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1992 FORD Escort Clipper OEM Service and Repair Workshop Manual

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11. After the repair, clean the affected area.

**Leakage From Torque Converter Housing**
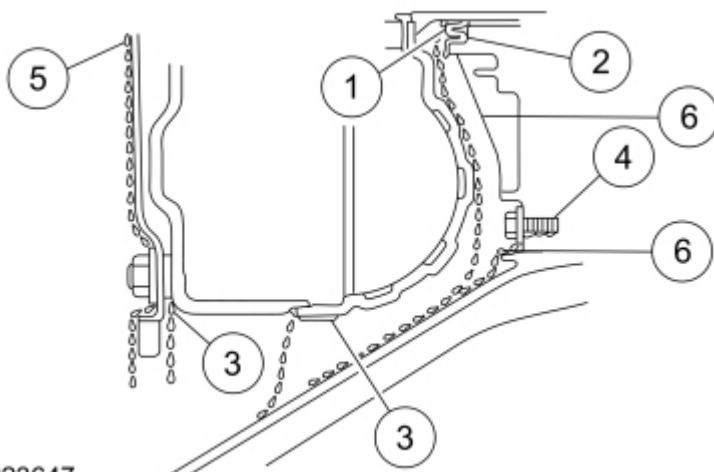
E223647

12. Leaks from the torque converter housing can originate from several locations. The paths which the transmission fluid takes to reach the bottom of the torque converter housing is shown in the illustration. The following 6 steps correspond with the numbers in the illustration.

    1. Transmission fluid leaking by the converter hub seal lip will tend to move along the drive hub and onto the back of the torque converter. Except in the case of a total seal failure, transmission fluid leakage by the lip of the seal will be deposited on the inside of the torque converter housing only, near the outside diameter of the housing.

    2. Transmission fluid leakage by the outside diameter of the torque converter impeller hub seal and the case will follow the same path that leaks by the inside diameter of the converter hub seal follow.

    3. Transmission fluid leakage from the converter cover weld or the converter-to-flexplate stud weld will appear at the outside diameter of the torque converter on the back face of the flexplate and in the converter housing only near the flexplate. If a converter-to-flexplate lug, lug weld or converter cover weld leak is suspected, remove the converter and pressure check.

    4. Transmission fluid leakage from the bolts inside the converter housing will flow down the back of the torque converter housing. Leakage may be from loose or missing bolts.

    5. Engine oil leaks from the rear main oil seal.

    6. Transmission fluid leak from front support cover and seal assembly.

13. Remove the torque converter.

E150987
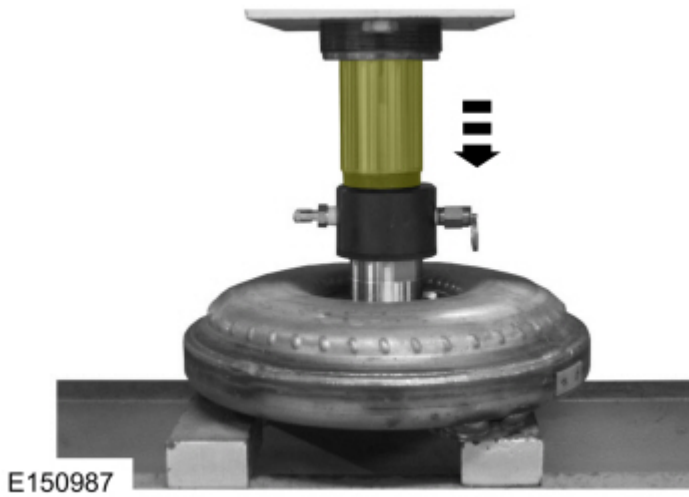
19. Connect a compressed air supply to the torque converter leak tester (307-421A).

E150989

70 psi
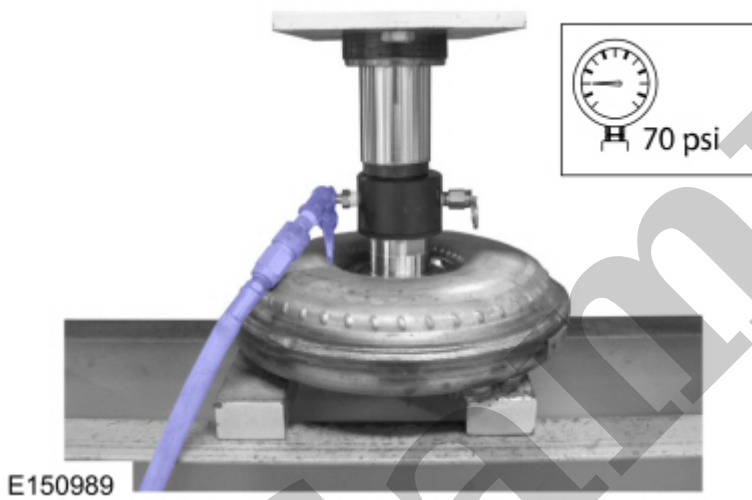
20. Apply air pressure to the torque converter and inspect for leaks at the torque converter hub welds and seams. Use a soap bubble solution around those areas to aid in diagnosis. If any leaks are present, install a new torque converter.

Low One-Way Clutch Assembly

307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80	2022 F-150
Diagnosis and Testing	Procedure revision date: 03/13/2020

Low One-Way Clutch Assembly

Low One Way Clutch

For low one way clutch operation,

 REFER to: Low One-Way Clutch Assembly

(307-01B Automatic Transmission - 10-Speed Automatic Transmission – 10R80 MHT, Description and Operation).

> **NOTICE**
>
> Do not clean with water or with water-based solvents. Damage to the component may occur.

Remove and inspect the low one way clutch for cracks and damaged splines. The splined section should lock in the direction of the number 1 arrow and rotate freely and smoothly when rotated in the direction of the number 2 arrow. Check for burned or excessively worn surfaces. If any damage is found or if the clutch does not rotate or lock, install a new low one-way clutch and front support and race assembly.

Parameter Identification (PID) Chart

307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80	2022 F-150
Diagnosis and Testing	Procedure revision date: 09/24/2020

Parameter Identification (PID) Chart

Diagnostic PID Chart

PID Acronym	PID Name	Description
APP	Accelerator Pedal Position	Accelerator pedal position percentage
APP1_[APP_D]	Accelerator Pedal Position D	Accelerator pedal position sensor 1 percentage
AT_NEU_DRV_STA	Auto Trans Neutral Drive Status	Automatic transmission neutral drive speed
AUX_PMP_CNTL_SPD	Auxiliary Transmission Fluid Pump Control Percentage Speed - Commanded	Commanded auxiliary transmission fluid pump control percentage speed
AUX_PMP_MON_SPD	Auxiliary Transmission Fluid Pump Monitor Percentage Speed - Measured	Measured auxiliary transmission fluid pump monitor percentage speed
AUX_TFP_CMD_OOR	Auxiliary Transmission Fluid Pump Control Module Is Reporting The Commanded Control Percentage Speed Request Is Out Of Range	Auxiliary transmission fluid pump control module is reporting the commanded control percentage speed request is out of range

	Over Speed	over speed
AUX_TFP_OVR_TMP	Auxiliary Transmission Fluid Pump Control Module Is Reporting Module Over Temperature	Auxiliary transmission fluid pump control module is reporting module over temperature
AUX_TFP_OVR_VOL	Auxiliary Transmission Fluid Pump Control Module Is Reporting Module Over Voltage	Auxiliary transmission fluid pump control module is reporting module over voltage
AUX_TFP_PROTECT	Auxiliary Transmission Fluid Pump Control Module Is Reporting Self Protect Stall State	Auxiliary transmission fluid pump control module is reporting self protect stall state
AUX_TFP_SPD_OOR	Auxiliary Transmission Fluid Pump Control Module Is Reporting Pump Motor Current And Speed Out Of Range	Auxiliary transmission fluid pump control module is reporting pump motor current and speed out of range
AUX_TFP_STALL	Auxiliary Transmission Fluid Pump Control Module Is Reporting Pump Motor Stalled	Auxiliary transmission fluid pump control module is reporting pump motor stalled
AUX_TFP_UND_CUR	Auxiliary Transmission Fluid Pump Control Module Is Reporting Pump Motor Under Current	Auxiliary transmission fluid pump control module is reporting pump motor under current
AUX_TFP_UND_SPD	Auxiliary Transmission Fluid Pump Control Module Is Reporting Pump Motor Under Speed	Auxiliary transmission fluid pump control module is reporting pump motor under speed
AUX_TFP_UND_VOL	Auxiliary Transmission Fluid Pump Control Module Is Reporting Module Under Voltage	Auxiliary transmission fluid pump control module is reporting module under voltage
AXLE_CONFIG_OOR	Axle Ratio: The Supported Configuration Data From The Master Is Out Of Range For The Slave	Axle ratio: the supported configuration data from the master is out of range for the slave
AXLE_CONFIG_SUPP	Axle Ratio: Slave Requires Config Support, But Config CDID From Master Shows Not Supported	Axle ratio: slave requires configuration support, but configuration CDID from master shows not supported

		NOTE This PID (parameter identification) monitors Intermediate Shaft Speed Sensor A (ISSA), NOT Input Shaft Speed Sensor A as it is named. Intermediate shaft speed sensor A (ISSA) fault status
ISS_A_RAW	Intermediate Speed A- Raw	Intermediate shaft A speed (in RPM (revolutions per minute)
ISS_B_QF	Transmission Input Shaft Speed Sensor - B- Quality Factor	**NOTE** This PID (parameter identification) monitors Intermediate Shaft Speed Sensor B (ISSB), NOT Input Shaft Speed Sensor B as it is named. Intermediate shaft speed sensor B (ISSB) fault status
ISS_B_RAW	Intermediate Shaft Speed B- Raw	Intermediate shaft B speed (in RPM (revolutions per minute)
LINEDSD	Line Pressure Control Desired	Commanded line pressure
LOAD	Engine Load	Engine load calculated by the PCM (powertrain control module)
LPC	Line Pressure Control (previously shown as PCA)	LPC (line pressure control) pressure
LPC_AMP	Line Pressure Control Measured In Current (previously shown as PCA_AMP)	LPC (line pressure control) amperage
LPC_F	Line Pressure Control Status (previously shown as PCA_F)	LPC (line pressure control) fault status
MIL_DIS	The Distance Travelled Since The (MIL) Was Activated	Distance travelled since the MIL (malfunction indicator lamp) was activated

	Below Expected	in input shaft speed below expected
SHFT_FLRE	Shift RPM Rise in Input Shaft Speed Above Expected	Shift RPM (revolutions per minute) rise in input shaft speed above expected
SHFT_ID	Shift Identification of Shift (PID)s Lag, Time, Flare and Drop	Shift identification for parameter identifications (PIDs) Lag, Time, Flare and Drop
SHFT_LAG	Shift Time Elapsed From 10% to 90% of Complete	Shift time elapsed from 10% to 90% of complete
SHFT_TIME	Shift Time Elapsed From Commanded to 10% Complete	Shift time elapsed from commanded to 10% complete
SHFT_TYP	Shift Type	Type of shift, including which gear and automatic or manual
SNOWPLW_CFG	Snowplow As Configured In The (PCM).	Snow plow prep package equipped or not equipped
SOFTWARE_PN	ECU (electronic control unit) Software Part Number	ECU (electronic control unit) software part number
SSA_AMP #	Shift Solenoid Pressure Control A	Commanded current for shift solenoid pressure control A (SSPCA)
SSB_AMP#	Shift Solenoid Pressure Control B	Commanded current for shift solenoid pressure control B (SSPCB)
SSC_AMP#	Shift Solenoid Pressure Control C	Commanded current for shift solenoid pressure control C (SSPCC)
SSD_AMP#	Shift Solenoid Pressure Control D	Commanded current for shift solenoid pressure control D (SSPCD)
SSE_AMP#	Shift Solenoid Pressure Control E	Commanded current for shift solenoid pressure control E (SSPCE)
SSF_AMP#	Shift Solenoid F Commanded Current	Commanded current for shift solenoid pressure control F (SSPCF)

TC_SLIPACT	Torque Converter Slip Actual	Actual difference between engine speed and turbine shaft speed (in RPM (revolutions per minute))
TC_SLIPDSD	Torque Converter Slip Desired	Commanded difference between engine speed and turbine shaft speed (in RPM (revolutions per minute))
TCC	Torque Converter Clutch Solenoid Pressure	Commanded pressure for the TCC (torque converter clutch) solenoid
TCC_AMP#	Torque Converter Clutch Solenoid Commanded Current	Commanded current for the TCC (torque converter clutch) solenoid
TCC_F	Torque Converter Clutch Fault	Fault status for the TCC (torque converter clutch)
TCC_OSC	Output State Control of Torque Converter	Output state control commanded pressure to the TCC (torque converter clutch) solenoid
TCC_RAT	Transmission Slip Ratio	Actual speed ratio of the torque converter (1.0 = fully engaged)
TCS_DEPRES	Transmission Control Switch Pressed	Transmission control switch is pressed
TD_CLTCH_A_CMD	Transmission Diagnostics - Clutch A Solenoid Commanded On/Off	Transmission diagnostics - clutch A solenoid commanded On/Off
TD_CLTCH_A_MEAS	Transmission Diagnostics - Clutch A Solenoid Measured Current On/Off	Transmission diagnostics - clutch A solenoid measured current On/Off
TD_CLTCH_A_SLIP	Transmission Diagnostics - Clutch A Slip State Yes/No	Transmission diagnostics - clutch A slip state Yes/No
TD_CLTCH_B_CMD	Transmission Diagnostics - Clutch B Solenoid Commanded On/Off	Transmission diagnostics - clutch B solenoid commanded On/Off
TD_CLTCH_B_MEAS	Transmission Diagnostics - Clutch B Solenoid Measured Current On/Off	Transmission diagnostics - clutch B solenoid measured current On/Off

		On/Off
TD_ELEC_PMP_MEAS	Transmission Diagnostics - Transmission Electric Pump Measured Current On/Off	Transmission diagnostics - auxiliary transmission fluid pump measured current On/Off
TD_GR_RAT_QF_ACH	Transmission Diagnostics - Gear Ratio Achieved Quality Factor	Transmission diagnostics - gear ratio achieved fault status
TD_HOOP_CMD	Transmission Diagnostics - Hold Out of Park Solenoid Commanded On/Off	Transmission diagnostics - hold out of park solenoid commanded On/Off
TD_HOOP_MEAS	Transmission Diagnostics - Hold Out of Park Solenoid Measured Current On/Off	Transmission diagnostics - hold out of park solenoid measured current On/Off
TD_ISS_A_QF	Transmission Diagnostics - Intermediate Shaft A Speed Quality Factor	Transmission diagnostics - intermediate shaft A speed fault status
TD_ISS_B_QF	Transmission Diagnostics - Intermediate Shaft B Speed Quality Factor	Transmission diagnostics - intermediate shaft B speed fault status
TD_LINEPRS_CMD	Transmission Diagnostics - Line Pressure Sensor Commanded On/Off	Transmission diagnostics - line pressure sensor commanded On/Off
TD_LINEPRS_MEAS	Transmission Diagnostics - Line Pressure Sensor Measured Current On/Off	Transmission diagnostics - line pressure sensor measured current On/Off
TD_OSS_QF	Transmission Diagnostics - Output Shaft Speed Quality Factor	Transmission diagnostics - output shaft speed fault status
TD_OWC_QF	Transmission Diagnostics - Selectable One Way Clutch Speed Quality Factor	Transmission diagnostics - selectable one way clutch speed fault status
TD_PRNDL_QF_ACHV	Transmission Diagnostics - PRNDL (Park- Reverse- Neutral- Drive- Low) Achieved Quality Factor	Transmission diagnostics - PRNDL (park- reverse- neutral- drive- low) achieved fault status
TD_PRNDL_QF_DSD	Transmission Diagnostics - PRNDL (Park- Reverse- Neutral- Drive- Low) Desired Quality Factor	Transmission diagnostics - PRNDL (park- reverse- neutral- drive- low) desired fault status