**SAVE TIME! READ THE ENTIRE MANUAL BEFORE BEGINNING HOISTER INSTALLATION.**

**INSTRUCTIONS**

**KIT INCLUDES:**

A 1 Welded screw eye
B 4 Pigtail lag screws
C 1 Shackle
D 4 Pulleys
E 2 Webbing straps with buckles 7’ (2.13 m)
F 1 Single black/red hoisting rope
G 1 Block and tackle with safety cleat (G1) and rope
H 4 Black drop ropes: 2 long, 2 short
I 2 Lag bolts 1/4” x 2-1/2” (6 x 63 mm)
J 2 Washers 1/4” (6 mm)
K 2 Organizer plates
L 2 Organizer pulleys

**Purchase separately (if needed)**

2 Pine boards (grade 2) 2’ x 6” x 6’ (50 mm x 152 mm x 1.83 m)
8 Lag bolts and washers 5/16” x 4” (8 x 100 mm)

**Tools Needed:**

Drill
Drill bits: 5/32” (4 mm), 7/32” (6 mm), 5/16” (8 mm)
Plumb line
Pencil
Stud finder
Stepladder
Safety glasses
Tape measure
Wrench: 7/16” (11 mm) box end or ratcheting wrench

*NOTE:* (G) Block and Tackle appearance varies by system size. Refer to Hoister part number for specific Safety Cleat style.

**IMPORTANT SAFETY INFORMATION**

- **DISABLE AUTOMATIC GARAGE DOOR OPENER** when installing, raising, or lowering Hoister.
- **READ ENTIRE MANUAL CAREFULLY BEFORE starting installation.** It will save you time.
- **DO NOT UNTIE ANY ROPES** System comes ready to install. Leave F, G and H together.
- **DO NOT RAISE OR LOWER HOISTER** with anyone standing under object.
INSTALLATION OVERVIEW

STEP 1  DETERMINE HOISTER LOCATION
STEP 2  INSTALL MOUNTING BOARDS
STEP 3  INSTALL PIGTAIL LAG SCREWS
STEP 4  INSTALL ROPE ORGANIZER
STEP 5  ASSEMBLE HOISTER SYSTEM
STEP 6  OPERATING HOISTER SYSTEM

MAINTENANCE & WARRANTY
A. PLAN THE INSTALLATION

Pull car into garage with object on car rack.

Measure length of object. Position Hoister so garage door can open with object lowered.

STORAGE OPTIONS

Measure height of object. Make sure object can be stored above or below the open garage door.

OPTION 1. Above Garage Door: Clearance to lift and store object above open garage door.

OPTION 2. Below Garage Door: Use if not enough clearance for Above Garage Door Storage (Option 1). Object has clearance to lift and store below open garage door.

DIAGRAM 1. Position object above car with clearance to open garage door. If Hoister is mounted too close to garage door, there may not be clearance to open door. Mounted too far forward, object may not balance or lower onto car.
B. PLAN LOCATION OF MOUNTING BOARDS

Mounting boards are used to position Hoister directly above object to be lifted.

7806 Hoister (200 lb system) requires mounting boards to span minimum three rafters.

**WARNING:** Do not screw into laminated rafters. They are not intended to accept fasteners. Consult rafter maker for recommendations. Screwing into laminated rafters may considerably weaken system, causing load to fall which may cause an accident, damage to property, personal injury or death.

**NOTE:** Mounting boards may not be necessary for installation in ceiling with exposed rafters. In ceilings with exposed rafters, system can be installed on rafters. Position Hoister directly above object to be lifted. If installing without mounting boards, go to step 3.

DISTANCE BETWEEN MOUNTING BOARDS

Distance between mounting boards should be 1/3 of object’s length.

**Exception:** Distance between mounting boards for long canoes/sea kayaks will be less than 1/3 object’s length.

Calculate distance between mounting boards using formula or chart below.

\[
\text{Object length} \times 0.33 = \text{Mounting distance}
\]

LOCATE CEILING MOUNTING BOARD POSITION

**DIAGRAM 2.** Center object under mounting points. Position mounting boards so lifted object is balanced.

**DIAGRAM 3.** Distance of mounting boards from front wall is important, as it affects the position of the welded screw eye in Step 5A.
**STEP 2: INSTALL MOUNTING BOARDS**

**A. DRILL CEILING RAFTER ATTACHMENT POINTS**

**LOCATE CEILING RAFTERS**

Mounting boards must attach to ceiling rafters. On finished ceilings, locate rafters using stud finder. Follow manufacturer’s instructions.

Mark center of ceiling rafters. Drill 7/32" (5.5 mm) holes.

**B. DRILL MOUNTING BOARDS**

Measure center-to-center distance between rafters. Mark distance on mounting boards. Mark drill points in the center of the board. Drill 5/16" (8 mm) holes completely through the mounting boards.

**C. ATTACH MOUNTING BOARDS TO CEILING**

Attach mounting boards using 5/16" (8 mm) lag bolts and washers (not included).

Do not over-tighten.

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**Diagram 4.** Mark center-to-center distance between rafters on mounting boards. Attach mounting boards to rafters.
A. DETERMINE PIGTAIL LAG SCREW (B) LOCATION

PULL VEHICLE INTO GARAGE

Diagram 5. Pull vehicle into garage with object on car rack. Disconnect automatic garage door.

MARK LOCATION POINTS

Use plumb line to locate four lifting points on mounting boards above vehicle.

Diagram 6. Mark object width on mounting boards.

DRILL HOLES ON EACH MOUNTING BOARD

Diagram 7. Add 2" (50 mm) outside each mark. Drill a 7/32" (5.5 mm) hole at each drill point on mounting boards.

INSTALL PIGTAIL LAG SCREWS

Diagram 8. Install a Pigtail Lag Screw (B) in each hole. Threads should just disappear into mounting board.

WARNING: Do not over-tighten Pigtail Lag Screw past top thread. This can weaken fastener hold which may considerably weaken system, causing load to fall which may cause an accident, damage to property, personal injury or death.
STEP 4: INSTALL ROPE ORGANIZER

A. DRILL HOLES IN MOUNTING BOARD

Diagram 9. Center Rope Organizer Plate (K) between the two Pigtail Lag Screws (B) on front mounting board. Use as template to mark center holes.

Drill two 5/32” (4 mm) holes.

B. ASSEMBLE ROPE ORGANIZER

Diagram 10. Assemble Rope Organizer using Plate (K) and Pulleys (L). Fasten to mounting board with Lag Bolts (I) and Washers (J).

IMPORTANT: Do not overtighten bolts. This can keep Rope Organizer Pulleys (L) from turning properly.

STEP 5: ASSEMBLE HOISTEER SYSTEM

A. INSTALL WELDED SCREW EYE (A)

Placement on Front Wall

Diagram 11. Distance 2 must be equal or somewhat greater than distance 3. See chart below. For a larger view, see Diagram 3.

Maximizing Lowering of Object

You may want to lower object to floor or sawhorses. If distance 2 is much greater than 3, the amount object can be lowered will be limited by length of supplied line. When distance 2 is much greater than 3, purchase longer line for drop ropes (H) to maximize distance object can be lowered.

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<td>13</td>
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</table>
**B. ATTACH PULLEYS**

Place one Pulley (D) on each Pigtail Lag Screw (B).

**INSTALL WELDED SCREW EYE (A) ON FRONT WALL**

Use stud finder to locate solid wood of top plate. Drill 7/32" (5.5 mm) hole. Screw Welded Screw Eye (A) into top plate of front wall (near top of ceiling).

**ATTACH BLOCK AND TACKLE (G)**

Attach Block and Tackle system (G) to welded Screw Eye (A) with Shackle (C). Remove ring from shackle like a key ring. Put pin through top of Safety Cleat (G1). Put ring back on to secure Shackle (C).

*NOTE:* Appearance of Safety Cleat (G1) varies by system size. Refer to system part number for specific Block and Tackle Safety Cleat.
C. INSTALL ROPE

**DIAGRAM 16.** Put all four Black Drop Ropes through Organizer.
Put two shorter Black Drop Ropes through Pulleys (D) on mounting board with Rope Organizer.
Put two longer Black Drop Ropes through Pulleys (D) on remaining mounting board.

D. ATTACH STRAPS TO ROPE

**TIE ROPE TO WEBBING STRAPS**
Keep knot as close to Webbing Strap (E) eye as possible.

**DIAGRAM 18.** Tie a Black Drop Rope to each Webbing Strap (E) using a figure-eight knot. Pass free end of rope through the sewn Webbing Strap eye.

**DIAGRAM 19.** Using free end of rope from Webbing Strap eye, retrace original figure-eight knot in reverse. Tightly cinch all four strands of rope exiting the knot. Tighten knots.

**DIAGRAM 20.** Align Pigtail Lag Screws in direction of rope running through Pulley.

E. ADJUSTING LIFTING SYSTEM

**ALIGN SCREW EYES**

**LEVEL OBJECT**
All webbing straps and ropes must have equal tension to keep object level. Check by slowly pulling the Black/Red Hoisting Rope (F).
To level object, adjust tension by moving knot or adjusting webbing strap at buckle.

**POSITION WEBBING STRAPS**
Place object in position under system. Place Webbing Straps (E) under object to be lifted. Push buckles together to lock.

**CEILING**

**OBJECT**

**Tie knots below top of object so load can be lifted to ceiling.**
STEP 6: OPERATING HOISTER SYSTEM

A. RAISE OBJECT


With rope pointed down the cleat will lock the rope and you can release it. Repeat until object is at desired height.

B. STORE OBJECT

With object in raised position make sure Single Black/Red Hoisting Rope (F) is securely locked in cleat with rope pointed down (see Diagram 21). Coil loose rope end. Hang coiled rope for storage when system is not in use.

C. LOWER OBJECT

Securely grip rope, apply tension and angle it away from front wall. Bring arm up to let rope out and then back towards the wall to lock the rope. Repeat until object is at desired height.
MAINTENANCE

Inspect rope (H and F), knots and straps regularly for signs of chafe, wearing or UV damage. Replace immediately. Inspect knots for signs of slipping. When attaching object, inspect webbing strap buckles (E) to make sure spring clip functions properly. Replace rope and hardware with Harken parts only.

WARRANTY

What Is Covered – This warranty covers defects in materials or workmanship.

Who Is Covered – The original purchaser.

For How Long – Harken® products are warranted for five (5) years from the date of purchase:

After the end of any specific warranty period noted above, HARKEN® MAKES NO EXPRESS OR IMPLIED WARRANTIES OF ANY KIND WITH RESPECT TO THE PRODUCTS, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states, or if you live outside the U.S., some countries, do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

What Is Not Covered – This warranty does not cover any product that was: improperly installed; inadequately inspected after installation; improperly maintained; used in any application for which it was not intended; used under load conditions exceeding the rating or other recommendation published in the Harken® catalog; or subject to misuse, negligence, accident, or unauthorized modification or repair. Ropes, buckles and webbing are also not covered. Labor charges are also not covered. Separate warranty provisions may be available from vendors on some of the above products. Contact Harken® for this warranty information.

CONSEQUENTIAL AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY. Some states do not allow the exclusion or limitation of incidental damages, so the above limitation or exclusion may not apply to you.

How To Get Service – If something goes wrong, contact Harken® directly or your local Harken® dealer to arrange for warranty assistance. Your dealer has Harken® Warranty Return Guidelines that provide you with exact return procedures depending on the product involved. We will need, in writing, your name, address, phone number, date of purchase, product involved, application, an explanation of the defect and conditions under which the product was used. We are fair and we do care when Harken® products do not perform.
3 Easy Steps

1. Secure

2. Lift

3. Store

SELECTING THE HARKEN HOISTER YOU NEED:

1. Determine maximum weight you will lift and select correct Hoister.

<table>
<thead>
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<th>Part No.</th>
<th>Description</th>
<th>Mechanical Advantage</th>
<th>Lifting Weight</th>
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<td></td>
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<tr>
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<td>60 lb Storage System</td>
<td>3:1</td>
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<tr>
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<td>7806</td>
<td>200 lb Storage System</td>
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</tbody>
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2. Standard Hoisters are designed for an 10’ (3 m) ceiling. Contact Harken for taller ceilings.

3. Check distance between ceiling and top of garage door in open position. Will object fit in this space? If not, will object lift and store under garage door in open position? If not, consider turning the object 90° and placing in the front of garage.

4. Hoisters 7801, 7802 and 7803 are designed to lift an object no wider than 5’ (1.52 m). System 7806 = 6’ (1.83 m).

Tools Needed: Drill, Drill bits: 5/32” (4 mm), 7/32” (6 mm), 5/16” (8 mm), Plumb line, Pencil, Stud finder, Stepladder, Safety glasses, Tape measure, Wrench: 7/16’ (11 mm) box end or ratcheting wrench. Optional Supplies: Two 2” x 6” x 6’ grade 2 pine boards (50 mm x 152 mm x 1.83 m), Eight 5/16” x 4” (8 x 100 mm) lag bolts and washers.

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