Linear

PROFESSIONAL INSTALLATION BY:

MODELS LD033 & LD050
BELT-DRIVE OR CHAIN-DRIVE
GARAGE DOOR OPENERS

HOMEOWNER'S INSTRUCTIONS

For Sectional and Jamb Type Doors

IMPORTANT SAFETY NOTES

Please read the instructions carefully! This garage door opener is designed to provide safe and reliable service if installed and tested as described in these instructions. A garage door is the largest mechanical appliance in a residence. Care must be taken to prevent injury or death during installation and operation of the garage door and garage door opener.

THE FOLLOWING FORMATS ARE USED FOR SAFETY NOTES IN THESE INSTRUCTIONS.

⚠ WARNING ⚠

This type of warning note is used to indicate possible mechanical hazards that may cause serious injuries or death.

⚠ CAUTION ⚠

This type of warning note is used to indicate the possibility of damage to the garage door or garage door opener.

IMPORTANT USER SAFETY INSTRUCTIONS

⚠ WARNING ⚠

A MOVING GARAGE DOOR CAN CAUSE INJURY OR DEATH!
TO REDUCE THE RISK OF DEATH OR SEVERE INJURY:

1. **READ AND FOLLOW ALL INSTRUCTIONS.**
2. **NEVER LET CHILDREN OPERATE, OR PLAY WITH DOOR CONTROLS! KEEP REMOTE CONTROL AWAY FROM CHILDREN!**
3. **Always keep moving door in sight and away from people and objects until it is completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.**
4. **NEVER CRAWL UNDER A STOPPED, PARTIALLY OPEN DOOR.**
5. **Test door opener monthly. The garage door MUST reverse on contact with a 1-1/2 inch object (or a 2x4 board laid flat at the center of the door) on the floor. If adjusting either the force or the limit of travel, re-test the door opener. Failure to adjust the opener properly may cause severe injury or death.**
6. **If possible, use the red emergency release handle only when the door is closed. Use caution when using this release with the door open. Weak or broken springs may cause the door to fall rapidly, causing injury or death.**
7. **KEEP GARAGE DOORS PROPERLY BALANCED. (See Garage Door Opener Maintenance) An improperly balanced door could cause severe injury or death. Have a qualified service person make repairs to cables, spring assembly and other hardware.**
8. **SAVE THESE INSTRUCTIONS.**

1 Using the Garage Door Opener

Opening the Door

1. With the door in view, press the wall station's UP/DOWN ARROW button, the button assigned to the opener on the remote control, or enter a valid access code and press START/STOP on a remote keypad.
2. When the opener is activated, the opener's light will turn on and the door will begin to open.
3. The door will open until the open limit is reached. If an obstacle is encountered (opener's light flashes four times) while the door is opening, the door will stop.
4. The opener's light will stay on for about five minutes after the door stops.

Closing the Door

1. With the door in view, press the wall station's UP/DOWN ARROW button or the button assigned to the opener on the remote control, or enter a valid access code and press START/STOP on a remote keypad.
2. When the opener is activated, the opener's light will turn on and the door will begin to close.
3. The door will close until the close limit is reached. If an obstacle is encountered (opener's light flashes four times), or the safety beam is interrupted (opener's light flashes three times) during closing, the door will stop, then re-open.
4. The opener's light will stay on for about five minutes after the door stops.

Stopping the Door Mid-travel

1. **The door can be stopped immediately at any time by pressing the wall station's UP/DOWN ARROW button, the remote control's pushbutton, or press the START/STOP button on a remote keypad.**
2. The next time the opener is activated, the door will move in the opposite direction.

Vacation Lock for Additional Security

1. Slide the wall station's LOCK switch to the locked position to prevent remote controls from opening the door after the door is completely closed. The remotes can close the door, but not open it. The door can still be opened or closed by using the wall station's UP/DOWN ARROW pushbutton.

➤ ***NOTE:*** *To signal that the vacation switch is locked, the opener's light will flash five times if a remote is activated in an attempt to open the door.*

2. Slide the wall station's LOCK switch to the unlocked position to return the opener to normal operation.

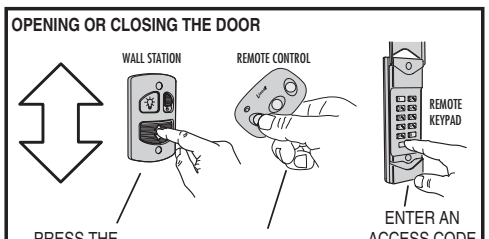
Controlling the Opener's Light

1. The opener's light can be lit by pushing the wall station's LIGHT button. The light will remain on until the LIGHT button is pressed again or the opener is cycled.
2. If the opener's light is on, pushing the wall station's LIGHT button will turn the opener's light off.

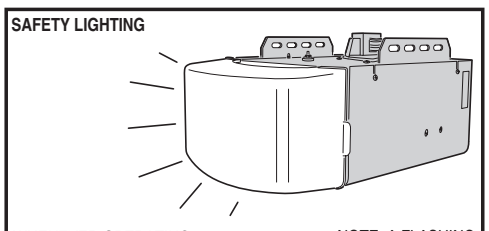
Disconnecting the Door from the Opener

1. With the door in any position (preferably closed), carefully pull the red release handle. **USE CAUTION IF THE DOOR IS OPEN, THE DOOR MAY DROP.**
2. The disconnected door can be opened or closed manually.
3. To reconnect the opener, flip the release lever up. Raise or lower the door manually until the opener reconnects.

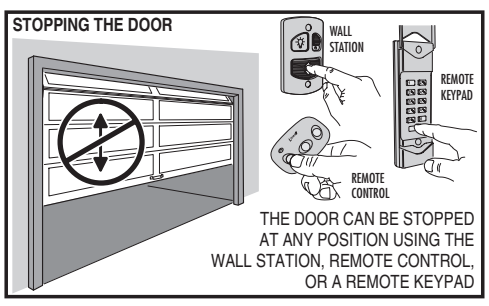
OPENING OR CLOSING THE DOOR



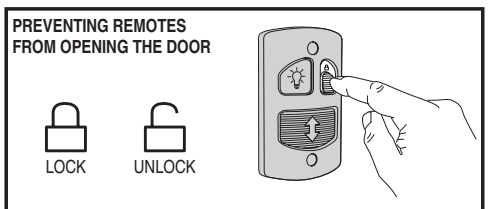
SAFETY LIGHTING



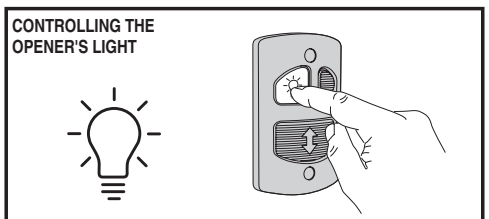
STOPPING THE DOOR



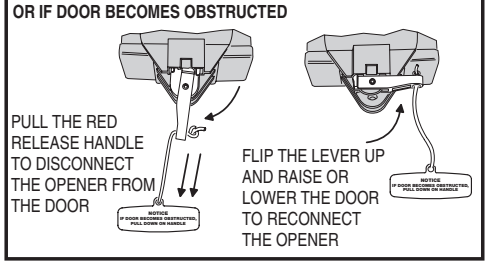
PREVENTING REMOTES FROM OPENING THE DOOR



CONTROLLING THE OPENER'S LIGHT



IN CASE OF POWER FAILURE OR IF DOOR BECOMES OBSTRUCTED



2 Remote Controls

This opener is supplied with a three-button remote control (the second and third buttons can be used to control an additional operator or gate if it contains a Linear MegaCode™ receiver). Additional single and multi-button remote controls can be purchased. An unlimited number of remote controls can be used with this operator. The short white wire on the back of the operator serves as an antenna for the remote controls. Do not cut off the white wire or the remote controls will not operate well.

⚠ WARNING ⚠

Children operating or playing with a garage door opener can injure themselves or others. The garage door could cause serious injury or death. Do not allow children to operate the remote control(s) or the wall station. A moving garage door could injure or kill someone under it. Activate the opener only when the door is clearly visible, free of obstructions and adjusted properly.

To Add a Remote Control

1. Press the opener's LEARN button. The red LEARN light will glow. The red light will stay on for about 15 seconds. **A remote must be added while the red LEARN light is still on.**
2. Send a signal from a remote. The red LEARN light and the opener's light will flash once indicating that the opener has accepted the remote.
3. Repeat Steps 1 & 2 for any additional remote controls.

To Remove all Remote Controls

1. Press and hold the opener's LEARN button for ten seconds or more.
2. Release the LEARN button. **The red LEARN light will blink three times signaling that all of the remotes in the opener's memory were erased.** The red LEARN light will turn off, then turn on for 15 seconds. A remote control can be entered during this time using Step 2 above.

Testing

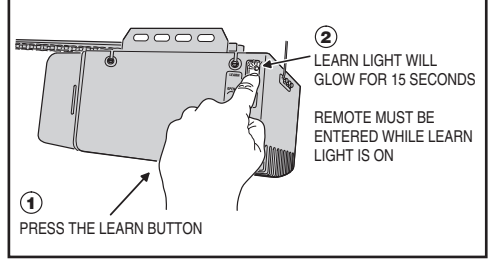
1. Before testing the remote control, straighten out the opener's white antenna wire so it points up.
2. **Stand clear of the door,** press the remote control's button and verify that the opener starts.

Replacing a Remote Control's Batteries

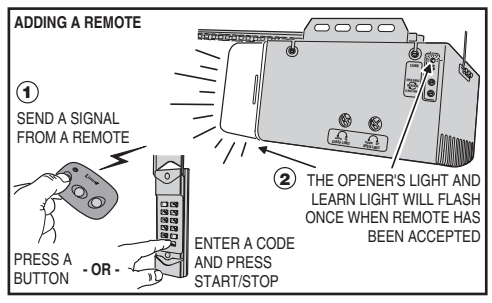
When the red light on the remote glows dimly, or fails to light at all when the remote is activated, the batteries need replacing.

1. Open the remote's case and remove the circuit board.
2. Replace old batteries with two Type 2032 batteries.
3. Re-assemble the remote.

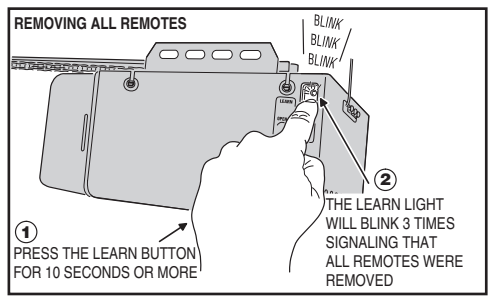
PREPARING TO ADD A REMOTE



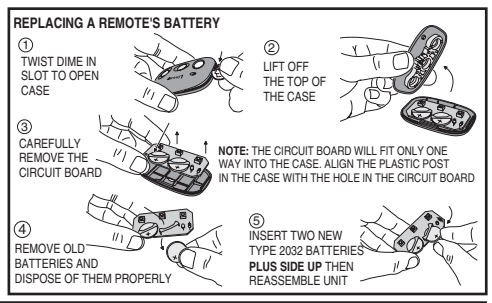
ADDING A REMOTE



REMOVING ALL REMOTES



REPLACING A REMOTE'S BATTERY



3 Garage Door Opener Maintenance

Weather conditions may affect the door operation which could require some re-setting of the opener's adjustments. Doors may swell and become heavier during wet periods, door hinges and rollers might bind during cold periods. To insure safe operation of the door, perform the following tests, including any additional test steps described.

Every Month

1. With the door closed, pull the red release handle to disconnect the opener from the door.
2. From outside the garage, slowly open the door manually all the way, and then close it all the way. Notice if there is any binding, sticking or rubbing. The door should move smoothly in both directions.
3. Raise the garage door about halfway up. Carefully release the door and see if the door balances. It should stay in place. Close the door.

➤ ***NOTE:*** *If the garage door is unbalanced or the door travel isn't smooth, have a qualified garage door professional adjust or repair the door.*

4. To reconnect the opener, flip the release lever up. Raise the door manually until the opener reconnects.
5. Perform the Safety Beam Test (Section 4).
6. Perform the Safety Reversal System Test as described in Steps 4-6 in Section 6.

After Servicing the Opener

1. Perform the Safety Beam Test (Section 4).
2. Perform the Open and Close Limit Adjustments (Section 5).
3. Perform the entire Door Force Safety System Test (Section 6).

Every 6 Months

Check the belt or chain tension.

- For belt-drive rails, examine the length of the tension spring in the traveler. It should be about 1" long.
- For chain-drive rails, examine the spacing between the turnbuckle and the rail. The turnbuckle should be slightly above the rail.

➤ ***NOTE:*** *Too much or too little chain tension will cause excessive sprocket noise.*

Chain Adjustment

If necessary, use the following steps to adjust the chain.

1. Hold the turnbuckle with a flat blade screwdriver and loosen the two locknuts with a 7/16" end wrench.
2. Twist the turnbuckle to adjust the chain tension. Adjust the chain until the turnbuckle is sightly above the rail.
3. Hold the turnbuckle with a flat blade screwdriver and tighten the two locknuts with a 7/16" end wrench.

Belt Adjustment

The tension spring in the traveler keeps the belt taut. The factory setting for the tension spring length is .9" long. If the tension spring is longer than 1", adjust the belt.

1. Hold the traveler so the adjustment wheel is visible through the large slot.
2. Use a flat blade screwdriver to turn the adjustment wheel to compress the tension spring until its length is between .9" and 1" long.

Every Year

Check the door hardware for lubrication needs. Lubricate door hinges, rollers and bearings according to door manufacturer's recommended procedures.

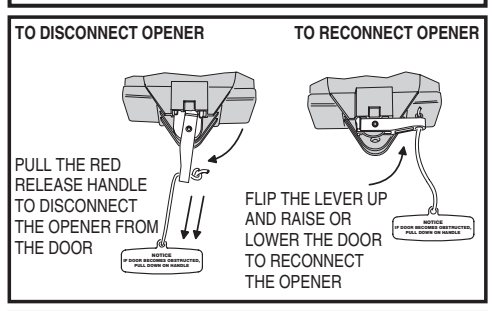
⚠ WARNING ⚠

Garage door hardware (springs, cables, brackets, pulleys, etc.) are under extreme pressure and tension. DO NOT ATTEMPT TO LOOSEN, TIGHTEN OR ADJUST ANY DOOR HARDWARE. CALL A QUALIFIED GARAGE DOOR INSTALLATION PROFESSIONAL!

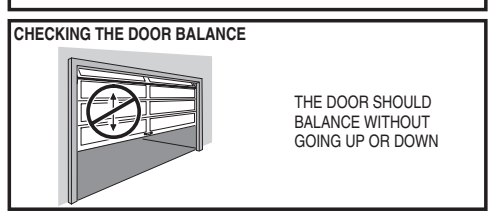
⚠ WARNING ⚠

The garage door opener must not be installed and used on an unbalanced door. The opener's internal door force sensor will not function properly on an unbalanced door. Risk of serious injury or death may result.

TO DISCONNECT OPENER / TO RECONNECT OPENER



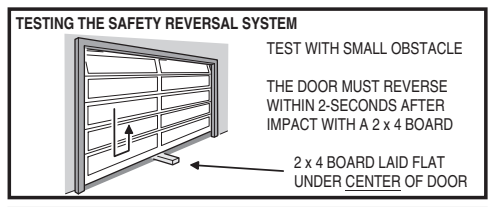
CHECKING THE DOOR BALANCE



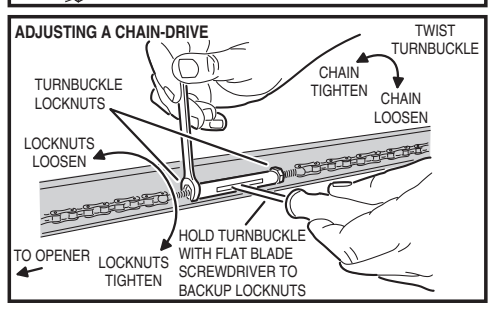
⚠ WARNING ⚠

Always perform the entire Door Force Safety System Test (see Section 6) after making any adjustments to the opener.

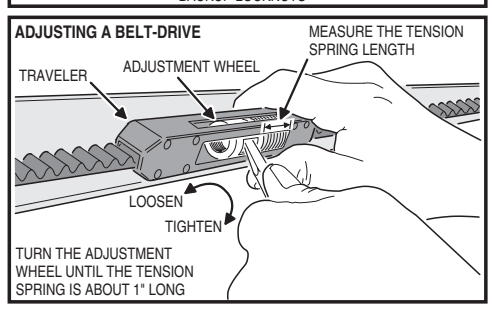
TESTING THE SAFETY REVERSAL SYSTEM



ADJUSTING A CHAIN-DRIVE



ADJUSTING A BELT-DRIVE



4 Testing the Infrared Safety Beam

The safety beam has two components, a sender and a receiver. The sender produces a narrow infrared beam that travels across the bottom of the door opening to the infrared receiver. If an object blocks the infrared beam while the door is closing, the door will stop, then reverse and fully open (the opener's light will flash three times).

As a safety feature, the opener will ignore signals from all remote controls if the door is open and the infrared safety beam is blocked or out of alignment. In this case, the door can be forced closed by pressing and holding the wall station's up/down arrow pushbutton (be sure the door area is in clear view).

⚠ WARNING ⚠

With the door closed, disengage the trolley from the chain during these alignment tests by pulling the red release handle.

⚠ WARNING ⚠

Serious injury or death from a closing garage door may result because of failure to test and adjust safety reverse system. Repeat this test monthly and adjust as needed.

Safety Beam Test

1 Check that the opener has power. The green lights on the sender and receiver should be lit.

2 If the receiver's green light is on, but the red light is off, the receiver has power but is not detecting the infrared beam from the sender. The red light might flash when the beam is partially detected. This can be caused by mis-alignment or something blocking the beam. Adjust the safety beam sender and receiver while watching the receiver's red light (stay out of the beam while aligning it). When the red light stays on, the beam is aligned.

SAFETY BEAM INDICATOR TABLE	
GREEN ON	POWER ON
GREEN OFF	POWER OFF
RED ON	BEAM OK - NO BLOCKAGE
RED OFF	BEAM BLOCKED OR MIS-ALIGNED
RED FLASHING	BEAM ALIGNED POORLY

➤ ***NOTE:*** *If the receiver's red light remains off, check for: 1) Dirt on the receiver's lens, 2) Sunlight shining into the receiver's lens, 3) A short in the safety beam wiring (from staples or at the opener terminals).*

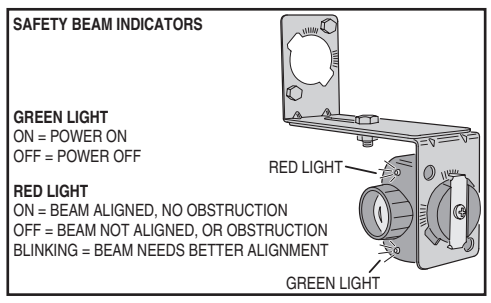
3 **With the door closed and the opener disengaged from the door,** press the wall station's UP/DOWN ARROW button to move the traveler (the part on the belt or chain that the trolley engages with) to the up position (away from the door).

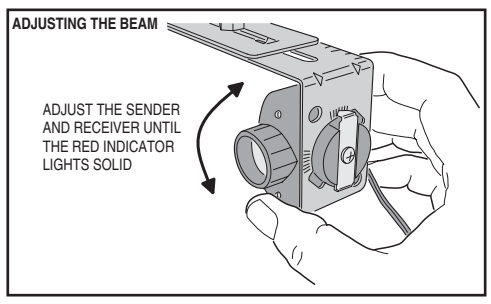
4 Push the wall station's UP/DOWN ARROW button again. While the traveler is moving to the down position (toward the door), block the safety beam. **THE TRAVELER MUST STOP, THEN REVERSE TO THE UP POSITION.** The opener's light should flash three times.

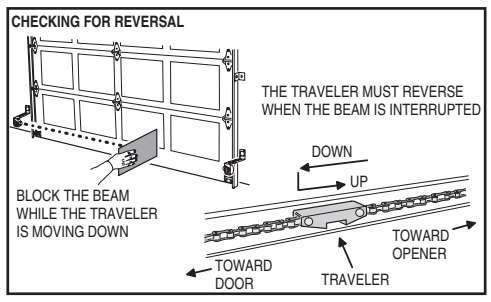
5 Place an object in the path of the safety beam. Check that constant pressure is required on the wall station's UP/DOWN ARROW button to cause the traveler to move toward the down position. Release the pushbutton *before* the opener stops; check that the traveler returns to the up position.

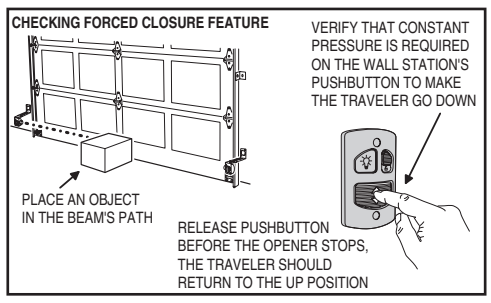
➤ ***NOTE:*** *The garage door opener will not respond to a CLOSE command from a radio transmitter if the safety beam is blocked.*

6 To reconnect the opener, flip the release lever up. Raise the door manually until the opener reconnects.









5 Adjusting the Open and Close Limits

The limit adjustments that control how far the door will open or close are located on the side of the opener. The limits should be adjusted so the door opens just short of any door stops, and closes right at the floor level. Each full turn of a limit adjustment equals about 2-½" of door travel.

⚠ CAUTION ⚠

Set the open and close limits carefully. Setting the limits beyond the distance that the door can travel could cause damage to the door, the door hardware, or opener.

1 Start with the door in the closed position.

2 Activate the remote control. Wait while the door moves to the open position and stops.

3 Examine the position of the door.

• If the door needs to open *more*, turn the OPEN LIMIT adjustment clockwise ¼-turn (towards UP on the label) to raise the open limit.

• If the door needs to open *less*, turn the OPEN LIMIT adjustment counterclockwise ¼-turn (towards DOWN on the label) to lower the open limit.

➤ ***NOTE:*** *On jamb doors, set the open limit so the door stops just short of level (see figure).*

4 Activate the remote control. Wait for the door to move down a few feet, then activate the remote control again to stop the door.

5 Repeat Steps 2-4 until the open limit is properly adjusted.

6 Activate the remote control. Wait while the door moves to the closed position and stops.

7 Examine the position of the door.

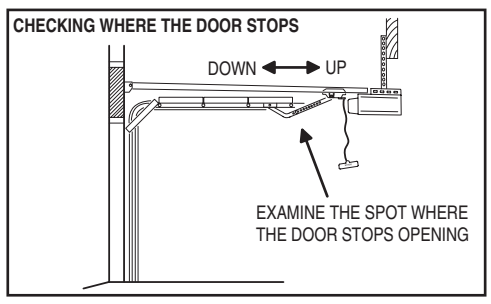
• If the door needs to close *more*, turn the CLOSE LIMIT adjustment counterclockwise ¼-turn (towards DOWN on the label) to lower the close limit.

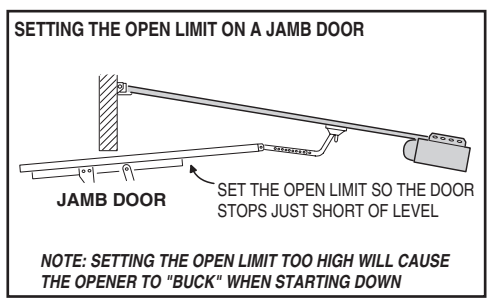
• If the door needs to close *less*, turn the CLOSE LIMIT adjustment clockwise ¼-turn (towards UP on the label) to raise the close limit.

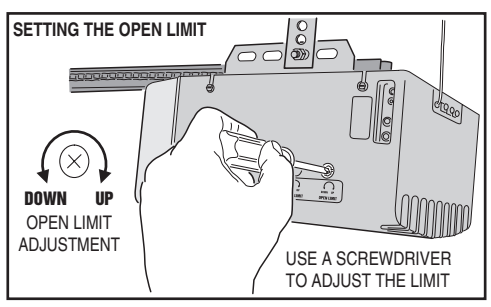
8 Activate the remote control. Wait for the door to move up a few feet, then activate the remote control again to stop the door.

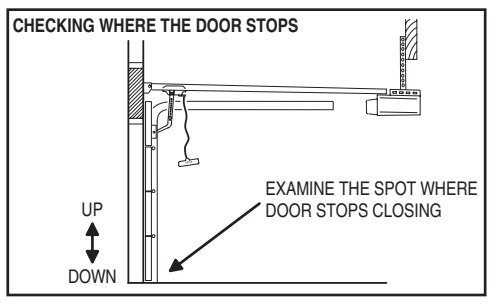
9 Repeat Steps 6-8 until the close limit is properly adjusted.

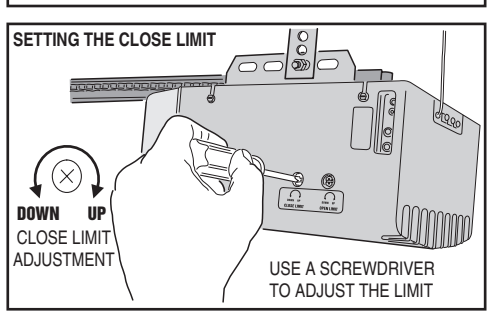
➤ ***NOTE:*** *If the door stops during opening or reverses during closing before reaching the limits, the door force adjustment needs to be set. Change the adjustment as described in the next section then return to this step to finish setting the limits.*











6 Testing & Adjusting the Door Force Safety System

The door force adjustments are located on the side of the opener. **The door force adjustments must be properly set at all times.** The CLOSE FORCE adjustment controls how much force is required to cause the door to reverse direction if an obstruction is encountered during closing. The OPEN FORCE adjustment controls how much force is required to stop the door if an obstruction is encountered during opening.

⚠ WARNING ⚠

Too much door force will interfere with the proper operation of the safety system. SOMEONE COULD BE SERIOUSLY INJURED OR KILLED IF THE DOOR FORCE IS SET TOO HIGH. A closing door might not reverse properly when required and someone could be pinned under it. An opening door might not stop when going up and someone hanging on the door could get pinned between the door and the header. Do not increase the door force beyond what is required to move the door. DO NOT USE THE DOOR FORCE ADJUSTMENT TO COMPENSATE FOR A BINDING OR STICKING GARAGE DOOR. PERFORM THE SAFETY REVERSAL SYSTEM TEST (STEPS 4-6) MONTHLY!

➤ ***NOTE:*** *Read the following directions carefully before changing the door force adjustments.*

⚠ WARNING ⚠

Always perform the Door Force Safety System Test after making any adjustments to the opener.

Door Force Safety System Test

1 Start with the door open. **Use the remote control to cycle the door during this test.**

Adjusting the Close Force

2 Turn the CLOSE FORCE adjustment 1/8-turn at a time in the DECREASE direction (counterclockwise) until the door stops and reverses mid travel while going down.

3 Turn the CLOSE FORCE adjustment 1/8-turn at a time in the INCREASE direction (clockwise) until the door fully closes without reversing.

Safety Reversal System Test

4 Lay a 2 x 4 board flat on the floor where it will be struck by the **center** of the door as it closes.

5 Verify that the door reverses when it strikes the board. The door **must** reverse within two seconds after striking the board.

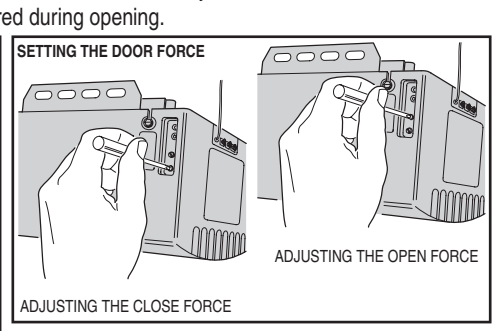
➤ ***NOTE:*** *If the door stops after encountering the board and does not reverse, the CLOSE FORCE needs to be DECREASED.*

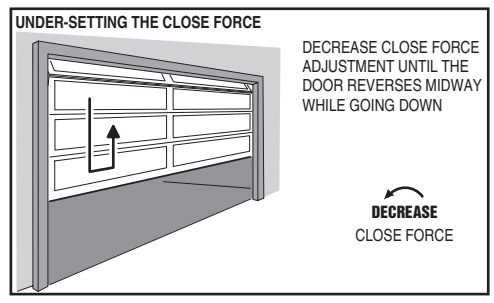
6 Repeat the Safety Reversal System Test until the door reverses within two seconds of striking the board.

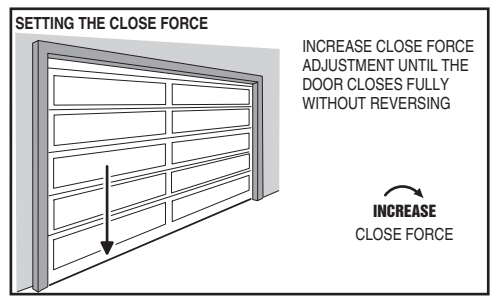
Adjusting the Open Force

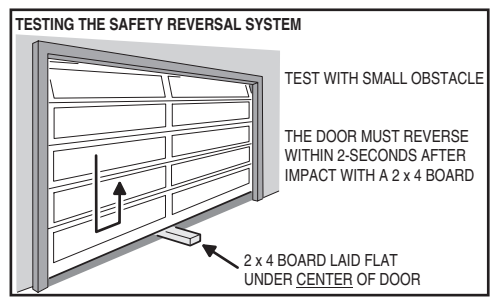
7 Turn the OPEN FORCE adjustment 1/8-turn at a time in the DECREASE direction (counterclockwise) until the door stops mid travel while going up.

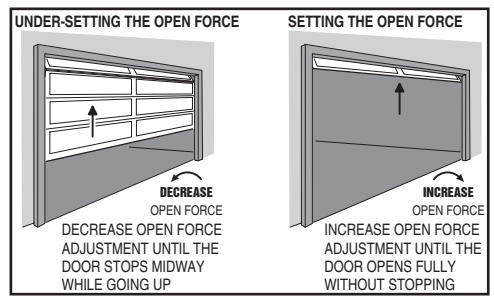
8 Turn the OPEN FORCE adjustment 1/8-turn at a time in the INCREASE direction (clockwise) until the door fully opens without stopping.











7 Replacing the Opener's Lamp

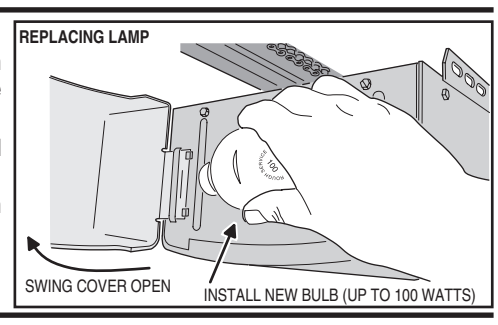
If the opener's safety lamp fails to light manually or when the opener is cycled, the light bulb needs replacing. Use the following steps to replace the light bulb.

1 Swing the light cover open to expose the light bulb and lamp socket.

2 Replace the light bulb with a 100 watt maximum rough service bulb (sometimes called a garage door bulb).

3 Swing the light cover closed, snapping it shut.

4 Press the wall station's lamp button to test the lamp.



8 Troubleshooting

LAMP FLASHES TROUBLE CODE	PROBLEM	CAUSE	REMEDY
1 FLASH	No problem	Remote control entered into memory	Add any additional remote controls (MegaCode™ type only)
2 FLASHES	Door won't close	Shorted wall station wires	Check wall station wires. Be sure both are connected to the terminal screws.Check for a staple in the wall station wires. Remove any staples compressing the wire.
3 FLASHES	Door won't close	Safety beam obstacle	Check for obstacles. Align the safety beam (Section 4)
4 FLASHES	Door reverses or won't open or close	Open or Close force exceeded, or motor thermal shutdown	Check for binding or un-balanced door. Adjust the door force (Section 6). If motor had thermal shutdown, wait 30 minutes and retry.
5 FLASHES	Door won't open from transmitter	Remote was activated while vacation switch was locked	Unlock vacation switch on wall station
6 FLASHES	Motor ran longer than 30 seconds	Mechanical or electronic failure	Call your local garage door professional

LIMITED WARRANTY

This Linear product is warranted to the original consumer against defects in material and workmanship for:

MODEL	ELECTRONICS	MECHANICAL	MOTOR	BELT
LD050	1 year	5 years	Lifetime	Lifetime
LD033	1 year	5 years	10 years	Lifetime

This product is warranted to the original consumer against defects in material and workmanship for the periods mentioned above. Linear will repair, or at its option, replace, any device that it finds requires service under this warranty, and will return the repaired or replaced device to the consumer at Linear's cost. Devices must be sent to Linear for service at owner's expense. This warranty does not apply to damage to the product from negligence, abuse, abnormal usage, misuse, accidents, normal wear or tear or due to failure to follow Seller's instructions, or arising from improper installation, storage or maintenance. In no event will Linear be responsible for incidental, compensatory, punitive, consequential, indirect, special or other damages. The remedies provided by this warranty are exclusive. Some states do not allow the exclusion or limitation of incidental and consequential damages, so the above limitation or exclusion may not apply to you. Any warranties implied by law are limited to the time periods set forth above. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For warranty service and shipping instructions contact Linear at the phone number shown below. In order to be protected by this warranty, save your proof of purchase and send a copy with equipment should repair be required. All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.