ISUZU

WORKSHOP MANUAL
INDUSTRIAL
DIESEL ENGINE
AA-4BG1T, AA-6BG1
BB-4BG1T, BB-6BG1T
MODELS

FOREWORD

This Workshop Manual is designed to help you perform necessary maintenance, service, and repair procedures on applicable Isuzu industrial engines.

Information contained in this Workshop Manual is the latest available at the time of publication.

Isuzu reserves the right to make changes at any time without prior notice.

The Table of Contents at the right hand side of this page shows you the general arrangement of the material in this Workshop Manual. A more detailed Table of Contents precedes each individual section.

The black spot at the right hand side of some pages indicates the first page of a given section.

This Workshop Manual is applicable to 1999 and later models.

TABLE OF CONTENTS

SECTION	NAME
1	GENERAL INFORMATION
2	MAINTENANCE
3	ENGINE ASSEMBLY I (DISASSEMBLY)
4	ENGINE ASSEMBLY II (INSPECTION & REPAIR)
5	ENGINE ASSEMBLY III (REASSEMBLY)
6	LUBRICATING SYSTEM
7	COOLING SYSTEM
8	FUEL SYSTEM
9	TURBOCHARGER
10	AIR COMPRESSOR
11	ENGINE ELECTRICALS
12	TROUBLESHOOTING
13	SPECIAL TOOL LIST
14	REPAIR STANDARD
15	CONVERSION TABLE

MidWestTech | JCB Isuzu AA-4BG1T, AA-6BG1, BB-4BG1T, BB-6BG1T Industrial Diesel En... Order the manual at mid-west-tech.com >

SECTION 1

GENERAL INFORMATION

TABLE OF CONTENTS

ITEM	PAGE
General repair instructions	1– 2
Notes on the format of this manual	1– 2
Main data and specifications	1– 6
External view	1– 9
Tightening torque specifications	1–15
Angular nut and bolt tightening method	1–17
Major parts fixing nuts and bolts	1–19
Identifications	1–30

MidWestTech | JCB Isuzu AA-4BG1T, AA-6BG1, BB-4BG1T, BB-6BG1T Industrial Dies... Order the manual at mid-west-tech.com >

SECTION 2

MAINTENANCE

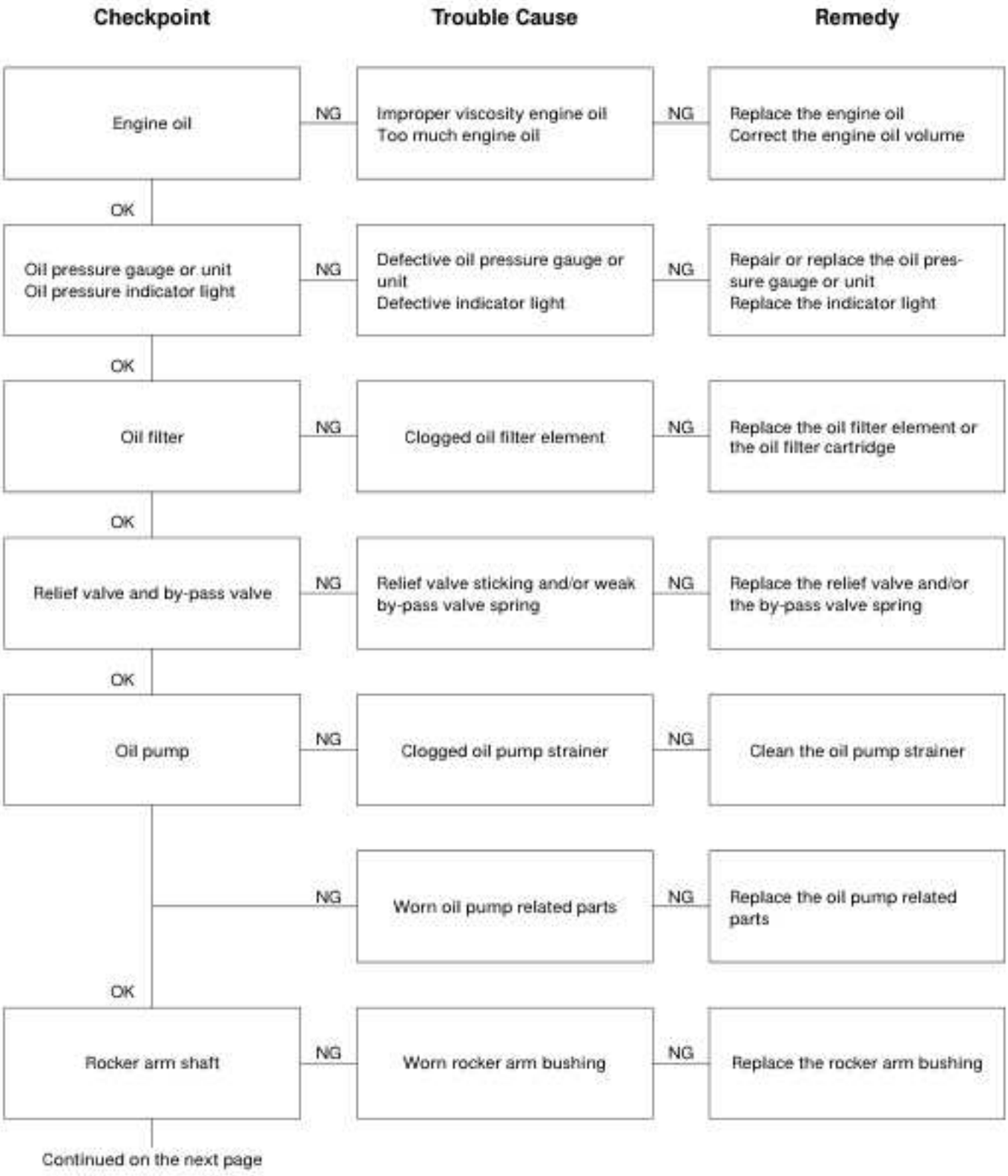
TABLE OF CONTENTS

ITEM	PAGE
Lubricating system	2– 2
Fuel system	2– 3
Cooling system	2– 7
Valve clearance adjustment	2– 7
Injection timing	2– 9
Compression pressure measurement	2–15
Turbocharger inspection	2–16
Engine repair kit	2–17
Recommended lubricants	2–19
Engine oil viscosity chart	2–19

Note: Maintenance intervals such as fuel or oil filter changes should be referred to INSTRUCTION BOOK.

MidWestTech | JCB Isuzu AA-4BG1T, AA-6BG1, BB-4BG1T, BB-6BG1T Industrial Dies... Order the manual at mid-west-tech.com >

OIL PRESSURE DOES NOT RISE



Continued on the next page

MidWestTech | JCB Isuzu AA-4BG1T, AA-6BG1, BB-4BG1T, BB-6BG1T Industrial Dies... Order the manual at mid-west-tech.com >

Major Category	Name of Part	Inspection Item		Nominal Dimension	Assembly Standard Value	Limit	Repair Procedure	Comments
Electrical	Starter 24V, 7.4 kW (HITACHI 1-81100-342-0)	Loose mount					Repair	
		Brush height			22 (0.866)	14 (0.551)	Replace	
		Magnetic switch	Series coil resistance value (Ω)		0.187 20°C (68°F)			If coil resistance value is severely abnormal, replace switch.
			Shant coil resistance value (Ω)		1.31 20°C (68°F)			
		Commutator	O.D.	Dia. 37 (1.457)		Dia. 36.5 (1.437)	Replace armature	
			Undercut depth		0.5 – 0.8 (0.02 – 0.031)	0.2 (0.008)	Repair	
		Ball bearings	Rear side (armature)	Dia. 28 (1.102)			6001 D	Replace if rotation is not smooth or if abnormal sounds are heard.
			Front (armature)	Dia. 16 (0.630)			6905 D	
			Pinion shaft (shaft)	Dia. 16 (0.630)				
		Performance	Unloaded characteristics (24V, 100A or less)		3500 min^{-1}			Smooth pinion operation without noise
	Preheater	Control register, glow plug					Replace if cut wiring or shorts are found	
	Battery	Battery terminals						Special order from original manufacturer; manufacturer's specs.
		Plates, separator plates, container, etc.						
		Electrolyte turbidity						

MidWestTech | JCB Isuzu AA-4BG1T, AA-6BG1, BB-4BG1T, BB-6BG1T Industrial Dies...
Order the manual at mid-west-tech.com >