

HARKEN®

N15W24983 Bluemound Rd., Pewaukee, WI 53072-4974 USA
 Telephone: (262) 691-3320 • Fax: (262) 701-5780
 Web: <http://www.harken.com> • Email: harken@harken.com

INSTRUCTIONS

CB Traveler Kits

Midrange 1654 and 1655

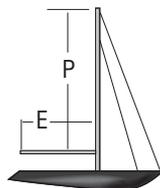
Sizing Check

Kit (car)	Monohulls				Multihulls			
	End-boom sheeting		Mid-boom sheeting		End-boom sheeting		Mid-boom sheeting	
	m ²	ft ²	m ²	ft ²	m ²	ft ²	m ²	ft ²
Small Offshore Boats					Maximum Mainsail Area			
1654 (T2731B)	20.5	220	17.5	190	17.5	190	12.6	135
1655 (T2741B)	24.2	260	20	215	20	215	14.9	160

Mainsail size - To determine sail area, use the P and E dimensions available for your mainsail at sailboat online databases, or talk to a sailmaker.

Boom sheeting position - End-boom sheeting position is near the boom's measurement band or clew point. Adjust sizing for boom positions that are between end and mid-boom.

Typical boat length - Boat lengths listed on box refer to medium displacement monohulls. For best fit, refer to the boat types and sail areas in the chart above. Contact Harken tech service with application questions.



Mainsail Area
 $P \times E \times .5$

Parts Included

1654 Midrange kit 3:1 purchase



T2731B - CB car



E2756 port/starboard
 end control set

1655 Midrange kit 4:1 purchase



T2741B - CB car



E2756 port/starboard
 end control set

Ordering Track

Refer to the chart and information below to order track and trim caps for the 1654 and 1655 kits.

Track Part No.	Lengths	Mounting hole spacing		Fasteners		Track width		Trim cap
		mm	in	mm	in	27 mm	1 1/16"	
R27	1 m (3' 3")	100 mm	3 15/16	8 FH	5/16 FH		1621	
	1.2 m (3' 11")							
	1.5 m (4' 11")							
	1.8 m (5' 11")							
	2 m (6' 7")							
	2.5 m (8' 2")							
3 m (9' 10")								
R27HB	1 m (3' 3")	Slide bolt		6 HHB	1/4 HHB		1622	
	1.5 m (4' 11")							
	1.8 m (5' 11")							
	2.5 m (8' 2")							

R27 Low-beam track - Use where track can fasten every 100 mm (3 15/16"). Tracks with 102 mm (4") hole spacing are available in limited lengths to match existing holes. See the Harken catalog, website, or contact Harken customer service.

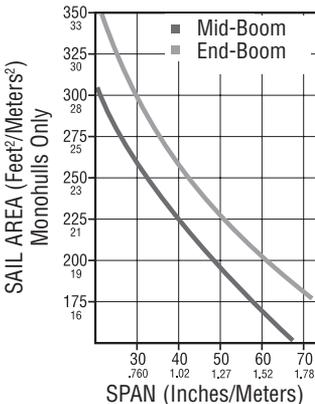
Fasteners - Order 8 mm (5/16") flathead fasteners. Order three (3) fasteners for every 300 mm (1').

R27HB High-beam track - Use for spanning cabin or cockpit. Track features internal slide bolts. See below.

Fasteners - Order 6 mm (1/4") hex head bolts. Use a minimum of three (3) fasteners per side of span.



27 mm high-beam track spanning chart



Curved track - Harken will bend track to your specifications. See the Harken website, catalog, your dealer, or Harken technical service for details.



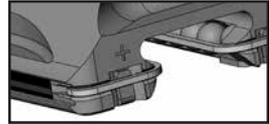
See instructions sent with track for installation

CB Cars and Track Vintage

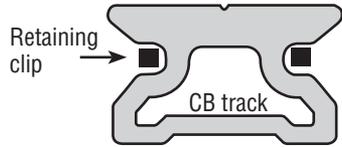
Car in kit is CB – Wire retaining clips hold bearings captive for easy loading onto track and for maintenance.

Car fits CB style track plus retrofits to non-CB track

All current tracks have deeper grooves to accept CB car retaining clips. Note, if fitting to older pre-2002 tracks, retaining clips do not work. Cars can convert to non-CB so they run on non-CB tracks. See separate car instructions in kit.



CB cars designed for CB track



Ordering Control Line

Refer to the chart below to order control line from your dealer.

	Diameter	Purchase	Formula	Quantity
Midrange System				
1654	8 mm	5/16"	3:1	Track length X 3 plus 1 m (3')
1655	8 mm	5/16"	4:1	Track length X 4 plus 1 m (3')

Installing Traveler Car on Track

Position car at end of track and gently roll car on to track. Car should roll on easily. If not, check to make sure you are using CB track. CB cars can convert to become non-CB cars; however, balls must be carefully retained while loading. See instructions sent with car.

Installing End Controls and Securing Control Line

See instructions packaged with end controls for installation on track.

1654 system with 3:1 purchase - To attach premade splice, remove one screw and rotate deadend bail to load the splice. Reassemble screws using threadlocking solution such as blue Loctite® adhesive.

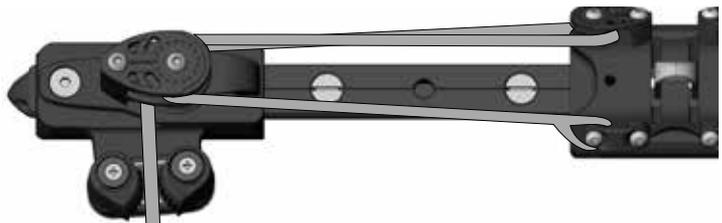


1655 system with 4:1 purchase - To capture spliced eye, use hex head wrench to remove sheave assembly. **Do not remove deadend horn.** Capture eye and assemble sheave using blue Loctite on screws. When using smaller control line you can use a hitch to attach to the end control bail if preferable.



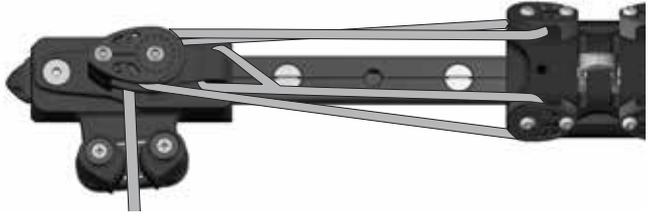
Reeving Control Line

1654 kit - 3:1 purchase



Reeving Control Line

1655 kit - 4:1 purchase

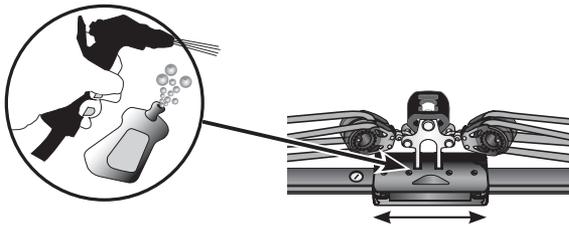


Inspection

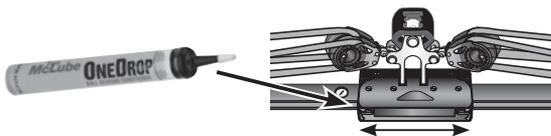
Frequently inspect shackles and control block fittings for signs of fatigue. Replace as necessary. Arrange control tackle so cars do not hit endstops under load.

Maintenance

Traveler cars - Clean by frequently flushing with fresh water. Periodically clean car by squirting a detergent/water solution into center openings. Roll car back and forth to distribute evenly. Flush bearings with fresh water.



Do not use spray lubricants because ball bearings can skid, not roll. Once car and track are dry, apply one (1) to two (2) drops of McLube® OneDrop™ ball bearing conditioner to a small area of the track. Roll car back and forth through OneDrop conditioner several times to distribute onto bearings. Wipe remaining OneDrop off track. OneDrop conditioner is preferred, but you can also use one (1) to two (2) drops of a light machine oil. Too much oil attracts dirt.



Track: Clean with detergent and fresh water.

Important! Exposure to some teak cleaners and other caustic solutions can result in discoloration of part and is not covered under the Harken warranty.

Warranty

For additional safety, maintenance, and warranty information see www.harken.com/manuals or the Harken catalog.