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**TECH TALK - VOLUME 285**  
**MARCH/APRIL 2025**

**TECHNICAL INFORMATION:** VEHICLE TURNS OFF IN 30 MINUTES MESSAGE

**AFFECTED VEHICLES:** 2025 ECLIPSE CROSS

**GROUP:** 42

**CONCERN:**

Some 2025 Eclipse Cross customers may comment their vehicle displays a warning message stating the vehicle will shut off in 30 minutes. 2025 Eclipse Cross vehicles equipped with F.A.S.T. Key have a feature called Vehicle Auto Turn-Off System. With the vehicle in park and the driver's door open, this message will be displayed, and a timer will automatically shut the vehicle off after 30 minutes of continued engine operation. This system can be temporarily shut off but will default to normal operation upon the next key cycle. Additional information regarding this feature is found on page 5-27 of the 2025 Eclipse Cross Owner's Manual.

Technicians are advised not to attempt any repairs for this concern as this a normal operating characteristic. Service Advisors should review the feature and its operation with their customers in the event customers raises a concern regarding the feature.



Free-hand Advanced Security Transmitter (F.A.S.T.-key) (if so equipped)

The transmittal will warm up, and you will be able to start normally. Do not leave the vehicle during warm-up operation.

**NOTE**

- Do not stop the engine with the selector lever in any position other than the "P" (PARK) position. If the engine is stopped with the selector lever in any position other than the "P" (PARK) position, the operation mode will go to ACC rather than OFF.

Put the operation mode in OFF after placing the selector lever in the "P" (PARK) position.

- Stop the vehicle.
- Fully engage the parking brake while depressing the brake pedal.
- Move the selector lever to the "P" (PARK) position, and then press the engine switch to stop the engine.

**WARNING**

- Do not over-rely on the vehicle auto turn-off system. Always turn off the engine when leaving the vehicle. Depending on the conditions, the system does not work and the engine does not shut off. If the engine is left running in a closed or poorly ventilated place, passengers may get carbon monoxide poisoning, resulting in serious injury or death.

**NOTE**

- The vehicle auto turn-off system can be temporarily deactivated using the multi-information display setting function. Operate the multi-information display switches to select "VEHICLE AUTO TURNS OFF" and switch between "ACTIVATE" and "DEACTIVATE". Refer to "Changing the function settings" on page 5-187.
- The vehicle auto turn-off system is automatically deactivated every time the operation mode is put in OFF.

**Vehicle auto turn-off system**

If the driver's door is opened with the selector lever in the "P" (PARK) position and the engine running, a timer starts and the engine will automatically stop in 30 minutes. Also, 30 seconds after the engine is automatically shut off, the operation mode turns to OFF. When the timer starts, 30 seconds before the engine is shut off and 30 seconds before the operation mode is turned to OFF, the display on the information screen in the multi-information display and the buzzer will inform the driver. After the timer starts, auto engine shut-off can be cancelled by depressing the brake pedal or the accelerator pedal.

Features and controls 5-27

**UPCOMING HOLIDAYS:**  
Memorial Day - May 26<sup>th</sup>

**IMPORTANT**

PLEASE MAKE SURE THAT **TSB-25-54-003** ABNORMAL NOISE FROM DYNAMIC SOUND YAMAHA ULTIMATE 12 SPEAKERS & **TSB-25-54-004** 2025 OUTLANDER DISCHARGED BATTERY ARE **COMPLETED ON ALL IN-STOCK** INVENTORY VEHICLES **PRIOR TO BEING SOLD.**

**DEALER TECHNICIANS:**  
We'd like to hear from you!

Please submit tips and suggestions for future Tech Talk articles to: [servicesupport@mmsa.com](mailto:servicesupport@mmsa.com)

Introducing the new 2025 Outlander. Click the image below to view on YouTube:



**TECHNICAL INFORMATION:** PREVENTING IMMOBILIZER LOCK OUT

**AFFECTED VEHICLES:** 2022-2025 OUTLANDER

**GROUP:** 42

**CONCERN:**

If it is necessary to replace more than one of the components listed below during a repair, please replace one at a time and complete the after-replacement procedures listed in the Service Manual for that component. These after-replacement procedures can also be found in TIN-21-00-008.

Immobilizer Integrated Components

- FAST Keys
- Hands Free Module (BCM)
- Body Control Module (BCM)
- Engine Control Module (ECM)
- Electronic Power Steering (EPS)
- Shift Control Unit (SCU)

Note: Replacing more than one of the components listed above simultaneously without following the recommendation to replace one at a time can cause the Immobilizer system to enter a theft prevention lock, rendering the vehicle immobile. Keys will not be able to be programmed thus preventing the engine from starting.



**TECHNICAL INFORMATION:** CHASSIS CONTROL MODULE CODE

**AFFECTED VEHICLES:** 2023-2025 Outlander Plug-in Hybrid

**GROUP:** 54

**CONCERN:**

The Outlander Plug-in Hybrid may set code C1BCC-97 in the Chassis Control Module with no explanation of the code. This code is not found in the Service Manual, but has been determined to be a code for a brake light error.

Recently this code was reported on a vehicle with an aftermarket tail-light. After installation of an OEM tail-light, the concern was resolved and the code did not return.

Another vehicle was also found with an aftermarket trailer hitch wired into the tail-light, resulting in code C1BCC-97.



**TECHNICAL INFORMATION:** CAMERA OR FCM/LDW/AHB-ECU SENSOR AIMING ADJUSTMENT

**AFFECTED VEHICLES:** All models equipped with Driver Assistance Camera or FCM/LDW/AHB-ECU Sensor

**GROUP:** 54

**CONCERN:**

During the aiming process for the windshield mounted camera, technicians may encounter situations where the process does not complete. To resolve this concern, verify that the camera is properly mounted to the OEM windshield and that all measurements are correct. The Service Manual contains additional information which may prove helpful.

Since alliance models and MMC models have different aiming or calibration procedures and different error codes if the process does not complete, please refer to the Service Manual of each model for appropriate working procedures, codes, and causes.

For your reference, below is a list of error codes and possible causes excerpted from the Outlander Service Manual: Cruise Control Driver Assistance - Driver Assistance System - Driver Assistance System - Basic Inspection - Camera Aiming Adjustment.

Displayed item		Possible cause	Service procedure
SUSPENSION		<ul style="list-style-type: none"> <li>◦ Temporary malfunction in internal processing of the front camera unit.</li> <li>◦ Front camera unit malfunction.</li> </ul>	Position the target appropriately again.  Then perform the aiming again.
Abnormally completed	0	Aiming completed (no error)	-
	1	Aiming status determination (SPI) protocol version mismatch	<ul style="list-style-type: none"> <li>◦ Turn the ignition switch to the ON from OFF. Accurately set target and perform camera aiming again.</li> <li>◦ If abnormally completed again after aiming, replace front camera unit.</li> </ul>
	2	Header CRC abnormality in SPI message	
	3	Object CRC abnormality in SPI message	
	4	Abnormality in "CLB Stat Run Mode" due to "Calibration static"	
	5	Aiming not completed within 5 seconds	Position the target appropriately again.
	6	Failure to activate aiming mode	Then perform the aiming again.
	7	Internal error during aiming	
8	Bottom value threshold exceeded	Correct the input values of the parameters and carry out the aiming again.	

Displayed item		Possible cause	Service procedure
	9	Aiming completion value is outside a certain range.	<ul style="list-style-type: none"> <li>◦ Correct the input parameters and carry out the aiming again.</li> <li>◦ Ensure that the target is correctly placed and the front camera unit is correctly installed, then carry out the aiming again.</li> </ul>
	18	<ul style="list-style-type: none"> <li>◦ Target not detected</li> <li>◦ The distance between the target and the camera input during the aiming differs more than 50 % of the actual distance.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Ensure that the front camera unit is correctly installed, then carry out the aiming again.</li> <li>◦ Ensure that the hood is not open, then carry out the aiming again.</li> <li>◦ Ensure that there is no obstruction on the windshield in front of the front camera unit, then carry out the aiming again.</li> <li>◦ Brightly illuminate the targets, check that the targets are within the range of the front camera unit and that all targets are clearly visible, then carry out the aiming again.</li> <li>◦ Ensure that the distance from the vehicle to the target is correct, then carry out the aiming again.</li> </ul>

Displayed item	Possible cause	Service procedure
Abnormally completed	19 Aiming result exceeds tolerances in the roll direction.	<ul style="list-style-type: none"> <li>◦ Check that the input parameters are correct, then carry out the aiming again.</li> <li>◦ Ensure that the target is correctly placed and the front camera unit is correctly installed, then carry out the aiming again.</li> <li>◦ Check that there is no reflection of strong light on the target and that there is no object around the target that could be mistaken for the target, then carry out the aiming again.</li> </ul>
	20 Aiming result exceeds the tolerances in the yaw/pitch direction.	
	21 Input parameters were not read correctly.	Correct the input parameters, then carry out the aiming again.
	22 Input parameters were not read correctly.	
	23 Target size is outside the recognizable range. (Target size is too small compared to the recognizable size.)	Position the target appropriately again.
	24 Aiming result exceeds the tolerances in the yaw direction.	Then perform the aiming again.
	25 Aiming result exceeds the tolerances in the pitch direction.	
	26 Too many targets	<ul style="list-style-type: none"> <li>◦ Position the target appropriately again.</li> <li>◦ Check that there is no reflection of strong light on the target and that there is no object around the target that could be mistaken for the target, then carry out the aiming again.</li> </ul>
27 Malfunction of internal processes	<ul style="list-style-type: none"> <li>◦ Turn the ignition switch to the ON from OFF. Accurately set target and perform camera aiming again.</li> <li>◦ If abnormally completed again after aiming, replace front camera unit.</li> </ul>	



**TECHNICAL INFORMATION:** TECHNICAL TIPS FOR VALVE SPRING

**AFFECTED VEHICLES:** All

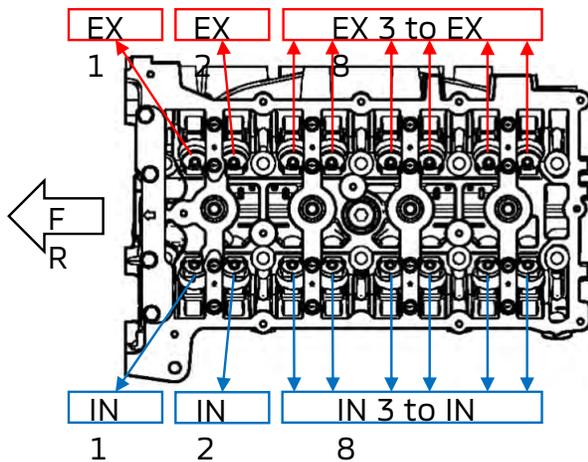
**GROUP:** 00

**CONCERN:**

There are several shapes of valve springs, some of which have a specified installation direction. This direction can be identified by a paint mark on the valve spring, but the paint may be removed when the part is washed, potentially leading to incorrect maintenance work. Therefore, this article provides technical tips for the valve spring.



**Technical Tips**



\*Example of "4B1" engine

- ✓ If the top and bottom diameters of the valve spring are different, install it so that the smaller diameter faces the camshaft side. (Figure 1)
- ✓ If the spring has an unequal pitch, install it so that the wider pitch faces the camshaft side. (Figure 2)
- ✓ If the valve spring has the same top and bottom diameters and equal pitch, it can be installed in either direction.

Figure 1	Figure 2
↑ Camshaft side	↑ Camshaft side
Small diameter	Wide
Large diameter	Narrow
↓ Cylinder head side	↓ Cylinder head side



## TSB/TIN/ATIN/SC/SR REVIEW

Since Tech Talk 284, the following bulletins have been published:

PUBLISH DATE	TSB/ATIN/TIN #	SUBJECT	MODELS
1/15/2025	TSB-25-54-001	HEAD UP DISPLAY MAY NOT FUNCTION WITH INTERNAL TEMPERATURE BELOW 14 DEGREES F	2022-2025 OUTLANDER AND OUTLANDER PLUG-IN HYBRID
1/23/2025	TSB-25-00-002	RAP-FILM ADHESIVE RESIDUE REMOVAL	ALL MODELS
	TSB-25-42-001	SUNROOF ASSEMBLY MAINTENANCE PROCEDURES DESCRIPTION CORRECTION - SERVICE MANUAL REVISION	2018-2020 AND 2022-2025 ECLIPSE CROSS
	TSB-25-00-003	LOAD CARRYING CAPACITY REDUCED LABEL	ALL MODELS
1/28/2025	TSB-22-13-001REV	CHECK ENGINE LIGHT ILLUMINATES OR ENGINE MALFUNCTION POWER REDUCED SERVICE NOW WARNING MESSAGE APPEARS WHILE IDLING OR DRIVING - REVISED	2022-2024 OUTLANDER
2/4/2025	TIN-25-00-001	POLICY CHANGE - WARRANTY PARTS RETENTION	ALL MODELS
2/10/2025	TSB-25-00-010	NEW MODEL FEATURES AND SERVICE INFORMATION	2025 OUTLANDER
	TSB-25-00-009	TECHNICAL SPECIFICATIONS	2025 OUTLANDER
2/12/2025	TSB-25-00-001	TECHNICAL SPECIFICATIONS	2025 OUTLANDER SPORT
	TSB-25-00-004	NEW MODEL FEATURES AND SERVICE INFORMATION	2025 OUTLANDER SPORT
2/27/2025	TIN-25-00-002	2025 OUTLANDER LAUNCH	2025 OUTLANDER
3/3/2025	TSB-25-54-002	UNRESPONSIVE TOUCH SCREEN OF SDA2 AUDIO UNIT - WARRANTY EXTENSION	2020 OUTLANDER, 2020-2022 OUTLANDER PLUG-IN HYBRID, AND 2020-2022 OUTLANDER SPORT / RVR
	TIN-25-54-001	UNRESPONSIVE TOUCH SCREEN OF SDA2 AUDIO UNIT - WARRANTY EXTENSION	2020 OUTLANDER, 2020-2022 OUTLANDER PLUG-IN HYBRID, AND 2020-2022 OUTLANDER SPORT / RVR
3/6/2025	TSB-25-54-003	ABNORMAL NOISE FROM DYNAMIC SOUND YAMAHA ULTIMATE 12 SPEAKERS	2025 OUTLANDER

### IMPORTANT

Affected new or used vehicle inventory must be repaired before the vehicle is sold or delivered. Dealers must check their vehicle inventory VINs on the Warranty Superscreen to verify whether the vehicle is involved in a recall campaign.

It is a violation of Federal Law for a dealer to sell or deliver a new motor vehicle or any new / used motor vehicle equipment (including a tire) covered by the notification under a sale or lease until the defect or non-compliance is remedied.





# TECHNICAL TRAINING COURSE SCHEDULE

Atlanta Technical Training Center - Southeast Region  
 801 Interstate West Parkway, Lithia Spring, GA 30122  
 (770) 732-3000 Airport: Atlanta (ATL)

March '25				
Monday	Tuesday	Wednesday	Thursday	Friday
3				7
10	11	12	13	14
17	BCS	BCS	BCS	BCS
24	MED4	STV4	EL1	28
31	CES	CES	BCS	BCS
	SMI FZF	ER1	ER1	ER1

April '25				
Monday	Tuesday	Wednesday	Thursday	Friday
31				4
7	SMI FZF	ER1	ER1	ER1
14	EECS	EECS	EECS	EECS
21	22	23	24	25
28	29	30	1	2
	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT

May '25				
Monday	Tuesday	Wednesday	Thursday	Friday
28				2
5	PHEVG2TT	PHEVG2TT	PHEVG2TT	PHEVG2TT
12	EECS	EECS	EECS	EECS
19	20	21	22	23
26	MED4	STV4	EL1	EL1
		ER1	ER1	ER1

New Jersey Technical Training Center - Northeast Region  
 516 Heron Drive, Swedesboro NJ 08085  
 (856) 467-7100 Airport: Philadelphia (PHL)

March '25				
Monday	Tuesday	Wednesday	Thursday	Friday
3	4	5	6	7
10	11	12	13	14
17	BCS	BCS	BCS	BCS
24	CVT FZF	ER1	ER1	ER1
31	ADAS	ADAS	CC1	CC1
	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT

April '25				
Monday	Tuesday	Wednesday	Thursday	Friday
31				4
7	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT
14	SMI FZF	ER1	ER1	ER1
21	22	23	24	25
28	MED4 V-ILT	STV4 V-ILT	EL1 V-ILT	EL1 V-ILT
	SMI V-ILT	CVT V-ILT		

May '25				
Monday	Tuesday	Wednesday	Thursday	Friday
28				2
5	SMI V-ILT	CVT V-ILT		
12	13	14	15	16
19	20	21	22	23
26	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT	PHEVG2TT V-ILT
		ER1	ER1	ER1

Franklin Technical Training Center  
 1552 Columbia Avenue, Franklin TN 37064  
 (657) 238-2891 Airport: Nashville (BNA)

March '25				
Monday	Tuesday	Wednesday	Thursday	Friday
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28
31	MED4	STV4	EL1	EL1

April '25				
Monday	Tuesday	Wednesday	Thursday	Friday
31				4
7	8	9	10	11
14	MED4 V-ILT	STV4 V-ILT	EL1 V-ILT	EL1 V-ILT
21	22	23	24	25
28	29	30	1	2

May '25				
Monday	Tuesday	Wednesday	Thursday	Friday
28	29	30	1	2
5	6	7	8	9
12	MED4	STV4	EL1	EL1
19	20	21	22	23
26	27	28	29	30

Course Title	Days	Code	Prerequisites
Engine & Emission Control Systems (ILT)	4	EECS	ES1W, EL1, STV4, MED4, ME3W
Engine Repair (ILT)	3	ER1	ES1W, EL1, STV4, MED4, ME3W
Climate Control (ILT)	2	CC1	ES1W, EL1, STV4, MED4, ME3W
Plug-in Hybrid Electric Vehicle (Virtual)	2	PHEVG2TT	EL1, STV4, MED4, DGPHEVWT
MED4 (Virtual)	1	MED4	ME3W
STV4 (Virtual)	1	STV4	No Prerequisites
Electrical Systems 1 (Virtual)	2	EL1	ES1W
Advanced Driver Assistance Systems (ILT)	2	ADAS21TT	ES1W, EL1, STV4, MED4, ME3W
Chassis Electrical Systems	2	CES22TT	EL1, STV4, MED4, ME3W, ES1W
CVT OVERHAUL PROCEDURES (Virtual) or (FZF)	1	CVT	STV4, MED4, EL1, ATFW
Brake Control System	2	BCS	MED4, STV4, EL1
Service Manual Introduction (Virtual) or (FZF)	1	SMI	MED4, STV4, EL1

Classes shaded in Green are (V-ILT) Virtual Instructor Led Training

MMNA technical on site training is not shaded

CVT Overhaul Procedures will be offered in two training formats.

1. CVT V-ILT online instructor-led.
2. CVT FZF in center training.





## YAMAHA CONFIRMS AUTOMOTIVE AUDIO INTEGRATION INTO NORTH AMERICAN MARKET

- This integration marks the third Yamaha in-car audio sound system with Mitsubishi Motors

**BUENA PARK, Calif., Feb. 6, 2025** – Yamaha Corporation (hereafter, Yamaha) confirms its partnership with Mitsubishi Motors North America, Inc. (MMNA) as part of the upcoming debut of the refreshed 2025 Mitsubishi Outlander, set for full unveiling in February 2025. The new Outlander features enhancements inside and out, highlighted by a premium audio system developed through an innovative collaboration with Yamaha.

In this groundbreaking partnership, Yamaha renowned audio experts have joined forces with Mitsubishi Motors' engineers to develop two premium in-car sound systems specifically for the company's flagship vehicle in the North American market. This marks the first time Yamaha has created a bespoke in-car audio system for a North American market vehicle, underscoring the significance of this collaboration.

However, this is not the first time Yamaha has partnered with Mitsubishi Motors. Internationally, in October 2024, [Yamaha Japan](#) also debuted Yamaha-branded audio systems in the home-market Mitsubishi Outlander, following its initial integration with Mitsubishi's [XFORCE](#) back in 2023. While the XFORCE is primarily available in the ASEAN region, this second venture will be featured in all 2025 Outlander models sold globally.



"We want to deliver excitement with a sound that impresses the driver's heart and brings them closer to the artists. Yamaha respects the artists' sounds, so we articulately craft the bass, mid and high ranges. We innovate to deliver a heart-stirring moment in the cabin," says sound-meister Tomokazu Hikida.

MMNA will share more details about the 2025 Mitsubishi Outlander, including extensive feature updates and specifications, during the vehicle's official North American debut in mid-February 2025.

Yamaha will continue to deliver high-quality Yamaha-branded automotive audio products through our ongoing partnership with Mitsubishi Motors.

