

RODEO

ENGINE

IGNITION SYSTEM (Y22SE 2.2L)

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Service Precaution

WARNING: THIS VEHICLE HAS A SUPPLEMENTAL RESTRAINT SYSTEM (SRS). REFER TO THE SRS COMPONENT AND WIRING LOCATION VIEW IN ORDER TO DETERMINE WHETHER YOU ARE PERFORMING SERVICE ON OR NEAR THE SRS COMPONENTS OR THE SRS WIRING. WHEN YOU ARE PERFORMING SERVICE ON OR NEAR THE SRS COMPONENTS OR THE SRS WIRING, REFER TO THE SRS SERVICE INFORMATION. FAILURE TO FOLLOW WARNINGS COULD RESULT IN POSSIBLE AIR BAG DEPLOYMENT, PERSONAL INJURY, OR OTHERWISE UNNEEDED SRS SYSTEM REPAIRS.

CAUTION: Always use the correct fastener in the proper location. When you replace a fastener, use ONLY the exact part number for that application. ISUZU will call out those fasteners that require a replacement after removal. ISUZU will also call out the fasteners that require thread lockers or thread sealant. UNLESS OTHERWISE SPECIFIED, do not use supplemental coatings (Paints, greases, or other corrosion inhibitors) on threaded fasteners or fastener joint interfaces. Generally, such coatings adversely affect the fastener torque and the joint clamping force, and may damage the fastener. When you install fasteners, use the correct tightening sequence and specifications. Following these instructions can help you avoid damage to parts and systems.

General Description

Ignition is done by the Ignition Module that fires. Since the cylinder on exhaust stroke requires less energy to fire its spark plug, energy from the ignition coils can be utilized to fire the mating cylinder on compression stroke. A notch in the timing disc on the crankshaft activates the crank position sensor which then sends information such as firing order and starting timing of ignition coil to the PCM.

By receiving signals such as crank position, engine speed, water temperature and Manifold Absolute Pressure (MAP), the PCM controls the ignition timing.

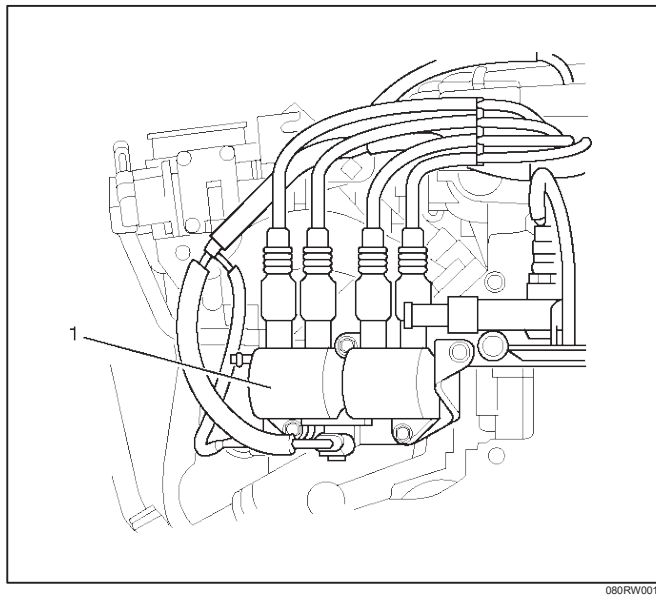
Diagnosis

Refer to Section Drivability and Emissions for the diagnosis to electronic ignition system (EI system).

Ignition Module

Removal

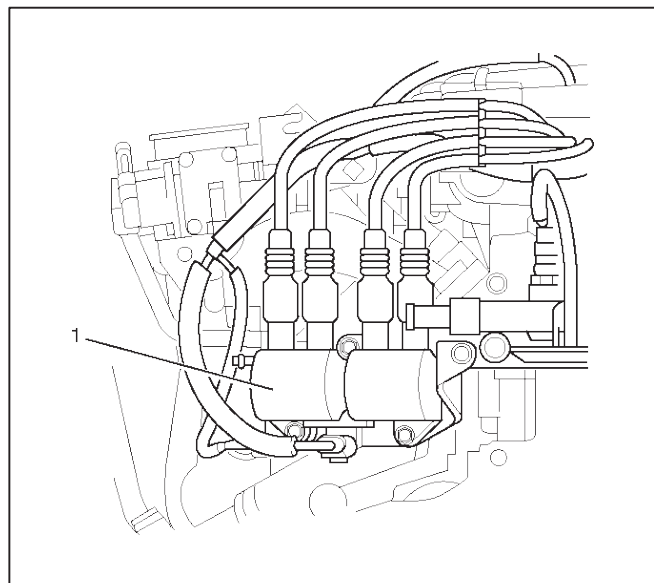
1. Disconnect battery ground cable.
2. Ignition module connector.
3. Removal ignition module (1).



Installation

1. Install the ignition module (1).
Connect ignition module connector and ignition coil, then tighten bolt to the specified torque.

Torque: 10 N·m (87 lb in)



2. Connect ignition module connector.
3. Connect battery ground cable.

Spark Plug

Removal

1. Remove spark plugs.

Inspection and Repair

The spark plug affects entire engine performance and therefore its inspection is very important.

- Check electrode and insulator for presence of cracks, and replace if any.
- Check electrode for wear, and replace if necessary.
- Check gasket for damage, and replace if necessary.
- Measure insulation resistance with an ohmmeter, and replace if faulty.
- Adjust spark plug gap to 1.05 mm (0.04 in).

NOTE:

- Do not adjust the spark plugs gap without new spark plugs.
- Do not damage to tip of spark plugs.
- Do not cleaning the spark plugs. If require the cleaning it due to heavy dirt, it is allowed only 20 seconds to be used spark plug cleaner.
- Check fuel and electrical systems if spark plug is extremely dirty.
- Use spark plugs having low heat value (hot type plug) if fuel and electrical systems are normal.
- Use spark plugs having high heat value (cold type plug) if insulator and electrode are extremely burned.

Sooty Spark Plugs

Much deposit of carbon or oil on the electrode and insulator of spark plug reduces the engine performance.

Possible causes:

- Too rich mixture
- Presence of oil in combustion chamber
- Incorrectly adjusted spark plug gap

Burning Electrodes

This fault is characterized by scorched or heavily oxidized electrode or blistered insulator nose.

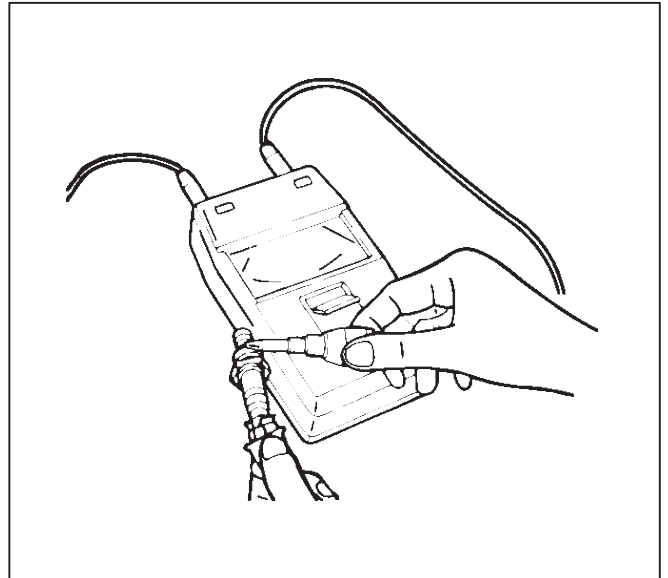
Possible causes:

- Too lean mixture
- Improper heat value

Measuring Insulation Resistance

- Measure insulation resistance using a 500 volt megohm meter.
- Replace spark plugs if measured value is out of standard.

Insulation resistance: 50 MΩ or more



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Installation

1. Spark plugs

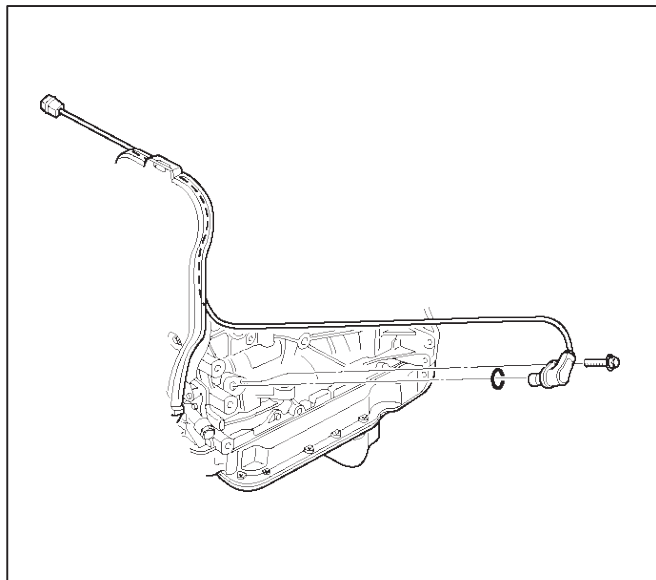
- Tighten spark plugs to the specified torque.

Torque: 25 N·m (18 lb ft)

Crankshaft Position Sensor

Removal

1. Disconnect battery ground cable
2. Wiring connector from crankshaft position sensor.
3. Remove crankshaft position sensor from cylinder block.



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Installation

1. Install crankshaft position sensor into the cylinder block.
Before installation, apply small amount of engine oil to the O-ring.

Torque: 6 N·m (52 lb in)

2. Reconnect wiring connector to crankshaft position sensor.

6D2-6 IGNITION SYSTEM (Y22SE 2.2L)

Main Data and Specifications

General Specifications

Ignition System	
Ignition Form	Electronic Ignition System (EI system) with Crankshaft position Sensor
Spark Plug	
Type	Electronic Spark Control
No. of Coils and Type	2 Solid State
Coil Location	Engine-mounted
Torque	25 N·m (18 lb ft)