

2000 ACCESSORIES & EQUIPMENT

Body Control Modules - Escalade, Tahoe & Yukon Denali

DESCRIPTION

NOTE: This article applies to "old style" "C" & "K" Series vehicles equipped with 5.7L, 6.5L and 7.4L engines. Old style pickups are not equipped with a Body Control Module (BCM). For "new style" "C" & "K" Series vehicles equipped with 4.3L, 4.8L, 5.3L and 6.0L engines, see BODY CONTROL MODULES -- SIERRA, SILVERADO, SUBURBAN, TAHOE, YUKON & YUKON XL article.

WARNING: Vehicles are equipped with Supplemental Inflatable Restraint (SIR) system. Before attempting ANY repairs involving steering column, instrument panel or related components, see **SERVICE PRECAUTIONS and DISABLING & ACTIVATING AIR BAG SYSTEM** in appropriate **AIR BAG RESTRAINT SYSTEMS** article.

Body Control Module (BCM) is designed to process various input information it receives from sensors and switches or borrows from other vehicle systems connected to class 2 serial data line. BCM evaluates this information and controls certain body systems by commanding an output on or off.

BCM can also command other vehicle systems to control functions by sending specific messages over class 2 serial data line. BCM controls operation of audible warnings, indicator warnings, power door locks, remote keyless entry, Passlock(tm) theft deterrent, content theft deterrent, interior and exterior illumination.

BCM goes into low power mode (asleep state) when ignition has been turned off and 20 minutes have elapsed without any wake up signals. BCM goes into high power mode (wake up state) after receiving any wake up signals.

The class 2 serial data line allows communication between modules and scan tool. Modules on the class 2 serial data line are:

- Body Control Module (BCM).
- Instrument Panel Cluster (IPC).
- Transfer Case Control Module (TCCM).
- Powertrain Control Module (PCM)/Vehicle Control Module (VCM).
- Supplemental Inflatable Restraint (SIR) Module.
- Electronic Brake Control Module (EBCM).

OPERATION

ASLEEP & AWAKE FUNCTIONS

After ignition switch is turned off and 20 minutes elapse without any wake up signals, Body Control Module (BCM) enters an asleep state and goes into low power mode. Wake up signals turn BCM on to begin controlling and/or monitoring of certain functions. BCM wake-up inputs are as follows:

- Dome light.
- Door ajar switches.
- Door handle switches.
- Ignition key put into ignition switch.
- Ignition key removed from ignition switch.
- Interior light request active.
- Ignition turned on.
- Key in door lock switch.
- Liftgate jamb switch
- Liftgate release switch.
- Parking lights.
- Power door lock switches.
- Remote transmitter request to BCM.

AUDIBLE WARNINGS (CHIME)

When BCM determines a driver warning chime is needed, BCM will sound chime when applicable.

BATTERY RUNDOWN PROTECTION

BCM helps to prevent inadvertent battery rundown from situations such as courtesy lights left on. BCM will turn off courtesy light circuit after ignition has been off for 20 minutes and no light request input has been received.

DOOR LOCK/UNLOCK SWITCH FUNCTION

Driver's and passenger's door lock/unlock switches are inputs to BCM. BCM will command door lock relay to unlock driver's door according to state of driver's or passenger's door lock switch.

DRIVER WARNING TELLTALES

BCM activates seat belt telltale in instrument cluster.

EXIT LIGHTING

Interior lights will illuminate for 40 seconds when ignition key is removed from ignition switch.

ILLUMINATED ENTRY

Interior lights will illuminate for 15 seconds when any door is opened and closed.

INTERIOR ILLUMINATION

Discrete input to BCM from door jamb switches or door handle or dome light inputs provide control for courtesy lights, illuminated entry control of courtesy lights, vanity mirror light, dome lights, glove box lights and reading lights. BCM can turn on some of interior lighting independently of interior lighting system.

LIFTGATE RELEASE FUNCTION

Liftgate release switch is an input to BCM. If liftgate release switch is pressed, BCM will energize liftgate release relay and command liftgate to release if shift lever is in Park or Neutral or parking brake conditions are met.

LOCKOUT PREVENTION

Lockout prevention feature is activated when key is in ignition switch, any door is opened and power door lock is pressed. This feature will lock all doors, then unlock driver's door.

POWER DOOR LOCK/UNLOCK FUNCTION

BCM is responsible for energizing door lock relay. Door lock relay will be energized whenever BCM receives a command from any door lock/unlock switch or remote transmitter.

REMOTE ILLUMINATED ENTRY

Interior lights will illuminate for 40 seconds when unlock button or liftgate release button is pressed on transmitter. Interior lights will illuminate for 2 seconds when lock button is pressed on transmitter.

RETAINED ACCESSORY POWER

Retained Accessory Power (RAP) feature allows power windows, radio and front and rear wiper systems to be operated after ignition is turned from on to off. Power will be turned off when any door is opened or 10 minutes has elapsed.

COMPONENT LOCATIONS

COMPONENT LOCATIONS

Component	Location
Body Control Module (BCM)	In Center Console
Data Link Connector (DLC)	Under Left Side Of Instrument Panel, Near Steering Column
Electronic Brake Control Module (EBCM)	Near Brake Master Cylinder
Electronic Variable Orifice (EVO)/Passlock Control Module	Under Center Of Instrument Panel
Instrument Panel Fuse Block	Behind Left End Of Instrument Panel
Powertrain Control Module (PCM)	Behind Glove Box, Under Right Side Of Instrument

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	Panel
Remote Control Door Lock Receiver	On Steering Column Support Bracket
Transfer Case Control Module (TCCM)	Behind Left Side Of Instrument Panel, On Steering Column Support Bracket
Underhood Fuse Block	Left Rear Corner Of Engine Compartment
Vehicle Control Module (VCM)	Left Side Of Engine Compartment, On Fenderwell
Vehicle Interface Unit (VIU)	Under Right Rear Seat

PROGRAMMING

REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

CAUTION: If vehicle is equipped with radio anti-theft feature (THEFTLOCK(R)), obtain secret code from customer prior to disconnecting power to vehicle or removing RADIO fuse.

NOTE: Programming of RKE transmitters can not be done simultaneously. First RKE transmitter must be programmed completely before programming next RKE transmitter(s). A maximum of 4 RKE transmitters may be programmed into BCM memory.

1. Turn ignition switch to RUN position to deactivate Content Theft Deterrent (CTD) alarm system (if equipped). Turn ignition switch to OFF position. Remove RADIO fuse (25-amp) from instrument panel fuse block.

NOTE: While programming transmitters, wait for doors to unlock. Failure to do this, will cancel programming.

2. Cycle ignition switch from OFF to RUN position 3 times within 5 seconds, leaving ignition switch in ON position. Body Control Module (BCM) will indicate programming sequence is active by activating hatch release, locking doors, then unlocking doors.
3. Press and hold both LOCK and UNLOCK buttons on RKE transmitter to be programmed for 15 seconds. Doors will lock and unlock, and hatch release will activate to verify RKE transmitter has been recognized by BCM.
4. Repeat step 3 for remaining RKE transmitters. After programming RKE transmitter(s), reinstall RADIO fuse. Turn ignition switch to OFF position.

SELF-DIAGNOSTIC SYSTEM

NOTE: If vehicle is equipped with THEFTLOCK(R) anti-theft device, obtain code from customer prior to disconnecting power to vehicle. See owner's manual for proper THEFTLOCK(R) procedures.

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Body Control Module (BCM) is equipped with a self-diagnostic system which detects system failures or abnormalities. When a malfunction occurs, BCM will store a numerical code. Malfunctions are recorded as history or current failures. Intermittent failures may be caused by problems with electrical circuit. If a visual inspection does not locate problem, vehicle may be driven with a DVOM attached to suspect circuit. Abnormal voltage or resistance readings when problem occurs indicates problem is within that circuit. However, a damaged Electronic Variable Orifice (EVO)/Passlock module can occasionally be the cause.

RETRIEVING DIAGNOSTIC TROUBLE CODES

NOTE: DTCs 41-45 will only set while in Body Control Module (BCM) diagnostic mode and a button on remote keyless entry system transmitter is pressed. Codes are used to determine performance of Remote Keyless Entry (RKE) system transmitter and receiver in BCM.

1. Turn ignition switch to RUN position to disarm theft deterrent system (if equipped). Turn ignition switch to OFF position. Remove RADIO fuse No. 17 (25-amp) from instrument panel fuse block. See **COMPONENT LOCATIONS**.
2. Turn ignition switch to ACC position. Chime will sound 2 times to verify system has entered programming mode for customizing special features. Within 5 seconds, turn ignition switch to OFF position, then back to ACC position. Chime will sound 3 times to verify diagnostic mode has now been entered.
3. BCM will begin to flash codes on SECURITY indicator light 4 seconds after entering diagnostic mode. Each flash of indicator represents a number (i.e., one flash followed by 2 quick flashes represents DTC 12). DTC 12 will always be the first code displayed, indicating diagnostic mode is at beginning of code display. Last code to be displayed will be DTC 55 followed by hardware configuration, then software configuration. Each code is displayed 3 times before next code is displayed.
4. If more than one code is present, codes will display in numerical order. Codes will cycle sequentially until diagnostic mode is exited.

BCM DTC DEFINITIONS

DTC	Description
<u>12</u>	Diagnostic System Check
<u>21/31</u>	Courtesy Lights Feed Circuit Shorted To Ground
<u>22/32</u>	Courtesy Lights Return Circuit Shorted To Battery
<u>23/33</u>	Retained Accessory Power (RAP) Circuit Shorted To Ground Or Battery
<u>24/34</u>	Fasten Seat Belt Indicator Circuit Shorted To Ground Or Battery
<u>25/35</u>	SECURITY Indicator Light Status
<u>41</u> ⁽¹⁾	Last Transmitter Message Received Valid
<u>42</u> ⁽¹⁾	Last Transmitter Message Received Invalid
<u>43</u> ⁽¹⁾	Last Transmitter Message Received Had Sumcheck Error
<u>44</u> ⁽¹⁾	Last Transmitter Message Received Had Encryption Error
<u>45</u> ⁽¹⁾	Receiver Processing Currently In 20-Second Lock-Out
<u>55</u>	Begin Configuration Display

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U1300	Class 2 Data Link Low
U1301	Class 2 Data Link High
U1XXX	Loss Of XXX Communication

(1) This is a Remote Keyless Entry (RKE) system code only. Codes are automatically cleared after they are displayed. To display codes again, a transmitter button must be pushed again.

INPUT/OUTPUT DIAGNOSTICS

While in diagnostic mode, if certain Body Control Module (BCM) inputs are activated or deactivated, BCM will respond with various indicators. For example, if a door lock switch is pressed, or if door or rear compartment lid is opened or closed, BCM will flash fasten seat belt indicator light and will sound an audible warning tone. BCM will also attempt to perform operation normally performed by that switch transition.

BCM also responds to changes in shock sensor or tamper input. Tamper input is activated by minor blows to vehicle, and shock input is activated by heavy blows to vehicle. Shock input can be activated by tapping on shock sensor located behind right rear wheelwell. If either input is activated, BCM will cause horns to chirp and will sound an audible warning tone.

If interior light switch is activated or deactivated while BCM is in diagnostic mode, BCM will flash fasten seat belt indicator light, sound an audible warning tone and flash courtesy lights. On vehicles equipped with Universal Theft Deterrent (UTD), at each interior light switch transition, BCM will cause courtesy lights to flash, horns to chirp and exterior lights to flash.

CLEARING DIAGNOSTIC TROUBLE CODES

Current Diagnostic Trouble Codes (DTCs) will remain stored and displayed as long as Body Control Module (BCM) detects fault to be current in diagnostic mode. History DTCs will remain stored by BCM until cleared.

Current DTCs (codes 21-24) and history DTCs (codes 31-34) can be cleared by depressing door unlock switch for 4 seconds while BCM is in diagnostic mode. After 4-second time period, chime will sound 3 times to confirm codes have cleared.

SCAN TOOL DOES NOT COMMUNICATE WITH CLASS 2 DEVICE

Description

Modules connected to class 2 serial data line monitor serial data communications during normal vehicle operation. Operating information and commands are exchanged between modules. Connecting scan tool to Data Link Connector (DLC) allows communication with modules for diagnostics. DTCs may be set due to this symptom and during testing procedure. Complete testing procedure to ensure that all DTCs are diagnosed and cleared.

Diagnostic Aids

When class 2 serial data line is shorted to ground, DTC U1300 will be set. When class 2 serial data line is shorted to voltage, DTC U1301 will be set.

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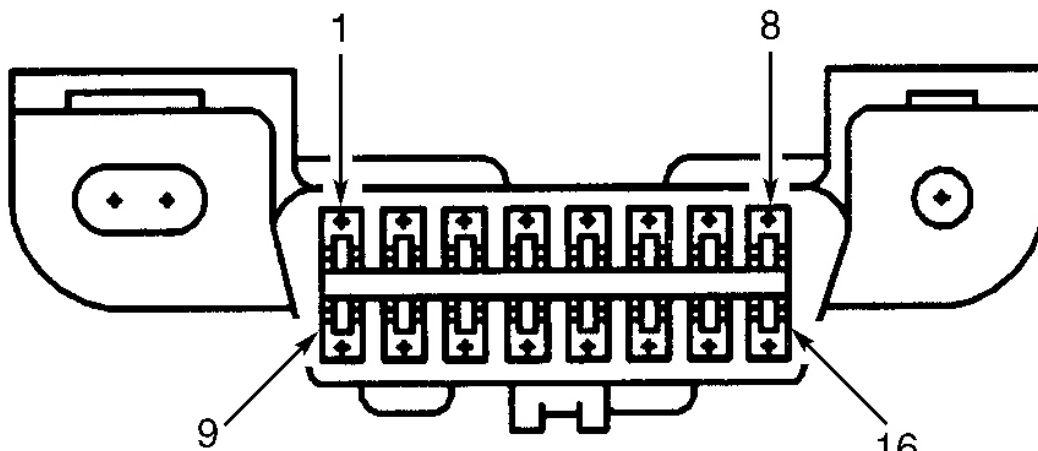
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Testing

1. Disconnect scan tool from Data Link Connector (DLC). Turn ignition switch to RUN position. Connect DVOM between DLC connector terminals No. 2 (Purple wire) and 4 (Black wire). See **Fig. 1** . If 7 volts or more exists, go to next step. If less than 7 volts exists, go to step 9 .
2. Turn ignition switch to OFF position. Disconnect Light Gray 36-pin engine-to-instrument panel harness connector, located in left rear corner of engine compartment. Turn ignition switch to RUN position. Observe voltage reading with DVOM still connected between DLC connector terminals No. 2 (Purple wire) and 4 (Black wire). If 7 volts or more exists, go to step 5 . If less than 7 volts exists, go to next step.
3. Turn ignition switch to OFF position. Reconnect Light Gray 36-pin engine-to-instrument panel harness connector. Disconnect Black 10-pin Electronic Brake Control Module (EBCM) connector, located in left rear corner of engine compartment near master cylinder. Turn ignition switch to RUN position. Observe voltage reading with DVOM still connected between DLC connector terminals No. 2 (Purple wire) and 4 (Black wire). If 7 volts or more exists, go to next step. If less than 7 volts exists, go to step 17 .
4. Turn ignition switch to OFF position. On models equipped with diesel engine, disconnect Powertrain Control Module (PCM) connectors located under right side of instrument panel behind glove box. On models equipped with gasoline engine, disconnect Vehicle Control Module (VCM) connectors located underhood on left inner fenderwell. On all models, turn ignition switch to RUN position. Observe voltage reading with DVOM still connected between DLC connector terminals No. 2 (Purple wire) and 4 (Black wire). If 7 volts or more exists, go to step 7 . If less than 7 volts exists, go to step 17 .
5. Turn ignition switch to OFF position. Disconnect Green 16-pin Electronic Variable Orifice/Passlock (EVO/Passlock) module connector, located under center of instrument panel. Turn ignition switch to RUN position. Observe voltage reading with DVOM still connected between DLC connector terminals No. 2 (Purple wire) and 4 (Black wire). If 7 volts or more exists, go to next step. If less than 7 volts exists, go to step 17 .
6. Turn ignition switch to OFF position. Disconnect Natural 32-pin Transfer Case Control Module (TCCM) connector, located behind left side of instrument panel on steering column support bracket. Turn ignition switch to RUN position. Observe voltage reading with DVOM still connected between DLC connector terminals No. 2 (Purple wire) and 4 (Black wire). If 7 volts or more exists, go to step 8 . If less than 7 volts exists, go to step 17 .
7. Repair short to voltage in Purple wire between PCM (diesel) or VCM (gasoline), EBCM and Light Gray 36-pin engine-to-instrument panel harness connector. See appropriate wiring diagram in DATA LINK CONNECTORS article in WIRING DIAGRAMS. After repairs, go to step 18 .
8. Repair short to voltage in Purple wire between DLC, EVO/Passlock module, TCCM and Light Gray 36-pin engine-to-instrument panel harness connector. See appropriate wiring diagram in DATA LINK CONNECTORS article in WIRING DIAGRAMS. After repairs, go to step 18 .
9. Turn ignition switch to OFF position. Connect DVOM between ground and DLC connector terminal No. 2 (Purple wire). If continuity exists, go to next step. If continuity does not exist, go to step 18 .
10. Disconnect Light Gray 36-pin engine-to-instrument panel harness connector, located in left rear corner of engine compartment. Observe reading with DVOM still connected between ground and DLC connector terminal No. 2 (Purple wire). If continuity exists, go to step 13 . If continuity does not exist, go to next step.
11. Reconnect Light Gray 36-pin engine-to-instrument panel harness connector. Disconnect Black 10-pin Electronic Brake Control Module (EBCM) connector, located in left rear corner of engine compartment near master cylinder. Observe reading with DVOM still connected between ground and DLC connector

- terminal No. 2 (Purple wire). If continuity exists, go to next step. If continuity does not exist, go to step 17 .
12. On models equipped with diesel engine, disconnect Powertrain Control Module (PCM) connectors located under right side of instrument panel behind glove box. On models equipped with gasoline engine, disconnect Vehicle Control Module (VCM) connectors located underhood on left inner fenderwell. On all models, observe reading with DVOM still connected between ground and DLC connector terminal No. 2 (Purple wire). If continuity exists, go to step 15 . If continuity does not exist, go to step 17 .
 13. Disconnect Green 16-pin Electronic Variable Orifice/Passlock (EVO/Passlock) module connector, located under center of instrument panel. Observe reading with DVOM still connected between ground and DLC connector terminal No. 2 (Purple wire). If continuity exists, go to next step. If continuity does not exist, go to step 17 .
 14. Disconnect Natural 32-pin Transfer Case Control Module (TCCM) connector, located under left side of instrument panel on steering column support bracket. Observe reading with DVOM still connected between ground and DLC connector terminal No. 2 (Purple wire). If continuity exists, go to step 16 . If continuity does not exist, go to step 17 .
 15. Repair short to ground in Purple wire between and Light Gray 36-pin engine-to-instrument panel harness connector, located in left rear corner of engine compartment. See appropriate wiring diagram in DATA LINK CONNECTORS article in WIRING DIAGRAMS. After repairs, go to step 18 .
 16. Repair short to ground in Purple wire between DLC, EVO/Passlock module, TCCM and Light Gray 36-pin engine-to-instrument panel harness connector, located in left rear corner of engine compartment. See appropriate wiring diagram in DATA LINK CONNECTORS article in WIRING DIAGRAMS. After repairs, go to step 18 .
 17. Replace the last control module that was disconnected. See appropriate procedure under **REMOVAL & INSTALLATION** . Go to next step.
 18. Clear DTCs using scan tool. Operate vehicle under conditions for running specific DTC. If DTC resets, go to step 1 .



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Fig. 1: Identifying Data Link Connector (DLC) Terminals
 Courtesy of GENERAL MOTORS CORP.

SCAN TOOL DOES NOT POWER UP

1. Using DVOM connected to ground, backprobe Data Link Connector (DLC) terminal No. 16 (Orange wire). See **Fig. 1** . If battery voltage exists, go to next step. If battery voltage does not exist, repair open or short to ground in Orange wire between DLC terminal No. 16 and AUX PWR fuse (25-amp) located in instrument panel fuse block. See appropriate wiring diagram in DATA LINK CONNECTORS article in WIRING DIAGRAMS.
2. Using DVOM connected to ground, backprobe DLC terminal No. 4 (Black wire). If continuity exists, go to next step. If continuity does not exist, repair open or short to voltage in Black wire between DLC terminal No. 4 and ground connection behind left side of instrument panel below instrument panel fuse block. See appropriate wiring diagram in DATA LINK CONNECTORS article in WIRING DIAGRAMS.
3. Check for poor connections between scan tool and DLC terminals No. 4 and 16. Repair as necessary. If DLC connections check okay, go to next step.
4. Scan tool may be malfunctioning. Check scan tool manual for diagnostic procedures. If necessary, substitute a known-good scan tool.

DIAGNOSTIC TESTS

NOTE: If vehicle is equipped with THEFTLOCK(R) anti-theft device, obtain code from customer prior to disconnecting power to vehicle. See owner's manual for proper THEFTLOCK(R) procedures.

DTC 12: DIAGNOSTIC SYSTEM CHECK

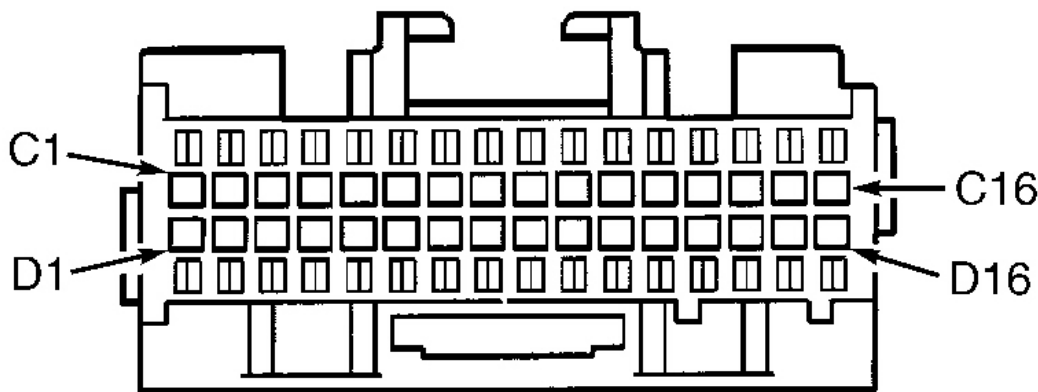
Description

DTC 12 is always displayed as the first code, indicating diagnostic display is in progress. If DTCs do not display, go to **Testing** . If DTCs display, go to appropriate diagnostic procedure. See **BCM DTC DEFINITIONS** table under SELF-DIAGNOSTIC SYSTEM.

Testing

1. Turn ignition switch to RUN position. If SECURITY indicator light illuminates, go to next step. If SECURITY indicator light does not illuminate, go to step 3 .
2. Attempt to enter Body Control Module (BCM) diagnostic mode. If SECURITY indicator light flashes DTCs, system is operating properly. Go to appropriate diagnostic procedure. See **BCM DTC DEFINITIONS** table under SELF-DIAGNOSTIC SYSTEM. If SECURITY indicator light does not flash DTCs, go to next step.
3. Disconnect Red 2-pin SECURITY indicator light connector. Connect DVOM between ground and Red 2-pin SECURITY indicator light connector terminal "B" (Dark Green wire). If battery voltage exists with ignition on, go to step 5 . If battery voltage does not exist with ignition on, go to next step.

4. Turn ignition switch to OFF position. Check for open or poor connection in Dark Green wire between Blue 32-pin BCM connector C1 terminal C16 and Red 2-pin SECURITY indicator light connector terminal "B". See **Fig. 2** . See **WIRING DIAGRAMS** . Repair as necessary and retest operation. If Dark Green wire is okay, go to step 8 .
5. Connect DVOM between ground and Red 2-pin SECURITY indicator light connector terminal "A" (Black wire). If continuity exists, go to next step. If continuity does not exist, go to step 7 .
6. Check for open or poor connection in Black wire between Black 6-pin BCM connector C2 terminal "A" and ground. See **WIRING DIAGRAMS** . Repair as necessary and retest operation. If Black wire is okay, go to step 8 .
7. Check for open or poor connection in Black wire between Red 2-pin SECURITY indicator light connector terminal "A" and ground connection located under right side of instrument panel mounted to Heating Ventilation Air Conditioning (HVAC) plenum bracket. See appropriate wiring diagram in ANTI-THEFT SYSTEMS article. Repair as necessary and retest operation. If Black wire is okay, go to next step.
8. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Retest operation.



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Fig. 2: Identifying Body Control Module (BCM) Connector C1 Terminals
 Courtesy of GENERAL MOTORS CORP.

DTC 21/31: COURTESY LIGHTS FEED CIRCUIT SHORTED TO GROUND

Description

Body Control Module (BCM) provides a 12-volt output to courtesy lights feed circuit when commanded by instrument panel dimmer switch, door jamb switch or rear compartment lid ajar indicator switch inputs.

DTC 21 will set when battery circuit is open due to a problem with COURTESY fuse No. 8, faulty harness or

connector, courtesy lights feed circuit is shorted to ground for more than 50 milliseconds while BCM is providing input on circuit, or BCM is defective.

When DTC 21 is set, courtesy lights will not come on and instrument panel dimmer switch will not operate. Glove box and center console lights will also be inoperative. DTC 21 will clear when fault is corrected and memory is cleared.

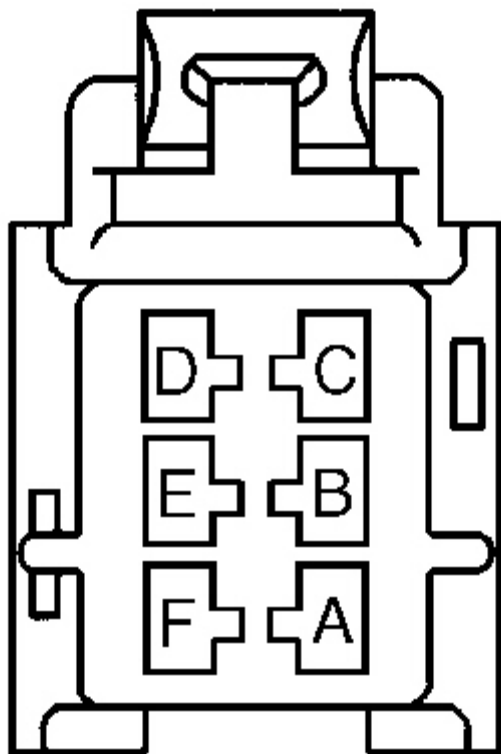
Diagnostic Aids

If only history DTC 31 is set, problem may be intermittent. Try to recreate fault by wiggling wiring and connectors while performing test. Check for poor connections at all connectors that may be causing intermittent condition. DTC 31 will clear when fault is corrected and memory is cleared.

Testing

NOTE: Check for proper installation of aftermarket electronic equipment.

1. Check CTSY fuse (20-amp) located in instrument panel fuse block. See **COMPONENT LOCATIONS** . If fuse is okay, go to step 3 . If fuse is open, go to next step.
2. Check for short to ground in Dark Blue/White wire between Black 6-pin BCM connector C2 terminal "B" and CTSY fuse. See **Fig. 3** . See **WIRING DIAGRAMS** . Repair as necessary. Replace CTSY fuse and retest operation. If Dark Blue/White wire checks okay, go to step 4 .
3. Check for open in Dark Blue/White wire between Black 6-pin BCM connector C2 terminal "B" and CTSY fuse. See **Fig. 3** . See **WIRING DIAGRAMS** . Repair as necessary and retest operation. If Dark Blue/White wire checks okay, go to next step.
4. Check for short to ground in Orange wire between Black 6-pin BCM connector C2 terminal "E" and appropriate interior light. See appropriate wiring diagram in ILLUMINATION/INTERIOR LIGHTS article. Repair as necessary and retest operation. If Orange wire checks okay, go to next step.
5. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Retest operation.



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Fig. 3: Identifying Body Control Module (BCM) Connector C2 Terminals
 Courtesy of GENERAL MOTORS CORP.

DTC 22/32: COURTESY LIGHTS RETURN CIRCUIT SHORTED TO BATTERY

Description

Body Control Module (BCM) provides a ground path on courtesy lights return circuit when commanded by instrument panel dimmer switch, door jamb switch or rear compartment lid ajar indicator switch inputs.

DTC 22 will set when courtesy lights return circuit is shorted to battery for more than 50 milliseconds while BCM is providing ground for circuit.

When DTC 22 is set, courtesy lights will not come on and instrument panel dimmer switch will not operate. Glove box and center console lights will operate normally. DTC 22 will clear when fault is corrected and memory is cleared.

Diagnostic Aids

If only history DTC 32 is set, problem may be intermittent. Try to recreate fault by wiggling wiring and connectors while performing test. Check for poor connections at all connectors that may be causing intermittent condition. DTC 32 will clear when fault is corrected and memory is cleared.

Testing

1. Check for short to battery voltage in White wire between headlight and panel dimmer switch and appropriate interior light. See appropriate wiring diagram in ILLUMINATION/INTERIOR LIGHTS article. Repair as necessary and retest operation. If White wire checks okay, go to next step.
2. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Retest operation.

DTC 23/33: RETAINED ACCESSORY POWER CIRCUIT SHORTED TO GROUND OR BATTERY

Description

Retained Accessory Power (RAP) is enabled when ignition switch is turned from RUN to OFF position. RAP will continue to supply power to power windows, radio and front and rear wipers for up to 10 minutes after ignition switch is turned to OFF position. RAP will shut off if any door is opened during this 10 minute period. Body Control Module (BCM) provides RAP function through RAP feed circuit to PWR WDO circuit breaker (25-amp), RADIO fuse (25-amp), WIPERS fuse (25-amp) and RR WIPER fuse (25-amp) located in instrument panel fuse block. See **COMPONENT LOCATIONS** .

DTC 23 will set when BCM detects RAP output on RAP feed circuit is either shorted to ground with RAP enabled or shorted to battery voltage with RAP disabled for more than 50 milliseconds. Code will also set if there is an open in Red wire between Black 6-pin BCM connector C2 terminal "F" and IGNB fuse (50-amp) located in underhood fuse block.

When DTC 23 is set, RAP will not operate (shorted to ground) or RAP will not deactivate when door is opened (shorted to battery). DTC 23 will clear when fault is corrected and memory is cleared.

Diagnostic Aids

If only history DTC 33 is set, problem may be intermittent. Try to recreate fault by wiggling wiring and connectors while performing test. Check for poor connections at all connectors that may be causing intermittent condition. DTC 33 will clear when fault is corrected and memory is cleared.

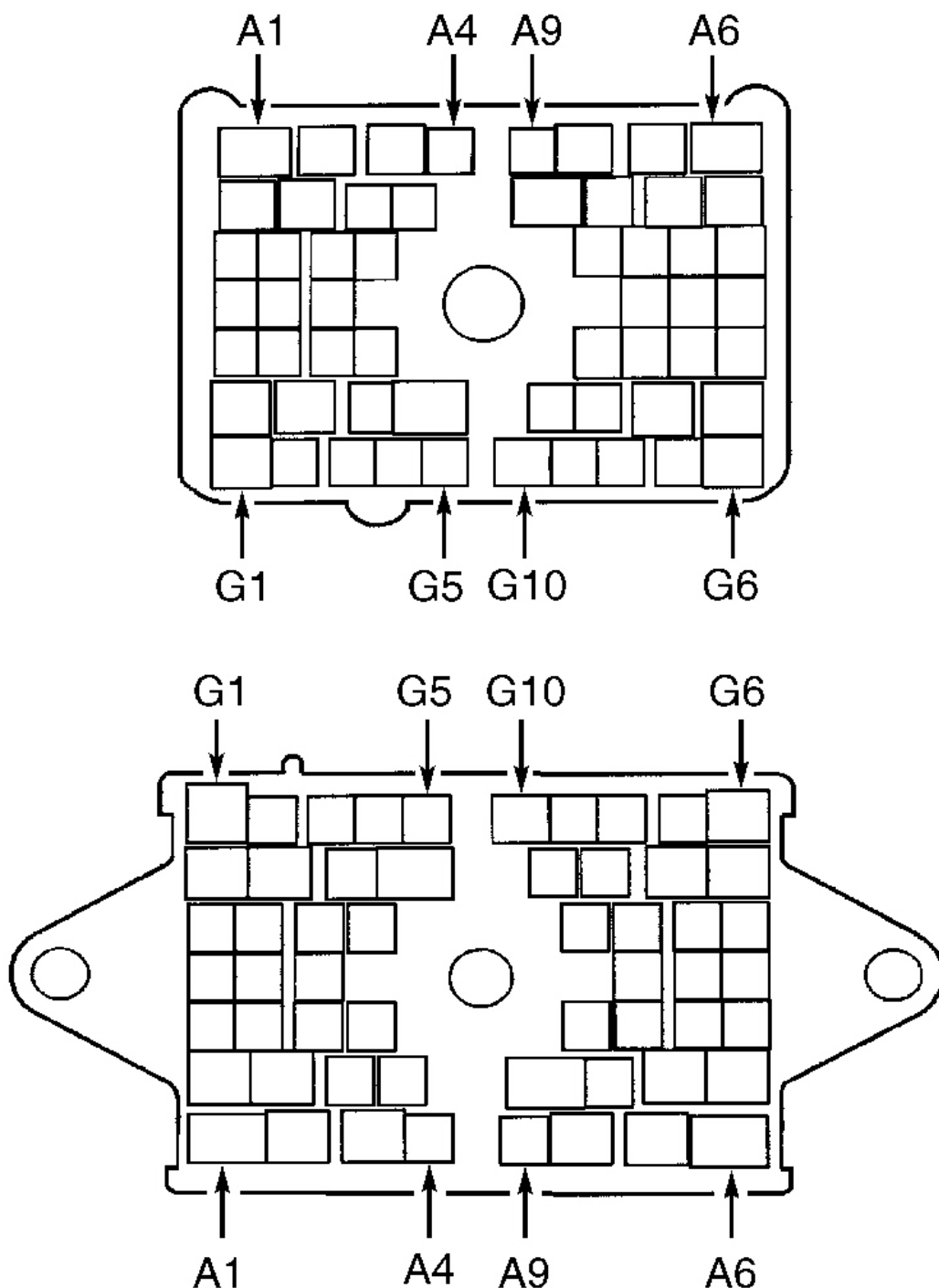
RAP Inoperative

1. Use DVOM connected to ground, backprobe Black 6-pin BCM connector C2 terminal "F" (Red wire). See **COMPONENT LOCATIONS** . See **Fig. 3** . If battery voltage exists, go to step 3 . If battery voltage does not exist, go to next step.
2. Check for open or poor connection in Red wire between Black 6-pin BCM connector C2 terminal "F" and IGNB fuse (50-amp) located in underhood fuse block. See **WIRING DIAGRAMS** . Repair as necessary and retest operation.

3. Gain access to Blue 56-pin in-line harness connector, located under floor console trim plate. Turn ignition switch to RUN position, then to OFF position (RAP mode). Ensure doors stay closed so as not to exit RAP mode. Using DVOM connected to ground, backprobe Blue 56-pin in-line harness connector terminal B9 (Dark Blue wire). See **Fig. 4** . If battery voltage exists, go to next step. If battery voltage does not exist, go to step 5 .
4. Using DVOM connected to ground, backprobe RR WIPER fuse located in instrument panel fuse block. If battery voltage exists, system is okay at this time. If battery voltage does not exist, go to step 7 .
5. Using DVOM connected to ground, backprobe Black 6-pin BCM connector C2 terminal "C" (Dark Blue wire). If battery voltage exists, go to next step. If battery voltage does not exist, go to step 8 .
6. Repair open in Dark Blue wire between Black 6-pin BCM connector C2 terminal "C" and Blue 56-pin in-line harness connector terminal B9. See **WIRING DIAGRAMS** . Retest operation.
7. Repair open in Dark Blue wire between Blue 56-pin in-line harness connector terminal B9 and CTSY fuse. See **WIRING DIAGRAMS** . Retest operation.
8. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Retest operation.

RAP Inactive

1. Gain access to Blue 56-pin in-line harness connector, located under floor console trim plate. Disconnect Blue 56-pin in-line harness connector. Using DVOM connected to ground, backprobe console-side of Blue 56-pin in-line harness connector terminal B9. See **Fig. 4** . If battery voltage exists, go to next step. If battery voltage does not exist, go to step 3 .
2. Check for short to voltage in Dark Blue wire between Black 6-pin BCM connector C2 terminal "C" and Blue 56-pin in-line harness connector terminal B9. See **Fig. 3** . See **WIRING DIAGRAMS** . Repair as necessary and retest operation. If Dark Blue wire checks okay, go to step 5 .
3. Using DVOM connected to ground, backprobe instrument panel-side of Blue 56-pin in-line harness connector terminal B9. If battery voltage exists, go to next step. If battery voltage does not exist, system is okay at this time.
4. Repair short to battery voltage in Dark Blue wire between Blue 56-pin in-line harness connector terminal B9 and instrument panel fuse block. See **WIRING DIAGRAMS** . Retest operation.
5. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Retest operation.



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Fig. 4: Identifying Blue 56-Pin In-Line Harness Connector Terminals

Courtesy of GENERAL MOTORS CORP.

DTC 24/34: FASTEN SEAT BELT INDICATOR CIRCUIT SHORTED TO GROUND OR BATTERY

Description

Body Control Module (BCM) provides a 12-volt output to fasten seat belt indicator, located on instrument cluster, while driver's seat belt is unfastened.

DTC 24 will set when BCM detects fasten seat belt output is either shorted to ground or shorted to voltage for more than 50 milliseconds.

When DTC 24 is set, fasten seat belt indicator will not come on when ignition is on and driver's seat belt is not fastened, or fasten seat belt indicator is always illuminated. DTC 24 will clear when fault is corrected and memory is cleared.

Diagnostic Aids

If only history DTC 34 is set, problem may be intermittent. Try to recreate fault by wiggling wiring and connectors while performing test. Check for poor connections at all connectors that may be causing intermittent condition. DTC 34 will clear when fault is corrected and memory is cleared.

Testing

1. Turn ignition switch to OFF position. Disconnect Blue 32-pin BCM connector C1. See **COMPONENT LOCATIONS** . Turn ignition switch to RUN position. If fasten seat belt indicator comes on, go to step 7 . If fasten seat belt indicator does not come on, go to next step.
2. Turn ignition switch to OFF position. Reconnect Blue 32-pin BCM connector C1. Disconnect instrument cluster connector. Connect a test light between instrument cluster connector terminals No. 30 (Yellow wire) and No. 31 (Black/White wire). Ensure driver's seat belt is unfastened. Turn ignition switch to RUN position. If test light illuminates, go to next step. If test light does not illuminate, go to step 4 .
3. Replace instrument cluster. See appropriate ANALOG INSTRUMENT PANELS article. Retest operation. If symptom still exists, go to next step.
4. Turn ignition switch to OFF position. Connect test light between battery voltage and instrument cluster connector terminal No. 30 (Yellow wire). If test light illuminates, go to next step. If test light does not illuminate, go to step 6 .
5. Repair short to ground in Yellow wire between Blue 32-pin BCM connector C1 terminal C4 and instrument cluster connector terminal No. 30. See **Fig. 2** . See appropriate wiring diagram in WARNING SYSTEMS article. If symptom still exists, go to next step.
6. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION.
7. Disconnect instrument cluster connector. Connect a test light between ground and instrument cluster connector terminal No. 30 (Yellow wire). If test light illuminates, go to next step. If test light does not illuminate, go to step 9 .
8. Repair short to battery voltage in Yellow wire between instrument cluster connector terminal No. 30 and Blue 32-pin BCM connector C1 terminal C4. See **Fig. 2** . See appropriate wiring diagram in WARNING

SYSTEMS article. If symptom still exists, go to next step.

9. Replace instrument cluster. See appropriate ANALOG INSTRUMENT PANELS article. Retest operation.

DTC 25/35: SECURITY INDICATOR LIGHT STATUS

Description

Body Control Module (BCM) provides a 12-volt output to illuminate SECURITY indicator light.

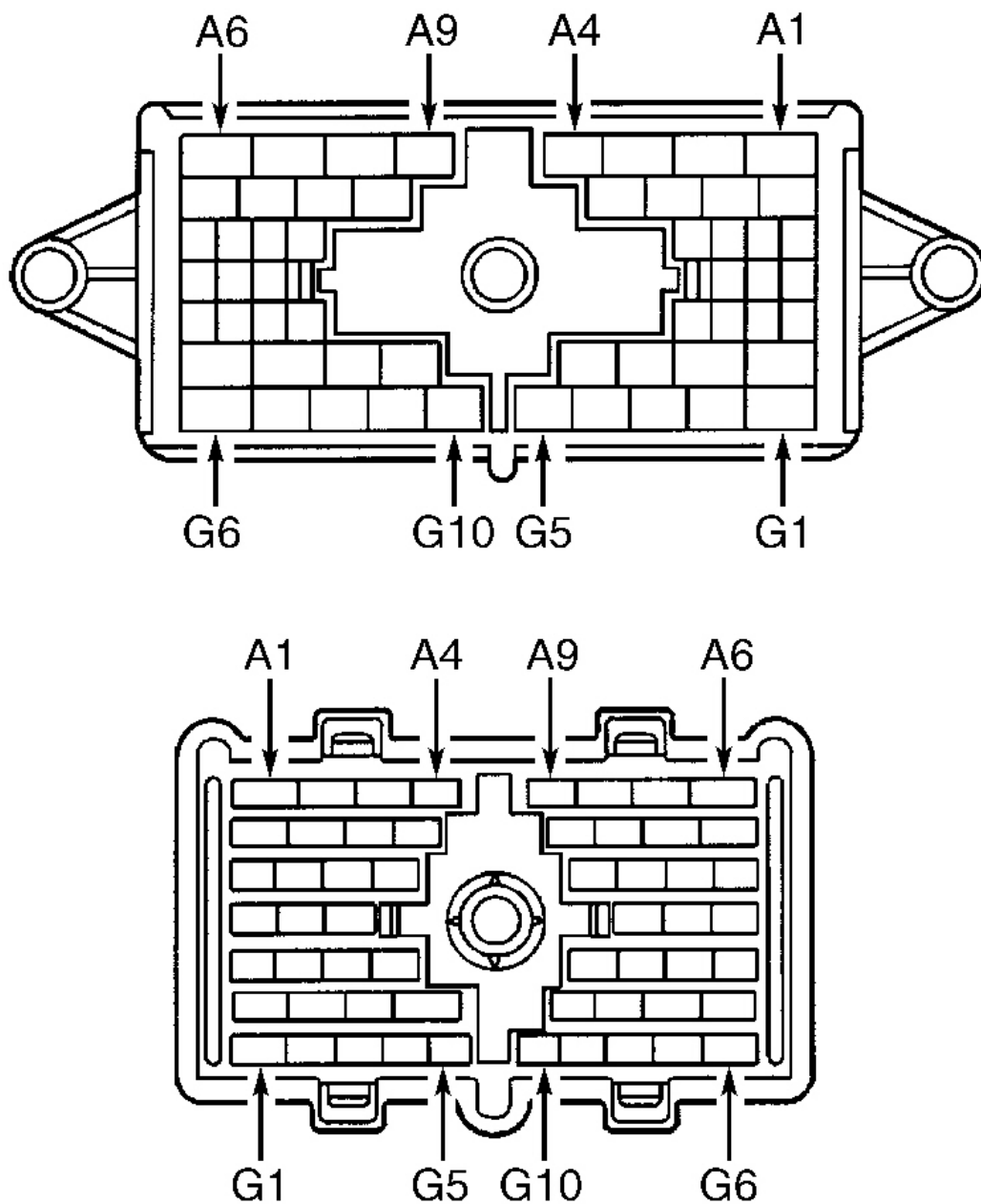
DTC 25/35 will set when BCM detects SECURITY indicator light circuit is either open or shorted to ground for more than 50 milliseconds.

Diagnostic Aids

If only history DTC 35 is set, problem may be intermittent. Try to recreate fault by wiggling wiring and connectors while performing test. Check for poor connections at all connectors that may be causing intermittent condition. DTC 35 will clear when fault is corrected and memory is cleared.

Testing

1. Turn ignition switch to RUN position. If SECURITY indicator light illuminates, go to next step. If SECURITY indicator light does not illuminate, go to step 3 .
2. Attempt to enter Body Control Module (BCM) diagnostic mode. If SECURITY indicator light flashes DTCs, system is operating properly. Go to appropriate diagnostic procedure. See **BCM DTC DEFINITIONS** table under SELF-DIAGNOSTIC SYSTEM. If SECURITY indicator light does not flash DTCs, go to next step.
3. Ensure ignition switch is in RUN position. Disconnect Red 2-pin SECURITY indicator light connector. Connect DVOM between ground and Red 2-pin SECURITY indicator light connector terminal "B" (Dark Green wire). If battery voltage exists, go to step 5 . If battery voltage does not exist, go to next step.
4. Turn ignition switch to OFF position. Check for open or poor connection in Dark Green wire between Blue 32-pin BCM connector C1 terminal C16 and Red 2-pin SECURITY indicator light connector terminal "B". See appropriate wiring diagram in appropriate ANTI-THEFT SYSTEMS article. See **Fig. 2** . Repair as necessary and retest operation. If Dark Green wire is okay, go to step 8 .
5. Connect DVOM between ground and Red 2-pin SECURITY indicator light connector terminal "A" (Black wire). If continuity exists, go to next step. If continuity does not exist, go to step 7 .
6. Check for poor connection or open in Black wire between Black 6-pin BCM connector C2 terminal "A" and Black 56-pin in-line harness connector terminal G1. See **WIRING DIAGRAMS** . See **Fig. 5** . Repair as necessary and retest operation. If Black wire checks okay, go to step 8 .
7. Check for open in Black wire between Red 2-pin SECURITY indicator light connector terminal "A" and ground connection located under right side of instrument panel mounted to Heating Ventilation Air Conditioning (HVAC) plenum bracket. See appropriate wiring diagram in appropriate ANTI-THEFT SYSTEMS article. Repair as necessary and retest operation. If Black wire checks okay, go to next step.
8. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Reprogram RKE transmitter(s). Retest operation.



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Fig. 5: Identifying Black 56-Pin In-Line Harness Connector Terminals
Courtesy of GENERAL MOTORS CORP.

DTC 41: LAST TRANSMITTER MESSAGE RECEIVED VALID

Description

Digital Radio Frequency (RF) message received from Remote Keyless Entry (RKE) system transmitter was valid, and all security checks passed.

DTC 41 will set when RKE system transmitter has been in programming mode out of range of Body Control Module (BCM), or when system transmitter is defective.

Diagnostic Aids

If RKE system transmitter digital RF message is sent and no DTC is set, transmitter may be defective. If RKE system transmitter digital RF message is sent and DTC 41 is set, but corresponding function does not operate, Body Control Module (BCM) or harness may be defective.

Testing

1. Reprogram Remote Keyless Entry (RKE) transmitter. See **REMOTE KEYLESS ENTRY (RKE) TRANSMITTER** under PROGRAMMING. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
2. Program a known-good RKE transmitter. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
3. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Reprogram RKE transmitter(s). Retest operation.

DTC 42: LAST TRANSMITTER MESSAGE RECEIVED HAD INVALID ID**Description**

Digital Radio Frequency (RF) message received was from a Remote Keyless Entry (RKE) system transmitter not programmed to Body Control Module (BCM). Remote function capabilities will not exist.

DTC 42 will set when RKE system transmitter was used without programming it to BCM. If transmitter was already programmed, transmitter may be defective. DTC 42 will also set if another transmitter was operated in the same area.

BCM should be placed in RKE system programming mode. Both transmitters must be programmed to BCM simultaneously.

Diagnostic Aids

DTC 42 may set if one or more of the following occur during BCM diagnostic mode:

- Transmitter is defective.
- Transmitter not programmed to BCM was used.

- Another transmitter was used in the immediate area.

Testing

1. Reprogram Remote Keyless Entry (RKE) transmitter. See **REMOTE KEYLESS ENTRY (RKE) TRANSMITTER** under PROGRAMMING. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
2. Program a known-good RKE transmitter. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
3. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Reprogram RKE transmitter(s). Retest operation.

DTC 43: LAST TRANSMITTER MESSAGE RECEIVED HAD SUMCHECK ERROR**Description**

The digital RF message received was from a Remote Keyless Entry (RKE) system transmitter that is programmed to Body Control Module (BCM), but message did not pass sumcheck security test. No remote function capabilities will exist.

DTC 43 will set when remote keyless entry system transmitter is out of synchronization with BCM. Fault may be caused by transmitter buttons being pressed more than 256 times while out of range of BCM. Fault may also be caused by transmitter battery being changed and buttons being pressed more than 10 times while out of range of BCM. Fault may also be present if digital RF message has an error due to outside noise from surrounding environment, or if transmitter is defective.

Most likely cause is that RKE system transmitter is out of synchronization. To synchronize transmitter, press LOCK and UNLOCK buttons on transmitter simultaneously for 5 seconds.

Diagnostic Aids

If DTC 43 is set, transmitter is out of synchronization with BCM. This can be caused by one or more of the following:

- Transmitter buttons were pressed more than 256 times while out of BCM RF signal range.
- Transmitter buttons were pressed more than 10 times while out of BCM RF signal range after transmitter battery was replaced.
- Transmitter RF signal was interrupted.
- Transmitter is defective.

Testing

1. Reprogram Remote Keyless Entry (RKE) transmitter. See **REMOTE KEYLESS ENTRY (RKE) TRANSMITTER** under PROGRAMMING. Attempt to perform all functions controlled by RKE

transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.

2. Program a known-good RKE transmitter. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
3. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Reprogram RKE transmitter(s). Retest operation.

DTC 44: LAST TRANSMITTER MESSAGE RECEIVED HAD ENCRYPTION ERROR

Description

The digital RF message received was from a Remote Keyless Entry (RKE) system transmitter that is programmed to Body Control Module (BCM), but message did not pass encryption security test. No remote function capabilities will exist.

DTC 44 will set when RKE system transmitter has been in program or re-synchronize mode while out of range of BCM. Fault may also be present if digital RF message has an error due to outside noise from surrounding environment, or if transmitter is defective.

Most likely cause is that RKE system transmitter is out of synchronization. To re-synchronize transmitter, press LOCK and UNLOCK buttons on transmitter simultaneously for 5 seconds.

Diagnostic Aids

If DTC 44 is set, transmitter is out of synchronization with BCM. This can be caused by one or more of the following:

- Transmitter was in program mode while out of BCM RF signal range.
- Transmitter RF signal was interrupted.
- Transmitter is defective.

Testing

1. Reprogram Remote Keyless Entry (RKE) transmitter. See **REMOTE KEYLESS ENTRY (RKE) TRANSMITTER** under PROGRAMMING. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
2. Program a known-good RKE transmitter. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
3. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Reprogram RKE transmitter(s). Retest operation.

DTC 45: RECEIVER PROCESSING CURRENTLY IN 20-SECOND LOCK-OUT

Description

At least 50 consecutive digital RF messages were received from a Remote Keyless Entry (RKE) system transmitter that is programmed to Body Control Module (BCM), but message did not pass encryption security test. BCM will cease processing any RKE system transmitter digital RF messages (good or bad) for 20 seconds. No remote function capabilities will exist.

DTC 45 will set when RKE system transmitter has been in program or re-synchronize mode while out of range of BCM. Fault may also be present if transmitter is defective.

Most likely cause is that RKE system transmitter is out of synchronization with BCM. To re-synchronize transmitter, press LOCK and UNLOCK buttons on transmitter simultaneously for 5 seconds.

Diagnostic Aids

If DTC 45 is set, transmitter is out of synchronization with BCM. This can be caused by one or more of the following:

- Transmitter was in program mode while out of BCM RF signal range.
- Transmitter is defective.

Testing

1. Reprogram Remote Keyless Entry (RKE) transmitter. See **REMOTE KEYLESS ENTRY (RKE) TRANSMITTER** under PROGRAMMING. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
2. Program a known-good RKE transmitter. Attempt to perform all functions controlled by RKE transmitter. If RKE transmitter controls all functions, repair is complete. If RKE transmitter does not control all functions, go to next step.
3. Replace Body Control Module (BCM). See **BODY CONTROL MODULE (BCM)** under REMOVAL & INSTALLATION. Retest operation.

DTC 55: BEGIN CONFIGURATION DISPLAY**Description**

DTC 55 is displayed to indicate the next 2 DTCs displayed are Body Control Module (BCM) hardware and software configurations. First number following DTC 55 is the hardware configuration. The second number is the software configuration. DTC 55 and both configuration numbers will always be displayed. After configuration numbers are displayed, entire DTC list will repeat beginning with DTC 12.

DTC U1300: CLASS 2 DATA LINK LOW**Description**

Modules connected to the class 2 serial data line monitor for serial data communications during normal vehicle

Microsoft

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operation. Operating information and commands are exchanged between modules. In addition, node alive (state of health) messages are transmitted by each module on the class 2 serial data line about once every 2 seconds.

When a module detects no messages and a low voltage on the class 2 serial data line for about 3 seconds, DTC U1300 is set, the setting of all other class 2 communication DTCs is inhibited and the module uses default values for all parameters received on the class 2 serial data line. A current DTC U1300 will clear when a valid class 2 message is detected on serial data line or at the end of the current ignition cycle. A history DTC U1300 can only be cleared using scan tool.

Diagnostic Aids

DTC U1300 cannot be retrieved as current. Diagnosis for current DTC U1300 is accomplished using **SCAN TOOL DOES NOT COMMUNICATE WITH CLASS 2 DEVICE** under SELF-DIAGNOSTIC SYSTEM. An intermittent condition can be caused by a short to ground on the class 2 serial data line.

DTC U1301: CLASS 2 DATA LINK HIGH**Description**

Modules connected to the class 2 serial data line monitor for serial data communications during normal vehicle operation. Operating information and commands are exchanged between modules. In addition, node alive (state of health) messages are transmitted by each module on the class 2 serial data line about once every 2 seconds.

When a module detects no messages and a high voltage on the class 2 serial data line for about 3 seconds, DTC U1301 is set, the setting of all other class 2 communication DTCs is inhibited and the module uses default values for all parameters received on the class 2 serial data line. A current DTC U1301 will clear when a valid class 2 message is detected on serial data line or at the end of the current ignition cycle. A history DTC U1301 can only be cleared using scan tool.

Diagnostic Aids

DTC U1301 cannot be retrieved as current. Diagnosis for current DTC U1300 is accomplished using **SCAN TOOL DOES NOT COMMUNICATE WITH CLASS 2 DEVICE** under SELF-DIAGNOSTIC SYSTEM. An intermittent condition can be caused by a short to voltage on the class 2 serial data line.

DTC U1XXX: LOSS OF XXX COMMUNICATION**Description**

Modules connected to class 2 serial data line monitor serial data communications during normal vehicle operation. Operating information and commands are exchanged between modules. When a module receives a message for a critical operating parameter, the module records the identification number of the module which sent the message for State Of Health (SOH) monitoring (node alive messages).

Once an identification number is learned by a module, it will monitor for that module's node alive message. Each module on the class 2 serial data line which is powered and performing functions that require detection of a communications malfunction is required to send a node alive message every 2 seconds.

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2000 ACCESSORIES & EQUIPMENT 'Body Control Modules - Escalade, Tahoe & Yukon Denali

When no message is detected by from a learned identification number for 5 seconds, DTC U1XXX (where XXX is equal to the identification number) is set. Use **DTC ID NUMBER** table to determine which module is not communicating.

When more than one loss of communication DTC is set in one or more modules, perform diagnosis in the following order:

- Current DTCs before history DTCs, unless otherwise indicated in testing procedure.
- DTC that was reported the most times.
- From lowest number DTC to highest number DTC.

DTC ID NUMBER

ID Number	Module
016	Powertrain Control Module (PCM)/Vehicle Control Module (VCM)/Vehicle Interface Unit (VIU)
026	Transfer Case Control Module (TCCM)
041	Electronic Brake Control Module (EBCM)
064	Body Control Module (BCM)
096	Instrument Panel Cluster (IPC)
192	Electronic Variable Orifice/Passlock (EVO/Passlock)

Testing

1. Check for open or short to ground in power circuit(s) for non-communicating module. See POWER DISTRIBUTION article in WIRING DIAGRAMS. Repair circuit(s) as necessary and go to step 9 . If circuit(s) are okay, go to next step.
2. Turn ignition switch to OFF position. Check for open in ground circuit(s) for non-communicating module. See GROUND DISTRIBUTION article in WIRING DIAGRAMS. Repair circuit(s) as necessary and go to step 9 . If circuit(s) are okay, go to next step.
3. Disconnect scan tool. Check for open in class 2 serial data line (Purple wire). See DATA LINK CONNECTORS article in WIRING DIAGRAMS. Repair circuit as necessary and go to step 7 . If circuit is okay, go to next step.
4. Check for open in class 2 serial data line (Purple wire) between Data Link Connector (DLC) terminal No. 2 and non-communicating module. See **Fig. 1** . See DATA LINK CONNECTORS article in WIRING DIAGRAMS. Repair circuit as necessary and go to step 7 . If circuit is okay, go to next step.
5. Check power, ground and class 2 serial data terminals at non-communicating module connector for poor connections or terminal tension. Repair as necessary and go to step 7 . If connections check okay, go to next step.
6. Replace non-communicating module. See appropriate procedure under **REMOVAL & INSTALLATION** . Go to step 9 .
7. Connect scan tool to DLC. Turn ignition on. On scan tool, select DISPLAY DTCS function for non-communicating module. If scan tool displays any DTCs that do not begin with a "U", perform appropriate diagnostic system check. See appropriate article for malfunctioning system. If scan tool does not display

- any DTCs or only displays DTCs beginning with a "U", go to next step.
8. Using scan tool, clear DTCs. Go to next step.
 9. Select DISPLAY DTCS function for module that had a loss of communication DTC set. If scan tool displays any DTCs that do not begin with a "U", perform appropriate diagnostic system check. See appropriate article for malfunctioning system. If scan tool does not display any DTCs or only displays DTCs beginning with a "U", go to next step.
 10. Using scan tool, clear DTCs. Continue diagnosing and clearing DTCs until all modules have been diagnosed and all DTCs have been cleared.

REMOVAL & INSTALLATION

TRANSFER CASE CONTROL MODULE (TCCM)

Removal & Installation

Remove lower instrument panel trim from below steering column. Remove 2 Transfer Case Control Module (TCCM) retaining screws. Disconnect TCCM electrical connector. Remove TCCM. To install, reverse removal procedure.

BODY CONTROL MODULE (BCM)

NOTE: It is necessary to remove one front seat during Body Control Module (BCM) replacement. Either seat can be removed.

Removal & Installation

1. Disconnect negative battery cable. Remove seat pedestal trim covers on one front seat. Remove seat-to-floor retaining bolts. Disconnect electrical connector(s) as necessary. Remove seat from vehicle. Remove console trim plate retaining screws. Lift upward on rear of console trim plate and slide rearward. Disconnect electrical connectors as necessary. Remove console trim plate.
2. Remove 4 console-to-floor retaining bolts. Disconnect instrument panel harness and cross-body harness connectors from console. Slide console rearward and remove from vehicle. Remove amplifier mounting screws. Disconnect amplifier electrical connector. Remove amplifier through bottom of console. Release retaining tabs on BCM. Remove BCM. To install, slide BCM into console and snap tabs into place. To complete installation, reverse removal procedure.

ELECTRONIC BRAKE CONTROL MODULE

Removal & Installation

See appropriate ANTI-LOCK article in BRAKES.

INFLATABLE RESTRAINT SENSING & DIAGNOSTIC MODULE (SDM)

Removal & Installation

See appropriate AIR BAG RESTRAINT SYSTEMS article.

INSTRUMENT PANEL CLUSTER

Removal & Installation

See appropriate ANALOG INSTRUMENT PANELS article.

POWERTRAIN CONTROL MODULE (PCM)/VEHICLE CONTROL MODULE (VCM)

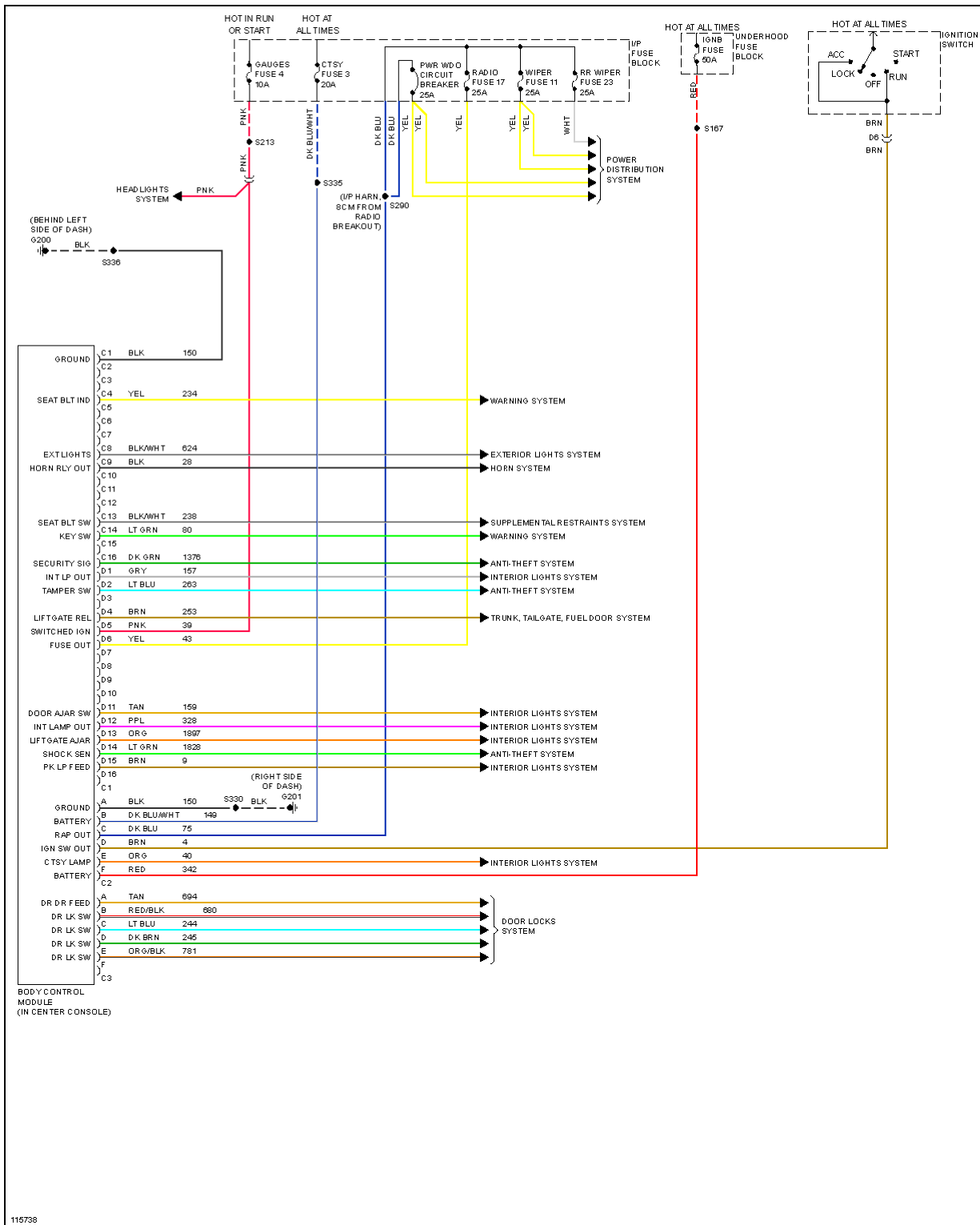
Removal & Installation

See appropriate REMOVAL, OVERHAUL & INSTALLATION article in ENGINE PERFORMANCE.

WIRING DIAGRAMS

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Fig. 6: Body Control Module (BCM) Wiring Diagram (Escalade, Tahoe & Yukon Denali)