

Ford Service Bulletin

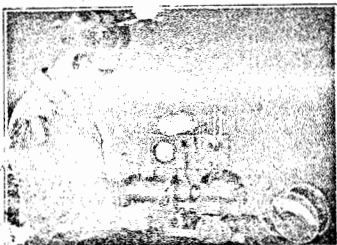
ED BY FORD MOTOR COMPANY OF CANADA, LIMITED, FORD, ONTARIO, CANADA

No. 3

AUGUST, 1925

Vol. 7

17



TESTING GENERATOR

Do You Go To The Home of The Ford?

For your Battery Service. It has come to our attention that a great number of Ford owners are under the impression that we are not equipped to give Battery Service.

We wish to advise that we have a completely equipped Battery Service Department, both in charge of experts.

The battery gives depends a great deal on the correct adjustment and performance of the electrical system.

Battery men often blame the failure of the battery in the electrical equipment of the car, and the electrical man likewise blames the battery if his end fails. We, as Ford Dealers, cannot do this. We are interested to see that everything is right.

We guarantee all batteries, delivered and serviced by us, to give satisfaction.

Generators and Starting Motors overhauled by us are also guaranteed.

Ask us to inspect your generator to make sure it is adjusted properly. No charge.

Generator Overhaul, \$3.00—Parts Extra.

Starting Motor Overhaul, \$3.00—Parts Extra.

DOMINION MOTOR Co. Ltd.

CANADA'S LARGEST Ford DEALERS

Cor. Fort and Graham, WINNIPEG, Man.

RESPONSIBLE FORD SERVICE

ARE YOU ADVERTISING YOUR FLAT RATE LABOR CHARGES



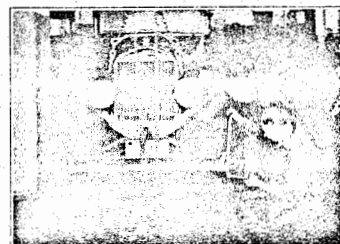
THE DOMINION MOTOR CO.

LIMITED

WINNIPEG

Is using the post cards shown herein to advantage.

We strongly suggest that you use a similar method of advertising.



FRONT AXLE OVERHAUL

For Easy Steering

Keep front wheels and steering gear lined up. An occasional front system overhaul will save your tires and insure safe driving.

Bring this card with you and we will

1. Take down front axle, spring, steering connecting rods, wheels and front radius rod, clean and inspect all parts down to the last bolt and nut.
2. Replace broken and worn parts where wear cannot be taken up, ream and re-bush spindle bodies and arms if necessary.
3. Assemble and tighten up steering arm connecting rod ball caps, pack front hubs with grease, replace wheels on axle and adjust bearings.
4. Remove all rust from spring leaves, oil and re-assemble. Re-bush front spring and perches if necessary.
5. Assemble front system to chassis; tilt front axle at correct angle, line up front wheels to proper alignment.

Labor Charge \$5.00—Parts Extra

DOMINION MOTOR Co. Ltd.

CANADA'S LARGEST Ford DEALERS

Cor. Fort and Graham, WINNIPEG, Man.

RESPONSIBLE FORD SERVICE



MOTOR DEPARTMENT

Motor and Transmission Re-manufacture

Only skilled Ford mechanics with up-to-date equipment should perform this work. Only genuine Ford parts should be used. Bring this card with you and we will:

1. Disassemble motor, clean and inspect each part, thoroughly test crank case in aligning jig, re-bush and ream main bearing caps.
2. True up and fit crank shaft, fit pistons, piston pins and rings (install oversize pistons or rings if necessary), line up connecting rods in alignment jig.
3. "Run in" crank shaft and connecting rods on burning in machine, regrind valves with special machine and refit valve seats, time valves up to piston travel.
4. Re-bush worn transmission parts, test magnets and re-charge, test magneto coil for short circuits, test crank case for leaks and re-bush if necessary.
5. Run motor on test block until broke in, test motor under own power.

Labor Charge \$30.00—Parts Extra.

DOMINION MOTOR Co. Ltd.

CANADA'S LARGEST Ford DEALERS

Cor. Fort and Graham, WINNIPEG, Man.

RESPONSIBLE FORD SERVICE



Removing transmission case—Auto cushions, protected by covers

New Transmission Bands

Hardened or worn bands cause slipping, loss of power, undue strain on motor and tires.

Bring this card with you and we will

1. Put in new GENUINE FORD transmission bands.
2. Wash and clean transmission, put on new felt or cork gaskets around crank case.
3. Tighten up exhaust pipe and magneto wire connections, tighten up all transmission bolts and nuts.
4. Test transmission bands and adjust to proper and final adjustment.

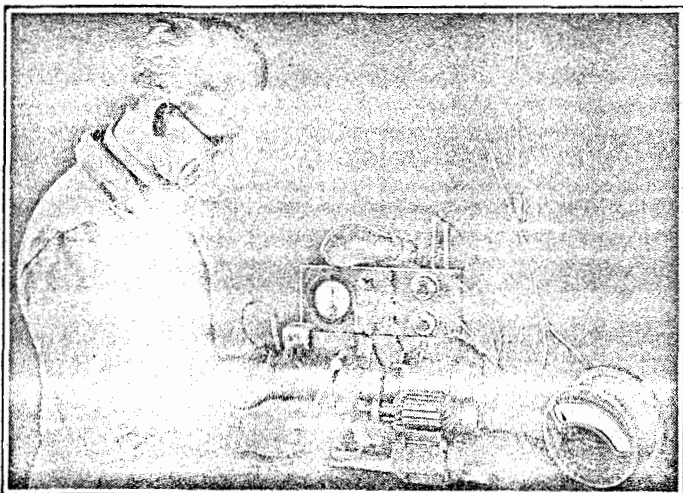
Labor Charge—Open Car, \$3.50 Closed Car, \$4.00
Oils and Bands Extra.

DOMINION MOTOR Co. Ltd.

CANADA'S LARGEST Ford DEALERS

Cor. Fort and Graham, WINNIPEG, Man.

RESPONSIBLE FORD SERVICE



TESTING GENERATOR

Fig. 38

Electrical equipment more or less necessary to the owner. When this card, he will get help but be impressed with the up-to-date methods shown for testing and making repairs. This means accuracy and speed.

Do You Go to the Home of the Ford?

For your Battery Service. It has come to our attention that a great number of Ford owners are under the impression that we are not equipped to give Battery Service.

We wish to advise that we have a completely equipped Battery and Electrical Department, both in charge of experts.

The service the battery gives depends a great deal on the correct adjustment and performance of the electrical system.

A battery man often blames the failure of the battery in the electrical equipment of the car, and the electrical man likewise blames the battery, if his end fails. We, as Ford Dealers, cannot do this.

We are interested to see that everything is right.

We guarantee all batteries, delivered and serviced by us, to give satisfaction.

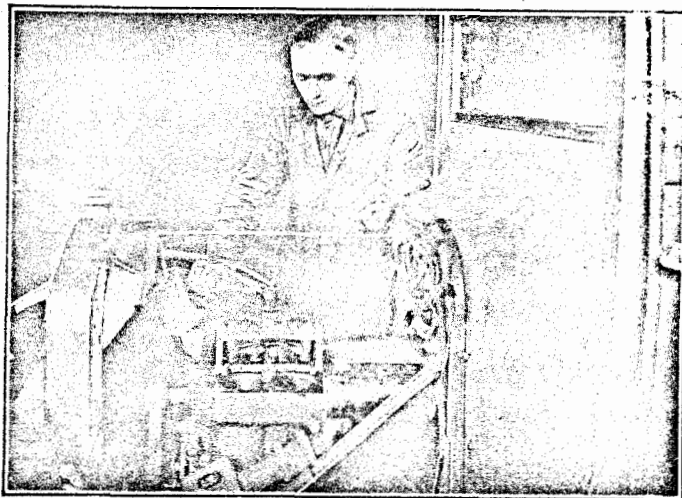
Generators and Starting Motors overhauled by us are also guaranteed.

Ask us to inspect your generator to make sure it is adjusted properly. No charge.

Generator Overhaul, \$3.00—Parts Extra.

Starting Motor Overhaul, \$3.00—Parts Extra

The valve grind operation, which is so often attempted by owners, can be performed much more satisfactorily in your Repair Shop—why not tell them about it?



GRINDING VALVES

Fig. 39

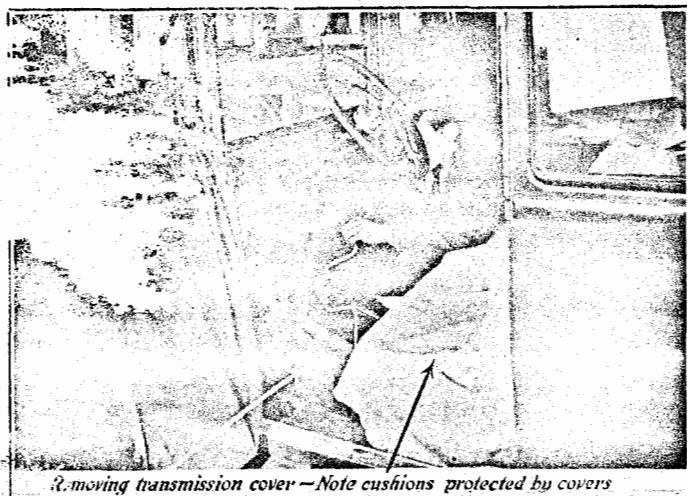
Carbon Cuts Power

Carbon deposits overheat your motor causing loss of power and increased gasoline consumption.

Bring this card with you and we will:

1. Scrape and clean all carbon deposits from top of cylinder block, pistons, cylinder head, etc.
2. Inspect valve seats and ream new seats if found pitted or worn.
3. Regrind valves to perfect seat with special machine, replace warped valves with new ones, time valves up to piston travel to assure maximum power.
4. Test valve springs for tension; if defective, replace with springs of even tension.
5. Inspect, clean and adjust spark plugs, coil points, commutator, adjust carburetor and clean gas line.

Labor Charge \$5.00—Parts Extra.



Removing transmission cover—Note cushions protected by covers

Fig. 40

New Transmission Bands

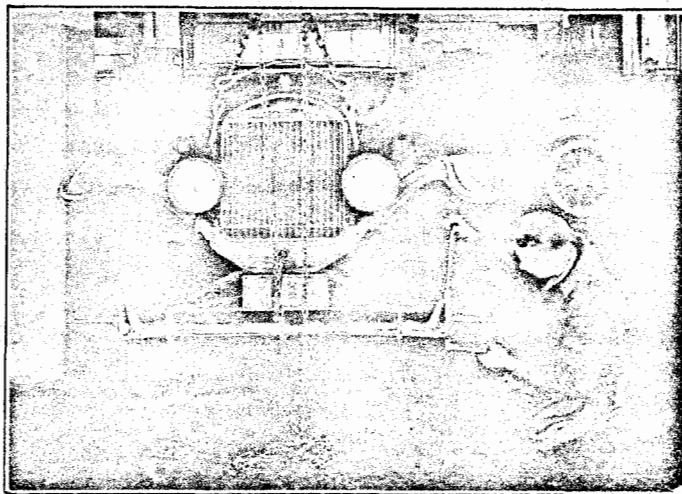
Hardened or worn bands cause slipping, loss of power, undue strain on motor and tires.

Bring this card with you and we will:

1. Put in new GENUINE FORD transmission bands.
2. Wash and clean transmission, put on new felt or cork gaskets around crank case.
3. Tighten up exhaust pipe and magneto wire connections, tighten up all transmission bolts and nuts.
4. Test transmission bands and adjust to proper and final adjustment.

Labor Charge—Open Car, \$3.50;
Closed Car, \$4.00 Oils and
bands Extra.

Do your customers realize the importance of having their front axle and steering checked over at regular intervals by an expert? Tell them what a difference it will make to their control system.



FRONT AXLE OVERHAUL

Fig. 41

For Easy Steering

Keep front wheels and steering gear lined up. An occasional front system overhaul will save your tires and insure safe driving.

Bring this card with you and we will:

1. Take down front axle, spring, steering connecting rods, wheels and front radius rod, clean and inspect all parts down to the last bolt and nut.
2. Replace broken and worn parts where wear cannot be taken up, ream and re-bush spindle bodies and arms if necessary.
3. Assemble and tighten up steering arm connecting rod ball caps; pack front hubs with grease, replace wheels on axle and adjust bearings.
4. Remove all rust from spring leaves, oil and re-assemble. Rebush front spring and perches if necessary.
5. Assemble front system to chassis; tilt front axle at correct angle; line up front wheels to proper alignment.

Labor Charge \$5.00—Parts Extra

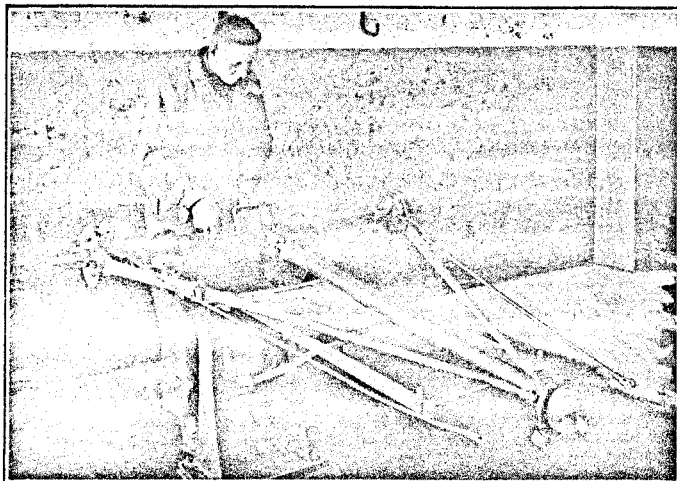


Fig. 42

Rear Axle Overhaul

Overhauling the Ford rear axle assembly should be done only by experienced Ford mechanics.

Bring this card with you and we will:

1. Take down rear axle assembly, wash and clean all internal parts, carefully inspect each part and replace all worn parts.
2. Test axle shafts and drive shafts.
3. Assemble, adjust and thoroughly grease all internal parts and enclose in housing.
4. Connect axle assembly to car, put on new felts at outer ends of rear axle, equalize and adjust brake rods.
5. Test complete assembly.

NOTE—Ask us about correct differential lubricant. It eliminates "Dope Leaks"

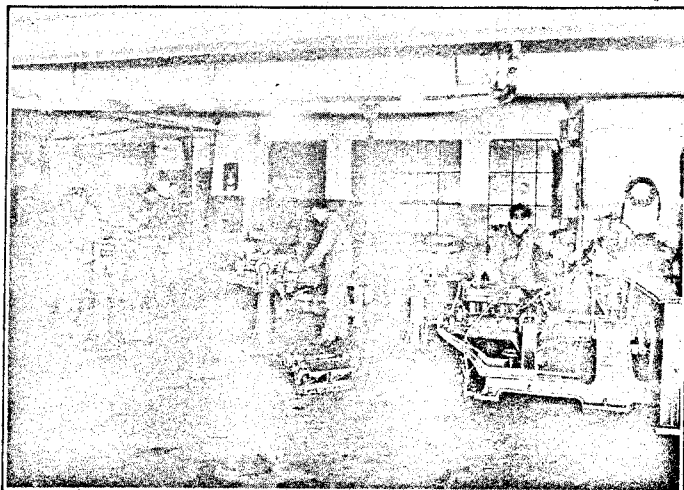
Labor Charge \$6.50—Parts Extra

(If equipped with Shock Absorbers, 75 Cents Extra)

Point out that, with your up-to-date equipment and skilled mechanics, the motor overhaul operation is no longer a nightmare, but a re-manufacturing process, methodically carried out from inspection to final test with factory precision.

The cost of this operation is not excessive because the owner is assured that his motor will be as good as new and carries your absolute guarantee.

A rear axle will fail through neglect more than from any one factor. If you impress this fact upon your owners they will be saved a possible break-down on the road and considerable money by having it checked by your expert.



MOTOR DEPARTMENT

Fig. 43

Motor and Transmission Re-manufacture

Only skilled Ford mechanics with up-to-date equipment should perform this work. Only Genuine Ford Parts should be used. Bring this card with you and we will:

1. Disassemble motor, clean and inspect each part, thoroughly test crank case in aligning jig, rebabbitt and ream main bearing caps.
2. True up and fit crank shaft, fit pistons, piston pins and rings (install oversize pistons or rings if necessary), line up connecting rods in alignment jig.
3. "Run in" crank shaft and connecting rods on running in machine, regrind valves with special machine and reface valve seats, time valves up to piston travel.
4. Rebuild worn transmission parts, test magnets and recharge, test magneto coil for short circuits, test crank case for leaks and line up if necessary.
5. Run motor on test block until broken in, test motor under own power.

Labor Charge \$30.00—Parts Extra.

Lincoln Generator Clutch

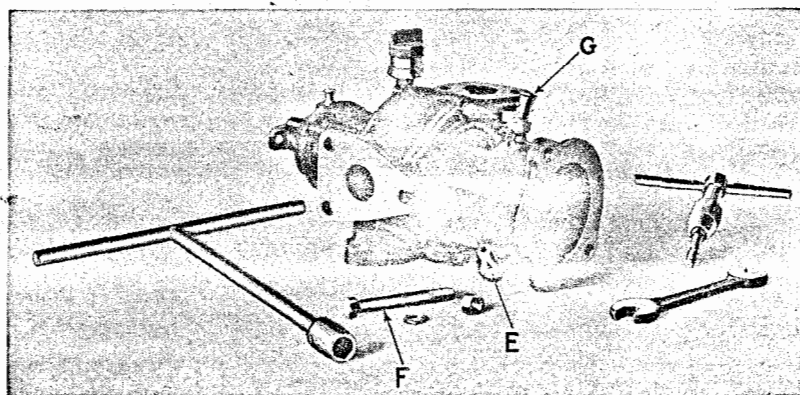


Fig. 44

The new type generator clutch "A", Fig. 45 with which all cars now being shipped from the factory are equipped, is designed to give quieter operation under all conditions. Its construction is such that it does not make a clicking sound when the ignition switch is turned "ON" or when the engine is idling.

To install a new style clutch the procedure outlined below should be followed:

Drain the cooling system—loosen the radiator cap so that the water will flow readily.

Remove the right hand engine dust pan.

Remove the lower water connection elbow from the water pump. It is not necessary to disturb the hose clamps.

Remove the accessory shaft by removing the two opposite bolts at each end.

Detach the water pipe which connects the water pump and cylinder block.

Remove the cap screws and loosen the nut on the one stud which hold the pump to the crankcase and generator. The pump can now be removed from underneath.

The generator clutch should now be removed. Disconnect the storage battery and push in the starter pedal. This will lock the starter generator armature so that the screw holding the clutch can be removed. If the starter does not mesh, revolve the starter generator armature slowly until the gears mesh. Remove the clutch using Puller (15Z-12121) 5Z-891.

Put the new style clutch in place and use the special washer (C) in place of the tongued washer (D). The same screw and lock washer

may be used. Use the same method for holding the armature as outlined above.

To provide adequate lubrication an elbow (E) is to be placed in the overflow hole in the lower back side of the water pump cover. See Fig. 44. An overflow hole at this point is necessary as it establishes a safe level for the lubricant and prevents building up a pressure with the lubricator gun which would force lubricant through the front starter-generator bearing and into the starter-generator where it might get to the commutator and brushes and thus cause serious damage. However, it has been found that this lubricant level can be raised somewhat and that the lubricant is retained longer if the overflow hole is trapped. Both of these objects are obtained by the use of the special elbow L-9168-R in the old overflow hole.

To install the elbow, carefully hand tap the overflow hole with a $\frac{1}{8}$ " pipe tap so that threaded end will not project more than $\frac{1}{8}$ inch above inside of housing. No drilling will be necessary. Remove the clamp screw (F) and screw in the elbow until tight, and shank stand vertically. See Fig. 44. In some cases it may be necessary to file off the corner of the clamp screw boss to clear the elbow as it is screwed in.

The old style clutch was lubricated through the front oiler on the starter-generator. The new style clutch also receives lubrication through the lubricator connection (G) Fig. 44.

Examine the position of the packing gland nuts on the water pump and if they are nearly up to the limit repack the pump. Make certain that the packing is driven down well or when the pump is reassembled the packing nuts can again be tightened

to the limit for an initial setting. After pump is reassembled, make sure that the pump can be easily turned by hand. Thoroughly clean the finished surface on the crankcase to which the pump is bolted, also the pad on the pump. Grease the gasket used at this point. Turn the pump shaft so that the yoke is in a vertical position. Place the over-running clutch cross on the clutch driving lugs and rotate the starter-generator shaft until the openings in the cross are vertical. Lock the starter-generator in this position with the starter gears as previously described. Slide the pump onto the pilot on the starter-generator making sure that the driving lugs engage the slots in the cross and start the cap screws which hold the pump to the generator. Start the screws which hold the pump to the crankcase and tighten. Then tighten pump to generator screws. Assemble the water pipe from cylinder to pump and the water inlet pipe. Connect accessory shaft, replace dust pan and fill cooling system.

The new style clutch is listed as part L-5543-B. This part number includes the special washer.

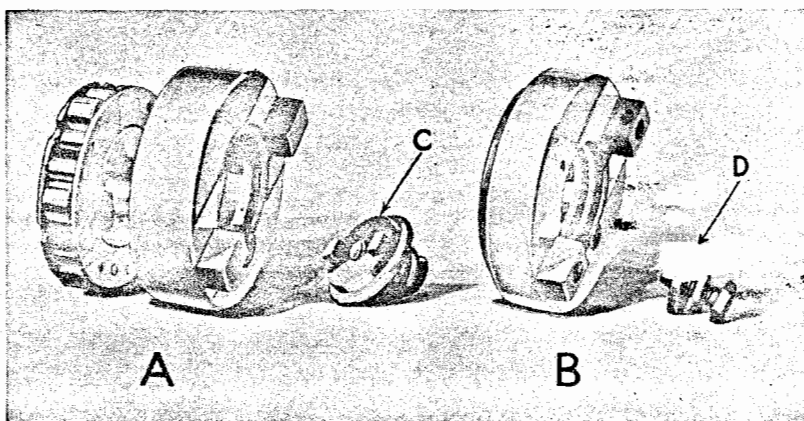


Fig. 45

Lincoln Rear Axle Shafts

Care should be taken when replacing the axle shafts, as they are rights and lefts. The shaft can be assembled on either side, but oil leaks at the hubs will result if they are on the wrong side.

The shafts are plainly marked "Right" and "Left," therefore there is no reason for a mistake if ordinary care is exercised.

Each shaft has a spiral groove turned on its diameter near the inner end in such a manner as to return any oil which gathers on the shaft, toward the differential housing. This part of the shaft revolves in felt washers which tend to further reduce the possibility of oil getting through to the hubs. (See Fig. 46).

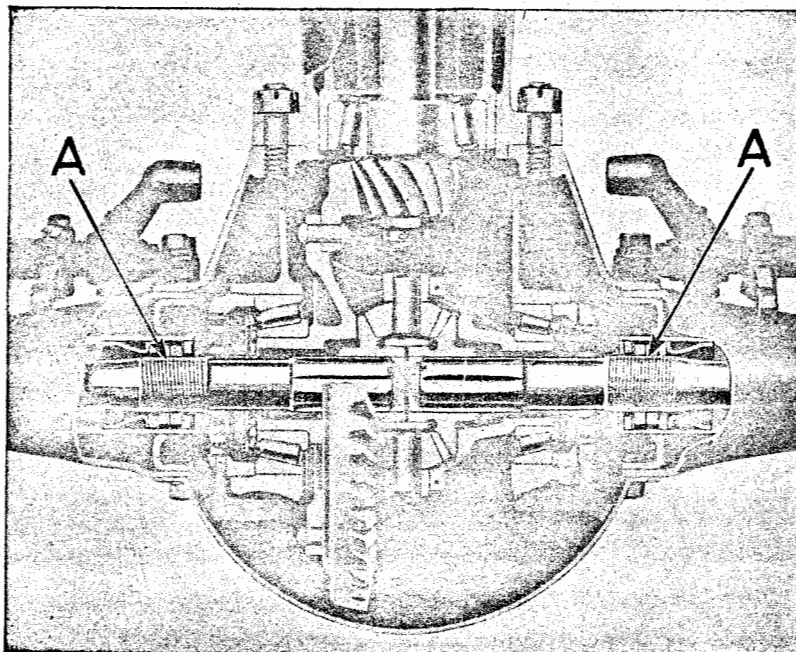


Fig. 46

Lincoln Instrument Board Light and Tail Light

The instrument board light and tail light are connected in series. Therefore, if either light bulb burns out there will be no light on the instrument board, thus notifying the driver. Both of these bulbs must be the 3-4 volt, 2 candle power, single contact type. If either light burns brightly and the other merely glows a cherry red, it is an indication that the bright bulb is a 6 volt instead of a 3 volt bulb.

Counterfeit Parts

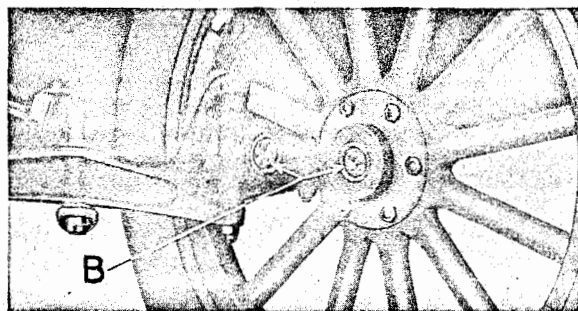
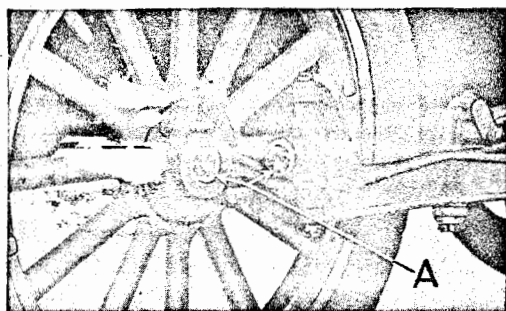


Fig. 47

There is one Ford owner who when purchasing parts, or having repair work performed on his Ford car, will make certain hereafter that he deals only with an authorized Ford dealer. "A" and "B", Fig. 47 explains his reason.

While the owner was operating his car under ordinary conditions, both of these counterfeit offset spindles collapsed at the same time.

The Ford dealers who replaced the broken parts with genuine Ford spindles, sent in the counterfeit material for our inspection. An analysis of the parts showed them to have less than $\frac{1}{3}$ the strength of genuine Ford spindles.

When a customer experiences trouble as the result of having been sold an inferior grade article, he seldom blames the manufacturer of such material, *he blames the concern who sold him the goods.* As a result, their business, which is dependent solely upon local trade, sustains a permanent loss, while the manufacturer of the counterfeit material simply transfers his selling efforts to some other locality where his goods are unknown.

Genuine Ford parts are your protection—their use is an assurance of quality and customer satisfaction.

New Method of Mounting Motor Unit on "TT" Chassis

We are now mounting the Motor Unit with the C. C. Arm on the top of the frame in the Truck Chassis. This necessitates the discontinuance of the following parts:

- 3083-B Crankcase Arm Block
- 3073 Crankcase Arm Bolt Side
- 3449-R Controller Shaft and Speed Lever Assembly—Right
- 3449 Controller Shaft and Speed Lever Assembly—Left.

5028-B No. 4 Spark Plug Wire

The following parts are being used with the new installation:

- 3074-C Crankcase Support Bolt Top
- 2742 Crankcase Support Spring
- 1134-R Controller Shaft and Speed Lever Assembly—Right
- 1134 Controller Shaft and Speed Lever Assembly—Left
- 5028 No. 4 Spark Plug Wire

When this change was first made we used No. 3083 Crankcase Arm Block and a special Side Bolt No. 3073-B. These have since been discontinued.

It is Economy to Change Spark Plugs Every 10,000 Miles

When spark plugs have been in use over a period of 10,000 miles, the spark loses its intensity and consequently the weakened spark fails to give complete combustion in the cylinders. Power is lost, the engine becomes sluggish and gasoline and oil are wasted. That is why it is real economy to change the plugs at least every 10,000 miles.

The spark plug core is made of a highly glazed porcelain material. After a time, due to the terrific heat of the explosions in the cylinder, the glazed surface on the core is gradually broken down and it becomes roughened enough to retain particles of carbon road dust, etc. These foreign particles form a partial short circuit across the plug, and part of the current which should give a hot efficient spark, leaks across the "short" and reduces the effectiveness of the plug in proportion. Thus it will be seen that installing a new set of spark plugs is not an expense, but an actual economy because of the more satisfactory engine performance obtained and the gasoline and oil that is saved.

9 Leaf Front Springs for Trucks

All trucks are now being equipped with 9 leaf front springs in place of the 7 leaf design which is standard production on all model T cars. This heavier front spring will carry the excessive loads that are often placed on the trucks, with less danger of breakage.

These heavier front springs are now available at all branches, and dealers should arrange to carry stocks adequate to their needs. When installing the new 9 leaf spring on a truck formerly equipped with the old 7 leaf spring, it is necessary to substitute the following parts:

Cat. No. Fac. No.

1165	TT-342	Front spring clip bar	\$0.25
1164-B	TT-2921	Crankcase bearing and spring clip assembly	.90
1151	TT-332	Front spring—9 leaf	3.00
1166	T-242	Front spring clip nut	.05
	T-82	Front spring clip cotter, Doz.	.03

Larger Amount of Oil Deflected on Transmission Band Linings

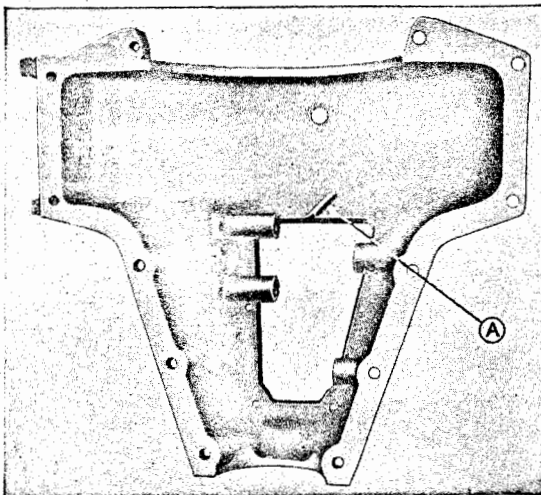


Fig. 48

"A", Fig. 48 shows the rib or web which is now being cast into the transmission cover.

The addition of a rib at this point deflects a larger volume of the oil carried up by the flywheel and magnets, onto the transmission band linings, and transmission drum bushings, thereby insuring an exceptionally smooth braking effect as well as materially adding to the life of both the band linings and bushings.

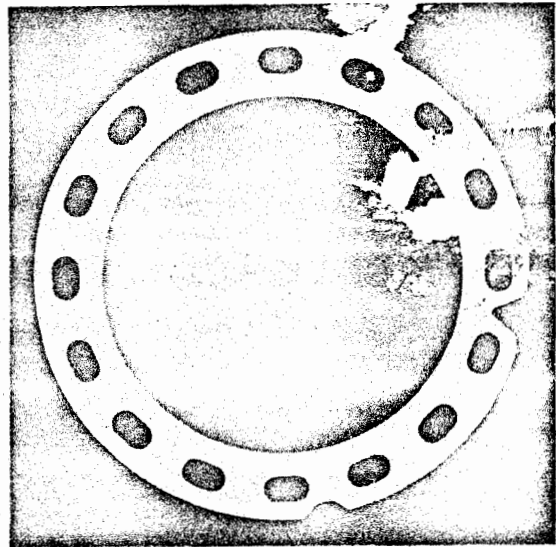


Fig. 49

New Design Magneto Coil Washer—Lower

We are now using a new design Magneto Coil Washer, lower—see Fig. 49. This washer is a one-piece construction and designed to improve the insulation under the coils and coil connections.

Check Electrical Connections

In order to prevent head lamp bulbs burning out prematurely, dealers should make it a point to see that connections on all electrical circuits are clean and tight before delivering a car to an owner. This is especially true of the connections on the battery circuit, such as terminals on battery, ground connection of battery, and battery wire terminals on terminal block.

It is also extremely important that all connections on the back of the switch be checked to insure their being in correct position and that the rubber insulation on the different wires is sufficiently near the end of the terminals that it is impossible for the metal part of any of the terminals to come in contact with each other. Should the metal part of the terminals touch each other at any time, serious trouble will result, such as burning out lamps, demagnetizing magneto, or short circuiting the lighting system.