CEBM006602

Shop Manual

930E-2

DUMP TRUCK

SERIAL NUMBERS **A30224 thru A30245**

KOMATSU®

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SECTION A

GENERAL INFORMATION

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23. After the brake assembly is properly positioned on the adapter and the four capscrews are snug, remove the alignment studs.

    Remove socket head capscrews (34) securing seal retainer (37) to brake assembly (18).

    Install the remaining brake adapter/brake assembly mounting capscrews (20) and hardened flatwashers (21). Tighten the capscrews to **1995 ± 100 ft. lbs. (2705 ± 136 N.m)**.

24. Install bearing retainer pin (40) in groove in spindle. Align and slide outer bearing cone (7) over pin. Lubricate the bearing with clean hydraulic oil.

25. Install shim pack (8), retainer (13), capscrews (11), and washers (12). Tighten the capscrews alternately in several successive increments while rotating the hub. Final torque is **750 ± 75 ft. lbs. (1017 ± 100 N.m)**.

26. Install a new O-ring (41) on cover (5). Install the cover, capscrews, and washers. Tighten the capscrews to standard torque.

Seal Assembly Gap Check

After the assembly of the wheel and brake is complete, the gap between seal carrier (3, Figure 3-7) and the brake assembly back plate (6) must be measured and adjusted if necessary.

The ideal gap is 0.433 in (11.0 mm). If necessary, the gap must be adjusted, using shims as required to maintain a **minimum** gap of 0.423 in (10.75 mm) to 0.443 in (11.25 mm) **maximum**.

27. Measure seal gap as follows:

    a. Measure gap, dimension "A", Figure 3-7 at three, equally spaced places and record the results.

    b. Add the three dimensions and divide the result by 3 to obtain the average gap width

28. If average gap width is not between the minimum and maximum allowable range, loosen the seal retainer capscrews (4, Figure 3-6) and add shims (5) as required to **reduce** the gap or remove shims to **increase** the gap. **The quantity and thickness of shims at each of the six locations must be equal.**

29. Re-tighten seal retainer capscrews to standard torque and measure gap as described in Step 28. If necessary, repeat Step 29 until the proper gap is maintained.

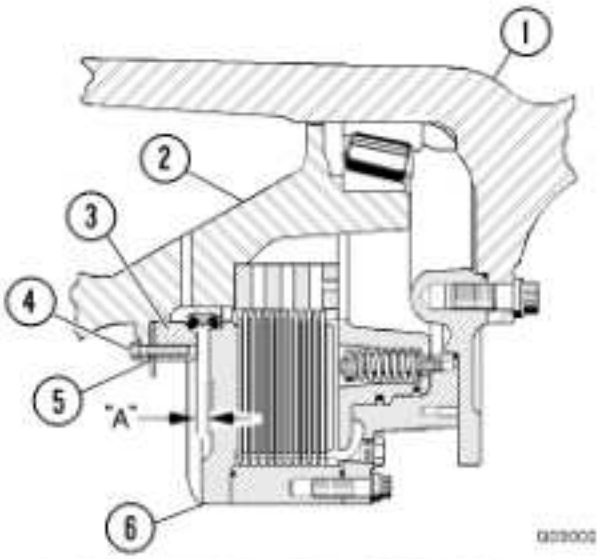


FIGURE 3-7. MEASURING SEAL GAP

1. Spindle
2. Wheel Hub
3. Seal Carrier
4. Capscrews
5. Shims
6. Brake Back Plate

30. Install speed sensor(s) (16, Figure 3-6) in support bracket(s) (17). Adjust sensor gap as follows:

    a. Rotate hub to position the top of a gear tooth directly under the sensor tip.

    b. Insert a 0.060 in (1.5 mm) feeler gauge between sensor tip and gear tooth. Loosen and adjust sensor clearance.

    c. Lock the sensor in place.

    d. Rotate hub 180° and verify clearance remains within 0.040 in (1.0 mm) minimum to 0.080 in (2.0 mm) maximum.

31. Install speed sensor cables.

32. Install hub and spindle assembly on suspension per instructions in Installation.

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HYDRAULIC SYSTEM

The following is a general description of the model 930E hydraulic system. Additional information concerning individual component description and operation can be found under the different system circuits such as the hoist circuit, steering circuit, and hydraulic brake circuit.

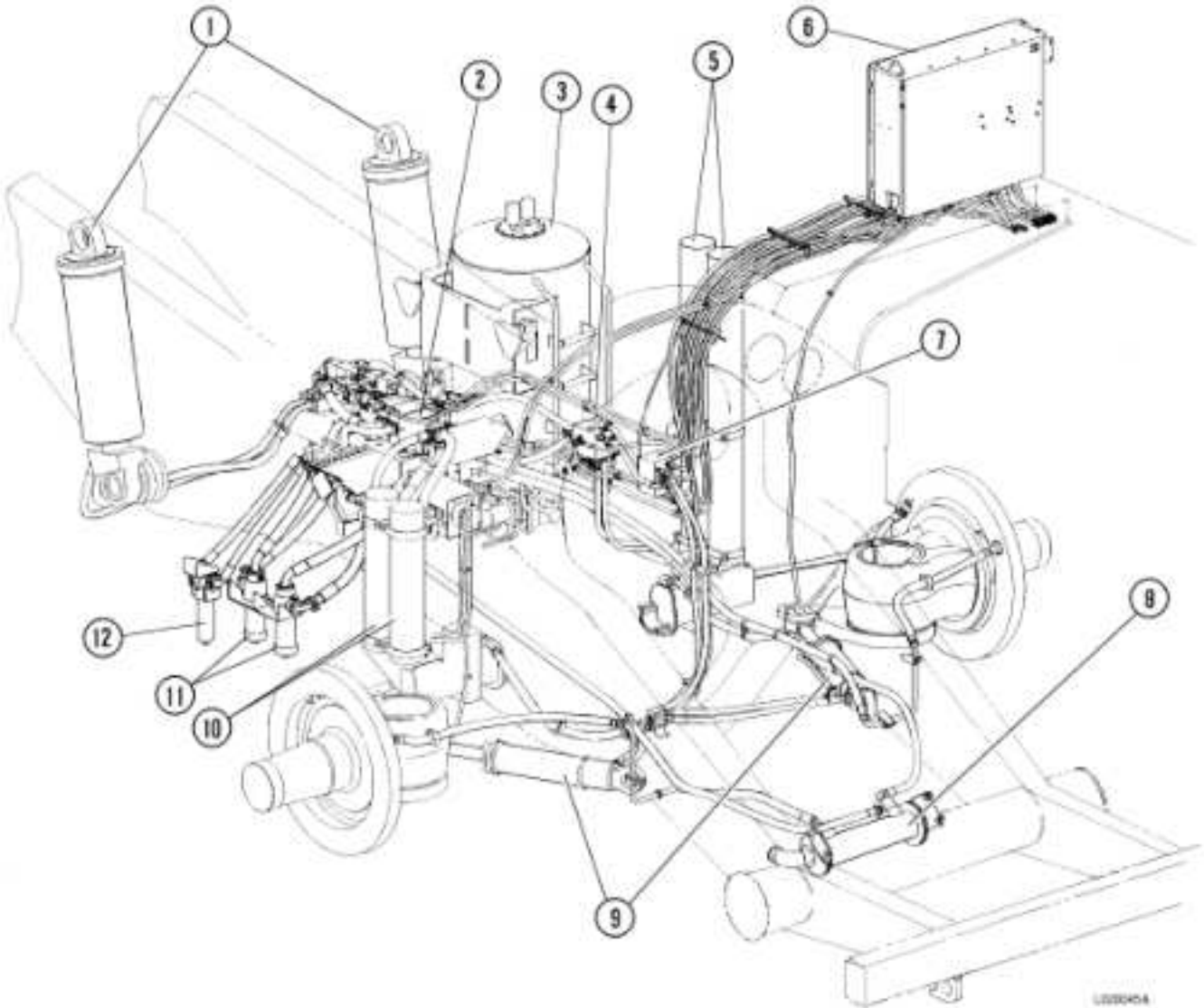


FIGURE 2-1. HYDRAULIC SYSTEM COMPONENTS AND PIPING

1. Hoist Cylinders
2. Hoist Valve
3. Hydraulic Tank
4. Bleeddown Manifold
5. Steering Accumulators
6. Hydraulic Components Cabinet
7. Flow Amplifier Valve
8. Heat Exchanger (Brake System Cooling)
9. Steering Cylinders
10. Brake System Auxiliary Accumulators
11. Hoist Circuit Filters
12. Steering Circuit Filter

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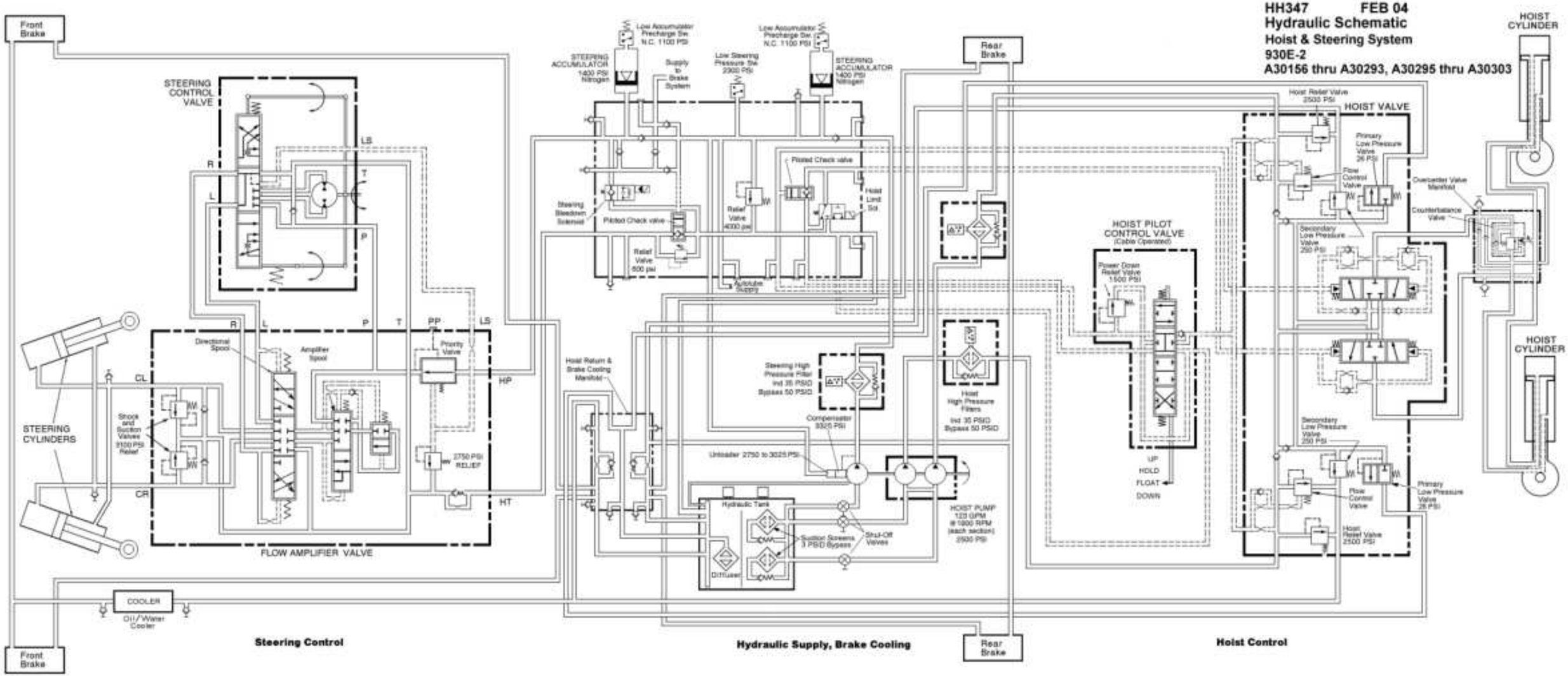
POSSIBLE CAUSES	SUGGESTED CORRECTIVE ACTION
TROUBLE: Steering wheel oscillates or turns by itself	
Lines connected to wrong ports	Check line routing and connections.
Parts assembled wrong. steering control unit improperly timed.	Reassemble correctly and time control valve.
TROUBLE: Steered wheels turn in opposite direction when operator turns steering wheel	
Lines connected to wrong cylinder ports	Inspect and correct line connections.

(STEERING PUMP)

TROUBLE: No pump output	
Air trapped inside steering pump	Bleed air from pump and/or system.
Broken pump drive shaft	Inspect hoist and steering pump, replace drive shaft.
Excessive circuit leakage	Check for external leaks, internal system pressure loss.
No oil to pump inlet	Check hydraulic tank oil level. Make certain pump inlet shut-off valve is open.
TROUBLE: Low pump output	
Low pump pressure	Check unloader valve operation and adjust pressure if necessary. Check compensator adjustment pressure. Check system relief valves.
Internal pump wear	Repair or replace steering pump.
Restricted inlet	Make certain shut-off valve is open. Check suction hose. Clean tank strainers.
Insufficient oil supply	Check hydraulic tank oil level. Make certain shut-off valve is open.
High pressure filter restricted	Replace filter element.

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HH347 FEB 04
Hydraulic Schematic
Hoist & Steering System
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A30156 thru A30293, A30295 thru A30303



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