80 Cruz-Air Logger

Operators Manual

S406214M2

Reprinted

CASE

CAUTION: The only person required when the machine is operating is the Operator. Never allow anyone to ride on the outside of the machine. Never allow anyone to ride in or on the attachment.

Never get on or off a machine while it is moving.

WARNING: PREVENT SERIOUS BODILY INJURY. Use proper traveling speeds and boom positions to maintain proper vehicle weight distribution on tires and axles. Overloading can cause failure and possible loss of vehicle control. See page 38 for details.

SERVICE

Never attempt to disconnect any hydraulic lines unless boom is resting firmly on ground and hydraulic line pressure is relieved by working the controls back and forth several times with engine off.

CAUTION: Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pinhole leak, can penetrate body tissues causing serious injury. Use a piece of wood or cardboard when looking for leaks - never use the hands or other parts of the body.

Relieve hydraulic pressure before disconnecting circuits. When reassembling make absolutely certain that all connections are tight.

If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious complications may arise if medical attention is not given at once.

WARNING: Never refuel when the engine is hot or running. DO NOT SMOKE when refueling, using starting fluid, or working with batteries.

CONTROLS – IDENTIFICATION AND USE

Information on the location, function and operation of the CRUZ-AIR controls are provided in the following pages. The controls and instruments in the operator's compartment will be discussed first, followed by a discussion of the instruments located on the engine shroud instrument panel.

The readings indicated as "Normal" on the instruments are based on general applications under normal working conditions. It is possible that instances may arise when these readings do not agree with the actual gauge readings obtained in the field. If it is felt that a malfunctioning component or system is the cause of the difference in readings, refer to the Service Manual supplied with the machine, or consult your Drott Dealer.

WARNING: CROWD AND SWING CONTROLS ARE INTERCHANGEABLE. THEREFORE THE OPERATOR (REGARDLESS OF EXPERIENCE) MUST CHECK CONTROLS PRIOR TO OPERATION.

IMPORTANT: Crowd and Swing Controls are interchangeable on SN 45883 up to SN 6299274. On units SN 6299274 and after the only control pattern authorized by Drott is the one shipped from the factory (swing control on foot pedal and crowd control on lever).

WARNING: Any changes to the controls must be clearly noted and posted in the Operator's Cab. If any control changes are made, a new Operator's Control Pattern decal must be installed in the cab to warn other operators of the changes.

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INSTRUMENT PANEL CONTROLS

1. OIL PRESSURE GAUGE indicates pressure of engine lubricating oil. Reading should remain constant without fluctuation. Detroit Diesel Engine has pressure reading of 35 to 50 PSI.

2. WATER TEMPERATURE GAUGE indicates the temperature of the engine coolant. Needle should remain just right of center when fully warmed and operating.

3. TORQUE CONVERTER PRESSURE GAUGE indicates pressure of oil in Transmission-Torque Converter system. Reading should range between 240 and 280 P.S.I.

4. AMMETER indicates the condition of the electrical system, i.e. whether battery is charging or discharging. Steady reading of "O" (mid-point) to plus 3 amps is normal.

5. FUEL GAUGE indicates the amount of fuel left in the 105 gallon tank.

6. HOURMETER indicates total engine running time. Use this instrument along with a calendar to carry out your scheduled preventive maintenance program.

7. TORQUE CONVERTER TEMPERATURE WARNING LIGHT lights when the Torque Converter oil temperature exceeds the upper limit.

8. LIGHT SWITCH controls instrument lights, head and tail lights, and clearance lights. It has four positions and is shown in the first, or "OFF" position. When placed in the second position, electrical circuits to the instrument and tail lights are completed. The third position turns on the headlights.

9. & 10. INSTRUMENT LIGHTS illuminate the instrument panel for night operation.

OPERATING THE CONTROLS

The 80 CRUZ-AIR is equipped with tandem hydraulic pumps and series-type control valves which permit the simultaneous operation of the hoist, crowd, swing and tool functions. The swing and tool functions are operated by foot pedals; leaving the hands free to work the hoist/utility, crowd and auxiliary controls. Become thoroughly familiar with the controls before attempting to operate them in unison. The tool pedal controls the clam boom cylinder, and/or the rotation of the pulpwood clam.

WARNING: CROWD AND SWING CONTROLS ARE INTERCHANGEABLE. THEREFORE THE OPERATOR (REGARDLESS OF EXPERIENCE) MUST CHECK CONTROLS PRIOR TO OPERATION.

NOTE: The seat should be adjusted to suit the operator. This should be done to assure safe and efficient machine operation.

NOTE: Monitor the warning lights and gauges while working. Any abnormal or erratic indication is cause for immediate shutdown.

Operating speeds for the individual work functions can be varied by "feathering" the controls. The engine should never be used as a substitute for the "feathering" technique. Move it slightly to start the work function, then complete the control movement smoothly. Use the same technique to stop the work function. Partially neutralize the control until the motion slows, then move the control to neutral. Careful practice with the CRUZ-AIR will help develop a smooth, well balanced working style, with maximum safe overlap of motions. Jerky, erratic operation may appear to be "fast", but this type of operation produces excessive wear on the machine without increasing production. Maximum production can be achieved when a comfortable pace is established and maintained.

LOGGING OPERATIONS

1. The CRUZ-AIR is equipped with clams for handling 8 ft. long (2.4 meters) pulpwood, logs up to 16 ft. long (4.8 meters), or tree length timber. For logging operations the hoist cylinder adjustment pin should be in the lower set of holes and the main boom should be in the "high-lift" position.

When operating with pulpwood clam the utility control lever (figure 11) is used to open and close the clam and the tool pedal controls clam rotation. When picking up a load, work the clam into the pile by simultaneously using the clam and boom hoist cylinders. Never force the clam into the pile with the hoist cylinder alone.

If pulpwood protrudes from the side of the truck, push it into place with the next clam load. Don't use the empty clam to force the pulpwood into place.

ADJUSTMENTS

HOIST CYLINDER ADJUSTMENT

The base end of the main boom hoist cylinders is attached to a support pivot which can be adjusted to provide higher dump height. The support pivot is secured to the mast by a fixed pivot pin and a second set of pins that are retracted and extended manually. These pins engage either one of two sets of holes in the mast ears.

Adjust the hoist cylinders as follows:

1. Set the boom on the ground, after the engine has been shut off. This will relieve pressure on the support pivot and holding pins.

2. Start the engine.

3. Manually unlock the pins from the holes in the mast.

NOTE: Both pins must be disengaged before support pivot can be repositioned. If difficulty is encountered, work hoist control back and forth several times.

4. When the pins are disengaged, use hoist control to move hoist cylinder support pivot to align new positioning holes. Extend hoist cylinders to move pivot from top to bottom set of holes. Retract hoist cylinders to move pivot from bottom to top set of holes.

SCHEDULED PREVENTIVE MAINTENANCE

DELIVERY INSPECTION

Fuel Tank	Fill with approved fuel
Hydraulic Reservoir	Check fluid level and fill
Swing Gearbox	Check fluid level and fill
Engine Crankcase	Check oil level and fill
Radiator	Check coolant level and fill
Batteries	Check electrolyte level and fill
Transmission - Torque Converter	Check fluid level and fill
Differential	Check oil level and fill
Planetary Hubs	Check oil level and fill
Accelerator Master Cylinder	Check fluid level and fill
Tires	Check for proper inflation and fill
Turntable	Torque capscrews
Engine	Refer to Manufacturer's literature

END OF FIRST DAY OR 8-10 HOURS

Hydraulic Filters	Replace filter element

END OF FIRST WEEK OR FIRST 50 HOURS

Transmission - Torque Converter	Drain and refill
Turntable	Torque capscrews

DAILY OR EVERY 10 HOURS

Boom	Lubricate all grease fittings
Turntable	Lubricate open gear
Hydraulic Reservoir	Check and fill if necessary
Engine Crankcase	Check oil level
Engine Cooling System	Check coolant level and fill
Fuel Tank	Drain moisture (morning) fill (night)
Outrigger Arm Channel	Clean
Tires	Check for proper inflation and fill
Operator's Cab	Clean thoroughly
Operating Controls	Check for proper Operation

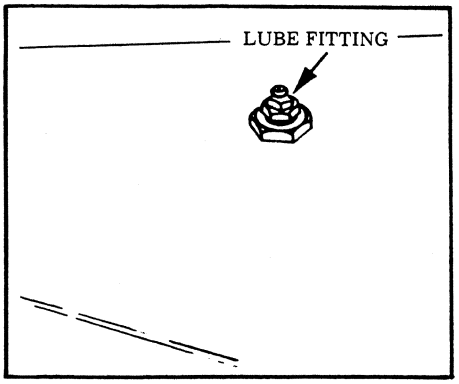


Figure 47.

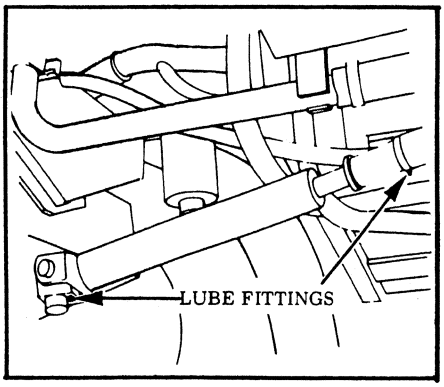


Figure 48.

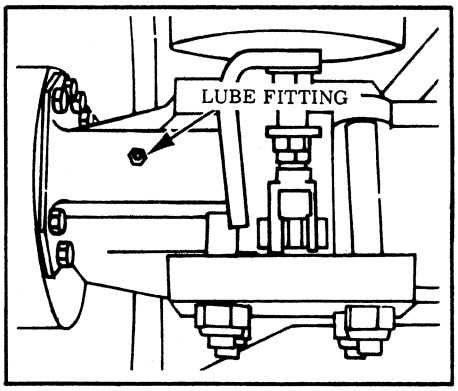


Figure 49.

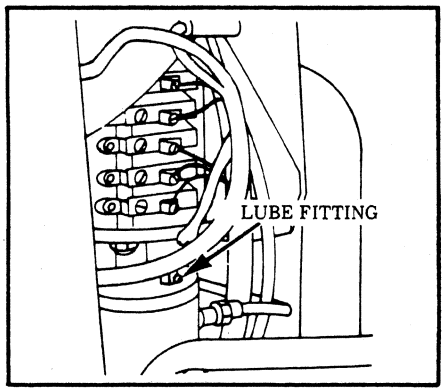
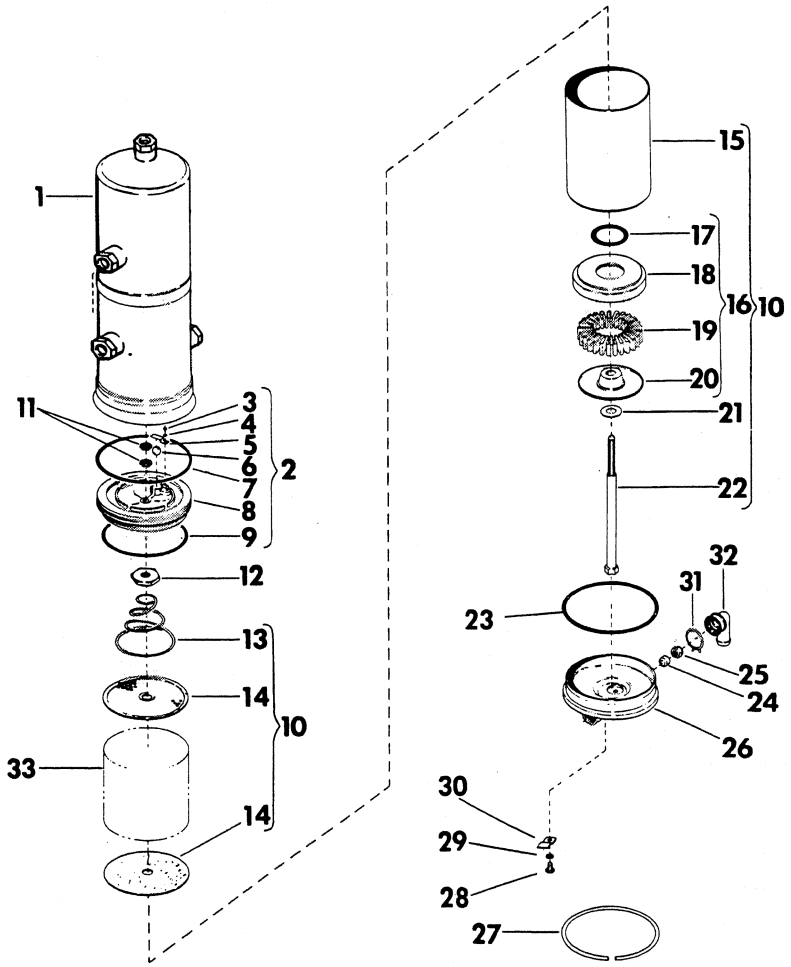
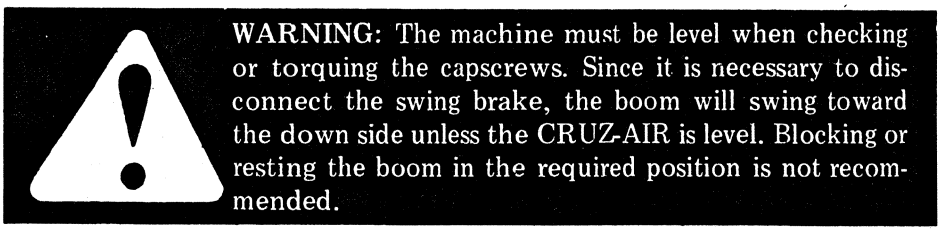


Figure 50.



1. Air Dryer Housing
2. Plate Assembly
3. Self-tapping Screw
4. Lockwasher
5. Valve Cover
6. Valve Ball
7. O-Ring
8. Plate
9. O-Ring
10. Cartridge Assembly
11. Nut
12. Spring Retainer
13. Conical Spring
14. Perforated Plate
15. Cartridge Shell
16. Filter Assembly
17. Filter Gasket
18. Filter Cover
19. Filter Paper
20. End Plate
21. Flat Washer
22. Cartridge Bolt
23. O-Ring
24. Valve
25. Self-Locking Nut
26. End Cover
27. Retaining Ring
28. Capscrew
29. Lockwasher
30. Retaining Clip
31. Hose Clamp
32. Elbow
33. Loose Bulk Desiccant

Figure 59. Compressor Air Dryer



a. With the CRUZ-AIR on level ground, swing the boom to the rear of the machine and extend the boom upward.

b. It is necessary to remove the swing gearboxes to reach the capscrews in the area of the gearboxes. Remove the capscrews securing the gearboxes to the mounting plates then swing the gearboxes out of the way and block them firmly in position.

NOTE: Torque values when using Loctite TL-242 (blue) applied to the threads and under the head, is as follows: When using a 1-5/16" socket and 36" long, 600 pound capacity wrench, torque to 560 ft.-lbs. When using the 1-5/16" socket with a 30" torque wrench horizontal extension PLUS the 36" long 600 ft.-lbs. capacity wrench, torque to 305-ft. lbs.

c. Use a 36 in. Torque Wrench with a 10 in. vertical extension and 1 1-5/16 in. 12 point drive socket to reach the capscrew located near the right swing gearboxes. The capscrews near the center swing gearbox are under too many tubelines to permit the use of the vertical extension. The torque wrench and socket will be sufficient here.