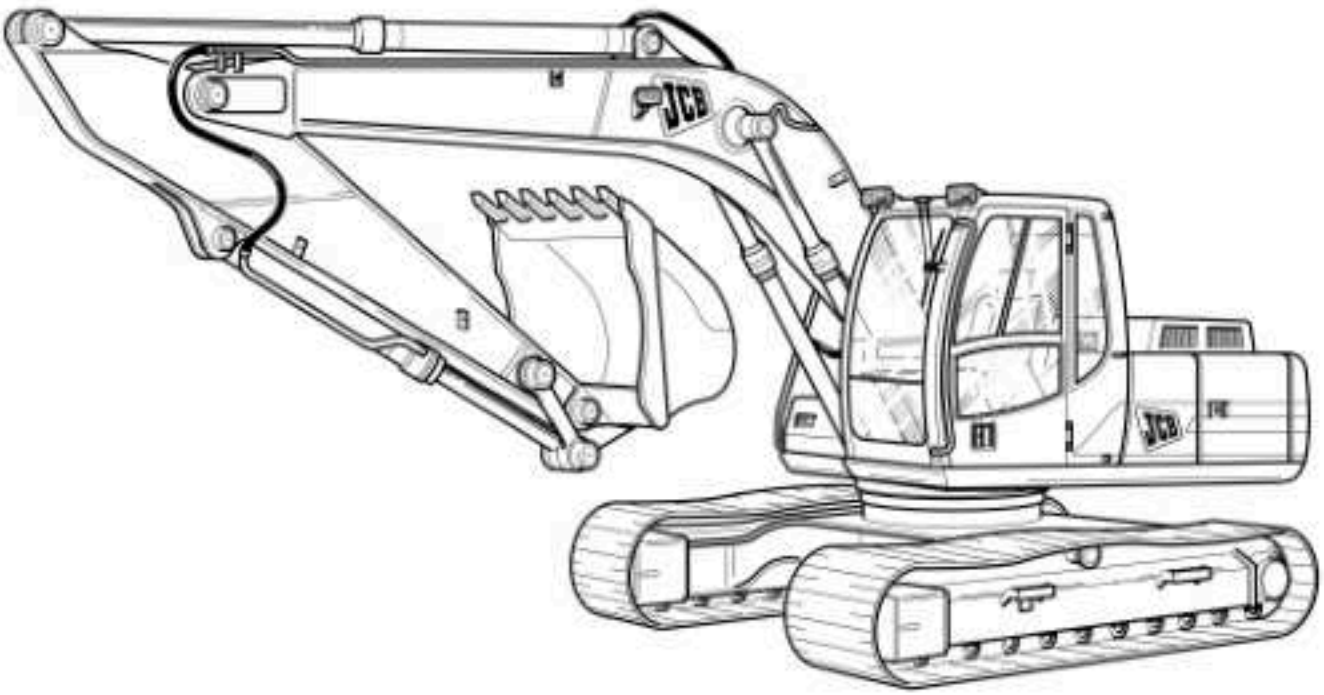
ENGINE SERVICE MANUAL



JS460 ENGINE SERVICE MANUAL

AA-6SDIT

Publication Number 9806/2240

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Note:
Before using this manual to perform maintenance and repairs, be sure to read the section "General Servicing Precautions" included in Chapter 1 (General Information).

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CHAPTER 1

GENERAL INFORMATION

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CHAPTER 2

MAINTENANCE

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Note:
See the "Operating Manual" for specifications regarding fuel filter and oil filter replacement periods.

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MAIN DATA AND SPECIFICATIONS

Item \ Engine Model				AA-6SD1T
Engine type				4-cycle, water-cooled vertical in-line overhead camshaft
Combustion chamber type				Direct injection
Cylinder liner type				Dry type
Number of cylinders; bore x stroke		mm		6 – 120 x 145
Total exhaust displacement		L (cid)		9.839 (601)
Compression ratio				16.8 : 1
Dimensions (L x W x H)		mm	*	1379 x 859 x 1158
Weight		kg	*	693
Ignition sequence				1-5-3-6-2-4
Fuel used				Diesel (2-D)
Fuel-injection pump type				In-line Bosch
Governor				Variable speed, mechanical, RSV type or electrically controlled type (Red IV)
Injection nozzle type				Multi-hole type
Injection starting pressure		MPa (kg/cm^2/psi)	*	17.7 – 22.1 (180 – 225/2570 – 3200)
Fuel injection timing (BTDC)			*	7°
Compression pressure (warm engine, 200 rpm)		MPa (kg/cm^2/psi)		2.84 (29/412)
Inlet valve	Open (BTDC)			15°
	Close (ATDC)			39°
Exhaust valve	Open (BTDC)			40°
	Close (ATDC)			14°
Valve clearance (cold engine)	Inlet valve	mm		0.4
	Exhaust valve			0.4
Lubricating system				Forced circulation type
Engine oil capacity; Oil pan		L (qts)	*	Max 30 (31.7), Min 25 (26.4)
Total system capacity		L (qts)	*	Max 35 (37), Min 30 (31.7)
Lubricating engine oil				API service type CD, or Isuzu Besco S-3
Oil cooler				Water-cooled, internally mounted
Cooling method				Forced circulation, pressurized water-cooled type
Cooling system volume		L (qts)		About 19 (20) (engine only)
Cooling fan			*	Dia. 850 mm, 6-blade, sucker type
Alternator		V–A	*	24 – 50
Starter		V–kW	*	24 – 5.5

Specifications marked with an asterisk (*) will vary according to engine application.

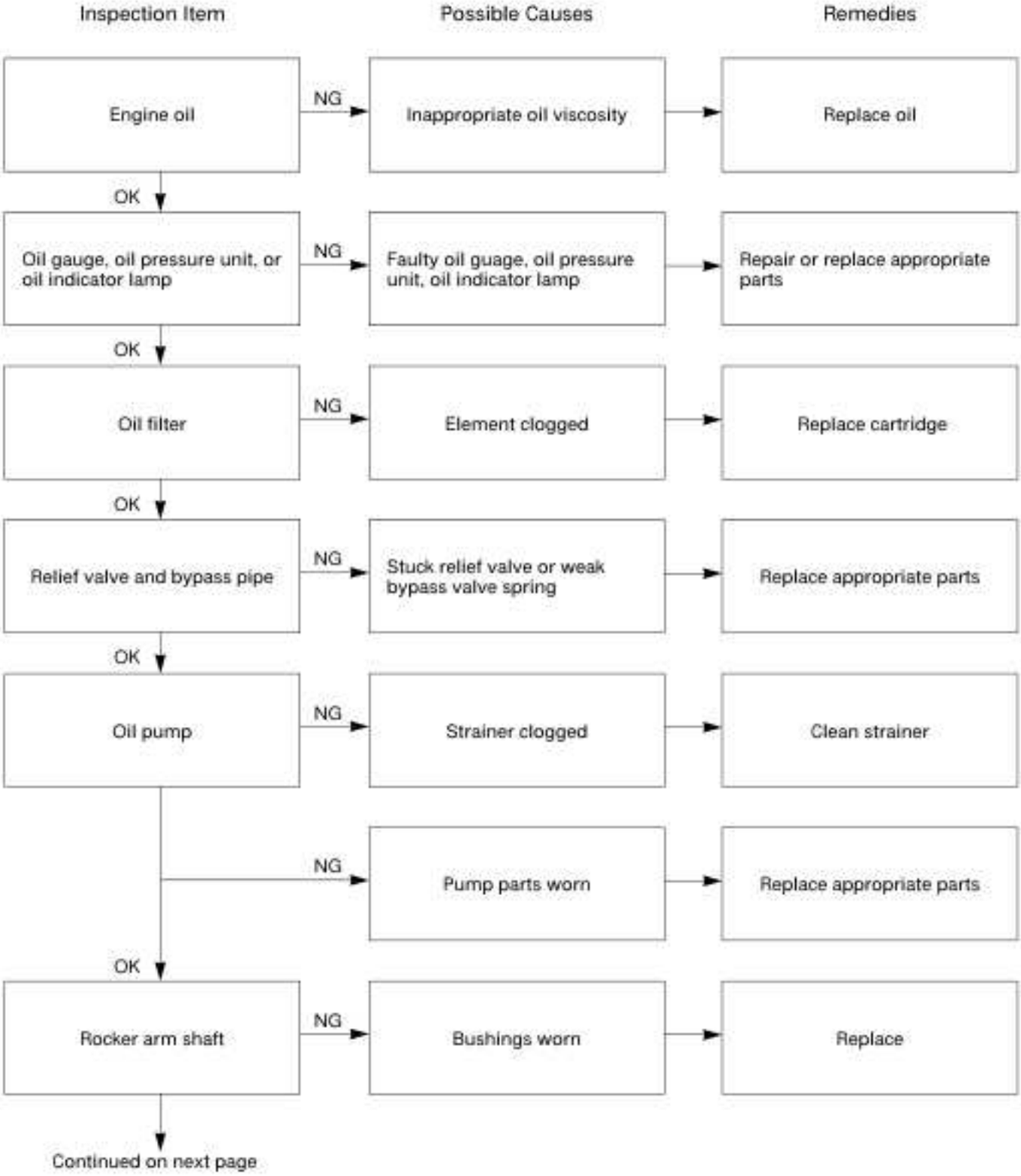
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TROUBLESHOOTING

Condition	Possible Cause	Correction
No output	Bad terminal connection	Repair
	Open or shorted circuit	Repair
	Open field coil	Replace
	Defective diode	Replace
	Defective IC regulator	Replace
Low output	Loose terminal connection	Tighten
	Loose cooling fan belt	Adjust belt tension
	Defective diode	Replace
	Shorted field coil	Replace
	Shorted stator coil	Replace
	Defective regulator	Replace
	Defective battery	Replace
	Poor terminal contact	Repair
Overcharging	Defective regulator	Replace
	Defective battery	Replace
Unstable current	Poor terminal contact	Repair
	Loose cooling fan belt	Adjust belt tension
	Short field coil	Replace
	Shorted stator coil	Replace
	Intermittent contact in wiring	Replace
	Poor terminal contact	Repair
	Defective regulator	Replace
Abnormal noise	Improper alternator installation	Correct
	Defective bearing	Replace
	Contact between the rotor core and stator core	Replace the rotor core and/or stator core
	Defective diode	Replace
	Shorted stator coil	Replace

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LOW OIL PRESSURE



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