CRAWLER EXCAVATOR

SERVICE MANUAL

HX300HD (China)

HYUNDAI

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3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15 cc/rev
Maximum pressure	40 kgf/cm² (570 psi)
Rated oil flow	27.75 ℓ /min (7.3 U.S. gpm/7.1 U.K. gpm)

4) MAIN CONTROL VALVE

Item		Specification
Type		10 spools
Operating method		Hydraulic pilot system
Main relief valve pressure		350 kgf/cm² (4980 psi) [380 kgf/cm² (5400 psi)]
Port relief valve pressure	Boom	400 kgf/cm² (5690 psi)
	Arm	400 kgf/cm² (5690 psi)
	Bucket	400 kgf/cm² (5690 psi)

[ ] : Power boost

5) SWING MOTOR

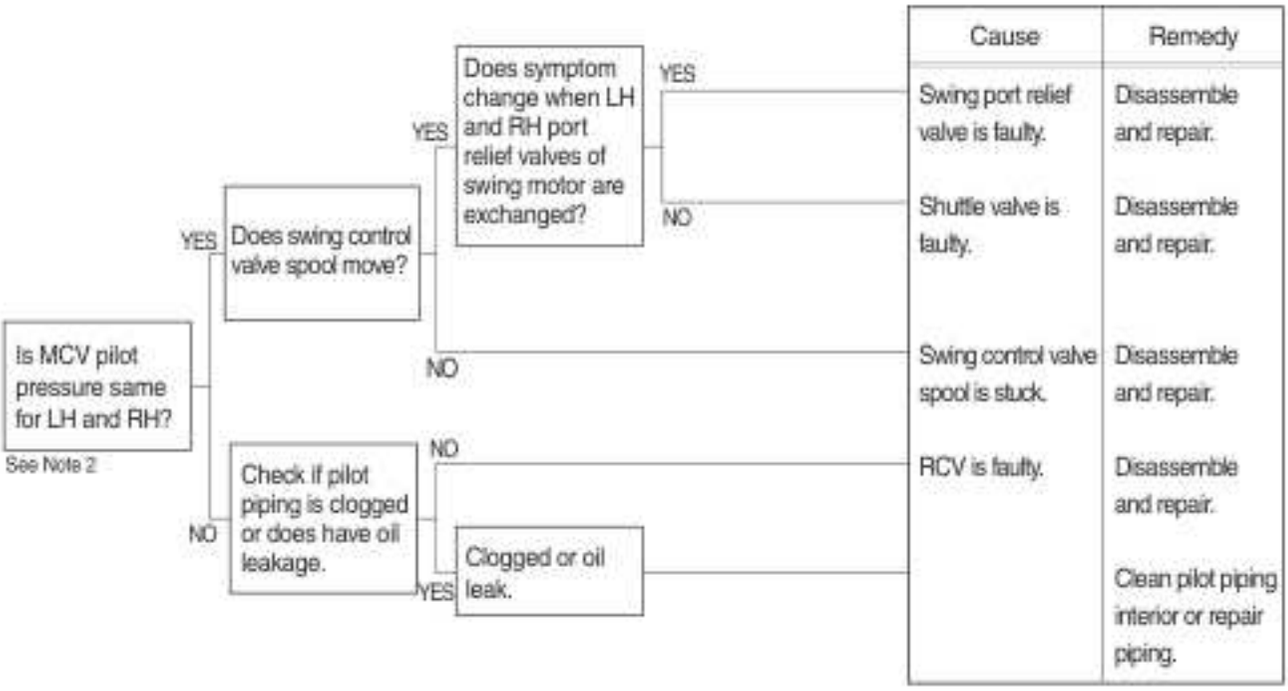
Item	Specification
Type	Axial piston motor
Capacity	156.9 cc/rev
Relief pressure	300 kgf/cm² (4270 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	84.4 kgf · m (610 lbf · ft) over
Brake release pressure	36.6 kgf/cm² (519 psi) below
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Capacity	282.6/156.9 cc/rev
Relief pressure	350 kgf/cm² (4980 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	134 kgf · m (969 lbf · ft)
Brake release pressure	17 kgf/cm² (242 psi)
Reduction gear type	2-stage planetary

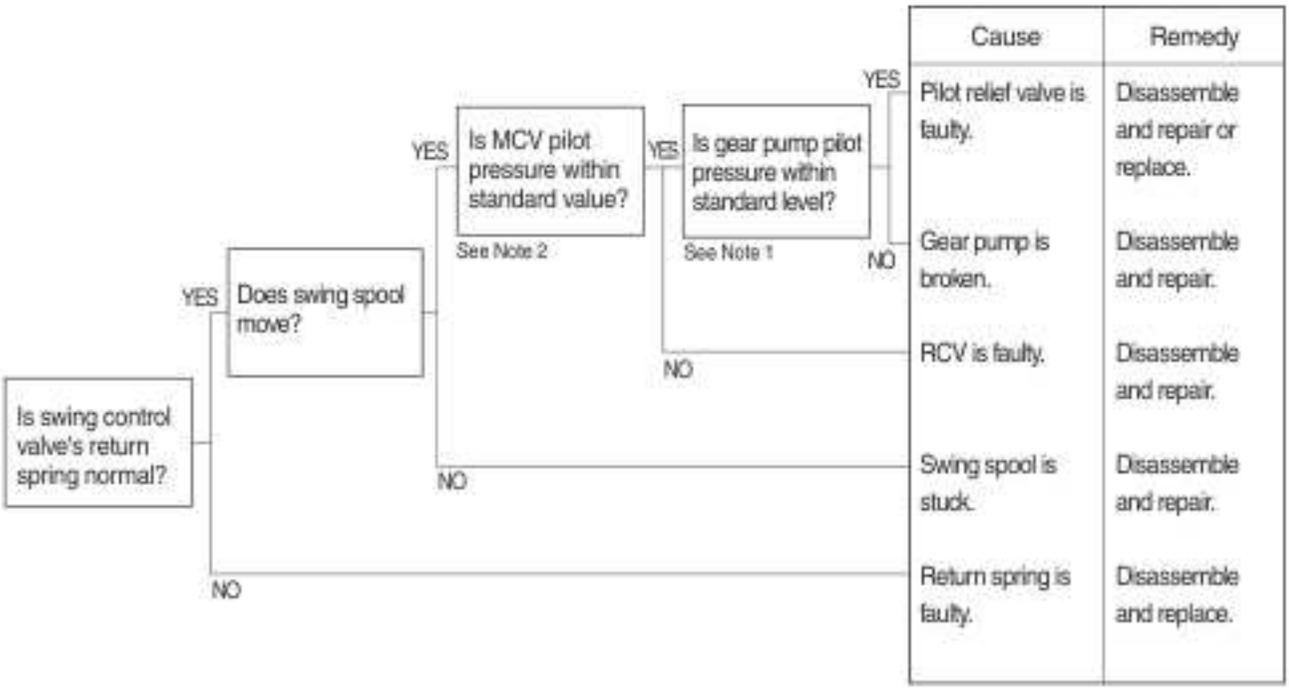
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3) SWING MOTION IS IMPOSSIBLE IN ONE DIRECTION



Cause	Remedy
Swing port relief valve is faulty.	Disassemble and repair.
Shuttle valve is faulty.	Disassemble and repair.
Swing control valve spool is stuck.	Disassemble and repair.
RCV is faulty.	Disassemble and repair.
	Clean pilot piping interior or repair piping.

4) MACHINE SWINGS BUT DOES NOT STOP



Cause	Remedy
Pilot relief valve is faulty.	Disassemble and repair or replace.
Gear pump is broken.	Disassemble and repair.
RCV is faulty.	Disassemble and repair.
Swing spool is stuck.	Disassemble and repair.
Return spring is faulty.	Disassemble and replace.

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15. MALFUNCTION OF BOOM PRIORITY EPPR VALVE

- Fault code : HCESPN 141, FMI 5 or 6

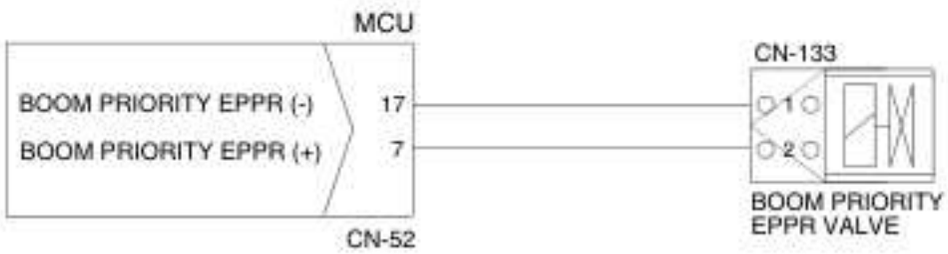
※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Cause	Remedy
Short circuit or poor connection between CN-52 (17)-CN-133 (1) or CN-52 (7)-CN-133 (2)	Repair or replace
Defective EPPR valve	Repair or replace

Wiring diagram



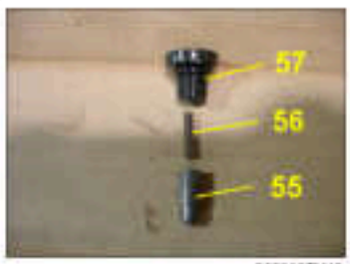
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4. REASSEMBLING

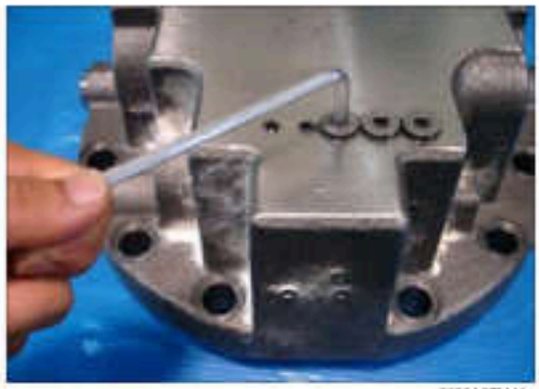
1) ASSEMBLING MOTOR

- REAR COVER ASSY

(1) Assemble check valve (55), spring (56) into rear cover (34) and then assemble plug (57) using L-wrench.



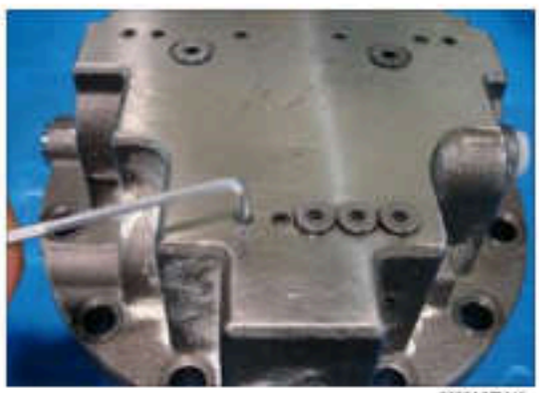
2609A8TM40


2609A8TM41

(2) Apply loctite #242 on the NPTF 1/16 plug (2) and then assemble 12-NPTF 1/16 Plug (2) into rear cover(34).



2609A8TM42


2609A8TM43

(3) Assemble spool (47), parallel pin (50), spring seat (49) and spring (51) into rear cover (34) in regular sequence and then assemble plug (48) and connector (52).



2609A8TM44


2609A8TM45


2609A8TM46

(4) Assemble relief valve (42, 2EA) into rear cover (34).



2609A8TM47


2609A8TM48


2609A8TM49

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③ Assemble 9 piston assy (12) into retainer plate (11).

- Piston assy × 9EA
- Retainer plate × 1EA



④ Assemble parts of procedure ② and ③.



(3) Assemble valve casing sub

① Assemble make up check valve sub

Assemble check valve (24), O-ring (27), plug (26) in that order and then screw it torque wrench.

- Make up check valve × 2EA
- Spring × 2EA
- Plug × 2EA
- O-ring × 2EA
- Tightening torque : 38 ± 3.8 kgf · m (275 ± 27.5 lbf · ft)



② Assemble reactionless valve assy

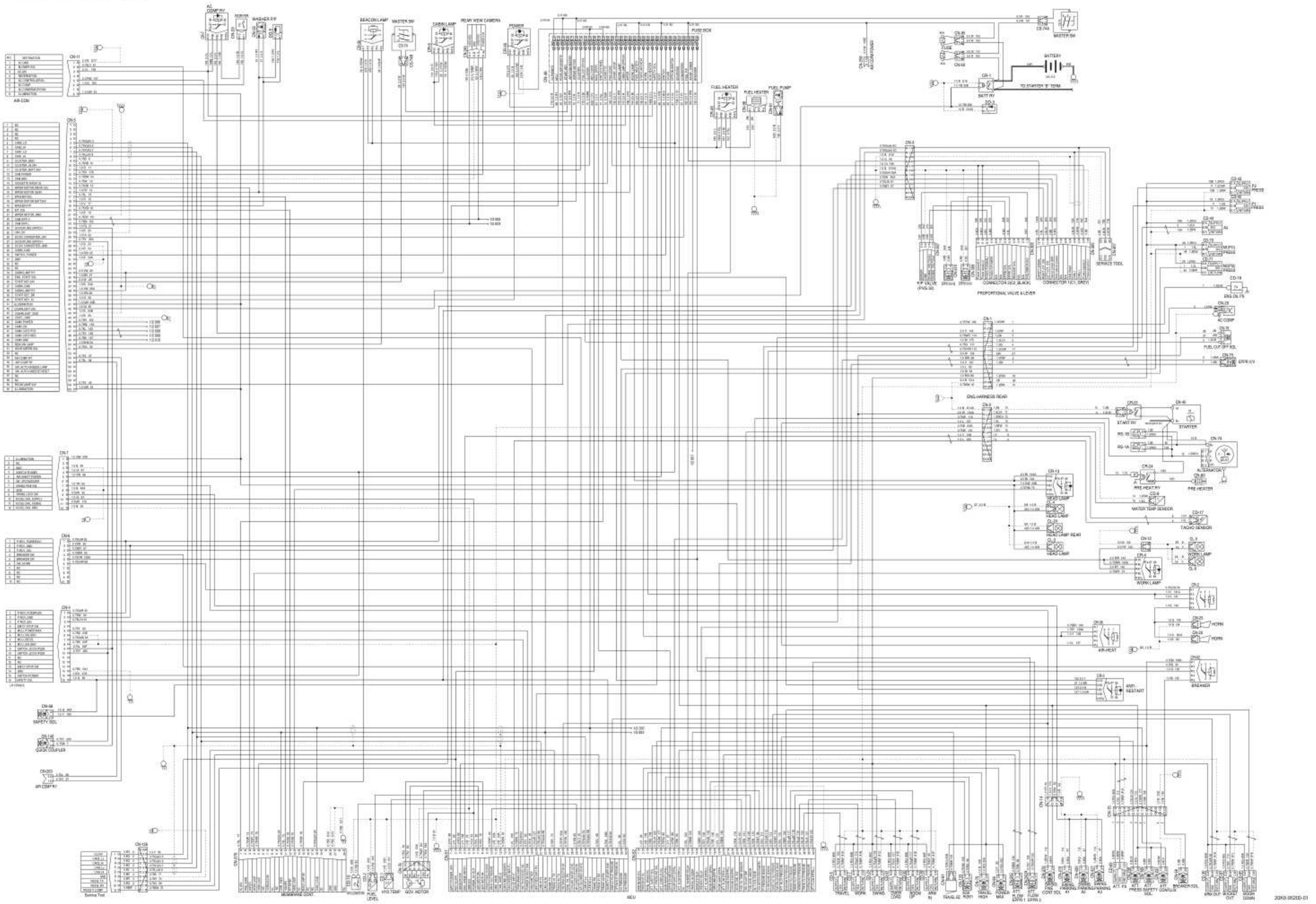
Assemble reactionless valve assy (31), plug (32), O-ring (33, 34) in that order and then screw it a torque wrench.

- Reactionless valve assy (31) × 2EA
- Plug (32) × 2EA
- O-ring (33, 34) × 2EA
- Tightening torque : 22 ± 1.5 kgf · m (159 ± 11 lbf · ft)



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ELECTRICAL CIRCUIT (1/2)



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