FORKLIFT

SERVICE MANUAL

110D-7A

HYUNDAI

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Fault code (Hex)	Meaning of the fault code possible reason for fault detection	Reaction of the TCU	Possible steps to repair
F1	**General EEPROM fault** TCU can't read non volatile memory · TCU is defective	No reaction OP mode : Normal	· Replace TCU ※ Often shown together with fault code F2
F2	**Configuration lost** TCU has lost the correct configuration and can't control the transmission · Interference during saving data on non volatile memory · TCU is brand new or from another vehicle	Transmission stay neutral OP mode : TCU shutdown	· Reprogram the correct configuration for the vehicle (e.g. with cluster controller,...)
F3	**Application error** Something of this application is wrong	Transmission stay neutral OP mode : TCU shutdown	· Replace TCU ※ This fault occurs only if an test engineer did something wrong in the application of the vehicle
F5	**Clutch failure** AEB was not able to adjust clutch filling parameters · One of the AEB-Values is out of limit	Transmission stay neutral OP mode : TCU shutdown	· Check clutch ※ TCU shows also the affected clutch on the display
F6	**Clutch adjustment data lost** TCU was not able to read correct clutch adjustment parameters · Interference during saving data on non volatile memory · TCU is brand new	No reaction, Default values : 0 for AEB Offsets used OP mode : Normal	· Execute AEB

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3. STEERING UNIT LEAKAGE TEST

- SPECIFICATION

Oil temperature	45±5°C(113±9°F)
Engine speed	High idle
Maximum leakage	7.5 ℓ /min (2 gpm)

- GAUGE AND TOOL

Temperature reader
Measuring container (Approx. 20 ℓ)
Stop watch

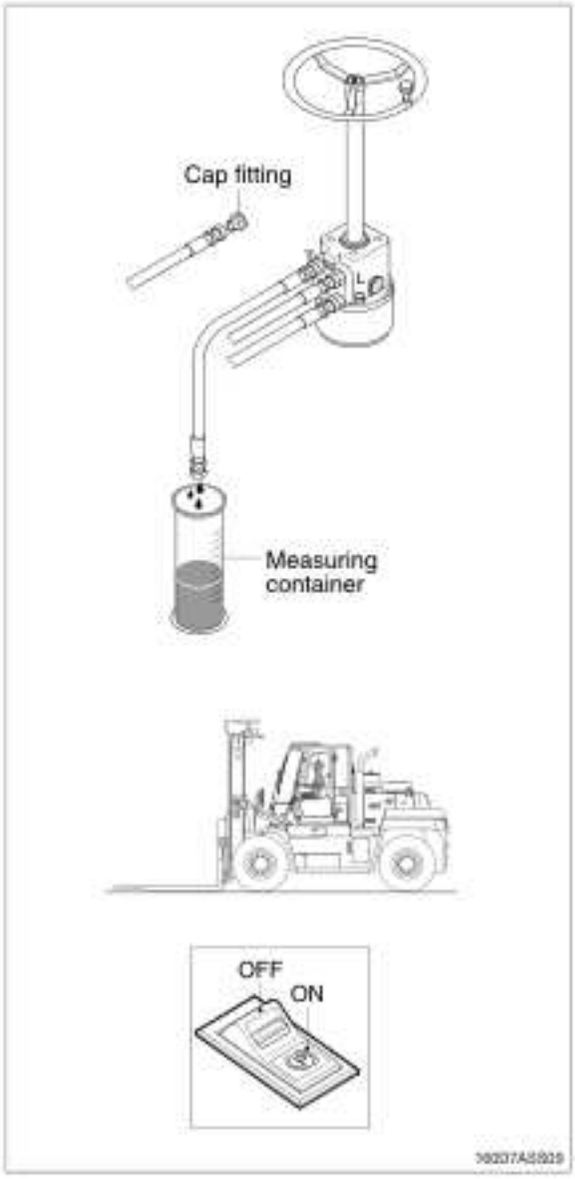
1) Install temperature reader.
(See temperature reader installation procedure in this group).

2) Heat hydraulic oil to specifications.

3) Disconnect return hose from fitting.
Install cap fitting.

4) Run engine at specifications. Rotate steering wheel completely to the right (or left) approximately 1.2 kgf · m of force.
Measure oil flow from return hose for 1 minute.

5) If leakage is greater than specifications, repair or replace steering unit.



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GROUP 7 CONNECTORS

1. CONNECTOR DESTINATION

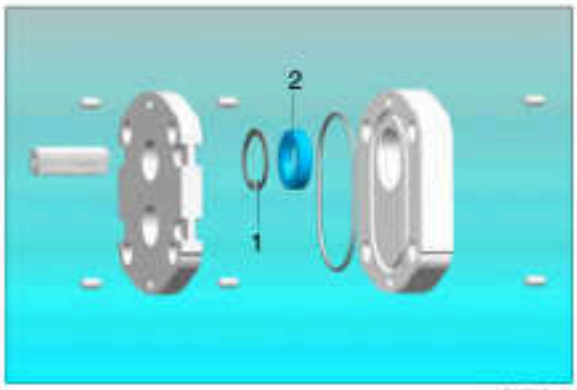
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-1	KET	52	I/conn(Engine harness-Main harness)	MG643241	MG613245
CN-2	KET	52	I/conn(Main harness-Engine harness)	MG643241	MG613245
CN-3	DEUTSCH	4	Seat switch	-	DT04-4P
CN-4	DEUTSCH	2	Work lamp switch	DT06-2S	DT04-2P
CN-5	DEUTSCH	2	Hazard switch	DT06-2S	DT04-2P
CN-6	AMP	15	I/conn(Frame harness-Engine harness)	2-85262-1	368301-1
CN-7	AMP	16	I/conn(Cabin harness-Main harness)	368047-1	368050-1
CN-8	KET	14	I/conn(Main harness-Monitor harness)	MG610350	MG640352
CN-9	DEUTSCH	2	I/conn(Frame harness-Master W/Lamp harness)	-	DT04-2P
CN-10	DEUTSCH	6	I/conn(Frame harness-Fender harness)-LH	DT06-6S	-
CN-11	DEUTSCH	6	I/conn(Frame harness-Fender harness)-RH	DT06-6S	DT04-6P
CN-12	AMP	3	To harness rear camera	174357-2	174359-2
		1		174890-2	174879-2
CN-13	KET	8	Condenser fan harness	MG640339	MG640341
CN-14	KET	6	Cabin harness	MG610049	MG620048
CN-15	KET	6	Aircon harness	MG610049	
CN-16	DEUTSCH	2	Mast work lamp harness	DT06-2S	DT04-2P
CN-17	DEUTSCH	2	Mast lamp harness	DT06-2S	-
CN-19	KET	2	Inching potentiometer	MG610329	MG640322
CN-21	DEUTSCH	8	Front wiper	DT06-8S	-
CN-22	KET	2	Front washer	MG610320	-
CN-23	KET	2	Speaker LH	MG610070	
CN-24	KET	2	Speaker RH	MG610070	
CN-25	Molex	2	Horn	35825-0211	
CN-26	KET	1	Tilt alarm	ST730018-3	-
CN-27	KUM	16	Radio & USB player	PK145-16017	-
CN-28	AMP	8	Transmission display	929504-3	-
CN-29	KET	2	Receiver dryer	MG640795	
CN-30	KUM	1	Compressor	PB625-01027	-
CN-31	AMP	2	Aircon harness	-	174354-2
CN-32	AMP	2	Aircon harness	-	176146-2
CN-33	AMP	6	Aircon harness	-	174264-2
CN-36	QPL	1	Fuse box	21HF-10500	-
CN-37	QPL	1	Fuse box	21HF-10500	-
CN-38	QPL	1	Fuse box	21HF-10500	-
CN-45	Ring term	1	Start motor	S820-308000	926682-3
CN-46	KET	1	Air compressor harness	-	MG650943-5

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(4) Separation intermediate section

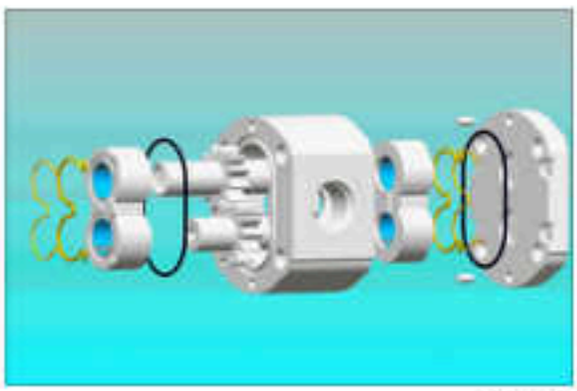
① Remove the through shaft and intermediate section as well as guard pins.

② Remove snap ring (1) and shaft seal (2) with proper tool.



(5) 3rd working section

① Do same job as for 1st and 2nd sections.



4) ASSEMBLY

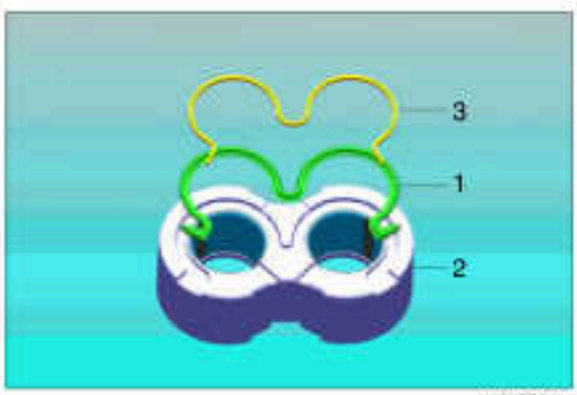
(1) Preassemble

Pressure plates

① Locate O-ring (1) into the grove on the aluminum pressure plate (2).

② Locate back-up ring (3) upon the O-ring (1).

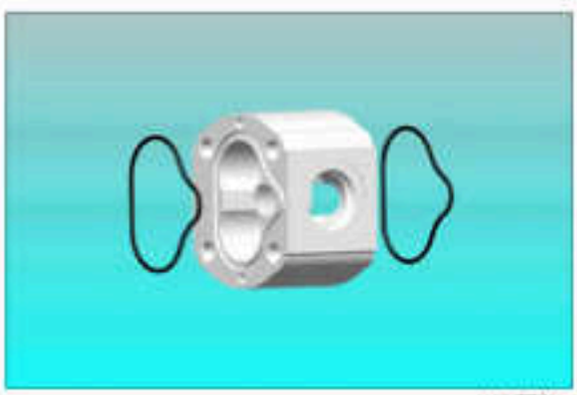
③ Smear clean grease on the O-ring (1) and back-up ring (3) to fix their position while moving.



Working body

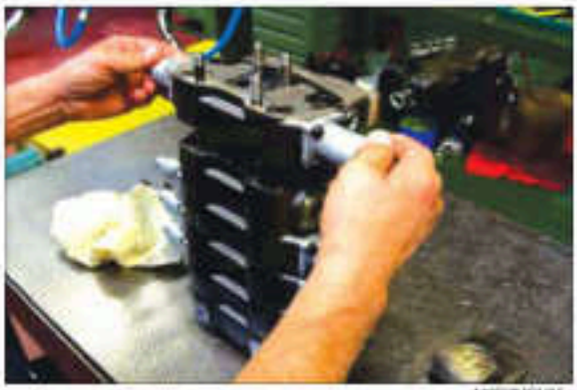
④ Insert square rings into the grooves.

※ Shape of square ring is different depend on type of bodies.



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Locate new or repaired working section in right position according to the order of functions.



100D7MCV05

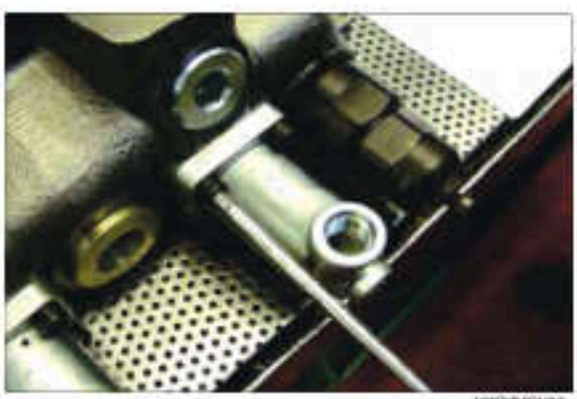
Tighten four nuts (M17) in a crisscross pattern with proper assembling torque of 4.3 kgf · m (31 lbf · ft).



100D7MCV06

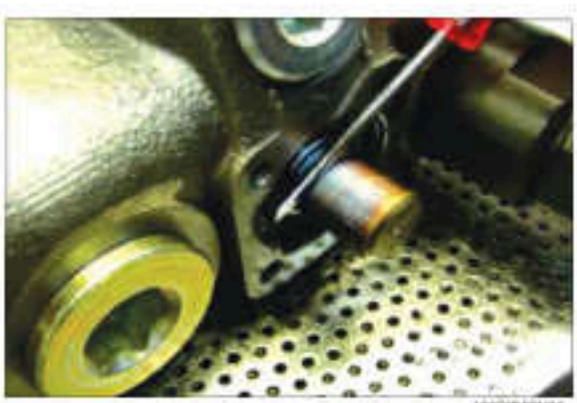
(2) Replacing spool & control kit

Loosen 4 screws holding aluminum kits to the body with 5 mm wrench.



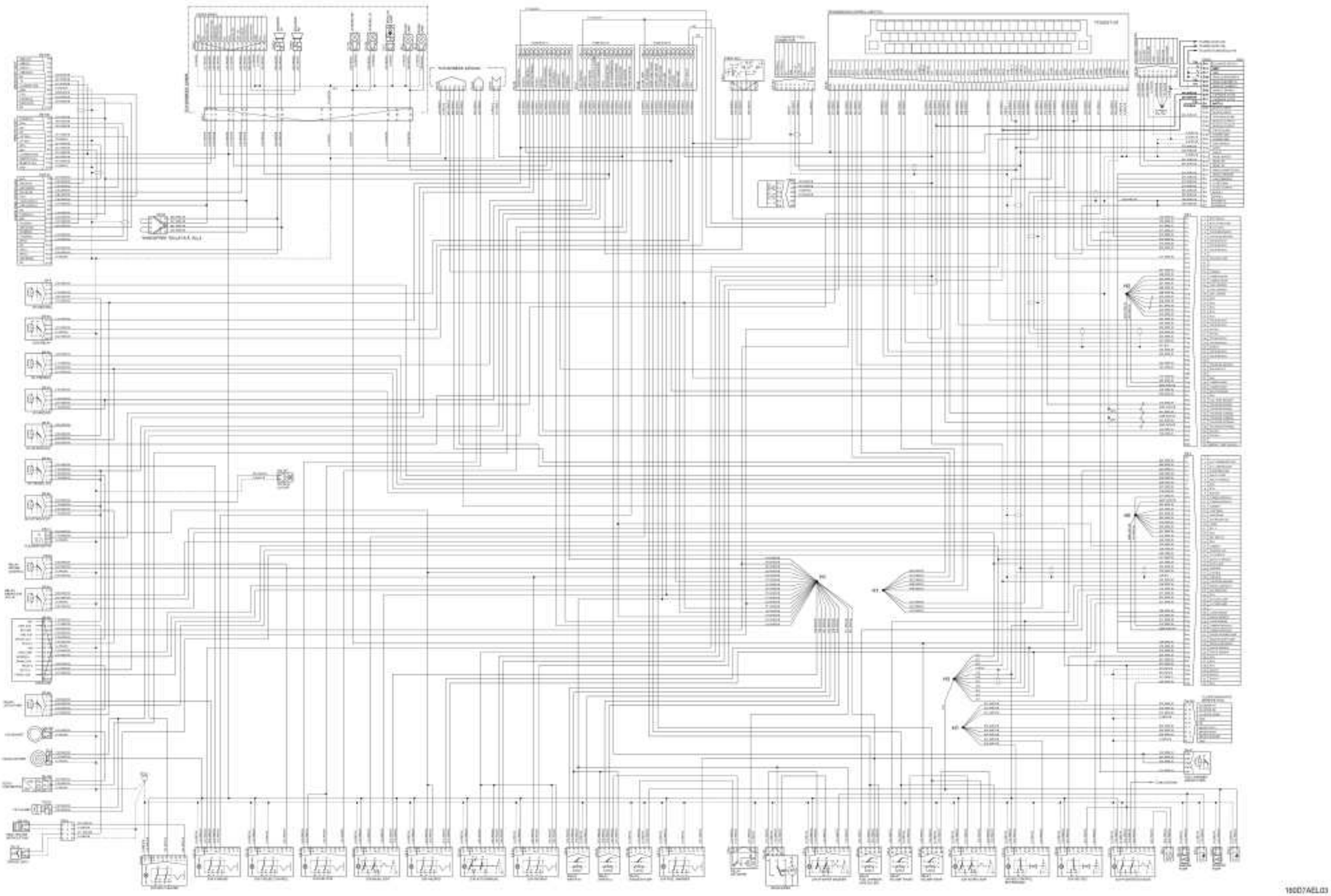
100D7MCV07

Take off all components and O-ring, valve inside, with attention not to give any damage to it.
Don't use anything with sharp edge.



100D7MCV08

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