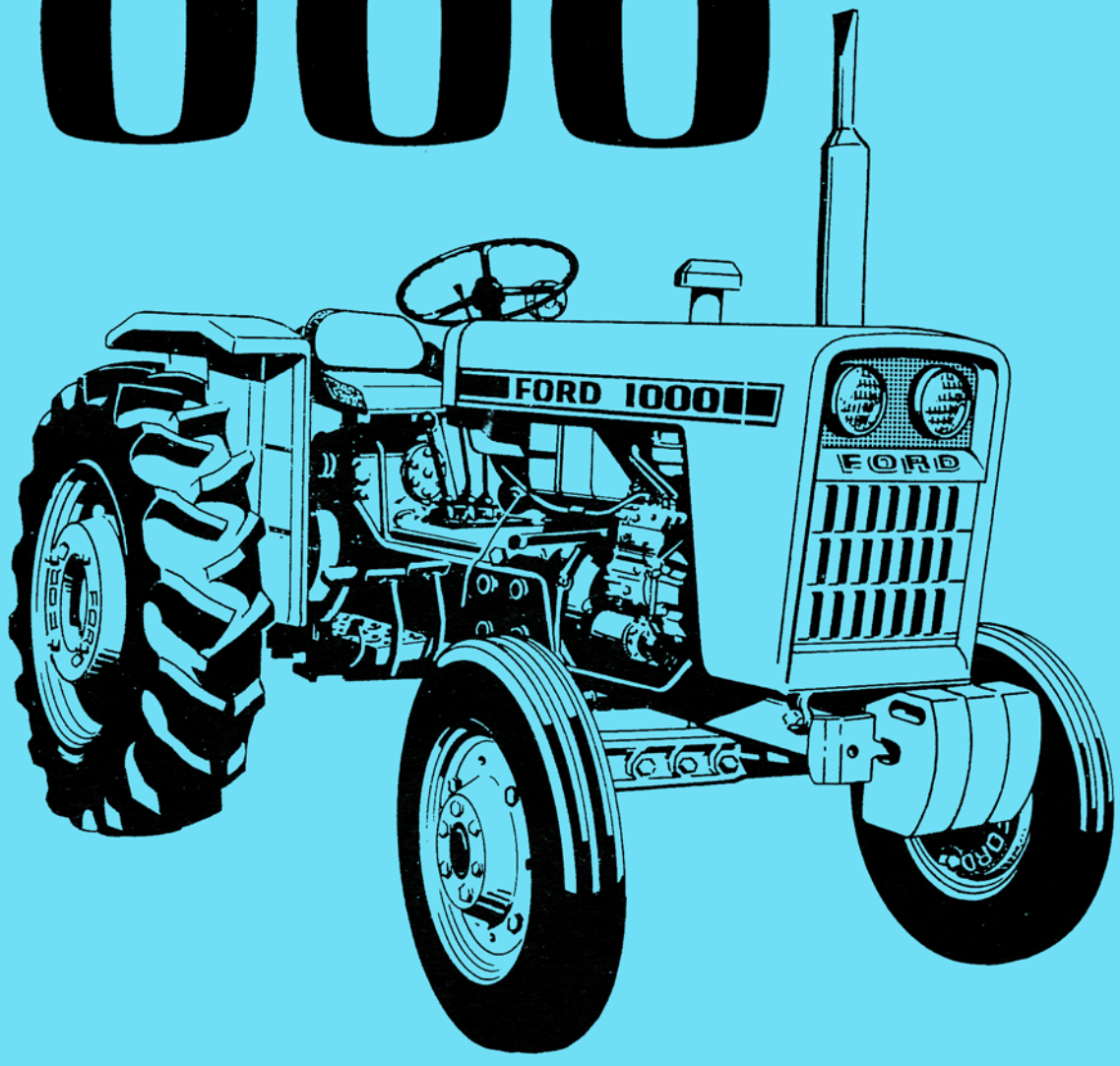
FORD

1000



OPERATOR'S MANUAL

foreword

This manual has been prepared to assist you in the proper break-in, daily care, and operation of your new Ford 1000 Tractor. It contains specific information on the many built-in features of the tractor, safety precautions and instructions for making minor adjustments.

Your tractor has been carefully inspected before leaving the factory and also by your Ford Tractor-Equipment Dealer, prior to delivery, to see that it is "ready to go." To keep it in this "ready to go" condition, it is important to follow regularly scheduled service periods as recommended in this manual.

Read this manual carefully before operating your tractor, and keep it in a convenient location for later reference. If, at any time, you have a service problem concerning your new tractor, remember that your Ford Tractor-Equipment Dealer has factory-trained service personnel, Genuine Ford Parts, and the necessary tools and equipment to best satisfy your service needs.

FORD TRACTOR OPERATIONS

FORD MOTOR COMPANY

ISSUED TO:	ISSUED BY:
Owner's Name	Ford Tractor-Equipment Dealer
Mailing Address	City
City	State
State	Delivery Date

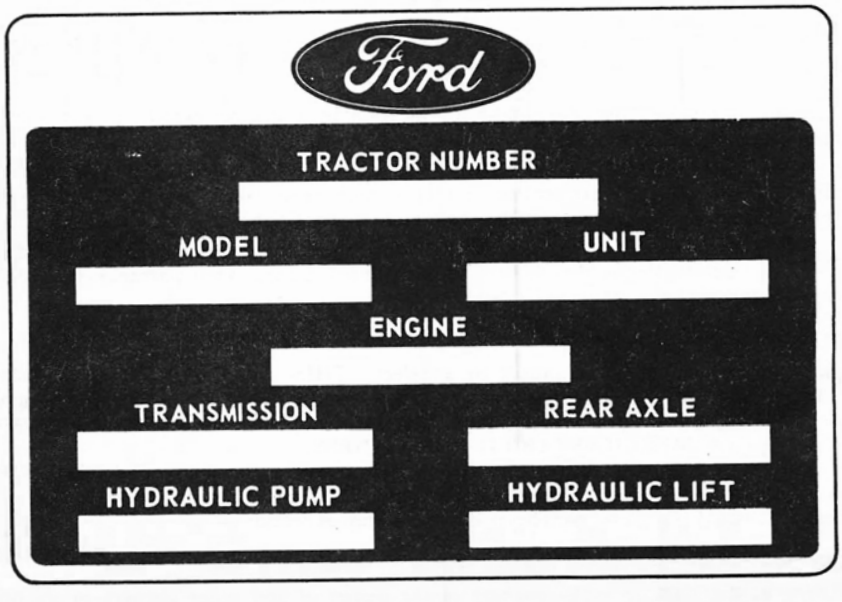
PLEASE READ CAREFULLY:

The WARRANTY on page 2 explains the coverage which is extended to your tractor during the warranty period. After you read the warranty ask your dealer to explain any points that you may not understand.

For a complete list of the pre-delivery service checks performed by your dealer, refer to PRE-DELIVERY SERVICE on the upper portion of pages 37 and 39. The copy on page 37 is your record of the service performed, and the copy on page 39, which is to be removed from the manual, is your dealer's record. MAKE SURE THAT YOU AND THE DEALER SIGN BOTH COPIES.

After you have operated your tractor for fifty hours, take this manual and your tractor to your dealer. He will then perform the factory recommended 50-HOUR SERVICE as listed on the lower portions of pages 37 and 39 – without charge – except for lubricant, hydraulic oil, or filters replaced as part of normal maintenance. MAKE SURE THAT YOU AND THE DEALER SIGN BOTH COPIES.

A VEHICLE IDENTIFICATION PLATE is located on the left-hand side of the clutch housing. The numbers on the plate are important should your tractor require future service. For your convenience, have your dealer record the numbers in the appropriate spaces below.



Warranty and Limitation of Liability
Ford Tractors and Equipment

COVERAGE PROVIDED

Ford Motor Company and the Selling Dealer jointly warrant to the original purchaser with respect to each Ford Tractor, Ford Implement or piece of Ford Equipment that for the periods specified herein, the Selling Dealer will repair or replace any part that is found to be defective in factory materials or workmanship.

Tractors designated for agricultural use ..... 12 Months

Self-propelled combines and attachments ..... 12 Months

Garden tractors, rider mowers and related attachments ..... 12 Months
Except commercial usage in which case coverage is ..... 90 Days

Tractors and related equipment designated for industrial usage ..... 6 Months

Agricultural implements except self-propelled combines and attachments ..... 6 Months

- The warranty period will begin on the date of original retail delivery or date of original use, whichever is earlier.
- The obligation of Ford and the Selling Dealer under this warranty is limited to repairs or replacements which will be made free of charge for both parts and labor using Ford service parts.
- The repairs or replacements will be performed by the Selling Dealer following delivery of the unit by the customer to the dealer's place of business in the United States.
- If the owner is traveling or has moved a long distance from the Selling Dealer, any authorized Ford Tractor and Equipment Dealer will perform the repairs.
- The Selling Dealer shall review these warranty provisions with his customer, secure his customer's acknowledgement of delivery of this warranty and record the date of original retail delivery.

WHAT IS NOT COVERED BY THE WARRANTY

1. This warranty shall NOT apply to any Ford Tractor, Ford Implement or Ford Equipment:
   (i) With respect to vendor warranted items such as tires and tubes and attachments, or to batteries which are covered by the Ford Parts and Accessories Warranty.
   (ii) With respect to vendor warranted items on the Series 340 Compact Loader which includes engine, battery, tires and tubes and attachments.
   (iii) If it has been subject to misapplication, abuse, misuse, negligence, or fire or other accident, or
   (iv) If parts not made or supplied by Ford have been used in connection with it if, in the sole judgment of Ford, such use affects its performance, stability or reliability, or
   (v) If it has been altered or repaired outside of a Ford location in a manner which, in the sole judgment of Ford, affects its performance, stability or reliability.
2. This warranty shall NOT apply to normal maintenance services (such as tune-ups, fuel system cleaning and wheel, brake and clutch adjustments) or to normal replacement of service items (such as filters and brake or clutch linings) or to normal deterioration due to use and exposure (such as belts and exterior finish).
3. This warranty shall NOT apply to any Ford unit which is distributed by anyone other than Ford Tractor and Equipment Operations - North America through its dealers in the United States. This warranty shall NOT apply to any Ford unit which is normally operated outside of the United States.

DISCLAIMER OF IMPLIED WARRANTIES

Except for personal injuries proven to have been caused by a defect, THIS WARRANTY, to the extent allowed by law, IS EXPRESSLY IN LIEU OF any other express or implied warranty, condition or guarantee agreement or representation by any person with respect to any Ford Tractor, Ford Implement or Ford Equipment or any part thereof, including ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS.

- Ford Motor Company and its authorized dealers will not assume any responsibility under this warranty for any loss of use of the unit, loss of time, inconvenience, commercial loss or consequential damages.
- No person is authorized to make any representations beyond those expressed herein.

RIGHT TO MAKE DESIGN CHANGES

Ford Motor Company reserves the right to make changes in the design of and other changes in its products at any time and from time to time without notice and without incurring any obligation with respect to any product previously ordered from it or sold or shipped by it.

contents

safety precautions

The following precautions are suggested to help prevent accidents.

1. Read this manual carefully to acquaint yourself with the tractor. Working with unfamiliar equipment can lead to accidents.

2. Use the handholds and step plates when getting on and off the tractor.

3. Familiarize yourself with all controls before attempting to operate the tractor.

4. Never start the engine while standing beside the tractor. Always sit in the tractor seat while starting the engine.

5. Do not bypass the safety starter switch. Consult your Ford Tractor-Equipment Dealer if your safety starter controls are malfunctioning.

6. Always wear the seat belt when the roll bar is installed. Never wear the seat belt if the roll bar is removed from the tractor.

7. Do not permit anyone to ride on the tractor with the operator.

8. Never engage the parking brake lever when the tractor is moving.

9. Use care when operating on steep grades to maintain proper stability.

10. Keep the tractor in gear when going downhill.

11. Always keep the tractor brakes in good operating condition.

12. Never run the tractor engine in a closed building without adequate ventiliation, as the exhaust fumes are very dangerous.

13. Always drive the tractor at speeds compatible with safety, especially when operating over rough ground, crossing ditches, slopes, or when turning.

14. Always use the drawbar for pull-type work. Never pull from the upper link or rear axle as the tractor can tip backward.

15. If your tractor is equipped with top link mechanical draft control, always install the lock pin in the upper link bracket before transporting mounted equipment.

16. If the tractor is stuck, back out to prevent an upset. If logs are used, always put them behind the rear wheels and back out.

17. If the front end tends to rise, install front end or front wheel weights. Do not continue to operate with a "light" front end.

18. Use the flasher warning lamp when traveling on public roads, day or night, unless prohibited by law in your state.

19. When operating P.T.O.-driven equipment, always shut off the engine and wait for the P.T.O. to stop turning before getting off the tractor and before disconnecting the equipment.

20. Never wear loose clothing when operating the power take-off, or around equipment that is rotating.

21. When operating stationary P.T.O. equipment, always apply the parking brake and block the rear wheels both in front and back.

22. Never clean or adjust P.T.O.-driven equipment with the tractor engine running.

23. Make sure the P.T.O. shield is installed when using P.T.O.-driven equipment, and always replace the P.T.O. shaft cap when the P.T.O. is not being used.

24. Always bring the tractor to a complete stop, shut off the engine, and apply the parking brake before getting off the tractor.

25. The operator should never get off the tractor while it is in motion.

26. Never park the tractor on a steep incline.

27. Never leave equipment in the raised position.

28. Never allow an open flame near the fuel tank or battery.

Whenever you see this symbol  it means:

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

SEAT, LIGHT, AND ENGINE CONTROLS

TRACTOR SEAT

Your new Ford 1000 Tractor is equipped with a pan seat which has a seat and back cushion as shown in Figure 1. The seat is adjustable to obtain the most comfortable position. It can be moved closer to or farther from the steering wheel by removing the attaching bolts, and repositioning the seat as desired.

SAFETY ROLL BAR AND SEAT BELT (OPTIONAL)

If your tractor is equipped with a safety roll bar and seat belt, remember that the safety offered is minimized if your seat belt is not buckled. Always use your seat belt — they save lives. DO NOT use the seat belt if the roll bar is removed from the tractor.

CAUTION: Never attach chains, ropes, or cables to the roll bar for pulling purposes; this is very dangerous, as the tractor will tip backward. Always pull from the tractor drawbar.

Be careful when driving through door openings or under low overhead objects. Make sure there is sufficient clearance for the roll bar to clear the structure or object.

ADJUSTING THE SEAT BELT

To lengthen the belt, tip the buckle end down and pull on the buckle until the ends can be joined.

To shorten the belt, buckle it, then pull on the loose end until the belt is snug.

If the seat belt is to be cleaned, use soap and water. Do not use carbon tetrachloride, naphtha, etc., as these will weaken the webbing. Also, for the same reason, do not bleach or redye the webbing.

FLASHER WARNING LAMP (OPTIONAL)

If your new Ford tractor is equipped with a flasher warning lamp, Figure 2, the spring-loaded push-type switch on the lamp housing is used to turn the flasher on or off.

The light switch must be in its intermediate or full out position before the flasher will operate.

For your protection, use the flasher warning lamp when traveling on public roads, day or night, unless prohibited by law in your state.

LIGHT SWITCH

The light switch, shown in Figure 3, is a push-pull type switch. Its positions are:

Full in . . . . . Off

Intermediate . . . . . Headlights (Low Beam), Instruments, and Tail Lamp

Full out . . . . . Headlights (High Beam), Instruments, and Tail Lamp

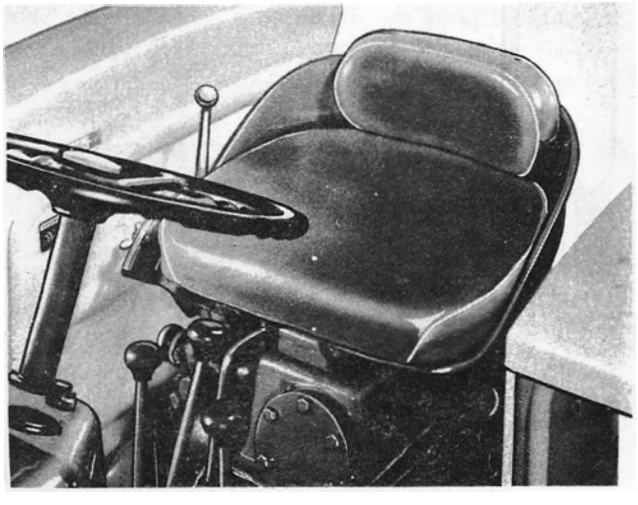


Figure 1
Tractor Seat

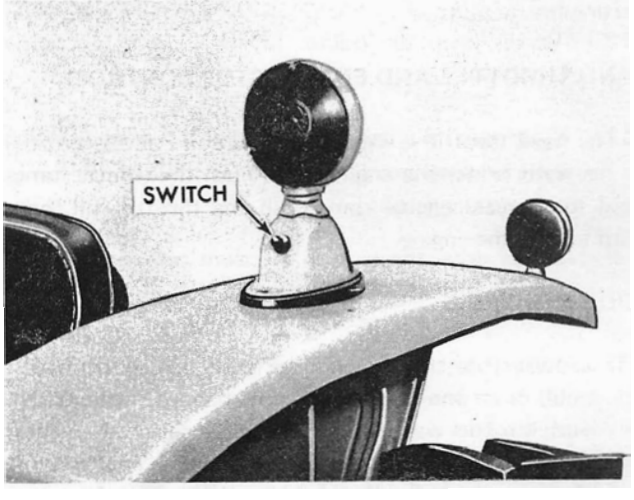


Figure 2
Flasher Warning Lamp

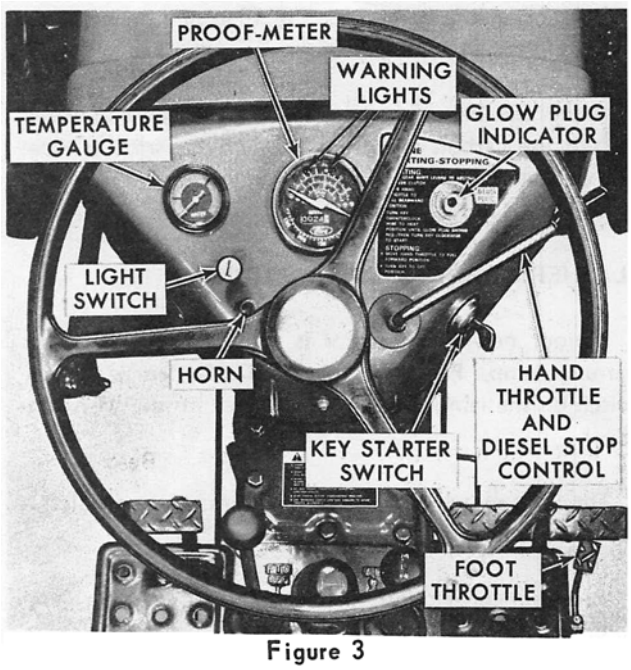


Figure 3
Engine Controls

KEY STARTER SWITCH

The key starter switch is shown in Figure 3. Turning the key to the left will activate the glow plug. Turning the key to the right to the "on" position will activate the warning lights and instruments. Turning the key further right to the "start" position will start the engine. Upon release, the key will spring return to the "on" position.

The starting circuit can only be activated when the clutch is disengaged. Always check to make certain the transmission gear shift lever is in neutral before attempting to start the engine. Refer to page 9 for complete starting instructions.

HAND THROTTLE AND ENGINE STOP CONTROL

The hand throttle is shown in Figure 3. Pull the throttle rearward to increase engine rpm. Push the throttle forward to decrease engine rpm. Push the throttle full forward to stop the engine.

FOOT THROTTLE

The foot throttle, shown in Figure 3, can be used separately, or in conjunction with the hand throttle. With the hand throttle control lever set at a selected engine rpm, the foot throttle can be used to increase engine rpm to its maximum speed. Upon release of the foot throttle, the engine speed will return to idle or to the rpm at which the hand throttle has been set to maintain.

FUEL GAUGE

The fuel gauge is shown in Figure 4. The amount of fuel in the gauge indicates the amount of fuel in the tank. If the fuel level is at the lowest point in the gauge approximately 1 gallon (3.8 Liters) remains in the tank.

TEMPERATURE GAUGE

The engine coolant temperature gauge is shown in Figure 3. When the needle is in the green zone, the engine is at its normal operating temperature. The red zone indicates a overheated engine and blue zone a cold engine.

WARNING LIGHTS

The engine oil pressure and charge indicator warning lights are located at the top of the proof-meter as shown in Figure 3. When the key starter switch is turned "on" these lights will come on. After the engine has been started, the lights should go out within a few seconds. If they do not go out:

- Engine oil pressure warning light: Stop the engine immediately and investigate the cause. It is important to remember that this light indicates oil pressure only. The operator must regularly check the crankcase for proper oil level.

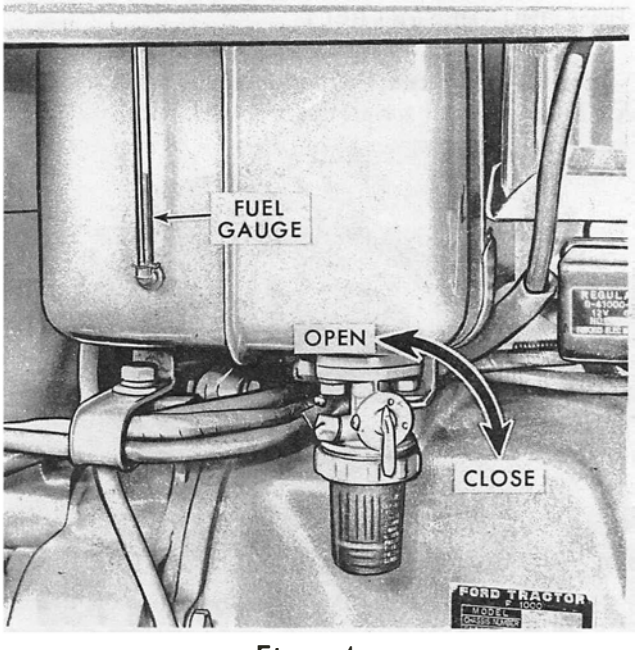


Figure 4
Fuel Gauge and Shut Off

- Charge indicator warning light: This is an indication that the battery is not being charged. Investigate the cause as soon as possible, otherwise the battery will become fully discharged.

PROOF-METER

The proof-meter is the large instrument is the center of the instrument cluster Figure 3. The proof-meter indicates:

- The hours and portions of hours your tractor has operated, based on an average engine speed of 2000 rpm. Engine speeds below 2000 rpm accumulate engine hours at a slower rate than clock hours. Engine speeds above 2000 rpm accumulate engine hours faster than clock hours. Use the proof-meter as a guide to determine hourly service and maintenance intervals.

- The engine revolutions per minute. Use the scale on the lower half of the proof-meter when operating P.T.O. driven equipment. P.T.O. driven equipment must be operated at an engine speed not to exceed 1955 rpm as shown by the yellow line on the rpm scale. Additional information on P.T.O. operation may be found on page 11.

- Ground speeds: The scales on the upper half of the proof-meter indicate ground speeds in miles per hour for 3rd, 6th, and 9th gears. Additional ground speed information may be found on page 35.

FUEL SHUT-OFF VALVE

The fuel shut-off valve, shown in Figure 4, is located on the left side of the tractor under the fuel tank. Turning the valve clockwise will stop the flow of fuel from the tank.

BRAKE AND REAR AXLE CONTROLS

BRAKE PEDALS

The brake pedals are shown in Figure 5. The right brake pedal is used to brake the right rear wheel. The left pedal is used to brake the left rear wheel. Depress both pedals simultaneously to stop the tractor.

To assist in making sharp turns at slow speeds, depress the right or left brake pedals as required.

CAUTION: When operating the tractor at high speeds, never attempt to make sharp turns by using the brakes.

BRAKE PEDAL LOCK

The brake pedal lock, shown in Figure 5, is used to secure the brake pedals together. Lock the pedals together whenever the tractor is operated at high speeds and at any time the tractor is used on the highway.

PARKING BRAKE LEVER

The parking brake lever shown in Figure 5, is used for locking the brake pedals in the applied position. The parking brake should be applied whenever the tractor is parked.

To apply the brake:

- Lock the brake pedals together with the brake pedal lock.

- Depress both brake pedals.

- Pull back on the parking brake lever. The teeth on the lever will engage the pawl on the left-hand brake pedal and will retain the pedals in the applied position.

To release the parking brake:

- Depress the brake pedals to release the pawl.

- Unlock the brake pedals if operating conditions require independent rear wheel braking action.

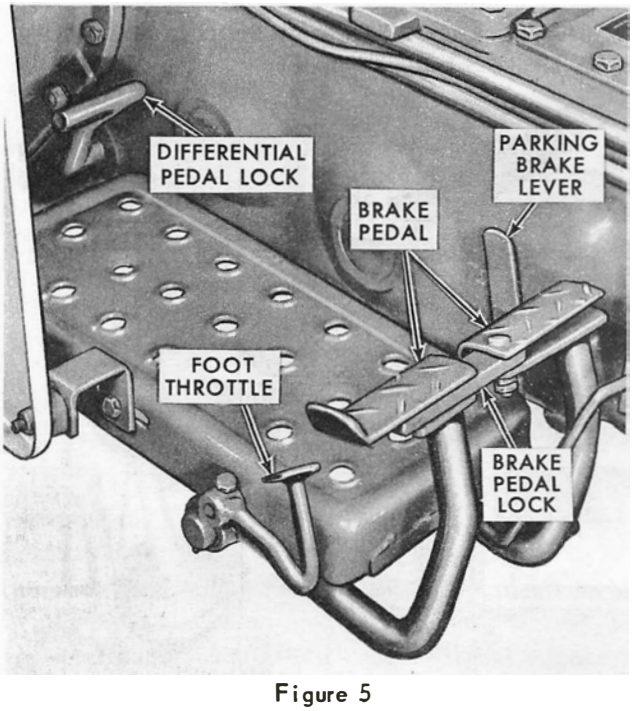


Figure 5
Brake and Rear Axle Controls

DIFFERENTIAL LOCK PEDAL

The differential lock pedal is shown in Figure 5. Depressing the pedal locks the rear axle shafts together, providing for additional traction in wet or loose soil. Refer to page 11 for differential lock operating information.

TRANSMISSION AND P.T.O. CONTROLS

TRANSMISSION GEARSHIFT LEVERS

The transmission gearshift levers are shown in Figure 6. A diagram showing the shift pattern is cast into the transmission cover.

The gearshift lever is the longer of the two transmission levers. It is used with the high-medium-low shift lever to select one of the forward or reverse gears. Always depress the clutch pedal before moving either lever. Refer to "OPERATING THE TRANSMISSION AND P.T.O." on page 10 for operating information.

CLUTCH PEDAL

The foot operated clutch pedal, Figure 6, must be completely depressed to start the tractor or to stop forward travel and P.T.O. shaft rotation. Always fully depress the pedal when changing gear ratios.

TRANSMISSION P.T.O. CONTROL LEVER

The transmission P.T.O. control lever is shown in Figure 6. The lever engages and disengages the P.T.O. If the tractor engine is running, always depress the clutch pedal fully before moving the lever. Move the lever rearward to engage the P.T.O. and forward to disengage the P.T.O.

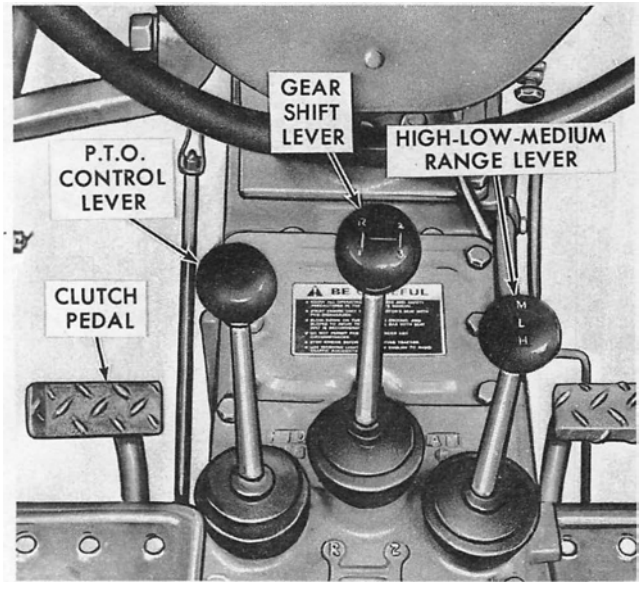


Figure 6
Transmission Controls

HYDRAULIC LIFT SYSTEM CONTROLS

HYDRAULIC LIFT CONTROL LEVER

The hydraulic lift control lever is shown in Figure 7. To raise the hydraulic lift arms, pull the lever up. To lower the lift arms, push the lever down. The adjustable stop is provided for locating the lever at any position in the quadrant.

FLOW CONTROL KNOB

The flow control knob is shown in Figure 7. Turning the knob "in" (clockwise) will decrease the lowering speed of the lower links and turning the knob "out" (counter-clockwise) will increase the lowering speed of the lower links. Refer to "FLOW CONTROL" page 12, for additional information on operating the flow control knob.

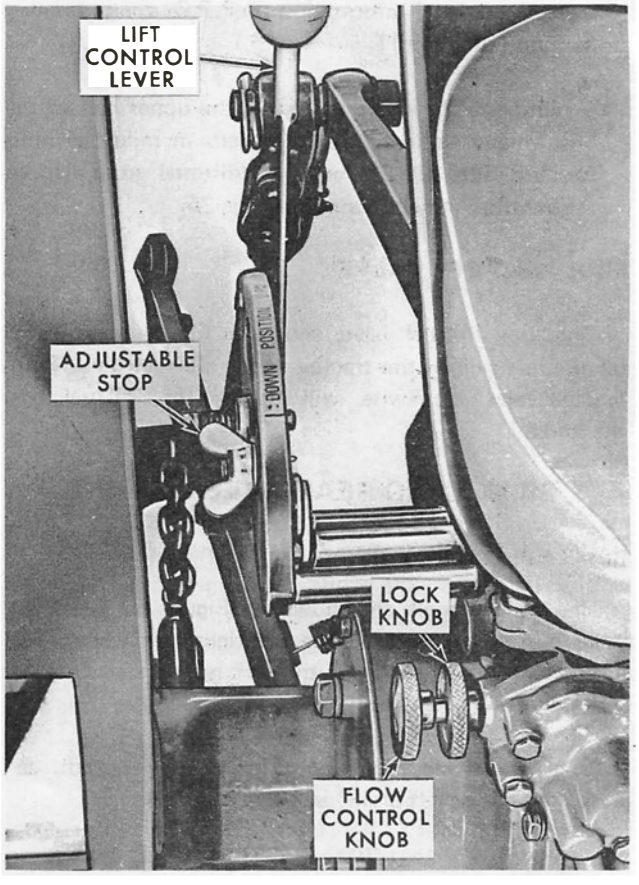


Figure 7
Hydraulic Lift System Controls

BREAK-IN PROCEDURES

Your new Ford Tractor will provide long and dependable service if given proper care during the 50-hour break-in period. During the first 50 hours of operation:

1. Avoid "lugging" the engine. Operating in too high a gear under heavy load may cause engine "lugging." "Lugging" is indicated when the engine will not respond to a throttle increase.

2. Use the lower gear ratios when pulling heavy loads and avoid continuous operation at constant engine speeds. You will save fuel and minimize engine wear by selecting the correct gear ratio for a particular operation. Operating the tractor in low gear with a light load and high engine speed will waste fuel.

3. Avoid prolonged operation at either high or low engine speeds without a load on the engine.

4. Check the instruments frequently and keep the radiator and oil reservoirs filled to their recommended levels. Daily checks include:

   - Engine oil level
   - Radiator Coolant
   - Air cleaner

STARTING THE ENGINE

A safety starter switch on the Ford 1000 allows the starting motor to be used only when the clutch pedal is depressed. The transmission gear shift lever should always be in neutral and the P.T.O. lever in the off position prior to starting the engine.

CAUTION: Never attempt to start the engine while standing beside the tractor -- always sit in the seat when starting the engine.

IMPORTANT: Do not engage the starting motor continuously for more than 30 seconds; doing so may cause starting motor failure.

WARM WEATHER STARTING

To start a cold engine in warm weather or to start an engine that is warm:

1. Depress the clutch pedal and move the shift lever to the neutral position.

2. Move the hand throttle to the full open position.

3. Turn the key starter switch to the "start" position, Figure 8. When the engine starts, release the key. Check to be sure the warning lights go out. If the engine fails to start after cranking for approximately 10 seconds, refer to the following "COLD WEATHER STARTING" information.

COLD WEATHER STARTING

If the engine fails to start using the preceding warm weather starting procedure or when starting the engine in cold weather:

1. Depress the clutch pedal and move the shift lever to the neutral position.

2. Move the hand throttle to the wide-open position.

3. Turn the key starter switch to "heat" to pre-heat the pre-combustion chamber and wait until the glow plug indicator, Figure 8, shows red (approximately 30 seconds).

4. Turn the key starter switch to the "start" position. When the engine starts, release the key. Check to be sure the warning lights go out.

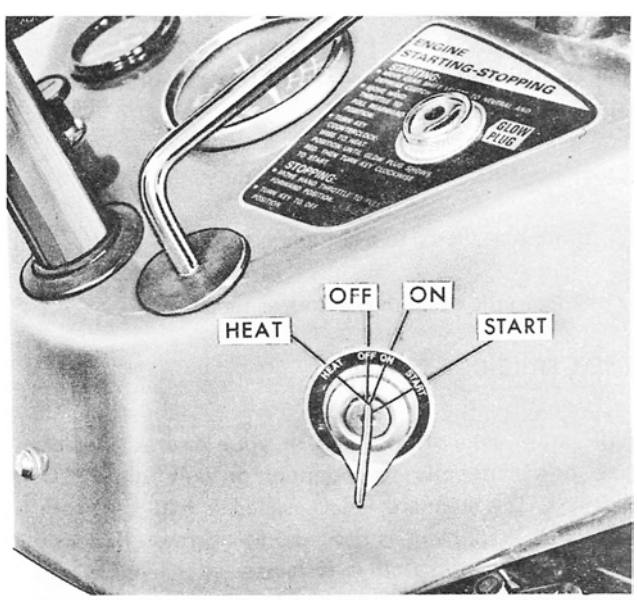


Figure 8
Key Starter Switch

STOPPING THE ENGINE

Push the hand throttle fully forward past idle position to stop the engine, then turn the key-starter switch, Figure 8, to the "Off" position.

IMPORTANT: Failure to turn the key-starter switch to the "Off" position after the engine stops will allow the warning lights to remain on, thus causing the battery to discharge.

OPERATING THE TRANSMISSION AND P.T.O.

The transmission operates through the use of a clutch pedal, a gear shift lever, and a high medium-low range lever. Figure 9 illustrates the pedal and levers involved. Ground speeds for the various gear ratios can be found on page 35.

When in motion, always depress the clutch pedal fully and bring the tractor to a complete stop before moving either gearshift lever. Do not attempt to change gears while the tractor is in motion.

NOTE: Avoid using the clutch pedal as a "footrest" (riding the clutch). Prolonged operation in this manner can cause damage to the clutch components.

When the range lever is in the low range, 1st, 2nd, 3rd and low reverse can be selected with the gear shift lever. When the range lever is in the medium range, 4th, 5th, 6th and medium reverse can be selected. When the range lever is in the high position, 7th, 8th, 9th and high reverse can be selected.

To change from one gear ratio to another, or to change ranges:

1. Depress the clutch pedal completely.
2. Bring the tractor to a complete stop.
3. Shift to the desired gear and/or range.

POWER TAKE-OFF

The power take-off (P.T.O.) in your tractor transfers engine power directly to mounted or pull-type P.T.O. equipment. The standard P.T.O. speed is 540 ± 10 rpm. Most P.T.O. equipment is designed to operate efficiently at this speed. This speed is obtained when engine rpm is set at 1955 rpm, as indicated by the yellow line on the Proof-Meter rpm scale.

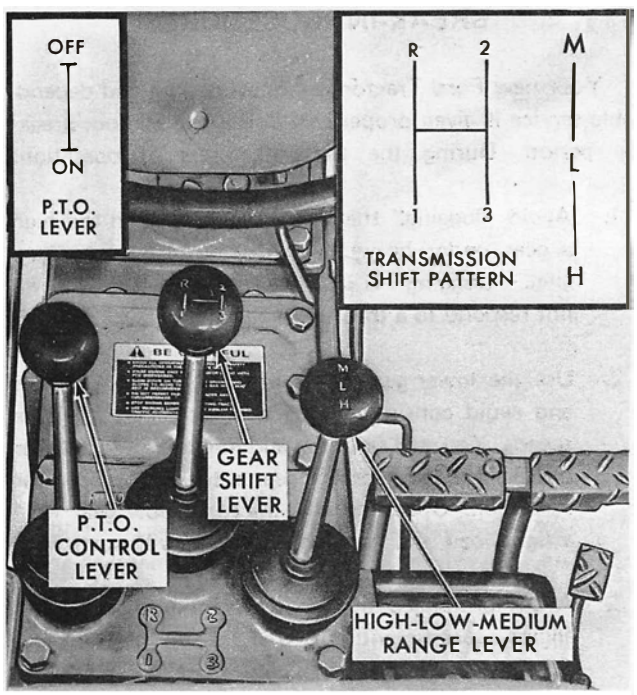


Figure 9
Transmission Controls and Shift Pattern

CAUTION: Do not exceed 1955 rpm engine speed when operating P.T.O.-driven equipment.

The transmission P.T.O. is controlled through a lever shown in Figure 9. The transmission P.T.O. can be engaged, operated, and disengaged whether or not the tractor is in motion, provided that it is operated as described under "POWER TAKE-OFF OPERATION"

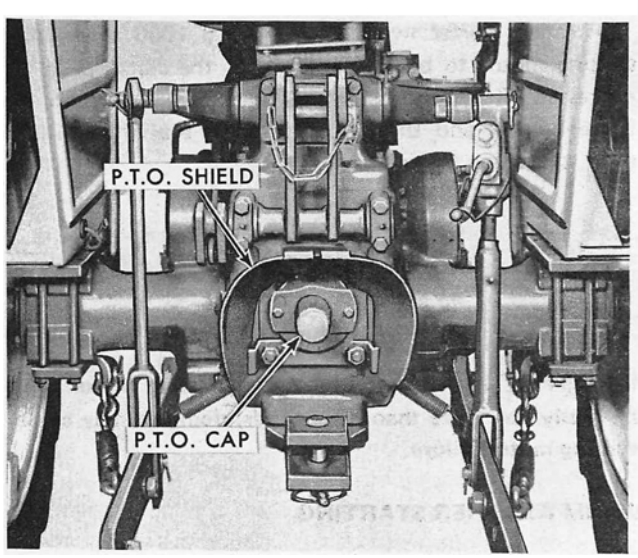


Figure 10
P.T.O. Cap and Shield

P.T.O. SHIELD

The P.T.O. shield, shown in Figure 10, is standard equipment. The shield is to be used with both mounted and pull-type equipment. Always install the P.T.O. shield when using P.T.O.-driven equipment.

POWER TAKE-OFF OPERATION

1. Stop the engine, set the parking brake, remove the P.T.O. shaft cap, and attach the mounted or drawn equipment. Make sure the equipment-driven shaft is properly aligned and locked to the tractor P.T.O. drive shaft and that the P.T.O. shield is installed on the tractor.

CAUTION: To reduce the possibility of personal injury and damage to the equipment, comply with the following before attaching or detaching P.T.O. equipment, and before working on or clearing P.T.O. equipment.

- **Disengage the P.T.O. with the P.T.O. control lever, Figure 9.**
- **Depress the clutch pedal completely and move the transmission gearshift lever to the neutral (N) position.**
- **Shut off the tractor engine.**
- **Wait until the P.T.O. shaft stops turning.**

2. With the P.T.O. disengaged, start the engine. In the case of mounted equipment raise and lower the equipment to make sure proper clearances exist.

3. With the transmission in neutral, depress the clutch pedal completely, then engage the P.T.O. by moving the P.T.O. control lever, Figure 9, rearward.

   NOTE: Failure to move the P.T.O. lever through its full range may result in damage to the P.T.O.

4. Check the P.T.O.-driven equipment for proper operation by gradually releasing the clutch pedal and increasing engine rpm.

5. After determining that the equipment is operating properly, depress the clutch pedal and shift to the desired operating gear. Release the pedal gradually to start the P.T.O. and tractor in motion.

6. Control the P.T.O. speed with the throttle, never exceeding 1955 rpm. If the tractor movement is to fast for the P.T.O. load, stop the tractor and shift to a lower gear.

7. Disengage the P.T.O. with the P.T.O. control lever when making sharp turns and with mounted equipment in the fully raised position.

8. Disconnect the P.T.O.-driven shaft at the tractor P.T.O. shaft before traveling on highways or for any great distance.

9. Reinstall the P.T.O. shaft cap when the P.T.O.-driven equipment is disconnected from the tractor or when the P.T.O. is not being used.

TOWING THE FORD 1000

To tow your tractor, place the transmission gearshift levers in neutral. Do not exceed 20 mph (32 kph). Do not tow your tractor to start it.

If the tractor is to be moved any great distance, use a solid tow bar and pull the tractor at a speed not to exceed 20 mph (32 kph).

CAUTION: For safety reasons, towing the Ford 1000 on the highway is not recommended. Also, for safety reasons, never attempt to start the engine by towing.

OPERATING THE DIFFERENTIAL LOCK

The differential lock is engaged by depressing the pedal located on the right side of the center housing, Figure 11. Depressing the pedal locks both rear axle shafts together, preventing one wheel from rotating independently of the other. The lock should be used to obtain additional traction from the opposite wheel whenever one wheel begins to slip in wet or loose soil.

Do not engage the differential lock when driving the tractor on the highway or when ground speed is above 5 mph (8 kph).

CAUTION: Do not engage the differential lock when turning the tractor. If the lock is engaged when turning, a loss of steering control may result.

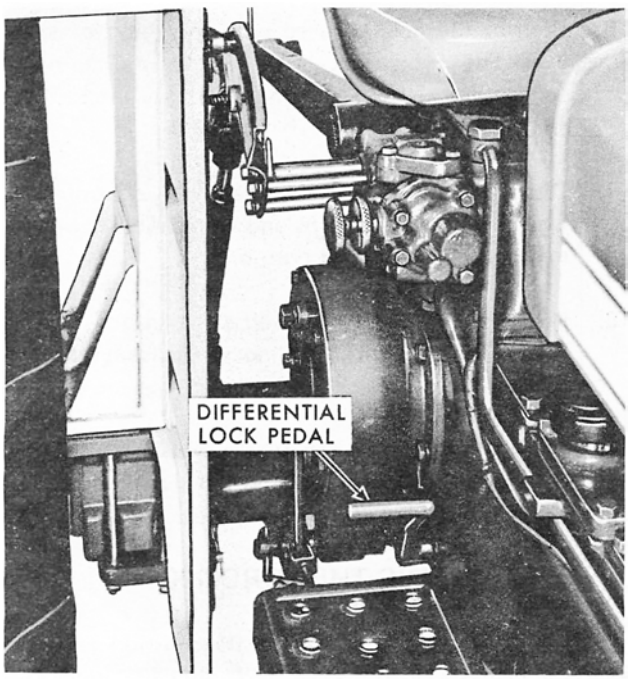


Figure 11
Differential Lock Pedal

To operate the differential lock, depress and hold down the pedal until the lock is positively engaged. It is best to engage the differential lock while the wheels are turning slowly to minimize shock loads to the drive line. If a wheel spins at high speed, as on ice, reduce engine speed to idle before engaging the lock, or damage may occur. The differential lock is released by releasing the pedal.

NOTE: In some instances the lock may remain engaged after the pedal is released. This may occur if one rear wheel tends to turn at a faster speed than the other. Should this happen, the lock may be disengaged by either of two ways.

- **Decrease the drawbar pull by raising or disengaging the implement so that neither wheel tends to slip.**

—OR—

- **Rapidly apply and release a light breaking load to the rear wheel that is turning most rapidly.**

OPERATING THE HYDRAULIC LIFT SYSTEM

The hydraulic lift system provides accurate, smooth, and instant hydraulic power for raising a variety of compatable equipment whenever the engine is running. The position control feature of the system maintains the selected height or depth of three point linkage equipment in relation to the tractor. When the hydraulic lift control lever is moved to a higher or lower setting in the quadrant, the system repositions the equipment to a higher or lower position and maintains the selected position.

FLOW CONTROL

The flow control knob, Figure 12, provides an adjustment to regulate the flow of oil from the lift cylinder thus slowing or increasing the rate of drop of the lower links. To adjust the rate of flow, back off the lock knob, Figure 12, and either turn the flow control knob "in" (clockwise) to decrease the rate of drop or "out" (counter-clockwise) to increase the rate of drop. After the flow control knob has been adjusted to the desired setting, secure the flow control knob by tightening the lock knob.

TOP LINK MECHANICAL DRAFT CONTROL (OPTIONAL)

The optional mechanical draft control system is shown in Figure 13. With the top link set for draft control, changes in the draft load of the attached implement are sensed through the upper link of the three point hitch. The mechanical draft control system tends to raise the implement slightly as the draft load increases and lowers the implement slightly as the draft load decreases. In this way, more uniform draft loads are maintained on the implement. The system is also very effective in controlling the maximum depth of mounted tillage equipment.

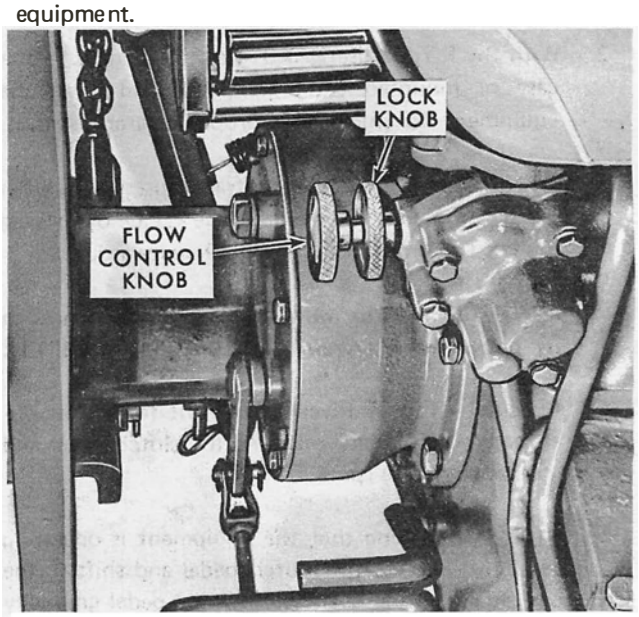


Figure 12
Flow Control Knob

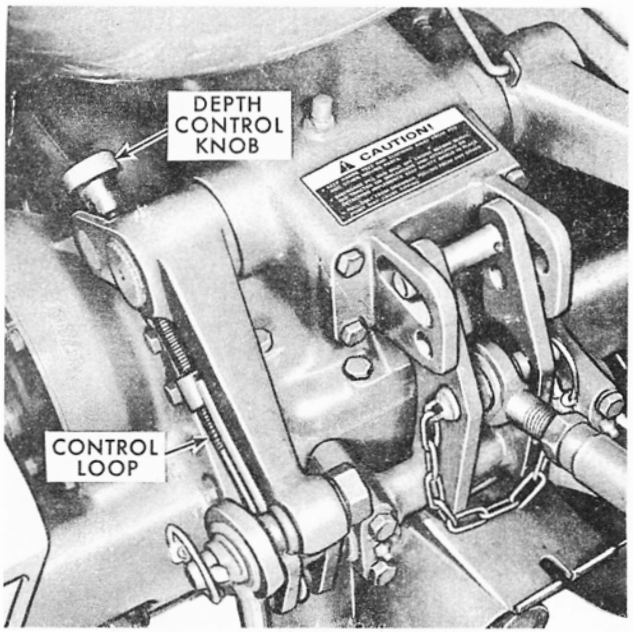


Figure 13
Hydraulic Lift Linkage–Mechanical Draft Control

With the lock pin installed, Figure 14, the tractor hydraulic system will maintain the selected height or depth of three point linkage equipment in relation to the tractor effectively locking out response to changes in draft. Install the lock pin when transporting mounted implements. This will minimize implement bouncing while traveling over rough terrain or roadways.

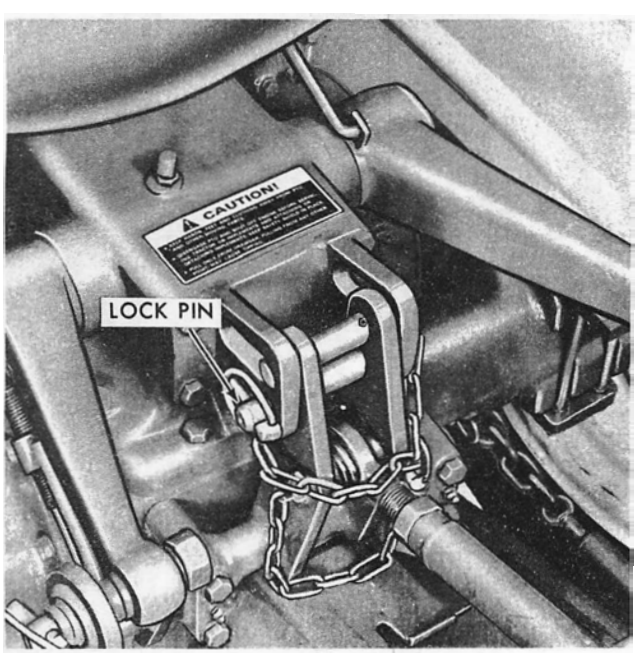


Figure 14
Hydraulic Lift Linkage–Lock Pin Installed

To operate in top link draft control:

1. Remove the lock pin, Figure 14, from the lift rocker.

2. Move the lift control lever down the quadrant until the operating depth is obtained.

   NOTE: If the depth control prevents the lower links from reaching the desired depth, turn the depth control knob counter-clockwise to extend the depth control loop, Figure 13.

3. After desired depth is obtained, turn the depth control knob clockwise until the control loop controls the shaft bracket pin.

4. The draft control system now maintains the draft load as represented by this depth until the lift control lever is moved up the quadrant to decrease the depth and draft load or the depth control knob is turned counter-clockwise to increase depth and draft load.

   NOTE: Whenever the operating depth is decreased, the depth control knob must be readjusted so the depth control loop remains in contact with the bracket pin.

WHEEL TREAD SETTINGS

FRONT WHEEL TREAD SETTINGS

The front wheel tread setting is adjustable from 43 to 60 inches (109.3-153.4 cm) in approximately 6 inch (15.2 cm) increments by a combination of repositioning the front axle and reversing the front wheels. See Figure 15. To reposition the front axle:

1. Raise the front of the tractor with a jack placed under the center of the front axle.

2. Remove the bolt from the tip rod clamp.

3. Remove the positioning bolts, Figure 15, and move the axle sections in or out until the desired setting is obtained, then reinstall the positioning bolts.

4. Position the front wheels in the straight ahead position, then reinstall the tie rod clamp bolts.

5. Torque all nuts to 40-45 lbs. ft. (5.5-6.2 kgm) and remove the jack.

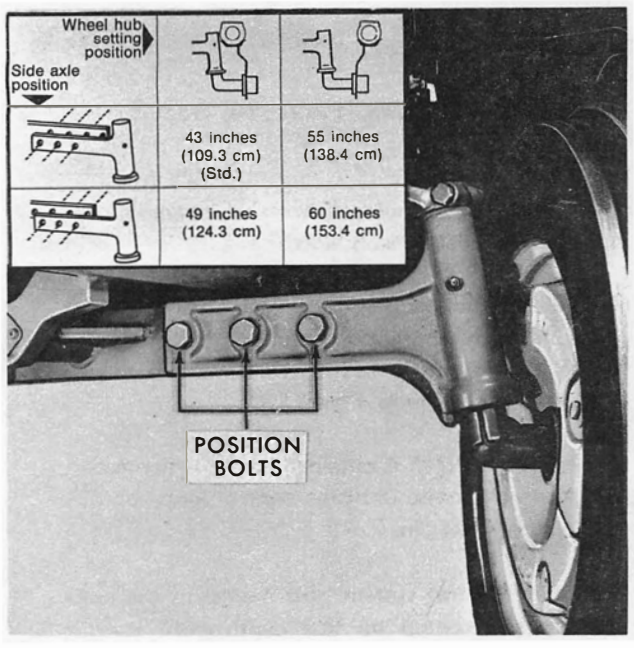


Figure 15
Front Wheel Tread Settings

6. Check the toe-in as outlined on page 31.

REAR WHEEL TREAD SETTINGS

The rear wheels on the Ford 1000 are adjustable from 48 to 58.7 inches (121.9 to 149.1 cm). Tread width settings are made by changing the position of the rim with respect to the wheel disc, by changing the position of the wheel disc with respect to the axle, and by interchanging the rear rims. These various positions are shown in Figure 16.

NOTE: After changing the rear wheel tread setting, the wheel rim and disc nuts should be torqued to 180-220 lbs. ft. (25-30 kgm) and the disc-to-axle nuts should be torqued to 125-140 lbs. ft. (17.2-19.4 kgm).

TRACTOR WEIGHTING

To obtain sufficient traction for maximum performance in heavy draft operations and to counterbalance rear mounted equipment, weight should be added to the tractor in the form of liquid ballast, cast iron weights, as shown in Figure 17 through 19, or a combination of both. Only enough weight should be added to provide good traction and stability.

Adding more weight than is needed results in unnecessary soil compaction and increased rolling resistance and thus higher fuel consumption.

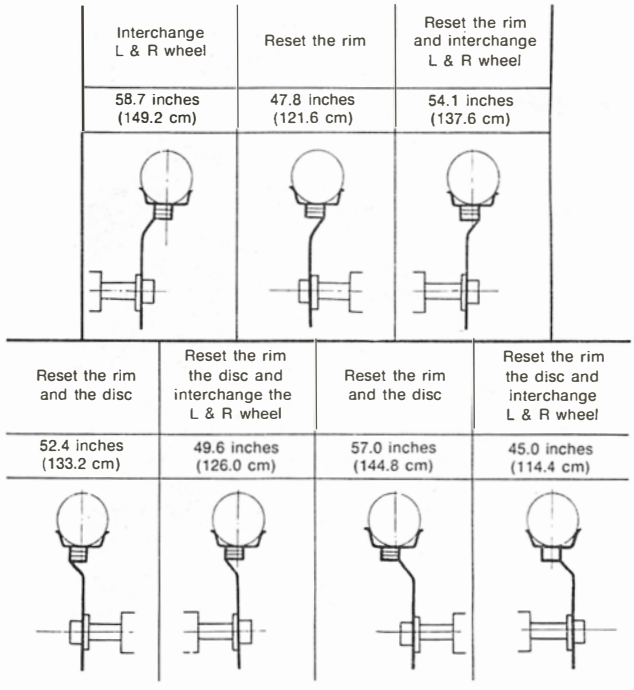


Figure 16
Rear Wheel Tread Settings

NOTE: When adding weight, adhere to the tire load capacities. Refer to "Tire Pressure" and the "Tire Inflation Versus Permissible Load" table on page 16.

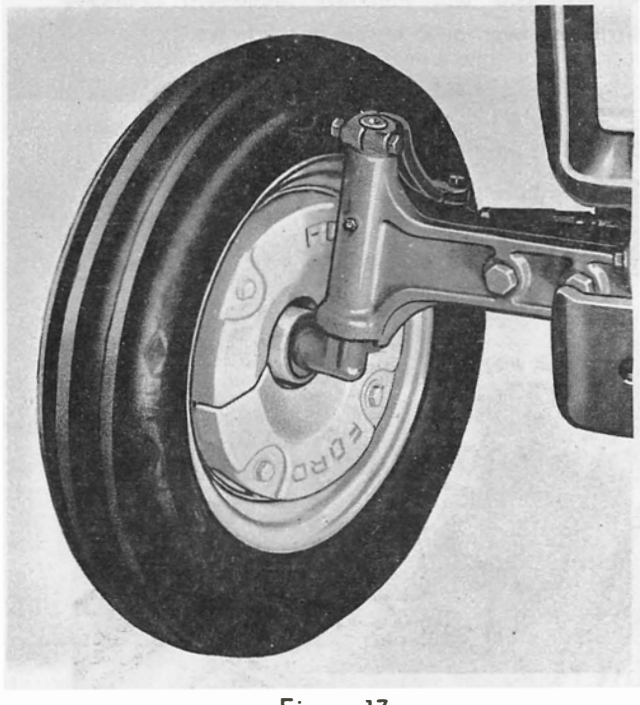


Figure 17
Front Wheel Weights

WEIGHTING LIMITATIONS

The weighting limitations that follow are limitations only, they do not imply that the tractor should be weighted to obtain the weights shown. Use only enough weight to obtain good performance, and do not exceed the tire load capacities. Do not add weight to the outer wheels of duals.

TOTAL VEHICLE WEIGHT

Total weight of the tractor, including liquid ballast, cast iron weights, and mounted equipment must not be greater than 3850 lbs. (1746.4 kg).

TOTAL REAR AXLE WEIGHT

Total rear axle weight, including liquid ballast, cast iron weights, and mounted equipment must not exceed 2750 lbs. (1246.4 kg).

Total rear axle weight is measured with only the rear wheels on the scales, with liquid ballast and/or cast iron weights in place, and with mounted equipment in the raised position.

LIQUID BALLAST

It is a common practice to add weight to the tractor by filling the front and rear tires with liquid. A calcium chloride ($CaCl_2$) and water solution is recommended due to its low freezing point and greater density (weight per gallon) then water. Because special equipment is required to fill the tires, we recommend that you consult your Ford Tractor-Equipment Dealer.

The following table lists the tire sizes available, along with weighting information for each. The table is based on a 75% fill (tire filled to the valve stem when the valve stem is at its highest point, at the top of the wheel) and the fact that:

5 lbs. of $CaCl_2$ added to 1 U.S. Gallon of Water = 13.5 lbs. (6.12 kg.)

6 lbs. of $CaCl_2$ added to 1 IMP. Gallon of Water = 16.2 lbs. (7.35 kg.)

2.7 kg. of $CaCl_2$ added to 1 IMP. Gallon of Water = 6.55 kg. (14.45 lbs.)

0.59 kg. of $CaCl_2$ added to 1 Liter of Water = 1.59 kg. (3.52 lbs.)

The proportions shown above all yield the same percentage mixture of $CaCl_2$ and water.

CAUTION: Never pour water on calcium chloride. Slowly add the calcium chloride flakes to the water and stir until dissolved.

NOTE: Plain water freezes at 32° F. (0° C.). The 5 lb. calcium chloride solution remains slush-free to –52° F. (--46.5° C.) and will freeze solid at –62° F. (–52° C).

LIQUID BALLAST TABLE

Tire Size	WATER ONLY					5 LB. $CaCl_2$ SOLUTION					
	Volume			Weight		Volume			$CaCl_2$		Weight	
	U.S. Gal.	Imp. Gal.	Liters	Lbs.	Kg.	U.S. Gal.	Imp. Gal.	Liters	Lbs.	Kg.	Lbs.	Kg.
5.00 x 15	3	2.4	11.3	25	11.3	2.5	2.0	9.5	12.5	5.6	33	14.9
20 x 8.00-10	4	3.3	15.1	33	14.9	3	2.4	11.3	15	6.8	40	18.1
11.2 x 24	23	19.1	87.0	192	87.0	19	15.8	71.9	95	4.3	253	114.7
13.6 x 16	28	23.3	105.9	234	106.1	23	19.1	87.0	120	54.4	312	141.5

NOTE: The above figures are for individual tires only. For combined front axle and/or rear axle weight multiply the figures by 2.

CAST IRON WEIGHTS

Cast iron weights are available as accessories from your Ford Tractor-Equipment Dealer. Weights can be mounted on the front wheels, on the front end of the tractor, and on the rear wheels as shown in Figures 17 through 19.

TIRE PRESSURE

Tire pressure must be considered when adding weight to the tractor. The following "TIRE INFLATION vs. PERMISSIBLE LOAD" table lists the tire sizes available and shows the maximum load the tires can carry for a given air pressure. Note that the load capacities decrease as inflation pressure decrease, and also that a specific tire pressure is recommended for certain size tires.

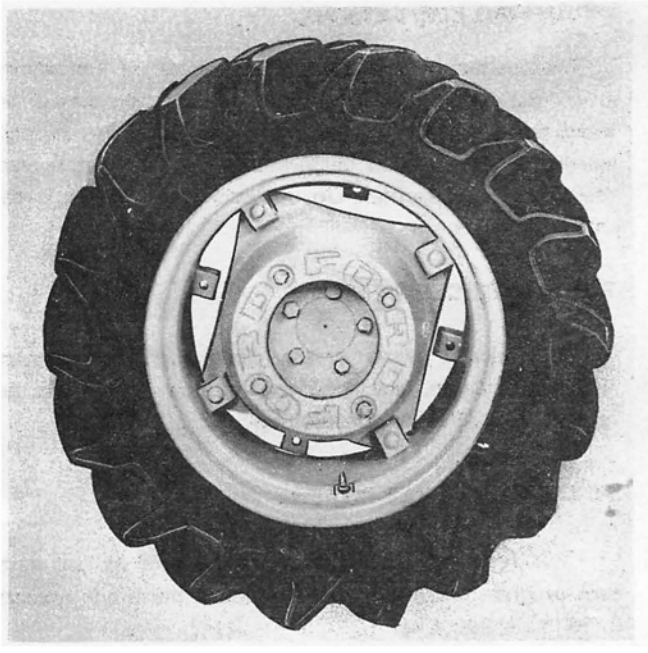
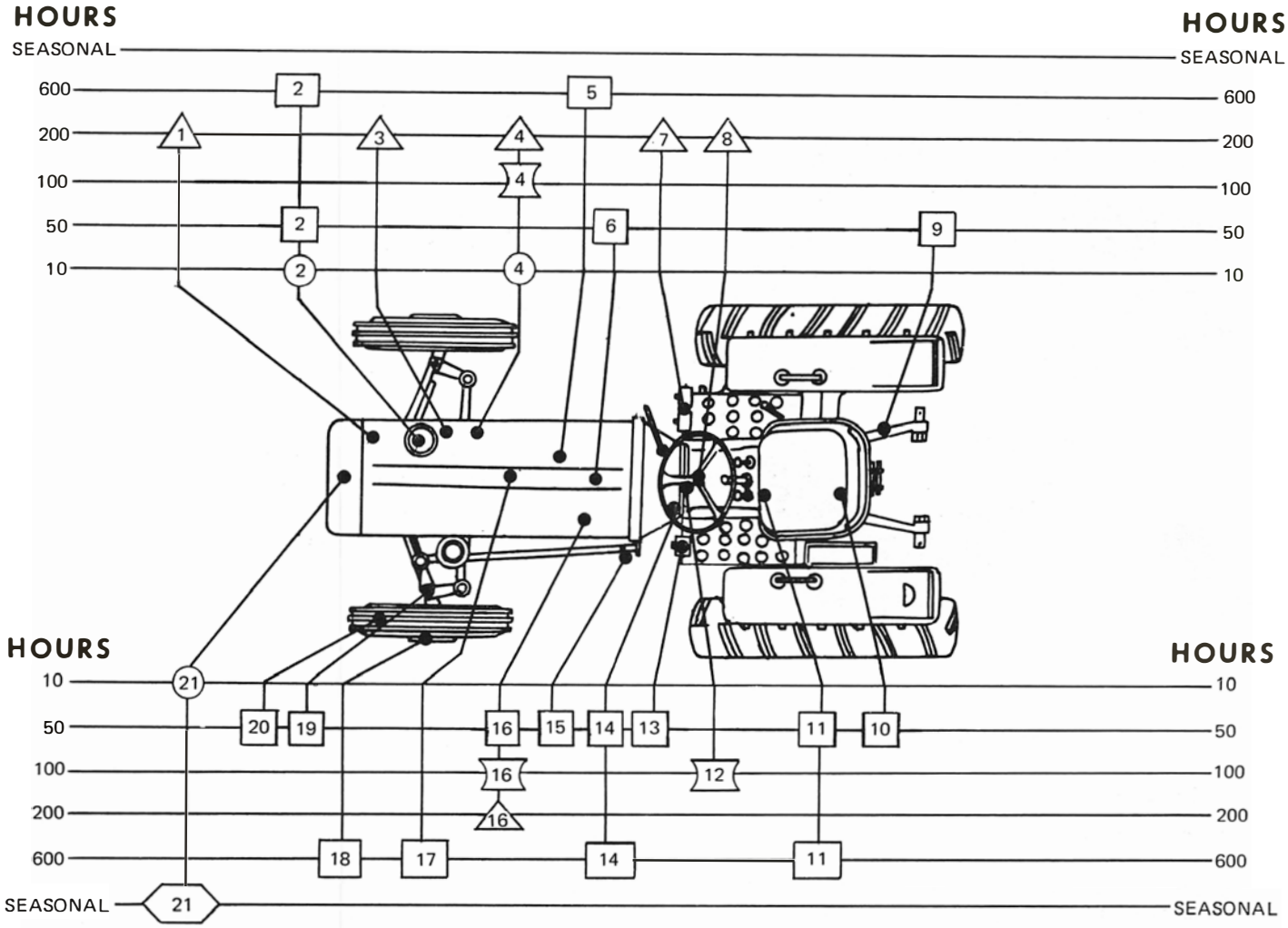


Figure 18
Rear Wheel Weights

TIRE INFLATION vs. PERMISSIBLE LOAD

	Inflation Pressures (psi)								
Front Tire Size	**8**	**10**	**12**	**20**	**24**	**28**	**32**	**36**	**40**
	Maximum Permissible Load (Lbs.)								
5.00 x 15	—	—	—	540	600	660	710	760	810
20 x 8.00-10	450	510	570	—	—	—	—	—	—
	Inflation Pressures (psi)								
Rear Tire Size	**12**	**14**	**16**	**18**	**20**	—	—	—	—
	Maximum Permissible Load (Lbs.)								
11.2 x 24	1470	1610	1740	1860	—				
13.6 x 16	1610	1760	1900	2040	2160				

NOTE: Do not exceed the maximum load listed. Also, do not under-inflate or over-inflate the tires.



NO.	LUBRICATION AND MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST		SERVICE INTERVALS
4	Engine Oil Level	X						Every (10) Hours or Daily
21	Radiator Coolant	X						
2	Air Cleaner	X						
2	Air Cleaner		X	X	X			Every 50 Hours
11	Trans. and Rear Axle Oil Level	X						
14	Hydraulic Oil Reservoir	X						
16	Fuel Filter		DRAIN					
6	Battery	X						
20	Tires	X						
13	Clutch Pedal	X				X		
–	Lubrication Fittings:							
15	Steering Linkage (4)			X				
19	Front Wheel Spindles (2)			X				
9	Hydraulic Lift Linkage (2)			X				
10	Draft Control Cross Shaft (2)			X				

NO.	LUBRICATION AND MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST		SERVICE INTERVALS
12	Steering Gear Housing Oil Level	X						Every 100 Hours
16	Fuel Filter		X					
4	Engine Oil				X			
16	Fuel Filter				X			Every 200 Hours
3	Fuel Injection Pump Oil				X			
1	Fan Belt	X				X		
4	Engine Oil Filter				X			
7	Brakes					X		
8	Steering Free-Play					X		
11	Transmission and Rear Axle Oil				X			Every 600 Hours
5	Fuel Injectors	X						
14	Hydraulic Oil				X			
18	Front Wheel Bearings			X				
2	Air Cleaner (Disassemble)		X					
17	Valve Clearance	X						
21	Radiator Coolant				X			Seasonal

LUBRICATION AND MAINTENANCE CHART — FORD 1000

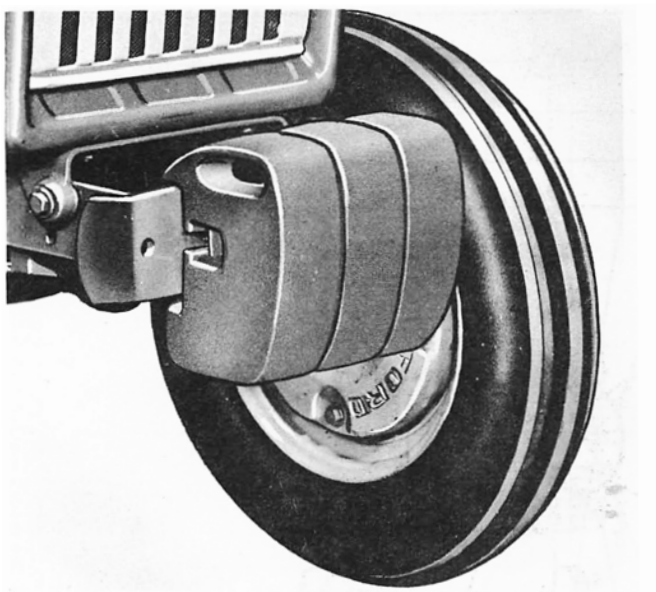


Figure 19
Front End Weights

FUEL AND LUBRICANTS

DIESEL FUEL

Type of fuel to use:

When operating in temperature above 20° F, use diesel fuel oil No. 2 (No. 2D) with a minimum cetane rating of 45. When operating in temperatures below 20° F, use diesel fuel oil No. 1 (No. 1D) with a minimum cetane rating of 50.

Fuel represents a major portion of your tractor operating costs; therefore, it is important to use it efficiently. Do not let low price tempt you to use inferior diesel fuel. The initial savings is a false economy when you consider the damage poor fuel can do to your tractor fuel system.

NOTE: Use only fuel designated for diesel engines. Some heating fuels contain harmful chemicals that, if used, can seriously affect tractor efficiency and performance. Refer to the "Engine Oil Recommendations" on page 19 for additional diesel fuel information.

STORAGE

Extremely small clearances exist between the fuel delivering elements of the fuel injection pump and the fuel delivering elements of the injectors. Therefore, it is of vital importance that precautions be taken to make sure the fuel is kept free of dirt and water. See Figure 20.

Diesel fuel should be stored in black iron tanks or containers. Do not store diesel fuel in a galvanized tank, as the zinc coating will react with the fuel and form un-

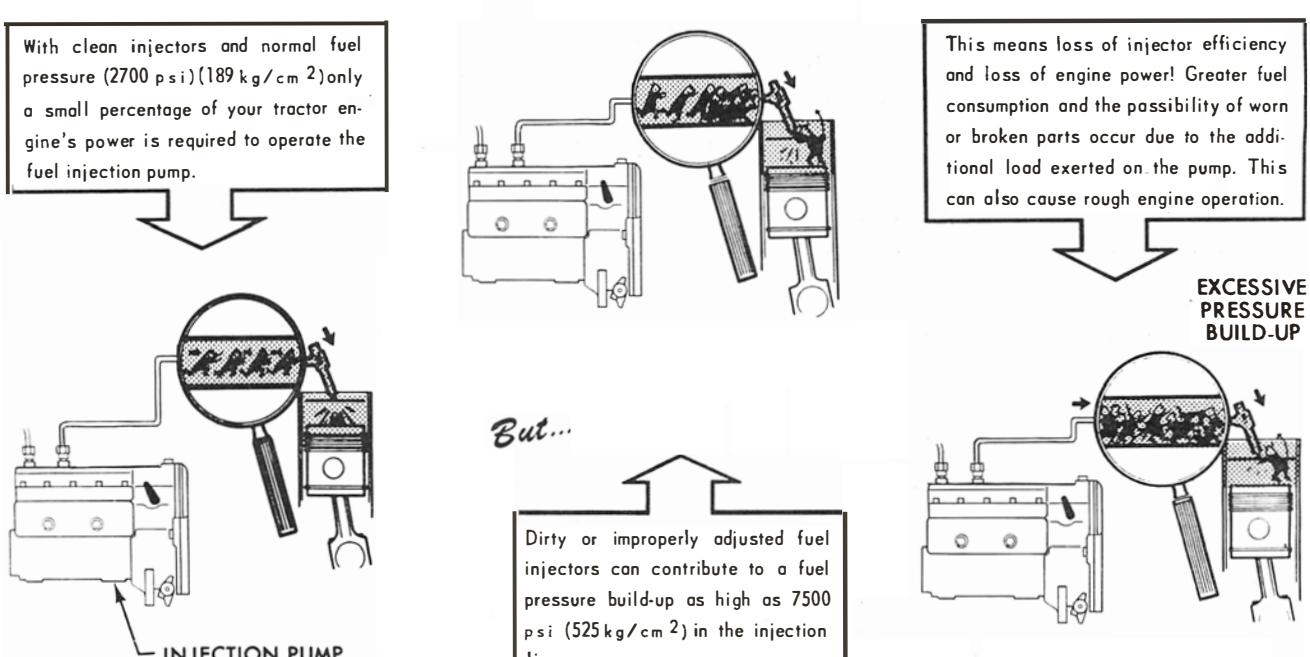


Figure 20
Dirt vs. Injectors

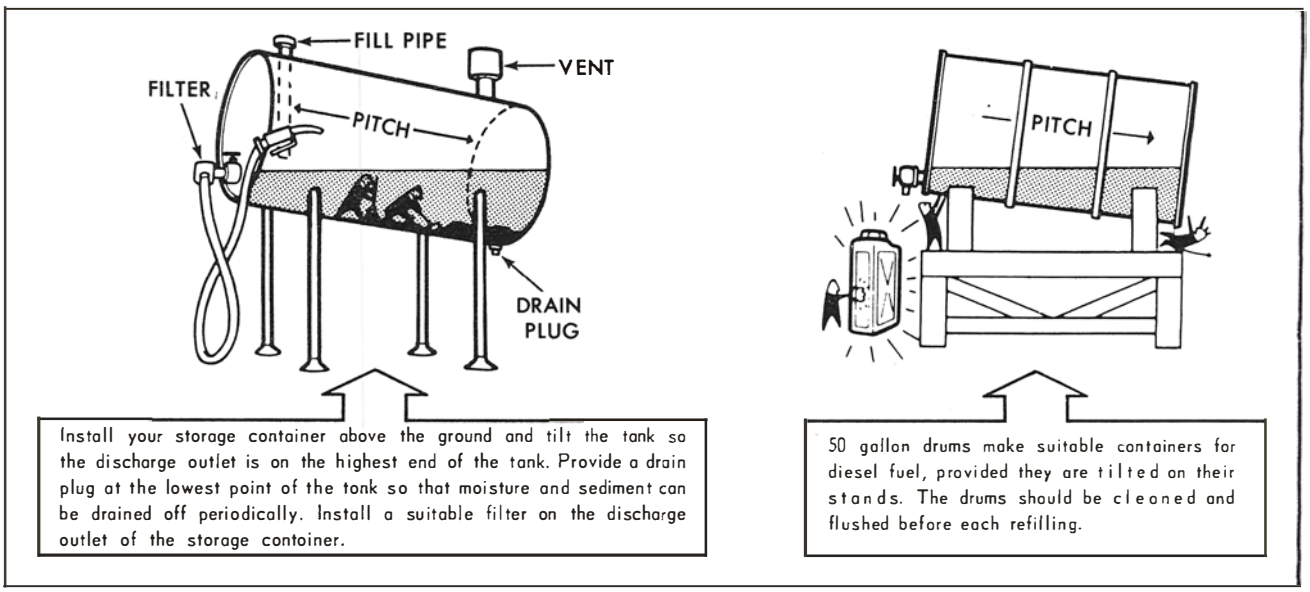


Figure 21
Diesel Fuel Storage

desirable compounds that may interfere with the proper operation of the fuel injection pump and injectors.

The most satisfactory arrangement is a bulk storage installation with either a tank and pump, Figure 21, or a gravity feed installation located high enough for the tractor tank to be filled direct. The tank should slope downward at the rear to allow sediment to settle away from the take-off point. Whenever the tank is refilled, allow the fuel to settle for 12 hours before using. A drain valve should be positioned at the lowest point in the tank so the moisture and sediment can be drained periodically. A fuel outlet filter should be used, as shown in Figure 21. Use the largest tank feasible and keep it as full as possible to minimize condensation.

If bulk storage is not possible and the fuel is stored in barrels, keep them in a clean, dry place. The barrel in use should be fitted with a fuel outlet filter and a drain tap, and should be supported so it slopes downward 1/2 inch per foot length away from the tap.

After use, install the cap at the top of the barrel and clean up fuel which may have been spilled. Diesel fuel will not evaporate and thus will collect dust and dirt.

REFUELING THE TRACTOR

If there is no filter on the outlet of the storage tank, filter the fuel through a 100-mesh screen or finer when filling the tractor fuel tank. Keep the tractor tank as full as possible to minimize condensation.

NOTE: It is a good practice to fill the tractor fuel tank with fuel at the end of each day, as this will reduce overnight condensation. Also, any fuel which may have been spilled should be cleaned up.

LUBRICANTS

Type of lubricant to use:

Engine Oil . . . . . Ford M-2C121-A (Ford 300)

NOTE: Ford Tractor 300 Engine Oil, is a super premium, heavy duty low ash engine oil compounded specifically to meet the rigid requirements of Ford tractor engines. It is available from your Ford Tractor-Equipment Dealer. Should Ford 300 engine oil not be readily available, use an equivalent commercial oil as shown in the following chart:

TEMPERATURE	VISCOSITY GRADE AND API CLASSIFICATION
Below +32° F. (0°C.)	Low Ash SAE 10W CD
32° to 50° F. (0° C.)	Low Ash SAE 20 CD
Above 50° F. (10° C.)	Low Ash SAE 30 CD

NOTE: When using diesel fuel with a sulfur content below 1.0%, diesel engine oil with an API classification of CC may be used instead of a CD oil, but the oil change interval must be reduced to 50 hours and the filter must be changed every 100 hours. When the sulfer content of

a fuel is greater than 1.0% but less than 1.3%, a CD oil must be used (except for temperatures of 10° F. and below) and the oil change interval must be reduced to 50 hours and the filter must be changed every 100 hours. The use of a fuel with a sulfer content above 1.3% is not recommended.

Transmission, Rear Axle, and Steering Gear Oil . . . . . A high quality, extreme pressure gear lubricant with an anti-foam additive. Refer to the following chart for recommended viscosity grade.

TEMPERATURE	VISCOSITY GRADE
Under 32° F. (0° C.)	SAE 80
32° F. to 86° F. (0° C -30° C.)	SAE 90
Over 86° F. (30° C.)	SAE 90 or 140

Hydraulic System Oil . . . . . Ford M-2C41-A

Front Wheel Bearings and All Lubrication Fittings - Good quality, multi-purpose, lithium base, cup type grease

STORAGE

Your new Ford Tractor is equipped with lubricant filters to protect vital points from damage caused by dirt which may enter under normal operating conditions. Precautions must, however, be taken by you to prevent lubricant contamination by dirt or water during storage. Service intervals in this section are based on the assumption that only new oil, of the type specified, is used.

Barrels of lubricant should be kept under cover, preferably in a clean, dry place, and should be clearly marked to indicate the lubricant which they contain.

When a barrel is kept in an exposed location, it should be tilted to allow any moisture to run away from the filler cap. Always use a clean container when transferring oil from a barrel to the tractor and make sure that any cap or bung, which has been removed, is installed as soon as possible.

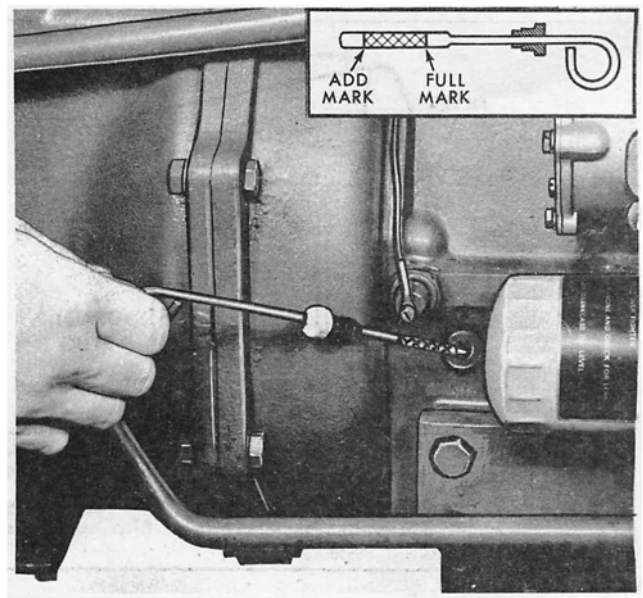


Figure 22
Engine Oil Level Dipstick

FUEL AND LUBRICANT SERVICE PROCEDURES

ENGINE

Checking Oil Level: Check the engine oil level daily or every 10 hours.

1. With the tractor standing level, and after the engine has been stopped for a period of time, check the oil level with the dipstick, Figure 22.

2. If the oil level is low, remove the filler cap, Figure 23, and add oil to the engine through the filler hole in the rocker cover to bring the oil level between the marks on the dipstick. Be careful not to overfill.

3. Install the oil filler cap.

Changing Oil and Filter: Change the engine oil every 100 hours and the engine oil filter every 200 hours.

NOTE: More frequent engine oil and filter changes are recommended if the tractor is operated for extended periods of time at maximum rated power and speed. Under such conditions, or other types of continued severe operating conditions, the engine oil should be changed at 70 hour intervals and the filter at 140 hour intervals.

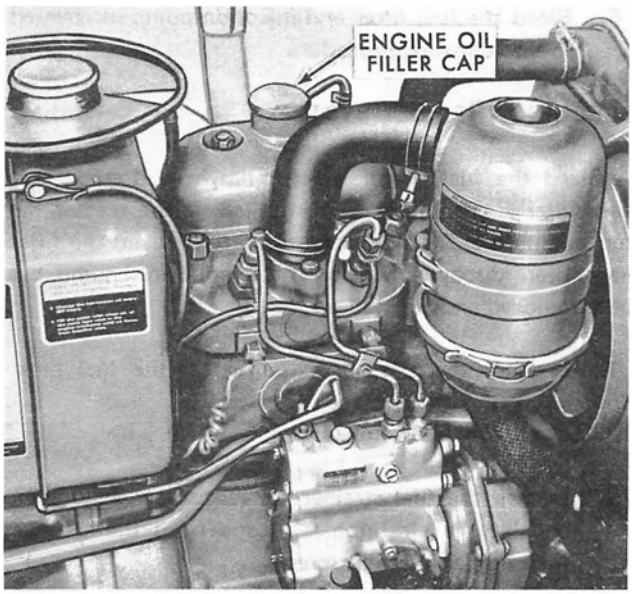


Figure 23
Engine Oil Filler Cap

1. With the engine off, but at normal operating temperature, drain and discard the engine oil by removing the drain plug, Figure 24. Reinstall the plug after the oil has drained and discard the oil.

2. Unscrew the oil filter, Figure 25, catching the used oil in a suitable container placed below the filter. Discard the filter.

3. Coat the gasket on the new filter with a film of oil. Screw the filter into place until the gasket contacts its mating surface, then turn the filter approximately 3/4 of a turn by hand. Do not over-tighten.

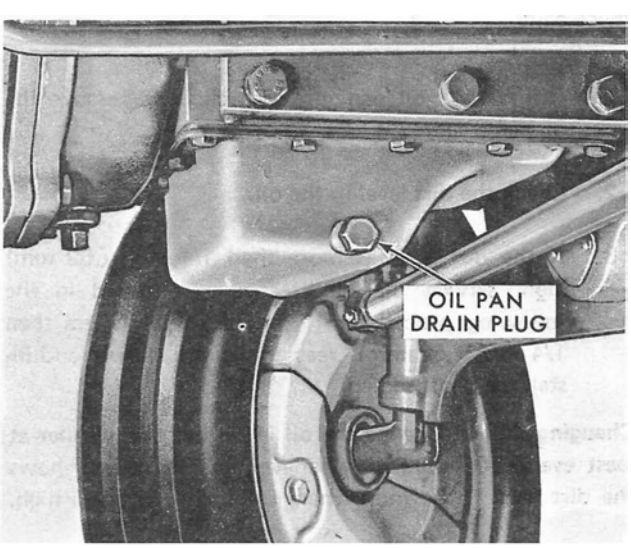


Figure 24
Engine Oil Pan Drain Plug

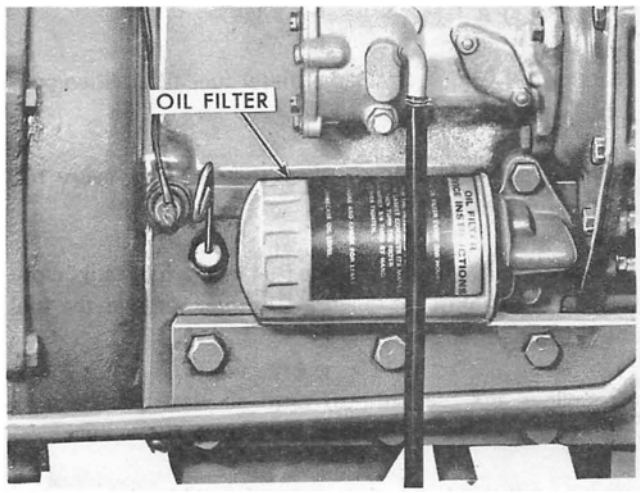


Figure 25
Engine Oil Filter

4. Add new oil of the type specified, page 19. Start the engine and check the filter for leaks after adding the oil. Be sure the oil level is at the proper level.

THE FUEL INJECTION PUMP

Change the injection pump oil every 200 hours.

1. Remove the drain plug located at the bottom of the injection pump to drain the old oil. See Figure 26.
2. Install the drain plug.
3. Remove the filler plug and fill with clean engine oil as specified on page 19, until oil flows from the breather pipe.

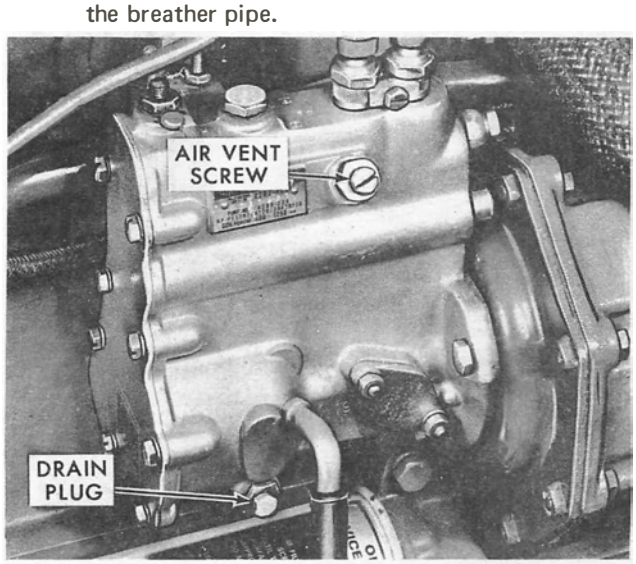


Figure 26
Fuel Injection Pump

FUEL FILTER

Draining the Filter: Drain the diesel fuel filter when condensation is evident.

Cleaning the Fuel Filter: Clean the fuel filter every 100 hours with light oil.

1. Be sure there is adequate fuel in the fuel tank; close the fuel shut-off, Figure 27, then remove the fuel sediment bowl.
2. Open the fuel shut-off until all water has been removed and only fuel flows from the filter.
3. Install the fuel sediment bowl and bleed the system as outlined on this page.

Changing the Fuel Filter: Change the diesel fuel filter every 200 hours.

1. Close the shut-off valve, Figure 27.
2. Remove the sediment bowl.
3. Discard the old element and install a new element.
4. Install and securely tighten the sediment bowl.
5. Open the fuel shut-off valve so fuel will flow to the filter.

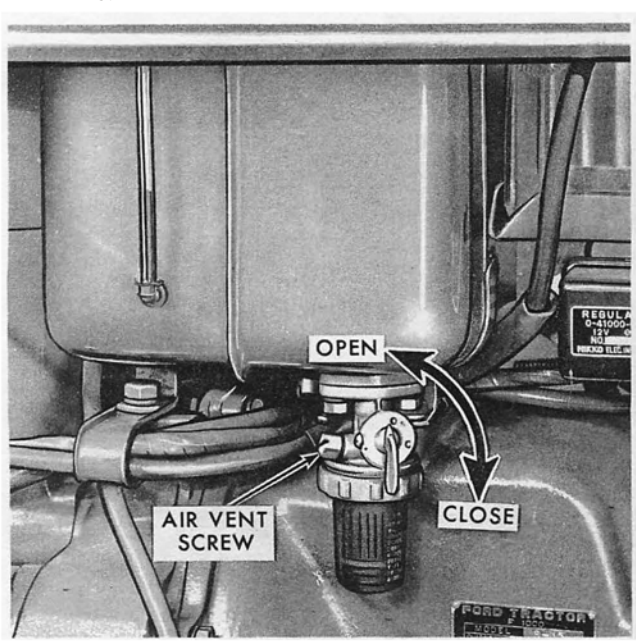


Figure 27
Fuel Filter

6. Bleed the fuel filter and injection pump as covered in the following procedure.

BLEEDING THE FUEL SYSTEM

Bleed the fuel system after it has been drained, if a new filter element has been installed, if the tractor has run out of fuel, if the lines leading to or from the filter have been disconnected, or if the injection pump has been removed and reinstalled.

1. Be sure there is adequate fuel in the fuel tank.
2. Open the fuel shut-off.
3. Loosen the fuel strainer air vent screw, Figure 27, and let the air bubbles escape from the strainer, then tighten the vent screw.
4. Loosen the fuel injection pump air vent screw, Figure 26, and bleed air out of the pump, then tighten the screw.
5. Pull the hand throttle to the high speed position. Turn the engine over for a few seconds to bleed the high pressure fuel tube.

AIR CLEANER

Checking Oil and Dirt Level: Check the oil and dirt level in the oil bath air cleaner daily or every 10 hours. Under conditions of extreme dust or chaff, check these levels twice daily.

1. Release the oil pan retaining clip and remove the oil pan, Figure 28.
2. Check the dirt level in the oil.
3. If the dirt level is more than 1/4 inch (.62 mm) high, service the air cleaner as outlined in the following procedure. If the dirt level is less than 1/4 inch (.62 mm), reassemble the cleaner and install the chaff screen.

Changing Oil: Change the oil in oil bath air cleaner at least every 50 hours or whenever an inspection shows the dirt level to be more than 1/4 inch (.62 mm) high.

1. Release the oil pan retaining clip and remove the oil pan, Figure 28.

2. Discard the oil and clean the oil pan inner cup and outer bowl with solvent.

   NOTE: If the 600 hour service is being performed, also clean air cleaner body as outlined below.

3. Refill the oil pan with clean engine oil until level with the mark on the pan. Do not overfill.

4. Install the oil filled pan and secure it in place with the retaining clip.

Cleaning the Air Cleaner Body: The oil bath cleaner, Figure 28, should be removed from the tractor, disassembled, and cleaned every 600 hours.

1. Loosen the clamp securing the engine air inlet hose to the air cleaner.

2. Remove the attaching bolts that hold the air cleaner in place, then remove the air cleaner.

3. Remove the air cleaner pan and discard the oil.

4. Wash all parts in solvent, including the air cleaner body.

5. After cleaning, install the air cleaner body and connect the air inlet hose.

6. Fill the air cleaner pan with clean engine oil. Do not overfill.

Figure 28
Air Cleaner

7. Install the oil filled pan and secure it in place with the retaining clip.

TRANSMISSION AND REAR AXLE

Checking Oil Level: Check the transmission oil level every 50 hours.

1. With the tractor standing level and the engine off, check the oil level with the dipstick, Figure 29.

2. The transmission and rear axle are filled to the correct level when the oil level is between the mark and the lower end of the dipstick. If low, remove the filler plug and add new oil of the type specified, page 19. Do not fill beyond the mark on the stick, as the transmission will be overfilled.

3. Install the filler plug and dipstick.

Changing Oil: Change the transmission and rear axle oil every 600 hours.

1. With the oil at normal operating temperature, drain and discard the oil by removing the transmission and rear axle drain plugs, Figure 30. Reinstall the plugs after the oil has drained. Discard the oil.

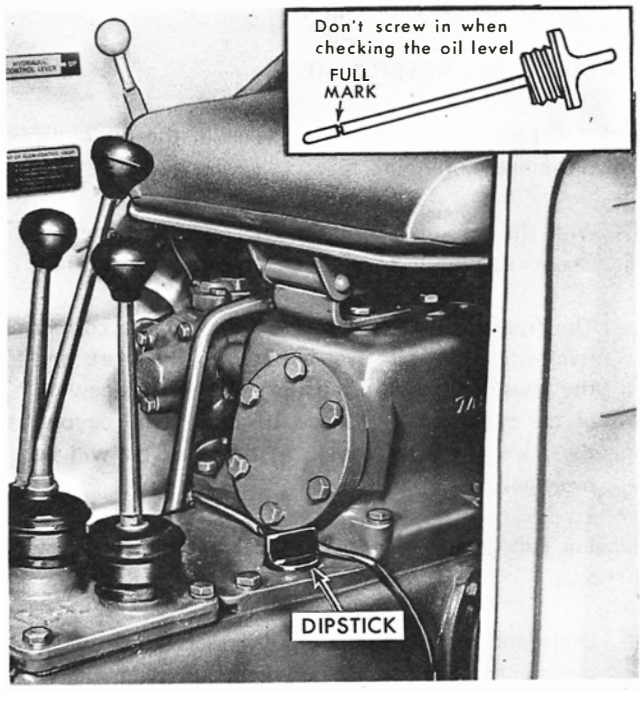


Figure 29
Transmission and Rear Axle Oil Level Dipstick

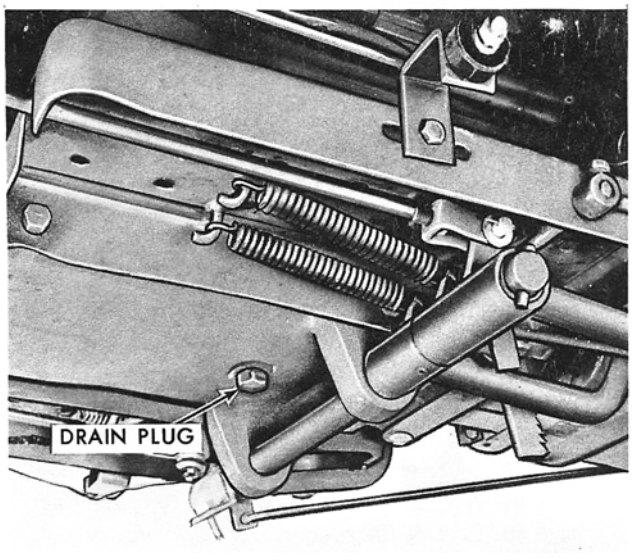


Figure 30
Transmission and Rear Axle Oil Drain Plug

2. Remove the dipstick, Figure 29 and fill and transmission with new oil of the type specified, page 19.

3. The transmission is filled to the correct level when the oil level is between the mark and the lower end of the dipstick. Do not fill beyond the mark on the stick, as the transmission will be overfilled.

4. Install the dipstick.

HYDRAULIC OIL RESERVOIR

Check Oil Level: Check the oil level in the hydraulic oil reservoir every 50 hours.

1. With the tractor standing level and the engine off, Check the oil level with the dipstick, Figure 31.

2. The hydraulic oil reservoir is filled to the correct level when the oil level is between the mark and the lower end of the dipstick. If low, add new oil of the type specified, page 19. Do not fill beyond the mark on the dipstick, as the reservoir will be overfilled.

Changing Oil: Change the hydraulic reservoir oil every 600 hours.

1. Drain and discard the hydraulic reservoir oil by removing the hydraulic reservoir drain plug, Figure 32. Reinstall the plug after the oil has drained.

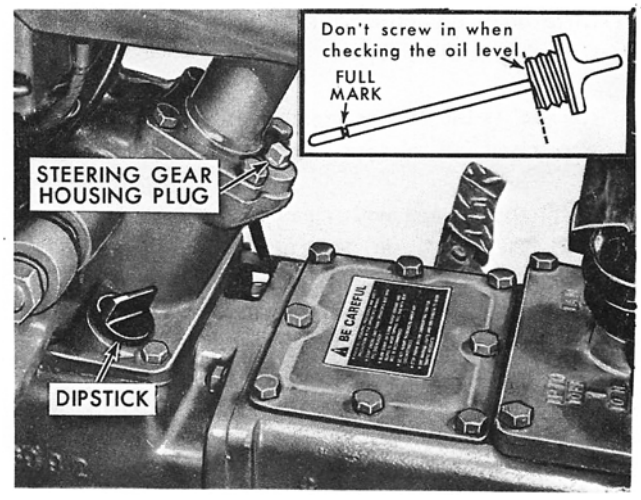


Figure 31
Hydraulic Oil Reservoir Dipstick

2. Remove the dipstick, Figure 31, and fill reservoir with new oil of the type specified on page 19.

3. The hydraulic reservoir is filled to the correct level when the oil level is between the mark and the lower end of the dipstick. Do not overfill.

STEERING GEAR HOUSING

Checking Oil Level: Check the oil level in the steering gear housing every 100 hours.

1. Visually check the oil level in the housing by removing the filler plug, Figure 31.

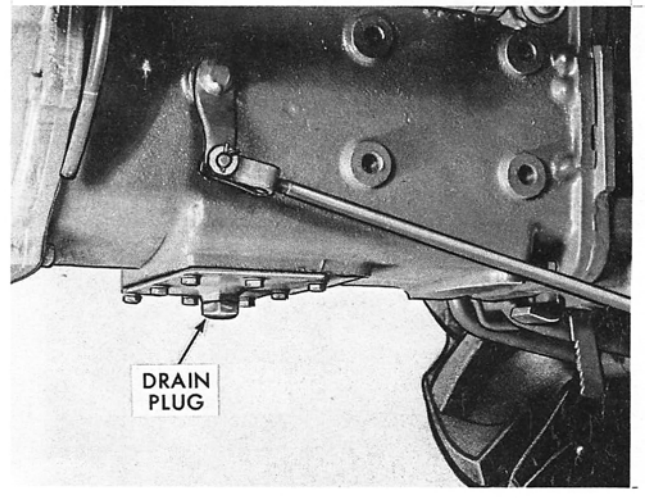


Figure 32
Hydraulic Oil Reservoir Drain Plug

2. The oil should be level with the bottom of the filler neck. If low, add new oil of the type specified, page 00, and reinstall the filler plug.

NOTE: Periodic changing of the steering gear oil is not required.

LUBRICATION FITTINGS

The following lubrication points (refer to the Lubrication Chart, page 17) require the application of a good quality grease every 50 hours. In extremely dirty conditions, lubrication should be made more often. Refer to page 19 for the type of grease that should be used.

- Steering linkage
- Front wheel spindles
- 3-point linkage
- Draft control system

1. Wipe away all old grease and dirt from the lubrication fittings to prevent dirt or foreign material from entering the fittings when new grease is applied.
2. Use a high pressure grease gun to force in the new grease until clean grease oozes from the assembly being lubricated.
3. Wipe away any excess grease.

GENERAL MAINTENANCE

COOLING SYSTEM

The cooling system in your new Ford 1000 Tractor has been filled with one year life antifreeze.

To obtain maximum efficiency and service life from the engine, it must operate at the correct temperature. This is dependent on the cooling system. The system should be kept filled with clear water with a rust inhibitor in summer or antifreeze solution in winter.

If the antifreeze does not contain a rust inhibitor, then one should be added.

Checking Coolant Level: Check the coolant level daily or every 10 hours. This check should be made when the engine is cold.

1. Remove the radiator cap and visually check the level of the coolant.

CAUTION: The cooling system operates under pressure which is controlled by the radiator cap. It is dangerous to remove the cap while the system is hot. Always cover the cap with a thick cloth and turn the cap slowly counter-clockwise to the first stop. Allow all pressure to escape before removing the cap completely.

2. If the coolant level is more than 1-1/2 to 2 inches (3.81 to 5.08 cm) below the bottom of the filler neck, add clean water or antifreeze solution as necessary. If the cooling system already contains antifreeze, add only antifreeze solution of the correct water/antifreeze mixture. Plain water will dilute the solution and weaken its protection.

IMPORTANT: Alcohol-type antifreeze is not recommended. Do not mix alcohol-type solution with permanent or long-life types of antifreeze.

3. Keep the radiator fins clear of chaff or dirt to allow free passage of air.

Draining and Flushing the Cooling System: Drain and flush the radiator and engine block every 6, 12 or 24 months as indicated below:

Plain Water. . . . . Drain, flush, and refill every 6 months; add rust inhibitor

Permanent Antifreeze

(Regular Ethylene Glycol . . .Change every 12 months

Long-Life (Ford) Antifreeze. . . Change every 12 months

To Drain the System:

1. Remove the radiator cap and open the drain valve at both the radiator and the engine block. The radiator drain valve is located on the bottom left side of the radiator. The engine block drain valve is located in front of the starting motor on the right side of the engine. See Figure 33.
2. After the coolant has drained, place a water hose in the radiator filler neck and run water through the

system with the engine running. When the water flowing from the drain valve is free of discoloration and sediment, stop the engine and remove the hose.

3. Close the two drain valves and slowly refill the system with a coolant that contains a rust inhibitor. Fill until the coolant level is approximately 1-1/2 to 2 inches (3.81 to 5.08 cm) below the bottom of the filler neck. Do not fill beyond this level.

   IMPORTANT: If plain water is used, be sure to add rust inhibitor to prevent corrosion of the water pump seal.

4. Clean the radiator cap and cap seal. Install the cap.

5. Run the engine until normal operating temperature is reached, then stop the engine and recheck the coolant level. Add coolant as required.

IMPORTANT: Never run the engine when the cooling system is empty, and do not add cold water or cold antifreeze solution if the engine is hot.

Thermostat: The thermostat is located in the coolant outlet connection in the front of the cylinder head.

When the engine is cold, the thermostat, which is a heat sensitive valve, shuts off the flow of coolant to the radiator, thus allowing rapid engine warm up. A recirculating bypass allows the coolant to circulate within the engine whenever the thermostat shuts off flow to the radiator.

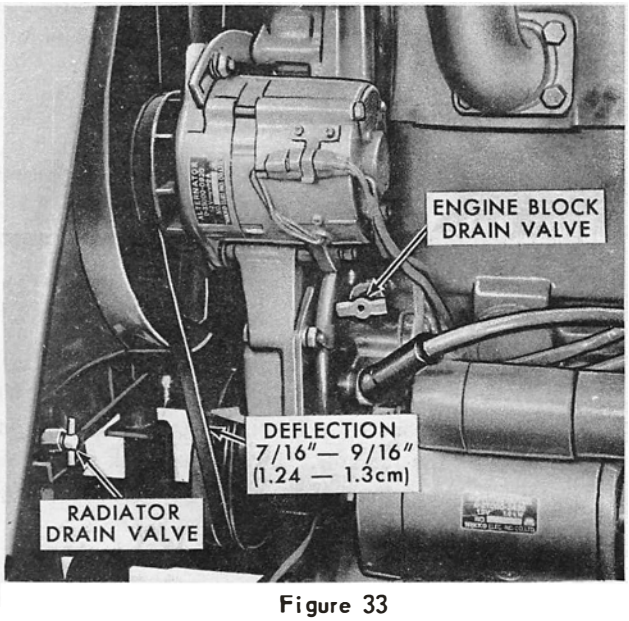


Figure 33
Fan Belt Adjustment and Coolant Drain Valves

IMPORTANT: Do not remove the thermostat in an attempt to improve the cooling. This will cause the engine to run below normal working temperatures, resulting in excessive engine wear.

If it ever becomes necessary to install a new thermostat, it should be positioned in the recess of the water outlet connection so that the heat element (spring end) will be in the cylinder head of the engine.

Fan Belt: A belt-driven fan at the front of the engine draws air through the fins of the radiator to cool the coolant in the radiator. A slipping fan belt will lower the efficiency of the fan, resulting in the engine running too hot. If the belt is too tight, it will shorten the alternator bearing life. A correctly tightened belt will deflect 7/16 to 9/16 inch (10 to 15 mm) when 20 to 25 pounds (9 to 11 kg) thumb pressure is applied midway between the belt pulleys. Check the condition and tension of the fan belt every 200 hours. If the belt shows signs of cracking or fraying install a new belt.

To Adjust Belt Tension:

1. Loosen the alternator mounting bolts, Figure 33.

CAUTION: Never attempt to loosen or tighten the bolts when the engine is running.

2. Pry the alternator away from the engine and tighten the mounting bolts.

3. Recheck belt deflection.

FUEL INJECTOR REMOVAL AND INSTALLATION

The injectors should be cleaned, tested, and adjusted every 600 hours. Do not disassemble or adjust the injectors yourself. Remove them from the tractor engine and have them serviced by your Ford Tractor-Equipment Dearler.

To remove the injectors:

1. Clean all loose dirt from around the injectors and lines. Disconnect the leak-off lines from the injectors.

2. Disconnect the injection pump lines at the pump and injectors. Cover the ends of the lines and the injector inlet and leak-off ports to prevent the entry of dirt.

3. Remove the injectors and discard the dust sealing washers.

4. Remove and discard the copper injector sealing washers from the injector locating bores. If a spare set of injectors is not immediately available, cover the bores to prevent the entry of dirt.

After the injectors have been serviced, install them as follows:

1. Place new dust sealing washers around the injector body.

2. Install a new copper sealing washer in each injector locating bore. Install the injectors and tighten the retaining nut to 10-15 lbs. ft. (1.3-2.0 kgm).

   IMPORTANT: Do not overtighten the retaining nuts. Overtightening may distort the injector.

3. Install the injector lines. Finger tighten the fittings at the injectors until after bleeding the fuel system. Tighten the fittings at the injection pump to 18-22 lbs. ft. (2.4-3 kgm).

4. Install the leak-off line, using new copper sealing washers above and below each connection, Figure 34. Tighten the leak-off line bolts to 8-10 lbs. ft. (1.1-1.3 kgm).

5. Bleed the fuel system as covered under "Bleeding The Fuel System" page 22.

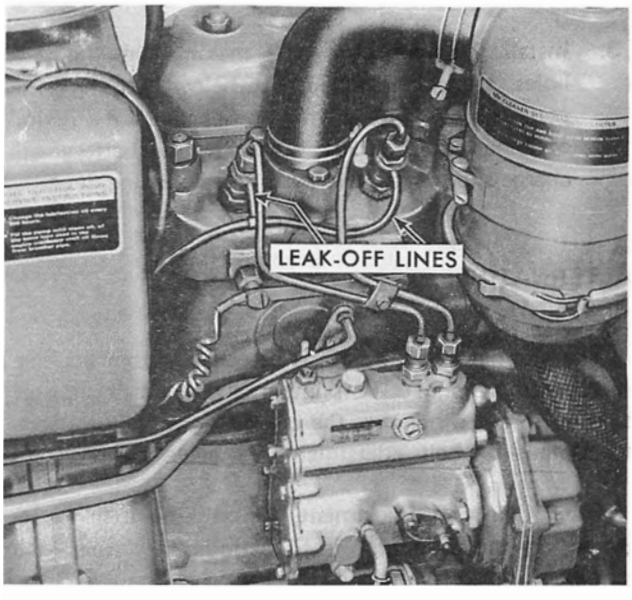


Figure 34
Fuel Injector Leak-Off Lines

ENGINE SPEED ADJUSTMENT

The maximum no-load speed of the engine is set by adjusting the stop bolt on the bellcrank, Figure 35. If maximum no-load speed is not within 2650-2700 rpm adjust the stop bolt as necessary. If the maximum rpm cannot be obtained check for correct throttle linkage adjustment as outlined in the following procedure.

1. Warm the engine to normal operating temperature, then stop the engine.

2. Disconnect the throttle linkage at the bellcrank and move the hand throttle lever to the wide-open position.

3. Pull the throttle linkage rod toward the bellcrank far enough to bring the control stop on the injection pump back against pump bellcrank. To prevent a false setting, do not pull excessively on the control rod.

4. Hold the rod in the maximum speed position as in Step 3 and hold the hand throttle in the wide open position as in Step 2. Adjust the rod to fit the distance between the bellcrank and pump.

5. Connect the rod to the bellcrank and tighten the jam nut.

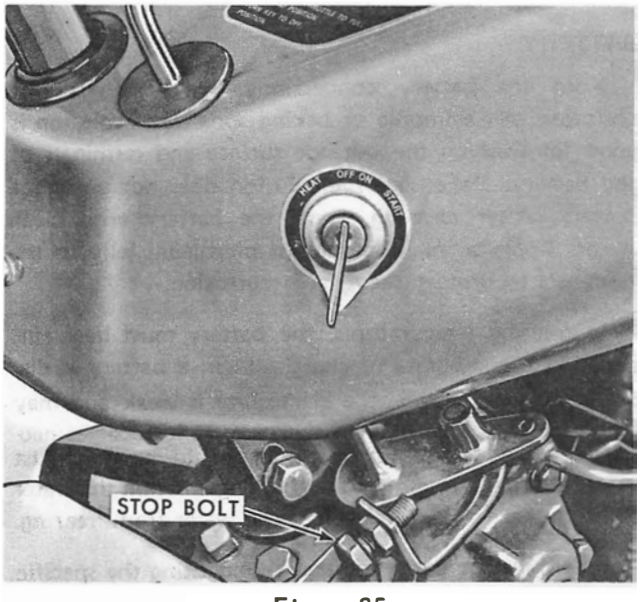


Figure 35
Throttle Stop Adjustment

VALVE CLEARANCE (LASH)

Correct valve clearance is one of the most important factors of good engine performance. Excessive clearance will cause the engine to operate excessively noisy, and insufficient clearance will cause poor performance. Because of this, it is extremely important that care be used when adjusting valve clearance.

Checking and Adjusting Valve Clearance: Check and adjust the valves every 600 hours. The clearance check and adjustment should be made with the engine cold.

1. Remove the valve rocker arm cover.
2. With the engine idling, check the clearance of each valve with a step-type feeler gauge.

   The setting should be:

Intake	.012 (.3 mm)
Exhaust	.012 (.3 mm)

3. If the clearance is incorrect on any valve, turn the adjusting screw at the push rod end of the valve rocker arm either into or out of the arm while checking for correct clearance with the step-type feeler gauge.
4. Install the rocker arm cover. Use a new gasket if the old one is damaged. Tighten the cover bolts evenly.

BATTERY

Keep the battery connections tight and free of corrosion. An ammonia or baking soda-water solution is good for washing the out-side surface and terminals of the battery. Make sure the solution does not enter the battery. After cleaning, wash the battery with clean water. Apply a small amount of petroleum jelly to the terminals to protect them from corrosion.

In freezing temperatures, the battery must be maintained in a good state of charge. When a battery is discharged or run down, the electrolyte is weak and may freeze, causing damaging to the case. If it becomes necessary to add water (distilled), it should be done just before using the tractor so the charging will mix the water with the electrolyte and prevent the water from freezing.

Determine the battery charge by checking the specific gravity of the electrolyte. Note in the following chart how the state of charge decreases when the specific gravity decreases.

State of Charge	Specific Gravity*
Fully Charged	1.280
75%	1.230
50%	1.130
Discharged	1.080

*Electrolyte temperature 80° F. (26.6° C.)

Checking Electrolyte Level: Check the electrolyte level in the battery every 50 hours.

CAUTION: When the alternator is charging, an explosive gas is produced inside the battery, therefore, always check the electrolyte level with the engine stopped. Do not use an exposed flame and do not smoke when checking the battery electrolyte level.

1. Clean the top of the battery, then remove the vent plugs.
2. If the electrolyte level is low, add distilled water. The level is correct when the liquid is 1/4 inch (6.35 mm) above the plates.

   NOTE: Keep distilled water in a clean, well covered, non-metallic container.

3. Install the vent plug after making sure the vent holes are not blocked. At below freezing temperatures, be sure to run the engine for a period of time, after adding water, so the battery will charge and prevent the water from freezing.

ALTERNATOR

The alternator, Figure 36, is belt-driven from the engine crankshaft pulley. It is important that belt slippage does not occur otherwise, the charging rate will be affected. Details of belt adjustment are given on page 26.

Other than belt adjustment, the only maintenance required on the alternator is to periodically inspect the terminals and keep tham clean and tight. The alternator cooling fan should also be cleaned periodically.

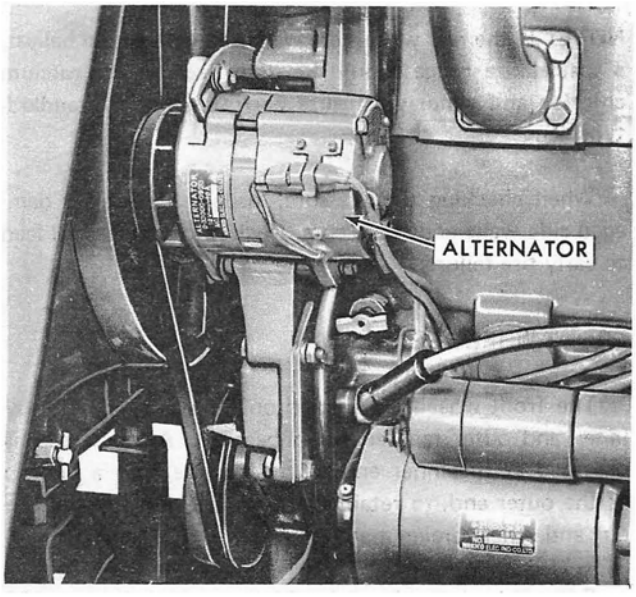


Figure 36
Alternator

When working on or checking the alternator, comply with the following precautions to prevent alternator damage.

- DO NOT, under any circumstances, short the FIELD terminal of the alternator to ground.
- DO NOT disconnect the voltage regulator while the alternator is operating.
- DO NOT disconnect the alternator output lead or battery cables while the alternator is operating.
- DO NOT remove the alternator from the tractor without first disconnecting the negative (—) battery cable. If the battery is to be removed, disconnect the negative cable first.
- If a battery is being installed, MAKE CERTAIN that the positive (+) cable is connected first and that the negative terminal is connected to ground. Reverse polarity will destroy the rectifier diodes in the alternator.

VOLTAGE REGULATOR

The voltage regulator automatically controls the alternator charging rate. No attempt should be made to adjust the setting of the regulator.

If the charge indicator warning light indicates that the alternator is not charging the battery, check the fan belt and the wiring connections. If these are satisfactory and the warning light continues to indicate no charge, consult your Ford Tractor-Equipment Dealer.

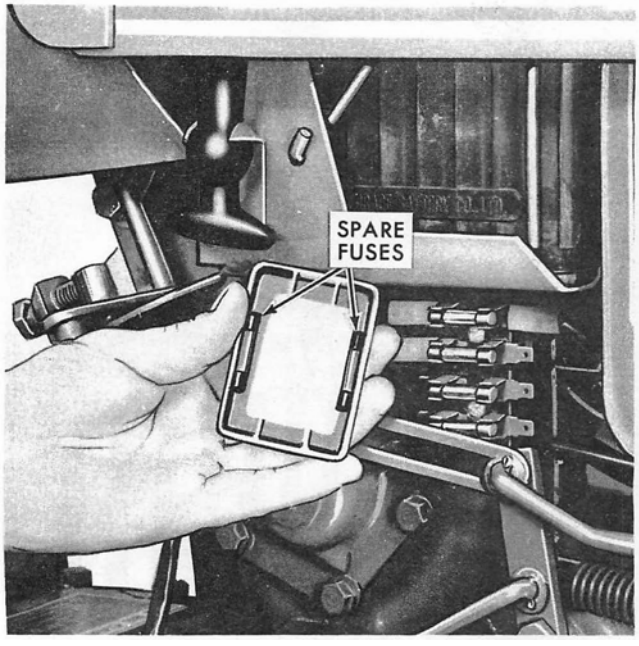


Figure 37
Fuse Box

FUSE BOX

The fuse box is shown in Figure 37. The cover is easily removed by pulling it off. A spare 5 AMP and 15 AMP fuse is stored in cover. Always replace broken fuses with the specified fuse.

HEADLAMPS

Should a headlamp failure occur, the bulb must be replaced. To change the bulb:

1. Remove the headlamp rim locking screw.
2. Remove the lamp unit from the lamp housing and separate the lens from the reflector.
3. Install the new bulb, Figure 38, and assemble the lens and reflector making sure the wiring connections are tight; that the top of the unit is up; and that the locating tab is positioned in the slot.
4. Install the rim and tighten the rim locking screw.

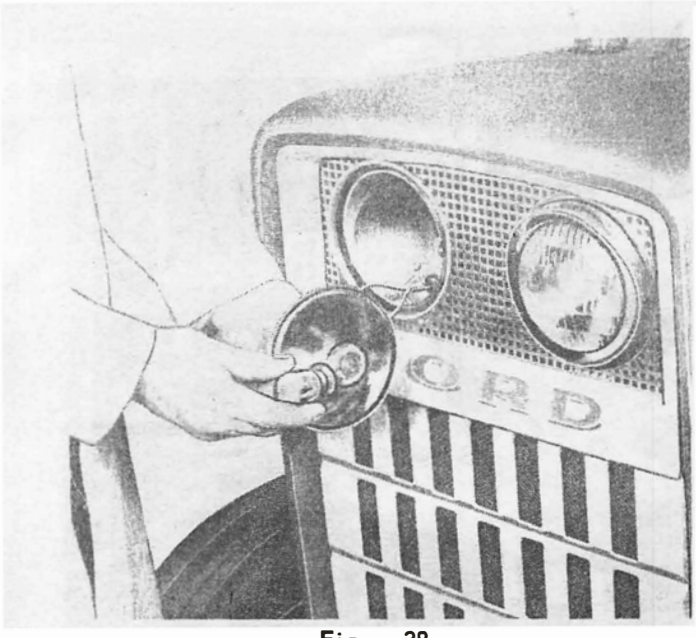


Figure 38
Head Lamp Removal

TAIL LAMP AND FLASHER WARNING LAMP

To replace a tail lamp bulb or flasher warning lamp bulb:

1. Remove the lens and/or rim assembly, then remove the bulb.
2. Install a new bulb and reinstall the lens and/or rim assembly.

INSTRUMENT LIGHTS

To change an instrument bulb:

1. Remove the screws that secure the instrument panel to the rear hood panel assembly and pull the instrument panel rearward.
2. If necessary, disconnect the Proof-Meter drive cable to obtain better access.
3. Remove the bulb socket from the rear of the instrument panel and install a new bulb.
4. Reassemble in the reverse order.

TIRES

Check tire pressure every 50 hours, or weekly. Refer to the "Tire Inflation Vs. Permissible Load" on page 16 for the air pressure that should be used.

NOTE: If the rear wheels are weighted with liquid ballast, a special tire gauge should be used because the calcium chloride and water will cause corrosion in the standard-type gauge.

When checking tire pressure, inspect the tire for damaged side walls and tread cuts. Neglected damage will lead to early tire failure.

FRONT WHEEL BEARINGS

The front wheels are carried on the wheel spindles by inner and outer tapered roller bearings. A grease seal is provided at the inner end of the spindle, and a hubcap at the outer end, to retain the lubricant and to keep out dirt and other foreign material.

Front wheel bearings should be repacked every 600 hours as follows:

1. Apply the parking brake to hold the tractor securely.
2. Jack up one of the front wheels and remove the hubcap, the cotter pin, and the nut. Figure 39. Remove the thrust washer, outer bearing, and then the complete wheel assembly.
3. Remove the grease retainer from the rear of the hub and the inner bearing from the wheel.
4. Thoroughly clean all parts in a suitable solvent and allow to dry naturally. Do not use compressed air. Inspect the bearing cone and roller assemblies for excessive discoloration or wear of the rollers; similarly, check the bearing cups.
5. Repack the cone and roller assembly with clean, short-fiber grease. Pack approximately 1/4-inch (6.35 mm) of grease in the space between the bearing cups in the hub, but do not pack the hub completely. Apply a film of grease on the surface of the spindle.
6. Reinstall the inner bearing and install the grease retainer in the rear of the hub.
7. Place the wheel assembly on the spindle and install the outer bearing, thrust washer, and castellated nut. Tighten the nut, at the same time turning the wheel, until a slight drag is felt. Back off the nut until the nearest slot in the nut lines up with the hole in the spindle. Install a new cotter pin, then the hubcap.

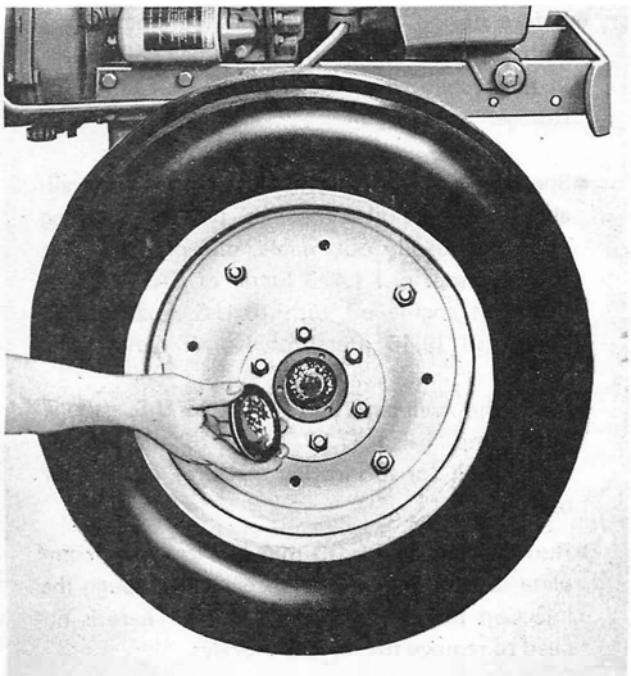


Figure 39
Servicing the Front Wheel Bearings

FRONT WHEEL TOE-IN

Front wheel toe-in adjustments on your tractor were made at the factory. Normally, the wheels maintain their toe-in; however, an occasional check should be made.

Checking Toe-In

1. With the front wheels in the straight-ahead position, mark the front of the wheels (not the tires) at wheel hub height. Determine the straight-ahead position by turning the steering wheel from lock to lock and then halfway back.

2. Measure and record the distance between the front of the wheels at the marks, then push the tractor forward or backward until marks are at wheel hub height on the rear of the wheel.

3. Measure and record the distance between the rear of the wheels at the marks.

4. The difference between the dimensions recorded in the Steps 2 and 3 should give zero to 1/2 inch (0-12.7 mm) toe-in. The distance between the wheels should be zero to 1/2 inch (0-12.7 mm) greater when the marks are at the rear than at the front.

5. If the toe-in is not correct, adjust as outlined in the following procedure.

Adjusting Toe-In

1. Loosen the tie rod clamp bolt.

2. Adjust the tie rod tube assembly as required to give zero to 1/2 inch (6.35 mm) toe-in.

3. After the correct toe-in is obtained, install and tighten the clamp bolt. Also tighten the tie rod end assembly attaching bolt.

BRAKE ADJUSTMENT

Whenever the brake pedal travel becomes excessive, or if the travel of one pedal is unequal to that of the other, adjustment of each pedal should be made in the following manner:

1. Jack the tractor up until both rear wheels are free to turn.

2. Loosen the lock-nut, Figure 40 and rotate the brake rod as necessary until there is 3/4 – 1-3/16 inches (1.9-3.0 cm) of pedal free play. Lengthening the rod increases free play while shorting the rod decreases free play.

3. Load test the tractor to make sure the braking action of both rear wheels is equal. Readjust as necessary.

CLUTCH PEDAL ADJUSTMENT

To obtain maximum clutch life, it is essential that the clutch pedal free travel be checked every 50 hours so as to maintain free travel at 3/4 – 1-3/16 inches (1.9-3.0 cm).

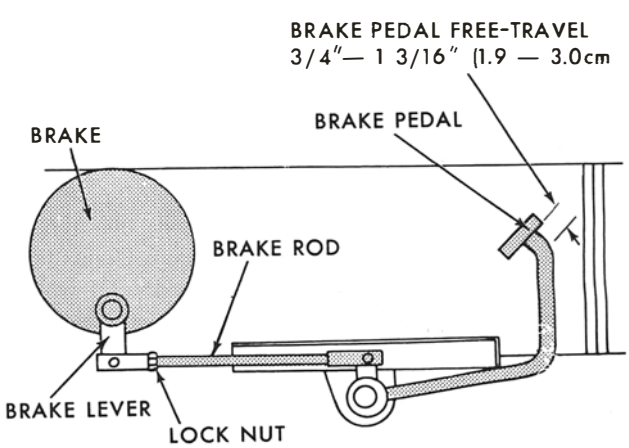


Figure 40
Brake Pedal Adjustment

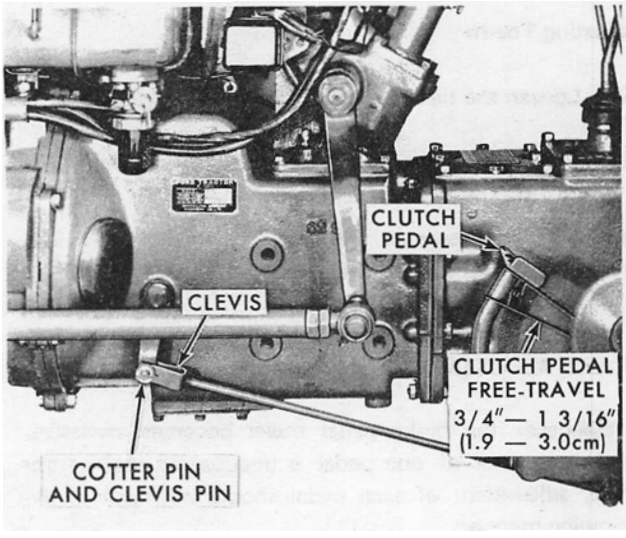


Figure 41
Clutch Pedal Free Travel Adjustment

1. Remove the cotter pin and clevis pin, Figure 41.

2. Turn the clevis to increase or decrease pedal travel as required.

TRACTOR STORAGE

Tractors that are to be stored for an extended period should be protected during storage. The following is a suggested list of operations to be carried out.

1. Thoroughly clean the tractor. Use touch-up paint where necessary to prevent rust.

2. Check the tractor for worn or damaged parts. Install new parts as required.

3. Raise the lift arms hydraulically to their fully raised position so the lift piston is in a fully extended position. This fills the cylinder with oil and will protect the cylinder wall surfaces from corrosion.

4. Lubricate the tractor. Drain and refill the transmission and the rear axle with new oil. Drain the engine oil and hydraulic reservoir and refill with new lubricating oil. Also clean the air cleaner.

5. If the tractor is stored or removed from operation for an extended period, special precautions should be taken to protect the fuel injection pump and the injector nozzles against corrosion and gumming during the storage period.

   - Before storing, the fuel system should be flushed with a special oil, a quantity of which will remain in the system when the engine is shut down for storage.

   - Special diesel fuel system flushing oils are available from most oil companies. If special flushing oil is not readily obtainable, mix one U.S. pint (0.8327 Imp. pt.) (.473 liters) of SAE 10 non-detergent engine oil with 10 U.S. quarts (8.33 Imp. qts.) (9.46 liters) of No. 2 diesel fuel.

   - Drain the fuel tank and pour two U.S. gallons (1.67 Imp. gals.) (7.57 liters) of the special flushing oil (or lubricating mixture) in the fuel tank.

   - Run the engine for 10 minutes to assure complete distribution of the special oil through the injection pump and fuel injectors. There is no need to remove the injector nozzles.

   Fill the fuel tank with No. 1 diesel fuel.

   IMPORTANT: Do not use No. 2 diesel fuel for winter storage because of wax separation and settling at low temperatures.

6. Drain the radiator and engine block. Flush the system, close the drain valves, and fill with antifreeze that contains a rust inhibitor.

7. Remove the battery and clean it thoroughly. Be sure that it is fully charged, and that the electrolyte is at the proper level. Place it in storage in a cool, dry place above freezing temperature. The battery should be charged periodically during storage.

8. Place blocking under the tractor axles to remove the weight from the tires.

9. Cover the exhaust pipe opening.

Tractors that have been placed in storage should be completely serviced in the following manner before using:

1. Inflate the tires to the recommended pressures, and remove the blocking.

2. Check the oil level in the crankcase, hydraulic lift system, transmission and rear axle, and oil bath air cleaner.

3. Install a fully charged battery and remove the exhaust cover, if other than a rain cap.

4. Check the cooling system. Use corrosion inhibitor in warm weather; permanent antifreeze in cold weather.

5. Start the engine and allow it to idle a few minutes. Be sure the engine is receiving lubrication and that each control is functioning correctly.

6. Drive the tractor without a load and check to be sure it is operating satisfactorily.

SPECIFICATIONS

CAPACITIES

Fuel Tank . . . . . 5.8 U.S. Gals. (22 Liters)
Cooling System . . . . . 5.6 U.S. Qts. (5.3 Liters)
Engine Crankcase:
- Less Filter . . . . . 5.0 U.S. Qts. (4.7 Liters)
- With Filter Change . . . . . 5.3 U.S. Qts. (5 Liters)

Hydraulic Reservoir . . . . . 10.5 U.S. Qts. (10 Liters)
Rear Axle and Transmission . . . . . 21 U.S. Qts. (19.8 Liters)

ENGINE

Type . . . . . Diesel
Number of Cylinders 2
Bore . . . . . 3.54 in. (9.0 cm)
Stroke . . . . . 3.94 in. (10.0 cm)
Displacement . . . . . 77.7 cu. in. (1272 cc)
Compression Ratio 21:1
Firing Order 1-2
Low Idle Speed . . . . . 750-850 rpm
Maximum Speed:
- High Idle . . . . . 2650-2700 rpm
- Rated . . . . . 2500 rpm

Valve Clearance (Lash-Warm Engine):
- Intake . . . . . 0.012 in. (.30 mm)
- Exhaust . . . . . 0.012 in. (.30 mm)
- Air Cleaner (Oil Bath) . . . . . 0.47 Qt. (.44 Liters)

COOLING SYSTEM

Type . . . . . Pressurized liquid w/recirculating bypass
Water Pump:
- Type . . . . . Centrifugal
- Drive . . . . . V-belt
- Water Pump Belt Deflection . . . . . 7/16 to 9/16 inch (10-15 mm) when 20-25 lb. (9-11 kg) thumb force is applied midway between pulleys
- Fan Diameter . . . . . 11-3/4 inches (30.0 cm)

Thermostat:
- Starts to Open . . . . . 159.8° F. (71° C.)
- Fully Open . . . . . 185° F. (85° C.)

Radiator Cap . . . . . 13 psi (7.2 kg/cm^2)

ENGINE OIL RECOMMENDATIONS

Type of Lubricant to Use

Engine Oil . . . . . Ford M-2C121-A (Ford 300)

NOTE: Ford Tractor 300 Engine Oil, is super premium, heavy duty low ash engine oil compounded specifically to meet the rigid requirements of Ford tractor engines. It is available from your Ford Tractor-Equipment Dealer. Should Ford 300 Engine Oil not be readily available, use an equivalent commercial oil as shown in the following chart:

Temperature	Viscosity Grade and API Classification
Below +32° F. (0° C.)	Low Ash SAE 10W CD
32° to 50° F. (0° C.- 10° C.)	Low Ash SAE 20 CD
Above 50° F. (10° C.)	Low Ash SAE 30 CD

SPECIFICATIONS

NOTE: When using diesel fuel with a sulfur content below 1.0%, diesel engine oil with an API classification of CC may be used instead of a CD oil, but the oil change interval must be reduced to 50 hours and the filter must be changed every 100 hours. When the sulfur content of a fuel is greater than 1.0% but less than 1.3%, a CD oil must be used (except for temperatures of 10° F. and below) and the oil change interval must be reduced to 50 hours and the filter must be changed every 100 hours. The use of a fuel with a sulfur content above 1.3% is not recommended.

ELECTRICAL SYSTEM

Alternator. . . . . .12-volt, heavy duty, 10 amps.
Regulator (Alternator) . . . . . .Transistorized
Battery. . . . . .12-volt, 70 amp. hour rating with negative ground
Starting Motor . . . . . Solenoid, pre-engaged
Headlamp. . . . . Bulb No. 1074
Tail Lamp . . . . . Bulb No. 89
Instrument and Warning Light Bulbs . . . . . Bulb No. 53

FUEL SYSTEM

Type. . . . . Diesel

Injection Pump:
Type . . . . . In-Line
Timing . . . . . 24° BTDC

CLUTCH

Type . . . . . 8.5 inch (21.59 cm) Dry Disc, Organic Face
Pedal Free-Travel . . . . . 3/4 – 1-3/16 inches (1.9-3.0 cm)

BRAKES

Type. . . . . .Drum (Expanding Shoe)
Drum . . . . . 6.69 Inch Diameter (17.0 cm.)

STEERING

Type . . . . . Manual
Turns Lock-to-Lock 2.3
Front Wheel Toe-In. . . . . 0 – 1/2 inch (0 – 1.27 cm)
Turning Radius (Without Brakes). . . . 9.0 feet (272.5 cm)

POWER TAKE-OFF

Type . . . . . .Transmission
Shaft . . . . . .1-3/8 inches (3.49 cm) 6-spline SAE STD
Engine Speed for 540 rpm P.T.O. Operation. . . .1955 rpm
Horsepower P.T.O.-Oberved. 23.0

HYDRAULIC LIFT SYSTEM

Type . . . . . .Live Position Control Category I 3-point linkage
Pump Type . . . . . .Gear
Pump Capacity. . . . 4.2 U.S. gpm @ 1422 psi at 2500 rpm (3.5 Imp. Gal. @ 100 kg cm^2 at 2500 rpm)
System Relief Valve Setting. . . . . 1422 psi (100 kg cm^2)
Mechanical Draft Control . . . . . Optional

CAST IRON WEIGHTS

(3) Front End Weights . . . . . 32 lbs. (14 kg) each
(4) Front Wheel Weights . . . . . 34 lbs. (15 kg) each, 2 per wheel
(4) Rear Wheel Weights . . . . . 54 lbs. (25 kg) each

DRAWBARS

Fixed Type . . . . . Standard
Adjustable . . . . . .Optional

TIRES

Front:
Standard . . . . . 500 x 15
Optional . . . . . 20 x 800 - 10
Rear:

Standard . . . . . 11.2 x 24
Optional . . . . . 12.6 x 16 R3
Wheel Bolt Torques:
Front Wheel Disc-to-Hub . . . . . 40-45 lbs. ft. (5.5-6.2 kgm)
Rear Wheel Disc-to-rim . . . . . 180-217 lbs. ft. (25-30 kgm)
Rear Wheel Disc-to-Axle . . . . . 123-138 lbs. ft. (17-19 kgm)

LUBRICANTS

Engine . . . . . See table on page 00.
Hydraulic System M2C41-A

Transmission, Rear Axle and Steering Gear Oil. . . . . A high quality, extreme pressure gear lubricant with an anti-foam additive. Refer to the following chart for recommended viscosity grade.

TEMPERATURE	VISCOSITY GRADE
Under 32° F. (0° C.)	SAE 80
32° to 86° F. (0° C.-30° C.)	SAE 90
Over 86° F. (30° C.)	SAE 90 or 140

Front Wheel Bearings and
Lubrication Fittings. . . . . Good quality, multi-purpose, lithium base, cup-type grease

GENERAL DIMENSIONS

Length . . . . . .100 inches (254 cm)

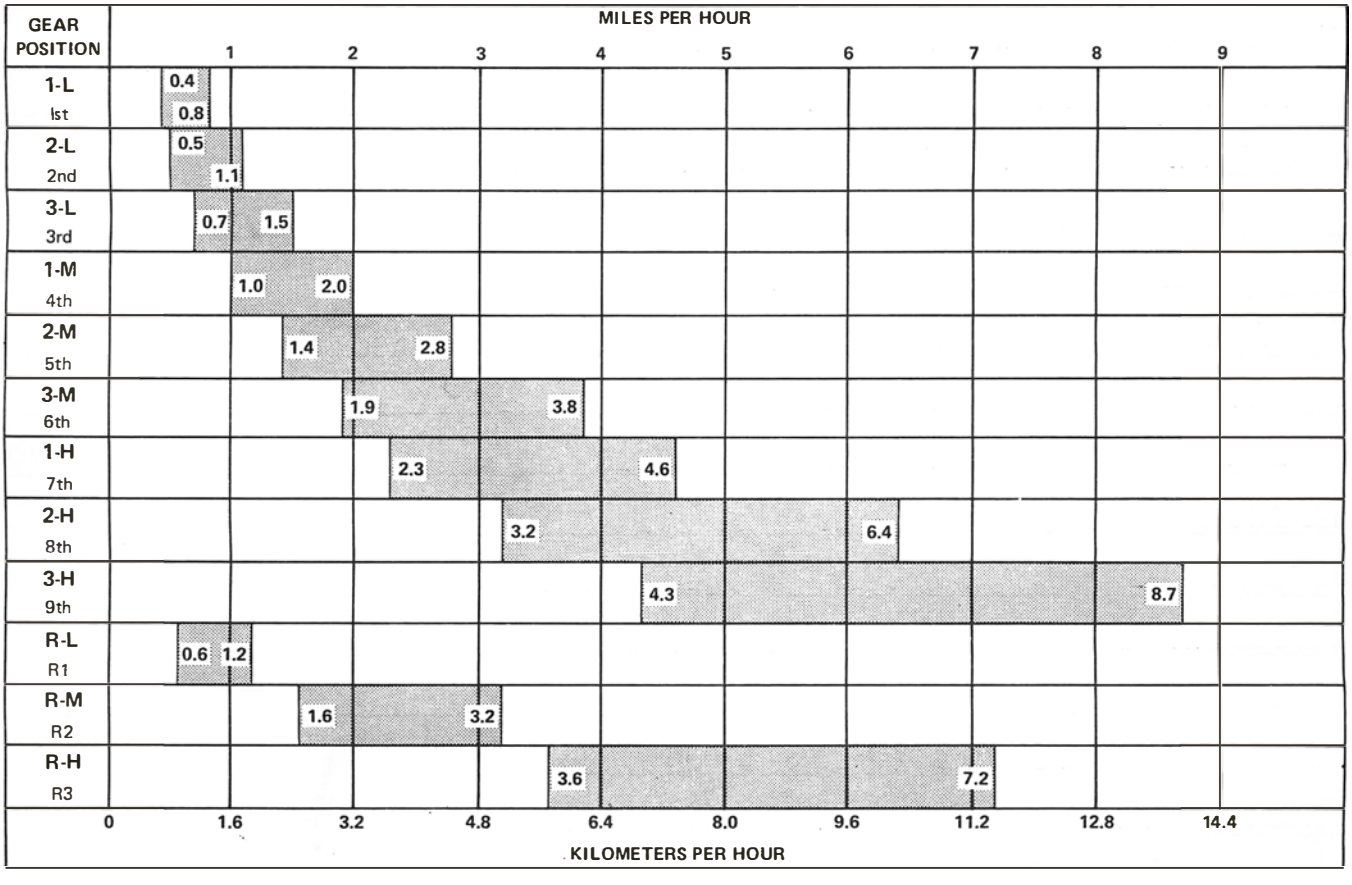
Height:
To Top of Exhaust. . . . . .70.6 inches (179.5 cm)
To Top of Chassis. . . . . 54.7 inches (139 cm)
Adjustable Width:
Front . . . . . 43-60 inches (108.5-153.5 cm)
Rear . . . . . 48-58.7 inches (121.6-149 cm)

Crop Clearance at Front Axle . . . . . 14.0 inches (35.6 cm)

Weight (Less Options) . . . . . .2260 lbs. (1025 kg)

Wheelbase . . . . . 62.6 inches (159.0 cm)

FORD 1000 GROUND SPEEDS
FROM 1250 TO 2500 RPM ENGINE SPEED
WITH 11.2 x 24 REAR TIRES



notes

PRE-DELIVERY SERVICE

CHECK AND ADJUST AS REQUIRED

INOPERATIVE SERVICE CHECKS:

1. Tire pressure ☐
2. Air cleaner oil level and hose connections ☐
3. Oil level in injection pump ☐
4. Radiator coolant level ☐
5. Fan belt tension ☐
6. Battery cleanliness, vent openings, electrolyte level, and charge ☐
7. Engine oil level ☐
8. Transmission and rear axle oil level ☐
9. Hydraulic reservoir oil level ☐
10. Starter safety switch operation ☐
11. Hydraulic Lift control adjustment ☐
12. Upper link, drawbar, and pins in position ☐
13. Steering gear box oil level ☐
14. Brake adjustment and pedal equalization ☐
15. Operation of brake pedal lock ☐
16. Rear wheel-disc-to-rim bolts for tightness ☐
17. Front and rear wheel disc and hub nuts for tightness ☐
18. Front wheel toe-in ☐
19. Fuel level ☐
20. Sheet metal and paint condition ☐
21. Tool box for Operator's Manual ☐
22. Check lift rod leveling crank for proper operation ☐
23. Drain diesel fuel filter ☐

OPERATIVE SERVICE CHECKS:

All operating checks are to be performed with the tractor at normal operating temperature.

1. Lights and instruments for proper operation ☐
2. Fluid and oil leaks ☐
3. Maximum no-load speed and idle speed adjustments, and fuel shut-off ☐
4. Starting and starter safety switch ☐
5. P.T.O. engagement and disengagement:
   - clutch pedal and P.T.O. lever ☐
6. Hydraulic System:
   - Selection lever for position control operation ☐
   - Flow control operation ☐

PERFORMANCE SERVICE CHECKS:

1. Engine operation including throttle and governor operation ☐
2. Transmission including clutch ☐
3. Steering control ☐
4. Differential lock engagement and disengagement ☐
5. Brake action ☐
6. All optional equipment and accessories ☐

TRACTOR MODEL NO. _____

INSPECTION PERFORMED
WARRANTY EXPLAINED

TRACTOR SERIAL NO. _____

OWNER'S SIGNATURE DATE DEALER'S SIGNATURE DATE

50-HOUR SERVICE

CHECK AND ADJUST AS REQUIRED

INOPERATIVE SERVICE CHECKS:

1. Tire pressure ☐
2. Change air cleaner oil and check hose connections ☐
3. Replace diesel fuel filter(s) and bleed system ☐
4. Change oil in in-line injection pump ☐
5. Tighten in-line pump delivery valve holders ☐
6. Radiator coolant level ☐
7. Fan belt tension ☐
8. Battery cleanliness and vent openings, electrolyte level, and charge ☐
9. All electrical cables, terminals, and wires ☐
10. Drain and refill engine oil ☐
11. Replace engine oil filter ☐
12. Transmission and rear axle oil level ☐
13. Hydraulic reservoir oil level ☐
14. Steering gear box oil level ☐
15. Rear wheel disc-to-rim bolts, lock nuts, for tightness ☐
16. Injection pump timing ☐
17. Cylinder head bolt torque ☐

OPERATIVE SERVICE CHECKS:

1. Lights and instruments for proper operation ☐
2. Fluid and oil leaks ☐
3. Maximum no-load speed and idle speed adjustments, and fuel shut-off ☐
4. Starting and starter safety switch ☐
5. Valve lash ☐
6. Hydraulic system:
   Selector lever for position control operation ☐
   Flow control operation ☐

PERFORMANCE SERVICE CHECKS:

1. Engine operation including throttle and governor operation ☐
2. Transmission including clutch ☐
3. Steering control ☐
4. Differential lock engagement and disengagement ☐
5. Brake action ☐
6. All optional equipment and accessories ☐

TRACTOR MODEL NO. _____

INSPECTION PERFORMED

TRACTOR SERIAL NO. _____

OWNER'S SIGNATURE DATE DEALER'S SIGNATURE DATE

DEALER COPY

PRE-DELIVERY SERVICE

CHECK AND ADJUST AS REQUIRED

INOPERATIVE SERVICE CHECKS:

1. Tire pressure ☐
2. Air cleaner oil level and hose connections ☐
3. Oil level in injection pump ☐
4. Radiator coolant level ☐
5. Fan belt tension ☐
6. Battery cleanliness, vent openings, electrolyte level, and charge ☐
7. Engine oil level ☐
8. Transmission and rear axle oil level ☐
9. Hydraulic reservoir oil level ☐
10. Starter safety switch operation ☐
11. Hydraulic Lift control adjustment ☐
12. Upper link, drawbar, and pins in position ☐
13. Steering gear box oil level ☐
14. Brake adjustment and pedal equalization ☐
15. Operation of brake pedal lock ☐
16. Rear wheel-disc-to-rim bolts for tightness ☐
17. Front and rear wheel disc and hub nuts for tightness ☐
18. Front wheel toe-in ☐
19. Fuel level ☐
20. Sheet metal and paint condition ☐
21. Tool box for Operator's Manual ☐
22. Check lift rod leveling crank for proper operation ☐
23. Drain diesel fuel filter ☐

OPERATIVE SERVICE CHECKS:

All operating checks are to be performed with the tractor at normal operating temperature.

1. Lights and instruments for proper operation ☐
2. Fluid and oil leaks ☐
3. Maximum no-load speed and idle speed adjustments, and fuel shut-off ☐
4. Starting and starter safety switch ☐
5. P.T.O. engagement and disengagement:
   - clutch pedal and P.T.O. lever ☐
6. Hydraulic System:
   - Selection lever for position control operation ☐
   - Flow control operation ☐

PERFORMANCE SERVICE CHECKS:

1. Engine operation including throttle and governor operation ☐
2. Transmission including clutch ☐
3. Steering control ☐
4. Differential lock engagement and disengagement ☐
5. Brake action ☐
6. All optional equipment and accessories ☐

TRACTOR MODEL NO. _____

INSPECTION PERFORMED
WARRANTY EXPLAINED

TRACTOR SERIAL NO. _____

OWNER'S SIGNATURE DATE DEALER'S SIGNATURE DATE

DEALER COPY

50-HOUR SERVICE

CHECK AND ADJUST AS REQUIRED

INOPERATIVE SERVICE CHECKS:

1. Tire pressure ☐
2. Change air cleaner oil and check hose connections ☐
3. Replace diesel fuel filter(s) and bleed system ☐
4. Change oil in in-line injection pump ☐
5. Tighten in-line pump delivery valve holders ☐
6. Radiator coolant level ☐
7. Fan belt tension ☐
8. Battery cleanliness and vent openings, electrolyte level, and charge ☐
9. All electrical cables, terminals, and wires ☐
10. Drain and refill engine oil ☐
11. Replace engine oil filter ☐
12. Transmission and rear axle oil level ☐
13. Hydraulic reservoir oil level ☐
14. Steering gear box oil level ☐
15. Rear wheel disc-to-rim bolts, lock nuts, for tightness ☐
16. Injection pump timing ☐
17. Cylinder head bolt torque ☐

OPERATIVE SERVICE CHECKS:

1. Lights and instruments for proper operation ☐
2. Fluid and oil leaks ☐
3. Maximum no-load speed and idle speed adjustments, and fuel shut-off ☐
4. Starting and starter safety switch ☐
5. Valve lash ☐
6. Hydraulic system:
   Selector lever for position control operation ☐
   Flow control operation ☐

PERFORMANCE SERVICE CHECKS:

1. Engine operation including throttle and governor operation ☐
2. Transmission including clutch ☐
3. Steering control ☐
4. Differential lock engagement and disengagement ☐
5. Brake action ☐
6. All optional equipment and accessories ☐

TRACTOR MODEL NO. _____

INSPECTION PERFORMED

TRACTOR SERIAL NO. _____

OWNER'S SIGNATURE DATE DEALER'S SIGNATURE DATE

whatever your service needs . . .
whatever your parts or accessories
requirements . . . your Ford Tractor-
Equipment Dealer is equipped
to serve you better . . . for less!

Diesel Injection Service

Don't lose diesel power and economy because of dirty or improperly adjusted injectors. Prompt and expert attention can correct excessive pressure buildup which can lead to wasteful fuel consumption, hard starting, loss of power, and possible pump damage.

Let your Ford Tractor–Equipment Dealer give your diesel a complete check-up. He offers a diesel pump and injector exchange service which features:

- **LOW COST** – substantially less than new.
- **FAST SERVICE**
- **WARRANTY** – same as for new pump and injectors.
- **PRECISION WORKMANSHIP** – by Ford diesel specialists for like-new performance.

YOU'LL FIND ALL THIS ONLY WHERE YOU SEE THIS SIGN

HEADQUARTERS FOR FORD
QUALITY CARE
DIESEL INJECTION SERVICE

FORD TRACTOR OPERATIONS

FORD MOTOR COMPANY

SE 3413 4731 PRINTED IN U.S.A.