## 1. KEY

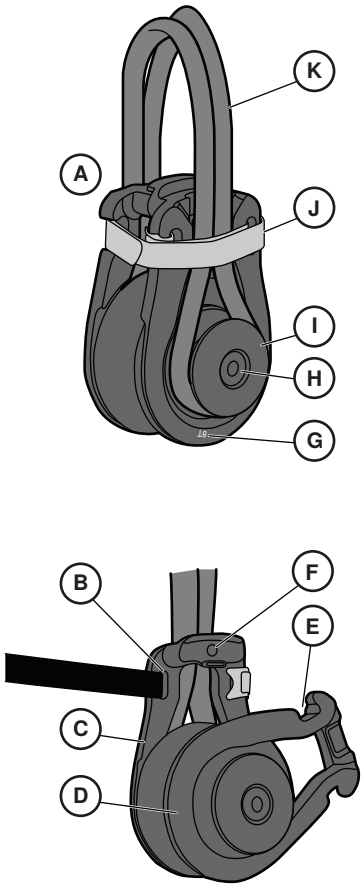
PROPER USE

USE WITH CAUTION

PROHIBITED USE

## 3. NOMENCLATURE

FIG 1

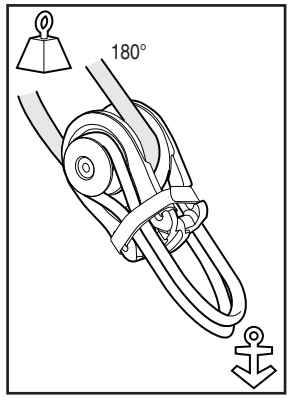



## 4. SPECIFICATIONS

| Part No. | Description | Sheave Ø mm | Sheave Ø in | Max line Ø mm | Max line Ø in | Maximum working load kg | Maximum working load lb | Breaking load kg | Breaking load lb |
|---|---|---|---|---|---|---|---|---|---|
| 3299 | 2.3T HL | 38.5 | 1.5 | 11 | 7/16 | 2,300 | 5,069 | 4,600 | 10,138 |
| 3300 | 5T HL | 56 | 2.2 | 16 | 5/8 | 5,000 | 11,020 | 10,000 | 22,040 |
| 3301 | 8T HL | 75 | 3 | 18 | 3/4 | 8,000 | 17,632 | 16,000 | 35,264 |
| 3302 | 12T HL | 101 | 4 | 30 | 13/16 | 12,000 | 26,448 | 24,000 | 52,896 |
| 3303 | 15T HL | 125 | 5 | 30 | 13/16 | 15,000 | 33,060 | 30,000 | 66,120 |

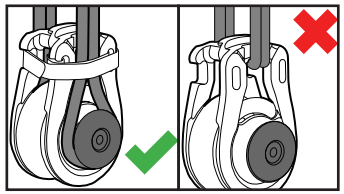
## 5. WARNINGS

FIG 2




| Angle of deflection | Load factor | Angle of deflection | Load factor | Angle of deflection | Load factor |
|---|---|---|---|---|---|
| 30° | 52% | 90° | 141% | 150° | 193% |
| 45° | 76% | 105° | 159% | 160° | 197% |
| 60° | 100% | 120° | 173% | 180° | 200% |
| 75° | 122% | 135° | 185% | — | — |

FIG 3



## 6. ATTACHING BLOCK

FIG 4

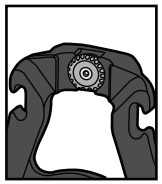


FIG 5

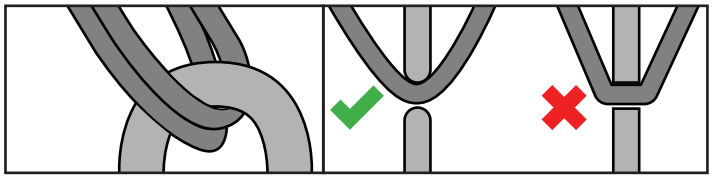


FIG 6

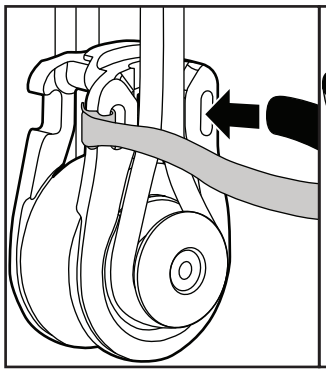


FIG 7

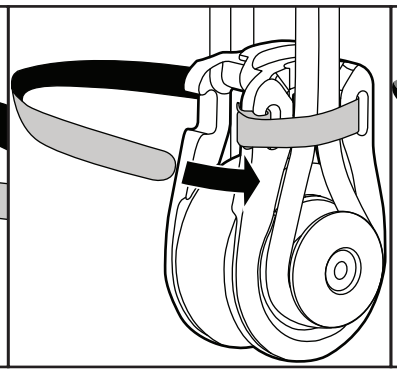
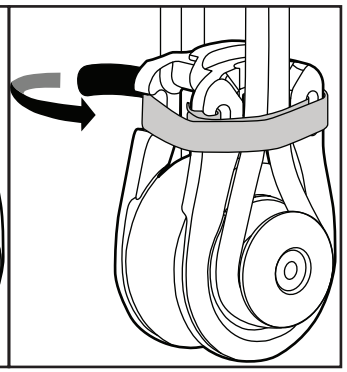


FIG 8



*Country of Manufacture - USA*

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Instruction Sheet

# High-Load Snatch Blocks

## 1. KEY

See diagrams.

## 2. FEATURES

Sideplates pivot open to make them easy to load onto sheets, perfect for temporary leads, line deflection, and static line functions requiring small adjustments. Loop carries primary load and articulates for a fair lead. Captured hook-and-loop strap holds block securely closed when sideplates are aligned. Harken, Inc. composite bearing technology (ULC) ensures sheaves turn smoothly and maintain efficiency under extreme loading. Snap-fit Torlon® bearings carry sideloads. Integral headspacer prevents Hard Lube-anodized aluminum sideplates from deflecting and binding.

## 3. NOMENCLATURE

| (Fig 1) | |
|---|---|
| A | Head |
| B | Closed slot |
| C | Beta cheek |
| D | Alpha cheek |
| E | Open slot |
| F | Stop ball |
| G | Maximum working load - metric tons |
| H | Screw |
| I | Thimble |
| J | Hook-and-loop strap |
| K | Loop |

## 4. SPECIFICATIONS

High-Load Snatch Blocks are supplied by Harken, Inc. with loops. Loads listed assume that the standard Harken, Inc.-supplied loops are used and are in new condition.

## 5. WARNINGS

**⚠ USE ONLY HARKEN, INC.-SUPPLIED REPLACEMENT LOOPS, OR WORK WITH A RIGGER WHEN USING ALTERNATE SPLICED LOOPS OR FASTENINGS. KNOTS OR INCORRECT SPLICES WEAKEN BLOCK ASSEMBLY CONSIDERABLY.**

**⚠ BLOCK LOADS INCREASE WHEN THE LINE TURNS AT A GREATER ANGLE. BLOCK LOADS DOUBLE WHEN THE LINE TURNS 180 DEGREES (FIG 2). USE BLOCK LOADING FACTORS. SELECT BLOCKS AND APPLICATION CAREFULLY.**

**⚠ ALWAYS SECURE TO THE THIMBLES. NEVER ATTACH LOAD-BEARING LASHINGS OR LOOP TO THE HEAD OF THE BLOCK. THIS WILL DRASTICALLY WEAKEN BLOCK SO IT WILL BREAK UNDER LOW LOAD. (FIG 3)**

## 7. INSPECTION

FIG 9

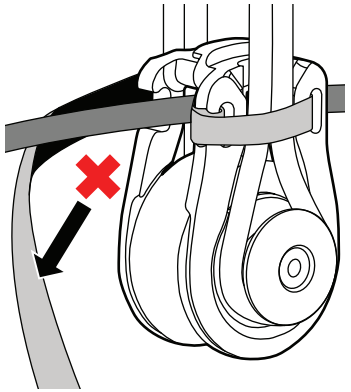
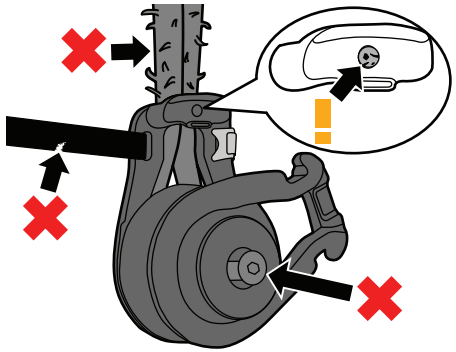
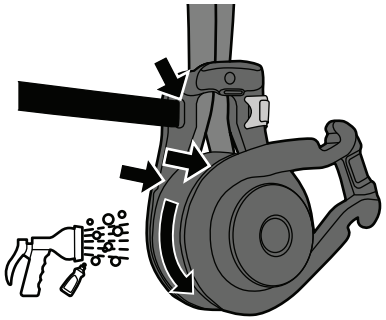


FIG 10



## 8. SHORT-TERM MAINTENANCE

FIG 11



## 9. LONG-TERM MAINTENANCE

FIG 12

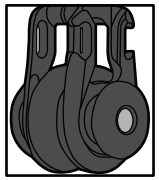


FIG 13

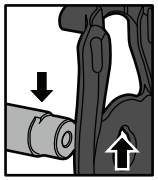
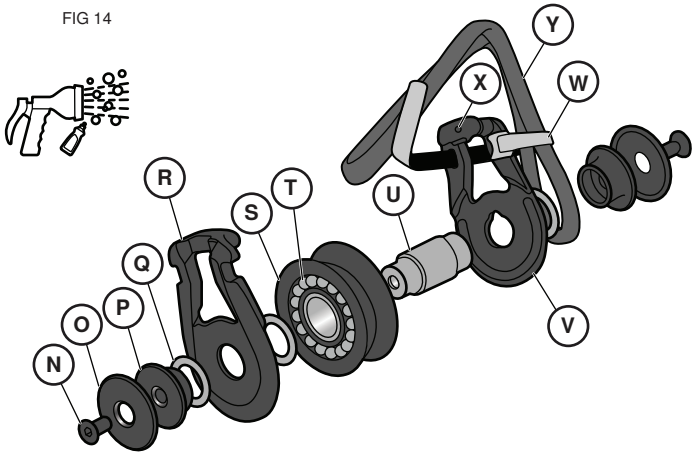


FIG 14




| Replacement part numbers | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Block | N Fastener FHCS (2) | Size (mm) | O Thimble cap (2) | P Thimble (2) | Q Mylar washer (3) | R Beta cheek | S Sheave with bearing | T Torlon balls | Size (Qty) | U Axle | V Alpha cheek | W Hook-and-loop strap | X Stop ball | Y Loop |
| 3299 | Block is riveted. Components are not replaceable, only loop and hook-and-loop strap are replaceable. (Fig 12) | | | | | | | | | | | H-93192 | MP-121 | H-77983 |
| 3300 | HFS1367 | 6X12 | H-71376 | H-71375 | H-22888A | AL-4110 | * | MP-126 | 1/4" (30) | MS-518 | AL-4111 | H-93193 | MP-117 | H-77984 |
| 3301 | HFS1365 | 8X16 | H-72105 | H-72102 | H-46227 | AL-4112 | * | MP-129 | 5/16" (34) | MS-555 | AL-4113 | H-93194 | MP-117 | H-77985 |
| 3302 | HFS1366 | 12X20 | H-72167 | H-72164 | H-45007 | AL-4114 | * | MP-127 | 3/8" (38) | MS-549 | AL-4115 | H-93195 | MP-117 | H-77987 |
| 3303 | HFS1368 | 12X25 | H-72275 | H-72274 | H-49195 | AL-4116 | * | MP-128 | 1/2" (34) | MS-521 | AL-4117 | H-93195 | ** | H-77989 |

* Sheaves have pressed-in ULC composite sleeve bearings. Contact Harken, Inc.

** Beta cheek in 3303 block uses spring-loaded pinstop.

### 6. ATTACHING BLOCK

1. Partially unwrap the hook-and-loop strap, leaving it secured to the closed slots in the alpha cheek. One end of the loop should be secured to the alpha cheek thimble and pass under the hook-and-loop strap.
2. Remove the other end of the loop from the thimble on the beta cheek.
3. Rotate the cheeks to load line on sheave. Close cheeks making sure they align. There will be a clicking sound as the locking ball seats. The 3303 block has a pull pin to secure the cheeks, not a locking ball. (Fig 4)
4. Pass the loop around the anchor point and over the beta cheek's thimble. Make sure anchor point is rounded. Sharp edges on many perforated toerails will cut loop, severely weakening it. Attach loop to a plate that is thick enough and have rounded edges so the loop is not damaged (Fig 5)
5. Rewrap the hook-and-loop strap. Make sure the hook-and-loop strap always starts with the deadend eye end passing over the loop and through the closed slot. The wrap direction is counter-clockwise when block is head-end up. (Fig 6) .
6. Pull the hook-and-loop strap tightly as you wrap. (Fig 7)
   Note: there is no need to pass the hook-and-loop strap through the closed slot on the strap's second pass. Make sure the strap is securely seated in the open slots on the beta cheek.
7. Press band in place to secure hook-and-loop strap. (Fig 8)

### 7. INSPECTION

**⚠ FAILURE TO INSPECT AND CORRECT THE FOLLOWING COMPONENTS CAN RESULT IN BLOCK FAILING BELOW RATED LOAD. INSPECT EACH TIME YOU SAIL. ON LONG PASSAGES, IT IS IMPORTANT TO INSPECT CAREFULLY WHILE UNDERWAY. IF IN DOUBT, REPLACE COMPONENT.**

- Always check the hook-and-loop strap to make sure it is secure. If the band does not hold, the sheet can catch the open slots when sail is flogging and accidentally open the block. Replace the strap if it loses holding ability. (Fig 9)
- Inspect loop and replace if there are signs of fatigue, strand separation, wear, or if the colored tracer fades from UV damage. (Fig 10) Inspect loop where it wraps around anchor. The loop must attach to round bails such as those on padeyes. (Fig 5)
- Inspect screws to make sure they are tight. If loose, remove and use threadlocker such as blue Loctite® to secure. (Fig 10)
- Check stop ball and replace if it does not secure cheeks. (Fig 10)

### 8. SHORT-TERM MAINTENANCE

Flush block and attachments frequently with detergent and fresh water. Clean bearings by flushing areas shown while rotating sheave. (Fig 11)

### 9. LONG-TERM MAINTENANCE

Disassemble block. Flush with detergent and fresh water. Reorder parts as needed. See assembly. (Fig 14)

Note: Raised tab on axle must match notch in alpha cheek (Fig 13). Sheaves have pressed-in ULC composite sleeve bearings; contact Harken, Inc.

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

### 10. WARRANTY

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