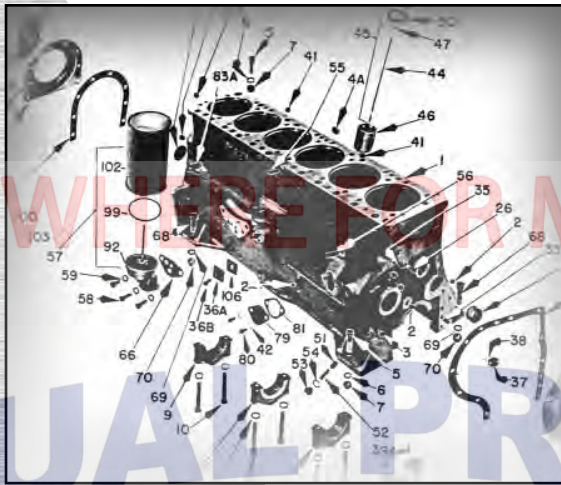




Trojan Parts Manual

3000 Wheel Loader

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TR-P-3000 W/L

Parts Manual



TROJAN

TRACTOR SHOVELS

**PARTS AND
OPERATORS MANUAL**

MODEL 3000

MANUAL No. TBO52

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BATAVIA, NEW YORK

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PARTS MANUAL AND OPERATING INSTRUCTIONS

Machine Serial No.

Engine Model Serial No.

Transmission Part No. Serial No.

Front Axle Part No. Serial No.

Rear Axle Part No. Serial No.

MODEL 3000

Manual No. TB052

MANUAL PART NO. 2022683

(Includes Revision 4)

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TROJAN DIVISION

TROJAN CIRCLE, BATAVIA, NEW YORK 14020

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TROJAN STANDARD PARTS SECTION

(See Index, Rear of Manual)

SAFETY PRECAUTIONS

The Trojan Tractor Shovel has been designed to incorporate every safety device possible.

The Trojan "Safety Curve Lift Arms*" which has been widely imitated but never equalled completely eliminates the shear hazard present in many other tractor shovels.

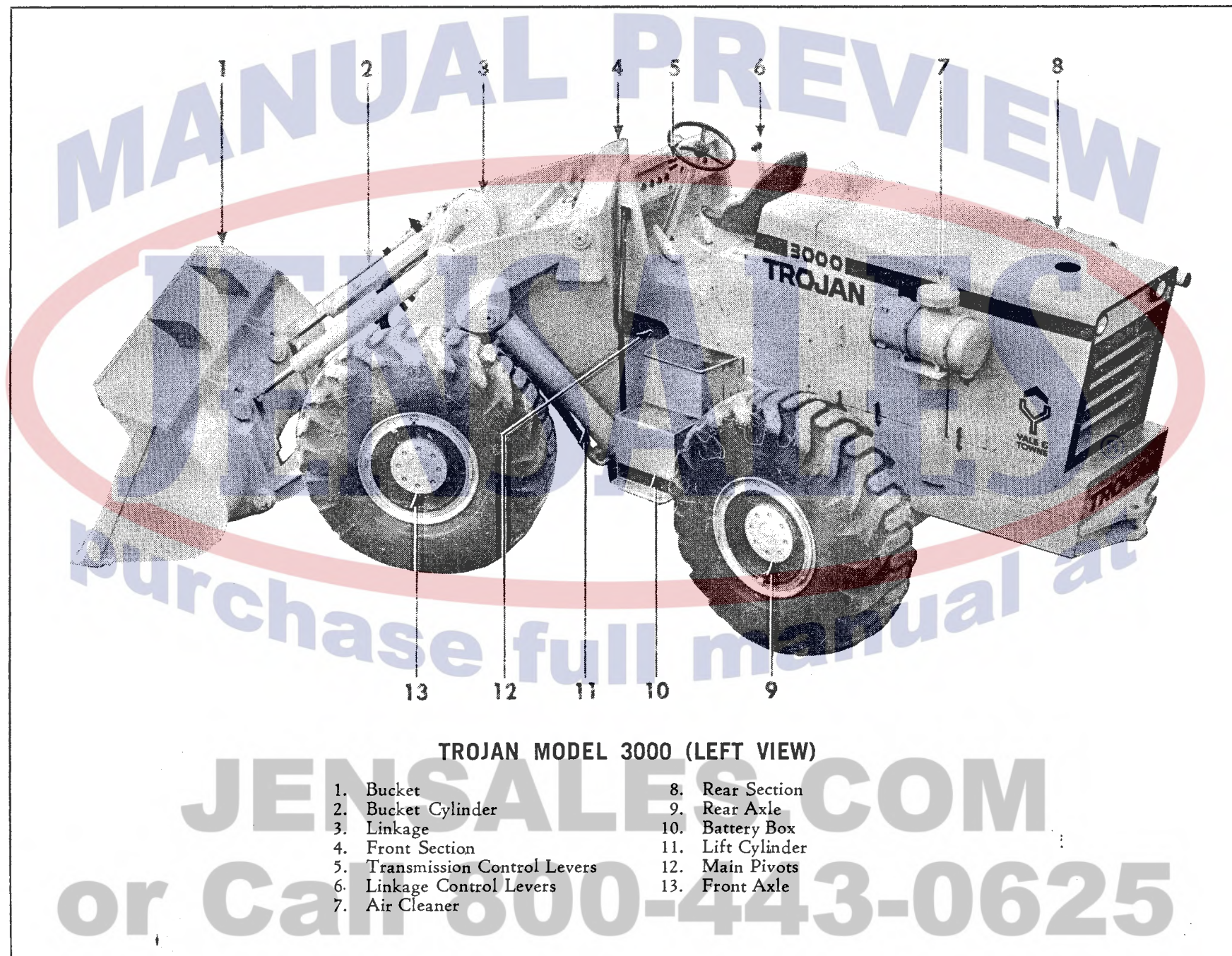
Your Trojan has large, well-positioned steps with adequate hand holds so the operator can easily climb to the seat without having to step on a slippery tire.

However, with all these safety features which have been incorporated in the design of the Trojan Tractor Shovel there are still the dangers of running over a man . . . dropping the bucket on him, etc. And therefore, the operator must be extremely careful in the operation of a big tool such as this. In order to help prevent accidents the following safety rules should be observed at all times:

1. Never leave the operators seat with the arms raised.
2. Never leave the seat with the engine running.
3. Set the parking brake before leaving the seat.
4. Always look carefully before starting the machine in motion. Have someone on the ground give a hand signal that all is clear.
5. Never lift the bucket over a ground crew or truck cab.
6. Never carry a rider in the bucket.
7. Keep the brakes properly adjusted.
8. Always stop the engine to make adjustments or lubricate the machine.

* Patented in the United States and Canada.

CLICK ANYWHERE FOR MORE DETAILS



TROJAN MODEL 3000 (LEFT VIEW)

- | | |
|--------------------------------|-------------------|
| 1. Bucket | 8. Rear Section |
| 2. Bucket Cylinder | 9. Rear Axle |
| 3. Linkage | 10. Battery Box |
| 4. Front Section | 11. Lift Cylinder |
| 5. Transmission Control Levers | 12. Main Pivots |
| 6. Linkage Control Levers | 13. Front Axle |
| 7. Air Cleaner | |

CLICK ANYWHERE FOR MORE DETAILS

GENERAL INSTRUCTIONS

TROJAN TRACTOR SHOVEL — MODEL 3000

ORDERING PARTS

In order to avoid delay, unnecessary correspondence, and to have your orders filled correctly, promptly and at the least possible expense, the following is the recommended procedure to use when ordering replacement parts. Call, wire or write your authorized TROJAN distributor, giving him the following information:

1. Your purchase order numbers.
2. Complete invoicing and shipping address.
3. Specify method of shipment; otherwise, least expensive method will be used.
4. Give the correct part numbers and descriptions, using your parts manual as reference.
5. Provide the model and serial number of your tractor shovel and the model and serial number of the major components for which these parts are required.

WHEN PARTS ARE RECEIVED

1. Check immediately for quantity, correctness and condition.
2. Advise your TROJAN distributor of any error.
3. Claims for damages during shipping, should be made to the carrier immediately.

SERIAL NUMBER PLATES

The tractor shovel serial number plate is located in the operator's compartment to the left of the seat and below the parking brake lever. See Fig. 2. Always give the serial number of the machine when ordering parts.

The Cummins Engine serial number plate is located on the engine to the rear of the injection pump and air compressor. The engine model and serial number are given on the engine serial number plate. Always provide the engine model and serial number when ordering parts from your Cummins Engine dealer.

The General Motors Engine serial number plate is located on the rocker arm cover. The engine model, serial number and assembly group numbers are listed. Always provide engine model and serial numbers when ordering parts from your local GM Diesel dealer.

The transmission serial number plate is located on the right rear of the transmission case. The part number and serial number of the transmission are stamped on the plate. See Fig. 1.

The Torque converter serial number plate is located on the converter housing. The part number and serial number of the converter are stamped on the plate.

The axle serial number plates are located on the front and rear axles on the left-hand side near the differential carrier. The model number and serial number of each axle are given on these plates.

The machine model and serial number, engine model and serial number, transmission part number and serial number, front axle part number and serial number and rear axle part number and serial number should be entered in the front of the parts and operator's manual for quick reference when ordering parts.

PREPARATION FOR OPERATION

Before starting your TROJAN Tractor Shovel, place it on level ground and make the following checks:

1. Look at the serial number plates and enter all model and serial numbers on the title page of this Parts Manual and Operating Instructions. A block on the title page is provided for this information.
2. Check the entire machine for damage in transit.
 - A. See that all bolts, nuts or other attaching parts are tight.
 - B. Pay particular attention to the axle, transmission, engine mounting bolts and wheel mounting nuts. Refer to the torque chart at the end of this manual.
3. Check all of the drain plugs, drain cocks, filler opening plugs, fuel lines, coolant lines and air cleaner connections to see that they are tight and do not leak.
4. Fill the fuel tank.
5. Check each battery cell. Make sure the plates are covered with fluid. Add clean, distilled water to cover plates if necessary.
6. Check to see that the cooling system is filled. Check for anti-freeze protection if freezing conditions are expected.
7. Grease all lubrication points, referring to the lubrication section of this manual for location and type of lubrication required.
8. Check the oil level of the following items, referring to the lubrication section of this manual for location, quantity and type of lubricant required:
 - A. Engine crankcase
 - B. Front drive axle (outer hubs—planetaries and differential)
 - C. Rear drive axle (outer hubs—planetaries and differential)
 - D. Main hydraulic reservoir.
 - E. Transmission

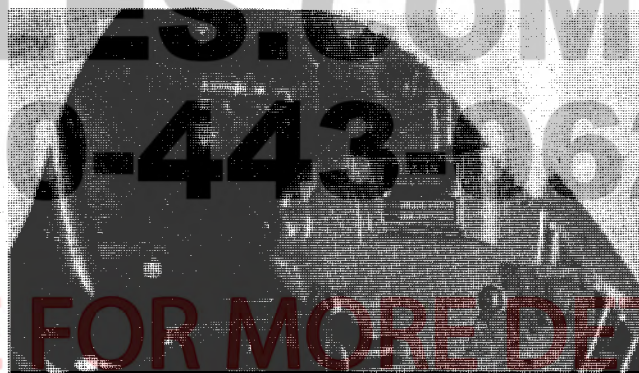


Fig. 1. Transmission Serial Number Plate

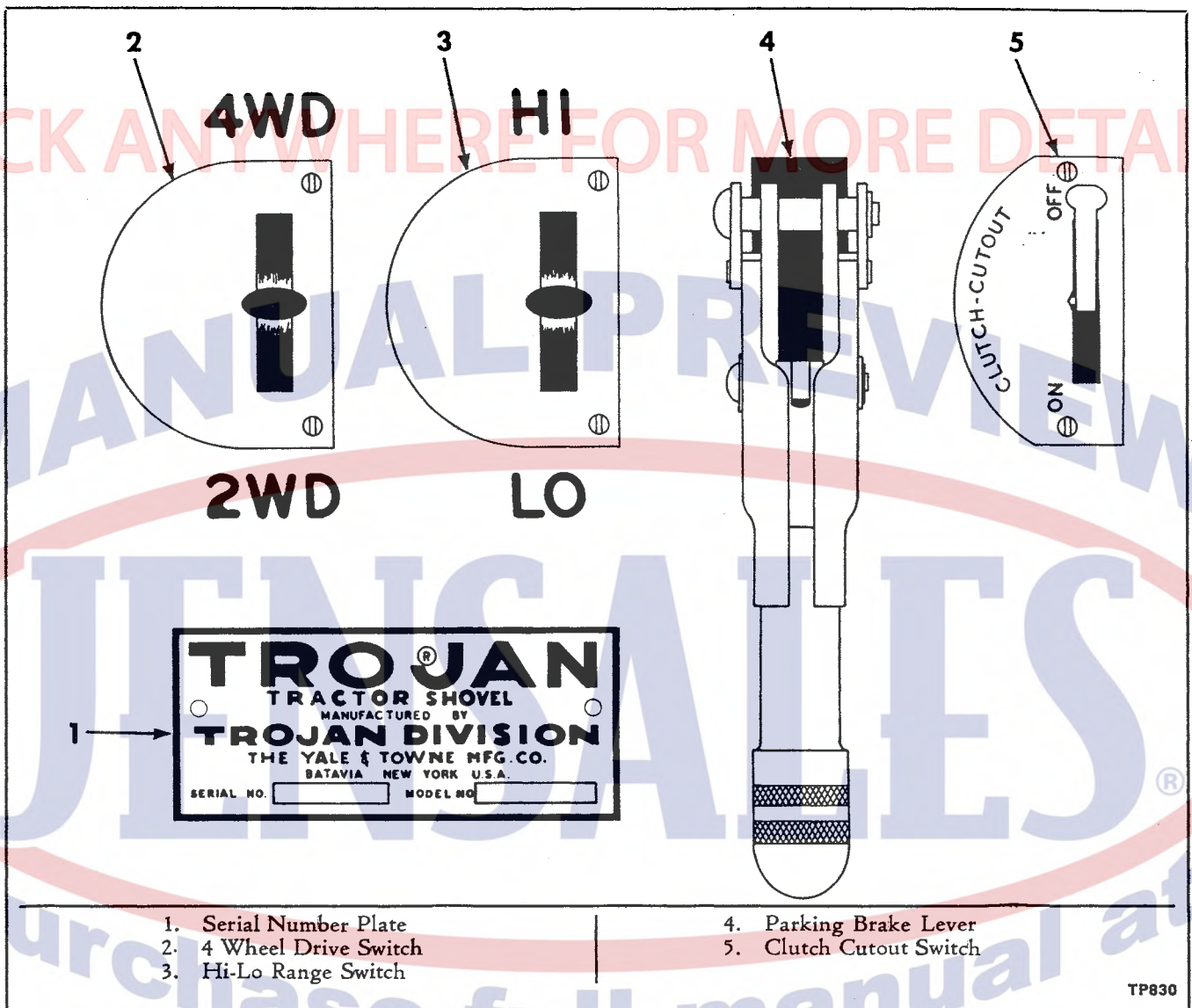


Fig. 2. Parking Brake and Switches

9. Check tire air pressure. Be sure valve caps are in place.

10. Refer to the list of capacities, electrical ratings and pressures, tabulated after the Instrument Panel and Operating Controls Section, for valves for this machine.

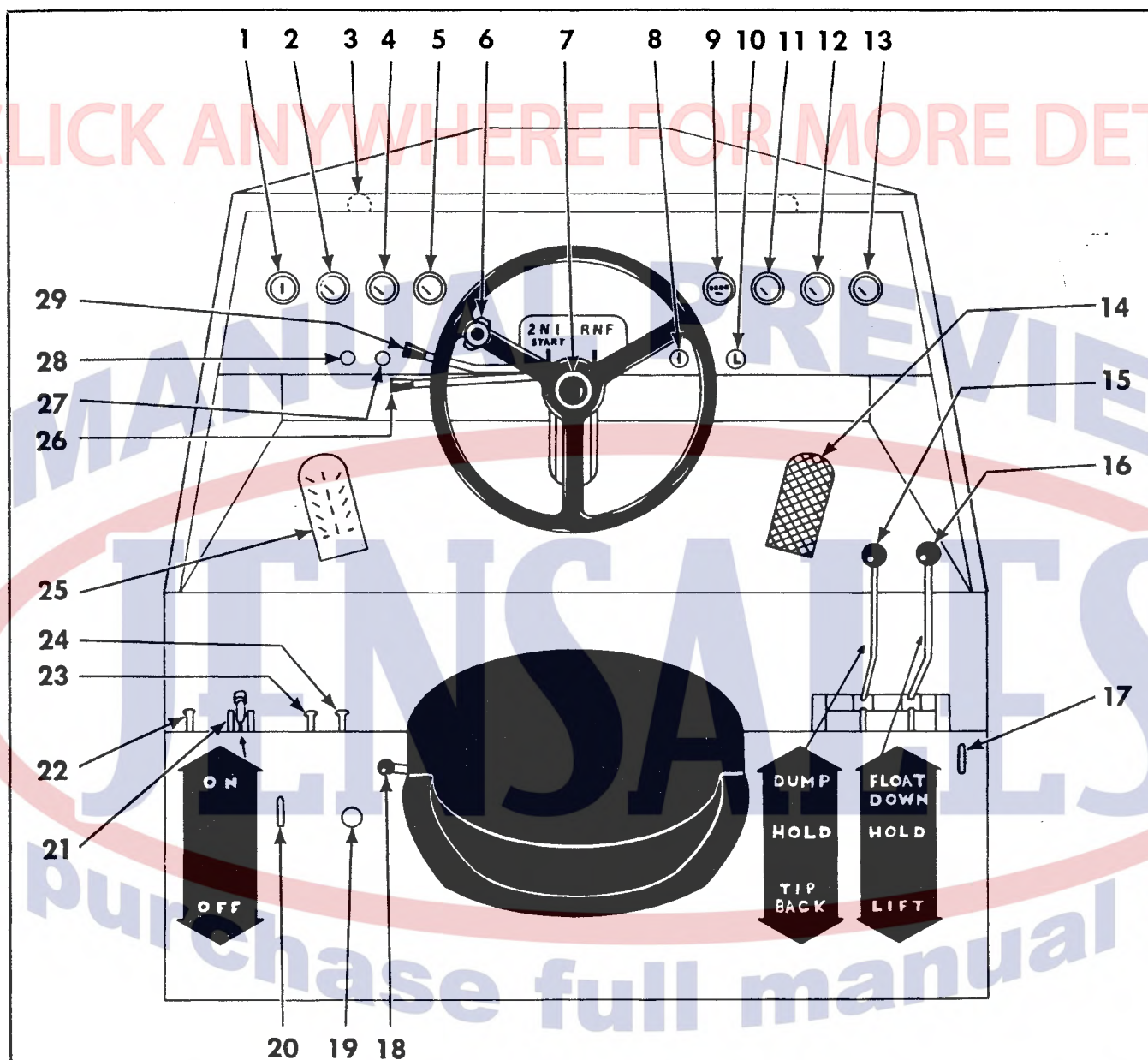
INSTRUMENT PANEL AND OPERATING CONTROLS

Before any operation is performed, study the start-up procedure, instrument panel and operating controls and shut-down procedure.

Before operating any machine, it is necessary for the operator to become thoroughly familiar with the location and function of the controls and instruments. Study the following paragraphs carefully to know the location and purpose of each item shown in Fig. 2.

The operator must work slowly and carefully until he becomes thoroughly familiar with the machine. Speed and skill will be attained more easily if the necessary time is spent acquiring complete familiarity with the machine and its operation.

The right side of the machine is to the right of the operator when he is sitting in the seat facing the bucket; the left side is to the left of the operator in this position.



1. Ammeter
2. Engine Oil Pressure Gauge
3. Dash Lamp
4. Engine Water Temperature Gauge
5. Fuel Gauge
6. Steering Wheel Spinner
7. Horn Button
8. Ignition Switch
9. Engine Hourmeter
10. Light Switch
11. Air Pressure Gauge
12. Transmission Clutch Pressure Gauge
13. Torque Converter Temperature Gauge
14. Accelerator Pedal
15. Bucket Control Lever

16. Lift Arm Control Lever
17. Engine Emergency Stop
18. Seat Adjustment Control
19. Ether Starting Kit
20. Engine Shut Down Control
21. Parking Brake Lever
22. Clutch Cut-Out Switch
23. Hi-Lo Range Switch
24. Four-Wheel Drive Switch
25. Brake Pedal
26. Directional Control Lever
27. Starter Button
28. Plug Button
29. Speed Range Control Lever

TP828

Fig. 3. Operator's Compartment

AMMETER (1 Fig. 3)

1. Location: The ammeter is mounted to the extreme left position on the instrument panel.
2. Purpose: The ammeter indicates the amount of current flow to and from the batteries. A reading in the minus - range indicates that the batteries are discharging; a reading in the plus + range indicates that the batteries are charging.

ENGINE OIL PRESSURE GAUGE (2 Fig. 3)

1. Location: The engine oil pressure gauge is the third gauge to the left of center on the panel.
2. Purpose: The engine oil pressure gauge indicates the pressure in the engine lubricating system. Refer to engine manufacturer's operation manual for correct operating pressure.

DASH LAMPS (3 Fig. 3)

1. Location: Two dash lamps are mounted above the instrument panel, one for each side of the panel.
2. Purpose: The dash lamps illuminate the instrument panel during night operation; they are controlled by the main light switch.

ENGINE WATER TEMPERATURE GAUGE (4 Fig. 3)

1. Location: The engine water temperature gauge is the second gauge just to the left of center on the panel.
2. Purpose: The engine water temperature gauge indicates the temperature of the engine coolant. Refer to engine manufacturer's operation manual for correct operating temperatures.

FUEL GAUGE (5 Fig. 3) (For Machines thru Serial No. 75-1067).

1. Location: The fuel gauge is located to the left of center on the instrument panel.
2. Purpose: The fuel gauge indicates the amount of fuel in the tank. It registers only when the ignition switch is in the ON position.

FUEL GAUGE (For Machines Serial No. 75-1068 & Higher).

1. Location: The fuel gauge is mounted in top of the fuel supply tank to the right of the operator.
2. Purpose: The fuel gauges indicate the amount of fuel in the tank at all times.

STEERING WHEEL SPINNER (6 Fig. 3)

1. Location: The steering wheel spinner is located on the steering wheel.
2. Purpose: The steering wheel spinner allows the operator to turn the wheel rapidly and easily in either direction.

HORN BUTTON (7 Fig. 3)

1. Location: The horn button is mounted in the center of the steering wheel.
2. Purpose: The horn button operates the electric horn. Depress the button to sound the horn.

IGNITION SWITCH (8 Fig. 3)

1. Location: The ignition switch is located on the lower edge of the instrument panel, to the right of the center of the panel.
2. Purpose: The ignition switch energizes the starting motor circuit and all gauges and switches except the engine hourmeter. Turn the key to the right for the ON position. Turn the key to the OFF position before leaving the operator's seat. Refer to shut-down procedure.

ENGINE HOURMETER (9 Fig. 3)

1. Location: The engine hourmeter is mounted just to the right of the center of the panel.
2. Purpose: The engine hourmeter indicates the operating time of the machine. It registers the operating time in hours and tenths of an hour. The operating time, as indicated on the hourmeter, should be used as a basis for lubrication and maintenance schedules.

LIGHT SWITCH (10 Fig. 3)

1. Location: The light switch is located to the right of the steering wheel below the hourmeter gauge on the instrument panel.
2. Purpose: Pull the light switch out to the first position to turn on the dash lights, headlights and red taillights. Pull it out to the second position to turn out the red taillights and to turn on accessory equipment connected to tail light terminal block. Dash lights and headlights remain on.

AIR PRESSURE GAUGE (11 Fig. 3)

1. Location: The air pressure gauge is mounted next to the hourmeter, just to the right of the steering wheel.
2. Purpose: This gauge indicates the air pressure in the air reservoir available for service brake power cluster operation. The gauge should read between 90 and 120 P.S.I. The machine must not be moved unless there is at least 60 pounds air pressure in the reservoir. If the air pressure falls below the specified range while operating, shut down immediately; refer to the brake section of this manual and correct the cause.

TRANSMISSION CLUTCH PRESSURE GAUGE (12 Fig. 3)

1. Location: The transmission clutch gauge is the third gauge to the operator's right on the panel.
2. Purpose: This gauge indicates the pressure of the transmission hydraulic system at the control valve that is available to actuate the transmission clutches. This pressure should read between 240 and 280 P.S.I. at 2,000 RPM. If clutch pressure falls below 240 P.S.I., investigate the cause immediately to prevent transmission clutch slippage. Refer to the transmission section in this manual.

TORQUE CONVERTER TEMPERATURE GAUGE (13 Fig. 3)

1. Location: The torque converter temperature gauge is mounted to the extreme right of the instrument panel.
2. Purpose: This gauge indicates the temperature of the oil in the torque converter and transmission lubricating system as it leaves the torque converter. It will normally register between 210° and 230°F. If the temperature rises above 230°F., shift to a lower operating range. Should the temperature remain above normal, investigate immediately and correct the cause. Refer to the torque converter section in this manual.

ACCELERATOR PEDAL (14 Fig. 3)

1. Location: The accelerator pedal is mounted on the front floorboard, to the right of the operator.
2. Purpose: Press the accelerator pedal to increase the speed of the machine. Release pressure to decrease speed.

BUCKET CONTROL LEVER (15 Fig. 3)

1. Location: The bucket control lever is the inside lever located to the operator's right.
2. Purpose: The bucket control lever has three positions for bucket control. Push the lever in the forward dump position to tilt the bucket to dump the contents; release the lever to the center hold position to hold the bucket in any given position; place the lever in the rear tip back position to hold the bucket in an upright position for transporting loads. The lever operates at any bucket height. Refer to the bucket position indicator and lever description and operating instructions for further description.

LIFT ARM CONTROL LEVER (16 Fig. 3)

1. Location: The lift arm control lever is the outer lever located to the right of the operator.
2. Purpose: The lift arm control lever has four positions. To raise the bucket, pull the lever back to the lift position. To hold the bucket at any height, move the lever forward one position to HOLD. To lower the bucket slowly with positive hydraulic down pressures, move the lever forward one position to the DOWN position. Move the lever all the way forward to the FLOAT position to lower the bucket quickly, or to allow the bucket to move freely following the grade contour while backgrading.

ENGINE EMERGENCY STOP CONTROL (17 Fig. 3) (GM Diesel Only)

1. Location: The engine emergency stop control is located on the panel to the right of the operator.
2. Purpose: The engine emergency stop control is to be used only when normal engine stopping procedures fail. Pull the control to cut off all air flow to the engine and stop it immediately. When the engine is stopped by this method, it must not be restarted until the cause of trouble is repaired. (REFER TO MACHINE SHUT-DOWN PROCEDURES)

SEAT ADJUSTMENT CONTROL (18 Fig. 3)

1. Location: The seat adjustment control is located on the seat base, to the left of the operator.
2. Purpose: Pull the seat adjustment control to the rear to release the catch; this permits the operator to move the seat backward or forward.

ETHER START KIT CONTROL (19 Fig. 3)

1. Location: The ether start kit control is to the left of the operator's seat above the parking brake lever.
2. Purpose: The ether start kit supplies a charge of ether to the intake manifold for starting in cold weather. To use kit, pull the control once, then immediately press the starter button. Refer to start-up procedure in cold weather (+40°F. and below)

ENGINE SHUT-DOWN CONTROL (20 Fig. 3) (GM Diesel Only)

1. Location: The engine shut-down control is located to the left of the operator's seat and above the parking brake lever.
2. Purpose: Pull the engine shut-down control to shut off the flow of fuel to the engine, stopping the engine. Hold until engine stops, then return to original position. Turn ignition switch to off position. Refer to shut-down procedure.

ENGINE SHUT-DOWN CONTROL (8 Fig. 3) (Cummins Diesel Only)

Turn ignition switch to OFF position.

PARKING BRAKE LEVER (21 Fig. 3)

1. Location: The parking brake lever is located immediately to the left of the operator's seat.
2. Purpose: Pull the lever up to set the parking brake. Release the parking brake by moving the lever down before putting the machine in motion to prevent damage to drum and lining.

CLUTCH CUT-OUT SWITCH (22 Fig. 3) (5 Fig. 2)

1. Location: The clutch cut-out switch is located to the extreme left of the operator adjacent to the seat.
2. Purpose: Position the clutch cut-out switch to the ON position to automatically disconnect the transmission clutches each time the service brakes are applied. This allows full engine supplied hydraulic power to be used to operate the lift and bucket cylinders.

TRANSMISSION RANGE SWITCH (23 Fig. 3) (3 Fig. 2)

(For Machines Having Serial No. thru 75-1094).

1. Location: The transmission range switch is the second switch to the left of the operator's seat.
2. Purpose: The transmission range switch selects either high or low transmission range. The high range provides the higher speeds for either setting of the speed control lever. The low range provides the lower speeds for either setting of the speed control lever.