

2004 ACCESSORIES & EQUIPMENT

Garage Door Opener - C/K SUV

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Retaining Screws	2 N.m	18 lb in

SCHEMATIC AND ROUTING DIAGRAMS

GARAGE DOOR OPENER SCHEMATICS

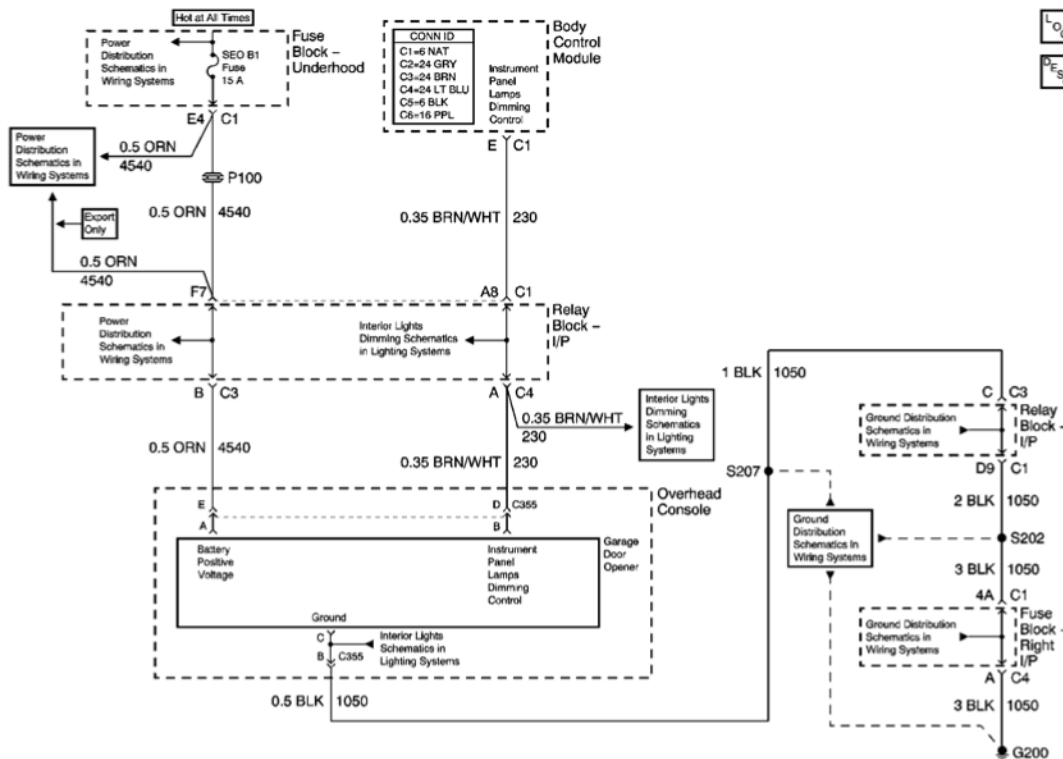
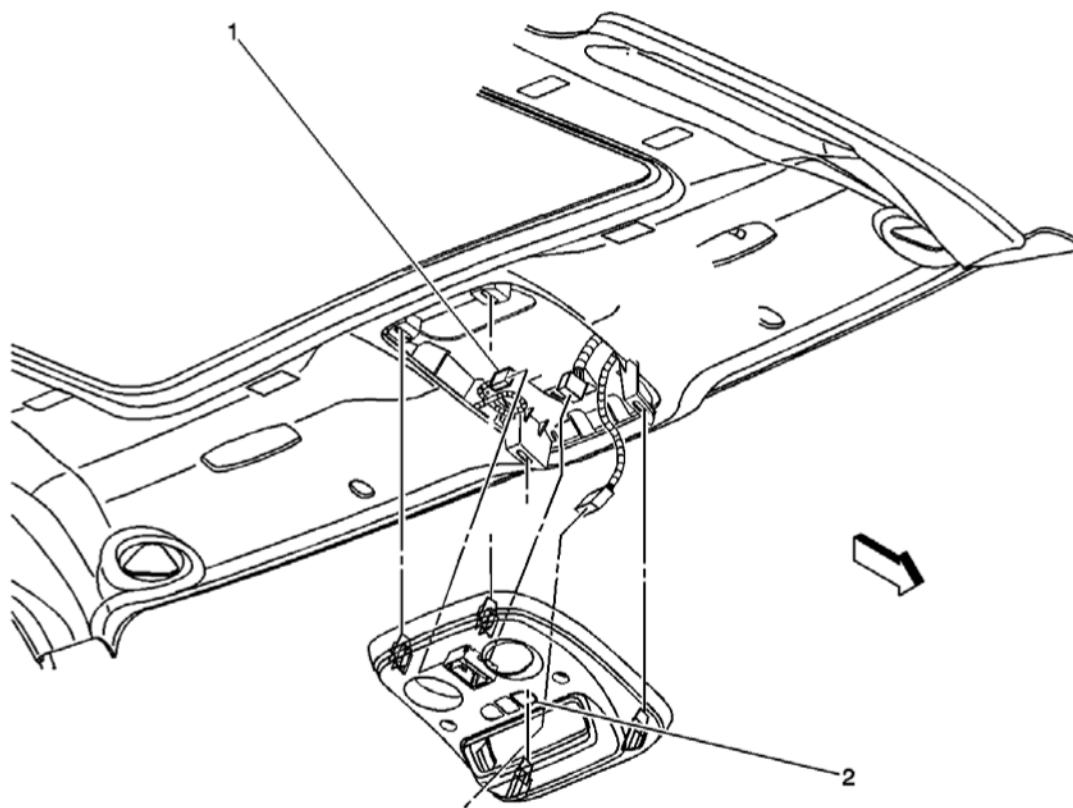


Fig. 1: Garage Door Opener Schematic
Courtesy of GENERAL MOTORS CORP.

COMPONENT LOCATOR

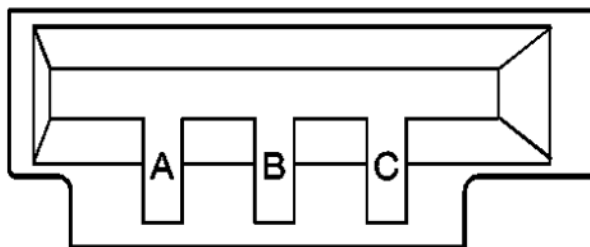


Callout	Component Name
1	C254
2	Garage Door Opener

Garage Door Opener (Part of Overhead Console) Terminal Identification

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Connector Part Information		• Molex 09-01-6038 • 3-Way F (WHT)	
Pin	Wire Color	Circuit No.	Function
A	ORN	4540	Battery Positive Voltage
B	WHT	230	Instrument Panel Lamps Dimming Control
C	BLK	1050	Ground

DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC STARTING POINT - GARAGE DOOR OPENER

Begin the system diagnosis by reviewing the system Description and Operation. Reviewing the Description and Operation information will help you determine the correct symptom diagnostic procedure to use when a malfunction exists. Reviewing the Description and Operation information will also help you determine if the condition described by the customer is normal operation. Refer to **Symptoms - Garage Door Opener** in order to identify the correct procedure for diagnosing the system and where the procedure is located.

SYMPTOMS - GARAGE DOOR OPENER

IMPORTANT: Review the system description and operation in order to familiarize yourself with the system functions. Refer to **Garage Door Opener Description and Operation** .

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the garage door opener. Refer to **Checking Aftermarket Accessories** in Wiring Systems.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to **Testing for**

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Intermittent Conditions and Poor Connections in Wiring Systems.

Symptom List

Refer to **Garage Door Opener Inoperative** in order to diagnose the symptom.

GARAGE DOOR OPENER INOPERATIVE

Garage Door Opener Inoperative

Step	Action	Yes	No
1	Did you review the Garage Door Opener Description and Operation and perform the necessary inspections?	Go to Step 2	Go to <u>Garage Door Opener Description and Operation</u>
2	IMPORTANT: If the vehicle is equipped with a valet switch, verify that the switch is in the OFF position. Operate each button on the garage door opener one at a time. Do all 3 buttons illuminate the LED?	Go to Step 4	Go to Step 3
3	Do any buttons illuminate the LED?	Go to Step 9	Go to Step 5
4	1. Place the J 41540 HomeLink Tester, adjacent to the GDO as indicated. See <u>Special Tools and Equipment</u> . 2. Operate each button on the garage door opener. Does the J 41540 verify each button when pressed? See <u>Special Tools and Equipment</u> .	Go to Step 9	Go to Step 8
5	Test the Switched Ignition Voltage circuit for an open, high resistance or a short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> in Wiring Systems. Did you find and correct the condition?	Go to Step 11	Go to Step 6
6	Test the Inadvertent Power Supply circuit for an open, high resistance or short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> in Wiring Systems. Did you find and correct the condition?	Go to Step 11	Go to Step 7
7	Test the ground circuit for an open or high resistance. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> in Wiring Systems. Did you find and correct the condition?	Go to Step 11	Go to Step 8
8	Inspect for poor connection at the harness connector. Refer to <u>Testing for Intermittent Conditions and Poor Connections</u> and <u>Connector Repairs</u> in Wiring Systems. Did you find and correct the condition?	Go to Step 11	Go to Step 9

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9	Replace the garage door opener. Did you complete the replacement?	Go to Step 10	
10	Program the garage door opener. Refer to <u>Garage Door Opener Programming - Universal</u> . Did you complete the procedure?	Go to Step 11	
11	Operate the system in order to verify the repair. Does the garage door opener operate properly for the customer?	System OK	Advise the customer to call HomeLink (tm) at 1-800-355-3515

REPAIR INSTRUCTIONS

GARAGE DOOR OPENER REPLACEMENT

Removal Procedure

1. Remove the console roof screw.

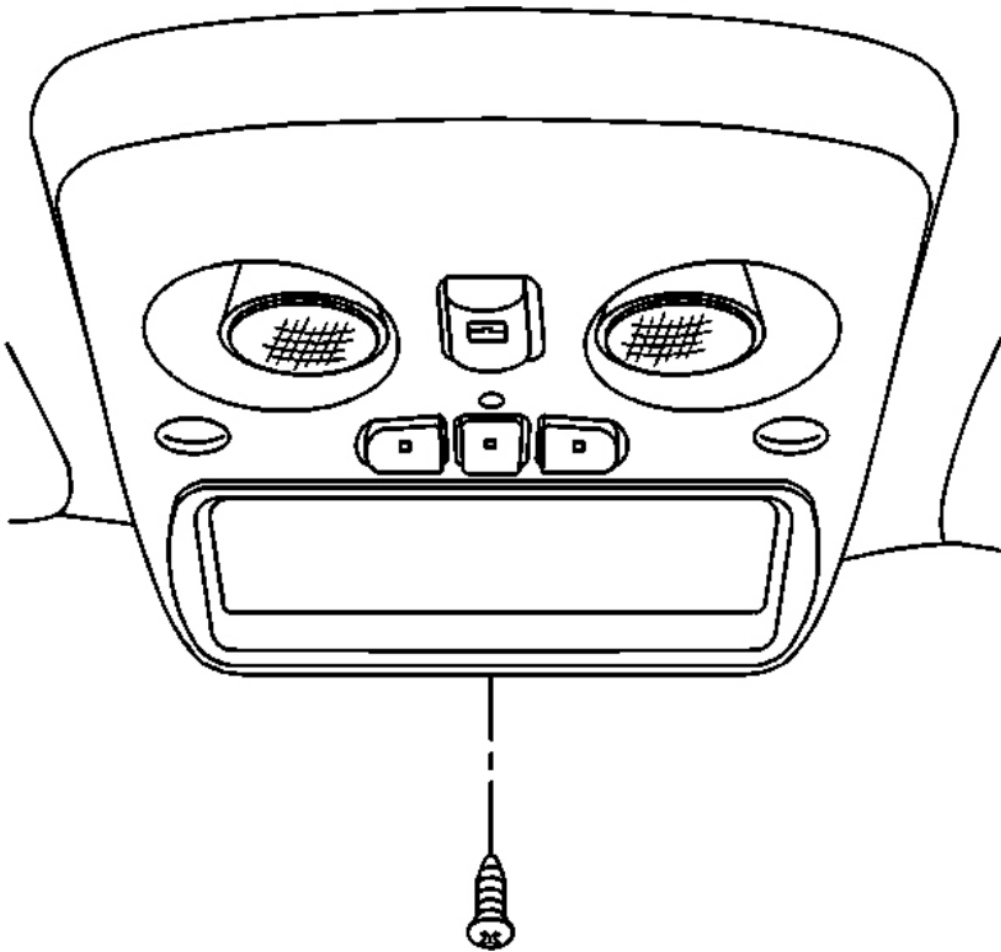


Fig. 3: Removing Console Roof Screw
Courtesy of GENERAL MOTORS CORP.

2. Disconnect the electrical connectors.
3. Remove the console from vehicle.
4. Disconnect the electrical connector from the garage door opener.
5. Remove the garage door opener retaining screws.
6. Remove the garage door opener from the overhead console.

Installation Procedure

1. Install the garage door opener to the overhead console.

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NOTE: Refer to Fastener Notice in Cautions and Notices.

2. Install the garage door opener retaining screws.

Tighten: Tighten the retaining screws to 2 N.m (18 lb in).

3. Connect the electrical connector to the garage door opener.
4. Install the console to the roof.
5. Connect the electrical connectors.
6. Install the overhead console retaining screw.

Tighten: Tighten the overhead console retaining screw to 2 N.m (18 lb in).

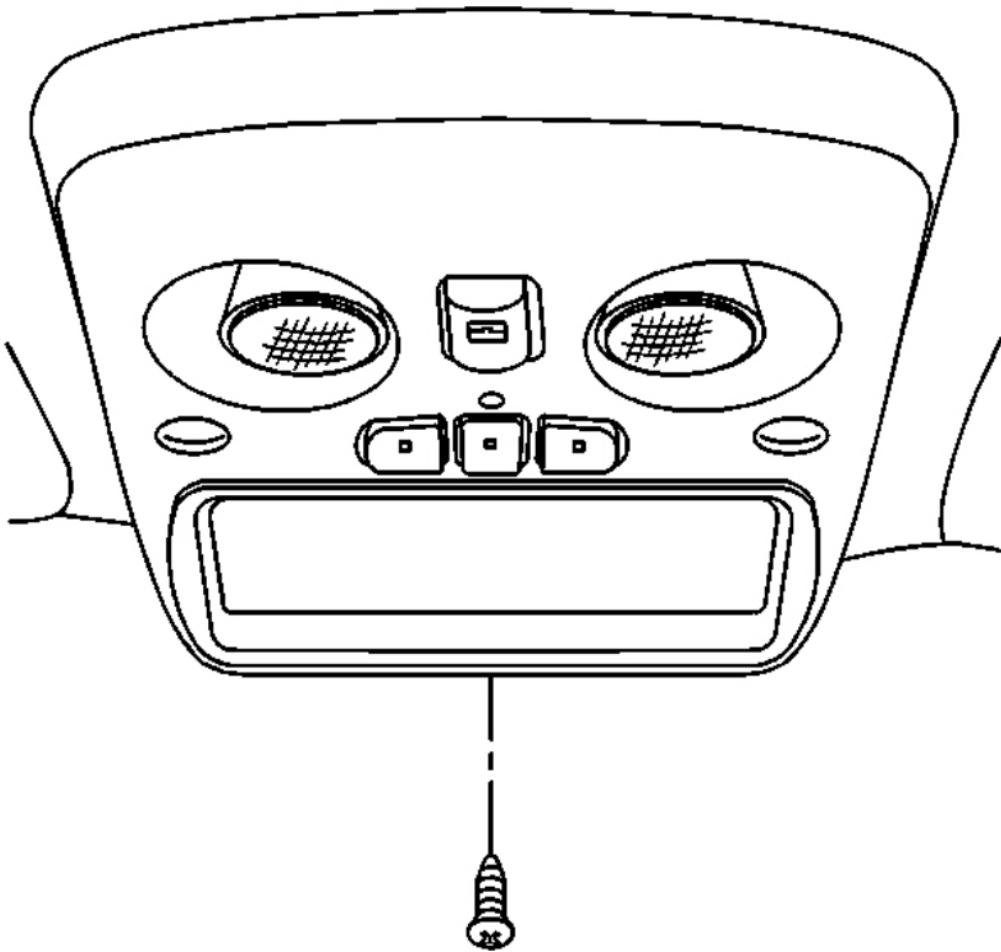


Fig. 4: Installing Overhead Console Retaining Screw
Courtesy of GENERAL MOTORS CORP.

GARAGE DOOR OPENER PROGRAMMING - UNIVERSAL

Garage Door Opener Programming

IMPORTANT: Do not use the garage door opener (GDO) with any garage door opener that does not have the stop and reverse safety feature. This includes any garage door opener model manufactured before April 1, 1982.

Be sure that people and objects are clear of the garage door you are programming.

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The GDO is programmed by using the customer's hand-held transmitter(s).

Turn the ignition OFF while programming the GDO transmitter. Follow these steps to program up to 3 channels:

1. If you have previously programmed a transmitter, proceed to Step 2. Otherwise, hold down the 2 outside buttons on the GDO transmitter for approximately 20 seconds, until the light on the GDO transmitter begins to flash rapidly. Then release the buttons. This procedure erases any previous settings and initializes the memory for all 3 channels.
2. Decide which of the 3 channels you want to program to the transmitter you have.
3. Hold the end of the hand-held transmitter against the front surface of the GDO (less than 1 inch) so you can still see the light.
4. Using both hands, press the hand-held transmitter button and the desired button on the GDO transmitter. Continue to hold both buttons through Step 5.

IMPORTANT: The GDO is compatible with most, but not all, types and brands of transmitters. If the GDO light does not flash rapidly after 90 seconds, there may be a compatibility conflict with the transmitter used to program the GDO. Call HomeLink(tm) at 1-800-355-3515 in order to address this problem.

5. Hold down the buttons on both transmitters until you see the light on the GDO transmitter flash slowly and then rapidly. The rapid flashing, which could take up to 90 seconds, indicates that the GDO transmitter has been programmed. Release the buttons on both transmitters when the light starts to flash rapidly.

Training the GDO for Rolling Code Receivers

This procedure is for training the customer's rolling code garage door openers to their GDO transmitter. The GDO must already be programmed to its hand-held transmitter. The training process below must be completed within 30 seconds or it must be repeated.

1. Locate the train button on the garage door opener receiver. Refer to the operator's manual for the garage door opener (or call HomeLink(tm) at 1-800-355-3515 for assistance). Follow instructions for the garage door opener in order to determine when the unit is in train mode.
2. Return to the GDO transmitter in the vehicle, and press the button that you want trained for rolling codes 3 times, for 1 second each time. If not successfully programmed, try 2-5 seconds each time.
3. Press the button used again in order to verify that the GDO transmitter has been programmed.

You may use either the hand-held transmitter or the GDO to open the garage door.

The GDO is compatible with most, but not all, types and brands of transmitters. If the GDO light does not flash rapidly after 90 seconds, there may be a compatibility conflict with the transmitter used to program the GDO. Call HomeLink(tm) at 1-800-355-3515 in order to address compatibility concerns.

Erasing Channels

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To erase programmed channels, hold down the 2 outside buttons until the light on the GDO transmitter begins to flash. Individual channels cannot be erased, but can be reprogrammed using the Garage Door Opener Programming and the Training GDO for Rolling Code Receivers procedures.

Non-Compatible Garage Door Openers

Manufacturer	Model Number
Chamberlain	G-3467
Click Card	ATDG-90
Genie	AR-55
Genie	AR-30
Linear	Code Red
Linear	Moore-o-matic
Linear	DX Format
Micom	Safeway
Pulsar/Allister	20
Skylink	Skylink
Stanley	1048
Stanley	1054
Stanley	1064
Telectron	T-22A
Telectron	T-80
Telectron	T-80G
Telectron	TP-21

DESCRIPTION AND OPERATION

GARAGE DOOR OPENER DESCRIPTION AND OPERATION

The garage door opener is located in the overhead console. The valet switch provides battery voltage to the garage door opener. If battery voltage is lost due to a condition such as a dead battery, the garage door opener unit relies on the non-servicable internal power backup supply. The unit is programmed using the customer's hand-held transmitters for the garage doors, electric entrance gates, or lighting and security systems.

The garage door opener is rolling code capable. Rolling code is a system that allows the code that the customers receiver receives from the garage door opener to change every time the garage door opener is used within operating range of the receiver. When the receiver and the garage door opener are initially programmed together, a code is established, a new code is created for every new transmission. The software in the receiver recognizes the garage door opener and accepts the new code.

The garage door opener is compatible with most, but not all types and brands of transmitters. If a problem should occur with a compatibility conflict with a transmitter, call HomeLink(tm) at 1-800-355-3515.

The garage door opener is a transmitter operating between 288-399 MHz. The power and range of the transmitter is limited to comply with laws governing the generation of radio frequency interference (RFI). The

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transmitter is programmed by the user to accept the signal generated by the user's transmitters, refer to **Garage Door Opener Programming - Universal** .

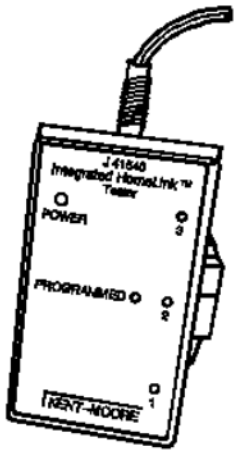
The garage door opener has 3 buttons that may be programmed for individual transmitter/receiver combinations to control up to 3 garage door openers, security gates, and lighting systems. Each button represents a transmitter code section of the transmitter, which operates separately from any other button, and may be considered a separate transmitter. Operation consists of simply pressing a button to activate the corresponding transmitter.

Battery voltage is provided to the garage door opener from the IGN SEN fuse in the IP fuse block. The garage door opener is grounded through G400. Inadvertent power is supplied from the body control module (BCM).

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

Special Tools

Illustration	Tool Number/ Description
 A diagram of a rectangular electronic device, the J 41540 Integrated HomeLink™ Tester. It has a coiled cable at the top. The front face has three buttons labeled 'POWER', 'PROGRAMMED', and a third button at the bottom. There are also three indicator lights labeled 1, 2, and 3. The brand name 'KENT-MOORE' is at the bottom.	J 41540 HomeLink Tester