SKID STEER LOADER

SERVICE MANUAL

HS80V, HS120V

HYUNDAI

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SAFETY FIRST

CHAPTER 1

SAFETY FIRST & GENERAL

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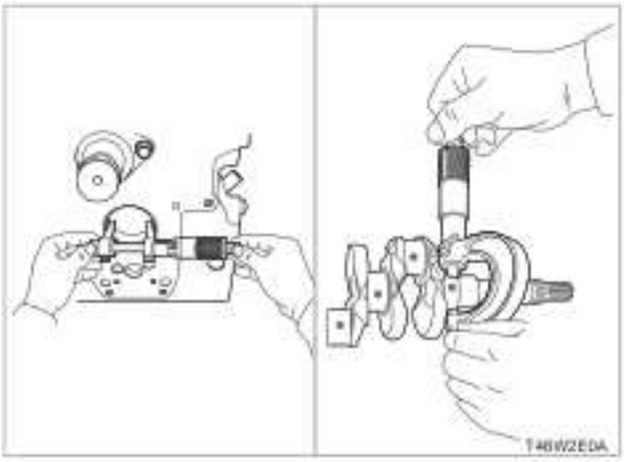
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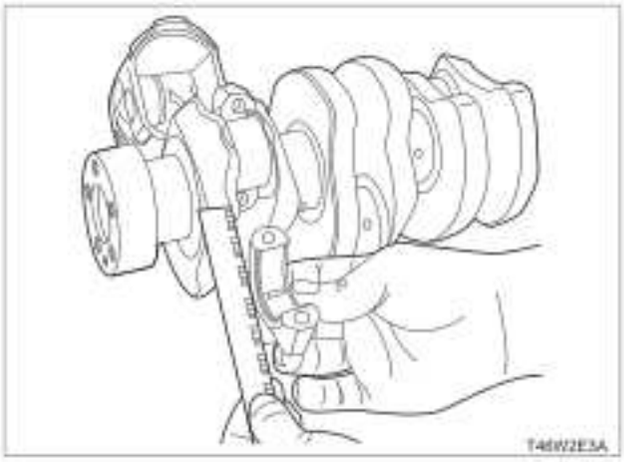
▶ CRANKSHAFT JOURNAL AND BEARING 1 OIL CLEARANCE



1. Measure the I.D. of the crankshaft bearing 1 with an inside micrometer.
2. Measure the O.D. of the crankshaft journal with an outside micrometer.
3. If the clearance exceeds the allowable limit, replace the crankshaft metal bearing.

Oil clearance	Specified value	0.040 ~ 0.104 mm (0.00153 ~ 0.00400 in.)
	Allowable limit	0.20 mm (0.0079 in.)
Journal O.D.	Specified value	59.921 ~ 59.940 mm (2.35909 ~ 2.35984 in.)
Bearing 1 I.D.	Specified value	59.980 ~ 60.025 mm (2.36142 ~ 2.36319 in.)

▶ CRANK PIN AND CONNECTING ROD BEARING OIL CLEARANCE



1. Place a plastigauge in lengthwise on the center of the crankpin.
2. Install the connecting rod, tighten the bolts to the specified torque once and remove the cap again.
3. Measure the amount of the flatness with the scale and get the oil clearance.
4. If the clearance exceeds the allowable limit, replace the bearing.

Oil clearance	Specified value	0.017 ~ 0.073 mm (0.00067 ~ 0.00287 in.)
	Allowable limit	0.20 mm (0.0079 in.)
Crankshaft pin O.D.	Specified value	51.959 ~ 51.975 mm (2.04563 ~ 2.04626 in.)
Crankshaft pin Bearing I.D.	Specified value	51.992 ~ 52.032 mm (2.04693 ~ 2.04850 in.)

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4. TROUBLESHOOTING

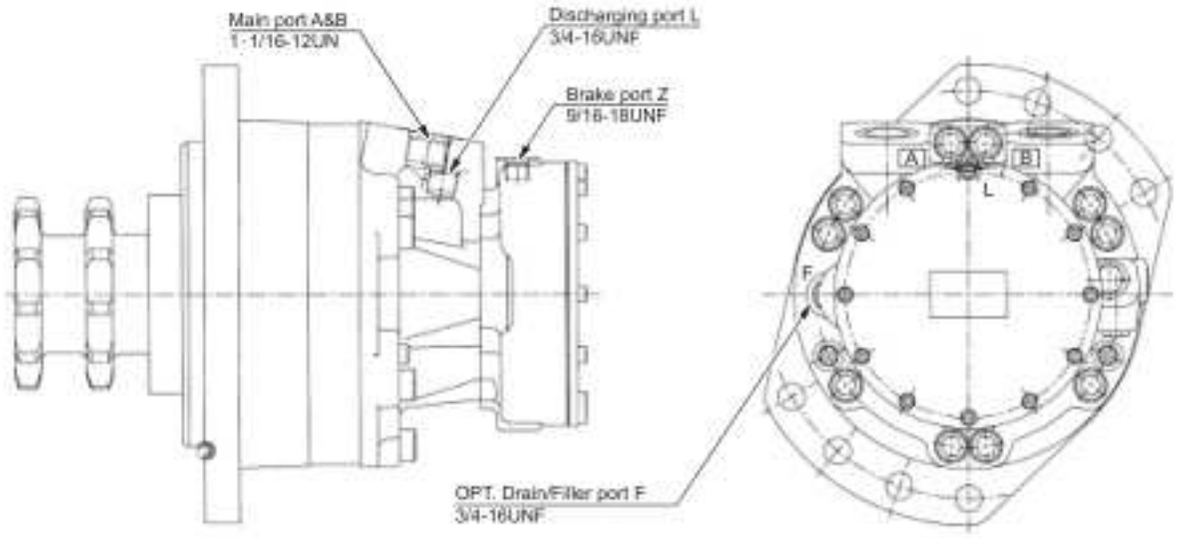
4.1 DRIVING HYDRAULIC SYSTEM/BRAKE

SYMPTOM	CAUSE	SOLUTION
The driving force on one side is weak. (Identical for the forward driving and reverse driving)	Insufficient oil in the tank	• Check for leakage and add the oil as necessary.
	Loose pedal linkage	• Adjust and reconnect the pedal linkage.
	Broken pump neutral bracket	• Replace it. Check the neutral bracket (for loose bolt or excessive play).
	Damaged high-pressure line	• Replace the line. Check the pump mounting bolt and HST motor.
	Damaged drive chain	• Check the chain and the chain connecting linkage Replace any damaged part.
	Damaged HST motor shaft	• Replace any defective part. Check the motor mounting bolt.
	Defective pump	• Check and repair the defective part.
	Faulty HST pump. The driving force on one side is weak at first, but, in a few minutes, the driving force on both sides becomes weak.	• Check and repair the defective part.
	Excessive internal oil leakage or damaged control pump motor or HST motor	• Check and repair any defective part. Clean the tank and the hydraulic lines. Replace the filter. Check the engine RPM and the hydraulic oil.
The driving force on one side is weak. (Only for the forward driving or reverse driving)	Defective relief valve of the valve block	• Replace the relief valve.
	Stuck or damaged shuttle valve of the HST motor	• Check and replace any defective part.
The driving force on one side is lost. (No hydraulic pressure delivered at all)	Insufficient oil level in the oil tank	• Check for oil leakage. Add the oil.
	Damaged coupling between the engine and pump	• Check and replace any damaged part. Check for misalignment.
	Malfunctioning HST pump	• Check and replace any damaged part.
The driving force on both sides is lost. (No hydraulic pressure built at all)	Damaged spline coupling (in the control pump)	• Check and replace any damaged part.
	Damaged implement pump shaft	• Check and replace any damaged part.
The driving force on both sides is lost. (Overall hydraulic pressure built)	Malfunctioning HST pump	• Check and replace any damaged part.
	Defective relief valve of the HST pump	• Check and replace any damaged part.
	Excessive internal leakage	• Clean the tank and hydraulic lines. Replace the filter.
	Defective control pump or HST motor	• Check the engine RPM and hydraulic oil specification.
	Excessively saggy drive chain	• Adjust

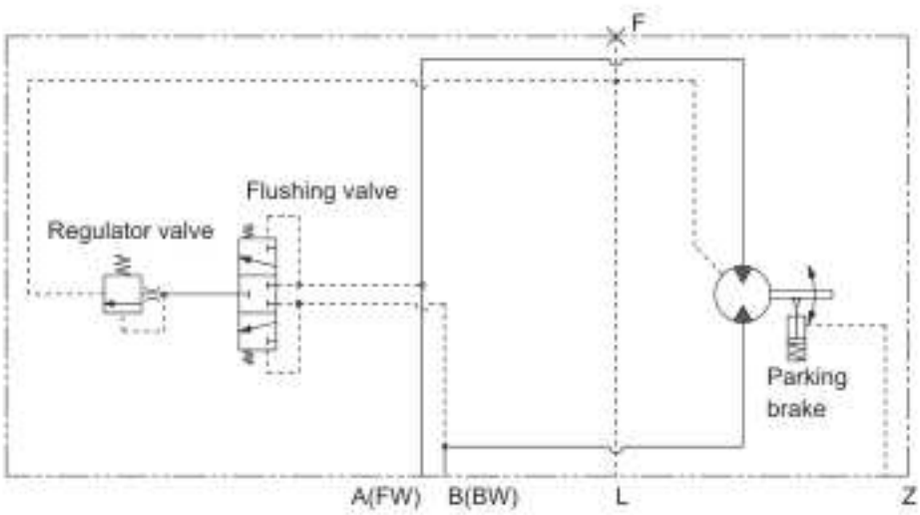
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EXTERIOR & CIRCUIT DIAGRAM

HS120V



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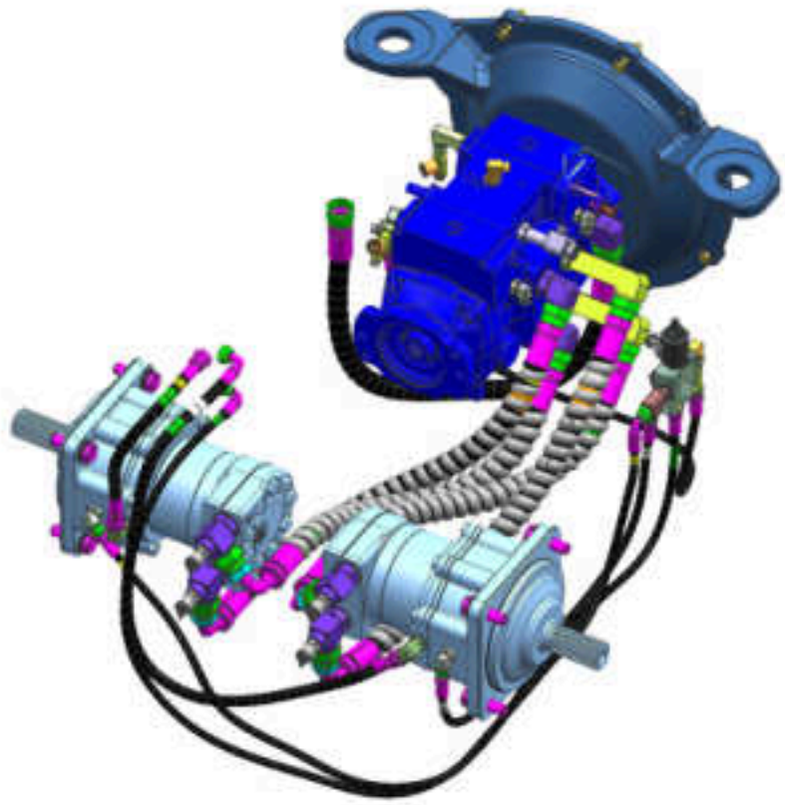
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2.3 CONNECTING LINES BY HYDRAULIC SYSTEM GROUPS

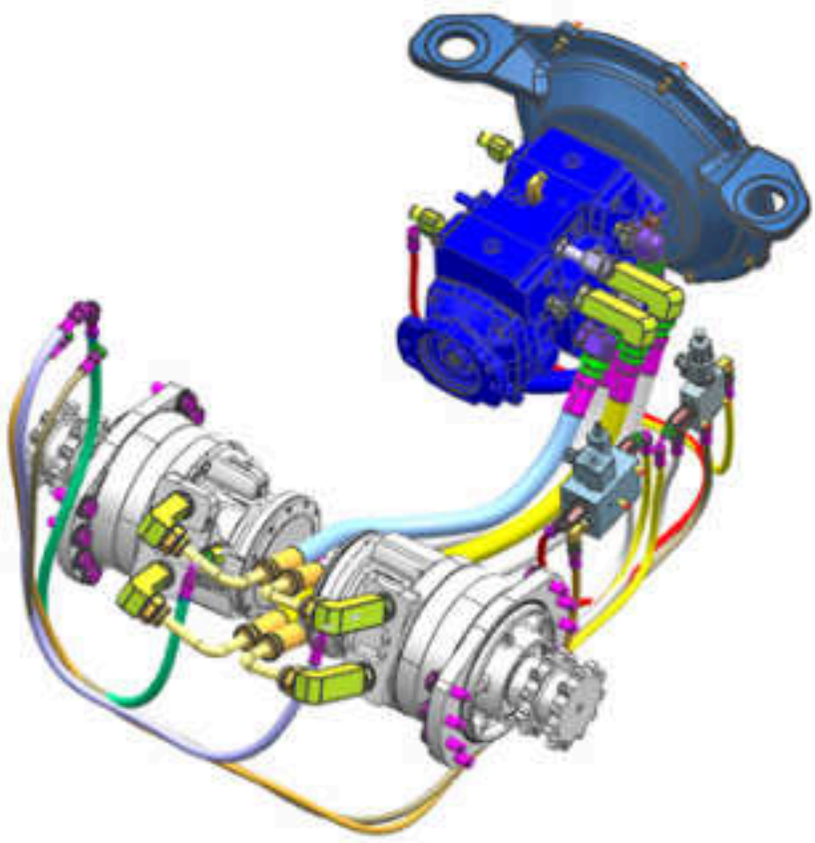
2.3.1 HST GROUP

HS80V



SL6W304A

HS120V



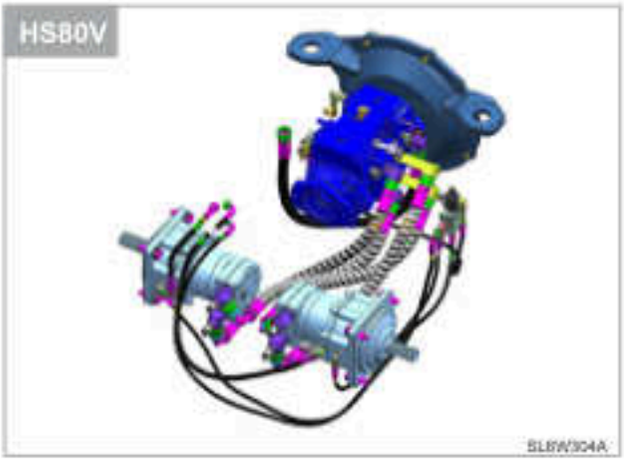
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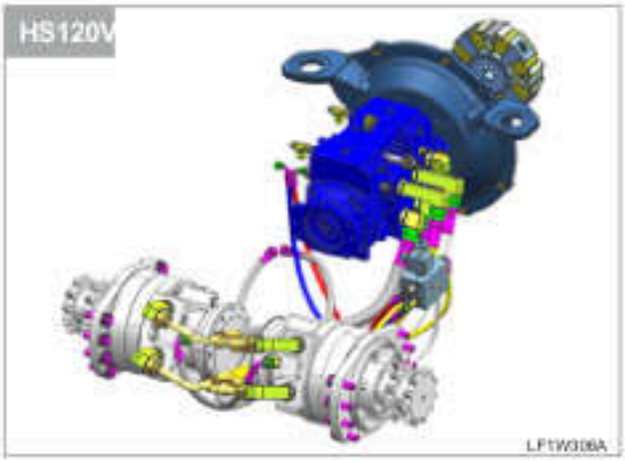
1.4.2 SPECIFICATIONS

HST GROUP

HS80V



HS120V



Engine

- Rotation speed (high idle) : 2,550 rpm

Pump

- Rotation speed (high idle) : 2,550 rpm
- Capacity : 43.5 cc/rev
- Flow rate : 110.9 lpm

Motor

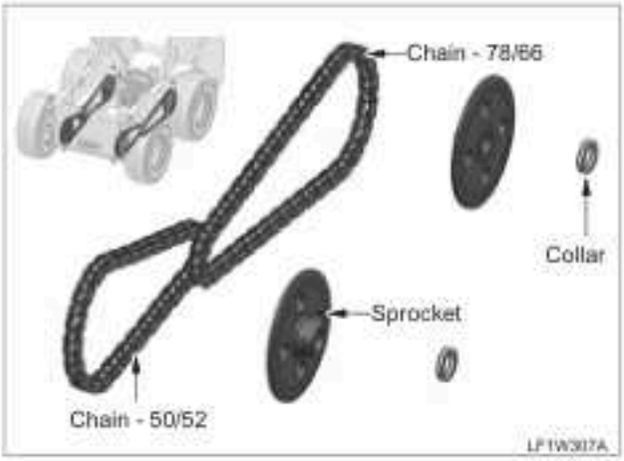
- HS80V Capacity : 470 cc/rev / HS120V Capacity : 520 cc/rev, 310 cc/rev

$$\text{Motor rpm} = \text{Pump rpm} \times \frac{\text{Pump displacement}}{\text{Motor displacement}}$$

→ HS80V Motor rpm : 236 rpm / HS120V Motor rpm : 213 rpm, 358 rpm

DRIVING CHAIN GROUP

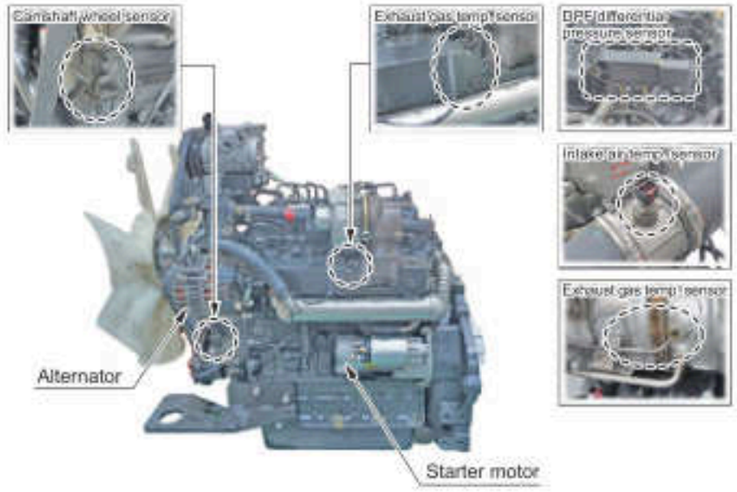
No. of Chain link : HS80V(55-78), HS120V(52-66)



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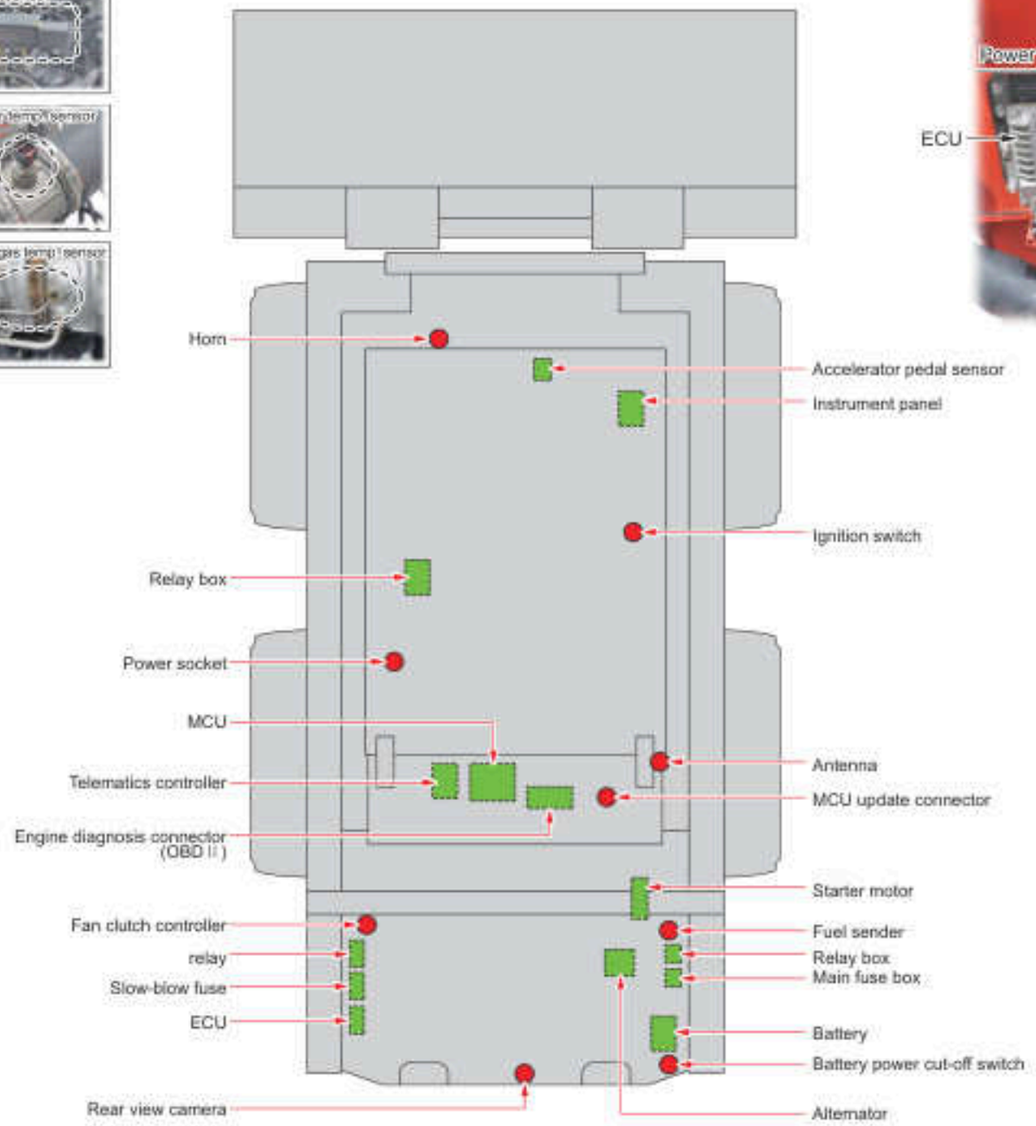
2.2 LOCATION OF ELECTRONIC COMPONENTS

ENGINE (LH)

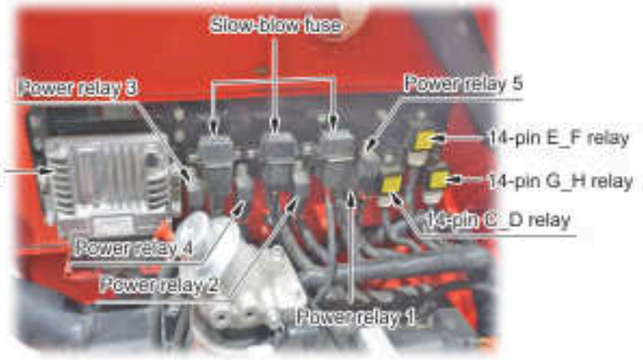


ENGINE (RH)





ENGINE ROOM





DRIVER'S SEAT



(1) Telematics controller
(2) MCU
(3) Engine diagnosis connector(OBD II)
(4) Flasher unit
(5) Escort unit
(6) MCU update connector



(1) Instrument panel
(2) Engine accelerator dial
(3) Ignition switch
(4) Switch panel (RH)
(5) Switch panel (LH)
(6) Relay box
(7) A/C controller
(8) Power socket



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