



J. I. Case

Service Manual

**9110, 9130, 9170, 9180,
Steiger, Puma, Wildcat,
Bearcat, Cougar & Panther
Volume 1 of 3**

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Service Manual

CIH-S-9110+

9100 Series Tractor Service Manual

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General Specifications

Wheel Bolt Torque

Tighten the wheel lug bolts to 600 ft-lb (814 N.m) every 10 hours for the first 50 hours. Repeat whenever the wheels are removed and remounted.

IMPORTANT: The 600 ft-lb (814 N.m) specification will apply when lug bolts are clean and dry. If lug bolts are clean and dipped in SAE 30 oil, tighten the bolts to 450 ft-lb (610 N.m).

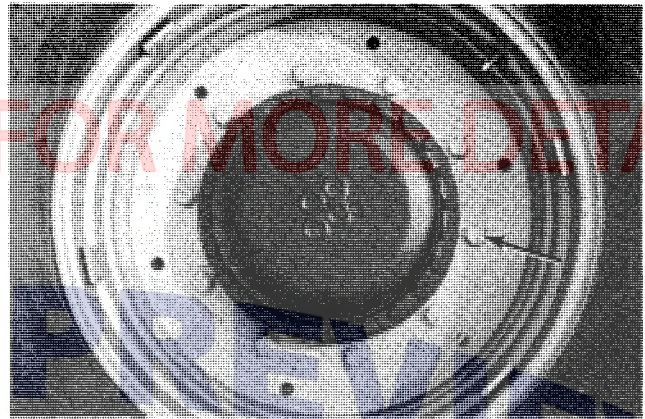


Figure 19:

Dual Bolt Torque (Rim Style Duals)

Tighten the dual bolts to 450 ft-lb (610 N.m) every 10 hours for the first 50 hours. Repeat whenever the wheels are removed and remounted.

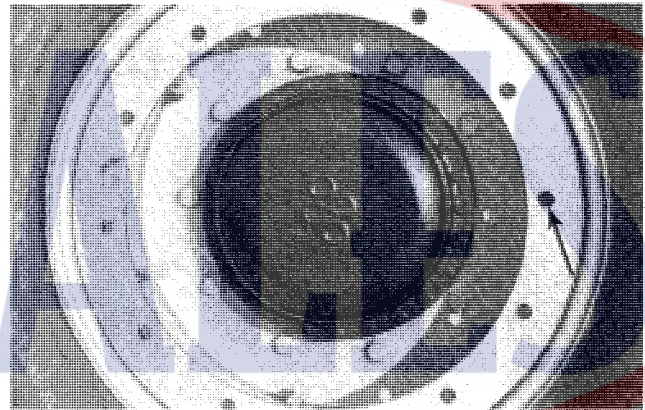


Figure 20:

Dual Bolt Torque (Spacer Band Style)

Tighten the dual bolts on spacer band style wheels to 200 ft-lb (271 N.m) every 10 hours for the first 50 hours. Repeat whenever the wheels are removed and remounted.

Tighten the dual bolts evenly until the spacer is seated. Then tighten alternately and evenly in a star configuration to 200 ft-lb (271 N.m). **Do not** over tighten.



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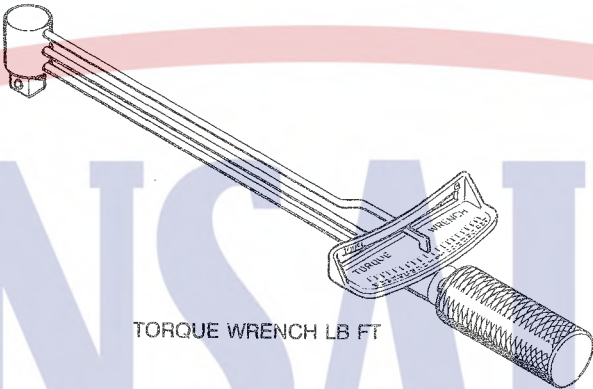
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SPECIAL TOOLS



SPECIAL TORQUES

	Decimal Value	Metric Value
Aftercooler Mounting Bolts.....	18 lb ft	24 Nm

SPECIFICATIONS

	Decimal Value	Metric Value
Aftercooler Test Pressure.....	18 PSI	125 kPa

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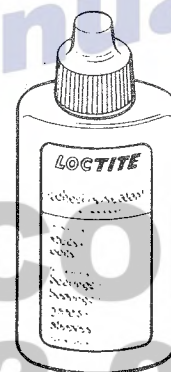
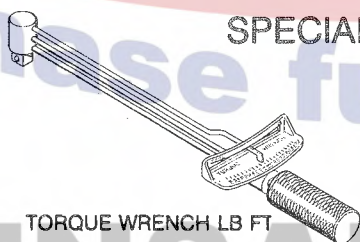
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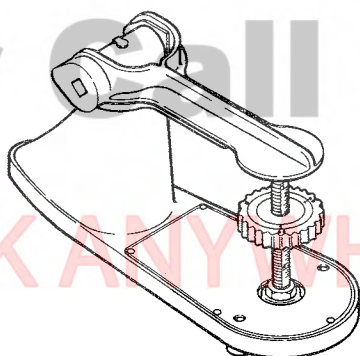
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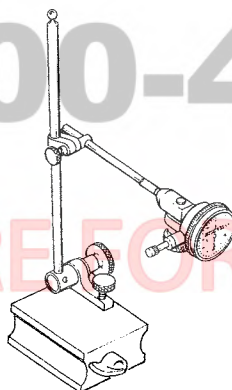
SPECIAL TOOLS



SAFETY SOLVENT - M20863 12 OZ AEROSOL



CAS-1357 VALVE SPRING TESTER



CAS-10066A DIAL INDICATOR

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Turbine Wheel Horizontal Movement.....	Metric Value 0.10 to 0.16 mm
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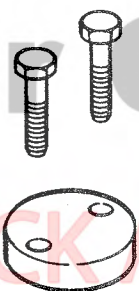
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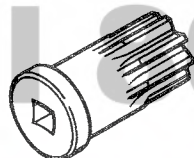
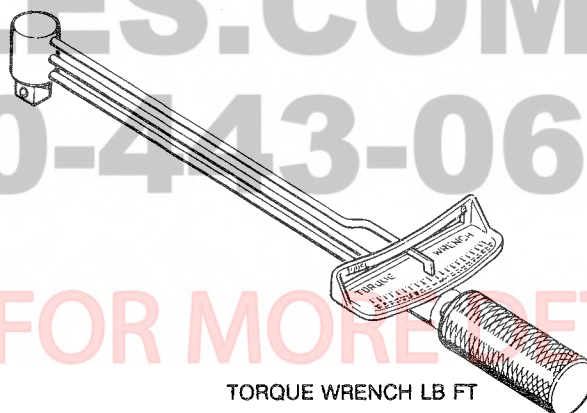
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SPECIAL TOOLS



CAS-1691 GEAR PULLER

CAS-1690 ENGINE
TURN OVER TOOL

TORQUE WRENCH LB FT

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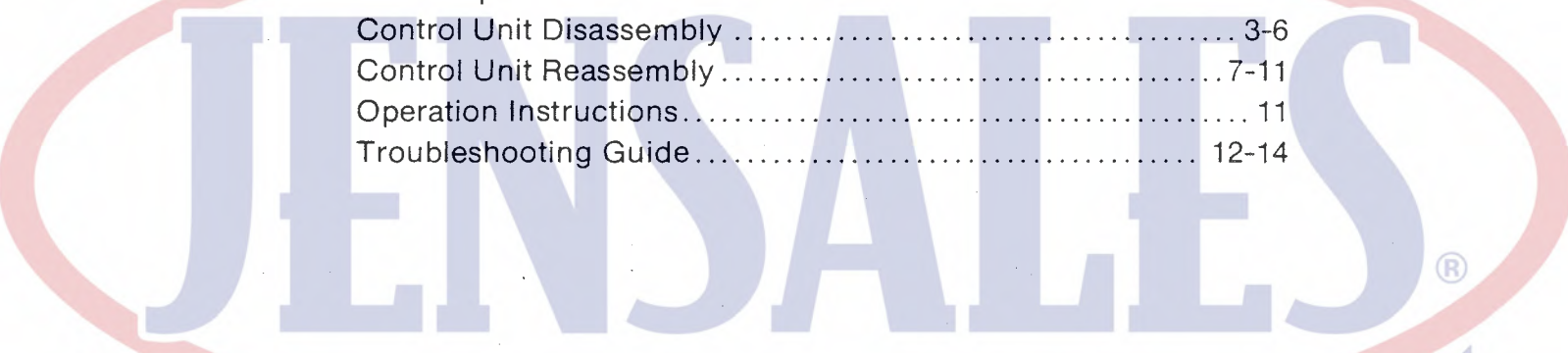
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Reassembly

13. Clamp housing in vise (Figure 17). Clamp lightly on edges of mounting area. Do not over tighten jaws. Install 4-3/4 in. (120 mm) diameter seal in housing.

NOTE: Check to insure that the spool and sleeve are flush or slightly below the meter end of the housing. Clean the upper surface of the housing by wiping with the palm of clean hand. Clean each of the flat surfaces of the meter end parts in a similar way when ready for reassembly. Do not use cloth or paper towel to clean surfaces.

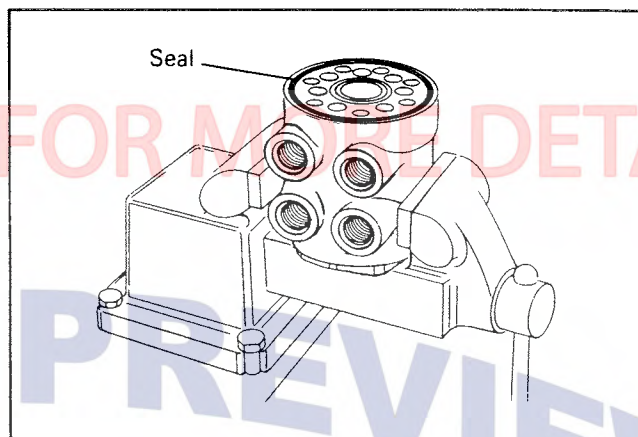


Figure 17:

14. Rotate spool and sleeve assembly until pin is parallel with port face (Figure 18). Install drive, make sure you engage drive with pin. To assure proper alignment, mark one of the two drive tooth slots that are parallel with slot in the end of drive (Figure 20, Ref. B, C).

15. The wear plate oil feed holes are larger on one side than the other. When reassembling the unit, make sure the side with the smaller diameter holes is against the valve housing.

16. Install 4-3/4 in. (120 mm) diameter O-ring seal on meter face.

17. With seal side of meter down, install meter on drive. If star has counterbore install with counterbore facing end cap.

IMPORTANT: The timing mark on drive must fall on the parallel line between any 2 meter star valleys. Note parallel relationships of reference lines A, B, C and D (Figures 19 and 20). Align bolt holes without disengaging meter from drive. Be careful when adjusting meter on housing, excessive turning of meter may disrupt seal between meter and housing.

18. Install 4-3/4 in. (120 mm) diameter seal in end cap.

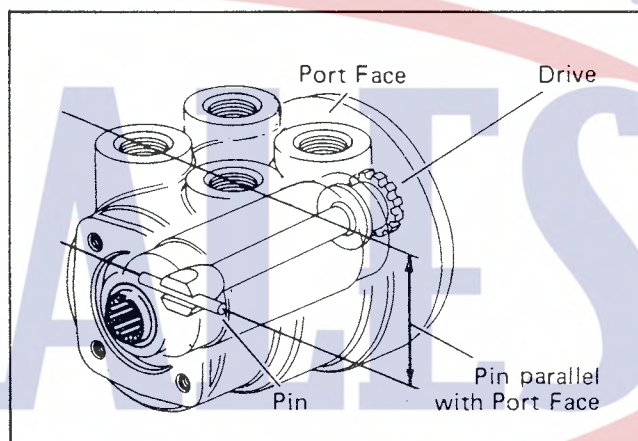


Figure 18:

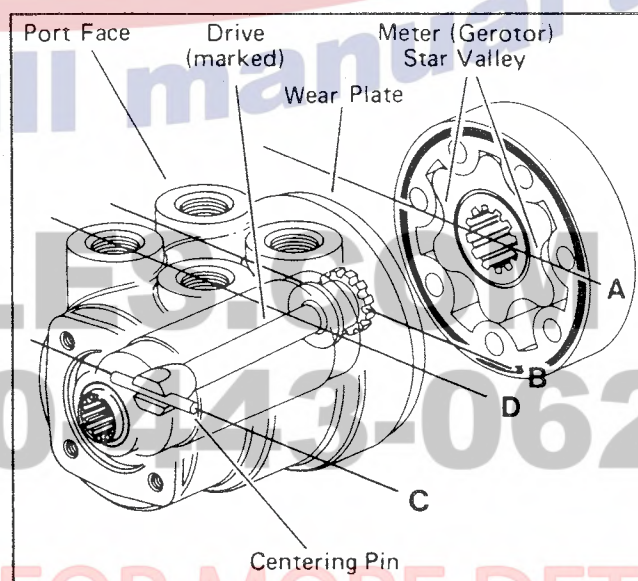


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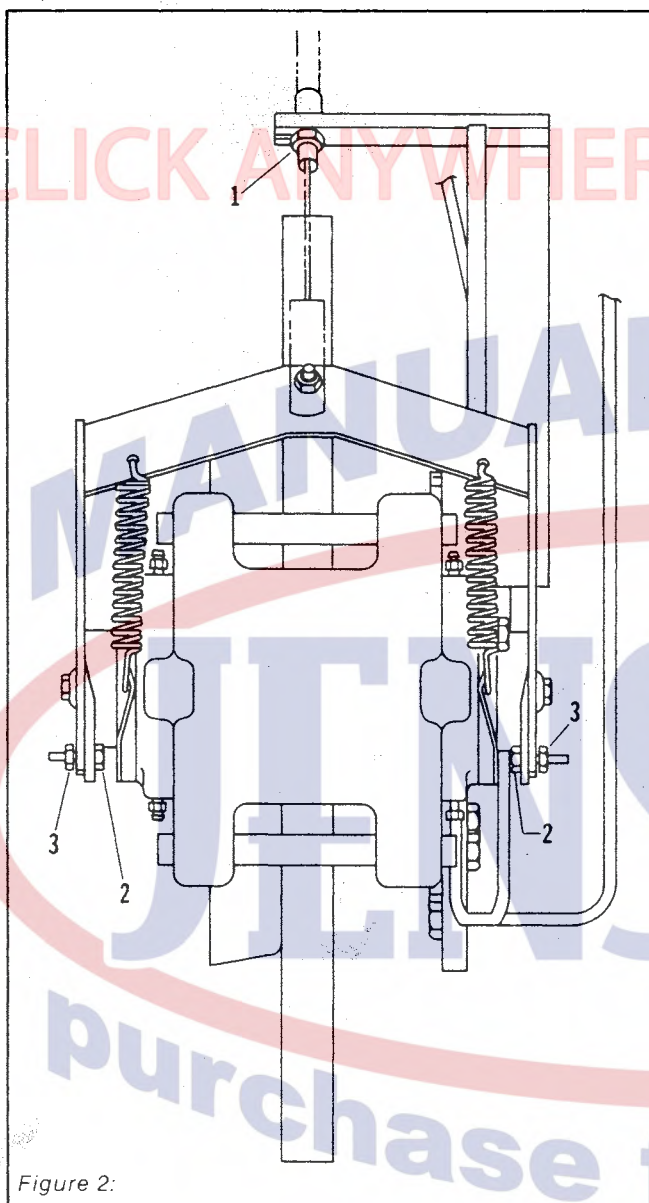


Figure 2:

Park Brake Adjustment (Fig. 2)

Whenever new pads are installed or the calipers are removed and repaired, the brake must be cycled 20 times at a minimum 60 lb pedal force for initial parking brake adjustment. Adjust cable at cable mount (1) to allow levers to return to relaxed position when the brake is in the released position.

IMPORTANT: In order to prevent pad drag and/or damage to the piston assembly, if there is greater than 1/8 (0.125) inch gap between the new pad and the disc add a 0.100 inch shim between the disc and pad on the initial pump up, remove the shim and pump up again to final adjustment.

Mating parts must move freely after lock nuts (3) are tightened. The capscrews (2) should be in the hole closest to the caliper lever pivot.

Replacing Friction Pads

Friction pads are replaced in sets only. In the following paragraphs, the numbers in parenthesis correspond to callouts in the drawings. Refer to the drawings as the steps are performed.

1. Pull out both pad pins (2) and remove pad holders (1) (See Fig. 3).
2. On the caliper without the integral parking brake, to make room for new pads, both pistons in the caliper must be pushed back into the cylinder bores. Remove reservoir cap so excess fluid can be removed and discarded as pistons are pushed back into the cylinder bores. Using a hardwood dowel, or the flat edge of a large screwdriver, work the pistons back into bores by carefully prying against old pads and disc.

IMPORTANT: Take care not to bend or mark the face of the disc.

3. To replace the pads on the caliper with the integral parking brake will require the caliper unit be removed from the mounting surface.
4. After removal, to make room for new pads, each piston must be screwed back into its cylinder bore. Remove reservoir cap so excess fluid can be removed as pistons are being screwed back into the cylinder bores. Using a 1-5/16" socket wrench on hexagon boss in the end of the piston, rotate piston (20) clockwise until end of piston under extender is flush with dust boot. (See Fig. 4)

NOTE: The remaining two steps apply to both calipers.

5. Install new pad holders (1).
6. With the unit(s) reassembled, apply brakes aggressively several times to seat the new pads against the disc. Recheck reservoir fluid level.

NOTE: See Park Brake Adjustment.

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