FORD

OPERATOR'S MANUAL

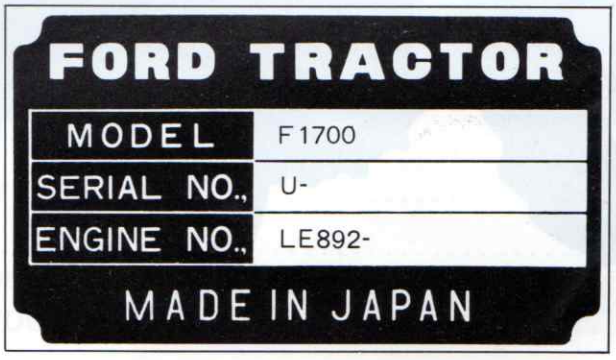
1700

PLEASE READ CAREFULLY:

For a complete list of the pre-delivery service checks performed by your dealer, refer to PRE-DELIVERY SERVICE on the upper portion of page 53 and 55. The copy on page 53 is your record of the service performed, and the copy on page 55, 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 53 and 55 — without charge — except for lubricant, 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 transmission 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.




FORD 1700
FORD

CONTENTS

INTERNATIONAL SYMBOLS

As a guide to the operation of your tractor, various international symbols have been utilized on the instruments and controls. The symbols are shown below with an indication of their meaning.


Engine speed


Hours recorded


Engine water temperature


Lights


Horn


Engine oil pressure


Safety Flasher


Axle connect


Axle disconnect


Continuously variable


Increase

Decrease


Alternator charge


Power take-off (on)


Power take-off (off)


"Tortoise," slow or minimum setting

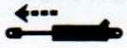

"Hare," fast or maximum setting


Caution

Control lever operating direction


Rock shaft (raised)


Rock shaft (lowered)


Remote cylinder (extended)


Remote cylinder (retracted)


Differential lock

SAFETY PRECAUTIONS

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. Read and take the following precautions before operating this tractor to help prevent accidents. Equipment should be operated only by those who are responsible and instructed to do so.

THE TRACTOR

1. Read the Operator's Manual carefully before using the tractor. Lack of operating knowledge can lead to accidents.
2. Use an approved Rollbar and Seat Belt for safe operation. Overturning a tractor without a rollbar can result in death or injury. If your tractor is not equipped with a rollbar and seat belt, see your Ford Tractor Equipment Dealer.
3. Always use the seat belt when the rollbar is installed. Do not use the seat belt if the rollbar is removed from the tractor.
4. Use the handholds and step plates when mounting and dismounting the tactor to prevent falls. Keep steps and platform cleared of mud and debris.
5. Do not permit anyone but the operator to ride on the tractor. There is no safe place for extra riders.

SERVICING THE TRACTOR

6. Cooling system operates under pressure which is controlled by the radiator cap. It is dangerous to remove the cap while system is hot. Always turn cap slowly to the first stop and allow the pressure to escape before removing the cap entirely.
7. Do not smoke while refueling the tractor. Keep any type of open flame away. Wait for engine to cool before refueling.
8. Keep the tractor in good operating condition for your safety. An improperly maintained tractor can be hazardous.
9. Keep open flame away from battery or cold weather starting aids to prevent fires or explosions. Use jumper cables according to instructions to prevent sparks which could cause explosion.
10. Stop the engine before performing any service on the tractor.
11. Do not modify or alter or permit anyone else to modify or alter this tractor or any of its components or any tractor function without first consulting a Ford Tractor-Equipment Dealer.

OPERATING THE TRACTOR

12. Apply the parking brake, place the PTO lever in the "OFF" position, the lift control lever in the down position, and the transmission in neutral before starting the tractor.
13. Do not start the engine or operate controls while standing beside the tractor. Always sit in the tractor seat when starting the engine or operating controls.
14. Do not bypass the safety start switch. Consult your Ford Tractor-Equipment Dealer if your safety start controls malfunction. Use jumper cables only in recommended manner, improper use can result in tractor runaway.
15. Do not get off the tractor while it is in motion.
16. Shut off the engine and apply the parking brake before getting off the tractor.
17. Do not park the tractor on a steep incline.
18. Do not operate the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes can cause death.
19. If engine ceases operating, stop the tractor immediately.
20. Pull only from the drawbar or the lower link drawbar in the down position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to upset.
21. If the front end of the tractor tends to rise when heavy implements are attached to the three-point hitch, install front end or front wheel weights. Do not operate the tractor with a light front end.
22. Do not leave equipment in the raised position.
23. Use the Flasher Lights and SMV signs when traveling on public roads both day and night.
24. Be sure the lights are adjusted to prevent blinding an oncoming vehicle operator.

DRIVING THE TRACTOR

25. Watch where you are going especially at row ends, on roads, around trees and any low hanging obstacle.
26. To avoid upsets drive the tractor with care and at speeds compatible with safety, especially when operating over rough ground, crossing ditches, slopes, and when turning.
27. Lock tractor brake pedals together when transporting on roads to provide two wheel braking.
28. Keep the tractor in the same gear when going downhill as used when going uphill. Do not coast or free wheel down hills.
29. Any towed vehicle whose total weight exceeds that of the towing tractor must be equipped with brakes for safe operation.
30. When the tractor is stuck or tires frozen to the ground, back out to prevent upset.

OPERATING THE PTO

31. When operating PTO driven equipment, shut off the engine and wait until the PTO stops before getting off the tractor and disconnecting the equipment.
32. Do not wear loose clothing when operating the power take-off, or when near rotating equipment.
33. When operating stationary PTO driven equipment, always apply the tractor parking brake and block the rear wheels front and back.
34. To avoid injury, do not clear, adjust, unclog or service PTO driven equipment when the tractor engine is running.
35. Make sure the PTO master shield is installed at all times and always replace the PTO shaft cap when the PTO is not in use.

Whenever you see this symbol  it means:

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

SEAT, LIGHT, AND ENGINE CONTROLS

TRACTOR SEAT

Your Ford 1700 Tractor is equipped with a molded cushion seat 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 loosening the attaching bolts, and repositioning the seat as desired, Figure 2. Two additional inches of adjustment can be obtained by removing the bolts and relocating in alternate holes in seat attachment plate.

Figure 1 — Tractor Seat, Roll Bar and Seat Belt

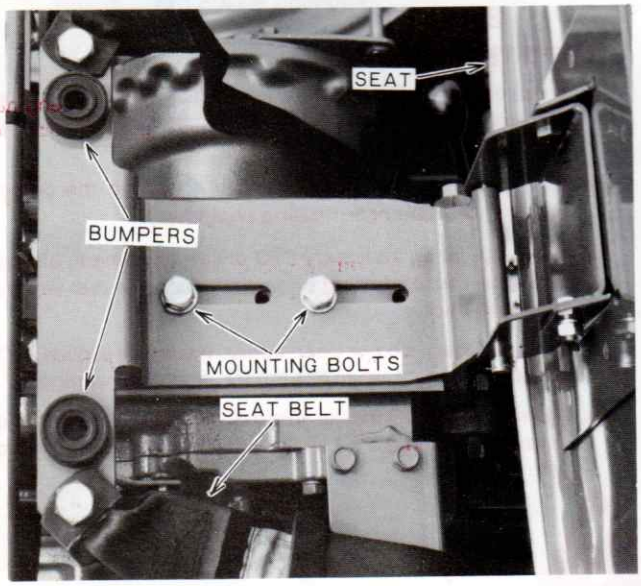


Figure 2 — Tractor Seat Adjustment

SAFETY ROLL BAR AND SEAT BELT

The safety offered by the roll bar and seat belt is minimized if your seat belt is not buckled. Always use your seat belt — they save lives.

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, naptha, etc., as these will weaken the webbing. For the same reason, do not bleach or redye the webbing. Replace seat belt if worn or damaged.

LIGHTING

FLASHER WARNING LAMP

Your Ford tractor is equipped with flasher warning lamps, Figure 3. The switch for the warning lamps is located on the right side of the instrument panel.

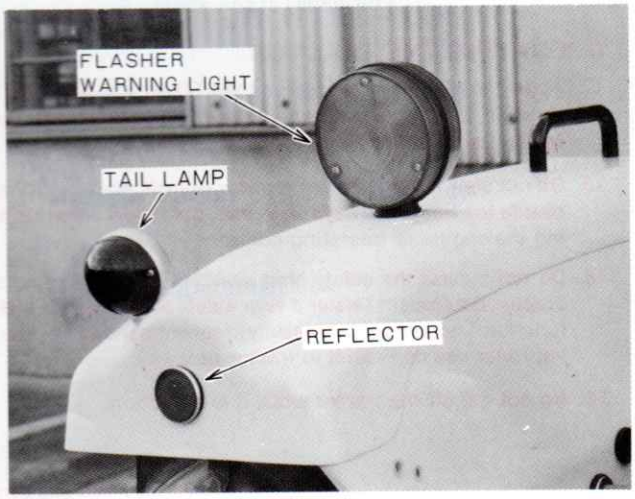


Figure 3 — Flasher Warning Lamp

The light switch must be in the "ON" positions before the flasher will operate.

For your protection, use the flasher warning lamp when traveling on public roads, day or night.

LIGHT SWITCH

The light switch, shown in Figure 4, is a push-pull type switch. Its positions are:

Full in ..... Off
Intermediate ..... Headlights (high beam), Instruments, and Tail Lamp
Full out ..... Headlights (low beam), Instruments, and Tail Lamp

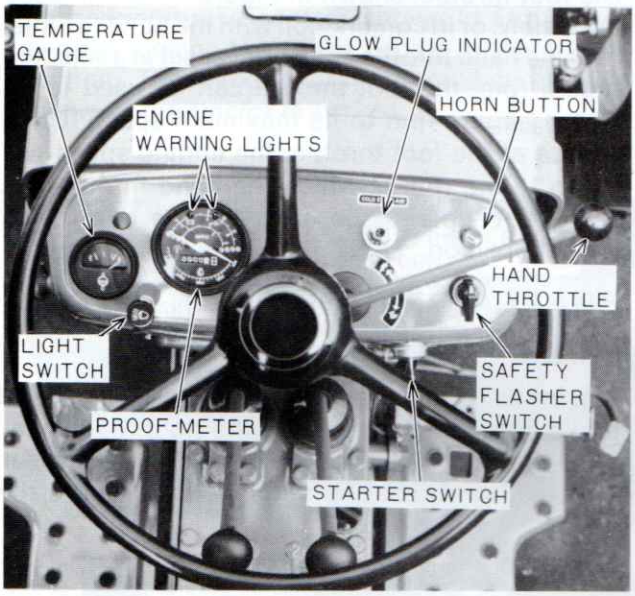


Figure 4 — Instrument Panel

INSTRUMENT PANEL

STARTER SWITCH

The starter switch is shown in Figure 4. Turning the key to the left will activate the cold-start 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 fully depressed. Always check to make certain the transmission main shift lever and PTO lever are in neutral before attempting to start the engine. Refer to page 13 for complete starting instructions.

IMPORTANT: The starter switch must remain in the ON position while operating the engine. The warning lights and battery charging system will not function with the switch in the OFF position.

FUEL GAUGE

The fuel gauge is shown in Figure 5. The amount of fuel in the gauge indicates the amount of fuel in the tank. If the fuel level is at the lowest point, the tank is empty.

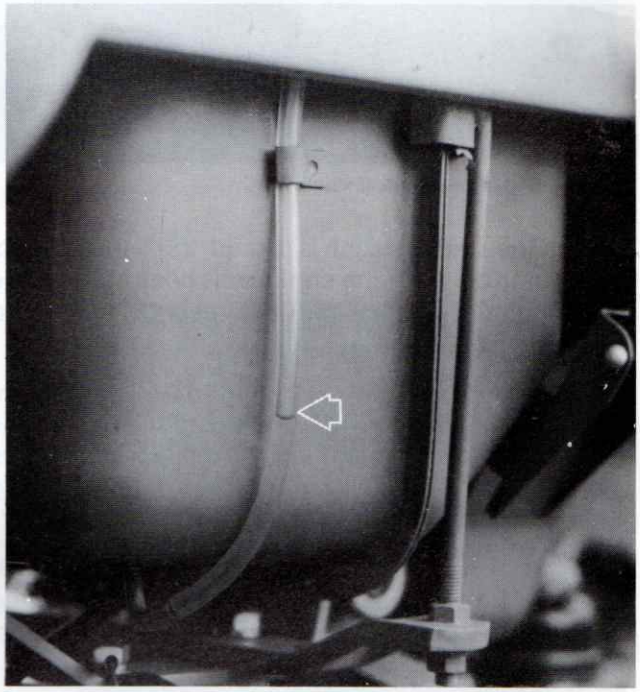


Figure 5 — Fuel Gauge

FUEL SHUTOFF VALVE

The fuel shutoff valve is shown in Figure 6. To open the fuel shutoff valve, move the handle so that it points straight up and down. To close the fuel shutoff valve, move the handle to the horizontal position. Always shut off the valve when servicing any portion of the fuel system.

TEMPERATURE GAUGE

The engine coolant temperature gauge is shown in Figure 4. When the needle is in the middle area, the engine is at its normal operating temperature. The needle at the "H" end indicates an overheated engine.

WARNING LIGHTS

The engine oil pressure and charge indicator warning lights are located as shown in Figure 4.

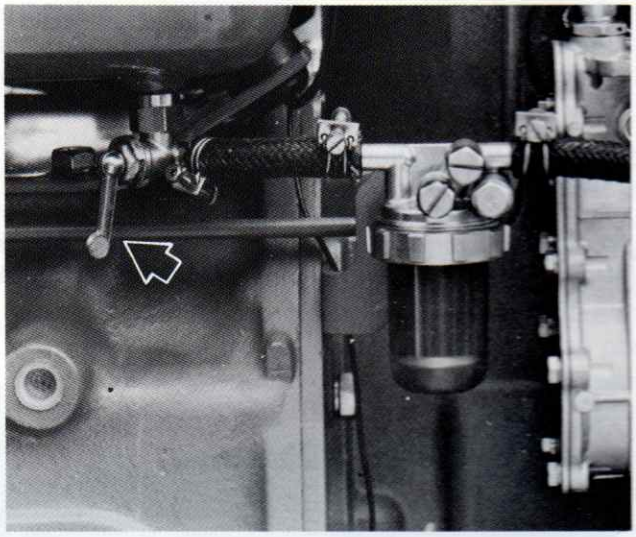


Figure 6 — Fuel Shutoff Valve

When the 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.
- Charge indicator warning light: This is an indication that the charging system is not operating normally. Investigate the cause as soon as possible, otherwise the battery will become fully discharged.

PROOF-METER

The Proof-Meter is located on the left side of the instrument panel, Figure 4. The Proof-Meter indicates:

- The hours and portions of hours your tractor has operated, based on an average engine speed of 2240 rpm. Engine speeds below 2240 rpm accumulate engine hours at a slower rate than clock hours. Engine speeds above 2240rpm accumulate engine hours faster than clock hours. Use the Proof-Meter as a guide to determine hourly service and maintenance intervals.
- Use the engine revolutions per minute scale on the lower half of the Proof-Meter when operating PTO driven equipment. PTO driven equipment must be operated at an engine speed not to exceed 2455 rpm as shown by the PTO symbol on the rpm scale. Additional information on PTO operation can be found on page 15.
- The scales on the upper half of the Proof-Meter indicate ground speeds in miles per hour (MPH) for 3rd, 6th, 9th and 12th gears. Additional ground speed information can be found on page 47.

THROTTLE CONTROLS

HAND THROTTLE AND ENGINE STOP CONTROL

The hand throttle is shown in Figure 4. Pull the throttle down 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 7, 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 the rpm at which the hand throttle has been set or idle, if the hand throttle is not at a pre-set position.

BRAKE CONTROLS

BRAKE PEDALS

The brake pedals are shown in Figure 7. 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.

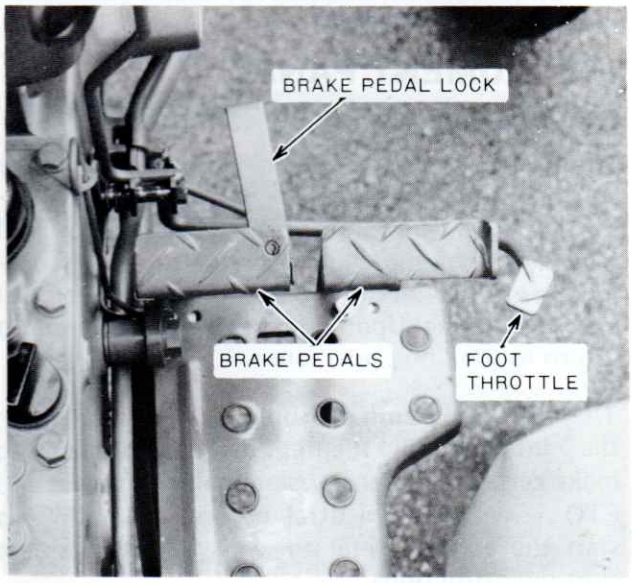


Figure 7 — Foot Throttle and Brake Controls

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. Sharp turns at high speeds may result in tractor overturn.

BRAKE PEDAL LOCK

The brake pedal lock, shown in Figure 7, 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 CONTROL

The parking brake control, shown in Figure 8, is used for locking the brake pedals in the applied position. The parking brake should be applied whenever the tractor is parked.

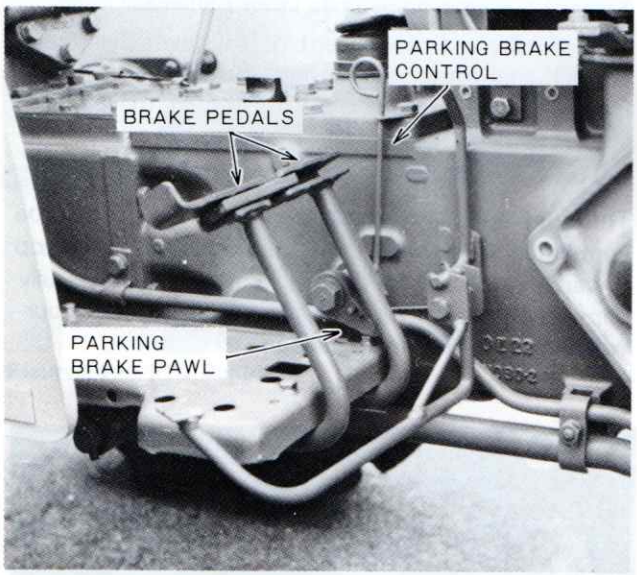


Figure 8 — Parking Brake

To apply the brake:

- Lock the brake pedals together with the brake pedal lock.
- Depress both brake pedals.
- Pull up on the parking brake control. The pawl on the control will engage the teeth 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.

DIFFERENTIAL CONTROL

DIFFERENTIAL LOCK PEDAL

The differential lock pedal is shown in Figure 9. Depressing the pedal locks the rear axle shafts together, providing additional traction in wet or loose soil. Refer to page 16 for differential lock operating information.

CAUTION: The tractor is very difficult to steer with the differential lock engaged.

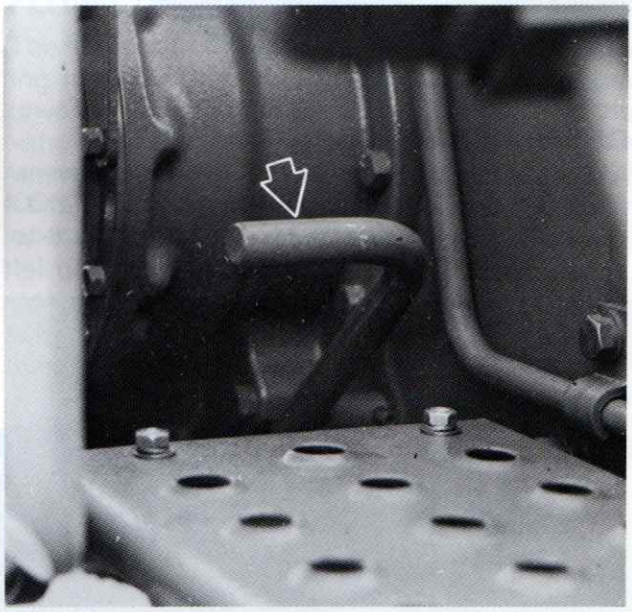


Figure 9 — Differential Lock

TRANSMISSION AND PTO CONTROLS

TRANSMISSION GEARSHIFT LEVERS

The transmission main shift lever and range selector lever are shown in Figure 10. A diagram showing the shift pattern is cast into the transmission cover.

Three forward and one reverse speed are provided for each of the four ranges. This provides a total of 12 forward and 4 reverse speeds.

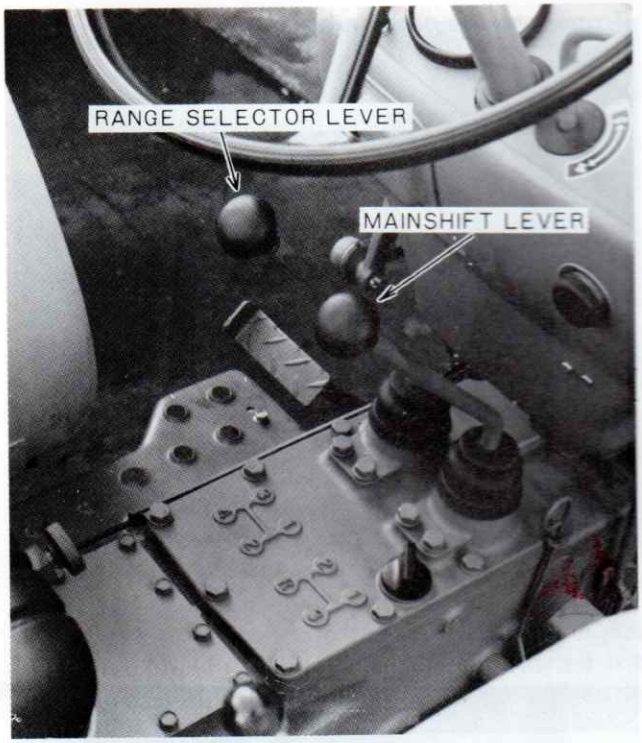


Figure 10— Transmission Controls

CREEPER RANGE (ACCESSORY)

A creeper range option with a 7.78:1 ratio is available which provides an additional 12 forward and 4 reverse speeds or a total of 24 forward and 8 reverse speeds. The control is located on the top, left front of the rear-axle center housing, Figure 11. Full downward movement of the lever engages (ON) the creeper range. Full upward movement disengages (OFF) the creeper range.

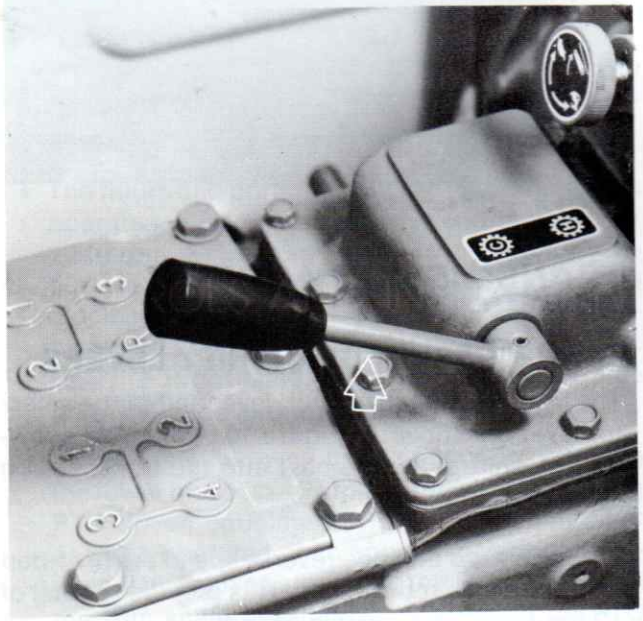


Figure 11— Creeper Range Control

FOUR-WHEEL DRIVE (OPTIONAL)

The shift lever for the four-wheel drive is located on the top right-hand front of the rear-axle center housing Figure 12.

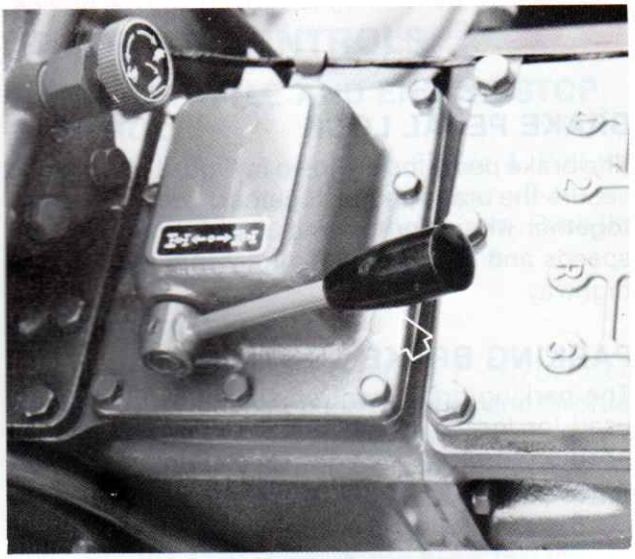


Figure 12— Four-Wheel Drive Lever (Optional)

Full downward movement of the lever disengages (OFF) the four-wheel drive. Full upward movement engages (ON) the four-wheel drive.

CLUTCH PEDAL

The foot-operated clutch pedal, Fig 13, must be completely depressed to start the tractor or to stop foward travel and PTO shaft rotation. Always fully depress the pedal when changing gear ratios, four-wheel drive and creeping range.

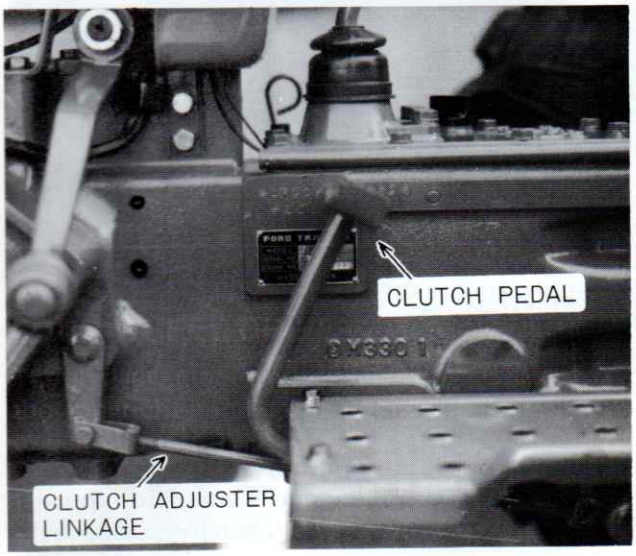


Figure 13— Clutch Control

TRANSMISSION PTO CONTROL LEVER

The transmission PTO control lever is shown in Figure 14. The lever engages and disengages the PTO. If the tractor engine is running, always depress the clutch pedal fully before moving the lever. Move the lever forward to engage the PTO and rearward to disengage the PTO.

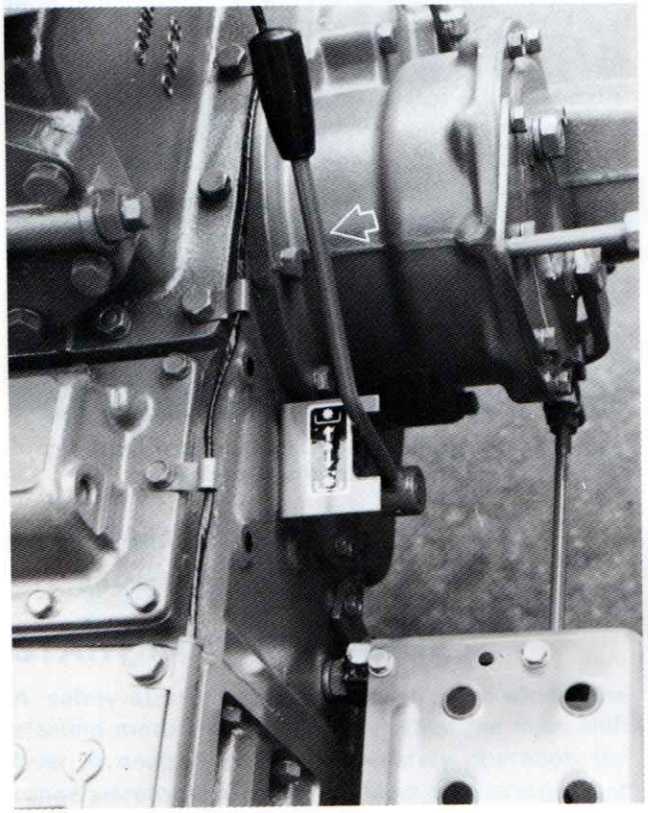


Figure 14 — PTO Control

HYDRAULIC LIFT SYSTEM CONTROLS

HYDRAULIC LIFT CONTROL LEVER (POSITION CONTROL)

The hydraulic lift control lever is shown in Figure 15. The lever is located at the right hand side of the seat. To raise the hydraulic lift arms, pull the lever upward. To lower the lift arms, push the lever downward. The adjustable stop is provided for locating the lever at any position in the quadrant.

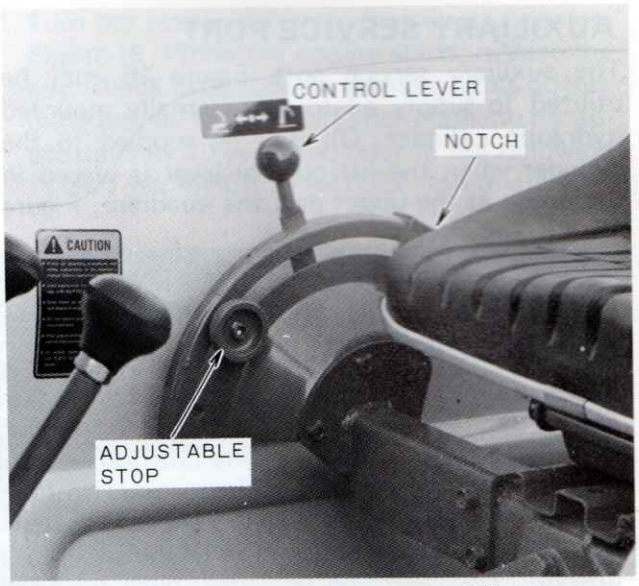


Figure 15 — Hydraulic Lift System Control (Position Control)

FLOW CONTROL VALVE

The flow control valve is shown in Figure 16. Turning the valve "in" (clockwise) will decrease the lowering speed of the lower links, and turning the valve "out" (counterclockwise) will increase the lowering speed of the lower links. Refer to "FLOW CONTROL," page 19, for additional information on operating the flow control valve.

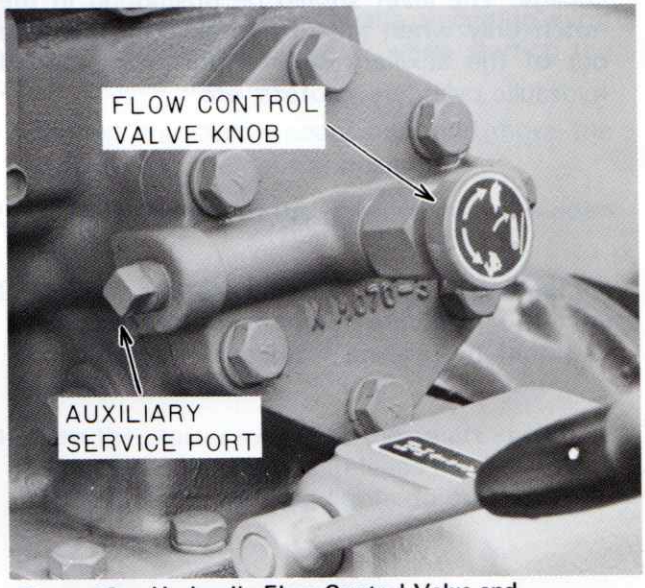


Figure 16 — Hydraulic Flow Control Valve and Auxiliary Service Port

AUXILIARY SERVICE PORT

The auxiliary service port, Figure 16, may be utilized to supply oil to an externally mounted hydraulic cylinder. Oil will be suppied to the cylinder when the lift control lever is placed in the notch at the upper part the quadrant, Figure 15, 17.

DRAFT AND POSITION CONTROL LEVERS (OPTIONAL)

The hydraulic lift control levers are shown in Figure 17. The levers are located at right hand side of the seat. Outer lever is position control lever, inner lever is draft control lever. Position control lever is used to raise or lower the hydraulic lift arms. To raise the lift arms, pull the lever upward. To lower the lift arms, push the lever downward. The adjustable stop is provided for locating the lever at any position in the quadrant. Draft control lever is used to adjust draft load. The lift arms are raised by light draft load when the lever is pulled upward, and by heavy draft load when the lever is pushed down.

IMPORTANT: The hydraulic control lever should not be positioned in the notch at the top of the quadrant when raising the tractor hydraulic linkage. The lever should be positioned in the notch only when taking hydraulic oil pressure out of the auxiliary service port for external hydraulic cylinders, motors, etc.

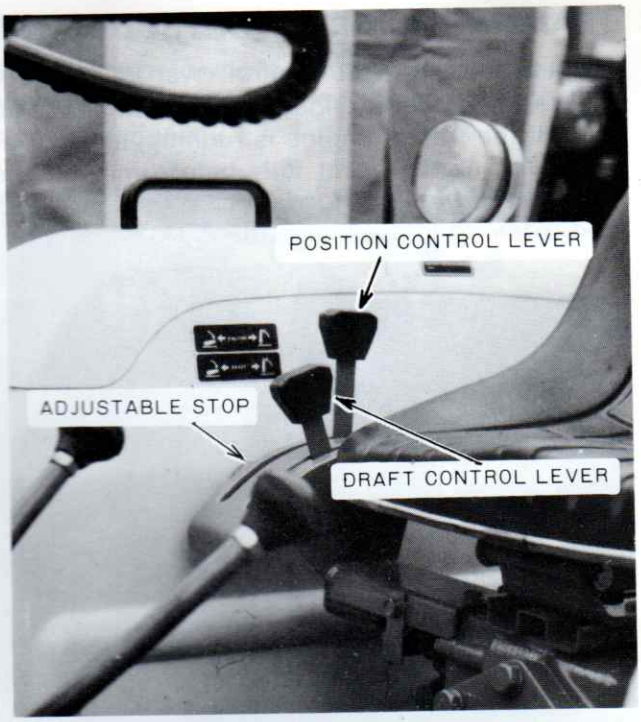


Figure 17 – Hydraulic Lift System Control – Draft and Position Control (Optional)

BREAK-IN PROCEDURES

Your 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 tractor allows the starting motor to be used only when the main shift lever in neutral position. For safety operation the range selector lever and PTO lever in neutral position prior to starting the engine, too.

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 fully and move the shift lever to the neutral position.
2. Move the hand throttle down to a near full open position.
3. Turn the starter switch to the "start" position, Figure 18. 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.

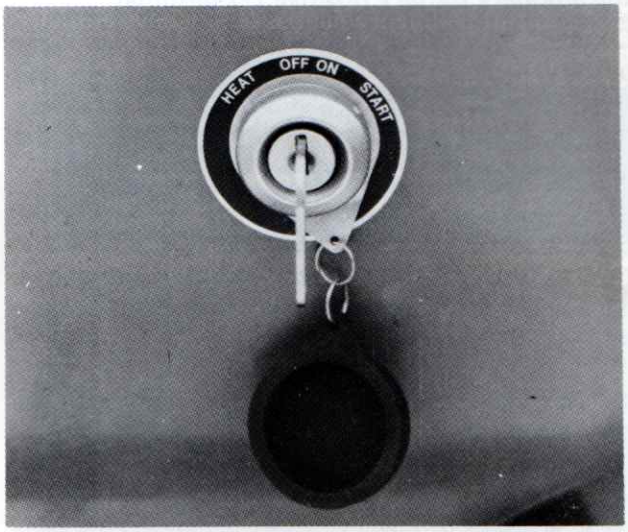


Figure 18 — Starter Switch

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 fully and move the shift lever to the neutral position.
2. Move the hand throttle down to the wide-open position.
3. Turn the starter switch to "heat" to preheat the precombustion chamber and wait until the cold-start aid indicator shows red (approximately 30 seconds).
4. Turn the starter switch to the "start" position. When the engine starts, release the key. Check to be sure the warning lights go out.

NOTE: A coolant immersion heater which provides for easier starting in temperatures below 0°F (−17.7°C) by warming the engine oil and coolant is available as a dealer installed option.

STARTING THE TRACTOR WITH JUMPER CABLES

If it is necessary to use jumper cables to start the engine, proceed with the following instructions.

Connect one end of the jumper cable to the tractor battery positive (+) terminal and the other to the auxiliary battery positive (+) terminal.

Connect the other cable first to the auxiliary battery negative (—) terminal, and the other end to the battery's ground strap. (Not the battery terminal) Follow the starting procedures after the jumper cables are connected.

Idle the engine and turn on all electrical equipment (lights, etc.), then disconnect the cables in reverse order of the connecting procedure above. This will help protect the alternator from damage due to extreme load changes.

NOTE: Reversed battery polarity will damage the voltage regulator and alternator.

CAUTION: Batteries contain sulfuric acid and produce explosive gasses. Follow the instructions below to prevent personal injury.

- Wear eye and skin protection.
- Keep sparks and flame away
- Always have adequate ventilation while charging or using the battery.
- Follow the battery manufacturer's instructions which are shown on the battery.

STOPPING THE ENGINE

Push the hand throttle fully forward past idle position to stop the engine, then turn the starter switch, Figure 18, to the "Off" position.

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

OPERATING THE TRANSMISSION, FOUR-WHEEL DRIVE AND PTO

The transmission operates through the use of a clutch pedal, a main shift lever, and a range shift lever. Figure 19 illustrates the pedal and levers involved. Ground speeds for the various gear ratios can be found on page 47. Figure 20 shows the combinations of main shift lever and range shift lever positions to obtain the 12 forward and four reverse speeds.

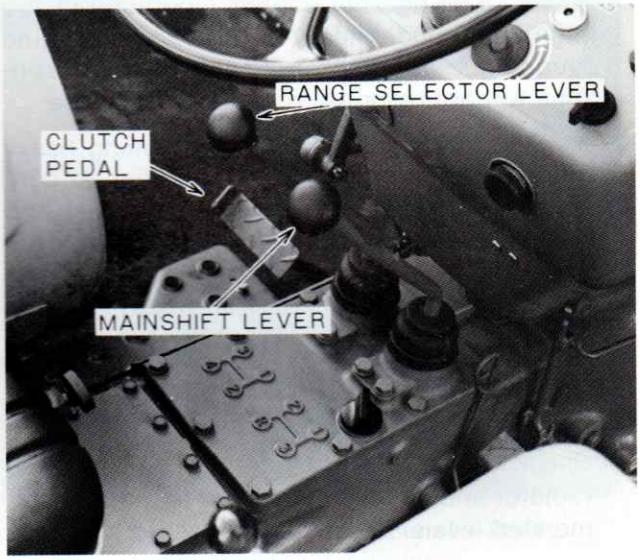


Figure 19— Transmission Controls and Shift Pattern

SPEED	RANGE	MAIN
1	1	1
2		2
3		3
4	2	1
5		2
6		3
7	3	1
8		2
9		3
10	4	1
11		2
12		3
R^1	1	R
R^2	2	R
R^3	3	R
R^4	4	R

Figure 20— Speed Range Combinations

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.

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

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.

The four-wheel drive is engaged and disengaged through use of the lever on the top right-hand front of the rear-axle center housing, Figure 12.

To engage the four-wheel drive, depress the clutch pedal fully and move the four-wheel drive lever full upward. To disengage, move the lever full downward.

CAUTION: Do not operate the tractor in four-wheel drive while driving on roads or at high speeds.

IMPORTANT: The front wheel drive should be used only when additional traction is required while operating in loose soil; wet, slippery conditions or on slopes. For normal operation on firm soil, hard surfaces and roading the unit, front wheel drive should be disengaged to maximize tire and driveline life and fuel economy.

POWER TAKE-OFF

The power take-off (PTO) in your tractor transfers engine power directly to mounted or pull-type PTO equipment. The standard PTO speed is 540 ± 10 rpm. Most PTO equipment is designed to operate efficiently at this speed. This speed is obtained when engine rpm is set at 2455 rpm, as indicated by the PTO symbol on the Proof-Meter rpm scale.

CAUTION: Do not exceed 2455 rpm engine speed when operating PTO-driven equipment.

The transmission PTO is controlled through a lever shown in Figure 14. The transmission PTO can be engaged, operated as described under "POWER TAKE-OFF OPERATION."

IMPORTANT: Optional drawbar is required to provide standard PTO drawbar relationship.

PTO SHIELD AND CAP

The PTO shield, shown in Figure 21, is standard equipment. The shield must always be used with both mounted and pull-type PTO equipment. The PTO cap should always be installed when the PTO is not in use.

WARNING

- Pull only from drawbar. Pulling from any other point can cause rear overturn.
- Do not operate with unshielded PTO. • Disengage PTO and stop engine before servicing tractor or implements or attaching and detaching implements.
- Position drawbar at 14" from end of PTO shaft to drawbar hole for 540 and 16" for 1000 PTO RPM. • When towing equipment use a safety chain.

FAILURE TO FOLLOW ANY OF THE INSTRUCTIONS ABOVE CAN CAUSE SERIOUS INJURY TO THE OPERATOR OR OTHER PERSONS.

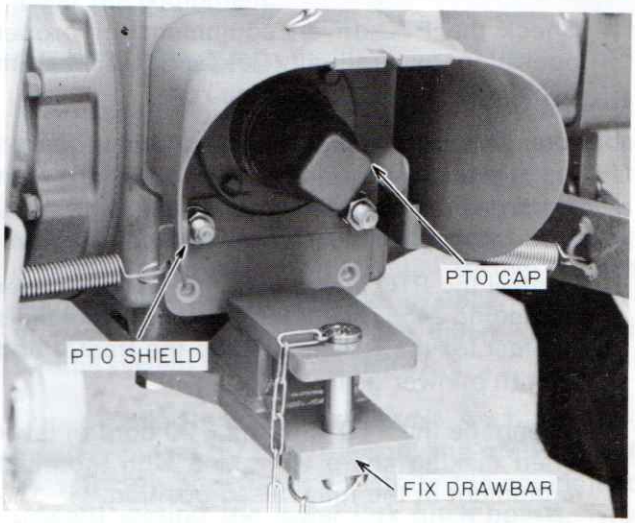


Figure 21 — PTO Shield and Cap

POWER TAKE-OFF OPERATION

1. Stop the engine, set the parking brake, remove the PTO shaft cap, and attach the mounted or pull-type equipment. Make sure the equipment-driven shaft is properly aligned and locked to the tractor PTO drive shaft and that the PTO 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 PTO equipment, and before working on or clearing PTO equipment.

- Depress the clutch pedal completely and move the transmission main shift lever to the neutral (N) position.
- Set parking brake.
- Disengage the PTO with the PTO control lever, Figure 14.

- Shut off the tractor engine.
- Wait until the PTO shaft stops turning.

2. With the PTO 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 PTO by moving the PTO control lever, Figure 14, forward.

CAUTION: Failure to move the PTO lever through its full range may result in damage to the PTO.

4. Check the PTO-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 PTO and tractor in motion.
6. Control the PTO speed with the throttle, never exceeding 2455 rpm. If the tractor movement is too fast for the PTO load, stop the tractor and shift to a lower gear.
7. Disengage the PTO with the PTO control lever when making sharp turns and with mounted equipment in the fully raised position.
8. Disconnect the PTO-driven shaft at the tractor PTO shaft before traveling on highways or for any great distance.
9. Reinstall the PTO shaft cap when the PTO-driven equipment is disconnected from the tractor or when the PTO is not being used.

TOWING THE TRACTOR

To tow your tractor, place the transmission main-shift levers in neutral. Do not exceed 12 mph (20 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 12 mph (20 kph).

CAUTION: For safe operation, towing the tractor on the highway is not recommended. Also, for safe operation, 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 rear-axle center housing, Figure 22. Depressing the pedal locks both final drive pinion gear 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.

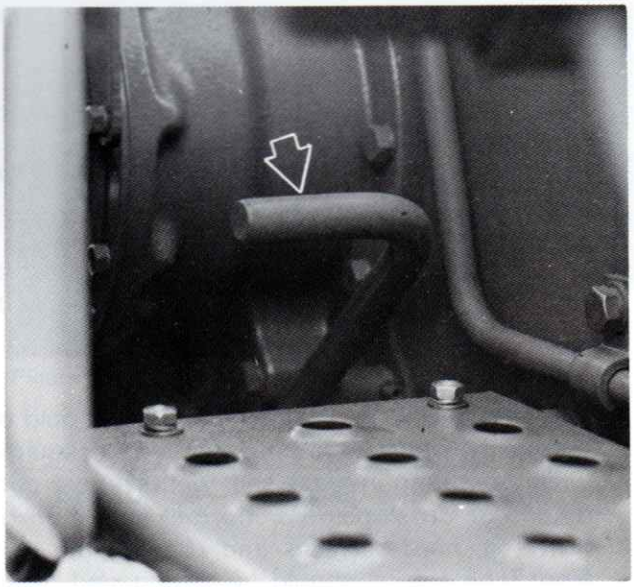


Figure 22 — Differential Lock Pedal

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 will result.

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 braking load to the rear wheel.

OPERATING THE HYDRAULIC LIFT SYSTEM

SINGLE LEVER HYDRAULIC LIFT SYSTEM (STANDARD)

The hydraulic lift system provides accurate, smooth, and instant hydraulic power for raising a variety of compatible 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 on the quadrant, the system repositions the equipment to a higher or lower position and maintains the selected position.

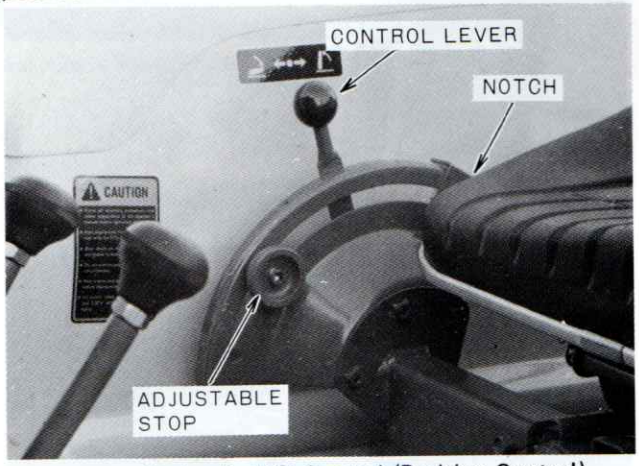


Figure 23— Hydraulic Lift Control (Position Control)

OPERATING THE HYDRAULIC LIFT SYSTEM

TWO LEVER HYDRAULIC LIFT SYSTEM WITH DRAFT AND POSITION CONTROL (OPTIONAL)

If your tractor is equipped with the optional Two Lever Control System shown in Figure 24, there are two modes of Hydraulic Lift System operation—Position Control or Draft Control—that can be selected to satisfy operating conditions for the implement being used.

POSITION CONTROL

When operating in position control, there is a definite relationship between the position of the control lever in the quadrant and the position of the equipment. The lever must be moved to change the position of the equipment relative to the tractor. The system will automatically maintain the equipment in the selected position.

Position control provides easy, accurate control of three-point linkage equipment that operates above the ground; such as sprayers, rakes, mowers, etc. It also provides a uniform depth when using a blade or similar equipment on level ground.

Position control lever (Outer) is used to raise and lower the equipment.

DRAFT CONTROL

When operating in draft control, the lift control lever is used to adjust the draft load. Once the lever is positioned, the hydraulic lift system will automatically adjust the depth of the equipment to maintain an even load on the tractor as soil conditions vary. The hydraulic system senses draft-changes through changes in upper link compression. The operation of the upper link draft sensing system is described below:

Upper Link Compression Loads: As the equipment is pulled through the soil, the draft caused by soil resistance tends to rotate the equipment upward around the lower link hitch points. This draft creates a pushing or compressive force on the upper link. When changes in soil resistance cause the draft to increase, the compression force on the upper link will also increase or decrease. These changes in upper link compression signal the hydraulic system, through internal linkage, to raise or lower the equipment, thereby maintaining uniform draft.

CAUTION: Do not transport or attach equipment when the hydraulic system is in draft control, use position control.

CAUTION: Always lower the hydraulic lift and all other hydraulic equipment before stopping the tractor.

Ford tractors having Hydraulic Draft Control option are equipped with two lever hydraulic lift control systems. The operation of each system is described on the next page.

TWO LEVER CONTROLS POSITION CONTROL OPERATION

The two lever control system is shown in Figure 24. Position control is obtained by placing the inner (draft) control lever in the down position and then moving the outer (position) control lever to position the equipment as desired.
The outer (position) lever is used to rise or lower the equipment.

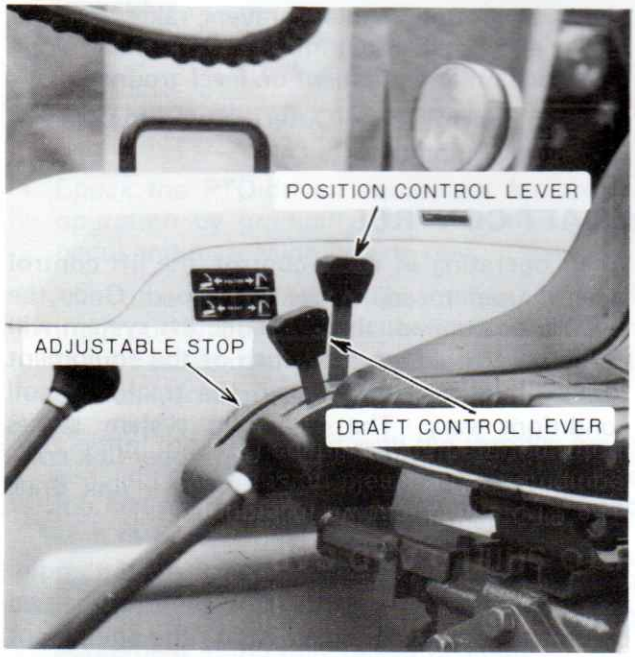


Figure 24 – Hydraulic Lift Control (Draft and Position)

DRAFT CONTROL OPERATION

Draft control is obtained by placing the position control lever in the down position. Use the draft control to adjust the draft setting (the lift system will automatically maintain the selected draft as described above.)

OPERATING IN BOTH POSITION AND DRAFT CONTROL

The position control may be used together with the draft control as follows:

1. Set the position control lever at the maximum desired implement depth. The hydraulic system will not lower the implement below the depth. (This will also prevent "diving" which may be encountered with light equipment, such as a rear blade, when grading or backfilling.)
2. Adjust the draft control lever for the maximum draft load (pull) desired.

The hydraulic lift system will now provide normal draft response within the range set by the position control. This adjustment provides a more uniform depth while maintaining an even pull in widely varying soil conditions.

HYDRAULIC LIFT ROCKER

The hydraulic lift rocker, Figure 25, has two holes for attaching the upper link. Attach the link in the lower hole, as shown, for light draft loads (cultivating) and in the top hole for heavier draft loads (plowing).

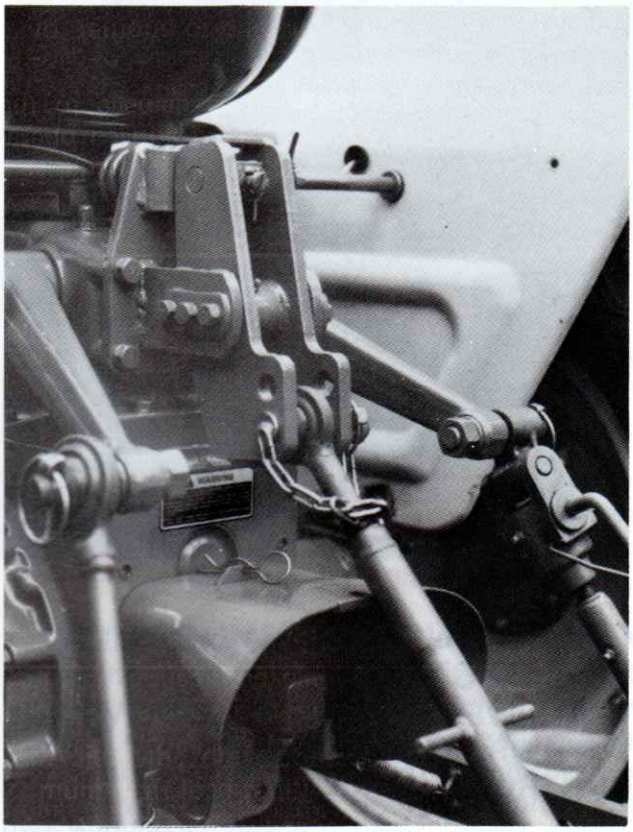


Figure 25 – Hydraulic Lift Rocker

CAUTION: Make sure area is clear of people before lowering equipment.

FLOW CONTROL

The flow control valve, Figure 26, 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 either turn the flow control valve "in" (clockwise) to decrease the rate of drop or "out" (counterclockwise) to increase the rate of drop.

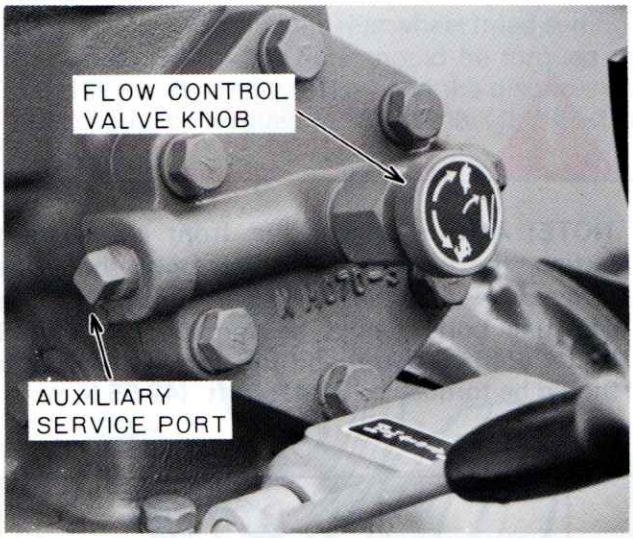


Figure 26 – Flow Control Valve

DRIVING THE TRACTOR

CAUTION: Observe the following precautions when driving the tractor.

- Watch where you are going – especially at row ends, on roads, and around trees.
- Keep the tractor in gear when going down hill. Use a low gear to maintain control with minimum braking.
- If the tractor is stuck, back out to prevent upsetting the unit.
- Always use the drawbar for pull-type work. Do not pull from any other part of the tractor since it may tip backward.
- Keep the lights adjusted so they do not blind the operator of an oncoming vehicle.
- Engage the clutch slowly when driving out of a ditch, gully, or up a steep hillside. Disengage the clutch promptly should the front wheels rise off the ground.
- Reduce speed before turning quickly or applying brakes. Lock the brake pedals together when traveling at high speeds. Brake both wheels simultaneously when making an emergency stop.
- Never apply the differential lock when turning.
- Use extreme caution and avoid hard applications of the tractor brakes when pulling heavy towed loads at road speeds.
- Towed loads that weigh more than twice the weight of the tractor should have brakes. If not, reduce speed and avoid inclines.
- Always sit in the driver's seat while starting or driving the tractor.
- Always use a slow moving vehicle (SMV) emblem and turn on flasher lights when traveling on public roads.

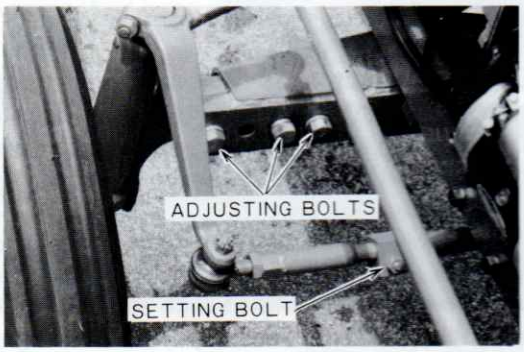
WHEEL TREAD SETTINGS

FRONT WHEEL TREAD SETTINGS (TWO-WHEEL DRIVE ONLY)

The front wheel tread setting is adjustable from 43.5 to 57.5 in. (110.5 – 146 cm) by a combination of repositioning the front axle and reversing the front wheels. See Figure 27. Turf tire tread setting is 46.5-56.5 in. (118-143.5 cm). To reposition the front axle:

IMPORTANT: It is **not** recommended that the front wheels be set at maximum tread width in rough terrain because of high steering wheel effort and kickback.

1. Set parking brake and raise the front of the tractor with a jack placed under the center of the front axle. Set safety stands under each side of tractor frame behind front axle.



WHEEL HUB SETTING POSITION ▶ / SIDE AXLE POSITION ▼		
	43.5 INCHES (110.5 cm) (STD.)	47.4 INCHES (120.5 cm)
	46.9 INCHES (119 cm)	50.8 INCHES (129 cm)
	50.2 INCHES (127.5 cm)	54.1 INCHES (137.5 cm)
	53.5 INCHES (136 cm)	57.5 INCHES (146 cm)

Figure 27 – Front Wheel Tread Settings

2. Remove the setting bolt from the tie rod.
3. Remove the positioning bolts, Figure 27, 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. Check the toe-in as outlined on page 38.

CAUTION: Never attempt to widen the tread setting by reversing front wheels on a four-wheel drive system.

NOTE: After changing the front wheel tread setting, the wheel disc to hub bolts should be torqued to 43-54 lbs.ft. (58-73 N.m), side axle adjusting bolts should be torqued to 177-199 lbs.ft. (240-270 N.m) and the tie rod clamp nuts should be torqued to 31-41 lbs.ft. (42-55 N.m)

STANDARD	INTERCHANGE L & R WHEEL	RESET THE RIM	RESET THE RIM AND INTERCHANGE L & R WHEEL
47.8 in. (121.5cm)	54.1 in. (137.5cm)	43.3 in. (110cm)	58.7 in. (149cm)
RESET THE RIM AND THE DISC	RESET THE RIM AND THE DISC, THEN INTERCHANGE L & R WHEEL	RESET THE RIM AND THE DISC	RESET THE RIM AND THE DISC THEN INTERCHANGE L & R WHEEL
57.1 in. (145cm)	45.1 in. (114.5cm)	52.4 in. (133cm)	49.6 in. (126cm)

Figure 28 – Rear Wheel Tread Settings

REAR WHEEL TREAD SETTINGS

The rear wheels on the Ford 1700 are adjustable from 43.3 to 58.7 inches (110-149 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 from side to side. Turf tire tread settings are 49.8-52 in. (126.5-132 cm). These various positions are shown in Figure 28.

NOTE: After changing the rear wheel tread setting, the wheel rim-to-disc nuts should be torqued to 137-159 lbs. ft. (186-215 N.m) and the disc-to-axle nuts should be torqued to 137-159 lbs. ft. (186-215 N.m).

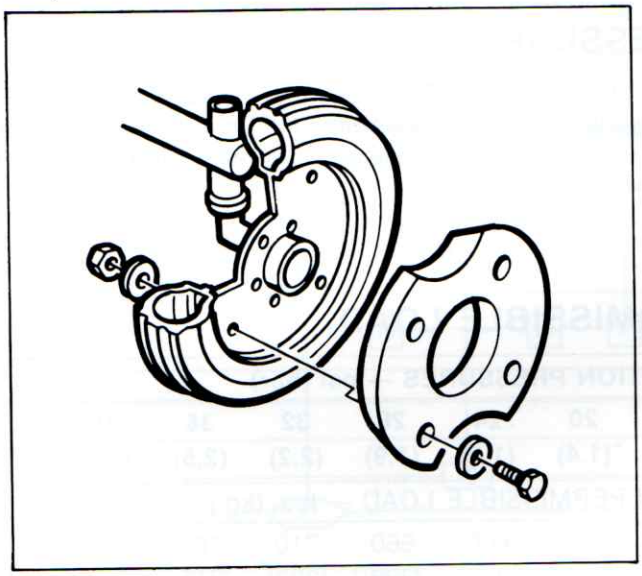


Figure 29 — Front Wheel Weights

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 Figures 29 through 31, 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.

NOTE: When adding weight, adhere to the tire load capacities. Refer to "Tire Pressure" and the "Tire Inflation Versus Permissible Load" table on page 22.

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.

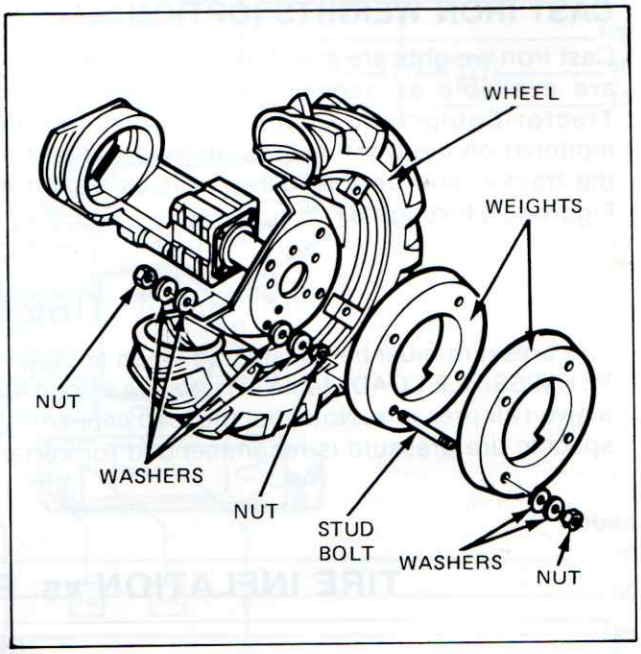


Figure 30 — Rear Wheel Weights

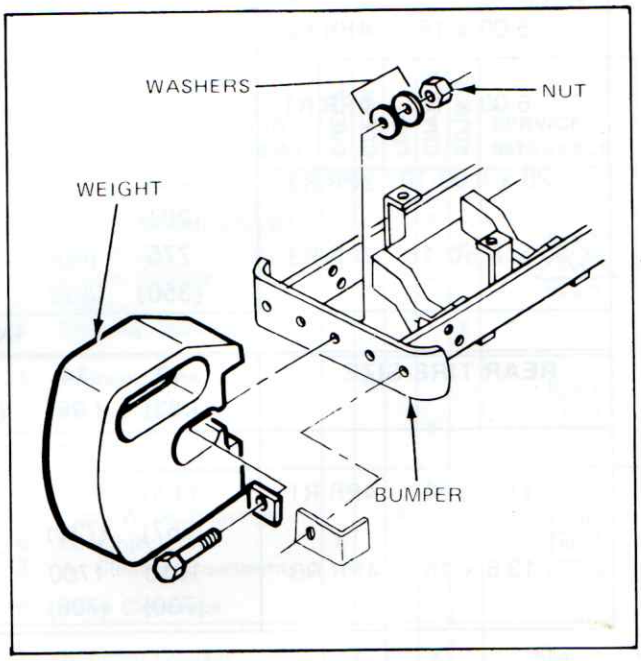


Figure 31 — Front End Weights

TOTAL VEHICLE WEIGHT

Do not add weight exceeding the following:
Front End — 190 lbs.
Front Wheels — 132 lbs. (No additional weight on four-wheel drive.)
Rear Wheels — 264 lbs. plus chloride.

CAST IRON WEIGHTS (OPTIONAL)

Cast iron weights are a factory installed option or 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 29 through 31.

LIQUID BALLAST

It is a common practice to add weight to the tractor by filling the 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) than water. Never exceed total recommended weight for the tractor. Because special equipment is required to fill the tires, we recommend that you consult your Ford Tractor-Equipment Dealer. Tires should never be filled beyond 75% (tire filled to the valve stem when the valve stem is at its highest point at the top of the wheel).

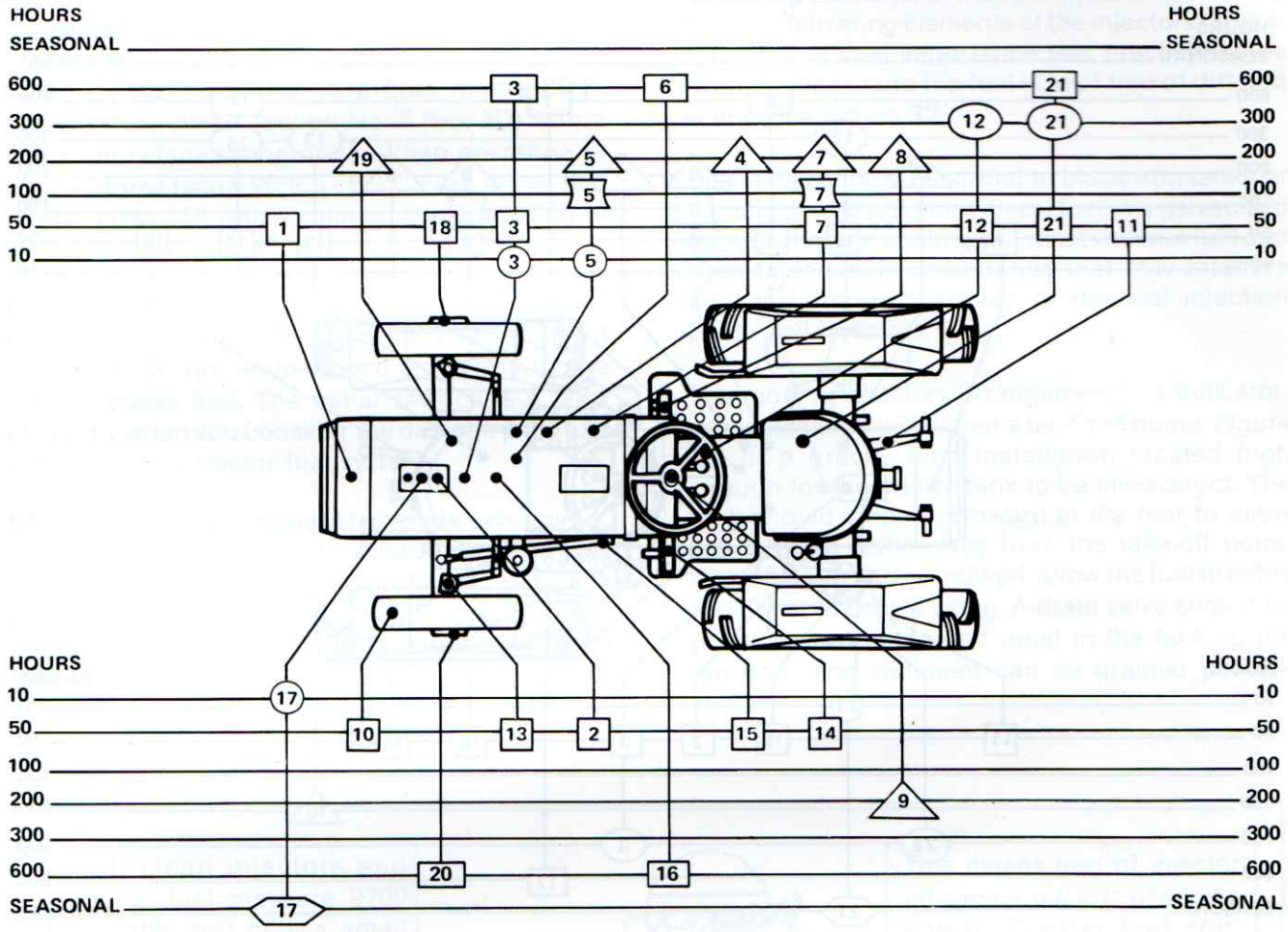
TIRE PRESSURE

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 pressures decrease, and also that a specific tire pressure is recommended for certain size tires.

TIRE INFLATION vs. PERMISSIBLE LOAD

	INFLATION PRESSURES — psi (bar)								
FRONT TIRE SIZE	**8 (.55)**	**10 (.69)**	**12 (.83)**	**20 (1.4)**	**24 (1.7)**	**28 (1.9)**	**32 (2.2)**	**36 (2.5)**	**40 (2.8)**
	MAXIMUM PERMISSIBLE LOAD — lbs. (kg.)								
5.00 x 15 4PR F2	—	—	—	540 (245)	600 (272)	660 (299)	710 (322)	760 (345)	810 (367)
6.00 x 16 4PR R1	—	—	—	760 (345)	840 (381)	920 (417)	—	—	—
20 x 8.00-10 2PR R3	450 (204)	510 (231)	570 (259)	—	—	—	—	—	—
27 x 8.50-15 2PR R3	775 (350)	885 (402)	—	—	—	—	—	—	—
	INFLATION PRESSURES — psi (bar)								
REAR TIRE SIZE	**12 (.83)**	**14 (.96)**	**16 (1.1)**	**18 (1.2)**	**20 (1.4)**	—	—	—	—
	MAXIMUM PERMISSIBLE LOAD — lbs. (kg.)								
11.2 x 24 4PR R1	1470 (667)	1610 (730)	1740 (789)	1860 (844)	—	—	—	—	—
13.6 x 16 4PR R3	1610 (730)	1760 (798)	—	—	—	—	—	—	—

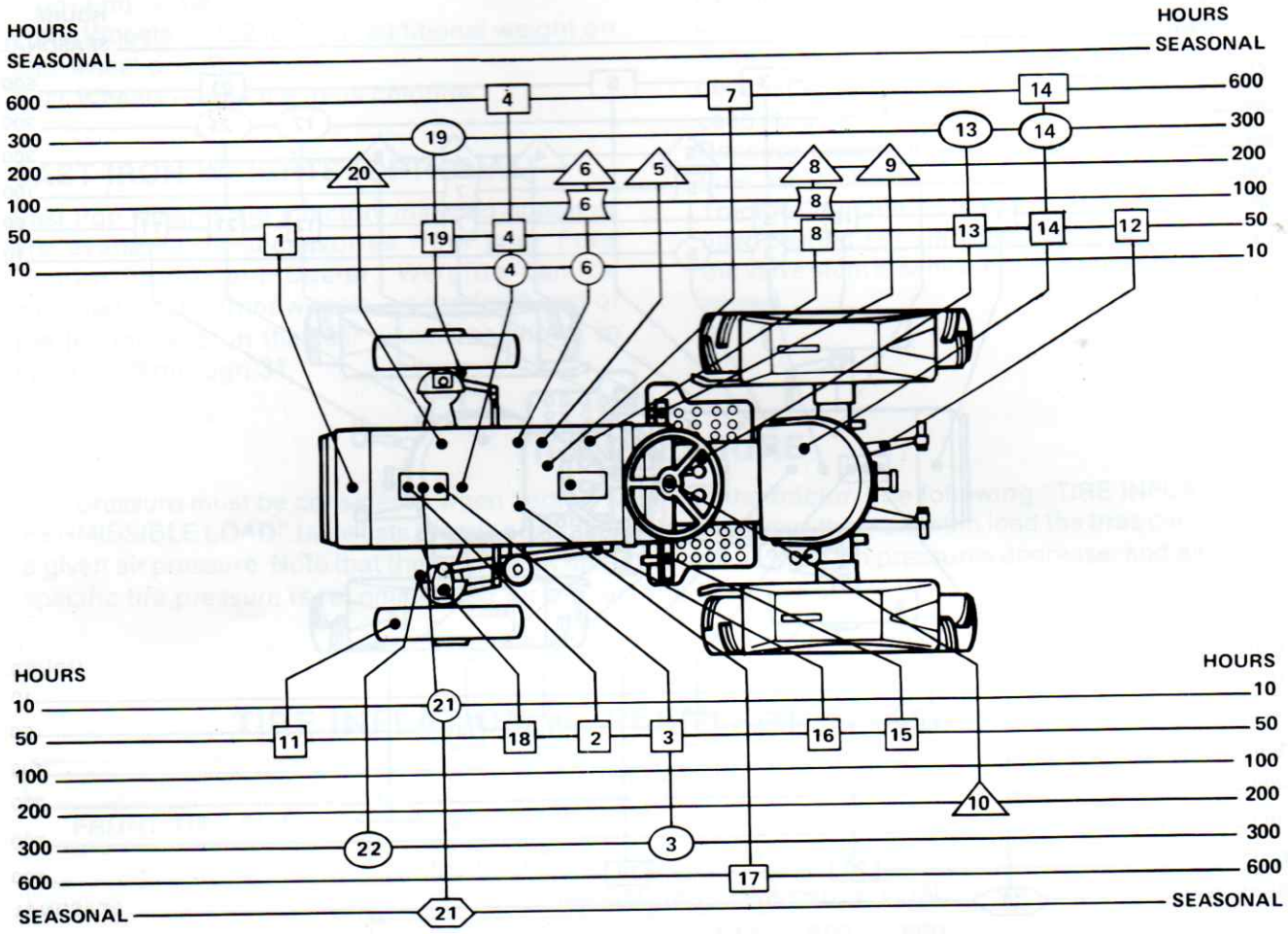
LUBRICATION AND MAINTENANCE CHART — FORD 1700 TWO-WHEEL DRIVE



NO.	LUBRICATION AND MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVALS
5	Engine Oil	X					Every (10) Hours or Daily
17	Radiator Coolant	X					
3	Air Cleaner	X					
21	Hydraulic Filter	X	X				First 50 Hours
3	Air Cleaner		X		X		Every 50 Hours
12	Transmission and Rear Axle Oil Level	X					
7	Fuel Filter	D	R	A	I	N	
1	Battery	X					
10	Tires	X					
14	Clutch Pedal	X					
—	Lubrication Fittings:						
15	Steering Linkage (4)			X			
2	Pivot Shaft (2)			X			
13	King Pins			X			
18	Front Wheel Spindles (2)			X			
11	Hydraulic Lift Linkage (2)			X			
7	Fuel Filter		X				Every 100 Hours
5	Engine Oil				X		

NO.	LUBRICATION AND MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVALS
7	Fuel Filter				X		Every 200 Hours
4	Fuel Injection Pump Oil				X		
19	Fan Belt	X				X	
5	Engine Oil Filter				X		
8	Brakes					X	
9	Steering Free-Play					X	
21	Hydraulic Filter		X				Every (300) Hours
12	Transmission and Rear Axle Oil				X		
21	Hydraulic Filter				X		Every 600 Hours
20	Front Wheel Bearings			X			
6	Fuel Injectors	X					
3	Air Cleaner (Disassemble)		X				
16	Valve Clearance	X					
17	Radiator Coolant				X		Seasonal

LUBRICATION AND MAINTENANCE CHART — FORD 1700 FOUR-WHEEL DRIVE



NO.	LUBRICATION AND MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVALS
6	Engine Oil Level	X					Every (10) Hours or Daily
21	Radiator Coolant	X					
4	Air Cleaner	X					
14	Hydraulic Filter	X	X				First 50 Hours
4	Air Cleaner		X		X		Every 50 Hours
13	Transmission and Rear Axle Oil Level	X					
3	Front Diff. Oil Level	X					
19	Front Axle Oil Level (2)	X					
8	Fuel Filter	D	R	A	I	N	
1	Battery	X					
11	Tires	X					
15	Clutch Pedal	X					
—	Lubrication Fittings:						
16	Steering Linkage (4)			X			
2	Pivot Shaft			X			
18	King Pin (2)			X			
12	Hydraulic Lift Linkage (2)			X			

NO.	LUBRICATION AND MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVALS
8	Fuel Filter		X				Every 100 Hours
6	Engine Oil				X		
8	Fuel Filter				X		Every 200 Hours
5	Fuel Injection Pump Oil				X		
20	Fan Belt	X				X	
6	Engine Oil Filter				X		
9	Brakes					X	
10	Steering Free-Play					X	
14	Hydraulic Filter		X				Every 300 Hours
13	Transmission and Rear Axle Oil				X		
3	Front Diff. Oil				X		
19	Front Axle Oil (2)				X		
22	Front Axle Dust Seals				X		
14	Hydraulic Filter				X		Every 600 Hours
4	Air Cleaner (Disassemble)	X					
7	Fuel Injectors		X				
17	Valve Clearance	X					
21	Radiator Coolant				X		Seasonal

FUEL AND LUBRICANTS

DIESEL FUEL

Type of fuel to use:

When operating in temperatures above 20°F. (−6.7°C), use diesel fuel oil No. 2 (No. 2D) with a minimum cetane rating of 45. When operating in temperatures below 20°F. (−6.7°C), 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 26 for additional diesel fuel information.

FUEL 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 32.

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 undesirable 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 33, 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 periodi-

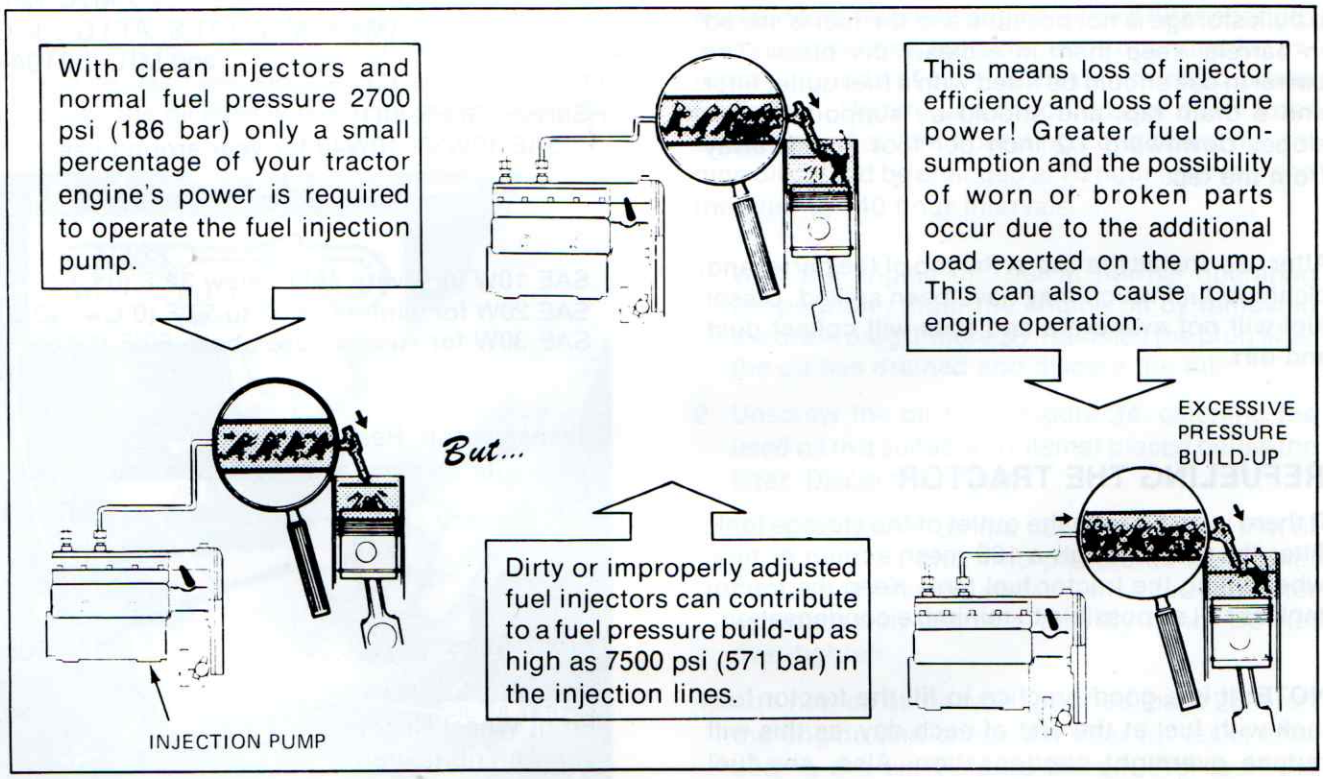


Figure 32 — Dirt vs. Injectors

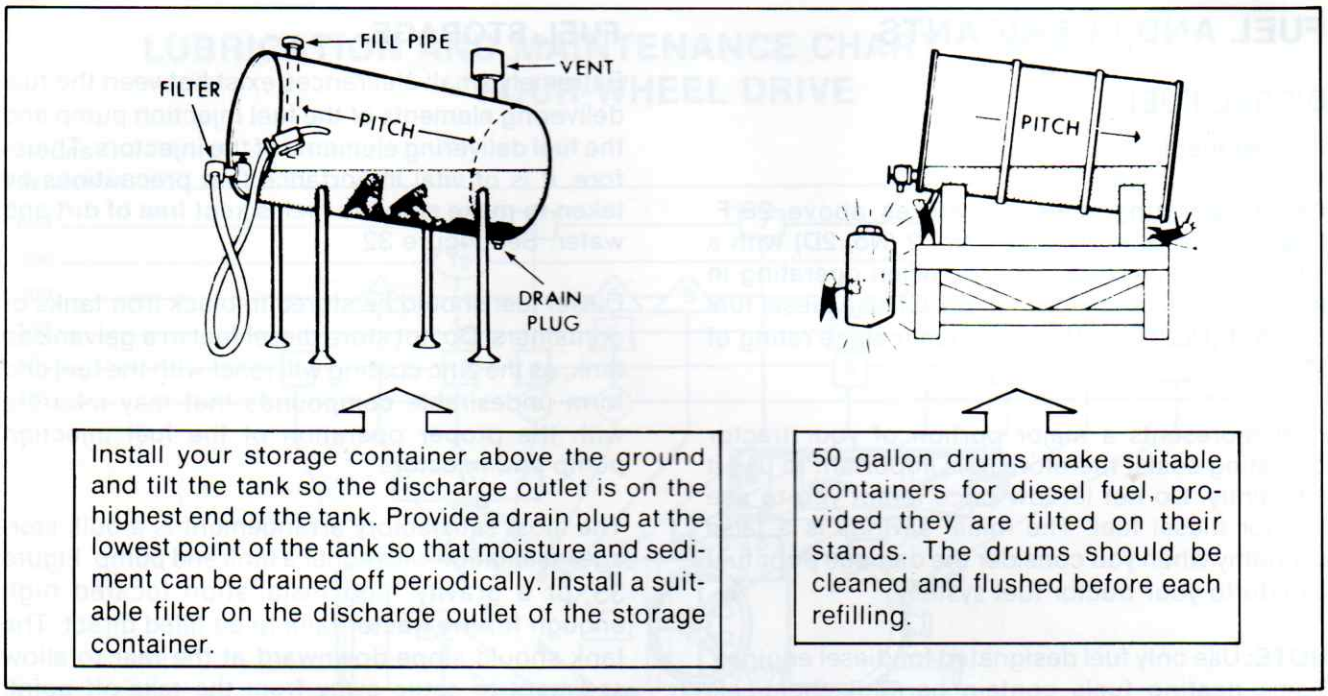


Figure 33 — Diesel Fuel Storage

cally. A fuel outlet filter should be used, as shown in Figure 33 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 M2C-121-A
(Meets M2C-121-B, API Grade CD and MIL-L-2104-C)

Service Grade CD
SAE 10W30, 10W40 for year around use

or

SAE 10W in severe cold below 32°F (0°C)
SAE 20W for winter use 32 to 50°F (0°C — 10°C)
SAE 30W for summer use above 50°F (10°C)

Transmission, Rear Axle,
Hydraulic System, and Power Steering
Oil M2C-134-A

Front Axles M2C-105-A

Front Wheel Bearings
and All Lubrication
Fittings M1C-137-A

LUBRICANT STORAGE

Your 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.

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 34.

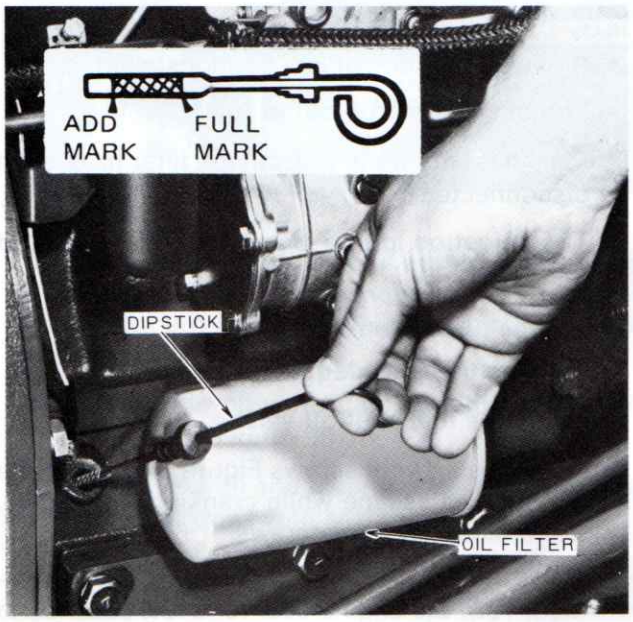


Figure 34 — Engine Oil Level Dipstick and Filter

2. If the oil level is low, remove the filler cap, Figure 35, 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.

Figure 35 — Engine 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.

1. With the engine off, but at normal operating temperature, drain the engine oil by removing the drain plug, Figure 36. Reinstall the plug after the oil has drained and discard the oil.
2. Unscrew the oil filter, Figure 34, 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.
4. Add new oil of the type specified, page 26. Start the engine and check the filter for leaks after adding the oil. Be sure the oil level is at the proper level.

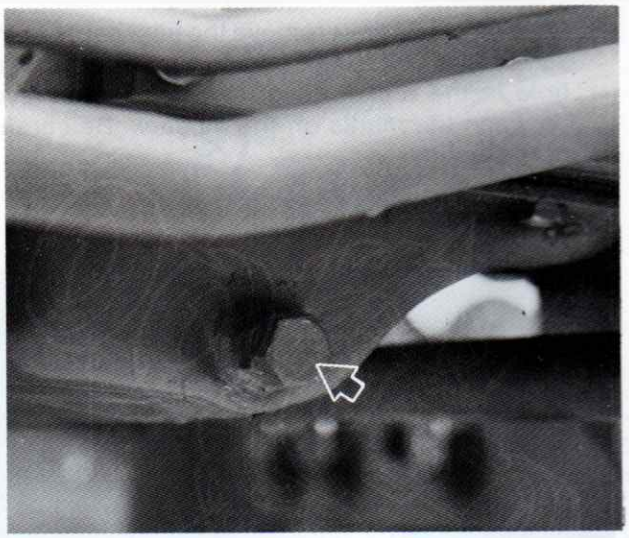


Figure 36 — Engine Oil Drain Plug

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 37.
2. Install the drain plug.
3. Remove the filler plug and fill with clean engine oil as specified on page 26 until oil flows from the oil level check plug, Figure 37.

NOTE: The fuel injection pump utilized oil from the engine crankcase for lubrication. When changing the engine oil, also change the fuel injection pump oil.

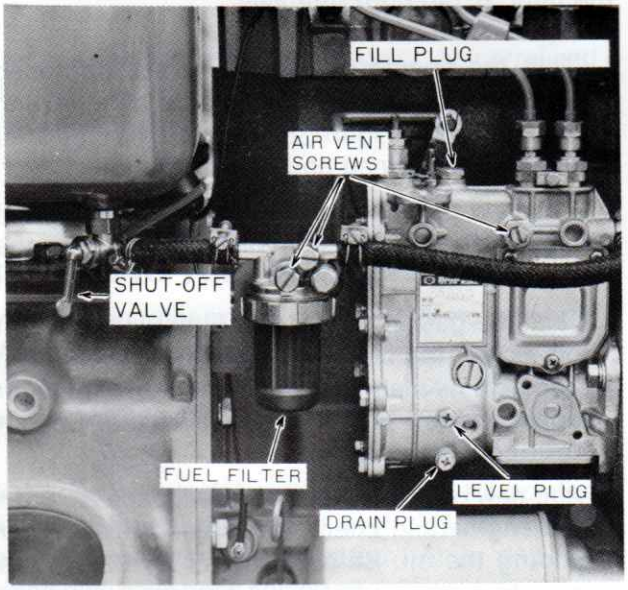


Figure 37 — Fuel Injection Pump

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 in a container of clean diesel fuel.

1. Be sure there is adequate fuel in the fuel tank; close the fuel shut-off, Figure 37, then remove the fuel sediment bowl.
2. Open the fuel shut-off valve 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 under "Bleeding the Fuel System."

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

1. Close the shut-off valve. Figure 37.
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.
6. Bleed the fuel filter and injection pump as covered under "Bleeding the Fuel System."

BLEEDING THE FUEL SYSTEM

Bleed the fuel system after it has been drained or after the following:

- A new filter element has been installed,
- The tractor has run out of fuel,
- The lines leading to or from the filter have been disconnected,
- The injection pump has been removed and reinstalled.

Bleed the fuel system as follows:

1. Be sure there is adequate fuel in the fuel tank.
2. Open the fuel shut-off valve.
3. Open the air vent screws Figure 37, and let the air bubbles escape while cranking the engine. Then close the vent screws.
4. Push the hand throttle to the high speed position. Turn the engine over for a few seconds to bleed the high pressure fuel lines.

NOTE: If the tractor does not start after completing the above bleeding procedure, the fuel lines to each injector may have to be loosened while cranking the engine to complete bleeding of the system. Tighten lines at the injectors after completing bleeding.

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 38.
2. Check the dirt level in the oil.
3. If the dirt level is more than 1/4 in. (6.35 mm) high, service the air cleaner as outlined in the following procedure. If the dirt level is less than 1/4 in. (6.35 mm), reassemble the cleaner and install the chaff screen.

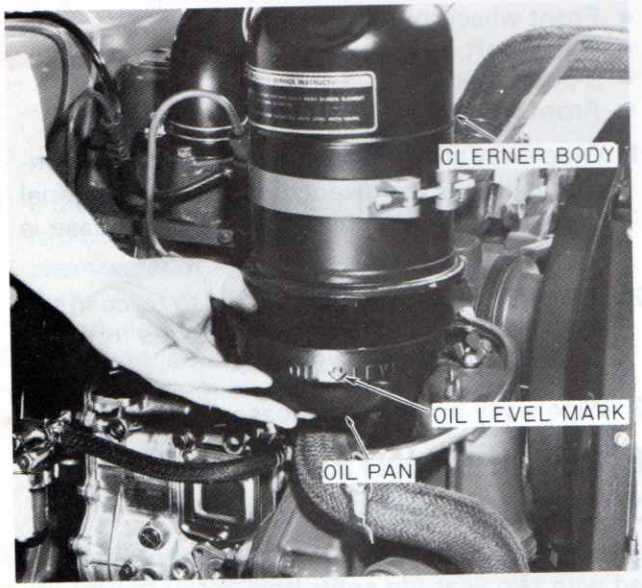


Figure 38 — Air Cleaner

Changing Oil: Change the oil in the air cleaner at least every 50 hours or whenever an inspection shows the dirt level to be more than 1/4 in. (6.35 mm) high.

1. Release the oil pan retaining clip and remove the oil pan, Figure 38.
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 38, should be removed from the tractor, disassembled, and cleaned every 600 hours.

1. Remove the air cleaner pan and discard the oil.
2. Loosen the clamp securing the engine air inlet hose to the air cleaner.
3. Remove the attaching bolts that hold the air cleaner in place, then remove the air cleaner.
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. Be sure clamp is tight and hose is sealed properly to avoid pulling unfiltered air into the engine.
6. Fill the air cleaner pan to the proper level with clean engine oil. Do not overfill.
7. Install the oil filled pan and secure it in place with the retaining clip.

TRANSMISSION, REAR AXLE, HYDRAULIC SYSTEM AND OPTIONAL POWER STEERING

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

1. With the tractor standing level and the engine off, check the oil level with the dipstick, Figure 39.

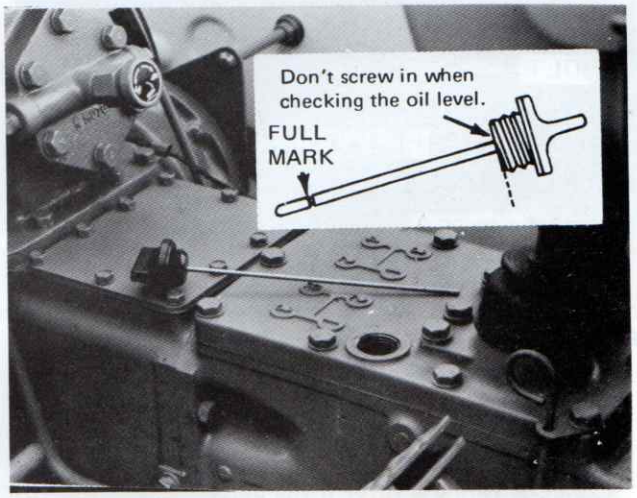


Figure 39 — Transmission, Rear Axle and Hydraulic System Oil Level Dipstick and Fill Plug

2. The oil is at 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 26, through the combined dipstick/fill plug. 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 oil every 300 hours.

1. With the oil at normal operating temperature, drain the oil by removing the transmission and rear axle drain plugs, Figure 40. Reinstall the plugs after the oil has drained. Discard the oil.
2. Check and if necessary clean the hydraulic oil filter.
3. Remove the filler plug, Figure 39, and fill with new oil of the type specified, page 26.
4. 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.
5. Install the dipstick and dipstick/filler plug.

IMPORTANT: Because there is a common sump for the transmission, rear axle and hydraulic system, special attention is necessary in maintaining clean oil.

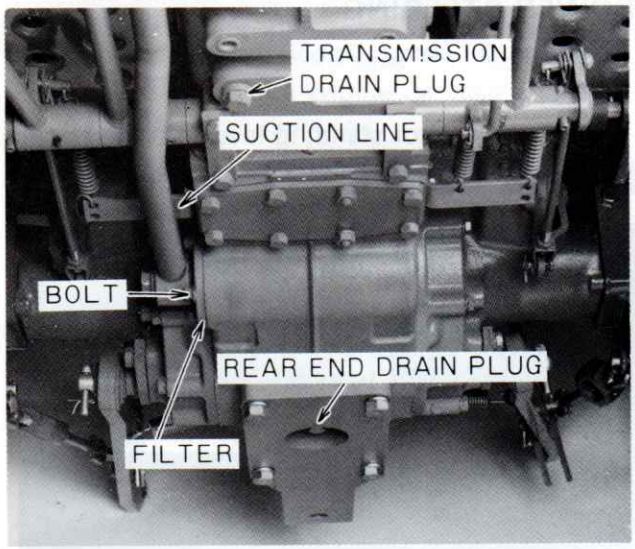


Figure 40 — Transmission, Rear Axle Oil Drain Plugs and Oil Filter

HYDRAULIC SYSTEM FILTER

Check condition of filter after first 50 hou Clean or replace filter if necessary. Clean the filt every 300 hours and change the hydraulic filt every 600 hours of service thereafter. The filter is located on the lower right side of the rear axle center housing.

1. Drain the oil from the common sump.
2. Remove the suction line.
3. Remove the four bolts that secure the filter to the rear axle center housing, Figure 40.
4. Remove the filter and clean or replace.

IMPORTANT: Replace gasket and O-ring during assembly.

5. Assembly the unit reversing proceding.

LUBRICATION FITTINGS

The following lubrication points (refer to the Lubrication Chart, page 26) require the application of a good quality grease every 50 hours. In extremely dirty conditions, lubrication should be made more often. Refer to page 26 for the type of grease that should be used.

- Steering linkage
- Pivot shaft
- Front wheel spindles
- Pedal shaft
- 3-point linkage
- Front-wheel drive king pins (if so equipped)

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 Ford Tractor has been filled with two 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 a 50/50 solution of permanent antifreeze and clear water for year-round service.

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.

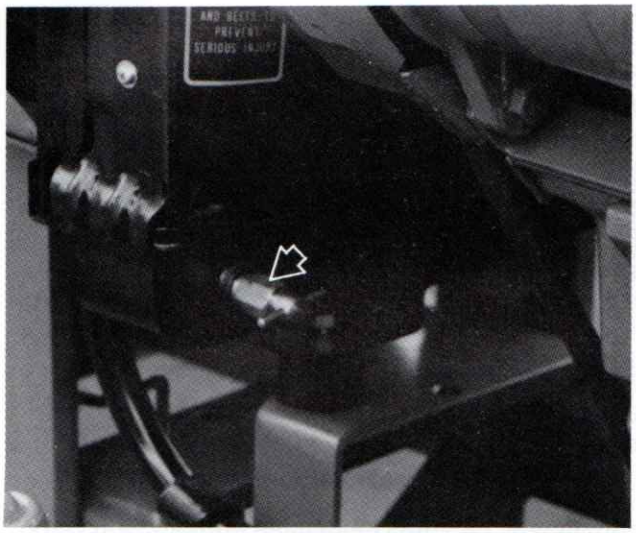


Figure 41 — Radiator Drain Valve

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 counterclockwise 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 in. (3.8 to 5 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 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 12 months. Refill with a 50/50 mixture of long -life (Ford) antifreeze, or equivalent and clear water.

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, Figure 41. The engine block drain valve is located on the left side of the engine. See Figure 42.
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. Make sure water is draining from block drain valve before starting engine. When the water flowing from the drain valve is free of discoloration and sediment, stop the engine and remove the hose. Allow all water to drain from the system through drain valves.
3. Close the two drain valves and slowly refill the system with a 50/50 solution of permanent antifreeze and clean water. Fill until the coolant level is approximately 1-1/2 to 2 in. (3.8 to 5 cm) below the bottom of the filler neck. Do not fill beyond this level.

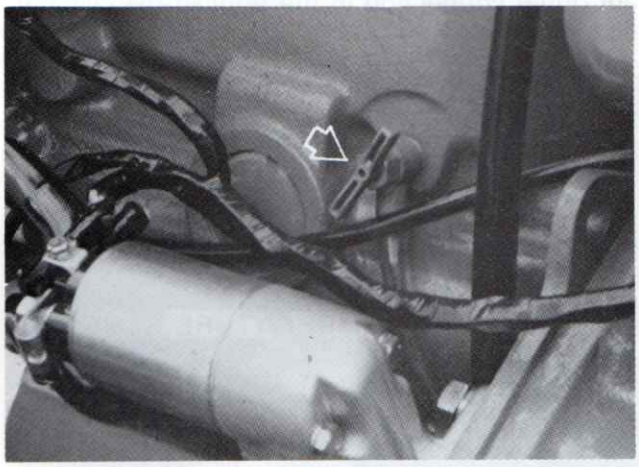


Figure 42 — Engine Block Drain Valve

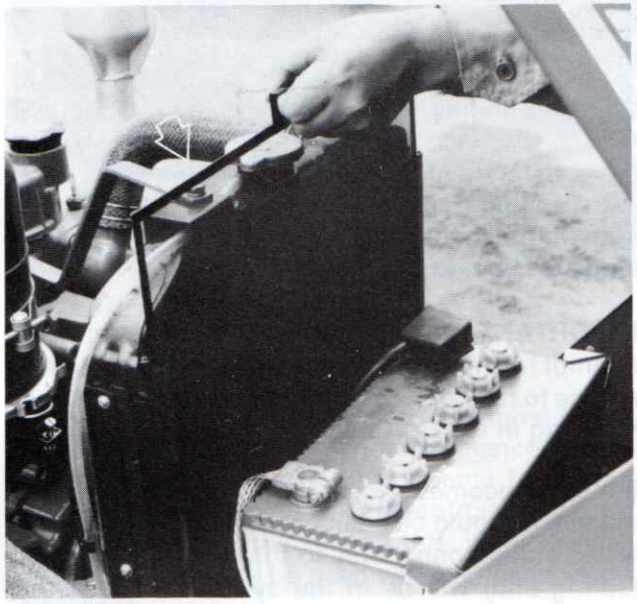


Figure 43 — Radiator Screen

IMPORTANT: Bleed the coolant system to make sure that no air pockets remain.

4. Clean the radiator cap and cap seal. Install the cap.
5. Clean the radiator front screen, Figure 43.
6. 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, Figure 44.

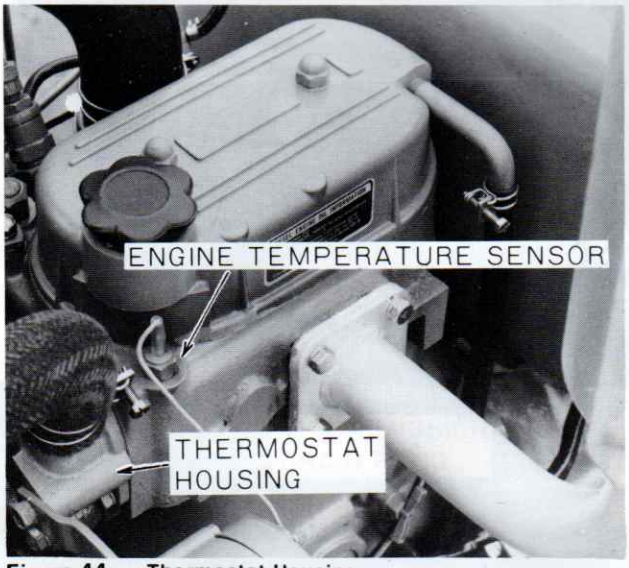


Figure 44 — Thermostat Housing

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 by-pass allows the coolant to circulate within the engine whenever the thermostat shuts off flow to the radiator.

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 in. (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 45.

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.

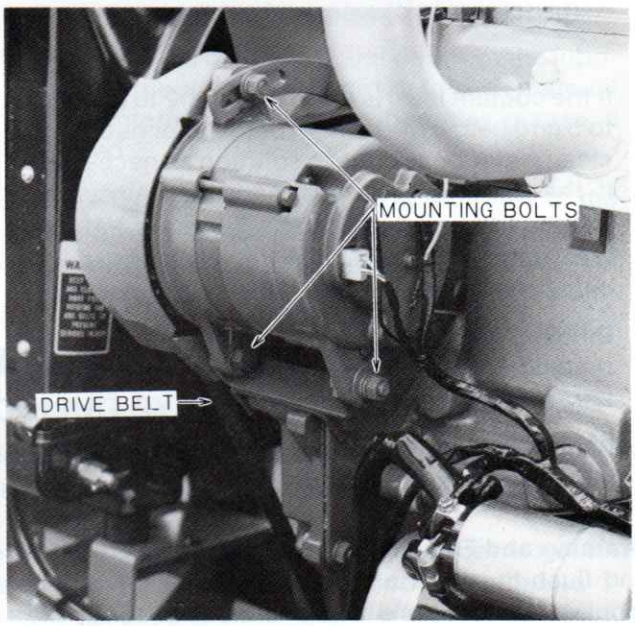


Figure 45 — Alternator Mounting Bolts

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 Dealer.

To remove the injectors:

1. Clean all loose dirt from around the injectors and lines. Disconnect the leak-off lines from the injectors, Figure 46.
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.
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. Install a new copper sealing washer in each injector locating bore. Install the injectors and tighten the retaining nut to 43-51 lbs. ft. (58-69 N.m).

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

2. 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. (24-30 N.m).
3. Install the leak-off line. Tighten the leak-off line nuts to 22-30 lbs. ft. (30-41 N.m).
4. Bleed the fuel system as covered under "Bleeding the Fuel System," page 28.

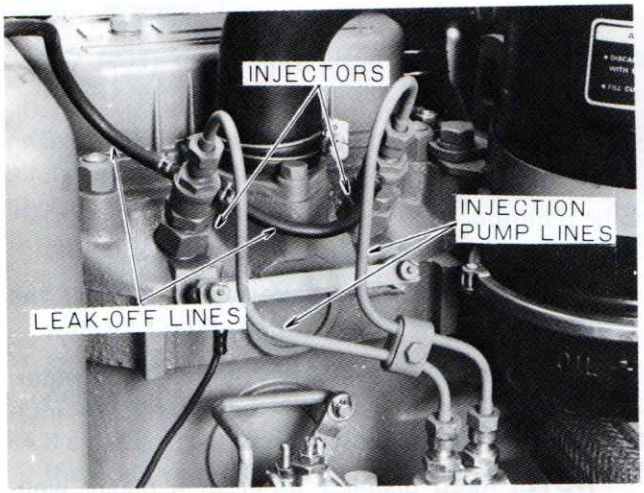


Figure 46 — Fuel Injector Leak-Off Lines

ENGINE SPEED ADJUSTMENT

The adjustments for idle and maximum no-load speed settings should be adjusted according to the following procedures:

1. Loosen the lock nuts, Figure 47.
2. Keep the foot throttle pedal at the same level as the upper surface of step plate.
3. Set the maximum no-load speed to 2600-2650 rpm, using the turnbuckle.
4. Retighten the lock nuts.

IMPORTANT: Do not step the foot throttle pedal downward from the level of upper surface of the foot step plate.

5. Move the throttle lever forward until a resistance is felt. This is the idle position.
6. Loosen the bolts at the resistance spring.
7. Set the idle speed to 700-800 rpm, Retighten the bolts.

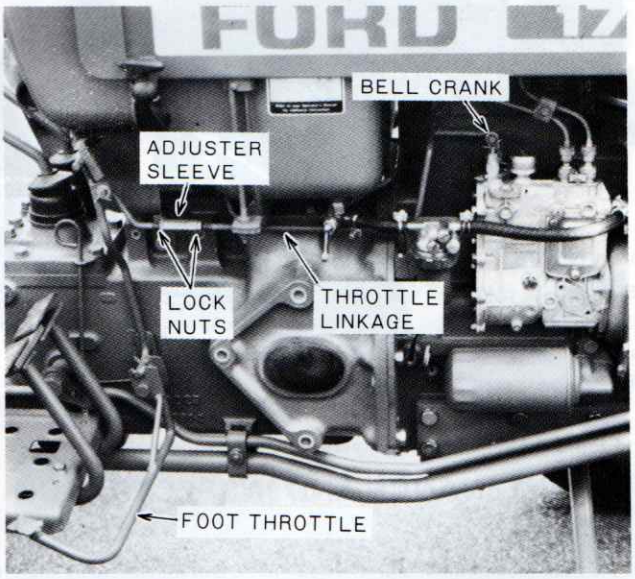


Figure 47 — Throttle Adjustment

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 shorten valve life. 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, Figure 48.

   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.

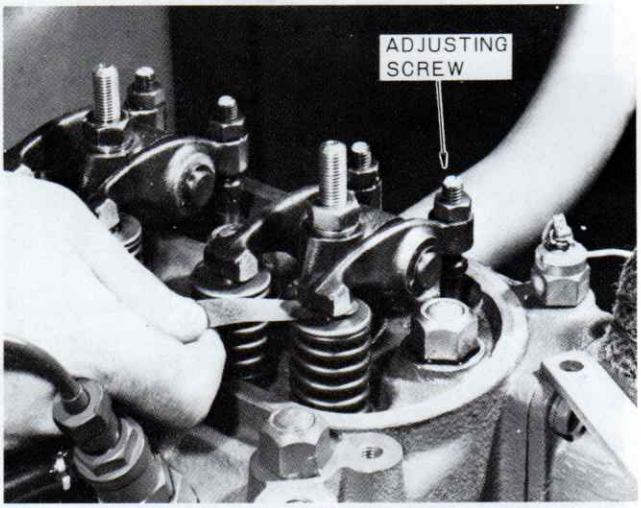


Figure 48 — Checking Valve Clearance

MAINTENANCE AND INSPECTION OF THE ROPS

After the first 20 hours of operation and after every 500 hours of operation or six months, whichever comes first, do the following:

1. Check the torque of the ROPS mounting bolts. If necessary, tighten the bolts to the correct torque. See bolt torques Page 43.
2. Check the operator's seat and the mounting parts for the seat belt. Tighten the bolts to the correct torque. Replace parts that have wear or damage.

POSSIBLE DAMAGE TO THE ROPS

If the machine has rolled over or the ROPS has been in some other type of accident (such as hitting an overhead object during transport) you must replace the ROPS to get the original protection.

After an accident, check for damage to (1) the ROPS, (2) the operator's seat, (3) the seat belt and the seat belt mountings. Before you operate the machine, replace all damaged parts.

IMPORTANT: Do not try to weld or straighten the ROPS.

BATTERY

Keep the battery connections tight and free of corrosion. An ammonia or baking soda-water solution is good for washing the outside 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 damage 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.

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 49, 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 32.

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

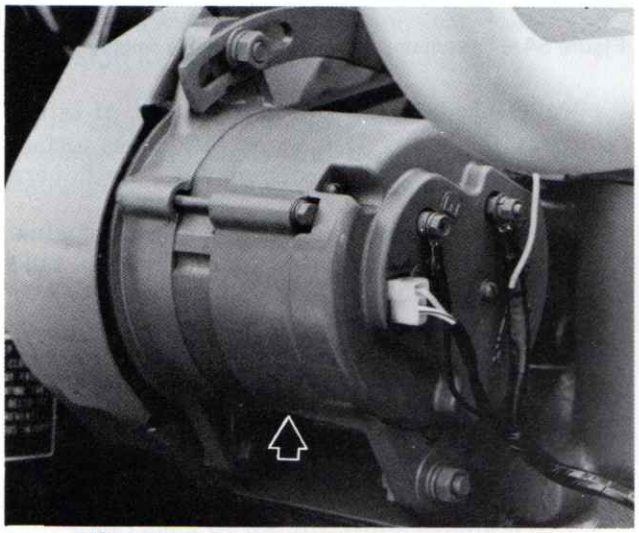


Figure 49 — Alternator

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, Figure 50, 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.

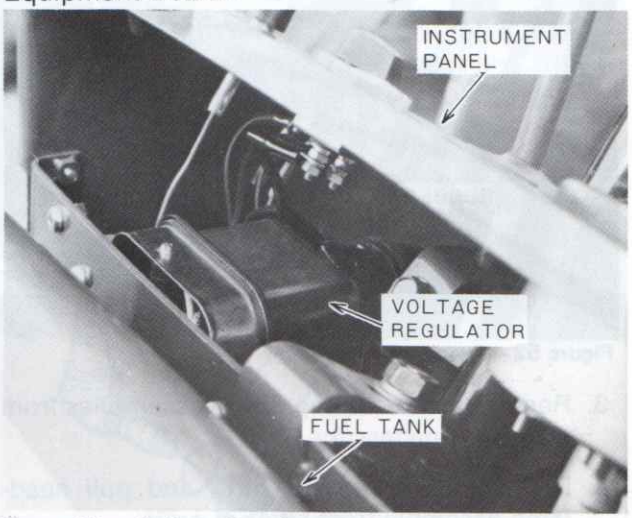


Figure 50 — Voltage Regulator

FUSE BOX

The fuse box is shown in Figure 51. Remove the fuse box cover by removing two screws and metal cover. The plastic fuse cover is easily removed by pulling it off. A spare 15 AMP and 5 AMP fuse are stored in cover. Always replace broken fuses with the specified fuse.

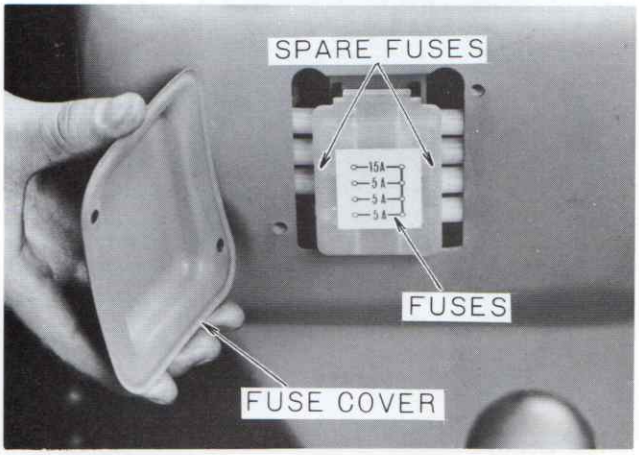


Figure 51 — Fuse Box

HEADLAMPS

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

1. Raise the hood.
2. Remove three nuts securing the headlamp housing to the bracket mounted on the grille screen, Figure 52.

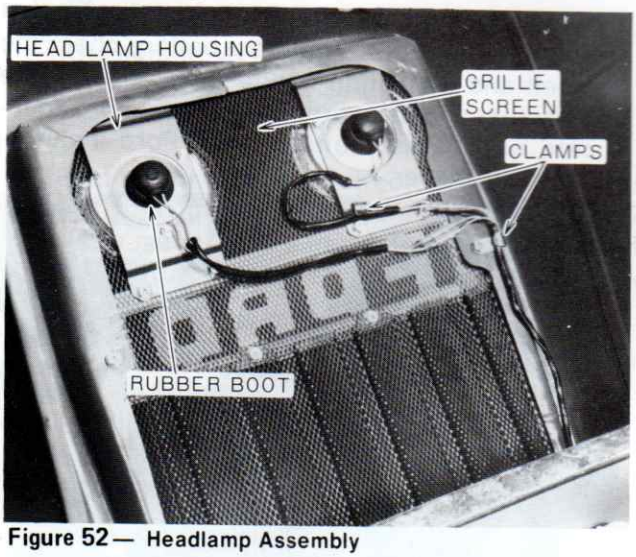


Figure 52 — Headlamp Assembly

3. Remove the headlamp wiring assemblies from clamps, if necessary.
4. Disconnect wiring assembly and pull headlamp assembly from front of grille.
5. Slide rubber boot back off the lamp socket, Figure 53.
6. Remove four spring clips holding the reflector in the ring, Figure 53.

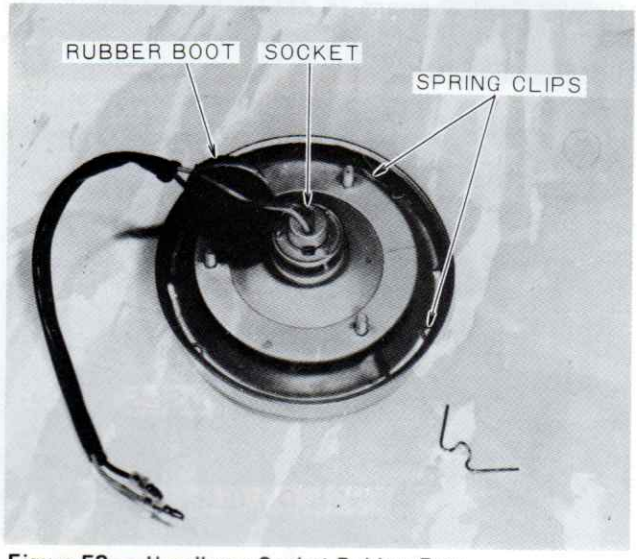


Figure 53 — Headlamp Socket Rubber Boot

7. Remove ring from assembly taking care not to drop the glass lens, Figure 54.
8. Remove lens and seal from front of reflector.

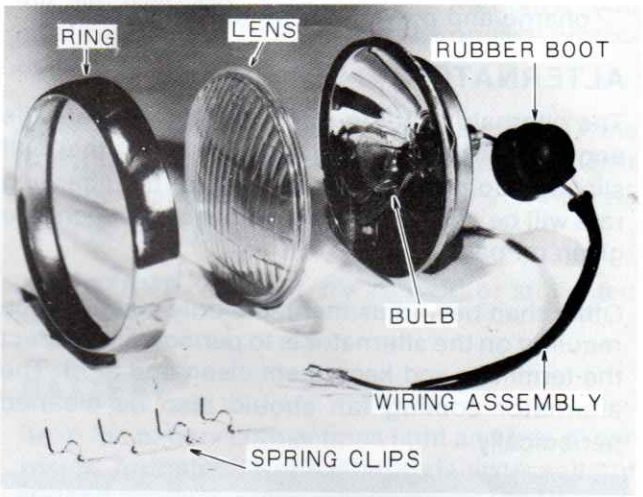


Figure 54 — Headlamp Assembly — Disassembled

IMPORTANT: Do not touch front of reflector with fingers. Damage to reflectives surface may be caused by touching with the fingers.

9. Push in on spring retainer with one hand while twisting bulb with other hand to release bulb from retainer tabs, Figure 55.
10. Position new bulb to socket, making sure that contacts will properly mate. The retaining tabs will only line up one way. Rotate bulb until tabs are properly aligned. Twist bulb into place while compressing spring retainer.
11. Reassemble headlamp assembly.

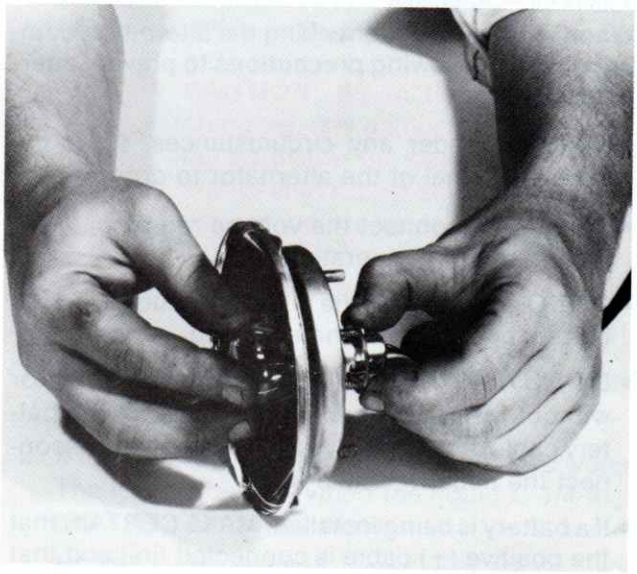


Figure 55 — Bulb Removal

TAIL LAMP AND FLASHER WARNING LAMP

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

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

TIRES

Check tire pressure every 50 hours, or weekly. Refer to the "Tire Inflation Vs. Permissible Load" table on page 22 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.

CAUTION: Inflating or servicing tires can be dangerous. To avoid possible jury, follow the safety precautions below:

- Use a clip-on tire chuck with a remote hose and gauge which allows the operator to stand clear of the tire while inflating it.
- Do not inflate a rear tractor tire over 35 PSI (2.4 bar).
- Do not inflate a tire unless the rim is mounted on the tractor or is secured so that it will not move if the tire or rim should suddenly fail.
- Do not re-inflate a tire that has been run flat or seriously under inflated until the tire has been inspected for damage by a qualified person.
- Do not weld, braze, otherwise repair, or use a damaged rim.

FRONT WHEEL BEARINGS (TWO-WHEEL DRIVE)

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, remove wheel and remove the hubcap, the cotter pin, and the nut, Figure 56. 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.

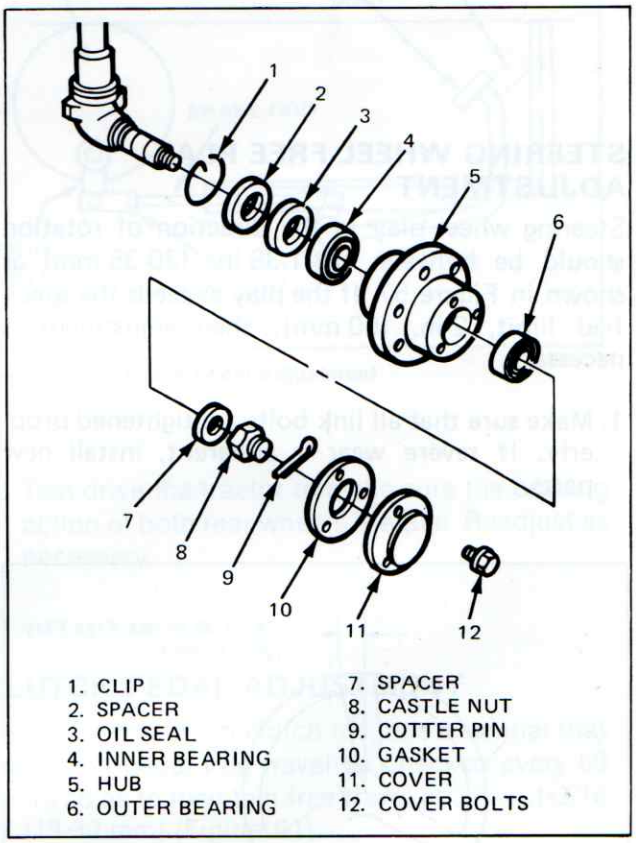


Figure 56 — Servicing Front Wheel Bearings — Two-Wheel Drive

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, pitting, 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-in. (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 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.

STEERING WHEEL FREE PLAY ADJUSTMENT

Steering wheel play in the direction of rotation should be between .78-1.38 in. (20-35 mm) as shown in Figure 57. If the play exceeds the specified limit, 2 in. (50 mm), then adjustment is necessary.

1. Make sure that all link bolts are tightened properly. If severe wear is apparent, install new parts.

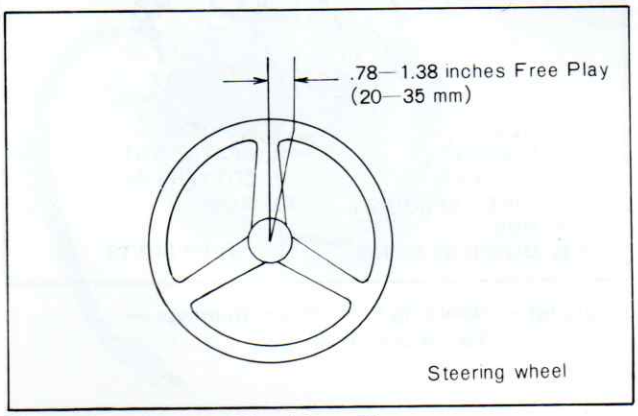


Figure 57 — Steering Wheel Free Play

2. Loosen the adjuster locknut on the right side of the steering gear box and turn the adjuster screw, see Figure 58. Turning the screw clockwise will decrease the free play while turning the adjuster screw counterclockwise will increase the steering wheel free play.

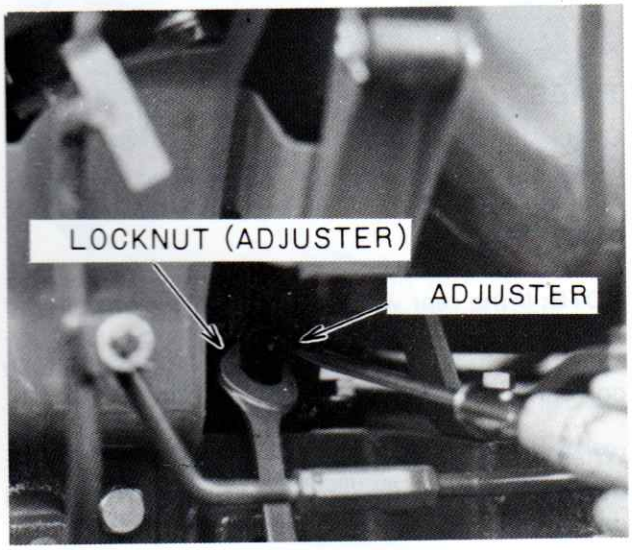


Figure 58 — Steering Wheel Free Play Adjustment

3. Once the adjustment is made, tighten the adjuster locknut securely.

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. Determine the straight-ahead position by turning the steering wheel from lock to lock and then halfway back. After rolling the tractor forward with the front wheels in the straight-ahead position, mark the front of the wheels (not the tires) at wheel hub height, Figure 59.

2. Measure and record the distance between the front of the wheels at the marks, then push the tractor forward 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 Steps 2 and 3 should give zero to 13/64-in. (0-5 mm) toe-in. The distance between the wheels should be zero to 13/64-in. (0-5 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 locknut.

2. Adjust the tie rod tube assembly as required to give zero to 13/64-in. (0-5 mm) toe-in.

3. After the correct toe-in is obtained, tighten the tie rod locknut.

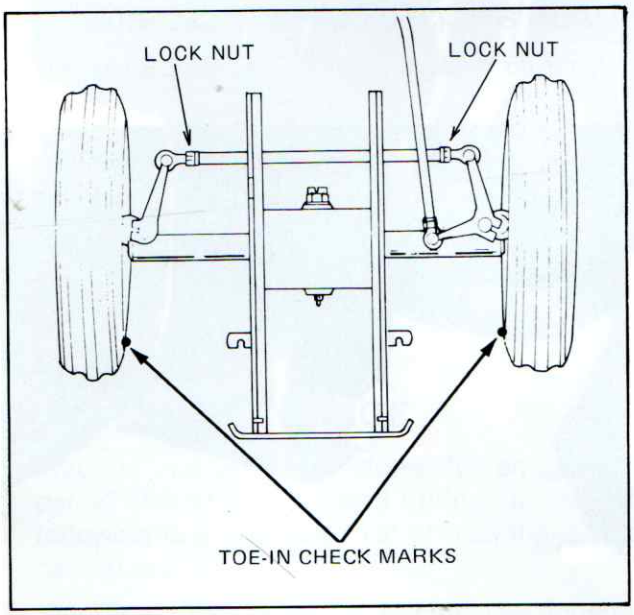


Figure 59 — Checking Toe-In

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. Support with safety stands.

2. Loosen the locknut, Figure 60, and rotate the brake rod as necessary until there is 3/4-1-3/16 in. (19-30 mm) of pedal free play. Lengthening the rod increases free play while shortening the rod decreases free play.

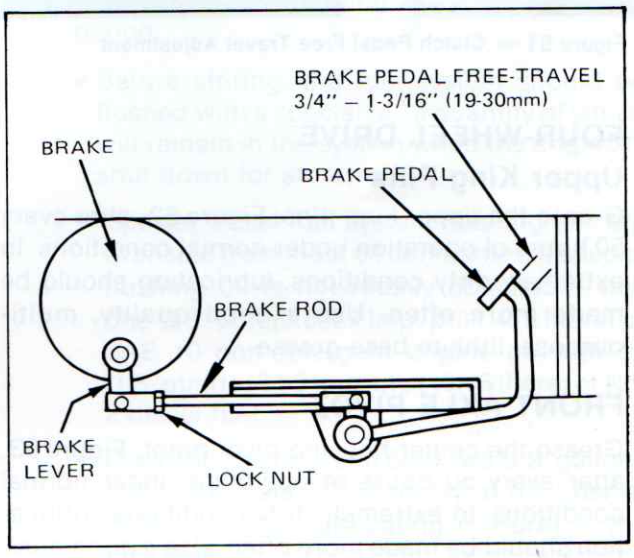


Figure 60 — Brake Pedal Adjustment

3. Test drive 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 in. (19-30 mm) (Figure 61).

1. Remove the cotter pin and clevis pin.

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

Figure 61 — Clutch Pedal Free Travel Adjustment

FOUR-WHEEL DRIVE

Upper King Pins

Grease the upper king pins, Figure 62, after every 50 hours of operation under normal conditions. In extremely dirty conditions, lubrication should be made more often. Use a good quality, multi-purpose, lithium base grease.

FRONT AXLE PIVOT

Grease the center housing pivot point, Figure 63, after every 50 hours of operation under normal conditions. In extremely dirty conditions, lubrication should be made more often. Use a good quality, multi-purpose, lithium base grease.

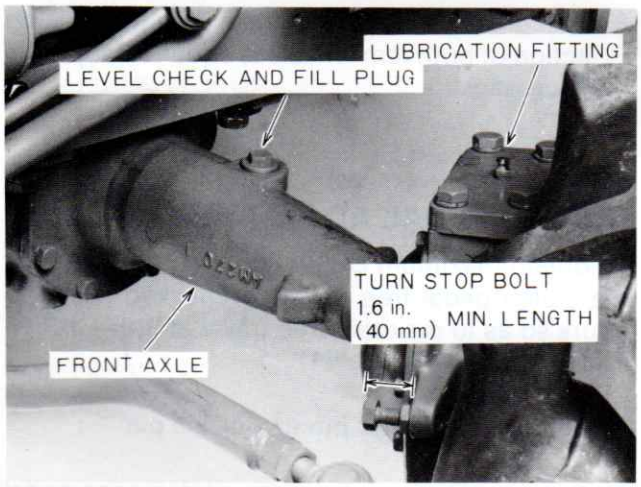


Figure 62 — King Pin Lubrication Points and Front Axle Differential Fill and Level Check Port

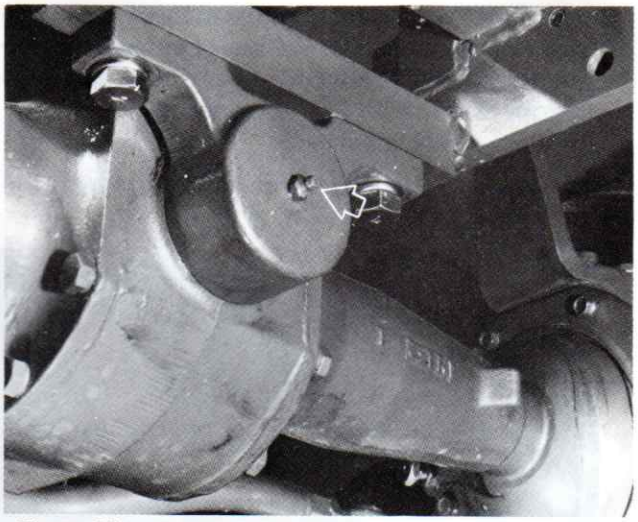


Figure 63 — Front Axle Pivot Lubrication Point

FRONT AXLE DIFFERENTIAL CASE

Checking Oil Level: Check the oil level in the front axle differential case every 50 hours. A dipstick/fill plug, Figure 62, is located on the top, right side of the housing. The oil level is correct when the level is between the mark and the dipstick tip.

Changing Oil: Drain the front axle differential case every 300 hours by removing the drain plug, Figure 64. Replenish with a high-quality, extreme pressure gear lubricant with an anti-foam additive. Refer to the following chart for recommended viscosity grades.

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

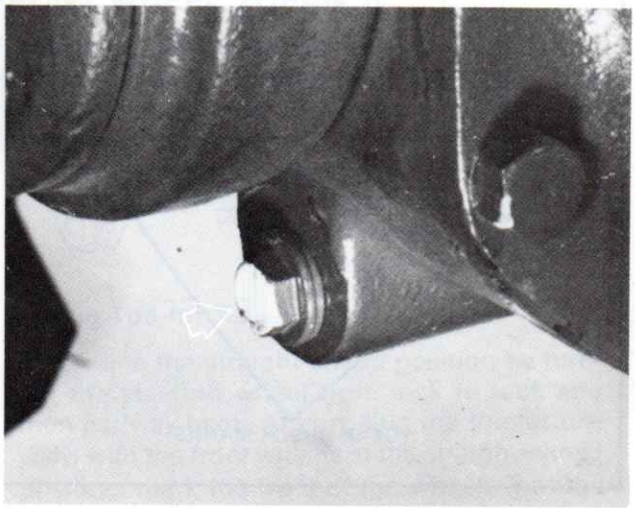


Figure 64 — Front Axle Differential Drain Plug

FINAL REDUCTION GEAR CASES

Checking Oil Level: Check the oil level in each final reduction gear case after every 50 hours of operation by removing the fill and level plug, Figure 65, on each gear case. The oil should be level with the bottom of the plug opening.

Changing Oil: Drain each final reduction gear case after every 300 hours of operation by removing the drain plug, Figure 65, on each gear case. Replenish with a high quality, extreme pressure gear lubricant with an anti-foam additive. Refer to the following chart for recommended viscosity grades.

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

The front-wheel drive king pin seals should be checked every 300 hours. See your Ford Tractor-Equipment Dealer.

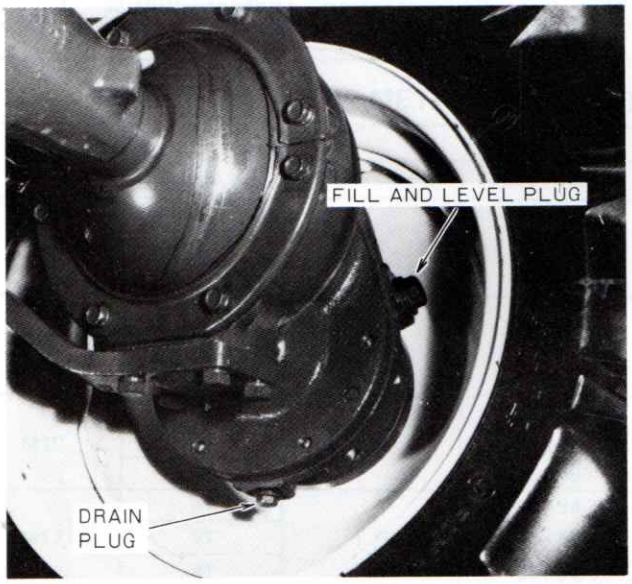


Figure 65 — Final Reduction Gear Case Fill and Drain Plugs

TRACTOR STORAGE

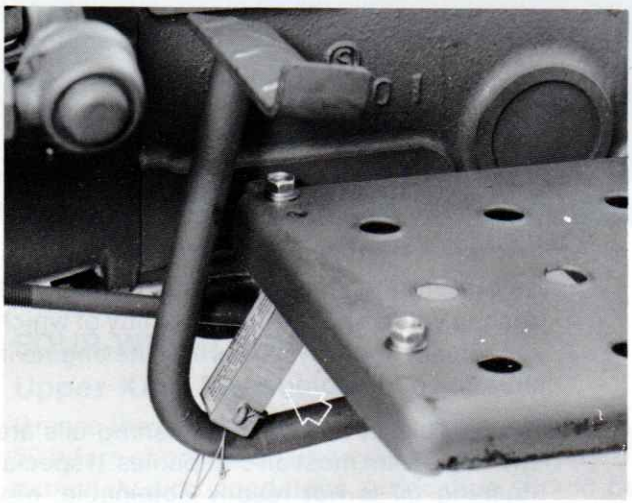
Tractors that are to be stored for an extended period should be protected during storage. The following is a suggested list of operations to be carried out.

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, hydraulic system and rear axle with new oil. Drain the engine oil 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 ensure 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 a 50/50 solution of permanent antifreeze and clear water.
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 tempera-

ture. 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.
10. Place the pedal spacer, Figure 66, between the clutch pedal and foot plate to separate the clutch disc from the flywheel.



Figire 66 — Installing Pedal Spacer

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 engine crankcace, the common sump (for the hydraulic lift, transmission, rear axle and optional power steering), the oil bath air cleaner and optional front wheel drive axle.
3. Install a fully charged battery and remove the exhaust cover, if other than a rain cap.
4. Check the cooling system. The system should be filled with a 50/50 solution of permanent antifreeze and clear water.
5. Remove clutch pedal spacer, Figure 66.
6. 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.
7. Drive the tractor without a load and check to be sure it is operating satisfactorily.

GENERAL TORQUE SPECIFICATION TABLE (Revised 2-74)

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

NOTE: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

SEE Grade No.		2				5				8 *			
Bolt head identification marks as per grade NOTE: Manufacturing Marks Will Vary													
Bolt Size		Torque Foot Pounds		Torque Newton-Meters		Torque Foot Pounds		Torque Newton-Meters		Torque Foot Pounds		Torque Newton Meters	
Inches	Millimeters	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	30.3
5/16	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8	9.53	20	23	27.1	31.2	35	42	47.5	57.0	45	54	61.0	73.2
7/16	11.11	30	25	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2	12.70	45	52	61.0	70.5	80	96	108.5	130.2	110	132	149.2	179.0
9/16	14.29	65	75	88.1	101.6	110	132	149.2	179.0	160	192	217.0	260.4
5/8	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	264	298.3	358.0
3/4	19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8	22.23	160	200	216.8	271.0	400	480	542.4	650.9	600	720	813.6	976.3
1	25.40	250	300	338.8	406.5	580	696	786.5	943.8	900	1080	1220.4	1464.5
1-1/8	25.58	—		—		800	880	1084.8	1193.3	1280	1440	1735.7	1952.6
1-1/4	31.75	—		—		1120	1240	1518.7	1681.4	1820	2000	2467.9	2712.0
1-3/8	34.93	—		—		1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3
1-1/2	38.10	—		—		1940	2200	2630.6	2983.2	3160	3560	4285.0	4827.4

* Thick nuts must be used with Grade 8 bolts.

METRIC BOLT TORQUE SPECIFICATIONS

Size of screw	Grade No.	Coarse thread Pitch (mm)	Coarse thread Foot Pounds	Coarse thread Newton-Meters	Fine thread Pitch (mm)	Fine thread Foot Pounds	Fine thread Newton-Meters
M6	4T (4)	1.0	3.6–5.8	4.9–7.9	—	—	—
	7T (7)		5.8–9.4	7.9–12.7		—	—
	8T (8) (11)		7.2–10	9.8–13.6		—	—
M8	4T	1.25	7.2–14	9.8–19	1.0	12–17	16.3–23
	7T		17–22	23–29.8		19–27	25.7–36.6
	8T		20–26	27.1–35.2		22–31	29.8–42
M10	4T	1.5	20–25	27.1–33.9	1.25	20–29	27.1–39.3
	7T		34–40	46.1–54.2		35–47	47.4–63.7
	8T		38–46	51.5–62.3		40–52	54.2–70.5
M12	4T	1.75	28–34	37.9–46.1	1.25	31–41	42–55.6
	7T		51–59	69.1–79.9		56–68	75.9–92.1
	8T		57–66	77.2–89.4		62–75	84–101.6
M14	4T	2.0	49–56	66.4–75.9	1.5	52–64	70.5–86.7
	7T		81–93	109.8–126		90–106	122–143.6
	8T		96–109	130.1–147.7		107–124	145–168
M16	4T	2.0	67–77	90.8–104.3	1.5	69–83	93.5–112.5
	7T		116–130	157.2–176.2		120–138	162.6–187
	8T		129–145	174.8–196.5		140–158	189.7–214.1
M18	4T	2.0	88–100	119.2–136	1.5	100–117	136–158.5
	7T		150–168	203.3–227.6		177–199	239.8–269.6
	8T		175–194	237.1–262.9		202–231	273.7–313
M20	4T	2.5	108–130	146.3–176.2	1.5	132–150	178.9–203.3
	7T		186–205	252–277.8		206–242	279.1–327.9
	8T		213–249	288.6–337.4		246–289	333.3–391.6

SPECIFICATIONS

The specifications on the following pages are provided for your information. For additional information, see your Ford Tractor-Equipment Dealer.

Properly Maintained Equipment is Safe Equipment

"Ford Motor Company, whose policy is one of continuous improvement, reserves the right to make changes in design and specifications at any time without notice and without obligation to modify units previously built."

CAPACITIES

Fuel Tank	5.8 U.S. Gals. 4.8 Imp. Gals. 22 Liters
Cooling System	5.6 U.S. Qts. 4.7 Imp. Qts. 5.3 Liters
Engine Crankcase:	
Two Wheel Drive	
Less Filter	5.0 U.S. Qts. 4.2 Imp. Qts. 4.7 Liters
With Filter Change	5.3 U.S. Qts. 4.4 Imp. Qts. 5.0 Liters
Four Wheel Drive	
Less Filter	4.4 U.S. Qts. 3.7 Imp. Qts. 4.2 Liters
With Filter Change	4.8 U.S. Qts. 3.9 Imp. Qts. 4.5 Liters
Rear Axle and Transmission (Includes Hydraulic and power steering)	23 U.S. Qts. 19 Imp. Qts. 22 Liters
Front Axle Differential (Four Wheel Drive)	2.5 U.S. Qts. 2.1 Imp. Qts. 2.4 Liters
Front Axle Final Reduction Gear Case (Each Case) (Four Wheel Drive)	0.23 U.S. Qts. 0.19 Imp. Qts. 0.22 Liters

COOLING SYSTEM

Type	Pressurized Liquid with Recirculating Bypass
Water Pump:	
Type	Centrifugal
Drive	V-Belt
Water Pump Belt Deflection	7/16 to 9/16 in. (10-15 mm) when 20-25 lbs. (9-11 kg) Thumb Force is Applied Midway Between Pulleys
Fan Diameter	11-3/4 in. (30.0 cm)
Thermostat:	
Starts to Open	159.8° F. (71°C.)
Fully Open	185° F. (85°C.)
Radiator Cap	13 psi (0.9 bar)

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	2-1
Low Idle Speed	700-800 rpm
Maximum Speed:	
High Idle	2600-2650 rpm
Rated	2500 rpm
Valve Clearance (Lash-Cold Engine):	
Intake	0.012 in. (.30 mm)
Exhaust	0.012 in. (.30 mm)
Air Cleaner (Oil Bath)	0.47 U.S. Qts. 0.39 Imp. Qts. (.44 Liters)

ELECTRICAL SYSTEM

Alternator	12-volt, Heavy Duty, 20 amps.
Regulator (Alternator)	Mechanical
Battery	12-volt, 72 amp. Hour Rating with Negative Ground
Starting Motor	Solenoid, Pre-engaged

FUEL SYSTEM

Type	Diesel
Injection Pump:	
Type	In-Line
Timing	21° BTDC

CLUTCH

Type	8.5 in. (21.59 cm) Dry Disc., Organic Face
Pedal Free-Travel	3/4-1-3/16 in. (19-30 mm)

BRAKES

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

STEERING

Type	Manual or Hydraulic power asist
Turns Lock-to-Lock	2.3
Steering Wheel Free-Play	.0.78-1. 38in. (20-35 mm)
Front Wheel Toe-In	0-13/64 in. (0-5 mm)

SPECIFICATIONS

STEERING — Cont'd.

Turning Radius
(Without Brakes) ..... 8.2 ft. (250 cm)
(Two Wheel Drive)
8.9 ft. (270 cm)
(Four Wheel Drive)

POWER TAKE-OFF

Type ..... Transmission
Shaft ..... 1-3/8 in. (3.49 cm)
6 Spline SAE STD

Engine Speed for 540 rpm
PTO Operation ..... 2455 rpm
Horsepower PTO
Observed 23.0

HYDRAULIC LIFT SYSTEM

Type ..... Live Position Control
With Draft Control (Optional)
Category 1 3-point
Linkage
Pump Type ..... Gear
Pump Capacity ..... 7.3 U.S. gpm @
2133 psi at 2500 rpm
(6.0 Imp. Gals. @
147 bar at 2500 rpm)

System Relief Valve
Setting ..... 2133 psi (147 bar)

DRAWBARS

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

CAST IRON WEIGHTS

(3) Front End Weights ..... 33 lbs.
(15 kg) each
(4) Front Wheel Weights
(Two Wheel Drive Only) ..... 66 lbs.
(30 kg) per wheel
(4) Rear Wheel Weights ..... 66 lbs.
(30 kg) each

TIRES

Front:
Standard (AG) ..... (Two Wheel Drive)
5.00-15, F2, 4 Ply
(Four Wheel Drive)
6.00-16, R1, 4 Ply
Optional (Turf) ..... (Two Wheel Drive Only)
20 x 8.00-10, 2 Ply

Optional (Turf) .....(Four Wheel Drive Only)
27 x 8.50-15, R3, 2Ply

Rear:
Standard (AG) .... (Two and Four Wheel Drive)
11.2 x 24, R1, 4 Ply
Optional (Turf) ..... (Two Wheel Drive Only)
13.6 x 16,R3, 4 Ply

Wheel Bolt Torques:
Front Wheel
Disc-to-Hub .....(Two Wheel Drive)
43-54 lbs. ft. (54-73 N.m)
(Four Wheel Drive)
137-159 lbs. ft. (186-215 N.m)
Rear Wheel
Disc-to-Rim ..... 137-159 lbs. ft.
(186-215 N.m)
Rear Wheel
Disc-to-Axle ..... 137-159 lbs. ft.
186-215 N.m)

LUBRICANTS

TRACTOR COMPONENT	FORD SPECIFICATION NUMBER	FORD PART NO.
Engine Oil	M2C-121 ..... (Meets M2C-121-B API Grade CD and MIL-L-2104C)	1QM-2C121-AMV (Case-24 Qts. 15W-40) 1QM-2C121-A10 (Case 24Qts. SAE 10W) 1QM-2C121-A30 (Case-24 Qts. SAE 30W)
Transmission, Rear Axle, Power Steering and Hydraulic System Oil	M2C-134-A	1QM-2C-53-A (1Gal.) 5GM-2C-53-A (5Gal.)
Front Wheel Bearings and Lubrication Fittings	M1C-137-A	1TM-1C-137-A (1 Tube)
Front Axles	M2C-105-A	E0AZ-19580-B (1Gal.) E0AZ-19580-E (5Gal.)

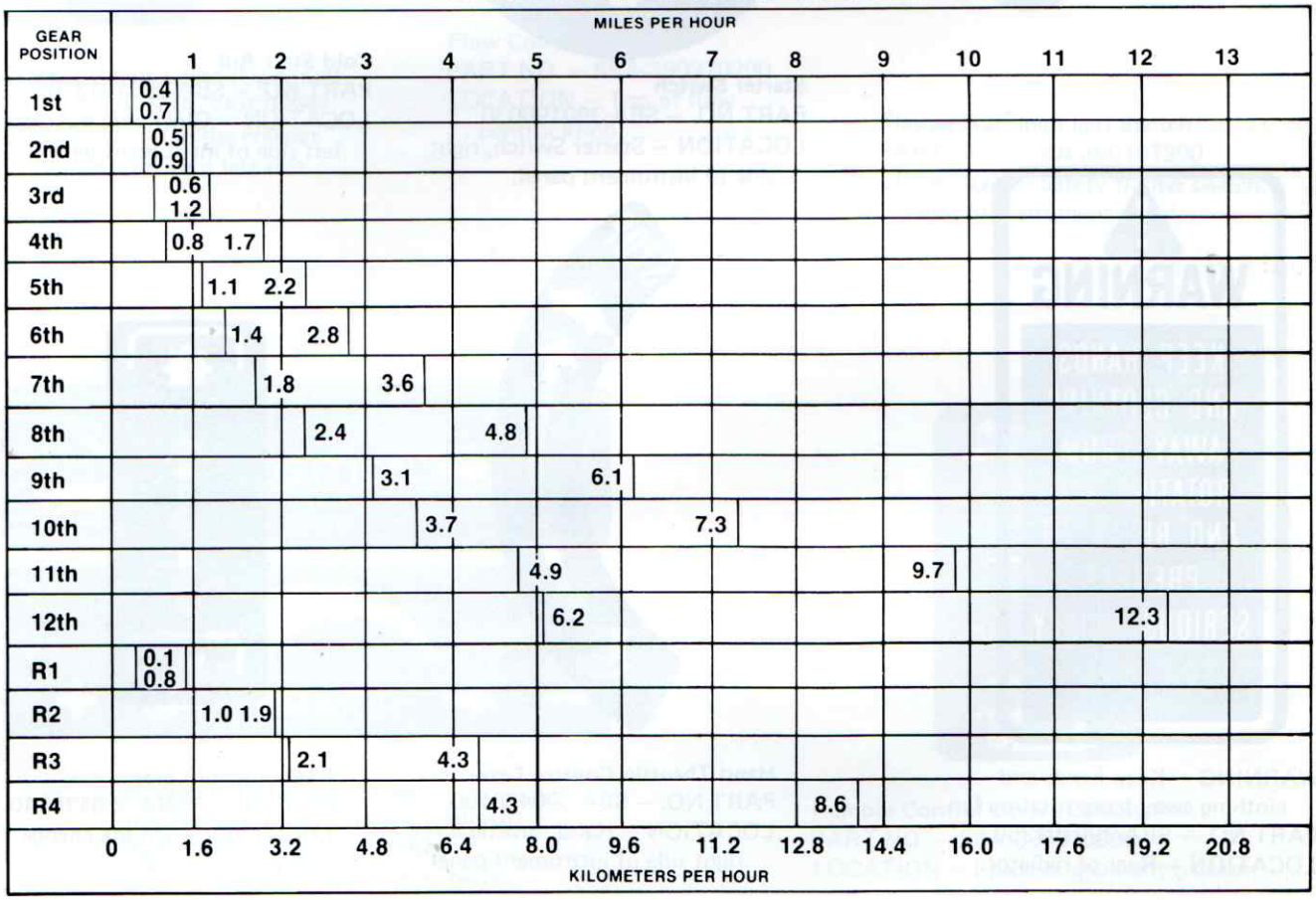
NOTE: Should the recommended engine oil not be readily available, use a commercial oil as shown in the following chart.

Temperature	Viscosity Grade and API Class
Year Around	SAE 10W30, 10W40 (CD)
Below 32° F (0° C)	SAE 10W (CD or CC/CD)
32 to 50° F (0–10° C)	SAE 20W (CD or CC/CD)
Above 50° F (10° C)	SAE 30W (CD or CC/CD)

GENERAL DIMENSIONS

	Two Wheel Drive	Four Wheel Drive
Length	110.6 in. (281.0 cm)	110.6 in. (281.0 cm)
Height:		
Top of Steering Wheel	55.9 in. (142.0 cm)	55.3 in. (140.5 cm)
Top of ROPS	85.5 in. (217.0 cm)	85.5 in. (217.0 cm)
Top of Vertical Exhaust	76.6 in. (194.5 cm)	75.4 in. (191.5 cm)
Width:	59.3 in. (150.5 cm)	59.3 in. (150.5 cm)
Minimum Ground Clearance	14.4 in. (36.5 cm)	12.6 in. (32.0 cm)
Adjustable Width:		
Front	43.5-57.5 in. (110.5-146 cm)	44.5 in. (113.0 cm)
Rear	43.3-58.7 in. (110-149 cm)	43.3-58.7 in. (110-149 cm)
Weight (Less Options)	2326 lbs. (1055 kg)	2513 lbs. (1140 kg)
Wheelbase	60.2 in. (153.0 cm)	59.3 in. (150.5 cm)

FORD GROUND SPEEDS
From 1250 to 2500 RPM Engine Speed
with 11.2 x 24 Rear Tires



SAFETY AND INSTRUCTION DECALS

In the event that decals become damaged or illegible, they should be replaced with new decals at their original position.

WARNING – Start engine only from operators seat.
PART NO. – SBA-190196680
LOCATION – On the starting motor.

WARNING – TO JUMP STAT
(Negative Grounded Battery)
PART NO. – SBA-390192300
LOCATION – On the battery.

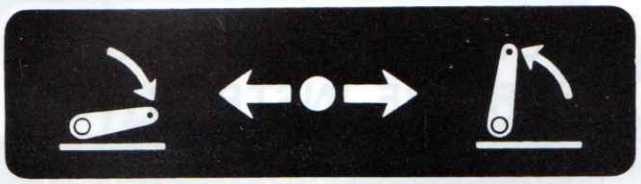
Starter Switch
PART NO. – SBA-390190030.
LOCATION – Starter Switch, right side of instrument panel.

Cold Start Aid
PART NO. – SBA-390191370.
LOCATION – Glow plug indicator left side of instrument panel.

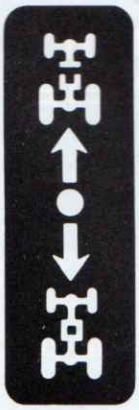
WARNING – Keep hands and clothing away from rotating fan.
PART NO. – SBA-390191350.
LOCATION – Rear of radiator.

Hand Throttle Control Lever
PART NO. – SBA-390430100.
LOCATION – Hand throttle lever, right side of instrument panel.

PTO Control Lever
PART NO. – SBA-390170640.
LOCATION – On the change lever guide plate.



Hydraulic Lift Control Lever
PART NO. – SBA-390370280.
LOCATION – Center of R.H. fender.



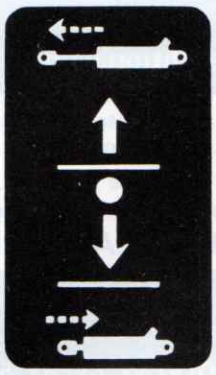
Four-Wheel Drive Control Lever
PART NO. – SBA-390170630.
LOCATION – On the change lever cace right side.

Creeper Range Lever (Optional)
PART NO. – SBA-390170680.
LOCATION – On the creeper change lever cace left side.

Flow Control Valve
PART NO. – SBA-390370290.
LOCATION – Top of flow control knob.

Flasher Warning Light Switch
PART NO. – SBA-390191390.
LOCATION – Safety flasher switch, right of instrument panel.

Hydraulic Lift Control Lever
(Draft and position control, optional)
PART NO. – SBA-390370570.
LOCATION – Center of R.H. fender.



Remote Control Lever (Optional)
PART NO. – SBA-390370300.
LOCATION – Front of quadrant bracket.

SAFETY AND INSTRUCTION DECALS

WATCH YOUR PROOF METER HOURS

LUBRICATION AND MAINTENANCE SERVICE INTERVALS

LUBRICATION AND MAINTENANCE ITEM	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVAL
Radiator	●					Every 10 Hours or Daily
Engine Oil Level	●					
Air Cleaner	●					
Transmission Oil Level	●					Every 50 Hours
Air Cleaner		●		●		
Front Diff Oil Level	●					
Front Axle Oil Level	●					
Tires	●					
Clutch Pedal					●	
Battery	●					
Lubrication Fittings						
Steering linkage			●			
Front wheel spindles			●			
3-point linkage			●			
Engine Oil				●		Every 100 Hours
Fuel Filter		●				
Injection Pump Oil				●		Every 200 Hours
Fuel Filter				●		
Engine Oil Filter				●		
Fan Belt					●	
Brakes					●	
Steering Free-Play					●	
Front Axle Oil				●		Every 300 Hours
Front Diff Oil				●		
Transmission–Rear Axle Oil				●		
Fuel Injectors	●				●	Every 600 Hours
Hydraulic Filter				●		
Air Cleaner (disassemble and clean)		●				
Radiator Coolant				●		Seasonal

Refer to your Operator's Manual for additional information

Lubrication and Maintenance Service Intervals
PART NO. – SBA-390191320.
LOCATION – On the fuel tank.

FUEL INJECTION PUMP SERVICE INSTRUCTIONS

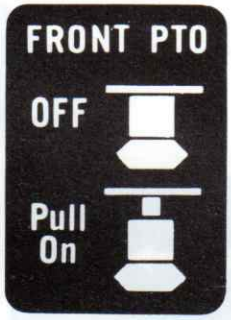
- Change the lubrication oil every 200 hours
- Fill the pump with clean oil of the same type used in the engine crankcase until oil flows from oil level check plug.

Fuel Injection Pump Service Instructions
PART NO. – SBA-190196091.
LOCATION – Front side of fuel tank.

DIESEL ENGINE OIL INFORMATION

Service Grade CD
SAE 10W30, 10W40 for year around use
or
SAE 10W in severe cold below 32° F
SAE 20W for winter use 32° to 50° F
SAE 30W for summer use above 50° F
Change interval every 100 hours

Diesel Engine Oil Information
PART NO. – SBA-190196490.
LOCATION – Left side of engine cylinder head cover.

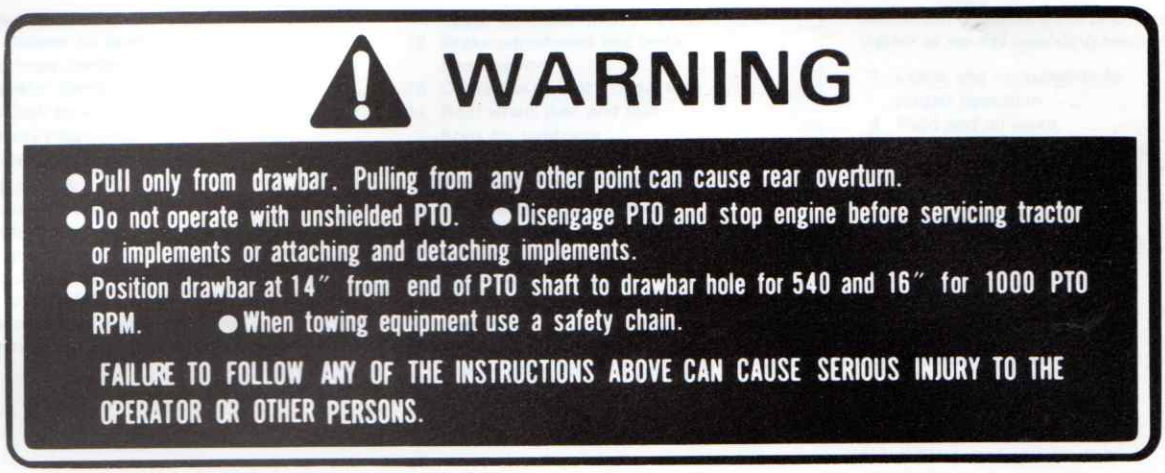


Front PTO Switch (Optional)
PART NO. – SBA-390191380.
LOCATION – Left side of instrument panel.

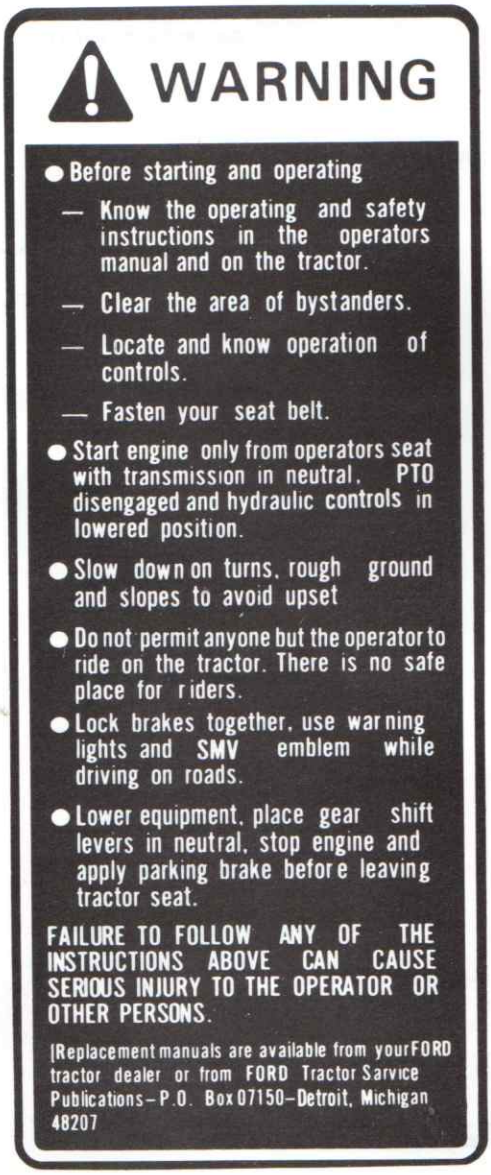
AIR CLEANER SERVICE INSTRUCTIONS

- DISCARD OIL, CLEAN CUP AND INNER MESH SCREEN ELEMENT WITH SOLVENT EVERY 50 HOURS.
- FILL CUP WITH CLEAN ENGINE OIL UNTIL LEVEL WITH MARK.

Air Cleaner Service Instructions
PART NO. – SBA-390190170.
LOCATION – Outside of air cleaner.



WARNING – Pull only from drawbar.
PART NO. – SBA-390192290
LOCATION – Top of PTO shaft.



WARNING – Befor starting and operaing.
PART NO. SBA-390192270
LOCATION – Center of R.H. fender.

NOTES

PRE-DELIVERY SERVICE

CHECK AND ADJUST AS REQUIRED

INOPERATIVE SERVICE CHECKS:

1. Tire pressure ☐
2. Air cleaner oil level and hose connections ☐
3. Radiator coolant level ☐
4. Fan belt tension ☐
5. Battery cleanliness, vent openings, electrolyte level, and charge ☐
6. Engine oil level ☐
7. Transmission and rear axle oil level ☐
8. Front Axle and Front Diff oil level (4WD) ☐
9. Starter safety switch operation ☐
10. Hydraulic Lift control adjustment ☐
11. Upper link, and hitch ☐
12. Brake adjustment and pedal equalization ☐
13. Operation of brake pedal lock ☐
14. Rear wheel disc and hub bolts for tightness ☐
15. Front wheel disc and hub nuts for tightness (2WD) ☐
16. Front wheel disc and hub bolts for tightness (4WD) ☐
17. Front wheel toe-in ☐
18. Fuel level ☐
19. Sheet metal and paint condition ☐
20. Check lift rod for proper operation ☐
21. 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 shutoff ☐
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 ☐
7. 4-wheel drive lever operation ☐
8. Low speed (creeper) lever ☐

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. Check air cleaner hose connection ☐
3. Replace diesel fuel filter(s) ☐
4. Tighten in-line pump delivery valve holders ☐
5. Radiator coolant level ☐
6. Fan belt tension ☐
7. Battery cleanliness and vent openings, electrolyte level, and charge ☐
8. All electrical cables, terminals, and wires ☐
9. Drain and refill engine oil ☐
10. Replace engine oil filter ☐
11. Transmission and rear axle oil level ☐
12. Front differential and front axle oil level (4WD) ☐
13. Injection pump timing ☐
14. Cylinder head bolt torque ☐
15. Clean Hydraulic System Oil Filter ☐

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 shutoff ☐
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**

PRE-DELIVERY SERVICE

CHECK AND ADJUST AS REQUIRED

INOPERATIVE SERVICE CHECKS:

1. Tire pressure ☐
2. Air cleaner oil level and hose connections ☐
3. Radiator coolant level ☐
4. Fan belt tension ☐
5. Battery cleanliness, vent openings, electrolyte level, and charge ☐
6. Engine oil level ☐
7. Transmission and rear axle oil level ☐
8. Front Axle and Front Diff oil level (4WD) ☐
9. Starter safety switch operation ☐
10. Hydraulic Lift control adjustment ☐
11. Upper link, and hitch ☐
12. Brake adjustment and pedal equalization ☐
13. Operation of brake pedal lock ☐
14. Rear wheel disc and hub bolts for tightness ☐
15. Front wheel disc and hub nuts for tightness (2WD) ☐
16. Front wheel disc and hub bolts for tightness (4WD) ☐
17. Front wheel toe-in ☐
18. Fuel level ☐
19. Sheet metal and paint condition ☐
20. Check lift rod for proper operation ☐
21. 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 shutoff ☐
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 ☐
7. 4-wheel drive lever operation ☐
8. Low speed (creeper) lever ☐

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. Check air cleaner hose connection ☐
3. Replace diesel fuel filter(s) ☐
4. Tighten in-line pump delivery valve holders ☐
5. Radiator coolant level ☐
6. Fan belt tension ☐
7. Battery cleanliness and vent openings, electrolyte level, and charge ☐
8. All electrical cables, terminals, and wires ☐
9. Drain and refill engine oil ☐
10. Replace engine oil filter ☐
11. Transmission and rear axle oil level ☐
12. Front differential and front axle oil level (4WD) ☐
13. Injection pump timing ☐
14. Cylinder head bolt torque ☐
15. Clean Hydraulic System Oil Filter ☐

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 shutoff ☐
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**

Ford Tractor Operations

Troy, Michigan 48084

Ford Motor Company

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