HARKEN HOISTER

- 7801: 60 lb (27 kg) System
- 7802: 90 lb (41 kg) System
- 7803: 145 lb (66 kg) System
- 7806: 200 lb (91 kg) System

Harken, Inc. • 1251 E. Wisconsin Ave. • Pewaukee, WI 53072 USA • Tel: 262-691-3320 • Fax: 262-691-3008 • Email: hoister@harken.com • Web: www.harken.com/hoister

INSTRUCTIONS

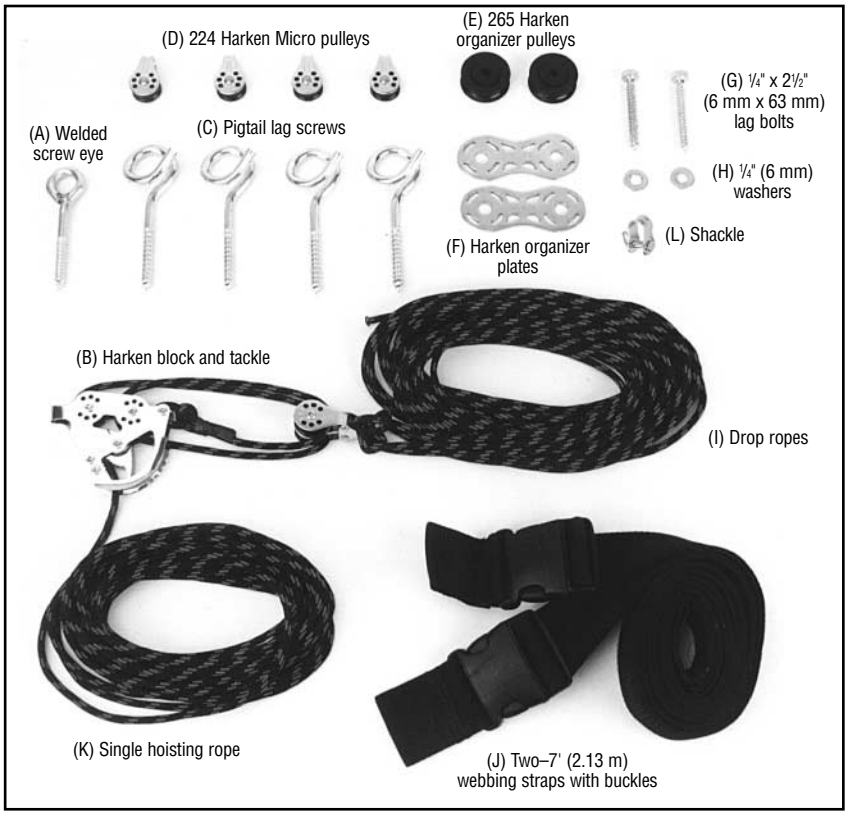
Kit includes:

Parts Included:

1 Welded screw eye .....A
1 Harken block and tackle .....B
4 Pigtail lag screws C
4 224 Harken Micro pulleys.....D
2 265 Harken organizer pulleys .....E
2 Harken organizer plates.....F
2 ¼" x 2½" (6 x 63 mm) lag bolts.....G
2 ¼" (6 mm) washers.....H
4 Drop ropes: 2 long/2 short I
2 7' (2.13 m) webbing straps w/buckles.....J
1 Single hoisting rope .....K
1 Shackle.....L

Optional: (purchase separately)

1 2" x 6" x 12' (50 mm x 152 mm x 3.66 m), grade 2 or better pine board
8 5/16" x 4" (8 x 100 mm) lag bolts and washers



Tools Needed:

Electric/hand drill
Drill bits: 5/32" (4 mm), 7/32" (6 mm), 5/16" (8 mm)
Plumb line
Pencil
7/16" (11 mm) box end or ratcheting wrench
Stud finder (available at building supply store)
Stepladder
Safety glasses
Tape measure

IMPORTANT: Disable garage door opener when installing, raising, or lowering Hoister.

Locate trusses/rafters

Locate trusses/rafters in ceiling above vehicle where system will be mounted using a stud finder. Be sure to follow manufacturer's instructions carefully for locating truss/rafter. **Warning: Each fastener must be securely anchored to a truss/rafter to make sure the item you are lifting does not fall.**

Warning: Make sure there is enough ceiling clearance to lift load well clear of vehicle and garage door.

Locate lift points

Park vehicle in garage with object to be lifted on top in its normal position.

Use a plumb line to locate four lift points. Put reference marks on ceiling using a dark pencil. If truss/rafters do not line up with these points, use a 2" x 6" (50 x 152 mm) board to screw the pigtail lag screws (see optional parts list).

Locate closest truss/rafter and adjust vehicle position to center car underneath marks.

Record measurements of four points. Add 2" (50 mm) to each width dimension. These measurements will determine where to locate pigtail lag screws. Measurement should not be more than 5' (1.53 m) apart. Maximum 6' (1.83 m) for System 7806. **See Figure 1**.

Locate Harken organizer

Make sure the organizer is far enough away from the garage wall. Distance to wall must be equal to the lifting distance. If organizer is too close to wall, move welded screw eye laterally across wall until you have the correct distance.
See Figure 2.

Install pigtail lag screws

Always wear your safety glasses!

Cut 2" x 6" x 12' (50 mm x 152 mm x 3.66 m), grade 2 or better, into two 6' (1.8 m) lengths.

Transfer four measurement points to 2" x 6" (50 x 152 mm) boards. Center measurements on each board.

Drill a 7/32" (5.5 mm) hole at each point.

Install a (C) pigtail lag screw in each hole.

It is important to install screw eye so threads just disappear in board. **Do not over-tighten screw eye. This can weaken fastener hold**.

Mount Harken organizer

Use organizer plate (F) as a drill template. Drill two 5/32" (4 mm) holes in middle of 2" x 6" (50 x 152 mm) board.

Sandwich two organizer pulleys (E) between two organizer plates (F). Mount in middle of 2" x 6" (50 x 152 mm) board using supplied 1/4" x 2½" (6 mm x 63 mm) lag bolts (G) and washers (H).

Fasten mounting boards to ceiling

Position 2" x 6" (50 x 152 mm) board with pigtail lag screw and organizer furthest away from garage door.

Position 2" x 6" (50 x 152 mm) board without organizer closest to garage door.

Figure 1

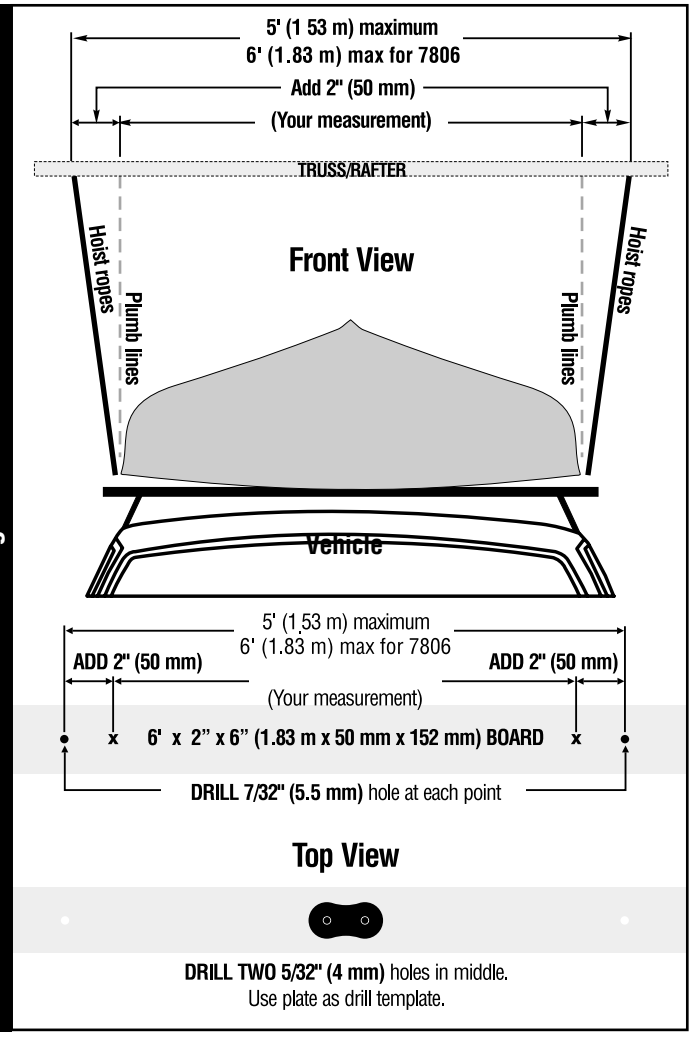
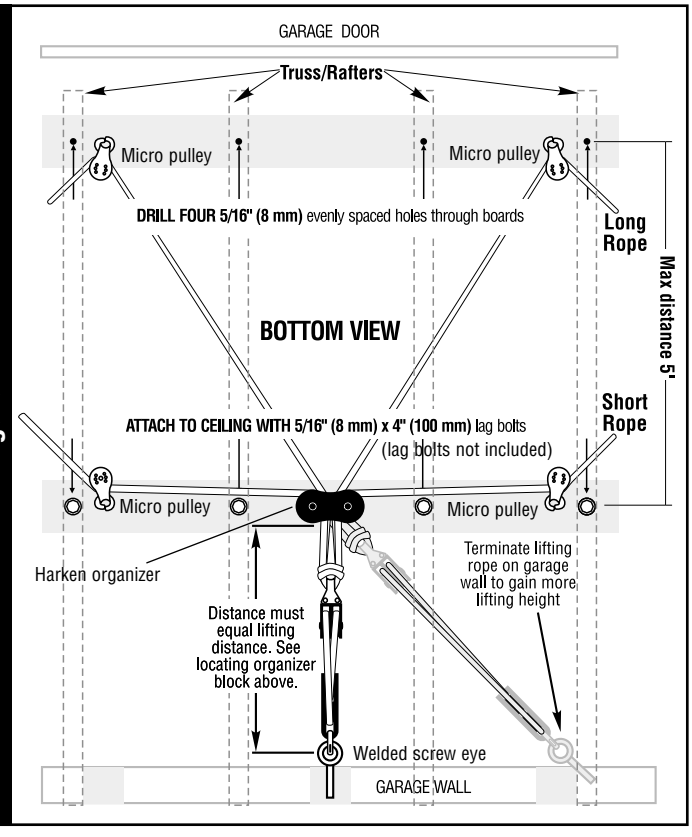


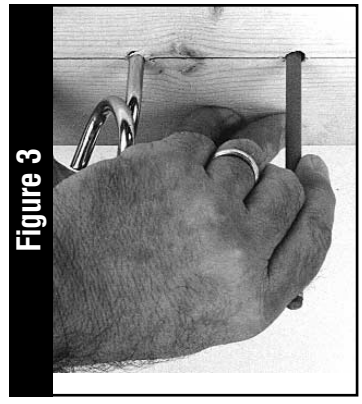
Figure 2



Drill four 5⁄16" (8 mm) clearance holes in each 2" x 6" (50 x 152 mm) board, evenly spaced for mounting to truss/rafter. **Note: be sure to use stud finder to locate truss/rafter center. Make sure to follow manufacturer's instructions.**

Use holes in 2" x 6" (50 x 152 mm) board as a template. Mark ceiling with pencil. Drill truss/rafter using a 7⁄32" (5.5 mm) drill.

Put one washer on each 5⁄16" x 4" (8 mm x 100 mm) lag bolt. Use an open end, box end, or adjustable wrench to screw each bolt securely into ceiling truss/rafter. **Do not over-tighten.**



Use holes in 2" x 6" as a template to mark ceiling.

Install welded screw

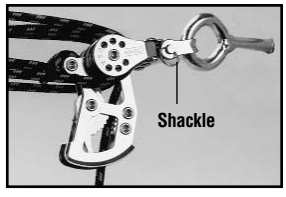
Install welded screw eye (A) on vertical wall opposite the garage door.

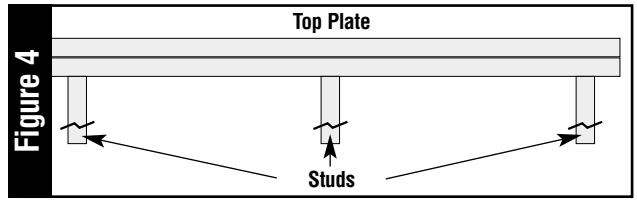
Using a stud/truss finder locate solid wood. ***Be sure to follow the manufacturer's instructions.*** Drill 7⁄32" (5.5 mm) hole. Screw welded eye into top plate of wall. **See figure 4.**

Weave rope

Place one 224 Micro pulley (D) on each pigtail lag screw (C).

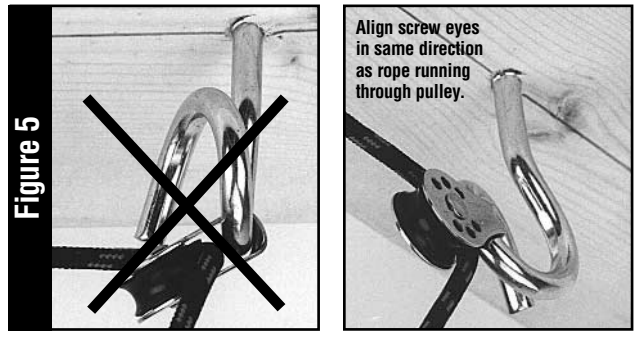
Attach block and tackle system to welded screw eye (A) with shackle (L). Remove ring from shackle pin, slide pin through head of pulley with safety cleat and put ring back on. Make sure single rope is facing down.





Feed all four drop ropes through organizer (F). Feed two shorter ropes through pulleys (D) on organizer board. Run two longer ropes through pulleys (D) on 2" x 6" (50 x 152 mm) board closest to garage door. **See Figure 2, previous page**.

Align screw eyes in same direction as rope running through pulley. See figure 5.



Set up system

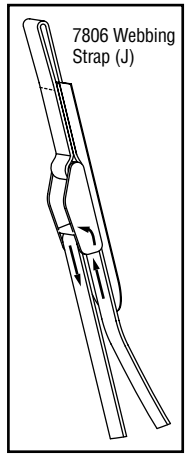
Place object to be lifted in its normal position on vehicle, directly under system.

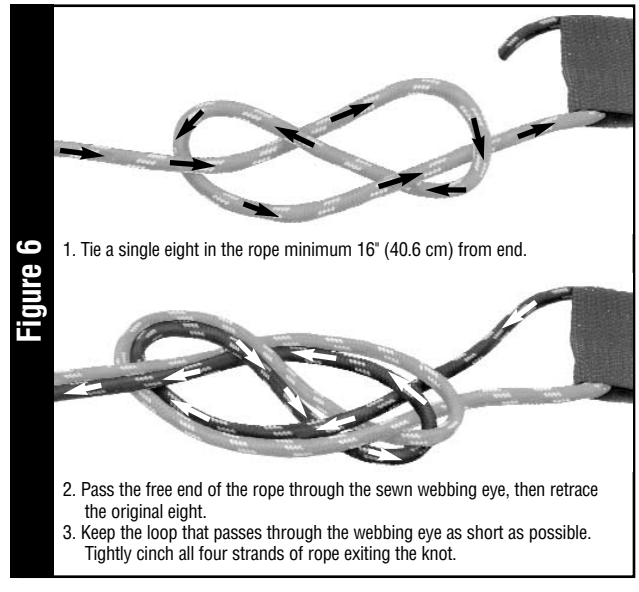
Tie rope to webbing strap using a "figure 8" knot. **See Figure 6.**

Check knots. **Make sure they are tied securely and will not come undone.**

Tip: with webbing strap in place, tie knots below top of object you are lifting so you can lift load to ceiling. **See Figure 7.**

Place webbing straps around load. Push buckles together to lock. Check by pulling on webbing. **Note: For system 7806, feed webbing straps (J) through buckle as shown.**

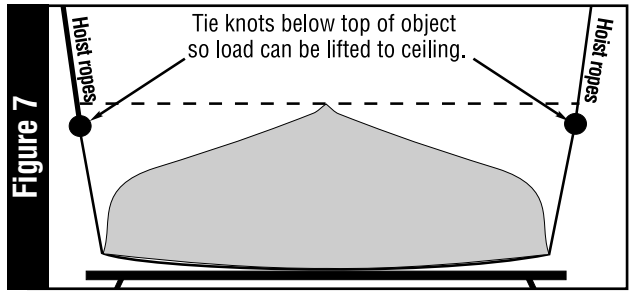




Equalize rope tension

Slowly pull single rope to check if load is level. ***All ropes must have equal tension so load remains level.***

To level load, adjust tension by moving the knot or adjusting webbing strap at buckle. When level/balanced you are ready to lift.

Operate system

Important: for safety, do not raise or lower load with anyone standing under item. Pull on single rope to raise load. When load is at correct height let go of rope—pulley with safety cleat will lock. To lower load, securely hold rope and apply tension while moving rope toward the object you are lowering. ***Slowly*** let the rope move through safety cleat.