GARGOYLE

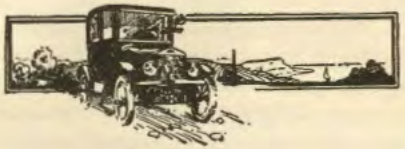
Mobiloil "E"

for FORDS

JAN 8 1923

Your Ford

HOW TO LUBRICATE IT CORRECTLY



YOUR FORD

How to Lubricate It Correctly

Why not settle once and for all this question of the correct oil for your Ford?

Correct Lubrication is the most important single factor in securing smooth, efficient and economical operation of your Ford.

There are two lubrication mistakes that Ford owners frequently make. One is to use an oil of poor quality. The other is to use an oil of too heavy a body.

The Ford Manual is definite on these points. In answer to the question,

"What kind of Oil should be used?" it says (Page 45, Answer 100):

> "We recommend only light high-grade gas engine oil for use in the Model T motor. A light grade of oil is preferred as it will naturally reach the bearings with greater ease and consequently less heat will develop on account of friction. The oil should, however, have sufficient body so that the pressure between the two bearing surfaces will not force the oil out and allow the metal to come in actual contact. Heavy and inferior oils have a tendency to carbonize quickly, also 'gum up' the piston rings, valve stems and bearings. In cold weather a light grade of oil having a low cold test is absolutely essential for the proper lubrication of the car. Graphite should not be used as a lubricant in the engine or the transmission as it will have a tendency to short-circuit the magneto."

You will note that this recommendation lays special emphasis on the use of a light high-grade oil. Oils can be both too light as well as too heavy. The grades "light," "medium" or "heavy" are not safe guides in determining the correct oil for your Ford.

Let us show you exactly why your Ford engine operates best on a high-grade oil of the correct body such as Gargoyle Mobiloil "E."

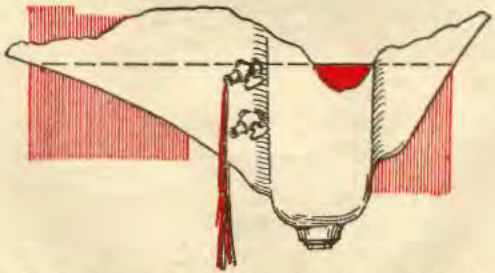
Point 1—Insuring the Correct Oil Level

First, you pour in the oil. Your Ford Manual tells you to open the upper pet cock on the oil reservoir, under the car, and to pour oil into the breather pipe until it runs from this pet cock.

Suppose you pour in an oil heavier than Mobiloil "E." It flows down the breather pipe, and then along the bottom of the crank-case, filling the splash troughs as it goes. Then it flows down into the oil reservoir. The oil level rises slowly, first above the lower pet cock, and then to the upper.

Here is the danger. It is easy to supply too much oil unless the oil flows out freely when the upper pet cock level is reached. Heavy-bodied oils flow sluggishly. Consequently there is a danger of overfilling the reservoir.

When you pour in Gargoyle Mobiloil "E" it runs out at once when the upper pet cock level is reached. The correct level is obtained with certainty.



Ford oil reservoir, showing pet cocks and oil level

Point 2—Carbon from Too Much or Too Heavy Oil

But possibly you do not think that this over-supply of oil makes any difference. Well, let us see what happens.

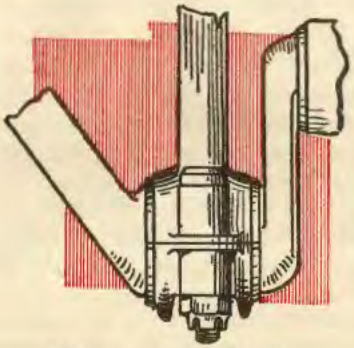
There is no splash trough for the rear cylinder. It is lubricated by the flywheel splash. (The third cylinder also receives some of this splash.) The more oil in the reservoir, the more will be splashed to the rear cylinders.

The tendency toward carbon formation is greater because of this over-supply of oil, especially if the oil is of too heavy a body. Cylinders 1, 2 and 3 are lubricated by the dipping of the connecting rods into the splash troughs. The heavier the body of the oil, the greater the tendency toward carbon formation.

The exceptionally clean-burning character of Gargoyle Mobiloil "E" minimizes carbon formation in the combustion chambers.

From actual photograph, showing carbon formation on head of piston

Point 3—Reaching the Friction Surfaces



Ford connecting rod bearing

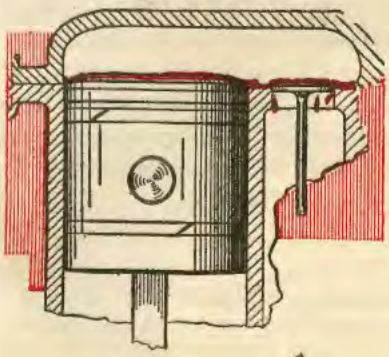
Next let us look at the connecting rods and splash troughs, that lubricate Cylinders 1, 2 and 3. Remember that the connecting rods have neither oil holes, oil grooves nor dippers. To lubricate the friction surfaces the oil must work its way through the close clearances between the ends of the bearings and the crank cheeks, and then distribute itself over the bearing surfaces.

Gargoyle Mobiloil "E" is sufficiently fluid to reach and lubricate these surfaces with ease. An incorrect or heavier oil very often does not.

Point 4—Preventing Valve Gumming

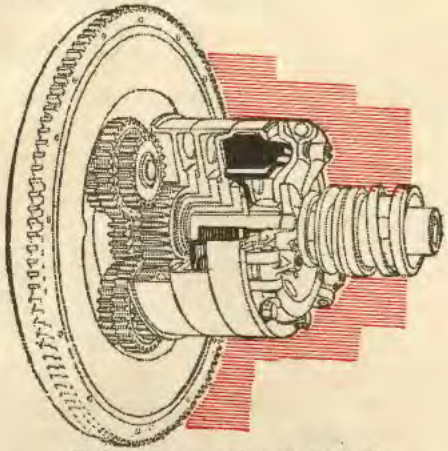
Next, let us consider the pistons. The Ford pistons over-run the top of the cylinder bore. Consequently, any oil carried up by the piston rings is forced into the valve chambers. A heavy oil does not burn up readily, but remains to gum the valves.

Gargoyle Mobiloil "E", being a clean-burning oil of the correct body, is readily consumed and expelled. It does not remain to foul the valves, seats and stems.



Diagrammatic sketch showing the effect of the piston "over-riding" the cylinder bore

Point 5—The Clutch



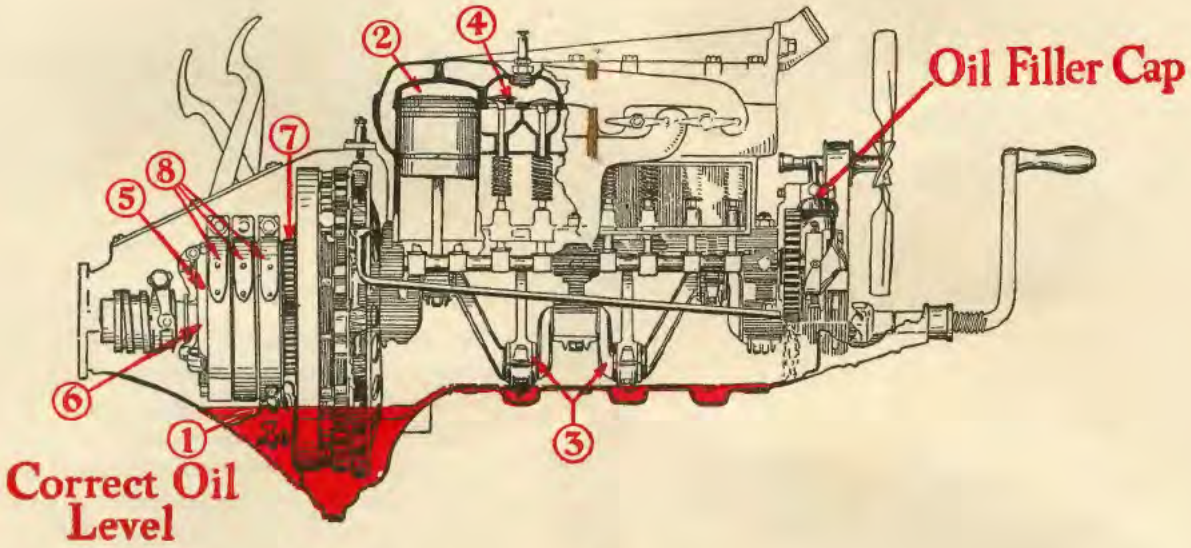
Solid black parts show Ford clutch

As to the clutch: The Ford has a multiple disc clutch running "wet." This clutch is continually in a spray of engine oil. All manufacturers of this type of clutch recommend a light oil which will give positive, quick engagement, with no slipping and an instantaneous release.

Heavier oils used in Ford engines cause a drag between the clutch plates. This causes "creeping." The car starts ahead when the engine starts, although the clutch is released.

Gargoyle Mobiloil "E" gives positive and immediate clutch engagement and disengagement. There is no "creeping."

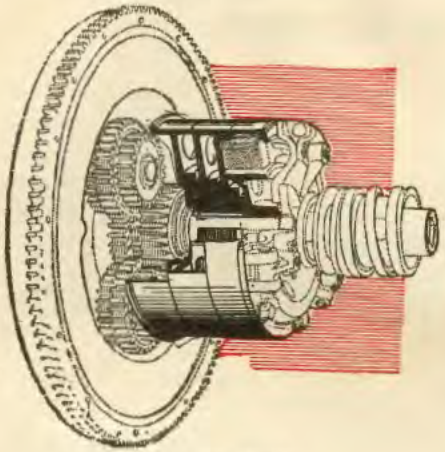
Eight Important Points in the Ford Lubricating System



1. Insuring correct oil level
2. Carbon from too much or too heavy oil
3. Reaching the Friction surfaces
4. Preventing valve gumming
5. The Clutch
6. The Transmission
7. The Gears
8. Chattering of transmission bands

For full discussion of each point, see text matter

Point 6—The Transmission



Ford transmission

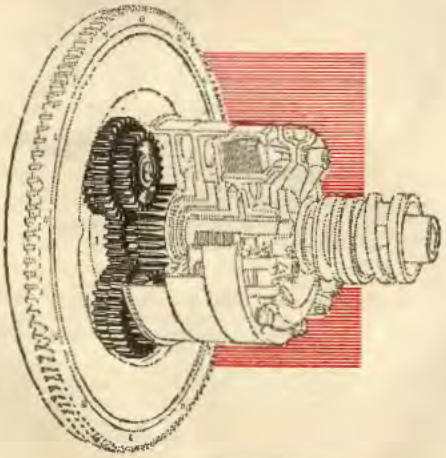
Just a word about the transmission. In the Ford you have a planetary transmission employing three close-fitting sleeves, mounted on an extension of the crank shaft. A heavy-bodied oil is not well adapted to work into and thoroughly lubricate the sleeves and bearings.

The body and character of Gargoyle Mobiloil "E" enable it to distribute thoroughly and meet the transmission lubrication need perfectly.

Point 7—The Gears

As to the transmission gears: There are three sets of triple gears mounted on close-fitting pivots. These gears are bronze bushed. The bearings fit tightly —in fact, so tightly that oil heavier than Mobiloil "E" is handicapped in working in and correctly lubricating the bushings and pins.

Gargoyle Mobiloil "E" is of such body that it freely creeps in between the close-fitting parts and thoroughly lubricates the gears and bearings.



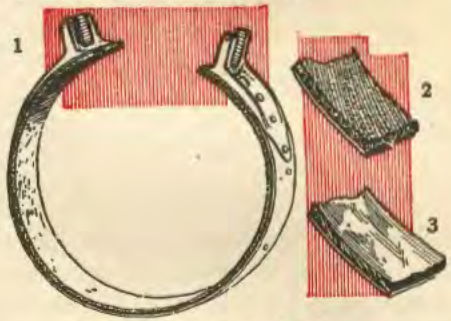
Ford transmission gears

Point 8—Chattering

Chattering of Ford transmission bands is caused by incorrect adjustment or wear, also by diluted and worn-out oil, which cannot properly lubricate the gripping surfaces.

The remedy is obvious: (1) Have the bands correctly adjusted, or (2) if worn, replace with new bands, (3) drain off the old crank-case oil at regular intervals.

The superior quality of Gargoyle Mobiloil "E" gives the greatest freedom from chattering.



1. *Ford transmission band*
2. *Appearance of lining when new*
3. *Smooth spots on worn lining*

CAUTION—There are many anti-chatter oils offered to Ford owners. These oils usually contain compounds such as animal fats, ammonia wool grease soap, etc., to overcome chattering of the transmission bands. Such oils should not be used.

Compounded oils of this character are not suited to the correct lubrication of the Ford engine. They are productive of excessive carbon formation and, in the presence of any moisture in the crank-case, produce emulsions which seriously interfere with and impair free and complete oil circulation.

To overcome transmission band chattering, follow the procedure outlined.

Point 9—Extreme Weather Conditions

On hot summer days you will sometimes see Fords running under overheated conditions, often due to faulty lubrication.

On cold winter days oil is required of a fluidity which enables it to meet low temperature conditions and permit ease in cranking the engine.

Gargoyle Mobiloil "E" has a remarkable ability both to absorb and radiate heat, and also to retain its fluidity under cold weather conditions.

★ ★ ★ ★ ★

By a careful consideration of the above factors the Vacuum Oil Company's Board of Engineers determined the need for an oil of high quality, free-flowing characteristics, and with minimum carbonizing tendencies, for the correct lubrication of the Ford engine, clutch and transmission.

To meet these exacting needs, Gargoyle Mobiloil "E" is manufactured.

The results secured by Ford owners through the use of Gargoyle Mobiloil "E" is ample proof of the correctness of this recommendation.

Put Gargoyle Mobiloil "E" in your Ford today.

Detailed Instructions for Ford Car Lubrication

Engine. Open upper level testing pet cock on right rear side of fly-wheel housing and fill reservoir with Gargoyle Mobiloil "E" through breather pipe opening on right side of timing-gear case until oil just begins to drip from pet cock.

Inspect oil level daily. Never permit oil level to fall below that of the lower pet cock.

Caution. Be sure pet cock is not stopped up. Do not over-fill. Always test oil level with engine stopped. If engine is running, pet cocks will not indicate correct level.

Periodic Draining. Every 1,000 miles remove drain plug from bottom of oil reservoir and drain off old oil. Drain immediately after stopping the engine while the oil is warm and thoroughly agitated. This will carry off most of the sediment.

Do not flush with kerosene. It is impossible to drain all the kerosene from the splash troughs and oil wells. The trapped kerosene will remain to cut the body and impair the lubricating value of the fresh oil. If flushing is deemed necessary, use a quart of fresh oil. After draining, refill

reservoir to correct level with fresh Gargoyle Mobiloil "E."

Differential. Gargoyle Mobiloil "CC," which is a straight mineral oil of semi-fluid character and of the highest quality, will correctly lubricate the differential of the Ford passenger-car. When a compounded grease is preferred, Mobilubricant, a light-colored, medium-bodied grease, is recommended.

Fill the housing through the filler opening until the level stands approximately 1½ inches below the lower side of the filler opening. Replenish supply every 1,000 miles. Every 5,000 miles drain the housing, flush with kerosene, and refill with fresh lubricant.

On the Model TT Ford (Commercial Model) the final drive gearing is of the worm type. The proper lubricant for this type of gearing is Gargoyle Mobiloil "C," which is a heavy dark fluid oil especially manufactured for the purpose.

Ford Engine Lubrication

Gargoyle Mobiloil "E"

A straw colored oil of highest quality, especially suited to the Ford engine. It possesses excellent lubricating properties and will retain its fluidity at low temperatures. Contains practically no free carbon.

Ford Differential Lubrication

Gargoyle Mobiloil "CC"

Gargoyle Mobiloil "CC" is a heavy mineral lubricant of semi-fluid character and of the highest quality which will correctly lubricate the differential of your Ford passenger car.

Mobilubricant

When a compounded grease is preferred, we recommend Mobilubricant, a light-colored, medium-bodied grease. Mobilubricant is particularly suited for pressure grease cups, differential, universal, and for packing the front wheels of your Ford car.

Gargoyle Mobiloil "E" is sold in all sized packages, from a gallon can to a barrel or steel drum (with faucet) for your home garage.

GARGOYLE

Mobiloil

Make the chart your guide

VACUUM OIL COMPANY

NEW YORK, U. S. A.

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