

# Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

## 2010 FORD Explorer Sport Trac OEM Service and Repair Workshop Manual

[Go to manual page](#)

**No** The fault is not present at this time and may be intermittent.

## PINPOINT TEST X : DTC P07F7

### Normal Operation and Fault Conditions

The PCM (powertrain control module) monitors clutch applications for all gears. It sets a DTC (diagnostic trouble code) if it detects a ratio error but is unable to detect which clutch caused the issue. The transmission logic disables the gear in question. If multiple incorrect gear ratio diagnostic trouble codes (DTCs) are set, look for a common clutch involved in the operation of those gear applications. If no common clutch errors are found, look for a line pressure or pump pressure concern.

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P07F7:00	Gear 10 Incorrect Ratio: No Sub Type Information	This DTC (diagnostic trouble code) indicates a gear ratio error either in or while shifting to 10th gear. The fault did not last long enough to set a more specific DTC (diagnostic trouble code) . The failsafe logic disables 10th gear for the remainder of the key cycle during which the fault occurred.

### Possible Sources

- Transmission fluid contamination
- Low line pressure
- D clutch stuck off or slipping
- E clutch stuck on
- B clutch slipping
- C clutch slipping
- F clutch slipping

### X1 CHECK THE PCM (POWERTRAIN CONTROL MODULE) FOR DTC (DIAGNOSTIC TROUBLE CODE) P07F7

- Ignition ON.
- Using a diagnostic scan tool, clear all diagnostic trouble codes (DTCs) from the PCM (powertrain control module) .
- Road test the vehicle.

PCM (powertrain control module) P0868:00	Transmission Fluid Pressure Low: No Sub Type Information	This DTC (diagnostic trouble code) indicates a non-electrical fault causing 2 or more clutches to fail to apply. The PCM (powertrain control module) understands this as most likely caused by low line pressure.
---	--	---

**Possible Sources**

- Transmission fluid contamination
- Low line pressure

**Y1 CHECK THE PCM (POWERTRAIN CONTROL MODULE) FOR DTC (DIAGNOSTIC TROUBLE CODE) P0868**

- Ignition ON.
- Using a diagnostic scan tool, clear all diagnostic trouble codes (DTCs) from the PCM (powertrain control module) .
- Road test the vehicle.
- Using a diagnostic scan tool, retrieve all continuous memory diagnostic trouble codes (CMDTCs) from the PCM (powertrain control module) .

**Is DTC (diagnostic trouble code) P0868 present in the PCM (powertrain control module) ?**

<b>Yes</b>	<p>Check the transmission fluid for contamination. REFER to: <a href="#">Preliminary Inspection</a> (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Diagnosis and Testing).</p> <p>Carry out the line pressure test. REFER to: <a href="#">Special Testing Procedures</a> (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Diagnosis and Testing).</p>
------------	---

<b>No</b>	The fault is not present at this time and may be intermittent.
-----------	--

**PINPOINT TEST Z : P1636**

**Normal Operation and Fault Conditions**

The PCM (powertrain control module) contains Phoenix drivers, which are chips that control the low sides of the solenoid circuits to provide the commanded current. The main processor in the PCM (powertrain control

Guided Routine available in the on-line Workshop Manual.  
After programming the new PCM (powertrain control module)  
, CARRY OUT the transmission strategy download.  
REFER to: [Transmission Strategy Download](#)  
(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, General  
Procedures).

<b>No</b>	GO to <a href="#">Z2</a>
-----------	--------------------------

## **Z2 ROAD TEST THE VEHICLE AND RECHECK THE PCM (POWERTRAIN CONTROL MODULE) FOR DTC (DIAGNOSTIC TROUBLE CODE) P1636**

- Road test the vehicle.
- Ignition OFF.
- Road test the vehicle a second time.
- Using a diagnostic scan tool, carry out the KOEO (key on, engine off) and KOER (key on, engine running) PCM (powertrain control module) self-tests.

**Is DTC (diagnostic trouble code) P1636 present in the PCM (powertrain control module) ?**



**Yes**

Guided Routine available in the on-line Workshop Manual.  
After programming the new PCM (powertrain control module)  
, CARRY OUT the transmission strategy download.  
REFER to: [Transmission Strategy Download](#)  
(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, General  
Procedures).

<b>No</b>	The fault is not present at this time.
-----------	--

**PINPOINT TEST AA : P163E, P163F**



**Yes**

Guided Routine available in the on-line Workshop Manual.  
 After programming the new PCM (powertrain control module)  
 , CARRY OUT the transmission strategy download.  
 REFER to: [Transmission Strategy Download](#)  
 (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, General  
 Procedures).

**No**

The fault is not present at this time. It might have been caused by an incorrect or corrupted  
 calibration.

**PINPOINT TEST AB : P1705**

**Normal Operation and Fault Conditions**

The PCM (powertrain control module) only runs the KOEO (key on, engine off) and KOER (key on, engine  
 running) self-tests when it confirms the vehicle is in park or neutral.

**DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P1705:00	Transmission Range Circuit Not Indicating Park/Neutral During Self Test: No Sub Type Information	This DTC (diagnostic trouble code) indicates the TR (transmission range) sensor did not show park or neutral during a KOEO (key on, engine off) or KOER (key on, engine running) PCM (powertrain control module) self-test.

**Possible Sources**

- Carrying out a PCM (powertrain control module) self-test with the vehicle in gear
- TR (transmission range) sensor
- Park system components
- PCM (powertrain control module) fault

<b>Yes</b>	GO to <a href="#">AB4</a>
------------	---------------------------

<b>No</b>	<p>RESOLVE the Gear Selector &gt; Inoperative symptom.</p> <p>REFER to: <a href="#">External Controls - Vehicles With: Column Shift</a> (307-05B Automatic Transmission External Controls - 10-Speed Automatic Transmission – 10R80, Diagnosis and Testing).</p> <p>REFER to: <a href="#">External Controls - Vehicles With: Console Shift</a> (307-05B Automatic Transmission External Controls - 10-Speed Automatic Transmission – 10R80, Diagnosis and Testing).</p>
-----------	---

#### **AB4 CHECK THE TR (TRANSMISSION RANGE) SENSOR FOR PROPER INSTALLATION**

- Drain the transmission fluid and remove the transmission fluid pan.  
REFER to: [Transmission Fluid Pan, Gasket and Filter](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
- Inspect the TR (transmission range) sensor and manual shaft for proper installation. Make sure the roll pin is completely installed in the TR (transmission range) sensor. Make sure detent spring is properly installed. Check all components for damage or binding.  
REFER to: [Transmission Range \(TR\) Sensor](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
- Check the park lock pawl solenoid for the pin being stuck extended.  
REFER to: [Park Lock Pawl Solenoid](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
- Inspect the park pawl, park pawl actuator rod, and park lock pawl valve. Make sure each component is properly installed and free of damage or binding.

**Are all TR (transmission range) sensor and park components properly installed and free of damage or binding?**

<b>Yes</b>	<p>INSTALL a new TR (transmission range) sensor.</p> <p>REFER to: <a href="#">Transmission Range (TR) Sensor</a> (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).</p>
------------	--

<b>No</b>	REPAIR or INSTALL new components as necessary.
-----------	--

the TR (transmission range) sensor shows the transmission is in park while the vehicle is moving above a certain speed, a DTC (diagnostic trouble code) will set.

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P1706:00	High Vehicle Speed Observed in Park: No Sub Type Information	This DTC (diagnostic trouble code) indicates the TR (transmission range) sensor reported the vehicle was in park while the vehicle was moving above a speed where park would be commanded. This would cause the park pawl to ratchet, which could damage the park pawl.

### Possible Sources

- Clutch stuck off fault
- Hydraulic control fault
- Unintended PCM (powertrain control module) reset
- PCM (powertrain control module) fault

### AC1 CHECK THE PCM (POWERTRAIN CONTROL MODULE) FOR DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, carry out the KOEO (key on, engine off) and KOER (key on, engine running) PCM (powertrain control module) self-tests.

**Are any power supply, internal module, TR (transmission range) sensor, clutch fault, or gear engagement fault diagnostic trouble codes (DTCs) present?**

<b>Yes</b>	RESOLVE those diagnostic trouble codes (DTCs) first. REFER to the DTC (diagnostic trouble code) Chart.
------------	--

<b>No</b>	GO to <a href="#">AC2</a>
-----------	---------------------------

### AC2 CHECK THE GSM (GEAR SHIFT MODULE) FOR DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, carry out the GSM (gear shift module) self-test.

**Are any diagnostic trouble codes (DTCs) present in the GSM (gear shift module) ?**

<b>Yes</b>	RESOLVE those diagnostic trouble codes (DTCs). REFER to: <a href="#">External Controls - Vehicles With: Column Shift</a>
------------	---

<b>Yes</b>	RESOLVE any observable symptoms. REFER to: <a href="#">Diagnosis By Symptom</a> (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Diagnosis and Testing).
------------	--

<b>No</b>	GO to <a href="#">AC5</a>
-----------	---------------------------

## AC5 INSPECT THE TRANSMISSION PARK SYSTEM COMPONENTS

- Remove the main control valve body.  
REFER to: [Main Control Valve Body](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
- Remove the transmission fluid auxiliary pump.  
REFER to: [Transmission Fluid Auxiliary Pump](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
- Inspect the park pawl and the park lock teeth on planetary carrier No. 4. Make sure the park lock teeth are not worn or damaged.
- Inspect the park pawl, park pawl actuator rod, TR (transmission range) sensor, and park return spring. Make sure all components are properly installed and free of damage.
- Remove and inspect the park lock pawl solenoid. Make sure the pin is not stuck.  
REFER to: [Park Lock Pawl Solenoid](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
- Remove and inspect the park lock pawl valve. If the valve or bore is damaged, INSTALL a new main control valve body.  
REFER to: [Main Control Valve Body](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Overhaul).

### Are any transmission park components worn, damaged, or improperly installed?

<b>Yes</b>	INSTALL new components as necessary.
------------	--------------------------------------

<b>No</b>	GO to <a href="#">AC6</a>
-----------	---------------------------

## AC6 RECHECK THE PCM (POWERTRAIN CONTROL MODULE) FOR DIAGNOSTIC TROUBLE CODES (DTCS)



control module) P1711:00	No Sub Type Information	(key on, engine running) self-test. The PCM (powertrain control module) expects a transmission fluid temperature reading between -1°C (30°F) and 120°C (248°F).
-----------------------------	----------------------------	---

### Possible Sources

- Transmission fluid temperature outside of self-test range
- TFT (transmission fluid temperature) sensor fault
- PCM (powertrain control module) fault

### AD1 CHECK THE TRANSMISSION FLUID TEMPERATURE

- Ignition ON.
- Access the PCM (powertrain control module) and monitor the TFT (Transmission Fluid Temperature) (Deg C) PID (parameter identification)

**Does PID (parameter identification) TFT show between -1°C (30°F) and 120°C (248°F)?**


<b>Yes</b>	GO to <a href="#">AD2</a>
------------	---------------------------

<b>No</b>	If the monitored temperature is plausible, either warm the transmission fluid temperature or let it cool into self-test range, then GO to <a href="#">AD2</a> If the monitored temperature is not plausible, <a href="#">GO to Pinpoint Test B</a>
-----------	--

### AD2 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the DTC (diagnostic trouble code) from the PCM (powertrain control module) .
- Ignition OFF.
- Ignition ON.
- Using a diagnostic scan tool, carry out the KOEO (key on, engine off) and KOER (key on, engine running) PCM (powertrain control module) self-tests.

**Is DTC (diagnostic trouble code) P1711 present in the PCM (powertrain control module) ?**

<b>Yes</b>	 <p>Guided Routine available in the on-line Workshop Manual.</p>
------------	---

## AE1 INSPECT THE TRANSMISSION FLUID FOR SIGNS OF WEAR

- Collect a transmission fluid sample and inspect it for signs of wear.  
REFER to: [Preliminary Inspection](#)(307-01A Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Diagnosis and Testing).

### Does the transmission fluid condition indicate excessive wear?

<b>Yes</b>	Overhaul the transmission. REFER to: <a href="#">Transmission</a> (307-01A Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul). Carry out the transmission fluid cooler backflushing and cleaning procedure. REFER to: <a href="#">Transmission Fluid Cooler - Backflushing and Cleaning - Vehicles With: Transmission Fluid Heat Exchanger</a> (307-02A Transmission Cooling - 10-Speed Automatic Transmission - 10R80, General Procedures). REFER to: <a href="#">Transmission Fluid Cooler - Backflushing and Cleaning - Vehicles With: Transmission Fluid Heat Exchanger</a> (307-02A Transmission Cooling - 10-Speed Automatic Transmission - 10R80, General Procedures).
------------	---

<b>No</b>	GO to <a href="#">AE2</a>
-----------	---------------------------

## AE2 CHECK FOR SIGNS OF INTERNAL TRANSMISSION DAMAGE

- Using a diagnostic scan tool, clear the DTC (diagnostic trouble code) from the PCM (powertrain control module).
- Road test the vehicle. Pay close attention for any noise, transmission engagement, or shifting concerns.
- Using a diagnostic scan tool, carry out the PCM (powertrain control module) self-test.

### Are any gear engagement or clutch fault diagnostic trouble codes (DTCs) present, or are any noise, engagement, or shifting concerns present?

<b>Yes</b>	Overhaul the transmission. REFER to: <a href="#">Transmission</a> (307-01A Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul). Carry out the transmission fluid cooler backflushing and cleaning procedure. REFER to: <a href="#">Transmission Fluid Cooler - Backflushing and Cleaning - Vehicles With: Transmission Fluid Heat Exchanger</a> (307-02A Transmission Cooling - 10-Speed Automatic Transmission - 10R80, General Procedures). REFER to: <a href="#">Transmission Fluid Cooler - Backflushing and Cleaning - Vehicles With: Transmission Fluid Heat Exchanger</a>
------------	--