WHEELED EXCAVATOR

SERVICE MANUAL

R170W-7A

HYUNDAI

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SECTION 9 COMPONENT MOUNTING TORQUE

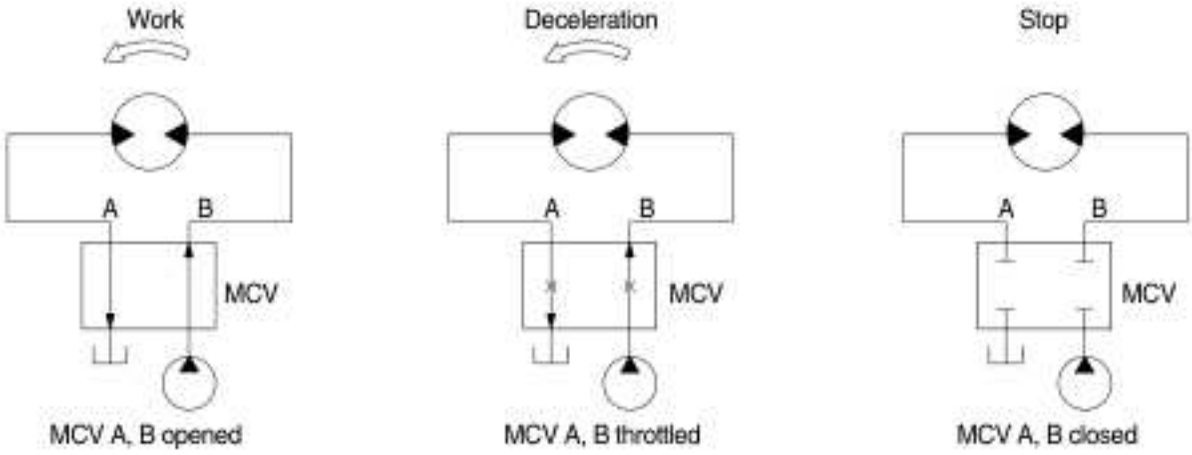
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4) BRAKE SYSTEM

(1) Control valve swing brake system

This is the brake system to stop the swing motion of the excavator during operation.
In this system, the hydraulic circuit is throttled by the swing control valve, and the resistance created by this throttling works as a brake force to slow down the swing motion.



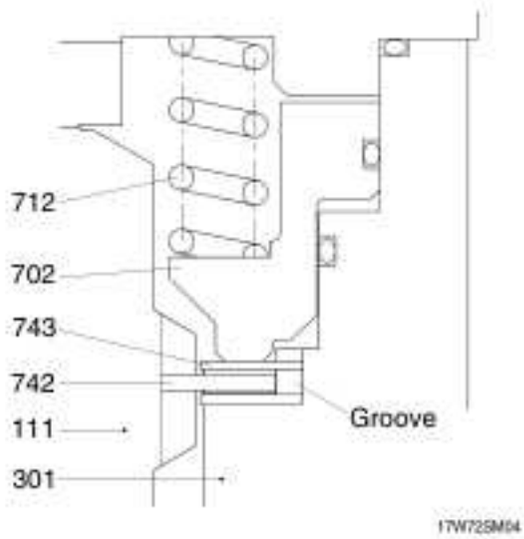
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(2) Mechanical swing parking brake system

The mechanical swing parking brake system is installed to prevent the upper structure from swinging downhill because of its own weight when the excavator is parked on a slope since it completely eliminates the hydraulic drift of swing motion while the excavator is on a slop, work can be done more easily and safely.

① **Brake assembly**

Circumferential rotation of separate plate(743) is constrained by the groove located at casing(301). When housing is pressed down by brake spring(712) through friction plate(742), separate plate(743) and brake piston(702), friction force occurs there.
Cylinder(111) is constrained by this friction force and brake acts, while brake releases when hydraulic force exceeds spring force.



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111	Cylinder	712	Brake spring
301	Casing	742	Friction plate
702	Brake piston	743	Separate plate

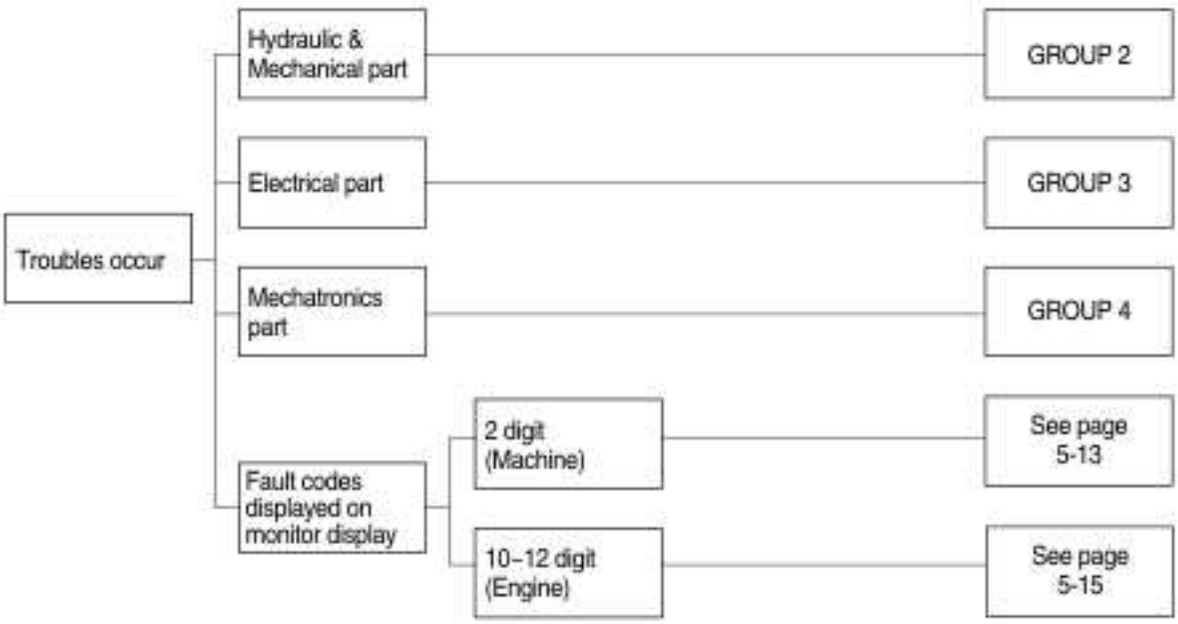
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GROUP 1 BEFORE TROUBLESHOOTING

1. INTRODUCTION

When a trouble is occurred in the machine, this section will help an operator to maintain the machine with easy.

The trouble of machine is parted Hydraulic & Mechanical system, Electrical system and Mechatronics system. At each system part, an operator can check the machine according to the troubleshooting process diagram.



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(2) Determine dimension II, from front face (arrow) of sun gear to mounting face of hub.

Dimension II, e.g. 255.70mm

CALCULATION EXAMPLE :

Dimension I eg. 260.65mm
Dimension II eg. ..... - 255.70mm
Difference ..... = 4.95mm
Required axial play(average) e.g. .....
..... - 0.75mm
Result = requ. thrust washer(s) e.g. .....
..... s = 4.20mm


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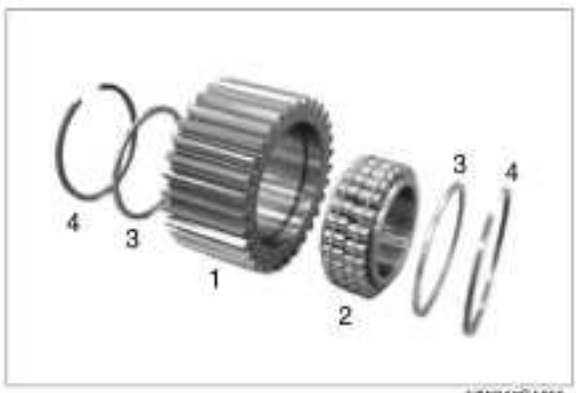
(3) Insert thrust washer(s) (e.g. s = 4.20mm) into planetary carrier and press into contact position.

(S) Driver 5870 048 263


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(4) Preassemble planetary gear, as shown in the figure.

1 = Planetary gear
2 = Roller bearing
3 = Washer
4 = Circlip



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(5) Warm up bearing inner ring and install pre-assembled planetary gear until contact.

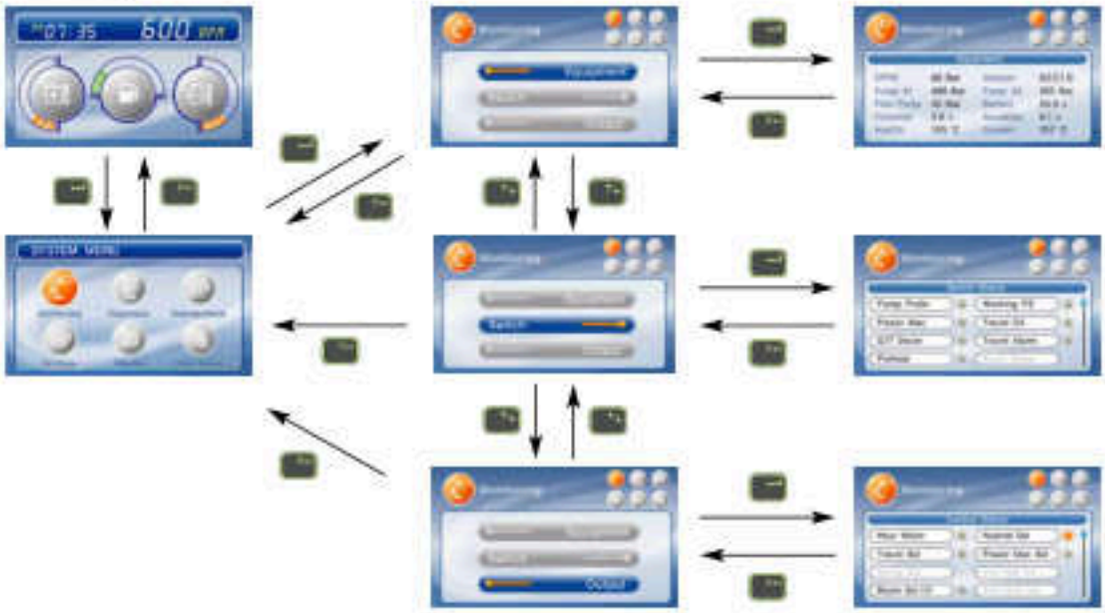
- Mount planetary gear or bearing inner ring with large radius looking to planetary carrier (downward).


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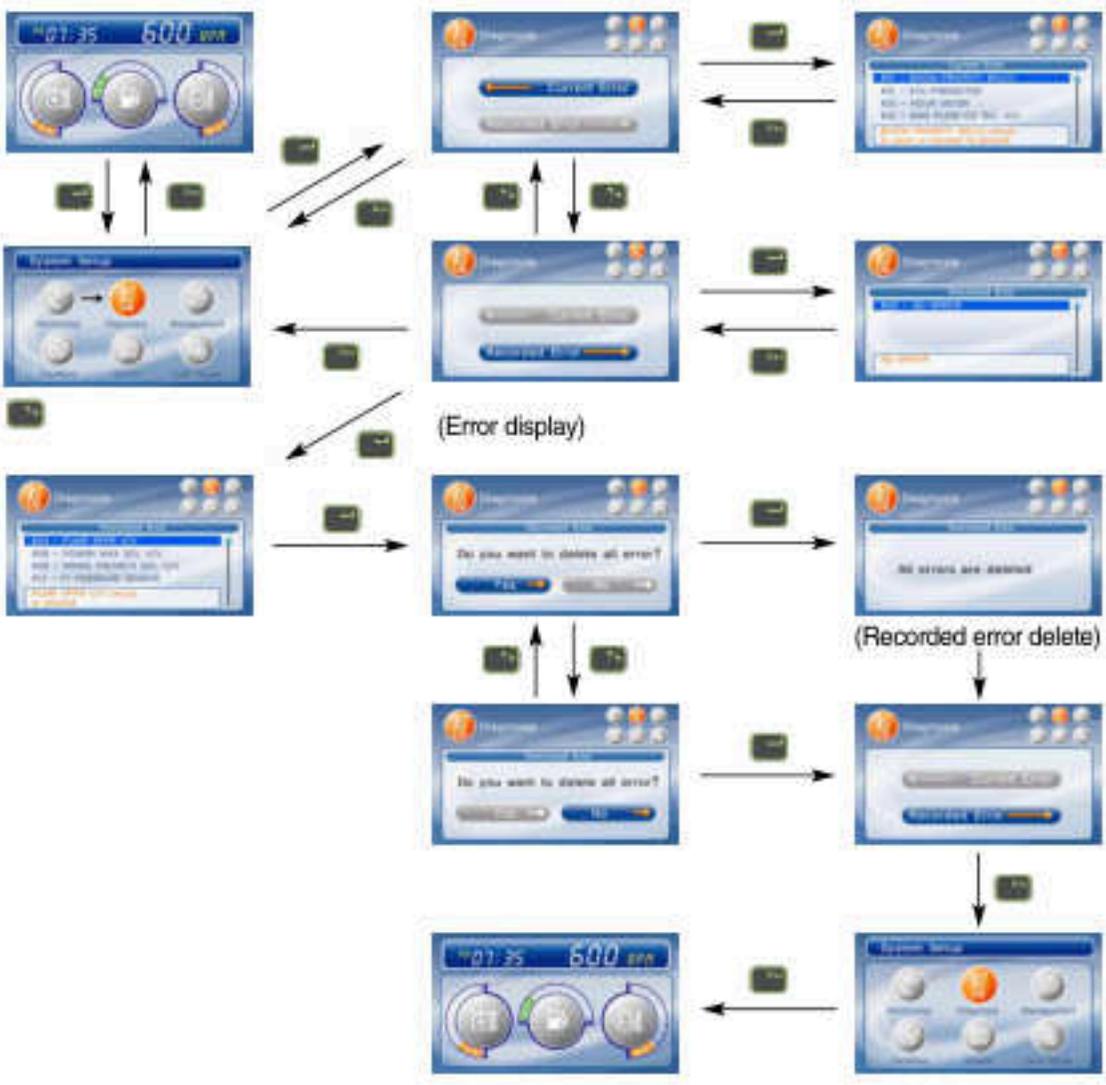
(2) Display map

① Monitoring



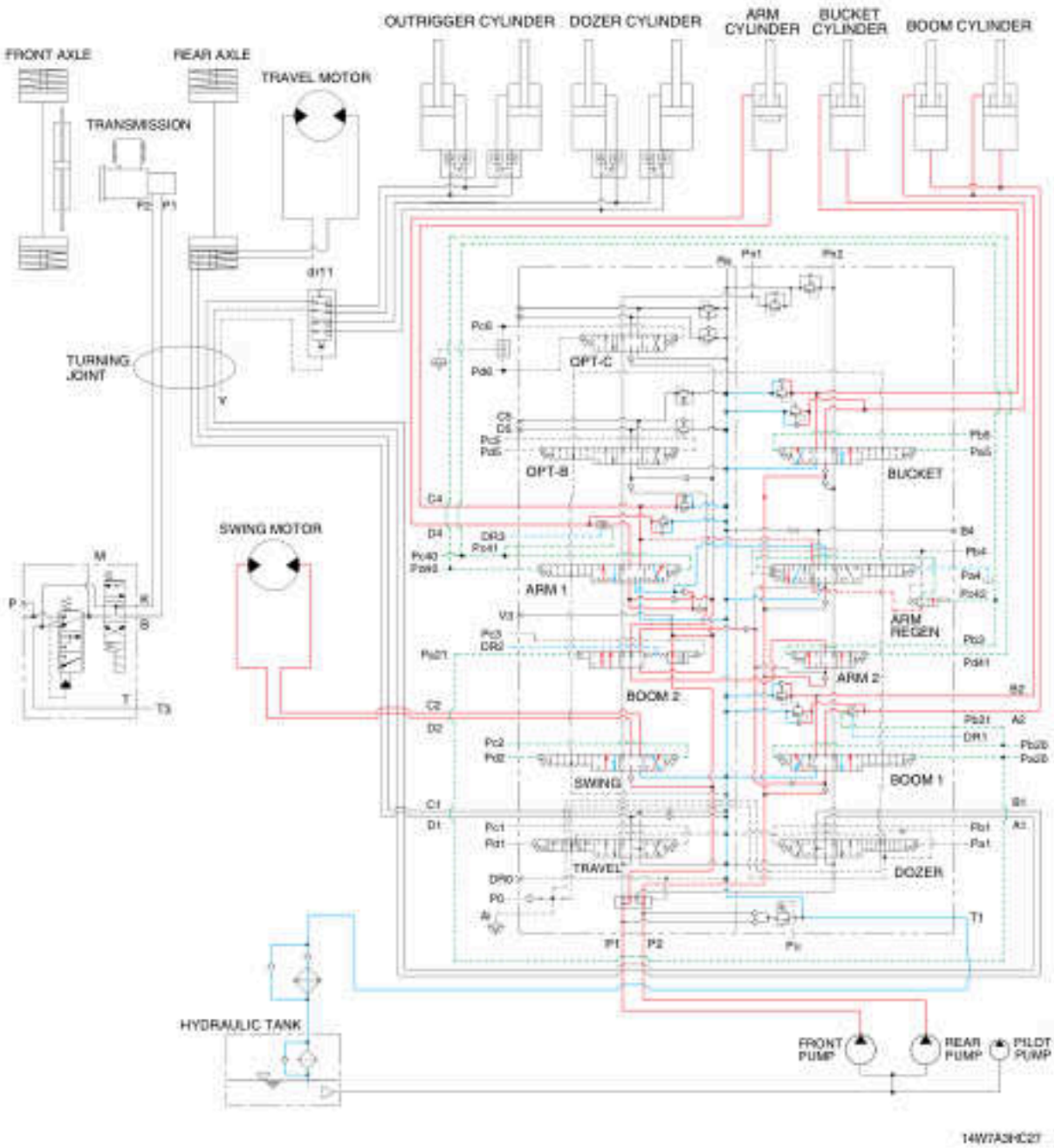
② Diagnosis

a. Protocol type 1



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5. COMBINED SWING, BOOM, ARM AND BUCKET OPERATION

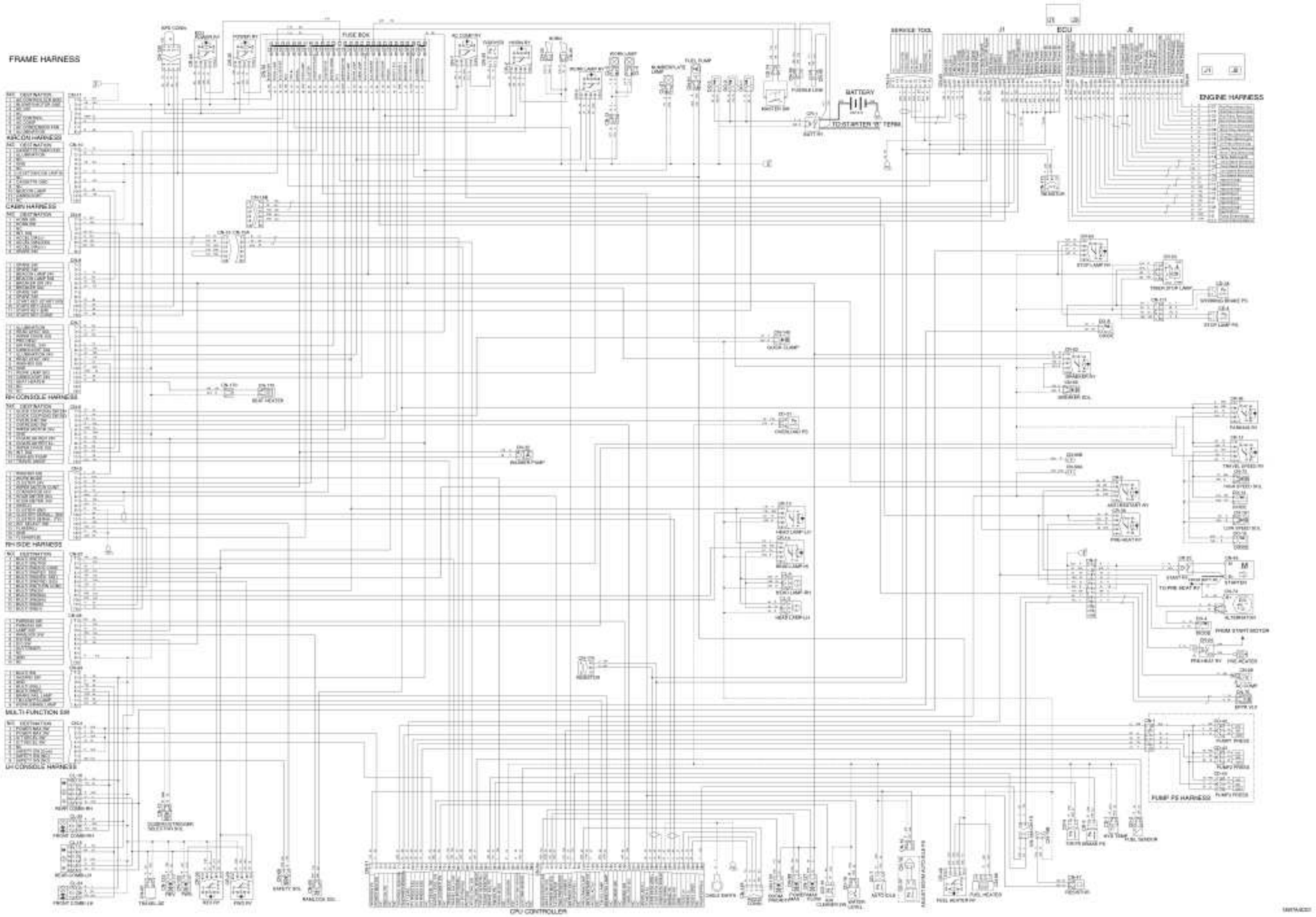


When the swing, boom, arm and bucket functions are operated, simultaneously each spool in the main control valve is moved to the functional position by the pilot oil pressure from the remote control valve.

The oil from the front pump flows into the swing motor, boom cylinders and arm cylinder through the swing spool, boom 2 spool, arm 1 spool, and the parallel and confluence oil passage in the left control valve. The oil from the rear pump flows into the boom cylinders, arm cylinder and bucket cylinder through the boom 1 spool, arm 2 spool, bucket spool and the parallel and confluence oil passage in the right control valve.

The superstructure swings and the boom, arm and bucket are operated.

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