ANTI-THEFT SYSTEM

1998 Pontiac Bonneville

1998 ACCESSORIES & EQUIPMENT
General Motors Corp. - Anti-Theft System

Buick; LeSabre
Oldsmobile; Eighty Eight, LSS & Regency
Pontiac; Bonneville

* PLEASE READ THIS FIRST *

WARNING: Deactivate air bag system before performing any service operation. See AIR BAG RESTRAINT SYSTEM article. DO NOT apply electrical power to any component on steering column without first deactivating air bag system. Air bag may deploy.

DESCRIPTION & OPERATION

PASS-KEY II(R) SYSTEM

PASS-Key II(R) is designed to prevent vehicle theft by disabling engine unless an ignition key with a specific electrical resistance is used in the ignition key lock cylinder. PASS-Key II(R) system operates using sensing contacts which are located within the ignition key lock cylinder. These contact a key resistor pellet which is located on the ignition key. When the lock is rotated, battery voltage is applied through appropriate fuse to PASS-Key II(R) decoder module. Pellet resistance is then compared with programmed value in module. 15 different resistances are used. System components include ignition key, ignition key lock cylinder, PASS-Key II(R) decoder module, starter enable relay and Powertrain Control Module (PCM).

UNIVERSAL THEFT DETERRENT (UTD) SYSTEM

The Universal Theft Deterrent (UTD) anti-theft system is designed to deter vehicle theft by pulsing horns and exterior lights when unauthorized vehicle entry is detected. The UTD operates separately from PASS-Key II(R) system. There are 5 basic UTD modes; Disarmed, Standby, Delayed, Armed and Alarm.

System is in Disarmed mode until ignition switch is in LOCK position, a door is open and doors are locked with power lock switch or Remote Keyless Entry (RKE) transmitter. When these conditions are met, system is in Standby. SECURITY light flashes once per second. When door is closed, system goes into Delayed mode for 30 seconds. SECURITY light stays on. After 30 second delay, system goes into Armed mode. When in Armed mode, system monitors inputs for unauthorized entry. SECURITY light remains off. If unauthorized entry is detected, system goes into Alarm mode. After 3 minutes system returns to Armed mode, unless a Disarm input is received. System components include door jamb switches, door lock cylinder switches, trunk tamper switch, door tamper switches (Buick only) and Remote Function Actuator (RFA) module.

Both systems use yellow SECURITY indicator light. PASS-Key II(R) system operates light when key is ON. UTD system operates light when key is OFF. UTD system does not affect engine starting.

COMPONENT LOCATIONS

PASS-KEY II(R) & UTD SYSTEM COMPONENT LOCATIONS
<table>
<thead>
<tr>
<th>Component</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASS-Key II(R) Decoder Module</td>
<td>Behind Top Right Side of Dash</td>
</tr>
<tr>
<td>Powertrain Control Module (PCM)</td>
<td>In Left Front Of Engine Compartment</td>
</tr>
<tr>
<td>Remote Function Actuator (RFA) Module</td>
<td>Behind Right Side of Dash</td>
</tr>
<tr>
<td>Starter Enable Relay</td>
<td>Behind Left Side of Dash, Above Instrument Panel Fuse Block</td>
</tr>
</tbody>
</table>

Fig. 1: Ignition Key Lock Cylinder Wiring Routing Turn Signal Switch Installed
Courtesy of General Motors Corp.
ANTI-THEFT SYSTEM ARMING & DISARMING

UTD SYSTEM

Arming Procedure
Close all windows and place shift lever in Park. Turn ignition switch to LOCK position and remove key. Open any door. Lock doors using electric switch or LOCK button on remote keyless entry transmitter. Close doors. After about 30 seconds, SECURITY indicator should go out, indicating system is armed. System can also be armed.
with windows open. System will not arm if doors are locked using inside knob or key in lock.

Disarming Procedure
To disarm system while SECURITY indicator is flashing and doors are still open, move electric door lock switch to UNLOCK position. To disarm system after it has been fully armed, unlock door using a key (from outside), turn ignition on (from inside) or use UNLOCK button on remote keyless entry transmitter.

To deactivate alarm once it sounds, unlock a front door using a key or use UNLOCK button on remote keyless entry transmitter.

PROGRAMMING

PROGRAMMING NEW MODULE

NOTE: New modules are unprogrammed. New module must be programmed with code that matches customer’s key for PASS-Key II(R) operation. New module can only be programmed once.

1) To program a NEW PASS-Key II(R) decoder module, install new module onto vehicle. Insert customer’s key into ignition lock cylinder and turn to RUN position. Start engine to verify operation.

2) Observe SECURITY indicator. SECURITY indicator should illuminate for about 5 seconds and go out. If SECURITY indicator flashes one flash per second and engine starts, check wiring, contacts to key resistance pellet, and key for defects or intermittents. Repair or replace as necessary. Repeat procedure because module did not program key code.

REPLACING PASS-KEY II(R) IGNITION KEY

Verifying Correct Key Code
Lost or broken keys must be replaced with a key that has proper resistance value. To determine resistance value or code, insert key into PASS-Key II(R) (VATS) Interrogator (J 35628-A) and read key code. Use key blank matching this key code and cut it to match original.

NOTE: Do not disconnect yellow two-way SIR connector when determining key code.

Determining BCM Programed Key Code
To determine unknown BCM key code, use Interrogator (J 35628-A) and following procedure.

1) Connect Interrogator (J 35628-A) wiring to PASS-Key II(R) dash connector at base of steering column. DO NOT connect to steering column wiring.

2) Turn Interrogator (J 35628-A) on and move key code switch to "1" and attempt to start engine. If engine starts, key code is "1". If engine does not start, turn ignition off and press 4-minute timer on Interrogator (J 35628-A).

3) When timer lamp goes out, move key code switch to next number and attempt to start engine. If engine does not start, continue trying different key codes until proper key code is found. See PASS-Key II(R) KEY RESISTANCE table.

PASS-KEY II(R) KEY RESISTANCE TABLE

<table>
<thead>
<tr>
<th>Key Code No.</th>
<th>Nominal Resistance (Ohms)</th>
<th>Acceptable Range (Ohms)</th>
</tr>
</thead>
</table>


TROUBLE SHOOTING

PASS-KEY II(R) SYSTEM

1) Look into key opening and check key pellet sensing contacts in ignition key lock cylinder. If contacts are damaged, or not Silver in color, replace ignition key lock cylinder. Ensure ignition key lock cylinder wiring is properly routed and not twisted when replacing lock cylinder. See Fig. 1. Using PASS-Key II(R) Interrogator (J 35628-A), check ignition keys. If key code window displays "E" for error, or display is erratic, replace key.

2) Check ignition key for cracked, dirty or coated resistor pellet. Ensure key does not have excess plastic around resistor pellet contacts. Check 20-amp PCM/VATS fuse in maxi-fuse block, 10-amp VATS 1A fuse and 10-amp AIR BAG/VATS 2E fuse in instrument panel fuse block. If symptom is intermittent, check component connectors for tight connections and clean terminals.

3) If starter enable relay must be replaced, check for short in Purple wire between starter enable relay and starter solenoid. A short in Purple wire may cause starter enable relay to fail.

UTD SYSTEM

1) Ensure parking lights, low beam headlights, horn and electrical door locks operate. Check SECURITY indicator by ensuring headlights and parking lights are off. Open a window to unlock a door without using a key. SECURITY indicator should not illuminate.

2) Check UTD system fuses. Check 15-amp HORN fuse in instrument panel fuse block. Check 10-amp MISC/RDO/CLSTR 9C fuse (Buick and Pontiac) or 10-amp PCM 8 fuse (Oldsmobile) in instrument panel fuse block. If system is intermittent, check component connectors for tight connections and clean terminals.

SYSTEM TESTS

NOTE: For Universal Theft Deterrent (UTD) and PASS-Key II(R) system component locations, see COMPONENT LOCATIONS.

PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK

1) Observe SECURITY indicator while cranking engine. If engine does not start, go to next step. If engine starts, check if SECURITY indicator illuminates for about 5 seconds and goes out. If SECURITY indicator illuminates and goes out, system is functioning.
properly. If SECURITY indicator remains illuminated steady (not flashing), see ENGINE CRANKS & STARTS, SECURITY INDICATOR STAYS ON. If SECURITY indicator does not illuminate, check indicator bulb and for open in Dark Green wire between instrument cluster and PASS-Key II(R) decoder module. If bulb and Dark Green wire are okay, replace PASS-Key II(R) decoder module.

2) If engine cranks but does not start, see ENGINE CRANKS BUT DOES NOT START. If engine does not crank or start, check if SECURITY indicator illuminates for about 5 seconds and goes out. If SECURITY indicator illuminates and goes out, see ENGINE DOES NOT CRANK OR START, SECURITY INDICATOR OPERATES NORMALLY under SYMPTOM TESTS (PASS-KEY II(R)). If SECURITY indicator remains illuminated steady or flashes, see SECURITY INDICATOR EITHER FLASHES OR STAYS ON STEADY under SYMPTOM TESTS (PASS-KEY II(R)). If SECURITY indicator does not illuminate, check indicator bulb and for open in Dark Green wire between instrument cluster and PASS-Key II(R) decoder module. If bulb and Dark Green wire are okay, replace PASS-Key II(R) decoder module.

UNIVERSAL THEFT DETERRENT (UTD) DIAGNOSTIC SYSTEM CHECK

1) Close all doors and lock left front door. Operate left front door handle and observe interior lamps. If interior lamps light, go to next step. If interior lamps do not light, repair interior lamps as necessary.

2) Depress transmitter door unlock button. If left front door unlocks, go to next step. If left front door does not unlock, repair as necessary. See REMOTE KEYLESS ENTRY SYSTEM article for diagnosing procedure.

3) Close all doors. Turn ignition switch to RUN and then back to OFF position. Open left front door and observe SECURITY indicator light. SECURITY indicator light should flash.

4) With left front door open, move power lock switch to LOCK position. SECURITY indicator light should remain on.

5) Close left front door and stay in vehicle. If SECURITY indicator light stays on for 30 seconds and then goes out, system is armed. Wait one minute, unlock left front door using mechanical lock switch and open door. Alarm horns, headlights, and exterior lamps should cycle on and off about once per second for 3-7 minutes.

6) Using key, unlock left front door. Alarm outputs should stop.

7) Re-arm system using described procedure and right front door lock switch. Close door. System is armed when SECURITY indicator goes out (in about 30 seconds). Wait one minute, unlock right front door with key and open door. Key unlock should disarm system and alarm outputs should not activate.

8) Stay in vehicle and re-arm system using described procedure on either door. Wait one minute, unlock door using mechanical lock switch and open then close door. Alarm outputs should activate.

9) After alarms stop (in about 3 minutes), open right front door. Alarm outputs should activate.

10) Press remote keyless entry transmitter unlock button. Alarm outputs should deactivate.

11) Stay in vehicle and lock each door using inside locks or outside key lock (do not use power door locks). Close all doors. System is not armed if SECURITY indicator goes off when last door is closed.

12) Unlock left door using inside lock release or outside key lock. Open door. Alarm outputs should deactivate.

SYMPTOM TESTS (PASS-KEY II(R))

NOTE: To prevent misdiagnosis, check for diagnostic trouble codes.
See G - TESTS W/CODES article in ENGINE PERFORMANCE section.

PASS-Key II(R) Symptom Verification
1) Perform PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. Ensure system will detect use of incorrect key by turning off engine. Disconnect PASS-Key II(R) 48-pin connector at base of steering column. Connect Interrogator (J 35628-A) to 48-pin connector. Set key code on interrogator to an incorrect key code. Attempt to start engine.

2) If engine cranks, replace PASS-Key II(R) Decoder Module and repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If engine does not crank within 3-minute lock-out period while SECURITY indicator is illuminated, turn ignition off. Disconnect interrogator and reconnect 48-pin connector at base of steering column. Attempt to start engine. If engine cranks, replace PASS-Key II(R) Decoder Module and repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

3) If engine does not crank, turn ignition off. Wait at least 3 minutes until end of lock-out period (SECURITY indicator will go out) and attempt to start engine. If engine does not start, see NOTES ON INTERMITTENTS. If an intermittent problem is suspected, see NOTES ON INTERMITTENTS.

Engine Cranks & Starts, SECURITY Indicator Stays On
1) Perform PASS-Key II(R) DIAGNOSTIC SYSTEM CHECK. Turn ignition off. Disconnect PASS-Key II(R) decoder module connector. Turn ignition on. If SECURITY indicator goes out, PASS-Key II(R) decoder module is not programmed or a system fault exists while engine is running. To determine cause, see SECURITY INDICATOR EITHER FLASHES OR STAYS ON STEADY.

2) If SECURITY indicator remains illuminated, determine if vehicle is equipped with Universal Theft Deterrent (UTD). If vehicle is not equipped with UTD, check for short to ground in Dark Green wire between instrument cluster and PASS-Key II(R) decoder module. If Dark Green wire is okay, replace PASS-Key II(R) decoder module. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

3) If vehicle is equipped with UTD, disconnect Remote Function Actuator (RFA) module connector. If SECURITY indicator goes out, replace RFA module. If SECURITY indicator remains illuminated, check for short to ground in Dark Green wire between instrument cluster and PASS-Key II(R) decoder module. If Dark Green wire is okay, replace PASS-Key II(R) decoder module. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

Engine Cranks But Does Not Start
1) Perform PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. Turn ignition off. Disconnect PASS-Key II(R) decoder module connector. Turn ignition on. Using DVOM, measure voltage between PASS-Key II(R) decoder module connector terminal A3 (Dark Blue wire) and ground.

2) If voltage is about 5 volts, go to next step. If voltage is not about 5 volts, check for open or short to ground in Dark Blue wire between PASS-Key II(R) decoder module and Powertrain Control Module (PCM). Also, check for poor connections at PCM. Repair or replace as necessary and repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If Dark Blue wire and connections are okay, diagnose possible faulty PCM. See G - TESTS W/CODES article in ENGINE PERFORMANCE section.

3) Turn ignition off. Reconnect PASS-Key II(R) decoder module connector. Turn ignition on. Using DVOM, measure voltage between PASS-Key II(R) decoder module connector terminal A3 (Dark Blue wire) and ground. If voltage is about 2.5 volts, PASS-Key II(R) system is functioning properly. See G - TESTS W/CODES article in ENGINE PERFORMANCE section. If voltage is not about 2.5 volts, check for poor connections at PASS-Key II(R) decoder module. If connections are okay, replace PASS-Key II(R) decoder module. Repeat PASS-Key II(R) DIAGNOSTIC SYSTEM CHECK.
Engine Does Not Crank Or Start, SECURITY Indicator Operates Normally

1) Perform PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. Turn ignition off. Disconnect starter enable relay connector. Connect a fused jumper wire between starter enable relay connector terminals C1 (Yellow wire) and A2 (Purple wire). Try to start engine.

2) If engine does not crank or start, check for open or short to ground in Yellow wire between ignition switch and starter enable relay, or Purple wire between starter enable relay and starter solenoid. If Yellow wire and Purple wire are okay, diagnose problem with starting system. See STARTER article in ELECTRICAL.

3) If engine cranks but does not start, check for open or short to ground in Pink wires between instrument panel fuse block (located behind left side of dash) and PASS-Key II(R) decoder module, or Red wire between PASS-Key II(R) decoder module and right fuse block (located in right rear of engine compartment). Check for open or poor connection in Black/White wire between PASS-Key II(R) decoder module and ground. Also, check for poor connections at PASS-Key II(R) decoder module. If Pink wires, Red wire, Black/White wire and connections are okay, replace PASS-Key II(R) decoder module. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

4) If engine cranks and starts, using DVOM, measure voltage between starter enable relay terminal C2 (Purple wire) and ground while trying to start engine. If battery voltage does not exist, repair open or short to ground in Purple wire between starter enable relay and instrument panel fuse block. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If battery voltage exists, using DVOM, measure voltage between starter enable relay terminals C2 (Purple wire) and A1 (Yellow wire) while trying to start vehicle.

5) If battery voltage exists, replace starter enable relay. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If battery voltage does not exist, check for open or short to ground in Yellow wire between starter enable relay and park/neutral position switch, or Yellow/Black wire between park/neutral position switch and PASS-Key II(R) decoder module. If Yellow wire and Yellow/Black wires are okay, check park/neutral position switch. Replace as necessary. If park/neutral position switch is okay, check PASS-Key II(R) decoder module for poor connections. If connections are okay, replace PASS-Key II(R) decoder module. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

SECURITY Indicator Either Flashes Or Stays On Steady

1) Perform PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. Using Interrogator (J 35628-A), check key to ensure valid key code is read. If key code is valid, go to next step. If key code is not valid, clean key and retest in interrogator. If a valid key code is now read, repeat PASS-Key II(R) DIAGNOSTIC SYSTEM CHECK. If a valid key code is not read, replace key. Repeat PASS-Key II(R) DIAGNOSTIC SYSTEM CHECK.

2) Disconnect PASS-Key II(R) 48-pin connector at base of steering column. Connect interrogator to ignition lock side of 48-pin connector terminals E13 (Purple/White wire) and E12 (White/Black wire). On all models, rotate lock cylinder through all positions while observing key code display (repeat 10 times). If display reads "E" for error or changes to another key code value at any position, replace ignition lock and keys. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

3) If display does not read "E" for error and does not change to another key code value, turn ignition off and disconnect interrogator. Using ohmmeter, measure resistance between ignition lock side of 48-pin connector terminals E13 (Purple/White wire) and E12 (White/Black wire), and ground.

4) If either resistance is 10 ohms or less, replace ignition lock and keys. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If resistance is more than 10 ohms, reconnect 48-pin connector at base of
steering column. Using ohmmeter, measure resistance across key pellet and note reading. Insert key into ignition lock. Disconnect PASS-Key II(R) decoder module connector.

5) Using ohmmeter, measure resistance between PASS-Key II(R) decoder module connector terminals B7 (Purple/White wire) and B8 (White/Black wire). If resistance readings are not within 10 ohms of each other, check for poor connections at 48-pin connector at base of steering column. Also, repair damage to Purple/White or White/Black wire between PASS-Key II(R) decoder module and 48-pin connector as necessary. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

6) If resistance readings are within 10 ohms of each other, insert key into ignition lock, leaving switch in OFF position. Using ohmmeter, measure resistance between PASS-Key II(R) decoder module connector terminals B7 (Purple/White wire) and B8 (White/Black wire), and ground. If resistance is more than 5 ohms, go to next step. If resistance is 5 ohms or less, repair short to ground in Purple/White wire or Black/White wire between PASS-Key II(R) decoder module and 48-pin connector. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

7) Check PASS-Key II(R) decoder module grounds (Black/White wires). Repair as necessary. If Black/White wires are okay, reconnect PASS-Key II(R) decoder module connector. Try to start engine. If engine does not start, go to next step. If engine starts, check for poor connections at PASS-Key II(R) decoder module and 48-pin connector. Repair as necessary. If an intermittent problem is suspected, see NOTES ON INTERMITTENTS.

8) Turn ignition on and observe SECURITY indicator. If SECURITY indicator does not go out after 3 minutes, replace PASS-Key II(R) decoder module. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If SECURITY indicator goes out, attempt to start engine using a spare key. If engine starts, replace suspect key. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK. If engine does not start, replace PASS-Key II(R) decoder module. Repeat PASS-KEY II(R) DIAGNOSTIC SYSTEM CHECK.

SYMPTOM TESTS (UNIVERSAL THEFT DETERRENT)

Universal Theft Deterrent (UTD) System Will Not Arm

1) Close left front door. Disconnect Remote Function Actuator (RFA) module connector. Using ohmmeter, check for continuity between RFA module connector terminal E10 (Dark Blue/White wire) and ground. If continuity does not exist, go to next step. If continuity exists, check for short to ground in Dark Blue/White wire. If Dark Blue/White wire is okay, replace left front door ajar switch.

2) Using ohmmeter, check for continuity between RFA module connector terminal E12 (Dark Blue wire) and ground. If continuity does not exist, go to next step. If continuity exists, disconnect right front door ajar switch connector. Using ohmmeter, check for continuity between RFA module connector terminal E12 (Dark Blue wire) and ground. If continuity exists, replace right front door ajar switch. If continuity does not exist, repeat procedure for remaining doors until malfunctioning switch is identified. If all switches are okay, repair short to ground in Dark Blue wire.

3) Using ohmmeter, check for continuity between RFA module connector terminal E5 (Light Green wire) and ground. If continuity does not exist, go to next step. If continuity exists, disconnect left front key cylinder switch connector. Using ohmmeter, check for continuity between RFA module connector terminal E5 (Light Green wire) and ground. If continuity exists, replace left front key cylinder switch. If continuity does not exist, repeat procedure for right front key cylinder switch and luggage compartment lid tamper switch until malfunctioning switch is identified. If all switches are okay, repair short to ground in Light Green wire.

4) Using ohmmeter, measure resistance between RFA module connector terminal E13 (Red/Black wire) and ground while pressing left
front door lock switch. If resistance is more than 5 ohms, check for open in Red/Black wire. If Red/Black wire is okay, replace left front door lock switch. If resistance is 5 ohms or less, using ohmmeter, measure resistance between RFA module connector terminal E13 (Red/Black wire) and ground while pressing right front door lock switch. If resistance is more than 5 ohms, check for open in Red/Black wire. If Red/Black wire is okay, replace right front door lock switch. If resistance is 5 ohms or less, replace RFA module.

UTD System Will Not Disarm

1) Using remote keyless entry transmitter, lock then unlock doors. If remote keyless entry transmitter does not operate properly, diagnose and repair remote keyless entry transmitter. See procedures in REMOTE KEYLESS ENTRY SYSTEM article. If remote keyless entry transmitter operates properly, disconnect Remote Function Actuator (RFA) module connector. Using ohmmeter, measure resistance between RFA module connector terminal E5 (Light Green wire) and ground while moving left front key cylinder switch to unlock position.

2) If resistance is 5 ohms or less, go to step 4). If resistance is more than 5 ohms, disconnect left front key cylinder switch connector. Using ohmmeter, measure resistance between left front key cylinder switch connector terminal "A" (Buick) or terminal "C" (Pontiac) and RFA module connector terminal E5 (Light Green wire). If resistance is 5 ohms or less, go to next step. If resistance is more than 5 ohms, repair open in Light Green wire.

3) Using ohmmeter, measure resistance between left front key cylinder switch connector terminal "C" (Buick) or terminal "B" (Pontiac) (Black wire) and ground. If resistance is 5 ohms or less, replace left front key cylinder switch. If resistance is more than 5 ohms, repair open in Black wire.

4) Using ohmmeter, measure resistance between RFA module connector terminal E5 (Light Green wire) and ground while moving right front key cylinder switch to unlock position. If resistance is 5 ohms or less, replace RFA module. If resistance is more than 5 ohms, disconnect right front key cylinder switch connector. Using ohmmeter, measure resistance between right front key cylinder switch connector terminal "A" (Buick) or terminal "C" (Pontiac) and RFA module connector terminal E11 (Light Green wire). If resistance is 5 ohms or less, go to next step. If resistance is more than 5 ohms, repair open in Light Green wire.

5) Using ohmmeter, measure resistance between right front key cylinder switch connector terminal "C" (Buick) or terminal "B" (Pontiac) (Black wire) and ground. If resistance is 5 ohms or less, replace right front key cylinder switch. If resistance is more than 5 ohms, repair open in Black wire.

NOTES ON INTERMITTENTS

INTERMITTENTS & POOR CONNECTIONS

Most intermittents are caused by poor electrical connections or wiring. Check for poor mating of connector halves or terminals not fully seated in connector body. Check for corrosion or dirt that may impede terminal contact. Check for damaged connector body that may cause poor mating, terminal contact, or exposure to dirt or moisture. Check for improperly formed or damaged terminals that may cause poor contact and possible corrosion. Using Connector Test Adapter Kit (J 35616-A), probe terminals to check terminal contact tension, thus avoiding damage to terminals. Using connector test adapter kit will help to avoid contamination and deformation to terminal contact. Contamination is caused by improperly connecting connector halves, missing or damaged connector seal or
damage to connector. These would cause terminals to be exposed to dirt or moisture. Contamination at connector leads may cause terminal corrosion. This may lead to open or intermittent open circuits. Deformation is caused by improperly probing the mating side of connector terminal, improper joining of connector halves, or repeated disconnecting and connecting of connector halves. Deformation, usually to female side of connector, may result in poor terminal contact, causing an open circuit or intermittent open circuit.

Check for poor terminal-to-wire connections. To check terminal-to-wire connections, remove terminal from connector and check for poor crimps, poor solder joints, crimping over insulation rather than wire, and corrosion in terminal-to-wire contact area. Check wire insulation for rubbed through areas, causing an intermittent short when bare area touches other wiring or components. Check for broken wiring inside insulation. Broken wiring may lead to false conclusions during a continuity or voltage check. If one or 2 strands of wire are intact, system may not operate properly, yet may show continuity with an ohmmeter.

If a visual inspection does not reveal cause of problem, vehicle may be driven with DVOM connected to suspect circuit. An abnormal reading when problem occurs indicates problem may be within that circuit.

**REMOVAL & INSTALLATION**

* PLEASE READ THIS FIRST *

**WARNING:** Deactivate air bag system before performing any service operation. See AIR BAG RESTRAINT SYSTEM article. DO NOT apply electrical power to any component on steering column without first deactivating air bag system. Air bag may deploy.

**CAUTION:** When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION section before disconnecting battery.

**PASS-KEY II(R) MODULE**

Removal & Installation
Remove glove box. Remove module nut. Remove module to access connector. Disconnect wiring and remove module. To install, reverse removal procedure. Program new module. See PROGRAMMING.

**WIRING DIAGRAMS**
Fig. 3: Anti-Theft System (PASS-Key II(R)) Wiring Diagram
Fig. 4: Anti-Theft System (Universal Theft Deterrent) Wiring Diagram