

Diagnosis and Testing

General Equipment

Ford diagnostic equipment

Refer to Wiring Diagram Section 112-1 for schematic and connector information.

Inspection and Verification

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.

VISUAL INSPECTION CHART

Mechanical	Electrical
• Ignition lock cylinder • Passive anti-theft system (PATS) ignition key (blue dot) • Non-PATS ignition key • Use of a non-programmed PATS ignition key • Use of a non-encoded PATS ignition key • More than one PATS key in close proximity of the PATS transceiver	• Fuse(s) • Wiring harness(s) • Electrical connector(s) • Relay(s) • PATS transceiver • Body control module (BCM) • Powertrain control module (PCM)

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. If the cause is not visually evident, use [Ford diagnostic equipment](#) to retrieve any DTCs and refer to the Diagnostic Trouble Code (DTC) Index.

DIAGNOSTIC TROUBLE CODE (DTC) INDEX

DTC	Indicator Flash Code	Description/Condition	Possible Source
B1681	11	PATS transceiver signal is not received	PATS transceiver wiring, PATS transceiver connector, PATS transceiver, PCM or BCM
B1232 and B2103	12	PATS transceiver antenna coil fault, vehicle does not start	PATS transceiver, PATS transceiver mounting
B1600	13	Non-PATS key or damaged encoded ignition key, or no key code received, vehicle does not start	PATS encoded ignition key
B2431	13	PATS transponder programming failed crypto transponder only, vehicle does not start	Ignition key
B1602	14	Partial key read of PATS key, vehicle does not start	PATS encoded ignition key, PATS transceiver
B1601	15	Incorrect key code, Unprogrammed PATS key (keycode format OK), vehicle does not start (20 second anti-scan invoked)	PATS encoded ignition key
U2510	16	CAN communication link between the PCM and body control module (BCM), vehicle does not start	Circuit, PCM or BCM
B1213	21		Incorrect number of keys programmed or

DTC	Indicator Flash Code	Description/Condition	Possible Source
		Number of programmed PATS encoded keys below minimum, vehicle does not start	PATS encoded ignition key
B2141	22	NVM Configuration failure. No security ID exchange between PCM and body control module (BCM), vehicle does not start	Circuit, PCM or BCM
B2139	23	Data mismatch (received data does not match what was expected). Security messages do not match between PCM and body control module (BCM), vehicle does not start	Circuit, PCM or BCM
P1260	-	PCM disabled	PCM