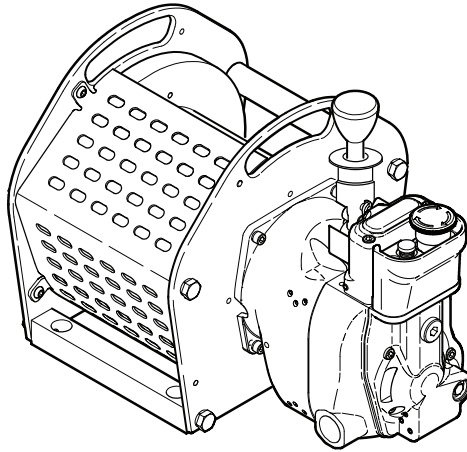


Liftstar and Pullstar Air Winch Models



LS2-300R, LS2-600R, PS2-1000R, LS2-1500R, PS2-2400R, LS2-300R-CE, LS2-600R-CE, LS2-1500R-CE PS2-1000R-E and PS2-2400R-E



Product Parts Information



Save These Instructions



Form MHD56283
Edition J
March 2017
CCN 71441109

Only allow **Ingersoll Rand** trained technicians to perform maintenance on this product. For additional information contact **Ingersoll Rand** factory or nearest Distributor.

For additional supporting documentation, refer [Table 1](#), p. 2.

Manuals can be downloaded from www.ingersollrandproducts.com

The use of other than genuine **Ingersoll Rand** replacement parts may result in safety hazards, decreased performance and increased maintenance and will invalidate all warranties.

Original instructions are in English. Other languages are a translation of the original instructions. Refer all communications to the nearest **Ingersoll Rand** Office or Distributor.

Table 1. Product Information Manuals

Publication	Document Number (CCN)
Product Safety Information Manual	MHD56250 (71402598)
Product Information Manual	MHD56282 (71441091)
Product Maintenance Information Manual	MHD56276 (71432298)

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PARTS ORDERING INFORMATION

These products are designed and constructed to provide long, trouble-free service. In time it may be necessary to order and install new parts to replace those that have been subjected to wear.

For your convenience and future reference, it is recommended that the following information be recorded.

Model Number _____

Serial Number _____

Date Purchase _____

When ordering replacement parts, please specify the following:

1. Complete model number and serial number as it appears on the data (name) plate.
2. Part number(s) and part description as shown in this manual.
3. Quantity required.

The data (name) plate is located on the product.

NOTICE

!

Continuing improvement and advancement of design may cause changes to this equipment which are not included in this manual. Manuals are periodically revised to incorporate changes. Always check the manual edition number on the front cover for the latest issue.

Sections of this manual may not apply to your product.

The use of other than genuine Ingersoll Rand replacement parts may result in safety hazards, decreased performance and increased maintenance, and will invalidate all warranties.

Return Goods Policy

Ingersoll Rand will not accept any returned goods for warranty or service unless prior arrangements have been made and written authorization has been provided from the location the goods were purchased.

Products that have been modified without **Ingersoll Rand** approval, mishandled or overloaded will not be repaired or replaced under warranty. A printed copy of the warranty that applies to this product is provided inside the back cover of the product information manual or in some cases the parts manual.

Disposal



When the life of the product has expired, it is recommended that it be disassembled, degreased and parts separated as to materials so that they may be recycled.

Ingersoll Rand Douai Operations

529, Avenue Roger Salengro

59450 Sin Le Noble, France

Phone: (33) 03-27-93-08-08

Fax: (33) 03-27-93-08-00

WINCH ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R)

Figure 1. WINCH ASSEMBLY DRAWING (LS2-300R, LS2-600R AND PS2-1000R) MHP2618

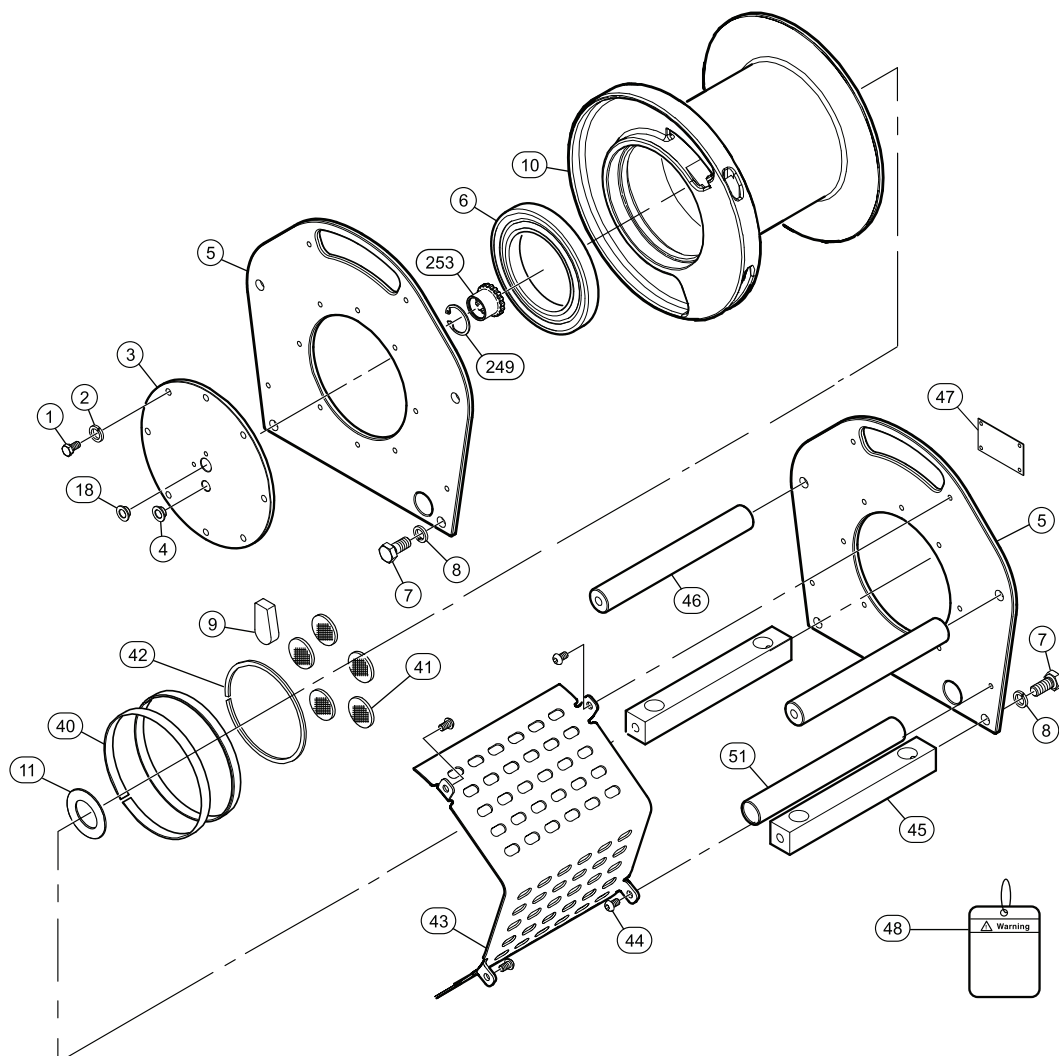


Table 2. WINCH ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Capscrew	8	4102-2301 (38598546)
2	Lockwasher	8	4520-1006 (38540142)
3	End Cover	1	9644-2058 (38578829)
4	Plug	1	6696-2941 (38603684)
5	Upright	2	9644-2054 (38593745)
6	Bearing	1	5080-0016 (38637286)
7	Capscrew	8	4102-2501 (38605218)
8	Lockwasher	8	4520-1010 (38634226)
9	Wire Rope Wedge	1	9644-2079 (38593794)
10	Drum (155 mm [6 in.] short)	1	9644-2049 (38593752)
	Drum (311 mm [12.2 in.] long)	1	9644-2089 (38594727)
11	Spacer	1	9644-2059 (38578837)

WINCH ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R)

Table 2. WINCH ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
18	Plug	1	6696-2841 (38603676)
40 ^(a)	Wear Ring	2	9618-0058 (38522108)
41 ^(a)	Exhaust Washer	5	6760-0303 (38535621)
42	Retainer Ring	1	4782-9332 (38636049)
43	Guard (Short Drum)	1	7644-2141 (38753307)
	Guard (Long Drum)		7644-2142 (38753315)
44	Capscrew	4	4120-1604 (38597522)
45	Spacer (188.5 mm [7.42 in.] short)	2	9644-2113 (38578811)
	Spacer (344.5 mm [13.6 in.] long)		9644-2144 (38597639)
46	Spacer (188.5 mm [7.42 in.] short)	2	9644-2056 (38593778)
	Spacer (344.5 mm [13.6 in.] long)	2	9644-2143 (38597621)
47	Data (Name) Plate	1	6676-3141-R (38605994)
48	Warning Tag	1	7106-0529 (71424782)
51	Pipe (Short Drum) used with Limitswitch	1	9651-0018 (38793824)
	Pipe (Long Drum) used with Limitswitch		9651-0019 (38793881)
249	Retainer Ring	1	4770-3050 (38748844)
253	Gear	1	9644-2060 (38578845)
* ^(b)	Drum Guard Tag	1	7144-9714

^(a) Recommended spares

^(b) Item is not illustrated.

Table 3. Kit List

Item No.	Description of Part	Total Qty	Part Number (CCN)
1000	Repair Kit: LS2-600R+PS-D Drum (include items: 1, 2, 4, 6, 7, 8, 9, 18, 40, 41, 44 and 249)	1	7650-0117 (38781183)
1001	Drum Kit: LS2-600R (include item: 10, 1000)	1	7650-0490 (47592547001)
1002	Drum Kit: LS2-600RGC (include item: 10, 1000)	1	7650-0491 (47592548001)
1003	Drum Kit: PS2-1000R (include item: 10, 1000, 1035)	1	7650-0492 (47592551001)
1004	Drum Kit: PS2-1000RGC (include item: 10, 1000, 1035)	1	7650-0493 (47592552001)

WINCH ASSEMBLY (LS2-1500R AND PS2-2400R)

Figure 2. WINCH ASSEMBLY (LS2-1500R AND PS2-2400R) DRAWING MHP3724

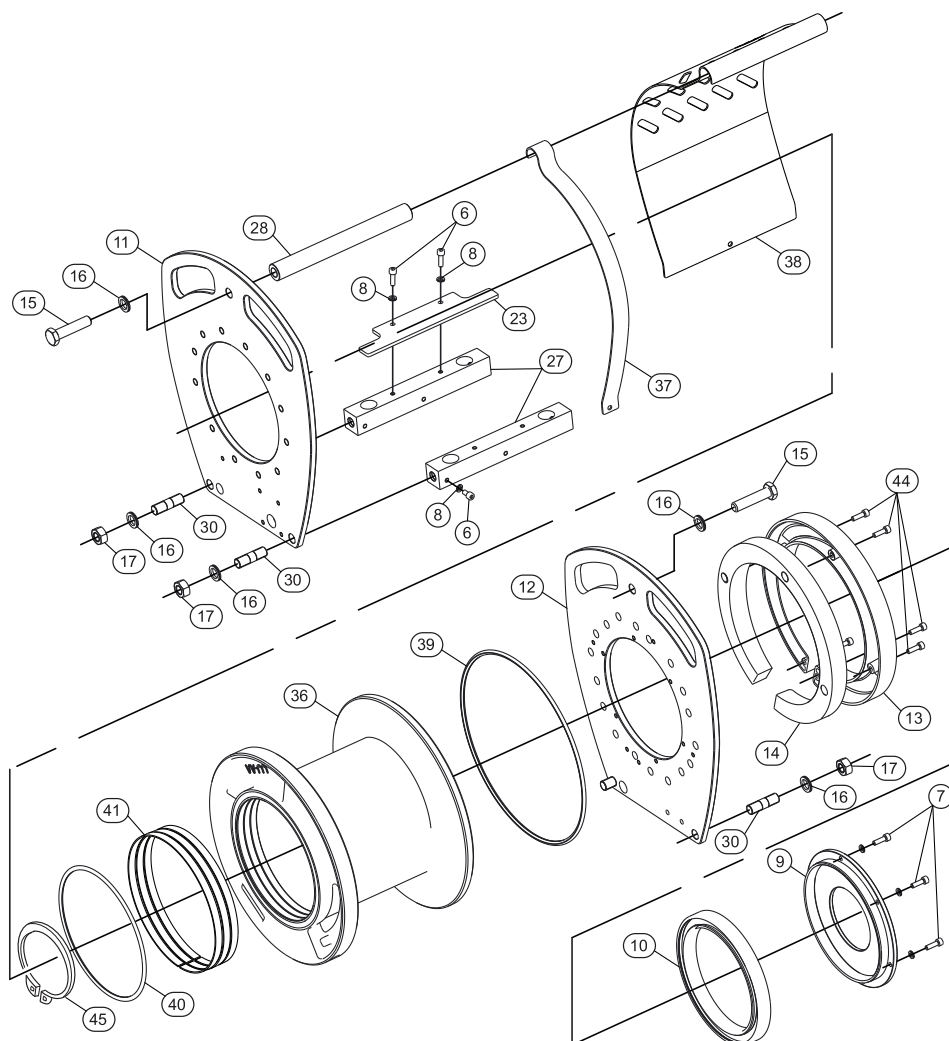


Table 4. WINCH ASSEMBLY (LS2-1500R AND PS2-2400R) PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
6	Screw	4	4132-2206 (38541132)
7	Screw	4	4133-8706 (47528349001)
8	Washer, Nord-Lock	8	4510-0206 (38797304)
9	End Cover	1	9645-0663 (46894010)
10	Bearing	1	5095-0028 (46894101)
11	Front Upright	1	9645-0612 (46898342)
12	Upright	1	9645-0666 (46898433)
13	Muffer Housing	1	9645-0697 (46898458)
14	Muffer Disc	1	9645-0698 (46898466)
15	Screw	2	4102-7401 (47527923001)
16	Washer, Nord-Lock	6	4510-0214 (47527932001)
17	Nut	4	4301-0611 (47528143001)
23	Support Plate (Short Drum)	1	9645-1065 (47526544001)
	Support Plate (Long Drum)	1	9645-1064 (47526543001)

WINCH ASSEMBLY (LS2-1500R AND PS2-2400R)

Table 4. WINCH ASSEMBLY (LS2-1500R AND PS2-2400R) PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
27	Spacer (Short Drum)	2	9645-0749 (46898326)
	Spacer (Long Drum)	2	9645-0763 (46899225)
28	Tie Rod (Short Drum)	1	9645-0748 (46898318)
	Tie Rod (Long Drum)	1	9645-0762 (46899217)
30	Stud	4	9645-1049 (47525639001)
36	Standard Drum (Short)	1	9645-0613 (46898359)
	Standard Drum (Long)	1	9645-0761 (46899209)
37	Anchor Drum Guard	1	9645-0769 (46899407)
38	Drum Guard (Short Drum)	1	9645-0767 (46899373)
	Drum Guard (Long Drum)	1	9645-0778 (46899761)
39	'O' Ring	1	5824-0629 (47515818)
40	'O' Ring	1	5824-0729 (47575819)
41	Tape Bearing	3	9645-0662 (46898409)
42	Wire Rope Wedge	1	9631-0023 (38537445)
43	'O' Ring	1	5824-3029 (47544707001)
44	Screw	5	4120-2004 (47555224001)
45	Retainer Ring (LS2-1500R only)	1	4770-3080 (38635769)

Table 5. Kit List

Item No.	Description of Part	Total Qty	Part Number (CCN)
1005	Replacement Kit: LS2-1500R-D (include items: 6, 7, 8, 10, 14, 15, 16, 17, 30, 39, 40, 41, 42, 43, 44, 45)	1	7650-1012 (47589811001)
1006	Rebuild Kit: LS2-1500R-D (include items: 27, 28, 30, 1005)	1	7650-1013 (47589810001)
1007	Rebuild Kit: LS2-1500R-D-GC (include items: 27, 28, 30, 1005)	1	7650-1014 (47589812001)
1008	Drum Kit: LS2-1500R (include item: 36, 1006)	1	7650-1028 (47590496001)
1009	Drum Kit: LS2-1500RGC (include item: 36, 1007)	1	7650-1029 (47590497001)
1010	Drum Kit: PS2-2400R (include item: 36, 1013)	1	7650-1030 (47590498001)
1011	Drum Kit: PS2-2400RGC (include item: 36, 1014)	1	7650-1031 (47590499001)
1012	Repair Kit: PS2-2400R-D (include item: 6, 7, 8, 10, 14, 15, 16, 17, 30, 39, 40, 41, 42, 43, 44)	1	7650-1025 (47590493001)
1013	Rebuild Kit: PS2-2400R-D (include items: 27, 28, 1012)	1	7650-1026 (47590494001)
1014	Rebuild Kit: PS2-2400R-D-GC (include items: 27, 28, 1012)	1	7650-1027 (47590495001)

BRAKE AND REDUCTION GEAR ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R)

Figure 3. BRAKE AND REDUCTION GEAR ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) DRAWING MHP2647

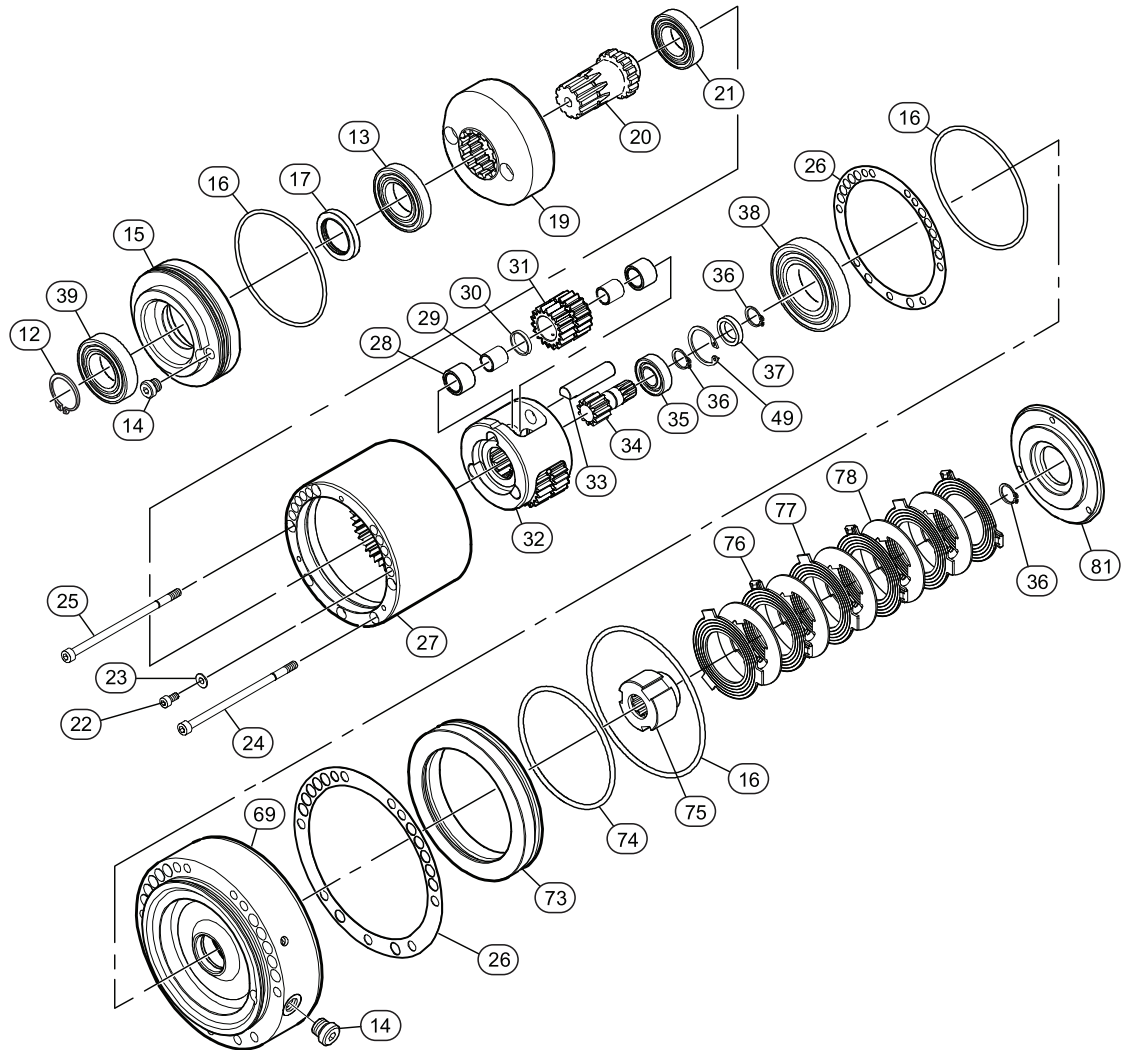


Table 6. BRAKE AND REDUCTION GEAR ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
12	Retainer Ring	1	4770-0029 (38522272)
13	Bearing	1	5080-0006 (38522157)
14	Plug	2	6511-0441 (38648184)
15	Reduction Gear End Cover	1	9644-2010 (38577854)
16	'O' Ring	3	5823-5229 (38548236)
17	Oil Seal	1	5801-3430 (38533212)
19	Ring Gear (47t) (LS2-300R)	1	9644-1200 (38750121)
	Ring Gear (48t) (LS2-600R/PS2-1000R)	1	9644-1003 (38577698)
20	Sliding Gear	1	9644-2011 (38577862)
21	Bearing	1	5080-0005 (38522140)
22	Capscrew	3	4132-6306 (38543427)
23	Washer	3	4500-1105 (38633806)
24	Capscrew	1	4133-2506 (38597563)

BRAKE AND REDUCTION GEAR ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R)

Table 6. BRAKE AND REDUCTION GEAR ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
25	Capscrew	5	4133-2406 (38597548)
26	Gasket	2	9644-1048 (38578258)
27	Reducer Housing	1	9644-1007 (38577714)
28	Needle Bearing	6	5656-2141 (38597225)
29	Bearing Ring	6	5636-2041 (38597217)
30	Spacer	3	9644-1047 (38578134)
31	Planet Gear (19-17t) (LS2-300R)	3	9644-1201 (38750139)
	Planet Gear (48t) (LS2-600R/PS2-1000R)	3	9644-1002 (38577672)
32	Planet Gear Support	1	9644-1006 (38577706)
33	Gear Shaft	3	9644-1046 (38578126)
34	Sun Gear	1	9644-2004 (38577847)
35	Bearing	1	5000-0002 (38522116)
36	Retainer Ring	3	4770-0015 (38522264)
37	Oil Seal	1	5801-9830 (38540456)
38	Bearing	1	5080-0009 (38522165)
39	Bearing	1	5005-0006 (38522124)
49	Retainer Ring	1	4770-3032 (38522280)
69	Brake Housing	1	9644-1012 (38577722)
73	Piston	1	9644-1014 (38578274)
74	'O' Ring	1	5823-5129 (38548228)
75	Splined Hub	1	9644-1013 (38577748)
76	Friction Plate with Springs	3	9644-1552 (38774139)
77	Friction Plate	3	6302-8241 (38548186)
78	Drive Plate	5	6302-8341 (38548194)
81	Brake Reaction Plate	1	9644-1015 (38577763)

Table 7. Kit List

Item No.	Description of Part	Total Qty	Part Number (CCN)
1015	Repair Kit: Brake LS2-600R+PS-B (include items: 14, 16, 26, 36, 74, 77, 78)	1	7650-0116 (38781175)
1016	Repair Kit: Reducer LS2-600R+PS-R (include items: 12, 13, 14, 16, 17, 21, 22, 23, 24, 25, 26, 28, 29, 35, 36, 37, 38, 39, 49)	1	7650-0118 (38781191)

REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R)

Figure 4. REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R) DRAWING MHP3723

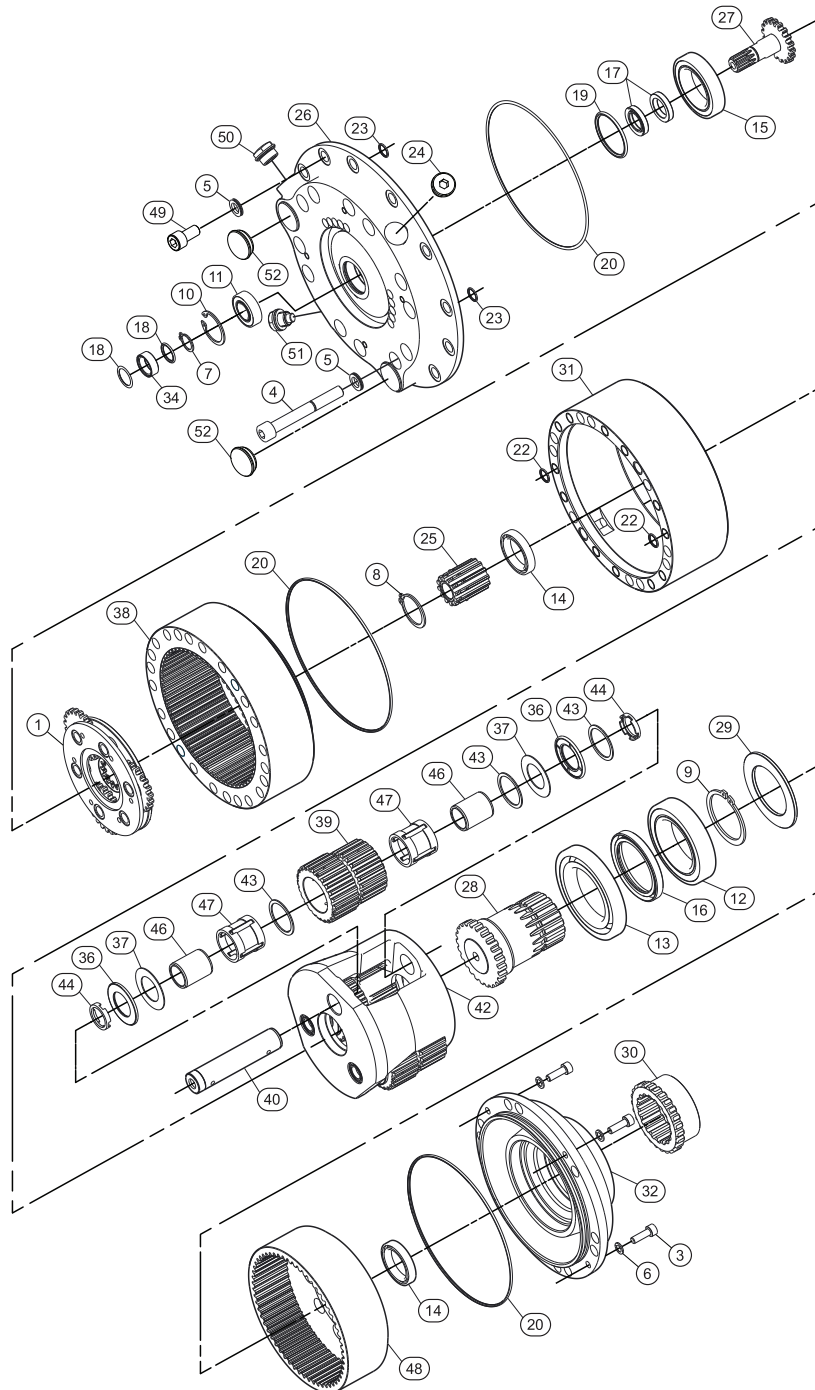


Table 8. REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R) PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Primary Gear Sub-assembly (ratio: 4.33)	1	3645-0608 (46889788)
2	Planet Support Assembly	1	3645-0616 (46890380)
3	Screw, M6X20	4	4132-2206 (38541132)
4	Screw, M10X80	12	4133-5506 (46900650)
5	Washer, M10 Nord-Lock	24	4510-0210 (38797353)

REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R)

Table 8. REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R) PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
6	Lockwasher W6	4	4520-1006 (38540142)
7	Retainer Ring	1	4770-0015 (38522264)
8	Retainer Ring	1	4770-0030 (38523395)
9	Retainer Ring	1	47700050 (38527545)
10	Retainer Ring	1	4770-3032 (38522280)
11	Bearing	1	5005-0002 (38537353)
12	Bearing	1	5005-0010 (38522132)
13	Bearing	1	5080-0011 (38637260)
14	Bearing	1	5090-0006 (38762191)
15	Bearing	1	5090-0008 (38782173)
16	Oil Seal	1	5801-2230 (38639365)
17	Seal Ring	2	5802-2230 (47525033001)
18	'O' Ring	2	5821-8129 (38539094)
19	'O' Ring	1	5822-4229 (38528592)
20	'O' Ring	2	5824-0029 (38782124)
22	'O' Ring	2	5824-0829 (47517375)
23	'O' Ring	2	5824-0929 (47517379)
24	Plug	1	6512-8928 (38648291)
25	Sun Gear 12 Teeth	1	9645-0038 (38764114)
26	Motor Flange	1	9645-0620 (46898375)
27	Sun Gear 18 Teeth	1	96450640 (46898516)
28	Output Shaft	1	9645-0643 (46898524)
29	Spacer	1	9645-0644 (46898532)
30	Gear	1	9645-0646 (46898540)
31	Half Reducer Housing for Winch	1	9645-0648 (46898557)
32	Reduction Gear End Cover	1	9645-0658 (46898391)
34	Spacer Ring	1	9645-0889 (47515625)
36	Stop	6	5605-4225 (38528485)
37	Washer	6	5731-2632 (38528501)
38	Gear Ring	1	9645-0010 (38761136)
39	Planet Gear	3	9645-0012 (38761458)
40	Planet Axle	3	9645-0024 (38761755)
42	Planetary Support	1	9645-0020 (38766903)
43	Bearing Spacer	9	9645-0136 (38782090)
44	Spacer Ring	6	9645-0137 (38782108)
46	Internal Bearing Ring	6	5630-0642 (38782207)
47	Needle Bearing	6	5650-3530 (38782215)
48	Gear Ring	1	9645-0615 (46890398)
49	Screw M10X20	12	4132-3606 (38632014)
50	Level Plug	1	6517-0328 (47533890001)

REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R)

Table 8. REDUCTION GEAR ASSEMBLY (LS2-1500R AND PS2-2400R) PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
51	Drain Plug	1	6517-0242 (38784815)
52	Plug	2	9645-0732 (46896890)

Table 9. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1017	RPK: LS2-1500R+PS-R (include items: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 36, 37, 40, 43, 44, 46, 47, 49, 50, 51, 52)	1	7650-1015 (47589814001)
1018	RBK: LS2-1500R+PS-R (include items: 1, 26, 1017)	1	7650-1016 (47589815001)

MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R)

Figure 5. MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R) DRAWING MHP2617

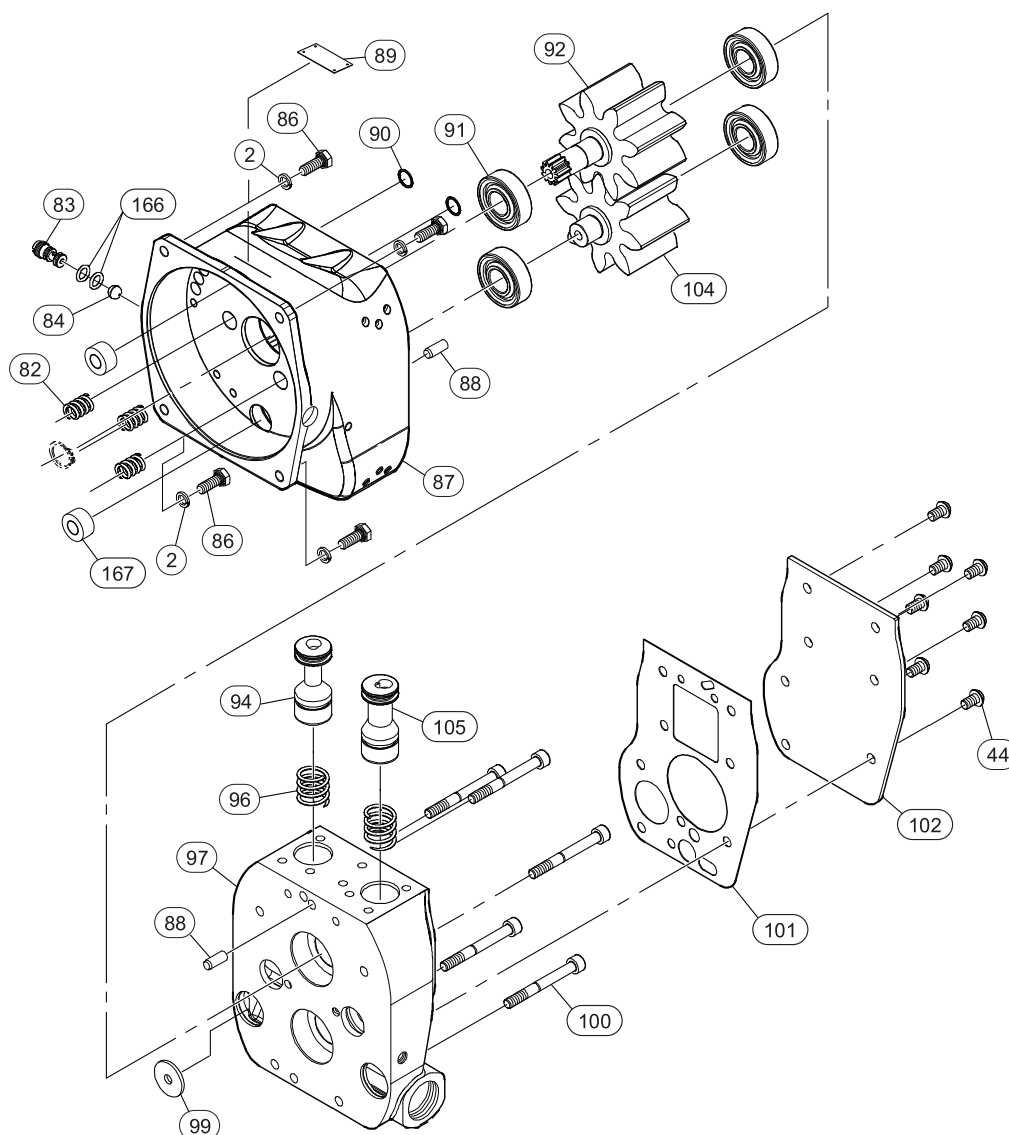


Table 10. MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R) PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
2	Lockwasher	4	4520-1006 (38540142)
44	Capscrew	7	4120-1604 (38597522)
82	Spring	3	6916-5532 (38522587)
83	Check Valve	1	9579-0106 (38551198)
84	Ball	1	6940-1625 (38542924)
86	Capscrew	4	4102-3001 (38749602)
87	Motor Housing (new style) ^(a)	1	9644-0575 (38776246)
	Motor Housing (old style) ^(a)		9644-1016 (38577904)
88	Pin	2	4600-1116 (38522231)
90	'O' Ring	2	5823-7429 (38597241)

MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R)

Table 10. MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R) PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
91	Bearing	4	5016-0002 (38634999)
92	Drive Gear ^(b)	1 set	7644-1256 (38760880)
94	Valve, Lifting (include 'O' Rings) ^(c)	1	7644-1356 (38758389)
96	Spring ^(c)	2	6919-0341 (38758272)
97	Motor Cover	1	9644-0515 (38768735)
99	Exhaust Washer	1	9644-1145 (38598868)
100	Capscrew	5	4133-2206 (38597489)
101	Gasket	1	9644-1188 (38634770)
102	Cover Plate	1	9644-1027 (38577938)
104	Idle Gear ^(b)	1 set	7644-1256 (38760880)
105	Valve, Lowering (include 'O' Rings) ^(c)	1	7644-1357 (38758397)
166	'O' Ring	2	5820-9229 (38534517)
167	Plug	2	9644-0725 (38789632)
*	Hose Protector ^(d)	(m)	6090-4242 (38793857)
*	Fitting, Hose ^(e)	3	6824-6128 (38582920)

- (a) Old style motors will have opening where brake housing plug (19) is installed. When ordering replacement part you must order new motor housing shown above.
- (b) Not sold separately.
- (c) Winches with serial number below 05-05-63 (year-month-chronological number) will have the old style part items 94, 96, 104 and 105, replace all when repair is required.
- (d) Item is not illustrated.
- (e) Only on LS2-300R, LS2-600R Motor "CE" version.

Table 11. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1019	Repair Kit: Motor-3.5HP-IND (include items: 2, 44, 83, 84, 86, 88, 90, 91, 94, 96, 100, 101, 105, 166)	1	7650-0133 (38781340)
1020	Rebuild Kit: Motor-3.5HP-IND (include items: 92, 104, 1019)	1	7650-0369 (47524780006)

MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-1500R AND PS2-2400R)

Figure 6. MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-1500R AND PS2-2400R) DRAWING MHP4060

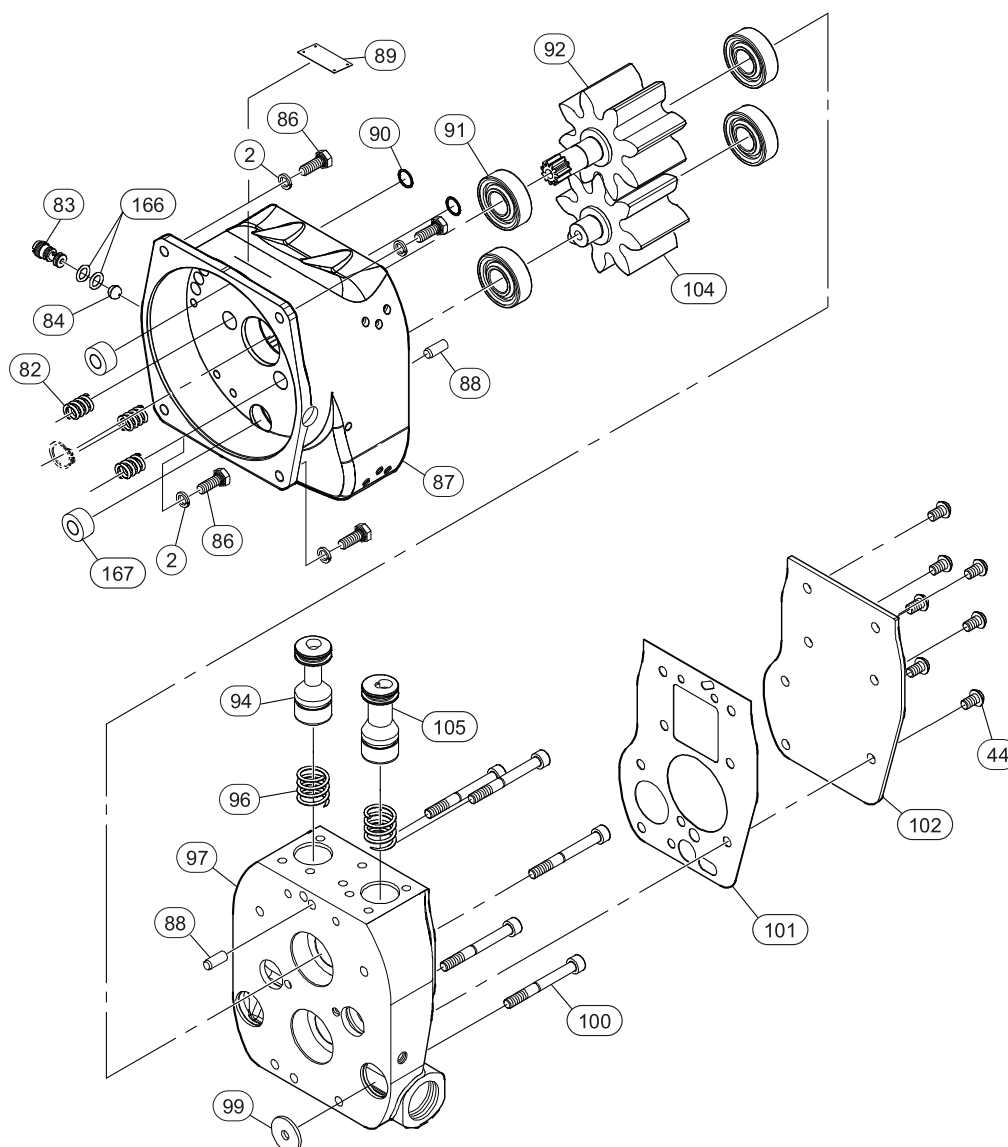


Table 12. MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-1500R AND PS2-2400R) PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
2	Lockwasher	4	4520-1006 (38540142)
44	Capscrew	7	4120-1604 (38597522)
82	Spring	3	6916-5532 (38522587)
83	Check Valve	1	9579-0106 (38551198)
84	Ball	1	6940-1625 (38542924)
86	Capscrew	4	4102-3001 (38749602)
87	Motor Housing (new style) ^(a)	1	9644-0575 (38776246)
	Motor Housing (old style)		9644-1016 (38577904)
88	Pin	2	4600-1116 (38522231)
90	'O' Ring	2	5823-7429 (38597241)

MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-1500R AND PS2-2400R)

Table 12. MOTOR ASSEMBLY WITHOUT EMERGENCY STOP (LS2-1500R AND PS2-2400R) PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
91	Bearing	4	5016-0002 (38634999)
92	Drive Gear ^(b)	1 set	7644-1256 (38760880)
94	Valve, Lifting (include 'O' Rings) ^(c)	1	7644-1356 (38758389)
96	Spring	2	6919-0341 (38758272)
97	Motor Cover	1	9644-0515 (38768735)
99	Exhaust Washer	1	9644-1145 (38598868)
100	Capscrew	5	4133-2206 (38597489)
101	Gasket	1	9644-1188 (38634770)
102	Cover Plate	1	9644-1027 (38577938)
104	Idle Gear	1 set	7644-1256 (38760880)
105	Valve, Lowering (include 'O' Rings)	1	7644-1357 (38758397)
166	'O' Ring	2	5820-9229 (38534517)
167	Plug	2	9644-0725 (38789632)
*	Hose Protector ^(d)	(m)	6090-4242 (38793857)
*	Fitting, Hose ^(e)	3	6824-6128 (38582920)

(a) Old style motors will have opening where brake housing plug (19) is installed. When ordering replacement part you must order new motor housing shown above.

(b) Not sold separately.

(c) Winches with serial number below 05-05-63 (year-month-chronological number) will have the old style part items 94, 96, 104 and 105, replace all when repair is required.

(d) Item is not illustrated.

(e) Only on LS2-300R, LS2-600R Motor "CE" version.

Table 13. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1019	Repair Kit: Motor-3.5HP-IND (include items: 2, 44, 83, 84, 86, 88, 90, 91, 94, 96, 100, 101, 105, 166)	1	7650-0133 (38781340)
1020	Rebuild Kit: Motor-3.5HP-IND (include items: 92, 104, 1019)	1	7650-0369 (47524780006)

MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R)

Figure 7. MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R) DRAWING MHP4068

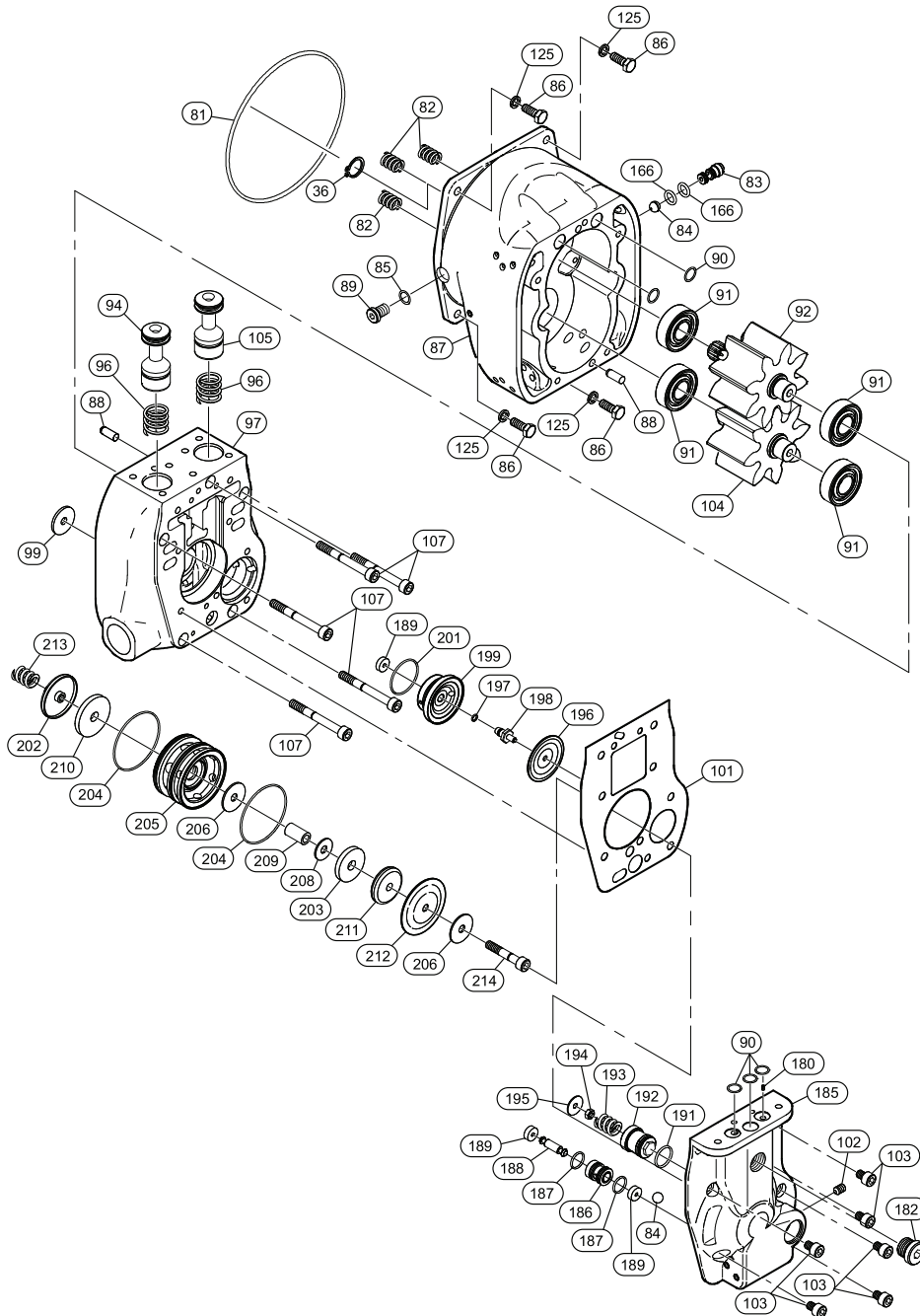


Table 14. MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R) PARTS LIST

Item	Description of Part	Total Qty	Part Number (CCN)
2	Lockwasher	4	4520-1006 (38540142)
14	Plug	1	6511-0441 (38648184)
16	O' Ring	2	5823-5229 (38548236)
26	Gasket	2	9644-1048 (38578258)
36	Retainer Ring	1	4770-0015 (38522264)
44	Capscrew	7	4120-1604 (38597522)

MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R)

Table 14. MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R) PARTS LIST (continued)

Item	Description of Part	Total Qty	Part Number (CCN)
69	Brake Housing	1	9644-0574 (38776258)
73	Piston	1	9644-1014 (38578274)
74	O' Ring	1	5823-5129 (38548228)
75	Splined Hub	1	9644-1013 (38577748)
76	Friction Plate with Springs	3	9644-1552 (38774139)
77	Friction Plate	3	6302-8241 (38548186)
78	Drive Plate	5	6306-1941 (38597209)
81	Brake Reaction Plate	1	9644-1015 (38577763)
82	Spring	3	6916-5532 (38522587)
83	Check Valve	1	9579-0106 (38551198)
84	Ball	1	6940-1625 (38542924)
86	Capscrew	4	4102-3001 (38749602)
87	Motor Housing (new style)	1	9644-0575 (38776246)
	Motor Housing (old style)		9644-1016 (38577904)
88	Pin	2	4600-1116 (38522231)
90	'O' Ring	2	5823-7429 (38597241)
91	Bearing	4	5016-0002 (38634999)
92	Drive Gear ^(a)	1 set	7644-1256 (38760880)
94	Valve, Lifting (include 'O' Rings)	1	7644-1356 (38758389)
96	Spring	2	6919-0341 (38758272)
97	Motor Cover	1	9644-1023 (38577912)
99	Exhaust Washer	1	9644-1145 (38598868)
100	Capscrew	5	4133-2206 (38597489)
101	Gasket	1	9644-1188 (38634770)
102	Cover Plate	1	9644-1027 (38577938)
104	Idle Gear	1 set	7644-1256 (38760880)
105	Valve, Lowering (include 'O' Rings)	1	7644-1357 (38758397)
126	Capscrew	2	4132-2306 (38540183)
166	'O' Ring	2	5820-9229 (38534517)
167	Plug	2	9644-0725 (38789632)
*(b)	Hose Protector	(m)	6090-4242 (38793857)
*(b)	Fitting, Hose	3	6824-6128 (38582920)
*(b)	'O' Ring	1	5823-9129 (38767380)
*(b)	Gasket	1	9644-1503 (38767372)

^(a) Not sold separately

^(b) Item is not illustrated.

Table 15. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1019	Repair Kit: Motor-3.5HP-IND (include items: 2, 44, 83, 84, 86, 88, 90, 91, 94, 96, 100, 101, 105, 166)	1	7650-0133 (38781340)
1020	Rebuild Kit: Motor-3.5HP-IND (include items: 92, 104, 1019)	1	7650-0369 (47524780006)

MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-300R, LS2-600R AND PS2-1000R)

Table 15. Kit List: (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1021	RPK: LS2-1500R+PS-B (include items: 2, 14, 16, 26, 36, 74, 76, 77, 82, 83, 84, 86, 166)	1	7650-1010 (47589809001)
1022	RBK: LS2-1500R+PS-B (include items: 73, 75, 81, 1021)	1	7650-1011 (47589808001)
1025	RPK: RPK-3,5/6HP M-TL+STOP (include items: 50, 84, 90, 101, 103, 180, 187, 189, 191, 192, 193, 194, 196, 197, 201, 203, 204, 210, 213, 214)	1	7650-0397 (47564855001)

MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-1500R AND PS2-2400R)

Figure 8. MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-1500R AND PS2-2400R) DRAWING MHP2812

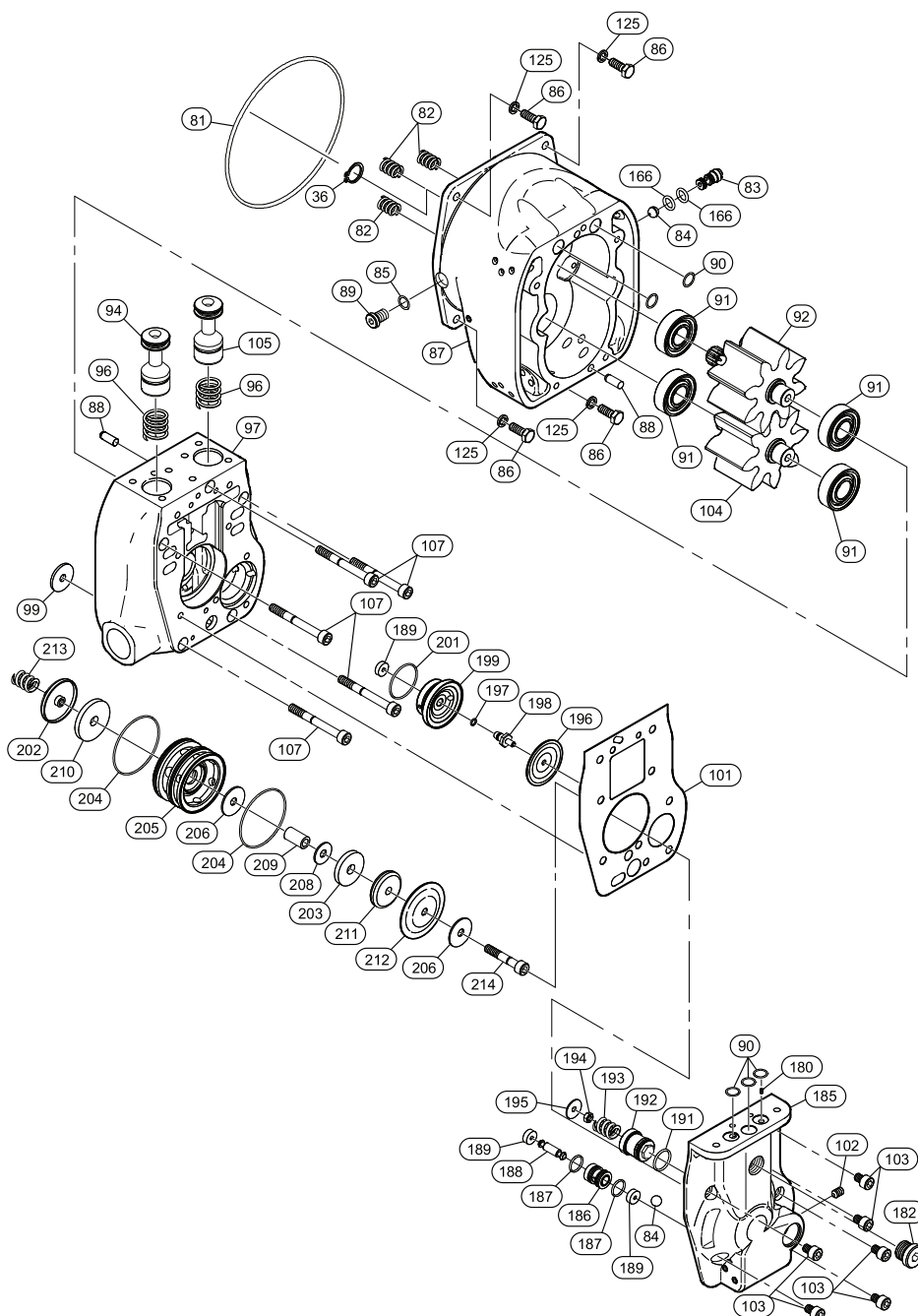


Table 16. MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-1500R AND PS2-2400R) PARTS LIST

Item	Description of Part	Total Qty	Part Number (CCN)
2	Lockwasher	4	4520-1006 (38540142)
14	Plug	1	6511-0441 (38648184)
16	O' Ring	2	5823-5229 (38548236)
26	Gasket	2	9644-1048 (38578258)
36	Retainer Ring	1	4770-0015 (38522264)
44	Capscrew	7	4120-1604 (38597522)

MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-1500R AND PS2-2400R)

Table 16. MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-1500R AND PS2-2400R) PARTS LIST (continued)

Item	Description of Part	Total Qty	Part Number (CCN)
69	Brake Housing	1	9644-0574 (38776258)
73	Piston	1	9644-1014 (38578274)
74	O' Ring	1	5823-5129 (38548228)
75	Splined Hub	1	9644-1013 (38577748)
76	Friction Plate with Springs	3	9644-1552 (38774139)
77	Friction Plate	3	6302-8241 (38548186)
78	Drive Plate	5	6306-1941 (38597209)
81	Brake Reaction Plate	1	9644-1015 (38577763)
82	Spring	3	6916-5532 (38522587)
83	Check Valve	1	9579-0106 (38551198)
84	Ball	1	6940-1625 (38542924)
86	Capscrew	4	4102-3001 (38749602)
87	Motor Housing (new style)	1	9644-0575 (38776246)
	Motor Housing (old style)		9644-1016 (38577904)
88	Pin	2	4600-1116 (38522231)
90	'O' Ring	2	5823-7429 (38597241)
91	Bearing	4	5016-0002 (38634999)
92	Drive Gear ^(a)	1 set	7644-1256 (38760880)
94	Valve, Lifting (include 'O' Rings)	1	7644-1356 (38758389)
96	Spring	2	6919-0341 (38758272)
97	Motor Cover	1	9644-1023 (38577912)
99	Exhaust Washer	1	9644-1145 (38598868)
100	Capscrew	5	4133-2206 (38597489)
101	Gasket	1	9644-1188 (38634770)
102	Cover Plate	1	9644-1027 (38577938)
104	Idle Gear	1 set	7644-1256 (38760880)
105	Valve, Lowering (include 'O' Rings)	1	7644-1357 (38758397)
126	Capscrew	2	4132-2306 (38540183)
166	'O' Ring	2	5820-9229 (38534517)
167	Plug	2	9644-0725 (38789632)
*(b)	Hose Protector	(m)	6090-4242 (38793857)
*(b)	Fitting, Hose	3	6824-6128 (38582920)
*(b)	'O' Ring	1	5823-9129 (38767380)
*(b)	Gasket	1	9644-1503 (38767372)

^(a) Not sold separately

^(b) Item is not illustrated.

Table 17. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1019	Repair Kit: Motor-3.5HP-IND (include items: 2, 44, 83, 84, 86, 88, 90, 91, 94, 96, 100, 101, 105, 166)	1	7650-0133 (38781340)
1020	Rebuild Kit: Motor-3.5HP-IND (include items: 92, 104, 1019)	1	7650-0369 (47524780006)
1021	RPK: LS2-1500R+PS-B (include items: 2, 14, 16, 26, 36, 74, 76, 77, 82, 83, 84, 86, 166)	1	7650-1010 (47589809001)

MOTOR ASSEMBLY WITH EMERGENCY STOP (LS2-1500R AND PS2-2400R)

Table 17. Kit List: (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1022	RBK: LS2-1500R+PS-B (include items: 73, 75, 81, 1021)	1	7650-1011 (47589808001)
1025	RPK: RPK-3,5/6HP M-TL+STOP (include items: 50, 84, 90, 101, 103, 180, 187, 189, 191, 192, 193, 194, 196, 197, 201, 203, 204, 210, 213, 214)	1	7650-0397 (47564855001)

CONTROL VALVE ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) (UPTO SERIAL NUMBER 091236)

Figure 9. CONTROL VALVE ASSEMBLY DRAWING (LS2-300R, LS2-600R AND PS2-1000R) MHP4070

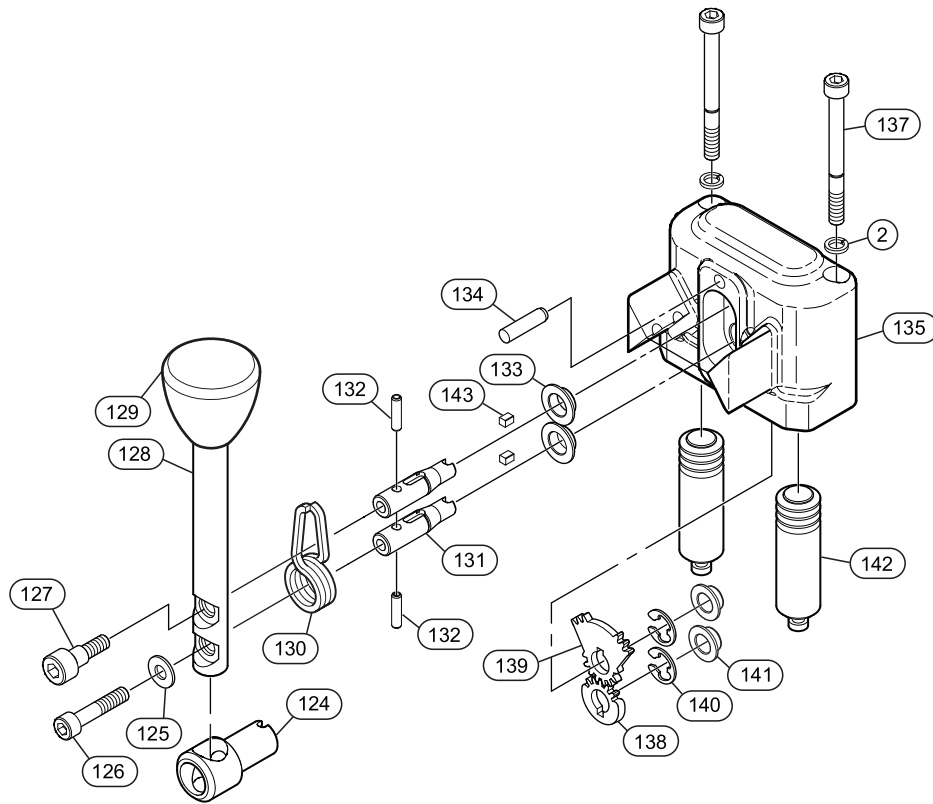


Table 18. CONTROL VALVE ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
60	Control Valve Assembly) ^(a)	1	76441112 (DNM38756052)
2	Lockwasher	6	4520-1006 (38540142)
124	Coupling	1	9644-1422 (38760526)
125	Washer	1	4500-1106 (38543468)
126	Capscrew	1	4132-2306 (38540183)
127	Shoulder Screw	1	9644-1108 (38595492)
128	Lever	1	9644-1083 (38592275)
129	Knob	1	6956-1841 (38597001)
130	Spring	1	9644-1421 (38760518)
131	Spindle Shaft	2	9644-0413 (38760435)
132	Roll Pin	2	4650-8320 (38592333)
133	Bushing	2	5900-8726 (28592291)
134	Pin	1	4600-1216 (38522835)
135	Valve Housing	1	9644-1082 (38592200)
137	Capscrew	2	4133-2106 (38597233)
138	Gear	1	7644-0417 (38760468)
139	Gear Cam	1	
140	Retainer	2	4783-7241 (38592341)

**CONTROL VALVE ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) (UPTO SERIAL
NUMBER 091236)**

Table 18. CONTROL VALVE ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
141	Bushing	2	5900-8826 (38592770)
142	Spool	2	9644-0414 (38760443)
143	Key	2	9644-0415 (38760450)

(a) Control Valve Assembly (60) includes item no. : 2, 124-135, 137-142.

Table 19. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1037	RPK: Valve-3,5/6HP M-V-L (include items: 2, 125, 126, 127, 129, 130, 132, 133, 137, 140, 141, 143)	1	7650-0160 (38781910)

CONTROL VALVE ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) (FROM SERIAL NUMBER 100153)

Figure 10. CONTROL VALVE ASSEMBLY DRAWING (LS2-300R, LS2-600R AND PS2-1000R) MHP2622

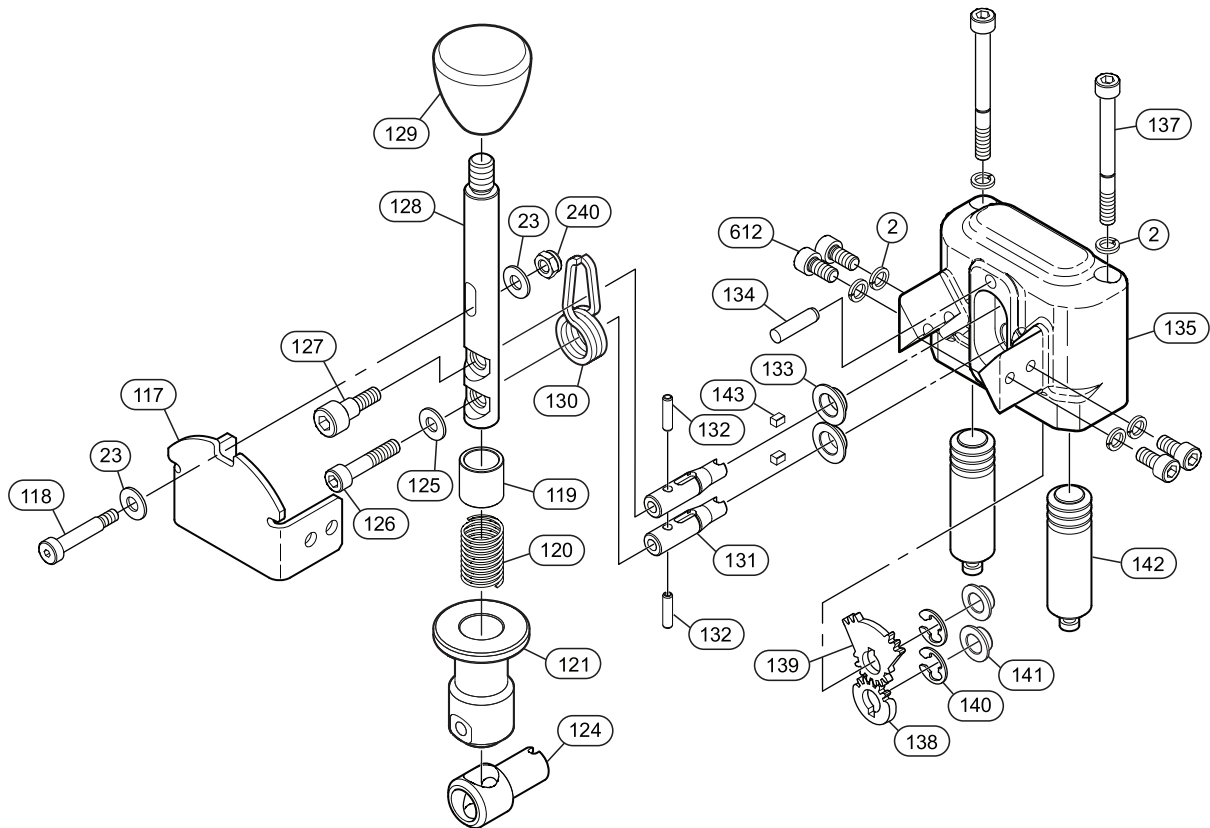


Table 20. CONTROL VALVE ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
60	Control Valve Assembly	1	3644-0769 (38795589)
2	Lockwasher	6	4520-1006 (38540142)
23	Washer	1	4500-1105 (38633806)
117	Stop Plate	1	9644-2749 (38794285)
118	Shoulder Screw	1	6520-4942 (38795464)
119	Bushing	1	5900-9626 (38795514)
120	Spring	1	6910-4842 (38795456)
121	Retractable Handle	1	9644-2748 (38794194)
124	Coupling	1	9644-1422 (38760526)
125	Washer	1	4500-1106 (38543468)
126	Capscrew	1	4132-2306 (38540183)
127	Shoulder Screw	1	9644-1108 (38595492)
128	Lever	1	9644-1083 (38592275)
129	Knob	1	6956-1841 (38597001)
130	Spring	1	9644-1421 (38760518)
131	Spindle Shaft	2	9644-0413 (38760435)
132	Roll Pin	2	4650-8320 (38592333)
133	Bushing	2	5900-8726 (28592291)

CONTROL VALVE ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R) (FROM SERIAL NUMBER 100153)

Table 20. CONTROL VALVE ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
134	Pin	1	4600-1216 (38522835)
135	Valve Housing	1	9647-0038 (38757506)
137	Capscrew	2	4133-2106 (38597233)
138	Gear	1	7644-0417 (38760468)
139	Gear Cam	1	
140	Retainer	2	4783-7241 (38592341)
141	Bushing	2	5900-8826 (38592770)
142	Spool	2	9644-0414 (38760443)
143	Key	2	9644-0415 (38760450)
240	Locknut	1	4370-7211 (38540688)
612	Capscrew	4	4132-4306 (38632089)

Table 21. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1023	RPK: Valve-3,5/6HP M-V-L-LS (include items: 2, 23, 118, 119, 120, 121, 126, 127, 129, 130, 132, 133, 137, 140, 141, 143, 240, 612)	1	7650-0256 (46886123)

CONTROL VALVE ASSEMBLY (LS2-1500R AND PS2-2400R)

Figure 11. CONTROL VALVE ASSEMBLY DRAWING (LS2-1500R AND PS2-2400R) MHP3718

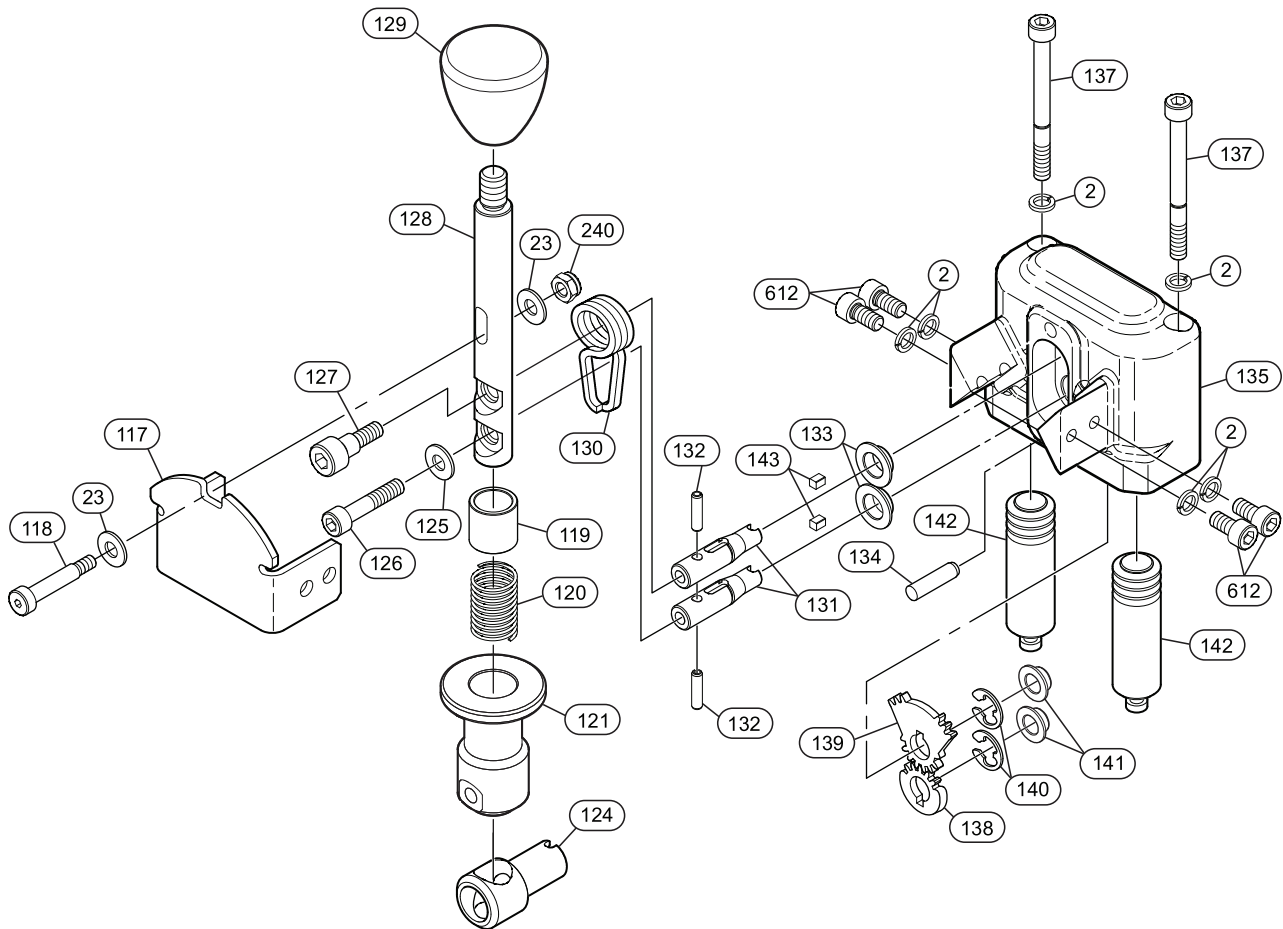


Table 22. CONTROL VALVE ASSEMBLY PARTS LIST (LS2-1500R AND PS2-2400R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
60	Control Valve Assembly	1	3644-0769 (38795589)
2	Lockwasher	6	4520-1006 (38540142)
23	Washer	1	4500-1105 (38633806)
117	Stop Plate	1	9644-2749 (38794285)
118	Shoulder Screw	1	6520-4942 (38795464)
119	Bushing	1	5900-9626 (38795514)
120	Spring	1	6910-4842 (38795456)
121	Retractable Handle	1	9644-2748 (38794194)
124	Coupling	1	9644-1422 (38760526)
125	Washer	1	4500-1106 (38543468)
126	Capscrew	1	4132-2306 (38540183)
127	Shoulder Screw	1	9644-1108 (38595492)
128	Lever	1	9644-1083 (38592275)
129	Knob	1	6956-1841 (38597001)
130	Spring	1	9644-1421 (38760518)

CONTROL VALVE ASSEMBLY (LS2-1500R AND PS2-2400R)

Table 22. CONTROL VALVE ASSEMBLY PARTS LIST (LS2-1500R AND PS2-2400R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
131	Spindle Shaft	2	9644-0413 (38760435)
132	Roll Pin	2	4650-8320 (38592333)
133	Bushing	2	5900-8726 (38592291)
134	Pin	1	4600-1216 (38522835)
135	Valve Housing	1	9647-0038 (38757506)
137	Capscrew	2	4133-2106 (38597233)
138	Gear	1	7644-0417 (38760468)
139	Gear Cam	1	
140	Retainer	2	4783-7241 (38592341)
141	Bushing	2	5900-8826 (38592770)
142	Spool	2	9644-0414 (38760443)
143	Key	2	9644-0415 (38760450)
240	Locknut	1	4370-7211 (38540688)
612	Capscrew	4	4132-4306 (38632089)

Table 23. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1023	RPK: Valve-3,5/6HP M-V-L-LS (include items: 2, 23, 118, 119, 120, 121, 126, 127, 129, 130, 132, 133, 137, 140, 141, 143, 240, 612)	1	7650-0256 (46886123)

EMERGENCY STOP

Figure 12. EMERGENCY STOP DRAWING MHP4062

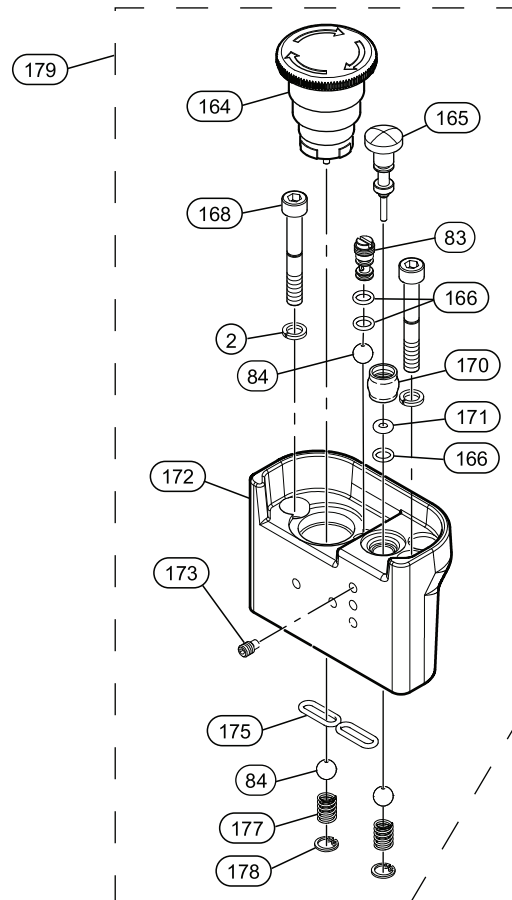


Table 24. EMERGENCY STOP PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
179	Emergency Stop Assembly (includes items 2, 83, 84, 164-166, 168, 170-175, 177 and 178)	1	7644-1116 (38767315)
2	Lockwasher	2	4520-1006 (38540142)
83	Check Valve	1	9579-0106 (38551198)
84	Ball	4	6940-1625 (38542924)
164	Valve, Emergency Stop	1	9579-0108 (38551180)
165	Valve	1	9579-0104 (38550190)
166 ^(a)	'O' Ring	3	5820-9229 (38534517)
168	Capscrew	2	4132-1706 (38631917)
170	Protector	1	9579-0107 (38554580)
171	'O' Ring	1	5823-5329 (38550208)
172	Emergency Stop Housing	1	9644-2091 (38592390)
173	Screw	1	4200-8307 (38633004)
175	'O' Ring	2	5821-6529 (38640629)
177	Spring	2	6912-8541 (38553889)
178	Retainer Ring	2	4771-3009 (38592408)

^(a) Recommended spares

Table 25. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1024	RPK: E-STOP Botton 3,5/6HP M-ESTOP (include items: 2, 83, 84, 166, 168, 170, 171, 173, 175, 177, 178)	1	7650-0086 (38780870)
1026	RBK: 3,5-6HP M-ESTOP (include items: 164, 165, 1024)	1	7650-0388 (47524977001)

PENDANT CONTROL WITHOUT EMERGENCY STOP ASSEMBLY

Figure 13. PENDANT CONTROL WITHOUT EMERGENCY STOP ASSEMBLY DRAWING MHP2640

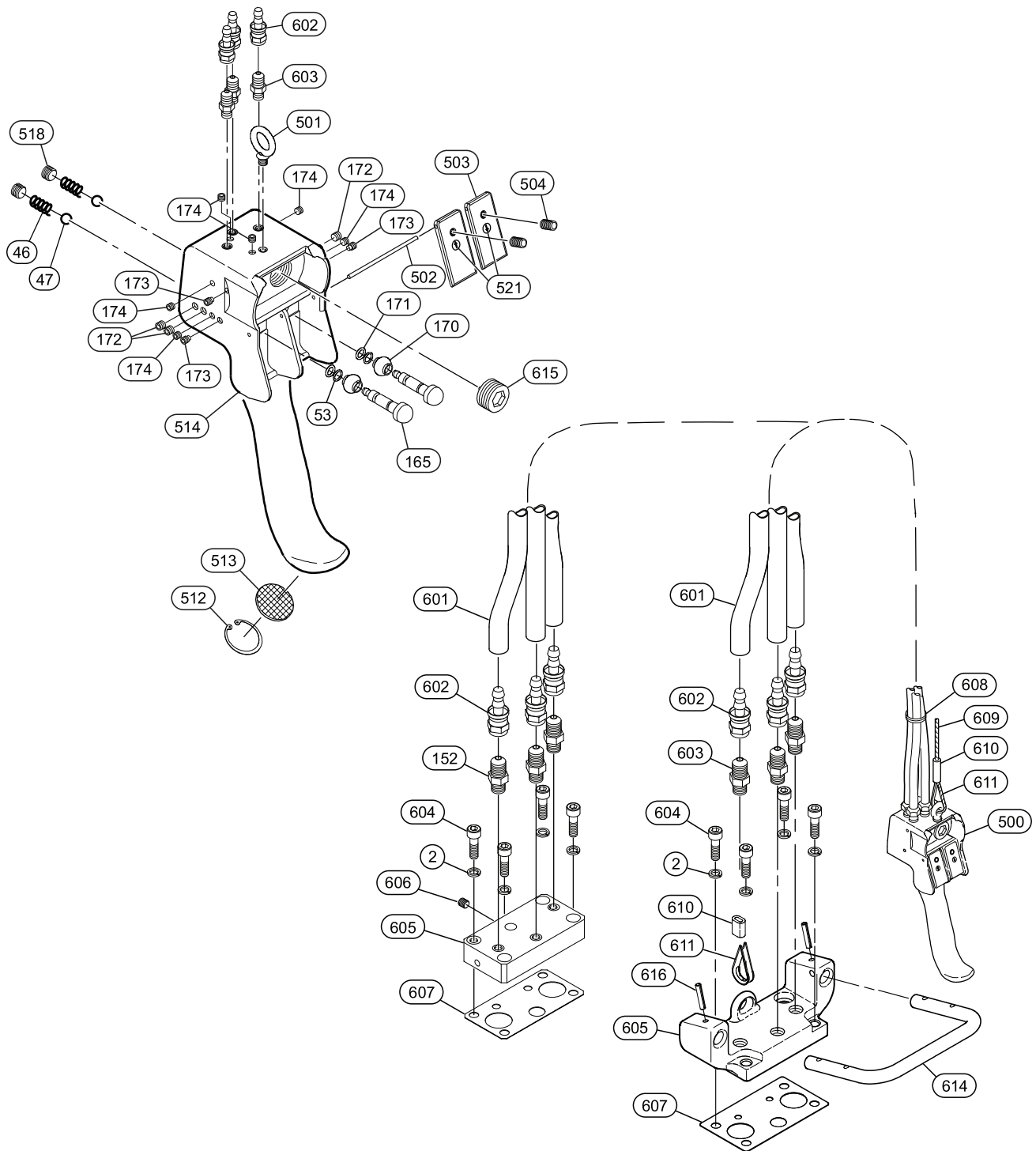


Table 26. PENDANT CONTROL WITHOUT EMERGENCY STOP ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
500	Pendant Assembly	1	PHS2E (38559233)
2	Lockwasher	6	4520-1006 (38540142)
46	Spring	2	6912-8541 (38553889)
47	Ball	2	6940-1625 (38542924)

PENDANT CONTROL WITHOUT EMERGENCY STOP ASSEMBLY

Table 26. PENDANT CONTROL WITHOUT EMERGENCY STOP ASSEMBLY PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
53	'O' Ring	2	5820-9229 (38534517)
165	Valve	2	9579-0104 (38550190)
170	Protector	2	9579-0107 (38554580)
171	'O' Ring	2	5823-5329 (38550208)
173	Setscrew	2	4200-8207 (38544292)
501	Lifting Eye	1	6422-2332 (38529160)
502	Pin	1	9579-0040 (38538237)
503	Lever	1	9579-0122 (38559100)
504	Screw	1	4200-8607 (38555546)
512	Retainer Ring	1	4771-3030 (38559373)
513	Exhaust Washer	1	6760-0303 (38535621)
514	Pendant Handle	1	9579-0129
518	Plug	2	6510-7741 (38648143)
521	Label Kit	1	9579-0111 (38554598)
601	Hose	As req'd	50923 (03990215)
602	Fitting, Adapter	5	51029 (03990298)
603	Fitting, Nipple	6	6823-7528 (38563789)
604	Capscrew	4	4132-2206 (38541132)
605	Adapter Plate	1	9644-1026 (38577920)
606	Setscrew	1	4200-7407 (38540498)
607	Gasket	1	9644-1093 (38595500)
608	Hose Tie	2	6112-5132 (38525226)
609	Strain Relief Wire	As req'd	6976-3132 (38537890)
610	Sleeve Clamp	1	6112-5032 (38525218)
611	Thimble	1	6932-5332 (38525242)
612	Screw	2	4132-4306 (38632089)
615	Plug	1	6512-9541 (38559530)
*(a)	Exhaust Valve Kit	As req'd	20417 (71069579)
*(a)	Label: "Read the Manual"	1	9618-0098 (38543856)
*(a)	Label: "Do Not Use for Lifting Personnel"	1	9618-0100 (38543872)

(a) Item is not illustrated.

Table 27. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1027	Repair Kit: Pendant (include items: 46, 47, 53, 170, 171, 518, 521, 602, 603, 610)	1	7650-0141 (38781423)
1028	RBK: Pendant-PHS2 (include items: 165, 501, 502, 503, 512, 513, 611, 615, 1027)	1	7650-0079 (38780805)
1029	Repair Kit (include items: 602, 603, 604, 606, 608, 610, 611)	1	7650-0161 (38781928)

PENDANT CONTROL WITH EMERGENCY STOP ASSEMBLY

Figure 14. PENDANT CONTROL WITH EMERGENCY STOP ASSEMBLY MHP2641

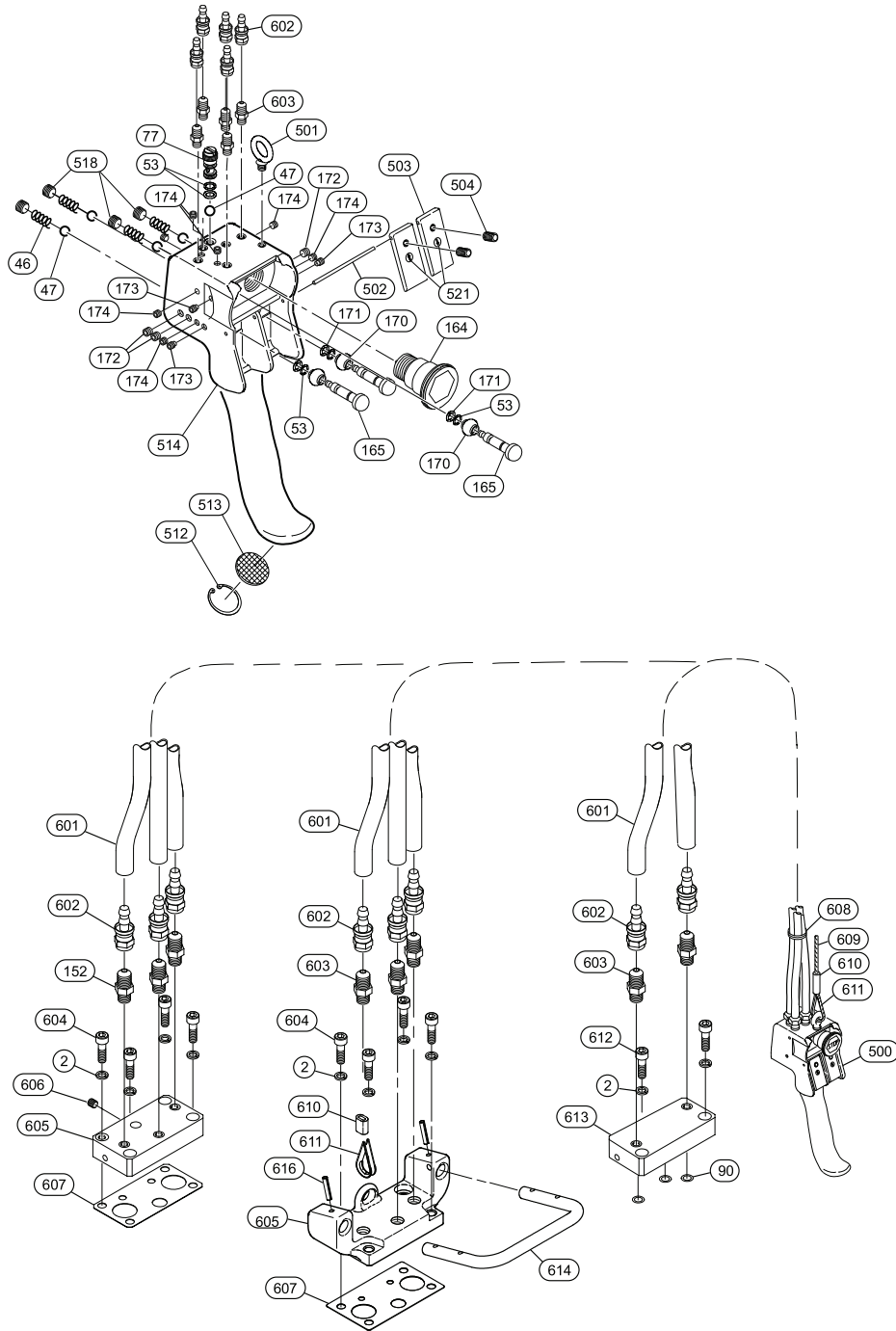


Table 28. PENDANT CONTROL WITH EMERGENCY STOP ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number (CCN)
500	Pendant Assembly	1	PHS2E-U
46	Spring	4	6912-8541 (38553889)
47	Ball	5	6940-1625 (38542924)
53	'O' Ring	5	5820-9229 (38534517)
70	'O' Ring	3	5823-7429 (38597241)

PENDANT CONTROL WITH EMERGENCY STOP ASSEMBLY

Table 28. PENDANT CONTROL WITH EMERGENCY STOP ASSEMBLY PARTS LIST (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
75	Lockwasher	6	4520-1006 (38540142)
77	Check Valve	1	9579-0106 (38551198)
164	Valve, Emergency Stop	1	9579-0108 (38551180)
165	Valve	3	9579-0104 (38550190)
170	Protector	2	9579-0107 (38554580)
171	'O' Ring	2	5823-5329 (38550208)
173	Setscrew	2	4200-8207 (38544292)
501	Lifting Eye	1	6422-2332 (38529160)
502	Pin	1	9579-0040 (38538237)
503	Lever	1	9579-0122 (38559100)
504	Screw	1	4200-8607 (38555546)
512	Retainer Ring	1	4771-3030 (38559373)
513	Exhaust Washer	1	6760-0303 (38535621)
514	Pendant Handle	1	9579-0129 (38559381)
518	Plug	2	6510-7741 (38648143)
521	Label Kit	1	9579-0111 (38554598)
601	Hose	As req'd	50923 (03990215)
602	Fitting, Adapter	6	51029 (0399298)
603	Fitting, Nipple	6	6823-7528 (38563789)
604	Capscrew	4	4132-2206 (38541132)
605	Adapter Plate	1	9644-1026 (38577920)
606	Setscrew	1	4200-7407 (38540498)
607	Gasket	1	9644-1093 (38595500)
608	Hose Tie	1	6112-5132 (38525226)
609	Strain Relief Wire	As req'd	6976-3132 (38537890)
610	Sleeve Clamp	1	6112-5032 (38525218)
611	Thimble	1	6932-5332 (38525242)
615	Plug	1	6512-9541 (38559530)
*(a)	Exhaust Valve Kit	As req'd	20417 (71069579)
*(a)	Label: "Read the Manual"	1	9618-0098 (38543856)
*(a)	Label: "Do Not Use for Lifting Personnel"	1	9618-0100 (38543872)

(a) Item is not illustrated

Table 29. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1029	Repair Kit (include items: 602, 603, 604, 606, 608, 610, 611)	1	7650-0161 (38781928)
1030	Repair Kit: Pendant (include items: 602, 610, 53, 47, 171, 77, 46, 170, 521, 603, 173, 518)	1	7650-0142 (38781431)
1031	Rebuild Kit: PHS2-U (include items: 164, 165, 501, 502, 503, 512, 513, 611, 1030)	1	7650-0080 (38780813)

LIMIT SWITCHES ASSEMBLY (LS2-300R AND LS2-600R)

Figure 15. LIMIT SWITCHES ASSEMBLY (LS2-300R AND LS2-600R) MHP3302

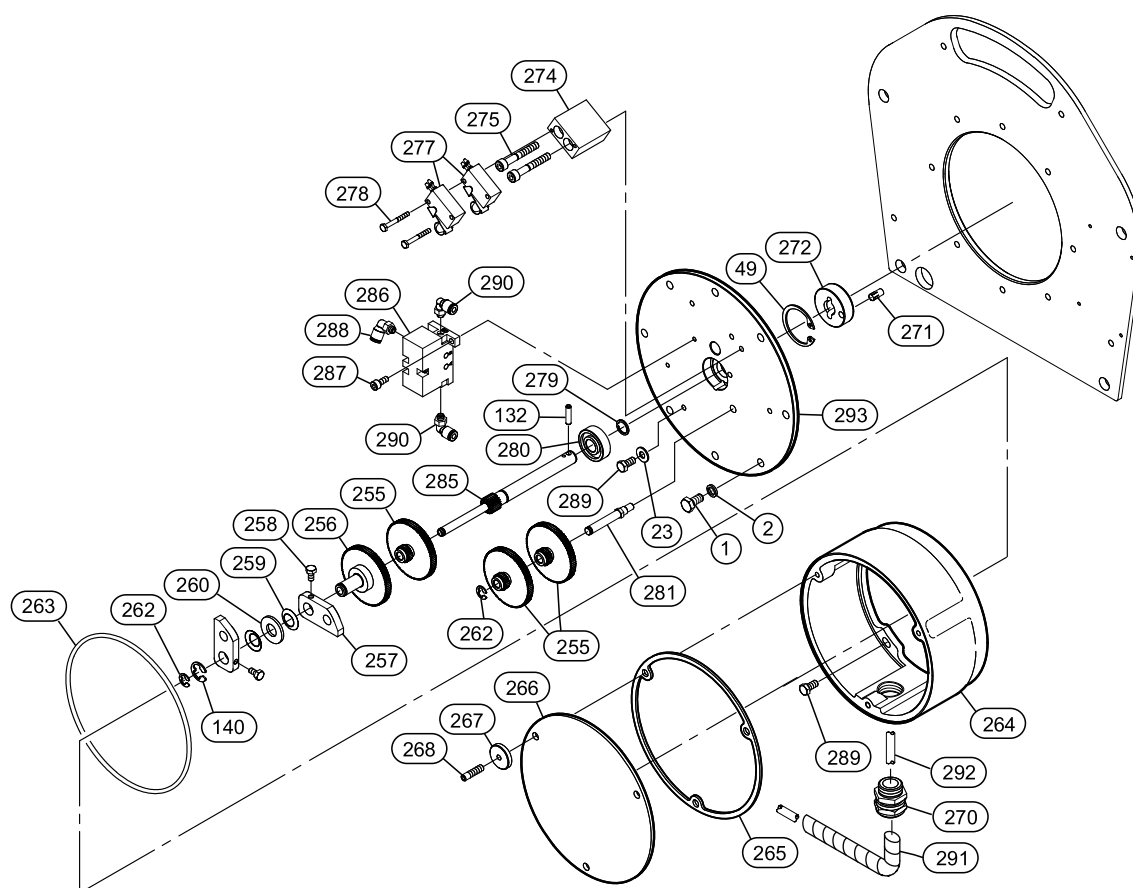


Table 30. LIMIT SWITCHES ASSEMBLY PARTS LIST (LS2-300R AND LS2-600R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Capscrew	8	4102-2301 (38598546)
2	Lockwasher	8	4520-1006 (38540142)
23	Washer	1	4500-1105 (38633806)
49	Retainer Ring	1	4770-3032 (38522280)
132	Pin	1	4650-8320 (38592333)
140	Retainer Ring	1	4783-7241 (38592341)
255	Double Geared Pinion	3	9651-0017 (38793816)
256	Cam Support	1	9651-0008 (38791596)
257	Cam	2	9651-0004 (38791554)
258	Screw	2	4102-4401 (38793808)
259	Spring Washer	2	6910-3442 (38791653)
260	Washer	1	4500-1110 (38539250)
262	Retainer Ring	2	4780-3342 (38791612)
263	'O' Ring	1	5823-9129 (38767380)
264	Housing	1	9651-0001 (38791521)
265	Gasket	1	9651-0012 (38792172)

LIMIT SWITCHES ASSEMBLY (LS2-300R AND LS2-600R)

Table 30. LIMIT SWITCHES ASSEMBLY PARTS LIST (LS2-300R AND LS2-600R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
266	Cover	1	9651-0002 (38791539)
267	Nut	3	4380-3742 (38792214)
268	Screw	3	4200-7707 (38543443)
270	Cable Glands	1	6090-3542 (38791695)
271	Pin	1	4640-7318 (38793790)
272	Connecting Washer	1	9651-0006 (38791570)
274	Valve Support	1	9651-0007 (38791588)
275	Capscrew	2	4132-2706 (38543419)
277	Pneumatic Valve	2	6855-8741 (38590592)
278	Capscrew	2	4101-9101 (38630638)
279	Retainer Ring	1	4780-1039 (38791646)
280	Bearing	1	5005-5000 (38791620)
281	Axle	1	9651-0003 (38791547)
285	Sun Gear (Short Drum)	1	9651-0005 (38791562)
	Sun Gear (Long Drum)	1	9651-0014 (38793899)
286	Air Pilot Valve	1	6859-8841 (38776332)
	Valve Base	1	6859-8941 (38776340)
287	Capscrew	2	4131-6506 (38540647)
288	Fitting, Elbow	1	6815-9828 (38793840)
289	Capscrew	4	4100-5101 (38535696)
290	Fitting, Hose	2	9651-0032 (46890612)
291	Hose Protector	(m)	6090-4242 (38793857)
292	Hose	(m)	1025U 04 01 (46903357)
293	End Cover	1	9644-2058 (38578829)

Table 31. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1032	RPK: LS2-600-CE-LIM-SW (include items: 1, 2, 23, 49, 132, 140, 258, 259, 262, 263, 265, 267, 268, 270, 271, 275, 277, 278, 279, 280, 286, 287, 288, 289, 290, 291, 292)	1	7650-0252 (46886081)

LIMIT SWITCHES ASSEMBLY (LS2-1500R)

Figure 16. LIMIT SWITCHES ASSEMBLY DRAWING (LS2-1500R) MHP3722

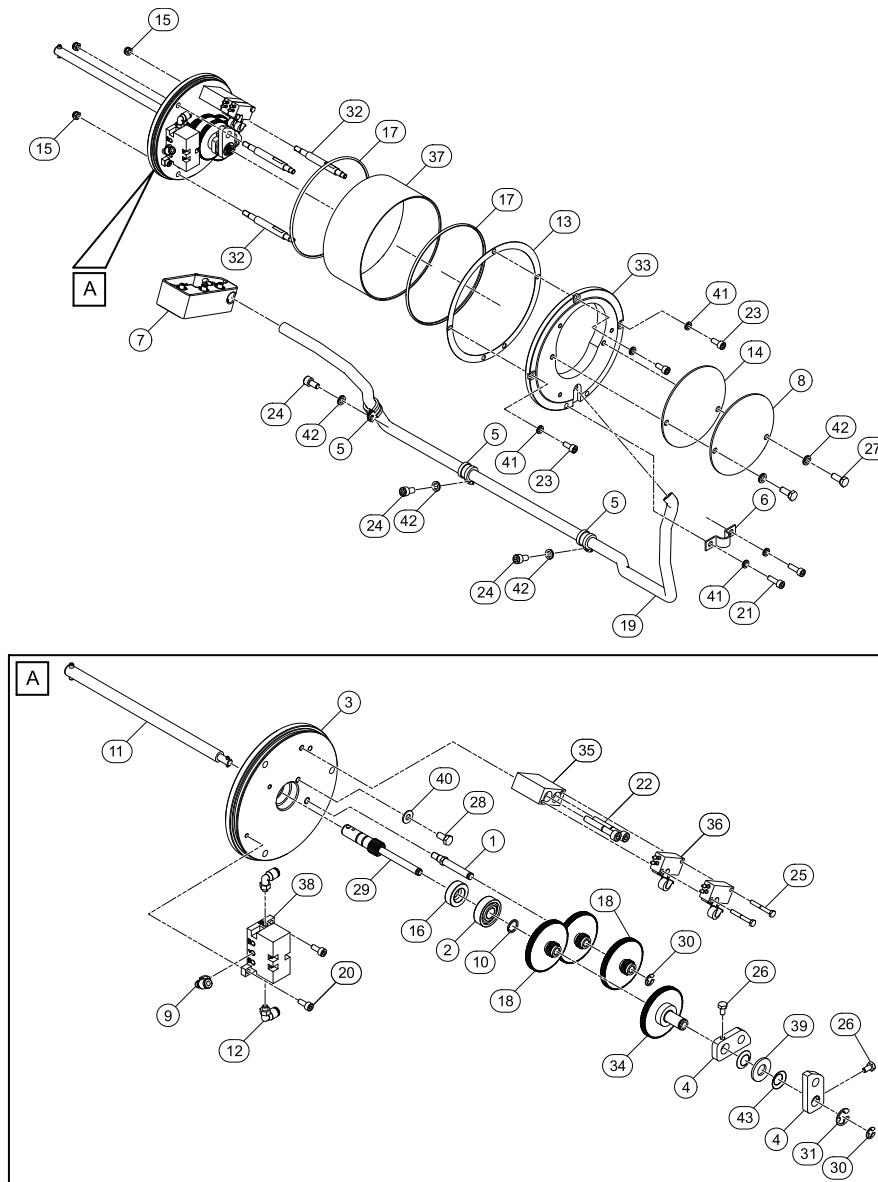


Table 32. LIMIT SWITCHES ASSEMBLY PARTS LIST (LS2-1500R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Axle	1	9651-0003 (38791547)
2	Bearing	1	5005-0000 (38791620)
3	Bearing	1	9651-0037 (46893269)
4	Cam Limit Switch	2	9651-0004 (38791554)
5	Clamp	3	6111-1542 (46898953)
6	Clamp Jumper	1	6111-1442 (46898946)
7	Connector Limit Switch Assembly	1	3645-1094 (47527720001)
8	Cover	1	9651-0040 (46893301)
9	Elbow Stud M5X0.8	1	6815-9828 (38793840)
10	Expansive Ring	1	4780-1039 (38791646)
11	Extension Shaft, Assembly (Long Drum)	1	3645-0780 (46899829)

LIMIT SWITCHES ASSEMBLY (LS2-1500R)

Table 32. LIMIT SWITCHES ASSEMBLY PARTS LIST (LS2-1500R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
12	Fitting, Elbow "vented"	2	9651-0032 (46890612)
13	Gasket	1	9651-0042 (46893327)
14	Joint	1	96510039 (46893293)
15	Locknut M5	3	4370-7211 (38540688)
16	Oil Seal	1	5802-2130 (46893483)
17	'O' Ring	2	5820-7129 (38537338)
18	Pinion, Double	3	9651-0017 (38793816)
19	Pipe	1	6911-8342 (47527862001)
20	Screw M4X10	2	4131-6506 (38540647)
21	Screw M5X16	2	4132-2906 (38531562)
22	Screw M5X35	2	4132-2706 (38543419)
23	Screw M5X12	3	4133-8706 (47528349001)
24	Screw M6X12	3	4132-4306 (38632089)
25	Screw M3X25	2	4101-9101 (38630638)
26	Screw M4X8	2	4102-4401 (38793808)
27	Screw M6X16	2	4102-3001 (38749602)
28	Screw M5X10	1	4100-5101 (38535696)
29	Shaft	1	9651-0038 (46893277)
30	Shoulder Collar	2	4780-3342 (38791612)
31	Shoulder Collar dia. 8	1	4783-7241 (38592341)
32	Spacer	3	9651-0041 (46893319)
33	Support	1	9651-0044 (46898607)
34	Support Cames	1	9651-0008 (38791596)
35	Support Distributor	1	9651-0007 (38791588)
36	Switch	2	6855-8741 (38590592)
37	Tube	1	9651-0036 (46893251)
38	Valve	1	6859-8841 (38776332)
39	Washer M10	1	4500-1110 (38539250)
40	Washer M5	1	4500-1105 (38633806)
41	Washer, M5 Nord-Lock	5	45100-205 (46892410)
42	Washer, M6 Nord-Lock	5	45100-206 (38797304)
43	Washer	2	6910-3442 (38791653)

Table 33. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1033	RPK: LS2-1500R-CE-LIM-SW (include items: 2, 5, 6, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 36, 38, 39, 41, 42, 43)	1	7650-1022 (47589818001)
1034	RBK: LS2-1500R-CE-LIM-SW (include items: 1, 4, 18, 29, 34, 1033)	1	7650-1023 (47589817001)

FREE SPOOL CLUTCH ASSEMBLY (PS2-1000R)

Figure 17. FREE SPOOL CLUTCH ASSEMBLY DRAWING (PS2-1000R) MHP2620

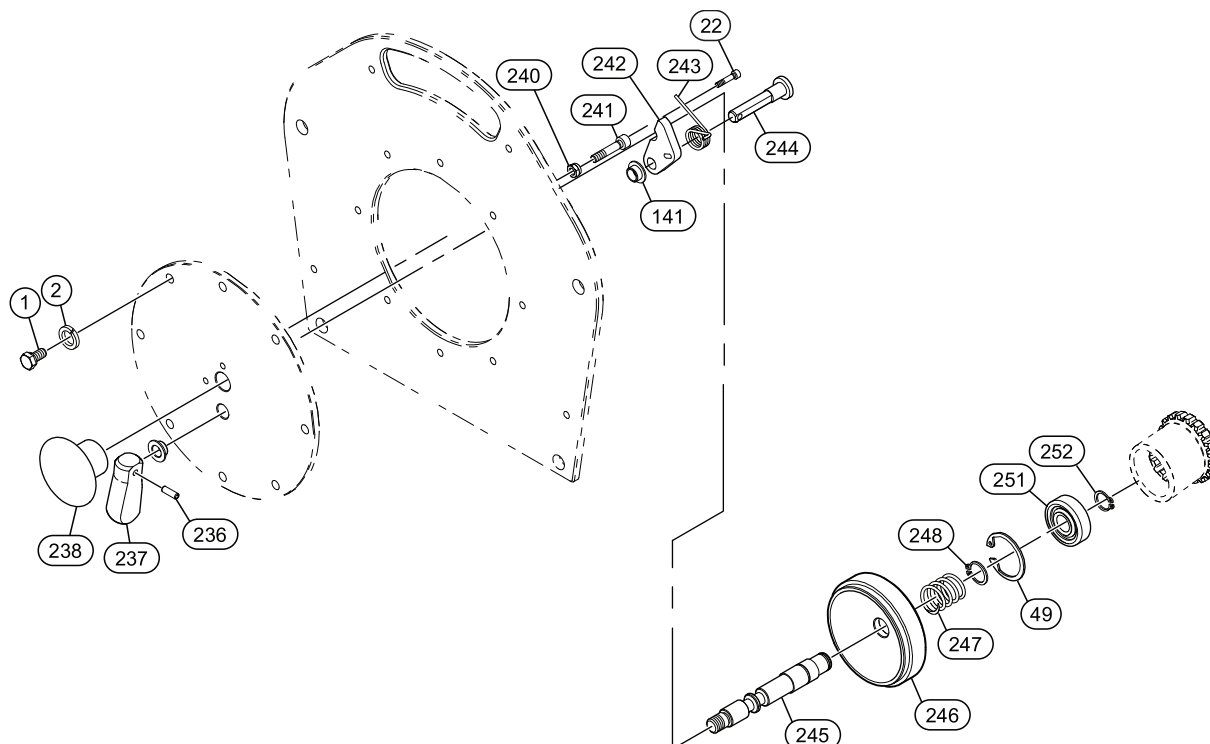


Table 34. FREE SPOOL CLUTCH ASSEMBLY PARTS LIST (PS2-1000R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
200	Free Spool Clutch Assembly (Short Drum)	1	9644-2076
	Free Spool Clutch Assembly (Long Drum)		9644-2157
1	Capscrew	8	4102-2301 (38598546)
2	Lockwasher	8	4520-1006 (38540142)
49	Retainer Ring	1	4770-3032 (38522280)
141	Bushing	2	5900-8826 (38592770)
235	Capscrew	1	4132-6303
236	Pin	1	4650-6820 (38635181)
237	Lever	1	9644-2149 (38604682)
238	Knob	1	6956-6232 (38522959)
240	Locknut	1	4370-7211 (38540688)
241	Capscrew	1	4133-0506 (38544706)
242	Cam	1	9644-2068 (38592507)
243	Spring	1	9644-2075 (38592556)
244	Spindle	1	9644-2067 (38592499)
245	Shaft (Short Drum)	1	9644-2070 (38592523)
	Shaft (Long Drum)		9644-2126 (38599080)
246	Spring Stopper	1	9644-2069 (38592515)
247	Spring	1	6918-8932 (38522942)
248	Retainer Ring	1	4770-0014 (38522983)

FREE SPOOL CLUTCH ASSEMBLY (PS2-1000R)

Table 34. FREE SPOOL CLUTCH ASSEMBLY PARTS LIST (PS2-1000R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
251	Bearing	1	5015-0001 (38526190)
252	Retainer Ring	1	4770-0012 (38522256)

Table 35. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1035	RPK: Clutch-PS2-1000R-C (include items: 49, 141, 236, 238, 240, 241, 243, 247, 248, 251, 252)	1	7650-0147 (38781480)

PRESS ROLLER ASSEMBLY (LS2/PS2)

Figure 18. PRESS ROLLER ASSEMBLY DRAWING (LS2/PS2) MHP3852)

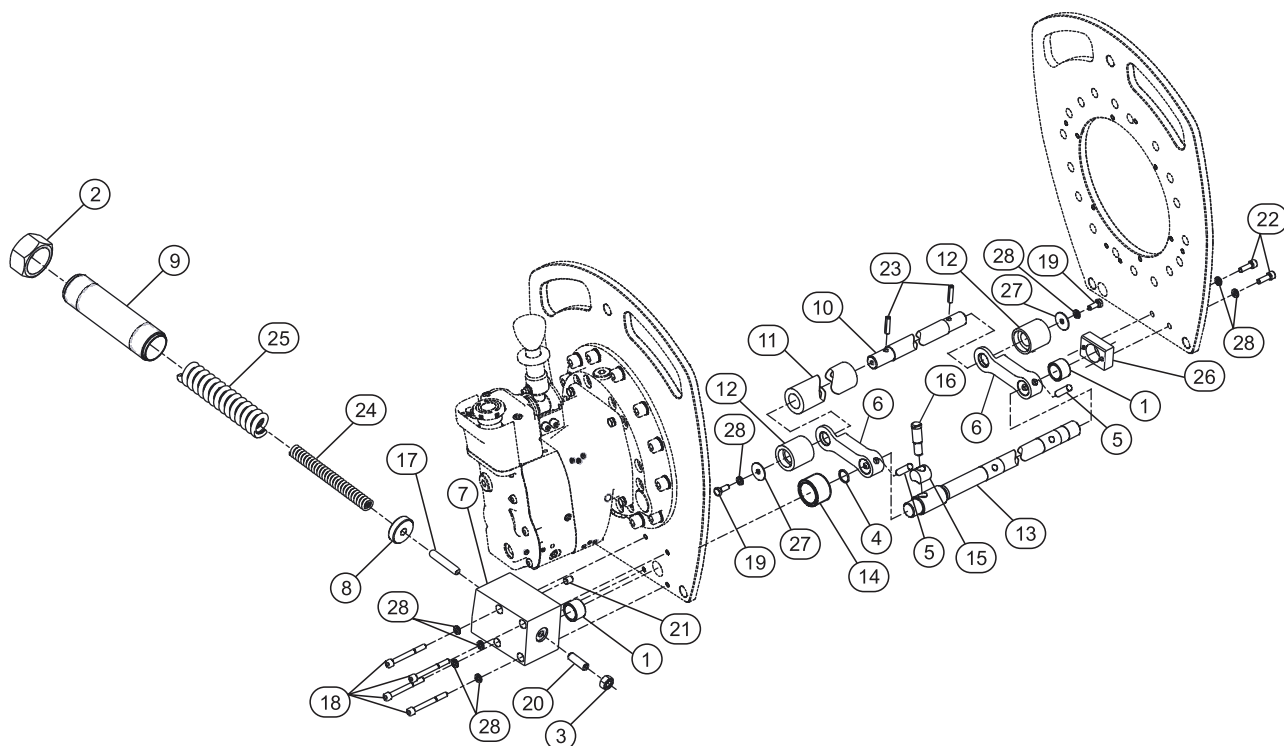


Table 36. Press Roller Assembly Short Drum Parts List: 47527752001

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Bushing Metaframe	2	5901-0126 (47527721001)
2	Female Plug	1	6516-8428 (47527718001)
3	Nut	1	4300-6911 (38539284)
4	'O' Ring	1	5821-1729 (38524401)
5	Pin	2	4600-0516 (38524518)
6	Press Roller Arm	2	9645-1084 (47527638001)
7	Press Roller Block	1	9645-1074 (47526776001)
8	Press Roller Ring	1	9645-1083 (47532226001)
9	Press Roller Tube	1	9645-1082 (47527597001)
10	Press Roller, Roller Axle	1	9645-1085 (47527664001)
11	Press Roller, Large Roller	1	9645-1086 (47527665001)
12	Press Roller, Small Roller	2	9645-1087 (47527668001)
13	Press Roller, Axle	1	9645-1078 (47527487001)
14	Press Roller, Bearing	1	9645-1077 (47526786001)
15	Press Roller, Pin	1	9645-1079 (47527534001)
16	Press Roller, Stop	1	9645-1080 (47527546001)
17	Press Roller, Tappet	1	9645-1081 (47527589001)
18	Screw M6X60	4	4132-2806 (38631974)
19	Screw M6X16	2	4102-3001 (38749602)
20	Screw M10X30	1	4200-4207 (38530390)
21	Screw M8-10	1	4200-9807 (47520148001)

Table 36. Press Roller Assembly Short Drum Parts List: 47527752001 (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
22	Screw M6X20	2	4132-2206 (38541132)
23	Spring Pin	2	4650-3120 (38538500)
24	Spring	1	6911-8242 (47527698001)
25	Spring	1	6911-8142 (47527690001)
26	Support Press Roller	1	9645-1263 (47544820001)
27	Washer	2	4570-1006 (38570784)
28	Washer, M6 Nord-Lock	8	4510-0206 (38797304)

Table 37. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1036	RPK-LS2-1500R+PS-ROLL (include items: 1, 2, 3, 4, 5, 9, 11, 12, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28)	1	7650-1017 (47589816001)
1037	RBK-LS2-1500R+PS-ROLL (include items: 14, 15, 16, 17)	1	7650-1018 (47589813001)

FRL + WATER SEPARATOR ASSEMBLY (LS2/PS2)

Figure 19. FRL + WATER SEPARATOR ASSEMBLY DRAWING (LS2/PS2) MHP3856

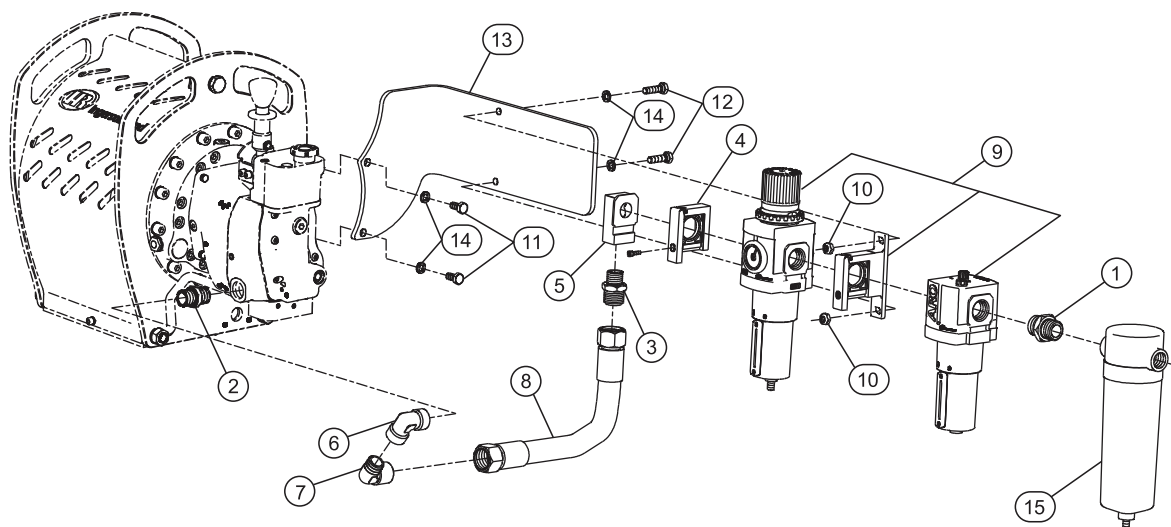


Table 38. FRL + WATER SEPARATOR ASSEMBLY PARTS LIST (LS2/PS2)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Fitting	1	6827-2128 (47579018001)
2	Fitting	1	6827-1628 (47557347001)
3	Fitting Reduction	1	6827-1728 (47557351001)
4	ARO Clamp Spacer	1	104397 (15307309)
5	Block, Right Angle Air	1	4598-8607
6	Elbow	1	6827-1828 (47557571001)
7	Elbow	1	6827-1928 (47557572001)
8	Hose	1	6827-1528 (47557345001)
9	FRL 1"	1	6770-3999 (47557761001)
10	Locknut	2	75583M (58250747)
11	Screw	2	4102-3101 (38750238)
12	Screw	2	4102-0801 (38560892)
13	Support, FRL+Water Separator	1	9645-1295 (47557353001)
14	Washer, M10 Nord-Lock	4	4510-0210 (38797353)
15	WS 300 Water Separator	1	WS180A (23720535)

FRL ASSEMBLY (LS2/PS2)

Figure 20. FRL ASSEMBLY DRAWING (LS2/PS2) MHP3857

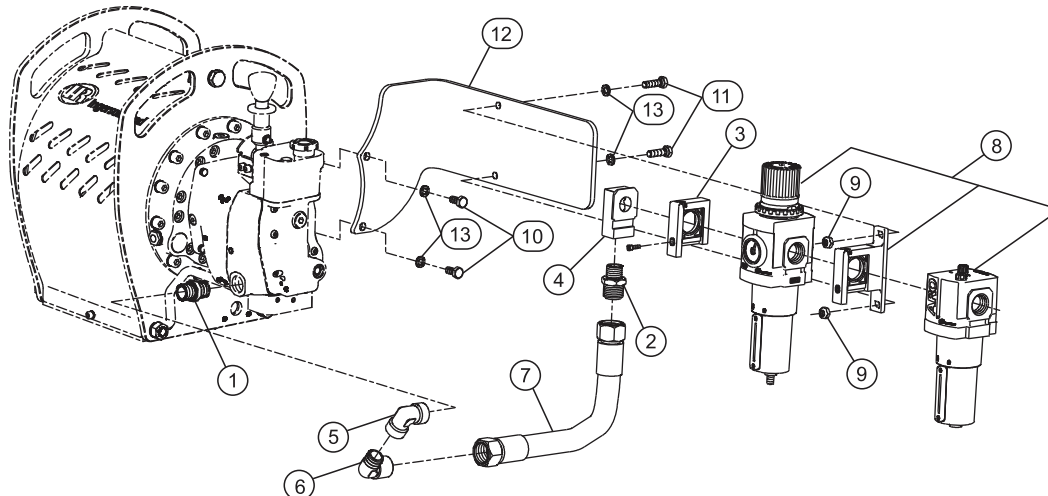


Table 39. FRL ASSEMBLY PARTS LIST (LS2/PS2)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Fitting	1	6827-1628 (47557347001)
2	Fitting, Reduction	1	6827-1728 (47557351001)
3	ARO Clamp Spacer	1	104397 (15307309)
4	Block, Right Angle Air	1	4598-8607
5	Elbow	1	6827-1828 (47557571001))
6	Elbow	1	6827-1928 (47557572001)
7	Hose	1	6827-1528 (47557345001)
8	FRL 1"	1	6770-3999 (47557761001)
9	Lock Nut	2	75583M (58250747)
10	Screw	2	4102-3101 (38750238)
11	Screw	2	4102-0801 (38560892)
12	Support, FRL	1	9645-1306 (47557730001)
13	Washer, M10 Nord-Lock	4	4510-0210 (38797353)

FREE SPOOL CLUTCH ASSEMBLY (PS2-2400R)

Figure 21. FREE SPOOL CLUTCH ASSEMBLY DRAWING (PS2-2400R) MHP3721

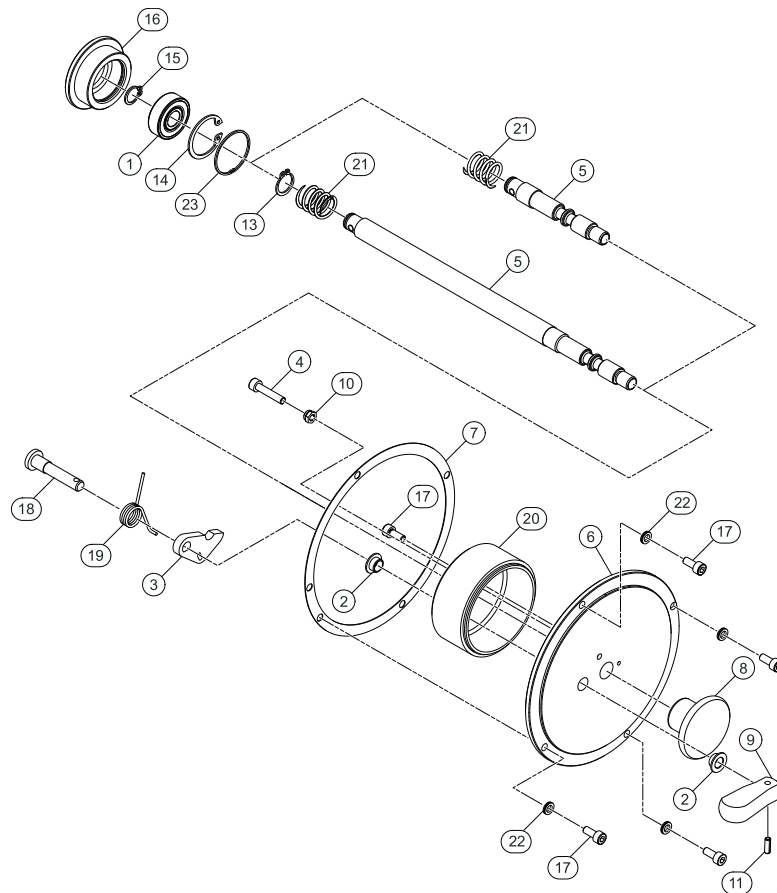


Table 40. FREE SPOOL CLUTCH ASSEMBLY PART LIST (PS2-2400R) (LONG DRUM)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Bearing	1	5015-0001 (38526190)
2	Bushing	2	5900-8826 (38592770)
3	Cam	1	9644-2068 (38592507)
4	Capscrew	1	4133-0506 (38544706)
5	Free Spool Clutch Shaft (long drum)	1	9645-0943 (46899324)
6	Free Spool Clutch Support	1	9645-0738 (46898482)
7	Gasket	1	9651-0042 (46893327)
8	Knob	1	6956-6232 (38522959)
9	Lever	1	9644-2149 (38604682)
10	Locknut M5	1	4370-7211 (38540688)
11	Pin	1	4650-6820 (38635181)
13	Retainer Ring	1	4770-0015 (38522264)
14	Retainer Ring	1	4770-3032 (38522280)
15	Retainer Ring	1	4770-0012 (38522256)
16	Ring	1	9645-0740 (46898508)
17	Screw M5X12	5	4133-8706 (47528349001)
18	Spindle	1	9644-2067 (38592499)

FREE SPOOL CLUTCH ASSEMBLY (PS2-2400R)

Table 40. FREE SPOOL CLUTCH ASSEMBLY PART LIST (PS2-2400R) (LONG DRUM) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
19	Spring	1	9644-2075 (38592556)
20	Spring Stopper	1	9645-0782 (46899969)
21	Spring	1	6918-8932 (38522942)
22	Washer, M5 Nord-Lock	4	4510-0205 (46892410)
23	Snap Ring	1	4770-3055 (38530473)

Table 41. FREE SPOOL CLUTCH ASSEMBLY PART LIST (PS2-2400R) (SHORT DRUM)

Item No.	Description of Part	Total Qty	Part Number (CCN)
1	Bearing	1	5015-0001 (38526190)
2	Bushing	2	5900-8826 (38592770)
3	Cam	1	9644-2068 (38592507)
4	Capscrew	1	4133-0506 (38544706)
5	Free Spool Clutch Shaft	1	9645-0739 (46898490)
6	Free Spool Clutch Support	1	9645-0738 (46898482)
7	Gasket	1	9651-0042 (46893327)
8	Knob	1	6956-6232 (38522959)
9	Lever	1	9644-2149 (38604682)
10	Locknut M5	1	4370-7211 (38540688)
11	Pin	1	4650-6820 (38635181)
13	Retainer Ring	1	4770-0015 (38522264)
14	Retainer Ring	1	4770-3032 (38522280)
15	Retainer Ring	1	4770-0012 (38522256)
16	Ring	1	9645-0740 (46898508)
17	Screw M5X12	5	4133-8706 (47528349001)
18	Spindle	1	9644-2067 (38592499)
19	Spring	1	9644-2075 (38592556)
20	Spring Stopper	1	9645-0782 (46899969)
21	Spring	1	6918-8932 (38522942)
22	Washer	4	4510-0205 (46892410)
23	Snap Ring	1	4770-3055 (38530473)

Table 42. Kit List:

Item No.	Description of Part	Total Qty	Part Number (CCN)
1036	RPK: Clutch-PS2-2400R (include items: 1, 2, 4, 7, 10, 11, 13, 14, 15, 17, 19, 21, 22)	1	7650-1024 (47589819001)

LABEL AND TAG PLACEMENT ASSEMBLY (LS2-300R, LS2-600R AND PS2-1000R)

Figure 22. LABEL AND TAG PLACEMENT ASSEMBLY DRAWING (LS2-300R, LS2-600R AND PS2-1000R) MHP3303

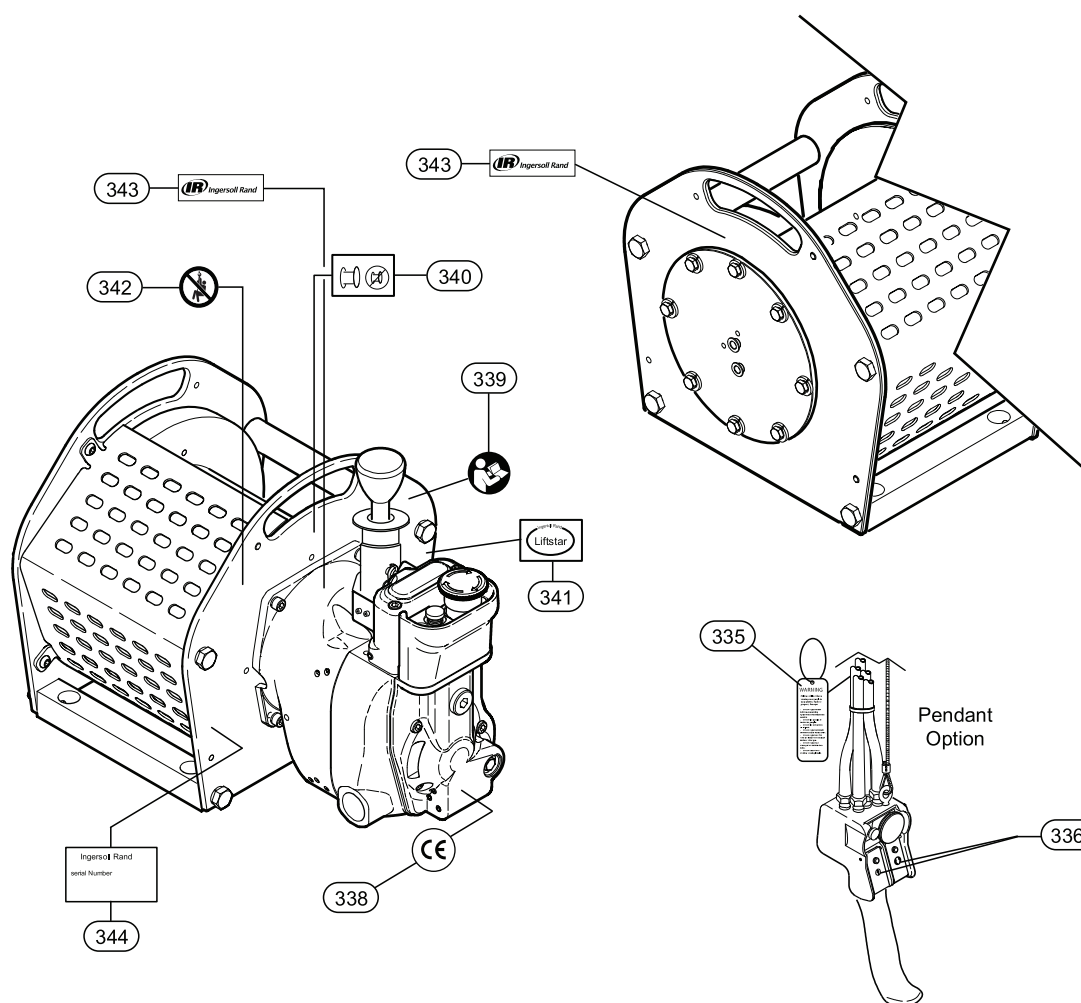


Table 43. LABEL AND TAG PLACEMENT ASSEMBLY PARTS LIST (LS2-300R, LS2-600R AND PS2-1000R)

Item No.	Description of Part	Total Qty	Part Number
330	CE Label Kit (includes 332-339 and 342)	1	Contact Factory
331	Label Kit (includes 332-337, 339 and 342)	1	
335	Tag, Warning	1	See Kit List
336	Pendant Label Kit	1	
338	CE Label	1	
339	Read Literature Symbol Label	1	
340	Label, Wire Rope Take Off Angle	1	
341	Label, Product Series	1	
342	Non-Manrider Symbol Label	1	
343	Ingersoll Rand Logo	3	
344	Data (Name) Plate	1	

LABEL AND TAG PLACEMENT ASSEMBLY (LS2-1500R AND PS2-2400R)

Figure 23. LABEL AND TAG PLACEMENT ASSEMBLY DRAWING (LS2-1500R AND PS2-2400R) MHP3725

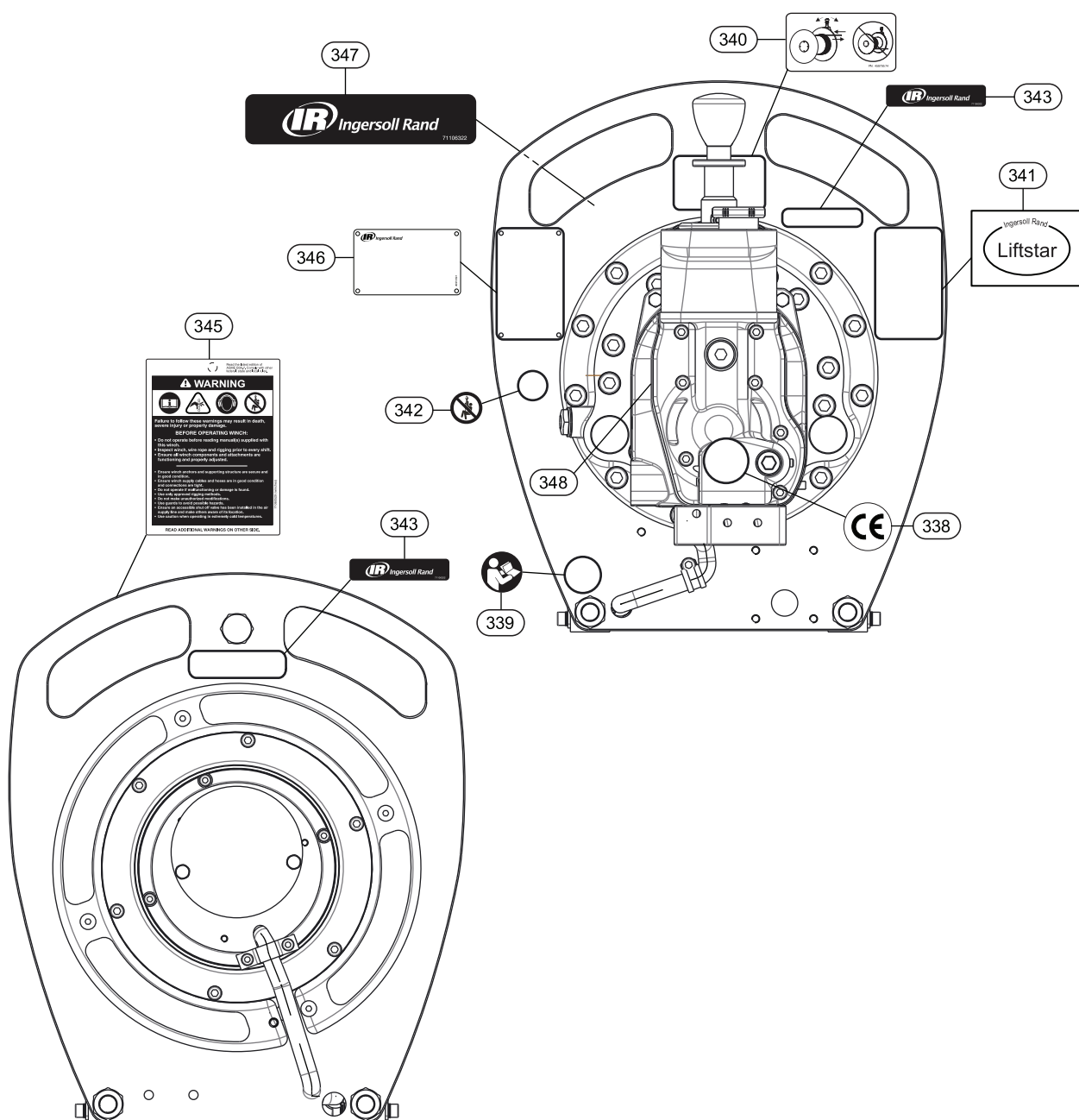


Table 44. LABEL AND TAG PLACEMENT ASSEMBLY PARTS LIST (LS2-1500R AND PS2-2400R)

Item No.	Description of Part	Total Qty	Part Number (CCN)
338	CE Label	1	9618-0097 (38543831)
339	Read Literature Symbol Label	1	9618-0098 (38543856)
340	Overwound	1	9618-0103 (38543898)
	Underwound	1	9618-0104 (38543906)
341	Liftstar	1	9618-0079 (38544235)
342	Non-Manrider Symbol Label	1	9618-0100 (38543872)
	No Utility	1	9618-0099 (38543864)

LABEL AND TAG PLACEMENT ASSEMBLY (LS2-1500R AND PS2-2400R)

Table 44. LABEL AND TAG PLACEMENT ASSEMBLY PARTS LIST (LS2-1500R AND PS2-2400R) (continued)

Item No.	Description of Part	Total Qty	Part Number (CCN)
343	Small Ingersoll Rand Logo	2	9999-0105 (71106322)
345	Warning Tag	1	(71060529)
346	Nameplate	1	(66763141)
347	Ingersoll Rand Logo	1	9999-0104 (71106231)
348	Lever	1	9618-0102 (38543880)

OVERHAUL KITS

Description	Part Number (CCN)
LS2-1500R+PS-COM	3650-0999 (47589797001)
LS2-1500R-L	7650-1000 (47589798001)
LS2-1500R-L-U	7650-1001 (47589799001)
LS2-1500R-L-CE	7650-1002 (47589800001)
LS2-1500R-PH	7650-1003 (47589801001)
LS2-1500R-PH-U	7650-1004 (47589802001)
LS2-1500R-PH-CE	7650-1005 (47589803001)
PS2-2400R-L	7650-1006 (47589804001)
PS2-2400R-L-E	7650-1007 (47589805001)
PS2-2400R-PH	7650-1008 (47589806001)
PS2-2400R-PH-E	7650-1009 (47589807001)
LS2-600R-L	7650-0027 (38780284)
LS2-600R-L-CE	7650-0268 (46886248)
LS2-600R-L-E	7650-0028 (38780292)
LS2-600R-PH	7650-0029 (38780300)
LS2-600R-PH-CE	7650-0269 (46886255)
LS2-600R-PH-E	7650-0030 (38780318)
PS2-1000R-L	7650-0047 (38780482)
PS2-1000R-L-E	7650-0048 (38780490)
PS2-1000R-PH	7650-0049 (38780508)
PS2-1000R-PH-E	7650-0050 (38780516)



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