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**Challenger** **Series**  
VACUUM PUMPS & BLOWERS

**PARTS MANUAL**

REVISED: 04/08/2026 (date)

**4310 PRO Blower**



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You must use this product as described in this manual. Read the manual before you install, operate, or maintain the product. For manual enquiries, email .....

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# 1 Instructions For Use

## Ordering parts

Always specify the part number, the name and quantity of the required items, as well as the type and serial number of the machine. Pages marked with Service symbol - “” contain parts of Service kit(s). For complete contents of the kit see chapter “1 - Service kits”.

## Column information

**Ref.** - Reference number: links a specific listed part to the drawing. Only parts with a reference number are shown in the drawing. Parts in the drawing without a reference number are simply there to illustrate the assembly.

**Part number** - Part number: if no part number is specified, the component is not available as a spare part. A line shown in bold is an assembly. A part of which the number is followed by a black dot is comprised in the bold printed assembly right above.

"<<< >>>" Directs to another list with the same title as the "Name".

When the part number of the specific parts is placed below the "Ref."/"Name" line a choice must be made upon the type/version of the machine.

**Qty** - Quantity: indicates the number of parts in connection with the corresponding reference number. "AR" means "As required": quantity or number to be determined.

**Name** - Part name: translations of the English names can be found in document "Glossary of part names".

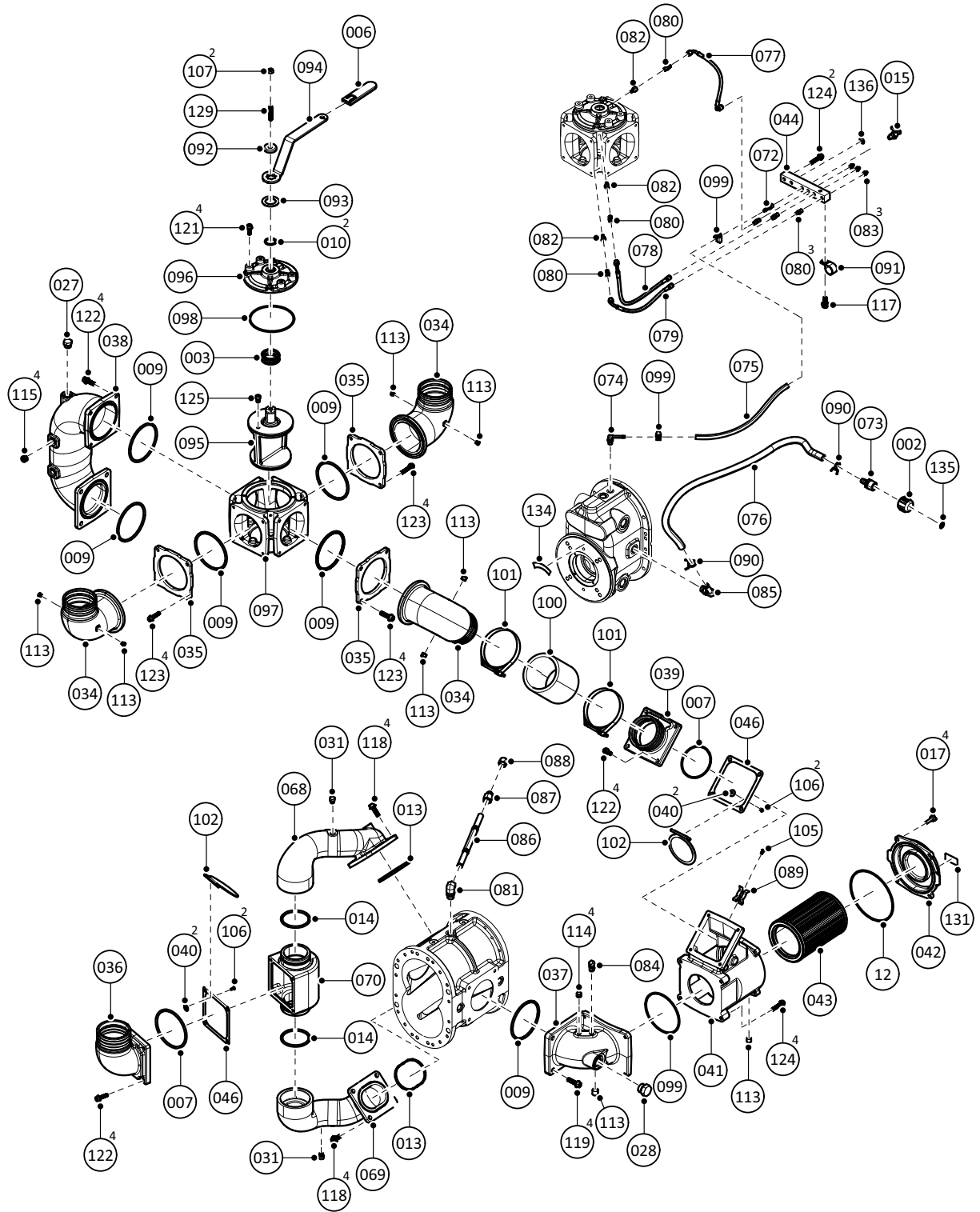
**Remarks** - Extra information about the part.

A series of letters can indicate that a particular part has been certified by the specified authorized body, in accordance with the codes or rules of the list.

Measurements are given in Inches.



Figure 2 - Manifold and Ballast



170-4310HP-82555\_A - 4310 PRO Blower Complete

Table 1 – 4310 Pro Blower Complete Parts List

Ref.	Description	Quantity	Part Number
001	KEY 3/8" X 3/8" X 2"	1	120-006
002	CAP 3/4" PIPE BLACK POLY	1	120-010-001
003	SPRING 4-WAY FTR VALVE	1	120-045
004	WAVE SPRING TRIPLE NESTED, 100 MM BORE	2	120-045-010
005	SIGHT EYE, 3/4" NPT, HEX HD.	1	120-048
006	GRIP, HANDLE W/ LOGO	1	120-060-002
007	O-RING, 2-240 VITON	2	120-064-003
008	O-RING 3-912 VITON	1	120-064-008
009	O-RING, 2-350 VITON	6	120-064-012
010	O-RING 2-216-VITON	2	120-064-017
011	O-RING 2-042 VITON	1	120-064-037
012	O-RING 2-260 VITON	1	120-064-038
013	4310 PRO BALLAST ELBOW SEAL	2	120-064-039
014	O-RING 2-338 VITON	2	120-064-040
015	VALVE, DRAIN 1/8" NPT	1	120-102
016	SERIAL TAG SS	1	120-107-001
017	FILTER KNOB, 5/16"-18 UNC	4	120-312-003
018	HOUSING BLOWER 4310 PRO, MACHINED	1	150-001-016
019	ENDPLATE 43 PRO NON-DRIVE MACHINED	1	150-003-020
020	ENDPLATE 43 PRO DRIVE MACHINED	1	150-003-021
021	4310 PRO DRIVE ROTOR HELICAL RIGHT HAND SCREW	1	150-005-4310P-DR
022	4310 PRO IDLER ROTOR HELICAL LEFT HAND SCREW	1	150-005-4310P-IL
023	ROTOR ADJUSTMENT NUT LOCK WASHER	2	150-011-002
024	ROTOR ADJUSTMENT NUT 43 SERIES	2	150-011-003
025	PULL OUT DOWEL PIN, 3/8" X 1-1/2"	4	150-043-009
026	PULL OUT DOWEL PIN, 3/8" X 1-3/4"	2	150-043-010
027	PLUG SAE ORB - 08 EXTERNAL HEX - FKM	9	150-047-007
028	PLUG SAE ORB - 12 EXTERNAL HEX - FKM	8	150-047-008
029	PLUG MAGNETIC SAE ORB - 08 EXTERNAL HEX - FKM	3	150-047-009
030	PLUG SAE ORB - 02 INTERNAL HEX - FKM	18	150-047-010
031	PLUG SAE ORB - 04 EXTERNAL HEX - FKM	3	150-047-011
032	SIGHT EYE, 1 1/16"-12 SAE	1	150-048
033	SIGHT-EYE ADAPTER ELBOW #10 MORB X 3/4" FNPT	1	150-048-010
034	ELBOW, ADJ 4" W/ 1/4 NPT	3	150-063-001
035	FLANGE, 4" ADJ-ELBOW NARROW	3	150-063-014
036	4" CLOCKABLE FLAPPER CHECK ELBOW	1	150-063-017

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Table 1 – 4310 Pro Blower Complete Parts List

Ref.	Description	Quantity	Part Number
037	43 SERIES INTAKE ELBOW	1	150-063-018
038	43 SERIES PRO EXHAUST MANIFOLD	1	150-063-019
039	FLANGE CHECK 4" HB - 43 SERIES PRO	1	150-063-020
040	WASHER, #10 FLAT HD	4	150-099-007
041	FILTER HOUSING 43 PRO SERIES	1	150-309-002
042	43 SERIES FILTER COVER	1	150-310-008
043	43 SERIES INTAKE FILTER	1	150-314-012
044	43 SERIES MAINTENANCE BLOCK	1	150-410-002
045	TIMING GEAR, DRIVE, 747	2	150-612-747
046	GASKET 4" SQ CHECK VALVE GARLOCK	2	150-616-001
047	SEAL RING, 2.5 OD CAST IRON	16	150-618-747
048	SEAL 40 X 72 X 7 ADL FPM	1	150-620-001
049	BEARING, 5309 (45 X 100 X 39.7)	2	150-621-747
050	BEARING, NU309 (45 X 100 X 25)	2	150-622-747
051	BEARING, NU308 (40 X 90 X 23)	1	150-623-747
052	B-LOC, RETAINING RING, FLANGED	2	150-624-747
053*	43 SERIES SUMP SEAL CARRIER	1	150-625-001
054	43 SERIES PRO DRIVE SUMP COVER	1	150-627-008
055	43 SERIES PRO NON-DRIVE SUMP COVER	1	150-628-008
056	ID SEAL SLEEVE 43 SERIES PRO	4	150-629-008
057	SEAL SLEEVE OD 43 SERIES PRO	4	150-630-004
058	43 SERIES PRO OIL LABYRINTH	4	150-631-006
059	43 SERIES PRO WAVE SPRING BACKER	2	150-633-011
060	OIL SLINGER, DRIVE END 747	1	150-635-747
061	BEARING RETAINER ND, SLINGER MOUNT, 43 SERIES	2	150-636-005
062	OIL SLINGER, 43 SERIES, NON DRIVE END	1	150-637-001
063	GASKET, END COVER 43 SERIES PRO	2	150-639-005
064	43 SERIES B-LOC SPACER	2	150-641-001
065	BRACKET 4310 VALVE MOUNT	1	150-644-011
066	43 SERIES LIFTING BRACKET	2	150-644-012
067	LOCK NUT DRIVE, ROTOR, 747	2	150-645-747
068	BALLAST MANIFOLD 43 SERIES PRO LH	1	150-650-022
069	BALLAST MANIFOLD 43 SERIES PRO RH	1	150-650-023
070	BALLAST TEE 43 SERIES PRO	1	150-650-024
071	SERIAL TAG BACKER, 16 GA SS	1	280-355-402
072	HOSE BARB 1/4" X 1/8" NPT STRAIGHT	1	310-LP5

170-4310HP-82555\_A - 4310 PRO Blower Complete

Table 1 – 4310 Pro Blower Complete Parts List

Ref.	Description	Quantity	Part Number
073	HOSE BARB 1/2" X 3/4" MNPT STRAIGHT	1	310-LP15
074	ADAPTER #4 MORB TO 1/4 HB 90 DEGREE	1	310-LP24
075	OIL LINE BLK 1/4" ID 30R7	1	320-407-003
076	OIL LINE BLK 1/2" ID 30R7	1	320-407-016
077	GREASE LINE -3 SST 90 DEG JIC TO 90 DEG JIC, 11.50" OAL	1	320-407-058
078	GREASE LINE -3 SST 90 DEG JIC TO STRAIGHT JIC, 15.00" OAL	1	320-407-059
079	GREASE LINE -3 SST 90 DEG JIC TO STRAIGHT JIC, 11.50" OAL	1	320-407-060
080	FITTING STR -3 MJIC X 1/8 MNPT	6	320-408-016
081	ADAPTER #8 MORB TO #6 FEMALE NPT 90 DEGREE	1	320-408-027
082	FITTING 1/4"-28 X1/8" FNPT STRAIGHT	3	320-408-028
083	FITTING GREASE 1/8" MNPT	3	320-408-029
084	FITTING ELBOW -4 MJIC X 1/4 MNPT	1	320-408-036
085	HOSE BARB 90 ELBOW 1/2" X #8 MORB	1	320-408-079
086	NIPPLE 3/8"X 5-1/2" GALV.	1	320-408-080
087	ADAPTER, -08 MJIC X -06 FNPT	1	320-408-081
088	CAP, -08 FJIC	1	320-408-082
089	CLIP 4300 SERIES REMOTE OIL FILL	1	320-409-011
090	SPRING CLIP CONSTANT-TENSION 3/4 OD HOSE	2	320-409-012
091	P-CLIP 1" ID 13/32" HOLE, CUSHIONED	1	320-409-020
092	WASHER, CUP 4-WAY	1	412-020-003
093	WASHER, THRUST BRONZE	1	412-020-004
094	HANDLE 4310 ENCLOSED	1	412-060-009
095	PLUG, 4 IN 4 WAY, MACHINED	1	412-062-004-2
096	TOWER VALVE 4" 4-WAY	1	412-065-004-2
097	HOUSING, VALVE, 4" 4-WAY, MACHINED	1	412-067-004-2
098	O-RING, 2-251, FPM	2	412-102-251
099	CLAMP WORM 1/4" SS	2	416-025-1WC
100	HOSE 4"D X 5"L	1	426-400-TAR-0500
101	CLAMP, T-BOLT, 4.625"	2	426-4625-TBC
102	43 SERIES PRO FLAPPER CHECK VALVE	2	804-041-012
103	WASHER, 5/16" X 1-1/4" X 1/8", ZP	2	860-035
104	WASHER, 3/8" X 1-3/4" X 3/16", ZP	1	860-036
105	BUTTON HEAD CAP SCREW - 10-24 UNC X 0.4375	3	BHCS 10-24 UNC X 0.4375
106	FLAT SOCKET CAP SCREW - 10-24 UNC X 0.50	4	FSCS - 10-24 UNC X 0.50
107	HEX NUT - 3/8 UNC	2	HEX NUT - 3/8 UNC

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Table 1 – 4310 Pro Blower Complete Parts List

Ref.	Description	Quantity	Part Number
108*	HEX HEAD CAP SCREW - 1/4-20 UNC X 0.75	4	HHCS - 1/4-20 UNC X 0.75
109	HEX HEAD CAP SCREW - 1/2-20 UNF X 2.00	2	HHCS - 1_2-20 UNF X 2.00
110*	HEX HEAD CAP SCREW - 5/16-18 UNC X 0.75	2	HHCS - 5/16-18 UNC x 0.75
111	LOCK WASHER, 1/2	2	LW - 1/2
112*	LOCK WASHER, 1/4	4	LW - 1/4
113	SOCKET HEAD PLUG - 1/4 NPT	8	PLUG - 1/4 NPT SH
114	SOCKET HEAD PLUG - 1/8 NPT	2	PLUG - 1/8 NPT SH
115	SOCKET HEAD PLUG - 3/8 NPT	4	PLUG - 3/8 NPT SH
116	BLIND RIVET, 3/32 DIA X 1/4 GRIP, SS	2	RVT 3/32 D X 1/4L SS
117	SERRATED FLANGE HEX HEAD SCREW - 3/8-16 UNC X 1.00	7	SFHCS - 3/8-16 UNC X 1.00
118	SERRATED FLANGE HEX HEAD SCREW - 3/8-16 UNC X 1.25	12	SFHCS - 3/8-16 UNC X 1.25
119	SERRATED FLANGE HEX HEAD SCREW - 3/8-16 UNC X 1.50	4	SFHCS - 3/8-16 UNC X 1.50
120	SERRATED FLANGE HEX HEAD SCREW - 3/8-16 UNC X 2.75	24	SFHCS - 3_8-16 UNC X 2.50
121	SERRATED FLANGE HEX HEAD SCREW - 5/16-18 UNC X 1.00	4	SFHCS - 5/16-18 UNC X 1.00
122	SERRATED FLANGE HEX HEAD SCREW - 5/16-18 UNC X 1.25	12	SFHCS - 5/16-18 UNC X 1.25
123	SERRATED FLANGE HEX HEAD SCREW - 5/16-18 UNC X 1.50	12	SFHCS - 5/16-18 UNC X 1.50
124	SERRATED FLANGE HEX HEAD SCREW - 5/16-18 UNC X 1.75	6	SFHCS - 5/16-18 UNC X 1.75
125	SOCKET HEAD CAP SCREW - 3/8-16 UNC X 0.50	1	SHCS - 3/8-16 UNC X 0.50
126	SHCS- 3/8-16 UNC X 1.50 YELLOW ZINC	8	SHCS - 3_8-16 UNC X 1.50 YZ
127	SOCKET HEAD CAP SCREW - 5/16-18 UNC X 0.50	2	SHCS - 5/16-18 UNC X 0.50
128	SOCKET HEAD CAP SCREW - M8 X 12MM	4	SHCS - M8 X 12MM
129	SET SCREW - 3/8-16 UNC X 2.00 CUP PT SS	1	SS - 3/8-16 UNC X 2.00 SS
130*	SERRATED FLANGE HEX HEAD SCREW - 5/16-18 UNC X 0.75	3	SFHCS - 5/16-18 UNC X 0.75
131	DECAL CLEAN FILTER REGULARY YELLOW	1	120-100-012
132	DECAL RPM 2700-4000	1	120-100-020
133	DECAL NVE/NATVAC.COM - BLACK VINYL	1	120-100-042
134	DECAL CURVED CW ARROW	1	120-101-006
135	DECAL OIL FILL	1	120-101-007 (A)
136	DECAL OIL VENT	1	120-101-007 (B)
137	DECAL 4310 BLOWER	1	120-101-010

\* This part is not illustrator

