HARKEN®

Battcar Switch System
26 mm, 32 mm

Installation Manual

WARNING! Strictly follow all instructions to avoid an accident, damage to your vessel, personal injury, or death. See www.harken.com/manuals for additional safety information.

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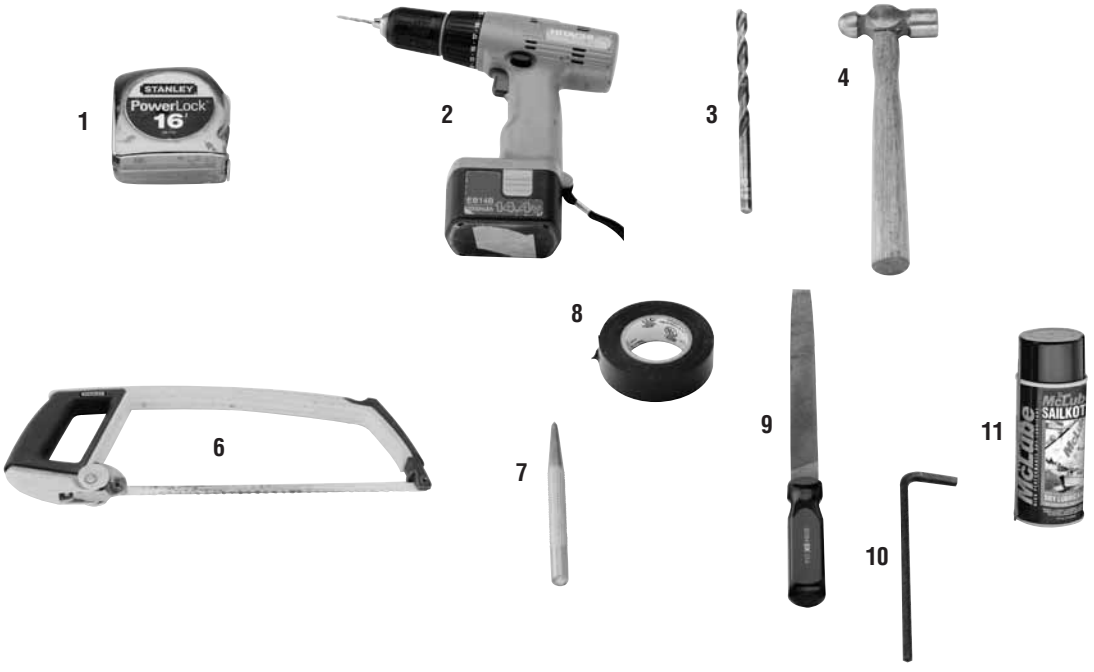
Tools



1.Tape measure	8. Tape
2. Power drill	9. File
3. Drill bits	10. Allen wrench
4. Hammer	11. McLube™ Sailkote™
5. Plastic Hammer	12. Tap for mast mounting holes (not shown)
6. Hacksaw	
7. Transfer Punch	Threadlocking adhesive for mast screws

HC9045
HC9046

Headboard Car (Assembly)

Intermediate Car

HC7493
HC7322

Tack Car

HC8125
HC8099

Trysail Car

C9342
C9494

Reef Car 26 mm

HC7325

Reef Car 32 mm

HC8076

Batten Car with Threaded Stud

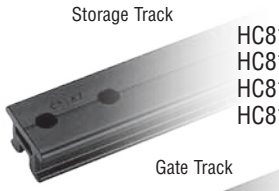
HC7324
HC8098
HC7316
C7814

3876 Web-On Standard

3877 Web-On Square Top

Main Components

Part No.	Description	System	Comments
HC9045	Headboard car	**26 mm**	Must use 3876 or 3877 headboard
HC7493	Intermediate car		Consult sailmaker for quantity required
HC7324	Batten car		12mm Threaded stud. Purchase batten receptacle separately
HC7325	Reef car		Use to secure tack when reefing
HC8125	Tack car		Use with halyard lock to tension luff
C9494	Trysail car		Use with trysail switch
HC9046	Headboard car	**32 mm**	Must use 3876 or 3877 headboard
HC7322	Intermediate car		
HC8098	Batten car		12mm Threaded stud. Purchase batten receptacle separately
HC7316	Batten car		14mm Threaded stud. Purchase batten receptacle separately
HC8076	Reef car		Use to secure tack when reefing
HC8099	Tack car		Use with halyard lock to tension luff
C9342	Trysail car		Use with trysail switch
Headboard Plates		**26 mm 32 mm**	
3876	Standard web-on headboard		See sailmaker instructions
3877	Square top web-on headboard		See sailmaker instructions

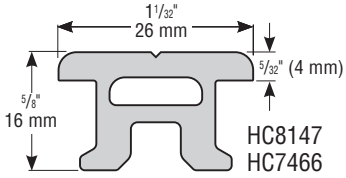

Storage Track
HC8147
HC8148
HC8149
HC8150

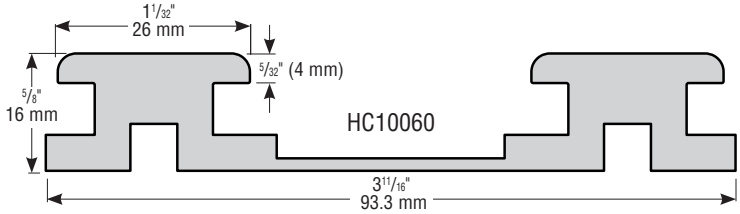

Gate Track
HC8221
HC8226

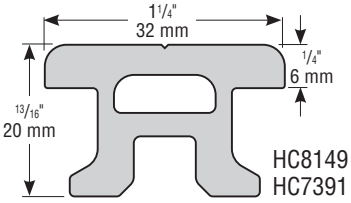

Endstop
1522A
548A


Splice Links
HC8222
HC8227

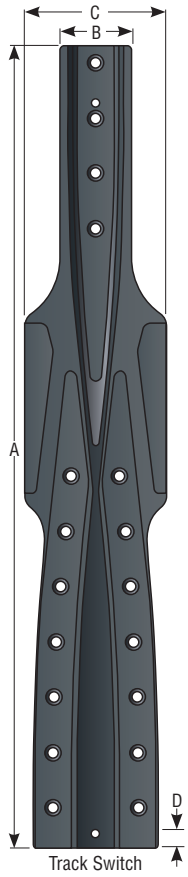

Storage Track
HC10060


1 1/32" 26 mm
5/32" (4 mm)
5/8" 16 mm
HC8147 HC8148
HC7466 HC8221


1 1/32" 26 mm
5/32" (4 mm)
5/8" 16 mm
HC10060
3 11/16" 93.3 mm


1 1/4" 32 mm
1/4" 6 mm
13/16" 20 mm
HC8149 HC8150
HC7391 HC8226


Trysail Switch
C9341 C9342
C9492 C9493



Track Switch


HC8220 26 mm
HC7382 32 mm

T-Track, Splice Links and Enstops

Part No.	Description	Length in	Length mm	Width in	Width mm	Height in	Height mm	Weight oz	Weight g	Fasteners in	Fasteners mm	Fastener spacing mm
26 mm												
HC7466	3 m T-Track	118 1/8	3000	1 1/32	26	5/8	16	61.1	1736	1/4	6	75
HC8879	2 m T-Track/high-load	78 3/4	2000	1 1/32	26	5/8	16	40.3	1141	1/4	6	50
HC8222	Splice link	—	—	1 1/32	26	—	—	0.1	3	—	—	—
1522A	Endstop	2 5/32	55	1 17/32	39	—	—	—	—	—	—	—
32 mm												
HC7391	3m T-Track	118 1/8	3000	1 1/4	32	13/16	20	96.2	2734	5/16	8	75
HC8880	2m T-Track/high-load	78 3/4	2000	1 1/4	32	13/16	20	63.1	1790	5/16	8	50
HC8227	Splice link	—	—	—	—	—	—	0.2	5	—	—	—
548A	Endstop	2 27/32	72	2 1/32	52	—	—	—	—	—	—	—

*Includes spacer tube for cutting adapters. See page 7.

Switch, Storage and Gate Track

Part No.	Description	Length (A) in	Length (A) mm	Width (B) in	Width (B) mm	Switch Width (C) in	Switch Width (C) mm	Height (D) in	Height (D) mm	Weight oz	Weight g	Fasteners in	Fasteners mm	Fastener spacing mm
26 mm														
HC8220	Switch	25 1/4	641	4	102	4	102	5/8	16	43.1	1225	1/4	6	—
HC8147	500 mm Storage track	19 11/16	500	1 1/32	26	—	—	5/8	16	10.2	291	1/4	6	50
HC8148	725 mm Storage track	28 17/32	725	1 1/32	26	—	—	5/8	16	14.8	419	1/4	6	50
HC10060	725 mm Double storage track	28 17/32	725	3 11/16	93.3	—	—	5/8	16	57.2	1623	1/4	6	50
HC8221	Gate track	11 13/16	300	1 1/32	26	—	—	5/8	16	6.1	174	1/4	6	75
32 mm														
HC7382	Switch	28 1/2	724	5	127	5	127	13/16	20	72.8	2068	5/16	8	—
HC8149	800 mm Storage track	31 1/2	800	1 1/4	32	—	—	13/16	20	25.6	728	5/16	8	50
HC8150	1025 mm Storage track	40 11/32	1025	1 1/4	32	—	—	13/16	20	32.8	933	5/16	8	50
HC8226	Gate track	11 13/16	300	1 1/4	32	—	—	13/16	20	9.6	273	5/16	8	75

Trysail Switch C9340, C9341, C9492, C9493 Trysail Tracks – See page 16

Sizing

Make sure you have the correct size battcar system for your boat.

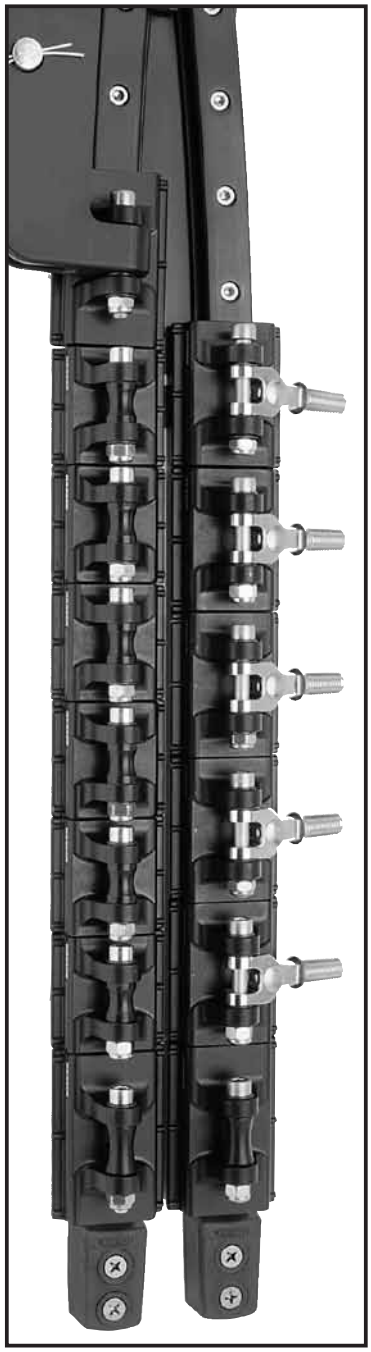
System	Fits Boats		Part No. Headboard Car	Part No. Battcar	Part No. Intermediate Car	Part No. Reef Car	Part No. Tack Car
	Minimum	Maximum					
26 mm	50 ft (15.2 m)	80 ft (24 m)	HC9045	HC7324	HC7493	HC7325	HC8125
32 mm	80 ft (24 m)	130 ft (40 m)	HC9046	HC8098, HC7316	HC7322	HC8076	HC8099

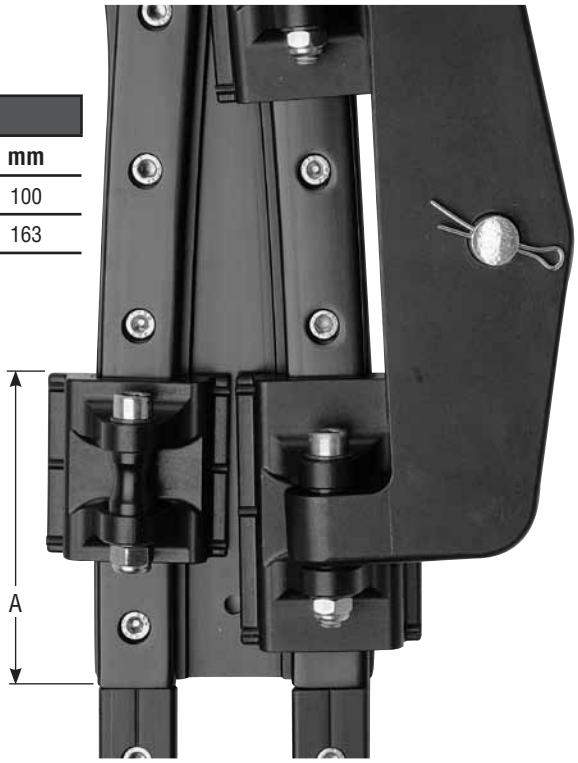
Track Length and Switch Height Considerations

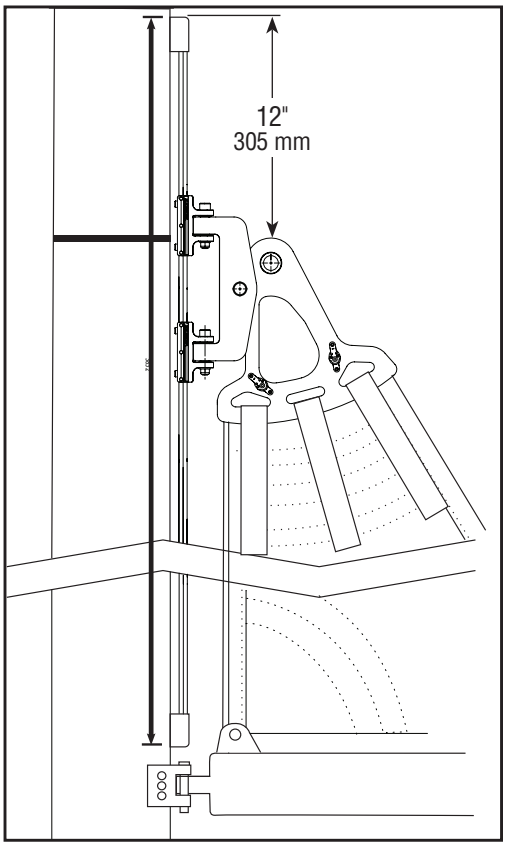
Switch height is determined by the number of cars required for system and the length of the storage track.

Note: Cars will pass each other when top of car is at “A” distance above bottom of switch. See chart at right.

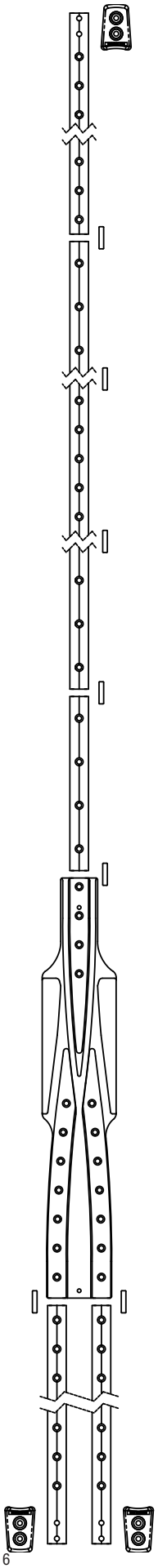
Unit	A	
	in	mm
26 mm	3.94	100
32 mm	6.44	163







Make sure track is longer than sail luff to allow for stretch as sail ages. Track must not block halyard exit. Using gate track above switch allows bottom storage track to extend down to gooseneck.



Layout system using charts to plan track location and lengths.

Total Track Length _____
- SUM _____
Top Track Length A _____

A

Variable-Length Top Track (26/32 mm Systems)		
Length		Hole Spacing
mm	in	mm
		75
If possible use a storage track with holes drilled for endstops positioned at the upper end for top endstop.		

B

Standard Track (26/32 mm Systems)		
Length		Hole Spacing
mm	in	mm
3000	118.11	75

_____ Length **X** _____ Quantity **=** _____

C

High-Load Track (26/32 mm Systems)		
Length		Hole Spacing
mm	in	mm
2000	78.74	50
Place in reefed headboard areas.		

+

_____ Length **X** _____ Quantity **=** _____

C1

Trysail Switch—26mm System		Hole Spacing
Length		—
mm	in	mm
368	14.50	Variable
Trysail Switch—32mm System		**Hole Spacing**
Length		—
mm	in	mm
406	16.00	Variable

+

1 Quantity **=** _____

D

Gate Track—26/32 mm Systems		
Length		Hole Spacing
mm	in	mm
300	11.81	75
Removable track - Allows cars to be left attached to sail and removed from top of switch.		

+

1 Quantity **=** _____

E

Switch—26mm System		
Length		—
mm	in	—
641	25.24	—
Switch—32mm System		
Length		—
mm	in	—
724	28.50	—

+

1 Quantity **=** _____

F

Storage Track—26 mm System		
Length		Hole Spacing
mm	in	mm
500	19.69	50
725	28.54	50
Storage Track—32 mm System		
Length		Hole Spacing
mm	in	mm
800	31.50	50
1025	40.35	50

+

1 Quantity **=** _____

SUM _____

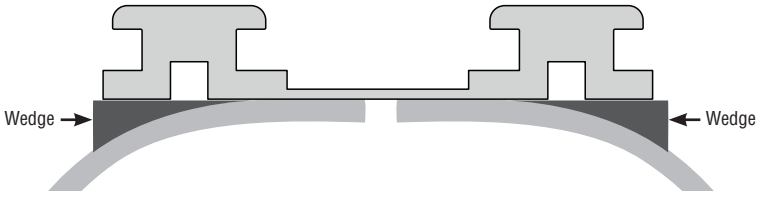
Enter "SUM" above to calculate "Top Track Length."

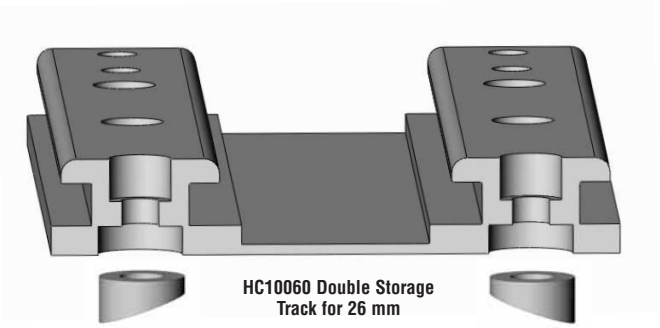
Preassembly — Mounting Track and Switch

Note width and shape of switch and build a platform on mast for mounting.

If using two storage tracks, make sure switch and storage tracks are on the same flat surface. Curved mast surfaces will not allow correct alignment.

HC10060 Double Storage Track for the 26 mm comes with a tube to cut spacers to adapt to curved mast surfaces. Note when mounting to curved surfaces, wedges will be necessary under the switch.





HC10060 Double Storage Track for 26 mm

Preassembly — Mounting Track to Mast

Consult with mastbuilder. Use suitable reinforcing plates when fastening track to carbon spars.

Assembly — General Instructions

When mounting tracks work meticulously using a straight edge reference line along mast. Do not let tracks vary from this line. Tape track in place and centerpunch hole at bottom using a transfer punch.

Tip for Mounting to Aluminum Mast: Use low speed drill with tap for cutting threads.

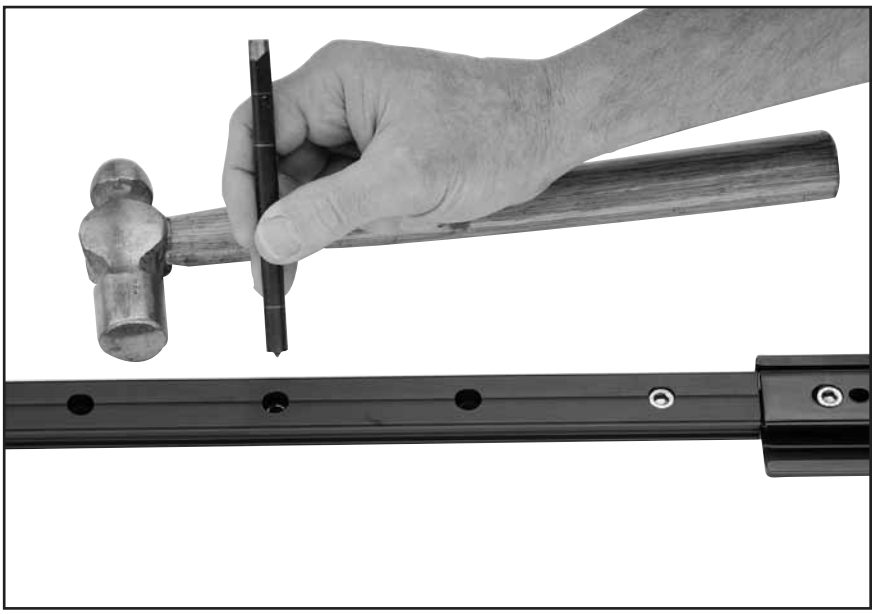
Important: Use blue Loctite® instead of oil to lubricate tap.

Remove track and drill and tap single hole. Fasten track using this single screw and align side to side correctly. Use tape to hold in place. **Use longer car to test alignment.**

Move up several holes and use transfer punch to mark a second hole. Remove track and drill and tap hole.

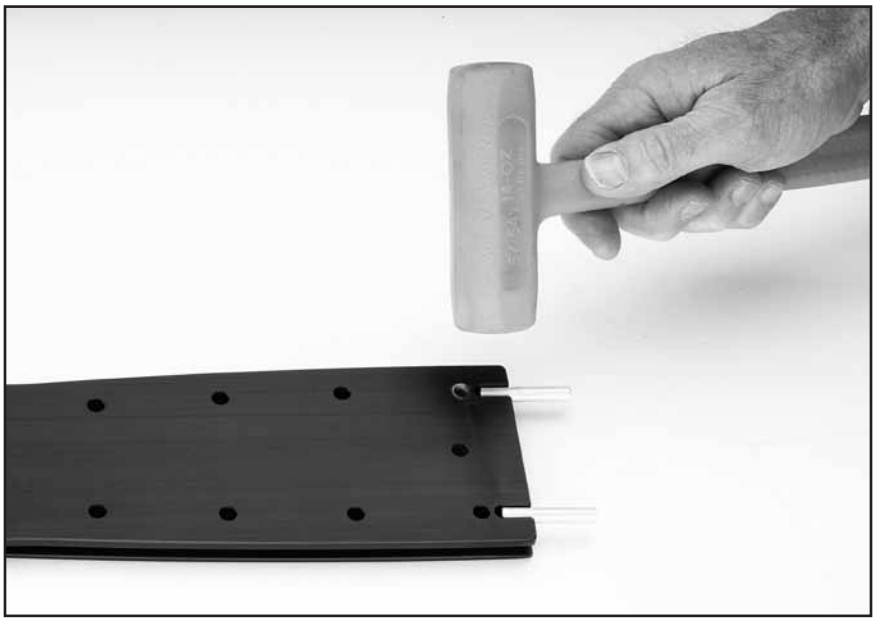
Fasten track using two screws. Mark all remaining holes using punch. Remove track and drill and tap all holes. Before installing track make sure upper end has splice piece inserted.

Use threadlocking adhesive to secure screw. See instructions that begin on page 8.



Insert three splice links into switch track.

Using a plastic hammer, tap them in place.



Carefully align track and tape in place. Use a transfer punch to mark a single hole.

Remove and drill and tap. Fasten with single screw, no adhesive.

Re-align and mark a second hole using transfer punch. Screw to mast using two screws, **no adhesive**.

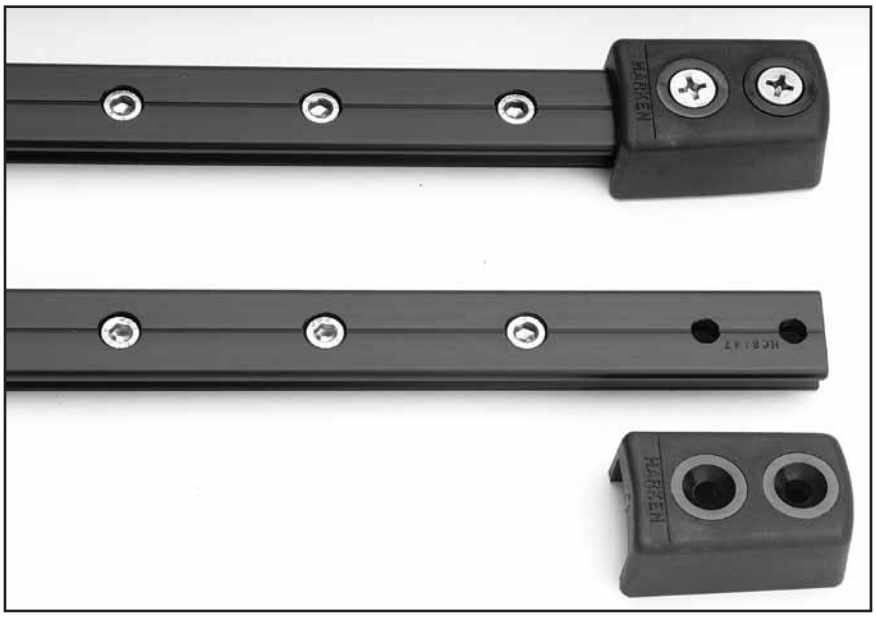
Mark remaining holes using transfer punch. Remove and drill and tap remaining holes.

Mount switch to mast using threadlocking adhesive on screws as required.

Make sure storage track ends with holes for endstop are at bottom. If shortening is required, cut track from upper end maintaining holes for endstop.

Fix bottom loader tracks by placing track over splice and tapping into place using plastic hammer.

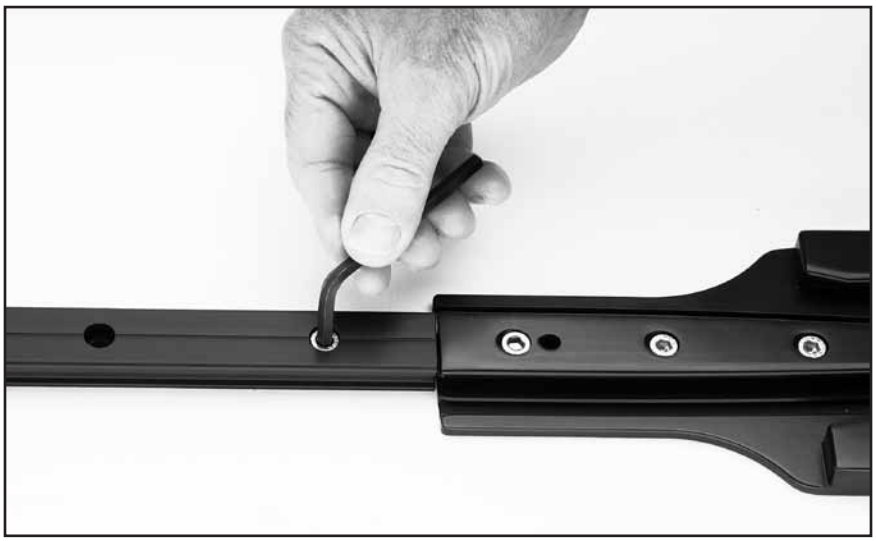
Align track and tape in place. Use transfer punch to mark hole. Remove track, drill and tap. Fasten track using single screw. Center punch another hole, drill, tap and fasten track. Center punch remaining holes, drill, tap and install using threadlocking adhesive.



With gate track off mast, use plastic hammer to tap splice link into upper end of track.

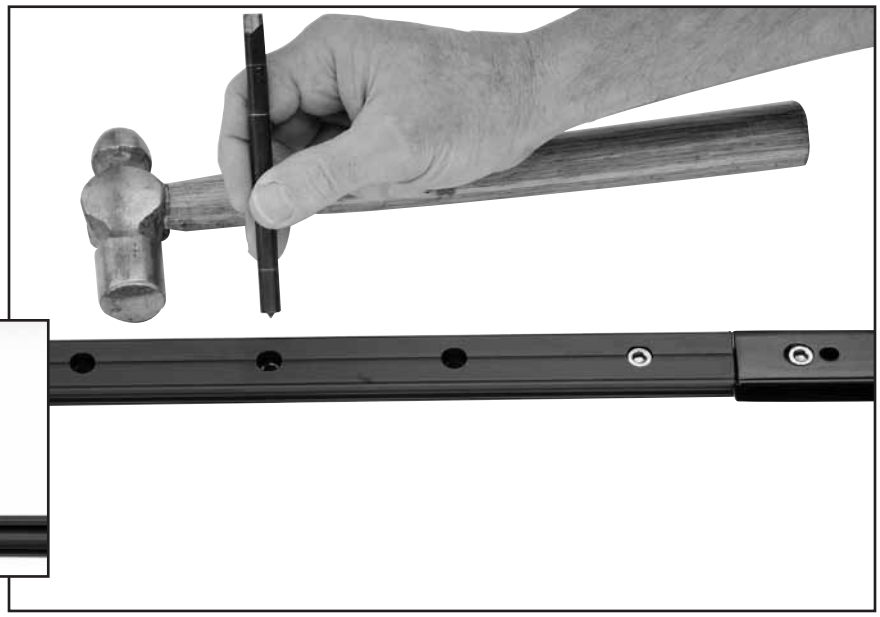
Carefully align track. Use transfer punch to mark holes. Drill, tap and mount as directed above.

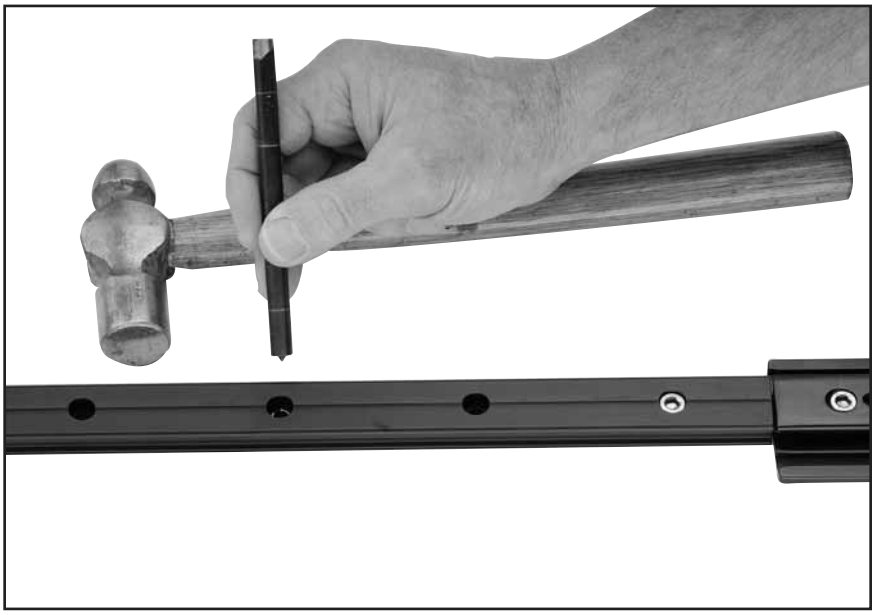
Important: Do not use threadlocking adhesive on screws because gate track is removed for loading cars.



With track off mast, tap upper splice link into track using procedures outlined above.

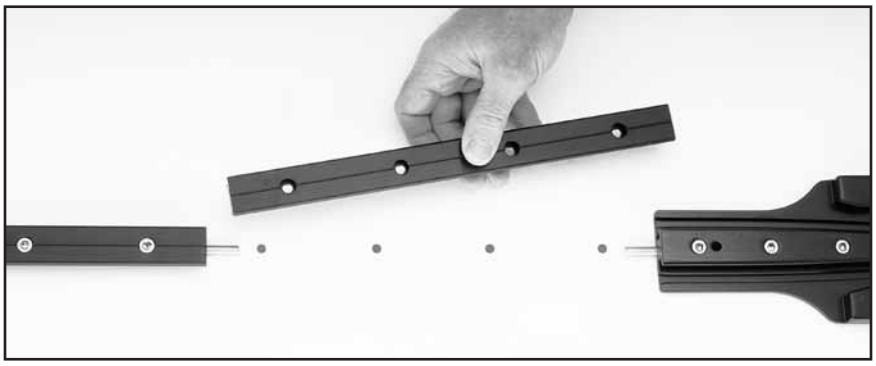
Follow general instructions, page 7 with regard to drilling and taping a single hole, etc. Always make sure to keep tracks aligned.





If possible use a storage track with holes drilled for endstops positioned at the upper end for top endstop.

Remove gate track.



Install cars from above switch.

Lubricate Cars Onshore Before Loading.

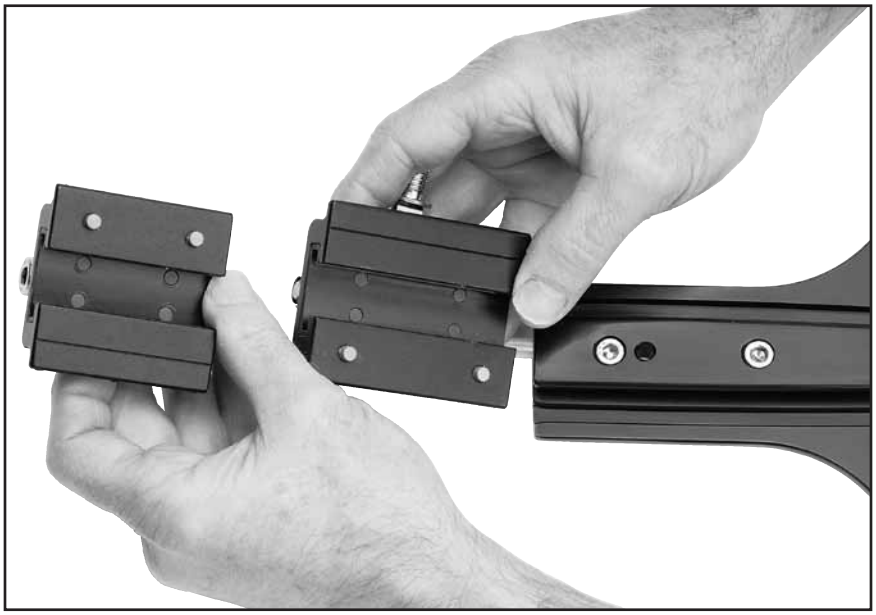
Before bringing headboard assembly or cars onboard boat, spray underbody track slot (see arrows above) with a light coating of McLube™ Sailkote™.

WARNING! Overspray from McLube will cause slippery decks which may result in loss of footing. Cover decks or spray cars off boat.

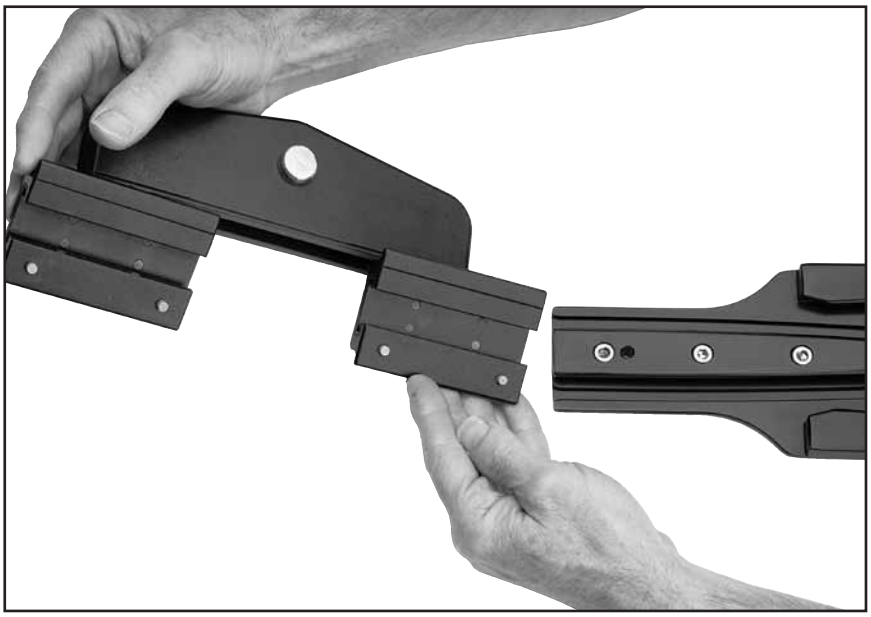
Note: Mustard-colored pegs on foot of car guide it to correct side. Car will go to side of track where there are no pegs.

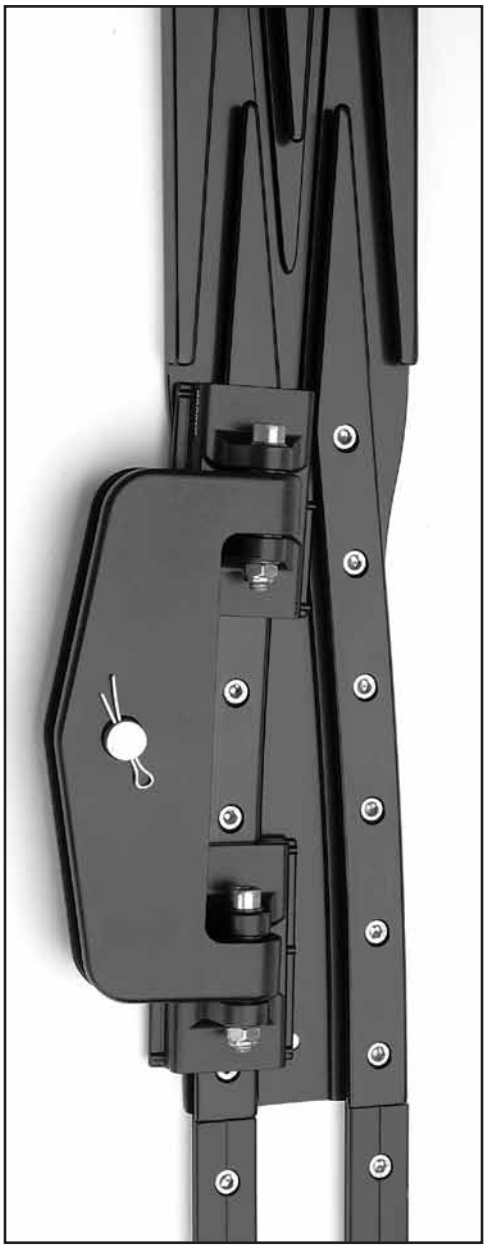
Tip:

Plain foot to right, car goes to right.
Plain foot to left, car goes to left.



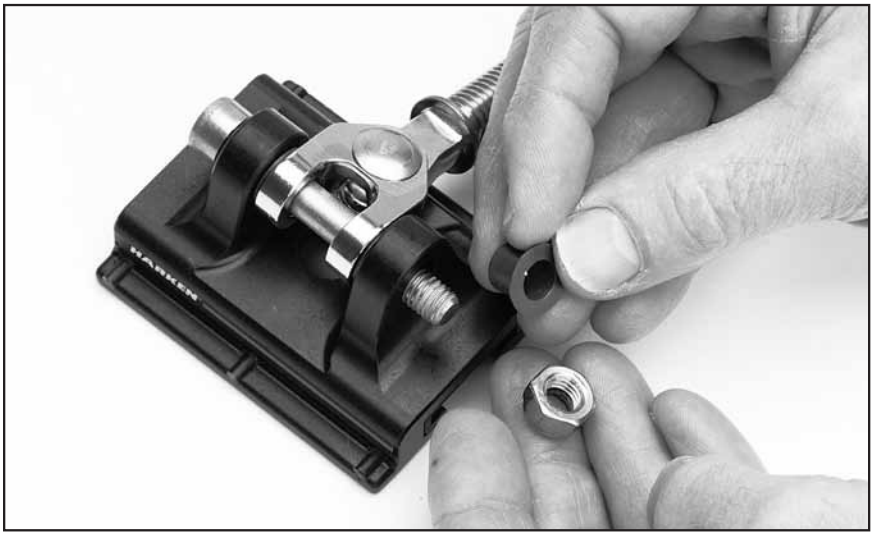
Headboard cars have spherical bearings and are designed to run through switch. Both cars must run through same side of switch. Make sure cars are loaded with pegs on same side.





Removing Toggle From Cars

When removing parts, make sure you retain plastic bushings between vertical pin and hole in car tangs.



Raising Sail

When raising, lowering, or reefing sail make sure sail is not loaded and cars pass through switch easily. Watch sail and cars carefully and stop hoisting immediately if any binding is detected.

Possible sources of binding:

Cars bind at switch
Reef line binds on fingers
Reef line binds between car and switch
Headboard or battens bind on lazy jacks
Battens have draped off boom, leveraging car

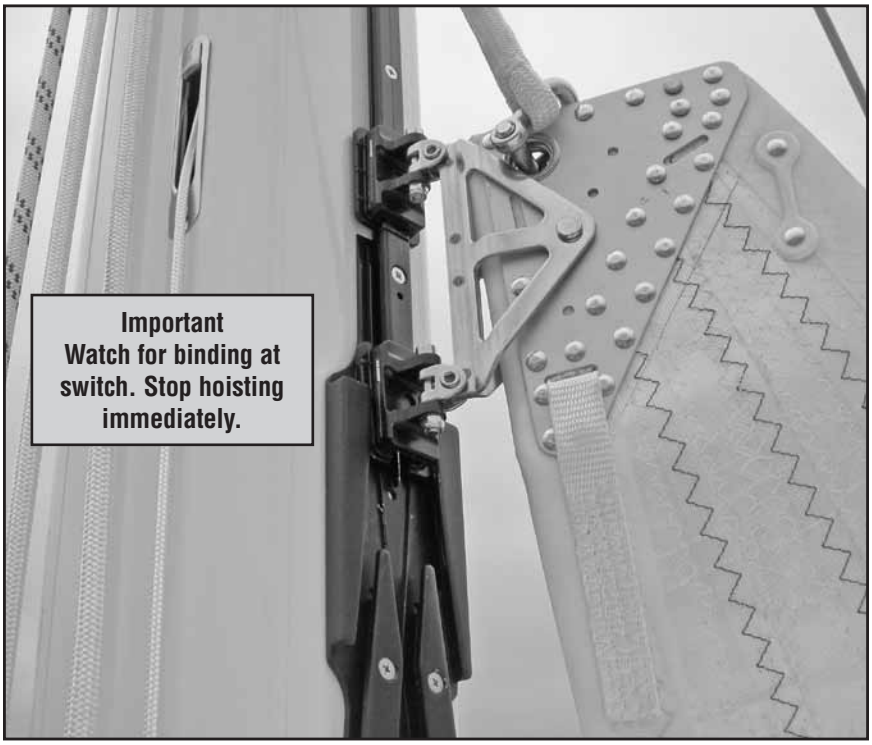
Correct the binding problem or luff sail before resuming hoist. If forced, the fingers that extend into switch may be damaged, requiring expensive switch and car replacement. Lazy jacks may also be damaged.

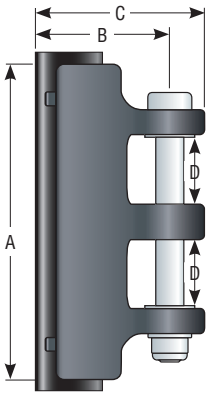
Important: **When using an electric halyard winch, be especially vigilant when raising sail. Luff sail. Watch for any binding or jamming at the switch and stop hoist immediately if any occurs.**

If winch operator does not have a good view of switch cars, station a crewmember with a good view and communication to operator.

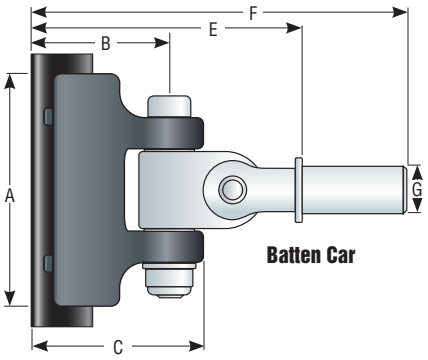
If there is a jam, damage to switch and cars will occur very quickly resulting in expensive repairs unless hoisting is stopped.

Important: Make sure reef outhaul loads are not applied to cars when in switch. Damage to switch and cars will occur, resulting in expensive repairs.

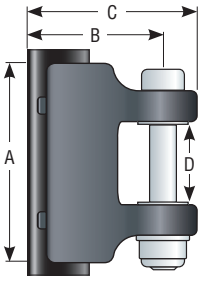




32 mm Reef Car



Batten Car



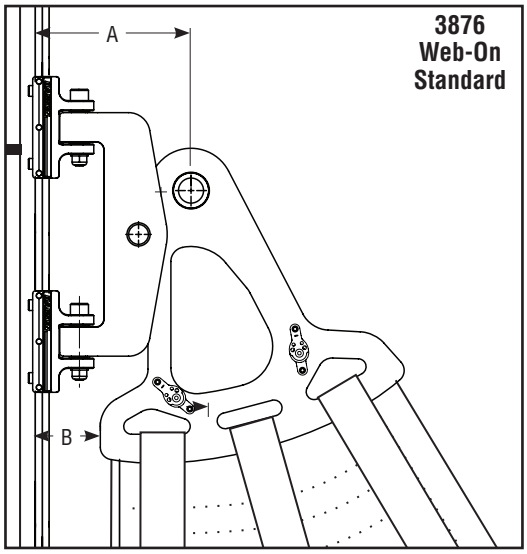
Intermediate Car
26 mm Reef Car

Part No.	Description	A in	A mm	B in	B mm	C in	C mm	D in	D mm	E in	E mm	F in	F mm	G Stud Ø mm
26 mm														
HC9045	Headboard car assembly	$10\frac{5}{8}$	270	$1\frac{7}{16}$	37			$3\frac{5}{8}$	92	—	—	—	—	—
HC7493	Intermediate car	$2\frac{3}{8}$	60	$1\frac{7}{16}$	37	$1\frac{27}{32}$	47	$\frac{13}{16}$	21	—	—	—	—	—
HC7324	Batten car	$2\frac{15}{16}$	75	$1\frac{7}{16}$	37	$1\frac{27}{32}$	47	—	—	$2\frac{29}{32}$	73	$4\frac{1}{16}$	103	12
HC7325	Reef car	$3\frac{17}{32}$	90	$1\frac{7}{16}$	37	$1\frac{27}{32}$	47	1	25	—	—	—	—	—
HC8125	Tack car	$3\frac{17}{32}$	90	$1\frac{7}{16}$	37	$1\frac{27}{32}$	47	1	25	—	—	—	—	—
32 mm														
HC9046	Headboard car assembly	11	280	$1\frac{7}{8}$	47			$3\frac{15}{16}$	100	—	—	—	—	—
HC7322	Intermediate car	$2\frac{15}{16}$	75	$1\frac{7}{8}$	47	$2\frac{3}{8}$	60	1	25	—	—	—	—	—
HC8098	Batten car/12mm stud	$3\frac{17}{32}$	90	$1\frac{7}{8}$	47	—	—	—	—	$3\frac{7}{16}$	87	$4\frac{19}{32}$	117	12
HC7316	Batten car/14mm stud	$3\frac{17}{32}$	90	$1\frac{7}{8}$	47	—	—	—	—	$3\frac{7}{16}$	87	$4\frac{21}{32}$	118	14
HC8076	Reef car	$4\frac{17}{32}$	115	$1\frac{7}{8}$	47	$2\frac{3}{8}$	60	1	25	—	—	—	—	—
HC8099	Tack car	$4\frac{17}{32}$	115	$1\frac{7}{8}$	47	$2\frac{3}{8}$	60	1	25	—	—	—	—	—

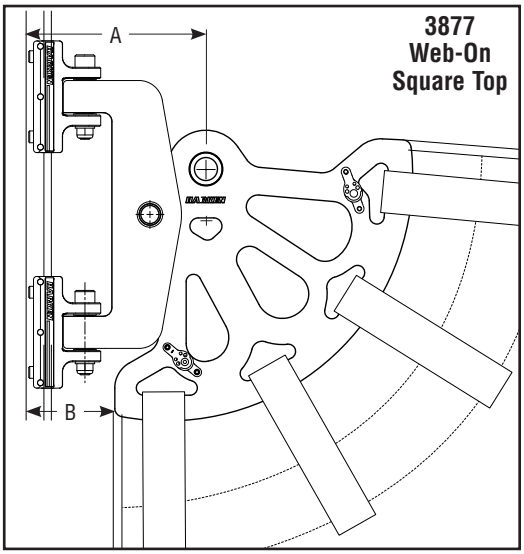
Use $1\frac{3}{4}$" (45mm) webbing. Holes in headboard accept 416 16 mm cheek blocks for leech line. Use 4 mm x 10 mm fasteners.

If more reinforcement is necessary, web through lightening holes.

System		3876 in	3876 mm	3877 in	3877 mm
26 mm	A	$5\frac{7}{16}$	138	$5\frac{3}{4}$	146
	B	$2\frac{9}{32}$	58	$2\frac{9}{32}$	58
32 mm	A	$5\frac{3}{4}$	146	$6\frac{1}{16}$	154
	B	$2\frac{19}{32}$	66	$2\frac{19}{32}$	66



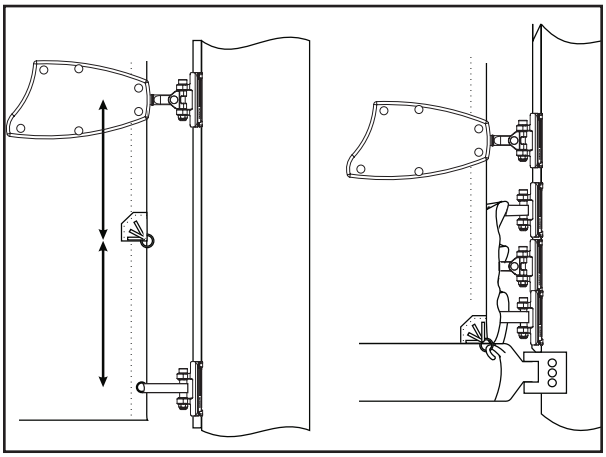
3876 Web-On Standard



3877 Web-On Square Top

Distance Between Attachment Points

DIAGRAM A



Battens and intermediate cars placed at sailmaker's discretion. Maximum distance between attachment points is 4' to 4'6" (1.2 m to 1.35 m).

Distance may be slightly greater. Contact Harken to discuss sail reshaping to eliminate luff flutter.

NOTE: Adding battens may reduce stack height by eliminating luff cars.

While sailing loaded cars must not ride in this area.

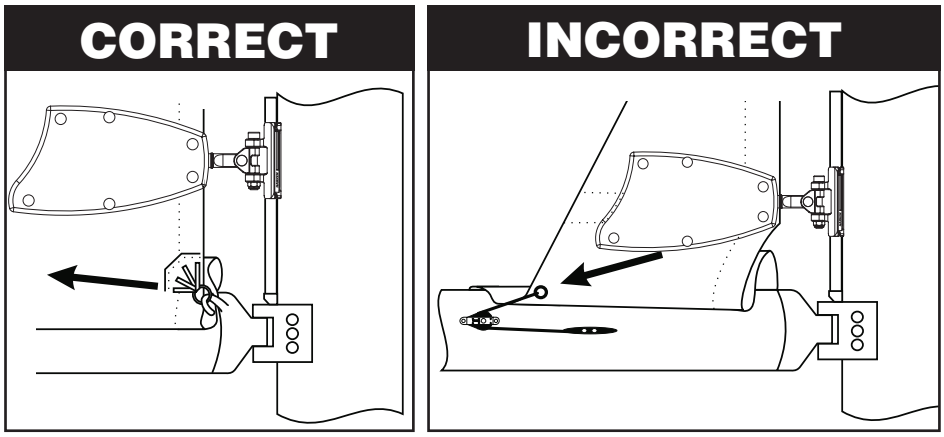


DIAGRAM B

Setting Reef Points

Space reef points halfway between sail attachment points. Battens or reef points may need to be moved. See Diagram A above.

NOTE: Batten fittings and cars cannot handle reefing outhaul or downhaul loads. Transfer loads to a tack fitting. See Diagram B above.

Important: When setting up reef, make sure cars are not loaded when they are in the switch area. If reef outhaul loads are applied to switch, the switch and cars will be damaged resulting in expensive repairs.

Instruct operators to not raise or lower sails with high loads on the cars while in the switch area.

Harken is not responsible for damage to the switch area due to reef loads or raising or lowering a sail when the sail is loaded.

Part No.	Description	Length in	Length mm	Width in	Width mm	Weight oz	Weight g	Fasteners mm	Maximum working load lb	Maximum working load kg
26 mm										
C9493	Port Trysail Switch*‡	14 1/2	368	4 25/32	121	27	762	6	—	—
C9492	Starboard Trysail Switch*‡	14 1/2	368	4 25/32	121	27	762	6	—	—
C9494	Car body*‡	2 3/8	60	1 1/32	26	5	143	—	1001	454
32 mm										
C9341	Port Trysail Switch*‡	16	406	5 7/8	149	43	1222	8	—	—
C9340	Starboard Trysail Switch*‡	16	406	5 7/8	149	43	1222	8	—	—
C9342	Car body*‡	2 15/16	75	3 1/32	77	11	309	—	595	270

*Available in black or clear anodized ‡Allow 8 weeks lead time

Preassembly

Use standard track and bend to transition between side tracks and switch. The cars should not be under load in this section. Installer is responsible for determining the bend of the track. A compound bend is required to transition from the side of the mast to the aft face.

Important: special care must be taken so that the trysail or standard cars do not hit the adjoining track.

Installing Track

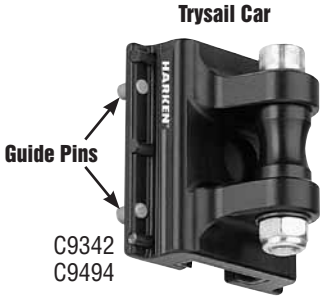
Consult with mast builder. Use suitable reinforcing plates when fastening track to carbon spars.

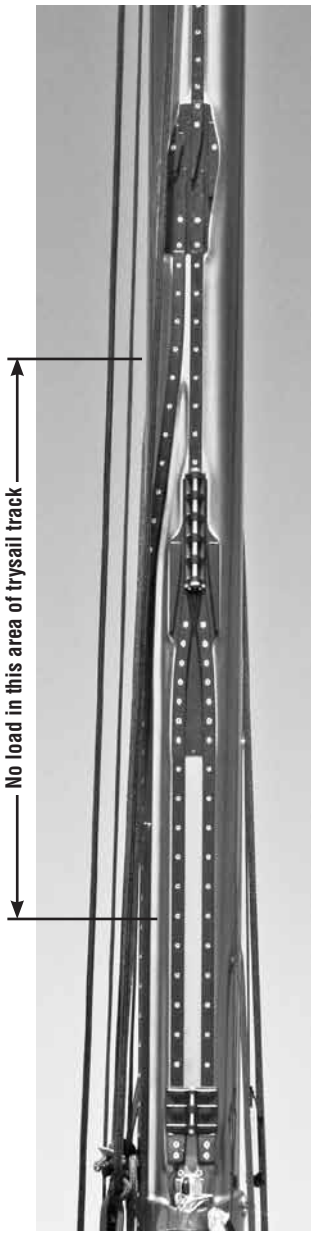
Loading Cars

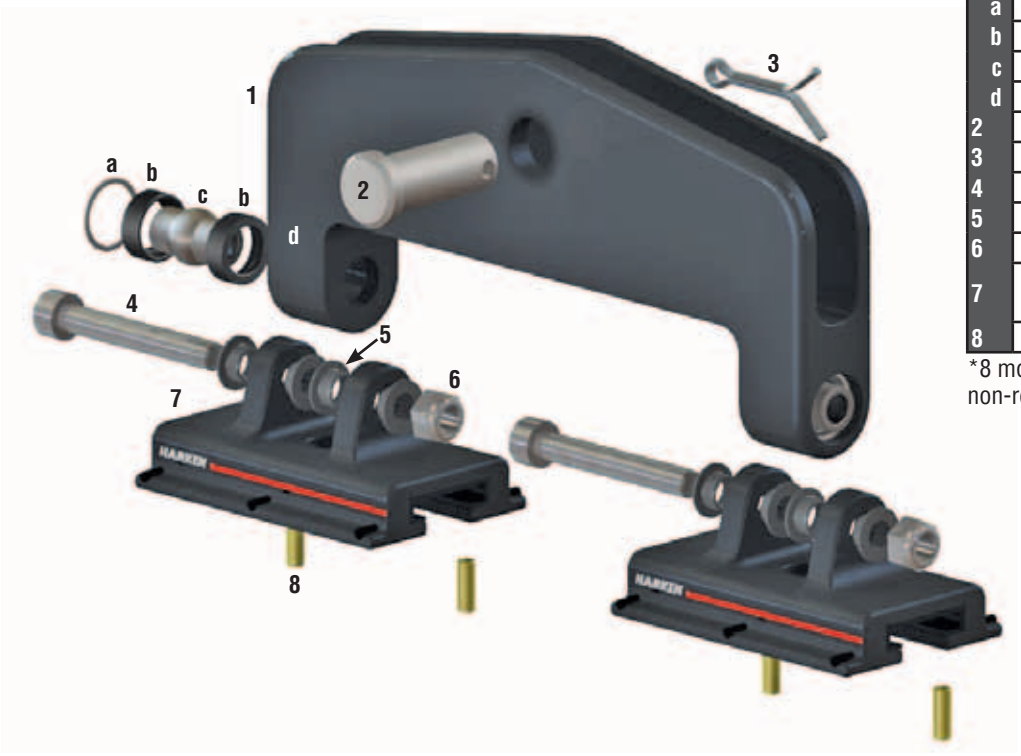
Load cars with guide pins on the same side as the trysail storage track. If storage track is on the starboard side, make sure pins are on starboard side when loading onto track.

Sailmaker instructions

Place cars so that there are none in the special compound bend track section or switch. Cars placed in this area under load will damage fingers of switch.

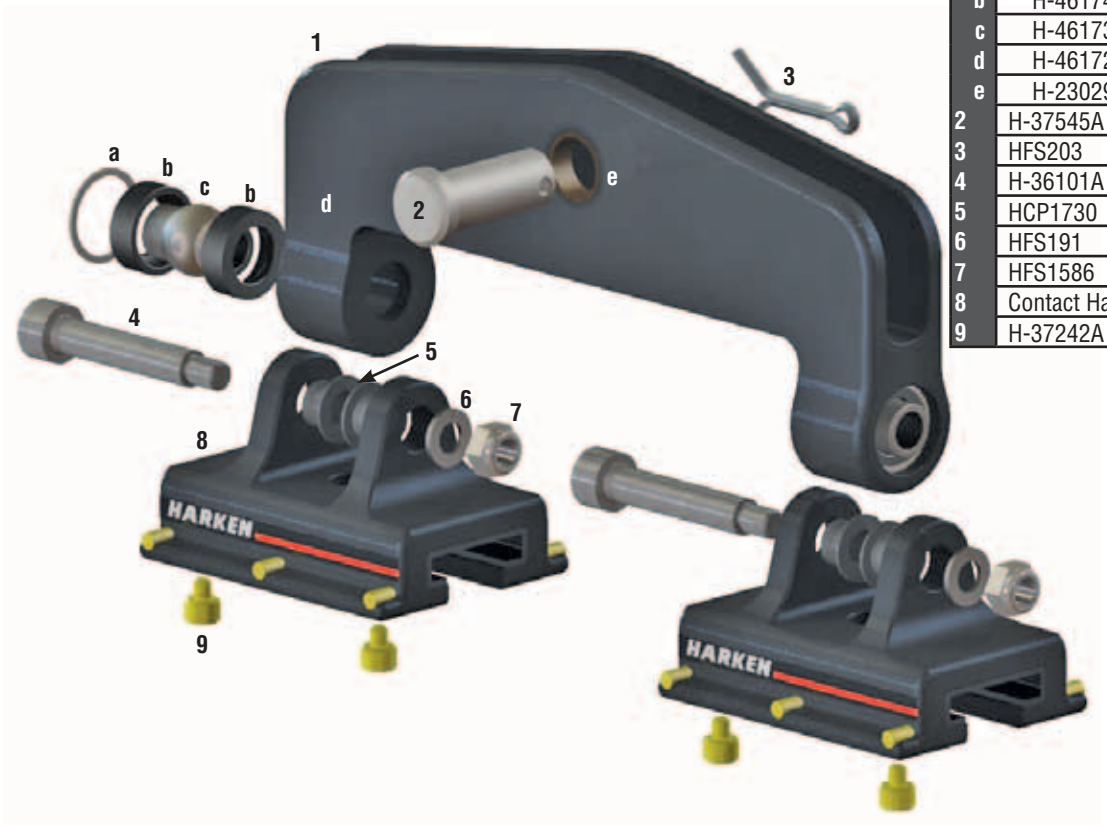




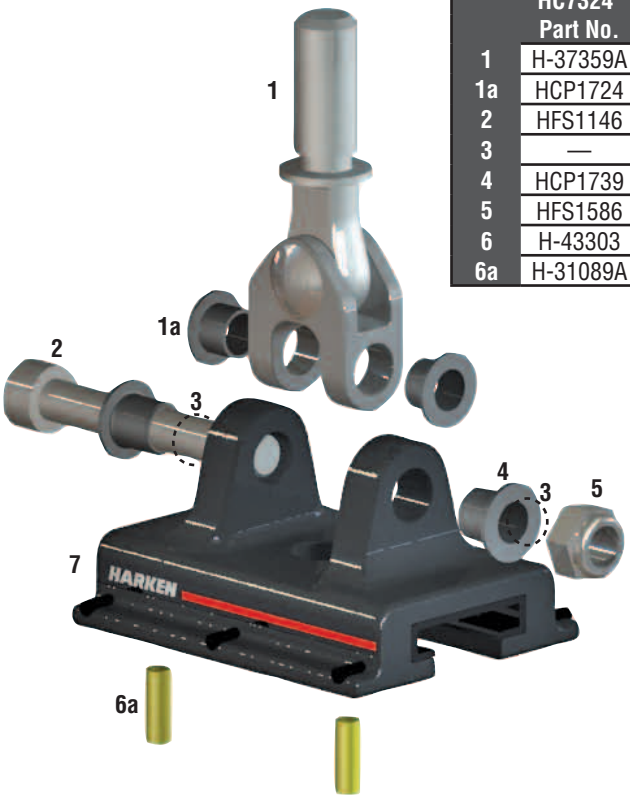


HC9045—26 mm System			
	Part No.	Description	Quantity
1	HC9045A	Coupler Assembly	1
a	H-45044	Smalley Ring	2
b	H-45043	Cup	4
c	H-45042	Spherical Becket	2
d	H-45041	Coupler Only	1
2	H-37545A	Clevis Pin	1
3	HFS203	Cotter Pin	1
4	HFS1146	M8 x 52 SHCS	2
5	H-46463	Igus Bushing	8
6	HFS1586	M8 Nylock Nut	2
7	H-43304	Car Assembly with Sliders and Pins	2
8	H-31089A	Guide Pin	4

*8 more are listed in bill. They are used to hold non-replaceable insert bearing in place.



HC9046—32 mm System			
	Part No.	Description	Quantity
1	HC9046NP	Coupler Assembly	1
a	H-46175	Smalley Ring	2
b	H-46174	Cup	4
c	H-46173	Spherical Becket	2
d	H-46172	Coupler Only	1
e	H-23029A	Igus Bushing	2
2	H-37545A	Clevis Pin	1
3	HFS203	Cotter Pin	1
4	H-36101A	M10 x 68 SHCS	2
5	HCP1730	Igus Bushing	4
6	HFS191	Flatwasher	2
7	HFS1586	Thin Nylock Nut	2
8	Contact Harken	Car Body	2
9	H-37242A	Guide Pin	4



	HC7324 Part No.	HC8098 Part No.	HC7316 Part No.	C7814 Part No.	Description	Quantity
1	H-37359A	H-45452	H-45451	H-39218A	Toggle/Stud Assembly w/Bushing	1
1a	HCP1724	H-38838A	—	HCP1819	Igus Bushing Only	2
2	HFS1146	H-36101A	H36101A	H-48140	Socket Head Cap Screw	1
3	—	H-37226A	H-37226A	—	Delrin Washer	2
4	HCP1739	HCP1730	HCP1730	HCP1819	Igus Bushing	2
5	HFS1586	HFS1586	HFS1586	HFS937	Locknut	1
6	H-43303	Contact Harken			Car Assembly/Sliders/Guide Pins	1
6a	H-31089A	H-37242A	H-37242A	H-41991	Guide Pin Only	2

	HC8125 Part No.	HC8099 Part No.	Description	Quantity
1	H-40900	H-40891	Socket Head Cap Screw	1
2	HCP1739	HCP1730	Igus Bushing	2
3	H-40902	H36138A	Bushing/Becket Roller	2
4	HFS1586	HFS1586	Nylock Nut	1

	HC7325 Part No.	Description	Quantity
1	HFS1146	Socket Head Cap Screw	1
2	HCP1739	Igus Bushing	2
3	H-40902	Bushing/Becket Roller	2
4	HFS1586	Nylock Nut	1
5	H-43304	Car Assembly/Sliders/Guide Pins	1
6	H-31089A	Guide Pin Only	2

	HC7493 Part No.	HC7322 Part No.	Description	Quantity
1	HCP1739	HCP1730	Socket Head Cap Screw	1
2	H-37250A	H-36101A	Igus Bushing	2
3	H-37363A	H-36138A	Bushing/Becket Roller	1
4	HFS1586	HFS1586	Nylock Nut	1
5	H-43305	Contact Harken	Car Assembly/Sliders/Guide Pins	1
5a	H-37089A	H-37242A	Guide Pin Only	2

	HC8076 Part No.	Description	Quantity
1	H-40891	Socket Head Cap Screw M10X107	1
2	HFS130	Flatwasher 10 mm	1
3	HCP1730	Igus Bushing	4
4	H-36138A	Bushing/Becket Roller	2
5	HFS191	Flat Washer 8 mm	1
6	HFS1586	Car Assembly/Sliders/Guide Pins	1
7	H-37242A	Guide Pin Only	2

Troubleshooting

Operation

Problem	Probable Cause	Solution
Cars bind.	Slider damaged or missing	Check and/or replace slider
	Dirt in cars.	Use detergent and fresh water to flush dirt out of cars; move cars up/down do circulate; follow with high pressure water; clean track grooves.
	Stud threaded too tightly into receptacle.	Back off threaded stud two turns.
	Car loaded with guide pins on wrong side	Check direction car is loaded
Can't raise sail, cars stop at switch.	Car loaded upside down. Pins in car on wrong side.	Remove car, flip it around and reload.
Nut on Battcar is not holding.	Locknut has been used too many times.	Get new 6 mm locknut.
Batten receptacle does not rotate.	Nuts are too tight.	Loosen nuts slightly.
Cars jam when raising sail.	Headboard or cars are catching on lazy jacks.	Use topping lift or rod vang and shock cord to pull lazy jacks out to shrouds.
Sail will not go all the way up.	Sail is too tall or sheave is too far forward.	Have sail shortened or move sheave aft.
Vertical post or pin on batten receptacle bending.	Reef loads are being transferred to batten receptacle.	Transfer reef downhaul and outhaul loads to mast or boom gooseneck.
Reef tack fitting will not reach reef hook.	Reef point too close to sail attachment.	Move intermediate car sail attachment.

Inspection

Inspect parts periodically and especially before long passages. Check for loose nuts, cotter pins or track screws. Check toggles or batten threaded studs for wear. If parts are under load during long passages it is important to inspect them carefully while in use.

WARNING: Parts degrade over time and may become weak. Failure to inspect and correct may result in system jamming or breaking under load.

Maintenance

Harken® equipment is designed for minimal maintenance, but some maintenance is required for optimum and safest possible operation and to comply with the Harken® limited warranty. In general, the most important aspect of maintenance is to keep your equipment clean by frequently flushing with fresh water.

In corrosive atmospheres, stainless parts may show discoloration around holes, rivets and screws. This is not serious and may be removed with a fine abrasive.

With the exception of winches, do not use grease unless specifically recommended in the instruction sheet.

Flush blocks thoroughly with fresh water. Periodically, disassemble the blocks and 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.

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