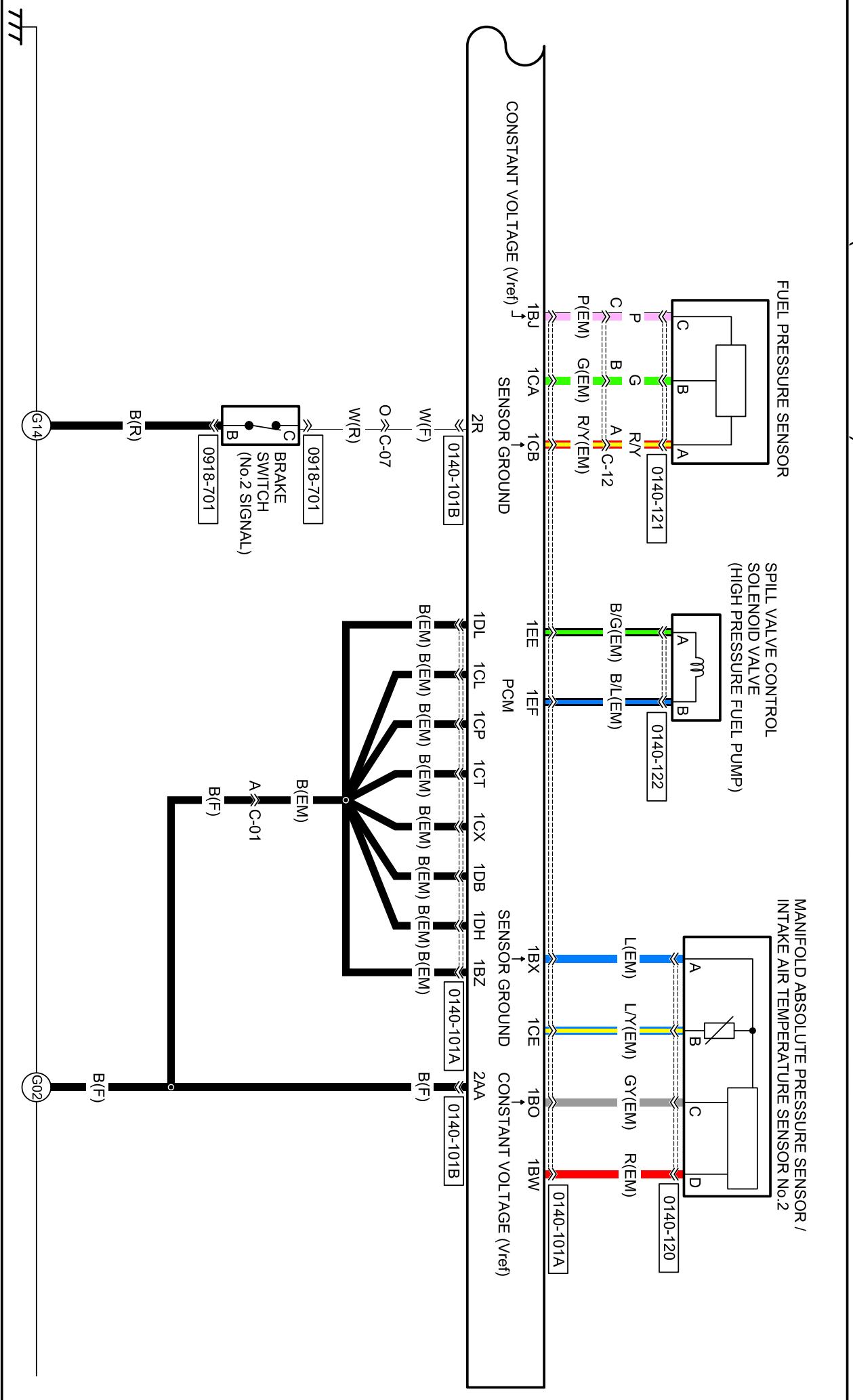


2016 Mazda MX-5  
CONTROL SYSTEM (SKYACTIV-G 2.0)

0140-1h



2016 Mazda MX-5  
CONTROL SYSTEM (SKYACTIV-G 2.0)

0140-1h

0140-101A  
PCM

B	G	L	G	L	Y	W	G	B	G	B
B	G	L	G	L	Y	W	G	B	G	B
B	G	L	G	L	Y	W	G	B	G	B
B	G	L	G	L	Y	W	G	B	G	B
B	G	L	G	L	Y	W	G	B	G	B

G	B	G	B	G	B	G	B	R	V	L	G
B	G	L	G	L	Y	W	G	B	G	L	G
B	G	L	G	L	Y	W	G	B	G	L	G
B	G	L	G	L	Y	W	G	B	G	L	G
B	G	L	G	L	Y	W	G	B	G	L	G

*	*	*	*	*	*	*	*	L	R	L	B	V
BR	G	*	X	*	V	L	G	L	Y	W	*	
BR	G	*	X	*	V	L	G	L	Y	W	*	
BR	G	*	X	*	V	L	G	L	Y	W	*	
BR	G	*	X	*	V	L	G	L	Y	W	*	

W	G	B	BR	B	R	G	X	BR	L	W	*	G
B	L	*	X	R	L	W	*	G	L	*	X	R
B	L	*	X	R	L	W	*	G	L	*	X	R
B	L	*	X	R	L	W	*	G	L	*	X	R
B	L	*	X	R	L	W	*	G	L	*	X	R

IEJ 1EH 1ED 1DZ 1DV 1DR 1DN 1DJ 1DF 1DD 1CZ 1CV 1CR 1CN 1CJ 1CF 1CB 1BX 1BV 1BQ 1BL 1BG 1BB 1AW 1AR 1AM 1AH 1AC 1X 1S 1N 1I

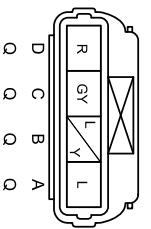
0140-101E  
PCM

*	B	*	B R	LG	L	R	P
G	*	G	B R	*	*	W	*
G	*	G	B R	*	*	W	*
*	B	*	B R	LG	L	R	P

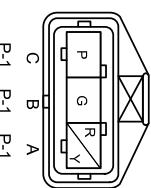
**2016 Mazda MX-5  
CONTROL SYSTEM (SKYACTIV-G 2.0)**

0140-1h

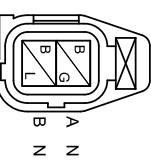
0140-120  
MANIFOLD ABSOLUTE PRESSURE SENSOR /  
INTAKE AIR TEMPERATURE SENSOR No.2



0140-121  
FUEL PRESSURE SENSOR



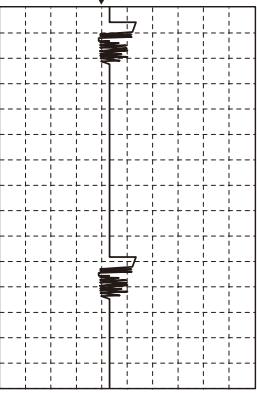
0140-122  
SPILL VALVE CONTROL SOLENOID VALVE  
(HIGH PRESSURE FUEL PUMP)



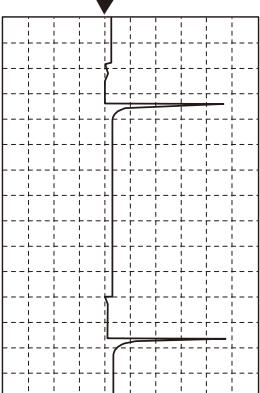
0918-701  
BRAKE SWITCH

<b>PCM terminal voltage table (reference)</b>							
<b>Terminal</b>	<b>Test condition</b>	<b>Voltage (V)</b>	<b>Terminal</b>	<b>Test condition</b>	<b>Voltage (V)</b>		
1BJ	Ignition switched ON (engine off)	Approx. 5.02	1CL	Under any condition	Below 1.0		
1BO	Ignition switched ON (engine off)	Approx. 5.03	1CP	Under any condition	Below 1.0		
	Ignition switched ON (engine off)		1CT	Under any condition	Below 1.0		
1BW	Idle (after warm up and no load)	Approx. 2.13	1CX	Under any condition	Below 1.0		
	Racing (Engine speed: 2,000 rpm)		1DB	Under any condition	Below 1.0		
1BX	Under any condition	Approx. 0.86	1DH	Under any condition	Below 1.0		
1BZ	Under any condition	Below 1.0	1DL	Under any condition	Below 1.0		
1CA	Ignition switched ON (engine off)	Approx. 1.22	1EE	(See High pressure fuel pump control (+) signal.)	80 {176}	Approx. 0.323	
1CB	Idle (after warm up and no load)	Approx. 1.21	1EF	(See High pressure fuel pump control (-) signal.)	130 {266}	Approx. 0.0893	
	Under any condition		Brake pedal released				
1CE	Ignition switched ON (engine off)	Below 1.0	Brake pedal fully depressed				
	IAT 20 °C {68 °F}	Approx. 3.57	B+				
	IAT 40 °C {104 °F}	Approx. 2.70	Under any condition				
	IAT 60 °C {140 °F}	Approx. 1.87	Below 1.0				

<b>Inspection using an oscilloscope (reference)</b>							
High pressure fuel pump control (+) signal							
PCM terminals							
• 1EE(+)—body ground(—)							
Oscilloscope setting							
• 10 V/DIV (Y), 5 ms/DIV (X), DC range							
Vehicle condition							
• Idle (after warm up and no load)							



<b>Inspection using an oscilloscope (reference)</b>							
High pressure fuel pump control (-) signal							
PCM terminals							
• 1EE(+)—body ground(—)							
Oscilloscope setting							
• 10 V/DIV (Y), 5 ms/DIV (X), DC range							
Vehicle condition							
• Idle (after warm up and no load)							



# 2016 Mazda MX-5 CONTROL SYSTEM (SKYACTIV-G 2.0)

0140-1h

[BLACK] SPILL VALVE CONTROL SOLENOID VALVE (HIGH PRESSURE FUEL PUMP)  
0140-122

[BLACK] (EM)-SHORT CORD  
C-12  
PCM  
0140-101A

FUEL PRESSURE SENSOR  
0140-121

PCM  
0140-101B

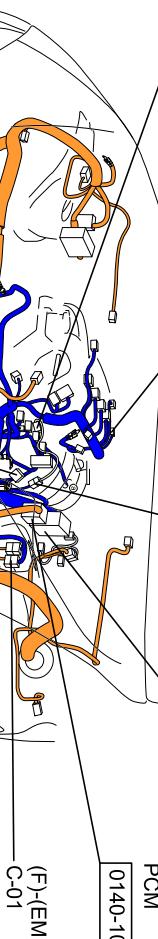
HIGH PRESSURE FUEL PUMP  
[BLACK]

- The high pressure fuel pump is used for the direct fuel injection system. Fuel (pressure : 450 kPa) from the fuel pump built into the fuel tank is boosted up to 20 MPa, and it is pumped to the fuel distributor in an easily atomizable state.

- High-level drivability 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.

BRAKE SWITCH  
0918-701



MANIFOLD ABSOLUTE PRESSURE SENSOR /  
INTAKE AIR TEMPERATURE SENSOR No.2  
[BLACK]  
0140-120

## FUEL PRESSURE SENSOR

- Detects the fuel pressure in the fuel distributor and sends it to the PCM as a fuel pressure signal.

## MANIFOLD ABSOLUTE PRESSURE SENSOR

- Detects the intake air pressure introduced into the cylinder and sends it to the PCM as an intake air pressure signal.

## INTAKE AIR TEMPERATURE SENSOR No.2

- Indicates the resistance value according to the intake air temperature after it passes through the throttle body (intake manifold).

: FRONT HARNESS  
: ENGINE HARNESS  
: ENGINE No.2 HARNESS  
: REAR HARNESS  
: REAR No.4 HARNESS  
: EMISSION HARNESS  
: DOOR HARNESS  
: INTERIOR LIGHT No.2 HARNESS

