

Display message "Drive To Workshop Without Changing Gear" is shown in the instrument cluster and/or the transmission does not shift out of P after the vehicle has been stopped

Topic number	LI27.60-N-071845
Version	2
Function group	27.60 - Gearshift, control
Date	10/28/21
Validity	Model 447, 907 with transmission 722.9 Model 906 with transmission 722.9 and with intelligent servo module (ISM) (A80)
Reason for change	Modification to work instructions

Complaint

Display message "Drive To Workshop Without Changing Gear" is shown in the instrument cluster and/or the transmission does not shift out of P after the vehicle has been stopped.

Cause

- Undervoltage of the on-board electrical system battery (G1).
Information: Communication error stored in the control units connected to the chassis CAN bus.

- Undervoltage of Emergency-P battery (G1/13).

- Power supply for the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80).

- Internal fault in the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80).
Information: Only if fault code P179Cxx is current and/or stored (see control unit/fault code table below).

Remedy

1. Attach diagnostic device (see AD00.00-S-2000-04E for model 447, AD00.00-D-2000-04SD for model 906 or AD00.00-D-2000-06TS for model 907).

2. Perform initial quick test (see AD00.00-S-2000-04E for model 447, AD00.00-D-2000-04SD for model 906 or AD00.00-D-2000-06TS for model 907).

XENTRY TIPS

Information: If undervoltage is found, conduct further research to determine the exact cause of the customer complaint, initiate appropriate repair measures and continue with operation step 3. If no undervoltage faults are found, continue with operation step 7

3. Check condition of on-board electrical system battery (G1) (see AR54.10-S-1129E for model 447, AR54.10-D-1129A for model 906 or AR54.10-D-1129TS for model 907).

Information: If the on-board electrical system battery (G1) is not OK, it must be replaced (see AR54.10-S-0005E for model 447, AR54.10-D-0005SD for model 906 or AR54.10-D-0009TSR for model 907); then continue with operation step 4.

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4. Reproduce the customer complaint again.

Information: If the customer complaint was not rectified, continue with operation step 5.

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5. Check condition of Emergency-P battery (G1/13) or auxiliary battery (depending on equipment) see:

SI54.10-S-0050A (for Emergency-P battery (G1/13)) for models 447 and 907,

AR54.10-S-1129E (for auxiliary battery) for model 447,

AR54.10-D-1129A (for auxiliary battery) for model 906 :

AR54.10-D-1129TS (for auxiliary battery) for model 907).

Information: If the Emergency-P battery (G1/13) or the auxiliary battery (depending on equipment) is not OK, it must be replaced see:

AR54.10-S-0120E (for Emergency_P battery (G1/13) except code MJ8,

AR54.10-S-0111E (for auxiliary battery for ECO start/stop function with code MJ8 and except code D50/D51/S23),

AR54.10-S-0111EE (for auxiliary battery for ECO start/stop function with code MJ8 and with code D50/D51/S23)

AR54.10-S-0007E (for auxiliary battery for retrofit consumers with code E28/EE8) for model 447

AR54.10-D-0120TSR (for Emergency-P battery (G1/13)),

AR54.10-D-0007TS (for auxiliary battery for retrofit consumers in the vehicle interior with code E2I)

AR54.10-D-0024TS (for auxiliary battery for retrofit consumers in the engine compartment with code E2M) for model 907

AR54.10-D-0111M (for auxiliary battery for ECO start/stop function with code MJ7), AR54.10-D-0007SD (with code E28) or AR54.10-S-0007JC (with code ZO1/ZO2) for model 906);

then continue with operation step 6.

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6. Try Reproducing the customer complaint again.

Information: If the customer complaint was not rectified, continue with operation step 7.

XENTRY TIPS

7. Check power supply for the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80).

Information: If the power supply is not OK, conduct further research to determine the exact cause of the customer complaint and initiate corresponding repair measures.

Information: If the power supply is OK (even with fault code P179Cxx present, see control unit/fault code table below), the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) must be replaced (see AR27.19-S-0550E for model 447 or AR27.19-D-0550TS for model 907); then continue with operation step 8.

Note: Ensure that vent hose (1) is routed correctly when installing the new control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) (opening of bend must point downwards) (see picture 01 (section A: vent hose (1) routed correctly / section B: vent hose (1) is not pointing downwards (incorrect) / section C: vent hose (1) not completely connected (incorrect) / section D: vent hose (1) not installed (incorrect))).

8. Perform quick test again (see AD00.00-S-2000-04E for model 447, AD00.00-D-2000-04SD for model 906 or AD00.00-D-2000-06TS for model 907) and delete the fault memory.

Information: If fault code P179Cxx (see control unit / fault code table below) is still present, this must be processed in accordance with the instructions in XENTRY Diagnostics; then continue with operation step 9.

9. Detach diagnostic device from vehicle (see AD00.00-S-2000-04E for model 447, AD00.00-D-2000-04SD for model 906 or AD00.00-D-2000-06TS for model 907).

Attachments	
File	Description
01.jpg	Ensure that vent hose (1) is routed correctly when installing the new control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) (opening of bend must point downwards). Section A: Vent hose (1) routed correctly Section B: Vent hose (1) does not point downwards (incorrect) Section C: Vent hose (1) not completely connected (incorrect) Section D: Vent hose (1) not installed (incorrect)

WIS-References		
Document number	Title	Note
AD00.00-D-2000-04SD	Connect STAR DIAGNOSIS, read out fault memory	Model 906
AD00.00-D-2000-06TS	Connect/disconnect diagnostic device	Model 907
AD00.00-S-2000-04E	Connect/disconnect diagnostic device	Model 447
AR27.19-D-0550TS	Remove/install intelligent servo module ISM	Model 907 Information: Only if the power supply for the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) is OK (even

XENTRY TIPS

		with fault code P179Cxx present, see control unit / fault code table above) (see operation step 7).
AR27.19-S-0550E	Remove/install intelligent servo module ISM	Model 447 Information: Only if the power supply for the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) is OK (even with fault code P179Cxx present, see control unit / fault code table above) (see operation step 7).
AR54.10-D-0005SD	Remove/install battery	Model 906
AR54.10-D-0009TSR	REMOVE/INSTALL ON-BOARD ELECTRICAL SYSTEM BATTERY	Model 907
AR54.10-S-0005E	Remove/install battery	Model 447
AR54.10-D-0120TSR	Remove/install auxiliary battery for park pawl emergency shift mode	Model 907
AR54.10-S-0120E	Remove/install auxiliary battery for park pawl emergency shift mode	Model 447 except code MJ8
AR54.10-D-0007SD	Remove/install auxiliary battery	Model 906 with code E28
AR54.10-S-0007JC	Remove/install auxiliary battery	Model 906 with code ZO1/ZO2
AR54.10-D-0007TS	Remove/install auxiliary battery	Model 907 with code E2I
AR54.10-D-0024TS	Remove/install auxiliary battery in engine compartment	Model 907 with code E2M
AR54.10-S-0007E	Remove/install auxiliary battery	Model 447 with code E28/EE8
AR54.10-D-0111M	REMOVE/INSTALL AUXILIARY BATTERY FOR ECO START/STOP FUNCTION	Model 906 with code MJ7
AR54.10-S-0111E	REMOVE/INSTALL AUXILIARY BATTERY FOR ECO START/STOP FUNCTION	Model 447 with code MJ8 and except code D50/D51/S23
AR54.10-S-0111EE	REMOVE/INSTALL AUXILIARY BATTERY FOR ECO START/STOP FUNCTION	Model 447 with code MJ8 and with code D50/D51/S23
AR54.10-D-1129A	Battery - Check condition	Model 906
AR54.10-D-1129TS	Battery - Check condition	Model 907
AR54.10-S-1129E	Battery - Check condition	Model 447
SI54.10-S-0050A	Service Information: Test method of auxiliary battery for park pawl emergency shift mode	MODEL 447, 907

Symptoms

Power transmission > Automatic transmission > Function > Malfunction

Power transmission > Automatic transmission > Function > No power flow

Power transmission > Automatic transmission > Function > Shifts

Power transmission > Automatic transmission > Function > Electrical fault/Fault code

Power transmission > Automatic transmission > Function > Blocks

XENTRY TIPS

Power transmission > Automatic transmission > Function > Shifting is not performed or is delayed
Power transmission > Automatic transmission > Function > Poor shift quality
Power transmission > Automatic transmission > Drive position selection > Function > General
Power transmission > Automatic transmission > Drive position selection > Function > Blocks
Power transmission > Automatic transmission > Drive position selection > Function > Gear cannot be engaged
Power transmission > Automatic transmission > Drive position selection > Function > Malfunction
Power transmission > Automatic transmission > Drive position selection > Function > Sticks
Power transmission > Automatic transmission > Drive position selection > Function > Electrical fault/Fault code
Power transmission > Function > No power flow
Communication/information > Information display > Indicator lamp > lit

Control unit/fault code	
Control unit	Fault text
A80 - Intelligent servo module for DIRECT SELECT (ISM)	<p>P179C55 - The control unit 'DIRECT SELECT' has a malfunction. The component is not configured.</p> <p>P179C49 - The control unit 'DIRECT SELECT' has a malfunction. There is an internal electrical fault.</p> <p>P179C47 - The control unit 'DIRECT SELECT' has a malfunction. There is a runtime error.</p> <p>P179C46 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the calibration or parameterization memory.</p> <p>P179C96 - The control unit 'DIRECT SELECT' has a malfunction. There is an internal component fault.</p> <p>P179C94 - The control unit 'DIRECT SELECT' has a malfunction. There is an unexpected instruction.</p> <p>P179C64 - The control unit 'DIRECT SELECT' has a malfunction. There is an implausible signal.</p> <p>P179C16 - The control unit 'DIRECT SELECT' has a malfunction. The limit value for electrical voltage has not been attained.</p> <p>P179C09 - The control unit 'DIRECT SELECT' has a malfunction. There is a component fault.</p> <p>P179C03 - The control unit 'DIRECT SELECT' has a malfunction. There is a frequency or pulse width modulation fault.</p> <p>P179C45 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the program memory.</p> <p>P179C44 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the data memory.</p> <p>P179C43 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the additional memory.</p>

XENTRY TIPS

	<p>P179C42 - The control unit 'DIRECT SELECT' has a malfunction. There is a general memory error.</p>
<p>A80 - Shift module (ISM)</p>	<p>P179C94 - The control unit 'DIRECT SELECT' has a malfunction. There is an unexpected instruction.</p> <p>P179C64 - The control unit 'DIRECT SELECT' has a malfunction. There is an implausible signal.</p> <p>P179C55 - The control unit 'DIRECT SELECT' has a malfunction. The component is not configured.</p> <p>P179C49 - The control unit 'DIRECT SELECT' has a malfunction. There is an internal electrical fault.</p> <p>P179C47 - The control unit 'DIRECT SELECT' has a malfunction. There is a runtime error.</p> <p>P179C46 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the calibration or parameterization memory.</p> <p>P179C45 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the program memory.</p> <p>P179C44 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the data memory.</p> <p>P179C96 - The control unit 'DIRECT SELECT' has a malfunction. There is an internal component fault.</p> <p>P179C43 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the additional memory.</p> <p>P179C42 - The control unit 'DIRECT SELECT' has a malfunction. There is a general memory error.</p> <p>P179C16 - The control unit 'DIRECT SELECT' has a malfunction. The limit value for electrical voltage has not been attained.</p> <p>P179C09 - The control unit 'DIRECT SELECT' has a malfunction. There is a component fault.</p> <p>P179C03 - The control unit 'DIRECT SELECT' has a malfunction. There is a frequency or pulse width modulation fault.</p>
<p>A80 - Shift module (ISM)</p>	<p>P179C94 - The control unit 'DIRECT SELECT' has a malfunction. There is an unexpected instruction.</p> <p>P179C64 - The control unit 'DIRECT SELECT' has a malfunction. There is an implausible signal.</p> <p>P179C55 - The control unit 'DIRECT SELECT' has a malfunction. The component is not configured.</p> <p>P179C49 - The control unit 'DIRECT SELECT' has a malfunction. There is an internal electrical fault.</p>

XENTRY TIPS

	<p>P179C47 - The control unit 'DIRECT SELECT' has a malfunction. There is a runtime error.</p> <p>P179C46 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the calibration or parameterization memory.</p> <p>P179C45 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the program memory.</p> <p>P179C44 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the data memory.</p> <p>P179C96 - The control unit 'DIRECT SELECT' has a malfunction. There is an internal component fault.</p> <p>P179C43 - The control unit 'DIRECT SELECT' has a malfunction. There is an error in the additional memory.</p> <p>P179C42 - The control unit 'DIRECT SELECT' has a malfunction. There is a general memory error.</p> <p>P179C16 - The control unit 'DIRECT SELECT' has a malfunction. The limit value for electrical voltage has not been attained.</p> <p>P179C09 - The control unit 'DIRECT SELECT' has a malfunction. There is a component fault.</p> <p>P179C03 - The control unit 'DIRECT SELECT' has a malfunction. There is a frequency or pulse width modulation fault.</p>
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Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note
541011	PERFORM QUICK TEST	---		Model 447, 906, 907
541120	REMOVE/INSTALL ON-BOARD ELECTRICAL SYSTEM BATTERY	---		Model 447, 906, 907
541107	CHECK CONDITION OF STARTER BATTERY TERMINAL STAMP: BATT. PART NO.:TEST CODE:	---		Model 447
541108	CHECK CONDITION OF STARTER BATTERY TERMINAL STAMP: BATT. PART NO.:TEST CODE:	---		MODEL 906, 907
541231	REMOVE/INSTALL AUXILIARY BATTERY FOR PARK PAWL EMERGENCY SHIFT MODE	---		Model 447 except code MJ8
541201	REMOVE/INSTALL AUXILIARY BATTERY FOR PARK PAWL EMERGENCY SHIFT MODE	---		Model 907
541229	CHECK CONDITION OF AUXILIARY BATTERY FOR PARK PAWL EMERGENCY SHIFT MODE TERMINAL STAMP: . BATT. PART NO.:	---		Model 447 except code MJ8

XENTRY TIPS

541200	CHECK AUXILIARY BATTERY FOR PARK PAWL EMERGENCY SHIFT MODE (BATTERY REMOVED) TERMINAL STAMP: . BATTERY.....	---		Model 907
541138	REMOVE/INSTALL AUXILIARY BATTERY FOR ECO START/STOP FUNCTION	---		Model 447 with code MJ8 and except code D50/D51/S23
541234	REMOVE/INSTALL AUXILIARY BATTERY FOR ECO START/STOP FUNCTION FOR VEHICLES WITH CODE S23/D50/D51	---		Model 447 with code MJ8 and with code D50/D51/S23
541237	CHECK CONDITION OF AUXILIARY BATTERY FOR ECO START/STOP FUNCTION (AUXILIARY BATTERY REMOVED) BATT. PART NO:....	---		Model 447 with code MJ8
541127	REMOVE/INSTALL AUXILIARY BATTERY FOR ECO START/STOP FUNCTION	---		Model 906 with code MJ7
541154	REMOVE/INSTALL AUXILIARY BATTERY	---		Model 447 with code E28/EE8
541160	REMOVE/INSTALL AUXILIARY BATTERY	---		Model 906 with code E28/ZO1/ZO2
541143	REMOVE/INSTALL AUXILIARY BATTERY IN VEHICLE INTERIOR (FRONT PASSENGER SEAT REMOVED) ON VEH. WITH CODE S04/SL1	---		Model 907 with code E2I and code S04/SL1
541144	REMOVE/INSTALL AUXILIARY BATTERY IN VEHICLE INTERIOR FOR VEHICLES WITH CODE SB2/SF2	---		Model 907 with code E2I and code SB2/SF2
541145	REMOVE/INSTALL AUXILIARY BATTERY IN VEHICLE INTERIOR FOR VEHICLES WITH CODE S23	---		Model 907 with code E2I and code S23
541165	REMOVE/INSTALL AUXILIARY BATTERY IN ENGINE COMPARTMENT	---		Model 907 with code E2M
541163	CHECK OUTPUT AND CONDITION OF (BOTH) AUXILIARY BATTERIES	---		Model 906 with code E28/ZO1/ZO2
271745	REMOVE/INSTALL SERVO MODULE, REPLACE IF NECESSARY	---		Model 447 Information: Only if the power supply for the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) is OK (even with fault code P179Cxx present, see control unit / fault code table above) (see operation step 7).
276600	REPLACE INTELLIGENT SERVO MODULE (AFTER CHECK)	---		Model 907 Information: Only if the power supply for the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) is OK (even with fault code P179Cxx present, see control unit / fault code table above) (see operation step 7).

XENTRY TIPS

270641	AUTOMATIC TRANSMISSION COMPONENTS: CHECK AS PER FAULT CODE	---		Model 447, 906, 907
540991	PROGRAM AND CODE CONTROL UNIT: (AFTER QUICK TEST)	---		Model 447 Information: Only if the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) needs to be replaced (see operation step 7).
540991	PROGRAM AND PARAMETERIZE CONTROL UNIT: (AFTER QUICK TEST)	---		Model 906 Information: Only if the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) needs to be replaced (see operation step 7).
540990	PROGRAM, CODE CONTROL UNIT (AFTER QUICK TEST)	---		Model 907 Information: Only if the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) needs to be replaced (see operation step 7).
540650	MAINTAIN ON-BOARD ELECTRICAL SYSTEM VOLTAGE (FOR TESTING AND DIAGNOSIS WORK)	---		Model 447, 906, 907 Information: Only if the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) needs to be replaced (see operation step 7).
			54759F2	Intelligent servo module (ISM) of DIRECT SELECT gearshift (E) – does not shift Information: Only when replacing the control unit of the intelligent servo module (ISM) for DIRECT SELECT (A80) (see operation step 7). The listed damage code is not to be considered as an acceptance of costs. The general guidelines in the Warranty Manual apply.