

1999-2000 ACCESSORIES & EQUIPMENT**Power Door Locks & Remote Keyless Entry Systems - Town Car****DESCRIPTION & OPERATION****DOOR LOCKS**

The power door lock system uses switches to lock and unlock doors. These switches send signals to the Driver Door Module (DDM), which in turn operates the door lock actuators.

KEYLESS ENTRY

Vehicle may be equipped with a keyless entry keypad. Keypad will allow driver to lock or unlock vehicle doors without using a key when a correct 5-digit code is entered. Factory set code is located on owners wallet card in glove compartment and taped to computer module. Personal code can be programmed to accommodate personal seat and mirror settings.

REMOTE KEYLESS ENTRY

Remote keyless entry transmitters have a range of 32 feet. They allow driver to lock, unlock and open trunk lid while engine is off and vehicle is not in a forward or reverse gear. Up to 4 transmitters can be programmed to the Driver Door Module (DDM), of which 3 can be programmed to memory seats and mirrors. Remote transmitter panic feature can be activated by depressing the PANIC button.

DDM controls power door lock system based on inputs supplied by remote transmitter, door key, trunk lid release or door lock control switches. To unlock driver door using remote transmitter, depress UNLOCK button on remote transmitter. Depressing remote transmitter UNLOCK button twice within 5 seconds will unlock driver and passenger doors. To lock all doors, depress remote transmitter LOCK button. The horn will chirp, if enabled, to verify door lock.

TRUNK & FUEL DOOR RELEASE

NOTE: Trunk lid may be referred to as decklid.

The fuel door release switch is located on driver door trim panel. The release mechanism is integral with trunk latch assembly. The switch for the trunk lock is also located on driver's lower trim panel. Switch sends a signal to the Driver Door Module (DDM), which in turn sends a signal that activates trunk lid release solenoid.

AUTOLOCK/SMART DOOR LOCK

Autolock feature will lock all doors automatically when:

- Autolock feature is enabled.
- All doors are fully closed.
- Ignition switch is in RUN position.

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- Transmission range selector is in any forward range.
- Vehicle speed is greater than 3 MPH.

After initial lock, all doors will automatically relock when any door is opened and closed when above conditions are met. Smart door lock feature prevents driver from locking keys in vehicle. If any key is in the ignition, driver or front passenger door cannot be locked using door lock switches but can be locked using the mechanical button or LOCK button on a remote transmitter. If smart lock is in operation and a door lock switch is depressed, Driver Door Module (DDM) will lock and immediately unlock the doors and sound a key in ignition warning chime.

COMPONENT LOCATIONS

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Component	Location
Battery Junction Box	Left Rear of Engine Compartment, Above Wheelwell
Data Link Connector (DLC)	Below Left Side Of Instrument Panel
Door Lock Actuators	In Respective Door
Driver Door Module (DDM)	In Upper Front Corner Of Driver Door
Driver Seat Module (DSM)	Under Left Front Seat
Fuse Junction Panel	Behind Instrument Panel, Left Of Steering Column
Lighting Control Module (LCM)	Behind Center Of Instrument Panel

PROGRAMMING

REMOTE TRANSMITTER

NOTE: After first remote transmitter is programmed, all other remote transmitters will be erased. All remote transmitters must be programmed at the same time. Up to 4 transmitters may be programmed at one time.

1. Cycle ignition switch from OFF to RUN position 4 times within 3 seconds. Locks will lock and unlock to confirm programming mode has been entered. Press any button on remote transmitter.
2. If additional remote transmitters are to be programmed, press any button on remaining remote transmitters within 7.5 seconds. To exit programming mode, turn ignition switch to START position or wait 7.5 seconds.

REMOTE MEMORY ACTIVATION/DEACTIVATION

NOTE: Each procedure (activate/deactivate) must be completed within 5 seconds.

1. To activate remote memory, depress SET button on driver door panel. Depress any button on remote transmitter to be associated with a memory setting. Depress the 1 or 2 memory button on driver door panel.

2. To deactivate remote memory, depress SET button on driver door panel. Depress any button on remote transmitter to be disassociated with its memory setting. Depress SET button on driver door panel.

AUTOLOCK & HORN CHIRP

NOTE: **This procedure must be completed within 5 seconds.**

1. Turn ignition switch to RUN position. Depress UNLOCK button 3 times. Turn ignition off. Turn ignition switch to RUN position. Doors should lock and unlock to confirm entry into program mode.
2. Depress UNLOCK button once to toggle autolock feature ON/OFF. Horn will chirp to confirm toggling. To exit programming, turn ignition switch to OFF or START position or wait 7.5 seconds.

KEYPAD PROGRAMMING

1. Enter 5-digit permanent entry code at keypad. Within 5 seconds of pressing last digit, press 1/2 button on keypad to activate programming mode. Hold 1/2 button for more than 2 seconds to erase all stored customer codes. Door locks will lock and unlock to confirm all codes are erased. Existing codes do not need to be erased to program new codes.
2. Enter new 5-digit keypad code. To associate new code with personality position No. 1 or 2, press 1/2 button within 7.5 seconds of entering last digit of new code for position No. 1 or 3/4 button for position No. 2. Doors will lock and unlock to confirm new code is programmed. If another code is to be programmed, begin entering code within 7.5 seconds of pressing last button.
3. After all new codes are programmed, a new remote transmitter can be programmed within 7.5 seconds of pressing last digit in keypad code. To exit program mode, press keyless entry keypad buttons 7/8 and 9/0 at the same time or wait 7.5 seconds for Driver Door Module (DDM) to exit automatically.

TROUBLE SHOOTING

INSPECTION & VERIFICATION

Verify customers complaint by operating remote keyless entry system. Check for damaged remote transmitter, or low transmitter batteries. Attempt to duplicate condition by operating handles, locks, latches and mechanisms. Ensure battery is fully charged. Check for binding lock mechanisms. Check for blown fuse(s), loose or corroded connectors, or damaged wiring harness. Repair or replace components as necessary. Visually inspect the following components. If inspection reveals an obvious concern which can be easily serviced, correct malfunction before continuing inspection and verification. If no problems are found, go to **SELF-DIAGNOSTIC SYSTEM** .

Mechanical

- Binding Latch Mechanism
- Binding Linkage
- Misaligned Door

Electrical

- Battery
- Blown Fuses
- Circuitry Open/Shorted
- Loose Or Corroded Connectors
- Damaged Door Lock Actuator
- Damaged Door Lock Switch
- Damaged Lighting Control Module (LCM)
- Damaged Driver Door Module (DDM)

SELF-DIAGNOSTIC SYSTEM

NOTE: Before performing self-diagnostics, perform **TROUBLE SHOOTING** .

PRELIMINARY PROCEDURE

1. The remote keyless entry system utilizes a self-diagnostic system which may store a Diagnostic Trouble Code (DTC) if a problem exists in the system. DTCs may be retrieved using New Generation Star (NGS) tester and Data Link Connector (DLC) for diagnosis of system.
2. Connect NGS tester to DLC located below instrument panel. Using NGS tester, perform DATA LINK DIAGNOSTIC TEST. If NGS tester displays CKT 914, CKT 915 or CKT 70=ALL ECUS NO RESP/NOT EQUIP, see appropriate MODULE COMMUNICATIONS NETWORK article to diagnosis network concern. If NGS tester displays NO RESP/NOT EQUIP for Driver Door Module (DDM), perform **TEST B: NO COMMUNICATION WITH DDM** under SYSTEM TESTS. If NGS tester displays NO RESP/NOT EQUIP for Lighting Control Module (LCM), perform **TEST A: NO COMMUNICATION WITH LCM** under SYSTEM TESTS.
3. If NGS tester displays SYSTEM PASSED, retrieve and record continuous DTCs. Erase continuous DTCs. Perform self-test diagnostics for DDM and LCM using NGS tester. If DDM DTCs are retrieved, see **DRIVER DOOR MODULE (DDM) DTC INDEX** table to continue diagnosis. If LCM DTCs are retrieved, see **LIGHTING CONTROL MODULE (LCM) DTC INDEX** table to continue diagnosis. If no DTCs are retrieved, perform appropriate symptom test under **SYSTEM TESTS** .

DRIVER DOOR MODULE (DDM) DTC INDEX

DTC (1)	Description	Proceed To Test
B1322	LF Door Ajar Circuit Short To Ground	<u>F</u>
B1342	ECU Defective	(2)
B1396	Power Door Lock Circuit Short To Battery	<u>E</u>
B1397	Power Door Unlock Circuit Short To Battery	<u>E</u>
B1553	Decklid Release Circuit Short To Battery	<u>C</u>
B1566	Door Ajar Circuit Short To Ground	<u>F</u>
B2425	Remote Keyless Entry Out Of Synchronization	<u>K</u>

(1) Codes listed are for testing in this article only. For a complete list of DTCs, see MODULE COMMUNICATIONS NETWORK - TOWN CAR article.

(2) Replace driver door module and retest system operation.

LIGHTING CONTROL MODULE (LCM) DTC INDEX

DTC (1)	Description	Proceed To Test
B1334	Decklid Ajar Rear Door Circuit Short To Ground	<u>C</u>
B1342	ECU Defective	(2)

(1) Codes listed are for testing in this article only. For a complete list of DTCs, see MODULE COMMUNICATIONS NETWORK - TOWN CAR article.

(2) Replace Lighting Control Module (LCM) and retest system operation.

SYSTEM TESTS

SYMPTOM INDEX

Symptom	Proceed To Test
No Communication With LCM - Unable To Perform LCM Self-Test	<u>A</u>
No Communication With DDM - Unable To Perform DDM Self-Test	<u>B</u>
A Single Door Lock Inoperative/Decklid Does Not Operate Properly	<u>C</u>
Smart Lock Does Not Operate Properly	<u>D</u>
All Door Locks Inoperative/ Do Not Operate Properly	<u>E</u>
Single Door Lock Inoperative/Door Ajar Switch Does Not Operate Properly	<u>F</u>
Trunk Release Inoperative Using Remote Transmitter	<u>G</u>
Doors Do Not Lock/Unlock Using Remote Transmitter	<u>H</u>
Memory Seat Does Not Operate Properly Using Remote Transmitter	<u>J</u>
Remote Keyless Entry Out Of Synchronization	<u>K</u>
Fuel Filler Door Is Inoperative	<u>L</u>

TEST A: NO COMMUNICATION WITH LIGHTING CONTROL MODULE

1. Turn ignition off. Connect New Generation Star (NGS) tester. Turn ignition switch to RUN position. Using NGS tester, monitor LCM PID IGN_LC. If NGS tester displays UNABLE TO PERFORM TEST/FUNCTION - MODULE NOT RESPONDING: LCM - CHECK IGNITION STATUS/VERIFY CABLE REQUIREMENTS - CHECK CABLE CONNECTION, go to step 8 . If NGS tester display is not as specified, go to next step.
2. Using NGS tester, monitor LCM PID IGN_LC while rotating ignition switch through ACC, OFF, and RUN positions. If PID IGN_LC does not indicate OFF while in all positions, go to next step. If PID IGN_LC indicates OFF while in all positions, go to step 5 .
3. Using a voltmeter, check voltage between ground and output side (top terminal) of fuse junction panel fuse No. 14 (7.5-amp). If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, repair Red/Yellow wire between fuse junction panel fuse No. 14 and LCM and retest system operation.
4. Check fuse junction panel fuse No. 14 (7.5-amp). If fuse is okay, repair White/Yellow wire between fuse junction panel and ignition switch and retest system operation. If fuse is not okay, repair Red/Yellow wire between fuse junction panel fuse No. 14 and LCM. Replace fuse and retest system operation.

5. Using a voltmeter, check voltage between ground and output side (top terminal) of fuse junction panel fuse No. 18 (7.5-amp). If voltage is more than 10 volts, go to next step. If voltage is 10 volts or less, go to step 7 .
6. Turn ignition off. Disconnect LCM 12-pin connector C220 located behind center of instrument panel. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and LCM 12-pin connector C220, terminal No. 6 (Dark Blue/Light Green wire). See **Fig. 1** . If voltage is more than 10 volts, replace LCM and retest system operation. If voltage is 10 volts or less, repair Dark Blue/Light Green wire between fuse junction panel fuse No. 18 and LCM and retest system operation.
7. Check fuse junction panel fuse No. 18 (7.5-amp). If fuse is okay, repair Black/Light Green wire between fuse junction panel and ignition switch and retest system operation. If fuse is not okay, repair Dark Blue/Light Green wire between fuse junction panel fuse No. 18 and LCM. Replace fuse and retest system operation.
8. Using a voltmeter, check voltage between ground and output side (left terminal) of fuse junction panel fuse No. 31 (7.5-amp). If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, go to step 12 .
9. Check fuse junction panel fuse No. 31 (7.5-amp). If fuse is okay, repair Dark Blue/Orange wire between fuse junction panel and power distribution box and retest system operation. If fuse is not okay, go to next step.
10. Turn ignition off. Remove and disconnect headlight switch. Disconnect LCM 16-pin connector C221 located behind center of instrument panel. Using an ohmmeter, check resistance between ground and LCM 16-pin connector C221, terminal No. 25 (Orange/White wire). See **Fig. 1** . If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, repair short to ground in Orange/White wire between fuse junction panel fuse No. 31 and LCM and retest system operation.
11. Connect and install headlight switch. Using an ohmmeter, check resistance between ground and LCM 16-pin connector C221, terminal No. 25 (Orange/White wire). If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, replace headlight switch and retest system operation.
12. Disconnect LCM 16-pin connector C221 located behind center of instrument panel. Using a voltmeter, check voltage between ground and LCM 16-pin connector C221, terminal No. 25 (Orange/White wire). See **Fig. 1** . If voltage is more than 10 volts, go to next step. If voltage is 10 volts or less, repair open in Orange/White wire between fuse junction panel fuse No. 31 and LCM and retest system operation.
13. Disconnect LCM 13-pin connector C222 located behind center of instrument panel. Ensure ignition is off. Using an ohmmeter, check resistance between ground and LCM 16-pin connector C221 terminal No. 23 (Pink/Orange wire). See **Fig. 1** . Check resistance between ground and LCM 13-pin connector C222, terminal No. 13 (Pink/Orange wire). If both resistances are less than 5 ohms, see appropriate MODULE COMMUNICATIONS NETWORK article to continue diagnosis. If either resistances is 5 ohms or more, repair open in appropriate Pink/Orange wire between LCM and ground and retest system operation.

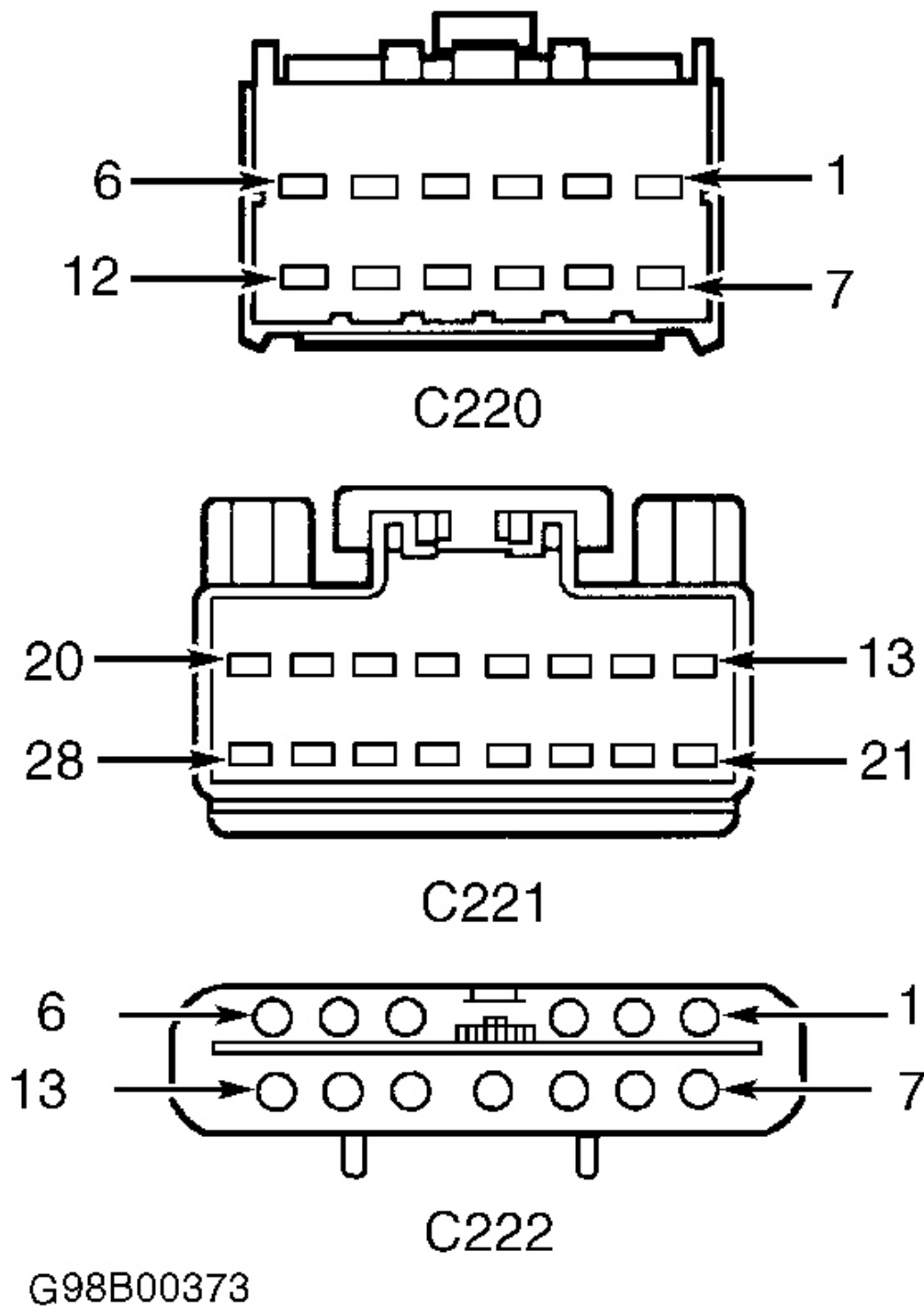


Fig. 1: Identifying Lighting Control Module (LCM) Connectors C220, C221 & C222

Courtesy of FORD MOTOR CO.

TEST B: NO COMMUNICATION WITH DRIVER DOOR MODULE

1. Ensure transmission is in Park. Turn ignition off. Check fuse No. 30 (7.5-amp) in fuse junction panel. If fuse is okay, go to next step. If fuse is not okay, go to step 5 .
2. Using a voltmeter, check voltage between ground and input side (left terminal) of fuse No. 30. If voltage is more than 10 volts, go to next step. If voltage is 10 volts or less, go to step 20 .
3. Install fuse No. 30. Remove door trim panel. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 29 (Light Green/Purple wire). See **Fig. 2** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Light Green/Purple wire between fuse junction panel and DDM. Retest system operation.
4. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 23 (Pink/Orange wire). See **Fig. 2** . If resistance 5 ohms or more, repair open in Pink/Orange wire and retest system operation. If resistance is less than 5 ohms, see appropriate MODULE COMMUNICATIONS NETWORK article to diagnosis network concern.
5. Replace fuse No. 30 in fuse junction panel. DO NOT operate any switches. If fuse opens again, go to next step. If fuse does not open again, go to step 9 .
6. Remove fuse No. 30 (7.5-amp) from fuse junction panel. Disconnect DDM 22-pin connector C520 and Driver Seat Module (DSM) 26-pin connector C313 located under driver seat. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 29 (Light Green/Purple wire). See **Fig. 2** . If resistance is 10 k/ohms or less, go to next step. If resistance is more than 10 k/ohms, go to step 8 .
7. Check driver door lock switch, right front passenger door lock switch and decklid release switch. See **DOOR LOCK SWITCH** and **DECKLID RELEASE SWITCH** under COMPONENT TESTS. Check outside rear view mirror control switch. See appropriate POWER MIRRORS article. Check driver power seat control switch. See appropriate POWER SEATS article. If all switches are okay, repair short to ground in Light Green/Purple wire and retest system operation. If any switch(es) are not okay, replace appropriate switch and retest system operation.
8. Connect DSM 26-pin connector C313. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 29 (Light Green/Purple wire). If resistance is more than 10 k/ohms, replace DDM and retest system operation. If resistance is 10 k/ohms or less, replace DDM and retest system operation.
9. Lock and unlock doors using driver and right passenger door lock switches. If fuse No. 30 opens, go to next step. If fuse No. 30 is okay, go to step 12 .
10. Check driver door lock switch and right front passenger door lock switch. See **DOOR LOCK SWITCH** under COMPONENT TESTS. If switches are okay, go to next step. If any switch is not okay, replace appropriate switch(es) and retest system operation.
11. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Disconnect driver door lock switch 7-pin connector. Disconnect right front passenger door lock switch 7-pin connector. Using an ohmmeter, check resistance between ground and driver door lock switch connector C503 terminal No. 2 (Pink/Yellow wire). Check resistance between ground and driver door lock switch connector C505 terminal No. 6 (Pink/Light Green wire). If either or both resistance readings are 10 k/ohms or less, repair short to ground in appropriate wire(s). If both resistance readings are more than 10

k/ohms, replace DDM and retest system operation.

12. Activate outside rear view mirror control switch through all positions. If fuse No. 30 opens, go to next step. If fuse No. 30 is okay, go to step 15 .
13. Check outside rear view mirror control switch. See appropriate POWER MIRRORS article. If switch is okay, go to next step. If switch is not okay, replace switch and retest system operation.
14. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Disconnect outside rear view mirror control switch 10-pin connector. Using an ohmmeter, check resistance between ground and appropriate terminals at outside rear view mirror control switch connector C550. See **MIRROR CONTROL SWITCH TERMINAL IDENTIFICATION** table. If all resistance readings are more than 10 k/ohms, replace DDM and retest system operation. If any resistance reading are 10 k/ohms or less, repair short to ground in appropriate wire(s) and retest system operation.

MIRROR CONTROL SWITCH TERMINAL IDENTIFICATION

Terminal No.	Wire Color
1	Red/Orange
2	Dark Green/Orange
4	Yellow/Black
8	Purple/Orange
9	Dark Blue/Orange

15. Activate memory set/recall switch through all positions. If fuse No. 30 opens, go to next step. If fuse No. 30 does not open, go to step 18 .
16. Check driver seat control switch. See appropriate POWER SEATS article. If switch is okay, go to next step. If switch is not okay, replace switch and retest system operation.
17. Disconnect DDM 22-pin connector C520 and DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect driver seat control switch 14-pin connector C509. Using an ohmmeter, check resistance between ground and driver seat control switch connector C509 terminals No. 4, 5, 6 and 7. See **DRIVER SEAT CONTROL SWITCH TERMINAL IDENTIFICATION** table. If all resistance readings are more than 10 k/ohms, replace DDM and retest system operation. If any resistance readings are 10 k/ohms or less, repair short to ground in appropriate wire(s) and retest system operation.

DRIVER SEAT CONTROL SWITCH TERMINAL IDENTIFICATION

Terminal No.	Wire Color
1	Yellow/White
2	Red/Light Blue
3	Yellow/Light Blue
4	White/Orange
5	Brown/Orange
6	Brown/Light Green
7	Black/Orange
9	Red/White
11	Yellow/Light Green
12	Red/Light Green

13	Gray
14	Gray/Black

18. Activate driver seat control switch through all positions. If fuse No. 30 opens, go to next step. If fuse No. 30 does not open, system is operating properly at this time. Retest system operation.
19. Remove door trim panel. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect driver seat control switch 14-pin connector C509. Using an ohmmeter, check resistance between ground and terminals No. 1, 2, 3, 9, 11, 12, 13 and 14 at driver seat control switch connector C509. See **DRIVER SEAT CONTROL SWITCH TERMINAL IDENTIFICATION** table. If all resistance readings are more than 10 k/ohms, replace DDM and retest system operation. If any resistance readings are 10 k/ohms or less, repair short to ground in appropriate wire(s) and retest system operation.
20. Remove maxi-fuse No. 8 (30-amp) from battery junction box. Using a voltmeter, check voltage between ground and maxi-fuse No. 8 input cavity (Black/Orange wire). If voltage is more than 10 volts, go to next step. If voltage is 10 volts or less, repair Black/Orange wire and retest system operation.
21. Remove fuse junction panel fuse No. 30 (7.5-amp). Disconnect Driver Seat Module (DSM) 2-pin connector C337 located under driver seat. Using an ohmmeter, check resistance in Red wire between battery junction box maxi-fuse No. 8 output cavity and fuse junction panel fuse No. 30 input cavity. If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Red wire and retest system operation.
22. Using an ohmmeter, check resistance between ground and battery junction box maxi-fuse No. 8 output cavity (Red wire). If resistance is more than 10 k/ohms, replace DDM and retest system operation. If resistance is 10 k/ohms or less, repair short to ground in Red wire and retest system operation.

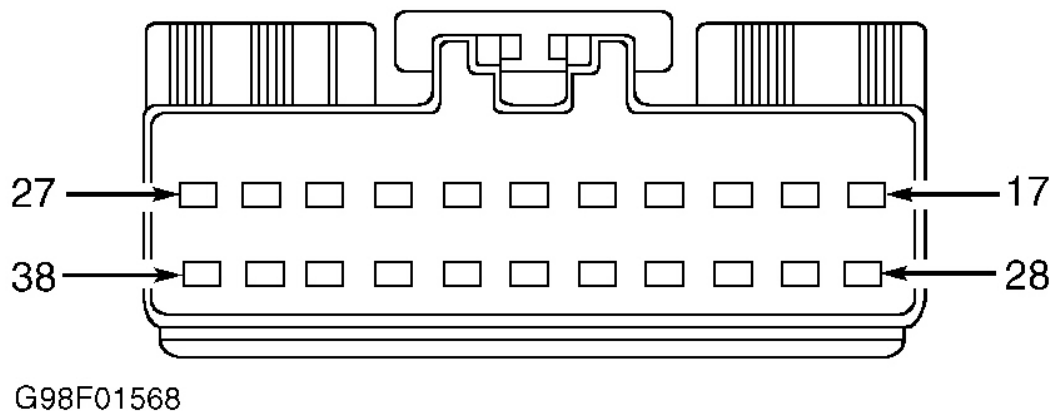


Fig. 2: Identifying DDM Connector C520 Terminals
 Courtesy of FORD MOTOR CO.

TEST C: SINGLE DOOR LOCK IS INOPERATIVE/DECKLID DOES NOT OPERATE PROPERLY (DTCS B1553 & B1334)

1. Retrieve Diagnostic Trouble Codes (DTCs). See **SELF-DIAGNOSTIC SYSTEM** . If no DTCs are

retrieved, go to step 6 . If Driver Door Module (DDM) DTC B1553 is retrieved during preliminary procedure DDM self-test, go to next step. If any other DTCs are retrieved, see appropriate DTC INDEX table under SELF-DIAGNOSTIC SYSTEM to continue diagnosis.

2. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and DDM 16-pin connector C521 terminal No. 7 (White/Purple wire). See **Fig. 3** . If voltage is more than 10 volts, reconnect DDM 16-pin connector C521 and go to next step. If voltage is 10 volts or less, go to step 4 .
3. Check decklid release switch. See **DECKLID RELEASE SWITCH** under COMPONENT TESTS. If decklid switch is okay, repair White/Purple wire and retest system operation. If decklid switch is not okay, replace switch and retest system operation.
4. Turn ignition off. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Using a voltmeter, check voltage between ground and DDM 22-pin connector C520 terminal No. 28 (Red wire). See **Fig. 2** . If voltage is more than 10 volts, go to next step. If voltage is 10 volts or less, replace DDM and retest system operation.
5. Check decklid release solenoid. See **DECKLID RELEASE SOLENOID** under COMPONENT TESTS. If decklid release solenoid is okay, repair Red wire and retest system operation. If decklid release solenoid is not okay, replace solenoid and retest system operation.
6. Using NGS tester, monitor DDM PID DLIDRLS while pressing and releasing decklid release switch several times. If PID values do not agree with switch positions, go to next step. If PID values agree with switch position, go to step 11 .
7. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Using a voltmeter, check voltage between ground and DDM 16-pin connector C521 terminal No. 7 (White/Purple wire). See **Fig. 3** . If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, replace DDM and retest system operation.
8. Turn ignition off. Disconnect decklid release switch connector. Using an ohmmeter, check resistance in White/Purple wire between DDM 16-pin connector C521 terminal No. 7 and decklid release switch connector. See **Fig. 3** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in White/Purple wire and retest system operation.
9. Using an ohmmeter, check resistance between ground and DDM 16-pin connector C521 terminal No. 7 (White/Purple wire). See **Fig. 3** . If resistance is less than 5 ohms, repair short to ground and retest system operation. If resistance is 5 ohms or more, go to next step.
10. Check decklid release switch. See **DECKLID RELEASE SWITCH** under COMPONENT TESTS. If decklid release switch is okay, repair Light Green/Purple wire and retest system operation. If decklid release switch is not okay, replace switch and retest system operation.
11. Turn ignition off. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Using a voltmeter, check voltage between ground and DDM 22-pin connector C520 terminal No. 26 (Black/White wire). See **Fig. 2** . If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, go to step 15 .
12. Ensure transmission is in Park position. Turn ignition off. Check condition of fuse junction panel fuse No. 29 (20-amp). If fuse is okay, go to next step. If fuse is not okay, replace fuse and retest system operation. If fuse fails again, go to step 14 .
13. Using an ohmmeter, measure the resistance in Black/White wire between DDM 22-pin connector C520 terminal No. 26 and output side (right terminal) of fuse No. 29. If resistance is less than 5 ohms, go to step 21 . If resistance is 5 ohms or more, repair open in Black/White wire and retest system operation.
14. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 26

(Black/White wire). See **Fig. 2** . If resistance is less than 5 ohms , repair short to ground in Black/White wire and retest system operation. If resistance is 5 ohms or more, replace DDM and retest system operation.

15. Disconnect decklid release solenoid connector. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and decklid release solenoid connector Red wire terminal while actuating decklid release switch. If voltage is 5 volts or less when decklid release switch is actuated, go to next step. If voltage is more than 5 volts when decklid release switch is actuated, go to step 19 .
16. Turn ignition off. Using an ohmmeter, check resistance in Red wire between DDM 22-pin connector C520 terminal No. 28 and decklid release solenoid connector. See **Fig. 2** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Red wire and retest system operation.
17. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 28 (Red wire). See **Fig. 2** . If resistance is 5 ohms or more, go to next step. If resistance is less than 5 ohms, repair short to ground in Red wire and retest system operation.
18. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and DDM 22-pin connector C520 terminal No. 28 (Red wire). See **Fig. 2** . If voltage is more than 10 volts, repair Red wire and retest system operation. If voltage is 10 volts or less, replace DDM and retest system operation.
19. Check decklid release solenoid. See **DECKLID RELEASE SOLENOID** under COMPONENT TESTS. If decklid release solenoid is okay, go to next step. If decklid release solenoid is not okay, replace solenoid and retest system operation.
20. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and decklid release solenoid connector Black wire terminal. If voltage is more than 10 volts, repair Black wire and retest system operation. If voltage is 10 volts or less, system is operating properly at this time.
21. Ensure transmission is in Park position. Turn ignition off. Check condition of battery junction box fuse No. 11 (40-amp). If fuse is okay, go to next step. If fuse is not okay, replace fuse and retest system operation. If fuse fails again, go to step 23 .
22. Using a voltmeter, check voltage between ground and power distribution box fuse No. 11 (40-amp) output cavity (Black/White wire). If voltage is more than 10 volts, repair Black/White wire and retest system operation. If voltage is 10 volts or less, repair Black/Orange wire and retest system operation.
23. Remove fuse junction panel fuse No. 29 (20-amp). Remove accessory delay relay located in fuse junction panel. Using an ohmmeter, check resistance between ground and power distribution box fuse No. 11 (40-amp) output cavity (Black/White wire). If resistance is more than 10 k/ohms, replace accessory delay relay and retest system operation. If resistance is 10 k/ohms or less, repair Black/White and/or Black/Pink wire(s) and retest system operation.

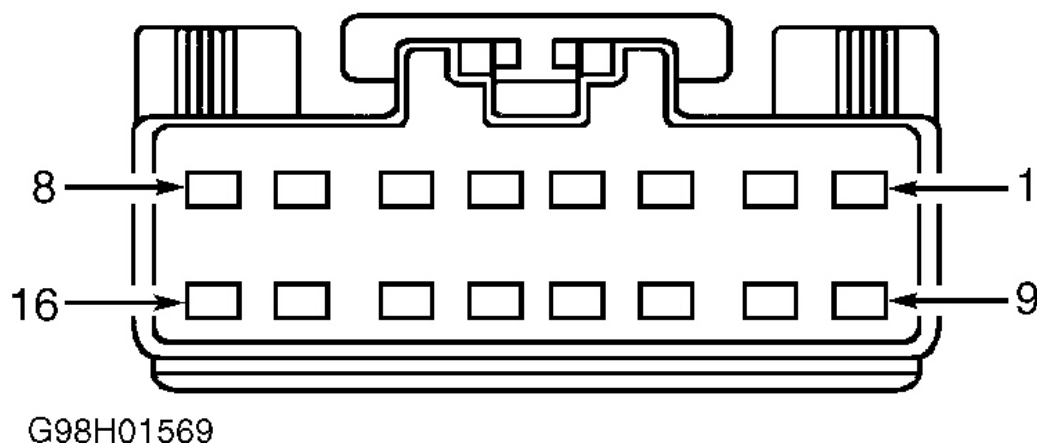


Fig. 3: Identifying DDM Connector C521 Terminals
 Courtesy of FORD MOTOR CO.

TEST D: SMART LOCK DOES NOT OPERATE PROPERLY

1. Using New Generation Star (NGS) tester, monitor DDM PID D_DR_DD while opening and closing driver door. If DDM PID D_DR_DD values agree with door position, go to next step. If DDM PID D_DR_DD values do not agree with door positions, go to step 3 .
2. Using NGS tester, monitor DDM PID P_DR_DD while opening and closing right front passenger door. If DDM PID P_DR_DD values agree with door position, go to step 9 . If DDM PID P_DR_DD values do not agree with door positions, go to step 5 .
3. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect driver door ajar switch connector located in upper rear of driver door. Using an ohmmeter, check resistance between ground and DDM 16-pin connector C521 terminal No. 5 (Dark Blue wire). See **Fig. 3** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Dark Blue wire and retest system operation.
4. Using an ohmmeter, check resistance between ground and DDM 16-pin connector C521 terminal No. 5 (Dark Blue wire). If resistance is more than 10 k/ohms, go to step 7 . If resistance is 10 k/ohms or less, repair short to ground in Dark Blue wire and retest system operation.
5. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect all passenger door ajar switch connectors located in upper rear of passenger doors. Using an ohmmeter, check resistance in Black/Orange wire between DDM 16-pin connector C521 terminal No. 6 and passenger door ajar switch connector. See **Fig. 3** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Black/Orange wire and retest system operation.
6. Using an ohmmeter, check resistance between ground and DDM 16-pin connector C521 terminal No. 6 (Black/Orange wire). See **Fig. 3** . If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, repair short to ground in Black/Orange wire and retest system operation.
7. Check door ajar switches. See **DOOR AJAR SWITCH** under COMPONENT TESTS. If all door ajar

switches are okay, go to next step. If any door ajar switch is not okay, replace appropriate door ajar switch and retest system operation.

8. Disconnect all door ajar switch connectors located in upper rear of doors. Using an ohmmeter, check resistance between ground and all door ajar switch connectors Black wire terminal. If resistances are less than 5 ohms, replace DDM and retest system operation. If any resistance is 5 ohms or more, repair open in appropriate Black wire(s) and retest system operation.
9. Insert ignition key into ignition. Using NGS tester, monitor LCM PID IGN_KEY. If LCM PID IGN_KEY does not indicate IN, go to next step. If LCM PID IGN_KEY indicates IN, replace DDM and retest system operation.
10. Disconnect key-in-ignition warning switch connector located in steering column, near ignition switch. Using NGS tester, monitor LCM PID IGN_KEY. Connect a jumper wire between ground and key-in-ignition warning switch connector Black/Pink wire terminal. If LCM PID IGN_KEY does not indicate IN with jumper wire connected and OUT with jumper wire removed, go to next step. If LCM PID IGN_KEY indicates IN with jumper wire connected and OUT with jumper wire removed, replace key-in-ignition warning switch and retest system operation.
11. Disconnect LCM 16-pin connector C221 located behind left side of instrument panel. Using an ohmmeter, check resistance in Black/Pink wire between LCM 16-pin connector C221 terminal No. 22 and key-in-ignition warning switch connector. See **Fig. 1** . If resistance is less than 5 ohms, replace LCM and retest system operation. If resistance is 5 ohms or more, repair open in Black/Pink wire and retest system operation.

TEST E: ALL DOOR LOCKS INOPERATIVE/ DO NOT OPERATE PROPERLY (DTCS B1396 & B1397)

1. Retrieve Diagnostic Trouble Codes (DTCs). See **SELF-DIAGNOSTIC SYSTEM** . If Driver Door Module (DDM) DTC B1396 is retrieved, go to next step. If DDM DTC B1397 is retrieved, go to step 4 . If no DTCs are retrieved, go to step 6 .
2. Turn ignition off. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Disconnect driver and front passenger door lock switch connectors. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and DDM 22-pin connector C520 terminal No. 22 (Pink/Yellow wire). See **Fig. 2** . If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, repair short to power in Pink/Yellow wire and retest system operation.
3. Check driver door lock switch. See **DOOR LOCK SWITCH** under COMPONENT TESTS. If door lock switch is okay, replace DDM and retest system operation. If door lock switch is not okay, replace door lock switch and retest system operation.
4. Turn ignition off. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Disconnect driver and front passenger door lock switch connectors. Turn ignition switch to RUN position. Using a voltmeter, check voltage between ground and DDM 22-pin connector C520 terminal No. 34 (Pink/Light Green wire). See **Fig. 2** . If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, repair short to power in Pink/Light Green wire and retest system operation.
5. Check passenger door lock switch. See **DOOR LOCK SWITCH** under COMPONENT TESTS. If door lock switch is okay, replace DDM and retest system operation. If door lock switch is not okay, replace door lock switch and retest system operation.
6. Using NGS tester, monitor DDM PID DR_LOCK while pressing door lock switch to LOCK and UNLOCK positions. If DDM PID values do not agree with switch positions, go to next step. If displayed DDM PID values agree with switch positions, go to step 13 .

7. Turn ignition off. Disconnect driver and front passenger door lock switch connector. Using an ohmmeter, check resistance in Pink/Yellow wire between DDM 22-pin connector C520 terminal No. 22 and driver door lock switch connector. Check resistance in Pink/Yellow wire between DDM 22-pin connector C520 terminal No. 22 and passenger door lock switch connector. If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Pink/Yellow wire and retest system operation.
8. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 22 (Pink/Yellow wire). See **Fig. 2** . If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, repair short to ground in Pink/Yellow wire and retest system operation.
9. Using an ohmmeter, check resistance in Pink/Light Green wire between DDM 22-pin connector C520 terminal No. 34 and driver door lock switch connector. Check resistance in Pink/Light Green wire between DDM 22-pin connector C520 terminal No. 34 and passenger door lock switch connector. If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Pink/Light Green wire and retest system operation.
10. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 34 (Pink/Light Green wire). See **Fig. 2** . If resistance is 5 ohms or more, go to next step. If resistance is less than 5 ohms, repair short to ground in Pink/Light Green wire and retest system operation.
11. Check driver and passenger door lock switches. See **DOOR LOCK SWITCH** under COMPONENT TESTS. If door lock switches are okay, go to next step. If either door lock switch is not okay, replace appropriate door lock switch and retest system operation.
12. Using a voltmeter, check voltage between ground and driver door lock switch connector Light Green/Purple wire terminal. Check voltage between ground and passenger door lock switch connector Light Green/Purple wire terminal. If voltages are more than 10 volts, replace DDM and retest system operation. If either voltage is 10 volts or less, repair Light Green/Purple wire and retest system operation.
13. Turn ignition off. Disconnect DDM 22-pin connector C520 located in upper front corner of driver door. Using a voltmeter, check voltage between ground and DDM 22-pin connector C520 terminal No. 26 (Black/White wire). See **Fig. 2** . If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, go to step 17 .
14. Ensure transmission in Park. Turn ignition off. Check condition of fuse junction panel fuse No. 29 (20-amp). If fuse is okay, go to next step. If fuse is not okay, replace fuse and retest system operation. If fuse fails again, go to step 16 .
15. Using an ohmmeter, check resistance in Black/White wire between DDM 22-pin connector C520 terminal No. 26 and output side (right terminal) of fuse No. 29. If resistance is less than 5 ohms, go to step 24 . If resistance is 5 ohms or more, repair open in Black/White wire and retest system operation.
16. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 26 (Black/White wire). See **Fig. 2** . If resistance is less than 5 ohms, repair short to ground in Black/White wire and retest system operation. If resistance is 5 ohms or more, replace DDM and retest system operation.
17. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 27 (Black wire). See **Fig. 2** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Black wire and retest system operation.
18. Remove door trim panel. Disconnect driver door lock motor connector. Using an ohmmeter, check resistance in Red/Orange wire between DDM 22-pin connector C520 terminal No. 37 and driver door lock motor connector. See **Fig. 2** . Check resistance in Pink/Black wire between DDM 22-pin connector C520 terminal No. 38 and driver door lock motor connector. If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Red/Orange wire and/or Pink/Black wire

- (s) and retest system operation.
19. Remove door trim panel. Disconnect passenger door lock motor connector. Using an ohmmeter, check resistance in Pink/Black wire between DDM 22-pin connector C520 terminal No. 38 and passenger door lock motor connector. See [Fig. 2](#) . Check resistance in Pink/Orange wire between DDM 22-pin connector C520 terminal No. 17 and passenger door lock motor connector. If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Pink/Black wire and/or Pink/Orange wire (s) and retest system operation.
 20. Remove door trim panel. Disconnect left rear door lock motor connector. Using an ohmmeter, check resistance in Pink/Black wire between DDM 22-pin connector C520 terminal No. 38 and left rear door lock motor connector. Check resistance in Pink/Orange wire between DDM 22-pin connector C520 terminal No. 17 and left rear door lock motor connector. If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Pink/Black wire and/or Pink/Orange wire(s) and retest system operation.
 21. Remove door trim panel. Disconnect right rear door lock motor connector. Using an ohmmeter, check resistance in Pink/Black wire between DDM 22-pin connector C520 terminal No. 38 and right rear door lock motor connector. Check resistance in Pink/Orange wire between DDM 22-pin connector C520 terminal No. 17 and right rear door lock motor connector. If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Pink/Black wire and/or Pink/Orange wire(s) and retest system operation.
 22. Using an ohmmeter, check resistance between ground and DDM 22-pin connector C520 terminal No. 17 (Pink/Orange wire). See [Fig. 2](#) . Check resistance between ground and DDM 22-pin connector C520 terminal No. 37 (Red/Orange wire). Check resistance between ground and DDM 22-pin connector C520 terminal No. 38 (Pink/Black wire). If all resistances are more than 10 k/ohms, go to next step. If any resistance is 10 k/ohms or less, repair short to ground in appropriate wire(s) and retest system operation.
 23. Connect DDM 22-pin connector C520. Using a voltmeter, check voltage between ground and appropriate door lock motor circuit while triggering DDM active command DOOR LOCK CONTROL to LOCK and UNLOCK using NGS tester. See **IDENTIFYING DOOR LOCK CIRCUITS** table. If voltage cycles from zero to more than 5 volts during active command mode, replace appropriate door lock motor and retest system operation. If voltage does not cycle from zero to more than 5 volts during active command mode, replace DDM and retest system operation.

IDENTIFYING DOOR LOCK CIRCUITS

Door Lock Actuator	Wire Color
Left Front Door (UNLOCK)	Red/Orange
Left Front Door (LOCK)	Pink/Black
Right Front Door (UNLOCK)	Pink/Orange
Right Front Door (LOCK)	Pink/Black
Left Rear Door (UNLOCK)	Pink/Orange
Left Rear Door (LOCK)	Pink/Black
Right Rear Door (UNLOCK)	Pink/Orange
Right Rear Door (LOCK)	Pink/Black

24. Ensure transmission is in Park. Turn ignition off. Check condition of battery junction box fuse No. 11 (40-amp). If fuse is okay, go to next step. If fuse is not okay, replace fuse and retest system operation. If fuse fails again, go to step 26 .

25. Using a voltmeter, check voltage between ground and power distribution box fuse No. 11 output cavity (Black/White wire). If voltage is more than 10 volts, repair Black/White wire and retest system operation. If voltage is 10 volts or less, repair Black/Orange wire and retest system operation.
26. Remove accessory delay relay located in instrument panel fuse block. Using an ohmmeter, check resistance between ground and battery junction box fuse No. 11 output cavity (Black/White wire). If resistance is more than 10 k/ohms, replace accessory delay relay and retest system operation. If resistance is 10 k/ohms or less, repair Black/White and/or Black/Pink wire(s) and retest system operation.

TEST F: SINGLE DOOR LOCK INOPERATIVE/DOOR AJAR SWITCH DOES NOT OPERATE PROPERLY (DTCS B1322 & B1566)

1. Retrieve Diagnostic Trouble Codes (DTCs). See **SELF-DIAGNOSTIC SYSTEM** . If Driver Door Module (DDM) DTC B1322 is retrieved, go to next step. If DDM DTC B1566 is retrieved, go to step 4 . If no DTCs are retrieved, go to step 6 .
2. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect driver door ajar switch connector located in upper rear of driver door. Using an ohmmeter, check resistance between ground and DDM 16-pin connector C521 terminal No. 5 (Dark Blue wire). See **Fig. 3** . If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, repair short to ground in Dark Blue wire and retest system operation.
3. Check driver door ajar switch. See **DOOR AJAR SWITCH** under COMPONENT TESTS. If driver door ajar switch is okay, replace DDM and retest system operation. If driver door ajar switch is not okay, replace driver door ajar switch and retest system operation.
4. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect passenger door ajar switch connector located in upper rear of passenger door. Using an ohmmeter, check resistance between ground and DDM 16-pin connector C521 terminal No. 6 (Black/Orange wire). See **Fig. 3** . If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, repair short to ground in Black/Orange wire and retest system operation.
5. Disconnect passenger door ajar switch connectors located in upper rear of doors. See **DOOR AJAR SWITCH** under COMPONENT TESTS. If all passenger door ajar switches are okay, replace DDM and retest system operation. If any passenger door ajar switch is not okay, replace appropriate door ajar switch and retest system operation.
6. Turn ignition off. Disconnect DDM 16-pin connector C521 located in upper front corner of driver door. Disconnect driver door ajar switch connector located in upper rear of driver door. Using an ohmmeter, check resistance in Dark Blue wire between DDM 16-pin connector C521 terminal No. 5 and driver door ajar switch connector. See **Fig. 3** . If resistance is less than 5 ohms, go to next step. If resistance is 5 ohms or more, repair open in Dark Blue wire and retest system operation.
7. Using a voltmeter, check voltage between ground and DDM 16-pin connector C521 terminal No. 5 (Dark Blue wire). If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, repair short to power in Dark Blue wire and retest system operation.
8. Disconnect all passenger door ajar switch connectors located in upper rear of passenger doors. Using an ohmmeter, check resistance in Black/Orange wire between DDM 16-pin connector C521 terminal No. 6 and passenger door ajar switch connectors. See **Fig. 3** . If resistances are less than 5 ohms, go to next step. If either resistance is 5 ohms or more, repair open in Black/Orange wire and retest system operation.
9. Using a voltmeter, check voltage between ground and DDM 16-pin connector C521 terminal No. 6 (Black/Orange wire). If voltage is 10 volts or less, go to next step. If voltage is more than 10 volts, repair

short to power in Black/Orange wire and retest system operation.

10. Disconnect all door ajar switch connectors located in upper rear of doors. Using an ohmmeter, check resistance between ground and all door ajar switch connectors Black wire terminal. If resistances are less than 5 ohms, go to next step. If any resistance is 5 ohms or more, repair open in appropriate Black wire(s) and retest system operation.
11. Check door ajar switches. See **DOOR AJAR SWITCH** under COMPONENT TESTS. If all door ajar switches are okay, replace DDM and retest system operation. If any door ajar switch is not okay, replace appropriate door ajar switch and retest system operation.

TEST G: TRUNK RELEASE INOPERATIVE USING REMOTE TRANSMITTER

1. Depress trunk release on driver door panel. If trunk lid opened, go to next step. If trunk lid did not open, perform **TEST C: SINGLE DOOR LOCK IS INOPERATIVE/DECKLID DOES NOT OPERATE PROPERLY**.
2. Depress door LOCK, UNLOCK and PANIC buttons on remote transmitter. If any remote transmitter buttons worked, go to next step. If no remote transmitter buttons worked, replace batteries in remote transmitter. If remote transmitter still does not work, reprogram transmitter. See **REMOTE TRANSMITTER** under PROGRAMMING. If reprogramming transmitter does not work, replace Driver Door Module (DDM) and retest system.
3. Using New Generation Star (NGS) tester, monitor DDM FUNCTION TEST/DATA, while depressing TRUNK button on remote transmitter. If last received data indicates TRUNK, replace DDM and retest system operation. If last data received does not indicate TRUNK, replace remote transmitter.

TEST H: DOORS DO NOT LOCK/UNLOCK USING REMOTE TRANSMITTER

1. Operate door locks using driver door switches. If doors locked and unlocked go to next step. If doors did not lock and unlock, perform **TEST E: ALL DOOR LOCKS INOPERATIVE/ DO NOT OPERATE PROPERLY**.
2. Depress TRUNK and PANIC buttons on remote transmitter. If either button on remote transmitter worked, go to next step. If neither button on remote transmitter worked, replace batteries in remote transmitter. If remote transmitter still does not work, reprogram transmitter. See **REMOTE TRANSMITTER** under PROGRAMMING. If reprogramming transmitter does not work, replace Driver Door Module (DDM) and retest system.
3. Using NGS tester, monitor DDM FUNCTION TEST TIC/DATA, while depressing LOCK button on remote transmitter. If last received data indicates LOCK, replace DDM and retest system operation. If last data received does not indicate LOCK, replace remote transmitter.

TEST J: MEMORY SEAT DOES NOT OPERATE PROPERLY USING REMOTE TRANSMITTER

1. Retrieve Diagnostic Trouble Codes (DTCs). See **SELF-DIAGNOSTIC SYSTEM**. If Driver Door Module (DDM) DTCs were retrieved, see **DRIVER DOOR MODULE (DDM) DTC INDEX** table under SELF-DIAGNOSTIC SYSTEM to continue diagnosis. If no DTCs were recorded, go to next step.
2. Depress LOCK button on suspect remote transmitter. If doors locked, go to next step. If doors did not lock, go to **TEST H: DOORS DO NOT LOCK/UNLOCK USING REMOTE TRANSMITTER**.
3. Program suspect transmitter to memory setting No. 1. See **REMOTE MEMORY ACTIVATION/DEACTIVATION** under PROGRAMMING. Move driver memory seat and mirror

settings to different settings and press UNLOCK button on remote transmitter. If driver memory seat and memory mirrors return to memory position No. 1, system is okay at this time. If driver memory seat and memory mirrors do not return to memory position No. 1, go to next step.

4. Depress memory button No. 1 on seat switch. If driver memory seat and memory mirrors return to memory position No. 1, replace DDM and recheck system operation. If driver memory seat and memory mirrors do not return to memory position No. 1, see appropriate POWER SEATS article for further diagnosis.

TEST K: REMOTE KEYLESS ENTRY OUT OF SYNCHRONIZATION (DTC B2425)

1. Depress any button on remote transmitter 4 times consecutively. If remote transmitter operates correctly, system is okay at this time. Clear DTCs and retest system operation. If remote transmitter does not operate correctly, go to next step.
2. Check other remote transmitter(s) that operate with vehicle. If another remote transmitter operates with vehicle go to next step. If another remote transmitter does not operate with vehicle, go to step 4 .
3. Depress any button on operational remote transmitter. Within 30 seconds, depress any button on inoperative remote transmitter. If suspect remote transmitter operates properly, clear DTCs and retest system operation. If suspect remote transmitter does not operate properly, go to next step.
4. Reprogram remote transmitter(s). See **REMOTE TRANSMITTER** under PROGRAMMING. If transmitter operates properly after reprogramming, clear DTC, reprogram all remote transmitters and retest system operation. If remote transmitter does not operate properly after reprogramming, perform **TEST H: DOORS DO NOT LOCK/UNLOCK USING REMOTE TRANSMITTER** .

TEST L: FUEL FILLER DOOR IS INOPERATIVE

1. Ensure fuel filler door is closed and latched. Pull manual release cable in luggage compartment to release fuel filler door. If fuel filler door operates manually, go to next step. If fuel filler door does not operate manually, repair fuel filler door and release mechanism. Retest system operation.
2. Disconnect fuel filler door release solenoid connector located in left side of luggage compartment. Using a voltmeter, check voltage between ground and fuel filler door release solenoid connector White/Pink wire terminal. If any voltage exists, go to next step. If no voltage exists, go to step 4 .
3. Disconnect fuel filler door release switch connector. Using a voltmeter, check voltage between ground and fuel filler door release solenoid connector White/Pink wire terminal. If any voltage exists, repair short to power in White/Pink wire and retest system operation. If no voltage exists, replace fuel filler door release switch and retest system operation.
4. Using an ohmmeter, check resistance between ground and fuel filler door release solenoid connector White/Pink wire terminal. If resistance is more than 10 k/ohms, go to next step. If resistance is 10 k/ohms or less, repair short to ground in White/Pink wire and retest system operation.
5. Disconnect fuel filler door release switch connector. Using a voltmeter, check voltage between ground and fuel filler door release switch connector Purple/Yellow wire terminal. If voltage is more than 10 volts, go to next step. If voltage is 10 volts or less, repair open in Purple/Yellow wire and retest system operation.
6. Using an ohmmeter, check resistance between fuel filler door release switch terminals while pressing and releasing fuel filler door release switch. If resistance is less than 5 ohms with switch pressed and more than 10 k/ohms with switch released, go to next step. If resistance is 5 ohms or more with switch pressed and/or 10 k/ohms or less with switch released, replace fuel filler door release switch and retest system

operation.

7. Using an ohmmeter, check resistance between ground and fuel filler door release solenoid connector Black wire terminal. If resistance is less than 5 ohms, replace fuel filler door release solenoid and retest system operation. If resistance is 5 ohms or more, repair open in Black wire and retest system operation.

COMPONENT TESTS

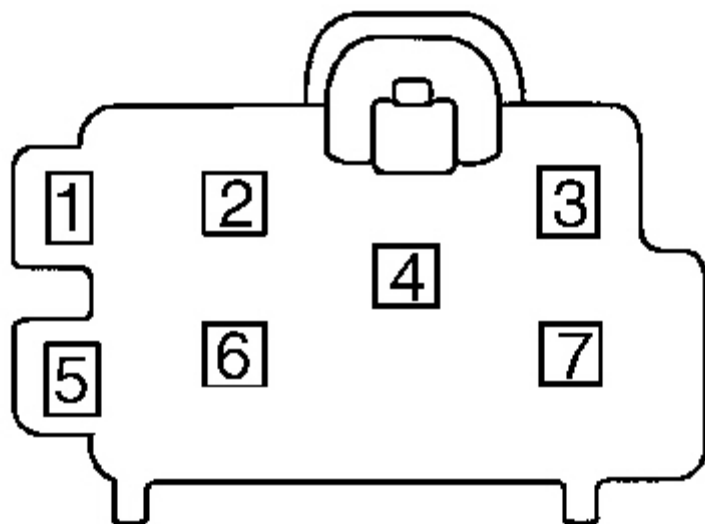
DOOR LOCK ACTUATOR

CAUTION: When performing the following test, use a circuit-protected DVOM. DO NOT apply power to actuator for longer than 5 seconds.

1. Remove door trim panel to access door lock actuator. Apply battery voltage and ground to door lock actuator terminals. Actuator rod should complete its travel in less than one second. Reverse leads at door lock actuator terminals. Actuator should operate in reverse direction at same speed.
2. Using an ammeter in series, measure actuator motor current. Reverse leads at actuator terminals to measure reverse current draw. Replace actuator if current exceeds 6 amps.

DOOR LOCK SWITCH

1. Remove door lock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. With switch in neutral position, continuity should not exist between terminals No. 2, 4 and 6. See **Fig. 4**.
2. Press switch to LOCK position. Continuity should exist between terminals No. 2 and 4 on left switch, or between terminals No. 4 and 6 on right switch. Press switch to UNLOCK position. Continuity should exist between terminals No. 4 and 6 on left switch, or between terminals No. 2 and 4 on right switch. If continuity is not as specified, replace switch.



G99D54885

Fig. 4: Identifying Power Door Lock Switch Terminals
Courtesy of FORD MOTOR CO.

DOOR AJAR SWITCH

Remove door ajar switch. Door ajar switch is located in upper rear of door. Using an ohmmeter, check continuity between switch terminals. With switch pin released, continuity should exist. With switch pin pressed in, continuity should not exist. If continuity is not as specified, replace switch.

DECKLID RELEASE SWITCH

Remove decklid release switch. Using an ohmmeter, check continuity between switch terminals. With switch pressed, continuity should exist. With switch released, continuity should not exist. If continuity is not as specified, replace switch.

DECKLID RELEASE SOLENOID

Remove decklid release solenoid. Apply battery voltage to solenoid Red wire terminal. Apply ground to solenoid Black wire terminal. Solenoid should actuate. If solenoid does not actuate, replace solenoid.

REMOVAL & INSTALLATION

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** before disconnecting battery.

DOOR LOCK ACTUATOR

Removal & Installation

Remove door trim panel and watershield. Using a 1/4" drill bit and drill motor, remove rivet attaching actuator to door. Disconnect door lock actuator connector. Disengage link from door latch. Remove door lock actuator. To install, reverse removal procedure.

DOOR LOCK SWITCH

Removal & Installation

Gently pry up on front portion of switch plate. Unhook rear edge of switch plate and remove switch plate from armrest. Remove connector retaining screws (if equipped). Disconnect connector and remove switch. To install, reverse removal procedure.

DRIVER DOOR MODULE (DDM)

Removal & Installation

Disconnect negative battery cable. Remove door trim panel and watershield. Disconnect connectors from module. Remove fasteners securing module and remove module. To install, reverse removal procedure.

FUEL DOOR LOCK SOLENOID

Removal & Installation

Open luggage compartment. Slide manual override handle through trim panel. Remove trim panel. Unplug harness connector. Remove solenoid mounting bolts. Remove solenoid. To install, reverse removal procedure.

WIRING DIAGRAMS

2000 Lincoln Town Car Cartier

1999-2000 ACCESSORIES & EQUIPMENT Power Door Locks & Remote Keyless Entry Systems - Town Car

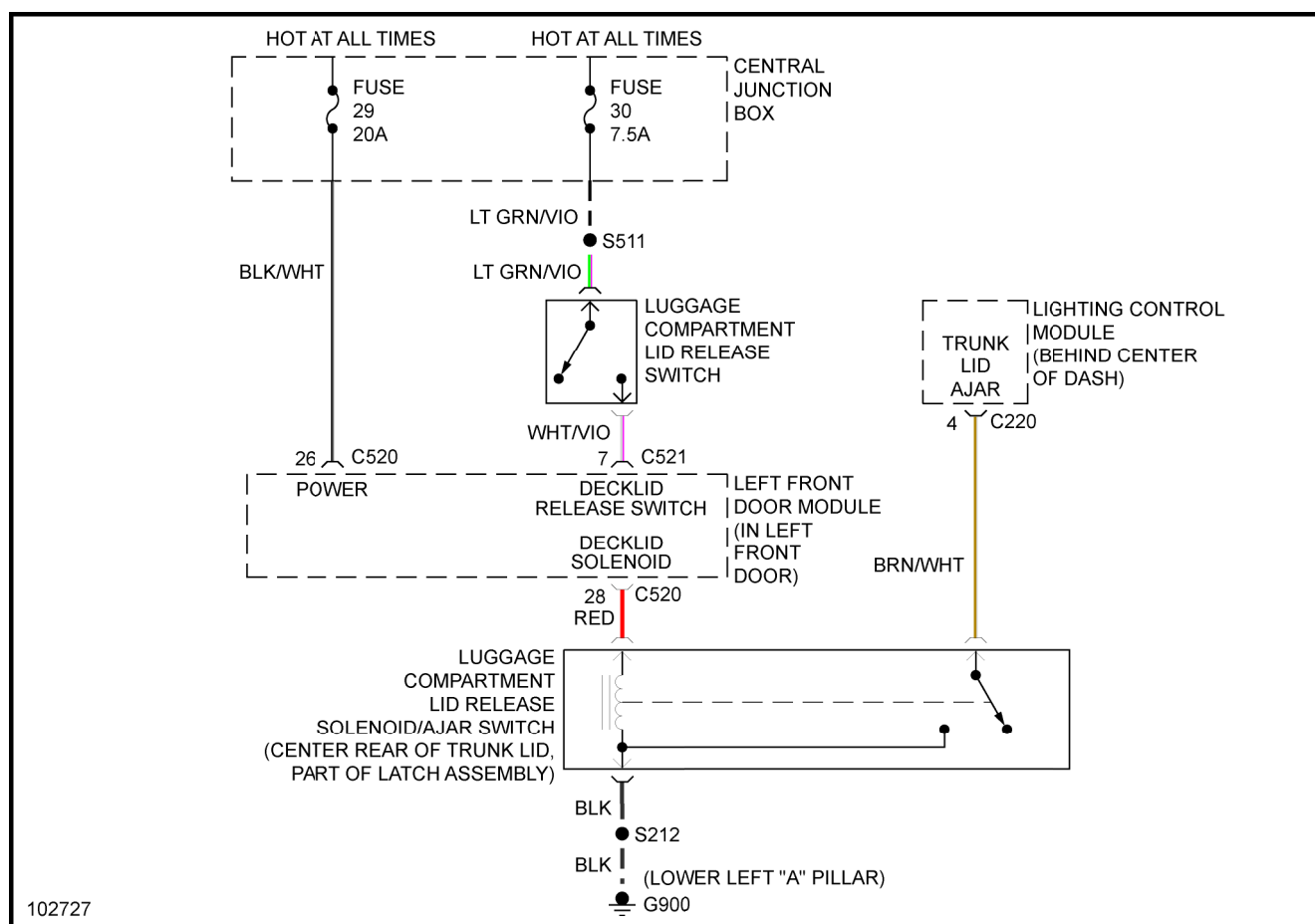


Fig. 5: Trunk Release Wiring Diagram (Town Car - 1999-2000)

2000 Lincoln Town Car Cartier

1999-2000 ACCESSORIES & EQUIPMENT Power Door Locks & Remote Keyless Entry Systems - Town Car

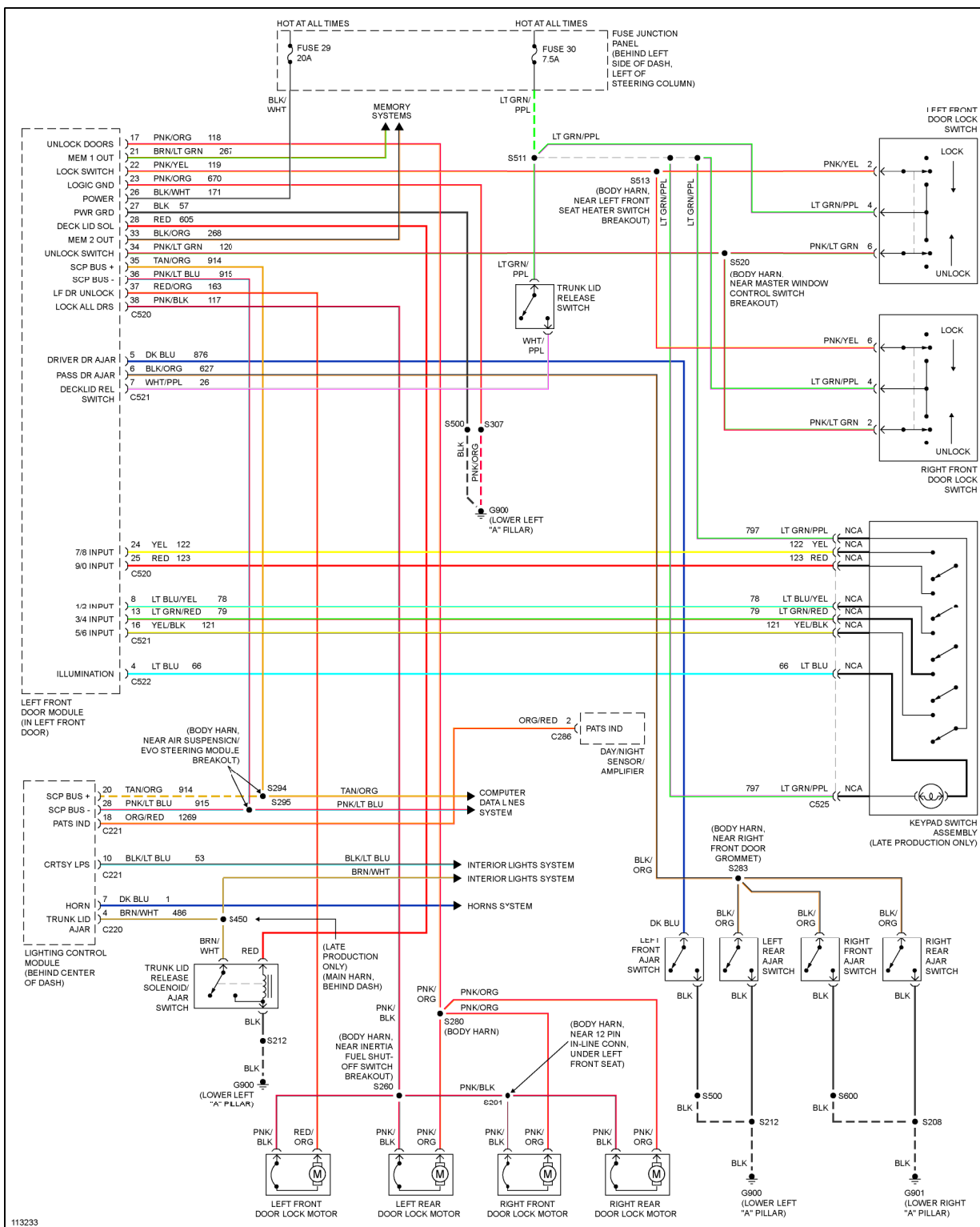


Fig. 6: Remote Keyless Entry System Wiring Diagram (Town Car - 1999)

2000 Lincoln Town Car Cartier

1999-2000 ACCESSORIES & EQUIPMENT Power Door Locks & Remote Keyless Entry Systems - Town Car

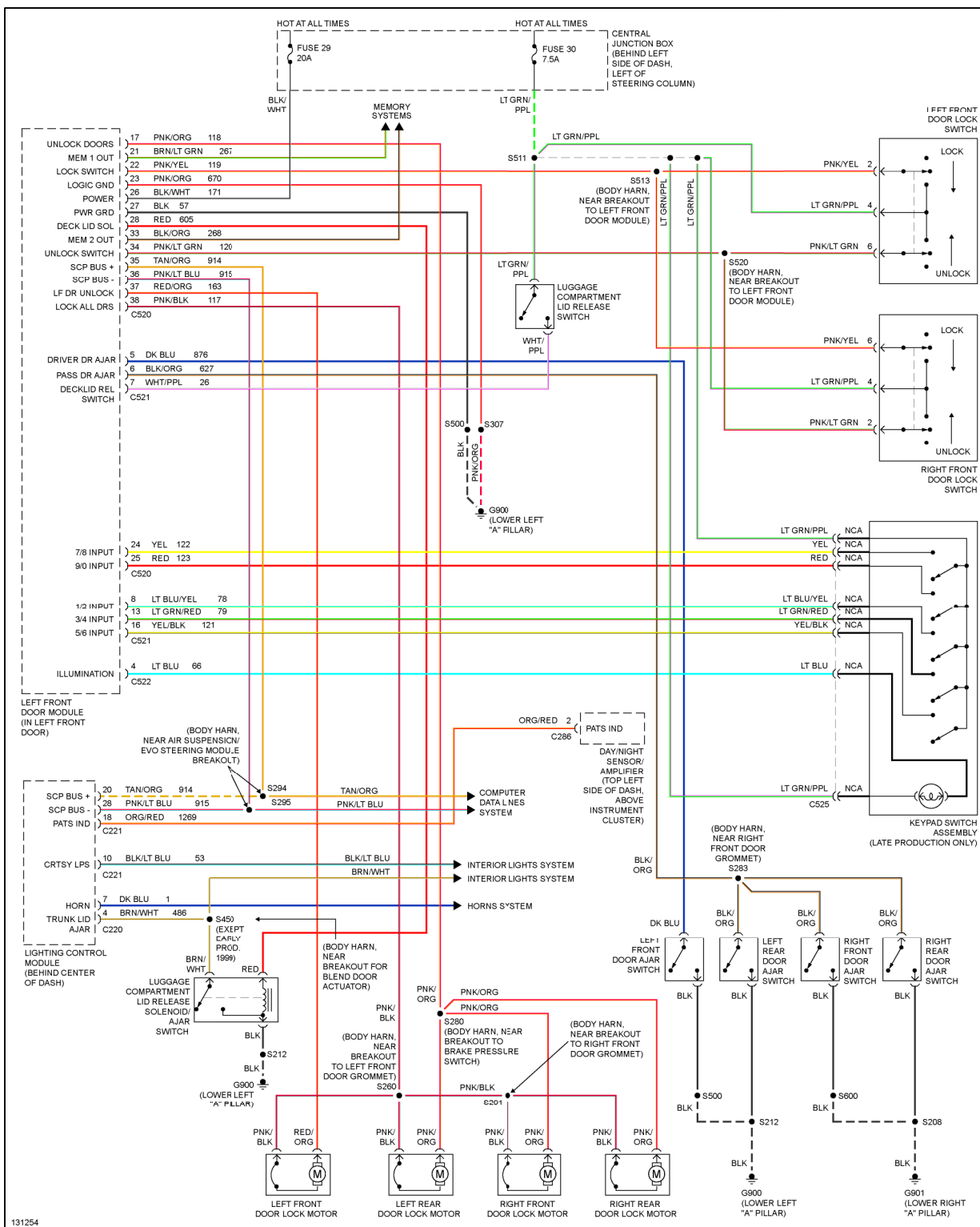


Fig. 7: Remote Keyless Entry System Wiring Diagram (Town Car - 2000)