



Technical Service Information

FORD AX4S/AX4N ERRATIC SHIFTING

COMPLAINT: Vehicles equipped with either the AX4S or AX4N transaxles may exhibit erratic and/or undescrivable shifts after the vehicle's processor has been changed. The same complaint may also occur immediately after the original processor has been flashed by a local Ford dealership. This condition may also produce a trouble code 623 on vehicles equipped with the AX4S, or P1779 on vehicles equipped with the AX4N transaxle.

CAUSE: The shift solenoid sequence is different between the AX4S and the AX4N transaxle, as shown in Figure 1. If the incorrect processor is installed, or the processor has been flashed incorrectly, the wrong shift pattern will be supplied to the transaxle.

Vehicles with the AX4N have a shift quadrant of OD, D and L. This eliminates the need for an OD cancel button. Vehicles with the AX4S transaxle have a shift quadrant of OD, 2 and Low, with an OD cancel button (See Figure 2).

TIP: *Should a processor programmed to operate an AX4S transaxle be installed into a vehicle with and AX4N, a code 623 or P1779 will be produced as it is looking for the OD cancel button.*

CORRECTION: Install the correct processor or have the processor re-flashed for the transaxle installed.

Special Note: *The solenoid shift commands may be viewed with a scanner or LED lights and compared to the chart shown in Figure 1. The commands viewed can then be compared to the type of transaxle installed in this vehicle. This will help verify that the above complaint is due to an incorrectly installed, or flashed, processor.*

AXODE/AX4S Solenoid Shift Pattern				AX4N Solenoid Shift Pattern			
GEAR	SS1	SS2	SS3	GEAR	SS1	SS2	SS3
<i>First</i>	<i>OFF</i>	<i>ON</i>	<i>OFF</i>	<i>First</i>	<i>OFF</i>	<i>ON</i>	<i>OFF</i>
<i>Second</i>	<i>ON</i>	<i>ON</i>	<i>OFF</i>	<i>Second</i>	<i>OFF</i>	<i>OFF</i>	<i>OFF</i>
<i>Third</i>	<i>OFF</i>	<i>OFF</i>	<i>ON</i>	<i>Third</i>	<i>ON</i>	<i>OFF</i>	<i>ON</i>
<i>Forth</i>	<i>ON</i>	<i>OFF</i>	<i>ON</i>	<i>Forth</i>	<i>ON</i>	<i>ON</i>	<i>ON</i>

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Figure 1

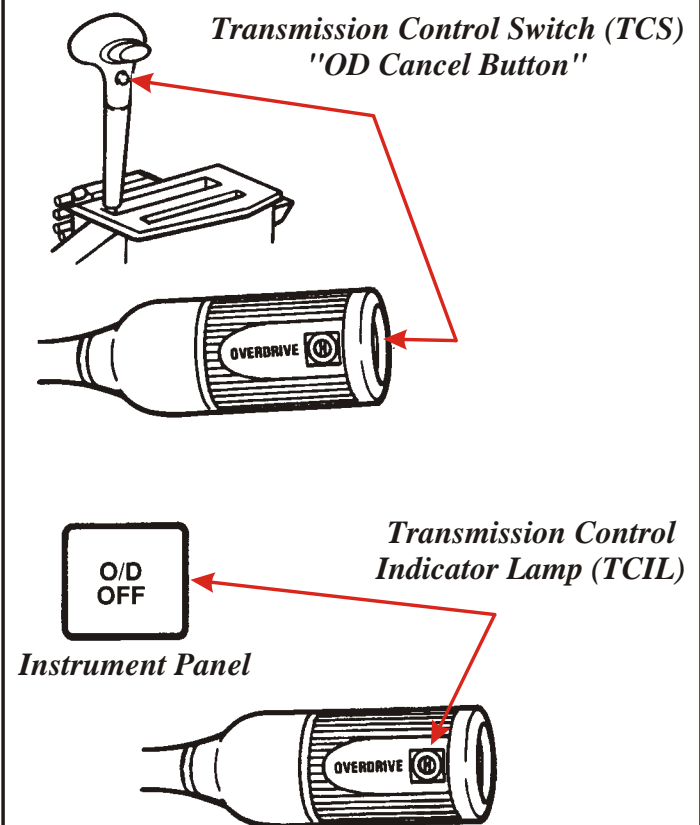
AXODE/AX4S <i>Shift Quadrant</i>	AX4N <i>Shift Quadrant</i>
<p style="text-align: center;"> Park Reverse Neutral Overdrive Second Low </p>  <p style="text-align: center;"> Transmission Control Switch (TCS) "OD Cancel Button" </p> <p style="text-align: center;"> Transmission Control Indicator Lamp (TCIL) </p> <p style="text-align: center;"> Instrument Panel </p>	<p style="text-align: center;"> Park Reverse Neutral Overdrive Drive Low </p> <p> <i>There "is not" a Transmission Control Switch (TCS) on vehicles equipped with the AX4N, as the shift selector lever provides this function.</i> </p> <p> <i>The "Check Engine" light is used as the Malfunction Indicator Lamp (MIL) as warning that codes have been stored. It may also be used to display codes.</i> </p> <p style="text-align: right;"> Copyright © 2000 ATSG </p>

Figure 2