

SAMPLE NEW

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G-10 TRACTOR

OPERATOR'S MANUAL AND PARTS LIST

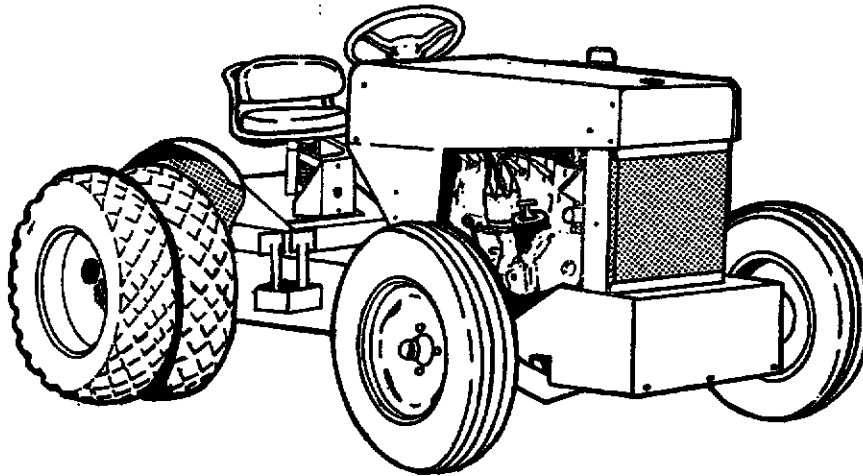
MODEL G-10 TRACTOR

INCLUDES ACCESSORIES

PRODUCT NO. 70119 (GAS) -
SERIAL NO. T18700 AND UP

PRODUCT NOS. 78039, 78053, 78063, 78065,
78068, 78129, & 78531

PRODUCT NO. 70121 (DIESEL) -
SERIAL NO. T18600 AND UP



JACOBSEN®

5-79

360898



IF INCORRECTLY USED THIS MACHINE CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE MACHINE SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ THE ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE MACHINE.

SAFE PRACTICES FOR RIDING VEHICLES

CAUTION

1. Keep all shields in place.
2. Before leaving operator's position:
 - a. Shift transmission to neutral
 - b. Set parking brake
 - c. Disengage attachment clutch
 - d. Shut off engine
 - e. Remove ignition key
3. Wait for all movement to stop before servicing machine.
4. Keep people and pets a safe distance away from machine.

1. Know the controls and how to stop quickly. READ THE OPERATOR'S MANUAL.
2. Do not allow children to operate the vehicle. Do not allow adults to operate it without proper instruction.
3. Do not carry passengers. Keep children and pets a safe distance away.
4. Clear the work area of objects which might be picked up and thrown.
5. Disengage all attachment clutches and shift into neutral before attempting to start the engine (motor).
6. Disengage power to attachment(s) and stop the engine (motor) before leaving the operator's position.
7. Disengage power to attachment(s) and stop the engine (motor) before making any repairs or adjustments.
8. Disengage power to attachment(s) when transporting or not in use.
9. Take all possible precautions when leaving the vehicle unattended, such as disengaging the power take-off, lowering the attachment(s), shifting into neutral, setting the parking brake, stopping the engine, and removing the key.
10. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.
11. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
12. Stay alert for holes in the terrain and other hidden hazards.
13. Use care when pulling loads or using heavy equipment.
 - a. Use only approved drawbar hitch points.
 - b. Limit loads to those you can safely control.
 - c. Do not turn sharply. Use care when backing.
 - d. Use counterweight(s) or wheel weights when suggested in the operator's manual.
14. Watch out for traffic when crossing or near roadways.
15. When using any attachments, never allow anyone near the vehicle while in operation.
16. Handle gasoline with care - it is highly flammable.
 - a. Use approved gasoline container.
 - b. Never remove the cap of the fuel tank, or add gasoline to a running or hot engine, or fill the tank indoors. Wipe up spilled gasoline.

c. Open doors if the engine is run in the garage - exhaust fumes are dangerous. Do not run the engine (motor) indoors.

17. Keep the vehicle and attachments in good operating condition and keep safety devices in place.
18. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
19. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
20. To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.
21. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
22. Do not change the engine governor setting or over-speed the engine.
23. When using the vehicle with mower, proceed as follows:
 - (1) Mow only in daylight or in good artificial light.
 - (2) Never make a cutting height adjustment while the engine (motor) is running if the operator must dismount to do so.
 - (3) Check the blade mounting bolts for proper tightness at frequent intervals.
24. Know what is behind you before backing up.
25. It is recommended that this machine not be used on public roads over 20 MPH (32 KPH). When riding on public roads you must comply to equipment requirements per SAE J137b and/or ASAE S279.4 lighting and marking standard.
26. Follow the manufacturer's maintenance recommendations implicitly. See "Maintenance" and "Lubrication".
27. It is recommended that your machine be thoroughly inspected at least once a year by a competent serviceman.
28. If it is necessary to adjust the carburetor with the engine running, take extra care not to allow rings, wristwatches, clothing, etc., to become entangled with moving parts.
29. Keep the machine and supply of gasoline in locked storage to prevent children or others from playing or tampering with them. Always remove the ignition key when machine is stored. When machine is to be stored for an extended time, disconnect battery cables or remove the battery.
30. Use fresh, clean gasoline only. For fuel recommendation, see GASOLINE. If machine is to be stored for an extended period, drain the tank and empty the gasoline storage container, either discarding the gasoline in a safe place, or using it in other gasoline-powered equipment for which it may be suited.
31. Do not attempt to fill gas tank from fuel container unless the container spout or funnel fits INSIDE the fuel tank filler neck. The use of too large a spout or funnel, or no funnel, may result in spilled gasoline, creating highly flammable gas vapors. This could result in fire and/or explosion, causing severe bodily injury.

SPECIAL PRECAUTIONS

1. Use gasoline only as a fuel, never as a cleaner.
2. Do not smoke when handling gasoline.
3. Pick up all debris, before mowing.

FOREWORD

This manual contains operating, maintenance, adjustment instructions and parts list for your Jacobsen Model G-10 Tractor. This material has been prepared in detail to help in ordering parts and proper care and efficient operation of this equipment.

If additional information is needed or should you require trained mechanic service, contact your Jacobsen Turf Equipment Distributor.

All Jacobsen Turf Equipment Distributors are kept informed of the latest methods of servicing and are equipped to provide prompt and efficient service in the field or at their service stations. They carry ample stocks of Jacobsen service parts or can secure them promptly for you from the factory.

Jacobsen parts are thoroughly tested and inspected before leaving the factory, however, some attention is required on your part. The amount of attention is slight but important if you are to obtain the fullest measure of satisfaction and performance.

When ordering parts, always specify the serial number and model of your tractor and equipment as well as the quantity, part number, and description of the parts needed.

The serial number plate is attached to left side of front floor board near clutch pedal and we suggest you record these numbers below for ready reference.

Serial No. _____



WARNING - DANGER

THIS MACHINE IS EQUIPPED WITH A SAFETY SWITCH WHICH IS INTENDED TO PROTECT THE OPERATOR AND OTHERS FROM INJURY. THE ENGINE IS PREVENTED FROM STARTING UNLESS THE CLUTCH PEDAL IS FULLY DEPRESSED. IN THE INTEREST OF SAFE OPERATING CONDITIONS, THIS MACHINE MUST NEVER BE OPERATED WITH THE SAFETY SWITCH DISCONNECTED OR MALFUNCTIONING. ALWAYS PLACE TRANSMISSION SHIFT LEVER IN NEUTRAL BEFORE STARTING ENGINE.

HOW TO ORDER REPAIR PARTS

This manual is an operating and service guide for the owner. We recommend that you read it carefully before operating your vehicle and that you follow the simple adjustments and maintenance listed. We do not recommend that you make major repairs beyond necessary adjustments and simple parts replacements required to keep your unit in good operating condition.

For assistance in getting the most out of your unit, and for overhaul, winter or summer storage, tune-up, and repair service, we recommend your Authorized Jacobsen Turf Equipment Distributor, who is prepared to help you.

To eliminate error and speed delivery:

1. Write your NAME and ADDRESS on your order plainly.
2. Explain WHERE and HOW to make shipment.
3. Give PRODUCT NUMBER, NAME, and SERIAL NUMBER that is stamped on the NAME PLATE or SERIAL PLATE of your product.
4. Order by QUANTITY DESIRED, the PART NUMBER, and the DESCRIPTION OF PART.

5. Send your order to or visit your nearest AUTHORIZED JACOBSEN TURF EQUIPMENT DISTRIBUTOR.

6. INSPECT ALL SHIPMENTS ON RECEIPT. If any parts are damaged or missing, file a claim with the carrier before accepting.

7. Do not return material to your nearest AUTHORIZED JACOBSEN TURF EQUIPMENT DISTRIBUTOR without a letter of explanation. Make a list of all returned parts, show your name and address, and include it with the shipment. TRANSPORTATION CHARGES MUST BE PREPAID.

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SPECIFICATIONS

	Gasoline	Diesel
ENGINE #	Ford Model 192 GF-6001-CF	Ford Model 192 DF-6001-CF
Cylinders	4	4
Displacement	192 cu. in. (3150 cm ³) Gas, OHV	192 cu. in. (3150 cm ³) Diesel, OHV
Bore	4.13 (105 mm)	4.13 (105 mm)
Stroke	3.60 (91.4 mm)	3.60 (91.4 mm)
Compression Ratio	7.5:1	16.5:1
Max. B.H.P.	78 at 2400 RPM	65 at 2400 RPM
Max. Torque	189 ft. lbs. (256 N-m) at 1450 RPM	160 ft. lbs. (217 N-m) at 1600 RPM
Continuous H.P.	53 (40 kW) at 2400 RPM SAE Code J 245	44 (33 kW) at 2400 RPM SAE Code J 270
Continuous Torque	137 (186 N-m) at 1300 RPM SAE Code J 245	108 (146 N-m) at 1500 RPM SAE Code J 270
THERMOSTAT	160°F. (71°C.)	180°F. (82°C.)
FUEL FILTER	Throw Away "In Line" Type	Ford No. DONN-9 NO74-A
GOVERNOR	Mechanical, 10% regulation standard. Variable speed type.	Centrifugal flyweight type; location, injection pump.
BATTERY	12 volt - 40 A.H. at 20 hr. rate for normal service, 12 volt-70 A.H. at 20 hr. rate for cold weather service.	12 volt - 135 A.H. at 20 hr. rate
Dimensions	9-1/2" (241 mm) L, 6-7/8" (175 mm) W, 8-5/16" (211 mm) H. SAE #17 M1, Delco-Remy #555 or equal. Not furnished with tractor.	16-1/4" (413 mm) L, 7-1/8" (181 mm) W, 11-7/16" (290 mm) H. Ford #CONN-10655A or equal. Not furnished with tractor.
TYPE	4 Wheel Special Purpose	
COOLING	Centrifugal type circulating pump full length water jacket, 4 blade fan (5 blade for diesel) and coolant capacity of 15 qt. (14 l.)	
CARBURETOR	Up Draft (Gasoline engine only).	
FUEL CAPACITY	13 gal. (14 l.) tank. For fuel type see "Operation" section	
HYDRAULIC FLUID	4-1/2 gal. (17 l.) Use a good grade of maximum severity tested motor oil such as SAE 10-W for ambient temps. below 100°F (38°C) or SAE 20 for temps. above 100°F (38°C).	
AIR CLEANER	Large capacity dry type Donaldson Cyclopac Air Cleaner, Model No. FWA 05-2526. Replacement Element No. P10-1275. Pre-cleaner, pre-screener combinations and Air Stack Extensions are available to fit 2" (51 mm) O.D. Inlet and may be obtained from Donaldson Distributors.	
OIL FILTER	Full flow type, filters oil every trip through engine, disposable. Ford No. C7NN-6714-A.	
LUBRICATION	Full pressure by positive displacement gear pump (Rotary type).	
ALTERNATOR	Capacity 37 amp hours.	
IGNITION	Weather proofed 12 volt system. (Distributor on gasoline engine tightly sealed).	
SELF-STARTER	Key Switch	
CLUTCH	11" (280 mm) Heavy Duty Borg & Beck. Clutch Disc Ford No. D3JL-7550-A. Pressure Plate Ford No. COTT-7563A.	
DRIVE AXLE	Dana Model 60, 7.17 to 1 reduction.	
TIRES AND INFLATION	See "ACCESSORIES" section of this manual.	
BRAKES	Foot operated hydraulic automotive type brakes on drive wheels. Mechanical parking brake on drive wheels.	
STEERING	Automotive type, with adjustable steering gear. 5 turns from left to right.	
STEERING AXLE	Heavy Duty, Pivotaly mounted.	
TURNING RADIUS	5-1/2 Ft. (1676 mm)	
WHEEL BASE	62-3/4" (1594 mm)	
WHEEL WEIGHT	Steering Wheels, 90 lbs. (41 kg)	

DIMENSIONS	Tractor Only
Length	96-3/4" (2457 mm)
Width	84" (2134 mm)
Height	55" (1397 mm)
Weight	2450 lbs. (1111 kg.)

GROUND CLEARANCE 5-1/4" (133 mm)

TRANSMISSION Heavy Duty, with 4 speeds forward, 1 reverse. (Ford D1TZ-7004-A). Helical Syncromesh in 2nd, 3rd & 4th gears.

TRANSMISSION RATIO

TRACTION SPEEDS M.P.H. (km/h) at 14.7" (374 mm) Rolling Radius

Gear	Ratio
1st Gear	6.68 to 1
2nd Gear	3.34 to 1
3rd Gear	1.79 to 1
4th Gear	1.00 to 1
Reverse	8.26 to 1

Engine RPM	1500	1600	1750	2000	2400
1st Gear	2.74 (4.40)	2.92 (4.69)	3.19 (5.13)	3.85 (6.17)	4.33 (6.96)
2nd Gear	5.48 (8.81)	5.85 (9.41)	6.39 (10.2)	7.31 (11.7)	8.77 (14.1)
3rd Gear	11.01 (17.7)	11.74 (18.8)	12.84 (20.6)	14.88 (23.8)	17.62 (28.3)
4th Gear	18.30 (30.0)	19.52 (31.4)	21.35 (34.3)	24.40 (39.2)	29.28 (47.4)
Reverse	2.22 (3.57)	7.36 (3.79)	2.59 (4.16)	2.95 (4.74)	3.55 (5.7)

When requesting engine information or ordering service parts, include the above engine type number which applies to the type of engine (gasoline or diesel) with which your tractor is equipped.

All weights shown are approximate.

OPERATING CONTROLS

DEFINITION OF DIRECTIONS

The terms left and right as used in this manual, refer to left and right side of the tractor when sitting in the operator's seat. The term front refers to the engine end of tractor and rear refers to body end.

See Figure 1 for Location of the Following Controls:

1. IGNITION SWITCH

Two keys are furnished and stored in toolbox. To start the engine turn the key clockwise to "Start" position and release when engine starts. Do not hold the key in the "Start" position for more than 30 seconds at a time. Key should be removed whenever vehicle is not being used to prevent unauthorized operation. FOR COMPLETE STARTING INSTRUCTIONS SEE PROCEDURE FOR TRACTOR OPERATION.



WARNING

Do not leave the ignition switch on for any length of time without starting engine; this could cause damage to the ignition system. Do not keep starter motor energized after engine has started.

2. CHOKE (GAS ONLY)

If engine does not start adjust choke (2) to proper gas flow. Refer to Engine Manual for starting procedure.

3. HAND THROTTLE

If a greater idling speed is desired, adjust the hand throttle by pushing in center of throttle and pulling upward to desired R P M. For finer adjustment turn in a clockwise or counter-clockwise direction. Hand throttle is located on right side of dash above the ignition key on diesel engines, and on left side of dash on gas engines.

4. ACCELERATOR PEDAL

Push accelerator pedal with your right foot to accelerate Tractor.

5. FOOT PEDAL STOP

Foot Pedal Stop is for adjusting the amount of acceleration permitted by accelerator pedal.

6. ACCELERATOR PEDAL REST

Place your right foot on Accelerator Pedal Rest and pivot the foot to hit accelerator.

7. HYDRAULIC BRAKES

Push Brake Pedal to stop tractor. Hydraulic Brakes stop drive wheels.

8. CLUTCH

Push Clutch Pedal to disengage transmission for shifting. The engine will not start unless the pedal is completely depressed.

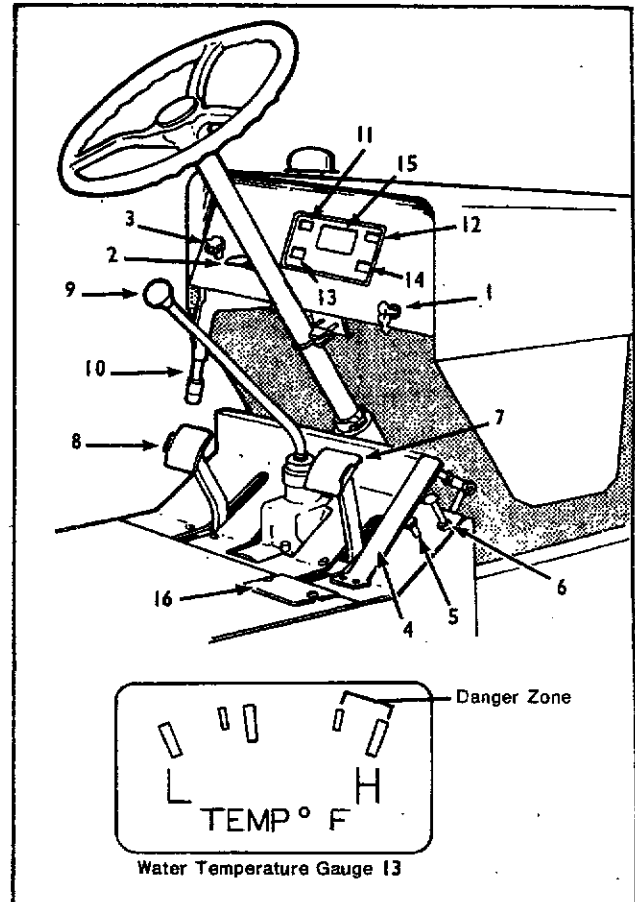


Figure 1

9. SHIFT LEVER

Move shift lever into desired gear (see Shifting Diagram) while you have clutch pedal pushed in disengaging transmission.

10. PARKING BRAKE

Parking brake lever mechanically operates drive wheel brakes and is totally independent of the hydraulic operation of brakes.

The parking brake lever is in the disengaged position when lever is pointing down. To engage parking brake, pull lever back until lever is pointing to rear of tractor. The operator should feel a definite "snap over center" action near the engaged position. To disengage parking brake, reverse above procedure.

IMPORTANT

The parking brake lever has only two positions, disengaged or engaged; parking brake lever can never partially apply brakes.

OPERATING CONTROLS

11. AMMETER

It indicates the rate of battery charge or discharge. When possible, maintain sufficient engine speed so ammeter indicates a charging rate to prevent unnecessary drain on the battery.

12. OIL PRESSURE GAUGE

See engine operator's manual for specific information.

13. WATER TEMPERATURE GAUGE (See Detail, Fig. 1)

The gauge will give the correct reading only if the ignition is turned on. If the gauge ever gives a reading in the "Danger Zone" shut the engine off and follow all other safety precautions before checking for cause. Check that the radiator fins are clear of debris, fan belt is tight, and radiator is filled to capacity.



WARNING - DANGER

To avoid possible serious bodily injury always allow the radiator to cool before removing the pressure cap.

14. FUEL GAUGE

The gauge will give the correct reading only if the ignition is turned on.

15. TACHOMETER GAUGE

The tachometer indicates engine RPM in largest semi-circle and MPH in 4th, 3rd, 2nd, 1st, and reverse gears toward center, respectively.

Beneath tachometer is an hour meter. It is intended to be an aid for maintenance schedules and a recorder of time spent on a job.

OPERATION

Before operating tractor, first, read and understand fully the information provided for the accessories on your tractor.

PUTTING BATTERY IN SERVICE (See Maintenance)

BEFORE OPERATING INSTRUCTIONS

Before starting engine check the engine oil level (See Engine Manual). Also, check hydraulic reservoir fluid level by pulling dipstick on top of tank. Oil should be between the marks on the dipstick.

Gasoline Engine: Fill tank with a good quality, clean gasoline 85 octane minimum

Diesel Engine: Fill the tank with a good quality, clean, No. 2 Diesel fuel.



WARNING - DANGER

To avoid possible serious bodily injury do not refuel tractor with engine running or while engine is hot; vapors from fuel, or fuel coming in contact with a hot engine may cause a fire or an explosion. Do not refuel tank while smoking or near an open flame. When filling tank with fuel, keep hose and nozzle or fuel can and funnel in contact with metal of fuel tank to prevent the possibility of fire or explosion caused by static electricity. Keep fire and intense heat away from fuel storage area, as the surrounding air contains highly explosive vapors.

GASOLINE

Non-leaded gasoline fuels now being marketed by major oil companies are suitable, provided that octane rating is 85 or higher.

Non-leaded gasoline gives the same top performance and the same fuel economy as leaded gasoline, and does promote longer life and minimizes plug fouling.

PROCEDURE FOR TRACTOR OPERATION

To Start:

1. Engage parking brake.
2. Depress clutch and hold.
3. Shift tractor transmission to neutral.
4. GASOLINE ENGINE - adjust choke and throttle
DIESEL ENGINE - depress foot accelerator to 3/4 position.
5. Turn key clockwise to crank engine. As soon as engine starts, release key. Do not operate starter more than 30 seconds at a time.

TO GO

1. Release parking brake.
2. With clutch pedal depressed shift to 1st gear.
3. Release clutch slowly and accelerate gradually.

OPERATION

4. Shift to desired gears per steps 2 and 3. Do not shift to 1st gear or reverse with tractor moving.

TO STOP

1. Depress clutch.
2. Apply foot brake.
3. Shift to neutral.
4. Turn key to "Off" position and remove key.
5. Set parking brake.

OPERATING SUGGESTIONS

SAFETY FIRST

Whenever tractor engine is started, operator must be in tractor

seat, gear shift in neutral position, and parking brake engaged. Under no circumstances should the engine be started with operator standing next to the tractor between lift arms. Parking brakes should always be applied when tractor is stationary.

SPEEDS

Speeds differ depending upon accessory being used. Operate at speeds at which you have control in case of an emergency. Speeds are governed by condition of turf, type of terrain, and obstacles to be encountered. There is no set speed, for only with experience can an operator determine the proper speed to fit various conditions.

OBSTACLES

If there is any doubt about adequate clearance between objects reduce speed until obstacles are cleared. When approaching an obstacle operator must judge the speed of the tractor and the distance to the object so he can clear the obstacle in ample time.

ADJUSTMENTS

**WARNING - DANGER**

To avoid possible serious bodily injury, before performing any maintenance lower all mowers to ground, place all valve levers in neutral, shift transmission to neutral, turn key to off position and remove key, set parking brake, and remove coil wire.

ACCELERATOR PEDAL (Gas Only)

(See Illustration 2 of parts list for reference numbers in the following instructions.) Accelerator pedal can be adjusted in three places as listed below:

1. To Adjust Accelerator Pedal Stop (Ref. 60)
 - a. Loosen nuts (Ref. 61).
 - b. Screw stop counterclockwise to decrease or
 - c. Clockwise to increase throttle action.
 - d. Tighten nuts securely.
2. Accelerator Pedal Link (Ref. 53) adjustment:
 - a. Loosen Lock Nut (Ref. 54).
 - b. Turn Accelerator Link counterclockwise to increase, or
 - c. Clockwise to decrease accelerator action.
 - d. Tighten lock nut.
3. Accelerator Rod (Ref. 44) adjustment:
 - a. Remove front end from carburetor link.
 - b. Loosen nut (Ref. 40) from joint (Ref. 45).
 - c. Turn accelerator rod (Ref. 44) counterclockwise to increase, or
 - d. Clockwise to decrease accelerator action.
 - e. Replace and tighten hardware.

HAND THROTTLE

The wire stop (Ref. 71) on the Throttle Control wire should be 1/4" to 1/2" (6-13mm) from the bend in the Throttle Governor Control Rod (Ref. 70) when throttle is in closed position.

(Diesel Only) (See Illust. 3)

ACCELERATOR PEDAL LINK

The accelerator pedal link should be adjusted to have a distance of 5" (127 mm) from the top of the pedal to the center of the ball joint, to adjust:

1. Loosen the lock nut.
2. Turn link (Ref. 2) in or out as needed.
3. Tighten lock nut.

ACCELERATOR PEDAL STOP

The accelerator pedal stop (Ref. 3) (the hex head cap screw underneath the pedal) should be adjusted to stop pedal travel as soon as the lever on the injector pump reaches the full open position; to adjust:

1. Loosen the jam nuts.
2. Turn the stop screw in or out as needed.
3. Tighten the jam nuts.

HAND THROTTLE CONTROL

The wire stop on the hand throttle control should be 1/4" (6 mm) from the stop bracket on the accelerator rod assembly (Ref. 10) when both are in the throttle closed position.

ACCELERATOR ROD COMPRESSION SPRING

The accelerator rod compression spring (Ref. 7) is adjusted at the factory to 4-1/8" (105 mm) between the block on the accelerator rod (Ref. 10) and the rod end assembly (Ref. 6) with the throttle closed. If adjustment is needed:

1. Loosen outer lock nut (Ref. 28).

ADJUSTMENTS

2. Turn the inner nut in or out as needed.
3. Tighten outer nut against inner nut to lock.

ACCELERATOR ROD

The accelerator rod (Ref. 10) should be adjusted so the lever on the accelerator shaft assembly (Ref. 5) rests against the floor board when the throttle is closed. To adjust:

1. Loosen the lock nut (Ref. 9).
2. Remove the cotter pin and washer (Ref. 8 & 11) and remove the rod end (Ref. 12) from the accelerator lever.
3. Turn the rod end in or out as needed.
4. Replace the rod end and the washer and cotter pin (a new cotter pin should be used).
5. Tighten lock nut.

(Gas & Diesel)

BRAKE PEDAL

Brake Pedal must have a minimum of 1/8" (3 mm) free play before brake pedal plunger contacts piston in master cylinder. If brake pedal has less than 1/8" (3 mm) free play, there is a possibility of the brakes being partially applied when brake pedal is fully released. Adjust brake pedal lag as follows: (See Illust. 5 for reference numbers used in the following instructions).

1. Remove the screw and nut (Ref. 34 and 35) from rod end (Ref. 29) and pedal.
2. Loosen lock nut (Ref. 15) on rod end.
3. Turn the rod end counterclockwise to increase, or clockwise to decrease free play lag.
4. Replace and tighten hardware.

NOTE

See your Service Station for Brake Shoe Adjustment or Brake Line Bleeding.

CLUTCH PEDAL

(See Illust. 5 for Ref. Nos.)

1. Loosen the jam nut (Ref. 15) at the end of the clutch linkage rod (Ref. 14).
2. Turn the spherical hex nut (Ref. 38) counterclockwise to increase or clockwise to decrease free play in clutch pedal travel.
3. Tighten jam nut to lock the adjustment.

When properly adjusted, clutch pedal should have 1" to 1-1/2" (25 - 38 mm) of free play in pedal travel.

PARKING BRAKE

(See Illust. 5 for reference numbers used in the following instructions).

MINOR BRAKE LEVER ADJUSTMENT

Adjusting knob at the end of brake lever (Ref. 83) is used to compensate for brake lining and linkage wear, or to adjust to unusual holding demands. Adjust by placing brake lever in the disengaged position and turning adjusting knob in a clockwise direction, applying and releasing brake lever every quarter turn until a definite "snap over center" action is achieved.

IMPORTANT

Overadjustment causes "hard" lever action, but does not increase brake efficiency. If under normal usage with proper lubrication lever becomes hard to operate, it is a sign of over adjustment. To correct this condition turn adjusting knob counterclockwise until desired "snap over center" action is obtained.

MAJOR BRAKE LEVER ADJUSTMENT

A major adjustment is required when brakes are adjusted or relined, or when adjusting knob on lever has been turned clockwise to maximum travel. Place lever in the disengaged position, turn adjusting knob counterclockwise as far as possible. Remove all slack and free play from linkage between lever and brakes. Then proceed with minor adjustment as described above.

TURNING RADIUS

The factory setting for the turning radius is 5-1/2 ft. (1676 mm) minimum inside. To check and make these adjustments see Illustration 4 for reference numbers used in the following and proceed as follows:

1. With the steering wheels in a maximum right turn, drive the tractor in a tight circle and stop.
2. Push a stake or screwdriver in the ground against the inner drive wheel tire to serve as a marker.
3. Drive tractor in a tight circle 180° and stop directly opposite the marker.
4. The distance from marker to inner drive wheel should be 11 ft. (3353 mm) which is a 5-1/2 ft. (1676 mm) radius.
5. To secure the proper setting, loosen the lock nut (Ref. 26) on spindle body stop (Ref. 25) and adjust the screw in to decrease or out to increase the turning radius.
6. Repeat items 1 through 5 for the left hand setting by making a left hand turn.
7. Tighten lock nuts (Ref. 28) on stop screws (Ref. 25) after making proper adjustments.
8. To adjust toe-in remove end of steering tie rod (Ref. 46) from a steering arm (Ref. 36 and 48) and screw the tie rod end (Ref. 9) in to decrease or out to increase the toe-in.
9. Replace the tie rod end on steering arm and tighten.

IMPORTANT

Proper toe-in is 1/8" (3 mm). This means the distance between the front edges of the steering tires is 1/8" (3 mm) less than the distance between the rear edges of the steering tires.

ADJUSTMENTS

STEERING GEAR BACK LASH

See Figure 2 for reference letters used in the following:

First turn the steering wheel gently from one stop all the way to the other, counting the total number of turns. Then, turn the steering wheel back halfway to the center position. Remove the horn button cap (Ref. 48, Illust 4) by prying it off with a screw driver. Note the position of the mark (Ref. A, Figure 2). This mark should be at 9 o'clock position when steering gear is straight ahead. Then loosen locknut on lash adjuster screw (Ref. B, Fig. 2), turn the adjuster screw clockwise to take out all the backlash in the gear teeth and retighten the locknuts. Replace the horn button cap.

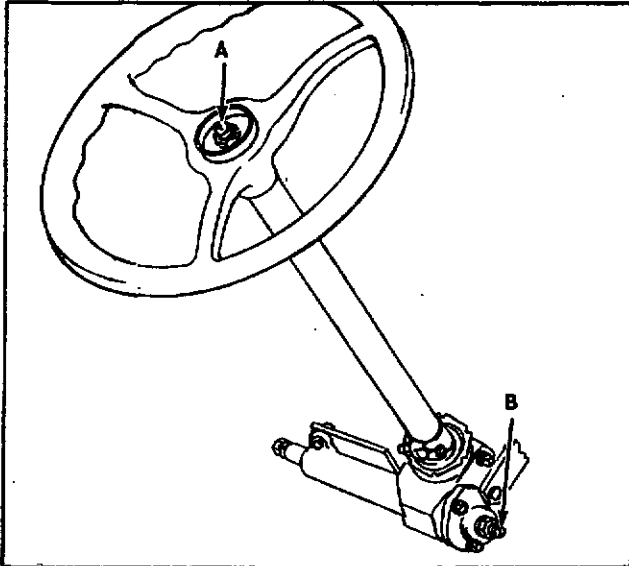


Figure 2

STEERING COLUMN HEIGHT

The steering column can be adjusted up or down changing the angle and height of the steering wheel in relation to the operator. By adjusting steering column and seat (refer to seat adjustment), maximum operator comfort can be obtained. The procedure for adjusting steering column height is as follows: (See Illust. 4 for reference numbers used in the following instructions.)

1. Set front wheels at straight ahead position.



WARNING

Care must be taken NOT TO TURN steering wheel or front wheels while making height adjustment so that steering gear does not bottom and become damaged in use. It is advisable after performing step 1, to mark position of steering wheel hub in relation to steering column. In the event the steering wheel is accidentally moved while adjusting steering column, simply line up mark on steering wheel hub with mark on steering column to properly position steering gear to the straight ahead position.

2. Remove drag link and steering arm (Ref. 33 and 56).
3. Loosen the three nuts (Ref. 20) holding the steering gear mounting bracket (Ref. 12) to the cowl structure assembly. Also

loosen the screw (Ref. 54) holding the other side of the steering gear to the cowl structure.

4. Loosen nuts (Ref. 32) holding steering column to "U" bolt saddle (Ref. 34).
5. Adjust steering column either forward or rearward as desired.
6. Retighten "U" bolt saddle mounting nut (Ref. 32) mounting bracket nuts (Ref. 20), and screw (Ref. 54).
7. Reinstall steering arm. The arm must be vertical.
8. Reinstall drag link. The drag link may require some adjustment in length depending on the distance steering column was moved.

IMPORTANT

Check that steering gear does not bottom by turning wheels to the extreme right and left. Also, check to make certain that action is being restricted by the wheel stops.

SEAT

(See Fig. 3)

The G-10 Tractor is equipped with a comfort control seat, allowing the operator to adjust seat for firmness of ride and also move the seat forward or back.

To vary the firmness of the seat, push seat forward and up to disengage clevis (1) from notch in upper arm (2). Pivot spring (3) forward or back lining up clevis with one of the four notches in upper arm. (The rear most notch gives the firmest ride.) Lower seat and engage clevis in notch in upper arm.

The seat can easily be moved forward or back by removing seat from mounting bar (4) and relocating seat mounting stud in one of the four holes in mounting bar. After seat has been repositioned, make certain seat is securely fastened to seat mounting bar.

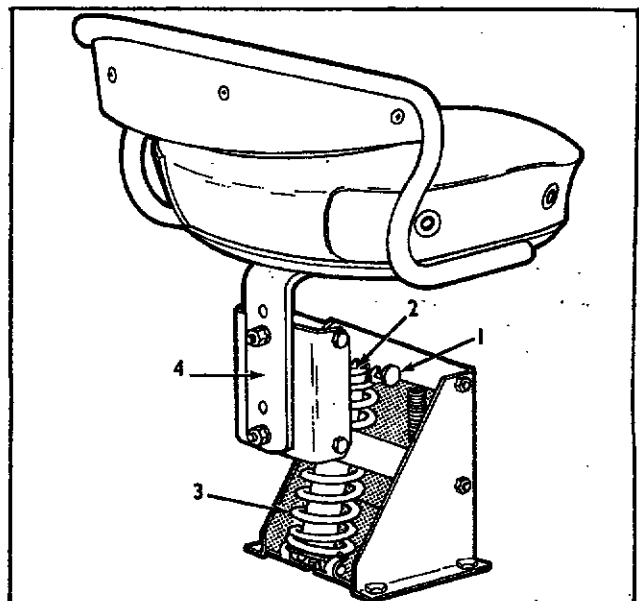


Figure 3

ADJUSTMENTS

ENGINE

See Engine Manual for Adjustment Instructions. (On G-10 engines only use JMC designated speeds as indicated below.)

Engine Speeds

Gas Idle Speed 600 RPM
Gas Maximum Speed Hand Throttle 2400 RPM

Foot Accelerator Throttle Shutter to be fully open with foot accelerator against stop bolt.

Diesel Idle Speed 675-725 RPM
Diesel Maximum Speed Hand Throttle 2400 RPM
 Foot Accelerator 2400 RPM

STANDARD DRAW BAR

The Standard Draw Bar is adjustable vertically by mounting it in the various holes in the support angles as shown at A, Figure 4. If extra extension is needed, invert the draw bar and mount as shown at B.

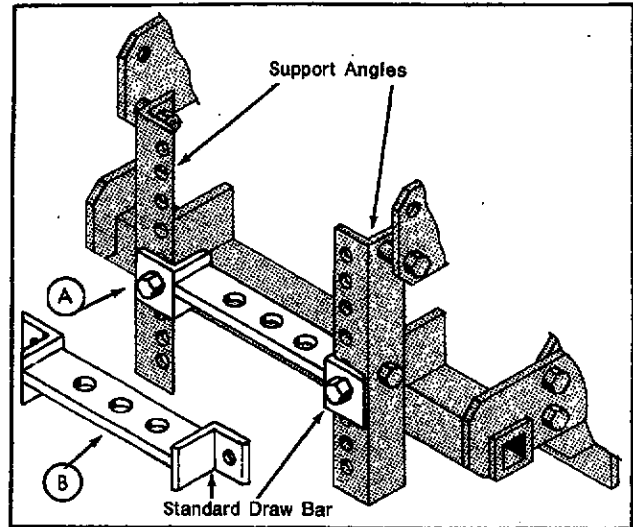


Figure 4

MAINTENANCE



WARNING - DANGER

To avoid possible serious bodily injury, before performing any maintenance lower all mowers to ground, place all valve levers in neutral, shift transmission to neutral, turn key to off position and remove key, set parking brake, and remove coil wire.

GENERAL MAINTENANCE

A long trouble-free life for your machine depends on the maintenance it receives. The following information is presented to assist you in providing the proper maintenance for your machine.

PROCEDURE

A maintenance program should be set up and should cover the following points.

1. Keep machine clean.
2. Keep all moving parts properly lubricated.
3. Keep all parts properly adjusted.
4. Inspect for loose parts.
5. Inspect for worn or damaged parts.

NOTE

If your inspection reveals worn or damaged parts replace these parts before actual breakdown occurs.

TOOLS

Some engine parts require metric tools, otherwise only standard mechanic's tools are needed for maintenance.

ASSEMBLY AND DISASSEMBLY

Use the illustrations in the parts section as reference for the disassembly and assembly of components. Always maintain relative position of parts when disassembling. Clean and lubricate individual parts and components as required.

PAINTING

For protection and appearance clean and retouch scratched or worn painted surfaces.

SAFETY SWITCH (See Illust. 5)

1. Loosen two nuts (Ref. 79) on neutral start switch bracket (Ref. 9) so bracket can be moved back and forth.
2. Push clutch pedal all the way to the floor stop.
3. Slide neutral start switch bracket forward until ball of safety switch is compressed against clutch pedal pad to complete circuit, allowing engine to crank.
4. Re-tighten two nuts on bracket.

RADIATOR

Check radiator for proper level of coolant every 40 operating hours. See engine manual for Drain - Refill Interval.

NOTE

Radiator is prefilled at factory with antifreeze to provide protection to -20° F. (-29°C).

If tractor is used in areas of exceptionally high temperatures a 5 blade fan #D1JJ-8600-D can be purchased from Ford Industrial Tractor Dealers.

MAINTENANCE

ENGINE

Check oil level in crankcase. Should be filled to "FULL" mark on dipstick - read the engine manual carefully before placing the tractor in operation.

MASTER BRAKE CYLINDER

Remove master cylinder access cover (16 in Fig. 1) and check master cylinder for brake fluid. Cylinder must be filled to base of filler plug.

TIRE MAINTENANCE

Attention to the following instructions and recommendations will help assure maximum use and service from your tires.

Refer to the section in this manual headed "Storage" for recommendations on storing tires.

TIRE PRESSURE

Due to variation in tractor weight, turf and soil condition, an exact tire pressure cannot be given. Using tire pressure suggested in "Wheels section" as a starting point and the information given below, a satisfactory tire pressure can be obtained.

Generally, the larger the tire cross section and the lower the pressure, the less marking will take place on soft turf. Most low pressures, however, are hazardous if they are so low that the sidewalls wrinkle under the load. The wrinkle is a good guide to the minimum pressure to be used. It is recommended to keep the pressure just high enough to avoid the wrinkle.

IMPORTANT

When checking tire pressure, revolve wheel so valve is at top to prevent loss of calcium chloride and water if tires are so loaded.

AIR CLEANER SERVICE

This tractor is equipped with a large capacity, dry type Donaldson Cyclopac Air Cleaner, Model No. FWA 05-2526, Jacobsen No. 116276.

Empty the dust cup weekly. Clean the element at the end of each 400 hours use, or sooner if it is full of dirt and grass. Replace the element yearly.

If the tractor is being operated in extremely dusty conditions, the air cleaner must be serviced more frequently.

INSTRUCTIONS FOR CLEANING THE ELEMENT (See Illust. 7)

Loosen the clamp at the bottom of the air cleaner and take off the dust cap. Remove the wing nut, allowing the element to drop out. Then proceed as follows, using either of two methods:

1. Compressed Air.

- Direct the air inside the element, moving the nozzle up and down while rotating the element (maximum air pressure, 100 PSI or 689 kPa.)

2. Water.

- Soak 15 minutes in water and Donaldson D-1400 Element Cleaner.
- Rinse until water is clear (maximum water pressure, 40 PSI or 275 kPa.)
- Air dry, do not use compressed air.

To remove carbon, soot and dirt from the element, wash in Donaldson D-1400 Cleaner. For dirt only, use any detergent.

Check the element for ruptures, pin holes or damaged gaskets by placing a light inside and replace if necessary.

The following may be obtained from Donaldson Distributors:

Donaldson No. D-1400 Element Cleaner

Replacement Elements may be ordered Per JMC No. 549593

FUEL FILTER

Replace fuel filter yearly. See "Specifications" for proper fuel filter.

BATTERY

(The following paragraph applies to Non-government tractors only.)

The battery and electrolyte required to fill your battery are not furnished with your tractor. Purchase these items from your Authorized Jacobsen Dealer or local auto supply store. For proper battery, see "Specifications".

REMOVE BATTERY FROM TRACTOR

(Government tractors only)

- Loosen two screws which hold battery box to support and remove box.
- Lift terminal covers and remove negative cable (black) first. Then, remove positive cable (red).
- Remove hex nuts, washers, hold down bolts, and hold down bracket. Remove battery.

PUTTING BATTERY IN SERVICE

- Place battery on wood bench or on a piece of wood or plastic. DO NOT SET BATTERY ON CONCRETE FLOOR.



WARNING - DANGER

Take care to avoid contact with the acid of the battery electrolyte. It will cause painful and dangerous injury to eyes or skin in case of contact. It will damage clothing and other articles if spilled or splattered. Before opening the electrolyte container or handling the electrolyte, study the antidote label on the container for instructions and procedure in case of accidental contact.

- Before installing the electrolyte study the instructions on the carton.
- Remove filler caps and fill battery with 1.265 specific gravity electrolyte acid to proper level. ALLOW BATTERY TO SET FOR 20 MINUTES (See Fig. 6).

MAINTENANCE



WARNING - DANGER

Do not over-fill battery. Electrolyte may overflow during charging period. We cannot be responsible for damages if this warning is disregarded.

4. With the filler caps still removed, place battery on charge after the 20 minutes setting period at 3 amperes until specific gravity reading is 1.265 - 1.275. If room, battery and electrolyte temperatures are below normal a longer charging period will be mandatory to bring the specific gravity up to 1.265 - 1.275.

5. Insert filler caps into filler holes.



WARNING - DANGER

Always connect the "ground" (black) cable last and remove it first whenever performing any battery maintenance.

MOUNTING THE BATTERY (See Fig. 5). (Non-government tractors only)

1. Be sure all switches are off.
2. Place battery on battery carrier with negative (-) terminal towards front of machine.
3. Place "L" shaped bracket over inside edge of battery (gas). Place battery hold down over top of battery (diesel).
4. Insert curved ends of battery mounting rods through slotted holes of battery carrier.
5. Slide other end of rods through holes in "L" shaped bracket (gas) or battery hold down (diesel). Secure in place with washers, lockwashers, and wing nuts.

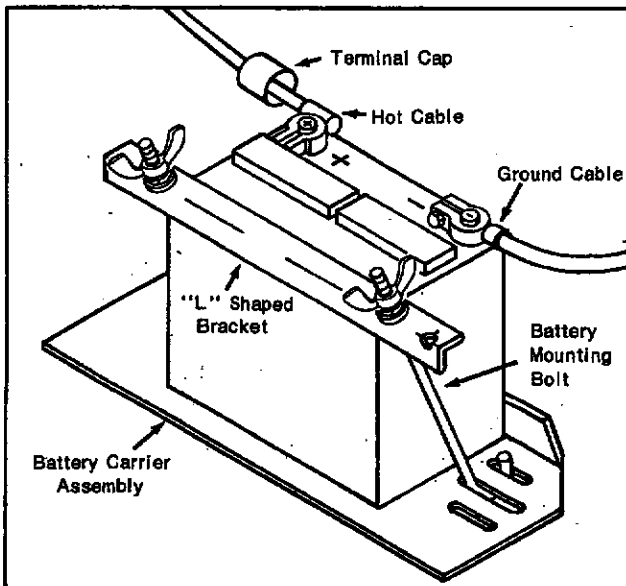


Figure 5

6. Connect the battery cables. The cable leading to solenoid is the "hot" cable and should be connected to the positive (+) battery terminal. The other cable is the ground cable and one end should be connected to the negative (-) battery terminal and the other end to the engine block.

7. Apply a light coat of petroleum jelly or chassis lubricant to both terminals and cable ends to prevent corrosion.

8. Slide the terminal cap over battery terminal.

MOUNTING THE BATTERY (See Illustration 1) (Government tractors only)

1. Be sure all switches are off.
2. Place battery on battery support with negative (-) terminal towards front of machine.
3. Place "L" shaped bracket (Ref. No. 47) over inside edge of battery.
4. Insert curved ends of battery hold down bolt (Ref. No. 48) through slotted holes of battery support.
5. Slide other end of rods through holes in "L" shaped bracket. Secure in place with washers and hex nuts.
6. Connect the battery cables. The cable leading to solenoid is the "hot" cable and should be connected to the positive (+) battery terminal. The other cable is the ground cable and one end should be connected to the negative (-) battery terminal and the other end to the engine bracket.
7. Apply a light coat of petroleum jelly or chassis lubricant to both terminals and cable ends to prevent corrosion.
8. Slide the terminal caps over battery terminals.
9. Replace battery box. Tighten screws.

BATTERY WATER LEVEL (See Fig. 6)

Every 25 hours, or more often when operating the machine in temperatures above 72 degrees F. (22°C), remove the 6 battery caps and check the water level in each cell. When the battery is in use, the water evaporates. Never allow the water level in the battery to get below the top of the plates, hydrogen gas builds up in the void space. Fill the battery to the marking ring with distilled water. If distilled water is not available, clean tap water may be used.

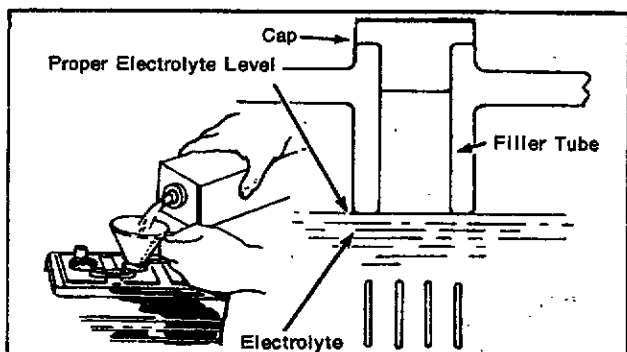


Figure 6

MAINTENANCE

NOTE

Use soap and water to clean the battery as required. Care must be taken to prevent soap and water from getting inside the battery. Brighten the terminal contact surface with steel wool. Tighten cables securely to battery terminals. Make certain vent holes in battery filler caps are kept open. Apply a light coat of petroleum jelly or chassis lubricant to terminals and cables ends to prevent corrosion.

SAFETY GUIDELINES FOR BATTERIES

1. Use extra caution with an external battery charger. If over-charging occurs the battery will release excessive hydrogen gas. Avoid charging next to an open flame or devices that may cause sparks.
2. Check the battery's liquid level regularly - hydrogen gas will build up in the void space.
3. Be sure there is nothing in your engine installation that will cause a spark to jump. Plug wires that are dirty or wet or covered with oil will cause a spark, as will poor connections and corroded terminals.
4. Accidents can also happen while inspecting or installing the battery. While installing, be sure all switches for ignition, lights, and accessories are in the "Off" position. Always at-

tach the ground cable last to further prevent spark with the installation tools. Do not use a match or a lighter to inspect the installation or water level.

IMPORTANT

Arcing caused by: (1) Contact between support rails and tools used to loosen terminals; (2) Removing wrong cable from battery terminal first; (3) Striking battery terminals against metal rails while installing or removing; (4) Contact with jumper cables may ignite fumes from battery, vapor from fuel tank, or both, causing explosion and/or fire, or (5) loose cables.

JUMPER CABLES

Before attempting to jump the battery check the water level and fill if necessary. Also check to be sure the battery is not frozen and replace it if it is.

To jump the battery attach the positive jumper cable to positive battery terminal and then attach the negative jumper cable to the tractor frame. DO NOT ATTACH NEGATIVE JUMPER CABLE TO THE BATTERY.

LUBRICATION



WARNING - DANGER

To avoid possible serious bodily injury, before performing any maintenance lower all mowers to ground, shift transmission to neutral, turn key to off position and remove key, set parking brake, and remove coil wire.

GENERAL INSTRUCTIONS

Lubrication coupled with cleanliness is the most inexpensive preventive maintenance tool. Therefore, lubricate the locations shown on lubrication chart at specified intervals and use type of lubricant recommended.

ENGINE (See Engine Manual)

LINKAGE FRICTION POINTS

Regularly apply several drops of oil to all linkage friction points. See Lubrication Chart for type of oil.

GREASE FITTINGS

Fill fittings slowly with grease until grease begins to seep out.

SEAT

During normal chassis lubrication, oil all seat pivot points with SAE 30 oil. Lubricate grease fittings on upper and lower arms with semi-fluid chassis lubrication grease.

PARKING BRAKE LEVER

During normal chassis lubrication, oil all brake lever moving parts, except side plates, with SAE 30 oil. Lubricate side plate slots with chassis grease.

LUBRICATION CHART

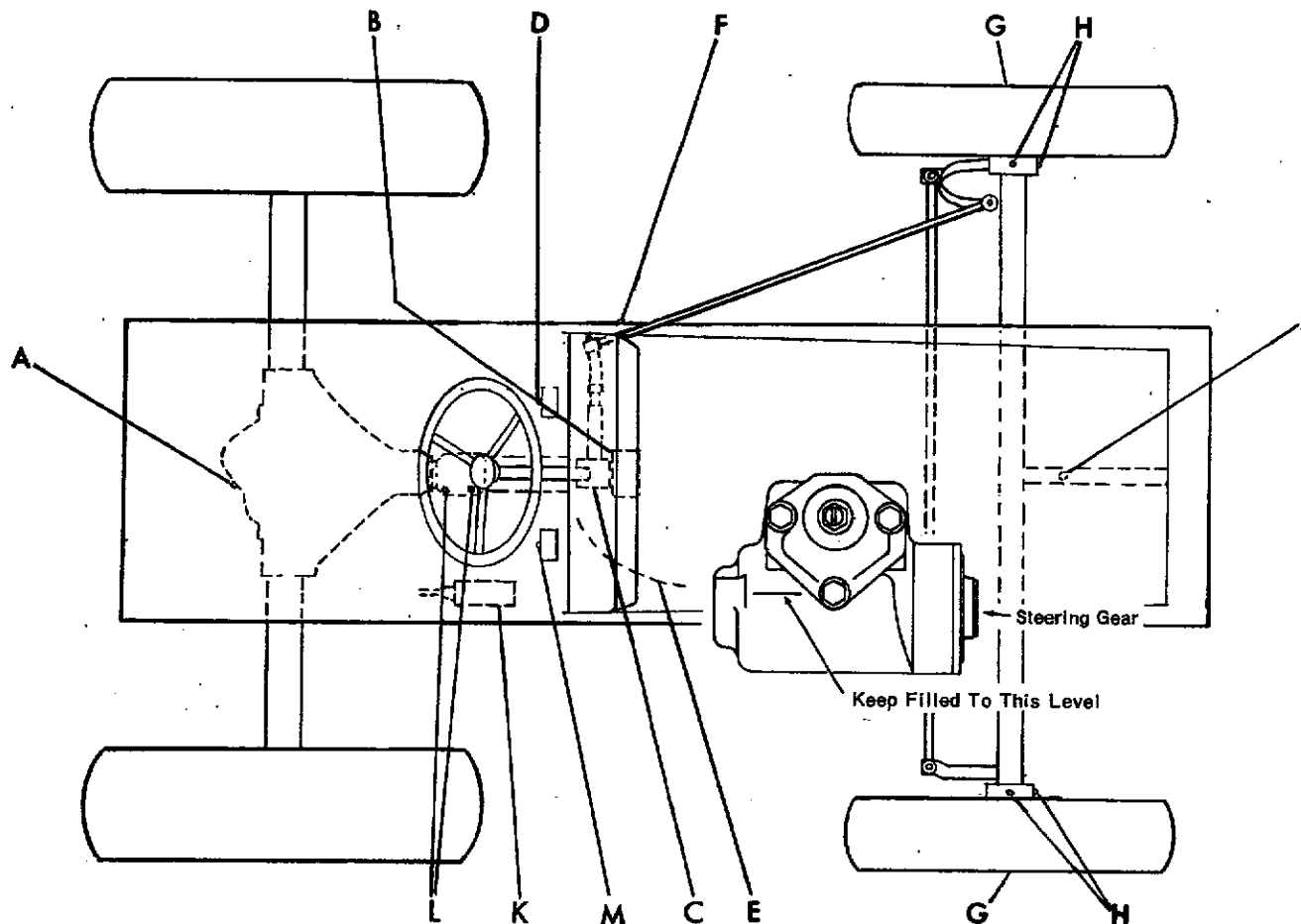


Figure 7

Ref. No.	Part Name	Lubricant	Check Interval	Lubrication Interval
A	Rear Axle	**6 Pt. (2.8 Ltr.)	40 Hrs.	Drain - Refill 250 Hrs.
B	Transmission	***7 Pt. (3.3 Ltr.)	40 Hrs.	Drain - Refill 250 Hrs.
C	Steering Gear	Steering Gear Oil	40 Hrs.	250 Hrs.
D	Clutch Pedal	Chassis Grease * (1)		40 Hrs.
E	Tachometer Cable	Powdered Graphite		1000 Hrs.
F	Clutch Shaft Pivot	Chassis Grease * (1)		40 Hrs.
G	Front Wheel Bearings	Fibrous Wheel Bearing Grease		Repack 1000 Hrs.
H	Steering Knuckle	Chassis Grease * (4)		40 Hrs.
J	Front Axle Pivot	Chassis Grease * (1)		40 Hrs.
K	Master Cylinder - Brake	Hydraulic Brake Fluid	40 Hrs.	
L	Universal Joint & Drive Shaft	Chassis Grease * (2)		40 Hrs.
M	Brake Pedal	Chassis Grease * (1)		40 Hrs.

Engine - Air Cleaner - See Engine Manual

*Grease fitting - Use a grease gun, number in parenthesis () indicates number of fittings.

Radiator is prefilled at Factory with an Antifreeze and Water mixture to protect engine to -20° F. (-29°C).

**Lubricant for the rear axle must meet the following specifications: SAE 140 (AGMA 7)

(API GL-5) MIL-L 2105-B containing Anglamol 6-1/2% min.

NOTE: Remove all dirt, dust, etc., from grease fittings before lubricating, and excessive grease after lubricating.

***Transmission - Engine Oil - SAE 50 above 0° F (-18°C) and SAE 30 below 0° F. (-18°C).

Alternate - SAE 90EP above 0° F (-18°C) and SAE 80EP below 0° F. (-18°C).

STORAGE

GENERAL INSTRUCTIONS

When you do not plan to use your vehicle for some time, it should be stored in a dry and protected place. Unnecessary exposure to the elements may deteriorate its appearance and shorten the usual service life.

Follow the procedures outlined in the following paragraphs for placing the vehicle in storage. If the vehicle is not to be used for an extended period, steps 3, 4 and 5 should be repeated every six months.

1. Drain the fuel from the fuel tank and carburetor.

IMPORTANT

Gum will eventually form in the tank, fuel line, and carburetor if the fuel is not drained. Gum in the carburetor jets and passages affects engine starting.

2. After engine has cooled, remove the spark plugs and pour about one tablespoon of good quality lubricating oil into each cylinder.
3. Crank the engine slowly by hand to distribute the oil over the cylinder walls. Replace spark plugs.
4. Clean exterior of engine. Paint exposed metal or coat it with a light coating of rust-preventative oil.
5. Remove the battery and clean it as directed. See "Maintenance". Place it on a rack or bench in a cool, dry place where it will not be exposed to freezing temperatures. Storage temperature must be 32 degrees F.(0°C) or above. Check the battery, referring to separate Battery Booklet supplied with it at the time of purchase and follow storage recommendations contained therein.

IMPORTANT

The battery should be checked every 60 to 90 days while in storage, and should be re-charged if necessary.

6. Wash, clean and completely lubricate the vehicle. Follow the steps given in the lubrication chart. Paint the exposed metal or brush a light coat of rust-preventative oil over unpainted metal (except pulley grooves). Incidentally, common motor oil is not a rust preventative oil.

7. Before storing the vehicle, clean the tires thoroughly. Jack up the vehicle so that the load is off the tires if it is to be out of service over a long period of time. If it is not jacked up, check the tires at least once a month and reinflate as necessary to keep them at the pressure recommended under "Tire Maintenance". Store the vehicle so that the tires are protected from the sunlight.

STARTING THE ENGINE AFTER STORAGE

1. Check the battery as directed in "Maintenance" and, if necessary, recharge it. Reinstall the battery following the instructions under "Mounting the Battery".
2. Remove the spark plugs and wipe dry. Crank the engine (with spark plugs removed), using starter, until excess oil has been expelled through the spark plug hole. Replace the plug and connect the ignition lead wire.
3. Service the air cleaner.
4. Check level of oil in crankcase and front transaxle.
5. Fill the fuel tank with fresh gasoline.
6. Start the engine and let it idle slowly. Either move the vehicle outside before starting engine or keep doors and/or windows wide open to provide sufficient ventilation to prevent danger from carbon monoxide gas in the exhaust. Do not accelerate the engine rapidly, and do not operate it at high speed immediately after starting. Allow time for it to become properly warmed and lubricated.
7. Before driving the vehicle, check to make certain that the tires are inflated to the proper pressure as given under "Tire Maintenance".

IMPORTANT

If fuel was NOT drained before storage, gum has probably formed in the tank, fuel line, and carburetor. This can be dissolved with acetone or a 50 - 50 mixture of alcohol and benzol. First, drain old fuel from tank and carburetor. Then install cleaning solution in tank and leave in for a 24 - 48 hour period. DO NOT START ENGINE WITH CLEANING SOLUTION IN TANK! Drain solution from fuel tank and carburetor, and re-fill tank with fresh gasoline.

WHEELS

INSTALLATION INSTRUCTIONS FOR DEMOUNTABLE WHEELS

Tire and rim assemblies must be correctly installed; and the rim clamps and nuts correctly tightened in order to assure maximum service life and safety.

See Figure 8 for steps 1-7 except where otherwise stated.

1. Use a wire brush to clean the wheel mounting surfaces, being sure that they are free from dirt, rust and paint. The mounting surface of the wheel is the 28° taper on the inboard side of the hub and drum casting.
2. Slide the inside tire and rim assembly over the hub and drum casting and push it back into position against the tapered mounting surface. Be sure that the valve stem is facing the inside of the tractor (See Fig. 9).
3. Slide the rim spacer in place over the hub and drum casting, aligning the locating tab with the slot in the hub and drum casting.
4. Slide the outside tire and rim assembly over the hub and drum casting. Be sure that the valve stem is facing out and is in the same relative position as the valve stem on the inside.

5. Push the whole assembly into position, so that inner rim fits snugly against tapers all around, spacer fits snugly and uniformly against inner rim, and outer rim fits snugly and uniformly against spacer (See Fig. 10).

6. Install rim clamps and nuts all around. Run the nuts up until the end of each stud is flush with the face of its nut, then rotate the wheel a half turn to allow parts to seat naturally.

7. Tighten the stud nuts a quarter turn at a time, following criss-cross pattern. This is very important. Failure to tighten nuts in this criss-cross sequence will cause misalignment of tire. Continue until all stud nuts are tightened to 75 to 90 ft-lbs. (101 N-m to 122 N-m).

CHECK WHEEL ALIGNMENT

To do this, place a block of wood or other object on the floor beside tire, and rotate the tire and wheel assembly. Note variations if any, in space between the tire and the block as the tire is rotated. If this variation exceeds 1/16" (1.6 mm) for rear rims or 1/8" (3mm) for front duals, the rim is not properly mounted. (See Fig. 11).

To correct misalignment, loosen nuts where the greatest deviation occurs, and tighten on the opposite side. Recheck and correct until deviation is eliminated.

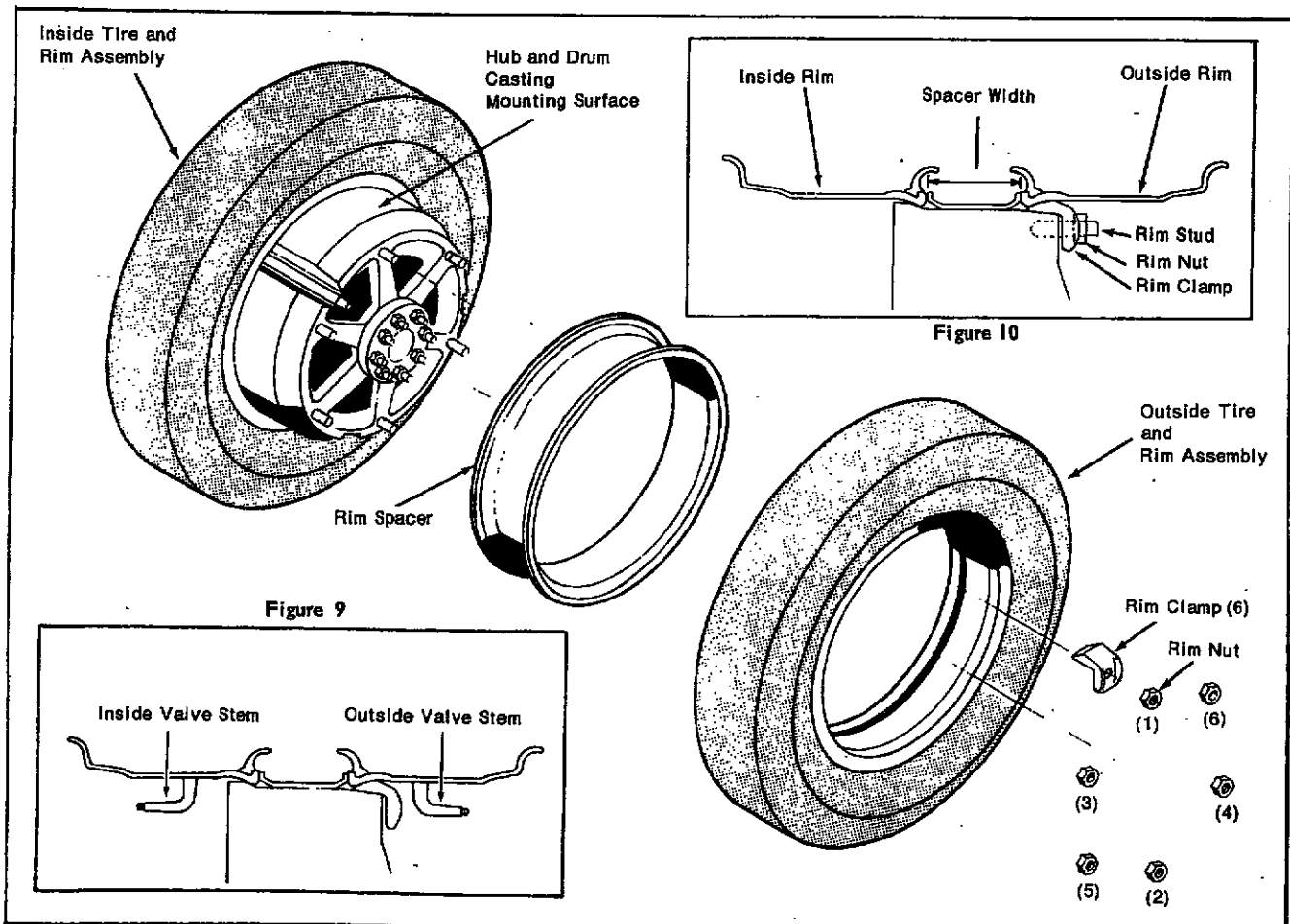


Figure 8

WHEELS

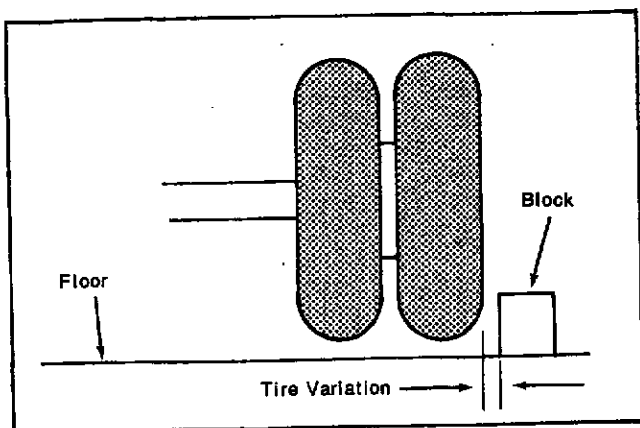


Figure 11

After running a short distance recheck the stud nuts for tightness. Parts will usually seat naturally and torque on nuts will drop. Retighten all nuts to specified torque; this second tightening will assure a tight, properly aligned wheel assembly.

Check torque on all stud nuts once each week.

RIM AND WHEEL SAFETY PRECAUTIONS

WARNING - DANGER

An inflated tire and rim can be very dangerous if misused or worn out. Many accidents, some fatal, have resulted from improper handling and operation of tractor rims and wheels. It is, therefore, of the utmost importance that the precautions outlined on this page be carefully followed by all persons servicing tractor rims and wheels to avoid personal injuries and costly damage.

DURING TIRE MOUNTING

Always inflate tire in safety cage or use a portable lock ring guard. This is a safeguard against improper assembly, inadvertently mismatched parts, and other assembly errors. Remember, an inflated tire contains potentially explosive energy that can blow improperly assembled rings loose. In emergency situations, where a safety cage or portable safety device is not available, use a clip-on type air chuck so that the operator can stand clear during tire inflation.

IMPORTANT

When clip-on air chuck is used, line pressure must be restricted to maximum inflation capacity of tire.

Use properly matched parts only. Rim base and rings must be matched according to size and type.

Replace damaged parts. Abuse during road operations or in mounting the tire can cause dents, cracks, or distortions which weaken the parts. Inspect for and replace damaged parts.

Periodically inspect and remove rust and other foreign matter. Accumulation of such material in the rim gutter can prevent the proper fitting of rings. Parts that are excessively corroded are weakened and should be replaced. Use a rust preventative compound (not containing water) during mounting to minimize rusting.

Follow manufacturer's recommended mounting procedures. **ADDED PRECAUTION:** Re-check assemblies just prior to inflation, particularly if they have been rolled across the floor or have received rough handling between mounting and inflation.

DURING TIRE DEMOUNTING

Completely deflate tire prior to demounting. The tire should be deflated prior to removal of the tire and rim assembly from the vehicle. Remove the valve core to insure complete deflation. **NEVER POSITION YOUR BODY IN FRONT OF RIM DURING DEFLATION.**

Follow recommended demounting procedures.

Check for damaged or worn parts. Mark defective parts for destruction to preclude their future use.

DURING TRACTOR OPERATION

Inspect rims and wheels for damage during tire checks and at periodic maintenance intervals. Remove and replace defective parts.

Do not exceed maximum inflation pressures. See Tire Pressure Specifications at the end of this section. This is determined by the size and ply rating of the tire, but is not to exceed the maximum inflation listed for the rim or wheel. It is also important to maintain uniform inflation in both tires of a dual assembly so that weight is equally sustained.

Do not run vehicle on one tire of dual assembly. When there is loss of air in a dual tire the carrying capability is reduced and load must be sustained by the other tire and rim. It is particularly important that inflation pressures be kept the same on each side to prevent tilting of the tractor or mower, which would result in uneven performance of attachments. Under-inflation will cause loss of traction in soft soil or loose sand and it may also result in hard riding qualities on uneven ground.

Never re-inflate a tire that has been run flat or seriously under-inflated without first breaking rim down and reassembling rim. It is especially important to make sure the lock ring is secure in the gutter and has not been damaged prior to re-inflation.

Periodically check clamps and wheel nuts. Loose wheel nuts can cause excessive wear around bolt holes, dangerous wheel vibration, and metal fatigue failure. Excessive torque is also dangerous in that it can cause stud or wheel breakage.

WHEELS

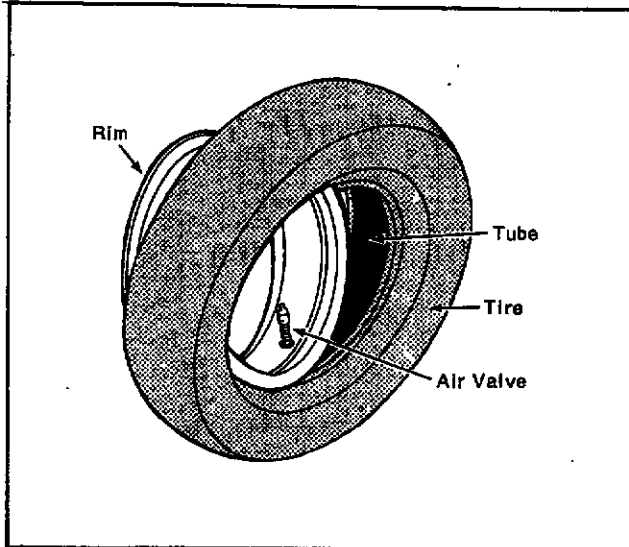


Figure 12

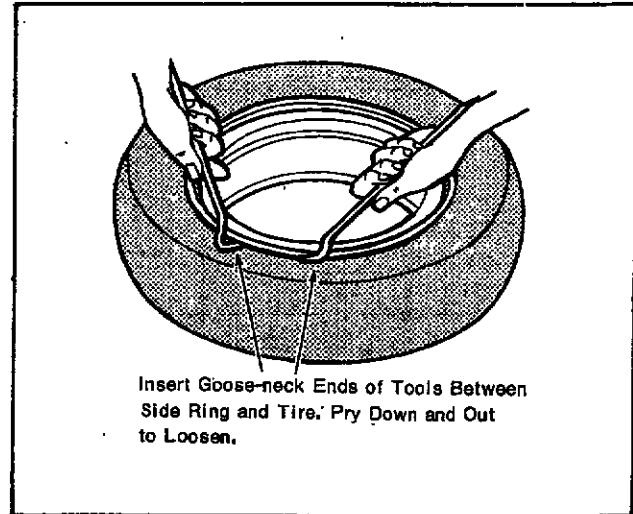


Figure 14

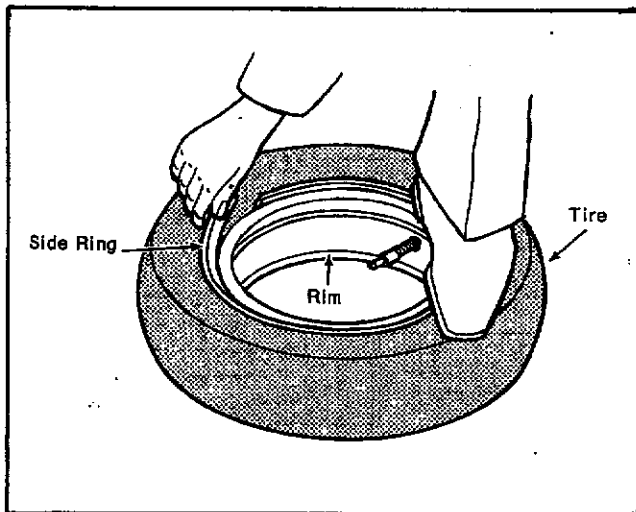


Figure 13

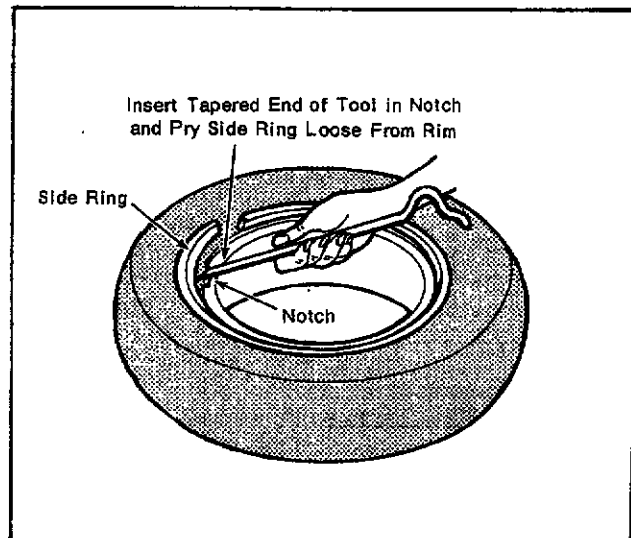


Figure 15

TIRE MOUNTING

1. Insert tube into tire. Align valve with rim valve slot. Insert rim into tire. (See Fig. 12).
2. To start side ring into position place side ring on rim base as shown in Figure 13.
3. Once side ring is started, walk ring into place. Inflate tire partially and check side ring to insure it is seated properly. Then inflate to recommended operating pressure.

NOTE

Special tool required - Goodyear TO-399 or equal.

TIRE DEMOUNTING



WARNING

Always deflate tire completely by removing valve core from valve before attempting to demount tire.

1. Drive the goose-neck end of two TO-399 tools between the side ring and side wall of the tire about 5" (127 mm) apart. Pry down and out in an arc of about 70 degrees. Leave one tool in position and place second tool about 5" (127 mm) beyond. Repeat this procedure in successive steps until the bead is broken loose from tire. (See Fig. 14).

Insert tapered end of TO-399 tool into notch on side ring and pry side ring from its groove in the base of the rim. (See Fig. 15).

2. Turn assembly over and break the back bead loose in same method as explained in Figure 8. Lift rim base from tire.

ACCESSORIES

PARTS LISTS AND TIRE PRESSURE SPECIFICATIONS FOR DRIVE AND STEERING WHEEL SETS FOR G-10 TRACTOR.

PRODUCT NO.	DRIVE WHEELS	STEERING WHEELS
70310	7.50 x 16 Dual	6.70 x 15 Standard
70311	9.50 x 16 Dual	6.70 x 15 Standard
70312	9.50 x 16 Dual	9.50 x 14 Wide Base
70313	7.50 x 16 Dual	9.50 x 14 Wide Base
70314	12 x 16.5 Wide Base	9.50 x 14 Wide Base

PARTS LISTS FOR ABOVE PRODUCTS

PRODUCT	PART NO.	QUAN.	DESCRIPTION
DRIVE WHEELS 7.50 x 16 DUAL	353674	4	Rim, 5.50 x 16
	318087	4	Tire, 7.50 x 16
	353172	4	Tube, Inner
	335878	4	Ring, Side
	353675	2	Spacer, Rim Mounting
	353676	12	Clamp, Rim Mounting
	353678	12	Nut, Rim Mounting
DRIVE WHEELS 9.50 x 16 DUAL	353674	4	Rim, 5.50 x 16
	319487	4	Tire, 9.50 x 16
	353172	4	Tube, Inner
	335878	4	Ring, Side
	353675	2	Spacer, Rim Mounting
	353676	12	Clamp, Rim Mounting
	353678	12	Nut, Rim Mounting
DRIVE WHEELS 12 x 16.5 WIDE BASE	121727	2	Wide Base Drive Wheel Assembly
	342478	2	Tire, Tubeless
	341680	2	Valve, Air
	446154	12	Lockwasher, 1/2 Hvy, Rim Mounting
	353678	12	Nut, Rim Mounting
STEERING WHEELS 6.70 x 15	313461	2	Wheel, Steering
	323965	2	Tire, 6.70 x 15
	314644	2	Tube, Inner
STEERING WHEELS 9.50 x 14 WIDE BASE	328944	2	Wheel, Steering
	342479	2	Tire, 9.50 x 14
	342480	2	Tube, Inner

The inflation pressures shown in the table are based on the specific tire loading of the G-10 Tractor when a PTO and 3 Point Hitch Accessory are mounted. ANY ADDITIONAL WEIGHT ADDED TO THE TRACTOR WILL REQUIRE AN INCREASE IN INFLATION PRESSURE, UP TO MAXIMUM.

FIGURES SHOWN ARE INFLATION PRESSURES IN POUNDS PER SQUARE INCH (KPA)

TIRE SIZE	FUNCTION	G-10	
		MIN	MAX
6.70 x 15	Steering	20 (138 kPa)	28 (193 kPa)
9.50 x 14	Steering	20 (138 kPa)	28 (193 kPa)
7.50 x 16 Dual	Drive	20 (138 kPa)	22 (151 kPa)
9.50 x 16 Dual	Drive	20 (138 kPa)	20 (138 kPa)
12 x 16.5	Drive	25 (172 kPa)	45 (310 kPa)

ACCESSORIES

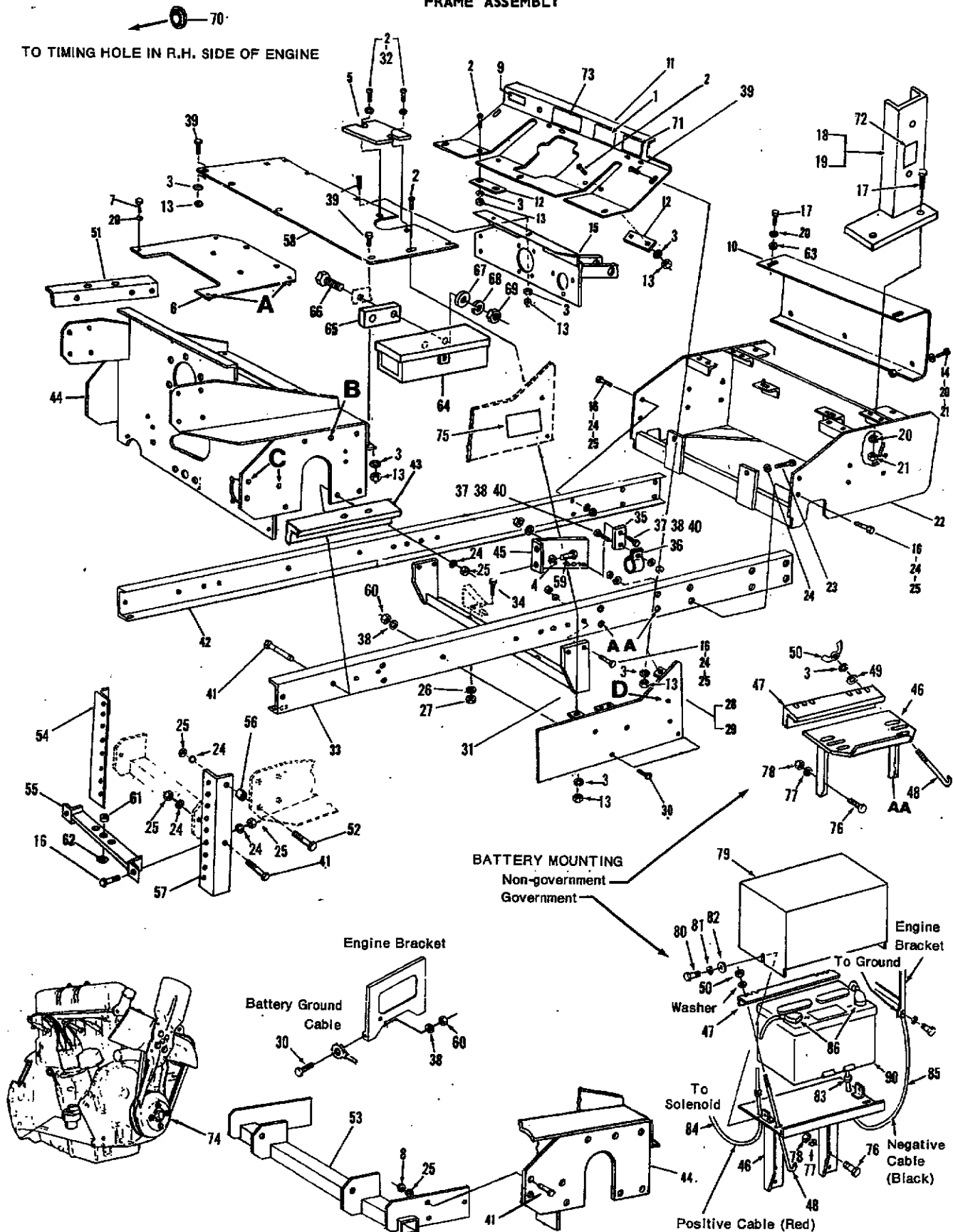
LIST OF TRACTOR ACCESSORIES AVAILABLE FROM JACOBSEN

Product No.	Name	Description
69002	Seat and Mounting	For greater driving comfort (Field Installed)
70310	Wheel Option	Dual Drive Wheels, 7.50 x 16
70311	Wheel Option	Steering Wheels, 6.70 x 15
70312	Wheel Option	Dual Drive Wheels, 9.50 x 16
70313	Wheel Option	Steering Wheels, 6.70 x 15
70314	Wheel Option	Dual Drive Wheels, 9.50 x 16
70315	Wheel Option	Steering Wheels, 9.50 x 14
70316	Wheel Option	Dual Drive Wheels, 7.50 x 16
70317	Wheel Option	Steering Wheels, 9.50 x 14
70318	Wheel Option	Drive Wheels, Wide Base, 12 x 16.50
70319	Wheel Option	Steering Wheels, Wide Base, 9.50 x 14
*78005	Battery	Standard 12 - volt for G-10 Tractor
78006	De-Luxe Seat Only	For greater driving comfort (Factory Installed)
*78019	Weight Box	For use with 3-point lift implements
*78031	Roll - Over Protection Structure	For Operator Safety
*78035	Seat & Tether Belt (For Knedler Seat)	For Operator Safety
78036	De-Luxe Seat only	For greater driving comfort (Field Installed)
78039	Power Steering	Automotive type hydraulic steering
78053	Power Take-Off	540 RPM power take-off to drive any implement used with the G-10 Tractor (Factory Installed)
78063	SAE 3-Point Lift	3-point lifting arrangement for all 3-point lift implements
78068	Rigid 3rd Link	For soil engaging type implements, Used with 78065 3-Point Lift
78129	Hydraulic Pump	Supplies hydraulic pressure for all hydraulic accessories except power steering
*78559	Head and Tail Lights	For night driving.
*78521	Horn	Steering column mounted horn button with an automotive type horn mounted under the hood.
*78525	Tail Pipe Extension	Extension for exhaust outlet between rear engine support and rear of tractor
78531	Steering Wheel Weights	For front steering wheels (For 15" or 381 mm rim only)
*78535	Hillside Mowing Brake	Hand brakes for mowing on hillsides. Standard brake lever and cables must be removed
*78553	Directional Lights	2 truck type lights with red and yellow lens, may be mounted on cowling. Equipped with flare flash wmergency switch
*78557	Back-up Lights	Mounted on fenders
*78554	Wiring Harness Assembly	(Required for any light kit)

* Indicates items not illustrated in this manual.

ILLUSTRATION 1

FRAME ASSEMBLY



PARTS LIST-ILLUSTRATION 1

Ref. No.	Part No.	Quan	Description
1	360053	1	Decal, Brake
2	404016	16	Screw, 1/4-20 x 5/8, Truss Hd Mach
3#	446130	21	Lockwasher, 1/4 Hvy
4	446148	2	Lockwasher, 7/16 Hvy
5	326418	1	Plate, Master Cylinder Cover
6	129864	1	Seat Mounting Plate Assembly
7	400268	4	Screw, 3/8-16 x 1-3/4 Hex Hd Cap
8	446166	6	Lockwasher, 5/8 Hvy
9		1	Plate, Serial No. (Ref. only)
10	326446	1	Front Cross Member Cover Plate
11	330921	1	Floor Board, Front
12	326392	2	Plate, Brake and Clutch Pedal Stop
13	443102	19	Nut, 1/4-20 Hex
14	400272	3	Screw, 3/8-16 x 2-1/4 Hex Hd Cap
15	122051	1	Transmission Cross Plate Assembly
16	400612	16	Screw, 5/8-11 x 1-1/2 Hex Hd Cap
17	400262	6	Screw, 3/8-16 x 1 Hex Hd Cap
18	162156	1	R.H. Front Grill Support
19	162157	1	L.H. Front Grill Support (Not Illus).
20	446142	13	Lockwasher, 3/8 Hvy
21	443110	7	Nut, 3/8-16 Hex
22	116277	1	Front Cross Member Assembly
23	400614	2	Screw, 5/8-11 x 1-3/4 Hex Hd Cap
24	446166	23	Lockwasher, 5/8 Hvy
25	443126	32	Nut, 5/8-11 Hex
26	446154	2	Lockwasher, 1/2 Hvy
27	443118	2	Nut, 1/2-13 Hex
28	130378	1	R.H. Floor Board Side Panel Assem.
29	130379	1	L.H. Floor Board Side Panel Assem. (Not Illus)
30	400184	5	Screw, 5/16-18 x 3/4 Hex Hd Cap
31	130365	1	Engine Cross Member Assembly Rear
32	447010	2	Lockwasher, 1/4 Ext tooth Rear
33	395012	1	Channel, R.H. Side
34	400410	2	Screw, 1/2-13 x 1-3/4 Hex Hd Cap
35	357956	1	Plate, Exhaust Pipe Mtg
36	345274	1	Clamp, Tail Pipe
37	400188	2	Screw, 5/16-18 x 1 Hex Hd Cap
38	446136	7	Lockwasher, 5/16 Hvy
39	404022	5	Screw, 1/4-20 x 1, Truss Hd Mach
40	443106	2	Nut, 5/16-18 Hex
41	400616	14	Screw, 5/8-11 x 2 Hex Hd Cap
42	395011	1	Channel, L.H. Side
43	326357	1	Angle, R.H. Axle Support
44	114074	1	Rear Cross Member Structure
45	336127	1	Bracket, Clutch Spring Mtg
46c	130887	1	Battery Carrier Assembly
46e	122100	1	Battery Support Assembly
47*	358819	1	Battery Hold Down Assembly
48*	358820	2	Bolt, Battery Hold Down
49	452004	2	Washer, 1/4 Flat

Ref. No.	Part No.	Quan	Description
50E	445612	2	Nut, 1/4-20 Wing
50e	444708	2	Nut, 1/4-20 Hex C/L
51	326358	1	Angle, L.H. Axle Support
52	400618	2	Screw, 5/8-11 x 2-1/4 Hex Hd Cap
53	113927	1	Hitch, Cross - Short
54	326703	1	Angle, Close Couple, Draw Bar Vertical L.H.
55	113313	1	Close Couple Draw Bar
56	326699	2	Spacer, Close Couple Draw Bar
57	326702	1	Angle, Close Couple, Draw Bar Vertical R.H.
58	130888	1	Floor Board, Rear
59	400334	2	Screw, 7/16-14 x 1 Hex Hd Cap
60	443106	5	Nut, 5/16-18 Hex
61	344023	1	Adapter, 5/8 Ball Hitch
62	325406	1	Washer, Ball Hitch Mounting
63	453011	2	Washer, 3/8 Med
64	110768	1	Tool Box Assembly
65	342103	1	Block
66	400194	2	Screw, 5/16-18 x 1-3/4 Hex Hd Cap
67	452006	2	Washer, 5/16 Std.
68	446136	2	Lockwasher, 5/16 Hvy
69	443106	2	Nut, 5/16-18 Hex
70	358298	1	Button Plug, Timing Hole Cover
71	360052	1	Decal, Accelerator
72	360102	1	Decal, Anti-freeze
73	360054	1	Decal, Clutch
74		1	Gas Engine, Ford Model 192GF-6001-CF
75	336640	1	Decal, Battery, Danger
76	400406	4	Screw, 1/2-13 x 1-1/4 Hex Hd
77	446154	4	Lockwasher, 1/2 Hvy
78	443118	4	Nut, 1/2-13 Hex
79e	122101	1	Battery Box Assembly
80e	400184	2	Bolt, 5/16-18 x 3/4 Hex Hd
81e	446136	2	Lockwasher, 5/16 Hvy
82e	453009	2	Washer, 5/16 Flat
83e	358369	2	Grommet
84e	162442	1	Cable, Battery (Positive)
85e	162443	1	Cable, Battery (Negative)
86e	360634	2	Terminal Cover
87e	342875	1	Pin, Snap Ring Locked
88e	357883	1	Plug, Magnetic (Engine Oil Pan Drain) Not Illustrated
89e	345724	1	Plug, Magnetic (Transmission Drain) Not Illustrated
90e		1	Battery, 12 V.

* Parts used only on tractors equipped with gasoline engine.

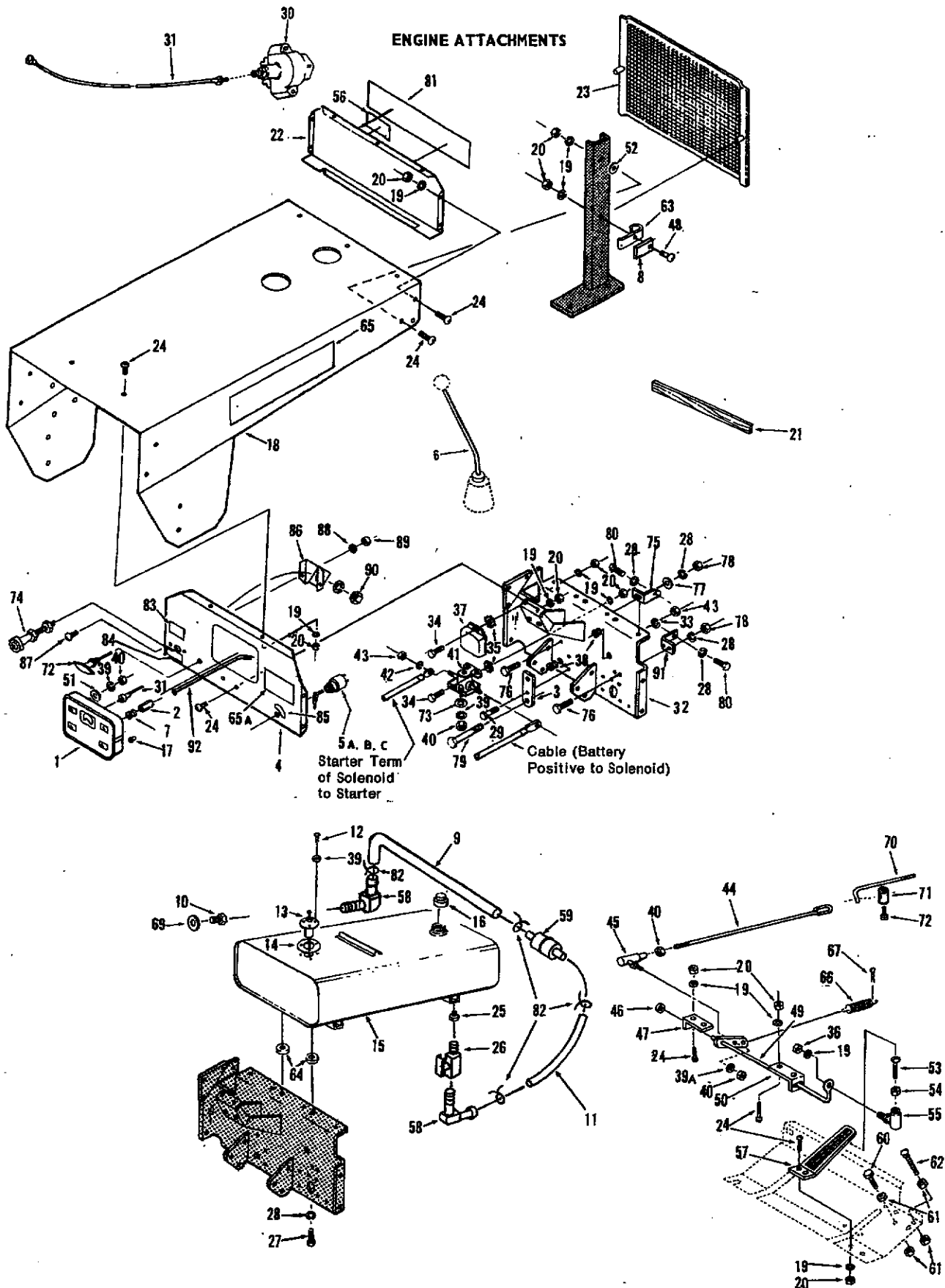
Quantity is 19 for Government Tractors.

E Parts used only on Non-government Tractors.

e Parts used only on Government Tractors.

c Parts used only on Non-government Tractors equipped with gasoline engine.

ILLUSTRATION 2



PARTS LIST-ILLUSTRATION 2

Ref. No.	Part No.	Quan.	Description
1	130080	1	Instrument Panel - Consists of:
	326406	1	Glass
	326407	4	Bracket, Mounting
	326408	1	Bezel
	326409	4	Gasket, Rear Section
	326410	1	Gasket, Front Section
	326411	1	Gasket, Glass Mounting
	113121	1	Ammeter
	326412	1	Mat, Panel
	113122	1	Case, Light Shield
	159712	1	Tachometer
	113124	1	Temperature Gauge
	357968	1	Oil Pressure Gauge
	113126	1	Fuel Gauge
	545083	1	Gasket, Tachometer
	335766	1	Decal, Tachometer
	353403	1	Fitting Adapter
2	326503	1	Coupling, Oil Line to Gauge
3	359583	2	Bracket, Cowling Mounting
4	336782	1	Dash Panel
5	129846	1	Ignition Switch Assem
5A	129846	1	Key, Ignition (Set of 2)
5B	358968	1	Nut, 9/16-24 NEF 2
5C	447221	1	Lockwasher, 9/16 Int Tooth
6	336192	1	Lever, Shifting
7	353878	1	Flare Gasket
8	360160	2	Plate Grill Spring Support
9	358621	1	Fuel Line (Long)
10	317282	1	Connector, Carburetor to Elbow
11	353622	1	Fuel Line (Short)
12	402146	5	Screw, 10-32 x 1/2 Rd Hd Mach
13	113128	1	Tank Signal Unit
14	326114	1	Gasket, Tank
15	113459	1	Fuel Tank Assem
16	326404	1	Cap, Gas
17	312794	2	Plug Excludes Panel Light Holes
18	116472	1	Hood Assembly
19*	446190	28	Lockwasher, 1/4 Hvy
20*	443102	29	Nut, 1/4-20 Hex
21	342291	1	Closure, Radiator
22	336769	1	Upper Grill Panel Assem
23	121995	1	Grill, Screen Assem
24*	404016	27	Screw, 1/4-20 x 5/8 Truss Hd Mach
25	471851	1	Reducer, 1/4 to 1/8 NPT
26	162476	1	Valve, Fuel Line Shut Off
27	400294	4	Screw, 3/8-24 x 3/4 Hex Hd Cap
28	446142	9	Lockwasher, 3/8 Hvy
29	400190	4	Screw, 5/16-18 x 1-1/4 Hex Hd Cap
30	113106	1	Gear Drive Unit, Tachometer
31	158807	1	Cable, Tachometer
32	121990	1	Cowling, Structure Assem
33	446136	4	Lockwasher, 5/16 Hvy
34	400108	5	Screw, 1/4-28 x 3/4 Hex Hd Cap
35	447510	5	Lockwasher, 1/4 Ext Int Tooth
36	443102	5	Nut, 1/4-28 Hex
37			Regulator Assem (Ref. Only)
38	326773	2	Grommet Rubber
39	446118	11	Lockwasher #10
39A	446118	1	Lockwasher #10
40*	444312	8	Nut, 10-32 Hex
41	113116	1	Starter Solenoid Assembly

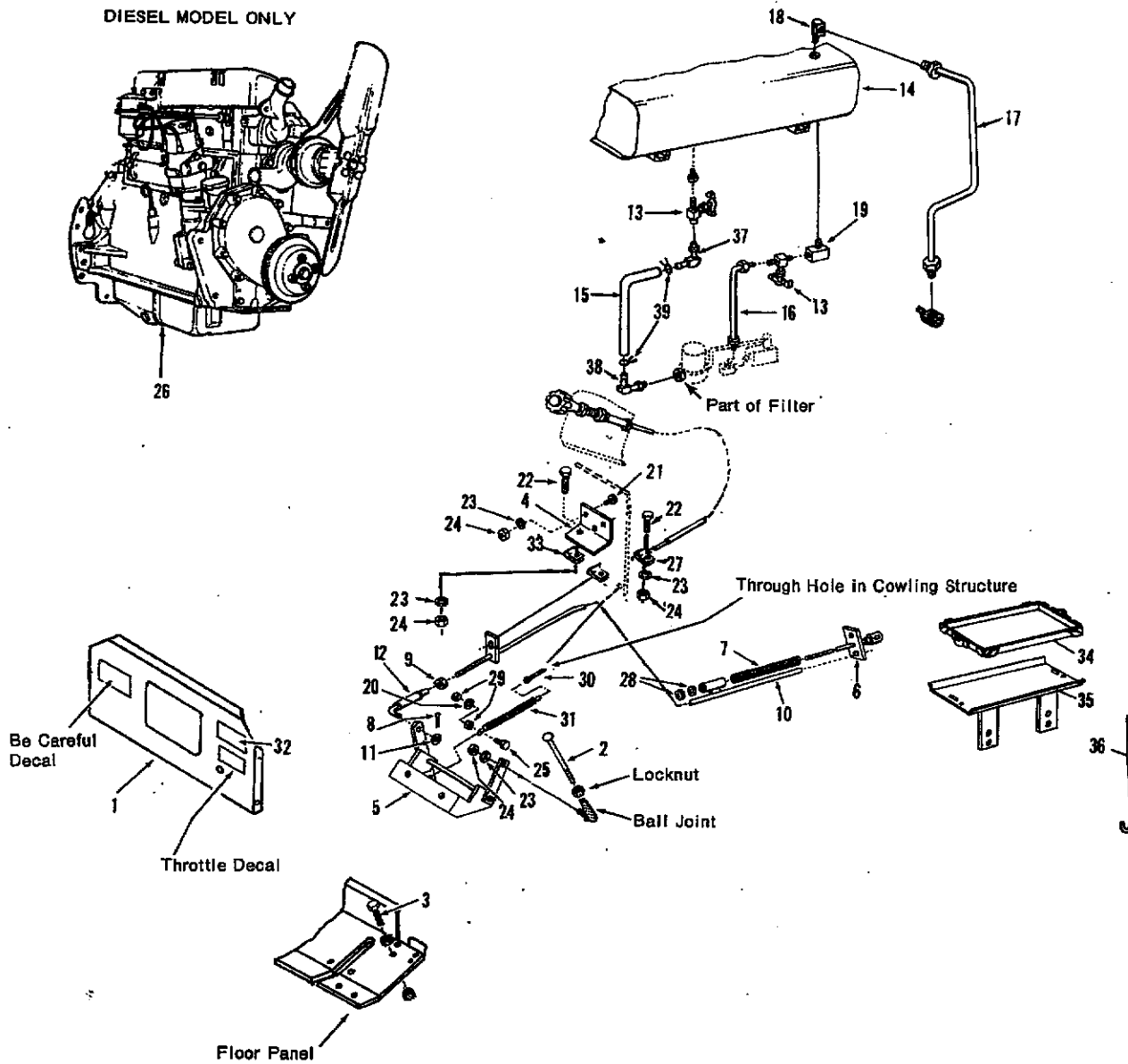
Ref. No.	Part No.	Quan.	Description
42	447012	2	Lockwasher, 5/16 Ext Tooth
43	443106	6	Nut, 5/16-18 Hex
44	326583	1	Rod, Accelerator
45	326109	1	Joint, SAE Type A Long Ball
46	458052	1	Lock Ring, Truarc
47	326393	1	Angle
48	404016	2	Screw, 1/4-20 x 5/8 Truss Hd Mach
49	126367	1	Accelerator Shaft Assem
50	326107	1	Bracket, Accelerator
51	453002	4	Washer, #10 flat
52	446180	2	Lockwasher, 1/4 Hvy
53	404060	1	Screw, 1/4-28 x 2-1/2 Truss Hd
54	443804	1	Nut, 1/4-28 Hex Jam
55	326111	1	Joint SAE Type G Ball
56	360274	1	Decal, Name G-10
57	344186	1	Pedal Accelerator
58	360847	2	Elbow, Fuel Line to Filter
59	351476	1	Fuel Filter
60	400192	1	Screw, 5/16-18 x 1-1/2 Hex Hd Cap
61	443106	4	Nut, 5/16-18 Hex
62	441672	1	Bolt, 5/16-18 x 2-1/2 Req Sp Neck Carr
63	359590	1	Spring Grill Latch
64	327702	4	Cushion, Fuel Tank Mounting
65	336943	2	Decal, Name
65A	344774	1	Decal, "Be Careful"
66	326476	1	Spring, Accelerator Return
67	480028	1	Pin, 1/8 x 1 Cotter
68	162160	1	Choke
69	319285	1	Gasket, Nipple to Carburetor
70	325173	1	Control, Throttle Governor
71	303962	1	Stud, Throttle Wire Swivel
72	402056	1	Screw, #8-32 x 3/8 Fill Hd Mach
73	455003	2	Washer, 3/16 Plain
74	162161	1	Throttle Control Assem
75	359616	1	Bracket, Cowling to Engine
76	400264	3	Screw, 3/8-16 x 1-1/4 Hex Hd Cap
77	453011	1	Washer, 2/8 SAE Flat
78	443110	3	Nut, 3/8-16 Hex
79	400348	2	Screw, 7/16-14 x 3 Hex Hd Cap
80	400258	2	Screw, 3/8-16 x 3/4 Hex Hd Cap
81	336942	1	Decal, Jacobsen
82	472804	4	Clamp, Fuel Line
83	360051	1	Decal, Parking Brake
84	360057	1	Decal, Throttle
85	351351	1	Decal, Ignition
86	336890	1	Bracket, Throttle Mtg
87	404066	2	Bolt, 5/16-18 x 3/4 Truss Hd
88	447214	2	Lockwasher, 5/16 Hvy Internal
89	443106	2	Nut, 5/16-18 Hex
90	443832	1	Nut, 3/4-16 Hex Jam
91	359618	1	Bracket, Cowling to Engine R.H.
92		1	Tube Assem, Oil Pressure Ford P.N. C1J2-18676A

* Two from quantity shown are for gas model only.

ILLUSTRATION 3

DIESEL

DIESEL MODEL ONLY

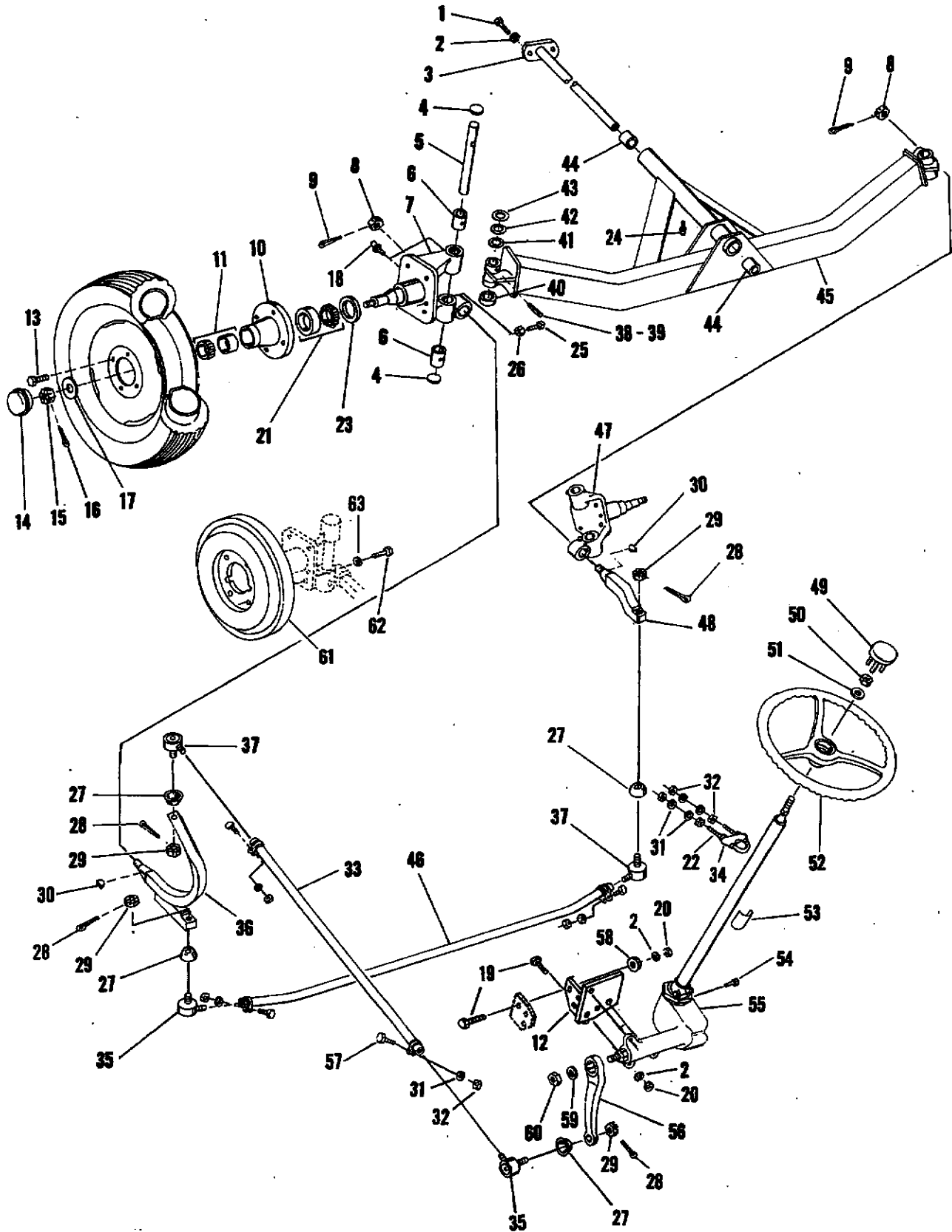


PARTS LIST-ILLUSTRATION 3

Ref. No.	Part No.	Quan.	Description
1	359962	1	Dash Panel
2	345690	1	Belt, Accel. Pedal
3	400194	1	Screw, 5/16-18 x 1-3/4 Hex Hd Cap
4	345674	1	Bracket, Throttle Cable
5	126627	1	Accelerator Bracket and Shaft Assem
6	155202	1	Accelerator Rod End Assem
7	345684	1	Spring, Accel. Rod Compression
8	460002	1	Pin, 1/16 x 1/2 Cotter
9	443804	1	Nut, 1/4-28 Hex Jam
10	130787	1	Rod Accelerator Assem
11	453023	1	Washer
12	311376	1	Rod End
13	327811	2	Valve Shut Off
14	113824	1	Fuel Tank Assembly
15	360833	1	Hose, Fuel (Fuel Tank to Fuel Inlet)
16	130103	1	Injector Return Line Assem
17	130891	1	Injector Overflow Tube Assem
18	327815	1	Fitting Elbow
19	311574	1	Fitting, Male Elbow
20	446124	1	Lockwasher #12
21	400103	2	Screw, 1/4-20 x 3/4 Hex Hd Cap
22	400104	3	Screw, 1/4-20 x 3/4 Hex Hd Cap
23	446130	5	Lockwasher, 1/4 Hvy
24	443102	5	Nut, 1/4-20 Hex
25	403492	1	Screw #12-24 x 3/4 Hex Hd Cap
26		1	Diesel Engine - Ford Model - 192-DF-6001-CF
27	303159	2	Clip Cable
28	444312	2	Nut, 10-32 Hex
29	444314	2	Nut, 12-24 Hex
30	460048	1	Pin, 3/16 x 1 Cotter
31	325166	1	Spring, Accelerator Return
32	353526	1	Decal, Operator Instructions
33	354081	1	Clip, Cable, Battery Cable
34	327533	1	Hold Down Battery
35	113821	1	Battery Carrier Assembly
36	327534	2	Bolt, Battery Hold Down
37	360838	1	Fitting, Hose (Valve to Hose)
38	360839	1	Fitting, Hose (Hose to Filter)
39	472801	2	Clamp, Hose (Fuel Tank to Fuel Filter)

ILLUSTRATION 4

FRONT AXLE AND STEERING LINKAGE



PARTS LIST-ILLUSTRATION 4

Ref. No.	Part No.	Quan	Description
1	400258	2	Screw, 3/8-16 x 3/4 Hex Hd Cap
2	446142	8	Lockwasher, 3/8 Hvy
3	113114	1	Front Axle Pivot Pin Assembly
4	316114	4	Plug, Steering Knuckle
5	316118	2	Pin, Steering Knuckle
6	316113	4	Bushing, Steering Knuckle
7	109365	1	L.H. Steering Knuckle Assembly
8	316111	2	Nut, Steering Arm Mounting
9	460032	2	Pin, 1/8 x 1-1/2 Cotter
10	203444	2	Hub
11	500534	2	Wheel Bearing Assembly Cup and Cone - Outer
12	126189	1	Steering Gear Mounting Bracket Assembly
13	313458	8	Wheel Bolt
14	314626	2	Hub Cap
15	445672	2	Nut, 5/8-18 Hex Castellated
16	460038	2	Pin, 5/32 x 1 Cotter
17	453020	2	Washer, 5/8 Plain
18	471208	4	Fitting, 1/8-27 NPT Grease
19	400264	6	Screw, 3/8-16 x 1-1/4 Hex Hd Cap
20	443110	6	Nut, 3/8-16 Hex
21	500535	2	Wheel Bearing Assembly Cup and Cone - Inner
22	342214	1	"U" Bolt
23	314627	2	Oil Seal
24	471224	1	Fitting, 1/8-27 x 67-1/2" Grease
25	412057	2	Screw, 3/8-16 x 1-1/2 Sq Hd Cup Point Set
26	443810	2	Nut, 3/8-16 Hex Jam
27	322843	4	Dust Cover
28	460028	4	Pin, 1/8 x 1 Cotter
29	445665	4	Nut, 1/2-20 Hex Slotted
30	463017	2	Key, 3/16 x 3/4 Woodruff
31	446136	10	Lockwasher, 5/16 Hvy
32	443103	10	Nut, 5/16-24 Hex

Ref. No.	Part No.	Quan	Description
33*	113115	1	Drag Link Assembly (Incl one each Ref. 28, 29, 35, 37; two each 27, 31, 32, 57)
34	342213	1	Saddle, "U" Bolt
35	153197	2	End Socket, L.H. (Incl Ref 27 and 29)
36	112947	1	L.H. Steering Knuckle Arm Assembly
37	153196	2	End Socket, R.H. (Incl Ref 29)
38	316115	AR	Pin, Knuckle Draw Key, Light
39	323756	AR	Pin, Knuckle Draw Key, Heavy
40	316117	2	Bearing, Knuckle Thrust
41	323760	AR	Shim, Heavy
42	323759	AR	Shim, Med
43	316118	AR	Shim, Thin
44	323725	2	Bushing, Axle Pivot
45	113112	1	Front Axle Assembly
46*	112948	1	Tie Rod Assembly (Incl one each Ref. 35, 37; two each 27, 28, 29 31, 32, 57)
47	109366	1	R.H. Steering Knuckle Assembly
48	331888	1	Arm, R.H. Steering Knuckle
49	112326	1	Horn Button Cap
50	443820	1	Nut, 1/2-20 Hex
51	453017	1	Washer, 1/2 SAE
52	112327	1	Steering Wheel
53	341660	1	Decal, Caution
54	400262	1	Screw, 3/8-16 x 1 Hex Hd Cap
55†	114022	1	Steering Gear Assembly (Includes Ref. Nos. 50, 51, 59 and 60)
56	327294	1	Arm, Steering Gear
57	400228	4	Screw
58	452008	2	Washer, Flat
59	446170	1	Lockwasher, 7/8 Med
60	443836	1	Nut, 7/8-14 Hex Jam
61	239070	2	Wheel Weights
62	400266	8	Screw, 3/8-16 x 1-1/2 Hex Hd Cap
63	446142	8	Lockwasher, 3/8 Heavy

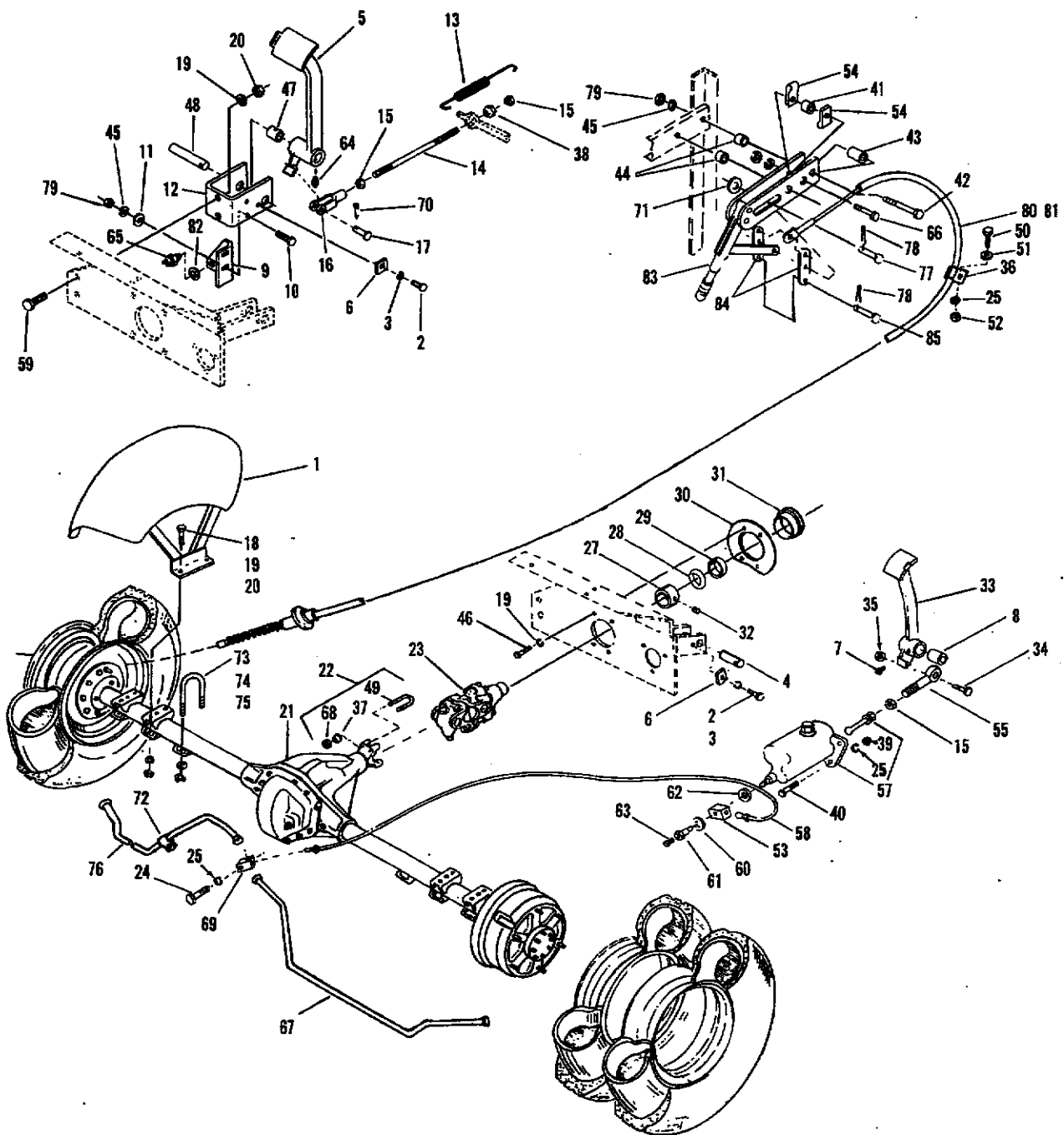
AR - As Required.

* - When removing end socket from rod, note if right or left hand thread and order by right or left hand number.

† - See Parts breakdown on Page 36.

ILLUSTRATION 5

REAR AXLE, CLUTCH AND BRAKE



PARTS LIST-ILLUSTRATION 5

Ref. No.	Part No.	Quan	Description
1	112945	1	Fender Assembly L.H.
	112946	1	Fender Assembly R.H. (Not Illust.)
2	400104	2	Screw, 1/4-20 x 1/2 Hex Hd Cap
3	446180	2	Lockwasher, 1/4 Hvy
4	328076	1	Shaft, Brake Pedal Mounting
5	161340	1	Clutch Pedal w/Bushing and Fitting (Ref. 47 and 64)
6	313263	2	Washer, Brake and Clutch Shaft
7	471208	1	Fitting, 1/8 x 27 NPT Grease
8	313912	1	Bushing, Brake Pedal
9	357782	1	Bracket, Neutral Start Switch
10	400190	2	Screw, 5/16-18 x 1-1/4 Hex Hd Cap
11	453009	2	Washer, 5/16 SAE Flat
12	336120	1	Bracket, Clutch Pedal Mtg.
13	319212	1	Spring, Clutch Return
14	357796	1	Rod, Clutch Linkage
15	443812	3	Nut, 3/8-24 Hex Jam
16	319151	1	Clevis, Clutch Linkage
17	461467	1	Pin, 3/8 x 1-3/8 Clevis
18	400406	4	Screw, 1/2-13 x 1-1/4 Hex Hd Cap
19	446154	10	Lockwasher, 1/2 Hvy
20	443118	6	Nut, 1/2-13 Hex
21	121861	1	Axle Assembly, Rear
22	112835	2	"U" Bolt Assembly w/Lockwasher and Nut
23	121783	1	Universal Joint
24	400264	1	Screw, 3/8-16 x 1-1/4 Hex Hd Cap
25	446142	6	Lockwasher, 3/8 Hvy
27	357756	1	Spacer, Transmission Shaft
28	459009	1	"O" Ring
29	319188	1	Seal
30	336101	1	Gasket
31	357781	1	Adaptor
32	428511	1	Screw, 5/16-18 x 5/16 Allen Hd Cup Pt Set
33	130898	1	Brake Pedal w/Bushing and Fitting (Ref 7 and 8)
34	400300	1	Screw, 3/8-24 x 1-1/4 Hex Hd Cap
35	444744	1	Nut, 3/8-24, Hex Gripco Lock
36	342216	5	Clamp
37	324220	4	Lockwasher
38	357795	1	Nut, Spherical Hex
39	443112	3	Nut, 3/8-24 Hex
40	400302	3	Screw, 3/8-24 x 1-1/2 Hex Hd Cap
41	545275	1	Spacer

Ref. No.	Part No.	Quan	Description
42	400196	2	Screw, 5/16-18 x 2 Hex Hd Cap
43	545237	2	Spacer
44	307183	2	Spacer
45	446136	5	Lockwasher, 5/16 Hvy
46	400406	4	Screw, 1/2-13 x 1-1/2 Hex Hd Cap
47	304392	2	Bushing, Clutch Pedal
48	357768	1	Shaft, Clutch Pedal Mounting
49	322819	2	Bolt, "U"
50	400226	2	Screw, 3/8-16 x 1 Hex Hd Cap
51	453011	2	Washer, 3/8 Std
52	443110	2	Nut, 3/8-16 Hex
53	319278	1	Fitting, Brake Line
54	545233	2	Clamp, Cable
55	357906	1	Rod End, SAE
57**	119292	1	Cylinder, Master Brake
58	112949	1	Brake Tube Assembly
59	400410	2	Screw, 1/2-13 x 1-3/4 Hex Hd Cap
60	319276	1	Gasket, Outlet
61	319279	1	Fitting, Outlet
62	319277	1	Gasket, Inner
63	472201	1	Plug, 1/4 Sq Hd Pipe
64	471219	1	Fitting, Grease
65	357780	1	Safety, Starting Switch Assembly
66	400194	1	Screw, 5/16-18 x 1-3/4 Hex Hd Cap
67	130231	1	Brake Tube Assembly, R.H. Rear
68	324146	4	Nut, Hex
69	327263	1	Fitting, Tee, Brake Line
70	460012	1	Pin, 3/32 x 5/8 Cotter
71	453008	1	Washer, 5/16 Flat
72	324887	1	Clip, Brake Tube Mounting L.H.
73	318123	2	"U" Bolt, Axle Mounting
74	446160	4	Lockwasher, 9/16 Hvy
75	443124	4	Nut, 9/16-18 Hex
76	130230	1	Brake Tube Assembly, L.H. Rear
77	545224	1	Pin, 5/16 x 1-15/32 Clevis
78	460004	2	Pin, 1/16 x 3/4 Cotter
79	443106	5	Nut, 5/16-18 Hex
80	121741	1	Cable Assembly, Brake L.H.
81	121742	1	Cable Assembly, Brake R.H. (Not Illus)
82	447221	1	Lockwasher, 9/16 Int Tooth
83	123094	1	Lever Assembly, Brake (Incl Ref. 41, 43, 54, 71, 77, 84 & 85)
84	545229	2	Link, Equalizer
85	545234	2	Pin, 5/16 x 25/32 Lg Clevis

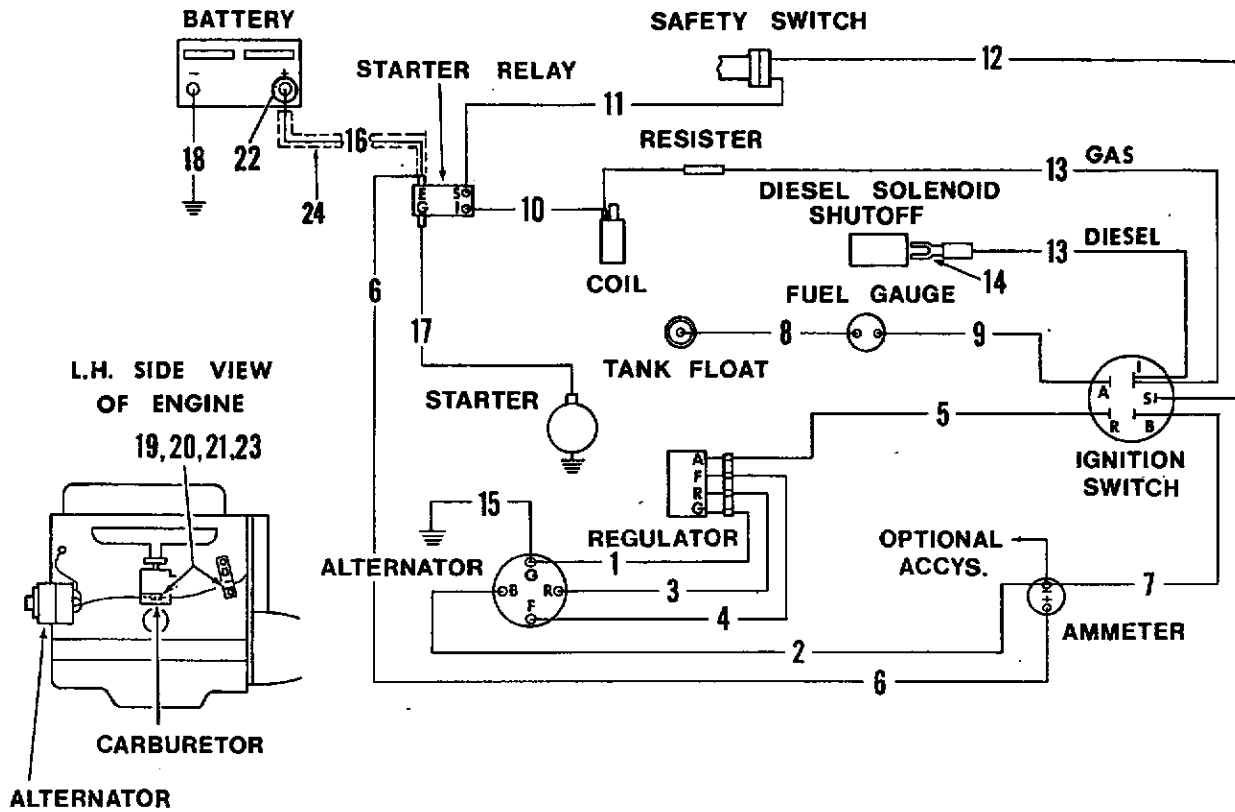
NOTE - All other Rear Axle Parts must be obtained from your GMC, Ford, or Dodge Truck Dealer.

† See Page 34 for breakdown.

** See Page 33 for breakdown.

ILLUSTRATION 6

WIRING DIAGRAM



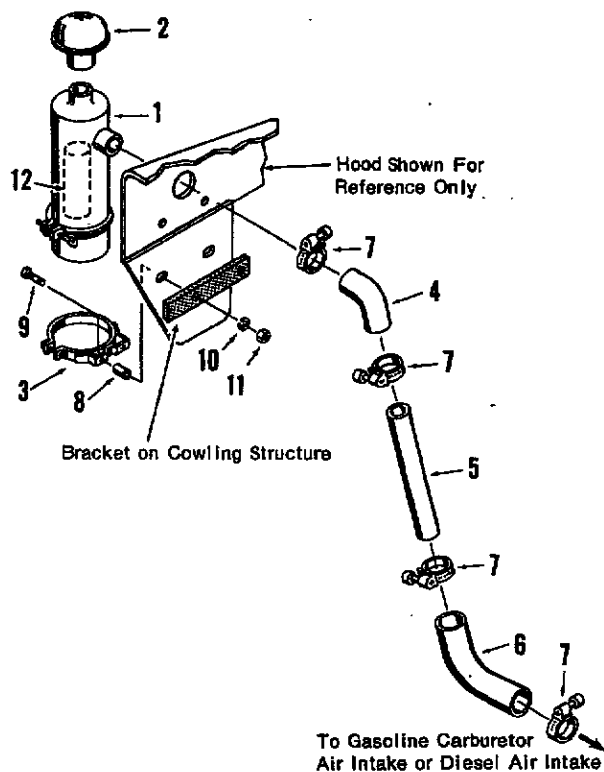
PARTS LIST

Ref. No.	Part No.	Quan.	Color	Description
	116418	1		Wiring Harness Assembly (Includes Ref. Nos. 1-13 & 15)
1		1	Black	Alternator Ground to Regulator Ground
2		1	Lt. Blue	Alternator Battery Terminal to R.H. Terminal of Ammeter
3		1	Red	Alternator Regulator Terminal to Regulator
4		1	Dk. Green	Alternator "F" Terminal to Regulator "F" Terminal
5		1	Yellow	Regulator to Regulator Terminal of Ignition Switch
6		1	Yellow	Battery Post of Starter Relay to L.H. Terminal of Ammeter
7		1	Red	Battery Terminal of Ignition Switch to R.H. Terminal of Ammeter
8		1	Green	Tank Float to Top Terminal of Fuel Gauge
9		1	Dk. Blue	Accessory Terminal of Ignition Switch to Bottom Terminal of Fuel Gauge
10*		1	Lt. Blue	Ignition Terminal of Starter Relay to Battery Terminal of Coil
11		1	Black	Starter Relay to Safety Switch
12		1	Brown	"S" Terminal of Ignition Switch to Safety Switch
13		1	Green	Ignition Switch to Coil Resistor (Gas)
14**	473158	1		Ignition Switch to Diesel Solenoid Shutoff (Diesel) Terminal
15		1	Black	Engine Ground from Alternator
16	113117	1	Red	Cable Assembly. Positive Terminal of Battery to Battery Side of Solenoid
17	113118	1	Red	Cable Assembly Starter Terminal of Solenoid to Starter
18	113119	1	Black	Cable Assembly Negative Terminal of Battery to Ground
19	354081	2		Clip, Wire Harness Mounting
20	400104	2		Screw, 1/4-20 x 1/2
21	446130	2		Lockwasher, 1/4 Hvy
22	359111	1		Cap, Terminal
23	359430	1		Bracket, Carb. Throttle Control
24	360137	1		Cover, Battery Cable

* Parts Used Only On Tractors Equipped With Gasoline Engines.

** Parts Used Only On Tractors Equipped With Diesel Engines.

ILLUSTRATION 7

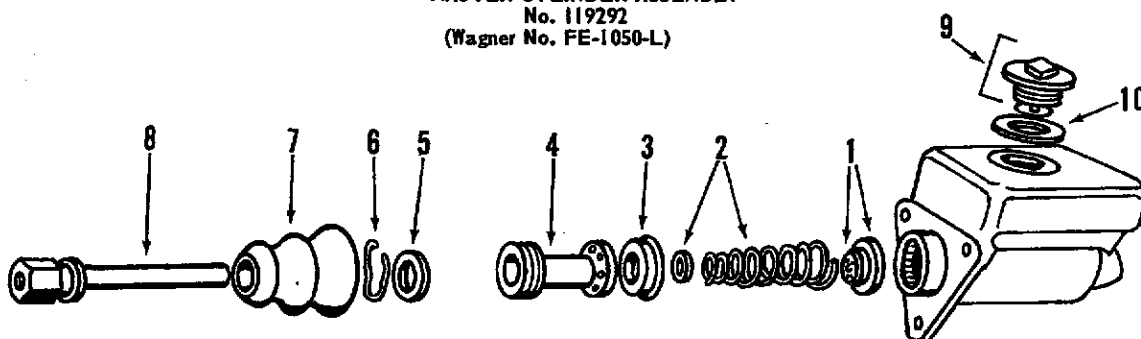


PARTS LIST

Ref. No.	Part No.	Quan	Description
1	116276	1	Air Cleaner Assembly
2	129901	1	Cap Assembly - Air Inlet
3	129902	2	Mounting Band Assembly
4	352585	1	Hose, Air Cleaner, Upper
5	352586	1	Tube, Air Cleaner
6	352587	1	Hose, Air Cleaner, Lower
7	328799	4	Clamp, Air Cleaner Hose
8	352588	4	Spacer, Air Cleaner Mounting
9	400118	4	Screw, 1/4-20 x 1-3/4 Hex Hd. Cap
10	448130	4	Lockwasher, 1/4 Hvy.
11	443102	4	Nut, 1/4-20 Hex
12	549593	1	Element

ILLUSTRATION 8

MASTER CYLINDER ASSEMBLY No. 119292 (Wagner No. FE-1050-L)



PARTS LIST

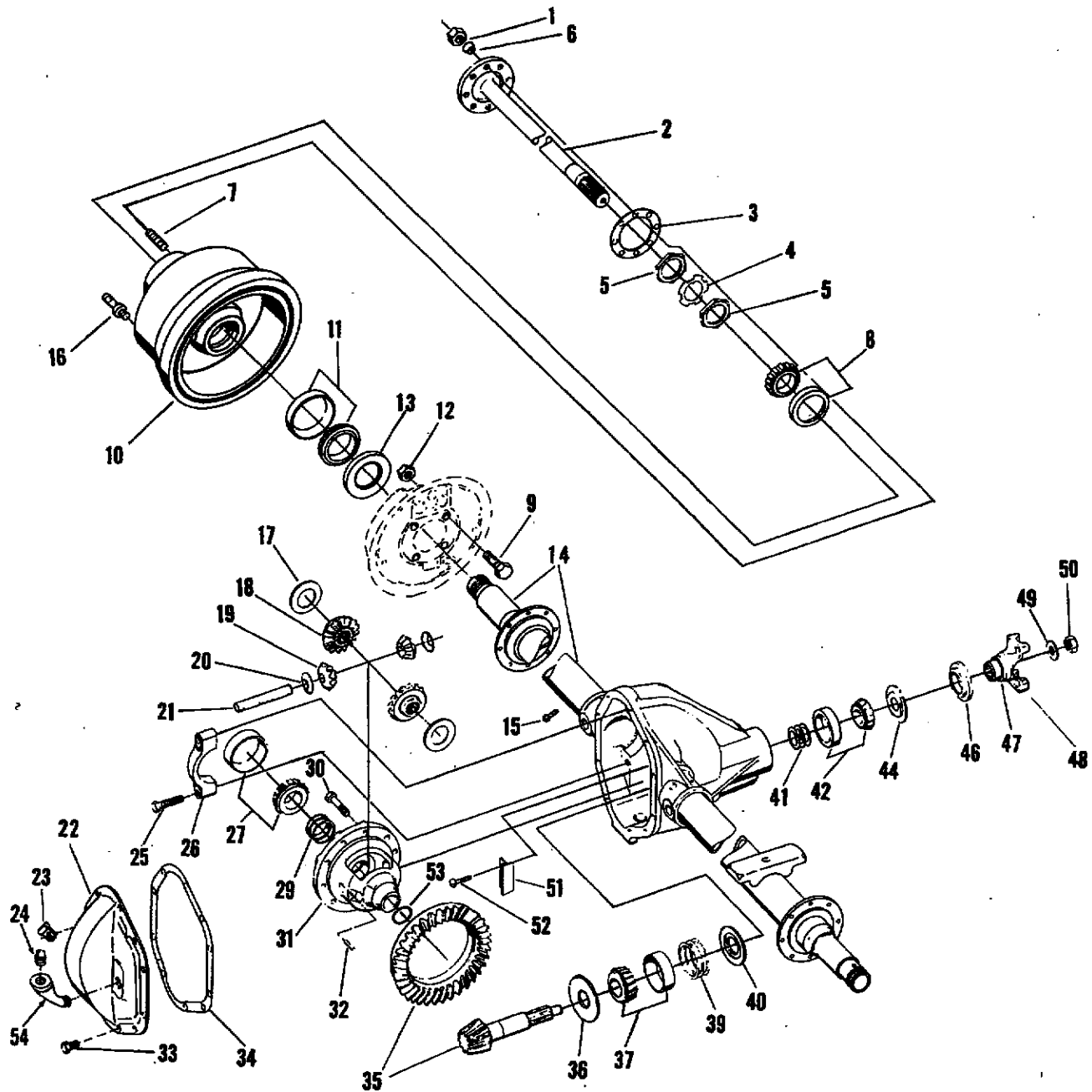
Ref. No.	Part No.	Quan.	Description
1	FC-14423	1	Valve & Valve Seat
2	FC-5908	1	Spring & Spring Retainer
3	FD-4504	1	Cup
4	FC-5910	1	Piston Assembly
5	FC-5916	1	Piston Stop Plate
6	FC-5917	1	Lockwire

Ref. No.	Part No.	Quan.	Description
7	FC-5921	1	Boot
8	FC-5918	1	Push Rod Assembly
9	FC-18299	1	Filler Cap Assembly
10	FC-5922	1	Gasket
11	FC-5375	1	Kit, Repair Master Cyl (Incl Ref 1, 3, 4, 6 and 7)

NOTE: Order parts from Wagner Electric Corporation, 6400 Plymouth Avenue, St. Louis, Mo. 63133

ILLUSTRATION 9

DRIVE AXLE ASSEMBLY



PARTS LIST-ILLUSTRATION 9

Ref. No.	Jacobsen Part No.	Dodge Truck Part No.	Ford Truck Part No.	GMC Truck Part No.	International Harvester Truck Part No.	Quan.	Description
1	357726					16	Nut, Lock
2	548652					2	Shaft, Axle
3	353851					2	Gasket, Drive Axle
4	341930					2	Lockwasher, Bearing Nut
5	341929					4	Nut, Bearing
6	353852					16	Washer, Cone
7	353850					16	Stud, Axle Mounting
8	501125					2	Cup & Cone Roller Bearing Assem (Outer)
9	353855					8	Bolt, Brake Mounting
10	159965					2	Hub Assembly (Incl Ref Nos. 7, 8, 11, & 16)
11	501124					2	Cup & Cone Roller Bearing Assem (Inner)
12	357726					8	Nut, Brake Mounting
13	335879					2	Seal, Oil
14*						1	Gear Housing Assembly
15	545737	1791563	B9C4022-A		110891H	1	Breather
16	353677					12	Stud, Rim Mounting
17	590107					2	Washer, Thrust
18	545738	2953824				2	Gear, Bevel - Side
19	545741					2	Gear, Bevel - Mate
20	590108					2	Washer, Thrust
21	545742	1922276	B5D4211-A	2358883	91269BR1	1	Shaft, Pinion Mate
22	545759					1	Cover, Gear Housing
23	545734			2403696		1	Clip, Brake Line
24	545760		353051		103896	1	Plug, Filler - Non Magnetic
25	590110		355765-S	180183		4	Screw, Diff Brg Cap
26**						2	Cap, Diff Brg
27	500646					2	Set, Cup & Cone Diff Brg
29	545752	1795152	B5D4067-A	2358873	912717R1	AR	Shim, Diff Adj 0.003 Thk
	545753	1795153	B5D4067-B	2358874	912718R1	AR	Shim, Diff Adj 0.005 Thk
	545754		B5D4067-C	2358875	912719R1	AR	Shim, Diff Adj 0.010 Thk
	545755		B5D4067-D	2358876	912720R1	AR	Shim, Diff Adj 0.030 Thk
30	590106	1795170	354846-58	2358877	912704R1	12	Screw, Drive Gear Mtg
31	545735	1922355	B5D4205-A	2358880	912729R1	1	Case, Differential
32	590109					1	Pin, Shaft Locking
33	545739	2952474				10	Screw, Cover Mtg
34	546654					1	Gasket, Gear Hsg Cover
# 35	502455					1	Ring Gear & Pinion Assem 7.17 to 1
36	545507					1	Oil Slinger, Pinion
37	500647					1	Set, Cup & Cone Inner Pinion Brg
39	545745	1922314	B5D4109-A	2358870	912705R1	AR	Shim, Inner Pinion Brg Adj 0.003 Thk
	545746	1922315	B5D4109-B	2358871	912706R1	AR	Shim, Inner Pinion Brg Adj 0.005 Thk
	545747		B5D4109-C	2358872	912707R1	AR	Shim, Inner Pinion Brg Adj 0.010 Thk
40	545763		C4TZ4670-A	2442778		1	Baffle, Oil
41	545748	1795185	B5D4672-A	2353010	912708R1	AR	Shim, Outer Pinion Brg Adj 0.003 Thk
	545749	1795186	B5D4672-B	2353011	912709R1	AR	Shim, Outer Pinion Brg Adj 0.005 Thk
	545750		B5D4672-C	2353012	912710R1	AR	Shim, Outer Pinion Brg Adj 0.010 Thk
	545751		B5D4672-D	2353013	912711R1	AR	Shim, Outer Pinion Brg Adj 0.030 Thk
42	500648					1	Set, Cup & Cone Outer Pinion Bearing
44	545743	1791193	B5D4670-A	2353014	912712R1	1	Oil Slinger, Pinion
46	545756	1795192	B5TZ4676-A	2353016	912713R91	1	Oil Seal, Pinion
47	545762		B9774859-A		293054C1	1	Shield, Dust
48	549392		B5D4851-A	5P2679	293053C1	1	Yoke, Univ. Joint
49	590111	1795175	351577-58	2353015	912716R1	1	Washer, Yoke
50	590112	1795173	354845-58	2353021	912728R1	1	Nut, Yoke Mtg
51	545757					1	Baffle, Oil
52	590113					2	Screw, Drive
53	545813					1	"O" Ring
54	471733					1	Elbow, 3/4 Street

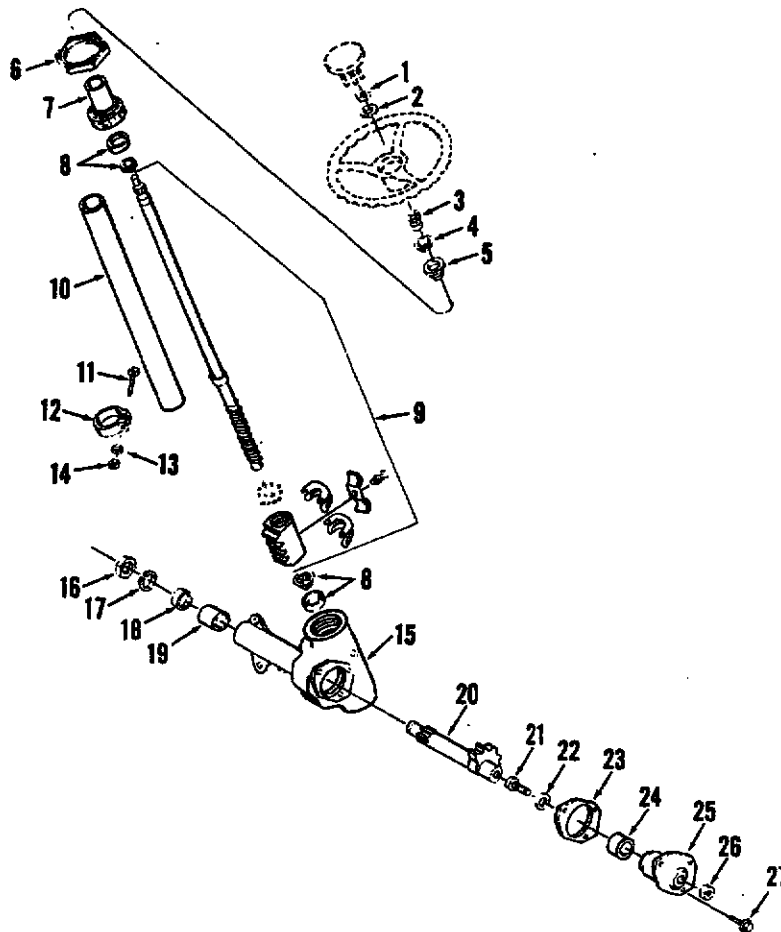
* Not Serviced.

** Not Serviced Separately.

Includes Ref. No. 30.

ILLUSTRATION 10

STEERING GEAR ASSEMBLY



PARTS LIST

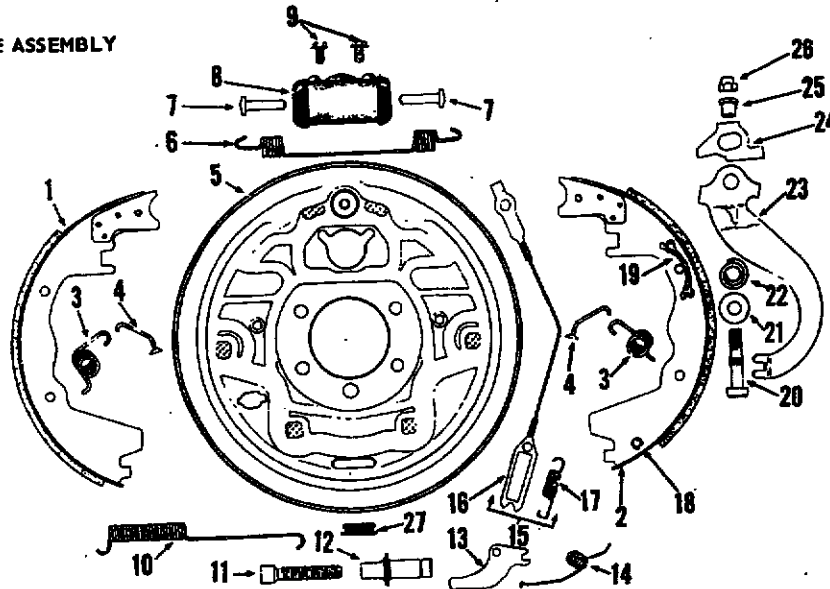
Ref. No.	Jacobsen Part No.	Saginaw Part No.	Quan.	Description
1	443820	114496	1	Nut, 1/2-20 Hex Jam
2	453017	265079	1	Washer, 1/2 Flat
3	545820	264832	1	Spring, Upper Bearing
4	545821	264831	1	Seat, Upper Bearing Spring
5	500686	5691182	1	Bearing Assembly
6	545827	5666699	1	Nut, Adjuster Lock
7	500699	5672103	1	Adjuster Assembly (Incl Ref No. 8)
8	500685		2	Bearing & Race Assem
9	500193	7813831	1	Ball, Nut & Steering Assembly
10	545242	5692454	1	Jacket, Steering Column
11	400234	181347	1	Bolt, 5/16-24 x 2 Hex
12	545817	262545	1	Clamp, Jacket
13	446134	103320	1	Lockwasher, 5/16 Med
14	443108	103025	1	Nut, 5/16-24 Hex

Ref. No.	Jacobsen Part No.	Saginaw Part No.	Quan.	Description
15	500700	5677646	1	Steering Gear Hsg Assem (Incl Ref No. 8 & 19)
16	443836	5667628	1	Nut, 7/8-14 Hex Jam
17	446170	56-7702	1	Lockwasher, 7/8 Med
18	545822	7801626	1	Seal, Grease
19	545815	266316	2	Bushing, Pitman Shaft
20	545823	7812878	1	Pitman Shaft & Gear
21	545816	7802482	1	Lash, Adjuster
22	545819	605142	1	Shim Kit, Lash Adjuster
23	545818	5666734	1	Gasket, Side Cover
24		7819678	1	Bushing, Cover
25	500687	7802483	1	Cover Assembly
26	443816	114495	1	Nut, 7/16-20 Hex Jam
27		7807009	3	Bolt, 3/8-16 x 3/4 Hex Washer Hd

Saginaw parts can be serviced under Saginaw Part Nos by GMC and Chevrolet dealers.

ILLUSTRATION 11

SERVICE BRAKE ASSEMBLY



PARTS LIST

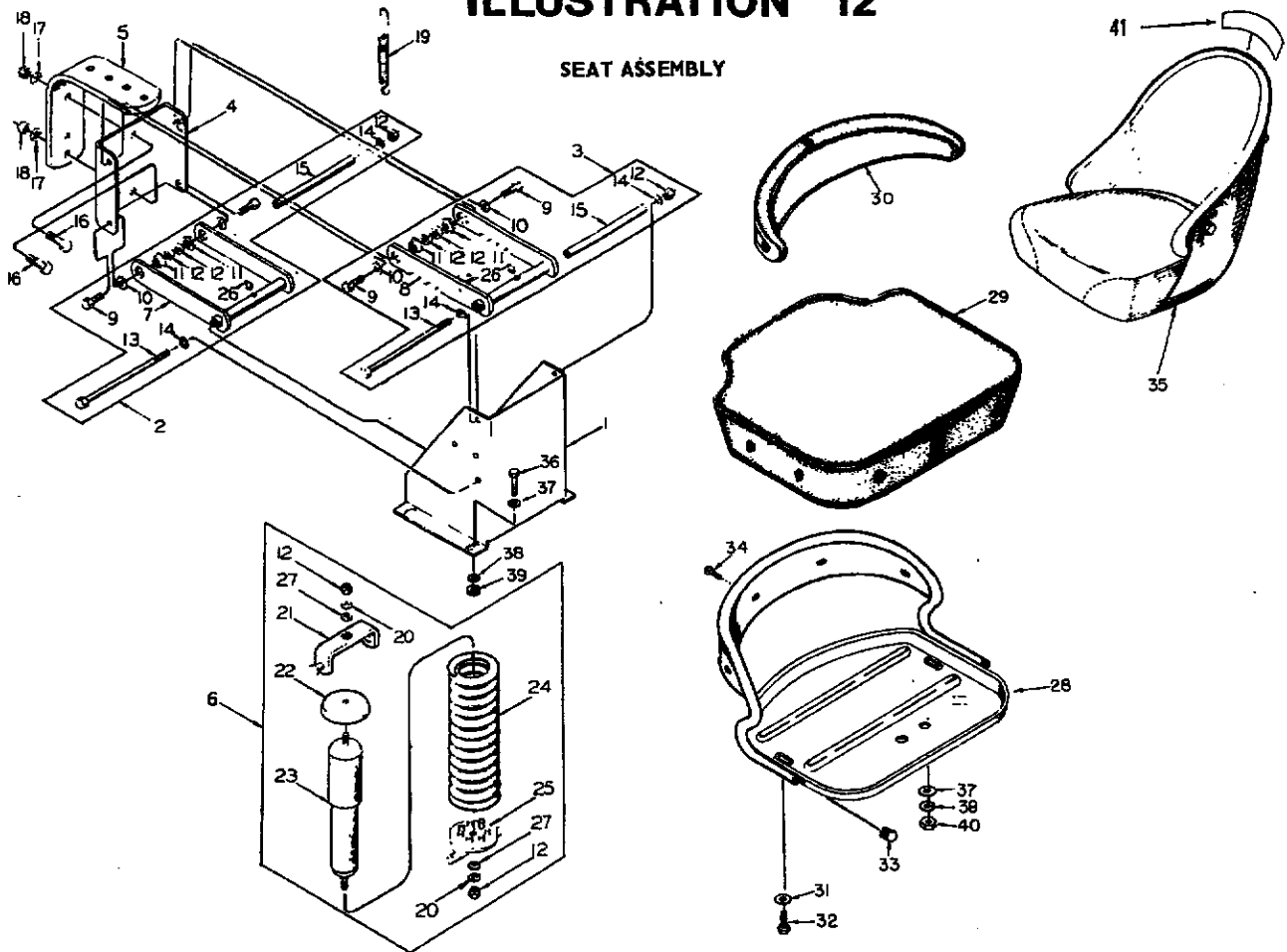
Ref. No.	Jacobsen Part No.	Bendix Part No.	Bendix Service Part No.	R.H. Quan.	L.H. Quan.	Description
	116401	3204533		1	1	Brake Assembly Complete
1	116400	3204534		1	1	Shoe & Lining Assembly Primary
		3204535		1	1	Shoe & Lining Assembly Secondary
2		3204536		1	1	Shoe & Lining Assembly Secondary
		3204539		1	1	Shoe & Lining Assembly Secondary
		3204540		1	1	Shoe & Lining Assembly Secondary
3	549061	317925		2	2	Spring, Shoe Hold Down
4	546655	318498	318510	2	2	Pin, Shoe Hold Down
5		324912		1	1	Backing, Plate & Bushing Assembly
		324913		1	1	Backing, Plate & Bushing Assembly
6	549062	322485		1	1	Spring, Shoe to Shoe
7	546656	315832	3203380	2	2	Connecting Link, Wheel Cylinder
8	502525	2229490		1	1	Wheel Cylinder, 1-1/16 Dia.
		2229491		1	1	Wheel Cylinder, 1-1/16 Dia.
9	501330	310333		2	2	Screw & Lockwasher Assembly
10	549063	322486		1	1	Spring, Shoe to Shoe
11	549064	322681		1	1	Pivot Screw
		322682		1	1	Pivot Screw
12	549066	322677		1	1	Adjusting Screw
	549067	322678		1	1	Adjusting Screw
13	546657	322695	322696	1	1	Lever, Auto Adjusting
14	549068	322689		1	1	Spring, Auto Adjusting
	549069	322690		1	1	Spring, Auto Adjusting
15	502399	322546		1	1	Lever Cable & Cam Assem Complete (Incl. Ref. 16 & 17)
	502400	322547		1	1	Lever Cable & Cam Assem Complete (Incl. Ref. 16 & 17)
16		317910		1	1	Cable & Fitting Assembly
17		320371		1	1	Spring, Over Travel
18	546658	318222	318223	1	1	Pin, Adjusting Lever
19	546659	319039	319040	1	1	Cable, Guide
20	549071	320802		1	1	Bolt, Anchor
21	546660	320803	320804	1	1	Washer, Parking Brake
22	549070	317939		1	1	Spring, Anti-Rattle - Cam & Lever
23	546661	322548	322550	1	1	Lever, Parking Brake
		322549	322551	1	1	Lever, Parking Brake
24	546663	317935	318063	1	1	Cam Plate, Parking Brake Lever
	546664	317936	318064	1	1	Cam Plate, Parking Brake Lever
25	546665	320799	320800	1	1	Bushing, Anchor Post
26	590244	321628		1	1	Nut, 1/4-28 Parking Brake Lever
27		318380		1	1	Cover, Adjusting Hole

SPECIAL SERVICE ITEMS

Jacobsen Part No.	Bendix Part No.	Quan.	Description
501329	3204543	1	Package, Lined Shoe Assem (Axle Set)
501330	310333	1	Screw & Lockwasher Assembly
501331	307734	1	Wheel Cylinder Repair Kit (One Cyl.)

ILLUSTRATION 12

SEAT ASSEMBLY



PARTS LIST

Ref. No.	Part No.	Quan.	Description
1	4900-11	1	Support Weld Assembly
2	1800-133	1	Plain Arm Complete Assembly
3	4900-16	1	Notched Arm Complete Assembly
4	4911C	1	U-Post
*5	341998	1	Mounting Bar
6	4900-18C	1	Shock and Spring Assembly
7	1800-122	1	Plain Arm Weld Assembly
8	4900-15C	1	Notched Weld Assembly
9	430-P	4	Capscrew, 3/8-24 x 1-1/8, UNF
10	446	4	External Lockwasher 3/8
11	480	4	Ball Bearing
12	482	8	Lock Nut Gripco 3/8-24 UNF
13	411A	2	Hex. Hd. Bolt, 3/8-24 x 7-9/16 UNF
14	630	4	Internal Lockwasher 3/8
15	432	2	Tube
16	1714	2	Capscrew, 1/2-12 x 1-1/2 UNC
17	629	2	Lockwasher Kantlink 1/2
18	494	2	Hex. Nut, 1/2-12 UNF
19	4109	1	Notch Arm Tension Spring
20	635	2	Washer Carburized, .402 ID x .640 OD x 1/32
21	1800-127	1	Clevis Weld Assembly
22	418	1	Cup
23	710	1	Shock Absorber
24	701	1	Spring

Ref. No.	Part No.	Quan.	Description
25	467	1	Spring Rocker
26	643	2	Grease Zerk
27	636	2	Rubber Washer, 3/8 ID x 3/4 OD x 3/32
28	5000-31	1	Seat Frame
29	549429	1	Cushion
30	549428	1	Back Pad
31	KA-6145	2	Flat Washer 5/16
32	KA-7271	2	Capscrew, 5/16-18 x 1 UNC
33	5411	2	Tube Plug
34	5073	4	Oval Head Bolt 1/4-20 x 1/2 UNC
*35	116405	1	Bucket Seat (optional)
*36	400406	4	Screw, 1/2-13 x 1-1/4, Hex. Hd. Cap
*37	452012	4	Washer 1/2 Std.
*38	446154	4	Lockwasher 1/2 Hvy.
*39	443118	4	Nut, 1/2 - 13, Hex.
*40	443120	1	Nut, 1/2 - 20, Hex.
41	338940	1	Decal, Name

NOTE: Order items marked with an asterisk (*) from Jacobsen Mfg. Co.
Order all other items from Knoedler Mfg. Co., Streator, Ill.

ALWAYS GIVE SERIAL NUMBER WHEN ORDERING PARTS

INSTRUCTIONS AND PARTS LISTS FOR G-10 ACCESSORIES

HYDRAULIC POWER STEERING ACCESSORY

Product No. 78039

The Power Steering Accessory is designed to reduce the effort required to steer the tractor. This accessory is especially helpful if the tractor is equipped with front wheel weights or if the tires are loaded with calcium chloride solution. If the tractor comes from the factory with the power steering installed the installation instructions below can be disregarded. While very little maintenance is required the maintenance is important and should not be overlooked.

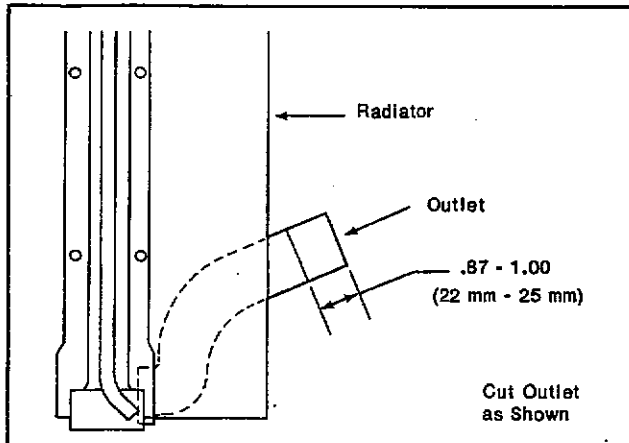


Figure 16

INSTALLATION INSTRUCTIONS

To install the Hydraulic Power Steering Accessory, see Illustration B for reference letters and proceed as follows:

- Jack up the front of the tractor so both front tires are off the ground.
- Loosen the generator and generator drive belt by unscrewing the bolt (Illustration 13).
- Remove the standard timing pulley (Generator Drive), the drive belt and the four (4) pulley mounting bolts.
- Install the new (2 groove) pulley with the standard pulley mounting bolts removed in Instruction No. 3.
- Reinstall the generator drive belt into the inner groove of the pulley and readjust the generator.
- Drain the radiator of all its contents. (The contents may be kept for future use or discarded.)
- Remove the standard radiator hose, cut radiator outlet as shown in Figure 16, and install the new pre-formed hose. Refill radiator.
- Remove the standard gas tank support bracket mounting bolt (Ref. 17). Attach the pump and reservoir mounting bracket to the gas tank support bracket and engine block with the mounting bolt (Ref. 17).
- Attach the pump and reservoir to the radiator connection part mounting bracket. Insert bolt through ear on water connection outlet and through the "Y" bracket and pump casting. Secure with nut.
- Assemble the pump drive belt into the outer groove of the new engine drive pulley and onto the pump drive pulley.
- Assemble the eye bolt, turnbuckle, and hook bolt assembly to the gas tank front support bracket as shown by hooking the hook bolt into the gas tank support bracket.
- Bolt the eye bolt to the arm on the pump casting with a bolt, lock washer and nut as shown and adjust the belt tension.
- Assemble the hoses (Ref. 22 & 23) to the pump and reservoir as shown. Ref. 23 is a low pressure return line hose, while Ref. 22 is a high pressure pump to valve hose.
- Thread the hoses from the pump and reservoir over the engine valve cover and thru the gas tank from support bracket.
- Remove the tie rod from the L.H. steering knuckle arm from the steering axle knuckle.
- Assemble the new L.H. steering knuckle arm (Ref. 4) to the steering axle knuckle with the hex slotted nut removed from the standard arm and new cotter.
- Remove the rear engine support bracket mounting bolts (Ref. 2) and assemble the cylinder mounting bracket (Ref. 1) to the frame with new screws (Ref. 2-5/8-11 x 2") old lockwashers, and nuts.
- Assemble the ball joint (Ref. 13) to the rod end of the cylinder (Ref. 10) and lock the joint securely onto the rod with the clamping bolt furnished (Ref. 6).
- Assemble the cylinder to the mounting bracket (Ref. 1) and the steering arm (Ref. 4) as shown in Illustration 13.
- Remove the standard drag link assembly (Ref. 3) from the L.H. steering knuckle arm and steering gear arm.
- Assemble the steering valve (Ref. 5) to the new drag link (Ref. 3) and adjust the assembly to the same length as the standard drag link. It is very important to have the new assembly the same length as the standard drag link in order to obtain the identical steering action within the steering gear. Lock the assembly securely with the screw, lockwasher and nut (Ref. 6).
- Assemble the steering valve and drag link assembly to the steering knuckle arm (Ref. 4) and steering gear arm.
- Assemble the protection hose (Ref. 25) onto the pump and reservoir hoses (Ref. 22 and 23) and assemble the ends of hoses (Ref. 22 and 23) to the valve.
- Assemble the valve to ram hoses to the valve and ram.

NOTE

- The hoses must be threaded in the same way over the axle and so on to obtain the routing which offers the least possibility of the hoses being snagged by foreign objects.
- Tape the pump and reservoir hoses (Ref. 22 and 23) inside of protection hose (Ref. 25) to the generator adjusting arm.
 - Fill the hydraulic steering pump and reservoir with oil (See Lubrication).
 - Start tractor and actuate steering.
 - Check all hoses and other hydraulic members for leaks.
 - Recheck pump reservoir and refill if required.

LUBRICATION

Ref.	Name	Interval	Lubricant	Remarks
RV	Reservoir	40 Hrs.	**	Fill to Within 1/2" (13mm) of Top Edge of Reservoir
Q	Rod End	40 Hrs.	* (1)	
S	Ram	40 Hrs.	* (1)	
T	Drag Link	40 Hrs.	* (1)	
U	Valve	40 Hrs.	* (1)	

* Grease Fitting - Use chassis grease in a grease gun. Number in parenthesis () indicates number of fittings.

** Good grade of maximum severity sequence tested motor oil, such as SAE 10W for ambient temperatures below 100 degrees F. (38° C), SAE 20 for ambient temperatures above 100 degrees F. (38° C) or automatic transmissions fluid Type A for full temperature range.

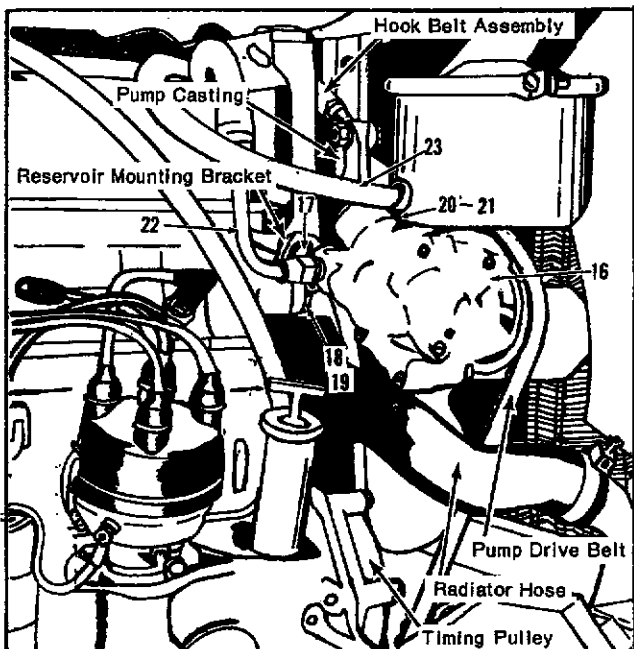
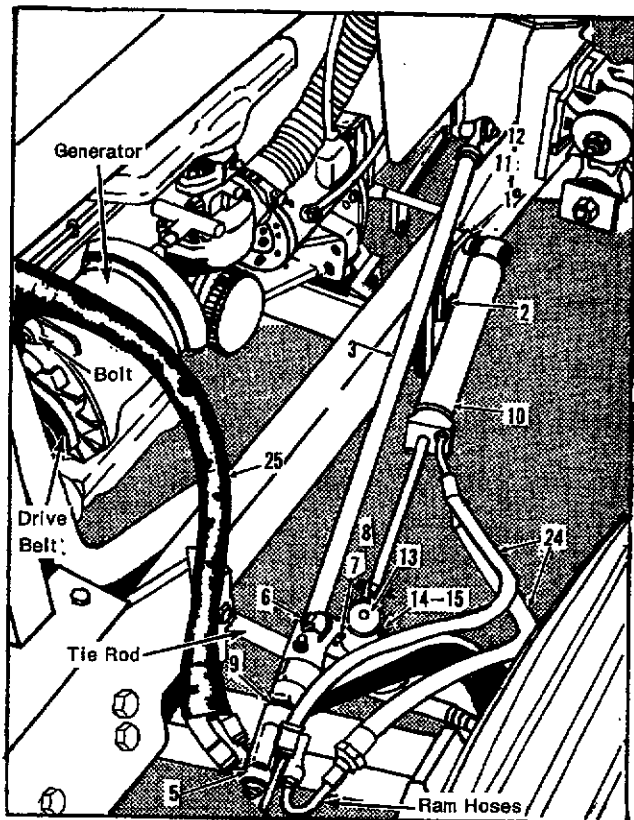
NOTE: Remove all dirt, dust, etc. from grease fittings and reservoir before lubrication and excess grease and oil after lubricating.

ILLUSTRATION 13

ADJUSTMENTS

HYDRAULIC STEERING PUMP - DRIVE BELT ADJUSTMENT

To adjust the pump drive belt, proceed as follows:



1. Loosen jam nut from turnbuckle.

2. Adjust belt tension to 1/2" (13 mm) deflection by turning the turnbuckle clockwise to tighten the belt or counterclockwise to loosen the turnbuckle.

3. With turnbuckle adjusted to obtain the correct belt tension, tighten the jam nut to lock the turnbuckle.

PARTS LIST

POWER STEERING ACCESSORY NO. 78039

Ref. No.	Part No.	Quan.	Description
1	161362	1	Cylinder Mounting Plate Assem.
2	400618	2	Screw, 5/8-11 x 2 Hex Hd Cap
3	126086	1	Drag Link Assembly
4	120425	1	L.H. Steering Knuckle Arm Assem.
5	*153232	1	Valve and Adapter Assembly (Saginaw Part No. 5691108)
6	400196	1	Screw, 5/16-18 x 2 Hex Hd Cap
7	446186	1	Lockwasher, 5/16 Hvy
8	443106	1	Nut, 5/16-18, Hex
9	453018	1	Washer, 9/16 Standard
10	**153233	1	Booster Cylinder Assembly (Saginaw Part No. 5692098)
11	445665	1	Nut, 1/2-20, Slotted
12	460016	1	Pin, 3/32 x 1, Cotter
13	153234	1	Ball Joint Assembly
14	445665	1	Nut, 1/2-20, Slotted
15	460016	1	Pin, 3/32 x 1, Cotter
16	#153235	1	Power Steering Pump Package (Ford No. B-43-9)
17	400264	1	Screw, 3/8-16 x 1-1/4, Hex Hd Cap
18	446142	1	Lockwasher, 3/8 Hvy
19	400306	1	Screw, 3/8-24 x 2, Hex Hd Cap
20	461464	1	Pin, 3/8 Clevis
21	460014	1	Pin, 3/32 x 3/4 Cotter
22	126087	1	Hose - H.P. - Pump to Valve
23	153236	1	Hose - L.P. - Return - Valve to Pump
24	126088	2	Hose - H.P. - Valve to Booster Ram
25	341953	1	Hose - Protection

* The valve can be serviced locally by Chevrolet dealers.

** The cylinder can be serviced locally by the following dealers:

Oliver Tractor Dealers-Part No. 106-342 ASA
International Harvester Tractor Dealers-Part No. 594567R91

New Holland Implement Dealers-Part No. 126593

The power steering pump package can be serviced locally by Ford Industrial Tractor Dealers - The package consists of the following items:

Ford Part No.	Quan.	Description
C3NN 3A691B	1	Power Steering Pump
CONN 3C631B	1	Bracket
CONN 3C632A	1	Turnbuckle
CONN 3B572A	1	Rod, R. H.
33800-S8	1	Nut
CONN 3B572B	1	Rod, L. H.
CONN 6351A	1	Pulley
C6JZ-8620B	1	Belt
372586-S8	1	Fitting
313674	1	Pressure Bolt
87032-S94	1	"O" Ring
CONN B994-A	1	Seal Ring
376859-S	1	Clamp
313151	1	Radiator Hose

3 POINT LIFT ATTACHMENT 78063

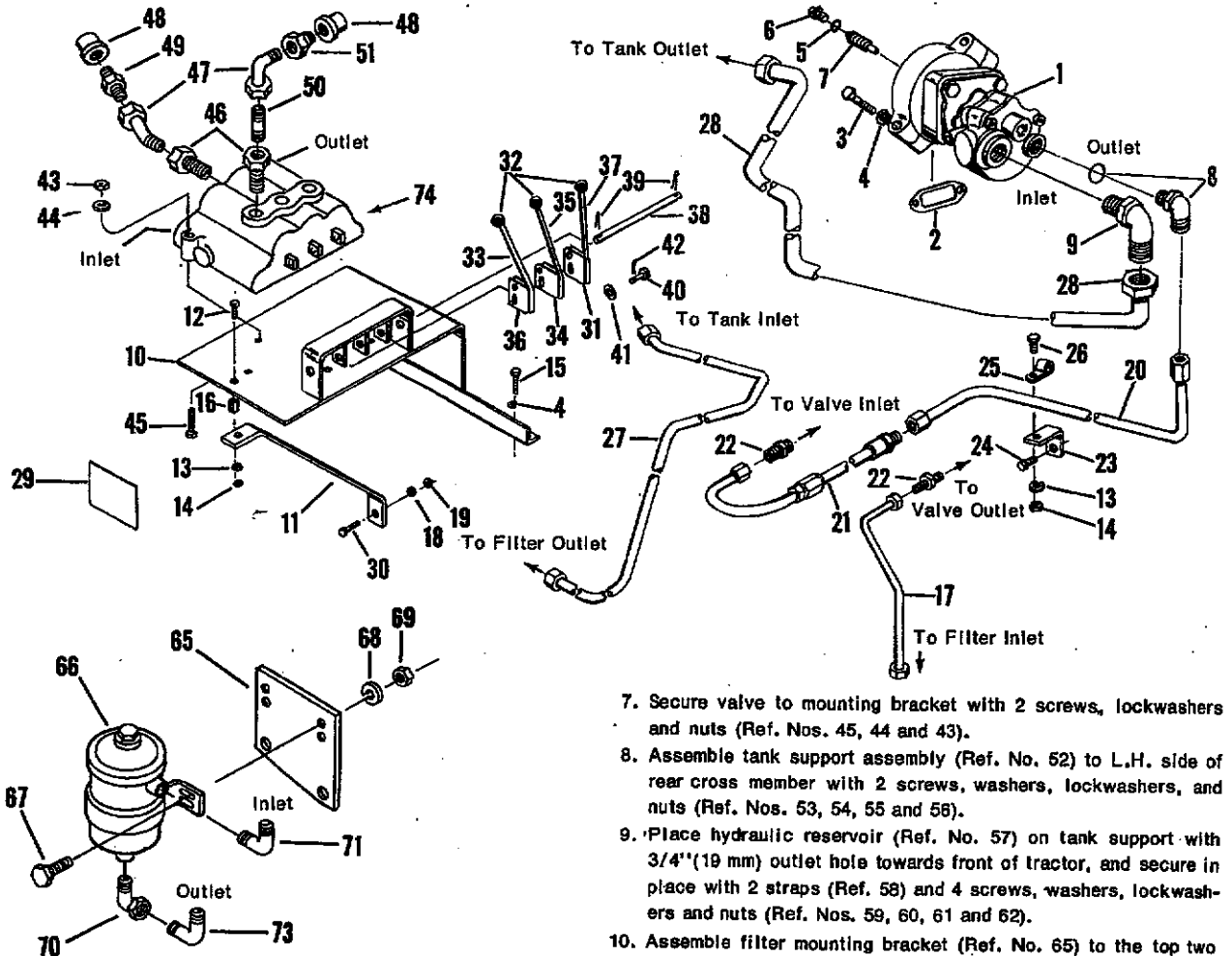
(INCLUDES HYDRAULIC PUMP AND 3 POINT LIFT ACCESSORIES)

HYDRAULIC PUMP PRODUCT NO. 78129

SET-UP INSTRUCTIONS

Refer to Illustration 14 for reference numbers below unless otherwise stated:

1. Remove the gear drive unit - tachometer (Ref. No. 30, Illust. 2) from the tractor and install the hydraulic pump (Ref. No. 1) in its place.
2. Assemble the valve mounting bracket (Ref. No. 10) to the two R.H. holes in the Seat Mounting Plate (Ref. No. 6, Illust. 1 - See A) with 2 screws, and lockwashers (Ref. Nos. 15 and 4). Discard the old hardware.
3. Assemble valve brace (Ref. No. 11) to the top center hole in the R.H. side of rear cross member assembly (Ref. No. 44, Illust. 1 - See B) with screw, lockwasher and nut (Ref. Nos. 30, 18 and 19).
4. Assemble brace to bracket with screw, spacer, lockwasher and nut (Ref. Nos. 12, 16, 13 and 14).
5. Place control lever assemblies (Ref. Nos. 31, 34 and 36) over small brackets on valve mounting bracket, line up the top holes in each, slide lever pivot pin (Ref. No. 38) through the holes, and secure on each end with cotter pins (Ref. No. 39).
6. Place valve on mounting bracket, slide end of valve spools into control levers and secure in place with clevis pin, washer and cotter pins (Ref. Nos. 40, 41 and 42).



7. Secure valve to mounting bracket with 2 screws, lockwashers and nuts (Ref. Nos. 45, 44 and 43).
8. Assemble tank support assembly (Ref. No. 52) to L.H. side of rear cross member with 2 screws, washers, lockwashers, and nuts (Ref. Nos. 53, 54, 55 and 58).
9. Place hydraulic reservoir (Ref. No. 57) on tank support with 3/4" (19 mm) outlet hole towards front of tractor, and secure in place with 2 straps (Ref. 58) and 4 screws, washers, lockwashers and nuts (Ref. Nos. 59, 60, 61 and 62).
10. Assemble filter mounting bracket (Ref. No. 65) to the top two holes in rear R.H. side of rear cross member (See C, Illust. 1).

11. Assemble filter (Ref. No. 66) to mounting bracket with 4 screws, lockwashers and nuts (Ref. Nos. 67, 68 and 69).
12. Insert elbow (Ref. No. 8) in the outlet port and elbow (Ref. No. 9) in the inlet port of the hydraulic pump.
13. Insert 2 connectors (Ref. No. 22) in the valve inlet and outlet ports.
14. Insert elbow (Ref. No. 63) in the inlet port and elbow (Ref. No. 64) in the outlet port of the hydraulic reservoir.
15. Insert elbow (Ref. No. 71) in the inlet port and elbow (Ref. Nos. 71 and 73) in the outlet port of the filter.
16. Assemble hydraulic tube (Ref. No. 17) from filter inlet to valve outlet port.
17. Assemble hydraulic tube (Ref. No. 27) from filter outlet to hydraulic reservoir inlet port.
18. Assemble hydraulic tube (Ref. No. 28) from hydraulic reservoir

- outlet port to hydraulic pump inlet port.
19. Assemble hydraulic tube (Ref. No. 20) and hose (Ref. No. 21) from hydraulic pump outlet port to valve inlet port.
20. Assemble clip mounting bracket (Ref. No. 23) to hole in R.H. side panel (Ref. No. 25, Illust. 1 - See D) with screw (Ref. No. 24).
21. Slide clip (Ref. No. 25) over tube (Ref. No. 20) and secure clip to mounting bracket with screw, lockwasher, and nut (Ref. Nos. 26, 13 and 14).

IMPORTANT

Hydraulic fittings (Ref. Nos. 46 through 51) are furnished and should be used when an accessory is used with the hydraulic lift. There are only enough fittings for 2 of the ports.

HYDRAULIC PUMP ACCESSORY 78129

Ref.No.	Part No.	Quan	Description
1 #	119261	1	Hydraulic Pump Assembly
2	319981	1	Gasket
3	319991	2	Screw
4	446142	4	Lockwasher, 3/8 Hvy
5	345662	1	Gasket, Tachometer Drive Shaft
6	345663	1	Bushing, Tachometer Drive Shaft
7	155014	1	Adapter Assembly
8 £	155305	1	Elbow, 90° - 3/4 x 3/4
9	155304	1	Elbow, 90° - 1-1/16 x 1-1/16
10	129589	1	Valve Bracket Assembly
11	326637	1	Brace, Valve Bracket
12	400190	1	Screw, 5/16-18 x 1-1/4 Hex Hd Cap
13	446136	2	Lockwasher, 5/16 Hvy
14	443106	2	Nut, 5/16-18 Hex
15	400270	2	Screw, 3/8-16 x 2 Hex Hd
16	326212	1	Spacer, Valve Bracket
17	129590	1	Hydraulic Tube Assembly
18	446166	1	Lockwasher, 5/8 Hvy
19	443126	1	Nut, 5/8-11 Hex
20	121794	1	Hydraulic Tube Assembly
21	126625	1	Hydraulic Hose Assembly
22	351108	2	Connector, 3/4 x 3/4
23	345665	1	Bracket, Clip Mounting
24	400188	1	Screw, 5/16-18 x 1 Hex Hd
25	345666	1	Clamp
26	400184	1	Screw, 5/16-18 x 3/4 Hex Hd
27	329238	1	Tube, Hydraulic
28	121795	1	Hydraulic Tube Assembly
29	341488	1	Decal, Instruction
30	400648	1	Screw, 5/8-11 x 2-1/4 Hex Hd Cap
31	158766	1	Inner Lever Assembly Complete
32	326731	3	Knob, Lever
33	129591	1	Lever Assembly, Inner
34	158767	1	Center Lever Assembly, Complete
35	129592	1	Lever Assembly, Center
36	158768	1	Outer Lever Assembly Complete
37	129593	1	Lever Assembly, Outer

Ref.No.	Part No.	Quan	Description
38	351406	1	Pin, Lever Pivot
39	460026	2	Pin, 1/8 x 3/4 Cotter
40	351112	3	Pin, 3/16 Clevis
41	453002	3	Washer, #10 SAE Flat
42	460008	3	Pin, 5/64 x 3/4 Cotter
43	443102	2	Nut, 1/4-20 Hex
44	446130	2	Lockwasher, 1/4 Hvy
45	400120	2	Screw, 1/4-20 x 2 Hex Hd Cap
46	351406	4	Adapter, "O" Ring Boss
47	472421	4	Street Ell 1/4 x 45°
48	472440	4	Pipe Cap, 3/8
49	358921	2	Nipple, 3/8 x 1/4 Reducer
50	324944	2	Nipple, 1/4 NPT x 1-1/2 Lg
51	471858	2	Bushing, Reducer 1/4 x 3/8 NPT
52	126601	1	Tank Support Assembly
53	400612	2	Screw, 5/8-11 x 1-1/2 Hex Hd Cap
54	453020	2	Washer, 5/8 SAE Flat
55	446166	2	Lockwasher, 5/8 Hvy
56	443126	2	Nut, 5/8-11 Hex
57	126469	1	Reservoir, Hydraulic
58	345502	2	Strap
59	400280	4	Screw, 3/8-16 x 7/8 Hex Hd Cap
60	453011	AR	Washer, 3/8 SAE Flat
61	446140	4	Lockwasher, 3/8 Hvy
62	443110	4	Nut, 3/8-16 Hex
63	345670	1	Elbow, 90°
64	345669	1	Elbow, 45°
65	345505	1	Plate, Filter Mounting
*66	154559	1	Oil Filter Assembly
67	400184	4	Screw, 5/16-18 x 3/4 Hex Hd Cap
68	446136	4	Lockwasher, 5/16 Hvy
69	443106	4	Nut, 5/16-18 Hex
70	471729	1	Ell, 3/8 x 90° Street
71	351123	1	Elbow, Male 90°
72	500585	1	Cap with Dipstick
73	345667	1	Elbow, 45° - 3/8 x 3/4
**74	158960	1	Valve Assembly Complete

* For Oil Filter Replacement Cartridge Use FRAM #CH - 6PL

For Parts List, see Illustration 16.

** See Illustration 15 for parts breakdown.

£ For service of O-ring, order Part No. 459029.

The hydraulic valve is designed to supply an easily operated hydraulic valve for any hydraulically operated accessory.

The hydraulic valve mounts easily to the valve bracket (Ref. No. 10) with screws, lockwashers and nuts (Ref. Nos. 43, 44 and 45). The hydraulic valve is operated by working the valve handle forward and backward.

When the valve lever is moved backward the rear valve port is opened and when moved forward the front valve port is opened. The normal method of connecting hydraulic accessories is to have the implement lifted with a backward movement of the valve lever and lowered with a forward movement.

NOTE

Hydraulic repair work should always be done in a very clean place as dirt in the hydraulic system will clog the fittings and stop the hydraulic system from working its best or at all.

LUBRICATION

HYDRAULIC FLUID LEVEL

Check hydraulic fluid level daily with oil at 60°- 90°F. (16°- 32°C). Check fluid level by disengaging power to accessory. Oil level in reservoir should be between marks on dipstick. Tank capacity is approximately 4-1/2 gallons (17 l.). If additional fluid is required, add a good grade of maximum severity tested motor oil such as SAE 10-W for ambient temperatures below 100°F. (38°C) or SAE 20 for temperatures above 100°F. (38°C). Don't mix different brands of oil.

NOTE

When connecting various hydraulic accessories to the G-10 tractor, some oil may be lost to the implement. Always recheck oil level when connecting or disconnecting optional hydraulic equipment. Frequent checks must be made on the oil level in the hydraulic reservoir. Should the pump run short of oil, immediate and permanent damage would result.

Hydraulic hose and tube lines should be inspected every week to check for loose connections, kinks, worn or cut hoses, etc. Be sure tubes and hoses do not contact other frame parts which could cause abrasive wear. Always replace worn hose or tube assemblies before operating machine.



WARNING - DANGER

To avoid possible serious bodily injury, place all controls in neutral and shut off engine before inspecting hydraulic lines or hoses. Never run hands across tubes, hoses or fittings to check for leaks.

HYDRAULIC OIL FILTER

IMPORTANT

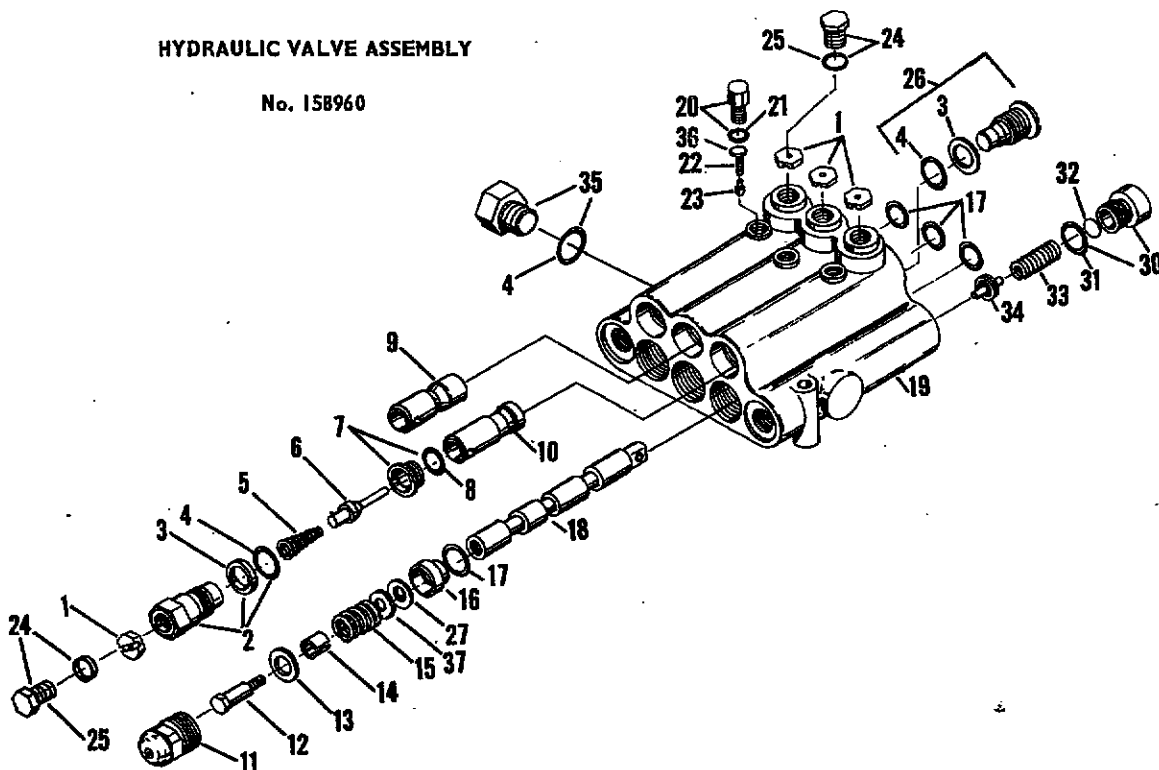
Oil filter element must be changed after the first 25 hours of operation.

To prevent damage to the hydraulic system the hydraulic oil filter should be changed every 200 operating hours.

ILLUSTRATION 15

HYDRAULIC VALVE ASSEMBLY

No. 158960



PARTS LIST-ILLUSTRATION 15

Ref. No.	Jacobsen Part No.	Cessna Part No.	Quan.	Description
1	351284	16087-845	6	Orifice Plate (.078 Dia.)
2	500745	31900-310	3	Plug Assem, Port Adapter
3	*		6	Backup Washer, 3/32 x 5/8 I.D.
4	*		7	"O" Ring, 3/32 x 5/8 I.D.
5	545914	31900-551	3	Spring, Lockout
6	*		3	Poppet Assembly
7	500746	31900-301	3	Seat Assembly
8	*		3	"O" Ring, 1/16 x 1/2 I.D.
9	545915	31900-384	1	Plunger, Lockout
10	545916	31900-381	2	Plunger, Lockout
11	500747	31900-391	3	Cap Assembly
12	545917	31900-304	3	Screw, Spool
13	545918	16048-75	3	Washer
14	545919	31900-305	3	Spacer
15	545920	31900-550	3	Spring, Spool Centering
16	545921	31900-377	3	Bushing
17	*		6	"O" Ring, 3/32 x 1/2 I.D.
18	N.S.		3	Spool
19	N.S.		1	Body
20	500748	31900-380	3	Plug Assem, Plunger Detent
21	*		3	"O" Ring, 1/16 x 7/32 I.D.
22	545922	17016-5	3	Spring, Detent
23	545923	31900-378	3	Plunger, Detent
24	351122	16103-106	6	Hex Plug Assembly
25	*		6	"O" Ring, 5/64 x 15/32 I.D.
26	500750	31900-386	3	Plug Assembly
27	546122	16048-253	AR***	Washer, .670 O.D.
30	500752	16227-021	1	Plug Assem, Relief Valve
31	*		1	"O" Ring, 3/32 x 9/16 I.D.
32	545925	16048-22	AR	Shim (.015 Thk)
	545926	16048-35	AR	Shim (.010 Thk)
	545927	16048-65	AR	Shim (.035 Thk)
33	545928	32015-23	1	Spring, Relief Valve (Yellow)
34	545929	32015-36	1	Poppet, Relief Valve
35	351127		1	Plug Assem, Pressure Bypass
36	546112	16179-20	AR**	Disc, Plain (.150 x .015)
37	546123	16048-254	3	Washer, .670 O.D.

* These items serviced in seal repair kit #500744.

** A maximum of 3 per plug assembly.

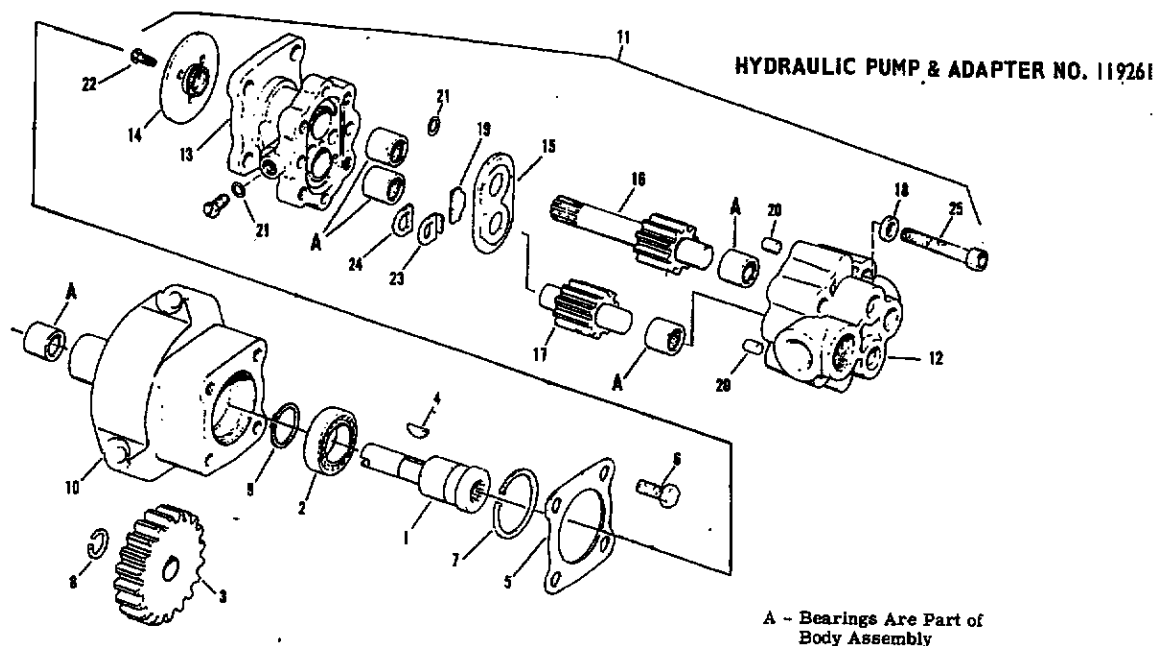
*** One optional in each spool assembly.

N. S. Not Serviced.

AR As Required.

NOTE: Order all Cessna part numbers from your authorized Cessna Valve Dealer.

ILLUSTRATION 16



PARTS LIST

Ref. No.	JMC Part No.	Quan.	Description
1	546102	1	Shaft, Drive Gear
2	546100	1	Bearing, Ball
3	546101	1	Gear, Drive
4	463005	1	Key, 1/8 x 5/8 Woodruff
5	545995	1	Gasket
6	400184	4	Screw, 5/16-18 x 3/4 Hex Hd Cap
7	458111	1	Ring, Retaining (Truarc #N 5000-165)
8	590155	1	Ring, Retaining (Truarc #5103-56)
9	458017	1	Ring, Retaining (Truarc #5100-98)
10	500879	1	Adapter Housing Assembly
11	500785	1	Pump Assembly, Complete
12	500880	1	Cover Assembly
13	500881	1	Body Assembly
14	500842	1	Seal Plate Assembly
15	500843	1	Wearplate & Seal Assembly
16	500882	1	Drive Gear Assembly (Incl. Shaft)
17	500883	1	Idler Gear Assembly (Incl. Shaft)
18	590144	4	Washer
19	546039	1	Block, Anti-Extrusion
20	590145	2	Pin, Dowel
21	590146	1	"O" Ring
22	590147	3	Screw, #8-32 x 3/8 Rec. Bnd Hd Thd Cutting
23	546040	1	Insert, Bridging
24	546041	1	Insert, Gasket
25	590156	4	Screw, 5/16-18 x 2 Hex Socket Hd Cap

3 POINT LIFT

The 3 Point Lift Accessory is designed for use on the G-10 Tractor with 3 Point Hitch mowing implements such as the Jacobsen 3 Point Hitch Frame Arrangement and other 3 Point Hitch attachments where fast travel between jobs is desired.

When 3 Point Hitch Attachments are used, employment of the Weight Box Accessory is suggested. Also, the front steering tires may be filled with a calcium chloride and water mixture, and front steering wheel weights added to obtain better steering when the implement is being carried at high speeds.

When the 3 Point Hitch Frame Arrangement with 3 Fairway or Blitzer mowers is being attached, it is suggested that the front steering tires be filled with a calcium chloride and water mixture, and front steering wheel weights be added to obtain better steering when the implement is being carried at high speeds.

The 3 Point Lift is designed for easy lock-up and quick hydraulic lifting and lowering of the implement.

To attach a 3 Point Hitch Implement to the G-10 Tractor, 3 Point Lift, proceed as follows:

Refer to Illustration 17 for reference numbers.

1. Back the tractor up to the implement to be attached.
2. Lower the Draft Links (Ref. No. 40) to the approximate area of the hook up pins located on the implement.

IMPORTANT

Sway Bar (Ref. No. 39) must be in "free swing" position - pin (Ref. No. 49) in inner hole of draft link (Ref. No. 40). The Draft Links (Ref. No. 40) can be adjusted by:
a. Pushing the valve lever forward to lower or pulling backward to raise.

b. Cranking the leveling crank (Ref. No. 30) counter-clockwise to lower or clockwise to raise.

3. Attach the Draft Links to the Implement and lock them in place with the Snap Ring Lock Pins (Ref. No. 50).

4. Attach the upper Link Eye (Ref. No. 56) to the Implement and lock it in place with Snap Ring Lock Pin (Ref. No. 50).

The upper link eye can be adjusted by screwing the turnbuckle (Ref. No. 54) clockwise to lengthen or counterclockwise to shorten.

5. Adjust the implement to the required operating position using the leveling cranks (Ref. No. 30) and the turnbuckle (Ref. No. 54).

6. Lock the turnbuckle in place on the upper link eye with the lock nut (Ref. No. 55).

7. Adjust the hydraulic valve control rod (Ref. No. 4) by placing the collars (Ref. No. 5) in the desired positions for maximum raising and lowering of the implement. Lock the collars in place on the rod with the thumb screws (Ref. No. 9).

8. Side sway bars (Ref. No. 39) can be locked if required, by locking pin (Ref. No. 49) in outer hole of drag link (Ref. No. 40).

OPERATING INSTRUCTIONS

When the implement mounted on the 3 Point Lift is in operation, the ram should be in the float position. The "float position" is obtained by lowering the implement (push the valve lever forward) to the approximate desired height and release the valve lever slowly.

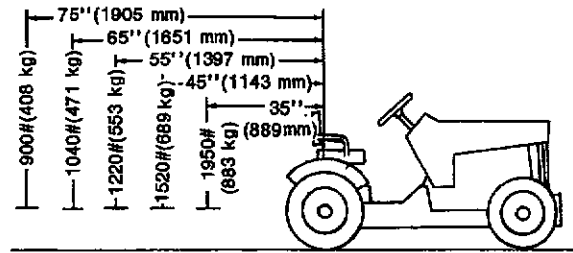
MAINTENANCE

1. All grease fittings (Ref. Nos. 29 and 56) must be lubricated every 40 hours with semi-fluid chassis lubrication grease.
2. All moving parts must be oiled every 40 hours with SAE 20 weight oil.
3. All mounting hardware and hydraulic fittings must be checked for tightness to prevent excessive wear and oil pressure leakage.

LOAD CARRYING CAPACITY

When using implements mounted on the 3 Point Lift it is important to know the weight of the implement and the position of the implement in relation to the rear axle of the tractor (or the horizontal center of gravity).

If the location of the horizontal center of gravity is not known, the information may be obtained from the manufacturer of the implement.



The above diagram is provided as a guide only. It shows the MAXIMUM implement weight at the given distances.

IMPORTANT

The weights and distances shown apply only when the front tires are loaded with calcium chloride solution and front wheel weights are used.

If the load at the horizontal center of gravity of the implement is 300 lbs. (136 kg) less than the figures shown in the diagram, there is no need for calcium chloride solution or front wheel weights.

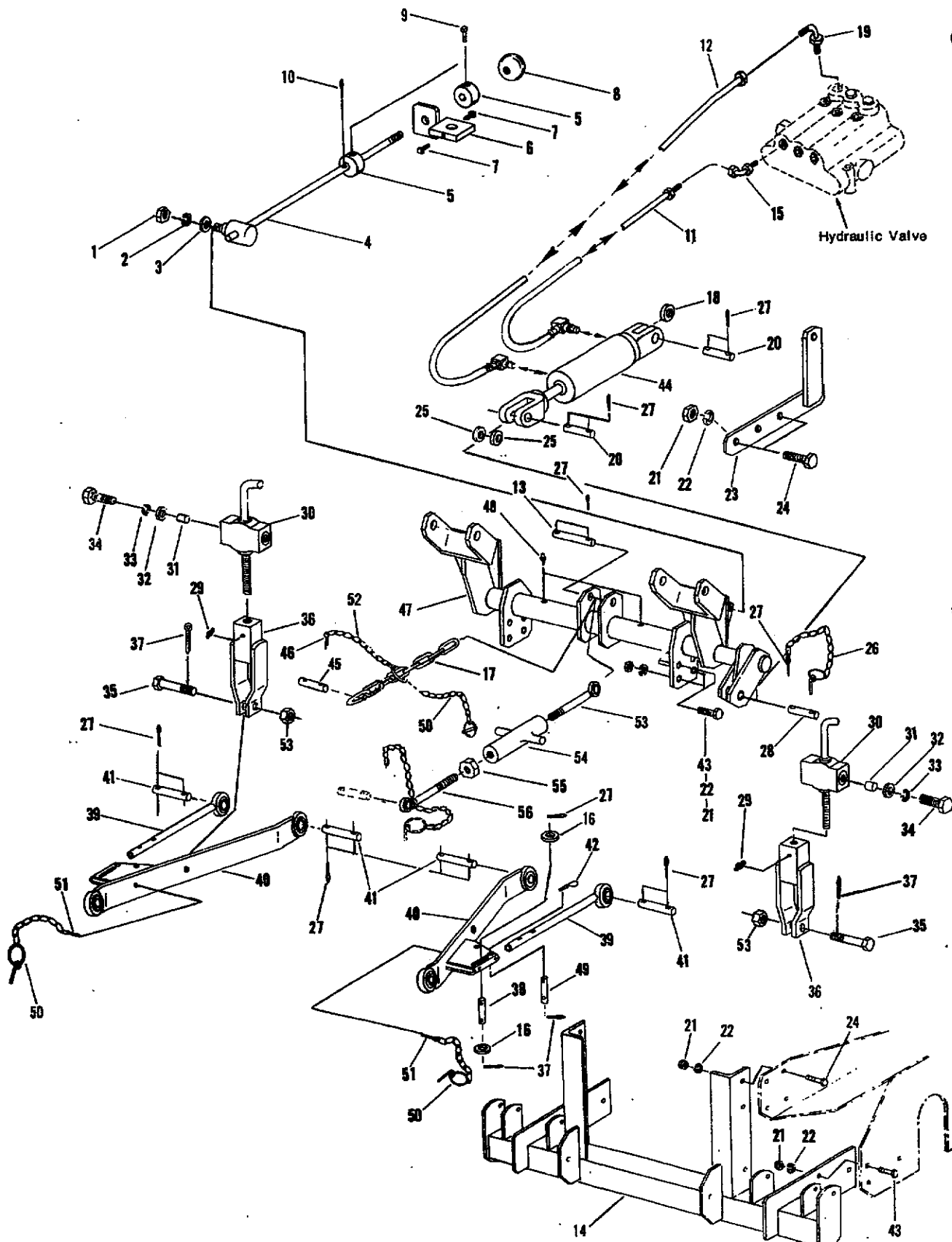


WARNING - DANGER

The use of loads on the 3 Point Hitch beyond the limits shown on the diagram can result in damage to the tractor and can be very hazardous to the operator.

ILLUSTRATION 17

3 POINT LIFT



PARTS LIST-ILLUSTRATION 17

Ref. No.	Part No.	Quan.	Description
1	443110	1	Nut, 3/8-16 Hex
2	446140	1	Lockwasher, 3/8 Med
3	453011	1	Washer, 3/8 SAE
4	113325	1	Control Rod
5	326679	2	Collar, Control Rod Stop
6	113304	1	Stop Plate
7	412004	2	Screw, 1/4-20 x 3/8 Sq. Hd Cup Pt Set
8	326731	1	Knob, Control Rod
9	424501	2	Screw, 1/4-20 x 1/2 Nylock Sq Hd Set
10	460026	1	Pin, 1/8 x 3/4 Cotter
11	158762	1	Hose H.P. (Raising)
12	158763	1	Hose H.P. (Lowering)
13	326539	1	Pin, Upper Link
14	113104	1	Hitch, Cross Pipe
15	351399	2	Elbow, 45° Male
16	452008	4	Washer, Special - Sway Bar Slide Pin
17	342167	1	Chain, 3rd Link Point
18	326785	1	Spacer, Ram Mtg
19	351107	1	Elbow, 90° Male
20	320076	2	Pin, Ram Mtg
21	443126	14	Nut, 5/8-11 Hex
22	446164	14	Lockwasher, 5/8 Med
23	113345	1	Hydraulic Ram Support
24	400616	6	Screw, 5/8-11 x 2 Hex Hd Cap
25	326642	2	Spacer, Ram Mounting
26	113239	1	Snap Ring Lock Pin
27	460052	15	Pin, 3/16 x 1-1/2 Cotter
28	326572	1	Pin, Rocker Link Arm
29	471217	2	Fitting, 1/4-28 Grease
30	113236	2	Leveling Crank
31	326585	4	Spacer, Lift Arm
32	453022	4	Washer, 3/4 SAE
33	446176	4	Lockwasher, 3/4 Med
34	400782	4	Screw, 3/4-10 x 2 Hex Hd Cap
35	380075	2	Screw, 5/8-11 x 2/62 Hex Hd Retaining
36	113256	2	Draft Arm Crank Fork
37	460048	8	Pin, 3/16 x 1 Cotter
38	326780	2	Pin, Sway Bar Slide
39	113341	2	Sway Bar
40	113344	2	Draft Link Assembly
41	326538	4	Pin, Lower Link
42	460312	2	Pin, Cotter Hair
43	400612	8	Screw, 5/8-11 x 1-1/2 Hex Hd Cap
44#	110838	1	Hydraulic Ram (Cessna)
	122087@	1	Hydraulic Ram (Columbus)
45	326535	1	Pin, Upper Hitch
46	460064	1	Pin, 1/4 x 2 Cotter
47	113270	1	Rocker Shaft Assembly
48	471227	2	Fitting, 1/4-28 x 45° Grease
49	326613	2	Pin, Sway Bar
50	113234	3	Snap Ring Locked Pin and Chain
51	326721	2	Pin, Keep
52	113328	1	Snap Keep Ring and Chain
53	444752	2	Nut, 5/8-11 Hex Center Loc
The Following Items Make Up The Rigid 3rd Point Link Accessory No. 78065			
53	113343	1	Upper Link Eye
54	204263	1	Link, Turn Buckle
55	443844	1	Nut, 1-1/4-7 Hex Jam
56	113342	1	Upper Link Eye

↔ Direction of Hydraulic Fluid.

HP High Pressure.

Seal Repair Kit Order No. 500342.

@ When ordering Columbus Hydraulic Cylinder, you must order new ram mounting pins (Ref. 20). Order Part Number 358407.

Columbus seal repair kit is 502508.

POWER TAKE-OFF ACCESSORY NO. 78053

DESCRIPTION

The transmission driven P.T.O. accessory is designed to supply power to drive any implement used with the G-10 tractor, which requires a 540 RPM SAE power take-off. The P.T.O. is attached to the right side of the transmission and is driven by the transmission. The P.T.O. operates when the P.T.O. lever and tractor clutch are engaged. The P.T.O. stops operating when the tractor is stopped and tractor clutch is disengaged. Tractors equipped with this P.T.O. have a rear axle ratio of 7.17 to 1.

OPERATION

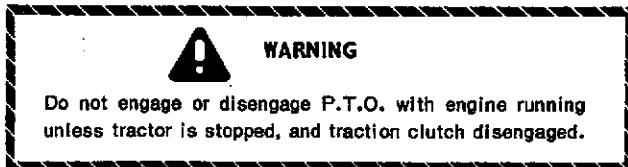
The power take-off is operated in the following manner:

To Engage:

1. With engine running, stop tractor and disengage traction clutch.
2. Pull control knob out.

To Disengage:

1. Stop tractor with engine running, and disengage traction clutch.
2. Push control knob in.



The P.T.O. output speed of 540 RPM is obtained by operating the engine at 1600 RPM. The operator should select the gear which provides best operation of the attached implement.

IMPORTANT

The engine RPM should be set with the hand throttle. DO NOT OPERATE ENGINE ABOVE 1600 RPM WHEN P.T.O. IS ENGAGED.

ADJUSTMENTS

IDLER PULLEY TENSION

Idler pulley tension may be adjusted to compensate for belt wear. The belt stretches during operation, becoming looser over the pulleys, eventually causing slippage. A slight increase in tension can be made by turning the handle (E, Fig. 17) in a clockwise direction, or decrease by turning counterclockwise. Adjust the spring arm guide until the bottom edge of the spring arm rests snugly against the bottom of the slot.

DRIVE BELT REPLACEMENT

The drive belt may be replaced in the following manner (See Figure 17 for reference letters used in these instructions):

1. Remove idler tension spring, move idler down and to the left as far as possible.

2. Loosen hub mounting bolt (Ref. D). Do not remove.
3. Remove hub mounting bolts (Ref. A, B, and C), move pulley down and to the right as far as possible.
4. Remove the old belt and replace it with a new one.
5. Adjust the tension spring if necessary by turning the handle at E until the spring is stretched out to 10 inches (254 mm) as shown in Figure 17.
6. Mount the spring arm guide in the lower position, adjusting it until the bottom edge of the spring arm rests snugly against the bottom of the slot. Tighten the guide securely.

LUBRICATION

P.T.O. Gear Box - Receives lubrication from transmission. Keep transmission filled to level plug. Idler Pulley Bearing - Pre-lubricated, needs no additional lubrication.

Driven Pulley Hub - Repack with wheel bearing grease every 1,000 hours.

Grease Fittings (3) - Lubricate with chassis grease every 40 hours. The fittings are located at Ref. F and G, Figure 17. There are 2 grease fittings at "F", one on each flange (Ref. No. 9, Illustration 18).

STORAGE

If P.T.O. is not used for extended periods, remove the belt and protect the pulleys with a coating of zinc chromate paint.

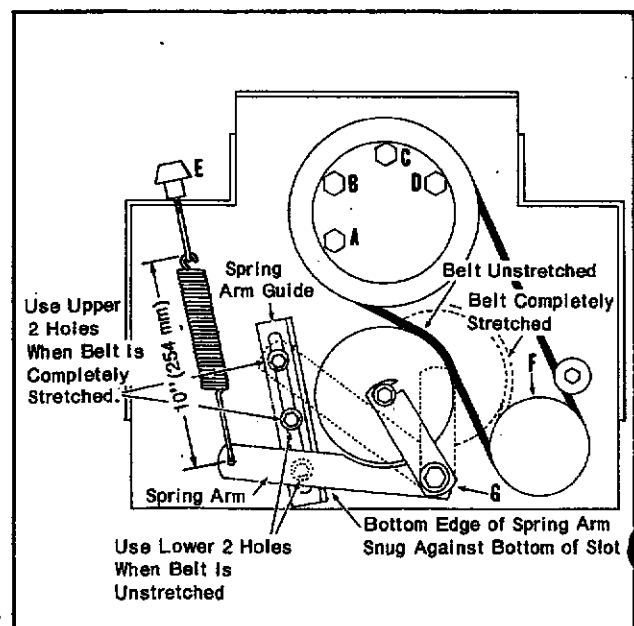


Figure 17

POSITIONING DRAW BAR FOR P.T.O. USE WITH PULLED IMPLEMENTS (See Fig. 18)

1. The horizontal distance (B) between the hitch point on the tractor draw bar and the rearmost point on the standard rubber tire or fender of the tractor shall not be less than 4 inches (102mm).
2. The position of the tractor draw bar for power take-off work shall be such that the vertical distance (C) from the ground line to the top of the draw bar at the hitchpoint shall be 15 inches (381 mm), plus or minus 2 inches (51 mm) when the tractor is equipped with standard size tires.
3. The horizontal distance (A) between the hitch point on the tractor draw bar and the end of the splined shaft of the power take-off shaft and the draw bar shall be locked in this position.
4. The vertical distance (D) between the top of the draw bar at the hitch point and the center line of the power take-off splined shaft shall not be less than 6 inches (152 mm) or more than 12 inches (305 mm). The recommended distance is 8 inches (203 mm).

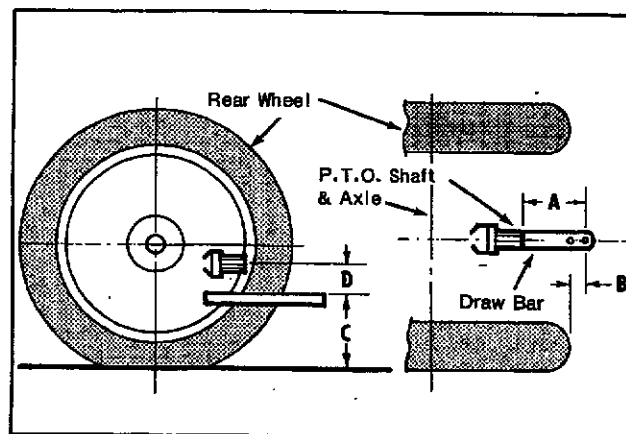


Figure 18

This diagram is an exploded view of a rear cross member structure. It shows the following components and their assembly relationships:

- Top Section:** Includes a channel (1) with various mounting brackets (e.g., 40, 41, 42, 43, 44, 45, 46, 47, 48, 49) and a central support (70).
- Central Section:** Features a main cross member (2) with a central housing (30) and various internal components like springs (28, 29), rollers (32, 33, 34, 35), and a central shaft (31).
- Bottom Section:** Shows the rear cross member structure (80) with mounting brackets (81, 82, 83, 84) and a central support (85).
- Labels:**
 - Rear Cross Member Structure:** Points to the bottom section of the assembly.
 - R.H. Side of Channel:** Points to the right side of the central channel.
- Part Numbers:** The diagram includes numerous numbered parts, including 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85.

PARTS LIST-ILLUSTRATION 18

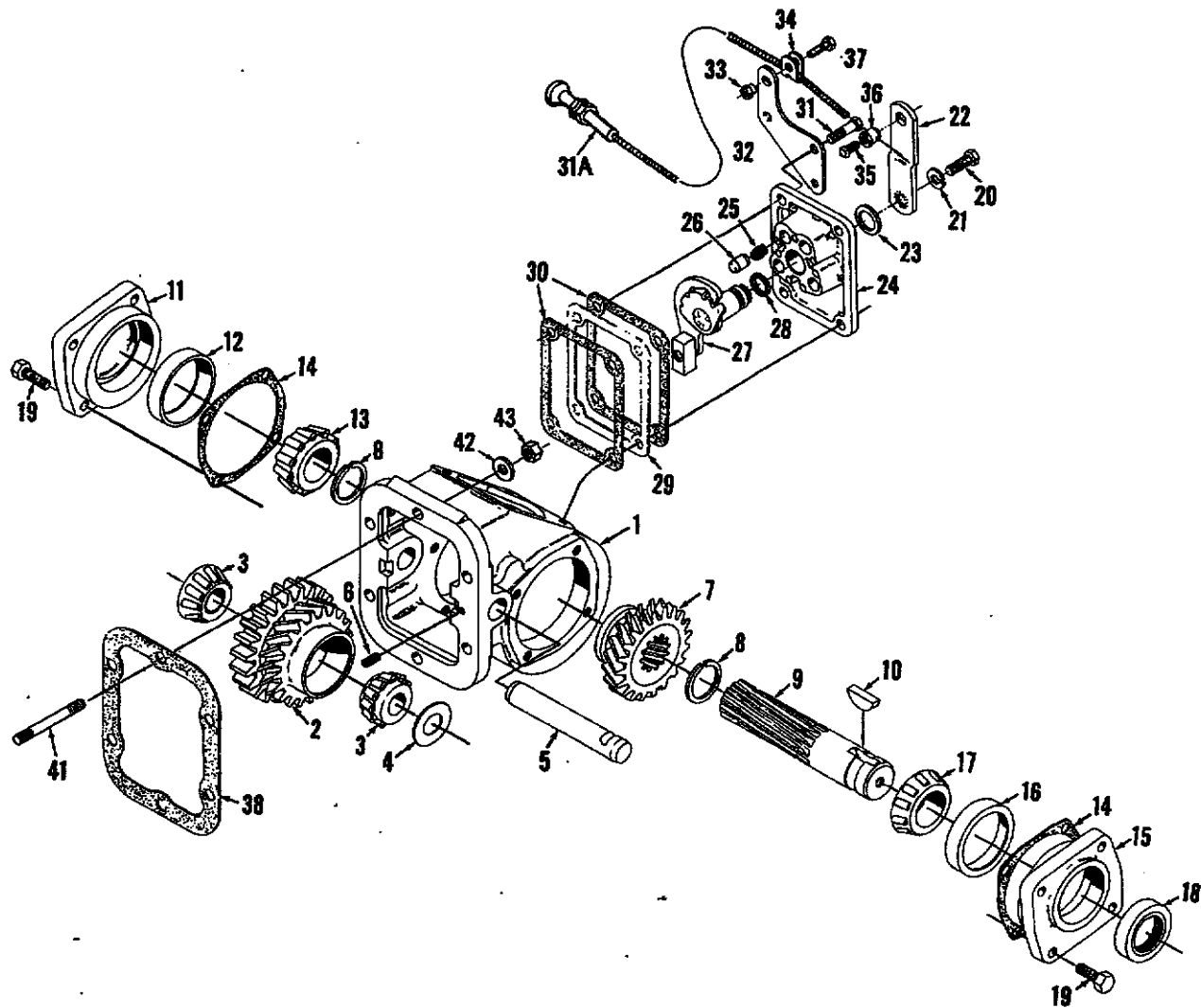
Ref.No.	Part No.	Quan	Description
1	353306	2	Screw, Hub to Shaft
2	400264	3	Screw, 3/8-16 x 1-1/4 Hex Hd Cap
3	121824	1	Drive Shaft
4	130387	1	Bracket Assembly
5	463039	3	Key, 5/16 x 1-1/8 Woodruff
6	345078	2	Screw, Special - Set
7	473062	AR	Wire #16 Ga.
8	336133	1	Shaft, P.T.O. Drive Pulley
9	359241	2	Flangette w/Fitting
9A	359242	2	Flangette w/o Fitting
10	345261	2	Bearing, Inner
11	325767	2	Collar, Bearing
12	471215	2	Fitting, 1/4-28 x 45° Grease
13	400268	3	Screw, 3/8-16 x 1-3/4 Hex Hd Cap
14	446142	14	Lockwasher, 3/8 Hvy
15	443110	14	Nut, 3/8-16 Hex
16	239052	1	Pulley, Drive
17	126535	1	Idler Pivot Arm Assembly
18	471210	1	Fitting, 1/8 NPSF x 45° Grease
19	154746	1	Idler Pivot Shaft Assembly
20	453022	AR	Washer, 3/4 SAE
21	445676	1	Nut, 3/4-16 Hex Slotted
22	460032	1	Pin, 1/8 x 1-1/2 Cotter
23	218043	1	Pulley, Idler
24	311958	1	Bearing
25	458615	2	Ring, Retaining
26	453011	6	Washer, 3/8 SAE
27	444744	2	Nut, 3/8-24 Hex Center Loc
28	331782	1	Spring
29	345079	1	Rod, Spring Adj
30	239042	1	Handle, Adj
31	332053	1	Shaft, Output
32	218042	1	Pulley, Driven
33	545645	1	Hub
34	500543	1	Roller Bearing Assembly, Cup and Cone, Inner
35	545646	1	Seal
36	500535	1	Roller Bearing Assembly, Cup and Cone, Outer
37	545647	1	Hub Cap
38	400712	4	Screw, 9/16-18 x 1-1/4 Hex Hd Cap
39	446160	4	Lockwasher, 9/16 Hvy
40	126558	1	P.T.O. Shield Assembly
41	400262	8	Screw, 3/8-16 x 1 Hex Hd Cap
42	326373	2	Pin, Draw Bar Support Pivot
43	326274	1	Pin, Draw Bar Pivot
44	329196	1	Belt
45	460064	6	Pin, 1/4 x 1-1/2 Cotter

Ref.No.	Part No.	Quan	Description
46	400616	2	Screw, 5/8-11 x 2 Hex Hd Cap
47	400614	2	Screw, 5/8-11 x 1-3/4 Hex Hd Cap
48	446164	4	Lockwasher, 5/8 Med
49	443126	4	Nut, 5/8-11 Hex
50	400408	4	Screw, 1/2-13 x 1-1/2 Hex Hd Cap
51	446154	5	Lockwasher, 1/2 Hvy
52	443118	5	Nut, 1/2-13 Hex
53	303159	1	Clip, Control Cable
54**	116379	1	PTO Gear Box Assembly
55	336134	1	Shield, Shaft
56	119309	1	Belt Shield Assembly
57	400104	2	Screw, 1/4-20 x 1/2 Hex Hd Cap
58	446130	6	Lockwasher, 1/4 Hvy
59	347053	2	U-Bolt
60	453023	4	Washer, 1/4 SAE
61	443102	4	Nut, 1/4-20 Hex
62	347175	1	Guide Spring Arm
63	453017	2	Washer, 1/2 SAE
64	347176	1	Spacer, Belt Guide
65	400426	1	Screw, 1/2-13 x 5 Hex Hd Cap
66	323943	AR	Washer, Spec
67	463040	1	Key, 1/4 x 1-1/4
68	404022	1	Screw, 1/4-20 x 1 Cable Mounting
69	358002	1	Decal, PTO (Not Illust.)
70	352754	1	Decal, Caution
71	113105	1	Draw Bar Support Assembly
72	326371	1	Draw Bar
73	400618	1	Screw, 5/8-11 x 2-1/4 Hex Hd
74	446164	1	Lockwasher, 5/8 Med
75	443126	1	Nut, 5/8-11 Hex
76	344023	1	Adapter, 5/8 Ball Hitch
77	325406	1	Washer, Ball Hitch Mounting
78	326372	2	Strap, Draw Bar Adj.
79	453017	3	Washer, 1/2 SAE Plain
80	162000	1	Bracket Assem
81	400406	3	Screw, 1/2-13 UNC x 1-1/4 Hex
82	443118	3	Nut, 1/2-13 UNC Hex
83	446154	3	Lockwasher, 1/2 Hvy
84	453011	3	Washer, 3/8 SAE Flat

AR - As Required.

* * See Illustration 19 for parts breakdown.

Chelsea Models 380-AR-C5-G



PARTS LIST-ILLUSTRATION 19

Ref. No.	Part No.	Quan.	Description
1	1-P-195	1	Case, P.T.O., Standard Mount
2	S 380-AR	1	Gear, Input Cluster
3	550439	2	Cone, Input Gear Bearing
4	14-P-15	1	Spacer, Input Gear
5	9-P-27	1	Shaft, Input Gear
6	378452-7	1	Set Screw, for Standard Mount 1/4-20 x 1/2
7	2-P-425	1	Gear, Output Sliding 19 Teeth
8	378391	2	Ring, Output Shaft Snap
9	3-P-202	1	Shaft, Std P.T.O. Output 1-1/4 Rd, 5/16 Keyway
10	500007-29 328274X	1	Key, Woodruff, Shipped Loose, 5/16 Bearing Cover Assem (Incl Ref No. 11-14)
11	21-P-131	1	Bearing Cap, For Closed End
12	550221	1	Cup, Bearing, For Closed End
13	550532	1	Cone, Bearing, For Closed End
14	22-P-24-1	AR	Gasket, Bearing Cap
	22-P-24-W	AR	Gasket, Bearing Cap
	328273X		Bearing Cover Assem (Incl Ref No 15-19)
15	21-P-130	1	Bearing Cap, For Output End
16	550221	1	Cup, Bearing, For Output End
17	550397	1	Cone, Bearing, For Output End
18	28-P-52	1	Seal, Output Shaft Oil
19	378430-10	8	Capscrew, Hex Hd Nylock
	328290-2X	1	Wire Control Shifter Cover Assem
20	500409-6	1	Capscrew, Shifter Lever
21	378003	1	Lockwasher
22	51-P-22	1	Lever, Shifter
23	378004	1	Flat Washer, Shifter Lever
24	34-P-17	1	Cover, Shifter
25	37-P-20	1	Spring, Shifter Ball
26	63-P-6	1	Pin, Poppet
27	328289-2X	1	Post and Plate Assem
28	28-P-49	1	"O" Ring, Shifter Post
29	5-A-062	1	Spacer, Shifter Cover Fiber
30	35-P-8	2	Gasket, Shifter Cover
31	378430-9	4	Capscrew, Shift Cover Hex 5/16-18 x 7/8 ESLOCK
31A	328346-10X	1	Cable Control Assem, Cable & Knob
	328380X	1	Cable Control Mounting Parts Kit (Incl. Ref. Nos. 32-37)
32	50-P-17	1	Bracket, Cable Control
33	378326	1	Nut, Hex
34	50-P-19	1	Bracket, Swivel
35	500568-4	1	Setscrew, 1/4-20 x 1/2
36	378019	1	Pin, Pivot
37	500396-8	1	Capscrew, Hex, 1/4-20 x 3/4
38	35-P-9-1	AR	Gasket, P.T.O. Mtg, .010 Thk
	35-P-9-2	AR	Gasket, P.T.O. Mtg, .020 Thk
39	68-P-2	1	Plate, Name (Not Illus)
40	378422	2	Screw, Drive, Name Plate Mtg (Not Illus)
41	378478-14	6	Stud, 3/8-16 x 24 x 1-5/8
42	378018	6	Copper Bolt Gasket
43	500371-3	6	Nut, 3/8-24 Hex

AR - As Required.

Parts listed are Chelsea part numbers, and should be obtained from truck equipment dealers handling parts made by Chelsea Products Division of Dana Corp. Look in the yellow pages of the phone book.