

Unique Lift LLC Installation Instructions

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Pre-Installation of Garage Lift

Prior to receiving the Unique Lift garage lift you should consider where you are planning to place the lift within your garage.

- A) If you are planning to install the lift above your garage door and mounting the basket under the garage drive then a minimum of 20" of clearance is required between the open garage door and the ceiling/joists for maximum storage.
- B) If you are planning to install the garage lift above your garage door but mounting the drive unit remote from the basket then a minimum of 15" of clearance is required between the garage door and the ceiling/joists for maximum storage.
- C) If you are NOT planning to install your lift above the garage door than a minimum of 8'6" of height is required between the garage floor to ceiling. In addition, the storage basket must rise and park to at least 7' above the garage floor unless an obstruction such as a truck or car will prevent someone from walking into the basket.

Once you determine where you will mount the garage lift then the next step is to consider the spacing of your garage joists. The Unique Lift requires the lift to be mounted on joists spaced either on 24" or 16" centers. If your joists are spaced further than 24" apart then you will need to explore adding additional joists. We advise you consult with a structural engineer before adding any additional joists.

For purpose of installation we will assume that your joists are set at 24" centers (You will follow the same installation steps for joists on 16" centers). The next step is to determine the direction the joists are running within your garage. This can be done by using a stud finder or a small finishing nail. Using the stud finder locate the joist by following the directions on the stud finder. Once you locate the joist then move the stud finder left and right as well as forward and backward of your location. This will identify which direction the joists are running. (Follow the same steps when using a small finishing nail. Pound the nail in all directions to determine the direction the joists are running. Please keep in mind the joist spacing while performing this test).

Once you determine the joist direction consider which way you will mount the garage lift. For joists running parallel with the lift then additional 2x4 studs must be added to spread out the load.

Installation (For Joists Running Parallel with the Garage Lift)

The Unique Lift garage lift requires the installation to be spread out among 6 joists to properly support the weight. With joists on 24" centers then six (6) 2" x 4" x 12' boards are required. First strike a string line on the garage ceiling since you are working at some considerable height above the garage floor we recommend you use a safe devise for working at the height of your garage. Now measure 12' across and strike another string line (have someone assist you at this point). Square the two string lines and mark the first joist. Make sure the marks are in the center of the joist **(It is important to make sure you mark the center of the joist. Making your mark off center could compromise the installation of the Unique Lift)**. Make additional marks on this joist on 16" centers. When you are completed you should have 6 marks on the first joist placed 16" apart. Now mark the next 5 joists in a similar manner making sure your marks are in the center of the joist **(Again it is important to mark the center of the joist. Making your mark off center could compromise the installation of the Unique Lift)**. Using a drill, drill a 1/8" pilot hole at least 3" deep into the joist (if you have a finished ceiling then add an additional 5/8" to the 3") at the marks you made on all 6 joists.

On the 2" x 4" x 12' board you will be installing make a mark in the center of the board 12" in from one end. Make a second mark 24" in from the first and at each 24" distance for the length of the board. You should have 6 marks spaced at 24" centers. Mark the remaining 5 other 2" x 4" x 12' boards the same. Drill a 3/8" hole at the marks on each board.

Position one of the drilled 2" x 4" x 12' on the ceiling and match up the holes drilled into the board with the pilot holes you drilled. Screw the board to the ceiling joists using a 3/8" x 4 1/2" lag screw and flat washer. We suggest YOU DO NOT use a power tool to screw in the lag screws. Using a power tool may cause the lag screw to strip compromising the attachment point. If the screw strips in the hole then you must remove the lag screw and repair the hole using industry standard practices.

Continue screwing in all of the lag screws for each board. Pay attention as you screw in the lag screw. You should feel the resistance of the wood of the joist as you tighten the lag screw. Tighten the lag screw until you see the washer begin to compress onto the 2" x 4" board. Over tightening may cause the lag screw to strip out.

Once you are completed you should have six (6) 2" x 4" x 12' boards lag screwed to the ceiling joists on 16" centers from each other. Now you can begin to layout where you want to mount the garage lift drive frame.

Installation (For Joists Running Perpendicular with the Garage Lift)

If the joists are on 16" centers then you can mount the garage lift drive frame directly to the existing joists. Make sure you mark the center of each joists **(It is important to make sure you mark the center of the joist. Making your mark off center could compromise the installation of the Unique Lift)** and drill the pilot holes 3 5/8" deep. You will still need to use six (6) joists for proper support. Using a 3/8 x 3 1/2" lag screws attach the drive frame.

If the joists are on 24" centers then you can add a 2" x 4" x 12' long board under the drive frame (2) and the cable support bracket. Follow the above procedure for lying out and installing the board.

Garage Lift Drive Frame

You want to position the drive frame between the 24" centered lag screws. Do not mount the drive frame outside the 24" centered lag screws. Using a string line mark the 2x4s where you want to mount the drive frame. Measuring 10" away from your mark and inside the 24" centered lag screws strike another string line and make a mark. Center these marks on the 2x4s and drill a 1/8" x 2 1/2" long pilot hole in each board. You should have 12 pilot holes drilled.

Now you are ready to mount the drive frame. The unit weighs about 30 lbs without the drive motor, gearbox, and mounting plate. Secure a safe devise able to handle two people securely. Two people firmly on a safe devise can lift the drive frame into position and center it within the 2x4s while a third person begins to screw in the 3/8" x 2 1/2" lag screws to the strut channel frame.

Gearbox and Mounting Plate

Once the drive frame is mounted to the 2x4s the next step is to mount the gearbox and mounting plate. Again this unit weighs about 30 lbs and two people standing securely on a safe devise while a third person fastens the fasteners to the strut channel frame can accomplish the task.

The gearbox and mounting plate use a special strut channel nut which when properly aligned within the strut channel will span the strut channel. Make sure the nuts make contact with the strut channel before tightening the bolts.

Using a straight edge align the drive sprocket on the gearbox with the driven sprocket on the cable drum shaft. Adjust the mounting plate until the sprockets align. Install the cable drum drive chain making sure the retaining clip is securely seated.

Again tap on the mounting plate until the chain tension up. You want the chain to have about a 1/4" of slack when complete. Tighten the two bolts on the opposite end of the electrical box. Now square up the electrical box with the mounting plate and tension the timing chain by tapping on the electrical box. Once the timing chain is tensioned tighten the two bolts securing the electrical box. You want the chain to have about a 1/4" of slack when complete. On the end opposite the electrical box tighten the two setscrews until they contact the mounting plate and then give them an additional turn. Finish the job by locking the set screws with the lock nuts. Recheck the drive chain and the timing chain to see if either has moved. Both should have about a 1/4" of slack and the sprockets aligned.

Electric Motor

You are now ready to install the motor. The motor weighs about 80 lbs and two people standing securely on a safe devise can install the motor into the gearbox and a third person can tighten the mounting bolts.

Once you have the motor in place then route the electrical conduit into the electrical box securing with the jam nut. Attached the motor leads as specified by the wiring drawing.

Cable Support Bracket

If you are mounting the Unique Lift garage lift under the drive unit then you will only install one cable support bracket. Measuring from the side of the cable drum closest to the electrical box make a mark on the 2x4s 48" away. Strike a string line on this mark and in the center of each 2x4 drill a 1/8" x 2 1/2" pilot hole. You should have six (6) holes drilled (one in each 2x4). Now center the cable support bracket within the 2x4s (have someone assist you at this point) and attach with 3/8" x 2 1/2" lag screws. Again do NOT use a power tool to install the lag screws. You may need to loosen and slide the cable sheaves out of the way to attach the cable support bracket.

If you are remote mounting the drive then you will need to install two cable support brackets. Follow the same procedure spelled out for mounting the drive unit but measure from the side of the cable drum closest to the electrical box to the first cable support bracket. Then measure 48" from this point for the second cable support bracket.

Lift Cables

Move the basket under the drive unit. The basket has four lift points tagged "A", "B", "C", and "D". Position the basket so lift points "A" and "C" are under the drive unit. Lift points "B" and "D" should be under the cable support bracket. When you place your order for the Unique Lift you were asked the height of your garage. Based on this information the cables are preassembled at the factory and shipped with the Unique Lift and are ready to install. Take the two shorter length cables and attach each one to the basket at points "A" and "C". Following the diagram included with the Unique Lift you will have each cable attached to the basket as described.

To complete the attachment of the cables to the drums loosen the set screws at the keys and remove the keys from under the drums. (You will need to slide drum "B" and "D" away from drums "A" and "C" to remove the keys). Take the cable end with the crimp button connection and proceed to insert into the side of the cable drum as indicated.

For "A" and "C" thread the cable over the cable drum and insert the button end into the side of the drum. The cables should hang straight down to the basket. Taking the two longer cables attach them to the basket at points "B"

and “D” (following the diagram included with the Unique Lift) and then thread the cables over the sheaves on the cable support bracket drum and then over the cable drum and attach the button end of the cable into the side of the drum.

Beginning with cable drums “A” and “C” start wrapping the cable around the drum by rotating the drum around the shaft. Follow the cable drum grooves as you roll the drum around the shaft winding up the cable. Once the cable begins to take weight from the basket stop and align the keyway of the shaft with the cable drum. You do not want to pick up the basket with the cable at this time. You may need to unroll the cable drum to align the keyway with the drum. Insert the key into the cable drum aligning with the keyway. Once you have “A” and “C” drum wrapped up and the key inserted then check the clearance between the key and the bearing.

On the two outer most drums make sure there is enough clearance between the end of the key and the bearings.

Slide the cable drum away from the bearing if necessary to create enough clearance. Once the cable drum is set then tighten the two setscrews to lock the key into the keyway.

Once you have the drums “A” and “C” properly spaced away from the bearings and the keys locked in place begin working the cable around drums “B” and “D”.

You should be working with the two inner cable drums. Follow the same procedures for threading the cable around the cable drum and attaching to the shaft as explained in the previous paragraph. The two inner cable drums should butt against the two outer drums when assembly is complete and keys are locked in position.

All four cables should hang straight down to the basket with a little slack in each cable. We will address adjusting the cable length after we complete the installation of the garage lift.

Master Control Box

Mount the master control box on a wall near the garage lift using the mounting kit supplied. Mount the master control box in a position so you can watch the basket operate while standing at the master control box. Install the cable provided into the master control box following the wiring diagram and route the cable back to the electrical box. Attach the cable via wire ties to the garage door structure so they are away from the movement of the garage door and the drive and timing chains. Again following the wiring diagram attach the wire ends inside the electrical box.

Garage Door Limit Switch

If you are installing the Unique Lift garage lift over a garage door then locate and mount the garage door limit switch either at the base of the door or at the existing garage door drive connection. Position the limit switch so the spring lever is in contact with either the door or the drive connection when the door is closed. Install the cable provided and route the cable back to the electrical box. Attach the cable via wire ties to the garage door structure so they are away from the movement of the garage door and the drive and timing chains. Again following the wiring diagram attach the wire ends inside the electrical box. **(If you are not installing the lift over a garage door then this switch is not required. Follow the wiring diagram as indicated to bypass this switch)**

Power up the Garage Lift

If you are installing the Unique Lift garage lift over a garage door then unplug the existing garage door opener and plug the existing garage door opener into the garage lift electrical box. Route the power cord from the garage lift electrical box to the outlet used for the existing garage door opener. You may need to extend either electrical cord to reach the electrical outlet depending on your installation.

(If you are NOT installing the lift over a garage door then you do not need to plug the existing garage door opener into the garage lift. Follow the wiring diagram as indicated to bypass this step)

Setting the Up and Down Limits

Once you have power to the unit at the master control box select the up position and depress and hold the up button. The garage lift should begin to pick the basket up. Stop hoisting and check to make sure the cables are wrapping the drums correctly and that the cables are hanging straight down and true. You may need to adjust the position of the sheaves on the cable support bracket at this time. To adjust the sheaves loosen the mounting bolts and tap the sheave along the strut channel aligning the cable with the basket and cable drum. Complete the adjustment by tightening the sheave mounting bolts. Level the basket by adjusting the turnbuckles. You can use a mason's level here to help guide you.

Now lower the basket by turning the master switch to the down position and press and hold the down button until the basket either stops or hits the ground.

Release the down button and go up to the electrical box and adjust the limit switch by depressing the locking plate and rotating the white nut on the threaded rod in an appropriate direction to allow the nut to trip the micro-switch.

(Warning: there is 120VAC in the electrical box. Only touch the nylon nuts and the locking plate while making these adjustments). This may take a couple of tries to get the down position set. Each time you make an adjustment raise the basket and then lower to check your adjustment. Make sure the locking plate snaps back into position once you release the plate. You want the basket to just reach the floor. The basket should rest on the floor with very little slack in the cables. Once you have the down position set, then repeat the process with the up position. If installing above a garage door then set the up position so the basket clears the door when the door is opened. This will maximize the storage space above the garage door. If NOT installing above a garage door then adjust the basket height to clear any obstacles while still providing a clear and safe passage under the storage basket.

Garage Door Safety Features (Safety features only if installing above a garage door)

Once the garage lift is in the up position you should be able to operate the existing garage door opener. If you find that the garage door does not open with the basket in the up position or the garage door operates when the basket is NOT in the up position then you will have to gently bend down the tip on the micro-switch labeled “Garage door safety switch” until both micro-switches (the up limit and the garage door safety switch) trip at the same time.

Test this once you have the adjustment set. With the garage door closed lower the basket a few feet then raise the basket until it stops. Now the garage door should open. Check also that the garage door does not rise if the basket is not in the up position.

To test the operation of the garage door limit switch mounted to either the base of the door or at the garage door drive connection try to lower the garage lift with the garage door slightly raised. The garage lift should NOT operate. If the garage lift does operate then adjust the limit switch until the spring lever contacts the garage door or the garage door drive connection.

Once all the safety switches are checked then operate the basket at least three (3) times checking the up and down limits. The basket should just reach the floor and when raised should clear the garage door. Complete the installation by installing the cover on the electrical box.