SEBE62120112

SHOP MANUAL

KOMATSU®

6D140-1 SERIES DIESEL ENGINE

MidWestTech | Komatsu 6D140-1 Diesel Engine Service Manual | Publication SEBE62120112

Order the manual at mid-west-tech.com >

CONTENTS

No. of page

01 GENERAL 01-001

11 STRUCTURE AND FUNCTION 11-001

12 TESTING AND ADJUSTING 12-001

13 DISASSEMBLY AND ASSEMBLY 13-001

14 MAINTENANCE AND STANDARD 14-001

15 REPAIR AND REPLACEMENT OF PARTS 15-001

MidWestTech | Komatsu 6D140-1 Diesel Engine Service Manual | Publication SEBE621... Order the manual at mid-west-tech.com >

WEIGHT TABLE

⚠ This weight table is a guide for use when transporting or handling components.

Unit: kg

No.	Item	Components	S6D140-1	SA6D140-1
1	Turbocharger	Komatsu KTR-110	22	22
2	Cylinder head assembly	Cylinder head, valve, valve spring	18.3	18.3
3	Cylinder block assembly	Cylinder block, cylinder liner, main bearing cap, bearing	340	340
4	Front cover		37	37
5	Oil pan		30	30
6	Flywheel assembly	Flywheel, ring gear	51: WS23, WS16S-3	51: HD325, WS23S
			55: WA500, GD825A, D155A-3, D155AX-3, WF600T, GS380-2, CS380-2	55: PC650, PC710
7	Flywheel housing		60: WA500, GD825A, D155A-3, D155AX-3, WF600T, GS380-2, CS380-2	54: PC650, PC710
			68: WS23, WS16S-3	68: HD325, WS23S
8	Crankshaft asssembly	Crankshaft, crankshaft gear	132	132
9	Camshaft assembly	Camshaft, camshaft gear	19	19
10	Piston and connecting rod assembly	Piston, piston ring, piston pin, connecting rod, connecting rod cap, bearing	10.5	10.5
11	Oil pump		5.5	5.5
12	Fuel injection pump		20	21: HD325, WS23S
				31: PC650, PC710
13	Water pump		12	17
14	Alternator	24 V, 35 A	9.5	9.5
		24 V, 50 A	12	12
15	Starting motor	24 V, 7.5 kW	18	18
		24 V, 11 kW	20	20
16	Air compressor		15	15
17	After-cooler assembly		-	43

MidWestTech | Komatsu 6D140-1 Diesel Engine Service Manual | Publication SEBE62120112 Order the manual at mid-west-tech.com >

POINTS TO REMEMBER WHEN TROUBLESHOOTING

Troubleshooting means locating the basic cause of the failure, and carrying out swift repairs, and ensuring that the failure does not occur again.
When carrying out troubleshooting, it is of course important to understand the structure and function. But to carry out the troubleshooting effectively, a quick method is to carry out troubleshooting using the problems mentioned by the operator as a guide in locating the cause.

1. Do not disassemble the machine simply because there is a failure

If the machine is disassembled immediately just because there is a failure:

- Unrelated or unnecessary places are also disassembled
- It becomes difficult to locate the cause of the failure

This means that there is not only a waste of time and money on replacement parts, oil, and grease, but this action will also lose the confidence of the user and operator.

For this reason also, it is important to carry out troubleshooting based on full investigation before starting and troubleshooting following the correct order.

2. Questions to ask the user and operator

1) Are there any problems other than those already reported?
2) Did anything unusual happen before the failure occurred?
3) Did the failure occur suddenly, or had the condition of the machine been poor before the failure occurred?
4) What were the conditions when the failure occurred?
5) Had any repairs been carried ot before the failure occurred?
6) Had any similar failure occurred before?

3. Checks before troubleshooting

1) Check the oil level.
2) Check for any external leakage of oil from the piping and hydraulic equipment.
3) Check the travel of the control levers.
4) Other maintenance items can also be carried out visually, so carry out any check that is considered necessary.

4. Confirming failure

Check the degree of the problem to judge for yourself if it is really a failure, or if there is some problem in the handling or operation of the machine.

- When driving the machine and re-enacting the failure, be sure that the investigation or measurement does not make the failure worse.

5. Troubleshooting

Narrow down the causes of the failure from the results of the questions and checks in the above Items 2 – 4, then follow the troubleshooting flow chart to locate the failure.

★ Basic procedure for troubleshooting
1) Start from the simple places.
2) Start from the most probable places.
3) Investigate related parts also.

6. Basic action to remedy cause of failure

Even if the failure is repaired, if the root cause of the failure is not repaired, the same failure will occur again.
To prevent this, it is necessary to investigate why the failure occurred, and to remove the root cause of the failure.

MidWestTech | Komatsu 6D140-1 Diesel Engine Service Manual | Publication SEBE62120112 Order the manual at mid-west-tech.com >