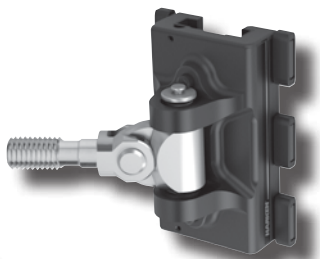
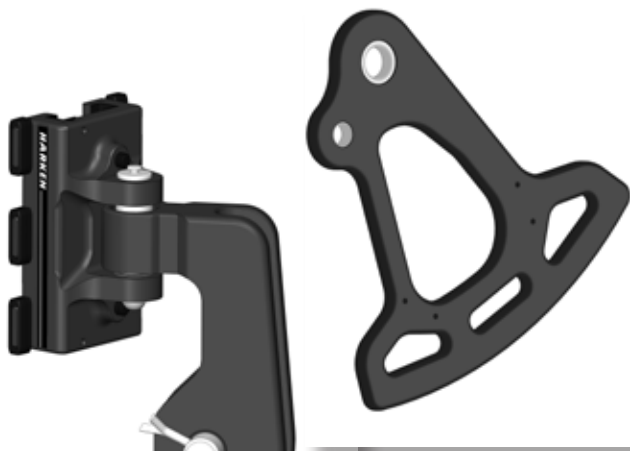


HARKEN®

40 MM BATTCAR SWITCH SYSTEM INSTALLATION MANUAL

Installation Manual – Intended for specialized personnel or expert users

M1027 08/20



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International Distributors

Please read these instructions carefully before installing, servicing, or operating the equipment.
This manual may be modified without notice. See: www.harken.com/manuals for updated versions.

PLEASE SAVE THESE INSTRUCTIONS

Introduction

This manual gives technical information on installation and service. This information is **destined exclusively** for specialized personnel or expert users. Installation, disassembling, and reassembling by personnel who are not experts may cause serious damage to property or injury to users and those in the vicinity of the product. If you do not understand an instruction contact Harken.

The user must have appropriate training in order to use this product.

Harken accepts no responsibility for damage or harm caused by not observing the safety requirements and instructions in this manual. See limited warranty, general warnings, and instructions in www.harken.com/manuals.

Purpose

Harken battcars are designed to reduce the size of or completely drop the mainsail on a sailboat so wind has little effect on the sail. Use of this product for other than normal sailboat applications is not covered by the limited warranty.

Safety Precautions



WARNING! This symbol alerts you to potential hazards that may kill or hurt you and others if you don't follow instructions. The message will tell you how to reduce the chance of injury.

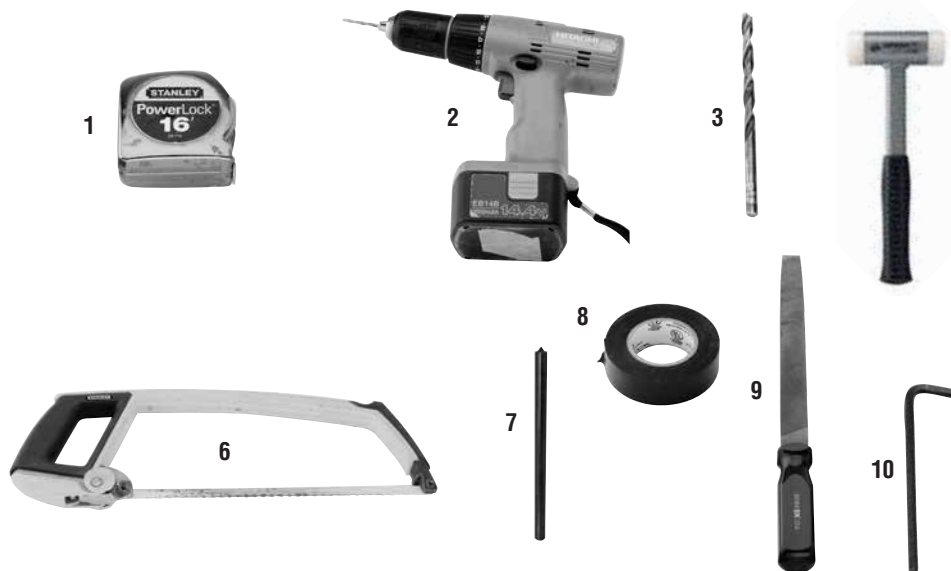


CAUTION! This symbol alerts you to potential hazards that may hurt you and others if you do not follow instructions. The message will tell you how to reduce the chance of injury.

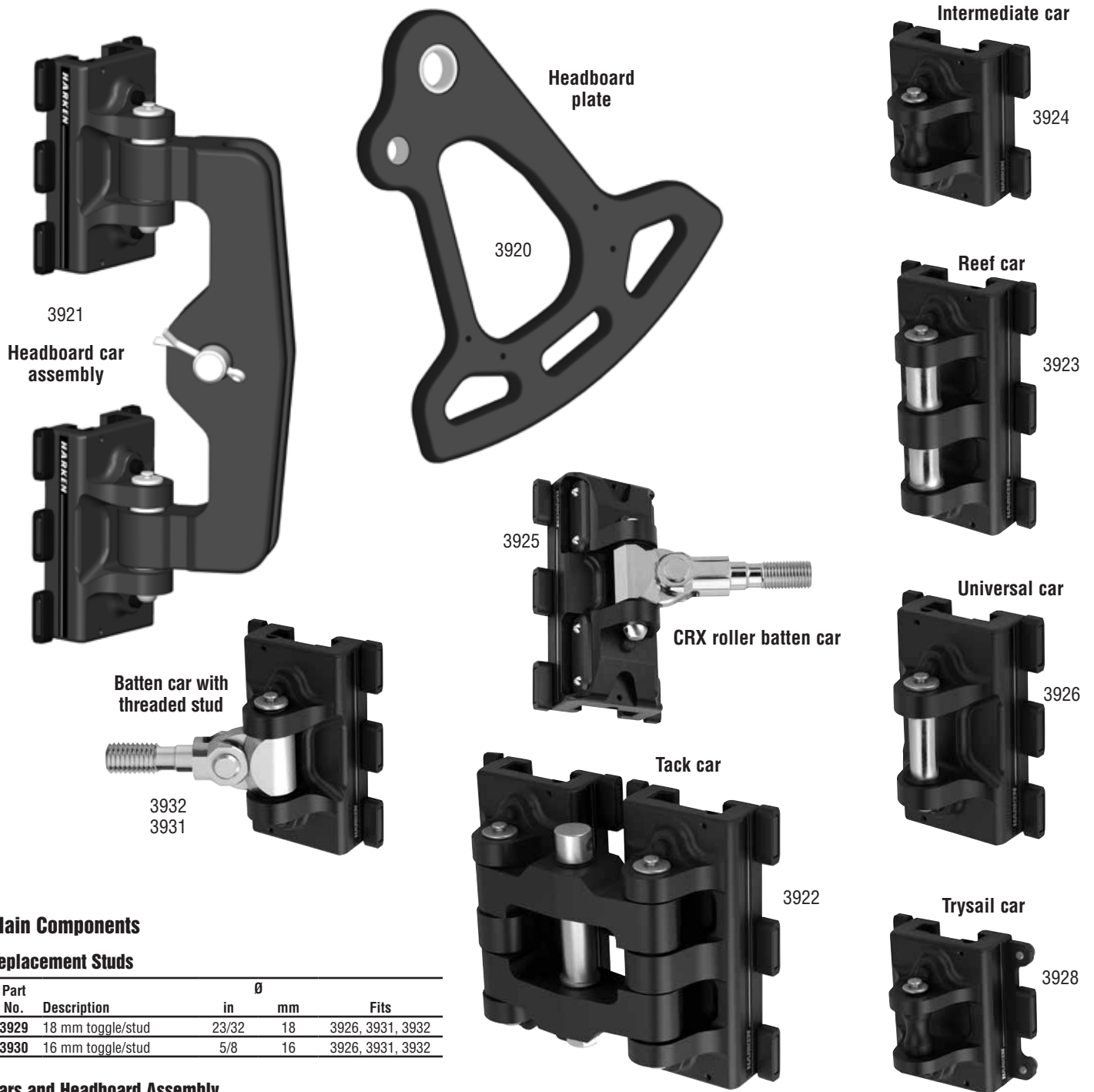


WARNING! Strictly follow all instructions to avoid potential hazards that may kill or hurt you and others. See www.harken.com/manuals for general warnings and instructions.

Tools



1. Tape measure	8. Tape
2. Power drill	9. File
3. Drill bits	10. Hex key - 5 mm
4. Hammer	11. Threadlocking adhesive for mast screws
5. Dead-blow hammer	
6. Hacksaw or cut-off saw	
7. Transfer punch	



Main Components

Replacement Studs

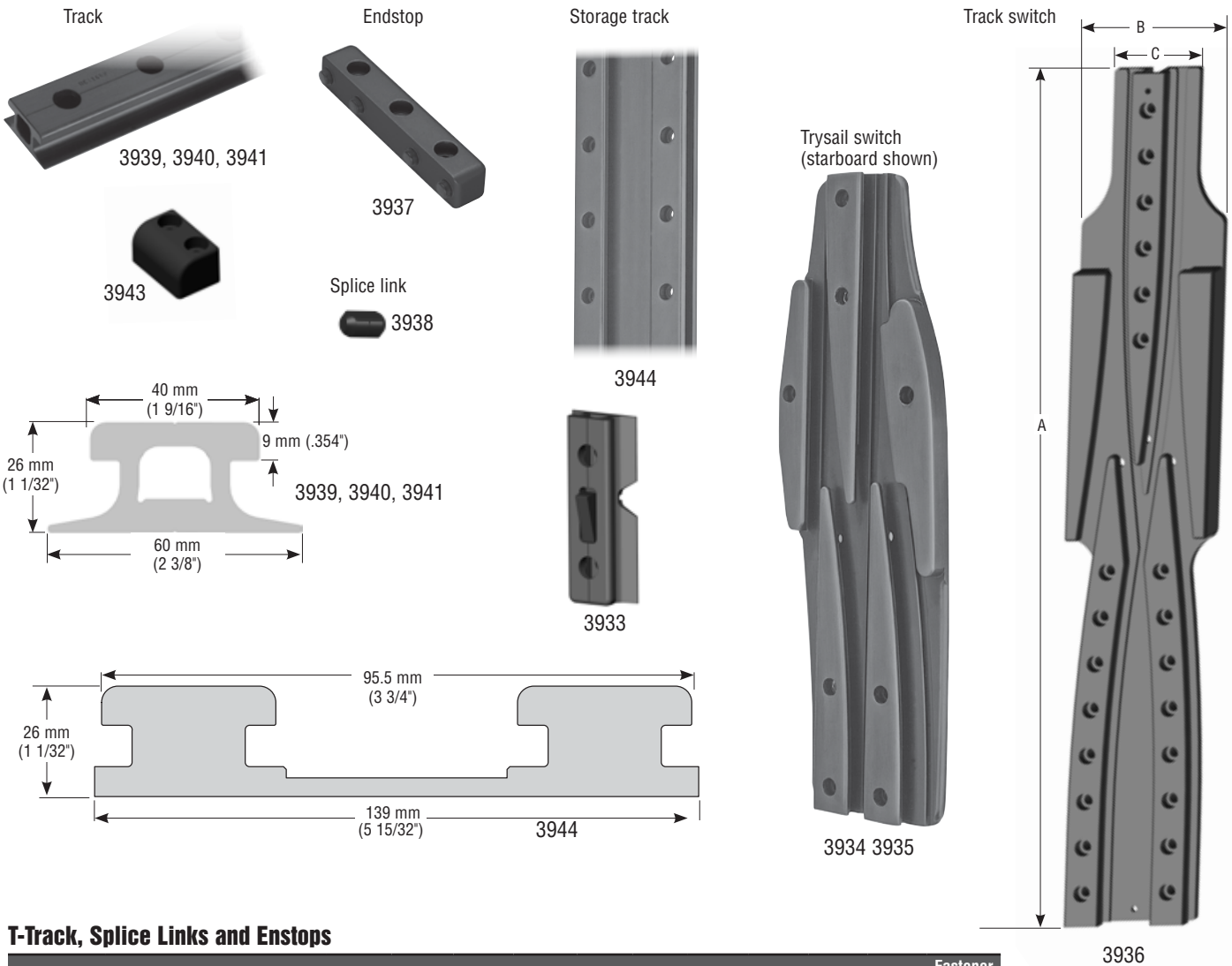
Part No.	Description	Ø		Fits
		in	mm	
3929	18 mm toggle/stud	23/32	18	3926, 3931, 3932
3930	16 mm toggle/stud	5/8	16	3926, 3931, 3932

Cars and Headboard Assembly

Part No.	Description	Length		Width		Weight		Maximum sail area				Maximum working load	
		in	mm	in	mm	oz	g	Monohull ft²	Monohull m²	Multihull ft²	Multihull m²	lb	kg
3921	Headboard car assembly	13 3/4	349	3 1/2	89			3780 +	350 +	2400 +	275 +	3549	1613
3920	Headboard plate	13 11/16	348	13 1/4	337			3780 +	350 +	2400 +	275 +	3549	1613
3924	Intermediate car	3 21/32	93	3 1/2	89	14	392	3780 +	350 +	2400 +	275 +	3549	1613
3923	Reef car	6 1/16	153	3 1/2	89	30	843	3780 +	350 +	2400 +	275 +	8998	4090
3932	Batten car/16 mm stud	5 1/32	128	3 1/2	89	35	979	3780 +	350 +	2400 +	275 +	5940	2700
3931	Batten car/18 mm stud	5 1/32	128	3 1/2	89	35	1000	3780 +	350 +	2400 +	275 +	5940	2700
3925	CRX roller batten car/16 mm stud	6 1/16	153	3 1/2	89	37	1045	3780 +	350 +	2400 +	275 +	5940	2700
3928	Trysail car	3 21/32	93	3 21/32	93	14	397	3780 +	350 +	2400 +	275 +	3549	1613
3926	Universal batten car	5 1/32	128	3 1/2	89	22	617	3780 +	350 +	2400 +	275 +	5940	2700
3922	Tack car	6 1/16	153	7 1/4	184	81	2303	3780 +	350 +	2400 +	275 +	13200	6000

+ If your boat or sail area is larger than the lengths and sail areas listed, please contact Harken.

Cars and headboards are available with black or clear anodizing.



T-Track, Splice Links and Enstops

Part No.	Description	Length		Width		Height		Weight		Fasteners		Fastener spacing
		in	mm	in	mm	in	mm	oz	g	in	mm	
40 mm												
3939	3 m T-Track/bond	118 ¹ / ₁₆	2999	2 3/8	60	1 1/32	26	203	5768	—	10	2925
3940	3 m Flange track/bolt-down	118 ¹ / ₁₆	2999	2 3/8	60	1 1/32	26	196	5565	—	10	75
3941	2 m T-Track/high-load bolt-down	78 1/2	1999	2 3/8	60	1 1/32	26	128	3638	—	10	50
3942	Gate track	29 1/2	749	2 3/8	60	1 1/32	26	49	1320	—	10	75
3938	Splice link	—	—	11/16	18	—	—	2	44	—	—	—
3944	Storage track	19 11/16	500	5 15/32	139	1 1/32	26	91	2590	—	10	50
3937	Endstop, bottom	5 13/16	148	1 5/16	33	1 1/32	26	9	267	—	—	—
3943	Endstop, top	2 3/8	60	1 1/2	38	1 7/32	31	—	—	—	10	—
3933	Push button trysail endstop	5 29/32	150	2 3/8	60	1 1/32	26	—	—	—	10	90

Tracks and headboard assemblies are available with black or clear anodizing.

Switch Tracks

Part No.	Description	Length (A)		Switch Width (B)		Width (C)		Height		Weight		Fasteners	
		in	mm	in	mm	in	mm	in	mm	oz	g	in	mm
40 mm													
3936	Switch	36 1/2	927	6 1/4	159	2 3/8	60	1 1/32	26	63	1798	—	10
3934	Starboard trysail switch	20	508	7 7/16	189	—	—	1 1/32	26	99	2800	—	10
3935	Port trysail switch	20	508	7 7/16	189	—	—	1 1/32	26	99	2800	—	10

Switches are available with black or clear anodizing.

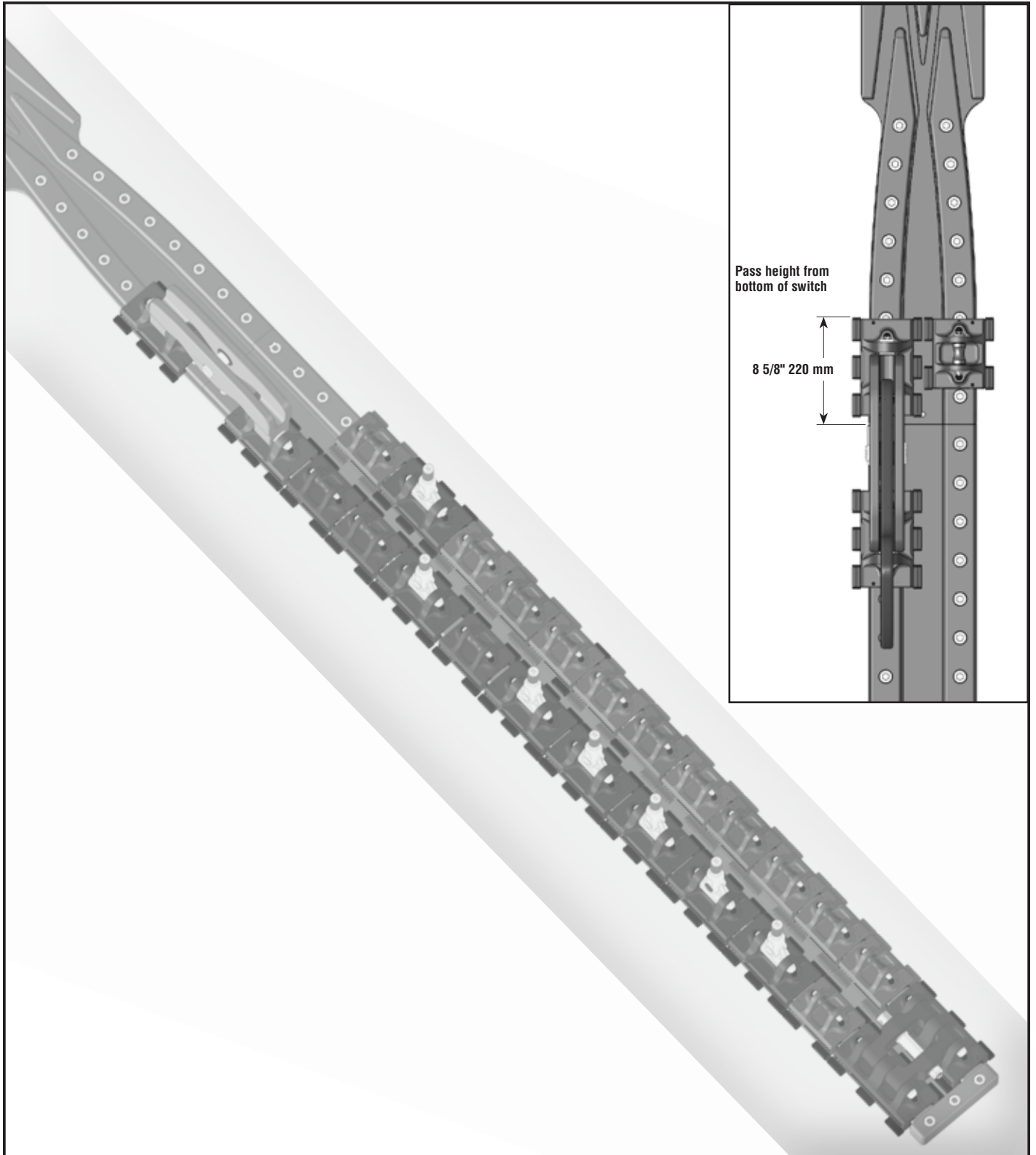
Track length and switch height considerations

Switch height is determined by the number of cars required for system and the quantity of storage tracks used.

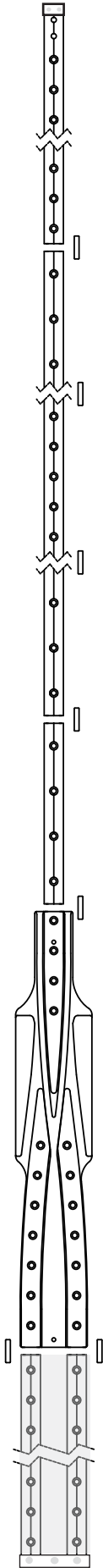
Note: Cars will pass each other when top of car is 8 5/8" (220 mm) above bottom of switch.

Track must not block halyard exit.

IMPORTANT! Allow enough room so that the car does not meet endstop. Allow for stretch.



Layout system using charts to plan track location and lengths.



A	Variable-Length Top Track		
	Length		Hole Spacing
	mm	in	mm
			50 or 75

Total track length _____
 - SUM _____
 Top track length A _____

B	Standard Track		
	Length		Hole Spacing
	mm	in	mm
	2999	118.071	75 (Bolt down)

_____ X _____ = _____
 Length Quantity

C	High-Load Track		
	Length		Hole Spacing
	mm	in	mm
	1999	78.701	50 (Bolt down)
Place in reefed headboard areas.			

_____ X _____ = _____
 Length Quantity

C1	Trysail Switch		Hole Spacing
	Length		—
	mm	in	mm
	368	14.50	Variable

_____ + _____ = _____
 If used

D	Gate Track		
	Length		Hole Spacing
	mm	in	mm
	749	29.5	75
Removable track - Allows cars to be left attached to sail and removed from top of switch.			

_____ + _____ = _____
 1 Quantity

E	Switch		
	Length		—
	mm	in	—
	927	36.5	—

_____ + _____ = _____
 1 Quantity

F	Storage Tracks		
	Length		Hole Spacing
	mm	in	mm
	500	19.69	50

_____ + _____ = _____
 Quantity

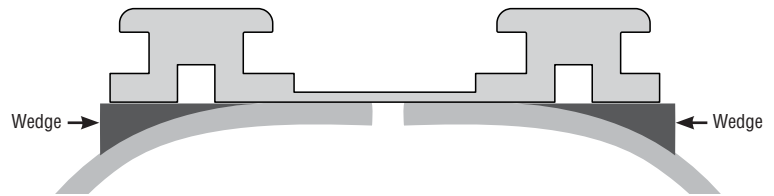
G	Endstop		
	Length		
	mm	in	
	33	1.3	

_____ + _____ = _____
 1 Quantity

SUM

Enter "SUM" above to calculate "Top track length."

Switch mounting surface- Note width and shape of switch and if necessary build a platform or use wedges on mast for mounting.



Installation on carbon masts -

IMPORTANT! Gluing to carbon masts requires mechanical fastening. Use fasteners at 75 mm. High load areas require 50 mm hole spacing. These include headboard locations at full hoist, headboard locations at all reef locations and tack cars or reefing tack car locations.

IMPORTANT! Tracks and fasteners must be isolated to prevent corrosion. Use thread inserts for mast fastener holes. Thread strength must be comparable to the fastener strength.

Adhesive Systems – Harken is not responsible for glued track installations and cannot make specific adhesive recommendations. Consult adhesive suppliers for the latest updates and test results.

Track Surface Anodizing - Harken tracks do not use lubricants in the anodizing process. Always test bond strength on an exemplary sample.

Mast substrate strength - It is installer’s responsibility to carry out all structural tests needed to ensure that the mast wall can bear the load. Consult mast builder.

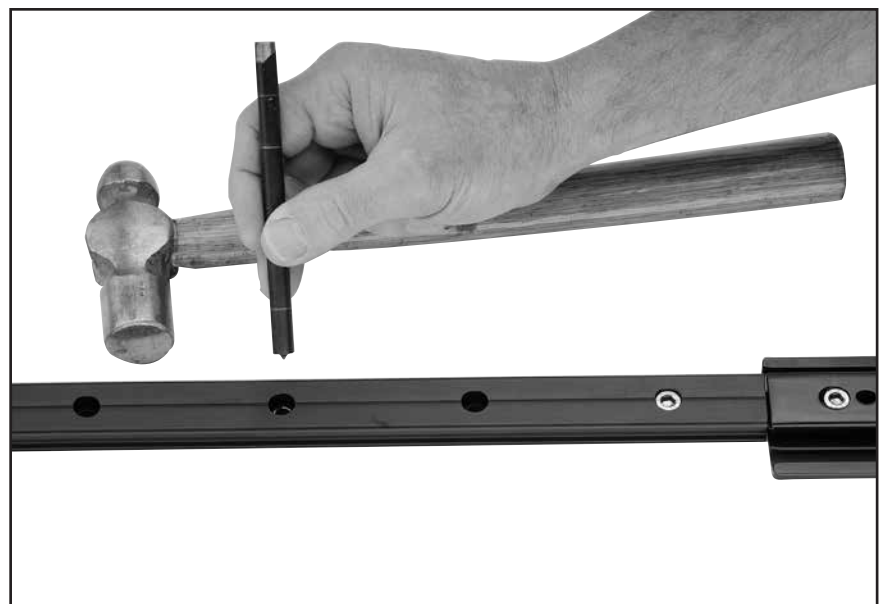
General mounting guidelines - When mounting tracks, work meticulously using a straight edge reference line along mast. Do not let tracks vary from this line. Tape track in place and centerpunch hole at bottom using a transfer punch.

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.**

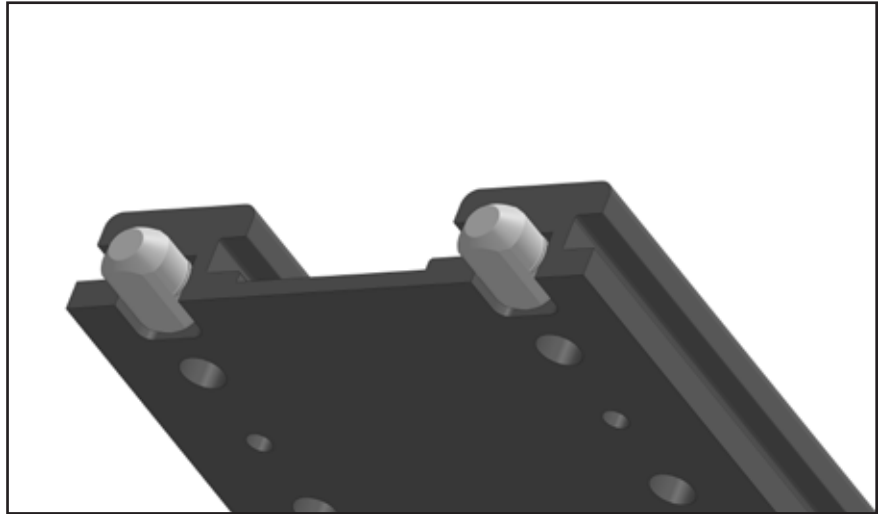
Move up several holes and use transfer punch to mark a second hole. Remove track and drill and tap hole.

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.

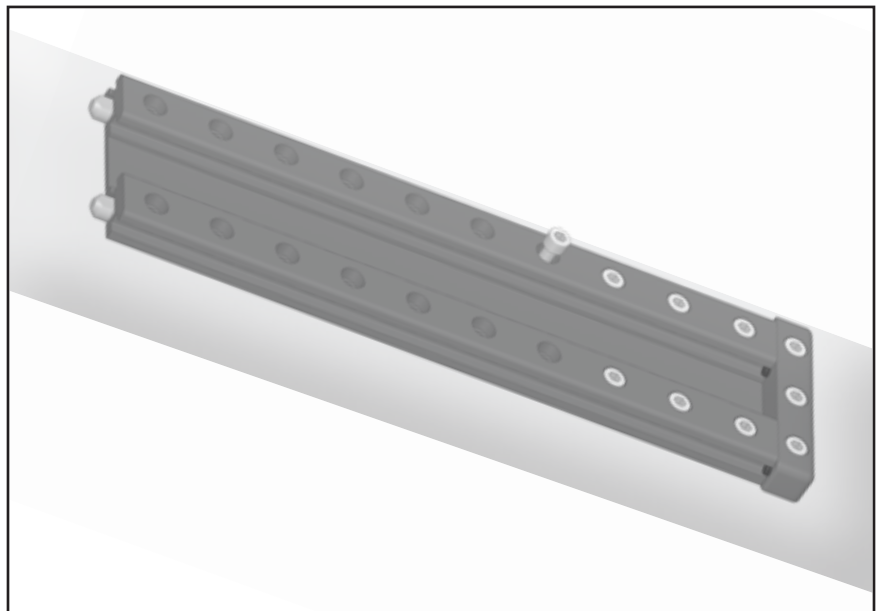
Use threadlocking adhesive to secure fasteners and as an isolator between mast and fastener.



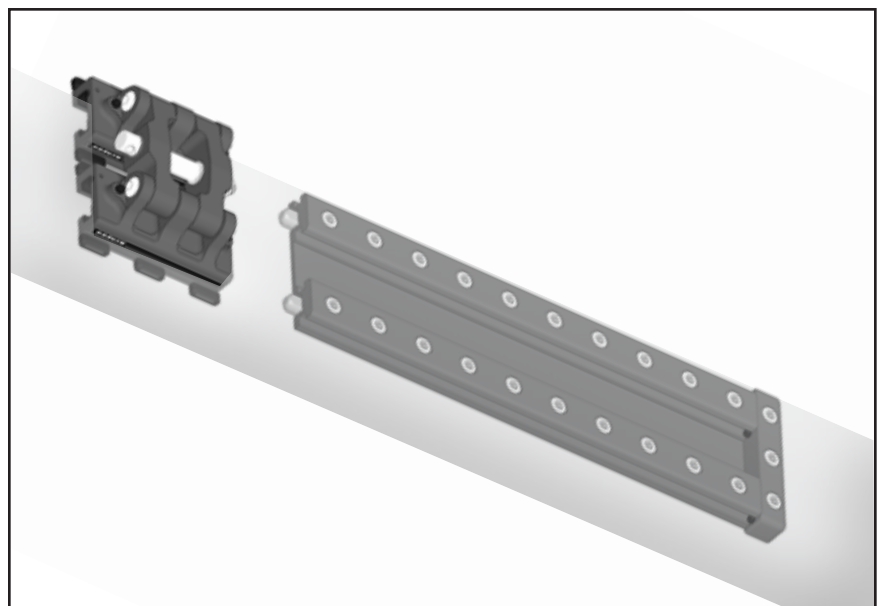
Push splice links into loader track.



Install bottom stop and bottom loader track.



Install tack car on bottom storage track.
Note: Tack car assembly can load from above switch by disconnecting one side of coupler.

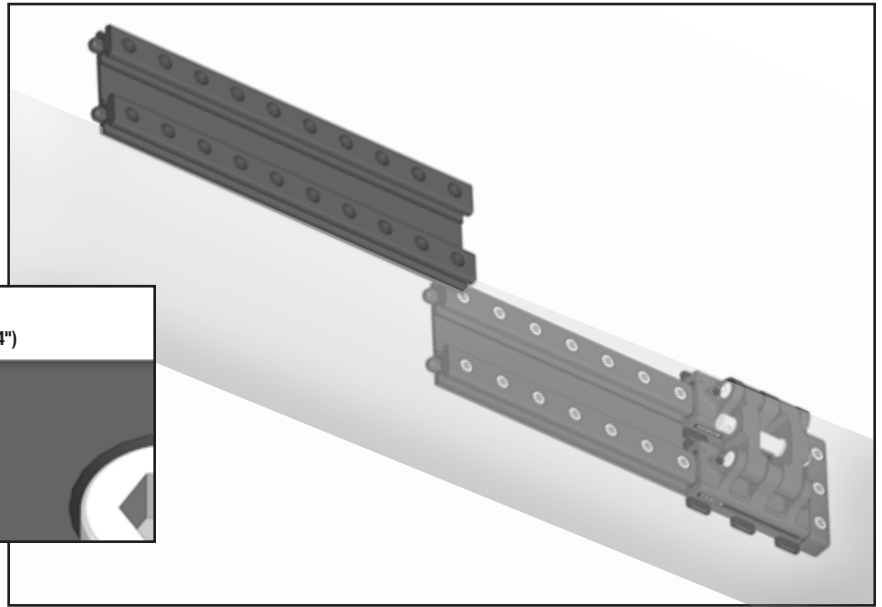
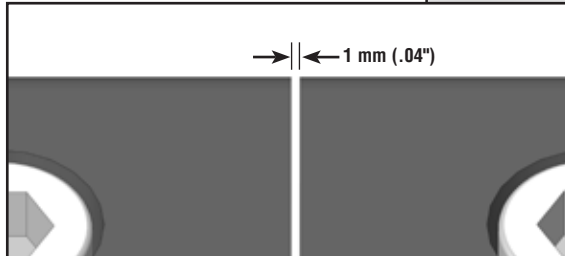


Assembly

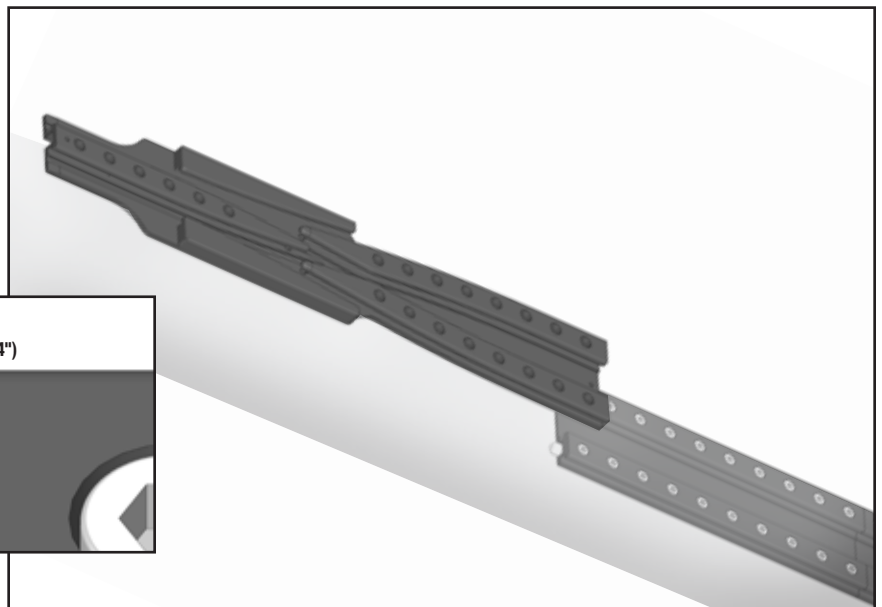
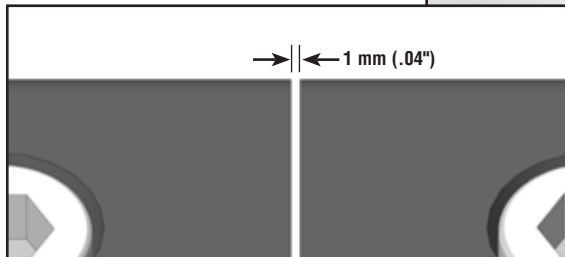
Mounting Storage Tracks, Switch, and Gate Track

Install splice links into other bottom loader tracks and install on mast.

IMPORTANT! Keep a 1 mm gap between tracks to allow for expansion, contraction and mastbend. Track hole spacing assumes this spacing



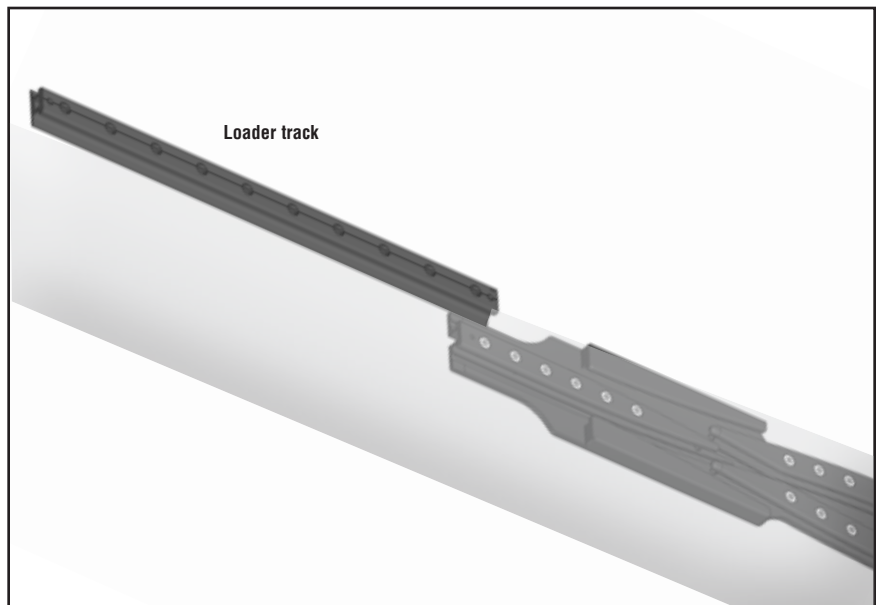
Install switch. Keep a 1 mm gap between switch and storage track.

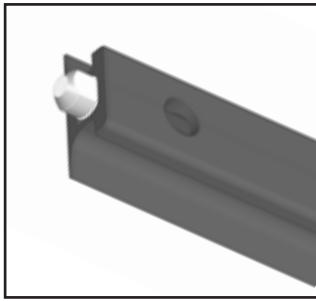


Install gate track. Keep a 1 mm gap between loader track and switch.

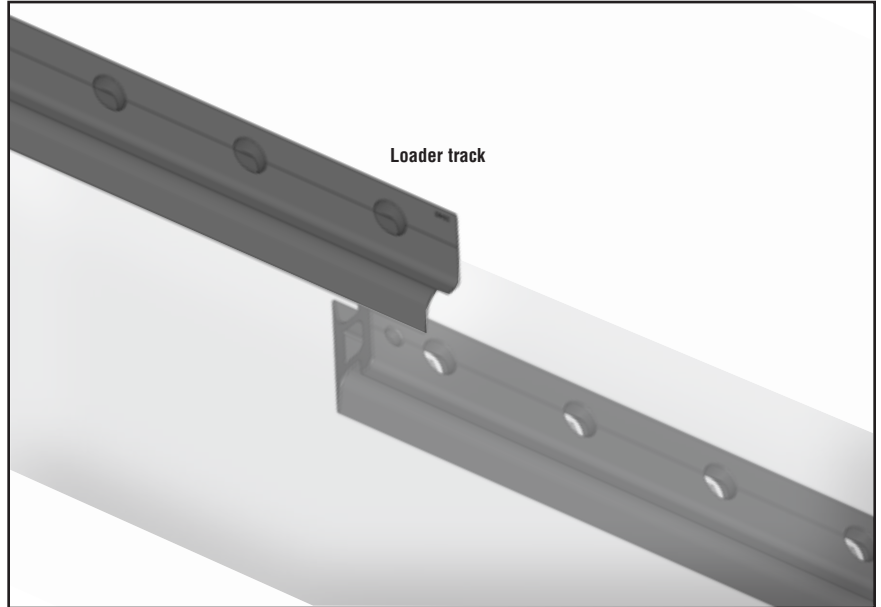
IMPORTANT! Do not use permanent threadlocking adhesive on screws because gate track is removed for loading cars.

IMPORTANT! Do not use splice links or adhesive when mounting the removable loader track.

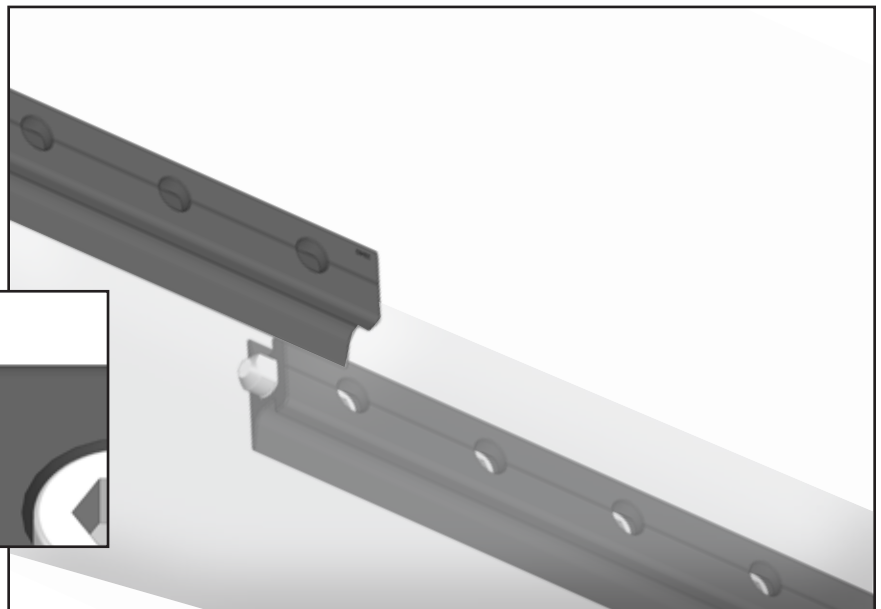
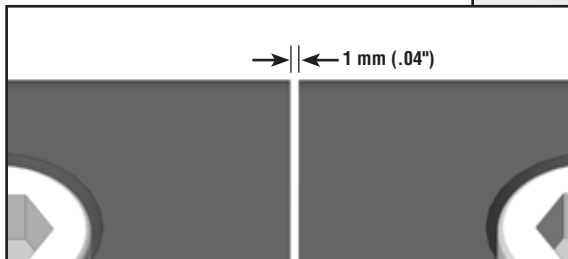




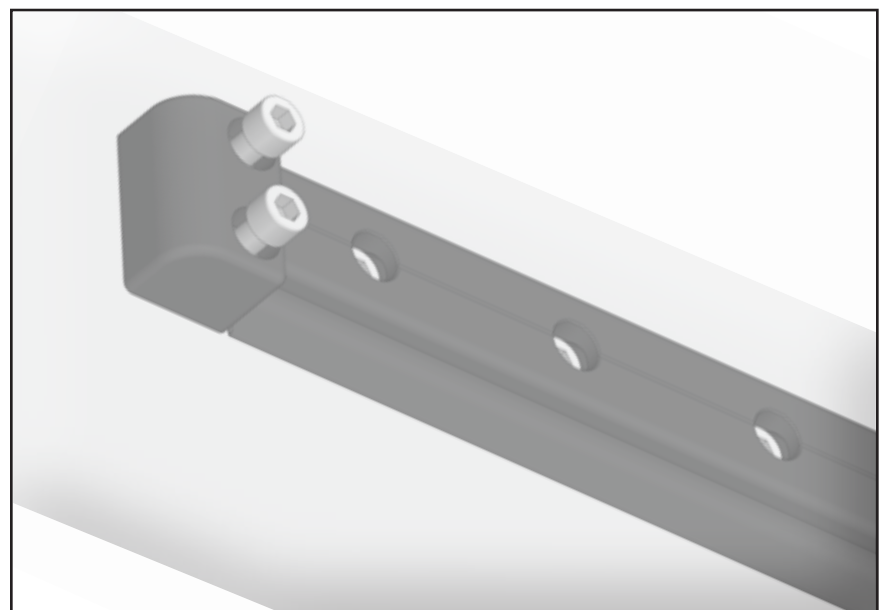
Install splice link in top end of full length track and install. Use no splice link at lower end of track mating with loader track. Keep a 1 mm gap between tracks.



Install splice link in top end of successive 2 or 3 m length tracks and install. Use no splice link at lower end of track mating with loader track. Keep a 1 mm gap between tracks.



Cut top track to length and install top endstop.



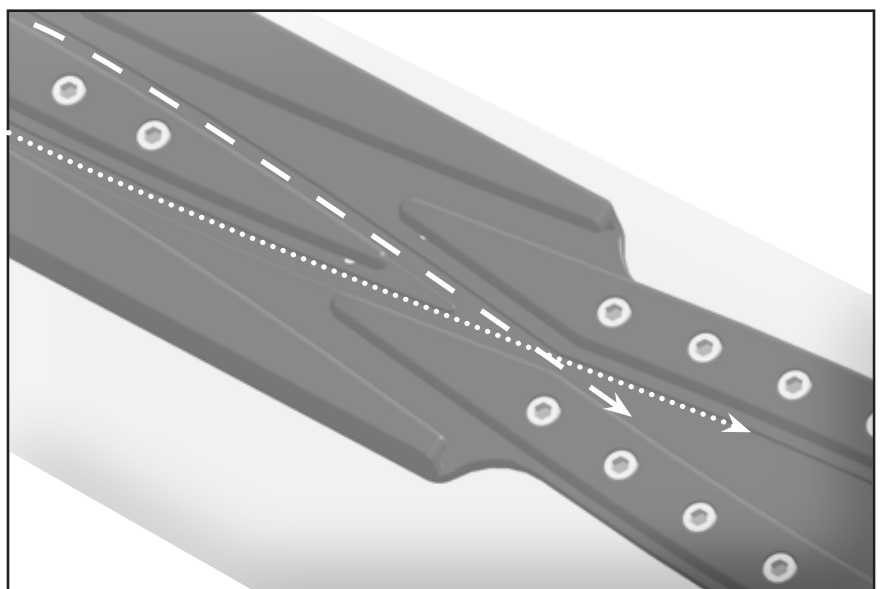
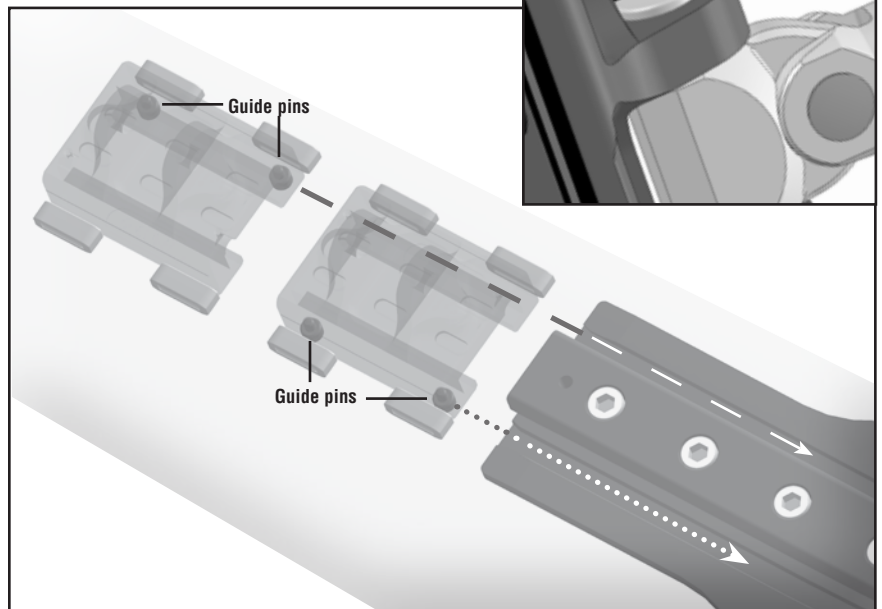
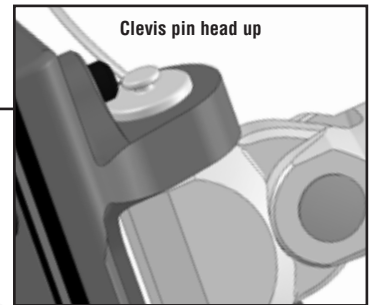
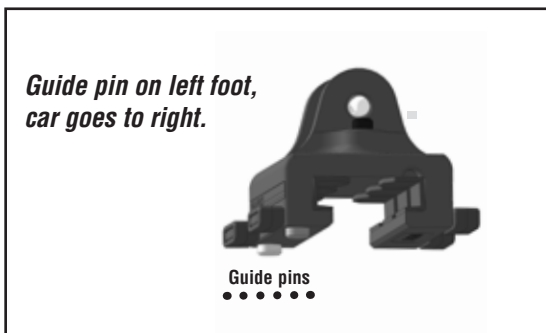
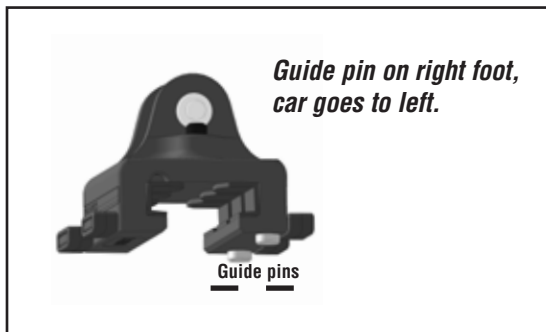
Remove gate track.



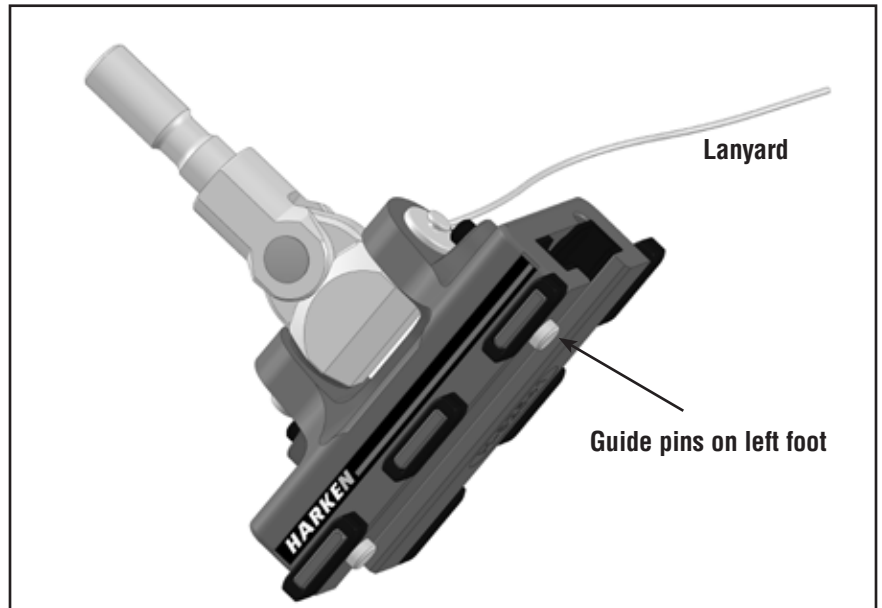
Install cars from above switch.

Note: Mustard-colored guide pins on foot of car guide it to one side of switch. Alternate sides by loading with pins on one side followed by pins on other side. Install cars so the clevis pin heads are up. Secure using lanyard. See next page.

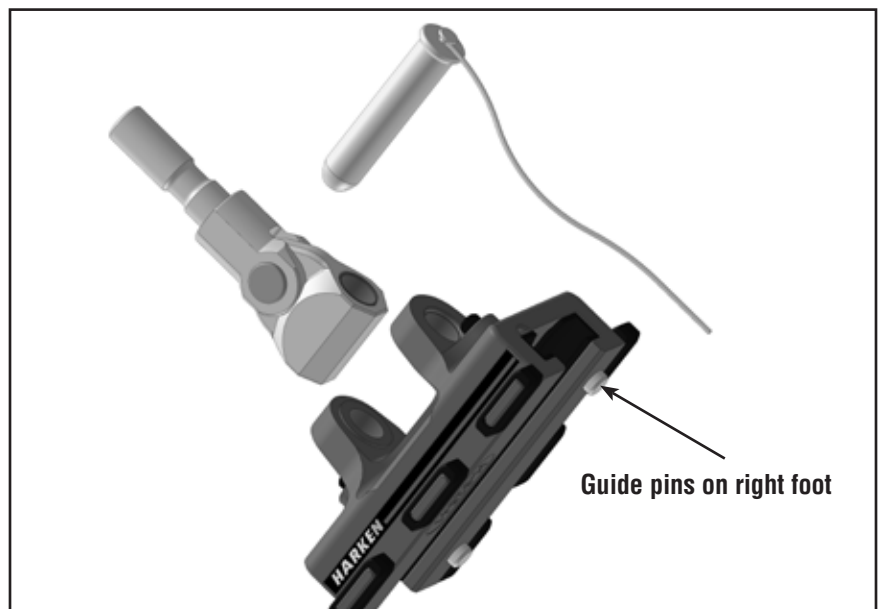
Tip:



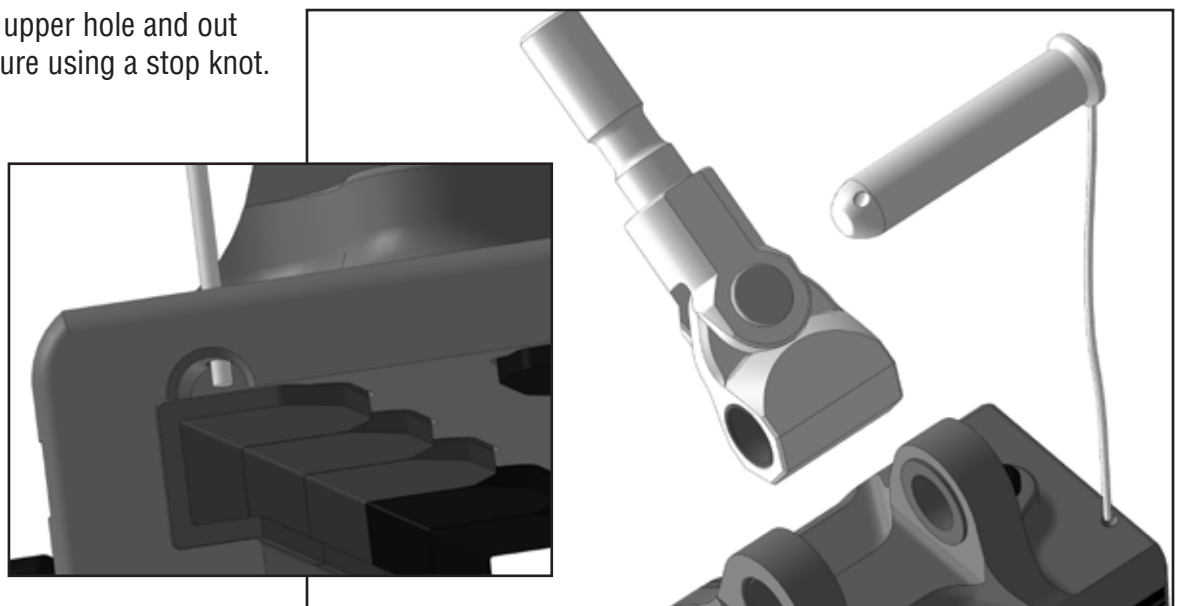
Attach lanyard to head of pin.



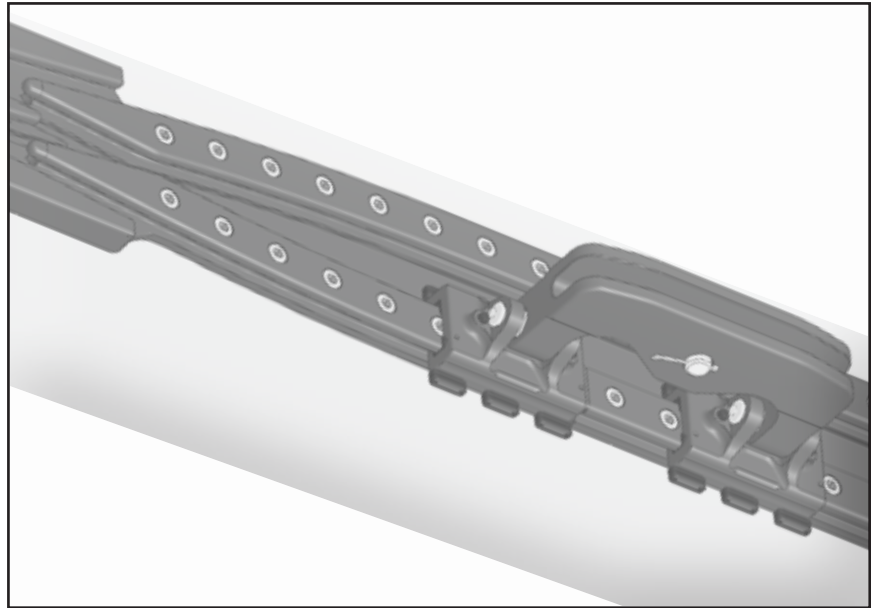
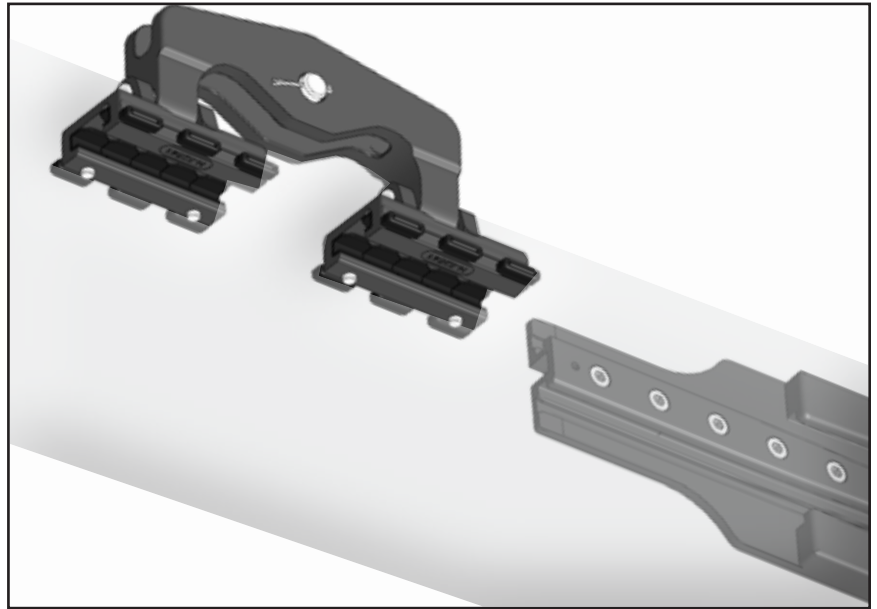
When flipping car around remove toggle, and flip clevis pin so head is up.



Feed lanyard through upper hole and out through opening. Secure using a stop knot.



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.



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.

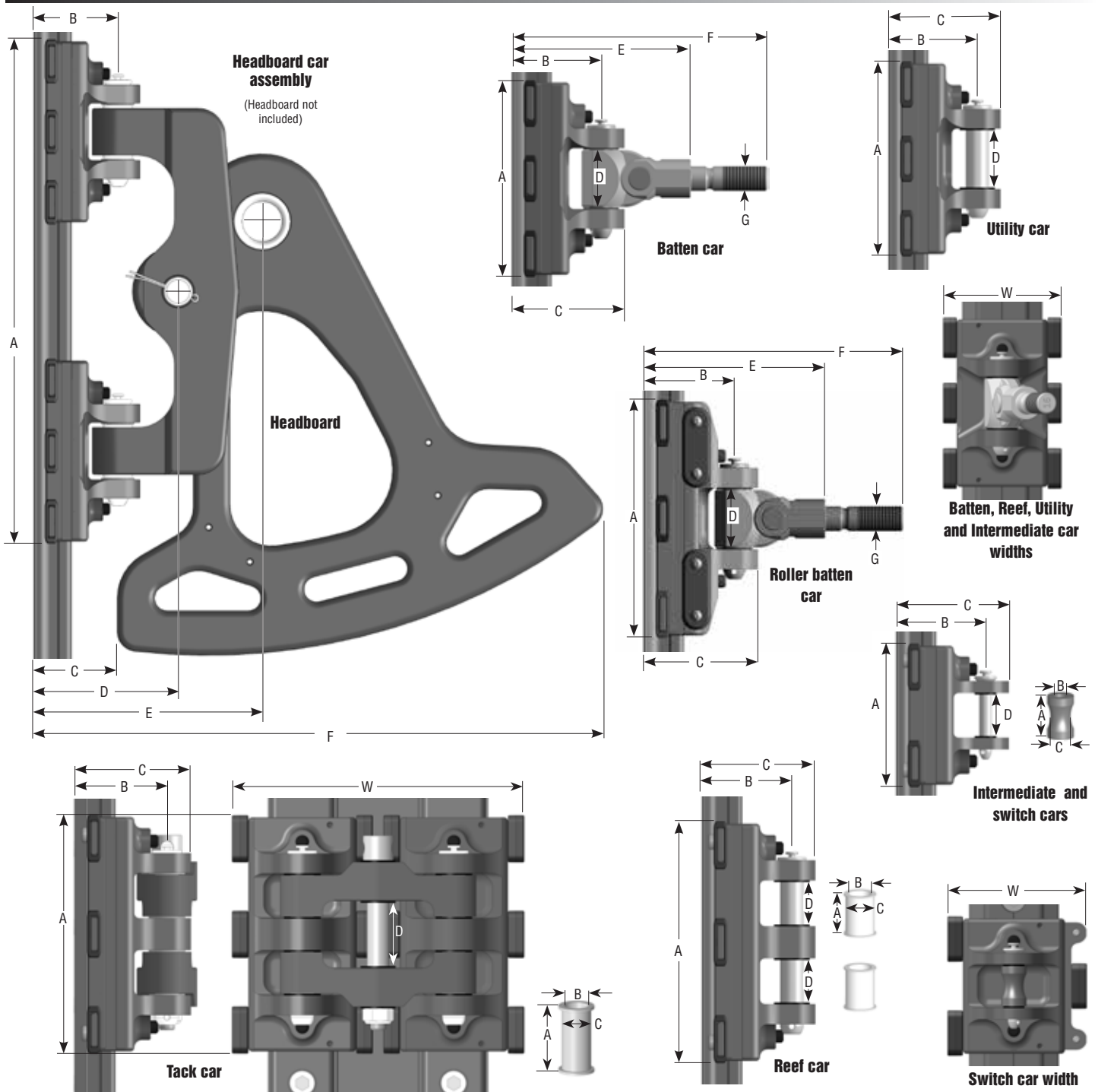
IMPORTANT! Be especially vigilant when raising sail. Luff sail. Watch for any binding or jamming at the switch and stop hoist immediately if any occurs.

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 as damage to switch and cars will occur, resulting in expensive repairs.





Part No.	Description	A		B		C		D		E		F		G Stud Ø mm	W Car width	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm			
40 mm																
3921	Headboard car assembly	13 3/4	349	2 9/32	58	2 21/32	68	4 11/32	110	6 5/8	168	15 15/16	405	—	3 1/2	89
3924	Intermediate car	3 21/32	93	2 9/32	58	2 7/8	73	1 1/16	27	—	—	—	—	—	3 1/2	89
H-82678	Intermediate car bushing (included)	1 1/16	27	11/32	8.4	1/2	13	—	—	—	—	—	—	—	—	—
3932	Batten car/16mm stud	5 1/32	128	2 9/32	58	2 7/8	73	1 15/32	38	2 9/32	58	6 9/16	167	16x2.0	3 1/2	89
3931	Batten car/18mm stud	5 1/32	128	2 9/32	58	2 7/8	73	1 15/32	38	2 9/32	58	6 9/16	167	18x2.5*	3 1/2	89
3926	Utility Car	5 1/32	128	2 9/32	58	2 7/8	73	1 15/32	38	—	—	—	—	—	3 1/2	89
3923	Reef car	6 1/32	153	2 9/32	58	2 7/8	73	1 1/16	27	—	—	—	—	—	3 1/2	89
H-82684	Reef car bushing (included)	1 1/16	27	19/32	15.1	3/4	19	—	—	—	—	—	—	—	—	—
3922	Tack car	6 1/32	153	2 9/32	58	2 7/8	73	1 5/8	40.8	—	—	—	—	—	7 1/4	184
H-82765	Tack car bushing (included)	1 19/32	41	9/16	15	11/16	18	—	—	—	—	—	—	—	—	—
3928	Trysail car	3 21/32	93	2 9/32	58	2 7/8	73	1 1/16	27	—	—	—	—	—	3 21/32	93
H-82678	Trysail car bushing (included)	1 1/16	27	11/32	8.4	1/2	13	—	—	—	—	—	—	—	—	—

*Threaded stud size changed from M18x2.0 to M18x2.5 in August 2020

Distance Between Attachment Points

Battens and intermediate cars placed at sailmaker's discretion.



While sailing,
loaded cars
must not ride
in this area.

Setting Reef Points

Note: Batten fittings and cars cannot handle reefing outhaul or downhaul loads. Transfer loads to a tack fitting.

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		Width		Weight		Fasteners mm
		in	mm	in	mm	oz	g	
40 mm								
3935	Port trysail switch	20	508	7 7/16	189	99	2800	10
3934	Starboard trysail switch	20	508	7 7/16	189	99	2800	10
3928	Trysail car	3 21/32	93	3 21/32	93			—

*Tracks and cars are available with black or clear anodizing.

Preassembly

Contact Harken regarding twist track blanks. **IMPORTANT! Special care must be taken so that the trysail or standard cars do not hit the adjoining track.**

Sailmaker instructions

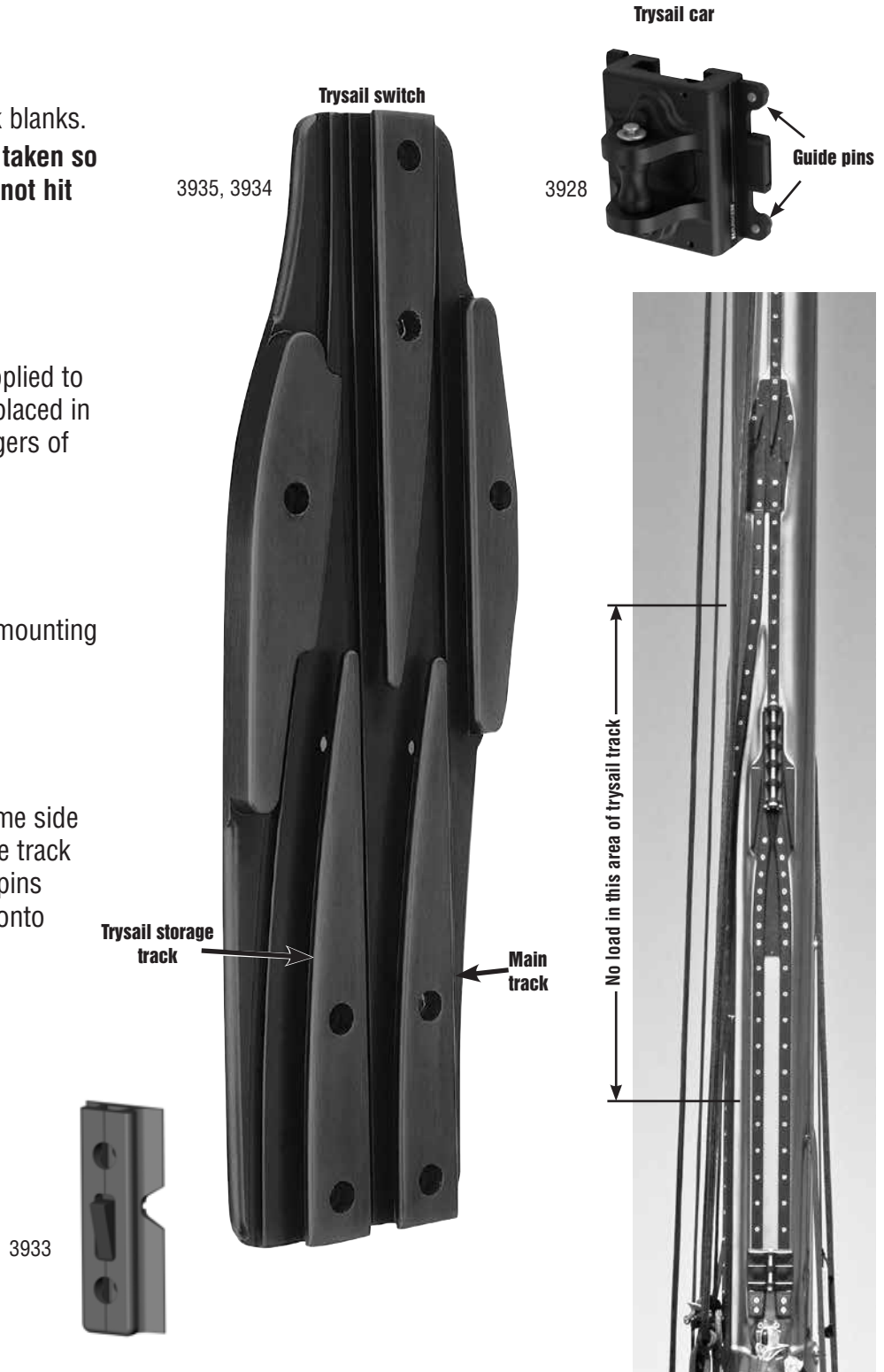
Place cars so there is no sail load applied to cars while on twist track area. Cars placed in this area under load will damage fingers of switch.

Installing Track

See preassembly section regarding mounting tracks and switch.

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.



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.
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.

Inspection

Inspect parts periodically and especially before long passages. Check for loose cotter pins, spring loaded stops 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.

CRX roller car inspection and maintenance

Perform long-term maintenance and inspection after prolonged use, before long-term storage, or if part has loosened.

Tools and supplies

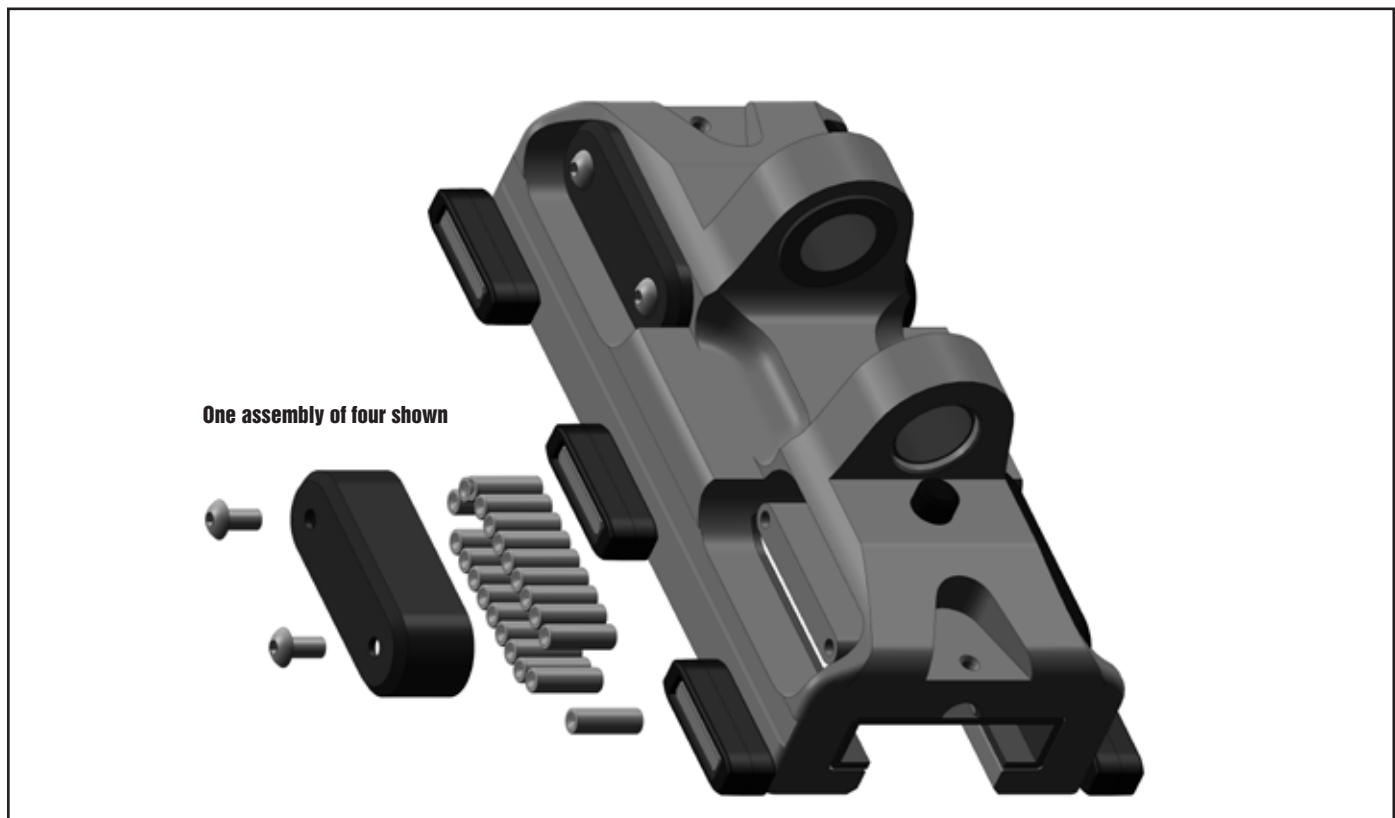
- Soapy water solution
- Soapy water solution
- Purple Loctite® adhesive
- McLube® OneDrop™ ball conditioner

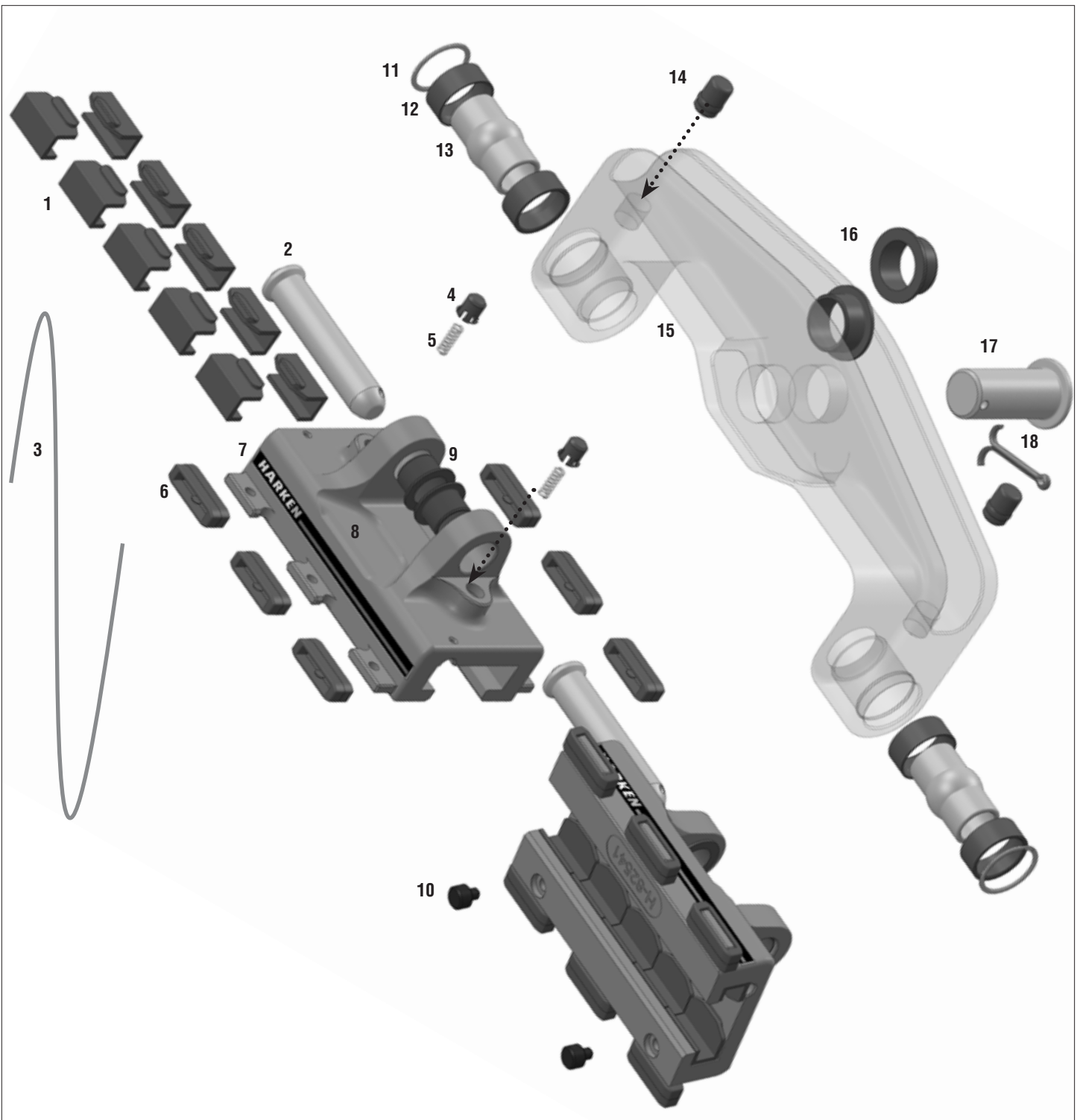
Order these parts and have on hand for long term service

HFS1092	Fst-M4x.7x8mm BHCS 18-8	Qty 8 per car
H-82802	Roller cap-40mm switch Battcar	Qty 4 per car
H-31089A	Roller-.1875inx.560in Tolon machined	Qty 84 per car

Inspection and service

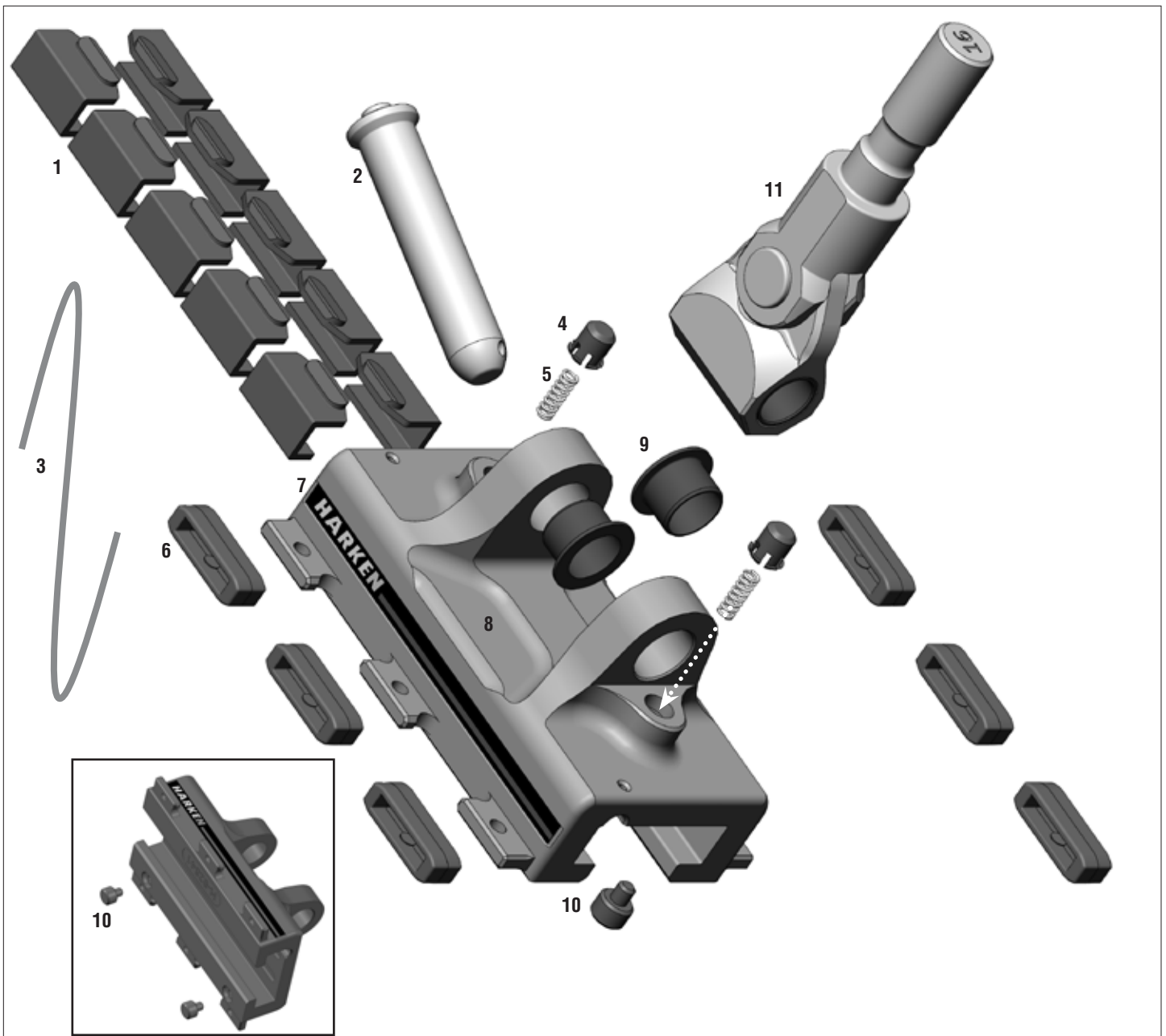
1. Refer to exploded view for disassembly.
2. Remove and inspect toggles, pins, screws for signs of wear, bending, or deterioration. Replace part if any is found.
3. Use soap and water to clean all parts. Rinse with fresh water.
5. Use **purple** Loctite on screws used to retain roller retaining caps. **IMPORTANT! Using red Loctite on roller retaining caps may be too hard to loosen and hex key may strip in socket.**
6. See Harken video showing how to load rollers.
7. Apply one (1) to two (2) drops of McLube OneDrop ball bearing conditioner to each roller race and circulate rollers to distribute.





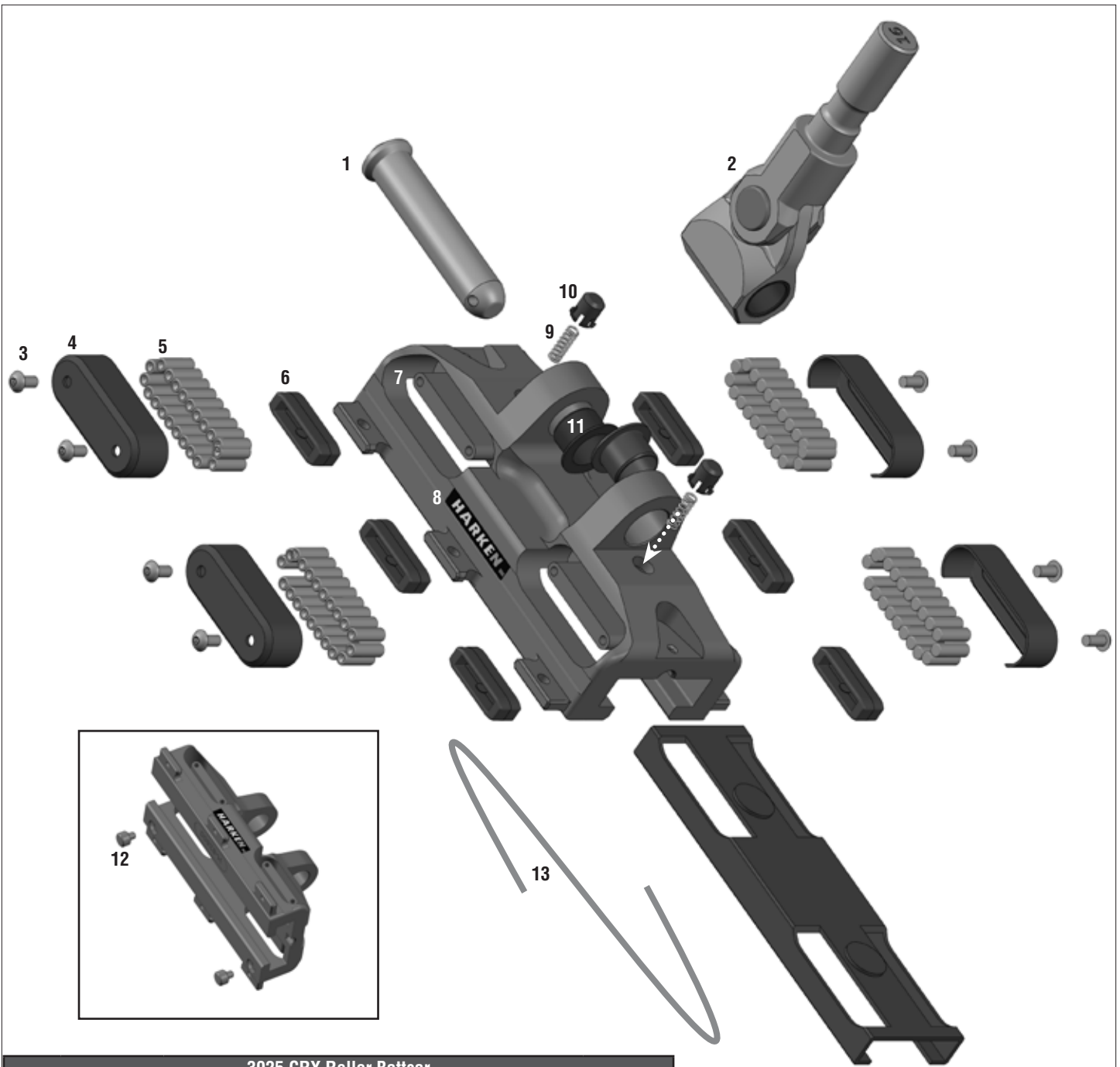
3921 Headboard Car Assembly							
Ref	Part No.	Description	Quantity	Ref	Part No.	Description	Quantity
1	MP-2105	Slider-40mm switch inside	20	10	H-37242A	Guide pin-32mm switch sys	4
2	H-82544	Pivot pin-40mm switch batten	2	11	MS-294	Smalley ring- wh-100-S02	2
3	HCP2177	Line-1.75mm Dyneema gray lash-it	400 mm	12	H-83185	Cup-40mm switch hdbrd car	4
4	H-36370A	Button-sys B batten car	4	13	H-83184	Bkt-40mm switch spherical hdbrd car	2
5	MS-1025	Spring-C0180-026-0560s ss cmp (H-37648a)	4	14	MP-1869	Bumper-mm, maxi (h-4861a)	2
6	MP-2104	Slider-40mm switch wing	12	15	H-83183	Carrier-40mm switch hdbrd car	1
7	4992	Label-6.25Inx.25In battcar	4	16	H-83259	Brg-Igus-tfm-2023-11	2
8	H-82541	Car body-40mm switch batten	2	17	H-83258	Pin-40mm switch hdbrd car	1
9	H-82686	Brg-Igus gfm-1517-12	4	18	HFS625	Cotter pin-.125X1.500 18-8	1

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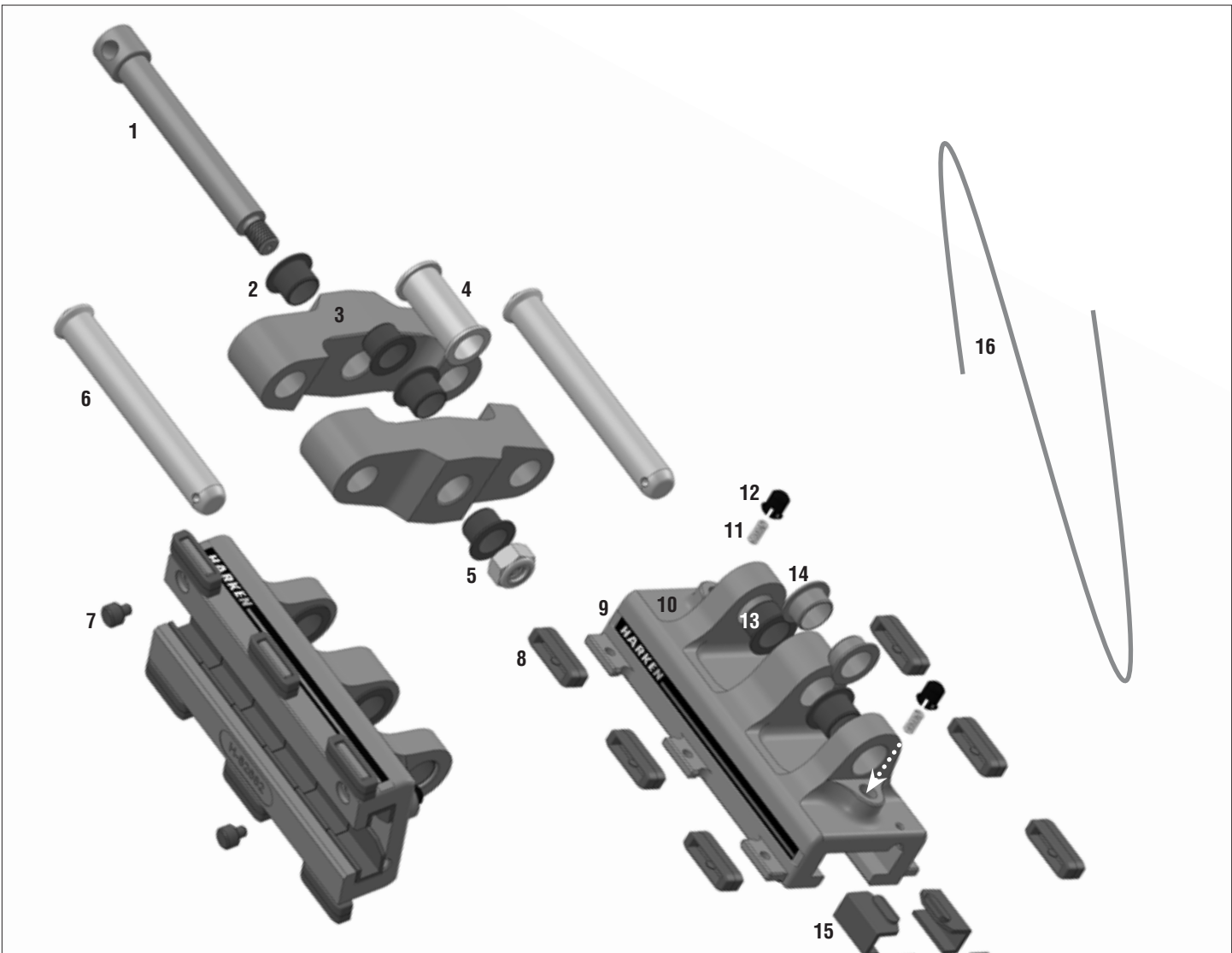
3932 Car-with 16mm toggle				3931 Car-with 18mm toggle			
Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1	MP-2105	Slider-40mm switch inside	20	1	MP-2105	Slider-40mm switch inside	4
2	H-82544	Pivot pin-40mm switch batten	2	2	H-82544	Pivot pin-40mm switch batten	2
3	HCP2177	Line-1.75mm Dyneema gray lash-it	300 mm	3	HCP2177	Line-1.75mm Dyneema gray lash-it	300 mm
4	H-36370A	Button-sys B batten car	4	4	H-36370A	Button-sys B batten car	2
5	MS-1025	Spring	4	5	MS-1025	Spring	2
6	MP-2104	Slider-40mm switch wing	12	6	MP-2104	Slider-40mm switch wing	1
7	4992	Label-6.25Inx.25In battcar	4	7	4992	Label-6.25Inx.25In battcar	2
8	H-82541	Car body-40mm switch batten	2	8	H-82541	Car body-40mm switch batten	1
9	H-82686	Brg-Igus gfm-1517-12	4	9	H-82686	Brg-Igus gfm-1517-12	1
10	H-37242A	Guide pin		10	H-37242A	Guide pin	2
11	3930	Toggle assembly - 40mm switch 16mm stud	1	11	3929	Toggle assembly - 40mm switch 18mm stud	1
11a	H-82627	Brg-Igus gsm 1517-15 (Included in 3930)	2	11a	H-82627	Brg-Igus gsm 1517-15 (Included in 3931)	2

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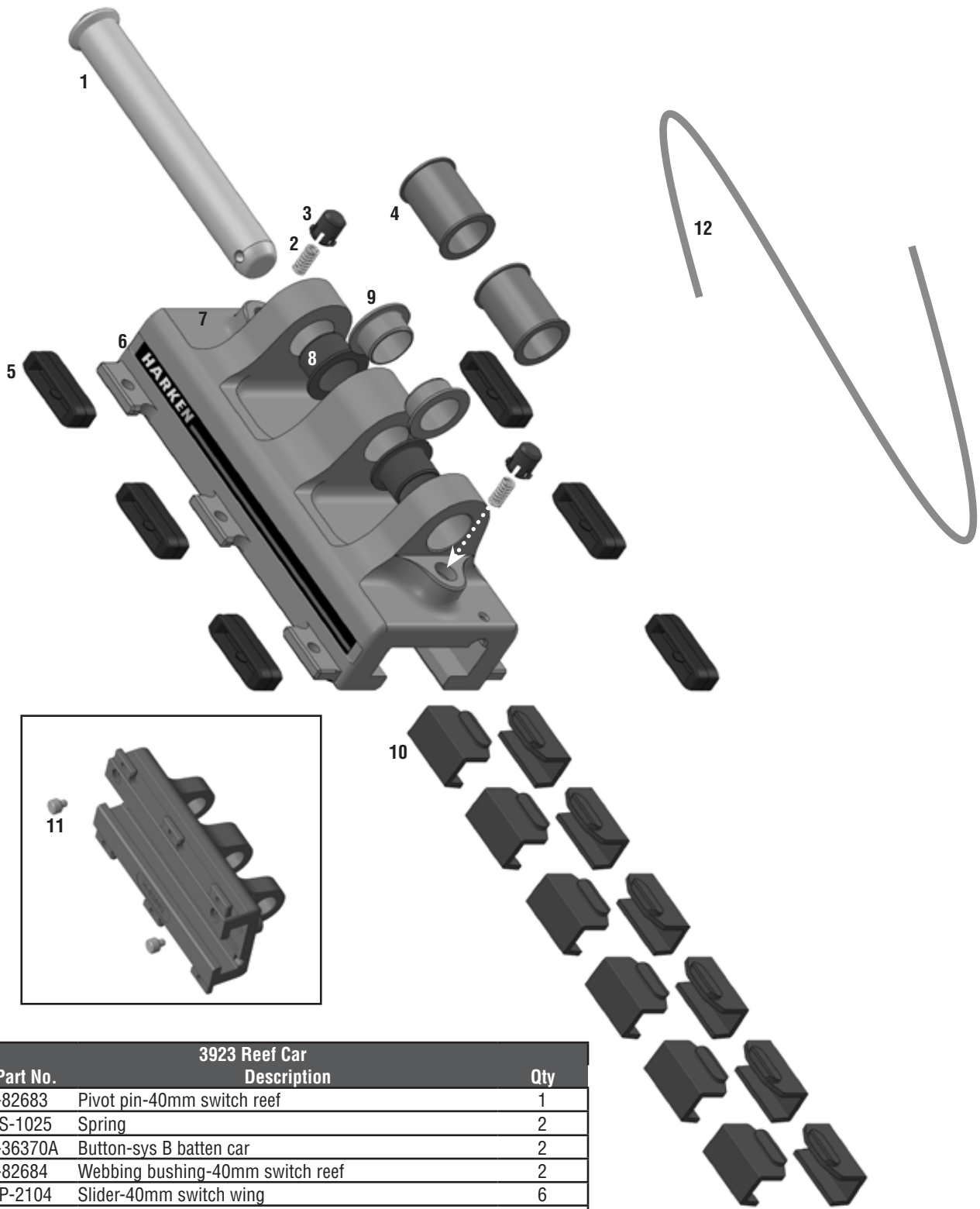
3925 CRX Roller Battcar				
Ref	Part No.	Description		Qty
1	H-82544	Pivot pin-40mm switch batten		1
2	3930	Tog assy-40mm switch 16mm Battcar		1
3	HFS1092	Fst-M4x.7x8mm BHCS 18-8		8
4	H-82802	Roller cap-40mm switch Battcar		4
5	H-31089A	Roller-.1875inx.560in Tolon machined		84
6	MP-2104	Slider-40mm switch wing		6
7	H-82800	Car body-40mm switch roller Battcar		1
8	4992	Label-6.25inx.25in Battcar		2
9	MS-1025	Spring		2
10	H-36370A	Button-sys B Batten car		2
11	H-82686	Brg-Igus GFM1517-12		2
12	H-37242A	Guide pin		2
13	HCP2177	Line-1.75mm Dyneema gray lash-it		300 mm

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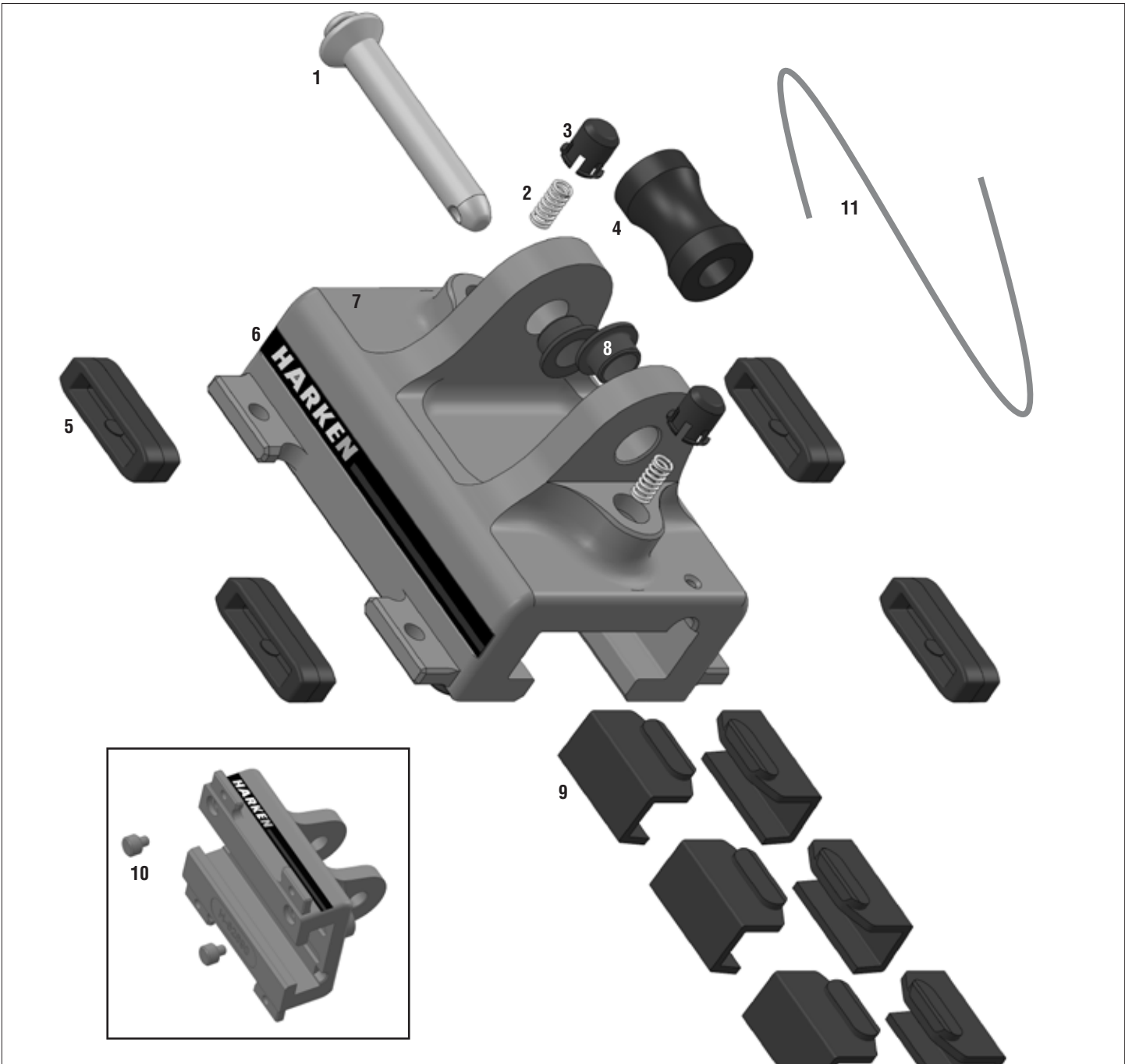
3922 Tack Car				
Ref	Part No.	Description		Qty
1	H-82764	Pivot pin-40mm switch tack car		1
2	H-82767	Brg-Igus gfm-1416-12		4
3	H-82763	Coupler-40mm switch tack		2
4	H-82765	Webbing bushing-40mm switch tack		1
5	H-82766	Fst-m10x1.5mm nylon lock nut		1
6	H-82683	Pivot pin-40mm switch reef		2
7	H-37242a	Guide pin		2
8	MPp-2104	Slider-40mm switch wing		12
9	4992	Label-6.25inx.25in battcar		4
10	H-82682	Car body-40mm switch reef		2
11	MS-1025	Spring		4
12	H-36370a	Button-sys B batten car		4
13	H-82686	Brg-Igus gfm-1517-12 (Used on outer lugs)		4
14	H-82685	Brg-Igus gfm-1517-09 (Used on center lug)		4
15	MP-2105	Slider-40mm switch inside		24
16	HCP2177	Line-1.75mm Dyneema gray lash-it		400 mm

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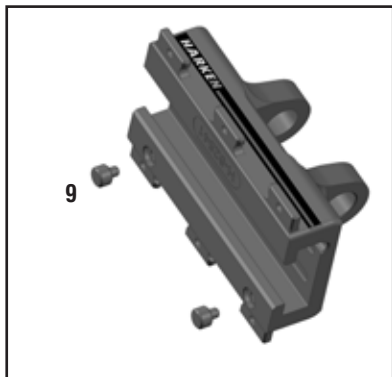
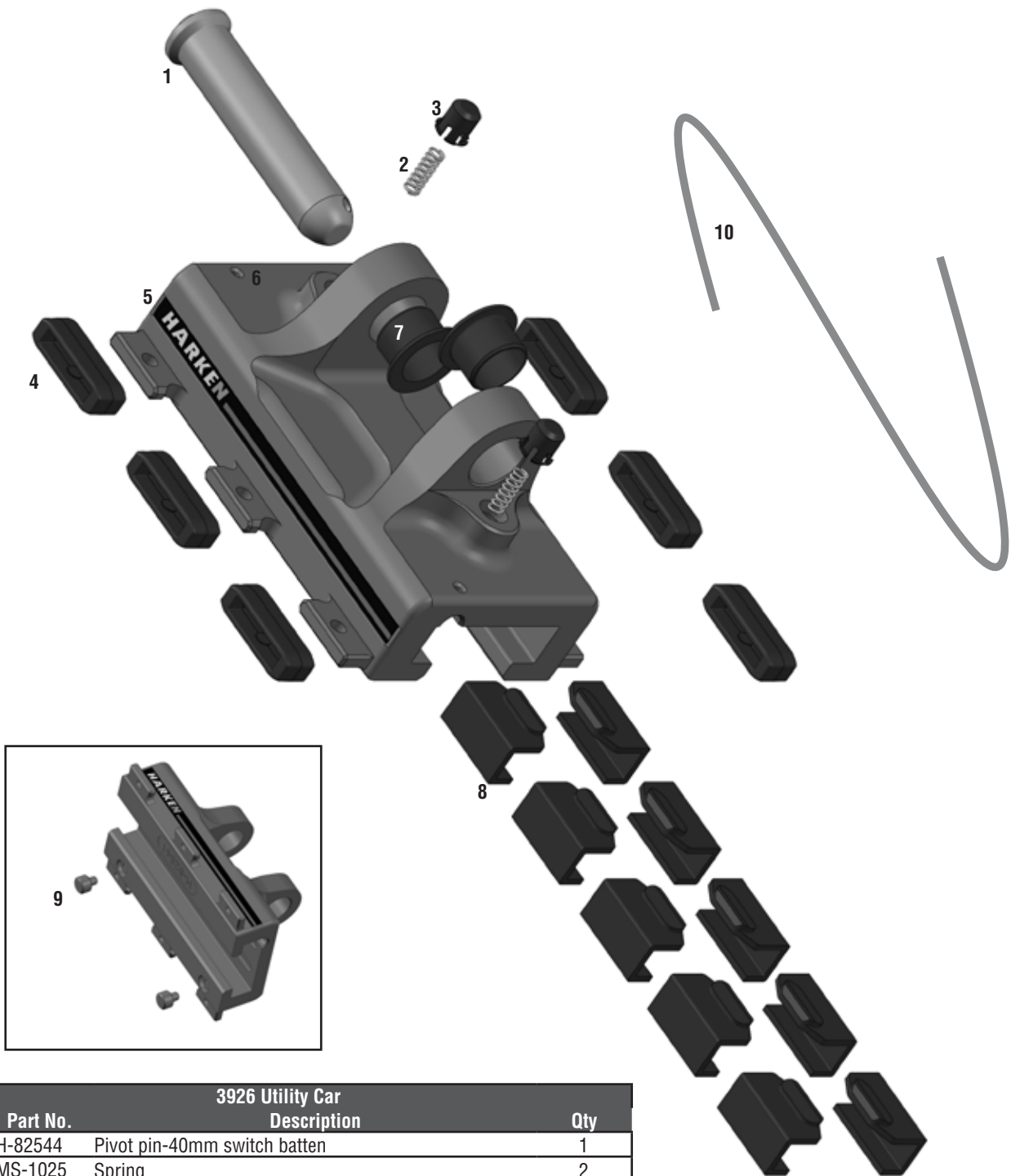
3923 Reef Car			
Ref	Part No.	Description	Qty
1	H-82683	Pivot pin-40mm switch reef	1
2	MS-1025	Spring	2
3	H-36370A	Button-sys B batten car	2
4	H-82684	Webbing bushing-40mm switch reef	2
5	MP-2104	Slider-40mm switch wing	6
6	4992	Label-6.25inx.25in battcar	2
7	H-82682	Car body-40mm switch reef	1
8	H-82686	Brg-Igus gfm-1517-12 (Used on outer lugs)	2
9	H-82685	Brg-Igus gfm-1517-09 (Used on center lug)	2
10	Mp-2105	Slider-40mm switch inside	12
11	H-37242A	Guide pin	2
12	HCP2177	Line-1.75mm Dyneema gray lash-it	200 mm

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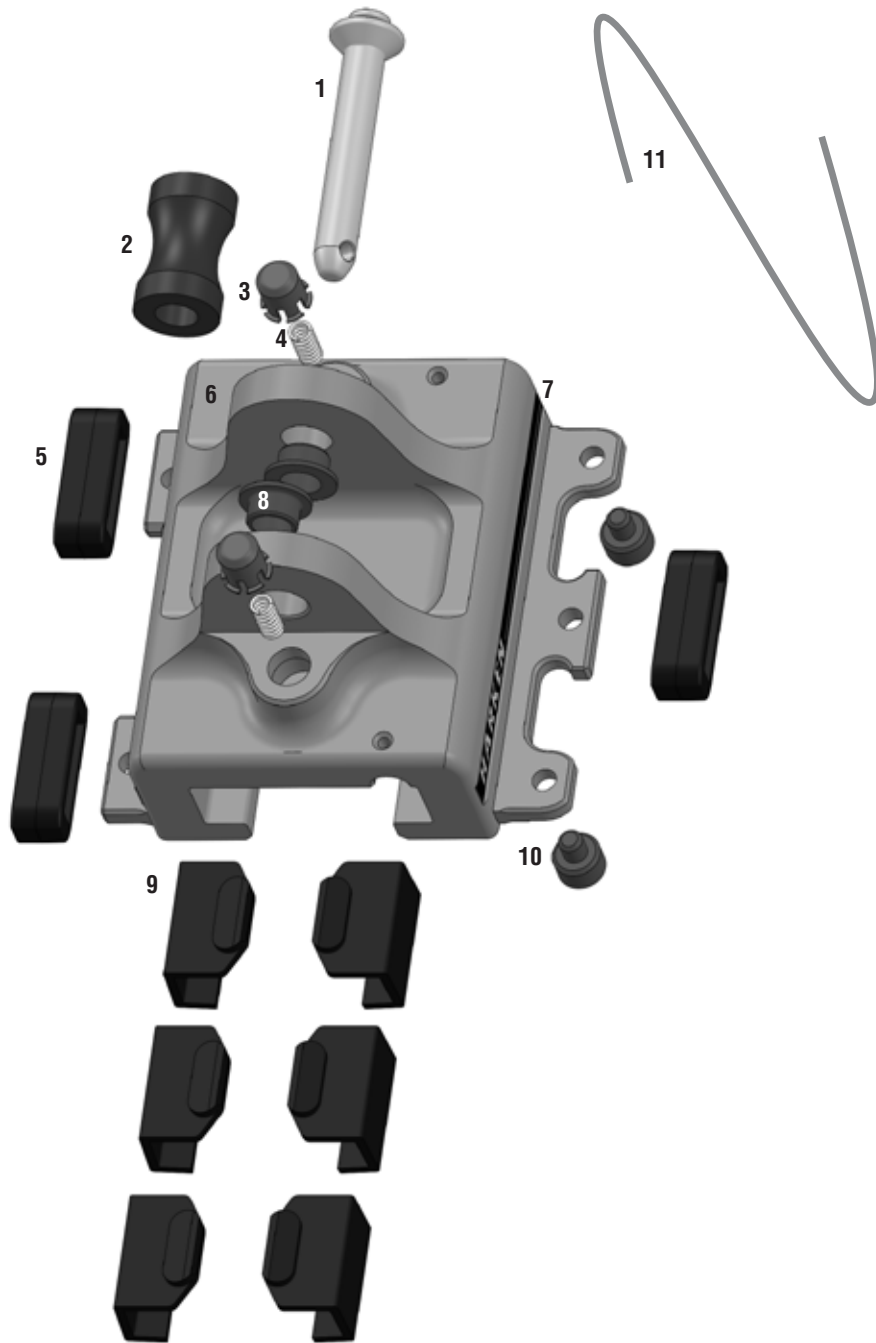
3924 Intermediate Car				
Ref	Part No.	Description		Qty
1	H-82679	Pivot pin-40mm switch trysail		1
2	MS-1025	Spring		2
3	H-36370A	Button-sys B batten car		2
4	H-82678	Bearing-40mm switch trysail		2
5	MP-2104	Slider-40mm switch wing		6
6	4992	Label-6.25inx.25in battcar		2
7	H-82690	Car body-intermediate 40mm switch		1
8	H-82680	Brg-Igus GSM 0810-06		2
9	MP-2105	Slider-40mm switch inside		6
10	H-37242A	Guide pin		2
11	HCP2177	Line-1.75mm Dyneema gray lash-it		200 mm

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3926 Utility Car				
Ref	Part No.	Description		Qty
1	H-82544	Pivot pin-40mm switch batten		1
2	MS-1025	Spring		2
3	H-36370A	Button-sys B batten car		2
4	MP-2104	Slider-40mm switch wing		6
5	4992	Label-6.25inx.25in battcar		2
6	H-82541	Car body-40mm switch batten		1
7	H-82686	Brg-Igus GFM1517-12		2
8	MP-2105	Slider-40mm switch inside		10
9	H-37242A	Guide pin		2
10	HCP2177	Line-1.75mm Dyneema gray lash-it		200 mm

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3928 Trysail Car			
Ref	Part No.	Description	Qty
1	H-82679	Pivot pin-40mm switch trysail	1
2	H-82678	Bearing-40mm switch trysail	2
3	H-36370A	Button-sys B batten car	2
4	MS-1025	Spring	2
5	MP-2104	Slider-40mm switch wing	3
6	H-82677	Car body-trysail 40mm switch	1
7	XXXX	Label	2
8	H-82680	Brg-Igus GSM 0810-06	2
9	MP-2105	Slider-40mm switch inside	6
10	H-37242A	Guide pin	2
11	HCP2177	Line-1.75mm Dyneema gray lash-it	200 mm

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