Technical Service Bulletin

SUBJECT:	NO:	TSB-22-16-003
UPDATE TO ENGINE ELECTRICAL CONTENT – SERVICE MANUAL REVISION	DATE:	**JULY 2022**
	MODEL:	**2018-22 ECLIPSE CROSS**

CIRCULATE TO:	[ ] GENERAL MANAGER	[**X**] PARTS MANAGER	[**X**] TECHNICIAN
[**X**] SERVICE ADVISOR	[**X**] SERVICE MANAGER	[**X**] WARRANTY PROCESSOR	[ ] SALES MANAGER

PURPOSE

This TSB provides updated content for the Engine Electrical section of the 2018-2022 Eclipse Cross Service Manuals.

AFFECTED VEHICLES

- 2018 - 2022 Eclipse Cross

AFFECTED SERVICE MANUAL

- 2018-2022 Eclipse Cross Service Manuals, Group 16 - Engine Electrical

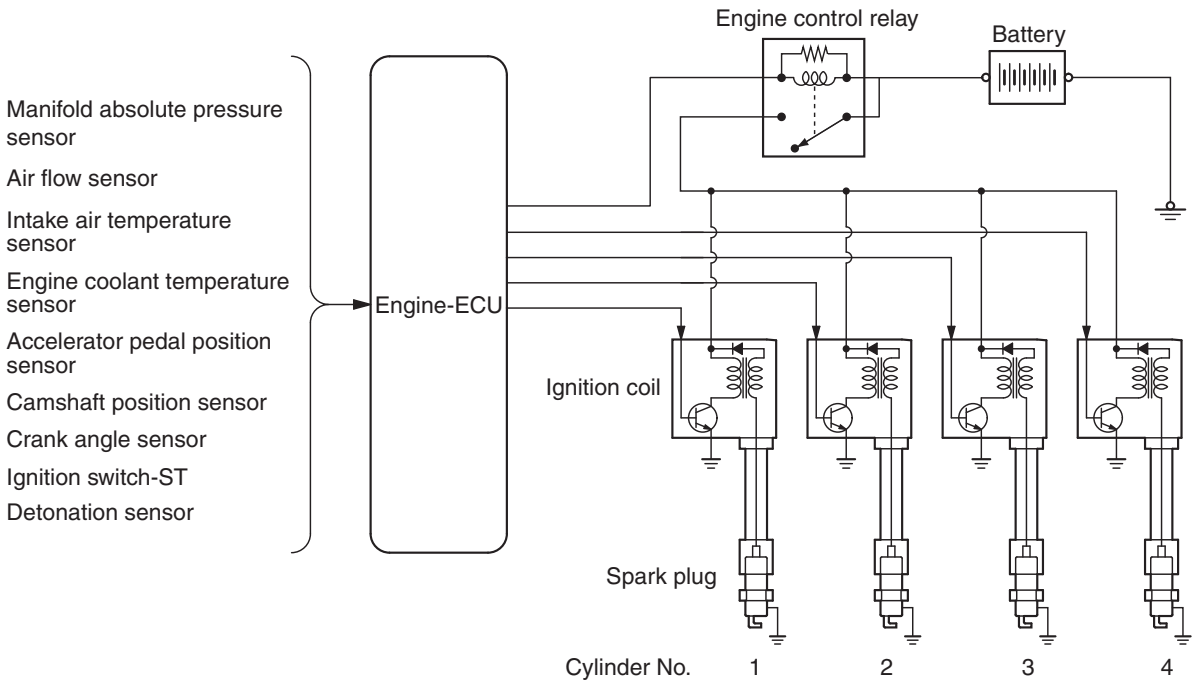
Please refer to the following information and chart to replace the pages in the 2018-2022 Eclipse Cross Service Manuals, Group 16 - Engine Electrical sections as follows:

- 2018-2022 Eclipse Cross Service Manuals, Group 16 - Engine Electrical > Ignition System > Service Specifications
- 2018-2022 Eclipse Cross Service Manuals, Group 16 - Engine Electrical > Ignition System > Spark Plug Check, Cleaning and Replacement

Applicable manual	Pub. No.	Applicable title	Contents
2018 ECLIPSE CROSS Service Manual	MSCD-020B-2018	ENGINE ELECTRICAL > IGNITION SYSTEM > SERVICE SPECIFICATIONS ENGINE ELECTRICAL > IGNITION SYSTEM > ON-VEHICLE > SERVICE > SPARK PLUG CHECK, CLEANING AND REPLACEMENT	Attached sheet 3
2019 ECLIPSE CROSS Service Manual	MSCD-020B-2019		
2020 ECLIPSE CROSS Service Manual	MSCD-020B-2020		Attached sheet 4
2022 ECLIPSE CROSS Service Manual	MSCD-020B-2022		Attached sheet 5

Attached sheet 3 (1/2)

SYSTEM DIAGRAM



AK503331AQ

IGNITION COIL SPECIFICATION

Item	Specification
Type	Molded 4-coil

SPARK PLUG SPECIFICATION

Item	Specification
NGK	SILKR7H8

SERVICE SPECIFICATIONS

M1163000302023

SPARK PLUG

Item	Standard value	Limit
Spark plug gap mm (in)	0.7 – 0.8 (0.028 - 0.031)	~~1.2 (0.05)~~ <Incorrect>

1.0 (0.04) <Correct>

SPARK PLUG CHECK AND CLEANING

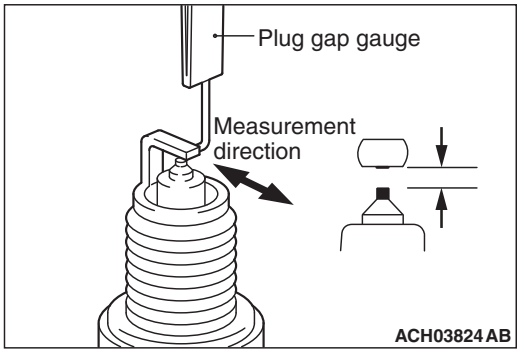
M1163004303329

⚠ CAUTION

- **Never attempt to adjust the gap of the iridium plug.**
- **Do not attempt to clean the iridium plug using a wire brush because it may result in damage to the electrode. When the iridium plug is cleaned, special tool spark plug brush (MB992273).**

NOTE: Obey the maintenance interval of the relevant vehicle for the spark plug replacement. If the plug gap and insulation resistance are normal, check the plug condition and clean if necessary.

SPARK PLUG GAP CHECK



Check the plug gap with the wire type plug gap gauge. Replace it if the limit is exceeded.

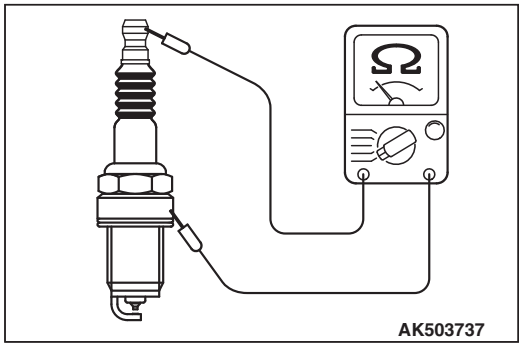
Standard value, limit:

<Correct> 1.0 (0.04)

Manufacturer	Type	Standard value mm (in)	Limit mm (in)
NGK	SILKR7H8	0.7 – 0.8 (0.028 – 0.031)	1.2 (0.05)

<Incorrect>

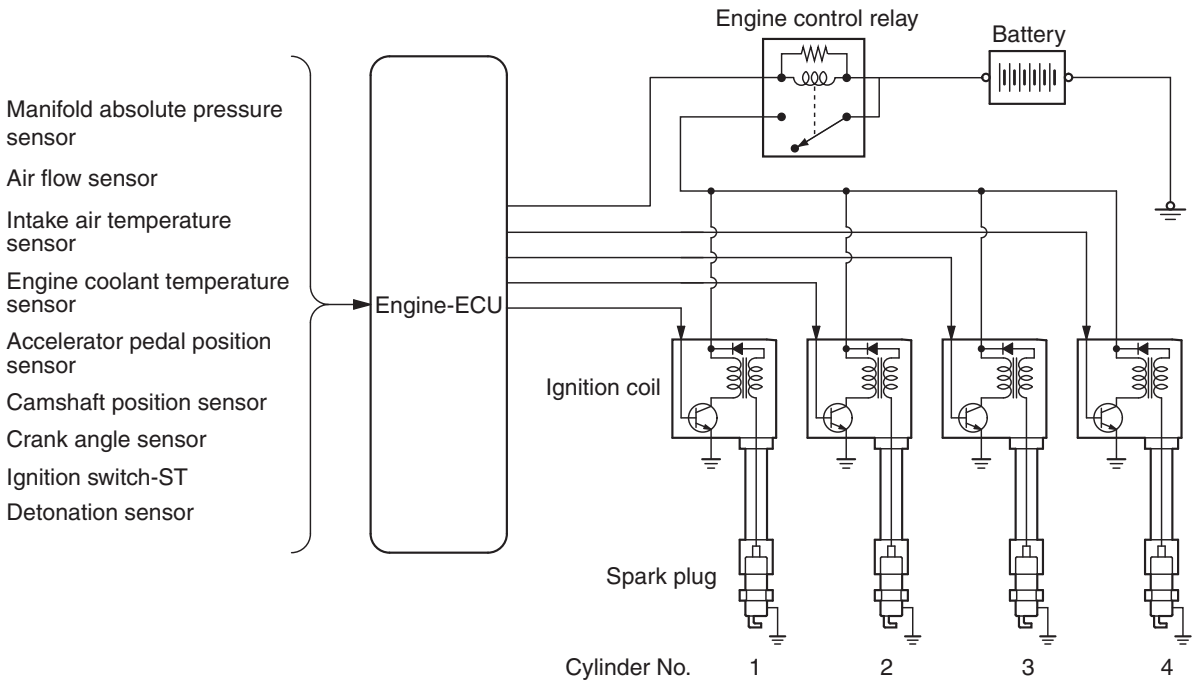
SPARK PLUG INSULATION RESISTANCE CHECK



1. Measure the insulation resistance of the spark plug. If the insulation resistance of the spark plug is under the limited value, clean the spark plug (Refer to P.16-24).
2. After cleaning, measure the insulation resistance again. Replace the plug unless it is within the limited value.

   Limit: Minimum 10 MΩ

SYSTEM DIAGRAM



AK503331AQ

IGNITION COIL SPECIFICATION

Item	Specification
Type	Molded 4-coil

SPARK PLUG SPECIFICATION

Item	Specification
NGK	SILKR7H8

SERVICE SPECIFICATIONS

M1163000302023

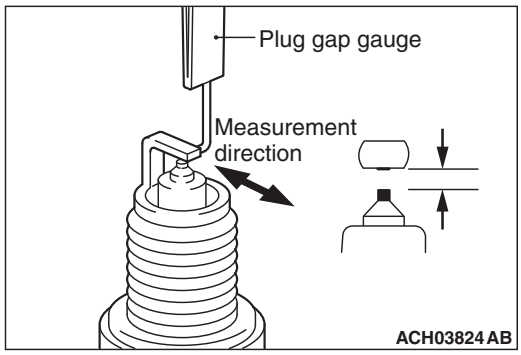
SPARK PLUG

Item	Standard value	Limit
Spark plug gap mm (in)	0.7 – 0.8 (0.028 - 0.031)	~~1.2 (0.05)~~ <Incorrect>

1.0 (0.04) <Correct>

Attached sheet 4 (2/2)

SPARK PLUG GAP CHECK



Check the plug gap with the wire type plug gap gauge. Replace it if the limit is exceeded.

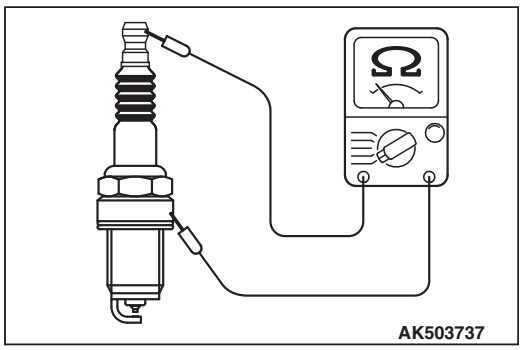
Standard value, limit:

<Correct> 1.0 (0.04)

Manufacturer	Type	Standard value mm (in)	Limit mm (in)
NGK	SILKR7H8	0.7 – 0.8 (0.028 – 0.031)	1.2 (0.05)

<Incorrect>

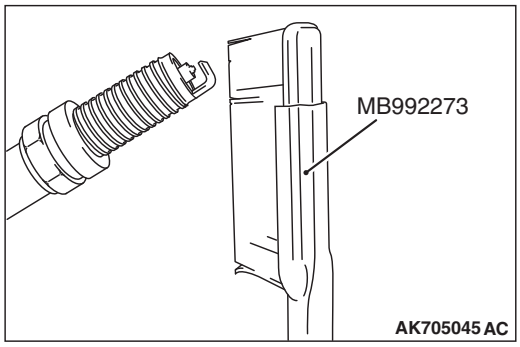
SPARK PLUG INSULATION RESISTANCE CHECK



1. Measure the insulation resistance of the spark plug. If the insulation resistance of the spark plug is under the limited value, clean the spark plug (Refer to P.16-25).
2. After cleaning, measure the insulation resistance again. Replace the plug unless it is within the limited value.

   Limit: Minimum 10 MΩ

SPARK PLUG CLEANING



1. Sufficiently apply the brake cleaner to the plug end.

   NOTE: Repeatedly applying the brake cleaner is acceptable during the cleaning.
2. Using special tool spark plug brush (MB992273), intensively clean the electrode for 1 to 2 minutes.

   NOTE: Even if using strong force, the electrode is not damaged.

   NOTE: In case of insufficient cleaning, it is permissible to take longer than 2 minutes for cleaning.
3. After the cleaning, sufficiently remove and then dry both of the carbon and the brake cleaner on the plug, using a waste cloth or air blowing.

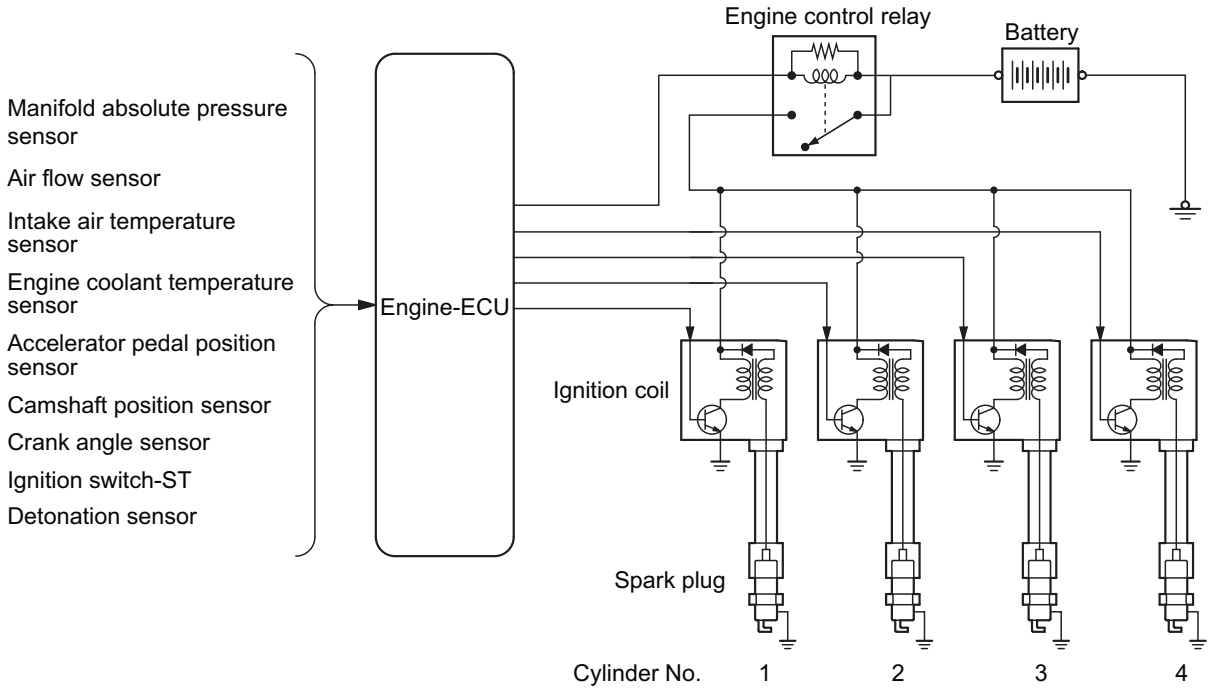
CAMSHAFT POSITION SENSOR CHECK

M1163004401256

Check the camshaft position sensor circuit if self-diagnostic trouble code, No.P0340 is shown.
(Refer to GROUP 13A – Troubleshooting – Direct Fuel Injection Multiport Fuel Injection (DFI and MFI) Diagnosis, Diagnostic Trouble Code Chart, Code No. P0340 inlet camshaft position sensor system P.13A-369.)

Attached sheet 5 (1/2)

SYSTEM DIAGRAM



AK503331AQ

IGNITION COIL SPECIFICATION

Item	Specification
Type	Molded 4-coil

SPARK PLUG SPECIFICATION

Item	Specification
NGK	SILKR7H8

SERVICE SPECIFICATIONS

SPARK PLUG

<Correct> 1.0 (0.04)

M11630003A0008

Item	Standard value	Limit
Spark plug gap mm (in)	0.7 - 0.8 (0.028 - 0.031)	~~1.2 (0.05)~~ <Incorrect>
Spark plug insulation resistance MΩ	-	minimum 10

Attached sheet 5 (2/2)

ON-VEHICLE SERVICE

IGNITION COIL CHECK

M1163001201792

NOTE: It is impossible to carry out an easy check using a circuit tester because a diode and so on are integrated into the inside circuit of this ignition coil. Accordingly, check the ignition coil in the following procedure.

1. Turn the ignition switch to the "LOCK" (OFF) position and then connect the scan tool [Refer to GROUP 13A - Direct Fuel Injection and Multiport Fuel Injection (DFI and MFI) Diagnosis, Diagnostic Function P.13A-10].
2. Make sure the diagnostic trouble codes are not set using scan tool (M.U.T.-IIISE). If set, record the code No. Carry out the troubleshooting for the set codes and solve the problems even if not related to the ignition.
3. Disconnect the injector connectors on all of the cylinders.
4. Disconnect the ignition coil connector.
5. Remove the ignition coil and install a good spark plug to the ignition coil.
6. Connect the ignition coil connector.
7. Ground the side electrode of the spark plug and crank the engine.
8. Check that spark is produced between the electrodes of the spark plug.
9. If the spark plug has weak sparks or no sparks, carry out the same check using a good ignition coil. If there are strong sparks on this check with a good ignition coil, it becomes clear there is a problem with the ignition coil. Replace the ignition coil with a new one. If there are no sparks on this check with a good ignition coil, there is probably a problem with the ignition circuit. Check the ignition circuit.
10. Using scan tool (M.U.T.-IIISE), make sure whether the diagnostic trouble codes are set due to the check, or not. Except the codes set in Step 1, clear the codes all together if they are present. And then, carry out the troubleshooting about the codes recorded.
11. Turn the ignition switch to the "LOCK" (OFF) position, and then disconnect the scan tool (M.U.T.-IIISE).

SPARK PLUG CHECK AND CLEANING

M11630043A0014

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NOTE: Obey the maintenance interval of the relevant vehicle for the spark plug replacement. If the plug gap and insulation resistance are normal, check the plug condition and clean if necessary.

SPARK PLUG GAP CHECK

Check the plug gap with the wire type plug gap gauge. Replace it if the limit is exceeded.

Standard value, limit:

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NGK	SILKR7H8	0.7 - 0.8 (0.028 - 0.031)	~~1.2 (0.05)~~ <Incorrect> 1.0 (0.04) <Correct>