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2000 FORD Excursion OEM Service and Repair Workshop Manual

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- For the ISSA sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C168A-2	Ω	Ground

- For the ISSB sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C168A-3	Ω	Ground

Is the resistance greater than 10,000 ohms on the suspect circuit?

Yes	GO to D6
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No	REPAIR the short to ground.
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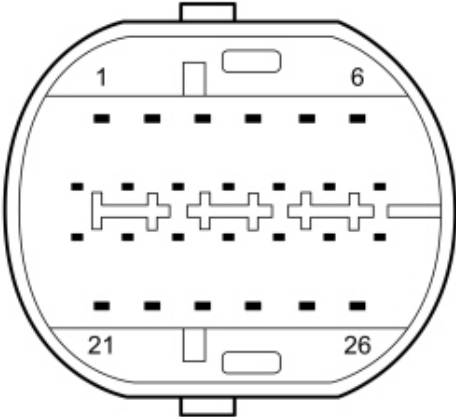
D6 CHECK THE SENSOR SIGNAL RETURN CIRCUIT FOR A SHORT TO POWER

- Ignition ON.
- For the OSS (output shaft speed) sensor, measure:

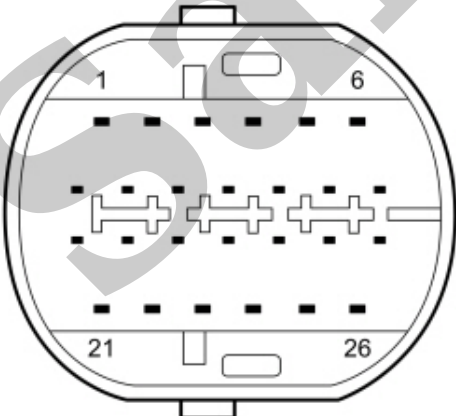
Positive Lead	Measurement / Action	Negative Lead
C168A-4	\bar{V}	Ground

- For the TSS (turbine shaft speed) sensor, measure:

Positive Lead	Measurement / Action	Negative Lead

Positive Lead	Measurement / Action	Negative Lead
 <p>E275612</p> <p>Transmission component side, pin 7</p>	Ω	C1107-2

- For the TSS (turbine shaft speed) sensor, measure:

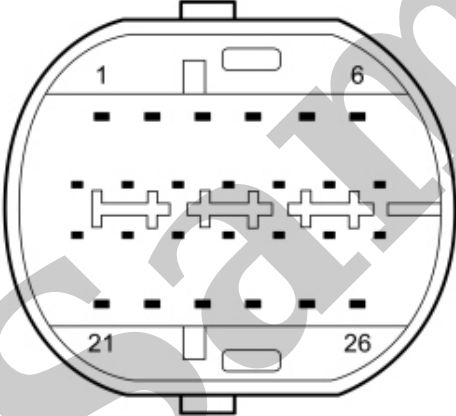
Positive Lead	Measurement / Action	Negative Lead
 <p>E275612</p> <p>Transmission component side, pin 8</p>	Ω	C3106-2

- For the ISSA sensor, measure:

Yes	GO to D8
No	<p>INSTALL a new transmission case wiring harness.</p> <p>REFER to: Transmission Internal Wiring Harness (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).</p>

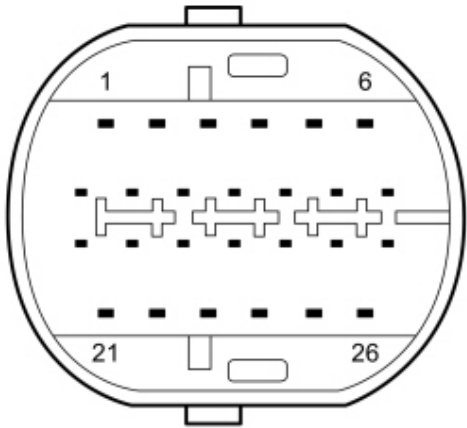
D8 CHECK THE TRANSMISSION INTERNAL WIRING HARNESS SENSOR VREF CIRCUIT FOR A SHORT TO GROUND

- For the OSS (output shaft speed) and ISSA sensors, measure:

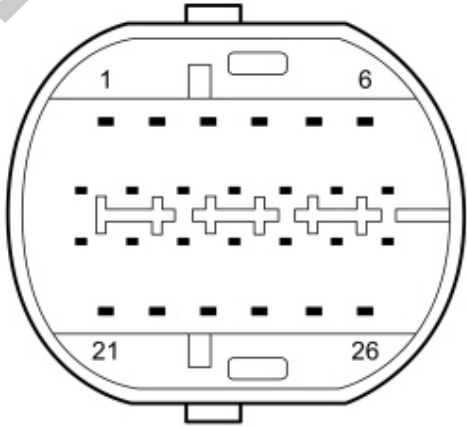
Positive Lead	Measurement / Action	Negative Lead
 <p>E275612</p> <p>Transmission component side, pin 7</p>	Ω	Ground

- For the TSS (turbine shaft speed) and ISSB sensors, measure:

Positive Lead	Measurement / Action	Negative Lead

C1107-1	Ω	 <p>E275612</p> <p>Transmission component side, pin 4</p>
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- For the TSS (turbine shaft speed) sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C3106-1	Ω	 <p>E275612</p> <p>Transmission component side, pin 1</p>

- For the ISSA sensor, measure:

Positive Lead	Measurement / Action	Negative Lead

No

INSTALL new transmission case wiring harness.

REFER to: [Transmission Internal Wiring Harness](#)

(307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).

D10 CHECK THE TRANSMISSION INTERNAL WIRING HARNESS SENSOR SIGNAL RETURN CIRCUIT FOR A SHORT TO GROUND

- For the OSS (output shaft speed) sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C1107-1	Ω	Ground

- For the TSS (turbine shaft speed) sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C3106-1	Ω	Ground

- For the ISSA sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C1836-1	Ω	Ground

- For the ISSB sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
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C1836-1	Ω	C1381T-69
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- For the ISSB sensor, measure

Positive Lead	Measurement / Action	Negative Lead
C1837-1	Ω	C1381T-70

Is the resistance less than 3 ohms on the suspect circuit?

Yes	GO to D12
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No	There is a terminal fitment issue. REPAIR any loose, damaged or bent terminals.
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D12 CHECK THE SENSOR VREF CIRCUIT FOR VOLTAGE AT THE SENSOR

- Connect PCM (powertrain control module) C1381T .
- Ignition ON.
- For the OSS (output shaft speed) sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C1107-2	\overline{V}	Ground

- For the TSS (turbine shaft speed) sensor, measure


Positive Lead	Measurement / Action	Negative Lead
C3106-2	\overline{V}	Ground

Normal Operation and Fault Conditions The transmission fluid auxiliary pump keeps the transmission fluid circulating and the transmission engaged during auto start-stop events. The transmission fluid auxiliary pump has an internal microprocessor and communicates with the PCM (powertrain control module) over a PWM (pulse width modulation) circuit with a frequency of 150 Hz and a duty cycle range of 10% to 90%.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P0C28:00	Electric/Auxiliary Transmission Fluid Pump 'A' Motor Current High: No Sub Type Information	This DTC (diagnostic trouble code) indicates the transmission fluid auxiliary pump communication is OK, the frequency is between 125 Hz and 175 Hz, but a high current is detected (20% to 25% duty cycle).
PCM (powertrain control module) P0C29:00	Electric/Auxiliary Transmission Fluid Pump 'A' Driver Circuit Performance: No Sub Type Information	This DTC (diagnostic trouble code) indicates the transmission fluid auxiliary pump communication is OK, the frequency is between 125 Hz and 175 Hz, but a high current is detected and the pump speed is out of range (75% to 80% duty cycle)
PCM (powertrain control module) P0C2A:00	Electric/Auxiliary Transmission Fluid Pump 'A' Motor Stalled: No Sub Type Information	This DTC (diagnostic trouble code) indicates the PCM (powertrain control module) commanded the transmission fluid auxiliary pump on but did not detect a corresponding increase in pump speed, indicating a stalled pump motor (35% to 40% duty cycle).
PCM (powertrain control module) P0C2C:00	Electric Transmission Fluid Pump Control Module Feedback Signal Range/Performance: No Sub Type Information	This DTC (diagnostic trouble code) indicates the transmission fluid auxiliary pump frequency is between 125 and 175Hz but has an invalid duty cycle, or the frequency is outside of the 125-175Hz range. This can be caused by a loss of power to the transmission fluid auxiliary pump.
PCM (powertrain control module) P0C2D:00	Electric Transmission Fluid Pump Control Module Feedback Signal Low: No Sub Type Information	This DTC (diagnostic trouble code) indicates the transmission fluid auxiliary pump duty cycle is less than 10%. This DTC can set while using output state control to command a pump speed outside of normal operating parameters.

- Inspect the connector for damaged or pushed out terminals, corrosion, loose wires and missing or damaged seals.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C168A-10		Ground

Is the voltage greater than 11 volts?

Yes	GO to E3
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No	<p>VERIFY the BJB (battery junction box) fuse F67 (20A) is OK.</p> <p>If the fuse is OK, REFER to the Wiring Diagrams manual to identify and repair an open circuit.</p> <p>If the fuse is not OK, REFER to the Wiring Diagrams manual to identify and repair a short to ground.</p>
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E3 CHECK THE TRANSMISSION FLUID AUXILIARY PUMP TASV CIRCUIT FOR VOLTAGE

E5 CHECK THE TRANSMISSION FLUID AUXILIARY PUMP TASV CIRCUIT FOR A SHORT TO GROUND

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C168A-12	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	 <p>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).</p>
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No	REPAIR the short to ground.
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E6 CHECK THE TRANSMISSION FLUID AUXILIARY PUMP GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C168A-17	Ω	Ground

Is the resistance less than 3 ohms?