FORKLIFT

SERVICE MANUAL

50DF-7

HYUNDAI

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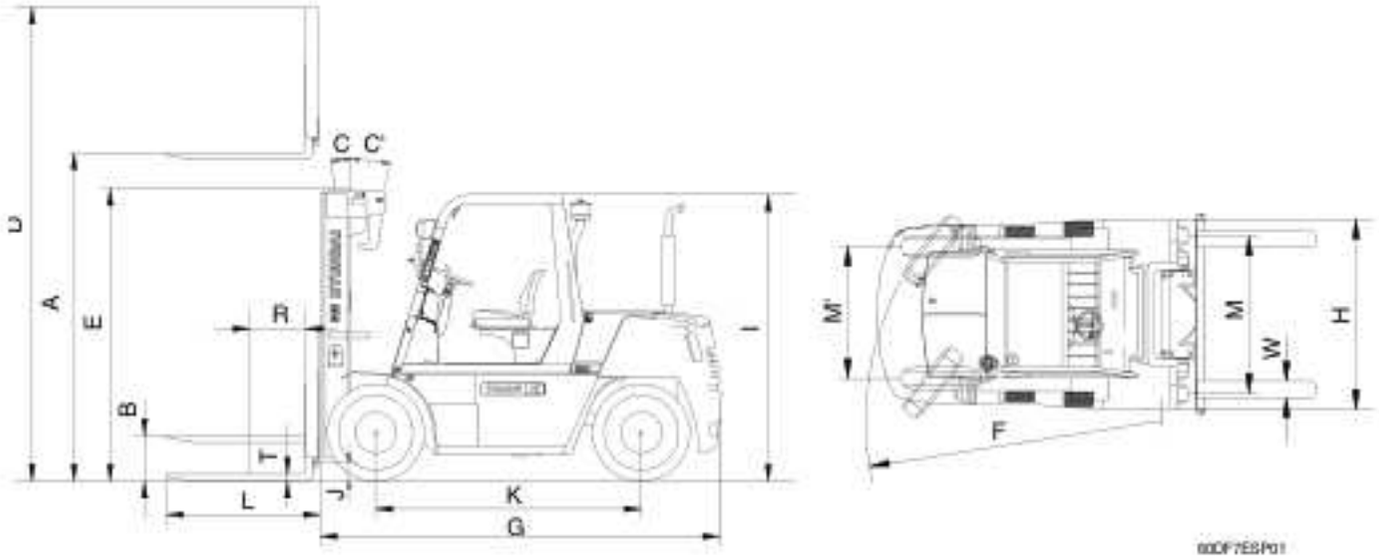
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2. SPECIFICATIONS



Model			Unit	50DF-7	60DF-7	70DF-7
Capacity			kg	5000	6000	7000
Load center		R	mm	600	←	←
Weight(Unloaded)			kg	8382	9245	9871
Fork	Lifting height	A	mm	3030	←	←
	Free lift	B	mm	140	←	←
	Lifting speed(Unload/Load)		mm/sec	460/440	460/430	460/420
	Lowering speed(Unload/Load)		mm/sec	450/500	←	←
	L×W×T	L,W,T	mm	1200×150×60	1200×180×65	←
Mast	Tilt angle(forward/backward)	C/C'	degree	15/10	←	←
	Max height	D	mm	4275	←	←
	Min height	E	mm	2515	←	←
Body	Travel speed(Unload)		km/h	22.8	22.7	22.8
	Gradeability		degree(%)	24.6(45.8)	23.3(43.1)	21.1(38.5)
	Min turning radius(Outside)	F	mm	3349	3396	3442
ETC	Operating pressure		kgf/cm²	185	←	←
	Hydraulic oil tank		ℓ	100	←	←
	Fuel tank		ℓ	150	←	←
Overall length		G	mm	4700	4765	4860
Overall width		H	mm	2068	←	←
Overhead guard height		I	mm	2523	←	←
Ground clearance		J	mm	195	←	←
Wheel base		K	mm	2300	←	←
Wheel tread front/rear		M, M'	mm	1578/1602	←	←

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2. TROUBLESHOOTING

1) TRANSMISSION

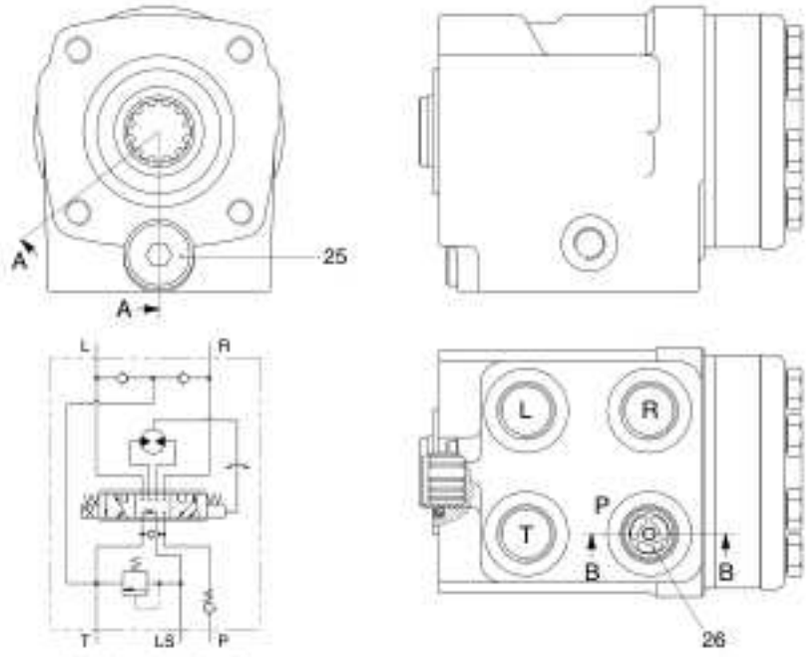
(1) Check list during operation list

No	Condition	Possible causes	Correction
1	Transmission does not operate in any speed or does not engage(slips) in all speeds	(1) Low oil pressure or no oil pressure caused by : a. Low oil, no oil, or thick oil. b. Inching control valve linkage loose, broken or adjustment is not correct. c. Inching valve spool stuck(held) open. d. Failure of the oil pump or a defect in the oil pump. e. Converter drive tangs worn off or not engaged into pump or broken bolt. f. Main regulator valve stuck open. g. Restriction in the oil flow circuit such as dirty oil screen.	(1) Check to oil level. a. Check to mix another oil. b. Check to tightening bolt or changing a control valve ass'y. c. Changing a spool of the control valve ass'y or check it. d. Changing the oil pump or have to check. e. Check to tightening torque of bolt from Torque Converter Gear. f. Check to Control Valve Ass'y. g. Check to suction filter due to a clogged from a mixed foreign materal.
2	Transmission does not shift	(1) Low oil pressure. (2) Main regulator valve will not move(stuck). (3) Solenoids or related electric components are out of order.	(1) Check to oil level. (2) Check Control Valve Ass'y. (3) Check to Solenoids Valve or related electric components.
3	Transmission gets hot.	(1) Restriction in cooling circuit. (2) Oil level too high or too low. (3) Low pump pressure -worn or damaged pump. (4) Converter one way clutch worn and slipping. (5) Air mixed in the oil. Air leaks on the intake side of the pump. (6) Low oil flow through converter. (7) Wrong application for vehicle (loads are too heavy for the lift truck). (8) Too much inching operation (slipping the clutch plates and discs). (9) Too much stalling of torque converter. (10) Cooler bypass valve stuck(held) open, full oil flow does not go through oil cooler.	(1) Check to Restriction in cooling circuit of transmission. (2) Check to oil level or replacement. (5) Check to transmission inside cover. (6) A plugged(restriction) oil flow passage. (7) Check to reliable work place under circumstance. (8) Check to Control Valve Ass'y. (9) Check to Torque Converter Ass'y or replacement.

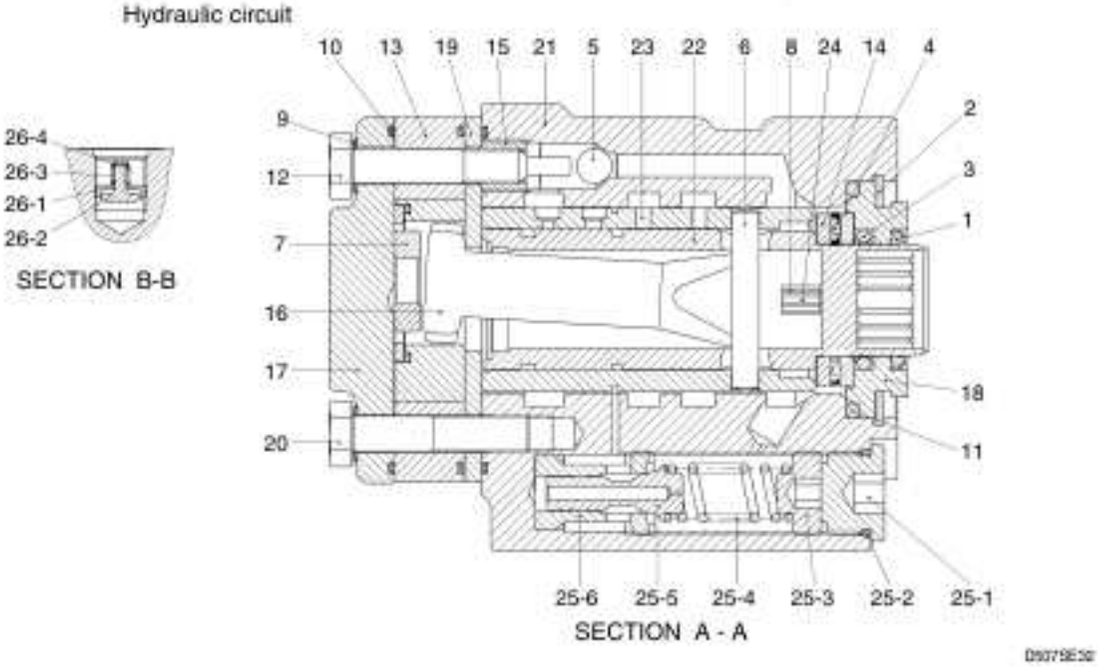
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3. STEERING UNIT

1) STRUCTURE



Hydraulic circuit



1	Dust seal	10	O-ring	19	Plate	25-3	Spring seat
2	Retaining ring	11	O-ring	20	Cap screw	25-4	Spring
3	Cap seal	12	Rolled screw	21	Housing	25-5	Spool
4	Thrust bearing	13	Gerotor set	22	Spool	25-6	Bushing
5	Ball	14	Bearing race	23	Sleeve	26	Check valve
6	Pin	15	Bore screw	24	Plate spring	26-1	Guide
7	Spacer	16	Drive shaft	25	Relief valve	26-2	Shim
8	Center spring	17	End cap	25-1	Plug	26-3	Spring
9	Washer	18	Bushing	25-2	O-ring	26-4	Washer

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(7) After taking out connecting shaft, remove gear housing, drive gear and driven gear set from cover.

※ When removing the gear housing, keep it as straight as possible so that it can not happen scratch or damage to inner surface by touching gear teeth.
Inspect scoring or excessive wear of shaft and gear teeth for both drive gear and driven gear set.



(8) Remove lip seal from the cover.

※ When remove the lip seal from the cover, take care not to give any scratch or damage on the surface of shaft hole or seal bore.



4) ASSEMBLY

(1) Throughly clean seal bore, press the shaft seal in to the seal bore of the cover.

※ Uniform pressure must be used to prevent misalignment or damage to the seal.



(2) Assemble shaft to the cover.

※ Throughly clean mounting surface of the gear housing for the seals.

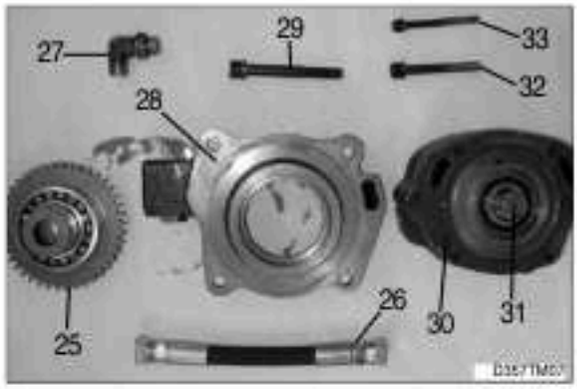


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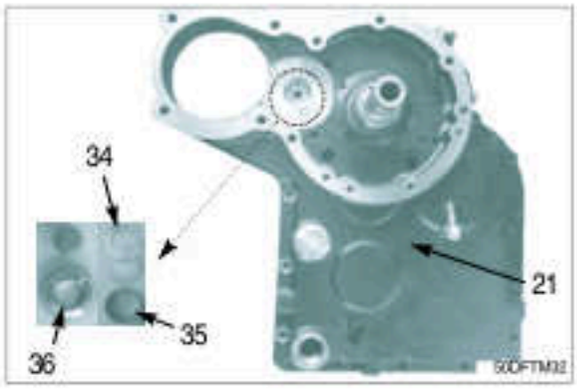
9) Remove four socket bolts (29), flange pump (28) from bearing plate (21).

Remove a bolt.soc(32) and four socket bolt (33) from flange pump.

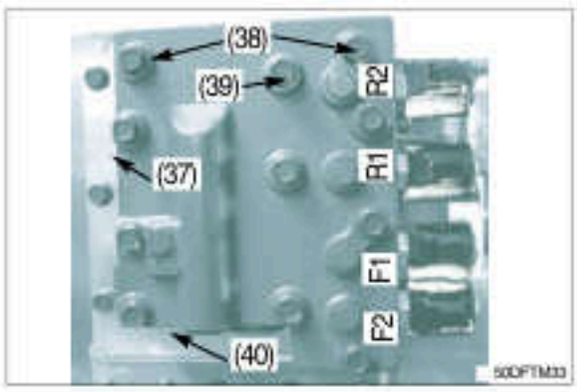
Remove charging pump(31) and pump gasket(30), then seperate to gear-P.T.O output(25) and ball bearing, 90° elbow(27).



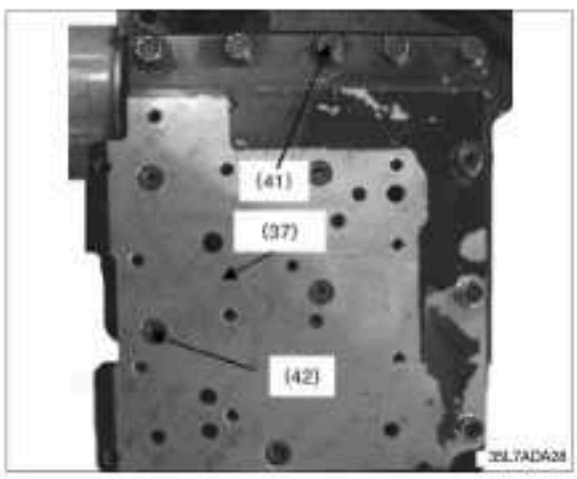
10) Separate to two thrust washers(34), needle bearing(35), gear- P.T.O Idle(36) from front cover.



11) Remove two bolts(38), nine bolts(39), valve gasket(40), valve plate(37).

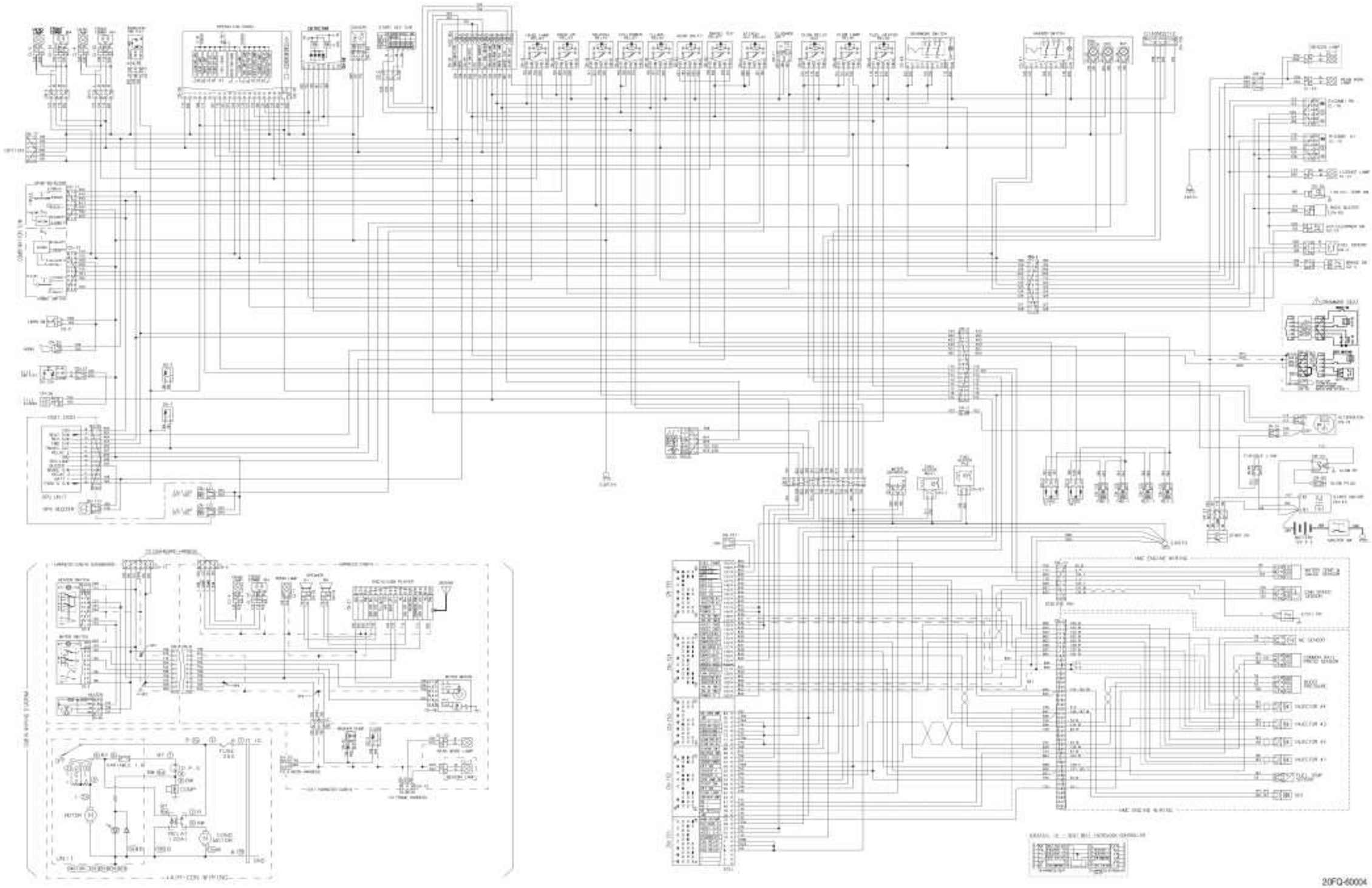


12) Remove eight bolts(41), five socket bolt(42), then separate valve plate(37) from transmission case.



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ELECTRICAL CIRCUIT (70DF : #1296~)



20FQ-60004

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