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1995 FORD Galaxy OEM Service and Repair Workshop Manual

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SCCM (steering column control module)	B1380:13	Steering Wheel Right Switch Pack: Circuit Open	GO to Pinpoint Test B
SCCM (steering column control module)	B1380:4A	Steering Wheel Right Switch Pack: Incorrect Component Installed	GO to Pinpoint Test B
SCCM (steering column control module)	B1380:96	Steering Wheel Right Switch Pack: Component Internal Failure	GO to Pinpoint Test B
SCCM (steering column control module)	B1380:9E	Steering Wheel Right Switch Pack: Stuck On	GO to Pinpoint Test B
SECM (steering effort control module)	B137F:11	Steering Wheel Left Switch Pack: Circuit Short To Ground	GO to Pinpoint Test C
SECM (steering effort control module)	B137F:17	Steering Wheel Left Switch Pack: Circuit Voltage Above Threshold	GO to Pinpoint Test C
SECM (steering effort control module)	B137F:2A	Steering Wheel Left Switch Pack: Signal Stuck In Range	GO to Pinpoint Test C
SECM (steering effort control module)	B137F:4A	Steering Wheel Left Switch Pack: Incorrect Component Installed	GO to Pinpoint Test C
SECM (steering effort control module)	B1380:11	Steering Wheel Right Switch Pack: Circuit Short To Ground	GO to Pinpoint Test C
SECM (steering effort control module)	B1380:17	Steering Wheel Right Switch Pack: Circuit Voltage Above Threshold	GO to Pinpoint Test C
SECM (steering effort control module)	B1380:2A	Steering Wheel Right Switch Pack: Signal Stuck In Range	GO to Pinpoint Test C

The CCM (cruise control module) does not communicate with the scan tool	GO to Pinpoint Test A
The ACC (adaptive cruise control) is inoperative	GO to Pinpoint Test B
The cruise control switch is inoperative/does not operate correctly	GO to Pinpoint Test B
The ACC (adaptive cruise control) is inoperative - With Adaptive Steering	GO to Pinpoint Test C
The cruise control switch is inoperative/does not operate correctly - With Adaptive Steering	GO to Pinpoint Test C
The ACC (adaptive cruise control) does not function in rain or snow conditions	GO to Pinpoint Test G
ADAPTIVE CRUISE NOT AVAILABLE SENSOR BLOCKED SEE MANUAL message in the IPC (instrument panel cluster) message center	GO to Pinpoint Test G
Unexpected ACC (adaptive cruise control) braking	GO to Pinpoint Test O
Late or lack of ACC (adaptive cruise control) braking	GO to Pinpoint Test O
ACC (adaptive cruise control) does not slow the vehicle down until too close to a lead vehicle, does not detect a lead vehicle or vehicle follows closer than the set gap value	GO to Pinpoint Test O
Collision warning alerts in high sensitivity setting occur on bridges	GO to Pinpoint Test O
Noise during ACC (adaptive cruise control) braking	GO to Pinpoint Test O

Pinpoint Tests

PINPOINT TEST A : THE CCM (CRUISE CONTROL MODULE) DOES NOT COMMUNICATE WITH THE DIAGNOSTIC SCAN TOOL

Refer to Wiring Diagrams Cell 31for schematic and connector information.
Normal Operation and Fault Conditions The CCM (cruise control module) communicates with the diagnostic scan tool through the IPMA (image processing module A) on a private CAN (controller area

(419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SCCM (steering column control module) B137F:11	Steering Wheel Left Switch Pack: Circuit Short To Ground	Set in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects a short to ground from a left steering wheel switch input circuit.
SCCM (steering column control module) B137F:13	Steering Wheel Left Switch Pack: Circuit Open	Set in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects an open from a left steering wheel switch input circuit.
SCCM (steering column control module) B137F:4A	Steering Wheel Left Switch Pack: Incorrect Component Installed	Set in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects a fault from a left steering wheel switch input circuit.
SCCM (steering column control module) B137F:96	Steering Wheel Left Switch Pack: Component Internal Failure	Set in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects a fault from a left steering wheel switch input circuit.
SCCM (steering column control module) B137F:9E	Steering Wheel Left Switch Pack: Stuck On	Sets in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects a left steering wheel switch is active for more than 2 minutes.
SCCM (steering column control module) B1380:11	Steering Wheel Right Switch Pack: Circuit Short To Ground	Set in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects a short to ground from a right steering wheel switch input circuit.
SCCM (steering column control module) B1380:13	Steering Wheel Right Switch Pack: Circuit Open	Set in continuous memory and during the on-demand self-test when the SCCM (steering column control module) detects an open from a right steering wheel switch input circuit.

- Using a diagnostic scan tool, perform CCM (cruise control module) self-test.

Are any DTCs recorded?

Yes	If IPMA (image processing module A) DTCs were retrieved, DIAGNOSE and REPAIR those DTCs first. REFER to: Lane Keeping System (419-07 Lane Keeping System, Diagnosis and Testing). If PCM (powertrain control module) DTCs were retrieved, DIAGNOSE and REPAIR those DTCs first. REFER to the Master DTC (diagnostic trouble code) Chart. If ABS (anti-lock brake system) module DTCs were retrieved, DIAGNOSE and REPAIR those DTCs first. REFER to the Master DTC (diagnostic trouble code) Chart. If EBB (electric brake booster) DTCs were retrieved, DIAGNOSE and REPAIR those DTCs first. REFER to the Master DTC (diagnostic trouble code) Chart. If CCM (cruise control module) DTCs were retrieved, DIAGNOSE and REPAIR those DTCs first. See the DTC (diagnostic trouble code) Chart in this section. If SCCM (steering column control module) DTC (diagnostic trouble code) B137F:11, B137F:13, B137F:4A, B137F:96, B137F:9E, B1380:11, B1380:13, B1380:4A, B1380:96 or B1380:9E is retrieved, GO to B4 For all other SCCM (steering column control module) DTCs, REFER to: Steering Wheel and Column Electrical Components (211-05 Steering Wheel and Column Electrical Components, Diagnosis and Testing).

No	GO to B2

B2 CHECK FOR LOST COMMUNICATION DTCS

- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds. Retrieve Continuous Monitoring Diagnostic Trouble Codes (CMDTCs) from all modules.

REFER to: Driver Airbag - Vehicles Without: Adaptive Steering(501-20B Supplemental Restraint System, Removal and Installation).

- Disconnect Right Steering Wheel Switch C2999 .
- Disconnect Left Steering Wheel Switch C2998 .
- Ignition ON.
- Measure:

Left Steering Wheel Switch

Positive Lead	Measurement / Action	Negative Lead
C2998-2	$\overline{\underline{\text{V}}}$	C2998-5
C2998-3	$\overline{\underline{\text{V}}}$	C2998-5
C2998-4	$\overline{\underline{\text{V}}}$	C2998-5

Right Steering Wheel Switch

Positive Lead	Measurement / Action	Negative Lead
C2999-2	$\overline{\underline{\text{V}}}$	C2999-5
C2999-3	$\overline{\underline{\text{V}}}$	C2999-5
C2999-4	$\overline{\underline{\text{V}}}$	C2999-5

Are the voltages approximately 5 volts?

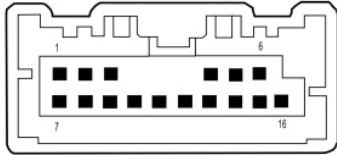| Yes	INSTALL a new steering wheel switch. in question. REFER to: Steering Wheel Multifunction Switch
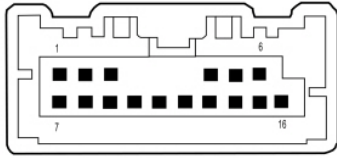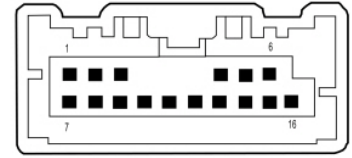
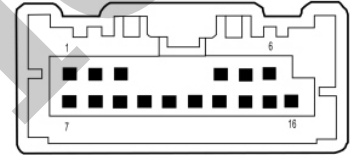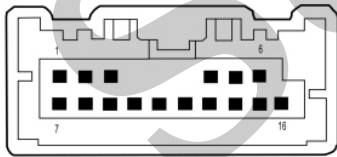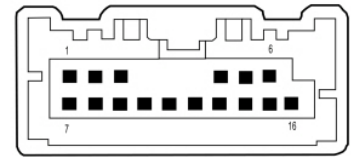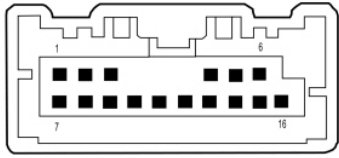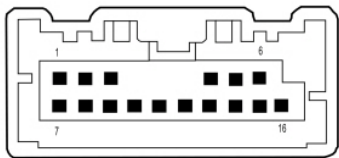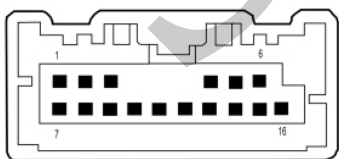|		
E253177 Upper Clockspring C218B, pin 14 (component side)	ᵥ̄	E253177 Upper Clockspring C218B, pin 13 (component side)
E253177 Upper Clockspring C218B, pin 7 (component side)	ᵥ̄	E253177 Upper Clockspring C218B, pin 9 (component side)
E253177 Upper Clockspring C218B, pin 8 (component side)	ᵥ̄	E253177 Upper Clockspring C218B, pin 9 (component side)

Upper Clockspring C218B, pin 11 (component side)		Lower Clockspring C218F, pin 5 (component side)

E253177

Ω

E253175

Upper Clockspring C218B, pin 12 (component side)		Lower Clockspring C218F, pin 6 (component side)

E253177

Ω

E253175

Upper Clockspring C218B, pin 14 (component side)		Lower Clockspring C218F, pin 8 (component side)

E253177

Ω

E253175
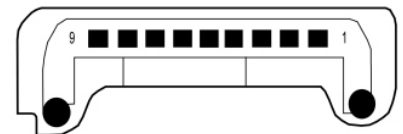
Upper Clockspring C218B, pin 13 (component side)		Lower Clockspring C218F, pin 7 (component side)
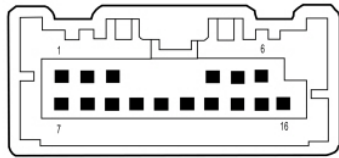
Upper Clockspring C218B, pin 9 (component side)	Ω	Lower Clockspring C218F, pin 3 (component side)

Are the resistances 3 ohms or less?

Yes	GO to B7

No	INSTALL a new clockspring. REFER to: Clockspring - Vehicles Without: Adaptive Steering (501-20B Supplemental Restraint System, Removal and Installation).

B7 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all SCCM (steering column control module) connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the SCCM (steering column control module) connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW service article instructions. If no service articles address this concern, INSTALL a new SCCM (steering column control module) .

Normal Operation and Fault Conditions REFER to: Steering Wheel and Column Electrical Components - System Operation and Component Description
(211-05 Steering Wheel and Column Electrical Components, Description and Operation).
 REFER to: Cruise Control - Vehicles With: Active Drive Assist/Intelligent Adaptive Cruise Control - System Operation and Component Description
(419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SECM (steering effort control module) B137F:11	Steering Wheel Left Switch Pack: Circuit Short To Ground	Set in continuous memory when the SECM (steering effort control module) detects a short to ground from a steering wheel switch input circuit.
SECM (steering effort control module) B137F:17	Steering Wheel Left Switch Pack: Circuit Voltage Above Threshold	Set in continuous memory when the SECM (steering effort control module) detects a short to voltage from a steering wheel switch input circuit.
SECM (steering effort control module) B137F:2A	Steering Wheel Left Switch Pack: Stuck in Range	Sets in continuous memory when the SECM (steering effort control module) detects a left steering wheel switch is active for more than 2 minutes.
SECM (steering effort control module) B137F:4A	Steering Wheel Left Switch Pack: Incorrect Component Installed	Set in continuous memory when the SECM (steering effort control module) detects an incorrect resistance value from a steering wheel switch input circuit.
SECM (steering effort control module) B1380:11	Steering Wheel Right Switch Pack: Circuit Short To Ground	Set in continuous memory when the SECM (steering effort control module) detects a short to ground from a steering wheel switch input circuit.
SECM (steering effort control module) B1380:17	Steering Wheel Right Switch Pack: Circuit Voltage Above Threshold	Set in continuous memory when the SECM (steering effort control module) detects an open from a steering wheel switch input circuit.
SECM (steering effort control module) B1380:2A	Steering Wheel Right Switch Pack: Stuck in Range	Sets in continuous memory when the SECM (steering effort control module) detects a right steering wheel switch is active for more than 2 minutes.
SECM (steering effort control module)	Steering Wheel Right Switch Pack: Incorrect Component	Set in continuous memory when the SECM (steering effort control module) detects an incorrect