

Service Information

Mazda Motor Corporation

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Category F	Technical	Ref. No. E004/13	Page 1 of 2
Coverage <input type="checkbox"/> Distributor only <input checked="" type="checkbox"/> Please inform your dealers		Date Issued February 5, 2013	
Please convey this information to your <input type="checkbox"/> Director <input checked="" type="checkbox"/> General Manager <input checked="" type="checkbox"/> Warranty Dept. <input checked="" type="checkbox"/> Parts Dept. <input checked="" type="checkbox"/> Training Dept. <input checked="" type="checkbox"/> Field Rep.		Date Revised	
Applicable Model Mazda6(GJ), CX-5(KE) / with SKYACTIV-G 2.0 / 2.5		Applicable Countries or Specifications Worldwide	

Subject: Whining sound from the engine compartment after starting a cold engine

DESCRIPTION

Some customer may complain about a whining sound which is heard from the engine compartment for about 20 seconds after starting the cold engine.

This is for improved exhaust gas purification and does not indicate defect of the parts.
Please refer to attached audio file.

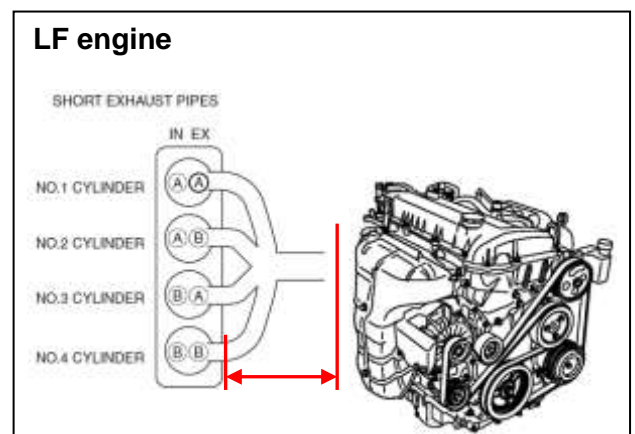
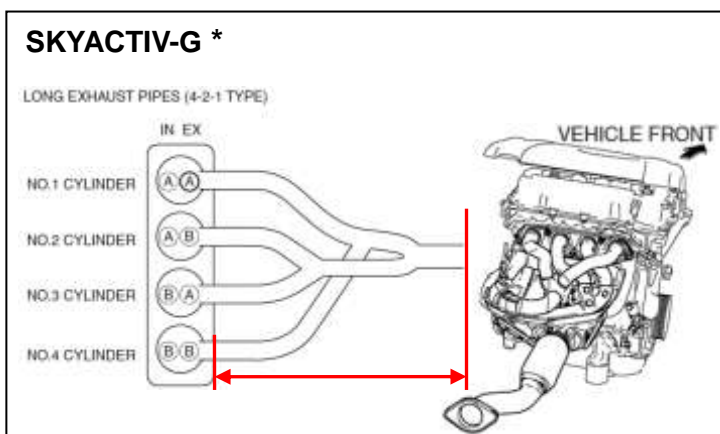
OCCURRENCE MECHANISM OF WHINING SOUND:

The SKYACTIV-G engine is employing the 4-2-1 exhaust pipes to improve the fuel economy and engine power.

But the distance from engine to catalytic converter is longer than for previous engines such as LF engine, and it takes longer time to warm up catalytic converter than at LF engine.

To improve this condition, the new idling control is employed to burn the fuel inside the exhaust manifold for 20 seconds to quickly warm up the catalytic converter, and this burning sound is heard as whining sound.

For the advantages of 4-2-1 exhaust pipes, please refer to Technical Guide; section EXHAUST MANIFOLD [SKYACTIV-G 2.0, SKYACTIV-G 2.5]



<Operating Requirement>

1. Water temperature at engine starting: from - 10 to 45 degrees Celsius.
2. Gear position: P, N, D with idling (Accelerator pedal off)

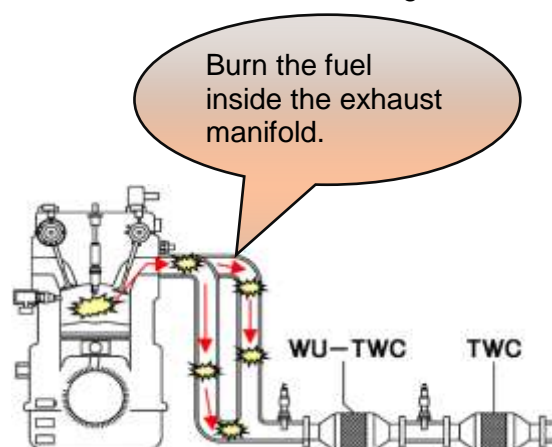
<Detail of control>

1. Retard the IG timing 20 degrees.
2. Increase the intake air to 70 % of packing efficiency.

By this control, fuel is burned inside the exhaust manifold to quickly warm up catalytic convertor. In this case, this burning sound is heard as whining sound.

<Cancelation of control>

If the vehicle starts driving, it will be cancelled.



Note:

<Owner's Manual>

This concern is mentioned in the O/M "When Driving Start/Stop Engine" as follow.

After starting a cold engine, the engine speed increases and a whining sound from the engine compartment can be heard.
This is for improved exhaust gas purification and does not indicate defect of the parts.

<How to identify this concern>

For the following cases, the sound is normal.

1. Customer complains this sound only about 20 seconds after cold engine start.
2. There is no leakage from exhaust manifold or no crack on the insulator of exhaust pipe.

Mitsunori Tokunaga
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