

Liberty

Product Information

Preface

This document has been written to assist customer service and sales people identify and provide spare parts and assistance to customers with Liberty windlass.

Liberty is automatic rope/ chain windlass able to handle rope from 16mm up to 20mm and chain from 8mm up to 16mm (depending on chainwheel)

Over the years Liberty has gone through quite few changes so I hope this document will cover at least more important ones.

First Liberty had two piece deckplate and had either Siti Gearbox or Maxwell gearbox.

At the time when Bonfiglioli gearbox was introduced Liberty has been named Quick Fit (QF) to reflect new features on the Windlass:

- deckplate was made from one piece and windlass has been assembled with quick fit spring(between deckplate and spacer tube) allowing just one person to install windlass.

Retrospectively every Liberty with two piece deckplate (and without Bonfiglioli gearbox) is called NQF Liberty.

Difference between NQF and QF liberty is not only in deckplate and gearbox. Changes have been done to drum , chainwheels , shaft..

There is a very little interchangeability between NQF and QF Liberty so it is important to correctly identify which Liberty model your customer has to order correct parts.

Here you will find steps to help you identify QF or NQF Liberty . The Bill Of Materials tables with the exploded views can be used to identify parts required.

Any comments or questions regarding this or other documents can be emailed to me at DHaluza@vetus-maxwell.com

Regards
Dubravka Haluza
Product Engineer

Rev 1.00 14th April 2014 – DH

Specifications

Electric Motor : Direct Current motor

Voltage : 12V DC or 24V DC,

Rated Output : Liberty 1700: 1000W Series Wound (P12072 12V)(P12074 24V)
Liberty 2500: 1200W Series Wound (P12073 12V)
1500W series Wound (SP2960)

Maximum Pull : Liberty 1700 : 770kg (1700 lbs)
Liberty 2500 : 1130kg (2500 lbs)

Haulage speed : Liberty 1700: 19m/min (62ft/min)
(Dependant on Liberty 2500: 20m/min (66ft/min)
the load)

Hydraulic Motor:

Pressure : 83 bar(1200psi)

Flow : 27 l/min (7.3US G/min)

Maximum Pull : 750kg (1672 lbs)

Haulage speed : 14m/min (46ft/min)

Rope size : Liberty 1700: 16mm (5/8")
Liberty 2500: 20mm (3/4")

Chain size : Liberty 1700: 8mm (5/16") short link
Liberty 2500: 10mm (3/8") short link

Options for Liberty:

_ Capstan or Low profile

_ Standard deck clearance 100mm(4") or EDC 200mm(8")

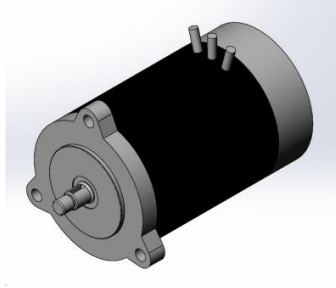
History

Release Date: November 2000

Discontinued: November 2011

Product changes:

2000: Small number of three bolt flanged Cima motor used on Liberty.



2001: Maxwell gearbox introduced (alongside Siti gearbox). Siti gearbox mostly used with 24V motor while Maxwell gearbox were used mostly with 12V motors.

These gearboxes are using different spacer tubes, shafts...

2001: Design of Pressure arm upper changed from three piece (cartridge hold by screw to middle arm –5014 +5087+SP0199) to one plastic part (4611 or 5437) which is retrofittable.



replaced with



2002: Stripper design changed (lobe added) to improve operation.



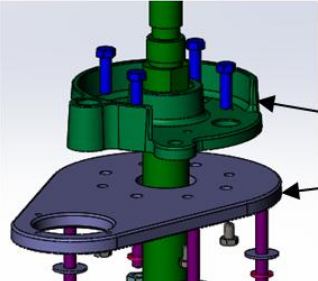
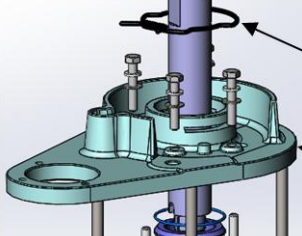
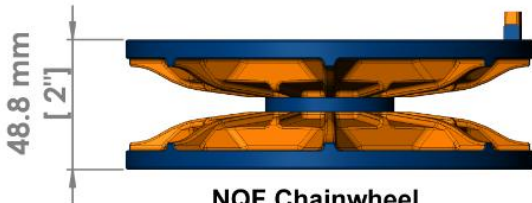
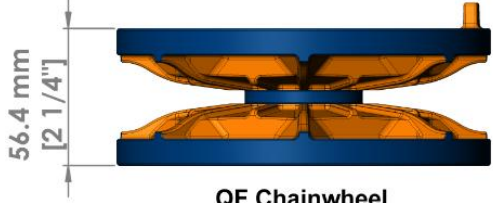
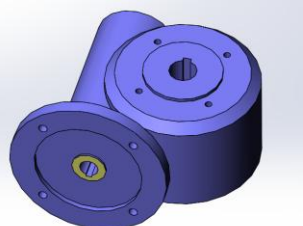
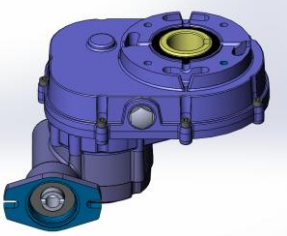
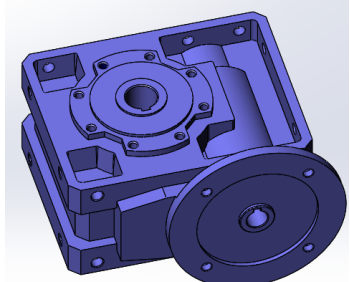
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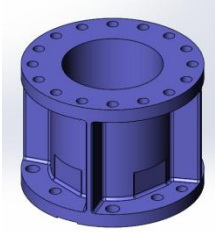
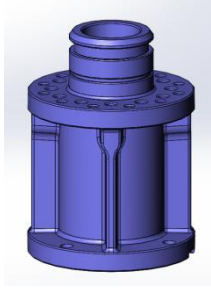


- 2002: Quick Fit (QF) Liberty introduced.
Two piece deckplate replaced with one piece deckplate for easy installation.
Both Siti and Maxwell gearboxes are replaced with Bonfiglioli gearbox .
Most of the parts on the windlass replaced with new ones.
- 2005 Stainless steel stripper designed as option (both for QF and NQF Liberty) as customers experienced lots of breakage of standard stripper.
- 2006 4546 _Quick Release Clip replaced with Circlip SP0878 .
Few customers made complaint that clip get caught by rope and dropped together with gearbox key)

Shafts (5210/5211/5212/5213) replaced with 6175/6176/6177/6178.
To be able to fit circlip on old shafts solution was to put Washer (part no: 6170) together with circlip
- 2006 Small batch of NQF Liberty with Maxwell gearbox sold mostly to NZ customers

Identification process

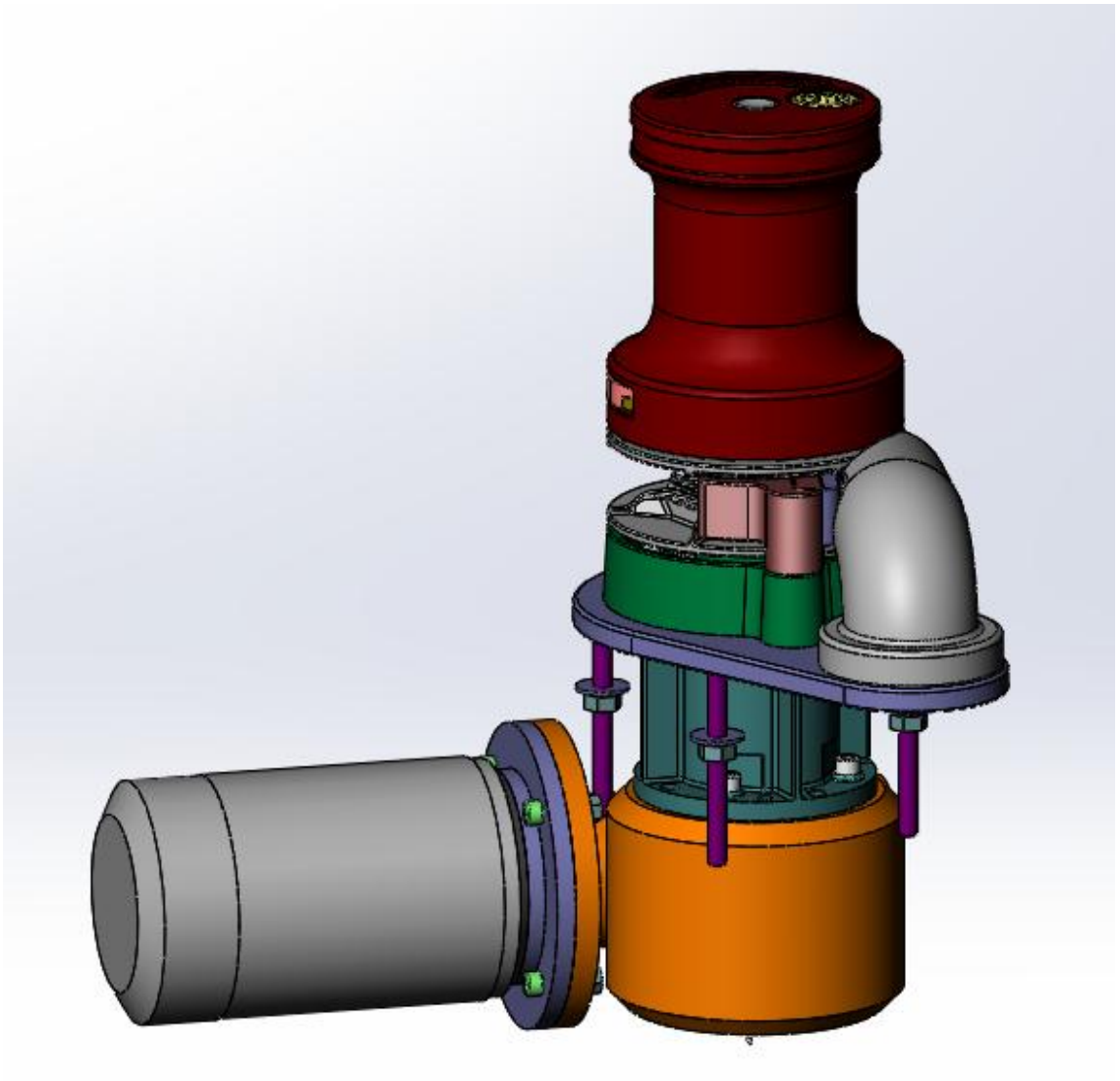
	NON QUICK FIT (NQF) LIBERTY	QUICK FIT (QF) LIBERTY
DECKPLATE	 <p>Two- piece deckplate</p>	 <p>Quick fit spring</p> <p>One piece deckplate</p>
CHAINWHEEL HEIGHT	 <p>48.8 mm [2"]</p> <p>NQF Chainwheel</p>	 <p>56.4 mm [2 1/4"]</p> <p>QF Chainwheel</p>
GEARBOX	 <p>SP2909_SITI gearbox</p> <p>OR</p>  <p>P9508022_MAXWELL gearbox</p>	 <p>SP3304_BONFIGLIOLI gearbox</p>

SPACER TUBE		 <p data-bbox="943 405 1477 434">Spacer tube with neck - used only on QF Liberty</p>
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1. NQF Liberty with Siti gearbox

Manufactured from 2000 to 2002 and mostly used with 24V motor.

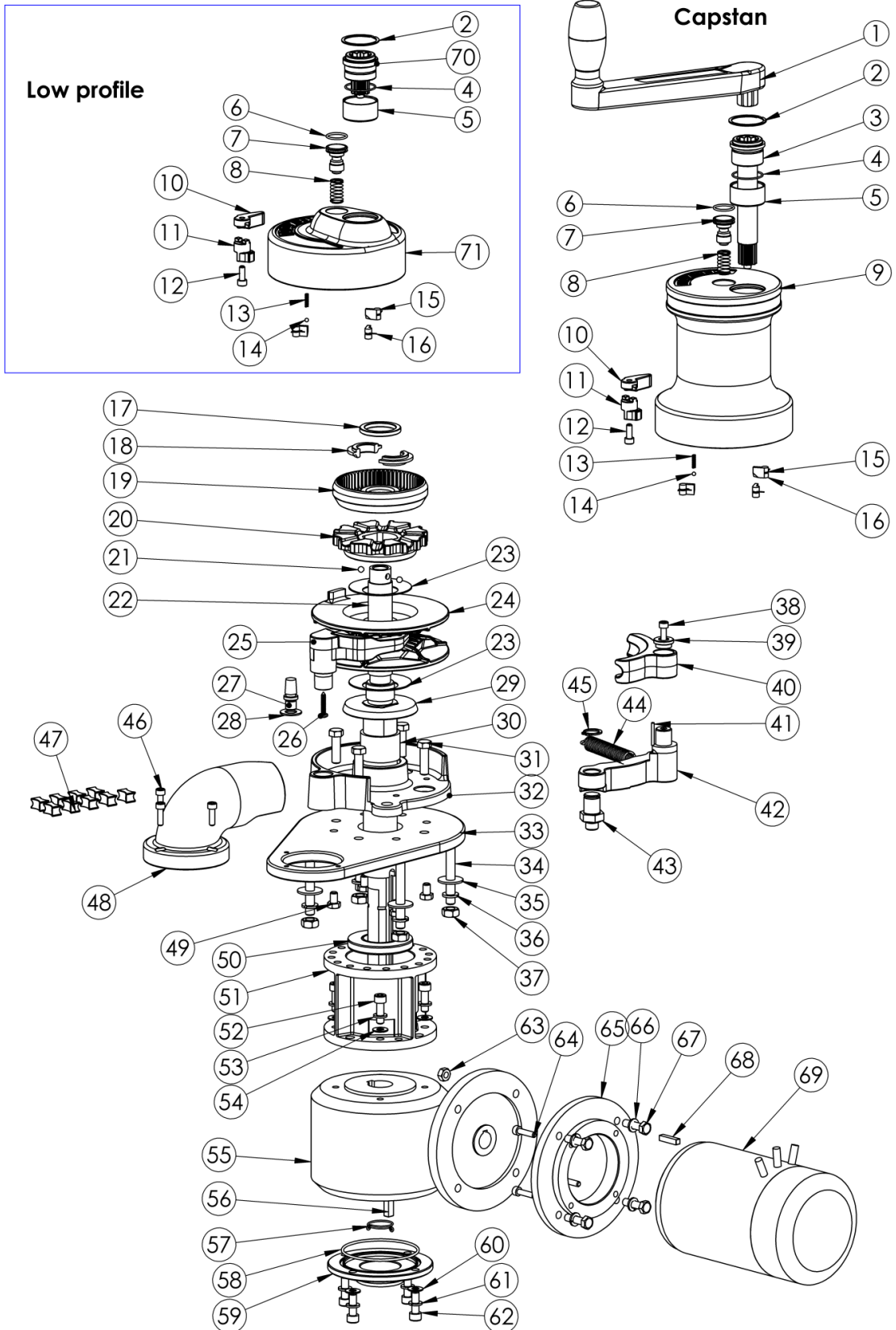
Limited number of windlass parts are available. For further information please contact Maxwell office.



Windlass Parts

NQF LIBERTY with SITI Gearbox

Low profile



Windlass Parts_NQF Liberty with SITI Gearbox

Item	Component description	Component number	Qty
1	Handle	P103865	1
2	Retaining ring	SP0893	1
3	Drive Pinion Capstan	5004	1
4	O-ring	SP2762	1
5	Bearing	SP0696	1
6	O-ring	SP0720	1
7	Quick Release Button	4975	1
8	Quick Release Spring	5017	1
9	Drum	4601	1
10	Drive pin Lever	5002	1
11	Drive pin Lower Arm	5001	1
12	Capscrew M6	SP0170	1
13	Spring	5101	1
14	Bearing	SP0695	1
15	Pawl	4627	3
16	Pawl Spring	SP3119	3
17	Collet Retaining Ring	5046	1
18	Collet	4936	2
19	Clutch Nut	5012	1
20	Upper Clutch Cone	4685	1
21	Bearing	SP0603	2
22	Mainshaft Capstan 4" TDC	4600	1
	Mainshaft LP 4" TDC	4617	1
	Mainshaft Capstan 8" TDC	5272	1
	Mainshaft LP 8" TDC	5274	1
23	Belleville Washer	5015	2
24	Chainwheel 10mm-3/8"	5040	1
	Chainwheel 5/16"	5348	1
	Chainwheel 8mm	5446	1
25	Stripper -10mm-3/8" chain	4619	1
	Stripper -8mm-5/16" chain	5349	1
	SS Stripper -10mm-3/8"	P103304	1
	SS Stripper -8mm-5/16"	P103305	1
26	Screw	SP0063	1
27	Retaining Pin	5093	1
28	Washer	SP0424	1
29	Lower Clutch Cone	5000	1
30	Deckplate Bearing	4609	1
31	Bolt	SP0221	4
32	Deckplate	4608	1
33	Deckplate Adaptor	5072	1
34	Stud 4"	5016	4
	Stud 8"	5224	4

Item	Component description	Component number	Qty
35	Flat washer	3843	4
36	Spring washer	SP0466	4
37	Nut	SP0371	4
38	Capscrew	SP0172	1
39	Retaining Washer	5088	1
40	Pressure Arm Upper 8mm-5/16"	5347	1
	Pressure Arm Upper 10mm-3/8"	4611	1
41	Tension Pin	SP0538	1
42	Pressure Arm Base 8mm-5/16"	5350	1
	Pressure Arm Base 10mm-3/8"	4856	1
43	Pressure Arm Pivot	4669	1
44	Spring	5018	1
45	Circlip	SP0896	1
46	Capscrew	SP0172	3
47	Chain spacer Kit 8mm	P101545	1
	Chain spacer Kit 5/16", 10mm - 3/8"	P101531	1
48	Chainpipe	4674	1
49	Bolt	SP0221	4
50	Seal	SP2765	1
51	Spacer Tube 4"	5228	1
	Spacer Tube 8"	5275	1
52	Capscrew	SP0158	4
53	Spring washer	SP0467	4
54	Flat washer	SP0428	4
55	SITI Gearbox	SP2909	1
56	Key	4635	1
57	Quick change clip	4547	1
58	O-ring	SP0723	1
59	End cap-Siti Gearbox	5227	1
60	Flat washer	SP0428	4
61	Spring Washer	SP0467	4
62	Capscrew	SP0158	4
63	Nut	SP0366	4
64	Capscrew	SP0175	4
65	Flange Adaptor for P11112 motor	5402	1
	Flange Adaptor for SP2960	4592	1
66	Spring Washer	SP0467	4
67	Bolt	SP0279	4
68	Key	5116	1
69	Motor (1000W 12V)	P12072	1
	Motor (1500W 24V)	SP2960	1
70	Drive Pinion LP	4691	1
71	Top Cover	4689	1

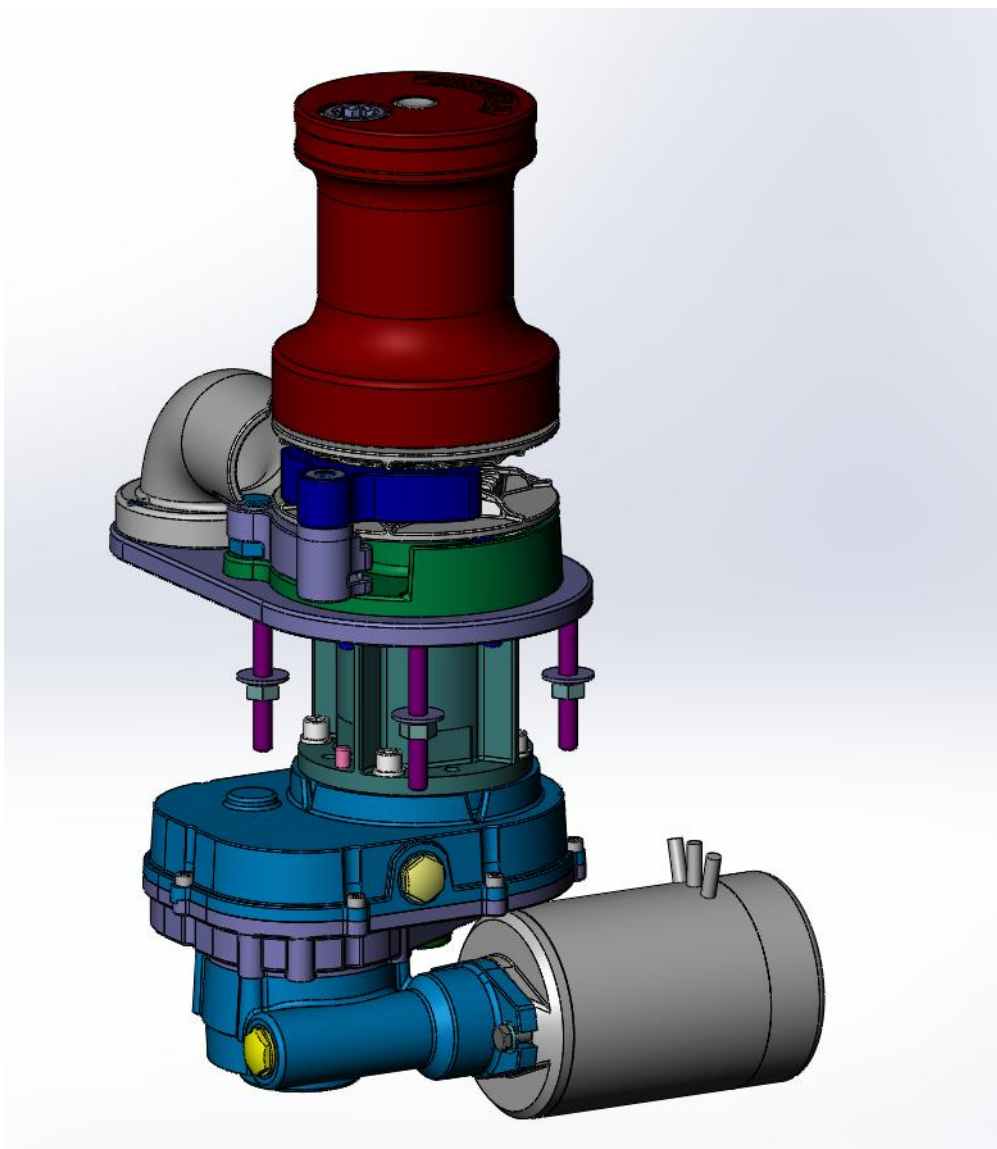
Available Kits:

P101512	Chainwheel assembly 10mm -3/8" NQF (includes 24, 25,26, 40,47)
P101541	Chainwheel assembly 5/16" NQF (includes 24, 25,26,40,47)
P101549	Chainwheel assembly 8mm NQF (includes 24, 25,26,40,47)

2 . NQF Liberty with Maxwell gearbox

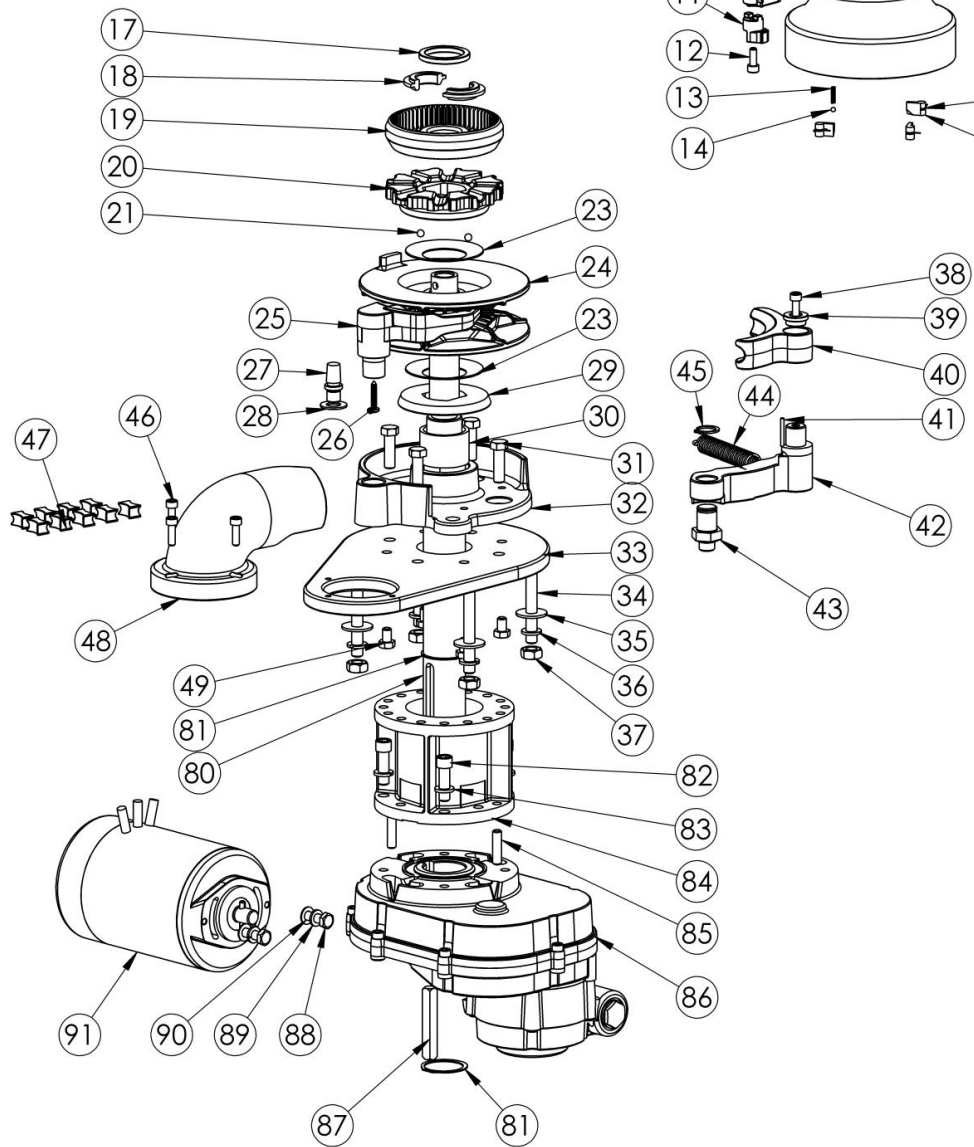
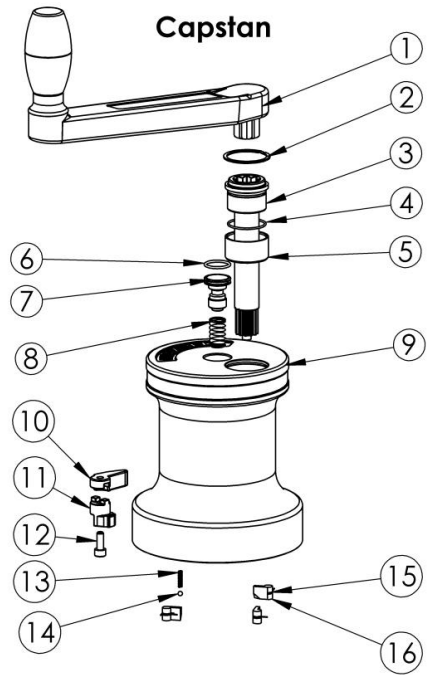
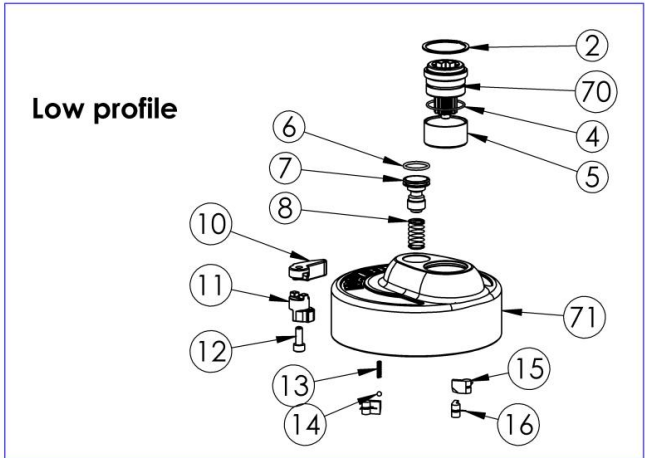
Manufactured from 2001-2002

Limited number of windlass parts are available. For further information please contact Maxwell office .



Windlass Parts

NQF LIBERTY with MAXWELL Gearbox



Windlass Parts_NQF Liberty with Maxwell gearbox

Item	Component description	Component number	Qty
1	Handle	P103865	1
2	Retaining ring	SP0893	1
3	Drive Pinion Capstan	5004	1
4	O-ring	SP2762	1
5	Bearing	SP0696	1
6	O-ring	SP0720	1
7	Quick Release Button	4975	1
8	Quick Release Spring	5017	1
9	Drum	4601	1
10	Drive pin Lever	5002	1
11	Drive pin Lower Arm	5001	1
12	Capscrew M6	SP0170	1
13	Spring	5101	1
14	Bearing	SP0695	1
15	Pawl	4627	3
16	Pawl Spring	SP3119	3
17	Collet Retaining Ring	5046	1
18	Collet	4936	2
19	Clutch Nut	5012	1
20	Upper Clutch Cone	4685	1
21	Bearing	SP0603	2
23	Belleville Washer	5015	2
24	Chainwheel 10mm-3/8"	5040	1
	Chainwheel 5/16"	5348	1
	Chainwheel 8mm	5446	1
25	Stripper -10mm-3/8" chain	4619	1
	Stripper -8mm-5/16" chain	5349	1
	SS Stripper -10mm-3/8"	P103304	1
	SS Stripper -8mm-5/16"	P103305	1
26	Screw	SP0063	1
27	Retaining Pin	5093	1
28	Washer	SP0424	1
29	Lower Clutch Cone	5000	1
30	Deckplate Bearing	4609	1
31	Bolt	SP0221	4
32	Deckplate	4608	1
33	Deckplate Adaptor	5072	1
34	Stud 4"	5016	4
	Stud 8"	5224	4

Item	Component description	Component number	Qty
35	Flat washer	3843	4
36	Spring washer	SP0466	4
37	Nut	SP0371	4
38	Capscrew	SP0172	1
39	Retaining Washer	5088	1
40	Pressure Arm Upper 8mm-5/16"	5347	1
	Pressure Arm Upper 10mm-3/8"	4611	1
41	Tension Pin	SP0538	1
42	Pressure Arm Base 8mm-5/16"	5350	1
	Pressure Arm Base 10mm-3/8"	4856	1
43	Pressure Arm Pivot	4669	1
44	Spring	5018	1
45	Circlip	SP0896	1
46	Capscrew	SP0172	3
47	Chain spacer Kit 8mm	P101545	1
	Chain spacer Kit 5/16", 10mm - 3/8"	P101531	1
48	Chainpipe	4674	1
49	Bolt	SP0221	4
70	Drive Pinion LP	4691	1
71	Top Cover	4689	1
80	Mainshaft Capstan 4" TDC	5044	1
	Mainshaft LP 4" TDC	5045	1
	Mainshaft Capstan 8" TDC	5271	1
	Mainshaft LP 8" TDC	5273	1
81	Circlip	SP0846	2
82	Capscrew	SP2484	4
83	Spring washer	SP0457	4
84	Spacer Tube 4"	5009	1
	Spacer Tube 8"	3204	1
85	Stop Pin	3480	2
86	Gearbox Maxwell	P9508023	1
87	Key	3150	1
88	Bolt	SP0288	2
89	Spring Washer	SP0467	2
90	Flat washer	SP0413	2
91	Motor	P12073	1
92			

Available Kits:

P101512	Chainwheel assembly 10mm -3/8" NQF (includes 24, 25,26, 40,47)
P101541	Chainwheel assembly 5/16" NQF (includes 24, 25,26,40,47)
P101549	Chainwheel assembly 8mm NQF (includes 24, 25,26,40,47)

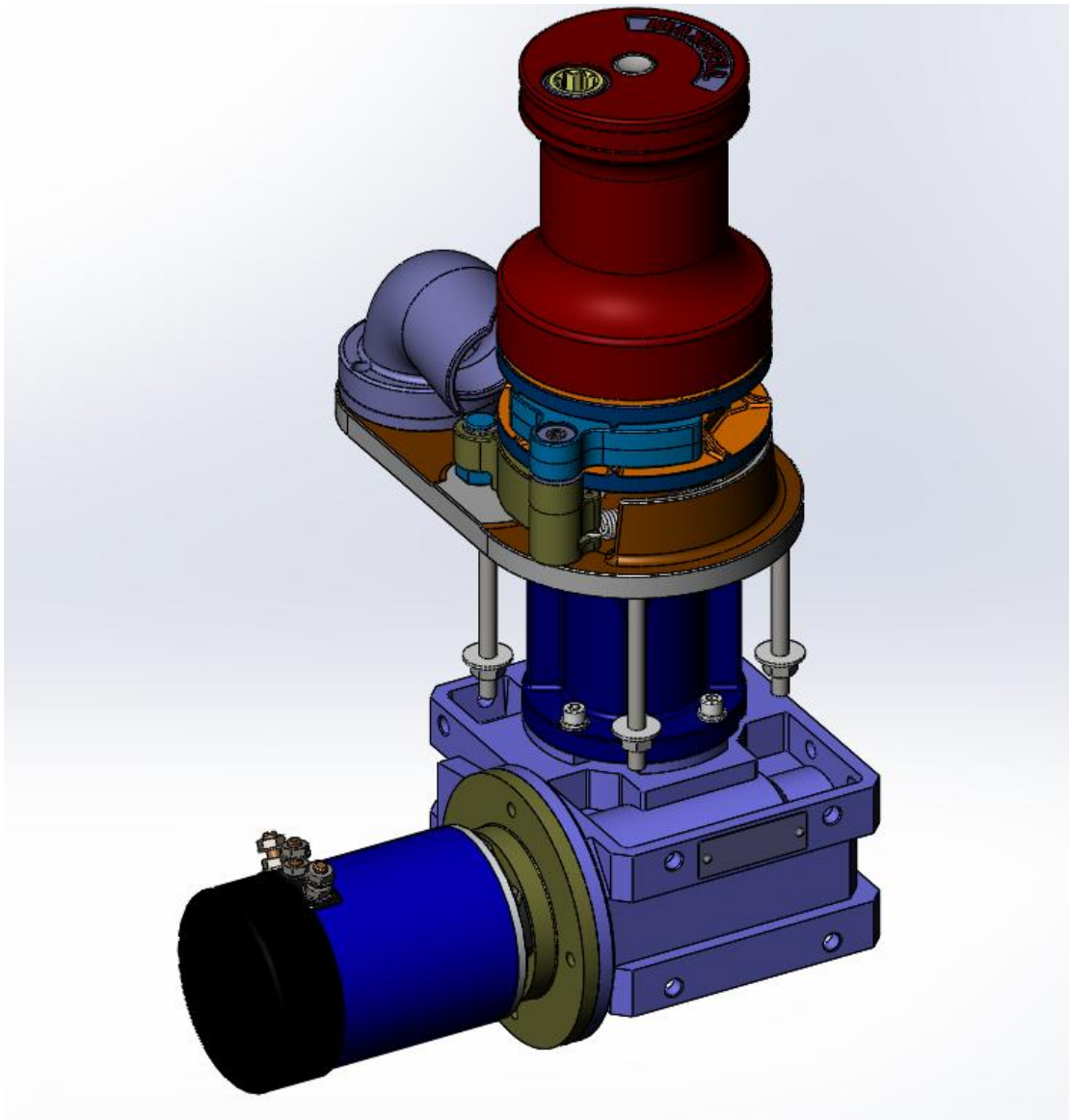
3. QF Liberty

Manufactured from 2002 -2011.

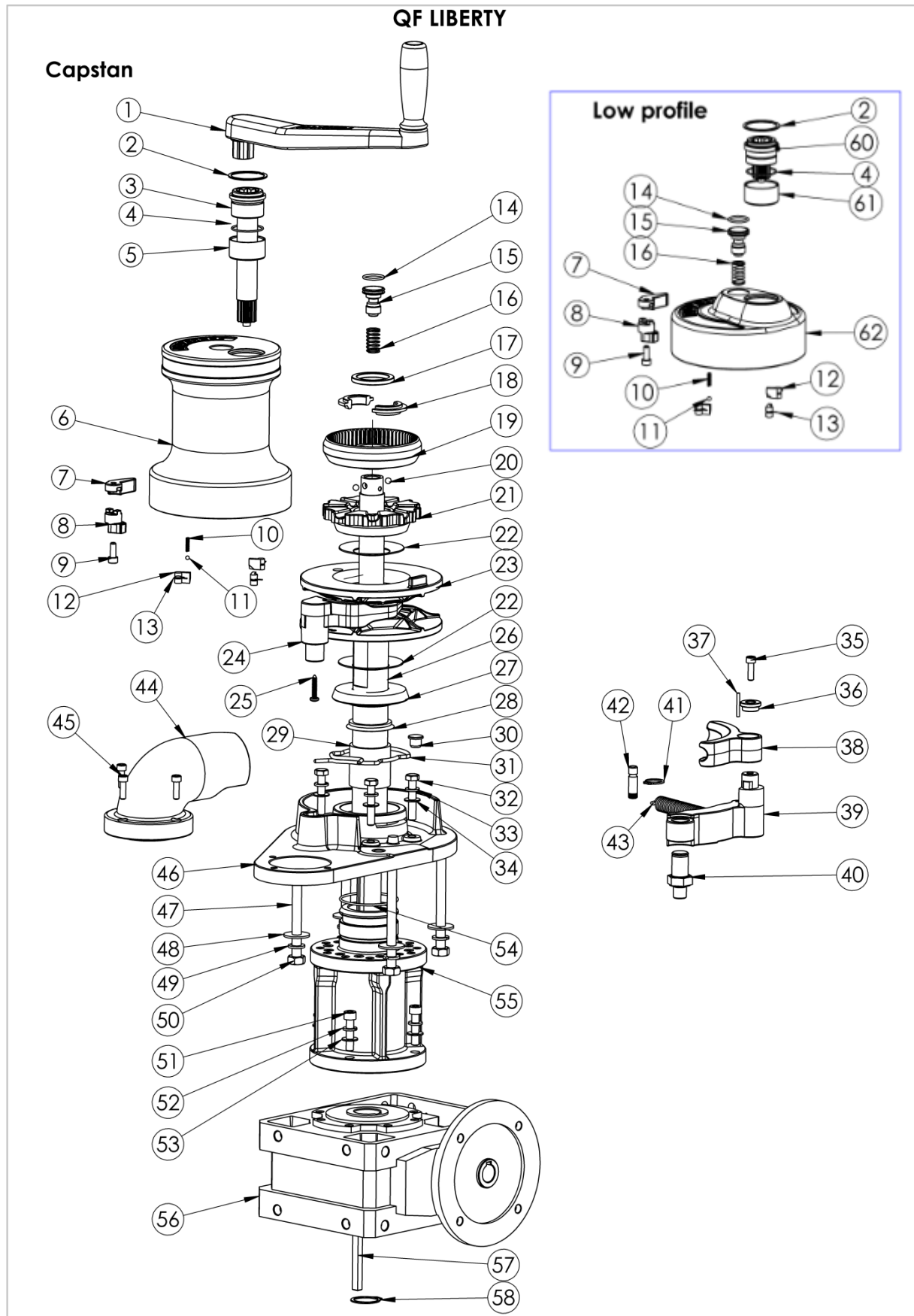
Two piece deckplate (on NQF Liberty) became one piece deckplate with spring to hold spacer tube allowing easy installation . This Liberty is called Quick Fit Liberty.

Liberty went thru lots of design changes : new chainwheel , spacer tube ,deckplate, shafts, so most of the parts are not retrofitable to NQF liberty.

Quick release clip replaced with circlip in 2006.



Windlass Parts



Windlass Parts_QF Liberty

Item	Component description	Component number	Qty
1	Handle	P103865	1
2	Retaining ring	SP0893	1
3	Drive Pinion Capstan	5004	1
4	O-ring	SP2762	1
5	Bearing	SP0696	1
6	Drum	5571C	1
7	Drive pin Lever	5002	1
8	Drive pin Lower Arm	5001	1
9	Capscrew M6	SP0170	1
10	Drive pin Lever	5002	1
11	Drive pin Lower Arm	5001	1
12	Capscrew M6	SP0170	1
10	Spring	5101	1
11	Bearing	SP0695	1
12	Pawl	4627	3
13	Pawl Spring	SP3119	3
14	O-ring	SP0720	1
15	Quick Release Button	4975	1
16	Quick Release Spring	5017	1
17	Thrust Washer	5046	1
18	Collet	4936	2
19	Clutch Nut	5012	1
20	Bearing	SP0603	2
21	Upper Clutch Cone	5219	1
22	Belleville Washer	5015	2
23	Chainwheel 10mm-3/8"	5220	1
	Chainwheel 5/16"	5346	1
	Chainwheel 8mm	5443	1
24	Stripper -10mm-3/8" chain	5222	1
	Stripper -8mm-5/16" chain	5428	1
	SS Stripper -10mm-3/8"	P103302	1
	SS Stripper - 8mm-5/16"	P103303	1
25	Screw	SP0063	1
26	Mainshaft Capstan 4" TDC *	5210	1
	Mainshaft LP 4" TDC *	5211	1
	Mainshaft Capstan 8" TDC *	5212	1
	Mainshaft LP 8" TDC *	5213	1
	Mainshaft Capstan 4" TDC **	6175	1
	Mainshaft LP 4" TDC **	6176	1
	Mainshaft Capstan 8" TDC **	6177	1
	Mainshaft LP 8" TDC **	6178	1

Item	Component description	Component number	Qty
27	Lower Clutch Cone	5218	1
28	V-ring Seal	SP0740	1
29	Deckplate Bearing	SP0657	1
30	Deckplate plug	5978	1
31	Quick Fit Spring	5144	1
32	Bolt	SP0291	4
33	Spring washer	SP0467	4
34	Flat Washer	SP0428	4
35	Capscrew	SP0172	1
36	Retaining Washer	5088	1
37	Tension Pin	SP0538	1
38	Pressure Arm Upper 8mm-5/16"	5347	1
	Pressure Arm Upper 10mm-3/8"	4611	1
39	Pressure Arm Base	5429	1
40	Pressure Arm Pivot	5209	1
41	Circlip	SP0896	1
42	Pin	5214	1
43	Spring	5018	1
44	Chainpipe	4674	1
45	Capscrew	SP0172	3
46	Deckplate	5208	1
47	Stud 4"	5225	4
	Stud 8"	4710	4
48	Flat washer	3843	4
49	Spring washer	SP0466	4
50	Nut	SP0371	4
51	Capscrew	SP0157	4
52	Spring washer	SP0467	4
53	Flat washer	SP0428	4
54	O- ring	SP2763	1
55	Spacer Tube 4"	5215	1
	Spacer Tube 8"	5216	1
56	Gearbox Bonfiglioli	SP3304	1
57	Gearbox Key	4635	1
58	Quick Release Clip	4547	1
	Circlip	SP0878	1
60	Drive Pinion LP	4691	1
61	Bearing	5610	1
62	Top Cover	4689	1
63	Chain spacer Kit 8mm	P100545	1
	Chain spacer Kit 5/16", 3/8" 10mm	P101531	

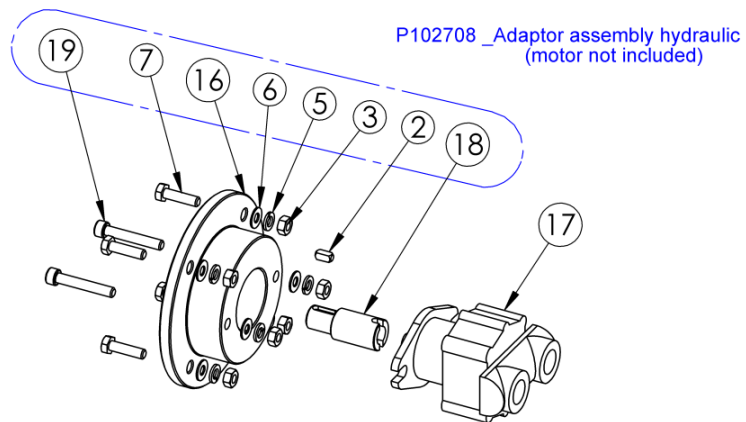
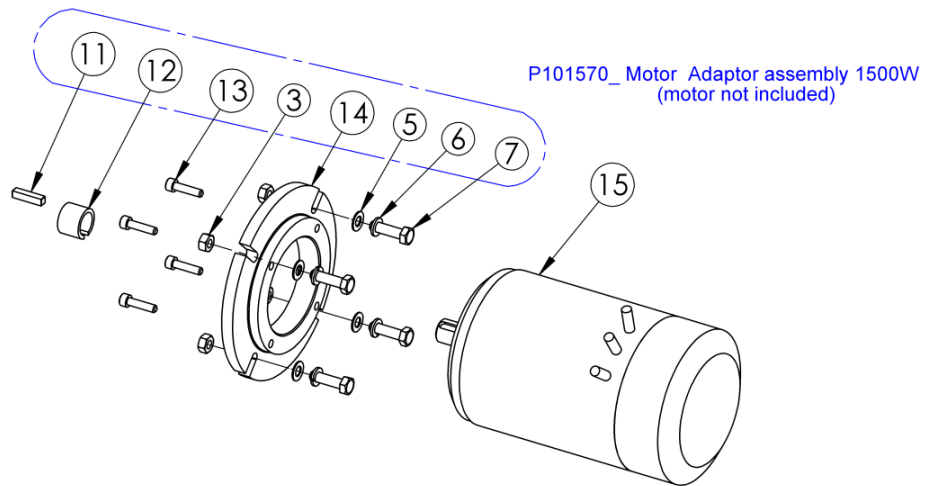
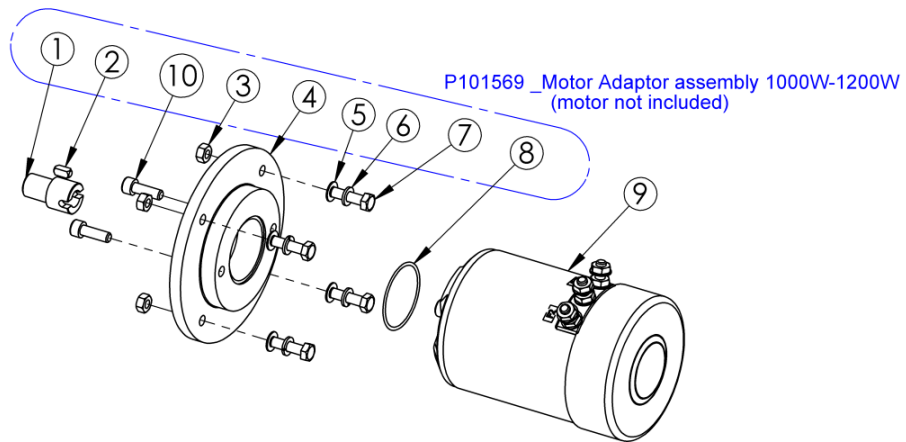
Note: * to be used 4547_Quick Release Clip

** to be used with SP0878_Circlip

Available Kits:

P101526	Kit- Liberty Stripper Assy 10mm (3/8") Chain (includes 24- plastic one ,25)
P101543	Kit- Liberty Stripper Assy 8mm (5/16") Chain (includes 24 -plastic one, 25)
P101525	Chainwheel assembly 10mm -3/8" QF (includes 23, 24,25, 38,63)
P101542	Chainwheel assembly 5/16" QF (includes 23,24, 25,38,63)
P101547	Chainwheel assembly 8mm QF (includes 23,24, 25,38,63,)
P101514	Shaft Assembly Capstan 4" TDC QF (includes 14, 15,16,20,26)
P101515	Shaft Assembly LP 4" TDC QF (includes 14, 15,16,20,26)
P101516	Shaft Assembly Capstan 8" TDC QF (includes 14, 15,16,20,26)
P101517	Shaft Assembly LP 8" TDC QF (includes 14, 15,16,20,26)
P101521	Drum Assembly QF (includes 2,3,4,5,6,7,8,9,10,11,12,13)

QF LIBERTY Motor options



Windlass Parts_QF Liberty motor options

Item	Component description	Component number	Qty
1	Shaft coupling	5404	1
2	Key	4636	1
3	Nut M8	SP0366	4
4	Adapter Plate	5402	1
5	Flat Washer	SP0413	4
6	Spring washer	SP0467	4
7	Bolt M8	SP0279	4
8	O-ring	SP2787	1
9	Motor 12V 1000W	P12072	1
	Motor 24V 1000W	P12074	1
	Motor 12V 1200W	P12073	1
10	Capscrew	SP0158	2
11	Key	5116	1
12	Spacer	5487	1
13	Capscrew	SP0175	4
14	Adapter Plate	4592	1
15	Motor 1500W 24V	SP2960	1
16	Adaptor Plate	5010	1
17	Hydraulic Motor	P14368	1
18	Shaft coupling	5011	1
19	Capscrew	SP2468	4

Available Kits:

P101569	Motor adaptor assembly 1000W-1200W (includes 1,2,3,4,5,6,7,8,10)
P101570	Motor adaptor assembly 1500W (includes 3,5,6,7,11,12,13,14)
P102708	Motor adaptor assembly hydraulic (includes 2,3,5,6,7,16,18,19)

Note:

In last few years lots of NQF parts (replacement / spare parts) have been machined from QF parts (chainwheels ,stripper ..) so relying just on part number cast or moulded on part for identification could be deceiving.



For example: 5220 chainwheel (QF chainwheel) was used to machine 5040 (NQF chainwheel), so part number cast in pocket is showing 5220 but the chainwheel is actually 5040.

