CRAWLER EXCAVATOR

# SERVICE MANUAL

## *HX235LCR*

HYUNDAI

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## 8. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

| Item | Specification |
|---|---|
| Model | Cummins QSB6.7 |
| Type | 4-cycle turbocharged diesel engine, low emission |
| Cooling method | Water cooling |
| Number of cylinders and arrangement | 6 cylinders, in-line |
| Firing order | 1-5-3-6-2-4 |
| Combustion chamber type | Direct injection type |
| Cylinder bore × stroke | 107 × 124 mm (4.2" × 4.9") |
| Piston displacement | 6700 cc (409cu in) |
| Compression ratio | 17.3 : 1 |
| Rated net horse power (SAE J1349) | 173 Hp at 1950 rpm (129 kW at 1950 rpm) |
| Rated gross horse power (SAE J1995) | 182.6 Hp at 1950 rpm (136 kW at 1950 rpm) |
| Maximum torque at 1500 rpm | 85.7 kgf · m (620 lbf · ft) |
| Engine oil quantity | 23.7 ℓ (6.26 U.S. gal) |
| Dry weight | 520 kg (1146 lb) |
| High idling speed | 1800 ± 50 rpm |
| Low idling speed | 850 ± 100 rpm |
| Rated fuel consumption | 158.5 g/Hp · hr at 1950 rpm |
| Starting motor | Nippon denso (24 V-4.8 kW) |
| Alternator | Nippon denso (24 V-95 A) |
| Battery | 2 × 12 V × 100 Ah |

### 2) MAIN PUMP

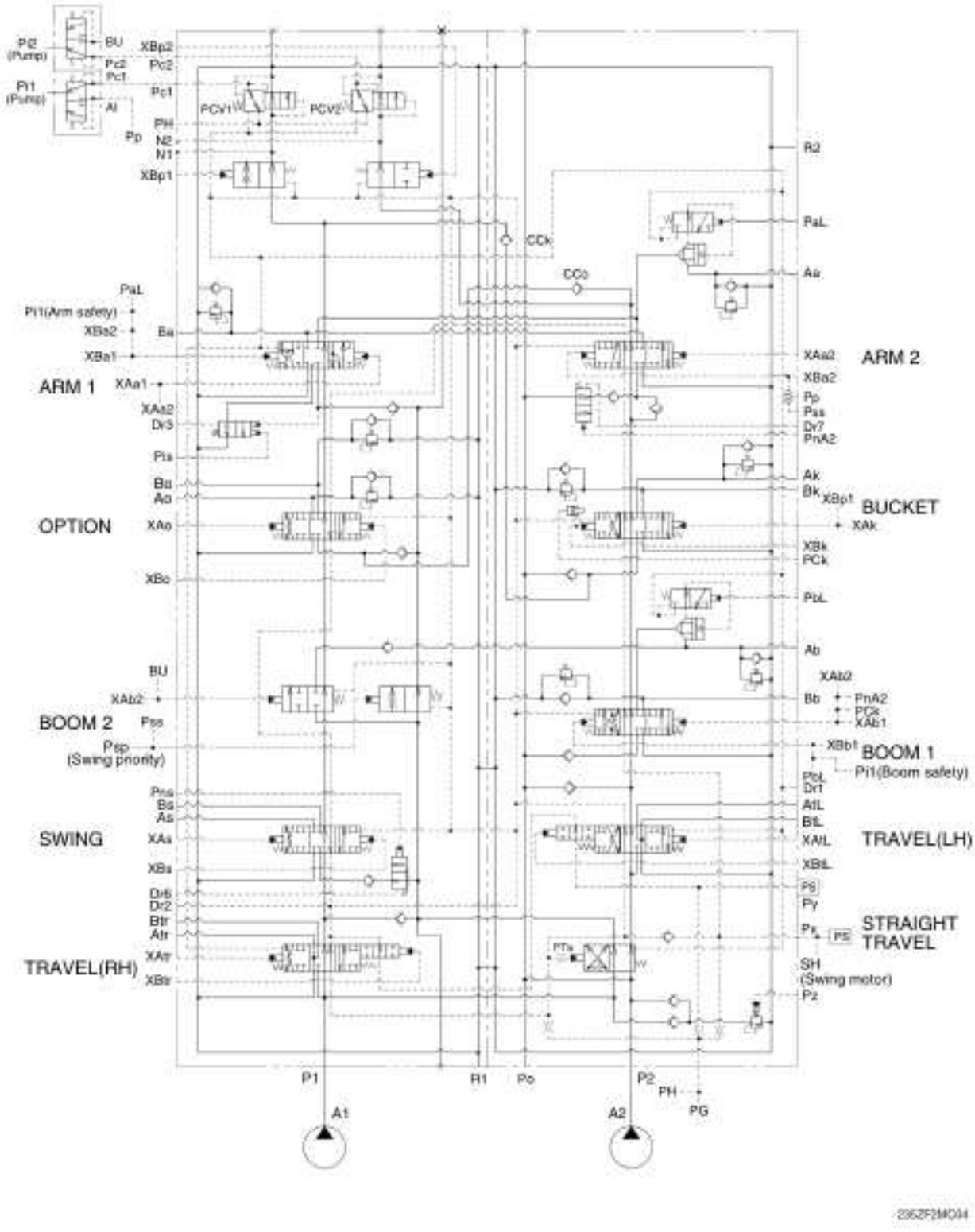
| Item | Specification |
|---|---|
| Type | Variable displacement tandem axis piston pumps |
| Capacity | 2 × 117cc/rev |
| Maximum pressure | 350kgf/cm² (4980psi) [380 kgf/cm² (5400 psi)] |
| Rated oil flow | 2 × 228.2 ℓ /min (60.3U.S. gpm/ 50.2U.K. gpm) |
| Rated speed | 1900 rpm |

[ ] : Power boost



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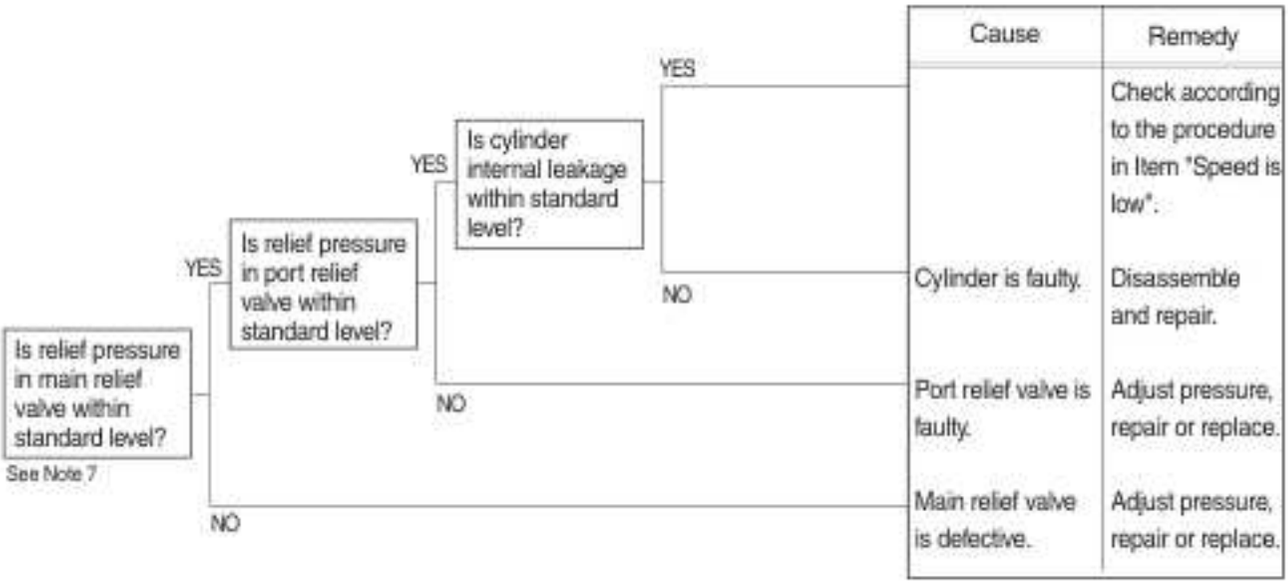
## 2. HYDRAULIC CIRCUIT



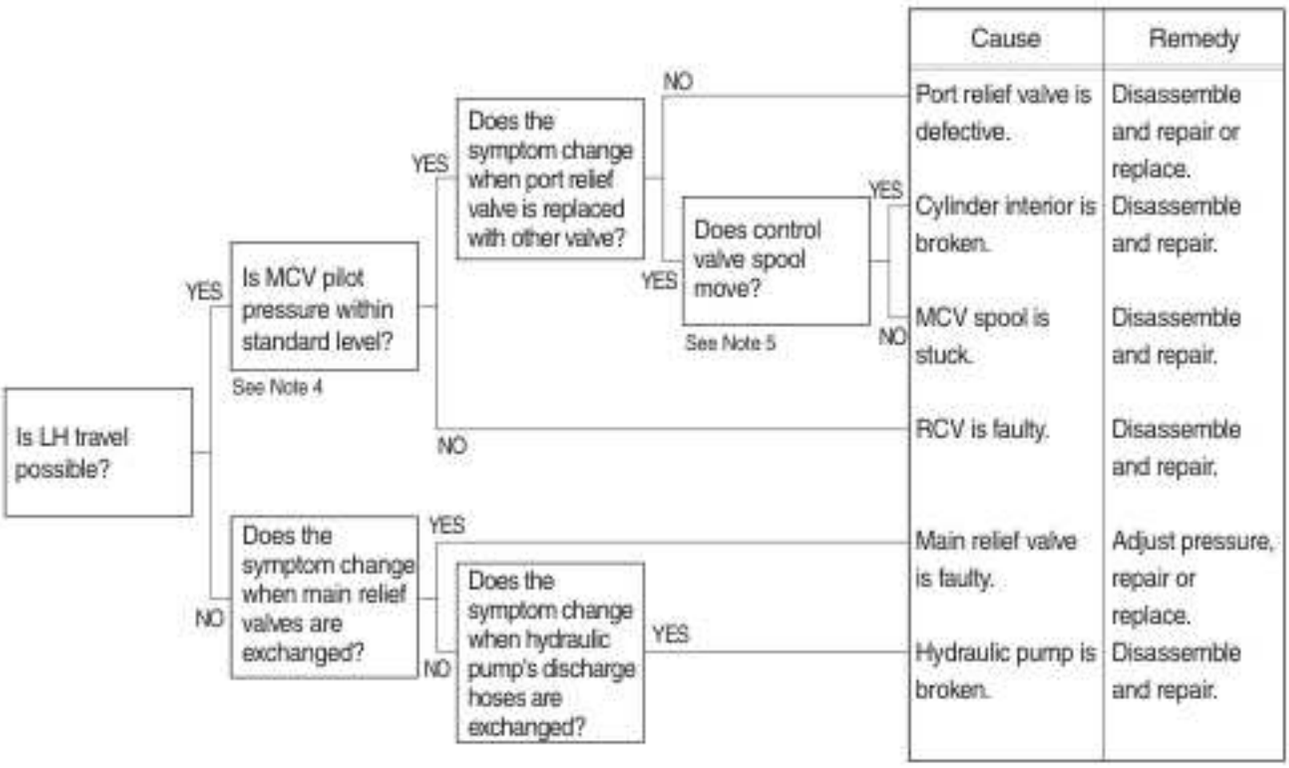



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## 4) BOOM, ARM OR BUCKET POWER IS WEAK




## 5) ONLY BUCKET OPERATION IS TOTALLY IMPOSSIBLE






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### 3) ASSEMBLING PINION GEAR SUB ASSY

(1) Prepare drive shaft pinion gear vertical with ground.

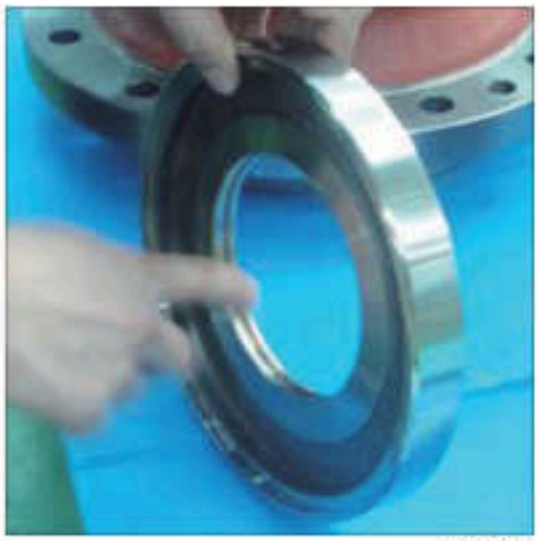


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(2) Fully apply grease (albania EP02) to O-ring groove of sleeve.

※ Be sure to maintain it vertical with ground when assembling it.

(3) Put O-ring into O-ring groove of sleeve. Fully apply grease on O-ring.



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(4) Assemble taper bearing and sleeve into drive shaft using press jig.
Use special jig for pressing. Leave no space between sleeve and taper bearing.



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3) DISASSEMBLY

The figure in ( ) shown after the part name in the explanation sentence shows its number in the structure figures (8-32~35).

(1) Place control valve on working bench.

※ Disassemble it in clean place and pay attention not to damage flange faces and plate faces.



(2) Disassembling of main spools

· Travel (301), bucket (304), swing (305), option (308), arm 2 (306), boom 2 (307), swing priority (311).

① Loosen the hexagon the socket head bolts (273) and remove the spring cover (201, 202) and the O-ring (261).

· Hexagon key wrench : 6 mm



② Pull out the spool, spring, spring seats (322), stopper (335 or 339) and spacer bolt (336) in the spool assembly condition from the casing.

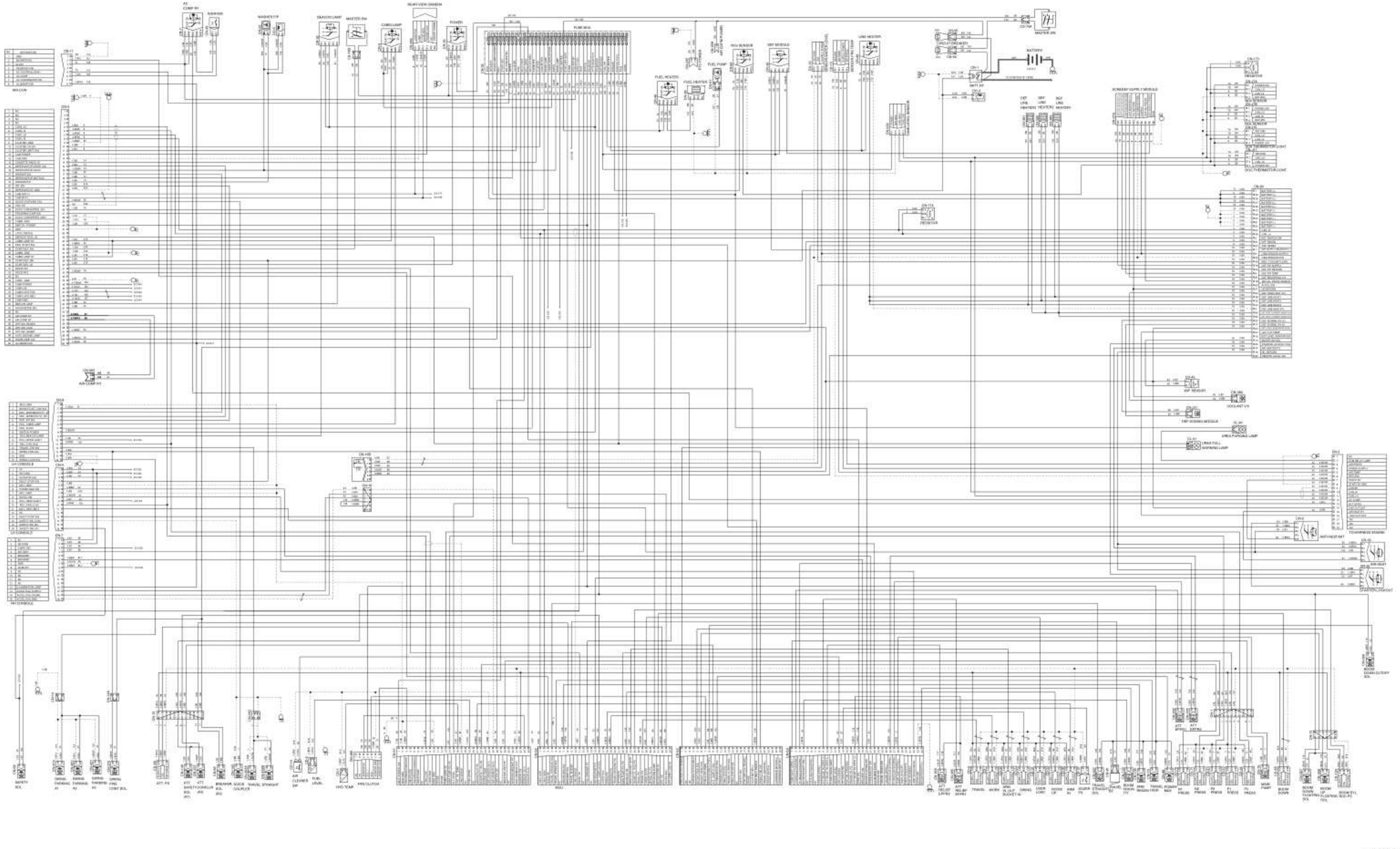
※ When pulling out the spool assembly from housing, pay attention not to damage the housing.





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## ELECTRICAL CIRCUIT (3/6, SERIAL NO. : #0575-)





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