## Quick Service

### CAM CLEATS & ACCESSORIES

#### Cam-Matic® & Carbo-Cam®

**SERVICE AT REGULAR INTERVALS**

Flush with fresh water. Periodically clean with mild detergent and water solution. Rotate cams to distribute soap solution evenly. Flush with fresh water.

**Inspect Carefully:**
- Cam motion isn’t smooth: Cams may be dirty. Flush with fresh water.
- Cam motion is uneven: Make sure correct number of balls are in each row. See chart below for replacement balls.
- Cams do not snap shut: Springs are damaged or missing. Replace.
- Line drops out of cam (underside mounts): Add a second spring to each cam alongside the original.
- Line pops out of cams: Lead is not fair. Use risers or wedges so line enters straight into the cam.

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### 150 CAM REBUILD

See cam rebuild video at www.harken.com/How-To-Videos/

**Note:** Cam cleats built before 1993 have different baseplates. Cam caps and cam bases will not fit. Replace only balls, torsion springs, and washers.

#### Disassembly

1. Remove cam from deck.
2. Take off red baseplate. Carefully work one end of baseplate up, then other.
3. Remove torsion springs.
4. Carefully put small bolt though fastener hole to remove red cam caps.
5. Lift cam off base, remove balls.
6. Lift off red plastic washer.
7. Remove remaining balls.

#### Cleaning/Repair

1. Replace plastic parts, balls and springs as needed.
2. Wash parts using soap and hot water.

#### Reassembly

**Tip:** When replacing balls use shaving cream or liquid detergent to keep balls in place on race.

1. Put 11 balls in lower race.
2. Put on red plastic washer, lip up.
4. Replace aluminum pawl. Make sure it seats on balls.
5. Fill cam top with 11 balls.
7. Repeat steps 1-6 on other cam.
8. Turn cam over. Replace torsion springs. Hook each end of spring around posts.

**Tip:** Use two springs on each side to stiffen cam action or to act as a backup if first spring breaks.

9. Push on red plastic baseplate. Plate is not symmetrical. Make sure to orient it correctly.
10. Flush shaving cream/soap away using fresh water.
11. Install cam on boat. Do not over-tighten mounting screws; paws will bind.

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### Identify your cam

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Fasteners</th>
<th>Springs</th>
<th>Washer/base plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>Cam-Matic®</td>
<td>#10 (5 mm) FH*</td>
<td>MS-006</td>
<td>150BALLS</td>
</tr>
<tr>
<td>280</td>
<td>Offshore Cam-Matic®</td>
<td>1/4 (6 mm) FH*</td>
<td>MS-094</td>
<td>MP-121 x 78</td>
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<tr>
<td>365</td>
<td>Carbo-Cam®</td>
<td>#10 (5 mm) FH*</td>
<td>MS-006</td>
<td>MP-119 x 46</td>
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<tr>
<td>412</td>
<td>Double Cam-Matic®</td>
<td>#10 (5 mm) TH*</td>
<td>MS-006</td>
<td>MP-119 x 66</td>
</tr>
<tr>
<td>468</td>
<td>Micro Cam-Matic®</td>
<td>#8 (4 mm) RH</td>
<td>MS-093</td>
<td>MP-124 x 48</td>
</tr>
<tr>
<td>471</td>
<td>Micro Carbo-Cam®</td>
<td>#8 (4 mm) RH</td>
<td>MS-093</td>
<td>MP-124 x 48</td>
</tr>
</tbody>
</table>

**Compatible parts**

<table>
<thead>
<tr>
<th>Identification</th>
<th>Replacement parts</th>
<th>Compatible parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cam w/ fairlead kit</td>
<td>Accessories</td>
</tr>
<tr>
<td>137</td>
<td>Eyestrap*; 201</td>
<td>Low-profile eyestrap*; 298 Wire fairlead;</td>
</tr>
<tr>
<td>327</td>
<td>Wire</td>
<td>375 X-Treme angle fairlead; 425BL/Y/G/B/R Color coded fairlead;</td>
</tr>
<tr>
<td>459</td>
<td>X-Treme Angle</td>
<td>145 15° wedge kit; 295 28 mm flat riser; 296 15° riser</td>
</tr>
<tr>
<td>438</td>
<td>Cam adapter plate</td>
<td>145 15° wedge kit; 295 28 mm flat riser; 296 15° riser</td>
</tr>
<tr>
<td>282</td>
<td>Eyestrap; 283</td>
<td>Wedge kit</td>
</tr>
<tr>
<td>261</td>
<td>Eyestrap*; 475</td>
<td>Wire fairlead; 476 X-Treme angle fairlead;</td>
</tr>
<tr>
<td>469</td>
<td>Wire</td>
<td>294 16 mm flat fairlead; 294 15° riser</td>
</tr>
<tr>
<td>472</td>
<td>Wire</td>
<td>294 16 mm flat fairlead; 294 15° riser</td>
</tr>
</tbody>
</table>

*Use RH round head screws when mounting eyestraps on cleats. TH=truss head. FH=flat head. **Caps and baseplates will not fit cleats made before 1993. Cap colors: B=Black, BL=blue

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**150 KIT includes all replacement parts: springs, ball bearings, washer, base plate

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