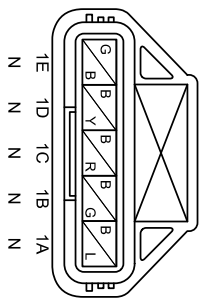
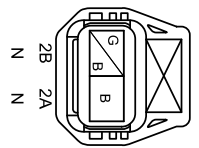
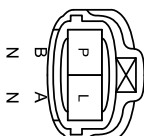
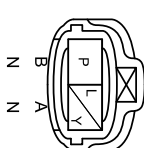
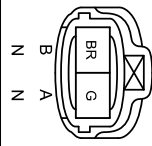






0140-119A ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER	0140-119B ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER	0140-123 OIL PRESSURE SWITCH	0140-124 FUEL INJECTOR No.1	0140-125 FUEL INJECTOR No.2
				

**PCM terminal voltage table (reference)**

Terminal	Test condition	Voltage (V)	Terminal	Test condition	Voltage (V)
1J	(See Electric variable valve timing motor (rotation direction) signal .)		1DX	(See Fuel injection control (+) signal .)	
1O	(See Electric variable valve timing motor (rotation pulse) signal .)		1EA	(See Fuel injection control (-) signal .)	
1P	Ignition switched ON (engine off) Idle (after warm up and no load)	Below 1.0 B+	1EB	(See Fuel injection control (+) signal .)	
1AE	(See Electric variable valve timing driver (diagnostic) signal .)		2AK	Because this terminal is for CAN, integrity determination by terminal voltage is not possible.	
1AZ	(See Electric variable valve timing control signal .)		2AL	Because this terminal is for CAN, integrity determination by terminal voltage is not possible.	
1DO	(See Fuel injection control (-) signal .)		<b>Fuel injector [SKYACTIV-G 2.0]</b> Inspect the resistance between fuel injector terminals A and B. Fuel injector resistance 1.74—2.04 ohms [20 °C {68 °F}]		
1DP	(See Fuel injection control (+) signal .)				
1DS	(See Fuel injection control (-) signal .)				
1DT	(See Fuel injection control (+) signal .)				
1DW	(See Fuel injection control (-) signal .)				

**Inspection using an oscilloscope (reference)**

Electric variable valve timing motor (rotation direction) signal  
PCM terminals

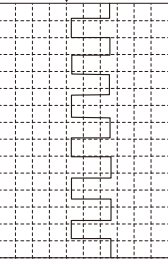
- 1J(+)—body ground(-)

Oscilloscope setting

- 2 V/DIV (Y), 5 ms/DIV (X), DC range

Vehicle condition

- Idle (after warm up and no load)



**Inspection using an oscilloscope (reference)**

Electric variable valve timing driver (diagnostic) signal  
PCM terminals

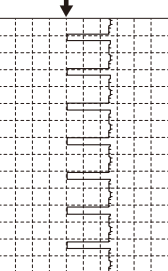
- 1AE(+)—body ground(-)

Oscilloscope setting

- 2 V/DIV (Y), 100 ms/DIV (X), DC range

Vehicle condition

- Idle (after warm up and no load)



**Inspection using an oscilloscope (reference)**

Fuel injection control (-) signal  
PCM terminals

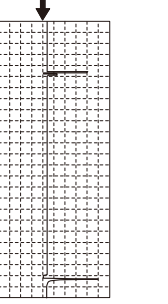
- Fuel Injection No.1: 1DO(+)—body ground(-)
- Fuel Injection No.2: 1DW(+)—body ground(-)
- Fuel Injection No.3: 1EA(+)—body ground(-)
- Fuel Injection No.4: 1DS(+)—body ground(-)

Oscilloscope setting

- 10 V/DIV (Y), 5 ms/DIV (X), DC range

Vehicle condition

- Idle (after warm up and no load)



**Inspection using an oscilloscope (reference)**

Electric variable valve timing motor (rotation pulse) signal  
PCM terminals

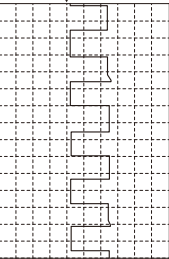
- 1O(+)—body ground(-)

Oscilloscope setting

- 2 V/DIV (Y), 5 ms/DIV (X), DC range

Vehicle condition

- Idle (after warm up and no load)



**Inspection using an oscilloscope (reference)**

Electric variable valve timing control signal  
PCM terminals

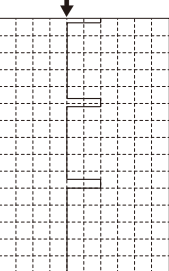
- 1AZ(+)—body ground(-)

Oscilloscope setting

- 2 V/DIV (Y), 2 ms/DIV (X), DC range

Vehicle condition

- Idle (after warm up and no load)



**Inspection using an oscilloscope (reference)**

Fuel injection control (+) signal  
PCM terminals

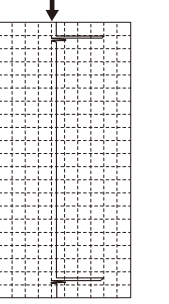
- Fuel Injection No.1: 1DP(+)—body ground(-)
- Fuel Injection No.2: 1DX(+)—body ground(-)
- Fuel Injection No.3: 1EB(+)—body ground(-)
- Fuel Injection No.4: 1DT(+)—body ground(-)

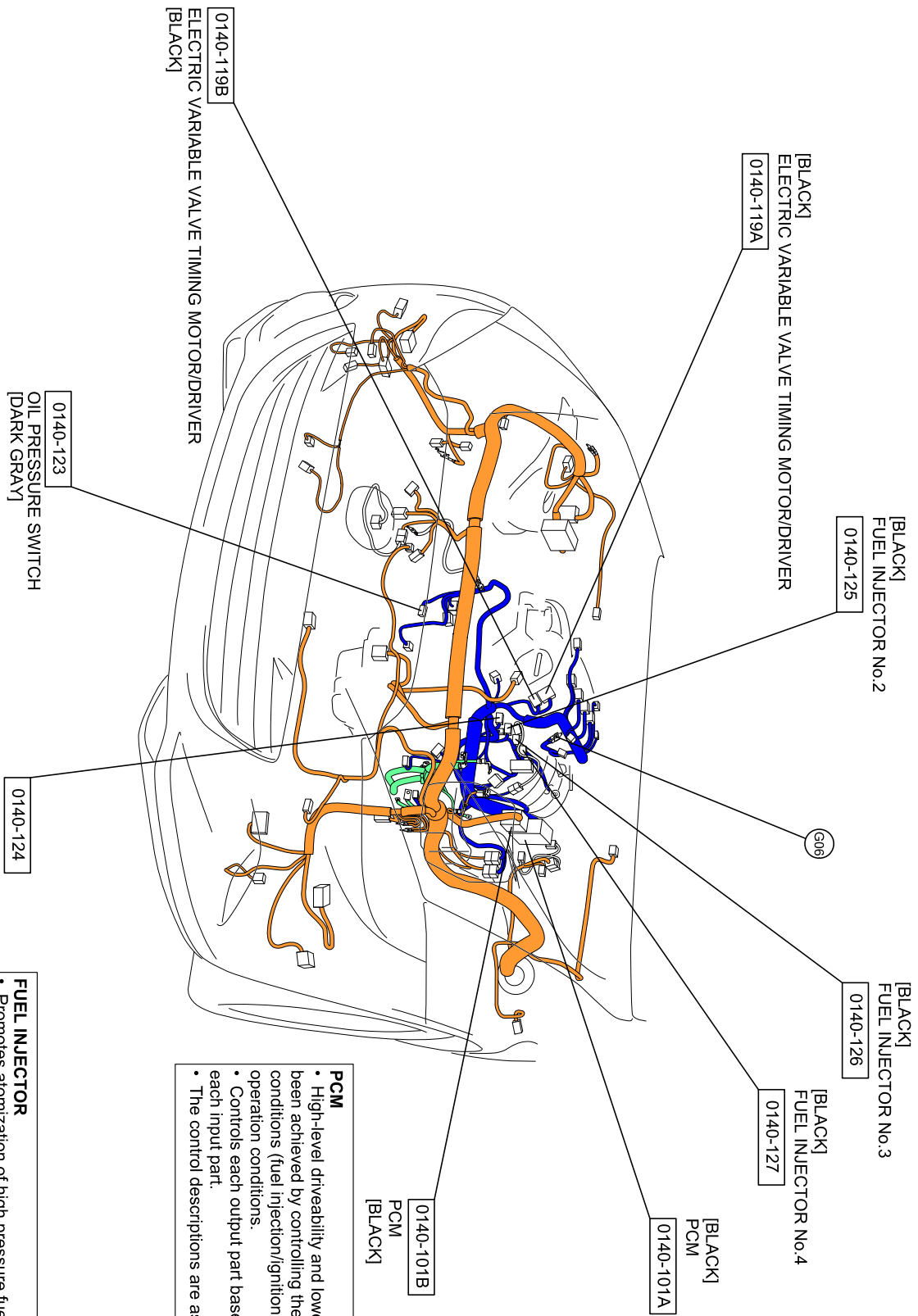
Oscilloscope setting

- 10 V/DIV (Y), 5 ms/DIV (X), DC range

Vehicle condition

- Idle (after warm up and no load)





[BLACK]  
ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER  
0140-119A

[BLACK]  
FUEL INJECTOR No.2  
0140-125

[BLACK]  
FUEL INJECTOR No.3  
0140-126

[BLACK]  
FUEL INJECTOR No.4  
0140-127

[BLACK]  
PCM  
0140-101A

0140-101B  
PCM  
[BLACK]

0140-119B  
ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER  
[BLACK]

0140-123  
OIL PRESSURE SWITCH  
[DARK GRAY]

0140-124  
FUEL INJECTOR No.1  
[BLACK]

**PCM**

- High-level driveability and lower fuel consumption have been achieved by controlling the appropriate engine conditions (fuel injection/ignition timing) according to operation conditions.
- Controls each output part based on the signal from each input part.
- The control descriptions are as shown below.

- : FRONT HARNESS
- : ENGINE HARNESS
- : ENGINE No.2 HARNESS
- : EMISSION HARNESS

**FUEL INJECTOR**

- Promotes atomization of high pressure fuel by injecting it from multiple holes. Atomized fuel mixes actively with air and achieves the optimum air-fuel mix for combustion. At this time, the combustion efficiency has been improved by decreasing the temperature in the combustion chamber and increasing the air density.
- The optimum injection amount is injected at the optimum timing by the PCM control according to the engine condition.