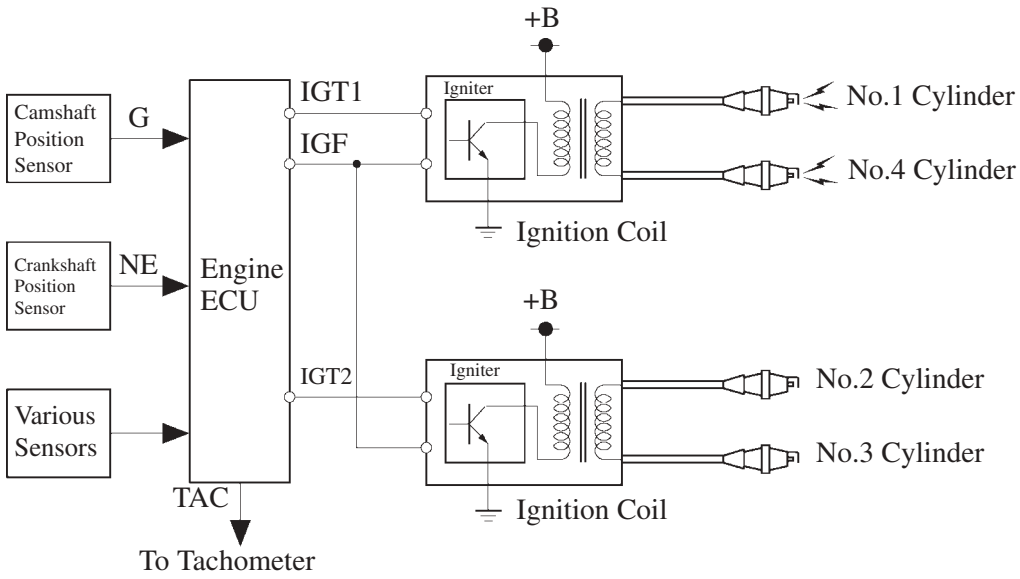
■IGNITION SYSTEM (FOR 2RZ-FE AND 3RZ-FE ENGINE)

1. General

A DIS (Direct Ignition System) has been adopted in the 2RZ-FE and 3RZ-FE engines. The DIS improves the ignition timing accuracy, reduces high-voltage loss, and enhances the overall reliability of the ignition system by eliminating the distributor.
The DIS in these engines is a 3-cylinder simultaneous ignition system which ignites 2 cylinders simultaneously with one ignition coil.

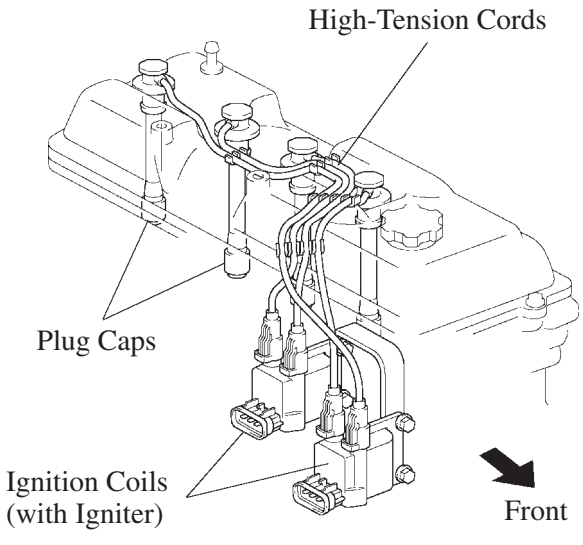


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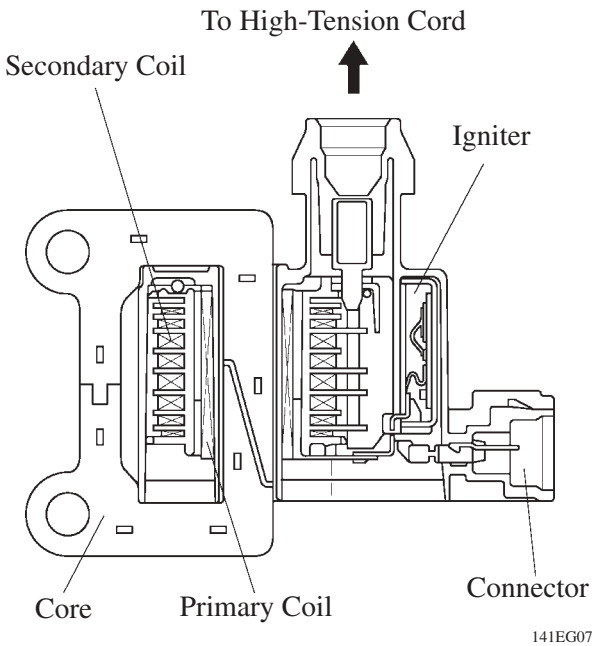
2. Ignition Coil

Construction

Construction of the DIS system of the 2RZ-FE and 3RZ-FE engines consists of 2 sets of ignition coils integrated with the igniter and with the high-tension cords attached directly to the ignition coil.



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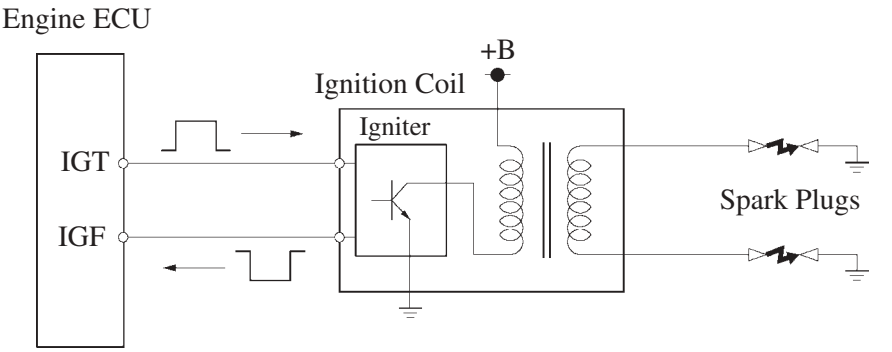
141EG07

Ignition Coil Cross Section

EG

Operation

Prompted by the IGT signal received from the engine ECU, the power transistors in the igniter cut off the current to the primary coil in the ignition coil. Accordingly, the high voltage generated in the secondary coil is supplied simultaneously to the 2 spark plugs via the high-tension cords that are connected to the both ends of the secondary coil. At the same time, the igniter also sends an ignition confirmation signal (IGF) as a fail-safe function to the engine ECU.

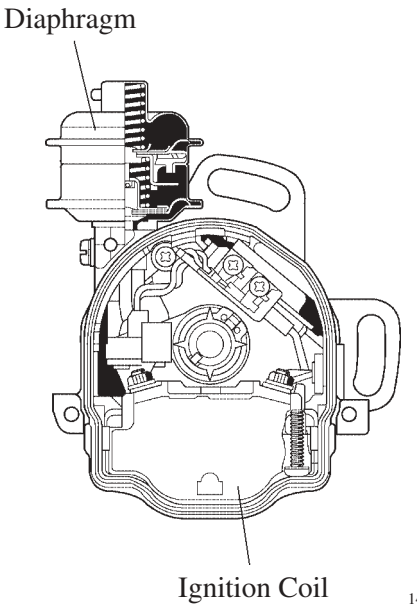


141EG06

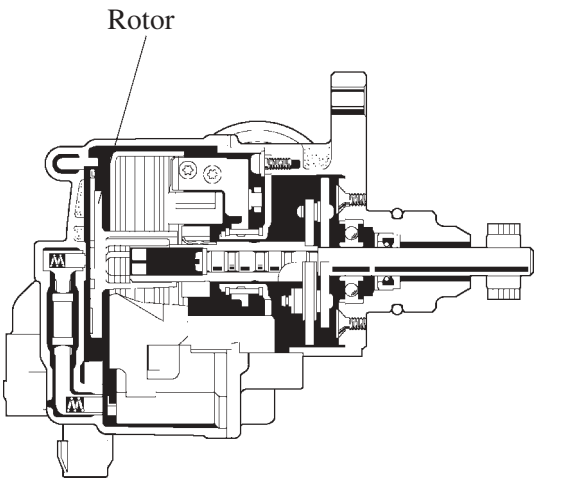
■IGNITION SYSTEM (FOR 3RZ-F ENGINE)

1. Distributor

The distributor contains the ignition coil to simplify the system.



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