

LOADING BALLS



To load balls in car, hold car on edge and load lower side with correct number of balls.

DO NOT OVERLOAD.



Remove two clips from car-loader. Slide plastic car-loader in so loading port is on the side of car without balls. Put one clip on "open" end of loader.



Load rest of balls through ball loading port into empty bearing race. Wiggle car slightly to move balls into race. Do not overload. Push car to end clip and slide on inner clip to prevent car from rolling back to loading port. Put car back on track.

Note: Some car loaders are aluminum and do not have clips. Use tape wrapped around end to secure car. Load balls by recessing aluminum loader one ball width.

SAVE YOUR CAR-LOADER - Plastic car-loader is used to transfer cars to tracks and to load bearings if they come out of car.

TO LOAD CAR ON TRACK - Slide off plastic spring clip from short end of the car-loader. Line it up with end of aluminum track and roll car onto track.

Maintenance

Harken equipment is designed for minimal maintenance, but some maintenance is required to give the best service 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 sheets.

Many Harken products are provided with specific instruction sheets that detail maintenance procedures. Instruction sheets are available at no charge by contacting Harken or a Harken distributor.

Traveler Cars: Keep traveler cars clean by frequently flushing with fresh water. Periodically clean cars by squirting a detergent/water solution into the car's center openings. Roll the car back and forth to distribute evenly and then flush bearings with fresh water. This maintenance is very important, particularly when the cars haven't been in use.

Do not use spray lubricants because ball bearings may skid instead of roll. If you use a light machine oil such as 3-in-1, use only a single drop in each ball race. Too much oil attracts dirt.

Clean track with detergent and water.

Frequently inspect shackles and control block fittings for signs of fatigue. Make sure every installation includes Harken track end stops. Arrange control tackle so cars do not hit end stops under load.

Warranty

See the Harken catalog for complete maintenance and warranty information.

TRAVELER CAR REPLACEMENT BEARINGS

Car			Ball Bearings			
Part No.	Description	Length	Size	Type	Amt	Order Part No.
TRAVELER CARS						
156, 157, 171	SB Traveler	2 ⁷ / ₈ " (73 mm)	1/4" (6 mm)	Delrin	42	176 (21 balls/set)
158, 159, 172	SB High-Load	2 ⁷ / ₈ " (73 mm)	1/4" (6 mm)	Torlon	42	177 (21 balls/set)
210	SB High-Load Cam	2 ⁷ / ₈ " (73 mm)	1/4" (6 mm)	Torlon	42	177 (21 balls/set)
214, 215, 440, 441	SB 1250 Series	4 ³ / ₈ " (111 mm)	1/4" (6 mm)	Torlon	64	177 (21 balls/set)
1508, 1594	MR Traveler	4 ¹ / ₄ " (108 mm)	5/16" (8 mm)	Torlon	48	1526 (25 balls/set)
1509, 1595	MR Long	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
1604	MR w/2 Toggles	7 ¹ / ₄ " (184 mm)	5/16" (8 mm)	Torlon	86	1526 (25 balls/set)
515, 1928	BB 3000 Series	5 ¹ / ₄ " (133 mm)	3/8" (10 mm)	Torlon	50	547 (25 balls/set)
558, 1929	BB 4500 Series	7 ¹ / ₄ " (184 mm)	3/8" (10 mm)	Torlon	72	547 (25 balls/set)
1939	BB 5000 Series with 2 toggles or shackles	8 ¹ / ₂ " (216 mm)	3/8" (10 mm)	Torlon	90	547 (25 balls/set)
1941	BB 6000 Series with 3 toggles or shackles	10 ¹ / ₂ " (267 mm)	3/8" (10 mm)	Torlon	110	547 (25 balls/set)
3068	Mini-Maxi Traveler	10" (254 mm)	1/2" (12 mm)	Torlon	72	HBB 21 (single balls)
3070	Maxi Traveler	13 ³ / ₈ " (353 mm)	1/2" (12 mm)	Torlon	104	HBB 21 (single balls)
WINDWARD SHEETING CARS						
211	SB Windward	2 ⁷ / ₈ " (73 mm)	1/4" (6 mm)	Delrin	42	176 (21 balls/set)
212	SB High-Load	2 ⁷ / ₈ " (73 mm)	1/4" (6 mm)	Torlon	42	177 (21 balls/set)
247	SB 1250 Series	4 ³ / ₈ " (111 mm)	1/4" (6 mm)	Torlon	64	177 (21 balls/set)
1575	MR Windward	4 ¹ / ₄ " (108 mm)	5/16" (8 mm)	Torlon	48	1526 (25 balls/set)
1576	MR Long	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
608, 1930	BB 3000 Series	5 ¹ / ₄ " (133 mm)	3/8" (10 mm)	Torlon	50	547 (25 balls/set)
609, 1931	BB 4500 Series	7 ¹ / ₄ " (184 mm)	3/8" (10 mm)	Torlon	72	547 (25 balls/set)
SPINNAKER POLE CARS						
780	SB Ring	4 ³ / ₈ " (111 mm)	1/4" (6 mm)	Torlon	64	177 (21 balls/set)
781	MR Ring	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
1578	MR 120 & 130 Bell	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
1579	MR Sparcraft Toggle	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
1580	MR Forespar Toggle	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
782	BB 120 & 130 Bell	7 ¹ / ₄ " (184 mm)	3/8" (10 mm)	Torlon	72	547 (25 balls/set)
783	BB Sparcraft Toggle	7 ¹ / ₄ " (184 mm)	3/8" (10 mm)	Torlon	72	547 (25 balls/set)
784	BB Forespar Toggle	7 ¹ / ₄ " (184 mm)	3/8" (10 mm)	Torlon	72	547 (25 balls/set)
GENOA LEAD CARS						
249	SB Genoa	4 ³ / ₈ " (111 mm)	1/4" (6 mm)	Torlon	64	177 (21 balls/set)
1537	MR Genoa	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)
554	BB Genoa	7 ¹ / ₄ " (184 mm)	3/8" (10 mm)	Torlon	72	547 (25 balls/set)
587	BB Genoa	5 ¹ / ₄ " (133 mm)	3/8" (10 mm)	Torlon	50	547 (25 balls/set)
3072	MM Genoa	12" (305 mm)	1/2" (12 mm)	Torlon	84	HBB 21 (single balls)
FURLING MAINSAIL OUTHAUL CARS						
595	BB Outhaul	5 ¹ / ₄ " (133 mm)	3/8" (10 mm)	Torlon	50	547 (25 balls/set)
1615	MR Outhaul	5 ¹ / ₄ " (133 mm)	5/16" (8 mm)	Torlon	60	1526 (25 balls/set)