

<b>Subject:</b>  <b>UNUSUAL ENGINE NOISE AFTER A COLD ENGINE START</b>	<b>Bulletin No:</b> 01-018/16  <b>Last Issued:</b> 10/25/2016
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## BULLETIN NOTE

This bulletin supersedes the previously issued bulletin(s) listed below: The changes are noted in Red beside the change bars.

Previously issued TSBs:	Date issued:
01-006/13	02/13/2013

## APPLICABLE MODEL(S)/VINS

2016-2017 Mazda2	2014-2017 Mazda6	2013-2016 CX-5	2016-2017 MX-5
2014-2017 Mazda3	2016-2017 CX-3	2016 CX-9	

## 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)

All SKYACTIV-G engines adopt AWS to reduce exhaust gas emissions immediately after a cold engine start. AWS increases the engine idling speed and retards the ignition timing for about 20 seconds after the cold engine start to quickly warm up the catalytic converter. The customer may identify the engine sound during the AWS operation as a unusual noise.

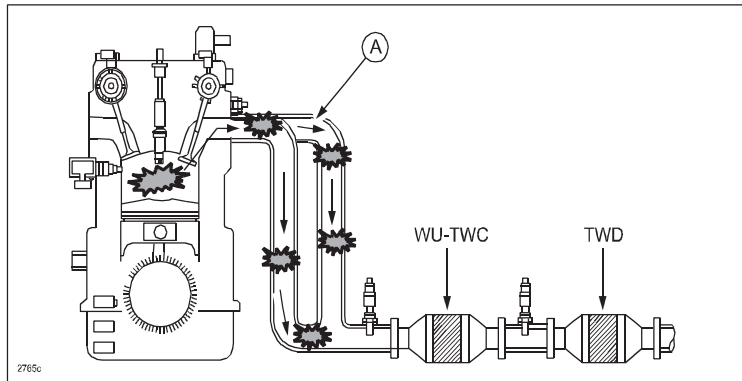
## AWS OPERATION

- Engine coolant temperature of less than 113F (145C) at engine start.
- At idle (accelerator pedal off) with transmission in P, N, or D.

## AWS CONTROL

- Ignition timing is retarded **about 20** degrees.
- 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

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