# MANUAL 28ST – 28ST FS

Version 3.0 Version 1.0





#### **GENERAL INFORMATION**

Due to the best choice of materials and high precision in manufacturing, we recommend, for normal use, only to dismantle, clean and lubricate the winch once every second year. Under extensive use, such as racing, charter or blue water sailing, we recommend to lubricate the winch once every year.

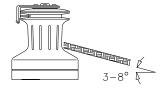
We strongly recommend always using ANDERSEN WINCH GREASE, when lubricating your winch. ANDERSEN WINCH GREASE is a high quality silicone/Teflon grease product. Most other types of grease, including "marine grease" are not suitable for lubrication of winches. Non-suitable grease products can cause malfunction, which could result in fatal injuries for the user and others.

Pawl arm springs should be replaced every second year. Spare arm springs and other parts that may be required are included in the ANDERSEN Service Kit. Please refer to the service instruction for the Service Kit suitable for the specific winch.

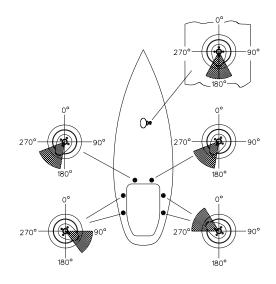
When the winch handle is not in use but the winch is under load, we recommend, from a safety point of view, to remove the winch handle from the winch.

To ensure correct function of the self-tailing unit, only use recommended line sizes. When using the winch with mooring lines <u>DO NOT</u> use the self-tailing function and be sure that the mooring line is not in contact with the self-tailing arm.

To ensure the best possible functioning of the winch, we recommend that the winch is placed in accordance with the line entry shown below.



Be also aware that self-tailing arm is positioned correctly. We recommend having the self-tailing arm positioned within the shaded area. On 12ST and 28ST the position of the self-tailing arm is fixed, making it very important to establish the proper location of the holes prior to drilling these in the deck. On all other models, the self-tailing arm can be placed in several different positions after having installed the winch.



#### **INSTALLATION**

Installing the winch is easy, if you follow these instructions. The numbers in ( ) refer to the position numbers in the parts list.

What is required for the installation?

Allen key (4 mm.).

Allen key (5 mm.).

Ø6.5 mm. (1/4") drill.

5 x M6 (1/4") countersunk head screws and corresponding nuts (length depending on deck thickness).

5 x large washers or backing plate.

Ring spanner to match nuts.

Bedding compound

- 1. Remove screws (1).
- 2. Remove self-tailing arm (2) and drum (4).
- 3. Mark location of boltholes using the template.

**IMPORTANT**: On the 28ST the self-tailing arm (2) is fixed in one position.

Ensure correct positioning of the self-tailing arm, before marking the bolt holes.

- 4. Drill bolt holes Ø6.5mm (1/4"). Be sure that no dust comes into contact with the winch while drilling.
- 5. Apply a light coat of bedding compound, ensuring that each bolthole is bedded. Keep drain grooves clear.
- 6. Fasten base (19) into place using 5 pieces. M6 (1/4") countersunk head screws. Use large washers or a backing plate.
- 7. Assemble in reverse order.

Check that the winch is functioning correctly:

The drum should operate smoothly, by turning the drum clockwise by hand.

The drum must not turn when trying to turn the drum anti clockwise.

While turning the winch handle clockwise the drum should turn fast.

While turning the winch handle anti clockwise the drum should turn slowly.

#### **SERVICE INSTRUCTION**

28ST ver. 3.0 - 28ST FS ver. 1.0

Tools required for service. Allen key (4 mm.). Screwdriver (small). Winch handle. ANDERSEN winch grease.

- 1. Remove screws (1).
- 2. Remove self-tailing arm (2) and drum (4).
- 3. Insert a winch handle. Pull up the drive shaft (5) gently, while turning gear wheel (14) and ratchet gear (13) carefully. Remove drive shaft (5).
- 4. Remove lower pawls (9) arm springs (8) and springs (7). The upper pawls are not removable.
- 5. Remove ratchet gear (13).
- 6. Remove shaft ring (10). It can be difficult to get the shaft over the top of the base (19). By turning and tilting the shaft, it will come off. DO NOT use violence.
- 7. Remove gear wheel (14).
- 8. To release the roller bearing (11), gently insert a small screwdriver between roller bearing and base (19). Remove roller bearing.
- 9. The ratchet gear (15) should be cleaned without being removed from the base (19).
- 10. Clean all parts in benzine. Remember to clean the gear teeth and roller bearing track inside the drum (4).
- 11. Assemble in reverse order. During assemble, by the use of a small soft brush lightly grease all gear teeth, drive shaft, roller bearing, shafts, pawls, springs and bushings. Pawls should only be lubricated with a very thin film of ANDERSEN WINCH GREASE. It is very important that pawls can move freely.

IMPORTANT: When assembling the winch, check the functioning of each pawl by pushing the pawl against the spring. The pawls should move smoothly and automatically return to their normal position, where the pawls engage with the teeth. If the pawls do not function correctly, clean and lubricate the pawls and gears. Check the function of the pawls again to make sure that it works correctly. If the pawls do not work correctly replace the springs and recheck the functioning.

Malfunctioning pawls may lead to unexpected failure of a loaded winch resulting in material damage or fatal personal injury.

Service Kit No: 1 (art. no. 710018) contains service parts 28ST.

For current World Wide Distributor list please see: www.andersenwinches.com

## **PARTS LIST**

28ST ver. 3.0 – 28ST FS ver. 1.0

POS.	QTY.	DESCRIPTION		ART. NO.
1.	3	Screws	ISO 7380-A4-M6×12	
2.	1	Self-tailing arm		596710
3.	1	Self-tailing top	Model ST	537551
3.	1		Model ST FS	537511
3.1	1	Circlip		726400U
3.2	1	Top ring		782100
3.3	6	Screw		781811
3.4	1	Disc	Model ST – (only for 537551)	726310
4.	1	Drum Complete		729110
5.	1	Drive shaft complete.		729000
6.	2	Pawl special	Not remove able	729300
7.	2	Spring		533500
8.	2	Arm spring		713300
9.	2	Pawl		713200
10.	1	Shaft ring		729700
11.	1	Roller bearing complete.		727400
12.	2	Bushing	Not remove able	716501
13.	1	Ratchet gear		711701
14.	1	Gear wheel complete		729600
15.	1	Ratchet gear		729400
16.	1	Bushing		729501
17.	1	Cover		729503
18.	1	Cir clip		729502U
19.	1	Base		731810
	1	Service kit 18		710018

### **EXPLODED VIEW**

28ST ver. 3.0 – 28ST FS ver. 1.0

