

Installation and Maintenance Manual

MRPW30.2

Performa™ Winch 30 STP



HARKEN®

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Introduction

This manual gives technical information on winch installation and maintenance, including disassembling and reassembling.

This information is EXCLUSIVELY DESTINED for specialised personnel or expert users.

Installation, disassembling and reassembling of the winch by personnel who are not experts may cause serious damage to users and those in the vicinity of the winch.

Harken® accepts no responsibility for defective installation or reassembly of its winches.

In case of doubt the Harken® Tech Service is at your disposal at techservice@harken.it

This Manual is available only in English. If you do not fully understand the English language, do not carry out the operations described in this Manual.

Technical characteristics

	Power ratio	Gear ratio
1st speed	7,8 : 1	1,1 : 1
2nd speed	29,8 : 1	4,25 : 1

The theoretical power ratio does not take friction into account.

Weight

	ST Version
Weight (Kg)	2,4

Rope range: Ø6-10mm

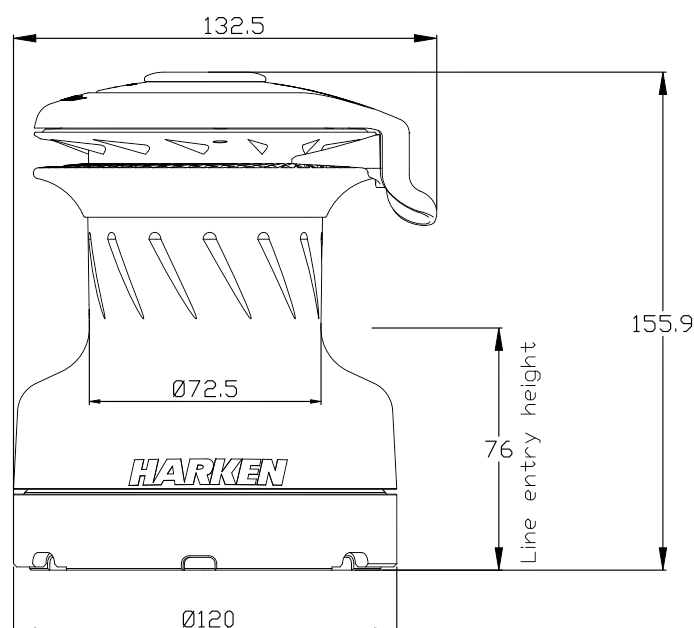
Maximum working load

WARNING!



The maximum working load (MWL) for the 30 ST Performa™ Winch is 550 Kg (1212,54 lb). Subjecting the winch to loads above the maximum working load can cause the winch to fail or pull off the deck suddenly and unexpectedly during high loads causing severe injury or death.

Outline



Installation

The winch must be installed on a flat area of the deck, reinforced if necessary to bear a load equal to at least twice the maximum working load of the winch.

It is the installer's responsibility to carry out all structural tests needed to ensure that the deck can bear the load.

Harken® does not supply the screws needed to install the winch since these may vary depending on the deck on which it is to be installed.

It is the installer's responsibility to choose the correct screws taking account of the loads they will have to bear.

Harken® assumes no responsibility for incorrect installation of its winches or for an incorrect choice of mounting screws.



DANGER!

Incorrect installation of the winch may cause severe injury or death. Consult the yard that built the boat in the case of doubt over the correct positioning of the winch.



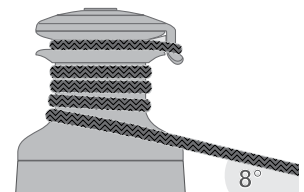
WARNING!

Failure to use the correct number and type of mounting fasteners or failure to ensure the correct deck strength can result in the winch pulling off the deck suddenly and unexpectedly during high loads causing severe injury or death.



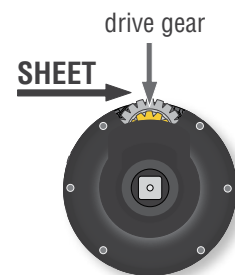
WARNING!

Verify the entry angle of the sheet. This must be 8° with tolerance of $\pm 2^\circ$, to avoid sheet overrides and damaging the winch or making the winch inoperable leading to loss of control of the boat which can lead to severe injury or death.



WARNING!

Mount the winch on the deck so that the drive gear is positioned where the sheet enters the winch drum. Incorrect position of drive gear can weaken winch leading to failure which can cause an accident leading to severe injury or death.



Once you have chosen the correct mounting position for the winch on the deck proceed with installation.


Procedure

To install the winch, remove the drum and use Socket Head (SH) bolts.

Tools needed

 One medium flat-bladed screwdriver

To identify the various parts, refer to the exploded view at the end of this Manual.

 Torque to apply when assembling



1. Unscrew the central screw
($\approx 2\text{Nm}/18\text{ in-lb}$)



2. Slide off the socket and the cover



3. Unscrew the three screws
($\approx 4\text{Nm}/35\text{ in-lb}$)



4. Remove the stripper arm by
rotating and lifting it.



5. Lift off the drum

Install the winch on the deck in the position you have chosen, keeping in mind the limits described on page 3.

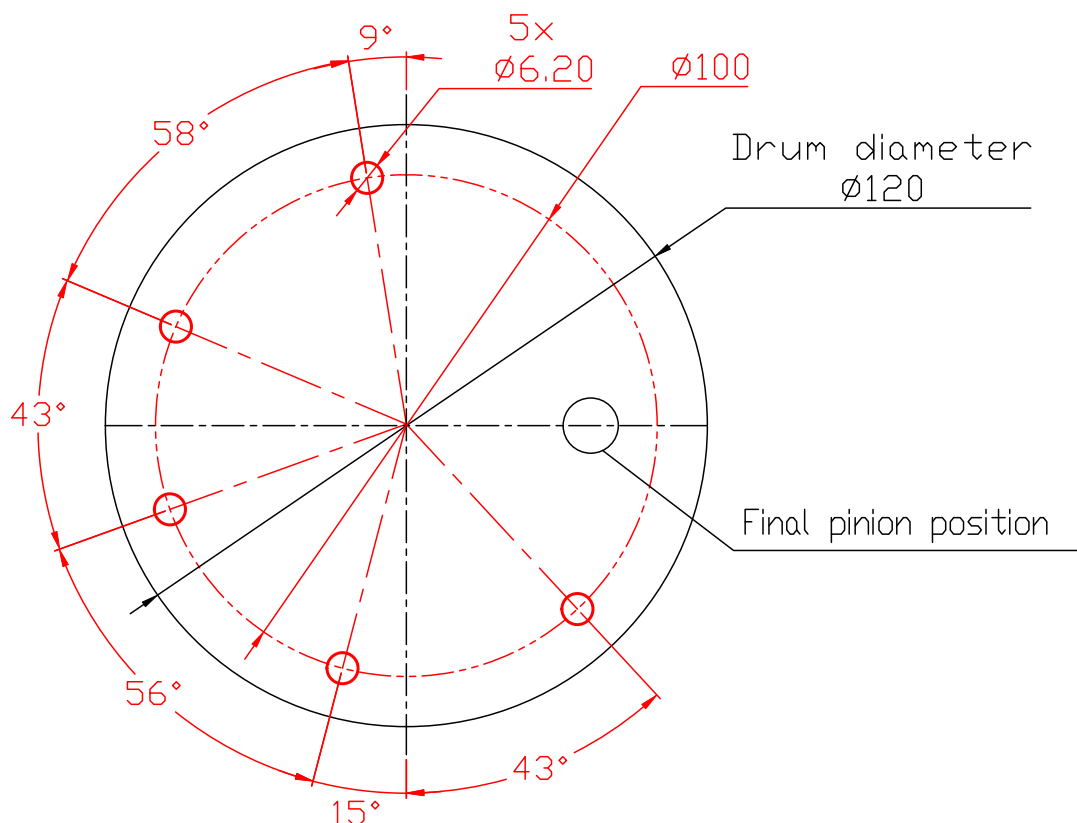
Installation procedure

Carry out the **Procedure**, then install the winch on the deck in the chosen position.

- A.** Position the base of the winch on the deck and mark the position of the holes or use the drilling cut-out template at the point where you have decided to place the winch.

Below is a reduced scale diagram.

The drilling cut out template is available on the Harken® website, www.harken.com



- B.** Remove the winch and drill the five 6.2 mm diameter holes.
- C.** Bolt the base of the winch to the deck using five M6 bolts (not supplied by Harken®), correctly chosen for the thickness and type of the boat deck. Consult the yard that built the boat in case of doubt.



WARNING!

To install the winch on the deck, use only bolts in A4 stainless steel (DIN 267). Bolts made of other materials may not have sufficient strength or may corrode which can result in winch pulling off deck suddenly and unexpectedly during high loads causing severe injury or death.

NOTICE

To mount winches on the deck, do not use countersunk bolts.

- D.** Fill the mounting holes with a suitable marine sealant.
- E.** Remove the excess adhesive/sealant from the holes and base drainage channels

F. Reassemble the winch following the steps of the **Procedure** in the reverse order, and apply the products indicated in the section on maintenance.

NOTICE

Before closing the winch, make sure the holes and drainage channels in the base of the winch are not obstructed.

Positioning the self-tailing arm

Position the self-tailing arm so that the line leaving the winch is led into the cockpit.

Maintenance

Washing

Winches must be washed frequently with fresh water, and in any case after each use.

Do not allow teak cleaning products or other cleaners containing caustic solutions to come into contact with winches and especially anodised, chrome plated or plastic parts.

Do not use solvents, polishes or abrasive pastes on the logos, on the stickers on the winches or on any anodized, chrome plated and plastic surfaces.

Make sure that the holes and drainage channels in the base of the winch are not obstructed so that water does not collect.

Maintenance table

Winches must be visually inspected at the beginning and end of every season of sailing or racing.

In addition they must be completely overhauled, cleaned and lubricated at least every 12 months.

After an inspection, replace worn or damaged components. Do not replace or modify any part of the winch with a part that is not original.



WARNING!

Periodic maintenance must be carried out regularly. Lack of adequate maintenance shortens the life of the winch, can cause serious injury and also invalidate the winch warranty. Installation and maintenance of winches must be carried out exclusively by specialized personnel.

In the case of doubt contact Harken® Tech Service at techservice@harken.it

Disassembly procedure

Tools needed




One medium flat-bladed screwdriver

A number five hex key



Rags

To identify the various parts refer to the exploded view at the end of this manual.

 Torque to be applied in assembly phase

Carry out procedure as shown in the paragraph on winch installation and then do the following:



6. Remove the stripper arm support



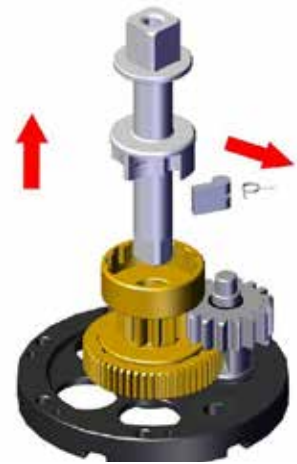
7. Unscrew the five drum support screws
($20\text{Nm}/180\text{ in-lb}$)



8. Slide out the drum support



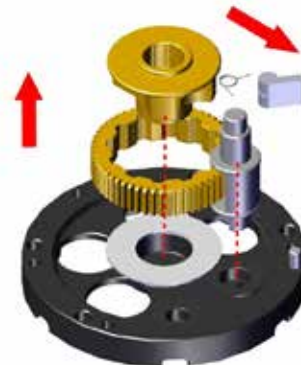
9. Slide out the pin and the gear



10. Slide out the central shaft;
pay attention to sliding out
the pawls and the springs



11. Slide out the central pawl carrier
and the gear



12. Slide out the central pawl carrier, the
ratchet gear and the pin; pay attention to
sliding out the pawls and the springs

If it is necessary to replace any **jaws** of the winch, proceed as follows:



I. Unscrew the 3 screws
($\approx 4\text{Nm}/35\text{ in-lb}$)



II. Remove the jaws

Once the winch is completely disassembled, clean the parts with a degreasing that does not leave residues, proper to clean metal components; rinse plastic parts in fresh water. Once you have done this, dry the parts with cloths that do not leave residue.

Inspect gears, bearings, pins and pawls for any signs of wear or corrosion.

Carefully check the teeth of gears and ring gears to make sure there are no traces of wear.

Check the roller bearings and check there are no breaks in the bearing cages.

Replace worn or damaged components.

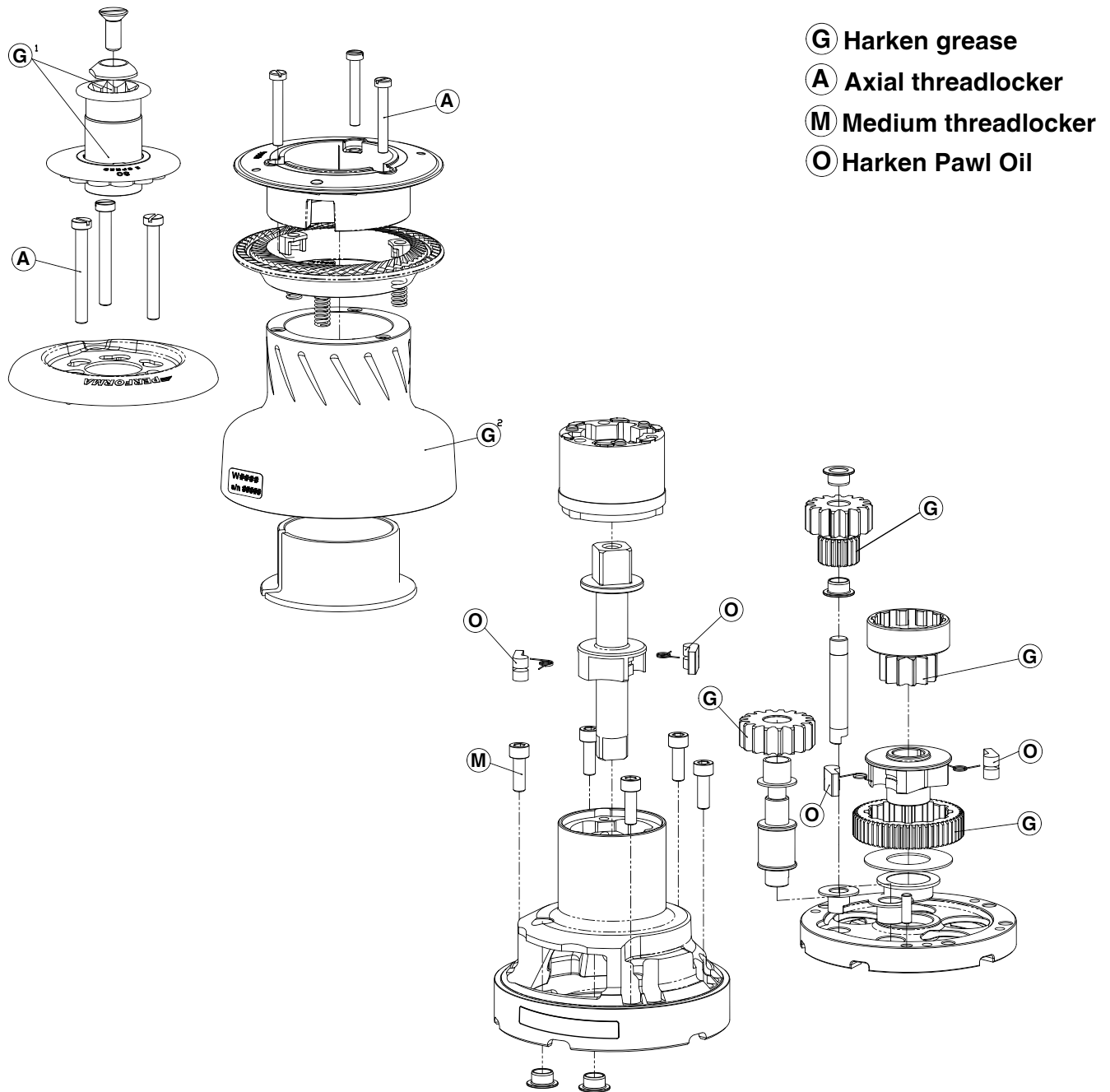
Carry out maintenance on components using the products listed below.

For more information on which products to use where, refer to the exploded diagram below.

Use a brush to lightly lubricate all gears, gear pins, teeth and all moving parts with grease.

Lightly lubricate the pawls and springs with oil. Do not use grease on the pawls!

Exploded view with maintenance products



Apply Harken® grease where indicated above
 Apply Harken® grease: 1. on assy socket screw - 2. on drum gear

NOTICE

On every gear and every component that must be greased, apply Harken® grease with a brush in a proper quantity as shown below:



NOTICE

Harken® grease to apply on all teeth: do not use excessive quantity of product to void wastes. If in contact with the pawls, an excess of grease can compromise the safety of the winch.

Assembly

Make sure that the holes and drainage channels in the base of the winch are not obstructed. Assemble the winch in the reverse order of the sequence in the section on disassembly.

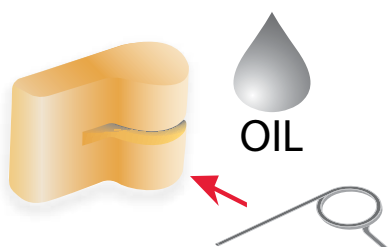
To tighten bolts, use the torque indicated in the disassembly procedure.



If the jaws have been disassembled, insert peeler between the two jaws, taking care that the letters TOP on the peeler are facing upwards.



When positioning the stripper arm, align the peeler with it.



To assemble the pawls: correctly position the spring in its housing as shown at left. Hold the spring closed and slide the pawl into its housing. Once in position, check that the pawls can be easily opened and closed with a finger.

In case of doubt concerning the assembly procedure contact Harken® Tech Service: techservice@harken.it

Harken® limited worldwide warranty

Refer to the Harken® Limited Worldwide Warranty in the Harken® Catalogue and on the website www.harken.com

Ordering spare parts

Spare parts can be requested from Harken® as described in the Harken® Limited Worldwide Warranty, indicating the part number in the Parts List and including the serial number of the winch for which the parts are required.

The serial number of the winch is printed on a plate on the drum support of the winch.



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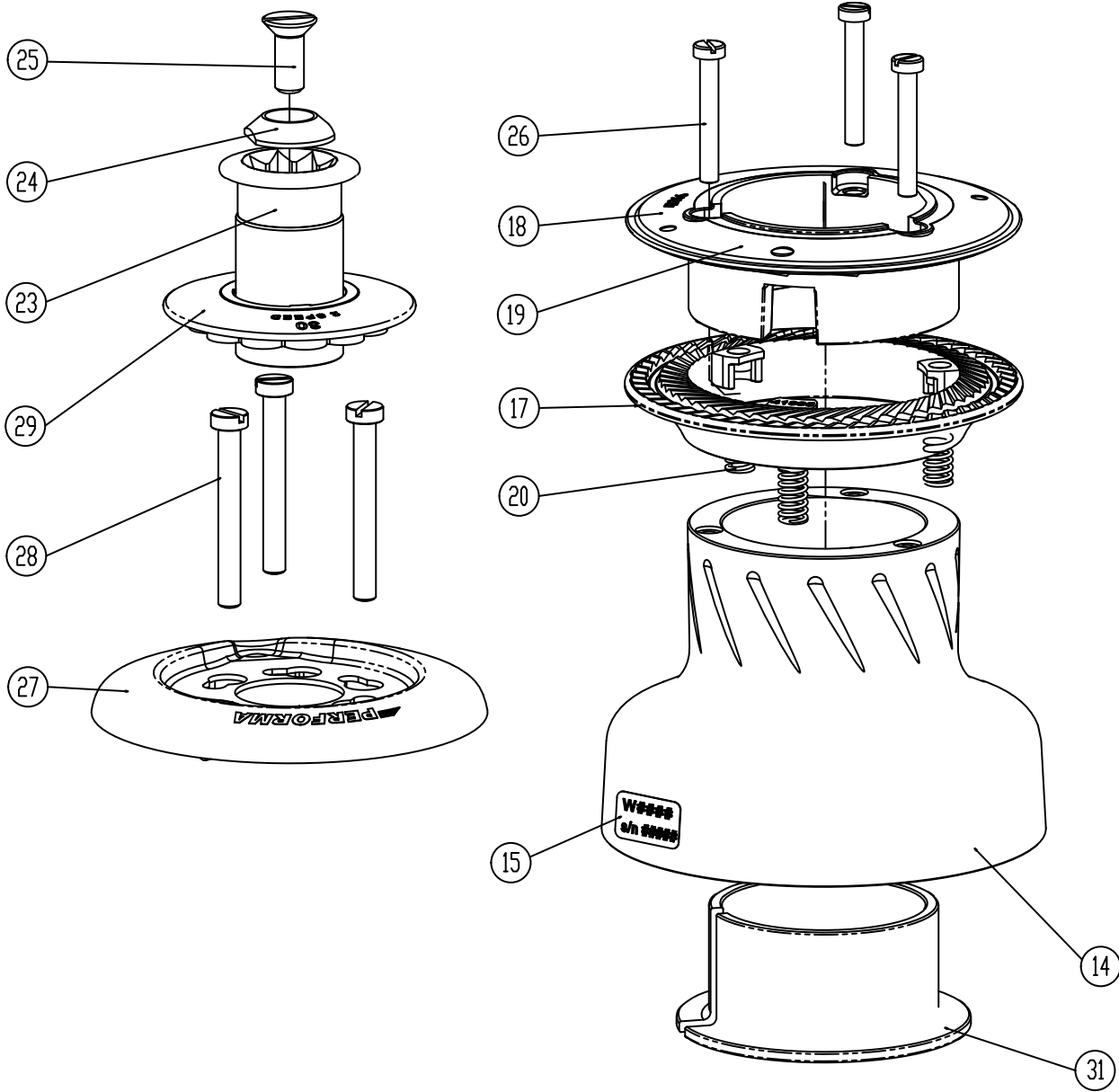
- **Tech Service**
Email: techservice@harken.it
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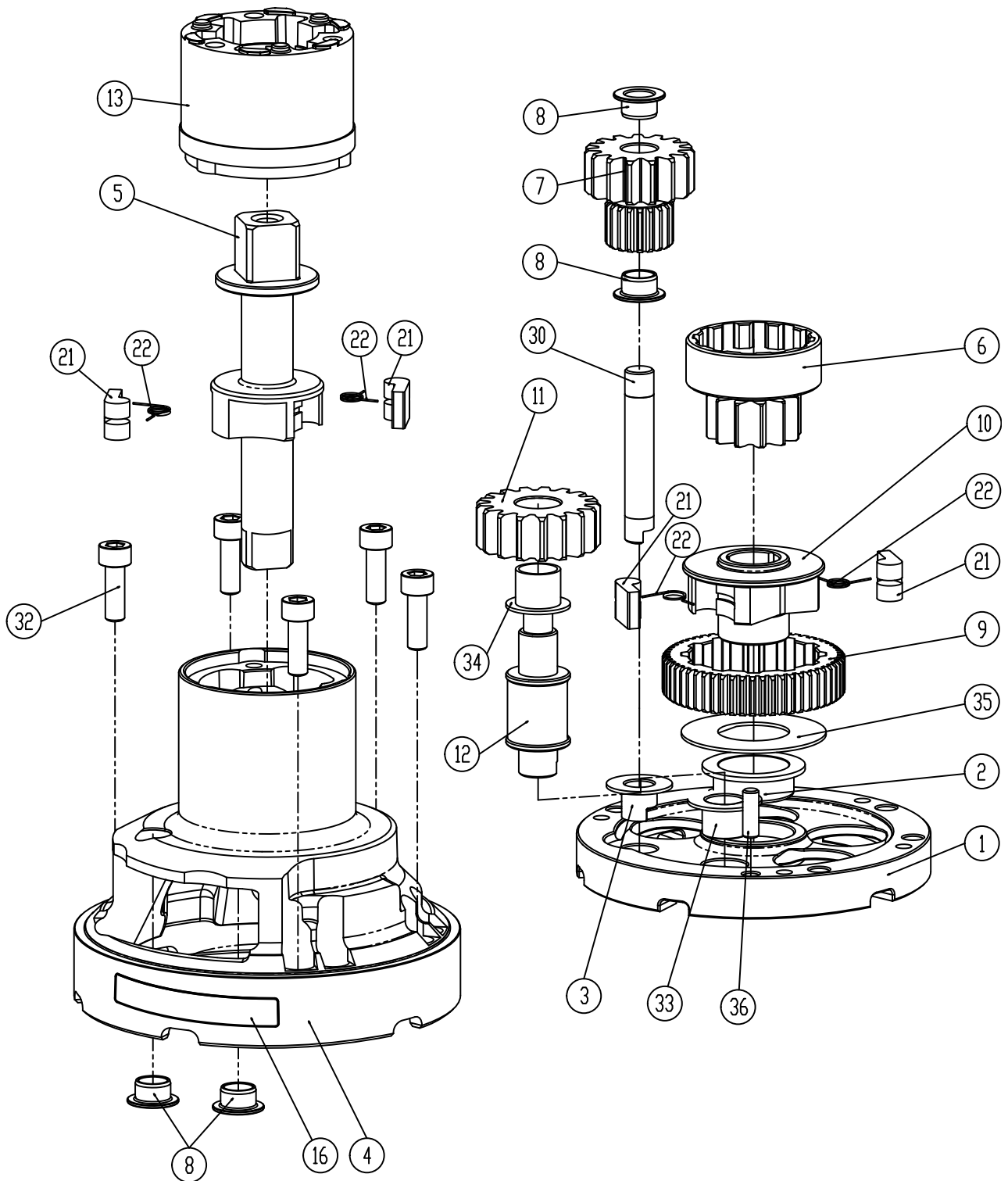
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Performa Winch 30 STP

Pos	Q.ty	Code	Description
1	1	S740320052	Base Winch 30STP
2	1	S4152300A7	Bushing Ø22xØ25x9.5
3	1	S413960085	Bushing Ø9xØ11x12
4	1	S740330053	Drum support Winch 30STP
5	1	S740340004	Central shaft
6	1	S740350041	Gear Z=12
7	1	S740370004	Gear
8	4	S418730080	Bushing Ø9xØ11x7
9	1	S740360041	Gear Z=55
10	1	S740380041	Pawl carrier Winch 30STP
11	1	S740400041	Gear Z=17
12	1	S740410004	Idler pin W30
13	1	S4129400A0	Stripper arm support
14	1	S678220053	Drum Performa
15	1		Winch Serial Number Sticker*
16	1		Winch Product Sticker**
17	1	S4136500A9	Lower Jaw
18	1	S6620900A8	Performa Upper Jaw
19	1	S663760080	Peeler Winch 20
20	3	S385970001	Spring
21	4	S000080003	Pawl Ø8
22	4	S000380001	Pawl Spring
23	1	S413640019	Socket Handle W20/80
24	1	S415130085	Washer Ø7.7xØ25x5.8
25	1	M0614303	Screw M8x20 UNI 6109
26	3	M6009103	Screw UNI EN ISO 1207:1996 - M5x35- A4
27	1	S663750019	Performa Black Stripper Arm
28	3	M6007103	Slotted cup head screw M6x50 UNI 6107
29	1	S7404300A5	Cover 2 Speed Winch 30
30	1	S413000004	Pin ø9x55
31	1	S413720080	Bushing Ø55xØ62x34
32	5	M0634803	Screw M 6x18 - A4 UNI 5931:2003
33	1	S413330085	Bushing Ø12xØ14x11
34	1	M0604394	Bush 1214-12
35	1	S413120002	Washer Ø22.5xØ45x1
36	1	S675530083	Roller Ø5x15

*Available with service kit; see website www.harken.com

**Winch product sticker

