HARKEN®

INDUSTRIAL WINCHES 46

IN46.2STA - IN46.2STC - IN46.2STGNA - IN46.2STGNC - IN46.2STGNA-M

User manual

Original Instruction
UIN46.2ST-F 18-03-2025

GLOSSARY AND SYMBOLS

Intended Use - use of the device according to the information supplied in the instructions for use.

Improper Use - use of the device in a way different from that indicated in the instructions for use.

General User - a user that use the device to pulling loads

Text preceded by the following symbols contains very important information or instructions, especially in regards to safety.

Failure to observe these may lead to:

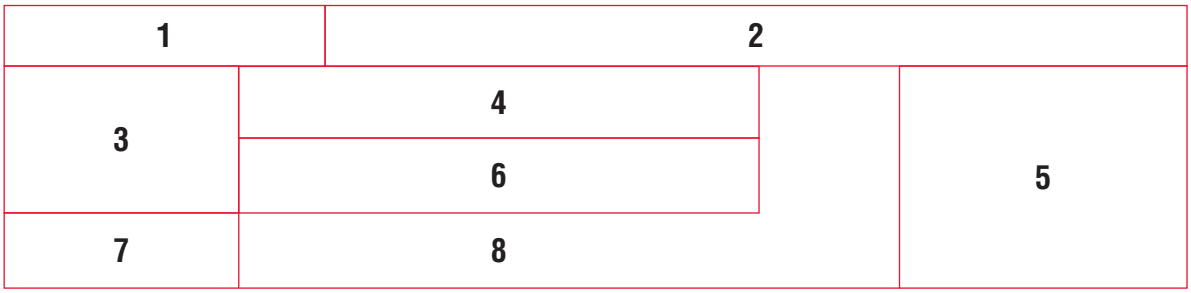
- danger for operators
- invalidity of the contract warranty
- refusal of the manufacturer to accept responsability

WARNING!
This denotes the existence of the potential danger, which could cause injury or damage if the information or instructions are not followed

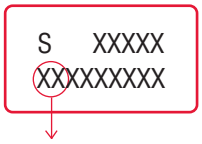
NOTE!
This denotes important information concerning the device

IDENTIFICATION DATA AND PLATES ON THE DEVICE

Each device is identified by a plate on which the reference data of the device are inscribed indelibly. Always quote these references when contacting the manufacturer or service centres.



1. Name of manufacturer.
2. Name of product.
3. Manufacturer's identification data.
4. Winch Model.
5. Serial number in format:



last two numbers of the year of manufacture of the device (e.g. 15 = the year 2015).

6. Indicator of the Max Working Load (MWL) of the device for pulling loads.
7. Pictogram instructing you to read the manual before using the device.
8. Safety information of Minimum turns and the diameter of the rope to use:

- IN46.2STA-IN46.2STC: 8mm-14mm (5/16"-9/16");
- IN46.2STGNA-IN46.2STGNA: 10mm-22mm (3/8"-7/8");
- Pictogram showing the direction of rotation of the rope on the winch.

The plate is on the skirt of the device (see figure on right)

GENERAL ADVICE

Use of the Industrial Winches 46 for pulling loads is permitted to a general user in accordance with National Regulations & Working Guidelines/Practices.

Harken® is not responsible for damage caused by the Industrial Winches 46 to people, animals or property in the case of:

- improper use of the Industrial Winches 46
- lack of proper maintenance, as indicated in the Maintenance chapter of this Manual
- unauthorised modifications or changes
- use of spare parts that are not original or specific for the model
- total or partial failure to observe the instructions
- usage contrary to specific national regulations

INTENDED USE

This winch is designed to be used as a manually powered, rope-handling winch for pulling loads.

This product, as supplied by Harken, is considered to be applicable to general pulling operations. Should this product be incorporated into systems for lifting objects and/or persons, it must be CE Certified for its intended application adding the appropriate additional safety devices. Such systems are classified as “machinery for lifting objects and/or persons” and needs to be CE Certified

IN46.2STA - IN46.2STC winches are more suitable for use in marine environments.

IN46.2STGNA - IN46.2STGNC winches are more suitable for heavy duty cycles (not in marine environments).

IN46.2STGNA-M winche is more suitable for heavy duty cycles in marine environments.

IMPROPER USE

The winch must not be used:

- for purposes different from those outlined in “Intended use” chapter, or for purposes not mentioned in this manual or different from those mentioned
- if unauthorised modifications or interventions have been carried out
- in an explosive atmosphere
- after it has fallen from a height of more than 1 meter onto a hard surface. In this case the device must be returned to the manufacturer or to a Harken® authorised repair centre
- with wire rope
- with loads in excess of the Maximum Working Load (MWL) of 750 kg for pulling loads

WARNING!
Subjecting the winch to loads above the maximum working load can cause the winch to fail or pull off the mounting surface suddenly, possibly resulting in severe injury or death.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

It is necessary use gloves when operating the device.

RESIDUAL RISKS

You must pay attention to the following residual risks present when using Industrial Winches 46:

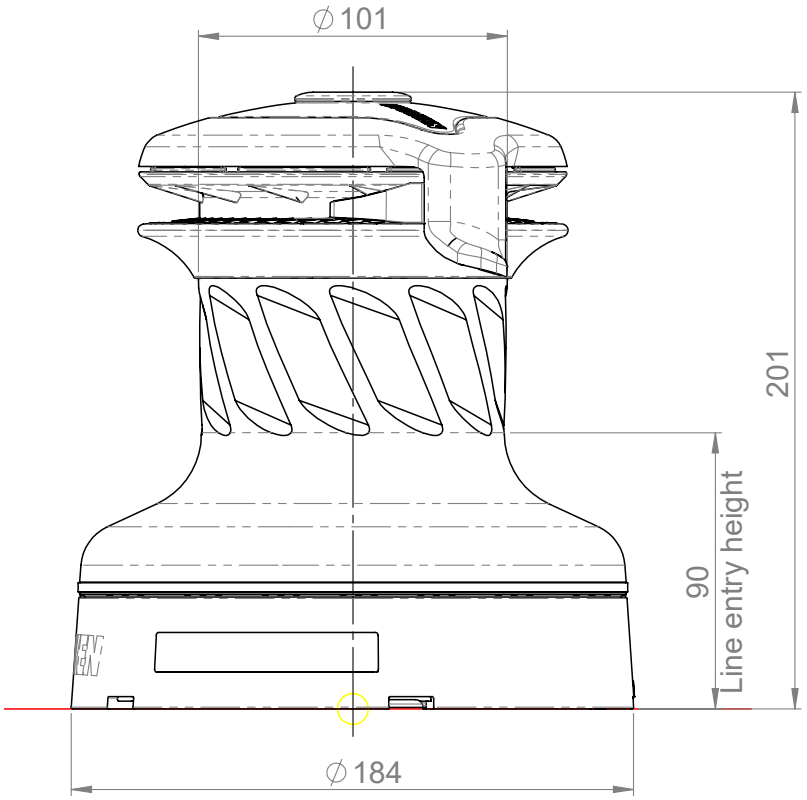
WARNING! Rotating Parts Trapping Risk
Always wear clothing and protective gloves that are form fitting. Avoid loose gloves or clothing and always follow the instructions in the manual.

SYSTEM DESCRIPTION

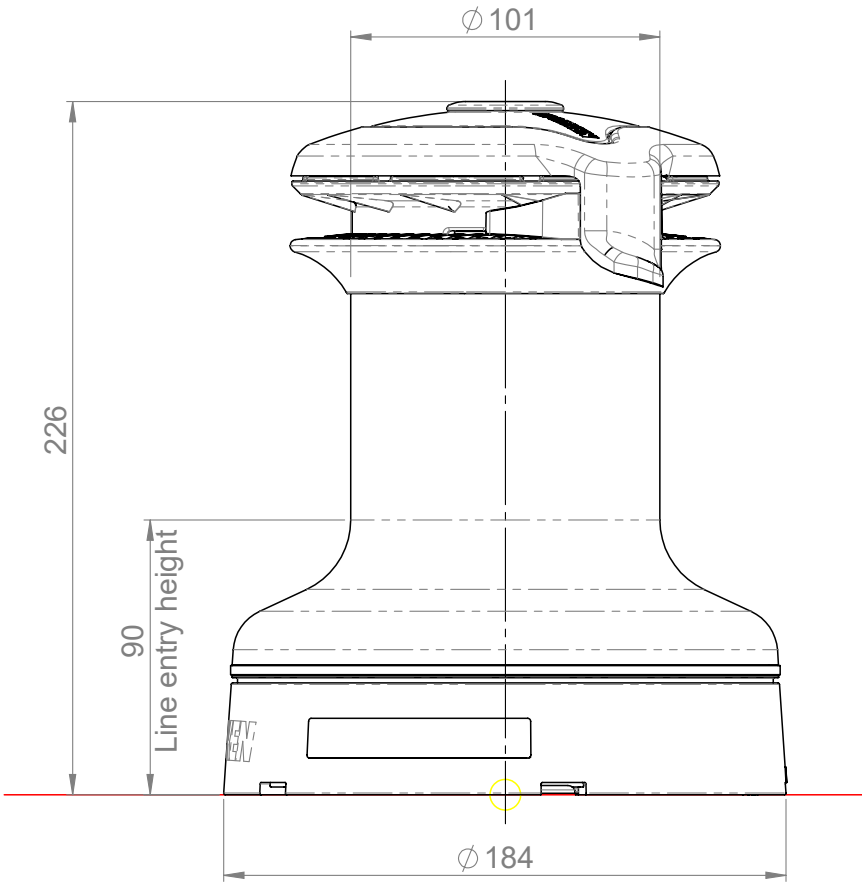
Parts Description

Pos.	Description
1	Socket Handle
2	Upper Jaw
3	Lower Jaw
4	Peeler
5	Stripper Arm
6	Drum
7	Skirt

OUTLINE WINCH IN46.2STA - IN46.2STC



OUTLINE WINCH IN46.2STGNA - IN46.2STGNC - IN46.2STGNA-M



Note: all dimensions are in mm.

MAX WORKING LOAD

The Max Working Load (MWL) of the Industrial Winches 46 is:

- 750 kg (1653 lb) for pulling loads

WARNING!
Do not apply a load greater than the Max Working Load (MWL) to the Winch.

ROPE REQUIREMENTS

WARNING!
Use only ropes with a diameter listed in this manual for each model of Winch.

WARNING!
Use only ropes in good condition.

WARNING!
For correct maintenance of ropes consult the rope Usage Manual.

WARNING!
Do not use with wire rope.

TECHNICAL DATA

Rope	IN46.2STA-IN46.2STC: 8mm-14mm (5/16" - "9/16") for pulling loads
	IN46.2STGNA-IN46.2STGNC-IN46.2STGNA-M: 10mm-22mm (3/8"-7/8") for pulling loads
Max Working Load (MWL)	750 kg (1653 lb) for pulling loads
Gear Ratio	IN46.2STA-IN46.2STC: 2,30:1 - 1st speed / 9,17:1 - 2nd speed
	IN46.2STGNA-IN46.2STGNC-IN46.2STGNA-M: 2,30:1 - 1st speed / 9,51:1 - 2nd speed
Power Ratio	IN46.2STA-IN46.2STC: 11,70:1 - 1st speed / 46,50:1 - 2nd speed
	IN46.2STGNA-IN46.2STGNC-IN46.2STGNA-M: 11,70:1 - 1st speed / 48,30:1 - 2nd speed
Winch Weight	IN46.2STA: 5.2 kg (11.46 lb)
	IN46.2STC: 7.8 kg (17.19 lb)
	IN46.2STGNA: 6,2 kg (13,67 lb)
	IN46.2STGNC: 9,12 kg (20,10 lb)
	IN46.2STGNA-M: 5,8 kg (12,79 lb)
Winch Handle suggested lenght (not included)	254 mm (10")
Winch Dimensions	IN46.2STA-IN46.2STC: 201 x Ø184 mm (7,92" x Ø,24")
	IN46.2STGNA-IN46.2STGNC-IN46.2STGNA-M: 226 x Ø184 mm (8,89" x Ø,24")
Recommended working temperature range	-10°C +50°C

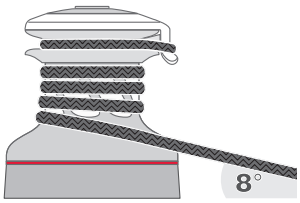
Winch Installation

Mounting Surface

Winch must be installed on a flat surface, reinforced if necessary, to withstand a load equal to 3000 kg.

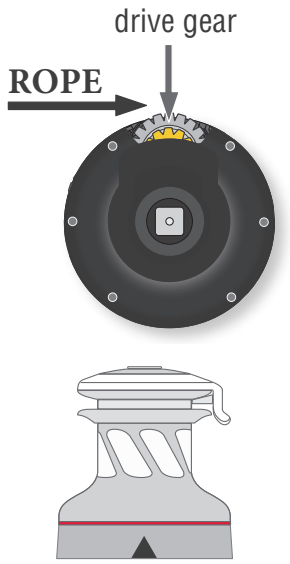
Winch Entry Angle of Pulling Rope

Winch entry angle must be 8° with a tolerance of ±2° to avoid rope overrides.



WARNING!
Verify entry angle of rope. It must be 8° with tolerance of ±2°, to avoid rope overrides and damaging winch or making winch inoperable, leading to loss of control, possibly resulting in severe injury or death.

Mount winch so drive gear is positioned where rope enters winch drum.
Note: ▲ on winch skirt identifies location of drive gear.



WARNING!
Mount winch so that drive gear is positioned where rope enters winch drum. Incorrect positioning of drive gear can weaken winch leading to failure, possibly resulting in severe injury or death.

Winch Location

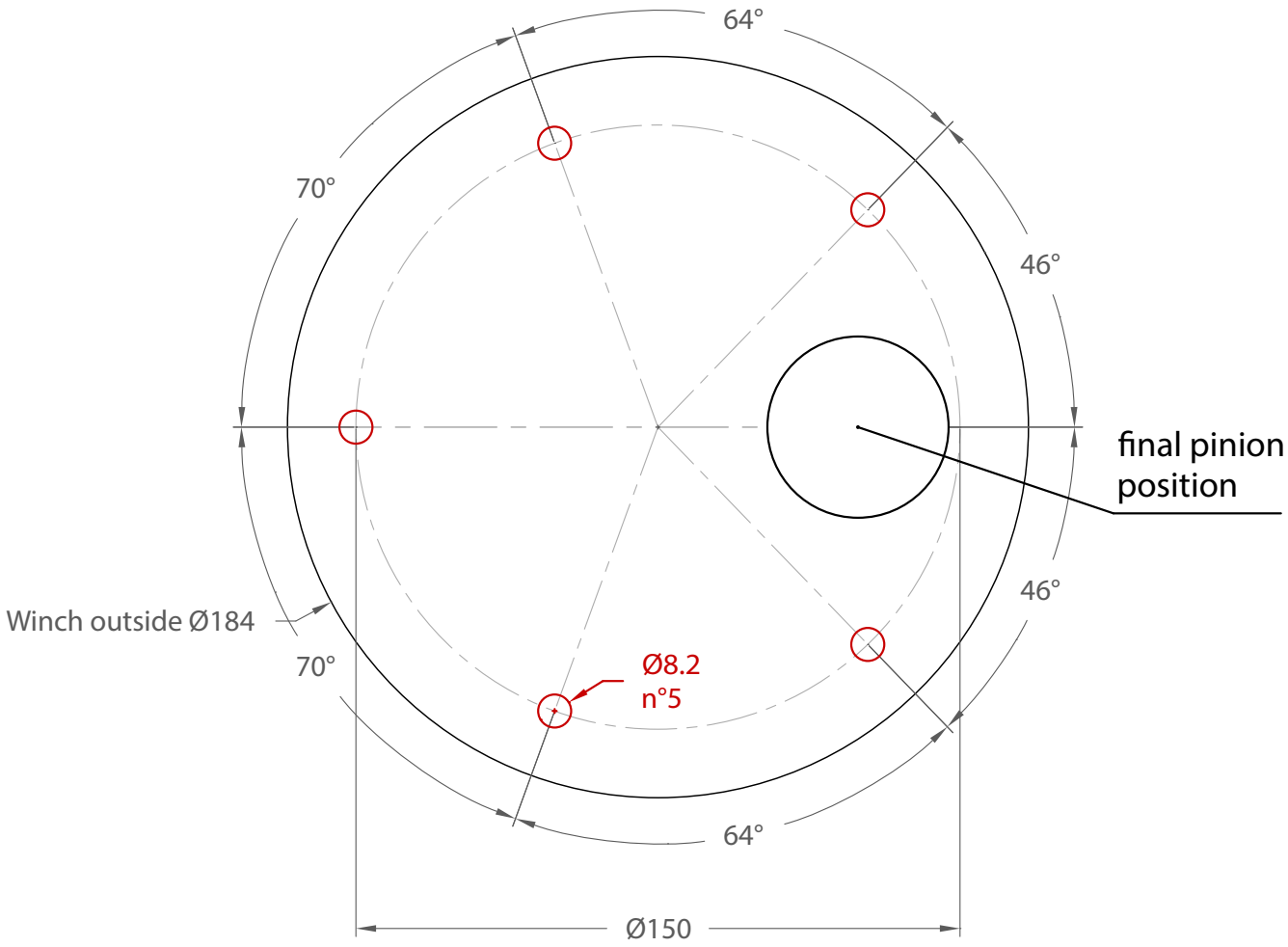
Winch must be installed in a position to allow sufficient working space around unit, so not to impede operation of handles.

Winch must be installed in a position to ensure visibility of the load trajectory by operator at all times.

WARNING!
Incorrect installation of winch may cause severe injury or death. Consult equipment supplier if in doubt about correct position of winch.

Harken® accepts no responsibility for defective installation or reassembly of its winches. If you have questions or concerns, Harken® Tech Service is at your disposal at techservice@harken.it.

Mounting Template



Note: all dimensions are in mm - DRAWING NOT IN SCALE.

NOTE!
Drilling template is available on Harken® website, www.harken.com. Download, print and compare template to winch to verify that size of template and hole position/sizes are correct.

NOTE!
When downloading winch templates make sure you have correct size paper and that printer will output at 100%. Before drilling holes verify that template is correct in every detail.
Harken cannot be responsible for incorrectly drilled holes because of a faulty template.

NOTE!
1/4" Hex Head bolts do not fit in the holes and cannot be used to mount winch

Installation Procedure

Harken® does not supply bolts to install winch since lengths may vary depending on mounting surface.

It is installer's responsibility to choose correct bolts, taking into account loads they will have to withstand.

Harken® assumes no responsibility to incorrect installation of winch and plate adapter or for use of incorrect mounting bolts.

WARNING!
Failure to use correct number and type of mounting fasteners or failure to ensure correct mounting surface strength can result in winch pulling off suddenly and unexpectedly during high loads, possibly resulting in severe injury or death.

WARNING!
Incorrect installation of winch plate may cause severe injury or death. Consult equipment supplier if in doubt about correct position of winch plate.

The Industrial Winches 46 can be installed following one of the two procedures below (**Procedure1** or **Procedure 2**):

Procedure 1

To install the Winch you must remove the drum and use bolts as described ahead.

Tool needed: one medium flat-bladed screwdriver , one number five hex key. 

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

Torque to apply when assembling is indicate on this manual with 

Only for IN46.2STA-IN46.2STC

1. Unscrew the central screw (2Nm/18 in-lb).

Only for IN46.2STGNA-IN46.2STGNC-IN46.2STGNA-M

1a. Unscrew the central screw (12Nm/106 in-lb).

2. Slide off the assy socket and the cover.

3. Unscrew the three screws (4Nm/35 in-lb).

4. Remove the self-tailing arm by rotating and lifting it.

5. Lift the drum.

Install the Winch on the position you have chosen, keeping in mind the limits described on page 12-13 and using socket head (SH) bolts.

Procedure 2

To install, you must remove the winch skirt and use hexagonal headed bolts.

Tools needed: one medium flat-bladed screwdriver. 

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

1. Remove the skirt with the help of the screwdriver placed as shown by the symbol 

2. Take off the skirt

3. Position the n°5 M8 hexagonal headed bolts in their holes

4. Reposition the skirt in its housing

5. Press down the skirt to position it correctly

NOTE!
Make sure the skirt is correctly clipped on to the base of the winch.

Install the Winch on the mounting surface and in the position you have chosen, keeping in mind the limits described on page 12-13 and using hexagonal headed bolts (HH).

Carry out **Procedure 1** or **Procedure 2**, then install the Winch on the chosen position and continue as follows:

A. Position the base of the Winch on the chosen position and mark the holes or use the drilling cut-out template (page 13).

B. Remove the Winch and drill the five 8.2 mm diameter holes. If drilling and tapping consult industry standards for drill/tap size.

C. Bolt the base of the Winch using five M8 bolts, washers, and nuts (not supplied by Harken®) as described at **Procedure 1** or **Procedure 2**.

WARNING!
To install the Winch, use only bolts in A4 stainless steel (DIN 267 part11).
Bolts made of other materials may not have sufficient strength or may corrode which can result in winch pulling off the mounting surface suddenly and unexpectedly during high loads causing severe injury or death..

NOTE!
To obtain correct Maximum Working Load (MWL) all five bolts, nuts, and washers must be securely tightened.
To mount winches do not use countersunk bolts.

D. Reassemble the Winch following the steps in **Procedure 1** or **Procedure 2** in the reverse order.

WARNING!
Failure to use correct number and length of mounting fasteners and/or failure to tighten them correctly can result in winch pulling off suddenly and unexpectedly during high loads which may cause load to drop, possibly resulting in severe injury or death.

USING THE DEVICE - CHECKING THE DEVICE BEFORE USE

Check the correct operation of the Winch by rotating the drum by hand in one direction and check the rotation lock in the opposite direction.

Acting on handles, verify the correct rotation of the Winch drum in first speed and reversing the rotation direction of the handle, in second speed.

WARNING!
Before each use, visuallly inspect the winch for signs of wear, damage or failure. If such signs are present, do not use the device. if the worn or defective parts are not immediately replaced, the manufacturer will assume no responsibility for resulting damage or accidents.

WARNING!
Before each use inspect winch and jaws for degradation, cracks, or wear that may affect locking strength and operation. Check pulling rope to make sure that it is free from wear. If in doubt, replace with a suitably strong rope.

WARNING!
Before each use check winch base securely fastened to plate.
Failure to use correct number and length of mounting fasteners and/or failure to tighten them correctly can result in winch pulling off suddenly and unexpectedly during high loads which may cause load to drop, possibly resulting in severe injury or death.

WARNING!
Before each use check the winch drum cannot be turned by hand counter-clockwise.

PULLING LOAD

WARNING!
Keep fingers, loose clothing, hair etc away from winch. Area around winch handle shouldd be kept clear of people and objects at all times.

To pull loads, proceed as follows:

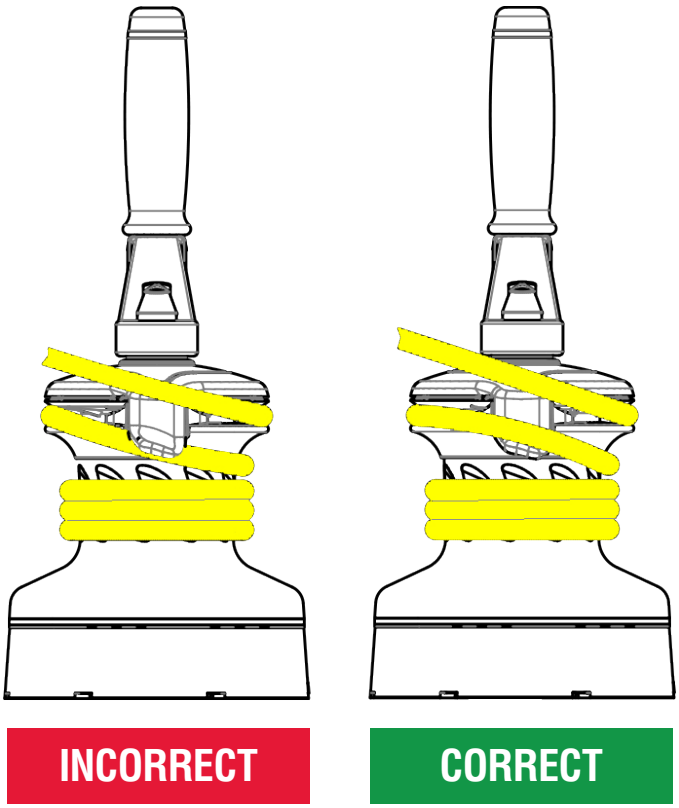
1. Starting from the base, wind the rope on the drum of the Winch in a clockwise direction.
2. Ensure that the rope does not override (overlap) on the Winch.

WARNING!
Take at least two turns of the rope around the winch drum, and if it slips under load increase the number of turns to a maximum of four, taking care not to overlap the rope.

NOTE!
The number of turns needed round the winch drum depends on the load and the condition of the rope.

WARNING!
Never allow rope to (override) overlap on winch drum. This can cause rope to jam and can prevent load from being pulled.

3. Pull rope through to take up any slack, then pass the rope on the stripper arm by winding rope clock-wise and pulling tight to engage.
4. Fit the rope into the jaws.

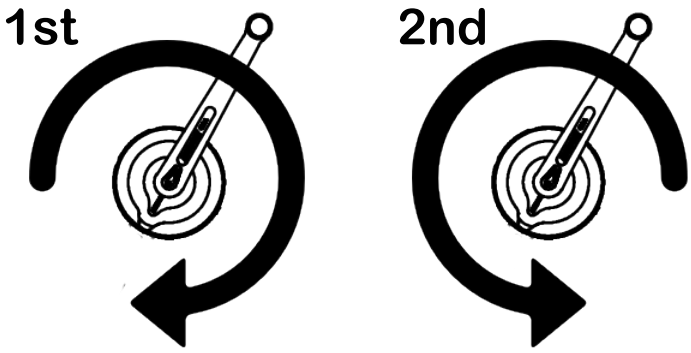


WARNING!
Ensure correct placement of rope on the stripper arm and into the spring loaded jaws. Failure to secure the rope in the jaws may cause rope slippage.

5. Start by turning both handles to lift the load clockwise. The gears automatically engage according to the direction of rotation.

1st gear: turn the handle clockwise (looking at the Winch from above).

2nd gear: turn the handle counterclockwise (looking at the Winch from above).



7. When the handle becomes difficult to rotate in 1st gear, reverse the direction to engage 2nd. A higher power ratio makes a heavier load easier to lift with the same effort.

NOTE!
The maximum input speed of the Industrial Winches 46 is 60 rpm.

MAINTENANCE

NOTE!
A formal inspection of the winch must be performed at least annually by trained personell. The inspection should be recorded in an inspection and maintenance log (see Maintenance schedule at the end of this manual).

Wash

Wash the Winch frequently with fresh water.

Do not allow cleaning products or other caustic solutions to come into contact with Winch, especially anodized, chrome-plated, or plastic parts. Do not use solvents, polishes, or abrasive pastes on logos or winch stickers.

Maintenance Schedule

Winch must be completely overhauled, cleaned, and lubricated at least every 12 months. Maintenance of Winches must be carried out exclusively by trained personnel. Harsh environment and/or heavy use may require more frequent maintenance.

NOTE!
Do not replace or modify Winch with a part that was not designed for it.

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.

NOTE!
Maintenance of winches must be carried out exclusively by trained personnel.

Disassembly procedure

Tool 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 1** as shown at page 16 and then do the following steps:

1. Completely unscrew the three screws and remove the stripper arm support

1a. Unscrew the three screws (4 Nm/35 in-lb) and remove the stripper arm support and socket spacer

2. Slide out the central shaft

3. Unscrew the 5 hex screws (20 Nm/177 in-lb)

4. Remove the assy housing
Important: washer may remain inside the drum support!

5. Remove the gear

6. Remove the washer

7. Remove the gear and remove the pawls carrier.

8. Remove the gear

9. Remove the pinion. To facilitate the operation press the spring against the pawl with a blade

10. Slide off gear

11. Remove washer

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

I. Unscrew the 4 screws (🔧4Nm/35 in-lb)

II. Remove the jaws. (remove four screws and spacer, only for winch model IN46.2STGNA and IN46.2STGNA-M)

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.

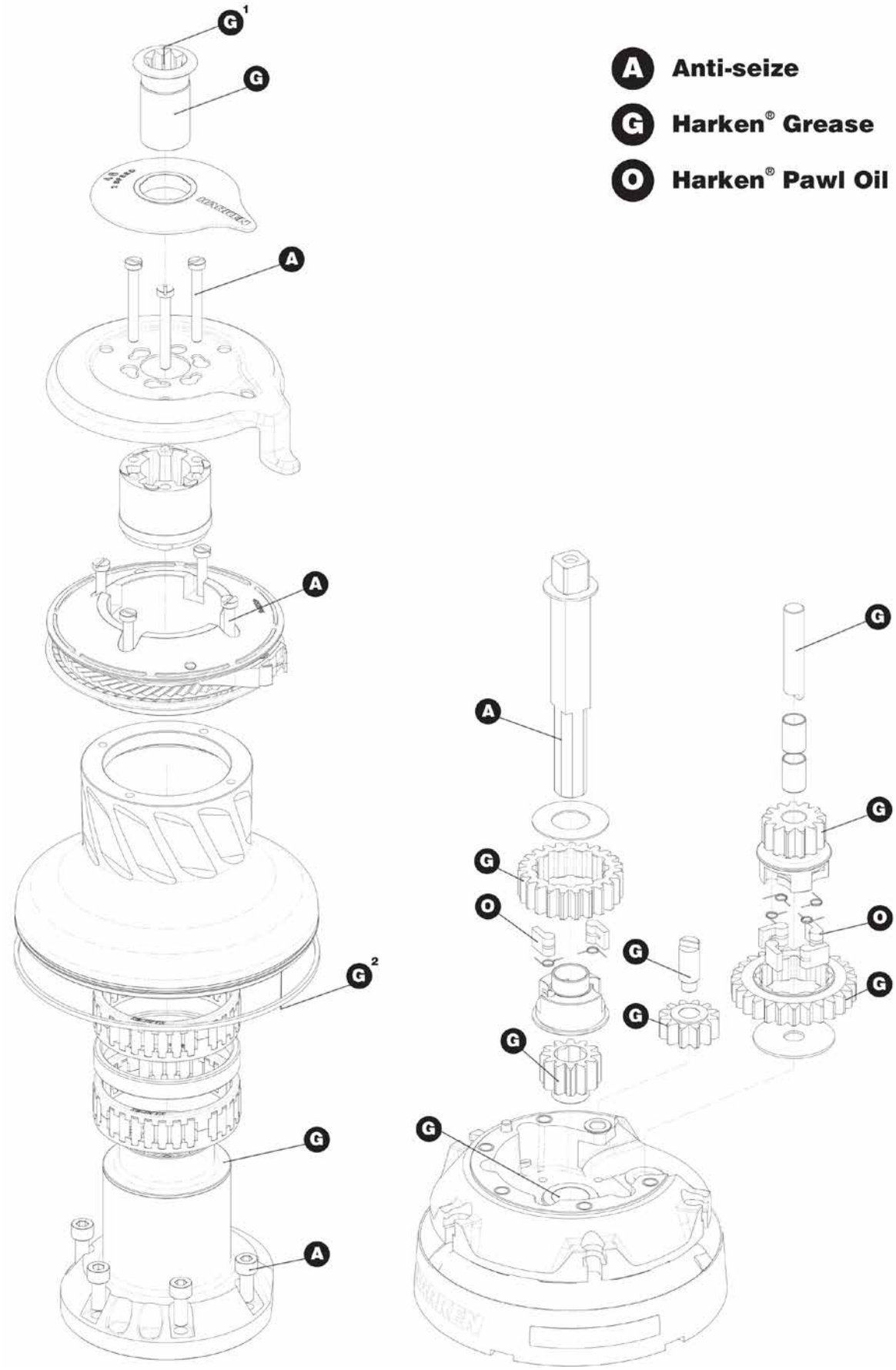
Carry out maintenance on components using the products listed below.

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.

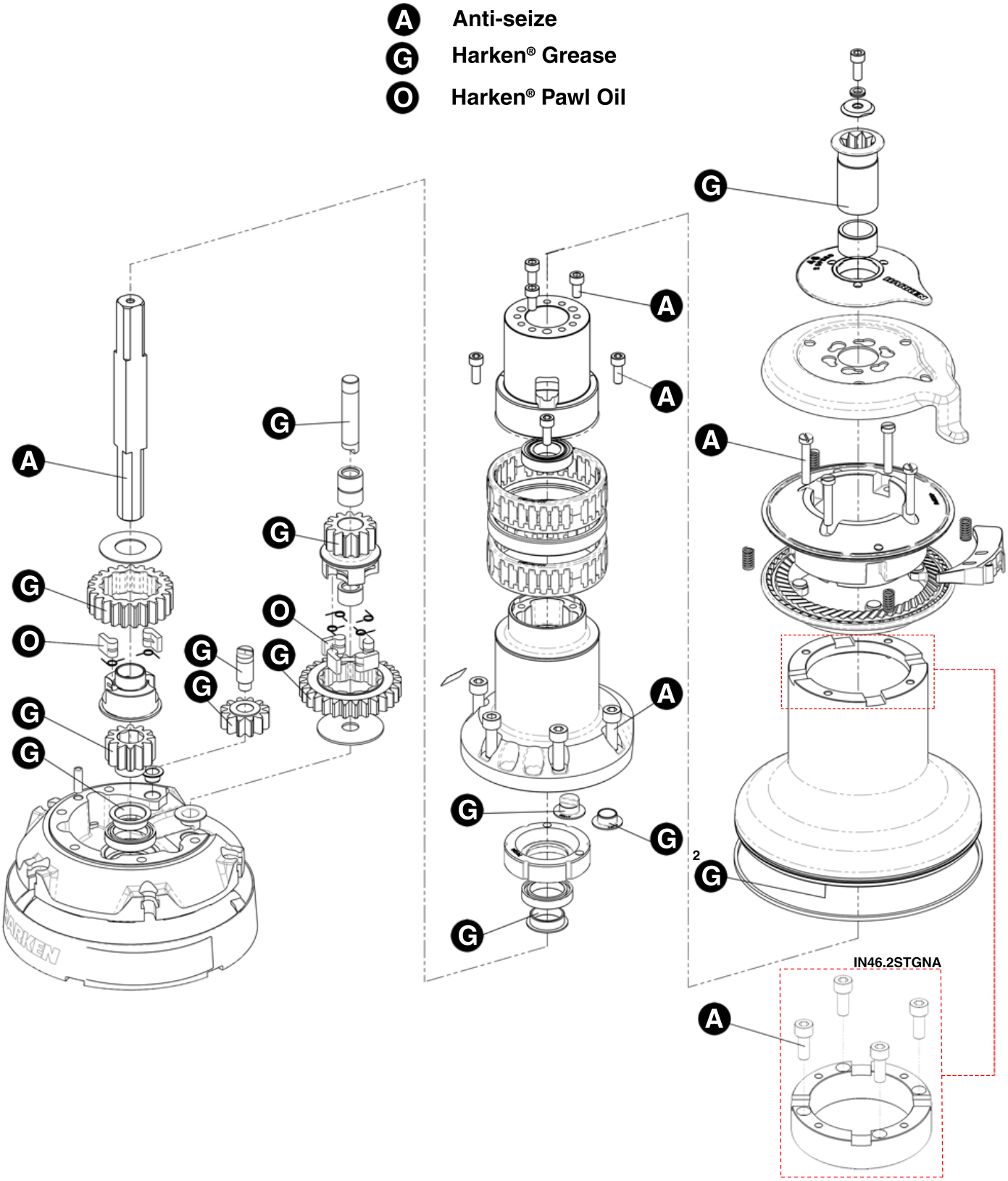
Lightly lubricate the pawls and springs with oil. **Do not use grease on the pawls!**

Exploded View With Maintenance Products IN46.2STA - IN46.2STC



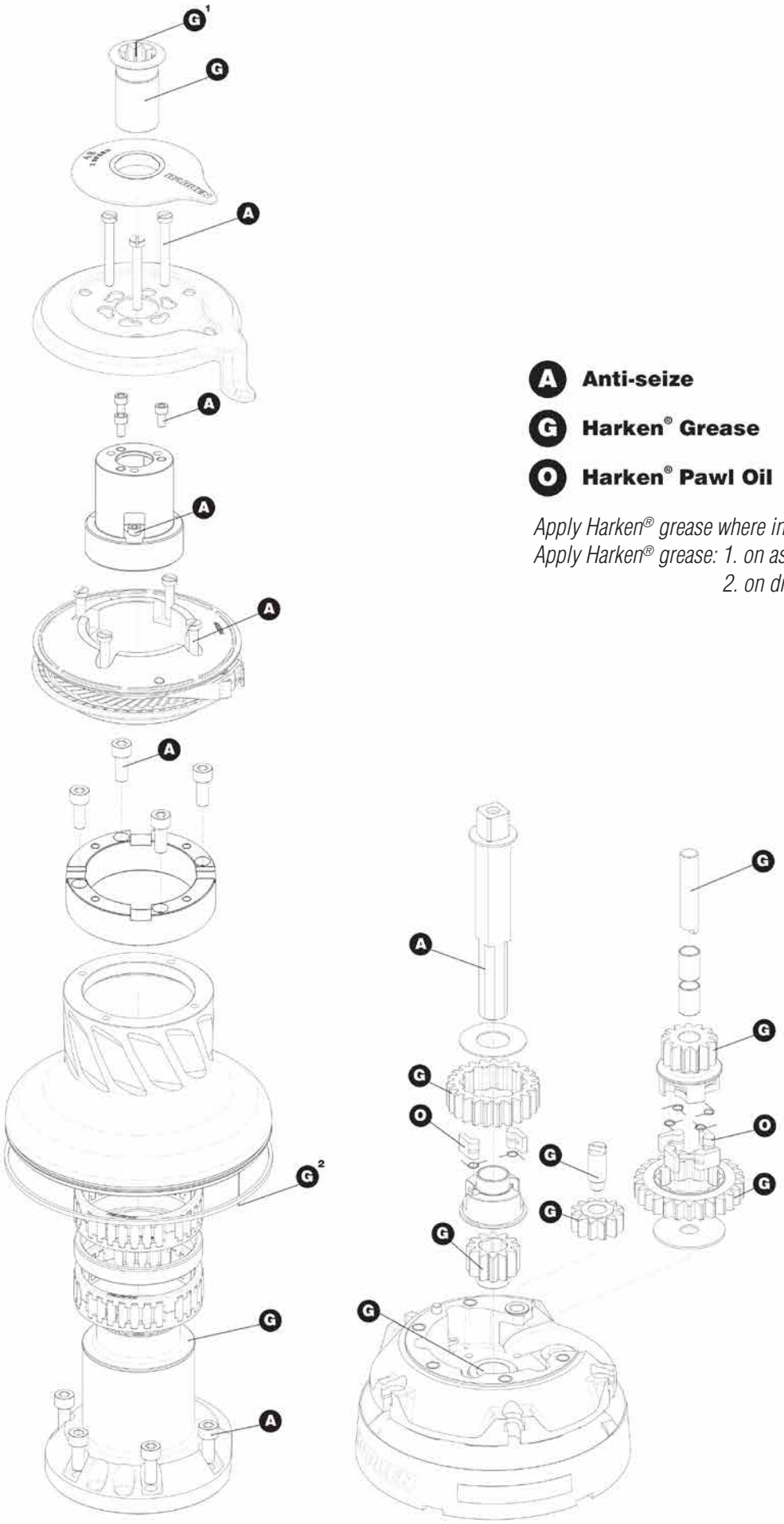
Apply Harken® grease where indicated above
Apply Harken® grease: 1. on assy socket screw - 2. on drum gear

Exploded view with maintenance products IN46.2STGNA - IN46.2STGNC



Apply Harken® grease where indicated above
Apply Harken® grease: 2. on drum gear

Exploded view with maintenance products IN46.2STGNA-M



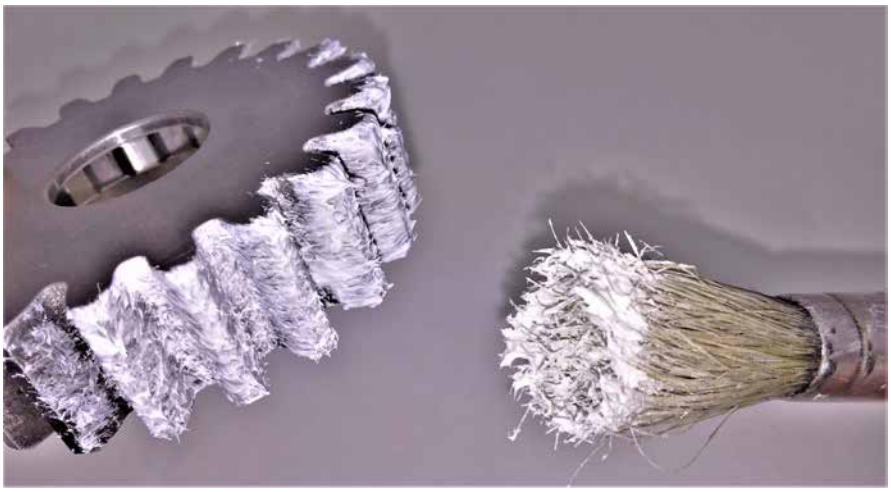
A **Anti-seize**

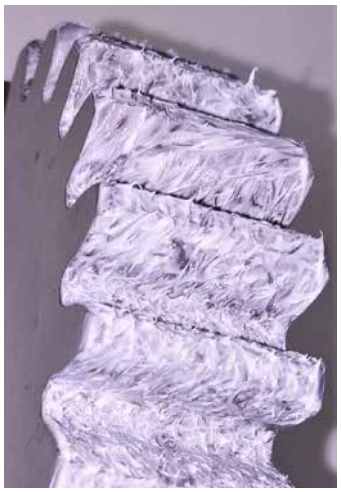
G **Harken® Grease**

O **Harken® Pawl Oil**

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

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





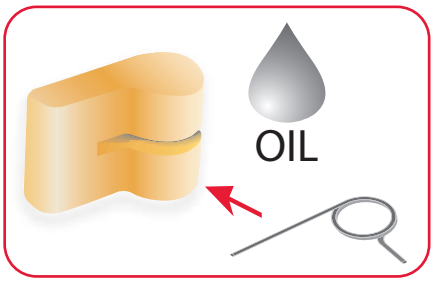
NOTE!
Harken® grease to apply on all teeth: do not use excessive quantity of product to void wastes. If in contact with the pawls, an excess of grease can compromise the safety of the winch.

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.

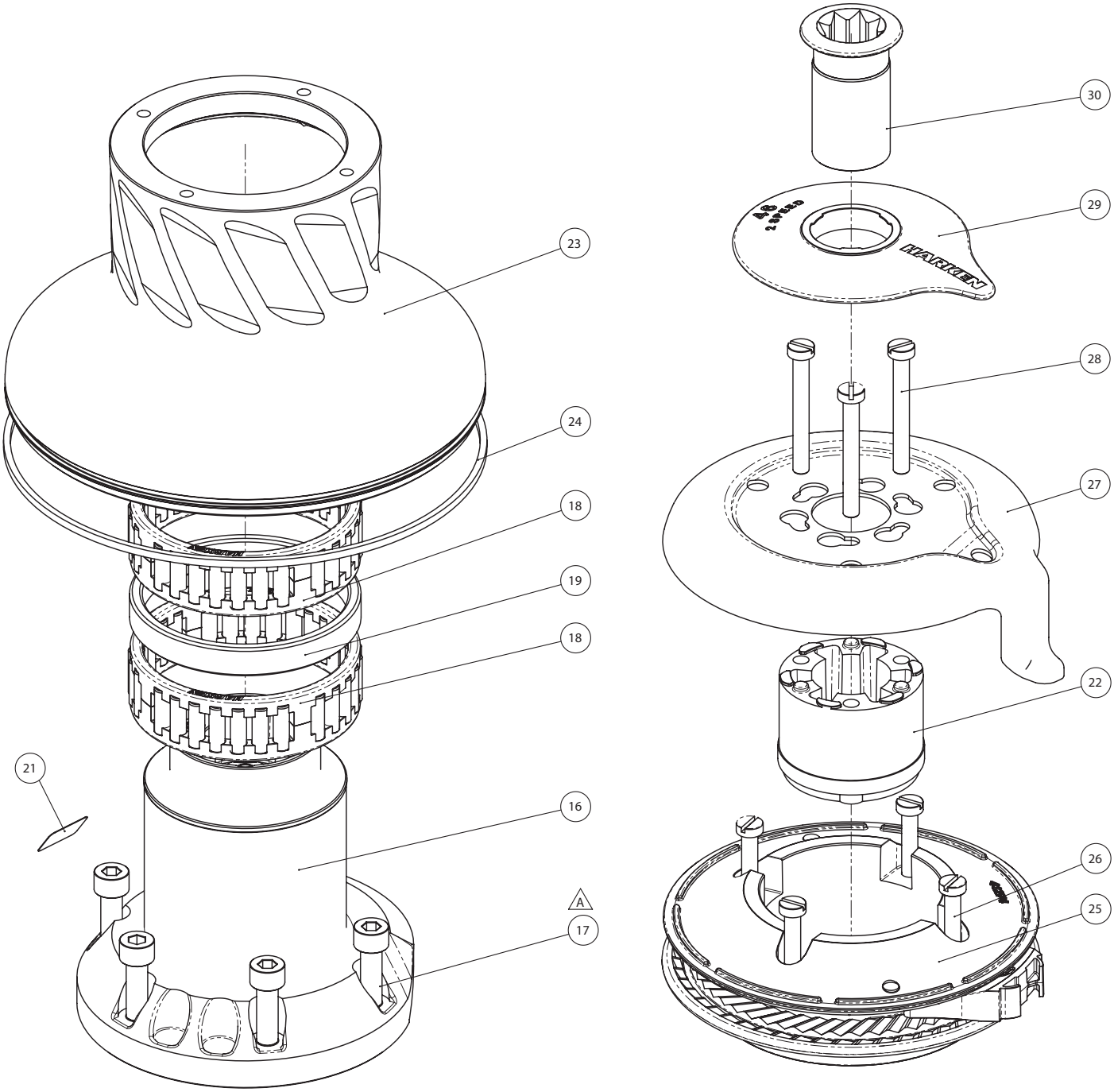
When positioning the stripper arm, align the peeler with it.

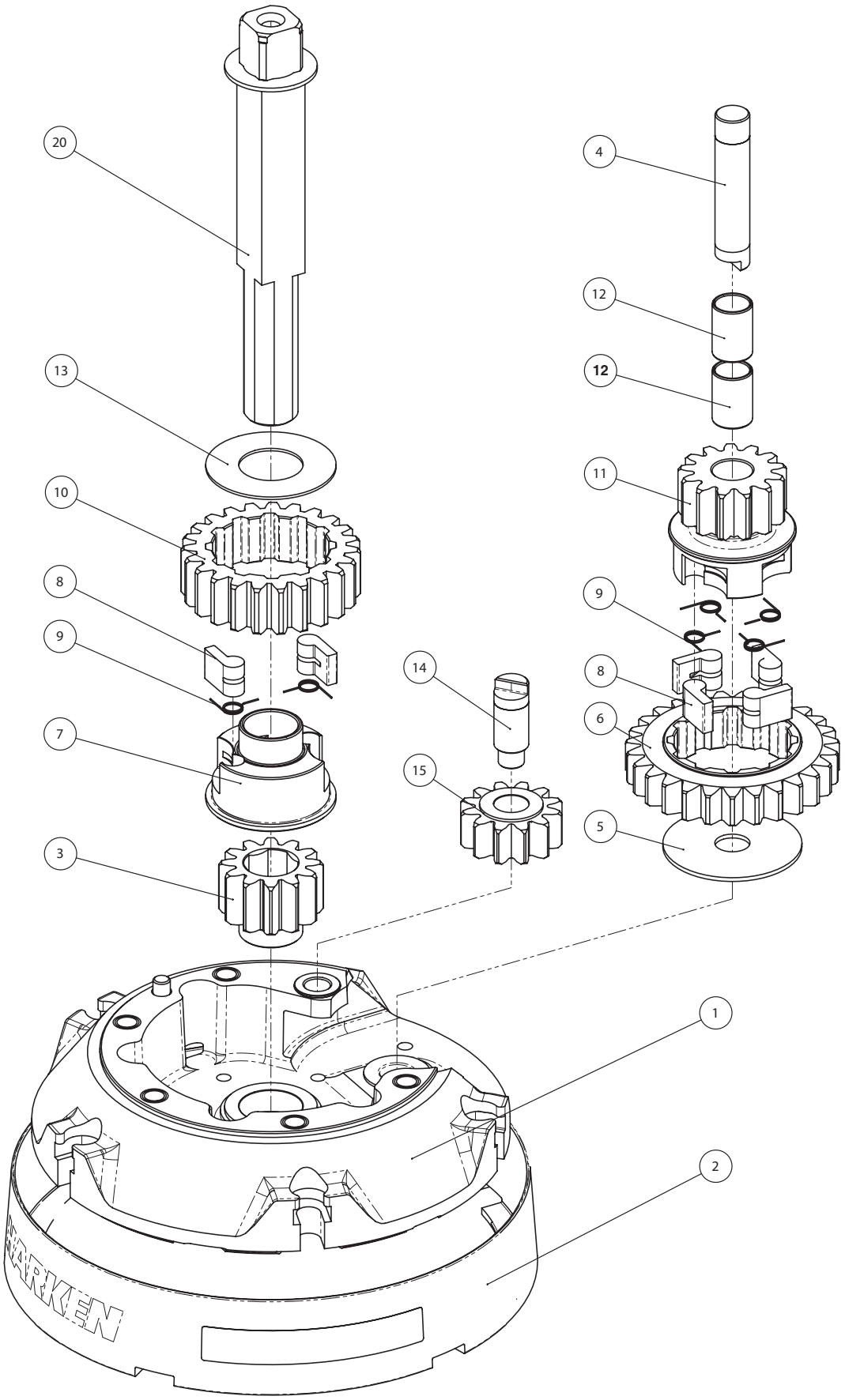
If the jaws have been disassembled, insert peeler between the two jaws, taking care that the letters TOP on the peeler are facing upwards.



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

Exploded view of IN46.2STA - IN46.2STC

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ANDERSEN

Part list of IN46.2STA

Winch IN46.2STA

A= drum in anodised aluminium

Pos.	Q.ty	Code	Description
1	1	A94132100	Assy Base Winch 46
			Base W46
	1	S413350080	*Roller Ø6x19*
	1	S4152300A7	*Bushing Ø22xØ25x9.5*
	1	S414890080	*Bushing Ø9xØ11x7*
	1	S413330085	*Bushing Ø12xØ14x11*
2	1	A97306100	Assy Skirt Industrial Winches 46
			Skirt W46
			Product Sticker Industrial Winches 46
3	1	S413020004	Gear Z12
4	1	S413300004	Pin Ø12x60
5	1	S278170002	Washer Ø12.5xØ48x1.5
6	1	S413260004	Gear Z27
7	1	S414260004	Pawls Carrier Ø8xN2
8	6		Pawl Ø8 (*)
9	6		Pawl Spring Ø8 (*)
10	1	S412830041	Gear Z23
11	1	S413250041	Pinion Z13
12	2	M6017694	Bushing PSM-1214-20
13	1	S413120002	Washer Ø22.5xØ45x1
14	1	S413070004	Pin Ø9xØ12x32.5
15	1	A94133400	Assy Gear Z12
			Gear Z12
	2	S414900080	*Bushing Ø12xØ14x8*
16	1	A94132200	Assy Housing Winch 46
			Housing Winch 46
	1	S414900080	*Bushing Ø12xØ14x8*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	S4133200B3	*Bushing for support*
17	5	M0606303	Screw M8x25 UNI 5931
18	2	A74133700	Bearing Ø75xØ87x26

Pos.	Q.ty	Code	Description
19	1	S413390080	Spacer
20	1	A94161400	Assy Central Shaft Winch 46
			Central shaft W46 ST
	1	S413880002	*Washer Ø17.2xØ32x1.5*
21			Winch Serial Number Sticker
22	1	S4129400A0	Stripper arm support
23	1	S412720053	Drum W46
24	1	S281690097	Red line
25	1	A94127300	Assy Jaws winch 46
			Lower Jaw W46
			Upper Jaw W46
	1	S414280080	*Peeler W46 - 50*
	4	S385970001	*SPRING*
26	4	M0601803	Screw UNI EN ISO 1207- M6x35 - A4
27	1	S413380019	Stripper Arm W46
28	3	M6007103	Screw M6x50 UNI6107
29	1	S4127000A5	Cover 2 speed W46
30	1	A94136400	Assy Socket W20-80
			Socket Handle W20/80
	1	S415130085	*Washer Ø7.7xØ25x5.8*
	1	M0614303	*Screw M8x20 UNI 6109*

(*) Available with service kit BK4512; see website www.harken.com

Part list of IN46.2STC

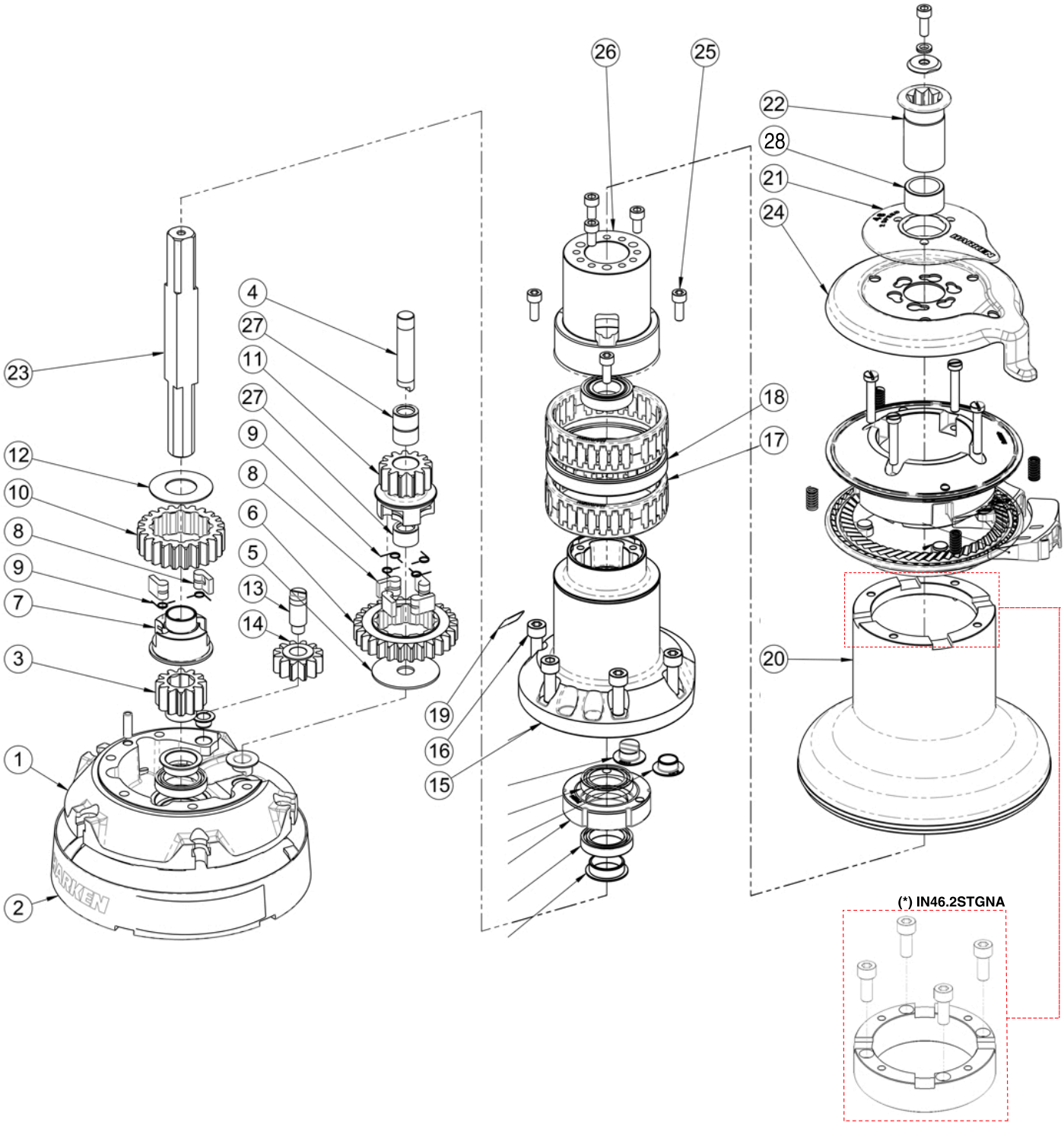
Winch IN46.2STC

C=drum in chrome bronze

Pos.	Q.ty	Code	Description
1	1	A94132100	Assy Base Winch 46
			Base W46
	1	S413350080	*Roller Ø6x19*
	1	S4152300A7	*Bushing Ø22xØ25x9.5*
	1	S414890080	*Bushing Ø9xØ11x7*
	1	S413330085	*Bushing Ø12xØ14x11*
2	1	A97306100	Assy Skirt Industrial Winches 46
			Skirt W46
			Product Sticker Industrial Winches 46
3	1	S413020004	Gear Z12
4	1	S413300004	Pin Ø12x60
5	1	S278170002	Washer Ø12.5xØ48x1.5
6	1	S413260004	Gear Z27
7	1	S414260004	Pawls Carrier Ø8xN2
8	6		Pawl Ø8 (*)
9	6		Pawl Spring Ø8 (*)
10	1	S412830041	Gear Z23
11	1	S413250041	Pinion Z13
12	2	M6017694	Bushing PSM-1214-20
13	1	S413120002	Washer Ø22.5xØ45x1
14	1	S413070004	Pin Ø9xØ12x32.5
15	1	A94133400	Assy Gear Z12
			Gear Z12
	2	S414900080	*Bushing Ø12xØ14x8*
16	1	A94132200	Assy Housing Winch 46
			Housing Winch 46
	1	S414900080	*Bushing Ø12xØ14x8*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	S4133200B3	*Bushing for support*
17	5	M0606303	Screw M8x25 UNI 5931
18	2	A74133700	Bearing Ø75xØ87x26
19	1	S413390080	Spacer
20	1	A94161400	Assy Central Shaft Winch 46
			Central shaft W46 ST
	1	S413880002	*Washer Ø17.2xØ32x1.5*
21			Winch Serial Number Sticker
22	1	S4129400A0	Stripper arm support
23	1	S413240043	Drum W46 C
24	1	S281690097	Red line
25	1	A94127300	Assy Jaws winch 46
			Lower Jaw W46
			Upper Jaw W46
	1	S414280080	*Peeler W46 - 50*
	4	S385970001	*SPRING*
26	4	M0601803	Screw UNI EN ISO 1207 - M6x35 - A4
27	1	S413380019	Stripper Arm W46
28	3	M6007103	Screw M6x50 UNI6107
29	1	S4127000A5	Cover 2 speed W46
30	1	A94136400	Assy Socket W20-80
			Socket Handle W20/80
	1	S415130085	*Washer Ø7.7xØ25x5.8*
	1	M0614303	*Screw M8x20 UNI 6109*

(*) Available with service kit BK4512; see website www.harken.com

Exploded view of IN46.2STGNA - IN46.2STGNC



(*) Installed only on Winch IN46.2STGNA.

Part list of IN46.2STGNA

Winch IN46.2STGNA

A= drum in anodised aluminium

Pos.	Q.ty	Code	Description
1	1	A97412300	Assy Base Winch IN46.2
			Base IN46.2
	1	S413350080	*Roller Ø6x19*
	1	S737270004	*Bushing Ø22xØ25x8.5*
	1	S414890080	*Bushing Ø9xØ11x7*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	M6034408	*Bearing 25x37x7*
2	1	A97306100	Assy Skirt Industrial Winches 46
			Skirt W46
			Product Sticker Industrial Winches 46
3	1	S413020004	Gear Z12
4	1	S741260008	Pin Ø12x60
5	1	S278170002	Washer Ø12.5xØ48x1.5
6	1	S740110004	Gear Z28
7	1	S414260004	Pawls Carrier Ø8xN2
8	6		Pawl Ø8 (*)
9	6		Pawl Spring Ø8 (*)
10	1	S412830041	Gear Z23
11	1	S741250041	Pinion Z13
12	1	S413120002	Washer Ø22.5xØ45x1
13	1	S413070004	Pin Ø9xØ12x32.5
14	1	A94133400	Assy Gear Z12
			Gear Z12
	2	S414900080	*Bushing Ø12xØ14x8*
15	1	A97412400	Assy Housing Winch IN46.2
			Housing Winch 46
	1	S414900080	*Bushing Ø12xØ14x8*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	S7412400B3	*Bushing for support IN46.2*
	1	M6034408	*Bearing 25x37x7*
	1	S737270004	*Bushing Ø22xØ25x8.5*

Pos.	Q.ty	Code	Description
16	5	M0606303	Screw M8x25 UNI 5931
17	2	A74133700	Bearing Ø75xØ87x26
18	1	S413390080	Spacer
19	1	S418760063	Winch Serial Number Sticker
20	1	A97306000	Drum assembly 46 ST GNP
	1	A96595400	*Assy Jaws Winch 46 Arborist*
			Lower Jaw Assembly W46 Arborist
			Upper Jaw W46
	1	S659590080	*Peeler W46 Arborist*
	4	S385970001	*Spring*
	1	S412720053	*Drum W46*
	4	M0601803	*Screw M6x35 UNI EN ISO 1207:1996*
	4	M0601703	*Screw M6x25 Uni 5931*
	1	S281690097	*Red line*
	1	S730320052	*Spacer Drum Winch 46STGNA*
21	1	S6765700A5	Cover 2 speed W46 GNP
22	1	A97413500	Assy Socket IN46.2
			Socket Handle W20/80
	1	S741360003	*Washer for Socket IN46.2*
	1	S415360003	*Screw M6x16 UNI EN ISO 1207:2003*
			precote coating
	1	M6072919	*Lock Washer ø6*
23	1	S757770002	Central Shaft
24	1	S413380019	Stripper Arm W46
25	3	M0635103	Screw M6x16 UNI5931
26	1	A77575800	Stripper Arm Support GNP
			Support GNP
	1	M7576202	*Ball Bearing*
	3	M0603703	*Screw M6x12 UNI5931*
27	3	M6034617	Roller bearing Nadella DL 12 12
28	1	S757760002	Ball Bearing

(*) Available with service kit BK4512; see website www.harken.com

Part list of IN46.2STGNC

Winch IN46.2STGNC

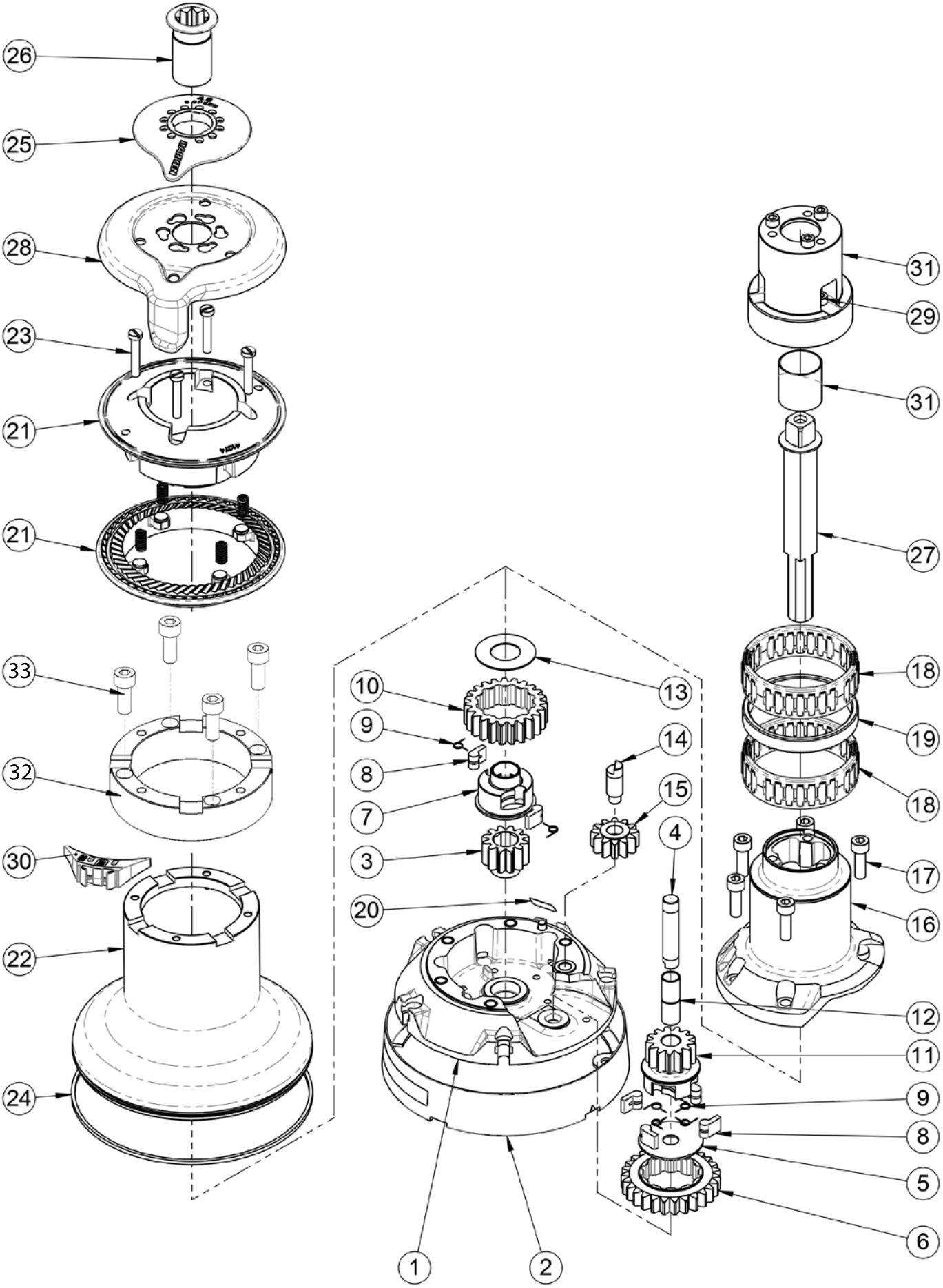
C=drum in chrome bronze

Pos.	Q.ty	Code	Description
1	1	A97412300	Assy Base Winch IN46.2
			Base IN46.2
	1	S413350080	*Roller Ø6x19*
	1	S737270004	*Bushing Ø22xØ25x8.5*
	1	S414890080	*Bushing Ø9xØ11x7*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	M6034408	*Bearing 25x37x7*
2	1	A97306100	Assy Skirt Industrial Winches 46
			Skirt W46
			Product Sticker Industrial Winches 46
3	1	S413020004	Gear Z12
4	1	S741260008	Pin Ø12x60
5	1	S278170002	Washer Ø12.5xØ48x1.5
6	1	S740110004	Gear Z28
7	1	S414260004	Pawls Carrier Ø8xN2
8	6		Pawl Ø8 (*)
9	6		Pawl Spring Ø8 (*)
10	1	S412830041	Gear Z23
11	1	S741250041	Pinion Z13
12	1	S413120002	Washer Ø22.5xØ45x1
13	1	S413070004	Pin Ø9xØ12x32.5
14	1	A94133400	Assy Gear Z12
			Gear Z12
	2	S414900080	*Bushing Ø12xØ14x8*
15	1	A97412400	Assy Housing Winch IN46.2
			Housing Winch 46
	1	S414900080	*Bushing Ø12xØ14x8*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	S7412400B3	*Bushing for support IN46.2*
	1	M6034408	*Bearing 25x37x7*
	1	S737270004	*Bushing Ø22xØ25x8.5*

Pos.	Q.ty	Code	Description
16	5	M0606303	Screw M8x25 UNI 5931
17	2	A74133700	Bearing Ø75xØ87x26
18	1	S413390080	Spacer
19	1	S418760063	Winch Serial Number Sticker
20	1	A96596100	Drum assembly 46 ST GNP
	1	A96595400	*Assy Jaws Winch 46 Arborist*
			Lower Jaw Assembly W46 Arborist
			Upper Jaw W46
	1	S659590080	*Peeler W46 Arborist*
	4	S385970001	*Spring*
	1	S659610043	*Drum W46 ST GNP*
	4	M0601803	*Screw M6x35 UNI EN ISO 1207:1996*
	1	S281690097	*Red line*
21	1	S6765700A5	Cover 2 speed W46 GNP
22	1	A97413500	Assy Socket IN46.2
			Socket Handle W20/80
	1	S741360003	*Washer for Socket IN46.2*
	1	S415360003	*Screw M6x16 UNI EN ISO 1207:2003*
			precote coating
	1	M6072919	*Lock Washer ø6*
23	1	S757770002	Central Shaft
24	1	S413380019	Stripper Arm W46
25	3	M0635103	Screw M6x16 UNI5931
26	1	A77575800	Stripper Arm Support GNP
			Support GNP
	1	M7576202	*Ball Bearing*
	3	M0603703	*Screw M6x12 UNI5931*
27	3	M6034617	Roller bearing Nadella DL 12 12
28	1	S757760002	Ball Bearing

(*) Available with service kit BK4512; see website www.harken.com

Exploded view of IN46.2STGNA-M



Part list of IN46.2STGNA-M

Winch IN46.2STGNA-M

A= drum in anodised aluminium

Pos.	Q.ty	Code	Description
1	1	A94132100	Assy Base Winch IN46.2
			Base IN46.2
	1	S413350080	*Roller Ø6x19*
	1	S4152300A7	*Bushing Ø22xØ25x8.5*
	1	S414890080	*Bushing Ø9xØ11x7*
	1	S413330085	*Bushing Ø12xØ14x11*
2	1	A97306100	Assy Skirt Industrial Winches 46
			Skirt W46
			Product Sticker Industrial Winches 46
3	1	S413020004	Gear Z12
4	1	S413300004	Pin Ø12x60
5	1	S278170002	Washer Ø12.5xØ48x1.5
6	1	S413260004	Gear Z27
7	1	S414260004	Pawls Carrier Ø8xN2
8	6		Pawl Ø8 (*)
9	6		Pawl Spring Ø8 (*)
10	1	S412830041	Gear Z23
11	1	S413250041	Pinion Z13
12	2	M6017694	Bushing PSM-1214-20
13	1	S413120002	Washer Ø22.5xØ45x1
14	1	S413070004	Pin ø9-ø12x32.5
15	1	A94133400	Assy Gear Z12
			Gear Z12
	2	S414900080	*Bushing Ø12xØ14x8*
16	1	A94132200	Assy Housing Winch IN46.2
			Housing Winch 46
	1	S414900080	*Bushing Ø12xØ14x8*
	1	S413330085	*Bushing Ø12xØ14x11*
	1	S4132200B3	*Bushing for support*
17	5	M0606303	Screw M8x25 UNI 5931
18	2	A74133700	Bearing Ø75xØ87x26
19	1	S413390080	Spacer
20	1	S418760063	Winch Serial Number Sticker
21	1	A96595400	*Assy Jaws Winch 46 Arborist*
			Lower Jaw Assembly W46 Arborist
			Upper Jaw W46
22	1	S412720053	Drum 46 ST
23	4	M0601803	Screw UNI EN ISO 1207 M6x35 A4
24	1	S412720053	Red Line
25	1	S6765700A5	Cover 2 speed W46 GNP
26	1	A94136400	Assy Socket IN46.2
			Socket Handle W20/80
	1	S415340003	*Washer for Socket IN46.2*
	1	M0614303	*Screw M8x20 UNI 6109*
27	1	A96595600	Central Shaft
28	1	S413380019	Stripper Arm W46
29	3	M0635103	Screw M6x16 UNI5931
30	1	S659590080	Peeler W46 Arborist
31	1	A76765500	Stripper Arm Support GNP
			Support GNP
	1	S027860098	*Bushing*
	3	M0603703	*Screw M6x12 UNI5931*
32	1	S730320052	Spacer Drum Winch 46STGNA
33	4	M0601703	Screw M6x25 UNI 5931

(*) Available with service kit BK4512; see website www.harken.com

HANDLING

Protect against extreme temperatures: less then -10° C or more then +50° C

Extreme heat may distort composite parts.

Extreme cold can cause the material to become brittle and cause the lubrication to congeal.

STORAGE

Store in clean/dry place

Avoid impact which could damage jaws and skirt; ensure good packaging when shipping.

MAINTENANCE SCHEDULE

Owner name	
Product name and Model	
Serial Number	
Year of manufacture	
Date of purchase	
Date of first use	
Maintenance interval	Annual

Winch Maintenance

Date of Service	Description of Service	Name and Signature of Maintanance Operator	Date of Next Intervention

Date of Service	Description of Service	Name and Signature of Maintanance Operator	Date of Next Intervention

Manufacturer
Harken Italy S.p.A.
Via Marco Biagi 14, 22070 Limido Comasco (CO), Italy
Tel 031.3523511; Fax 031.3520031
Web: www.harken.it
Email: info@harken.it

Worldwide Limited Warranty

Refer to the Harken World Limited Warranty on the website at:

http://www.harken.com/

The product warranty is accepted only if it has been maintained as specified in this Manual by Harken authorized personnel and is accompanied by Maintenance Schedule properly compiled