

<b>Subject:</b>  <b>UNUSUAL ENGINE NOISE AFTER A COLD ENGINE START</b>	<b>Bulletin No:</b> 01-006/13
	<b>Last Issued:</b> 02/13/2013

## APPLICABLE MODEL(S)/VINS

2013-2014 CX-5

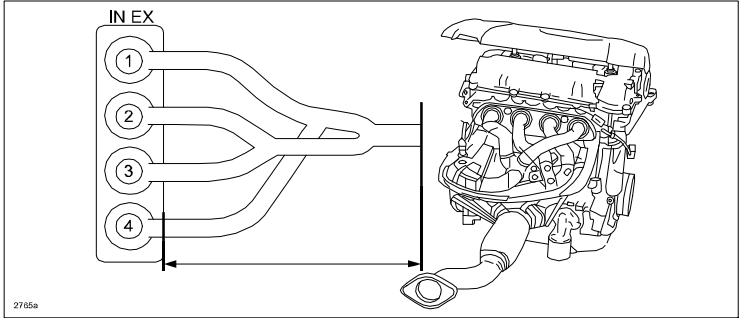
2014 Mazda6

## DESCRIPTION

Some customers may complain about an unusual noise coming from the engine compartment for about 20 seconds after a cold engine start. This noise is a normal engine operation for improved exhaust gas emissions. The noise does not indicate a malfunction.

## ACCELERATED WARM-UP SYSTEM (AWS)

The SKYACTIV-G engine is equipped with 4-2-1 exhaust manifold to improve the fuel economy and engine power. The distance from the engine to the catalytic converter is longer than previous engines such as the LF engine. This longer distance does not allow the catalytic converter to warm up quickly. To off-set this condition, AWS has been developed by burning fuel inside the exhaust manifold for 20 seconds to quickly warm up the catalytic converter. The customer may identify the burning sound as an unusual noise.

SKYACTIV-G	<p><b>Long Exhaust Pipes (4-2-1 Type)</b></p> 
LF Engine	<p><b>Short Exhaust Pipes</b></p> 

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## **AWS OPERATION**

- a. Engine coolant temperature of 50F - 113F (10C - 45C) at engine start.
- b. At idle (accelerator pedal off) with transmission in P, N, or D.

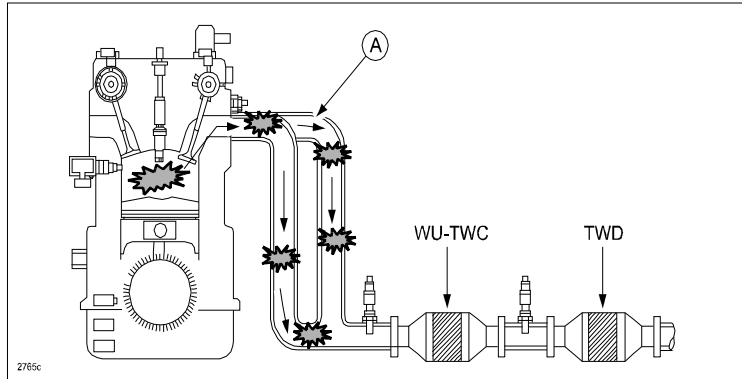
## **AWS CONTROL**

- a. Ignition timing is retarded 20 degrees.
- b. Engine speed is increased.

AWS burns fuel inside the exhaust manifold (A) to quickly warm up the catalytic converter. The customer may identify the burning sound as an unusual noise.

## **AWS CANCELATION**

AWS is canceled when the vehicle is driven.



## **AWS IDENTIFICATION**

- a. Customer states the noise is about 20 seconds after a cold engine start.
- b. There is no leakage from the exhaust system.