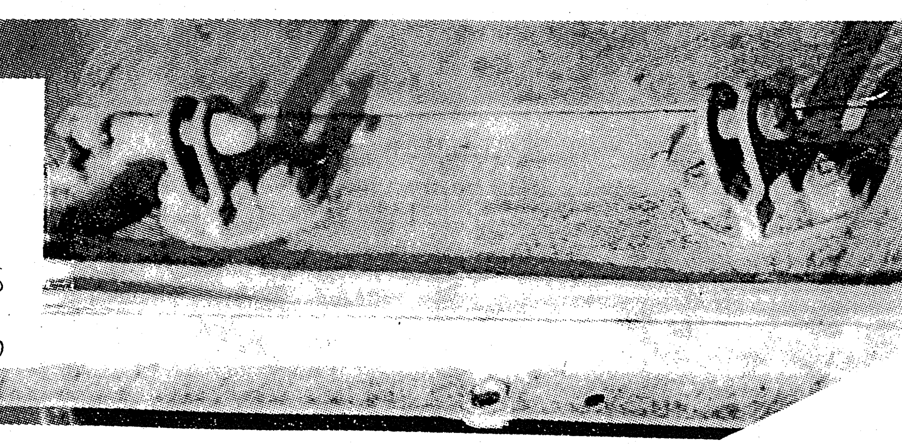
International
Model A Ford Victoria Association
68 WINDJAMMER • FRISCO TEXAS 75034



THE UPPER PHOTO SHOWS THE PASSENGER SEAT THAT GOES WITH THE SLIDING DRIVERS SEAT. NOTICE THE DIFFERENT BRACKETS FROM THE EARLY SEAT. THE LOWER PHOTO SHOWS THE FLOOR BRACKETS FOR THE ABOVE SEAT. BILLY McDONALD