

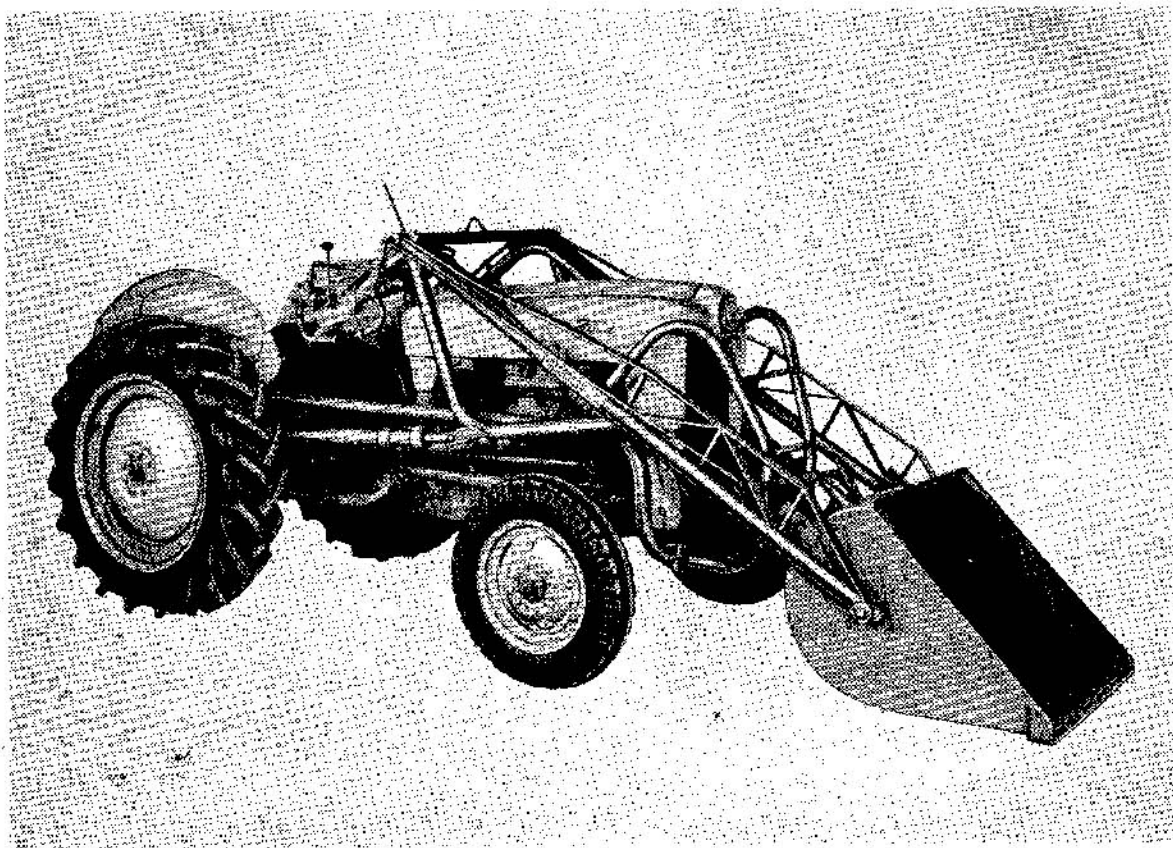


# DEARBORN LOADERS



MODELS 19-59 AND 19-60

## ASSEMBLY AND OPERATING INSTRUCTIONS



The Dearborn Loaders are designed to meet the requirements and demands for equipment of this type. The versatility of the Dearborn Loaders enables the operator to perform a wide variety of loading operations efficiently and economically. The welded tubular steel construction provides light weight with maximum strength. The Model 19-59 and 19-60 loaders have been especially designed for use on the Model NAA Ford Tractor.

This manual contains two sections: Section One presents information concerning the Dearborn Standard Loader, Model 19-59, and Section Two covers the Dearborn Heavy Duty Loader, Model 19-60. Because there are a number of parts and assembly steps which are common to both models, reference is occasionally made to Section One when installing

the Dearborn Heavy Duty Loader.

The assembly procedure given for each loader is based on mounting the loader on the tractor and assembling it at the same time. The work can easily be done by two men; however, where a suitable chain fall or hoist is available, the loader may be completely assembled on the floor and then with the aid of the hoist, be positioned for mounting on the tractor. In either case, certain work must be done on the tractor itself before the loader is mounted in place.

This manual contains information on the assembly, operation, lubrication and adjustments. Read it carefully, follow the illustrations and keep it available for ready reference.

**DEARBORN MOTORS CORPORATION**

**BIRMINGHAM, MICHIGAN**

# DEARBORN HEAVY DUTY LOADER

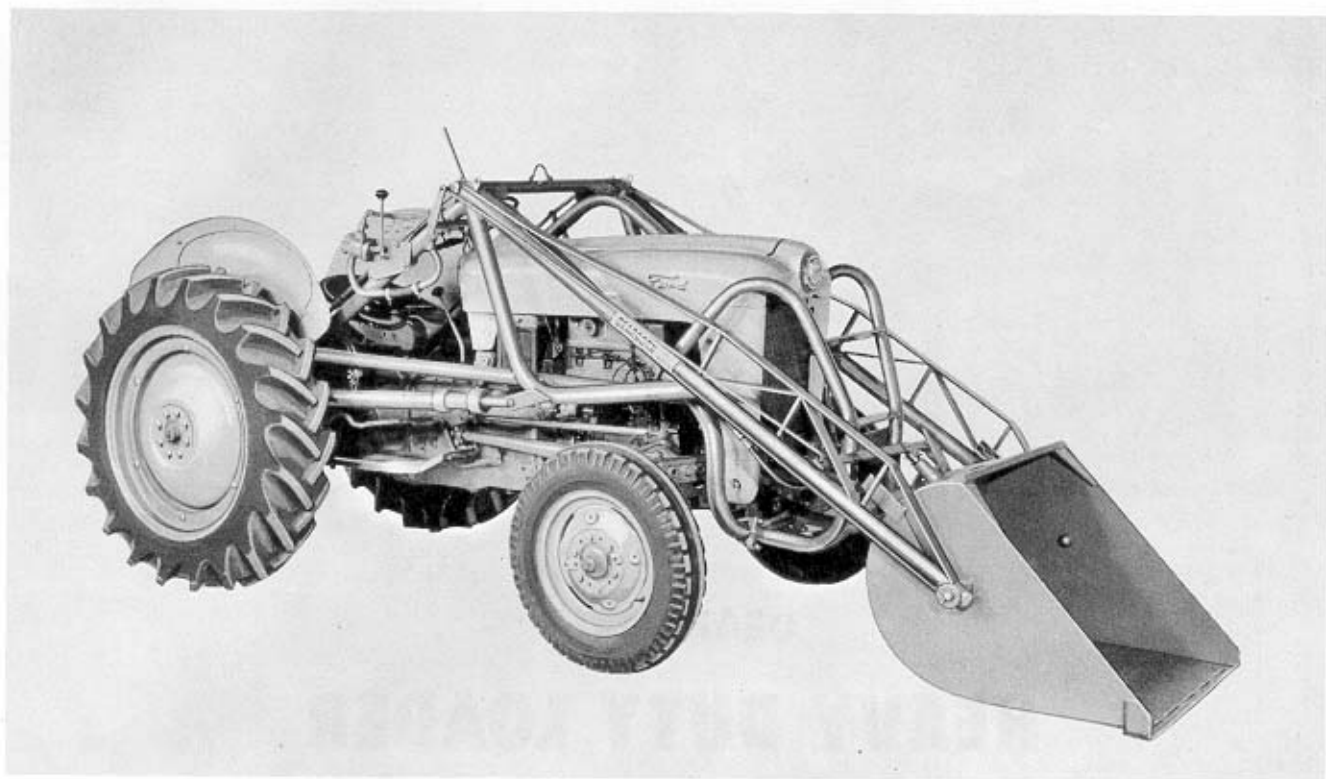


Figure 1  
The Dearborn Heavy Duty Loader

## BUNDLE INFORMATION

The Dearborn Heavy Duty Loader, Model 19-60, is shipped in five bundles as shown in Figure 2. The Material Bucket (Model 19-31) and the Manure Fork (Model 19-32) shown in Figure 2, are sold separately by your Ford Tractor and Dearborn Farm Equipment dealer. Check the shipment against the following list and Figure 2, to be sure that all parts are received.

Item	D.M.C. Bundle No.	Description
A.	194432	Main Frame with Hydraulic Lines, Clamps, Valve and Trip Assembly Lever Assembled.
B.	191463	Lift Arm Assembly with Latch Bar assembled to Lift Arm Assembly and Trip Rod wired on.
C.	194448	Carton of miscellaneous parts.
D.	194463	Bumper.
E.	194074	Hydraulic Cylinder Assemblies.
F.	19-31	Material Bucket.
G.	19-32	Manure Fork.

D.M.C. Bundle No. 194448 contains the following parts: One of each of the parts is shown in Figure 3.

Item	Description	Required
1.	Complete drive assembly	1
2.	Assembly and Operating Manual	1
3.	U-bolt, nut and lockwasher assembly	4
4.	Bolt and lockwasher assembly 7/16" - 14 x 1"	4
5.	Bolt and lockwasher assembly 5/8" - 18 x 1 1/2"	1
6.	Bolt, lockwasher and nut assembly 3/8" - 16 x 1 1/4"	2
7.	Anchor pin—short	2
8.	Anchor pin—long	4
9.	Hose, 1" x 8 1/2"	1
10.	Rear axle mounting bracket	2
11.	Equalizer pipe, 3/8" x 10"	1
12.	Cap screw and lockwasher assembly 5/16" - 18 x 1 1/2"	6
13.	1/8" zerk fitting	8
14.	5/8" x 1 1/2" square bolt, lockwasher and nut assembly	4

# DEARBORN HEAVY DUTY LOADER

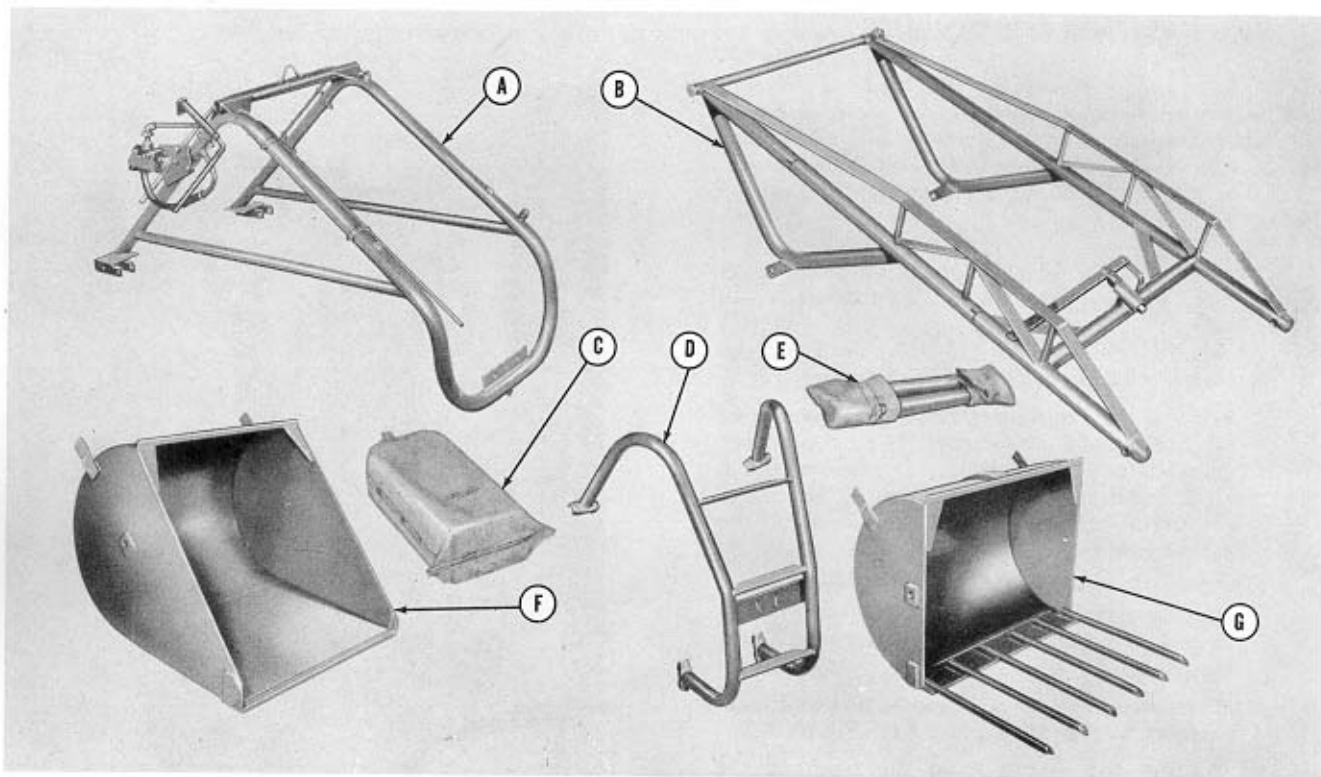


Figure 2  
Model 19-60, Heavy Duty Loader Bundled for Shipment

- |     |  |   |
|-----|--|---|
| 15. | Clevis pin, $\frac{3}{4}$ " x 2"   | 1 |
| 16. | $\frac{1}{2}$ " x $1\frac{1}{2}$ " hex head bolt and lockwasher            | 1 |
| 17. | $\frac{3}{4}$ " x 90° elbow  | 1 |
| 18. | Valve control handle and knob  | 1 |
| 19. | Suspension plate assembly  | 1 |
| 20. | $\frac{3}{8}$ "-18" Hose with couplings                                    | 3 |
| 21. | Pin—bucket   | 2 |
| 22. | 1" Hose clamp  | 2 |
| 23. | 1" Flatwasher  | 2 |
| 24. | $\frac{5}{8}$ "—18 x $1\frac{3}{16}$ " flat head screw and washer assembly | 1 |
| 25. | Nipple, $\frac{3}{4}$ " x 2"   | 1 |
| 26. | $\frac{1}{4}$ " x $1\frac{1}{2}$ " cotter pin                              | 2 |
| 27. | 1" x $\frac{3}{4}$ " reducer bushing                                       | 1 |
| 28. | $\frac{3}{16}$ " x $1\frac{1}{4}$ " cotter pin                             | 1 |
| 29. | $\frac{1}{2}$ " x $\frac{3}{8}$ " reducer                                  | 1 |
| 30. | Hydraulic pump   | 1 |
|     | Miscellaneous cotter pins and flatwashers                                  |   |

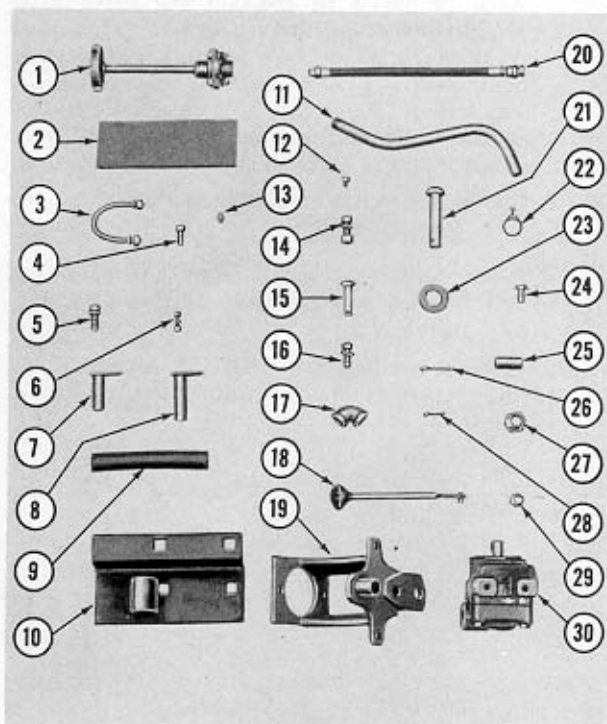


Figure 3  
Small Parts Contained in Carton

# DEARBORN HEAVY DUTY LOADER

## ASSEMBLY PROCEDURE

**NOTE:** It is the responsibility of the Ford Tractor and Dearborn Farm Equipment dealer to assemble the loader, mount it on the tractor, and to instruct the owner in its operation, care and maintenance. The following instructions are provided in case of need.

1. Open the bundle which contains the small parts and lay out the parts to facilitate assembly.
2. Attach the drive plate (2), Figure 5, to the tractor crankshaft pulley (1) as follows:
  - a. Remove the crankshaft ratchet nut and four cap screws and lockwashers from the engine crankshaft. The crankshaft ratchet nut has a right hand thread. If possible, do not move the crankshaft pulley after removal of the cap screws.
  - b. Fit the flatwasher (1), Figure 4, on the special cap screw (2), and install the cap screw in place of the crankshaft ratchet which was removed.
  - c. Place the four  $\frac{7}{16}$ " x 1" cap screws and lockwashers in the drive plate (3), Figure 4.
  - d. Position the assembly on the front of the crankshaft pulley (1), Figure 5, by working it through the opening (4) at the bottom of the engine suspension plate (5). Caution must be taken to position the drive plate without dropping the cap screws (3), Figure 5, from the drive plate or moving the crankshaft pulley (1). Make sure that all of the cap screws (3), Figure 5, are partially started in the holes of the crankshaft pulley before any attempt is made to tighten them securely.
  - e. Use a thin wrench to tighten the cap screws (3), Figure 5.
3. Remove the radiator grille from the tractor and install the loader suspension bracket (6), Figure 6, as follows:
  - a. Remove the hex head bolt (2), Figure 6, and lockwasher from the front of the tractor.

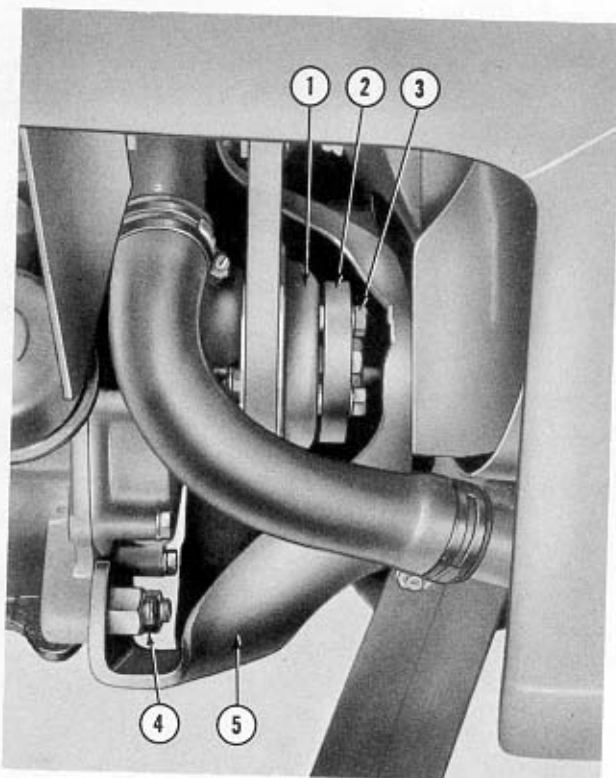


Figure 5  
Pump Drive Plate Installed

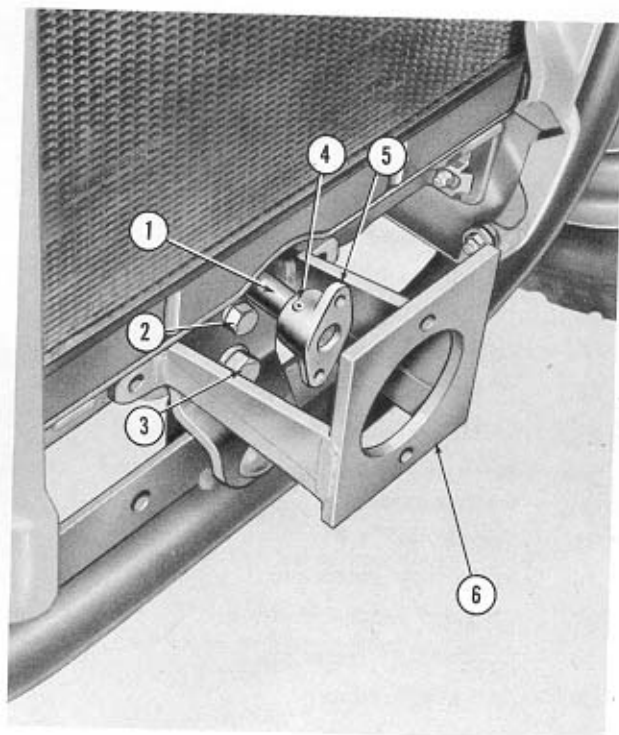


Figure 6  
Loader Suspension Plate Installed

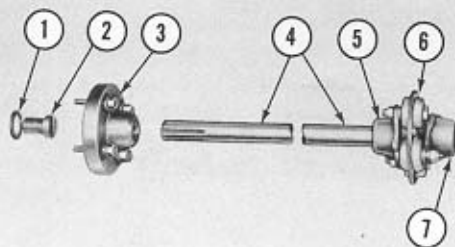


Figure 4  
Drive Plate and Pump Drive Shaft



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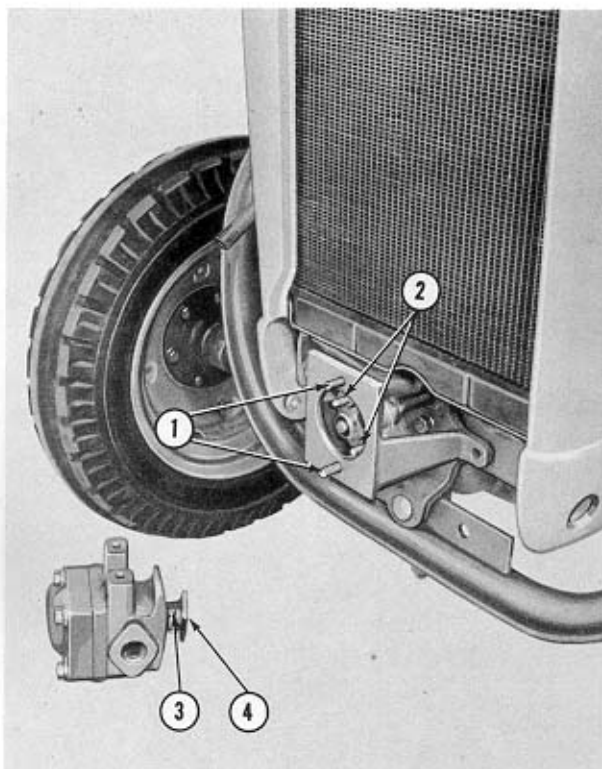


Figure 7  
Attaching the Hydraulic Pump

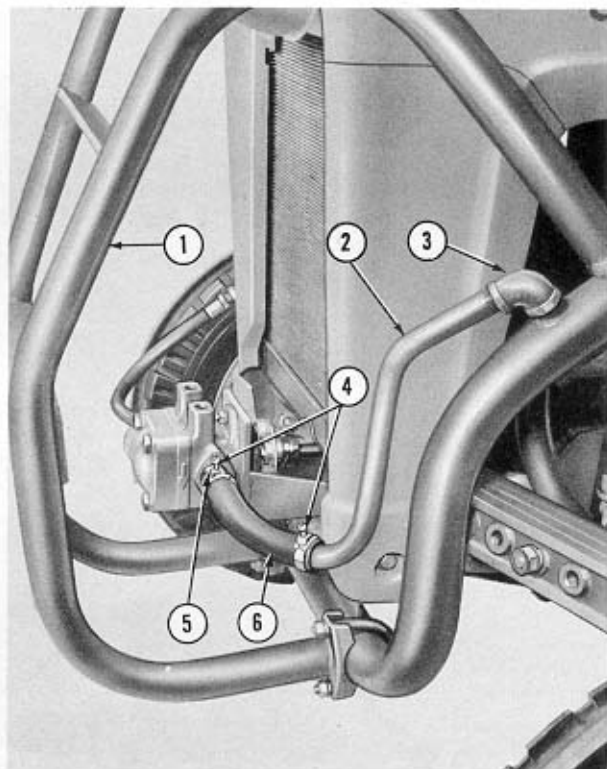


Figure 8  
Attaching the Hydraulic Lines and Bumper

- b. Position the loader front suspension bracket (6), Figure 6, as shown. Insert both the  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " hex head bolt (2), and the  $\frac{5}{8}$ " x  $1\frac{1}{2}$ " bolt (3) and lockwashers as shown.
4. Remove the flange (7), and coupling (6), Figure 4, from the pump drive shaft (4). Coat the shaft splines with grease and insert the shaft in the crank hole until it is firmly seated in the splined drive plate (2), Figure 5. Loosen the Allen screw (4), Figure 6, and position the flange (5), on the shaft (1) so that the end of the shaft lags about  $\frac{1}{8}$ " of being flush with the face of the flange.
5. Mount the loader main frame on the tractor as explained in Steps 6 and 7, Section One of this manual.
6. Install the loader hydraulic pump as follows:
  - a. Attach the coupling (6), Figure 4, to the flange (5), Figure 6, with the bolts and lock-nuts provided.
  - b. Install the flange (4), Figure 7, on the pump drive shaft with the Woodruff key. Do not tighten the Allen head screw (3), securely at this time.
  - c. Attach the hydraulic pump to the mounting bracket loosely with the bolts (1), Figure 7.

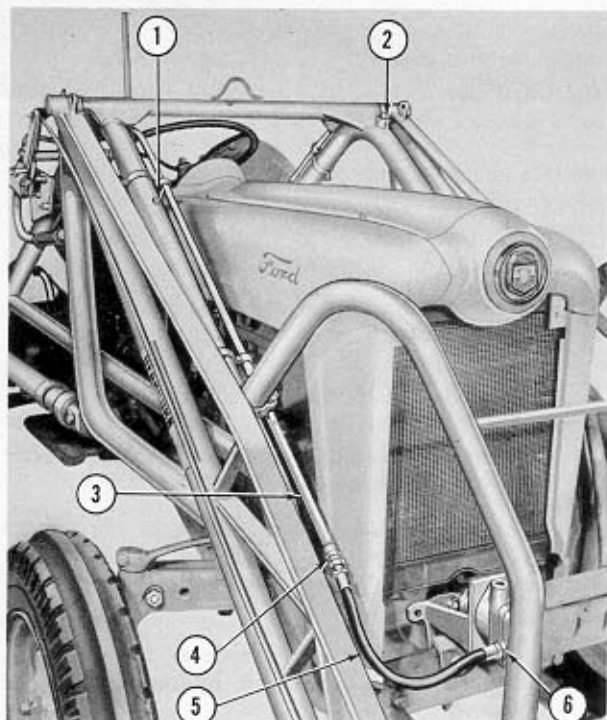


Figure 9  
High Pressure Line and Fill Point

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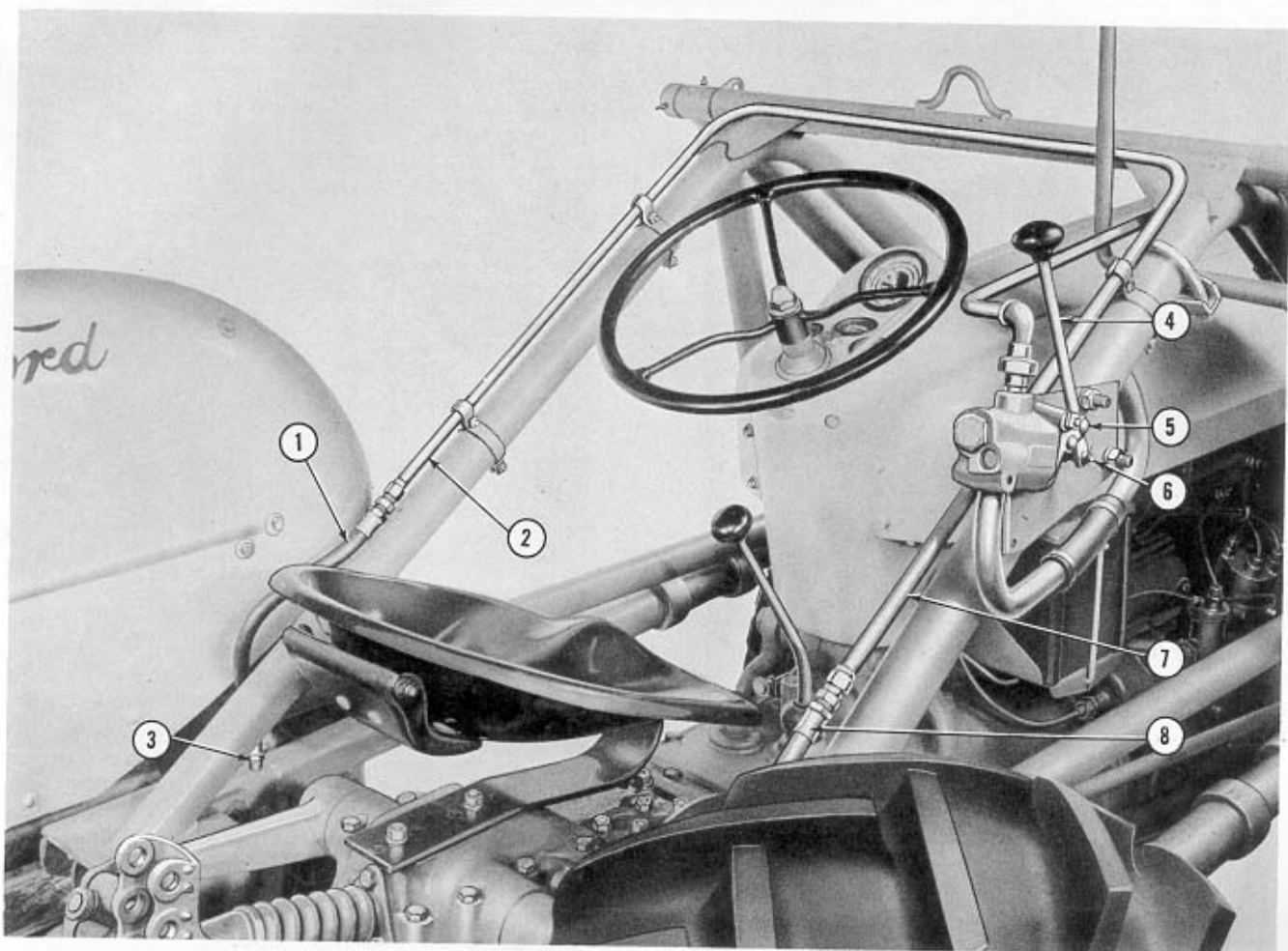


Figure 10

## Control Valve and Hydraulic Lines Installed

- d. Reattach the flange (4), Figure 7, to the coupling with the two bolts (2) and locknuts provided.
  - e. Tighten the pump mounting bolts (1), Figure 7. Make sure that the pump shaft is firmly seated in the splined drive plate and tighten the Allen head screw (3), Figure 6, securely.
7. Connect the hydraulic oil lines from the loader frame to the pump as follows:
- NOTE: To avoid leaking joints in the loader hydraulic system, coat the threads of all hydraulic pipe lines with plumbers compound and tighten securely.*
- a. Install a  $\frac{1}{2}$ " to  $\frac{3}{8}$ " reducer bushing (6), Figure 9, on the loader hydraulic pump as shown.
  - b. Assemble the 1" to  $\frac{3}{4}$ " reducer bushing (5), Figure 8, and the nipple. Turn the assembly into the loader hydraulic pump.
  - c. Turn the  $\frac{3}{4}$ " pipe elbow (3), Figure 8, onto the outlet. Install the pipe (2) in the elbow.
  - d. Install the hose section (6), Figure 8, and clamps (4) as shown. Tighten the clamps securely.
  - e. Turn the externally threaded end of the hose (5), Figure 9, into the reducer (6), in the hydraulic pump. Then, attach the internally threaded coupling to the high pressure pipe (3) as shown at (4), Figure 9.
8. Attach the loader bumper (1), Figure 8, to the loader main frame with the four U-bolts, lock-washers and nuts provided.
9. To assemble the loader lift arms, hydraulic cylinders, bucket or fork assembly and trip lever, proceed with steps 8, 9, 10, 11 and 12 in Part One of this manual.

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10. Place the control lever (4), Figure 10, on the pin (6) and secure with a cotter pin as shown. Connect the lever to the valve with the linkage as shown at (5).
11. Insert the externally threaded end of the hose sections (1) and (8), Figure 10, into the hydraulic cylinders and attach the internally threaded couplings to the high pressure lines (2) and (7).

## HYDRAULIC OIL

Before filling the loader with hydraulic oil, flush out the reservoir with kerosene or oil as follows:

- a. Remove the oil drain plug from the loader main frame.
- b. Disconnect the hose section (6), Figure 8, from the left side of the hydraulic pump by loosening the screw clamp (4).
- c. Place a drain pan under the drain hole and the disconnected hose section to catch the discharged kerosene or oil.
- d. Attach one end of a length of hose to the nipple (5), Figure 8. Place the other end in the oil or kerosene to be used for flushing.
- e. Start the tractor engine and flush the reservoir thoroughly.
- f. Replace the drain plug in the loader frame and reattach the hose (6), Figure 8. Retighten the clamps (4) securely.

Fill the loader hydraulic oil reservoir as follows:

- a. Use four and one-half (4½) gallons of hydraulic oil, Ford specification M-4864-D, or other hydraulic oil which meets this specification. See your local Ford Tractor and Dearborn Farm Equipment dealer.
- b. Remove the 1" pipe plug (2), Figure 9.
- c. Fill the reservoir with oil.
- d. Replace the filler plug loosely.
- e. Operate the loader for about 15 minutes in order to bleed air from the system.
- f. Add oil to fill the frame completely and install the filler plug tightly.

- g. Check all pipe connections and hydraulic lines for loose or leaking joints.

After the loader has been operated for approximately 25 hours, the reservoir should be flushed out as directed above. This will eliminate any particles of foreign material which may have loosened during loader operation. The hydraulic oil may be used again if it is carefully filtered through a cloth.

After 1000 hours or 1 year of operation (whichever is shorter), the loader reservoir should be drained and again filled with new hydraulic oil.

## LUBRICATION

The Dearborn Heavy Duty Loader, Model 19-60, is equipped with eight lubrication fittings. After the loader has been assembled and before operation, it should be lubricated. Refer to the lubrication chart in Section One of this manual for lubrication of the Dearborn Heavy Duty Loader.

## OPERATION

The Dearborn Heavy Duty Loader should be operated at moderate tractor speeds to avoid spillage and loss of control. Excessive operating speeds are dangerous and may cause unnecessary strain. The tractor engine speed should be 1200 to 1500 R.P.M. and the tractor operated in second gear.

The bucket is raised or lowered by operating the lever attached to the loader control valve. To trip the bucket, pull back on the trip lever handle. When the bucket is lowered to loading position, the bucket latch pin will automatically reset itself.

Drive straight into the pile when crowding a load into the bucket. Do not overtax the loader by trying to fill the bucket "on a turn." When loading from a pile of material, keep the surrounding area clean to secure better traction and more efficient operation. Load the bucket with repeated short, forward thrusts and raise the lift arms a little each time for maximum fill.

## TRANSPORTING

When transporting the loader with the bucket (or manure fork) loaded or empty, the lift arms should be raised to a height where the bucket (or fork) is just below the level of the tractor hood. Maximum stability and visibility are obtained when the lift arms are in this position.