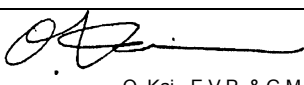




SERVICE BULLETIN

PUBLICATION GROUP, AFTER SALES SERVICE DEP.
MITSUBISHI MOTOR SALES EUROPE BV

| | | | |
|-------------------------|---|---------------------|---------------|
| SERVICE BULLETIN | | No.: ESB-98E16-001 | |
| | | Date: 1998-10-15 | <Model> <M/Y> |
| Subject: | CHANGE OF SPARK PLUG FROM PLATINUM TO IRIIDIUM PLUG | (EC,EXP) CARISMA | 98-10 |
| Group: | ENGINE ELECTRICAL | | |
| INFORMATION |  O. Kai - E.V.P. & G.M. After Sales Service Dept. | | |

1. Description:

With change of the spark plug from the platinum to iridium plug, applicable description in the Workshop Manual have been changed.

2. Applicable Manuals:

| Manual | Pub. No. | Language | Page(s) |
|--|------------|-----------|-----------|
| '98 CARISMA GDI Workshop Manual chassis | PWDE9502-C | (English) | 16-19, 20 |
| | PWDS9503-C | (Spanish) | |
| | PWDF9504-C | (French) | |
| | PWDG9505-C | (German) | |
| | PWDD9506-C | (Dutch) | |
| | PWDW9507-C | (Swedish) | |
| | PWDI96E1-C | (Italian) | |

3. Effective Date:

From December 3, 1997

4. Interchangeability:

Not interchangeable except that the new plug can be used in old cars.

5. Details

<Reference>

| | Old | New |
|----------|----------|----------|
| Part No. | MD336367 | MD360019 |
| Model | PZFR6B | IZFR6B |

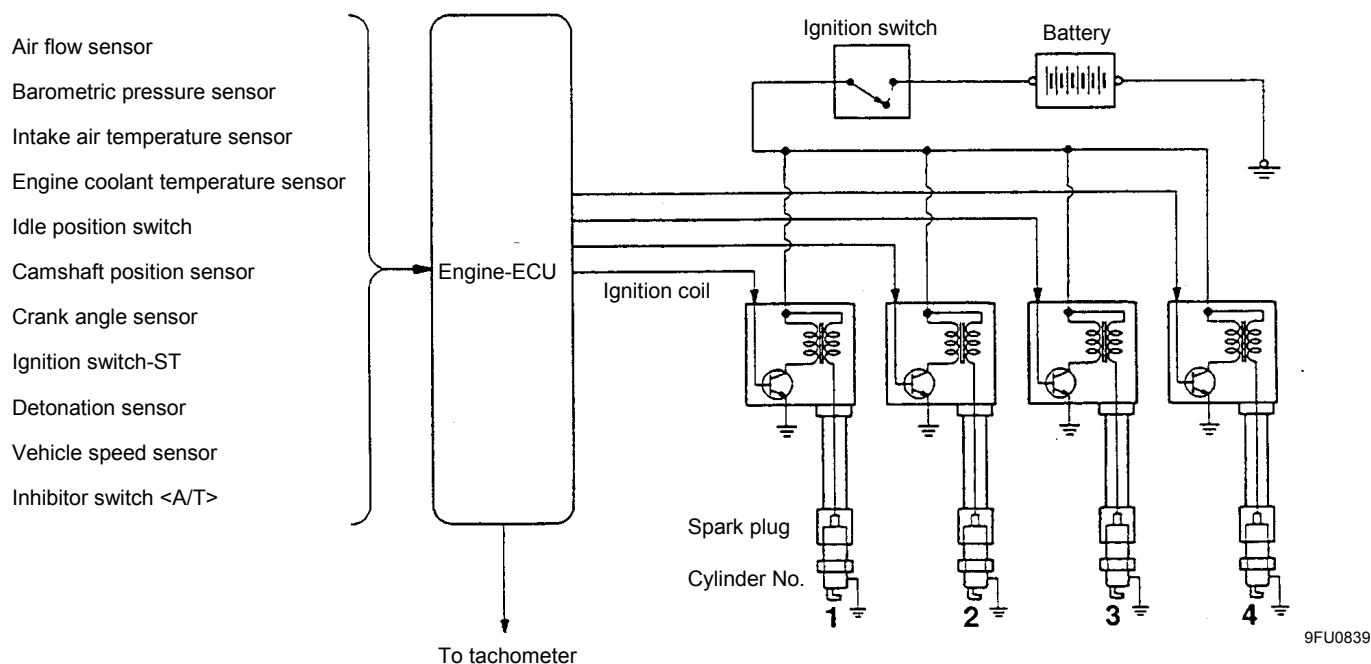
IGNITION SYSTEM

GENERAL INFORMATION

This system is equipped with four ignition coils with built-in power transistors for each of the cylinders. Interruption of the primary current flowing in the primary side of an ignition coil generates a high voltage in the secondary side of the ignition coil. The high voltage thus generated is applied to the spark plugs to generate sparks. The Engine-ECU turns the power transistors inside the ignition coils alternately on and off. This causes the primary currents in the ignition coils to be alternately interrupted and allowed to flow to fire the cylinders in the order 1 - 3 - 4 - 2.

The Engine -ECU determines which ignition coil should be controlled by means of the signals from the camshaft position sensor and the crank angle sensor . It also detects the crankshaft position, in order to provide ignition at the most appropriate timing in response to the engine operation conditions. When the engine is cold or running at high altitudes, the ignition timing is slightly advanced to provide optimum performance. Furthermore, if knocking occurs, the ignition timing is gradually retarded until knocking ceases

SYSTEM DIAGRAM



IGNITION COIL SPECIFICATION

| Items | Specification |
|-------|---------------|
| Type | Molded 4-coil |

SPARK PLUG SPECIFICATION

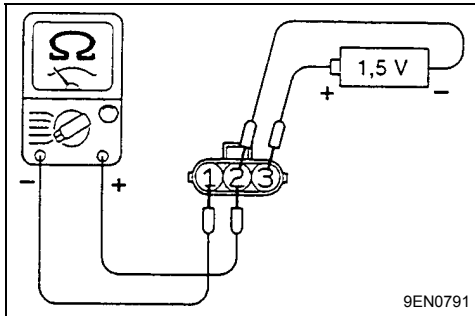
| Items | Specification |
|-------|---------------|
| NGK | PZFR6B <Old> |

IZFR6B <New>

SERVICE SPECIFICATIONS

SPARK PLUG

| Items | Specification | Limit |
|-------------------------------------|---------------|-------|
| Spark plug gap mm | 0.5 - 0.6 | 0.75 |
| Spark plug insulation resistance MΩ | - | 1 |



ON-VEHICLE SERVICE

POWER TRANSISTOR CONTINUITY CHECK

NOTE

1. An analogue-type circuit tester should be used.
2. Connect the negative (-) probe of the circuit tester to terminal 1.

CAUTION

This test must be performed quickly (in less than 10 seconds) to prevent coil from burning and power transistor from breakage

| Voltage: 1.5V | Terminal No. | | |
|-----------------------------|--------------|-----|---|
| | 1 | 2 | 3 |
| When current is flowing | ○ | ○ - | + |
| When current is not flowing | | | |

<New>
iridium

SPARK PLUG CHECK AND CLEANING

Caution

1. The spark plug gap for ~~platinum~~ **plugs** should not be adjusted. ~~<Old>~~
2. Cleaning ~~platinum~~ **plugs** may result in damage to the ~~platinum~~ **tip**. Therefore, if cleaning is necessary because the plug is sooty, use a plug cleaner, and do not clean the plug for more than 20 seconds in order to preserve the electrodes. A wire brush should never be used. ~~<Old>~~
3. The spark plugs in GDI engines are special ~~platinum~~ **plugs** in which the electrodes can become black even when the plugs are working normally. Carbon which may become deposited on these plugs burns off more readily than with conventional plugs, and so should not cause any problems with spark plug performance. Judgement of whether a spark plug is operating normally or not should be made by checking the insulation resistance.

<Old>

<Old>