

Service Information

Mazda Motor Corporation

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Category B	Technical	Ref. No. E056/07	Page 1 of 3
Coverage <input type="checkbox"/> Distributor only <input checked="" type="checkbox"/> Please inform your dealers		Date Issued December 18, 2007	
Please convey this information to your <input checked="" type="checkbox"/> Warranty Dept. <input checked="" type="checkbox"/> Parts Dept. <input type="checkbox"/> Director <input checked="" type="checkbox"/> Training Dept. <input checked="" type="checkbox"/> General Manager <input checked="" type="checkbox"/> Field Rep.		Date Revised	
Applicable Models Mazda3 (BK) with 1.3L Engine		Applicable Countries or Specifications Europe	

Subject: Knocking or Chattering Sound from Engine When Cold

DESCRIPTION

Some customers may complain that they hear a knocking or chattering sound coming from the engine just after starting in cold engine condition (ambient temperature is 15 degrees Celsius or less). If no root cause can be confirmed after inspecting the vehicle, please refer to the following statement and explain the customer that the sound is normal character and will not affect the engine performance / function.

<Symptom>

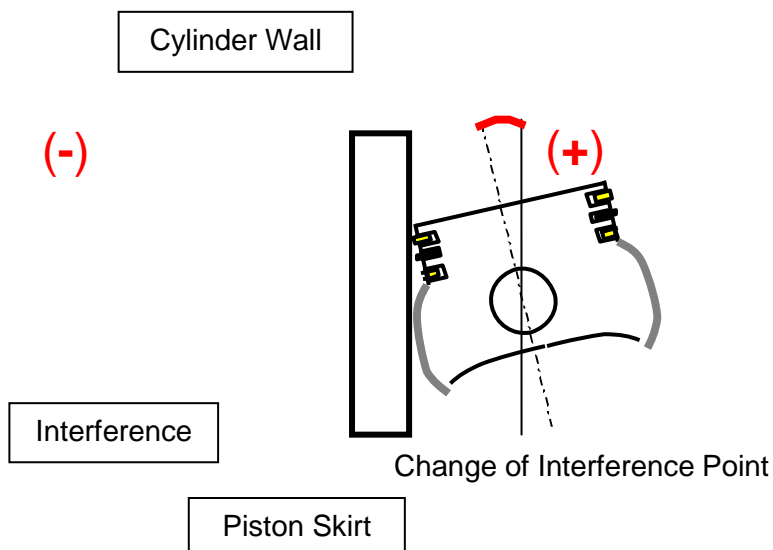
When the engine speed reaches approx. 1,000 – 1,500 rpm with the variable tumble shutter valve closed in a cold engine, the knocking or chattering sound occurs in the engine.

The variable tumble shutter valve's function is to increase the flame propagation speed by giving swirl to intake air and speeding up the airflow speed. This helps fuel burn smoothly at cold conditions where fuel is difficult to evaporate and provide smooth driving behavior and clean emission performance.

<Occurrence Mechanism>

When the variable tumble shutter valve is closed, the intake airflow speed increases and rapid combustion occurs. The level of rapid combustion varies and, depending on that, the knocking / chattering sounds may be audible if the piston slightly touches the cylinder sidewall due to the enhanced combustion pressure.

This audible sound will not affect the engine performance / function. When the coolant temperature exceeds the specified setting (60 degrees Celsius), the variable tumble shutter valve stays open and the knocking / chattering sound stops.



Piston Interference Point to the Cylinder Sidewall

The audible sound occurs depending on combustion condition and its temperature.

If the customer is still complaining after the above explanation, please replace the pistons as per the Workshop Manual.

Then reprogram the PCM with Mazda Modular Diagnostic System (M-MDS) using the reprogram file IDS/PDS **51.8**, IDS/PDS **52.1** or later software.

Note: During reprogramming procedure, the message screen will appear asking if the applicable pistons are installed or not.

Caution: It may cause a complaint for sound if you select the button "YES" for a not applicable vehicle.

APPLICABLE VINS

JMZ BK ** **** 100001 - 399999

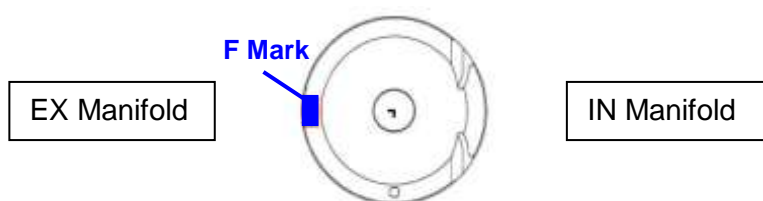
JMZ BK ** **** 500001 - 599243

PARTS INFORMATION

Part No.		Part Name	Note
New	Old		
ZJY4 11 SA0	ZJY2 11 SA0A	Piston Set	Order 4 sets per vehicle. (One piston set includes one piston and one piston pin.)
ZJY4 11 SC0	ZJY1 11 SC0 ZJY2 11 SC0	Piston Ring Set	Order 1 set per vehicle. (One piston ring set includes 4 sets of top, 2nd and oil rings.)

Note: Please replace all the four piston sets at the same time.

Note: The piston has "F" mark at the top.



CALIBRATION FILES INFORMATION

VIN range (JMZ BK** ****-)	Applicable Pistons Installed	Applicable Pistons NOT Installed
100001 - 261860	SW-ZJYTE0000	SW-ZJ07ED000
261860 - 399999	SW-ZJYXE0000	SW-ZJ30EA000
500001 - 599243	SW-ZJ32EC000	SW-ZJYDE0000

For Koji Tsuji
Manager, Technical Information Gr.
Technical Service Dept.
Mazda Motor Corp.
15B0144820 (MC Internal Use)