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MANUAL PREVIEW

Allis Chalmers

Operator's Manual

H4 & HD4

Tractor, Loader,
and Ripper

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AC-O-H4,HD4

Operator's Manual

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OPERATORS INSTRUCTIONS

FOR MODEL H 4 & HD 4 TRACTORS, LOADER and RIPPER



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GENERAL SPECIFICATIONS

TRANSMISSION

Type	Constant mesh helical gear
Speeds (At Rated 2100 RPM) One to One Converter Ratio	
1st Forward	1.81 MPH
2nd Forward	2.81 MPH
3rd Forward	4.88 MPH
1st Reverse	2.09 MPH
2nd Reverse	3.24 MPH
3rd Reverse	5.63 MPH

CAPACITIES

Cooling System	.16 qts.
Engine Crankcase	
Oil Change	8 qt.
Oil and Filter Change	9 qt.
Hydraulic System (Tractor only)	36 qt.
Hydraulic System with Loader	16 gal. approx.
Transmission	12.25 qt.
Shuttle Clutch & Converter	26 qt.
Final Drives Each	6.7 qt.
Fuel Tank	18 gal.

STEERING

Method	Multiple disc clutch
Type	Dry
Disc Diameter	9-7/8"

SHUTTLE CLUTCH

Method	Multiple disc
Type	Wet hydraulically operated
Number Discs	4 forward, 4 reverse

TRACK

Tread Width (center to center of track)	51"
Length of Track on Ground (center to sprocket to center of idler)	.69-3/4"
Width of Shoes	
Optional	10"-12"
Number of Shoes (Each Track)	36
Track Pitch (center of pin to center of next pin)	6"
Number of Truck Wheels (each track)	5
Number of Support Rollers (each track)	1

LOADER

BUCKET

Rated Capacity	1 cu. yd.
Width	.66"
Dump Clearance (Full Raise)	.98"
Hinge Pin Height (Full Raise)	120"
Maximum Dump Angle (Full Raise)	45°
Dumping Reach (Full Raise)	.27"
Dump Clearance (Full Raise) 45°	.98"
Dumping Reach (Full Raise) 45°	.29"
Tip-Back Angle (Ground Level)	38°
Tip-Back Angle (Maximum)	56°
Digging Depth	.6" at 6°
Grading Angle	.74°

HYDRAULICS

Capacity of System (gallons)	approx. 16
Pump (G.P.M.)	24 @ 1600 PSI & 2100 Engine RPM
Lift cylinder	4" Diam. 25-1/2" Stroke
Dump Cylinder	3-1/2" Diam. 20-1/2" Stroke
Relief Valve (PSI)	1600

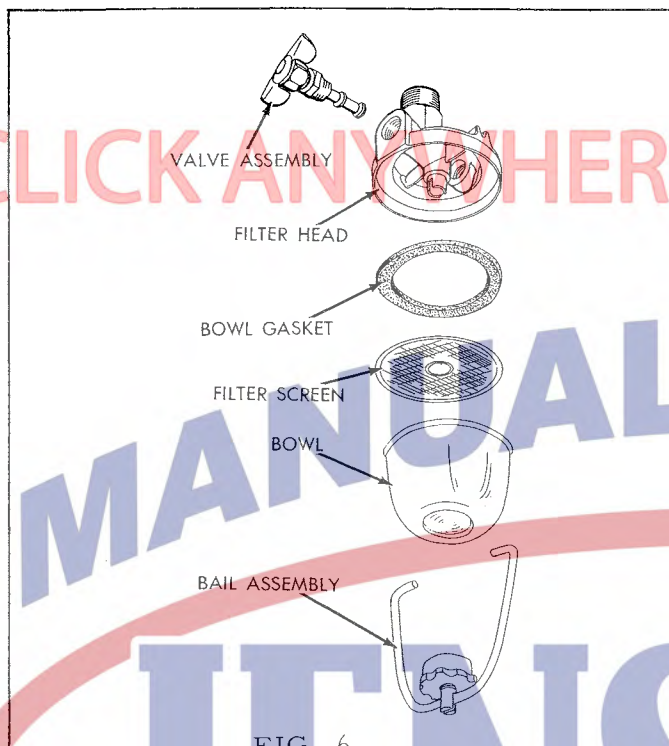


FIG. 6



FIG. 7

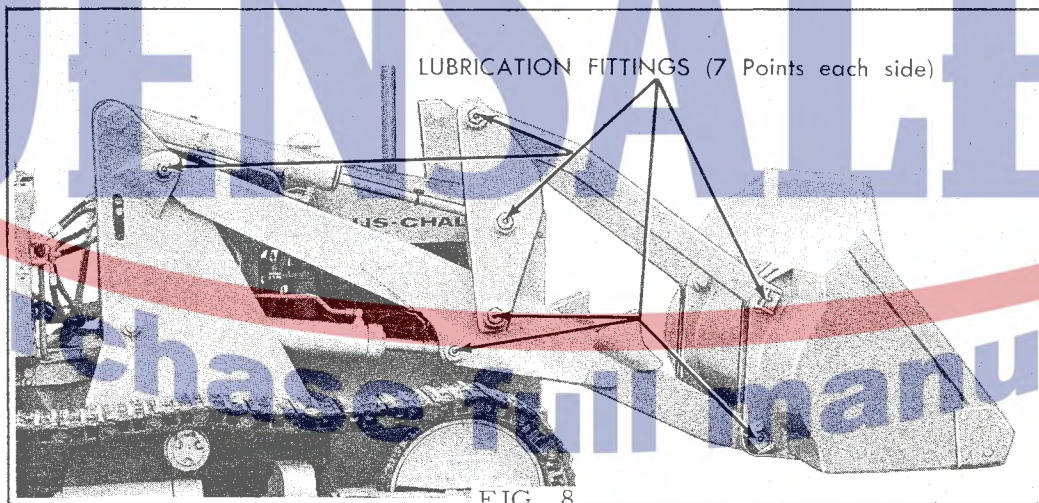


FIG. 8

5. FUEL FILTER BOWL - GASOLINE & DIESEL (Figs. 6 & 7)

Check daily and clean when the water or sediment is visible. Clean filter element when necessary.

The fuel filter is located at bottom of fuel tank and is provided for the purpose of keeping dirt and water from entering the carburetor, or fuel injection pump. However, the best results are obtained by using adequate fuel storage handling facilities.

6. LUBRICATE LOADER AND RIPPER PIVOT POINTS (Fig. 8, 9 & 10)

Lubricate the loader and ripper pivot points daily or after 8 hours of operation. Use high grade chassis lubricant. Wipe all fittings clean before applying grease.

7. BATTERY (S)

Check the electrolyte solution in the battery at least once a week (40 hours) to see that it is at the proper level. This level should be maintained to lower edge of filler tube, which is about $3/8$ " above top of separators.



Keep all open flame away from battery as an explosive gas is liberated when battery is being charged or discharged.

The battery supplied with your tractor has a lead washer type valve in the filler tube to prevent over filling. Never add anything to the battery solution except DISTILLED OR RAIN WATER. Boiled water will not do. The supply of water should be kept in clean covered vessels of glass, china, rubber or lead.



FIG. 32

Loading (Fig. 32)

The H4 - HD4 tractor equipped with a loader makes an exceptional production team - the maximum 56° roll back of the bucket assists in completely filling it on each pass.

1. In loading from a bank or stockpile, position the bucket so that it is level with the ground. The bucket must not be rolled back - thus riding the bucket on the heel wasting power and preventing bucket from entering the ground.
2. Move the tractor forward into the stockpile. As the cutting edge penetrates the material raise the lift arm slightly. Use the forward gear that will provide penetration without excessive engine lug.
3. When the bucket has entered the material far enough to get the bucket full - roll the bucket completely back, taking advantage of maximum breakaway.
4. With the bucket completely loaded the operator backs away naturally and quickly only far enough to allow him to turn and move up to the truck to be loaded.

Increase production: Spot the next truck to be loaded on the opposite side. This will allow the operator to clean up and maintain the loading area. Also by alternating the direction of turning, equal life can be expected from the steering clutches, brakes and the track assemblies.

Stripping and Stockpiling (Fig. 33)

Stripping of top soil and stockpiling it for later use is a simple matter for this crawler tractor and loader. This is an efficient method of loading the top soil for removal.



FIG. 33

In stripping top soil, start with bucket in a level position and maintain a level cut. If an error is made, reposition the tractor for a level attitude and start the cut over.

To start the cut place the bucket at an approximately 5° angle. With the lift-lower lever in the center of hold position, move the tractor forward. In hard to penetrate material, a slight down pressure on the lift arms may be necessary.

As the tractor moves forward the depth of cut can be adjusted by a slight lift on the lift arms or by slightly rolling the bucket back. Cut only as much as the tractor can handle.

When the bucket is full and pushing a good load,

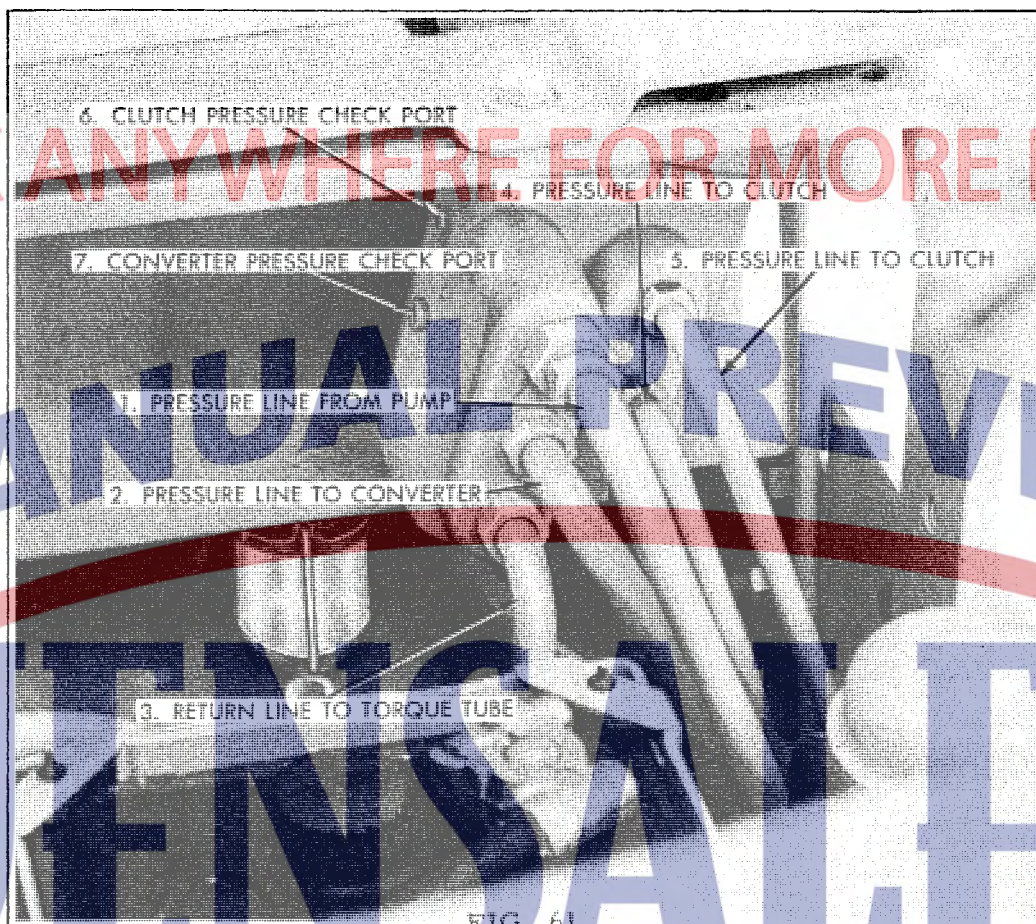


FIG. 61

CLUTCH PRESSURE (Fig. 61)

To check the clutch pressure install a pressure gauge at check port "6" (See Fig.). Operate tractor engine at high idle. Pressure should be 210 to 230 PSI.

NOTE: Check with system at operating temperature.

CONVERTER PRESSURE (Fig. 61)

To check converter pressure install a pressure gauge at check port "7" (See Fig.). Operate tractor at high idle. Pressure should be 60 to 120 PSI.

NOTE: Check with system at operating temperature.

PUMP (Flow Rate) (Fig. 61)

Remove pressure line "1" (See Fig.) from clutch control valve. Connect line "1" to pressure or inlet line of flow rater.

Remove converter line "2" (See Fig.) from clutch control valve. Connect return line or outlet line from flow rater to line "2".

CAUTION: Flow rater return line must be connected to line "2". Do not return directly to sump.

Operate tractor at 2100 RPM. Check pump volume to 1000 PSI.

CAUTION: Do not exceed 1000 PSI. With flow rater connected in this way, there is no relief valve to protect flow rater or pump.

Pump volume should be 8.5 GPM at 1000 PSI and 2100 RPM.