

Manual

Hydraulic Unit 110 STH/FS 2+2

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DATA FOR HYDRAULIC WINCH
WORLD WIDE DISTRIBUTION LIST



Serial no.: PS _____

Part no.: 710417
08-03-2013

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CONGRATULATIONS

You have purchased an ANDERSEN high quality product. This product is a result of many years of development and experience in producing winches for sailboats. This product gives you a high degree of functionality and many years of safe and easy sail handling.

GENERAL INFORMATION

PLEASE READ THIS BEFORE INSTALLING YOUR ANDERSEN HYDRAULIC UNIT

The hydraulic ANDERSEN unit has several built-in advantages:

- ⇒ Easy to fit on your boat.
- ⇒ Easy to dismantle. Winch and hydraulic unit can be dismantled separately.
- ⇒ Always the possibility of manual (2 speed) winch operation, just by inserting a standard winch handle. No shift-bottom of any kind.

Installation of the winch/unit

Please follow "Mounting Instructions".

About "Mounting Instructions": Ensure that each hole in the deck is bedded, including the big hole.

Ensure that the sealing ring (o-ring) on top of the gear unit is placed in its groove.

When positioning the base of the winch on the deck make sure that the water will be led through the drain holes in the base.

IMPORTANT: Be careful not to put bedding compound in the thread holes in the deck plate.

Hydraulic Installation.

Please follow "Mounting Instructions".

The hydraulic unit should be placed on a dry spot.

Be sure that connection to the Power Pack can be established, using either tubes or hoses.

Use only ½ inch, laminated hoses with 2 layers, according to DIN 20022-2SN.

When connecting the hydraulic motor to the power pack use only the recommended size of fittings, please refer to the datasheet for the winch unit.

The fittings are to be bounded with Loctite® 577.

IMPORTANT: When working with the hydraulic installation be sure that the surroundings are 100 % clean and free from dust. Clean the surroundings before releasing the fittings, and seal all openings with caps.

ATTENTION: We recommend that an emergency-stop, which stops the power pack, is mounted nearby the operation place for the hydraulic winches.

Function of the hydraulic gear unit.

Single or Multiple Gear

Numbers of gears (speeds) of an ANDERSEN hydraulic winch is determined by the winch itself or by the hydraulic Power Pack. ANDERSEN offers single and two speed hydraulic winches. A single speed ANDERSEN hydraulic winch can have multiple speeds if the speeds are controlled by change of flow rates on the Power Pack.

A two speed hydraulic winch will always have minimum 2 speeds regardless of Power Pack since there are two gears in the hydraulic box.

Single Speed

The hydraulic single speed winch is referred to as 2+1 which means that the winch operates with two speeds in manual mode and 1 speed in hydraulic mode. The hydraulic mode is controlled by one control button.

Two Speed

The hydraulic two speed winch is referred to as 2+2 which means that the winch operates with 2 speed in manual mode and 2 speeds in hydraulic mode. The hydraulic speeds are controlled by two control buttons. Included in the box are stickers to mark the control buttons AUTOMATIC and one marked SLOW. The functions of the control buttons are predetermined by the Power Pack.

Activating the buttons makes you choose between fast and slow gear, the slow button makes the winch drive slow and are used at for example trimming the sails.

Automatic Gear Changing

Automatic gear changing is controlled by the hydraulic Power Pack. The buttons are connected to the Power Pack, which accordingly controls the functions of cheese buttons. In order to determine if your ANDERSEN 2+2 winch can change gear automatically you must consult your supplier of the Power Pack

IMPORTANT:

From a safety point of view it is recommended to remove the winch handle when the winch is operating in hydraulic mode.

GENERAL SERVICE INSTRUCTIONS

The hydraulic drive unit is lubricated for life and sealed and need no further maintenance.

The part *on* deck is a standard self tailing winch, and needs regular service. We recommend dismantling, cleaning and lubrication once every second year. Under extensive use, such as racing, charter or blue water sailing, we recommend to make a further lubrication check during the one year period.

We strongly recommend always to use ANDERSEN WINCH GREASE when lubricating your winch. ANDERSEN WINCH GREASE is a high quality silicon/©Teflon grease. Check frequently the drain holes and make sure that they are not blocked by dirt.

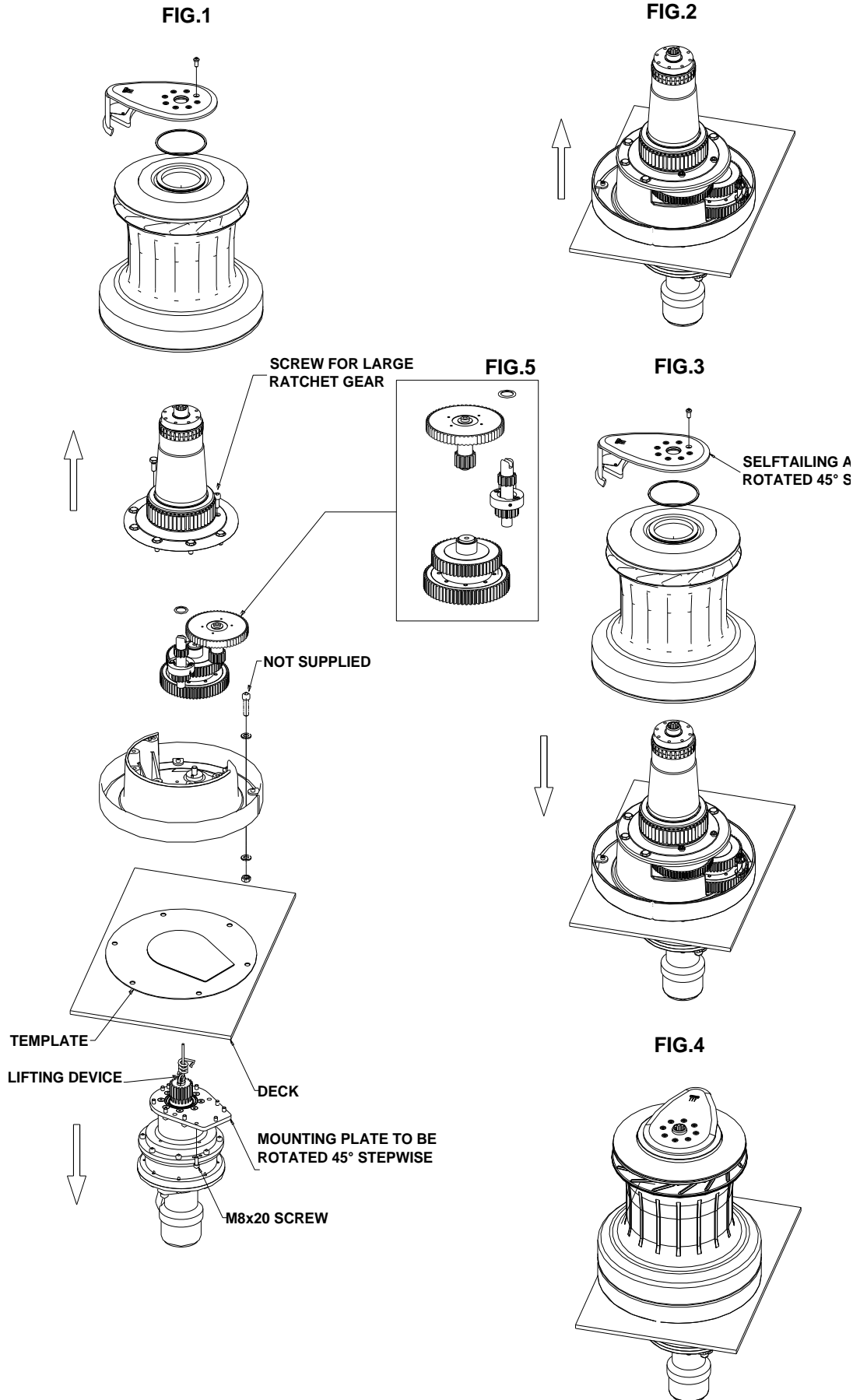
Check once a month the fittings at hoses for leaks and tighten up the fittings if necessary.

Check the mechanical connection between motor and gear unit once a month. Also check the hoses for leaks once a month.

IMPORTANT: Damaged hoses must be replaced immediately.

MOUNTING INSTRUCTION

Hydraulic Unit 110 STH/FS 2+2

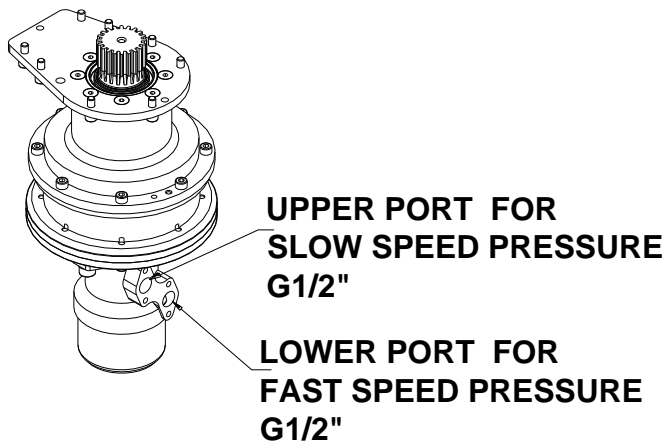


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MOUNTING INSTRUCTION

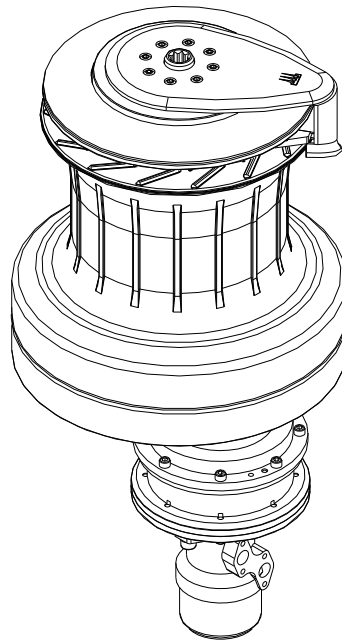
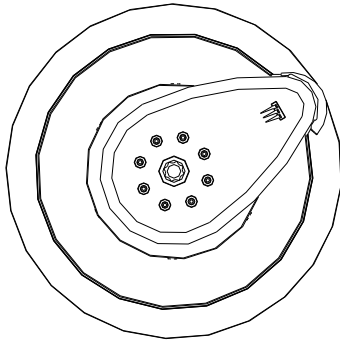
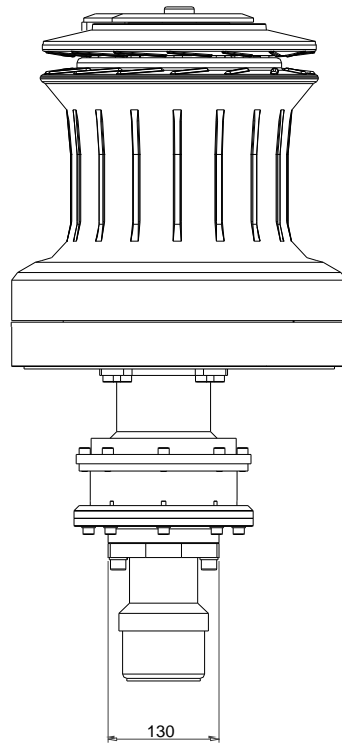
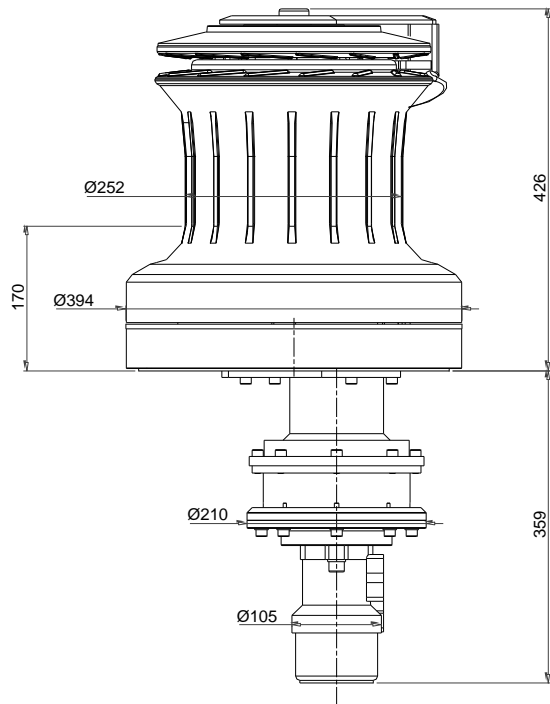
Hydraulic Unit 110 STH/FS 2+2

1. Disassemble winch. Tip: Be careful just to loosen screw for large ratchet gear. Then it is easy to remove winchbase assembled with bearings.
2. Place template on deck, considering optimal rope outlet (see template drawing).
3. Decide which way to turn mounting plate in accordance with your hydraulic connections. NOTE: If you dismantle the motor the gear oil will leak slowly from the gearbox!
4. Fasten Base with M12 Screws (Not supplied).
5. Fasten Gear unit from beneath with M8x20 Screws. Use of lifting device is advised.
6. Reassemble winch (gearwheels in order shown in FIG. 5). Place drum carefully to avoid damage on ball bearing. Rotate selftailing arm as you please.



INSTALLATION DIMENSIONS

Hydraulic Unit 110 STH/FS 2+2

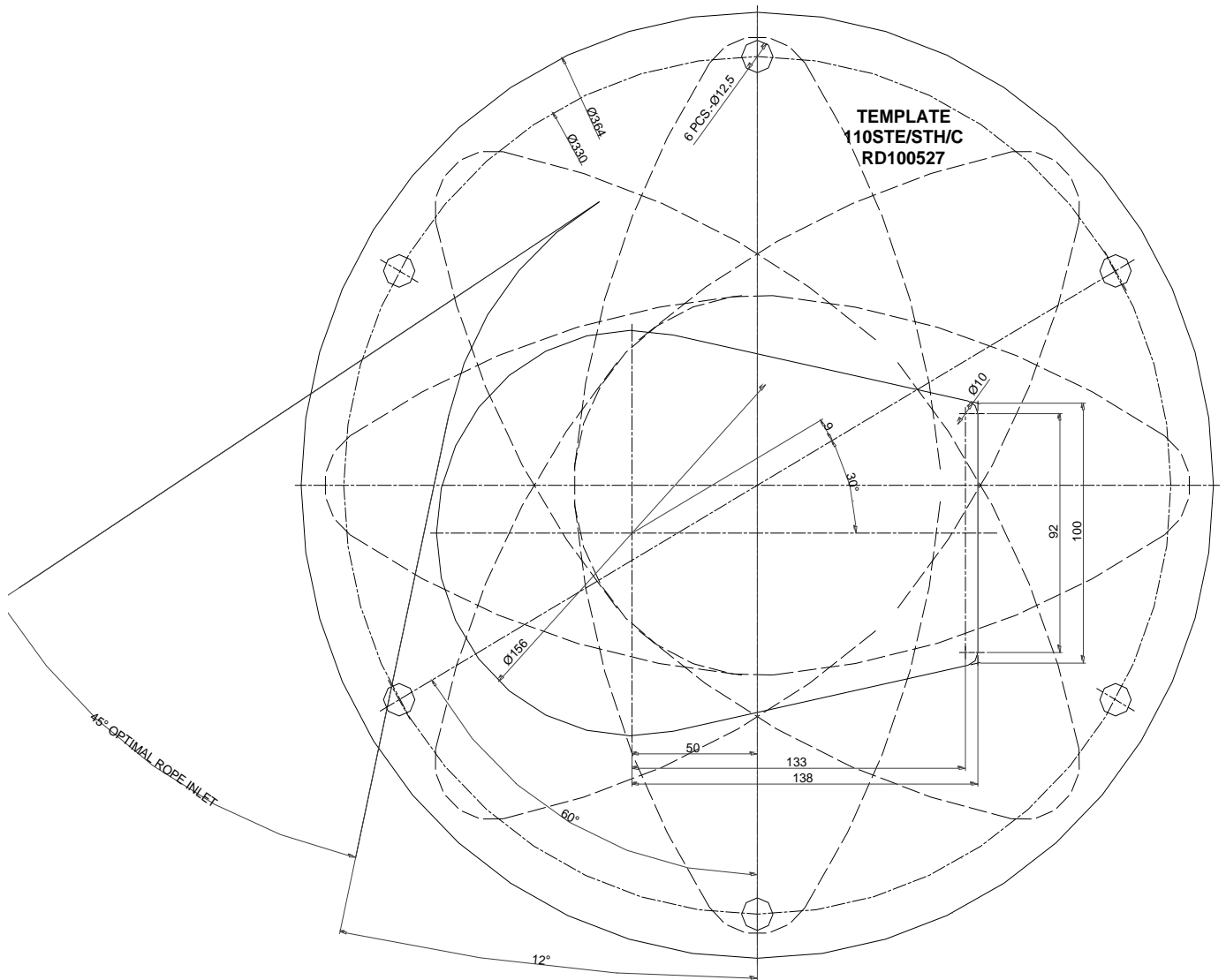


(Non-dimensional accuracy)

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DRILLING TEMPLATE

Hydraulic Unit 110 STH/FS 2+2

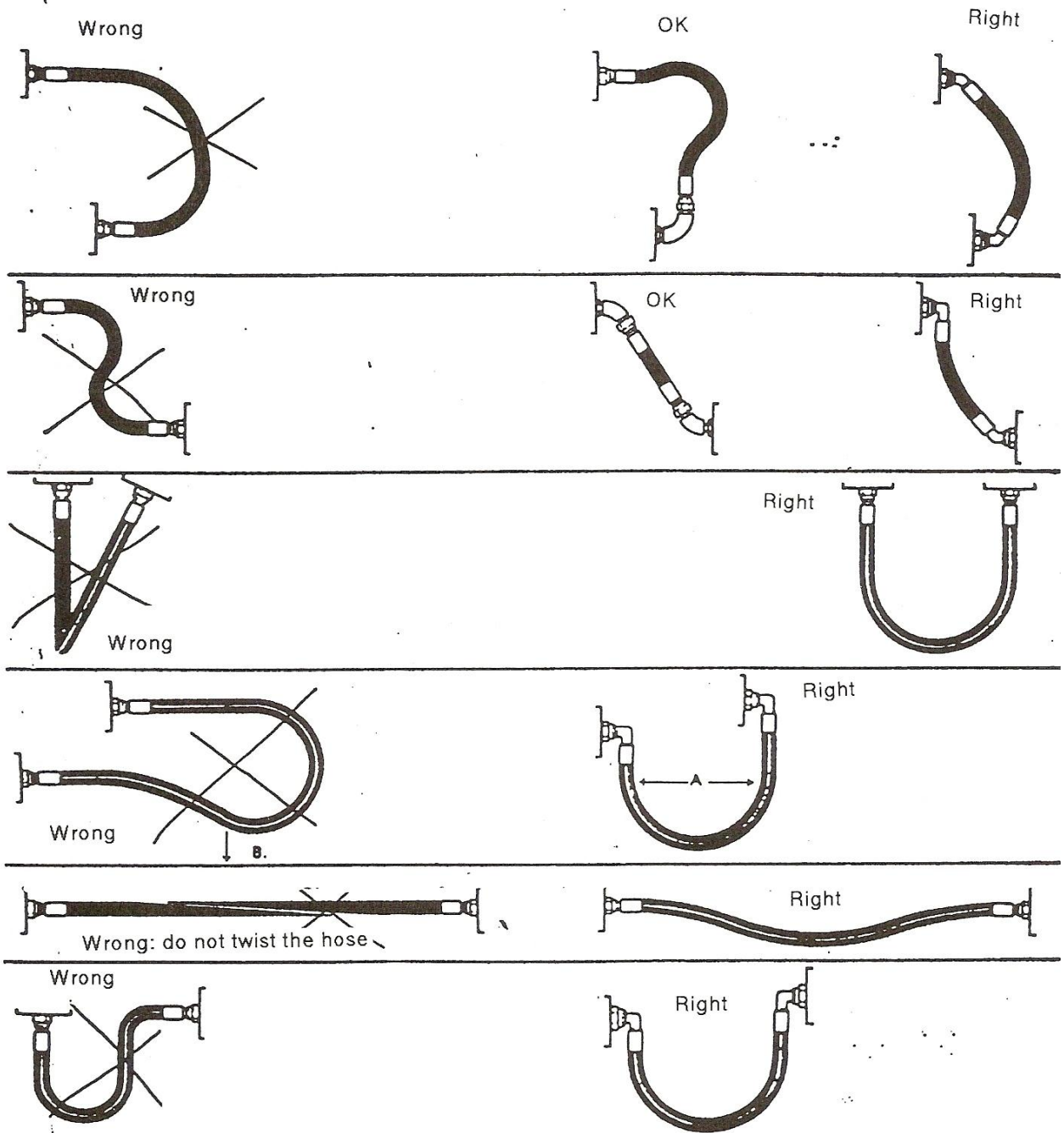


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HOSES

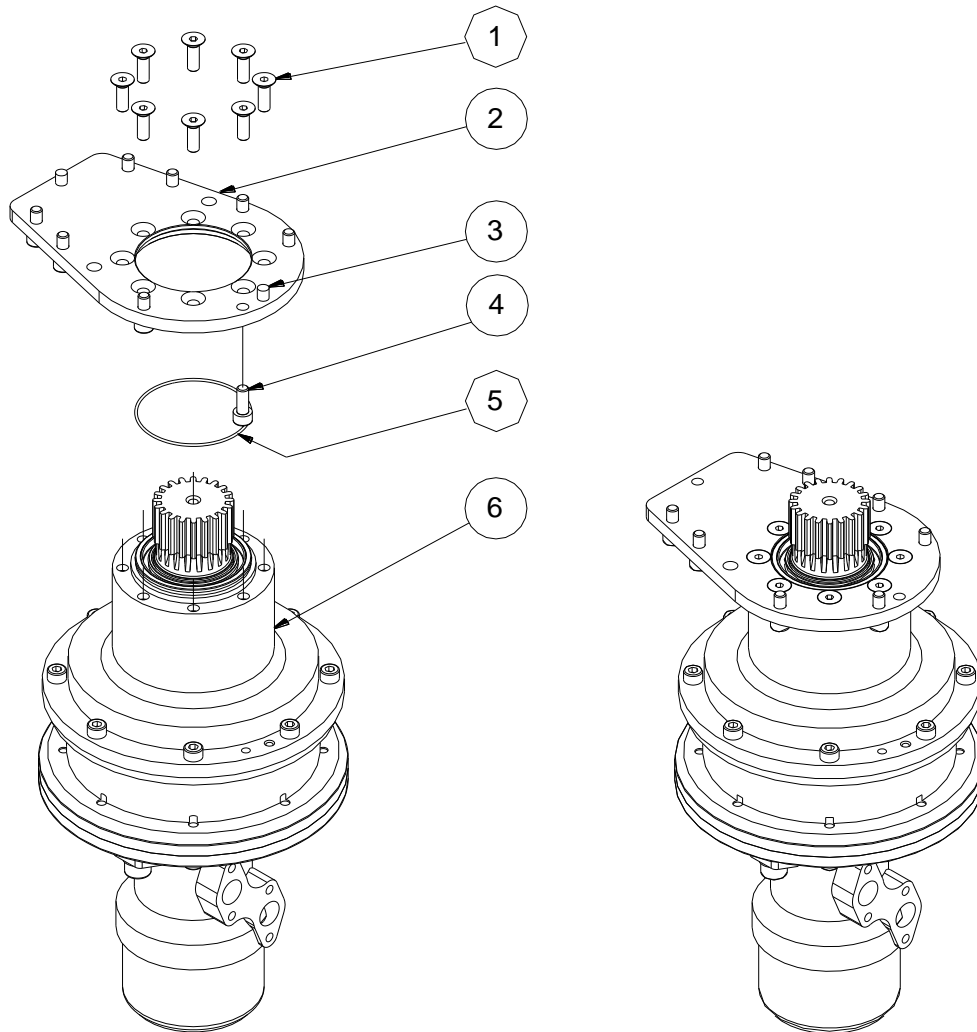
MOUNTING INSTRUCTIONS



EXPLODED VIEW

Hydraulic Unit 110 STH/FS 2+2

767350



PARTS LIST

Hydraulic Unit 110 STH/FS 2+2

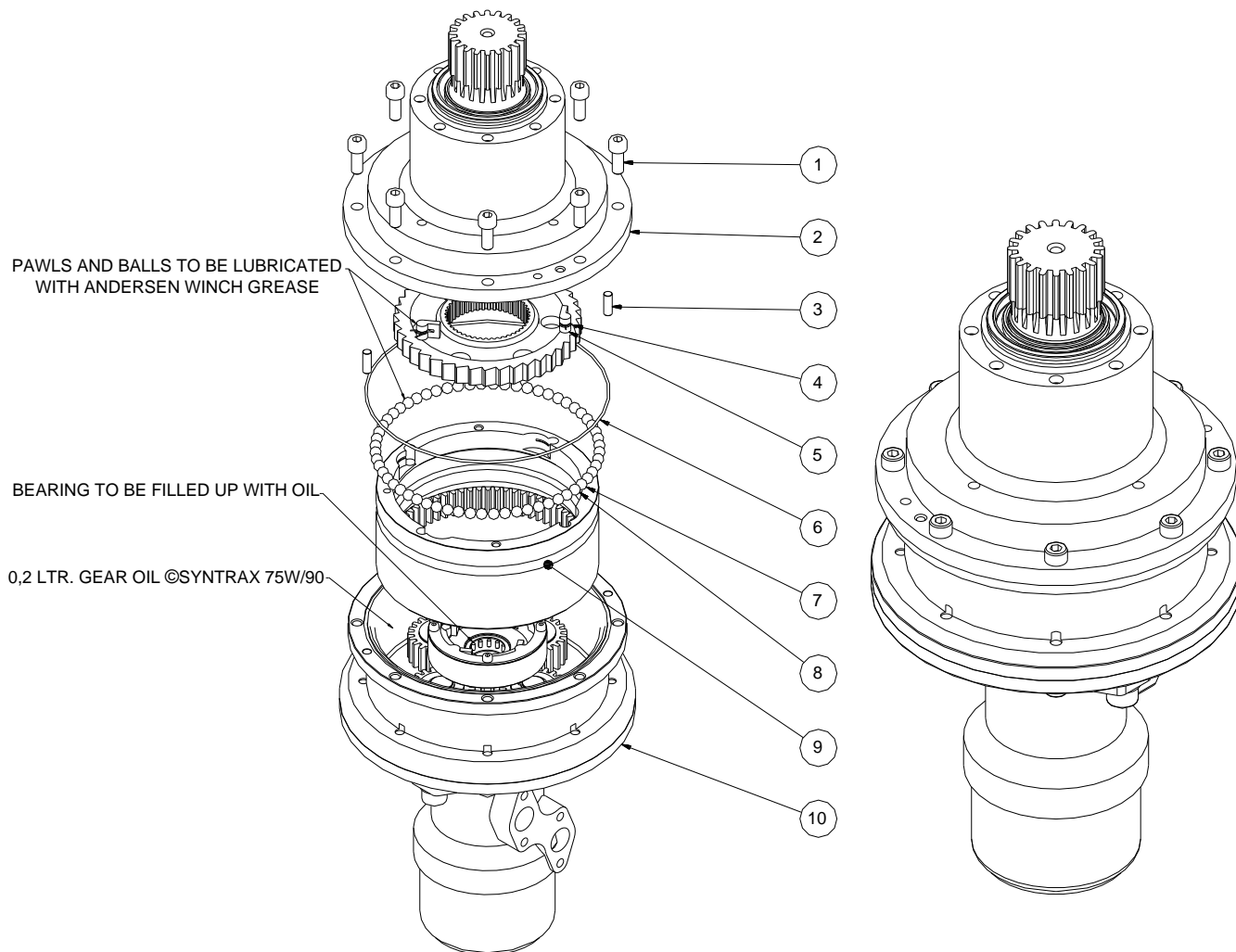
Pos	Qty.	Description	Art. No.
1	8	Screw	DIN7991-A4-M8x25
2	1	Mounting Plate	768700
3	2	Pin	DIN7-A1-8H8X20
4	8	Screw	DIN912-A4-M8x20
5	1	O-Ring	RD100798
6	1	Gearbox	769005
	2	Lifting device M8	512119
	1	Template	RD100527
	1	Manual	710417

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EXPLODED VIEW

Hydraulic Unit 110 STH/FS 2+2

Gearbox Art. No. 769005



PARTS LIST

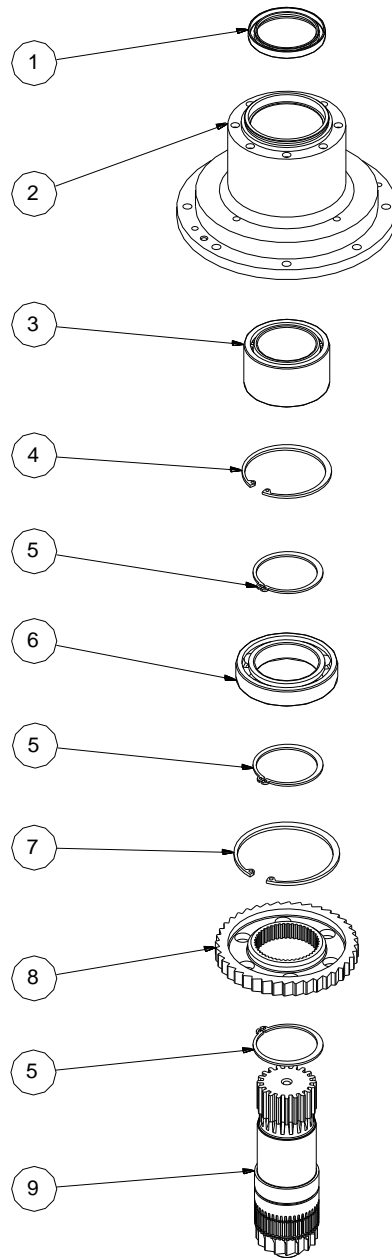
Hydraulic Unit 110 STH/FS 2+2

Gearbox Art. No. 769005

Pos	Qty.	Description	Art. No.
1	8	Screw	DIN912-A4-M8x20
2	1	Gearbox, Top	769020
3	2	Pin	713401
4	4	Arm Spring	713300
5	4	Pawl	713200
6	1	O-ring	RD100799
7	30	Ball, Stainless	526301
8	30	Ball, POM	526302
9	1	Gearwheel	767600
10	1	Gearbox, Bottom	769015

EXPLODED VIEW

Hydraulic Unit 110 STH/FS 2+2
Gearbox Top Art. No. 769020



PARTS LIST

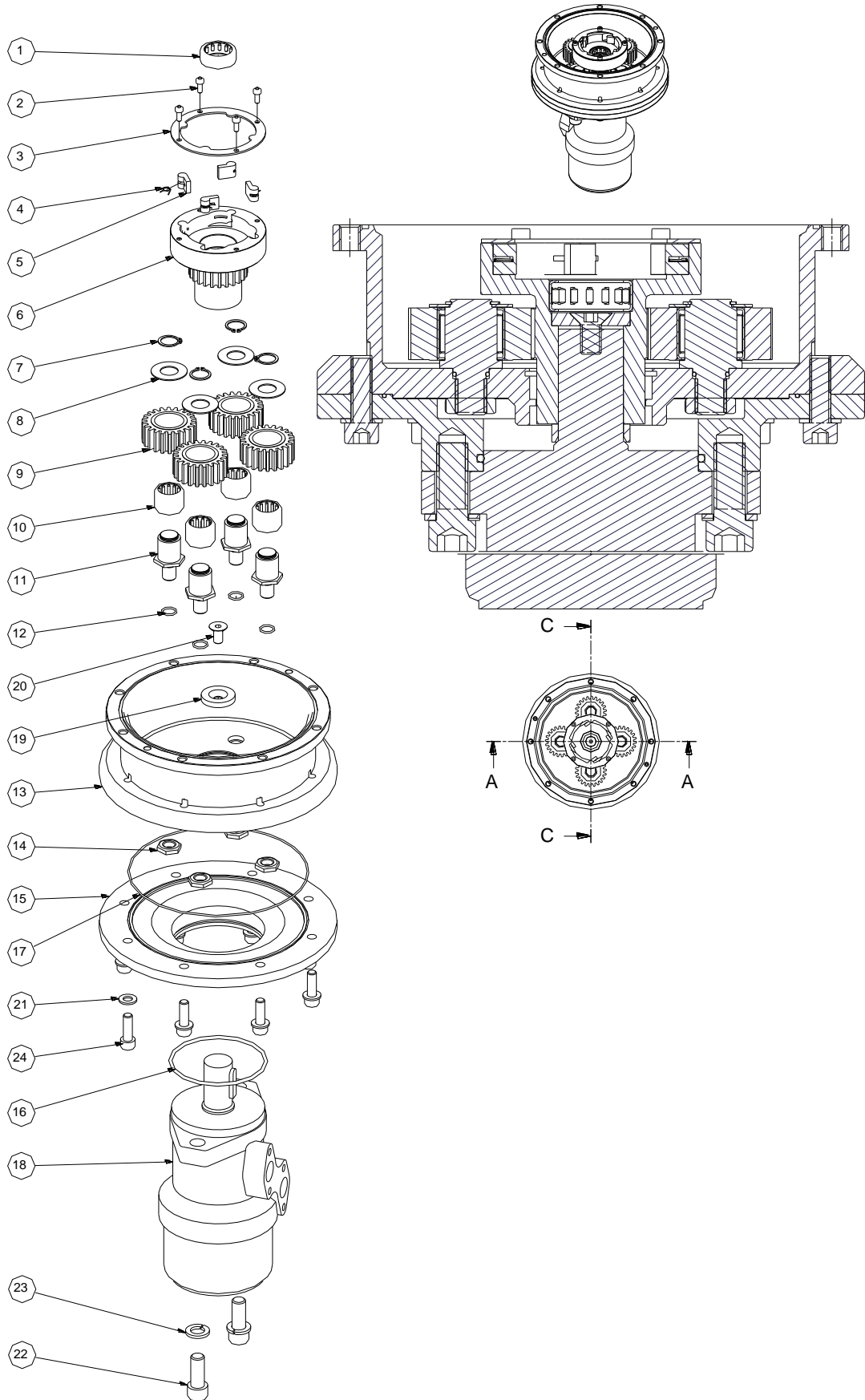
Hydraulic Unit 110 STH/FS 2+2

Gearbox Top Art. No. 769020

Pos	Qty.	Description	Art. No.
1	1	Sealing	RD100800
2	1	Cover for Gearbox	768810
3	1	Roller Bearing	RD100796
4	1	Circlip	DIN472-HT-J80
5	3	Circlip	DIN471-A-60
6	1	Bearing	RD100797
7	1	Circlip	DIN472-95X3
8	1	Gearwheel	767500
9	1	Drive Shaft	767400

EXPLODED VIEW

Hydraulic Unit 110 STH/FS 2+2
Gearbox Bottom Art. No. 769015



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PARTS LIST

Hydraulic Unit 110 STH/FS 2+2 Gearbox Bottom Art. No. 769015

Pos	Qty.	Art. No.	Description
1	1	RD100793	Roller Bearing
2	4	DIN912-A4-M4X10	Screw
3	1	768100	Pawl Wheel
4	4	713300	Arm Spring
5	4	713200	Pawl
6	1	767905	Sun Wheel
7	4	DIN471-A2-A16	Circlip
8	4	768080	Disc
9	4	767700	Gear Wheel
10	4	RD100794	Roller Bearing
11	4	767800	Shaft for Gear Wheel
12	4	RD100394	O-ring
13	1	768910	Geatbox
14	4	DIN439-A4-M12	Nut
15	1	768950	Flange for Gearbox
16	1	RD100058	O-ring
17	1	RD877501	O-ring
18	1	RD100156	Motor EPRM 160 CD
19	1	768960	Disc
20	1	DIN7991-A4-M8x16	Screw
21	8	DIN125A-A4-Ø8,4	Disc
22	2	DIN912-A4-M12X30	Screw
23	2	DIN127B-A4-Ø12	Disc
24	8	DIN912-A4-M8X25	Srew
25	1	768970	Adjustment disc

DATA FOR HYDRAULIC WINCH UNIT

Hydraulic Unit 110 STH/FS 2+2

Winch type	110ST FS
Hydraulic unit type	2+2
Hydraulic motor type:	M+S: EPRM 160CD
Max pressure:	140[bar]
Max oil flow:	45[l] continues
Flow per meter rope – Slow speed	4,3[l/m]
Flow per meter rope – Fast speed	1,5[l/m]
Min. size of fittings between motor and hoses/pipes:	½"
Line size:	16-25 [mm]

NOTE: If you dismantle the motor the gear oil will leak slowly from the gearbox!

WORLDWIDE DISTRIBUTION

(FOR UPDATED DISTRIBUTOR LIS, PLEASE SEE WWW.ANDERSENWINCHES.COM)

WARRANTY

Refer to our website www.ronstan.com/warranty for our terms and conditions.