4JJ1 Isuzu Engine

Service Manual

87606795

CASE CONSTRUCTION

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Engine

Engine Mechanical (4JJ1)

Contents

Isuzu Diesel Engine (4JJ1) 1A-3
Precautions on Service Work 1A-3
Main Data and Specifications 1A-8
Special Tool 1A-9
Engine Foot 1A-10
Components 1A-10
Removal 1A-10
Installation 1A-11
Cylinder Head Cover 1A-13
Components 1A-13
Removal 1A-14
Installation 1A-15
Torque Specifications 1A-16
Intake Manifold 1A-17
Components 1A-17
Removal 1A-17
Installation 1A-18
Torque Specifications 1A-20
Exhaust Manifold 1A-21
Components 1A-21
Removal 1A-21
Inspection 1A-22
Installation 1A-23
Torque Specifications 1A-25
Timing Gear Train 1A-26
Components 1A-26
Removal 1A-26
Disassembly 1A-29
Reassembly 1A-29
Inspection 1A-30
Installation 1A-31
Torque Specifications 1A-35
Special Tool 1A-35
Camshaft ASM 1A-36
Components 1A-36
Removal 1A-37
Disassembly 1A-38
Reassembly 1A-40
Installation 1A-41
Torque Specifications 1A-43
Special Tool 1A-43
Rocker Arm Shaft ASM 1A-44
Components 1A-44
Removal 1A-44
Disassembly 1A-45
Reassembly 1A-47
Installation 1A-47
Torque Specifications 1A-48
Valve Stem Seal, Valve Spring 1A-49
Components 1A-49
Removal 1A-49
Inspection 1A-50
Installation 1A-51
Special Tool 1A-52
Cylinder Head 1A-53
Components 1A-53
Removal 1A-53
Disassembly 1A-58
Inspection 1A-59
Reassembly 1A-64
Installation 1A-67
Torque Specifications 1A-75
Special Tool 1A-75
Piston, Connecting Rod 1A-77
Components 1A-77
Removal 1A-77
Disassembly 1A-78
Reassembly 1A-84
Installation 1A-85
Torque Specifications 1A-87
Special Tool 1A-87
Flywheel 1A-88
Components 1A-88
Removal 1A-88
Inspection 1A-89
Installation 1A-89
Torque Specifications 1A-91
Special Tool 1A-91
Gear Case ASM 1A-92
Components 1A-92
Removal 1A-92
Installation 1A-93
Torque Specifications 1A-94
Crankshaft Front Oil Seal 1A-95
Components 1A-95
Removal 1A-95
Installation 1A-96
Torque Specifications 1A-98
Special Tool 1A-98
Crankshaft Rear Oil Seal 1A-99
Components 1A-99
Removal 1A-100
Installation 1A-100
Torque Specifications 1A-102
Special Tool 1A-102
Crankshaft 1A-103
Components 1A-103
Removal 1A-103
Disassembly 1A-104
Reassembly 1A-105
Inspection 1A-105
Installation 1A-109
Torque Specifications 1A-112
Cylinder Block 1A-113
Components 1A-113
Removal 1A-113

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Inspection 1A-114
Installation 1A-116
Lubrication System 1A-117
Precautions on Service Work 1A-117
Functional Check 1A-118
Special Tool 1A-119
Oil Filter ASM 1A-120
Components 1A-120
Removal 1A-120
Installation 1A-121
Oil Port Cover ASM 1A-122
Components 1A-122
Removal 1A-122
Installation 1A-122
Oil Cooler 1A-123
Components 1A-123
Removal 1A-123
Disassembly 1A-124
Reassembly 1A-125
Installation 1A-125
Oil Relief Valve 1A-127
Components 1A-127
Removal 1A-127
Installation 1A-128
Crankcase, Oil Pan 1A-130
Components 1A-130
Removal 1A-130
Disassembly 1A-131
Reassembly 1A-132
Installation 1A-132
Torque Specifications 1A-134
Oil Pump 1A-135
Components 1A-135
Removal 1A-135
Disassembly 1A-137
Reassembly 1A-137
Inspection 1A-137
Installation 1A-139
Oil Pressure Switch 1A-142
Components 1A-142
Removal 1A-142
Inspection 1A-142
Installation 1A-143

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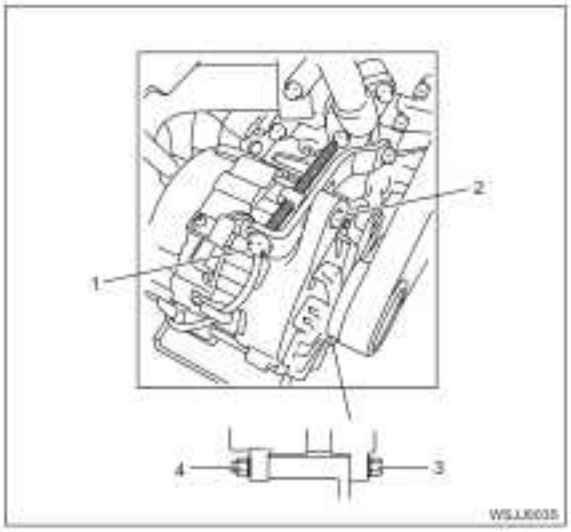
Installation

1. Install the gasket.
2. Install the water pump ASM.
   - Tighten the bolt and nut to the specified torque.

Tightening torque: 25 N.m (2.5 kg.m/18 lb ft)

3. Temporarily tighten the bolt until the water pump pulley is properly seated in the water pump ASM.
4. Mount the fan belt, and tighten the tension adjusting bolt of the generator to adjust the tension.
   - Refer to the "Drive Belt".
5. After fan belt adjustments, tighten the generator using the specified torque.

Tightening torque:
Bolt: 51 N.m (5.2 kg.m/38 lb ft)
Lock nut: 25 N.m (2.5 kg.m/18 lb ft)



Name

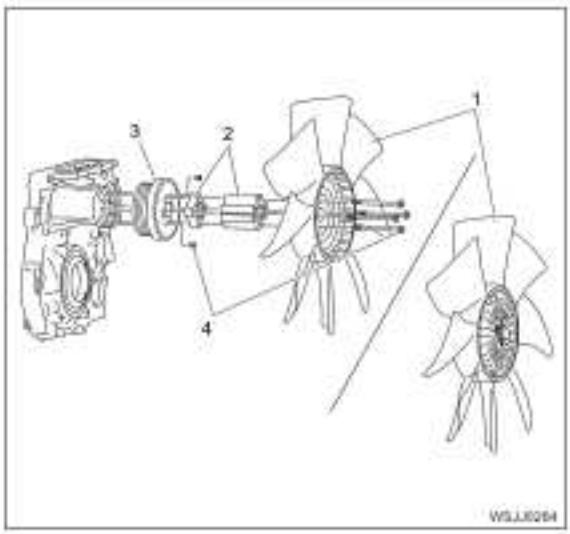
1. Tension Adjusting Bolt
2. Lock Nut
3. Bolt
4. Nut

6. After fan belt adjustment, tighten the temporarily fitted water pump pulley to the specified torque.

Tightening torque: 10 N.m (1.0 kg.m/87 lb in)

7. Install the fan ASM and spacer.

Tightening torque:
M8 : 25 N.m (2.5 kg.m/18 lb ft)
M10: 52 N.m (5.3 kg.m/38 lb ft)



Name

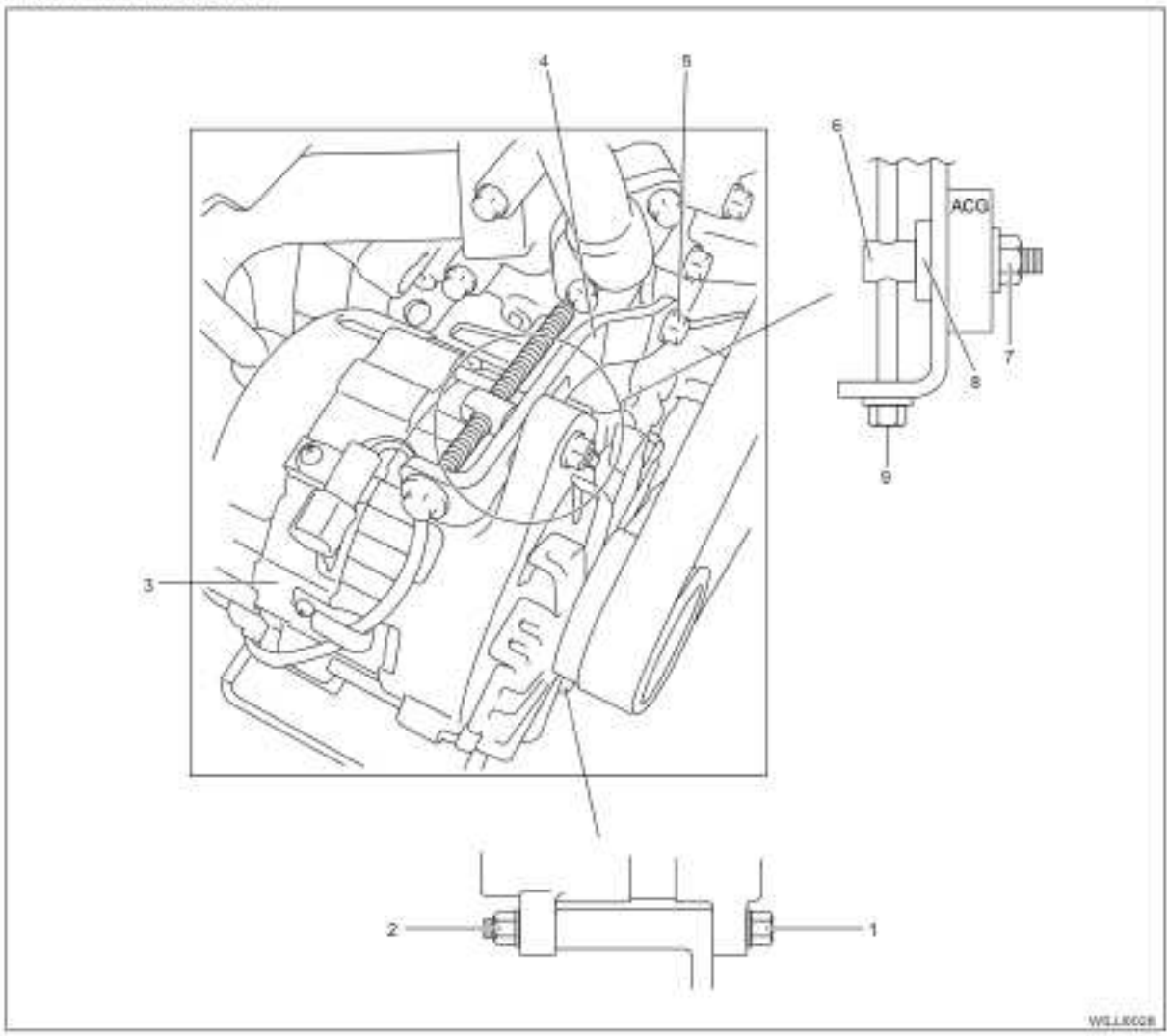
1. Fan ASM
2. Spacer
3. Water Pump Pulley
4. Bolt

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Charging System

General Description

The main charging system components are the batteries, the generator and the battery discharge indicator light circuit. The generator is a self-rectifying type with a built-in regulator.



Name

1. Lower Mounting Bolt
2. Nut
3. Generator
4. Generator Adjusting Plate
5. Bolt
6. Sliding Piece
7. Adjusting Nut
8. Washer
9. Tension Adjusting Bolt

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Trouble countermeasure

Trouble symptom	Trouble cause
Starter does not operate when starter switch is turned on.	1. Full discharge of battery 2. Open circuit, poor contact 3. Poor contact in starter switch or improper tightening of terminal 4. Poor contact in starter relay or plug terminal 5. Short or open circuit in magnetic switch coil
Pinion moves forward but it does not engage with ring gear.	1. Insufficient capacity of battery 2. Improper gap of pinion and ring gear 3. Wear of pinion or ring gear tooth edge 4. Dust on pinion shaft 5. Insufficient auxiliary rotation of armature due to insufficient thrust gap of motor
Pinion engages and rotates motor but it does not run engine.	1. Slippage of clutch 2. Breakage of reduction gear
Pinion engages but it does not run engine.	1. Insufficient capacity of battery 2. Too high rotational resistance of engine 3. Improper tightening of wiring circuit terminal 4. Short circuit of armature or field coil 5. Contamination of commutator 6. Fatigue or wear of brush spring 7. Locking of bearing 8. Poor contact in magnetic switch
When turning starter switch off after engine starts, starter does not stop.	1. Retuning failure of starter switch contact 2. Retuning failure of starter relay contact 3. Short circuit in magnetic switch coil

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