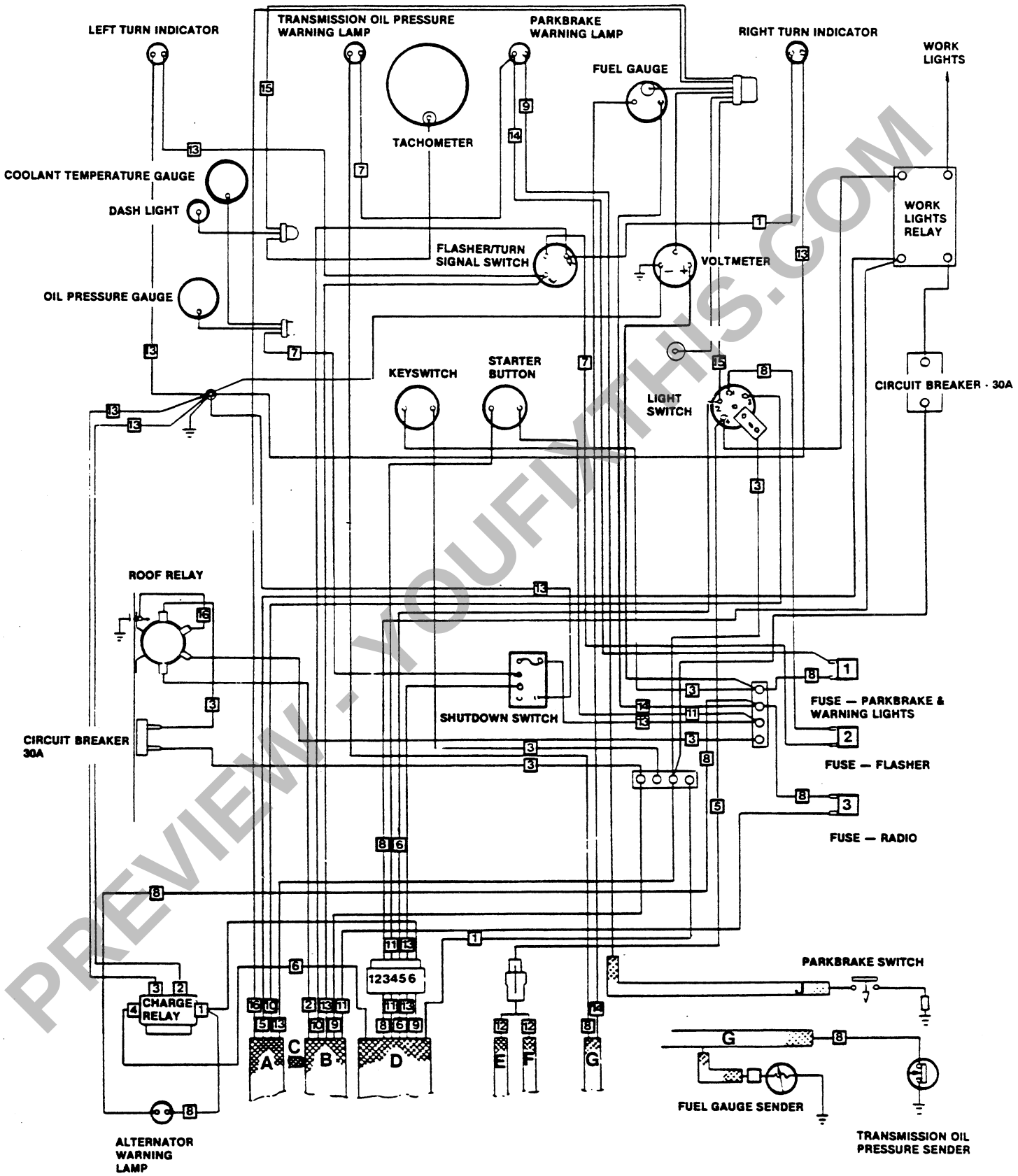


FIGURE 6-26: Wiring Diagram, Cab Console

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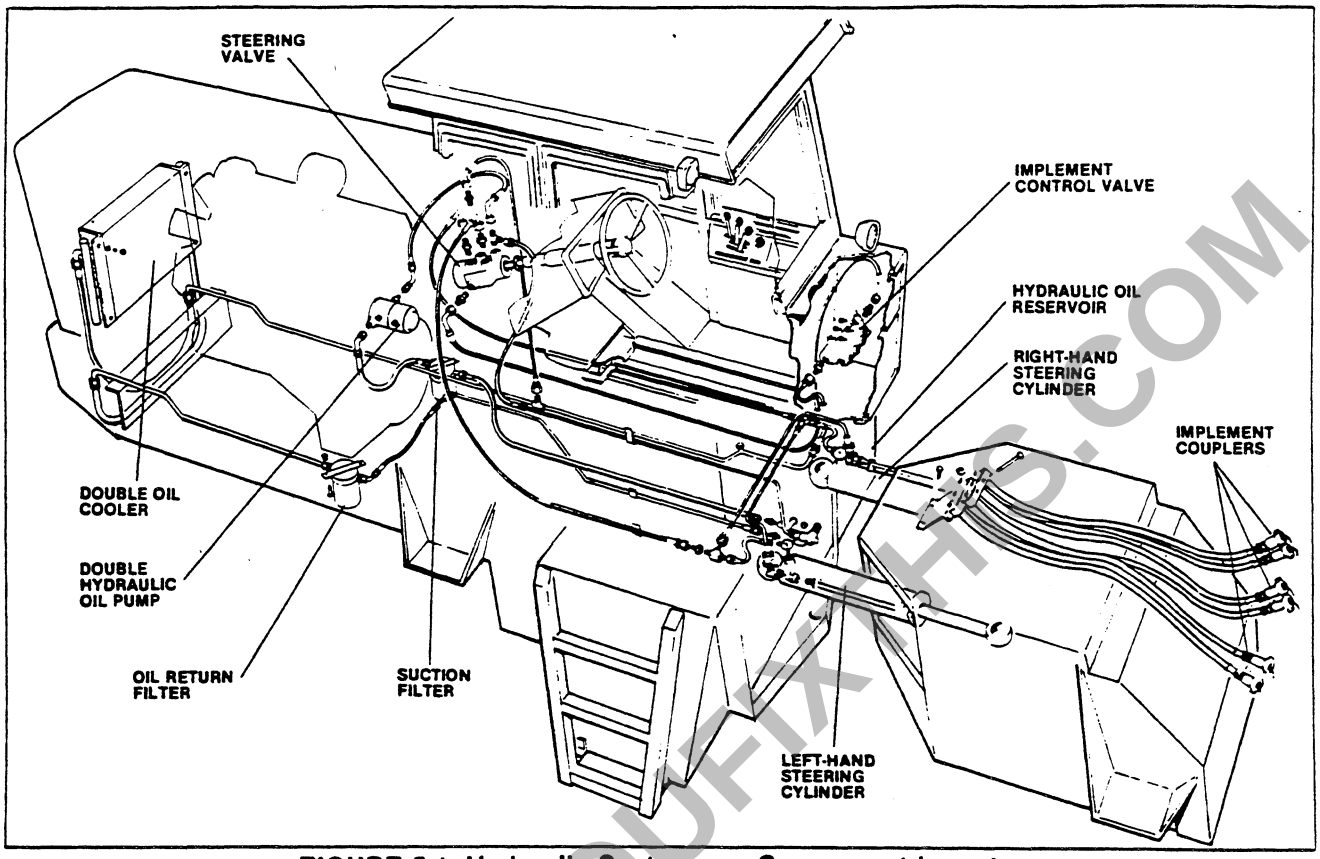


FIGURE 5-1: Hydraulic Systems — Component Location

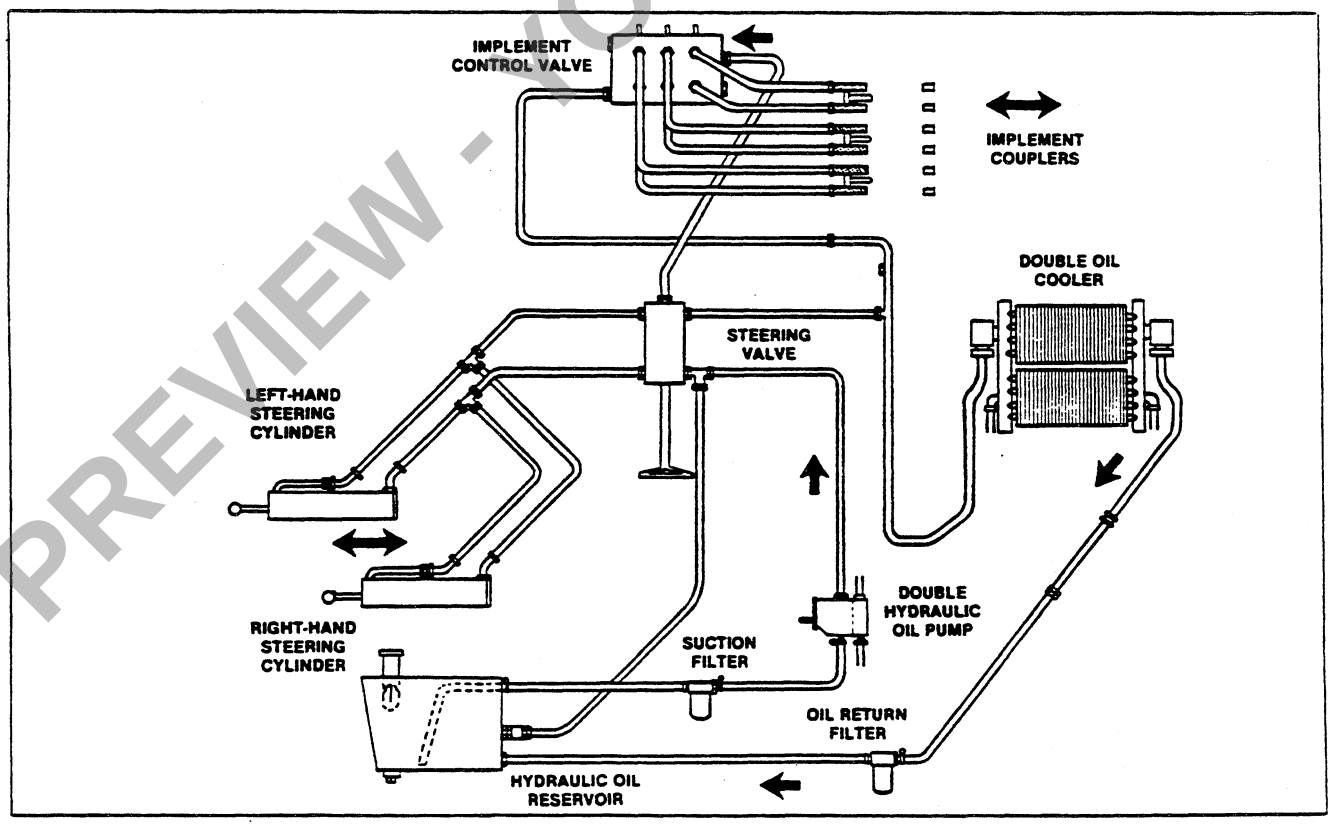


FIGURE 5-2: Hydraulic Circuit Diagram

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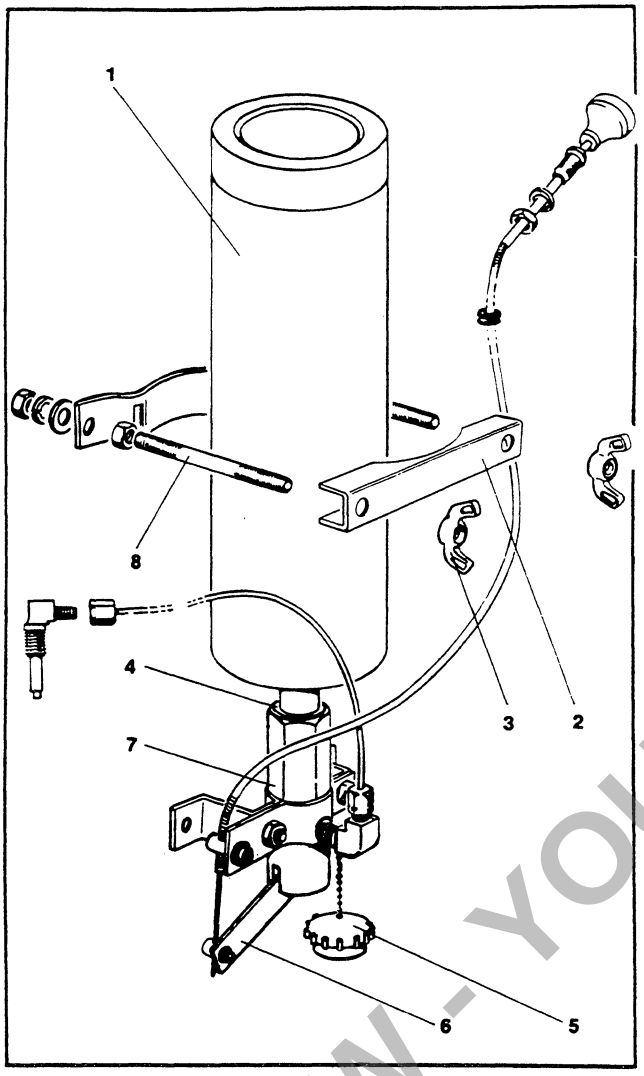


FIGURE 2-25: Removal/Installation Cold Start Cylinder

2. Unscrew cylinder (1) by hand until free of valve (7).

3. Place cap (5) over valve opening.

4. To install cylinder, remove cap (5) from valve. Check that cylinder sealing gasket is in place.

5. Secure cylinder with saddle clamp (2) and wing nuts (3).

IMPORTANT

Do not test operation of system with engine running.

6. To test gasket for leaks, brush soapy water around neck of cylinder and raise valve lever (6) for one second. Ether should be heard entering valve chamber.

7. Replace gasket if soap solution shows bubbles at threads of cylinder connection.

WARNING

DO NOT USE A FLAME TO DETECT A LEAK.

BE ALERT

5.13 REMOVAL AND INSTALLATION OF ALTERNATOR

Special Tools and Equipment

1. Belt tension gauge

2. Torque wrench 0-100 ft lb

To remove and install alternator, (Ref. Figure 2-26) proceed as follows:

1. Label and disconnect ground wire (2), charge relay wire (1) and alternator output wire (3).

2. Loosen nut (10) on capscrew (8). Remove capscrew (5). Hinge top of alternator downward to slacken belt tension. Remove belts from alternator pulley.

TABLE 2-7: Mounting Torque Values

Alternator Bracket to Block	75 ft lb
Alternator to Bracket	60-70 ft lb
Alternator to Adjustment Link	50-55 ft lb
Starter Motor to Flywheel Housing	
5/8 in. 12 point flange screw	210 ft lb
1/2 in. hex head capscrew	
Grade 5	75 ft lb
Grade 6	85 ft lb
Grade 8	105 ft lb

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21. Disconnect oil bypass filter hoses (15) at engine. Cap hoses and engine ports (Ref Figure 2-30).

22. Remove hydraulic pump (16) from rear of engine. Tie hydraulic pump, with hoses connected, to the left side of engine compartment.

23. Remove U-bolts from forward universal joint (7) of engine output shaft driveline. Tape cups to cross and tie driveline out of the way

24. Fasten engine lifting boom (10) to engine lifting points (9). Locate hoist (11) over engine and hook to boom for level lift. Raise engine just enough to relieve weight on engine mounts.

25. Remove four capscrews (12), lockwashers and nuts securing front engine support to engine (13).

26. Remove nut (1) and mounting hardware from both rear engine mounts.

27. Raise and turn engine slowly, permitting exhaust connections to slide apart, fan to clear fan shroud, and flywheel housing to clear steering valve.

28. Raise engine approximately 16 inches to bring oil pan above tractor frame. Transport engine away over the right side frame and rest it on an engine stand.

Installation

To install an engine, proceed as follows (Ref. Figure 2-30):

1. Tighten capscrews (8) holding mounting brackets to engine, 75 ft lb (102 N·m) torque.

2. Raise engine and transport to right side of tractor.

3. Raise engine to clear frame and move rear of engine across to left side.

4. Lower and turn engine to enter rear of engine under the steering valve and fan blades into fan shroud.

5. Locate rear engine mounts over frame holes and place an isolator pad (3) over a plain washer (2) between engine mount and frame. Place isolator sleeve (4) and spacer (5) in mounting bracket and put another isolator pad and plain washer on top of these. Insert mounting bolts (6) downward into engine mount and through hole in frame. Thread on nut (1) from below the frame. Do not tighten nut.

6. Secure front engine support to engine through muffler mount (14), using four capscrews (12), lockwashers and nuts. Tighten front engine support capscrews to 68 to 75 ft lb (100 N·m) and rear engine mounting bolts to 375 ft lb (500 N·m). Remove lifting boom and hoist.

7. Connect driveline to yoke on engine with U-bolts, lockwashers and nuts. Grease universal joint (7) with multi-purpose grease.

8. Mount hydraulic pump to engine using a new gasket.

9. Mount sections of rear hood support on tractor frame.

10. Raise centerhood support with attached air conditioner components and fasten to front and rear hood supports with four flange screws at each end.

11. Connect top and bottom radiator hoses.

12. Connect bypass oil filter hoses to engine.

13. Push cab heater hoses into engine fitting. Tighten clamps.

14. Align flange of exhaust knee pipes with exhaust manifold. Use a new gasket between flange and manifold. Secure with capscrews, lockwashers and nuts.

15. Install surge tank and connect its hoses to engine ports and radiator.

16. Mount air conditioner compressor on its bracket and tension belt to 100 lb. Fix air conditioner hoses to rear hood support and front hood with hose hangers.

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9 Troubleshooting

9.1 GENERAL

A troubleshooting subsection at the system level is included with each section in the service manual. Troubleshooting information is in chart form to help identify the problem so that a possible remedy can be found. The sections are arranged as follows:

1. Engine System - Section 2
2. Drive Train - Section 3
3. Controls - Section 4
4. Hydraulic System - Section 5
5. Electrical System - Section 6
6. Environmental Systems - Section 7
7. Structures - Section 8

9.2 TROUBLESHOOTING GUIDE

Do the easiest and obvious checks first when troubleshooting problems on the tractor.

Each of the sections generally is divided into five parts:

1. Introduction
2. Description and Operation
3. Troubleshooting
4. Maintenance
5. Repair and Overhaul

Table 1-9 troubleshoots simple problems and remedies concerning the engines. Further information is in Section 2 — Engine Systems and/or Cummins Maintenance and Operation Manual.

TABLE 1-9: Engine (Section 2)

TROUBLE	PROBABLE CAUSE	REMEDY	REFERENCE
Difficult to start or will not start.	No fuel in tank.	Fill tanks with proper fuel.	
	Improper fuel.	Drain wrong fuel and refill.	
	Dirty or watery fuel.	Drain tanks, bleed system and fill with clean fuel.	
	Override switch.	Check and/or replace.	Cummins Operation and Maintenance Manual. Section 5.
	Air in fuel system.	Bleed fuel system.	
	Improper timing.	Check injector pump by skilled serviceman.	
	Dirty injector nozzles.	Clean and repair by skilled serviceman.	

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4 Specifications and Capacities

4.1 GENERAL

The following specifications and capacities apply to the Model 500 tractors.

4.2 DIMENSIONS

Length . . . . . .234 in. (5940 mm)

Width . . . . . .95 in. (2410 mm)

Heights . . . . . .Ref. Table 1-1

Wheelbase . . . . . .120 in. (3050 mm)

Wheel Tread Adjustment Range
(Single tires):

18.4 x 34, 18.4 x 38 . . . . . .60-95 in. (1520-2410 mm)
23.1 x 30, 23.1 x 34 . . . .66.5-95 in. (1690-2410 mm)
15.5 x 38, 16.9 x 38 . . . . . .60-95 in. (1520-2410 mm)

Dual tires:

Maximum allowable . . . . . .120 in. (3050 mm)

Turning Radius

Nominal, to centerline of
tractor . . . . . .152 in. (3860 mm)
With 18.4 x 38 single tires
@ 100 in. (2540 mm) tread . . .202 in. (5130 mm)
With 18.4 x 38 dual tires
@ 120 in. (3050 mm) tread
(to centerline of outerwheel . 212 in. (5280 mm)

TABLE 1-1: Tire Sizes vs Tractor Dimensions

TIRE SIZE	CAB HEIGHT	STACK HEIGHT	MAXIMUM HEIGHT*	MINIMUM TREAD
		Canadian and US Measure		
23.1 x 30	119.4 in.	123.7 in.	149.4 in.	66.5 in.
23.1 x 30 R2	121.0	125.2	151.0	66.5
18.4 x 34	119.0	123.0	149.0	60.0
18.4 x 34 R2	119.4	123.7	149.4	60.0
23.1 x 34	121.4	125.7	151.4	66.5
15.5 x 38	118.0	122.2	148.0	60.0
16.9 x 38	119.5	123.6	149.5	60.0
18.4 x 38	121.0	125.2	151.0	60.0
18.4 x 38 R2	121.4	125.7	151.4	60.0
		Metric (SI) Measure		
23.1 x 30	3030 mm	3140 mm	3790 mm	1690 mm
23.1 x 30 R2	3070	3180	3840	1690
18.4 x 34	3020	3120	3780	1520
18.4 x 34 R2	3030	3140	3790	1520
23.1 x 34	3080	3190	3850	1690
15.5 x 38	3000	3100	3760	1520
16.9 x 38	3040	3140	3800	1520
18.4 x 38	3070	3180	3840	1520
18.4 x 38 R2	3080	3190	3850	1520

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6 Lubrication

6.1 GENERAL

Table 1-6 lists the lube points on the Model 500 tractors. Along with the table are lube point illustrations (Ref. Figure 1-1).

Refer to subsection 5 for capacities and requirements.

NOTE

Too frequent greasing could rupture the bearing seal and allow lubricant to enter the clutch assembly or dirt to enter housing.

TABLE 1-6: Lubrication Points

LUBE POINT	DESCRIPTION	SERVICE POINTS	LUBRICANT
	Ref. Fig. 1-1		
1	Check Engine Oil Level	1	See 'Lubricant Chart'
2	Change Engine Oil	1	See 'Lubricant Chart'
3	Upper Drive Lines (incl. P.T.O.)	9	SAE Multi-Purpose Grease
4	Lower Drive Lines	9	SAE Multi-Purpose Grease
5	Drive Line Steady Bearing [3]	2	SAE Multi-Purpose Grease
6	Check Transmission Oil	1	See 'Lubricant Chart'
7	Steering Cylinder Pivots	4	SAE Multi-Purpose Grease
8	Upper Main Frame Pivot	1	SAE Multi-Purpose Grease
9	Differential/Planetary oil (front and rear Differentials) [1]	2	See 'Lubricant Chart'
10	Gear Oil P.T.O. Drop Box	1	See 'Lubricant Chart'
11	Drag Link Pivot Bearings	4	SAE Multi-Purpose Grease
12	Drive Disc Shaft Support Bearing [2]	1	SAE Multi-Purpose Grease
13	Draw Bar Rollers	2	SAE Multi-Purpose Grease
14	Axle Outboard Bearings	4	SAE Multi-Purpose Grease
15	Three-Point Hitch (Option)	6	SAE Multi-Purpose Grease
16	Seat (1977 Models)	9	SAE Multi-Purpose Grease
17	Three-Point Hitch (oil metal to metal parts)	-	SAE 30
18	Door and Window Hinge Pins	5	SAE 30

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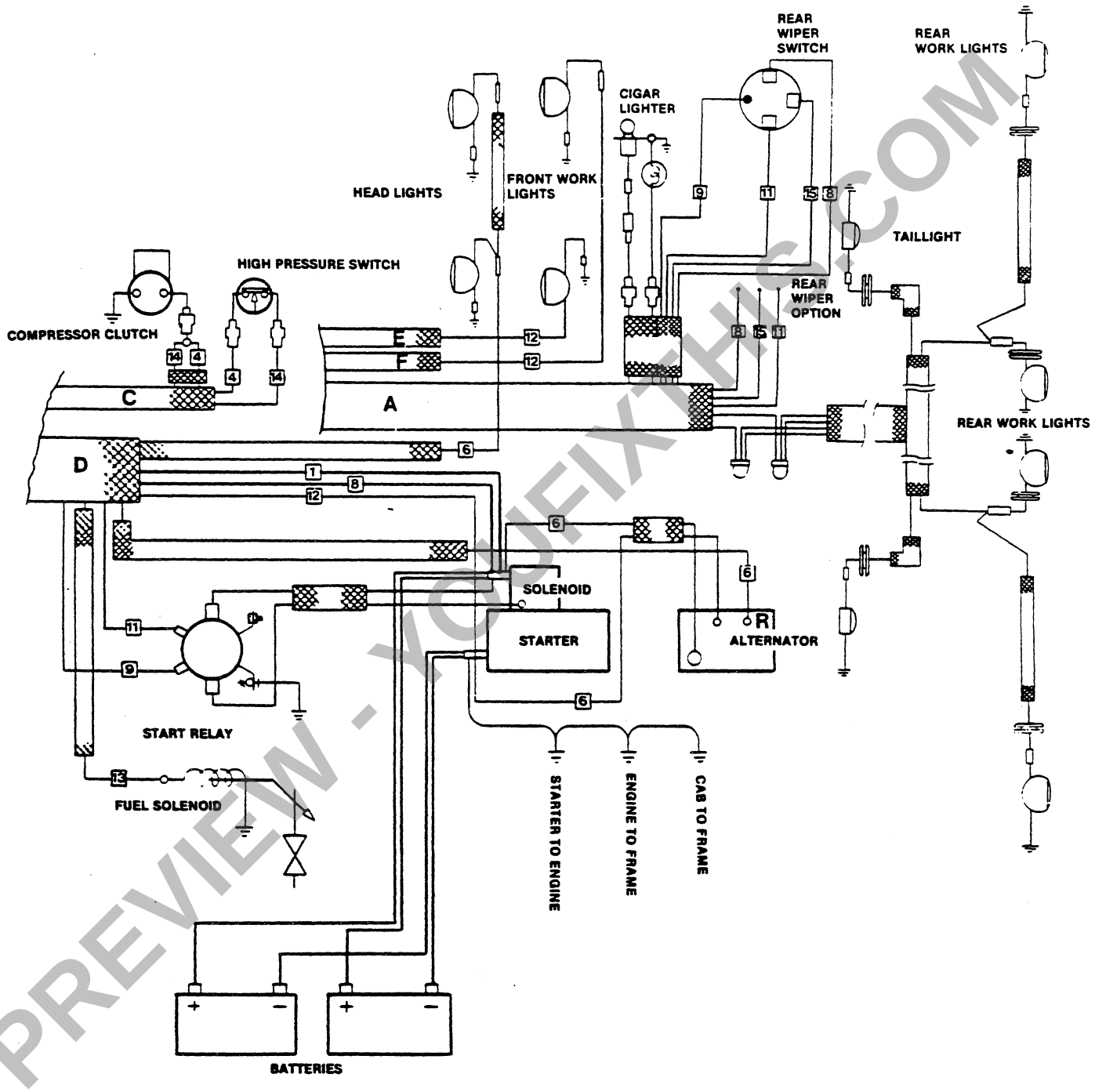


FIGURE 6-27: Wiring Diagram, Engine Compartment and Rear of Cab

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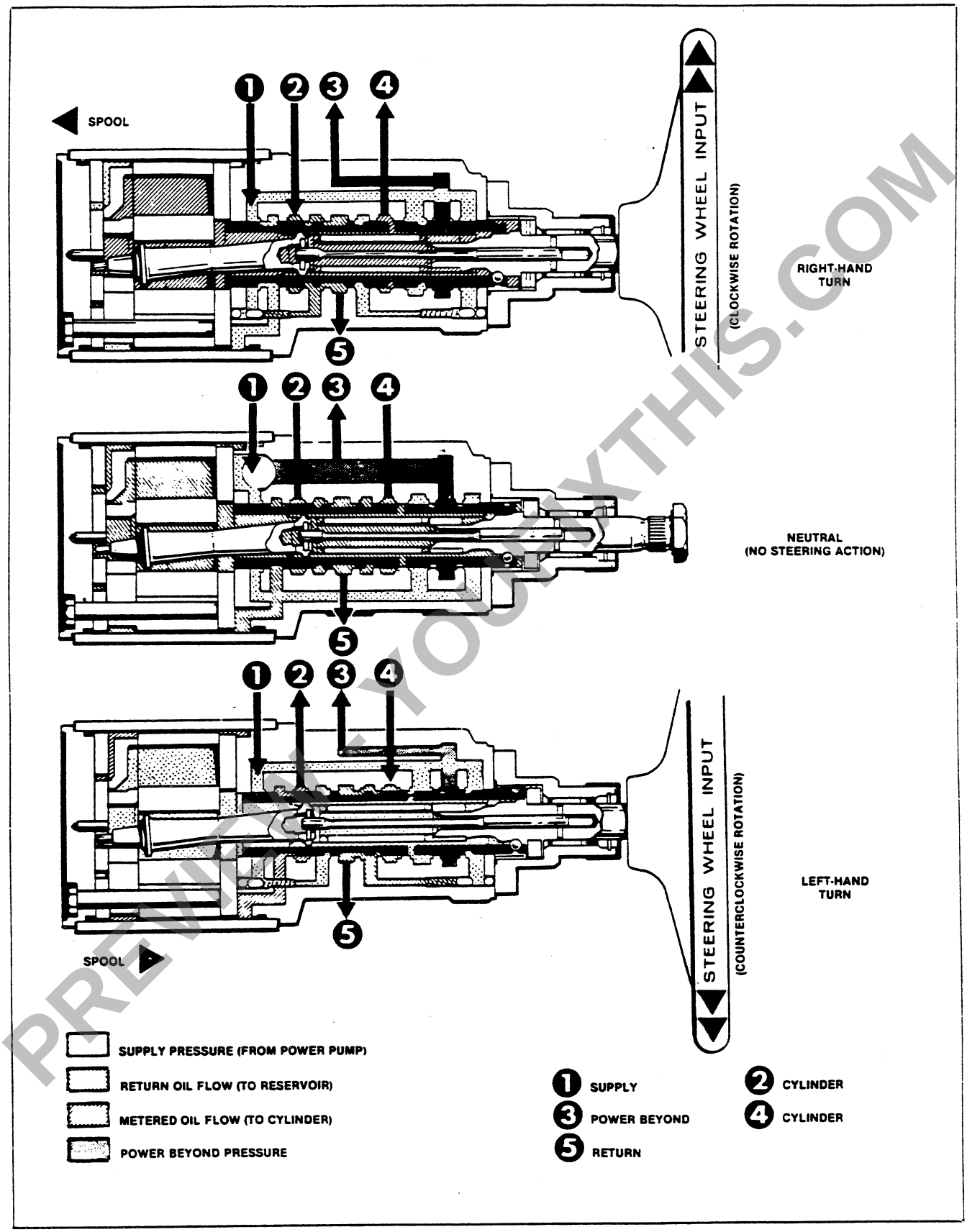


FIGURE 5-3: Steering Valve — Hydraulic Fluid Flow Diagram

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8 SPECIFICATIONS

8.1 Torque Specifications

AXLE ASSEMBLIES

Axle tube to differential housing	180 lb ft (240 N·m)
Axle to planet carrier	170 lb ft (230 N·m)
5/8 in.	266 lb ft (360 N·m)
3/4 in.	266 lb ft (360 N·m)
UNLESS OTHERWISE SPECIFIED	
Companion flange	170 to 190 lb ft (230 to 260 N·m)
Differential case halves	135 to 155 lb ft (185 to 210 N·m)
Differential carrier	30 lb ft (40 N·m)
Differential pinion yoke	400 lb ft (540 N·m)
Differential ring gear	190 to 200 lb ft (230 to 260 N·m)

TRANSMISSION AND CLUTCHES

Brake mounting cap	75 lb ft (109 N·m)
Hydraulic control valves	30 lb ft (42 N·m)
Lubrication pump	31 lb ft (45 N·m)
Master clutch housing	50 lb ft (70 N·m)
Output shaft bearing cap	75 lb ft (109 N·m)
PTO clutch housing	31 lb ft (45 N·m)
Shaft yoke	400 lb ft (580 N·m)
Transmission mounting bolts	160 lb ft (220 N·m)

PTO DROPBOX

Bearing caps	49 lb ft (66 N·m)
Yokes	395 lb ft (530 N·m)
Steady bearing yokes	300 lb ft (400 N·m)
Clutch apply pressure	125 to 150 psi (850 to 1 000 kPa)
Differential pinion rolling force	6 to 14 lb (26 to 62 N)
Dropbox end play	.002 to .004 in. (.05 to 0.1 mm)
Ring gear backlash	.016 in. (.4 mm)
Transmission lube pressure	20 to 30 psi (140 to 200 kPa)
Transmission shaft end play	.003 to .005 in. (.07 to .12 mm)

BEARING SET UP

Input Shaft

Take up on cup follower until bearing binds slightly in rotation and provides .003 to .005 in. (.076 to .127 mm) end play. Rotate shaft while settings are made.

Countershaft

The special fixture and self-adjusting rings are to be used to provide .003 to .005 in. (.076 to .127 mm) end play. Rotate shaft while settings are made.

CAPSCREWS

5/16 in.	17 lb ft (23 N·m)
3/8 in.	31 lb ft (42 N·m)
7/16 in.	49 lb ft (66.5 N·m)
1/2 in.	75 lb ft (101 N·m)
5/8 in.	150 lb ft (203 N·m)
3/4 in.	160 lb ft (217 N·m)

SHAFT NUTS

1-1/2 - 18 UNC	400 lb ft (584 N·m) minimum

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1. Locate transmission directly under outboard end of extension track. Hook chain end of main hoist to rear lifting bracket and pulley end of second hoist to front lifting bracket. Ensure hoists are attached so PTO clutch housing and lubrication pump will enter cab first (Figure 3-32).

2. Connect rope or chain guideline to front output shaft yoke.

3. Raise transmission completely by simultaneously working both chain hoists.

4. Push transmission into cab with PTO clutch output shaft and lubrication pump first. Rotate transmission 90 degrees so main clutch input shaft faces forward and PTO clutch output shaft is rearward. Run guide line out under front differential housing.

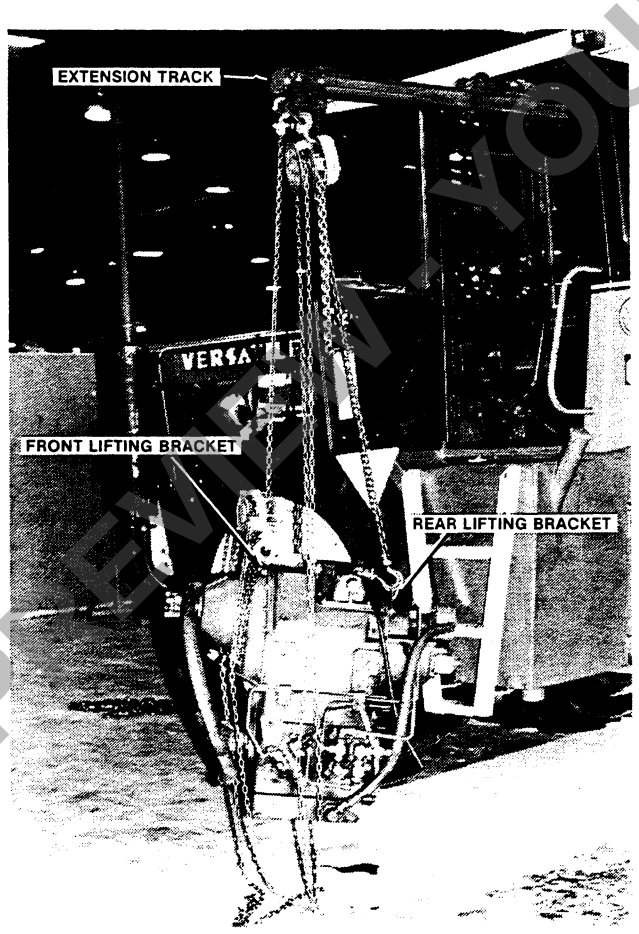


FIGURE 3-32: Transmission Installation

5. Lower front mounting chain hoist so transmission tips forward. Lower main hoist so rear output spline shaft almost contacts cross member. Use prybar and also raise front chain hoist to work splined shaft under cross member.

6. Lower transmission until PTO clutch housing almost touches cross member. Alternately use prybar, raise and lower front and main chain hoists and use guide line to lower PTO housing under cross member.

7. Lower transmission onto mounting plate by simultaneously working chain hoists.

8. Align holes in bottom of transmission with holes in mounting plate. Insert rubber isolation pads between transmission and mounting plate.

CAUTION

DO NOT PUT FINGERS BETWEEN TRANSMISSION AND MOUNTING PLATE. USE A SCREWDRIVER TO ALIGN ISOLATION PADS.

BE ALERT

9. Insert four capscrews, lockwashers, washers, spacers and rubber isolation pads up through holes in transmission mounting plate and thread into mounting holes in bottom of transmission. Torque bolts to 160 lb ft (217 N·m).

10. Install side mounting bracket to left side of transmission, with slotted holes toward frame. Locate two rubber isolation pads between bracket and transmission. Retain bracket with two 2-3/4 in. capscrews, lockwashers, washers, spacers and rubber isolation pads.

11. Fasten bracket to frame with two two in. capscrews, plainwashers, lockwashers and hex nuts. Refer to Figure 3-30, Transmission Removal.

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9.3 TROUBLESHOOTING DRIVE TRAIN

Table 1-10 troubleshoots simple problems and remedies of the drive train. Refer to Section 3 -Drive Train for further service information.

TABLE 1-10 Drive Train

TROUBLE	PROBABLE CAUSE	REMEDY	REFERENCE
	Clutch		
Slow or erratic clutch engagement.	Low oil level.	Add oil to proper level.	
	Foamed oil.	Adjust oil level.	
		Eliminate suction air leaks.	
	Clogged oil screen on input side of oil pump.	Remove and clean.	
	Worn hydraulic oil pump.	Check pump output against specifications.	Section 3.
		Overhaul or replace.	Section 3.
	Improper linkage adjustment.	Check linkage and readjust.	Section 4.
		Check direction and and range valve positioning.	Section 3. Section 3.
	Low clutch apply pressure.	Check low clutch apply pressure.	Section 3.
	Sticky linkage.	Free linkage and adjust.	Section 4.
Slipping clutch.	Parkbrake engaged.	Release parkbrake.	
	Binding parkbrake linkage.	Adjust linkage to assure complete release.	Section 4.
	Improper vehicle operation.	Operating in improper range for load and terrain.	

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*Maximum allowable height (clearance for bridges, overpasses, etc.) is specified with antenna extended to 30 in. (762 mm).

4.3 TIRE INFLATION

For correct tire inflation pressures, refer to Table 1-2.

IMPORTANT

When using dual wheels, ensure that pressure of outside tires is 2 psi (14 kPa) less than that of inside tires.

TABLE 1-2: Tire Inflation Chart

TIRE SIZE	PLY RATING	LITTLE OR NO BALLAST	MAX. BALLAST OR OR HEAVY LOAD
18.4 x 38*	8	16 (110 kPa)	16 (110 kPa)
16.9 x 38*	8	20 (138 kPa)	22 (152 kPa)
15.5 x 38*	10	32 (221 kPa)	32 (221 kPa) Duals only
23.1 x 34	8	16 (110 kPa)	16 (110 kPa)
18.4 x 34*	8	16 (110 kPa)	18 (124 kPa)
23.1 x 30	8	16 (110 kPa)	16 (110 kPa)

*When used as duals, minimum tire pressure is 12 psi (82.5 kPa) and 14 psi (96 kPa) for 15.5 x 38. Use ballast on duals only.

4.4 WEIGHTS

Maximum operating weight . 22 000 lb (10 000 kg)
Recommended range . . . . . 17 000-19 000 lb (7730-8640 kg)

4.5 ENGINE

Type . . . . . Cummins Diesel

Model V504-C210

Maximum brake horsepower @ 2850 rpm (r/min) 192 hp (143 kW)

Maximum torque @ 1900 rpm (r/min) . . . . . 387 ft lb (525 N·m)

Full-load governed speed . . . . . 2850 rpm (r/min)

Full-throttle no-load speed . . . . . 3300 rpm (r/min)

Idle speed . . . . . 1000 rpm (r/min)

Bore . . . . . 4.625 in. (117 mm)

Stroke . . . . . 3.75 in. (95 mm)

Displacement . . . . . 504 cu. in. (8.26 L)

Compression ratio 17.0:1

Oil capacity . . . . . 28 qt US, 22.4 qt Cdn (26.5 L)

Oil pan angular capability . . . . . 30 degrees

Lubrication system: Full-flow filter, bypass oil conditioner and filter, oil-to-water cooler.

Engine mounts . . . . . VERSATILE design, full rubber isolation

4.6 COOLING SYSTEM

Capacity . . . . . 40 qt US, 32 qt Cdn (37.8 L)

Radiator area . . . . . 779.3 sq in. (4030 cm^2)

Radiator fins . . . . . 8.5 fins/in. (3.1 fins/cm)

Pressure cap . . . . . 7 psi (48 kPa)

System reservoir . . . . . Independent surge tank

Fan:

Type . . . . . Six-blade, sucker
Diameter . . . . . 22 in. (560 mm)

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8 Storage

8.1 GENERAL

When your tractor is not going to be used for several months, it must be prepared for storage to prevent damage to components. Prepare a kit for the long period of storage. Include plastic bags and tape to seal off openings; paint for scratched and chipped surfaces; grease and rust preventative; cleaning cloths and various fluids to refill all systems to proper level.

8.2 PREPARATION OF TRACTOR FOR STORAGE

After warming the engine, proceed as follows:

1. Drain crankcase.
2. Install new engine oil filters.
3. Fill crankcase with new oil.
4. Drain and flush cooling system. Refill it with a correct mixture of water and glycol base antifreeze.
5. Drain oil from axle housing. Refill with recommended lubricant (Ref. Table 1-5).
6. Drain oil from hydraulic circuit reservoir. Refill with recommended fluid. (Ref. Table 1-5).
7. Drain oil from transmission circuit. Refill with recommended lubricant (Ref. Table 1-5). Run engine to circulate coolant.
8. Operate transmission, hydraulic system, steering and brakes to distribute oil to all components.
9. Relieve tension of drive belts; e.g. alternator, air conditioner, compressor.
10. Remove both batteries, charge them fully. Store in a cool, dry place. Keep batteries fully charged. Bring them to a full charge monthly.

TABLE 1-8: Filters - 500 Tractors

LOCATION	PART NO.
Air Cleaner Element — Inner (safety)	33748
Air Cleaner Element — Outer	33747
Cab Pressurizer Element — Inner	30988
Cab Pressurizer Element — Outer	30986
Corrosion (DCA) Element	25881
Engine By-pass Oil Filter	711T106
Engine Crankcase Oil Filter	602T121
Fuel Filter	608T118
Hydraulic Filter, Steering Side (Return)	36169
Hydraulic Filter, Implement Side (Suction)	15799
Transmission Filter	SW2854
Transmission Oil Suction Screens	20199

11. Clean tractor entirely of all dirt, grease and other foreign matter. Touch up all painted surfaces which are scratched or chipped.
12. Jack up tractor and block up axles to remove weight from tires. Cover tires if they are exposed to heat and sunlight.
13. Coat all exposed hydraulic cylinder shafts with grease or rust preventative.
14. Using plastic bags or tape, seal the following tractor openings: air cleaner inlet, exhaust muffler, fuel tank breather tube and cap, radiator inlet hose, and air conditioning air intake screens.
15. Store tractor in dry, protected place. If tractor is to be stored outside, cover with a waterproof canvas or protective material to protect components.

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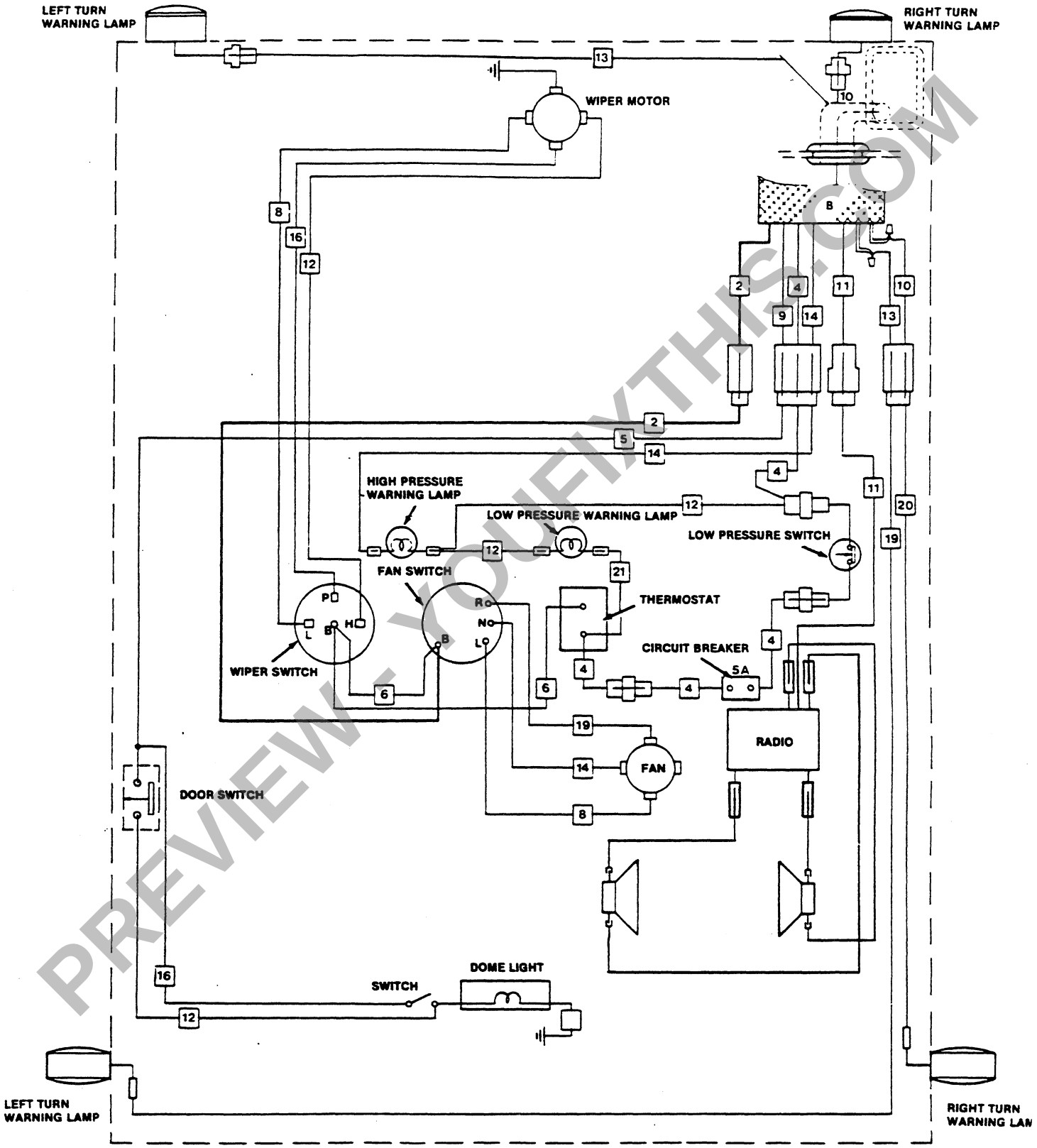


FIGURE 6-28: Wiring Diagram, Cab Roof

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4. Remove the end caps, shims and bearing cups. Discard shims and seal.

5. Before a shaft can be removed from the dropbox, one of the two bearing cones must be removed by using a press as shown in Figure 3-90.

NOTE

When supporting dropbox casting in press be sure the casting is level and the supports are as close to the center as possible. Support the bottom end using blocks or jack stand (1).

– CAUTION

BE ALERT

WEAR SAFETY GLASSES WHEN USING A PRESS.

6. Mount the dropbox in press with extended input shaft pointing downward. Insert two small blocks of wood between the input gear and casting. Use a step plate between input shaft and ram when pressing shaft out of bearing. Leave dropbox in press.

7. Remove shaft, leaving behind two spacers and gear. If mounted bearing and shaft do not need replacing, omit Step 8 and proceed to Step 9.

IMPORTANT

Do not press on the bearing cage of bearings.

8. Remove dropbox from press. Mount shaft in press with bearing and a seven in. (178 mm) long welded capped pipe by two in. inside dia with outer beveled edge as shown in Figure 3-91. Press bearing from shaft.

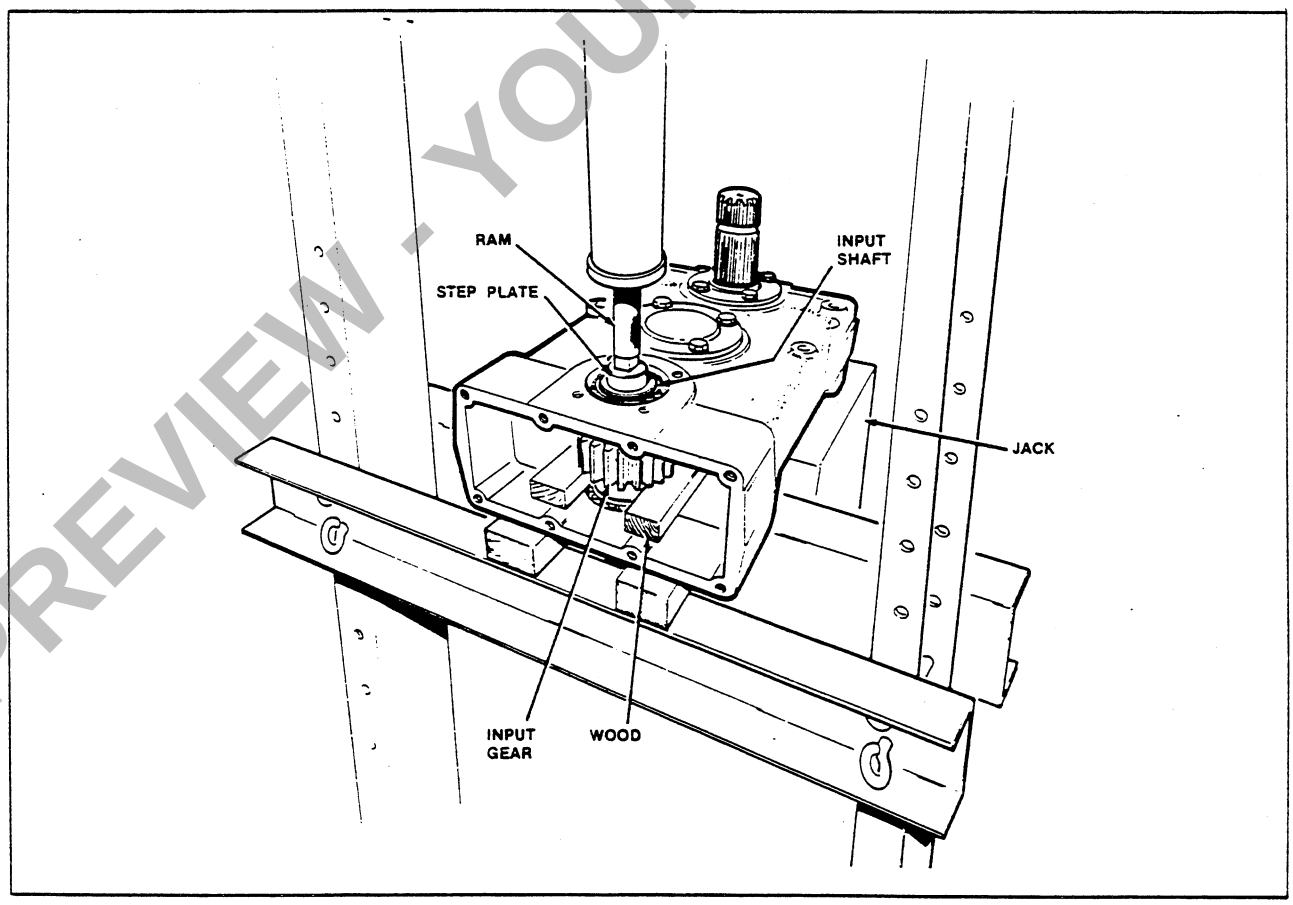


FIGURE 3-90: Dropbox Mounted in Press

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9.4 HYDRAULICS

Table 1-11 troubleshoots the simple problems and remedies of the hydraulic system. Refer to Section 5 - Hydraulic System for further service information.

TABLE 1-11: Steering and Implement Control

TROUBLE	PROBABLE CAUSE	REMEDY	REFERENCE
Noisy or erratic steering.	Cold oil.	Allow system to warm up.	
	Low oil level.	Fill.	
	Clogged suction filter.	Clean.	
	Air in system.	Check suction hose connections and filter gasket.	Section 5.
	Collapsed suction hose.	Replace.	Section 5.
	Faulty relief valve.	Check and/or replace.	Section 5.
Hard steering.	Engine idle set too low.	Set idle to 1000 rpm.	Cummins Operation and Maintenance Manual.
	Clogged suction filter.	Clean and/or replace.	
	System air leaks. Low relief.	Check suction hose connections and filter gasket.	Section 5.
		Replace seals.	Section 5.
No steering.	Low oil level.	Fill to proper level.	
	Plugged suction filter.	Replace filter.	
	Blown piston seals in cylinders.	Overhaul.	Section 5.

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3 Maintenance

3.1 GENERAL

The following details the recommended step-by-step procedures for removal, installation and adjustment of various controls. This subsection does not contain any information regarding disassembly, inspection, or assembly of the individual items which may require removal from tractor for repair or overhaul purposes; refer to subsection 4, Repair, for these procedures.

IMPORTANT

Park tractor on level ground; stop engine; set parkbrake; and chock wheels before doing any of the maintenance procedures in this subsection.

3.2 THROTTLE ADJUSTMENT

The throttle adjustments cover models with either the mechanical linkage (1977 models) or the cable linkage (1978/79). To adjust the throttle linkage, proceed as follows (Ref. Figure 4-15):

NOTE

There is no adjustment for the throttle speed setting on the fuel injector pump.

1. Remove the instrument panel cover to gain access to high and low speed adjustment screws.

2. Secure all cable or rod linkage positioning brackets and clamped surfaces before any adjustment is made. Check rod or cable ends for security and wear. Tighten or replace parts if necessary.

3. To adjust low idle speed setting, loosen jamnut on the low speed idle screw and turn screw in or out to adjust to 1000 rpm, using engine tachometer for reference. Tighten jamnut when adjustment is complete.

4. To adjust high speed setting, loosen jamnut on high speed screw and adjust to 3300 or 2850 rpm under full load. Use engine tachometer for reference.

NOTE

The engine should attain top idle rpm (up to 3300 rpm or 2850 rpm under full load) with throttle lever fully forward.

IMPORTANT

A binding or sticking throttle could cause a serious accident.

5. Tighten jamnut when setting completed.

6. Replace instrument panel cover.

3.3 CLUTCH LINKAGE ADJUSTMENTS

Make sure all adjustments and measurements are made with the clutch pedal in the full UP position and engine stopped. The adjustments apply to the clutch upper linkage connecting the clutch pedal to the bellcrank (Ref. Figure 4-16).

1. With bellcrank in position, (clutch pedal is in free position against the stop and valve spool fully retracted) set. 20 in. (5 mm) free play on the clutch lever linkage (Ref. Figure 4-16, Detail A).

2. Lock in position with jamnut (Ref. Figure 4-16, Detail A).

3. With adjustment made and bellcrank in position, set 7/10 in. (18 mm) free play on brake cable (Ref. Figure 4-16, Detail B).

4. Tighten setscrew and lock in position using jamnut (Ref. Figure 4-16, Detail B).

5. After adjustments are complete, spray all linkage connections on bellcrank with oil. Grease bellcrank pivot through grease nipple.

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