

HARKEN

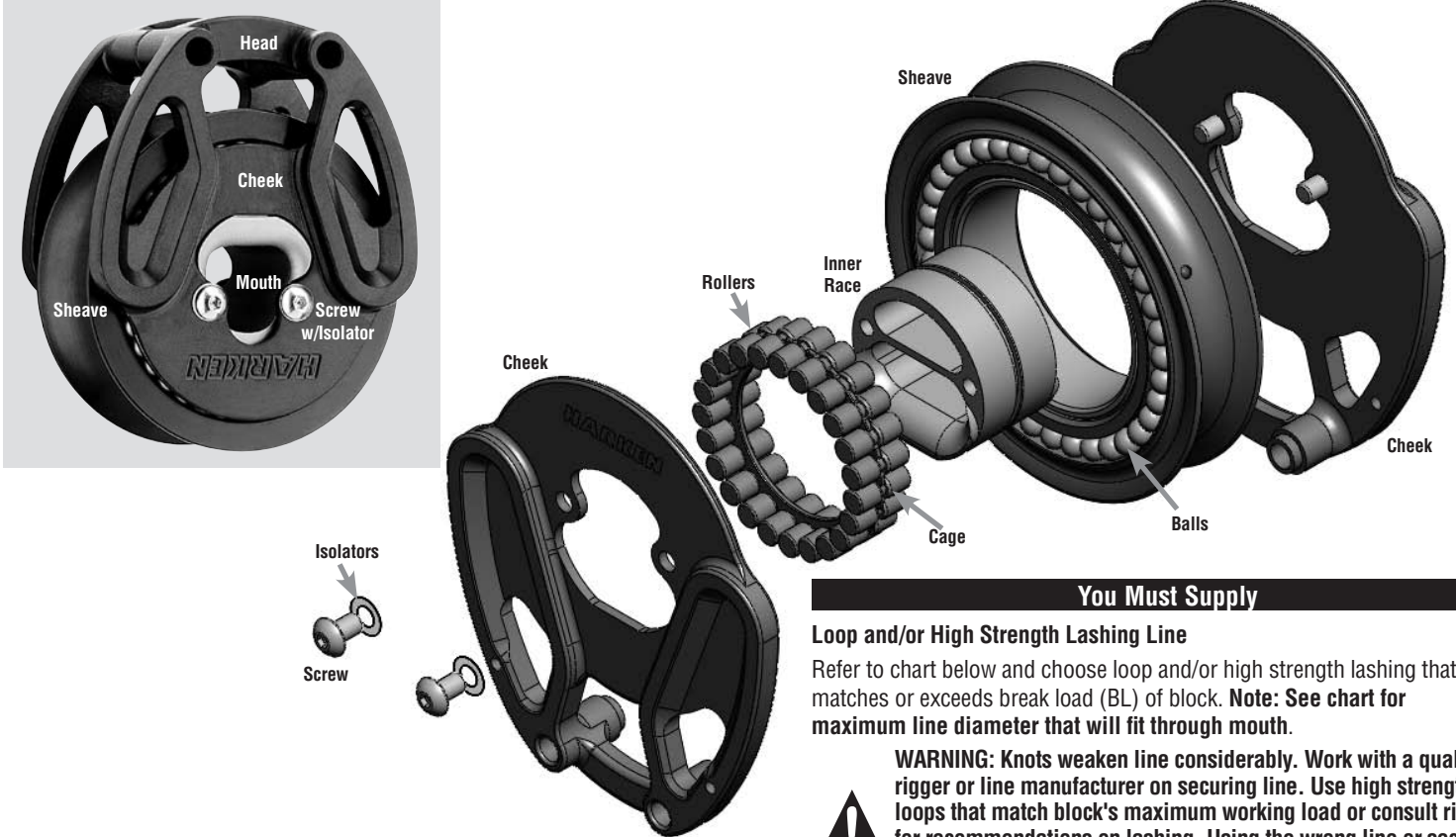
INSTRUCTION SHEET

TTR Blocks

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

Parts



You Must Supply

Loop and/or High Strength Lashing Line

Refer to chart below and choose loop and/or high strength lashing that matches or exceeds break load (BL) of block. **Note: See chart for maximum line diameter that will fit through mouth.**

WARNING: Knots weaken line considerably. Work with a qualified rigger or line manufacturer on securing line. Use high strength loops that match block's maximum working load or consult rigger for recommendations on lashing. Using the wrong line or securing line improperly can cause an accident, damage to your vessel, personal injury or death.

Small Control Line

Use for lashing loop to head. Use small diameter line. Line length will vary depending on block.

Part No.	Sheave Ø mm	Maximum Working Load (MWL)		Breaking Load (BL)		Max line Ø		TTR Block Replacement Part Numbers									
		lb	kg	lb	kg	in	mm	Rollers				Balls					
								Cheek	Sheave	Inner Race	Cage	Order	No.	Order	No.	Fasteners	Isolators
C9273	60	6614	3000	13228	6000	3/8	10	A: H-48003 B: H-48004	H-48005	H-48006	H-21636B	H-43676	22	HSB16	68	HFS1119	—
C8491	75	11025	5000	22050	10000	1/2	12	H-45000	H45191	H-43677	H-21636B	H-45195	22	HSB117	72	HFS917	H-46397
C8580	75	11025	5000	22050	10000	2 x 1/2	2 x 12	H-45099	H-48447	H-48445	H-21636B	H-48446	22	HSB117	72	HFS917	H-46397
C8575	100	14333	6500	28666	13000	5/8	16	H-44999	H-44176	H-44174	H-21551B	H-44175	23	HSB17	72	HFS757	H-46398
C9161	100	14333	6500	28666	13000	2 x 3/4	2 x 20	H-47014	H-47222	H-47219	H-21551B	H-46428	23	HSB17	72	HFS757	H-46398
C8462	125	17641	8000	35281	16000	11/16	18	H-45131	H-43574	H-42648	H-22124B	H-41540	25	HSB17	90	HFS757	H-46398
C8757	125	17641	8000	35281	16000	2 x 5/8	2 x 16	H-45281	H-45287	H-45282	H-22124B	H-41540	25	HSB17	90	HFS757	H-46398
C8754	150	22046	10000	44092	20000	13/16	20	H-45247	H-45241	H-45242	H-22221C	H45236	31	HBB7	76	HFS1033	—
C8957	155	22046	10000	44092	20000	2 x 7/8	2 x 22	H-46250	H-48458	H-48456	H-22221C	H-48457	31	HBB7	76	HFS1033	H-46313
C8755	175	26455	12000	52910	24000	7/8	22	H-45238	H-45233	H-45235	H-23017C	H-45236	36	HBB7	86	HFS1033	H-46313
C8734	200	33069	15000	66138	30000	1	26	H-45021	H-45022	H-45020	H-28556A	H-45026	40	HBB7	104	HFS1033	H-46313

Attach Block

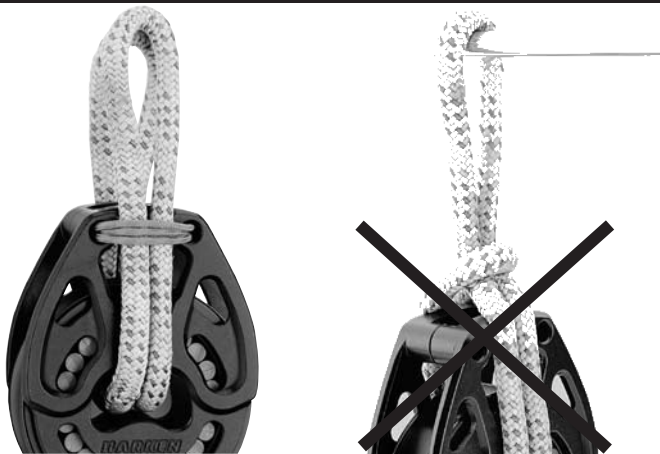
! **WARNING:** Attach loop/lashing only through mouth of sheave. Attaching line to or through block head will considerably weaken block so it can easily break under load causing an accident, damage to your vessel, personal injury or death.

CORRECT INCORRECT



! **WARNING:** Do not attach loop using choker method shown below as this will considerably weaken block so it can easily break under load causing an accident, damage to vessel, personal injury or death.

CORRECT INCORRECT



Lash Block Head

1. Lash loop to head of block with small control line using square knot. Run line ends up and behind lashing, then down and under itself on each side of knot. Pull tight to secure.



2. Secure stop knot by carefully melting line ends with a hot knife.



! **WARNING:** If lashing comes loose, block can flip and cause line to jam, resulting in loss of control. This can lead to an accident, damage to your vessel, personal injury or death.

If lashing comes loose block can flip so that sheet rides off sheave.



Use as Becket/Fiddle Block



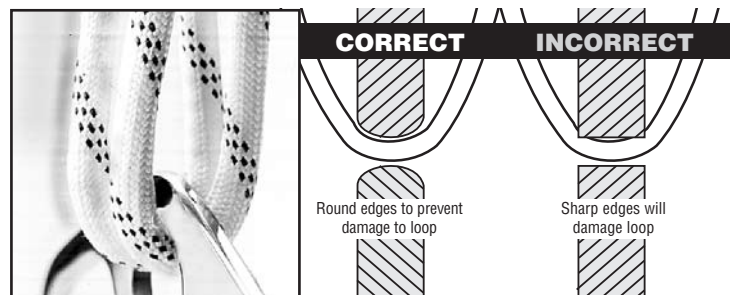
TTRs can be set up as becket or fiddle blocks. Attach becket or secondary block to anchor point. Lash to head and upper part of mouth as shown.

! **WARNING:** Attaching becket or secondary block to primary block will weaken block so it may break under load causing an accident, damage to vessel, personal injury or death.

Anchor Point Chafing or Cutting

! **WARNING:** Loops or lashings running over a sharp edge can cause part to break under load causing an accident, damage to your vessel, personal injury or death.

Loops must be attached to round bails such as those found on padeyes or pins. Sharp edges on many perforated toerails will cut loop, severely weakening it. When loop is attached to a plate, it must be at least 1/4" thick and have rounded edges to keep loop from being damaged.



Inspect Parts Every Time you Sail

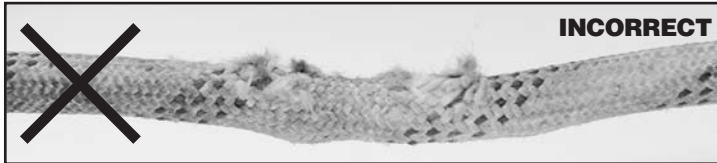
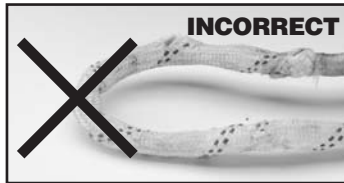
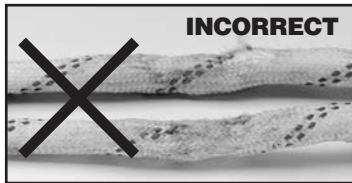


WARNING: Parts must be inspected each time you sail. If parts are under load during long passages it is important to inspect them carefully while in use. Failure to inspect and correct block and loop or lashing may result in block breaking under load causing an accident, damage to your vessel, personal injury or death.

Inspect loops and lashings. Replace if there are signs of wear or if the colored tracer fades from UV damage. Pull loop out of mouth and inspect loop/lashing carefully for any signs of wear, UV-damage, fatigue or strand separation. Replace loop if it shows signs of UV-damage or wear.



WARNING: Replace all loops and lashings every year or if there is any sign of wear, UV-damage, fatigue or strand separation. If in doubt replace. Consult chart to match strength of loop/lashing to block and load. Failure to replace damaged or weakened parts can cause part to break under load causing an accident, damage to your vessel, personal injury or death.



Inspect lashing at head of block to make sure knot is holding tightly.

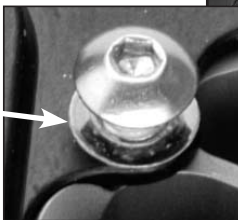


Maintenance

Remove screws from cheek. Be careful not to lose small mylar washers (isolators) under screw heads.



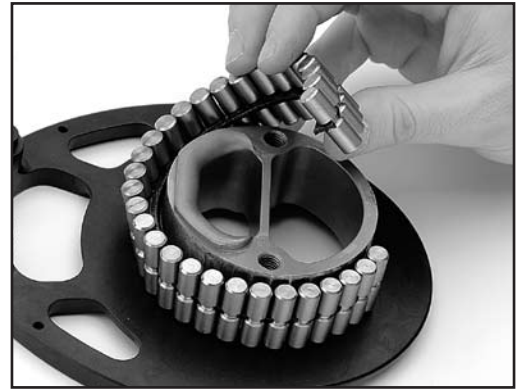
Mylar Washer (Isolator)



Flush parts frequently with detergent and fresh water.



Remove roller/cage assembly. Clean using solvent.



Lightly grease inner ring of sheave as shown at right. Do not grease rollers.



Assemble block using mylar washers (isolators) and blue Loctite® on screws.



Harken equipment requires minimal maintenance, but some is required to give the best service and to comply with Harken's limited warranty.

It is important to keep equipment clean by frequent 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.

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

Mylar® washers should always be used between stainless fasteners and aluminum sideplates. Stainless fasteners which pass through aluminum blocks should be coated with an antiseize compound.

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 or the Harken® catalog.

HARKEN®

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