PART NO. KM8TH-E-01

HITACHI

Service Manual

AH350-D
AH400-D

Articulated Dump Truck

Serial No.001817 and up

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TRANSMISSION OIL COOLER RESTRICTION TEST

Remove the cover to expose the hydraulic pipes.



Disconnect transmission cooler out line (1) and install flow meter.

Start machine and warm transmission to specification temperature (See specification).

Operate engine at fast idle and read flow at specified pressure.

If flow rate is less than specification, the cooler is restricted.

Transmission Oil Cooler Restriction Specification

Transmission Oil Temperature . . 88° C (190° F).

Engine Speed: Fast Idle . . . . 2240 ± 20 r.p.m.

Cooler Flow: Flow-Rate . 215 l/min (57 gal/min).

Specified Test Pressure
Pressure . . . . . 276 kPa {2.8 bar (40 psi)}

Equipment and Tools

Flow Test Kit . . . . . JT05418.

Digital Hydraulic Tester . . . . . JT07148.

The transmission oil cooler restriction test allows the technician to diagnose a restricted transmission oil cooler.

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Charge pressure can not be set	Pump is stroking in all the time.	Check for a load signal from somewhere.
	Hoses are connected incorrectly.	Correct.
	The pump compensating pressure is set too low and the pump does not provide enough pressure to reach the upper limit of the charge band.	Check that the pump is set to the correct pressure.
	The pressure on the brake circuit's pressure limiting valve (Valve XB) is set lower than the upper limit of X4.	Set the pressure on XB.
	X4 valve be faulty.	Replace X4.
The pump strokes rapidly after each application of the foot valve.	Orifice 18 has not been installed.	Install.
	The brake charge accumulators have a very low charge pressure.	Check their charge and replace or recharge them if necessary.
	X4 valve be faulty.	Replace X4.
The brakes don't recharge at all.	The pump compensating pressure is set below the residual pressure.	Set pressures.
	Orifice 9 might be blocked.	Remove and clean it/replace it if necessary.
	The hydraulic cut solenoid could be energized or jammed open.	Unplug the connector to see if it makes a difference. If it does, there might be a software problem.
	X4 valve be faulty.	Replace X4.

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Seat		
Symptom	**Possible Cause**	**Remedy**
Seat can be lowered, but does not pump up in the lowest position.	Bowden pull wire is not correctly adjusted. Bowden pull wire is broken. Pneumatic system is loose. Height level control is defective.	Check Bowden pull wire adjustment, adjust it, if necessary. Replace Bowden pull wire. Check the entire pneumatic system for air leakage, replace defective components. Check the height level control
Seat pumps up and remains in the middle position, while the compressor is running.	The sealing ring of the height level control is loose.	Replace the height level control.
Seat pumps up by itself (e.g. seat suspension); compressor starts.	Short-circuit in the compressor cable (caused by abrasion on the edge of the swinging structure). Cable break.	Remove the burr on the swinging structure and insulate the cable. Replace the compressor

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Place a container under each wet disc brake housing on the axle being drained.



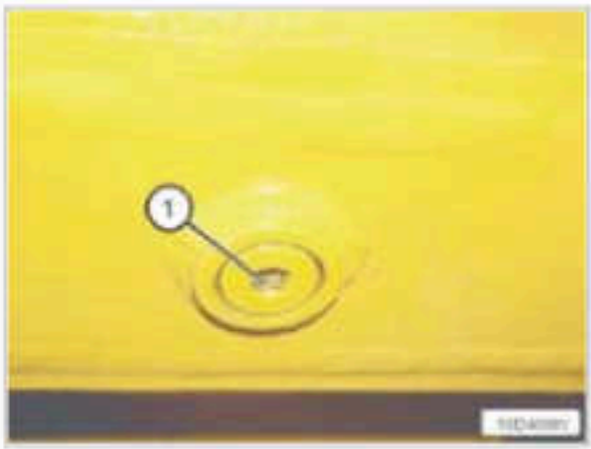
Unscrew and remove the plug (1) on one housing and then on the other one. Allow to drain until it just drips.



Place suitable container under the drain plug.

Clean axle housing around check drain plug (1).

Remove drain plug (1) from axle housing.



Place a container under the drain plug (1) and remove drain plug.

Drain oil into the container

Replace the drain plug and tighten

Remove the container and wipe the drain plug and axle housing clean.

Add oil through check and fill port. **(See operation manual for recommended oils and quantities).**

Fill until oil just starts to flow from fill port.

Install check and fill plug and wipe clean.

CHECK BIN SHOCK PAD CLEARANCE

⚠WARNING

Before working on the bin and/or machine, carefully follow the safety precautions stipulated in the operation manual in the Safety Section and Pre-Service Instructions.

Install the bin prop and remove the cap screws securing the bin pads to the bin on both the left and right hand side front and rear.



Place spacer blocks with mounting plates (LHS & RHS) in position on the chassis as well as front

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OEU PIN LAYOUT OEU - Output Extension Unit J1 - BROWN (32 PIN) J2 - BROWN (48 PIN) J3 - BLUE (32 PIN)						
PIN NUMBER	**TYPE OF INPUT/OUTPUT**	**CONROLLER FUNCTION**	**VEHICLE FUNCTION**	**RANGE**	**COMMENTS**	**MICRO PIN**
J2 - L1	Battery Power	28 V Battery (KL30)	28 V Battery (KL30)	FUSE 3		Vcc / Vss
J2 - M1	Ignition Power	28V Ignition (KL15)	28V Ignition (KL15)	FUSE 22		-
J2 - L2	Power Ground	Ground (KL31)	Ground(KL31)	GROUND		-
J2 - M2	Power Ground	Ground (KL31)	Ground (KL31)	GROUND		-
J2 - A1	CANH	CAN High	CAN High	250KB		-
J2 - B1	CANL	CAN Low	CAN Low	250KB		-
J3 - H3	VP1 - Valve pwr & digital (sw 8)			FUSE 24		-
J3 - H4	VP1 - Valve pwr & digital (sw 8)			FUSE 24		-
J3 - H1	VP1 Ground			GROUND		-
J3 - H2	VP1 Ground			GROUND		-
J3 - G1	VP2 - Valve pwr & digital (sw 9)			FUSE 23		-
J3 - G2	VP2 - Valve pwr & digital (sw 9)			FUSE 23		-
J1 - G3	VP3 - Valve pwr & digital (sw 10)			FUSE 18		-
J1 - G4	VP3 - Valve pwr & digital (sw 10)			FUSE 18		-
J2 - L3	VP4 - Valve pwr & digital (sw 11)			FUSE 20		-
J2 - M3	VP4 - Valve pwr & digital (sw 11)			FUSE 20		-
J2 - L4	VP5 - Valve pwr & digital (sw 12)			FUSE 21		-
J2 - M4	VP5 - Valve pwr & digital (sw 12)			FUSE 21		-

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