WHEEL LOADER

SERVICE MANUAL

SL735

HYUNDAI

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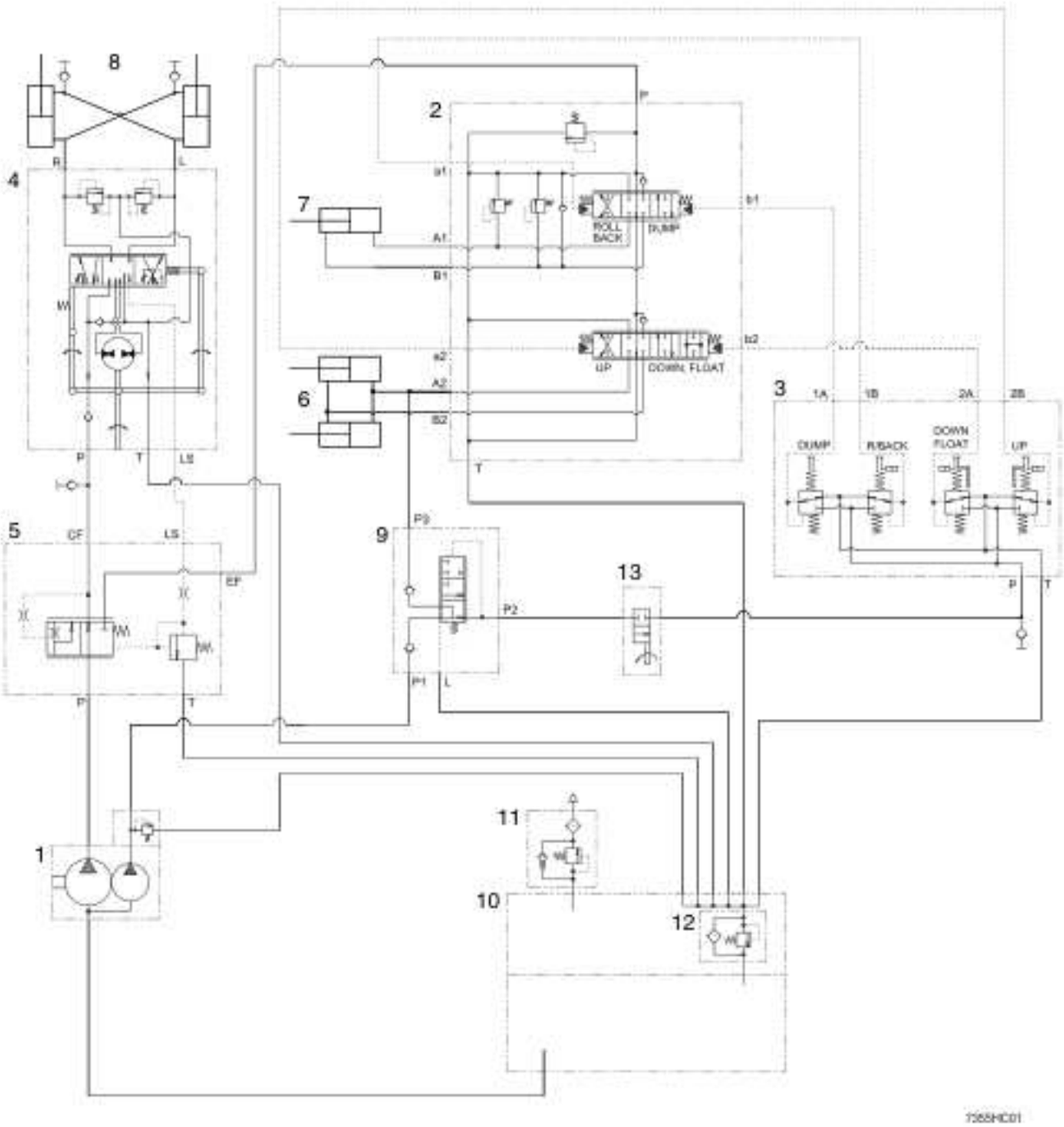
6) TROUBLESHOOTING

Problem	Cause	Remedy
Oil leaks	Damaged O-ring at journal and overflow valve.	Replace O-ring.
	Oil leaks at connections of valve body, partition disc, stator and rear cover.	Clean off dirt on junction surface, grind scratches, and fasten up screws according to notes in assembly.
Steering is light under no load (or light load) but heavy when increasing load	Pressure of overflow valve is lower than that of steering system or overflow valve is clogged.	Adjust the pressure of overflow valve to a specified value, or clean the overflow valve.
Steering is light as slowly turning while heavy as fast	Insufficient oil supply of hydraulic pump.	Select a suitable pump. Check hydraulic pump for normal operation ad check if the volumetric efficiency is too little.
Steering is heavy as fast or slowly turning and no steering pressure.	Malfunction of one-way valve inside the valve body.	If steel ball is missing, load ϕ8 steel ball. If steel ball is stuck by dirt, clean.
Foam is in oil, irregular sound is heard, cylinder moves and stops from time to time	Air in steering system.	Bleed air, check suction pipe for oil leaks, and that if return pipe is under oil level.
Steering is heavy	Oil tank is not full, or oil viscosity too high.	Refill oil to specified level. Use recommended fluid.
Severe steering deviation. Cylinder will not move as turning steering wheel (or moves slowly)	Malfunction in two-way buffer valve (steel ball is seized due to dirt, or spring failure).	Clean two-way buffer valve, or replace spring.
Disordered oil distribution. Steering wheel turns itself or shakes	Reversed locations of rotator and intermediate shaft.	Reassemble referring to notes in assembly.
Obvious increase in vibration by pressure. Further, the wheel could not turn	Broken or deformed yoke, broken or deformed opening of intermediate shaft.	Replace yoke, replace intermediate shaft. Substitution with other object is forbidden.
Steering wheel could not return to center. Steering gear could not unload when steering wheel stops turning	Steering column and valve spool are not coaxial.	Troubleshoot after finding out the cause.
	Steering column has pushed the valve spool to be stuck.	
	Too much steering column rotating resistance.	
	Broken or deformed spring leaf.	
Steering cylinder moves little at first and then will not as manual steering	Too low oil level in oil tank (oil in cylinder has returned to oil tank).	Refill oil to specified level.
As power steering, cylinder piston reaches the extreme and driver could not feel the extreme clearly. Steering cylinder will not move as manual steering	Too much radial or axial clearance at rotor and stator due to long time of use.	Replace rotor and stator. If axial clearance has become too large, grind the end surface of stator.
No manual steering	Too high oil viscosity.	Use recommended oil.

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GROUP 1 HYDRAULIC CIRCUIT

1. HYDRAULIC CIRCUIT



1	Main pump (+pilot pump)	6	Boom cylinder	11	Air breather
2	Main control valve	7	Bucket cylinder	12	Return filter
3	Remote control lever	8	Steering cylinder	13	Safety valve
4	Steering unit	9	Pressure select valve		
5	Priority valve	10	Hydraulic tank		

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6. HYDRAULIC SYSTEM RESTRICTION TEST

- SPECIFICATION

Oil temperature 45±5°C(113±9°F)
Engine speed High idle
Maximum pressure
3 MPa (30 bar, 43 psi) at steering unit
Maximum pressure at main control valve
1 MPa (10 bar, 145 psi)

- GAUGE AND TOOL

Gauge 0~7 MPa (0~70 bar, 0~1000 psi) 2EA
This test will check for restrictions in the hydraulic system which can cause overheating of hydraulic oil.

1) Install temperature reader.
(see temperature reader installation procedure in this group)

2) Heat hydraulic oil to specifications.
(see hydraulic oil warm up procedure in this group)

3) Connect fitting and gauge to steering valve.

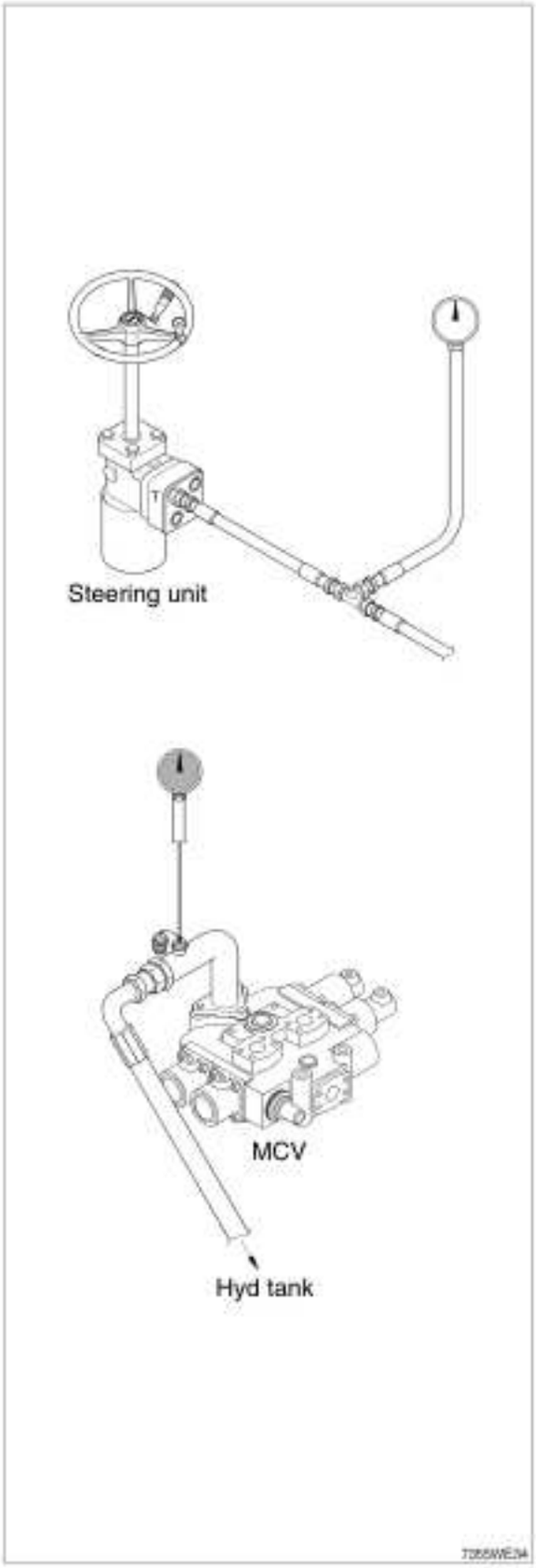
4) Connect fitting and gauge to main control valve.

⚠ **Do not operate steering or loader functions or test gauge may be damaged.**

5) Run engine at specification and read pressure gauges.

If pressure is more than specification at the loader control valve, check for a kinked, dented or obstructed hydraulic line. Check loader control valve for a binding spool.

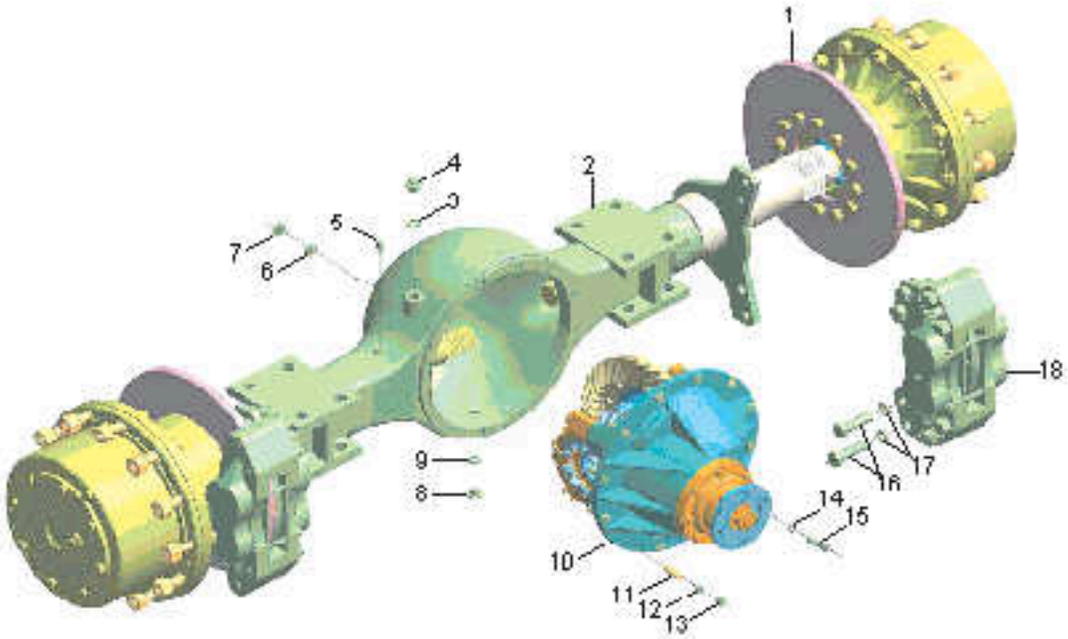
If pressure is more than specification at the steering unit, inspect neutral condition of the steering unit and priority valve for a stuck spool. Make sure orifice plugs are installed in ends of priority valve spool.
Check for plugged orifice in priority valve LS port and dynamic signal orifice on the spool of priority valve.



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8) STRUCTURE

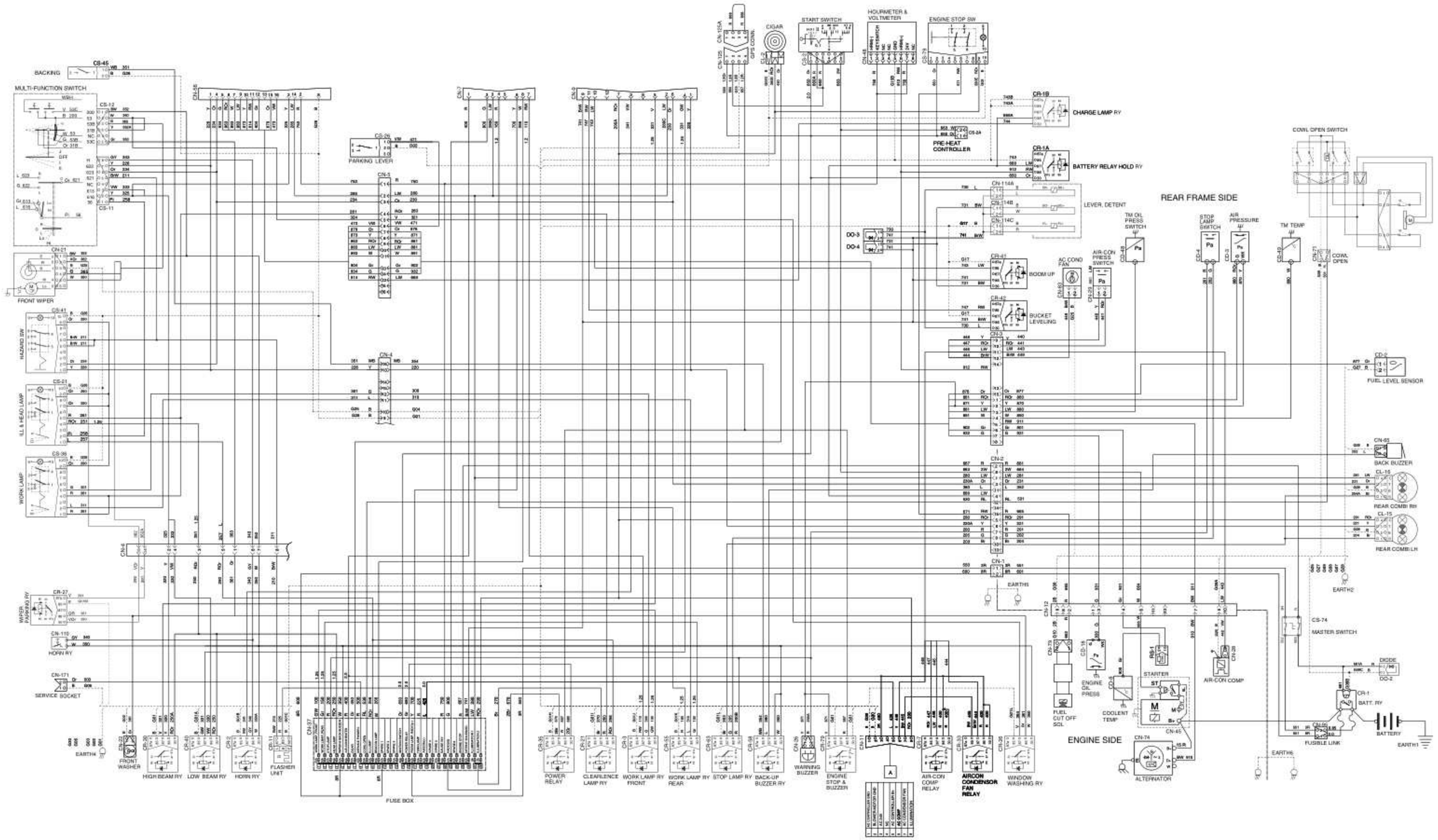
(1) Drive axle assembly



1	Wheel-end reductor	7	Screw plug	13	Nut
2	Axle housing assy	8	Screw plug	14	Washer
3	O-ring	9	O-ring	15	Bolt
4	Screw plug	10	Final drive assy	16	Bolt
5	Exhaust plug	11	Double end studs	17	Washer
6	O-ring	12	Washer	18	Disc brake assy

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· ELECTRICAL CIRCUIT (1/2)



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