



TECHNICAL SERVICE BULLETIN

Momentary Neutral-Out Condition In Drive - Excluding Police Interceptor Vehicles

23-2249

06 November
2023

This bulletin supersedes 23-2120.

Model:

Ford 2018-2021 Expedition	10R80 - built on or before 29-Apr-2021
2020-2021 Explorer	10R80 MHT - built on or before 14-Feb-2021 10R60 - built on or before 25-Jan-2021
Lincoln 2020-2021 Aviator	10R80 MHT - built on or before 14-Feb-2021 10R60 - built on or before 25-Jan-2021
2018-2021 Navigator	10R80 - built on or before 29-Apr-2021

Summary

This article supersedes TSB 23-2120 to exclude Police Interceptor vehicles with column shift.

Issue: Some 2018-2021 Expedition/Navigator and 2020-2021 Explorer/Aviator vehicles equipped with a 10R80/10R80 MHT or 10R60 (excluding Police Interceptor vehicles with column shift) may exhibit a momentary transmission neutral-out condition while in drive. Vehicle may also have diagnostic trouble code (DTC) P07E6 and/or P07E4 stored in the powertrain control module (PCM) or transmission control module (TCM) and/or a possible audible noise. This may be due to a leak in the park valve circuit. To correct the condition, follow the Service Procedure to inspect the park system hardware for wear or damage and replace the valve body separator plate with an improved valve body separator plate.

Action: Follow the Service Procedure to correct the condition on vehicles that meet all of the following criteria:

- One of the following vehicles:
 - 2018-2021 Expedition/Navigator - 10R80 - built on or before 29-Apr-2021
 - 2020-2021 Explorer/Aviator - 10R80 MHT - built on or before 14-Feb-2021
 - 2020-2021 Explorer/Aviator - 10R60 - built on or before 25-Jan-2021
- Non-column shift vehicles
- Momentary transmission neutral-out condition

Parts

Explorer Aviator 10R60

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
L1MZ-7Z490-E	1	Valve Body Separator Plate	1	1

JR3Z-00811-A	1	Output Shaft Retaining Nut (RWD)	1	1
L1MZ-4421-A	1	Front Drive Shaft Boot (4WD)	1	1
L1MZ-7060-E	1	Output Shaft And Planetary Carrier (RWD)	1	1
L1MZ-7060-F	1	Output Shaft And Planetary Carrier (4WD)	1	1
L1MZ-3B478-A	1	Front Drive Shaft Boot Clamp (4WD)	1	1
L1MZ-6L612-A	1	Exhaust Gasket (2.3L Explorer)	1	1
L1MZ-6L612-B	1	Left Catalytic Converter Gasket (3.0L)	1	1
LP5Z-7A248-A	1	Torque Converter Hub Seal	1	1
LP5Z-7B031-A	1	Front Support To Case Seal	1	1
LP5Z-7D019-A	2	(F10) Output Shaft Seals	1	2
LP5Z-7A441-B	1	Park Pawl	1	1
LP5Z-7D070-B	1	Park Pawl Return Spring	1	1
9L3Z-7D071-A	1	Park Pawl Shaft	1	1
LP5Z-7D410-B	1	Park Pawl Actuator Rod	1	1
HL3Z-7D419-B	2	Park Pawl Actuator Rod Sleeve Seals	1	2
PC3Z-7D419-A	1	Park Pawl Actuator Rod Sleeve	1	1
HL3Z-7G100-C	1	Park Rod Sleeve Roll Pin	1	1
W715131-S442	1	Park Manual Release Bracket Bolts	4	2
HL3Z-7F337-A	1	Manual Control Shaft Seal	1	1
LP5Z-7G091-A	1	(F9) Input Shaft Seal	1	1
LP5Z-7G091-B	5	(F2) Input Shaft Seals	1	5
HL3Z-7G100-B	1	Manual Shaft To Transmission Range Sensor Roll Pin	1	1
JL3Z-7N134-A	12	Front Support Assembly Bolts	1	12
W520214-S440	1	Transmission Mount Nut	2	1
W712658-S439	1	Solenoid Retaining Plate Bolt	4	2
W714265-S442	1	Left And Right Catalytic Converter Nuts (3.3L)	4	4
W715618-S437	1 For 3.3L, 2 For 2.3L/3.0L	Torque Converter Nuts	4	2.3L/3.0L Requires 6, 3.3L Requires 4
W716375-S900	2	Transfer Case Mounting Bolts (4WD)	5	8
W716979-S439	1	Rear Subframe Bolts (3.0L)	4	2
W719413-S439	1	Middle Subframe Bolts (3.0L)	4	2
W719431-S439	1	Transmission Mount Bolts	4	4WD Requires 3, RWD

				Requires 2
W719511-S439	1	Driveshaft Flex Coupling Bolts	4	3
W719699-S442	1	Catalytic Converter Nuts (Explorer)	4	2.3L Requires 3, 3.0L Requires 2, 3.3L Requires 4
W721083-S439	1	Transmission Support Insulator Bolts	4	4
L1MZ-9450-A	1	Downstream Exhaust Gasket (2.3L)	1	1
XG-1-E1	As Needed	Motorcraft® Premium Long-Life Grease		
XG-11	As Needed	Motorcraft® High Temperature 4x4 Front Axle and Wheel Bearing Grease		
XL-1	As Needed	Motorcraft® Penetrating And Lock Lubricant		
XL-2	As Needed	Motorcraft® High Temperature Nickel Anti-Sieze Lubricant		
XL-5-A	As Needed	Motorcraft® Multi-Purpose Grease Spray		
XT-10-QLVC	As Needed	Motorcraft® MERCON® LV Automatic Transmission Fluid (Transfer Case Fluid) (All Markets Except Canada)		
CXT-10-LV6	As Needed	Motorcraft® MERCON® LV Automatic Transmission Fluid (Transfer Case Fluid) (Canada Only)		
XT-12-QULV	As Needed	Motorcraft® MERCON® ULV Automatic Transmission Fluid		
VC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except Canada)		
CVC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)		
ZC-37-A	As Needed	Motorcraft® Wheel and Tire Cleaner		

Parts

Explorer Aviator 10R80 MHT

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
L1MZ-7Z490-G	1	Valve Body Separator Plate	1	1
L1MZ-4421-A	1	Front Drive Shaft Boot (4WD)	1	1
L1MZ-3B478-A	1	Front Drive Shaft Boot Clamp (4WD)	1	1
L1MZ-6L612-A	1	Exhaust Gasket (2.3L Explorer)	1	1
HL3Z-7A232-A	1	Park Pawl Actuator Rod	1	1
PC3Z-7A441-A	1	Park Pawl	1	1
PC3Z-7D070-A	1	Park Pawl Return Spring	1	1
9L3Z-7D071-A	1	Park Pawl Shaft	1	1

HL3Z-7D419-B	2	Park Pawl Actuator Rod Sleeve Seals	1	2
PC3Z-7D419-A	1	Park Pawl Actuator Rod Sleeve	1	1
HL3Z-7G100-C	1	Park Rod Sleeve Roll Pin	1	1
W500213-S442	1	Park Manual Release Cable Bolt	4	1
HL3Z-7F337-A	1	Manual Control Shaft Seal	1	1
HL3Z-7G091-C	1	(F9) Input Shaft Seal	1	1
HL3Z-7G091-D	5	(F2) Input Shaft Seals	1	5
HL3Z-7D019-A	2	(F10) Output Shaft Seals	1	2
L1MZ-7052-A	1	Output Shaft Seal (RWD)	1	1
L1MZ-7052-B	1	Output Shaft Seal (4WD)	1	1
HL3Z-7J458-C	1	Output Shaft And Planetary Carrier	1	1
HL3Z-7G100-B	1	Manual Shaft To Transmission Range Sensor Roll Pin	1	1
W520214-S440	1	Transmission Mount Nut	2	1
W719431-S439	1	Transmission Mount Bolts	4	4WD Requires 3, RWD Requires 2
W712658-S439	1	Solenoid Retaining Plate Bolt	4	2
W714265-S442	1	Left And Right Catalytic Converter Nuts (3.3L)	4	4
L1MZ-6L612-B	1	Left Catalytic Converter Gasket (3.0L)	1	1
W719699-S442	1	Catalytic Converter Nuts (Explorer)	4	2.3L Requires 3, 3.0L Requires 2, 3.3L Requires 4
W715131-S442	1	Cooler Tube Bracket Bolts	4	2
W716375-S900	2	Transfer Case Mounting Bolts (4WD)	5	8
W716979-S439	1	Rear Subframe Bolts	4	2
W719413-S439	1	Middle Subframe Bolts	4	2
W719511-S439	1	Driveshaft Flex Coupling Bolts	4	3
W721083-S439	1	Transmission Support Insulator Bolts	4	4
L1MZ-9450-A	1	Downstream Exhaust Gasket (2.3L)	1	1
XG-1-E1	As Needed	Motorcraft® Premium Long-Life Grease		
XG-11	As Needed	Motorcraft® High Temperature 4x4 Front Axle and Wheel Bearing Grease		
XL-1	As Needed	Motorcraft® Penetrating And Lock Lubricant		

XL-2	As Needed	Motorcraft® High Temperature Nickel Anti-Sieze Lubricant		
XL-5-A	As Needed	Motorcraft® Multi-Purpose Grease Spray		
XT-10-QLVC	As Needed	Motorcraft® MERCON® LV Automatic Transmission Fluid (Transfer Case Fluid) (All Markets Except Canada)		
CXT-10-LV6	As Needed	Motorcraft® MERCON® LV Automatic Transmission Fluid (Transfer Case Fluid) (Canada Only)		
XT-12-QULV	As Needed	Motorcraft® MERCON® ULV Automatic Transmission Fluid		
VC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except Canada)		
CVC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)		
ZC-37-A	As Needed	Motorcraft® Wheel and Tire Cleaner		

Parts

Expedition/Navigator 10R80

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
JL1Z-7Z490-C	1	Valve Body Separator Plate	1	1
HL3Z-7052-B	1	Output Shaft Seal (4WD)	1	1
HL3Z-7085-B	1	Output Shaft Seal Nut Retainer (RWD)	1	1
7L1Z-4B496-C	2	CV Joint To Pinion Flange Bolts And Retaining Straps (4WD)	1	2
7L1Z-4B496-D	3	CV Joint To Transfer Case Flange Bolts And Retaining Straps (4WD)	1	3
HL3Z-7A248-A	1	Torque Converter Seal	1	1
W715618-S437	1	Torque Converter Nuts	4	4
HL3Z-7A248-G	1	Front Support To Case Seal	1	1
PC3Z-7A441-A	1	Park Pawl	1	1
PC3Z-7D070-A	1	Park Pawl Return Spring	1	1
9L3Z-7D071-A	1	Park Pawl Shaft	1	1
HL3Z-7A232-A	1	Park Pawl Actuator Rod	1	1
PC3Z-7D419-A	1	Park Pawl Actuator Rod Sleeve	1	1
HL3Z-7D419-B	2	Park Pawl Actuator Rod Sleeve Seals	1	2

JL1Z-7N134-A	1	Park Override Lever Bolt	1	1
HL3Z-7G100-C	1	Park Rod Sleeve Roll Pin	1	1
HL3Z-7F337-A	1	Manual Control Shaft Seal	1	1
HL3Z-7G100-B	1	Manual Shaft To Transmission Range Sensor Roll Pin	1	1
HL3Z-7G091-C	1	(F9) Input Shaft Seal	1	1
HL3Z-7G091-D	5	(F2) Input Shaft Seals	1	5
HL3Z-7D019-A	2	(F10) Output Shaft Seals	1	2
HL3Z-7J458-C	1	Output Shaft And Planetary Carrier (4WD)	1	1
HL3Z-7J458-D	1	Output Shaft And Planetary Carrier #4 (RWD)	1	1
HL3Z-7N134-C	1	Output Shaft Flange Bolt (RWD)	1	1
JL3Z-7N134-A	12	Front Support Assembly Bolts	1	12
W520113-S440	1	Stabilizer Bar Bracket Nuts	4	4
W520114-S442	1	Transmission Crossmember Nuts	4	4
W714418-S439	1	Transmission Crossmember Bolts	4	4
W709771-S440	2	Transmission Mount Nuts (4WD)	1	2
W711140-S901	3	Transmission Insulator Bolts (RWD)	1	3
W520514-S440	4	Left And Right Catalytic Converter Nuts	1	4
W715131-S437	1	Fluid Cooler Tube Bolt	4	1
W712658-S439	1	Solenoid Retaining Plate Bolt	4	2
W716375-S900	2	Transfer Case Mounting Bolts (4WD)	5	9
N811880-S100	1 For 4WD, 2 For RWD	Driveshaft Flange Bolts	4	4 Pieces Required For 4WD, 8 Pieces Required For RWD
XG-1-E1	As Needed	Motorcraft® Premium Long-Life Grease		
XG-11	As Needed	Motorcraft® High Temperature 4x4 Front Axle and Wheel Bearing Grease		
XL-1	As Needed	Motorcraft® Penetrating And Lock Lubricant		
XL-2	As Needed	Motorcraft® High Temperature Nickel Anti-Sieze Lubricant		
XL-5-A	As Needed	Motorcraft® Multi-Purpose Grease Spray		
XT-10-QLVC	As Needed	Motorcraft® MERCON® LV Automatic Transmission Fluid (Transfer Case Fluid) (All Markets Except Canada)		
CXT-10-LV6	As Needed	Motorcraft® MERCON® LV Automatic Transmission Fluid (Transfer Case Fluid) (Canada Only)		
XT-12-QULV	As Needed	Motorcraft® MERCON® ULV Automatic Transmission Fluid		

VC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except Canada)		
CVC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)		
ZC-37-A	As Needed	Motorcraft® Wheel and Tire Cleaner		

Parts

Parts To Inspect And Replace Only If Necessary (All Vehicle Lines)

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
L1MZ-4650-A	If Needed	Driveshaft Alignment Bushing (Explorer/Aviator)	1	1
L1MZ-4782-A	If Needed	Flex Coupling (Explorer/Aviator)	1	1
L1MZ-7A098-A	If Needed	Fluid Filter (10R80)	1	1
L1MZ-7A098-B	If Needed	Fluid Filter (10R80 MHT)	1	1
HL3Z-7A191-B	If Needed	Fluid Pan Gasket (10R60/10R80)	1	1
LP5Z-7A098-A	If Needed	Fluid Filter (10R60)	1	1
ML3Z-7A191-A	If Needed	Hybrid Drive Unit Gasket	1	1
HL3Z-7A248-D	If Needed	Fluid Pump Seal	1	1
5L7Z-7D285-A	If Needed	Fluid Cooler Seals (Explorer/Aviator 10R80 MHT, Expedition/Navigator)	2	2
L1MZ-7F396-A	If Needed	Fluid Pan Gasket (10R80 MHT)	1	1
L1MZ-7G084-A	If Needed	Fluid Spray Nozzle (10R80 MHT)	1	1
BL8Z-7G199-A	If Needed	Hybrid Drive Unit Feed Tube Seals (10R80-MHT)	1	2
HL3Z-7G199-A	If Needed	Aux Pump Tube Seal	1	1
HL3Z-7H032-C	If Needed	10R80 T-3 Thrust Bearing (Must Be Replaced With T-3 Shim)	1	1

L1MZ-7J135-A	If Needed	Fluid Auxiliary Pump Seal (10R80 MHT)	1	1
7L1Z-7J227-A	If Needed	Fluid Cooler O-ring Seals (10R60)	2	4
HL3Z-7J227-A	If Needed	Aux Pump Tube O-ring Seal	1	1
5L7Z-7J324-A	If Needed	Fluid Tube Backing rings (Explorer/Aviator 10R80 MHT, Expedition/Navigator)	2	2
L1MZ-7N265-A	If Needed	Fluid Pan To Case Seals (10R80 MHT)	1	2
7T4Z-7Z302-A	If Needed	Fluid Filter Seal	1	1
HL3Z-7Z490-E	If Needed	Channel Plate	1	1
W716963-S900	If Needed	Left And Right Catalytic Converter Studs (3.3L)	4	4
W719511-S439	If Needed	Driveshaft Flex Coupling Bolts (Explorer/Aviator)	4	3
W719698-S900	If Needed	Left Catalytic Converter Studs (Explorer/Aviator)	1	2.3L Requires 3, 3.0L Requires 2, 3.3L Requires 4
W701183-S300	If Needed	Engine Dowel (2.3L)	4	2
W718758-S300	If Needed	Engine Dowel (3.3L)	4	2

Parts

Select One Of The Following If Needed (10R80 And 10R80 MHT)

Service Part Number	Quantity	Description	Unit of Issue
HL3Z-7A527-K	If Needed	T-3 Shim 3.5-3.6mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-L	If Needed	T-3 Shim 3.65-3.75mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-M	If Needed	T-3 Shim 3.8-3.9mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-N	If Needed	T-3 Shim 4.25-4.35mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-P	If Needed	T-3 Shim 3.2-3.3mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-Q	If Needed	T-3 Shim 3.05-3.15mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-R	If Needed	T-3 Shim 3.35-3.45mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
HL3Z-7A527-S	If Needed	T-3 Shim 3.95-4.05mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1

HL3Z-7A527-T	If Needed	T-3 Shim 4.1-4.2mm Selective (Must Replace HL3Z-7H032-C Bearing With Shim)	1
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Parts

Select One Of The Following If Needed (10R60)

Service Part Number	Quantity	Description	Unit of Issue
LP5Z-7A527-A	If Needed	T-3 Shim 3.05-3.15mm Selective	1
LP5Z-7A527-B	If Needed	T-3 Shim 3.2-3.3mm Selective	1
LP5Z-7A527-C	If Needed	T-3 Shim 3.35-3.45mm Selective	1
LP5Z-7A527-D	If Needed	T-3 Shim 3.5-3.6mm Selective	1
LP5Z-7A527-E	If Needed	T-3 Shim 3.5-3.6mm Selective	1
LP5Z-7A527-F	If Needed	T-3 Shim 3.65-3.75mm Selective	1
LP5Z-7A527-G	If Needed	T-3 Shim 3.8-3.9mm Selective	1
LP5Z-7A527-H	If Needed	T-3 Shim 3.95-4.05mm Selective	1
LP5Z-7A527-J	If Needed	T-3 Shim 4.1-4.2mm Selective	1
LP5Z-7A527-K	If Needed	T-3 Shim 4.25-4.35mm Selective	1

Quantity refers to the amount of the service part number required to repair the vehicle.

Unit of Issue refers to the number of individual pieces included in a service part number package.

Piece Quantity refers to the total number of individual pieces required to repair the vehicle.

As Needed indicates the amount of the part may vary and/or is not a whole number. Parts can be billed out as non-whole numbers, including less than 1.

If Needed indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2018-2021 Expedition, Navigator 4X2/4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249A	3.9 Hrs.
2018-2021 Expedition 4X2: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249B	10.1 Hrs.
2018-2021 Expedition 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249C	11.0 Hrs.

2018-2021 Navigator 4X2: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249D	10.4 Hrs.
2018-2021 Navigator 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249E	11.3 Hrs.
2020-2021 Aviator 3.0L 10R80 MHT 4x4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249F	3.3 Hrs.
2020-2021 Aviator 3.0L 10R80 MHT 4x4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249G	10.7 Hrs.
2020-2021 Explorer 3.3L 10R80 MHT 4X2/4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249H	3.3 Hrs.
2020-2021 Explorer 3.3L 10R80 MHT 4X2: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249J	10.8 Hrs.
2020-2021 Explorer 3.3L 10R80 MHT 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249K	11.3 Hrs.
2020-2021 Aviator 3.0L 10R60 4x2/4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249L	3.2 Hrs.
2020-2021 Aviator 3.0L 10R60 4x2: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249M	9.2 Hrs.
2020-2021 Aviator 3.0L 10R60 4x4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249N	9.7 Hrs.
2020-2021 Explorer 2.3L 10R60 4X2/4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249P	3.2 Hrs.
2020-2021 Explorer 2.3L 10R60 4X2: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249Q	10.4 Hrs.
2020-2021 Explorer 2.3L 10R60 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249R	10.8 Hrs.
2020-2021 Explorer 3.0L 10R60 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249S	3.2 Hrs.
2020-2021 Explorer 3.0L 10R60 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249T	9.7 Hrs.

2020-2021 Explorer 3.3L 10R60 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Pass) Replace The Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249U	3.2 Hrs.
2020-2021 Explorer 3.3L 10R60 4X4: Retrieve DTCs, Remove The Main Control Valve Body And Auxiliary Pump Inspect (Fail) Replace The Output Shaft, Planetary Carrier, No. 4 Assembly. Park Pawl, Actuator Rod And Main Control Valve Body Separator Plate (Do Not Use With Any Other Labor Operations)	232249V	11.4 Hrs.

Repair/Claim Coding

Causal Part:	7Z490
Condition Code:	42

Service Procedure

1. Remove the main control valve body and transmission fluid auxiliary pump assemblies. Refer to Workshop Manual (WSM), Section 307-01.
2. Inspect the park pawl actuator rod/cam assembly for signs of wear or damage. Refer to WSM, Section 307-01.
3. Is there evidence of wear or damage on the park pawl actuator rod/cam assembly?
 - (1). Yes - proceed to Step 4.
 - (2). No - replace the main control valve body separator plate. Refer to WSM, Section 307-01. Repair is complete.
 - It is only necessary to separate the upper valve body from the lower valve body to replace the valve body separator plate.
4. Reinstall the transmission fluid pan and bolts to prepare for transmission removal.
5. Remove the transmission. Refer to WSM, Section 307-01.
6. Disassemble the transmission to replace the output shaft and planetary carrier No.4 assembly, park pawl and park actuator rod. Refer to WSM, Section 307-01 > Overhaul.
 - (1). It is only necessary to remove the following parts to perform the repair:
 - Torque converter or hybrid drive unit (HDU)
 - Transmission fluid pan
 - Park override lever
 - Intermediate speed sensor A [ISSA], and output shaft speed [OSS] sensors. Clean all metallic debris from OSS sensor.
 - Disconnect TR sensor
 - Fluid pump
 - Output shaft flange (if equipped) (RWD)
 - Output shaft nut (if equipped)
 - Using a punch, remove and discard the manual shaft-to-TR sensor roll pin
 - Manual shaft, the TR sensor and the park pawl actuator rod. Discard the park actuator rod
 - Front support
 - Clutch and planetary assembly
 - Output shaft and planetary carrier No. 4 assembly. Discard the output shaft and planetary carrier No. 4 assembly

- Output shaft seal
- Park pawl. Discard the park pawl.

7. To reassemble the transmission, reverse the disassembly procedure. Refer to WSM, Section 307-01 > Overhaul.

(1). Perform the T3 selective shim measurement to calculate the correct shim thickness needed.

8. Replace the main control valve body separator plate. Refer to WSM, Section 307-01.

(1). It is only necessary to separate the upper valve body from the lower valve body to replace the valve body separator plate.

9. Install the transmission. Refer to WSM, Section 307-01.

10. Perform an adaptive learning drive cycle. Refer to WSM, Section 307-01.

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