



Technical Service Bulletin

SUBJECT: ERROR CODE CORRECTION USED DURING CAMERA AIMING ADJUSTMENTS– SERVICE MANUAL REVISION			No: TSB-23-54-005
			DATE: August 2023
			MODEL: Outlander
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input checked="" type="checkbox"/> TECHNICIAN
<input checked="" type="checkbox"/> SERVICE ADVISOR	<input checked="" type="checkbox"/> SERVICE MANAGER	<input checked="" type="checkbox"/> WARRANTY PROCESSOR	<input type="checkbox"/> SALES MANAGER

PURPOSE

This TSB provides correction of the error code list used with camera aiming adjustments in the applicable Service Manual sections:

- Driver Assistance System

AFFECTED VEHICLES

2022-2023 Outlander

AFFECTED SERVICE MANUAL

- 2022-2023 Outlander Service Manual

PROCEDURE

Please use the following chart as a guide to replace the indicated page (Attached sheet 1 (1 of 2) in the affected Service Manuals, Group 54, Cruise Control & Driver Assistance, Driver Assistance System, Driver Assistance System, Basic Inspection, Camera Aiming Adjustment, Work Procedure with the Attached sheet 1 (2 of 2).

Applicable manual	Pub.No.	Applicable title	Content
2022 OUTLANDER Service manual	MSCD-030B-2022 (Volume 5)	CRUISE CONTROL & DRIVER ASSISTANCE <ul style="list-style-type: none"> └ DRIVER ASSISTANCE SYSTEM └ DRIVER ASSISTANCE SYSTEM └ BASIC INSPECTION └ CAMERA AIMING ADJUSTMENT └ Work Procedure 	Attached sheet 1
2023 OUTLANDER Service manual	MSCD-030B-2023	CRUISE CONTROL & DRIVER ASSISTANCE <ul style="list-style-type: none"> └ DRIVER ASSISTANCE SYSTEM └ DRIVER ASSISTANCE SYSTEM └ BASIC INSPECTION └ CAMERA AIMING ADJUSTMENT └ Work Procedure 	



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6. Confirm the displayed item.

- "Normally Completed" ?Select "OK".
- "SUSPENSION", "Abnormally completed": Perform the following services. <Incorrect>

<Correct> Attached sheet 1 (2/2)



Displayed item	Possible cause	Service procedure
SUSPENSION	<ul style="list-style-type: none"> • Temporary malfunction in internal processing of the front camera unit. • Front camera unit malfunction. 	
Abnormally completed	2 Front camera unit cannot detect the target <ul style="list-style-type: none"> • A target is not-yet-placed. • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 	Position the target appropriately again. Then perform the aiming again.
	3 Roll angle is outside the threshold <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 	
	4 Yaw/pitch angle is outside the threshold. <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 	
	5 Input value of aiming is invalid. <ul style="list-style-type: none"> • Input value is not correct against actual setting position. 	Correct input value of aiming and perform camera aiming again.
	6 The size of target is different. (A numerical value input to M.U.T.-III SE differs from detected size) <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 	Position the target appropriately again. Then perform the aiming again.
	7 The size of target is different. (A numerical value input to M.U.T.-III SE differs from detected size) <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 	
	8 Yaw/pitch angle is outside the threshold. <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 	
	Abnormally completed	9 Yaw/pitch angle is outside the threshold. <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position.
10 Detect several targets. <ul style="list-style-type: none"> • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position. 		
11 Internal process malfunction		<ul style="list-style-type: none"> • Then turn the ignition switch OFF→ON. Accurately set target and perform camera aiming again. • If ABNORMALLY COMPLETED again after aiming, replace front camera unit.
12 Internal process time out		

Displayed item		Possible cause	Service procedure
SUSPENSION		<ul style="list-style-type: none"> Temporary malfunction in internal processing of the front camera unit. Front camera unit malfunction. 	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"> Turn the ignition switch to the ON from OFF. Accurately set target and perform camera aiming again. If abnormally completed again after aiming, replace front camera unit.
	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. Then perform the aiming again.
	6	Failure to activate aiming mode	
	7	Internal error during aiming	
	8	Bottom value threshold exceeded	Correct the input values of the parameters and carry out the aiming again.
	9	Aiming completion value is outside a certain range.	<ul style="list-style-type: none"> Correct the input parameters and carry out the aiming again. Ensure that the target is correctly placed and the front camera unit is correctly installed, then carry out the aiming again.
	18	<ul style="list-style-type: none"> Target not detected The distance between the target and the camera input during the aiming differs more than 50 % of the actual distance. 	<ul style="list-style-type: none"> Ensure that the front camera unit is correctly installed, then carry out the aiming again. Ensure that the hood is not open, then carry out the aiming again. Ensure that there is no obstruction on the windshield in front of the front camera unit, then carry out the aiming again. 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. Ensure that the distance from the vehicle to the target is correct, then carry out the aiming again.
	19	Aiming result exceeds tolerances in the roll direction.	<ul style="list-style-type: none"> Check that the input parameters are correct, then carry out the aiming again. Ensure that the target is correctly placed and the front camera unit is correctly installed, then carry out the aiming again. 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.
	20	Aiming result exceeds the tolerances in the yaw/pitch direction.	Correct the input parameters, then carry out the aiming again.
	21	Input parameters were not read correctly.	
	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. Then perform the aiming again.
	24	Aiming result exceeds the tolerances in the yaw direction.	
	25	Aiming result exceeds the tolerances in the pitch direction.	
26	Too many targets	<ul style="list-style-type: none"> Position the target appropriately again. 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. 	
27	Malfunction of internal processes	<ul style="list-style-type: none"> Turn the ignition switch to the ON from OFF. Accurately set target and perform camera aiming again. If abnormally completed again after aiming, replace front camera unit. 	