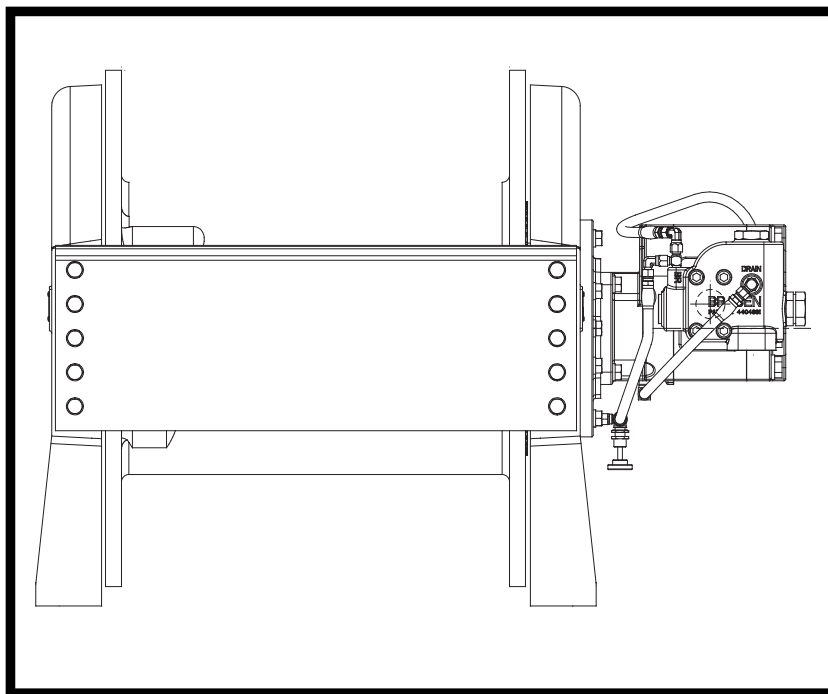


BRADEN®

CH210 HOIST

MATERIAL LIST



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PACCAR WINCH DIVISION

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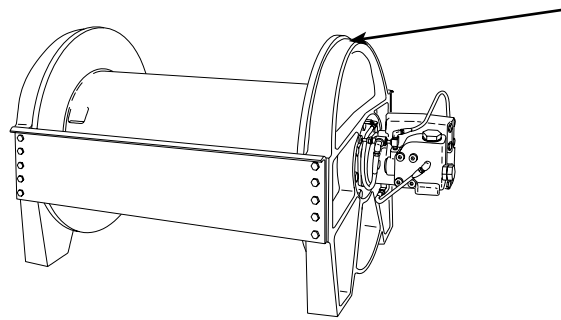
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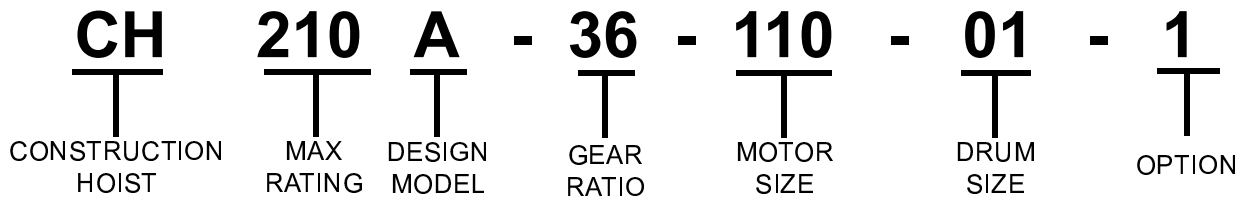
MODEL NUMBER AND SERIAL NUMBER

When information on a hoist is needed, always refer to the model number and serial number. Both are located on the top of the motor side end plate as indicated.



MODEL NUMBER AND SERIAL NUMBER

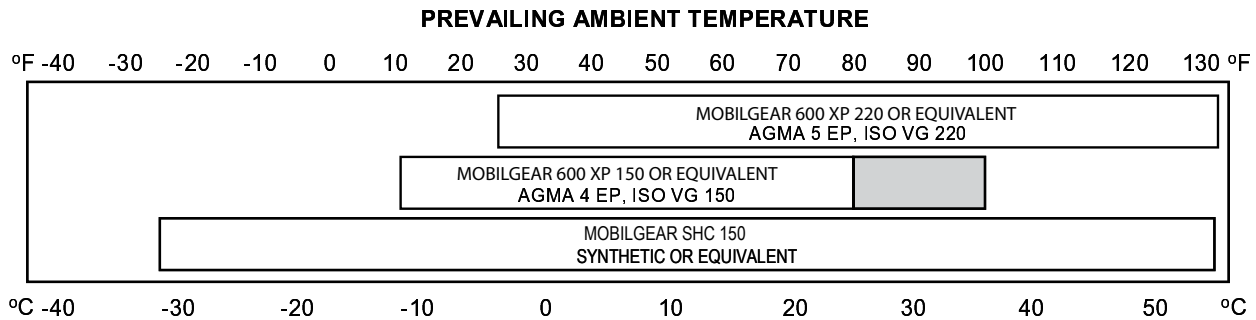
EXPLANATION OF MODEL NUMBER



- CH** DESIGNATES CONSTRUCTION HOIST
- 210** DESIGNATES 21,000 LB FIRST LAYER LINE PULL
- A** DESIGNATES THE MODEL SERIES RELATING TO DESIGN CHANGES
- 36** DESIGNATES TOTAL GEAR REDUCTION
- 110** DESIGNATES HYDRAULIC MOTOR DISPLACEMENT IN CU IN/REV (DECIMAL POINT ELIMINATED EXAMPLE 110 – 11.0 CU IN/REV)
- 01** DESIGNATES THE DRUM OPTION
- 1** PERMITS TESTING AND INSPECTION PER API 2C FOR OFFSHORE CRANES

Oil Capacities - 01 Drum 33 pints (15.6 L) - 02 Drum 51 pints (24.1 L)
Capacities are approximate. Fill hoist to center of sight gauge in support endplate with drum in a horizontal position.

RECOMMENDED PLANETARY GEAR OIL



i **NOTE:** SHADED TEMPERATURE RANGE IN THE CHART ABOVE NOT RECOMMENDED FOR SEVERE APPLICATIONS SUCH AS: OFFSHORE CRANES, SUSTAINED FAST DUTY CYCLES OR FREQUENT LIFTING.

Planetary hoists are factory filled with Mobilgear 600 XP 150, or equivalent. Consult your oil supplier for other equivalent oils if required.

Mobil	Shell	Chevron	Texaco
Mobilgear 600 XP 150	Omaia 150	Gear Compounds EP 150	Meropa 150
Mobilgear 600 XP 220	Omaia 220	Gear Compounds EP 220	Meropa 220



**63592 - SEAL KIT WITH V-RING
 63370 - SEAL KIT W/O V-RING**

PART NO.	DESCRIPTION	QTY.
100589	O-RING	1
107297	OIL SEAL	1
70167	OIL SEAL	1
103441	SEAL, U-CUP	1
22357	O-RING	1
77278	BACK-UP WASHER	1
13017	O-RING	1
25366	O-RING	1
10330	O-RING	1
13542	O-RING	1
21150	O-RING	1
24773	O-RING	1
106203	O-RING	1
10052	O-RING	1
13838	O-RING	1
25591	O-RING (in 63370 kit only)	1
103393	V-RING SEAL (in 63592 kit only)	1
103380	V-RING SEAL (in 63592 kit only)	1

**BRAKE DISC PACK
 64576 - 36:1, 64575 - 50:1**

PART NO	DESCRIPTION	QTY	
		36:1	50:1
102954	BRAKE DISC	8	11
103167	FRICTION DISC	7	6
24108	BRAKE SPRING	18	15

64573 BEARING KIT 50:1

PART NO.	DESCRIPTION	QTY
24486	BALL BEARING	1
24487	BALL BEARING	1
29512	THRUST WASHER	1
103239	THRUST WASHER	1
24306	THRUST WASHER	6
26120	ROLLER BEARING	3
24113	SPIROL PIN	3
103447	PRIMARY PLANET SHAFT	3
103138	OUTPUT PLANET SHAFT	3
103681	THRUST WASHER	6
103683	ROLLER	132
24582	SPIROL PIN	3
103682	BEARING SPACER	3

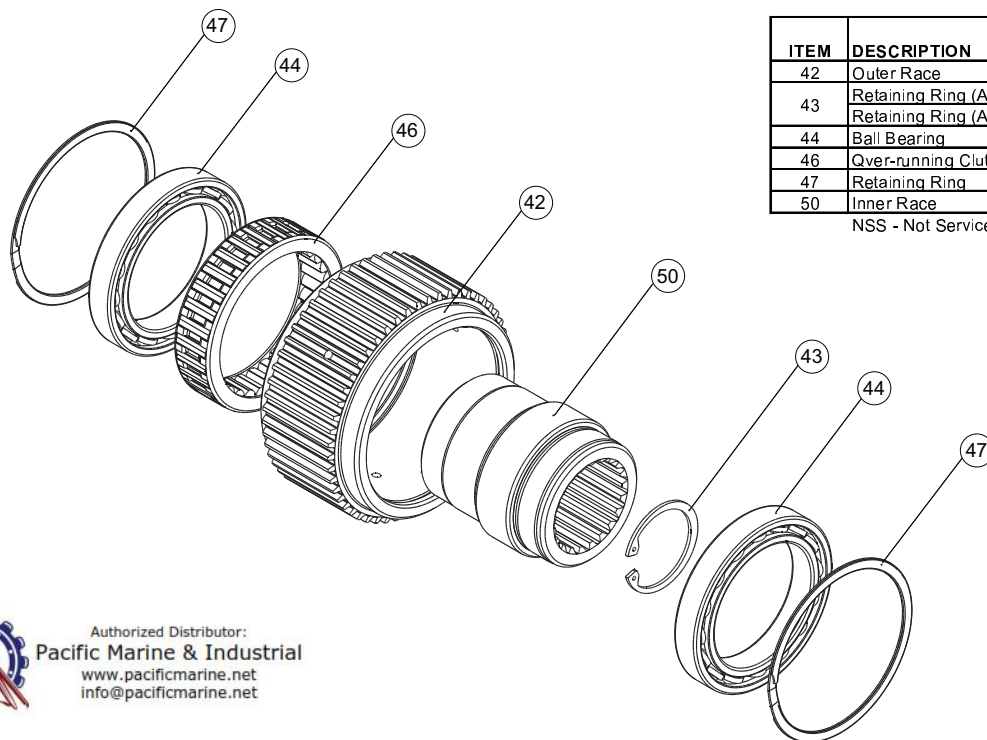
64574 BEARING KIT 36:1

PART NO	DESCRIPTION	QTY
24486	BALL BEARING	1
24487	BALL BEARING	1
29512	THRUST WASHER	1
103239	THRUST WASHER	1
24309	OIL SEAL	6
25292	ROLLER BEARING	3
24113	SPIROL PIN	3
104113	PRIMARY PLANET GEAR SHAFT	3
103138	OUTPUT PLANET SHAFT	3
103681	THRUST WASHER	6
103683	ROLLER	132
24582	SPIROL PIN	3
103682	BEARING SPACER	3

WINCH ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Over-running Clutch Assembly (14T "C" Input)	82908	1
	Over-running Clutch Assembly (13T "D" Input)	82907	1
2	Brake Cylinder Assembly ("C" Motor Mount)	82930	1
	Brake Cylinder Assembly ("D" Motor Mount)	83120	1
3	Primary Planet Carrier Assembly (Current Production)	83117	1
	Primary Planet Carrier Assembly (S/N's Prior to 0201100)	82931	1
4	Output Planet Carrier Assembly	82932	1
5	Drum Support Assembly (w/o Auxiliary Brake)	82933	1
6	Motor Assembly	82934	1
48	Motor Endplate	103155	1
51	Capscrew (1/2 - NC X 3 G8)	102347	8
52	Lockwasher (1/2)	11026	28
53	Ring Gear	104110	1
55	Primary Sun Gear (with 82908 Clutch)	103242	1
	Primary Sun Gear (with 82907 Clutch)	103243	1
56	Drum Closure	103041	1
57	Output Sun Gear	103244	1
59	Cable Drum (01)	103170	1
	Cable Drum (02)	83047	1
	Cable Drum (01 with Ratchet & Pawl)	103870	1
	Cable Drum (01 with Auxiliary Brake)	104902	1
60	Capscrew (1/2 - NC X 1-1/2 G8 Special -01 Drum)	103314	20
	Capscrew (1/2 - NC X 2 G8 Special -02 Drum)	29855	20
61	Tie Plate, 26-3/4 in. long (01 drum)	103211	2
	Tie Plate, 38-3/4 in. long (02 drum)	103815	2
64	Ball Bearing	24487	1
65	Ball Bearing	24486	1
66	Thrust Washer	103239	1
67	Thrust Washer	29512	1
68	O-Ring	100589	1
69	Seal	107297	1
70	Seal	70167	1
71	Cable Wedge - Not Shown	24493	1
72	Plug, O-Ring Flush	32411	2
103	V-Ring Seal	103393	1
105	Drive Screw	11842	4
107	Nameplate	76381	1
108	Closure (#8 Caplug)	70686	1
109	Tie Plate Spacer-Not Shown (02 Drum ONLY)	104108	4

OVERRUNNING CLUTCH ASSEMBLY

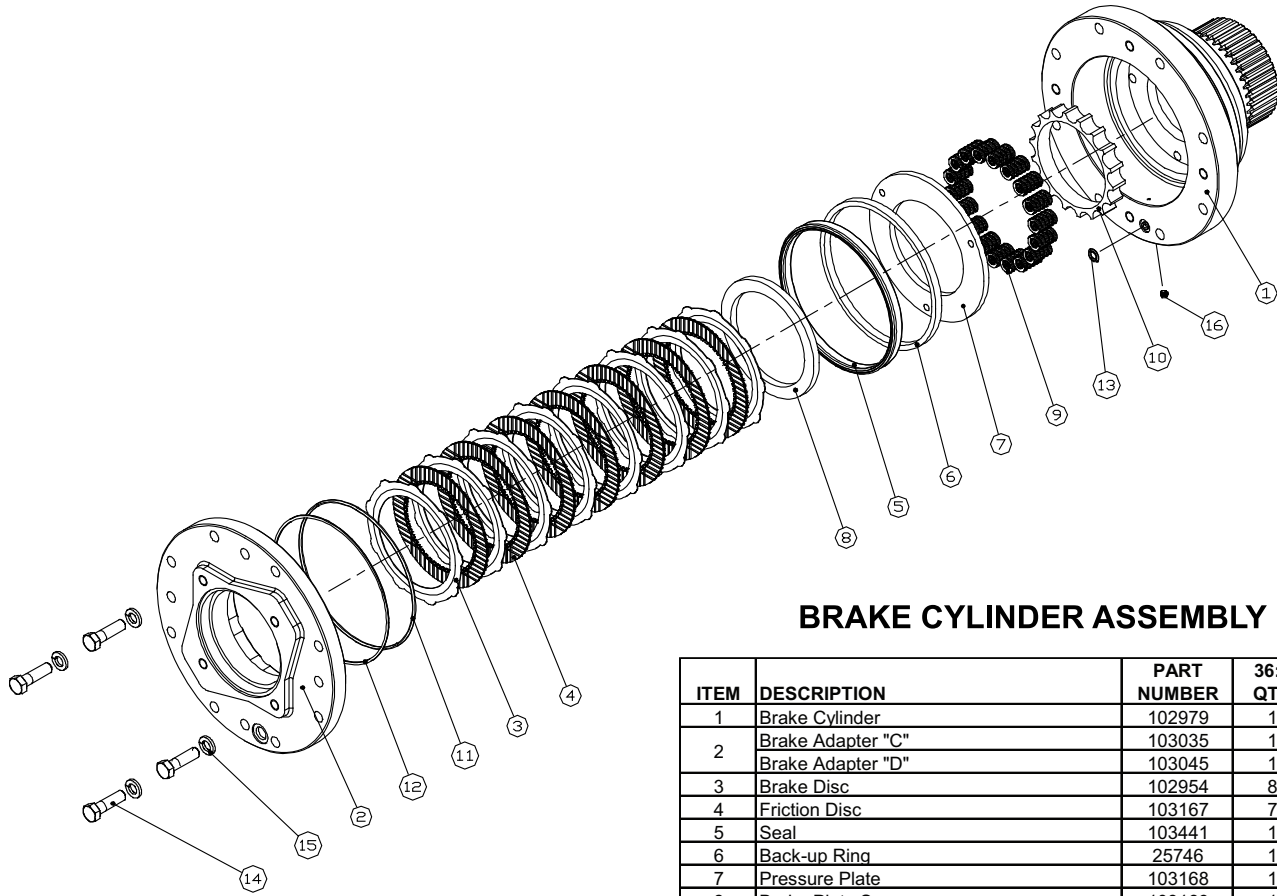


ITEM	DESCRIPTION	PART NUMBER	QTY.
42	Outer Race	NSS	1
43	Retaining Ring (Assy 82908)	24506	1
	Retaining Ring (Assy 82907)	28734	1
44	Ball Bearing	103104	1
46	Over-running Clutch	NSS	1
47	Retaining Ring	103110	2
50	Inner Race	NSS	1

NSS - Not Serviced Separately



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BRAKE CYLINDER ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	36:1 QTY	50:1 QTY
1	Brake Cylinder	102979	1	1
2	Brake Adapter "C"	103035	1	1
	Brake Adapter "D"	103045	1	1
3	Brake Disc	102954	8	11
4	Friction Disc	103167	7	6
5	Seal	103441	1	1
6	Back-up Ring	25746	1	1
7	Pressure Plate	103168	1	1
8	Brake Plate Spacer	103169	1	1
9	Spring	24108	18	15
10	Spring Spacer	103147	1	1
11	O-Ring	22357	1	1
12	Backup Ring	77278	1	1
13	O-Ring	13017	1	1
14	Capscrew (1/2 - 13 X 1-3/4 G8 Z)	104323	4	4
15	Lockwasher (1/2)	11026	4	4
16	Plug	103379	1	1

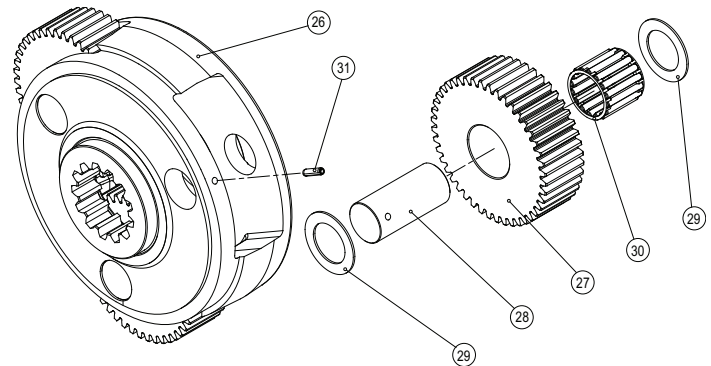
PRIMARY PLANET CARRIER ASSEMBLY

P/N 83117 (CURRENT PRODUCTION)

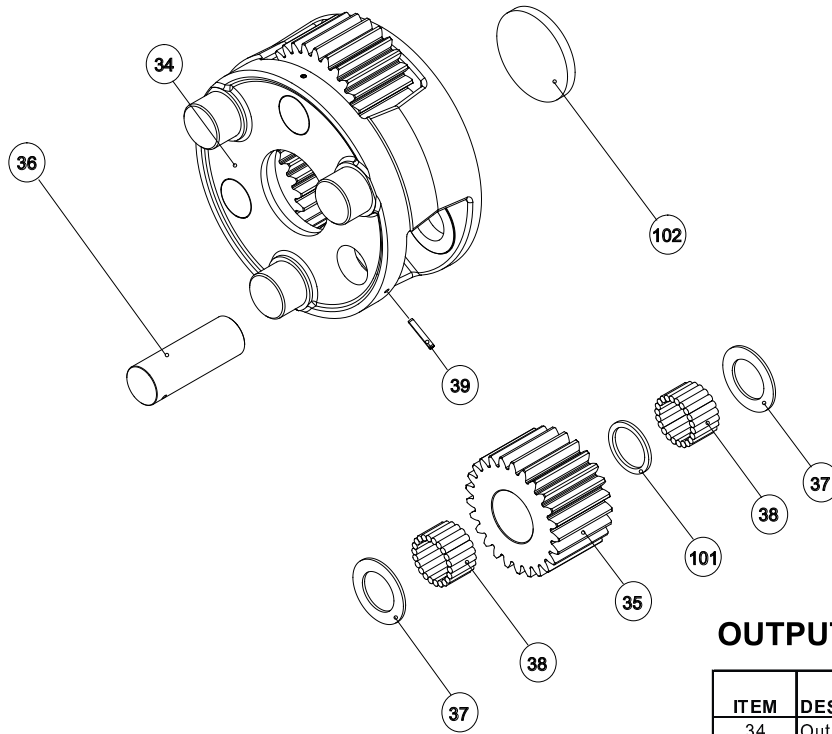
ITEM	DESCRIPTION	PART NUMBER		QTY.
		36:1	50:1	
26	Primary Planet Carrier	104112	103056	1
27	Primary Planet Gear	104114	103237	3
28	Primary Planet Gear Shaft	104113	103447	3
29	Thrust Washer	24306	24306	6
30	Roller Bearing	25292	26120	3
31	Spirol Pin	24113	24113	3

P/N 82931 (S/N'S PRIOR TO 0201100)

ITEM	DESCRIPTION	PART NUMBER		QTY.
		36:1	50:1	
26	Primary Planet Carrier	103055	103056	1
27	Primary Planet Gear	103238	103237	3
28	Primary Planet Gear Shaft	26295	103447	3
29	Thrust Washer	25631	24306	6
30	Roller Bearing	24579	26120	3
31	Spirol Pin	24113	24113	3



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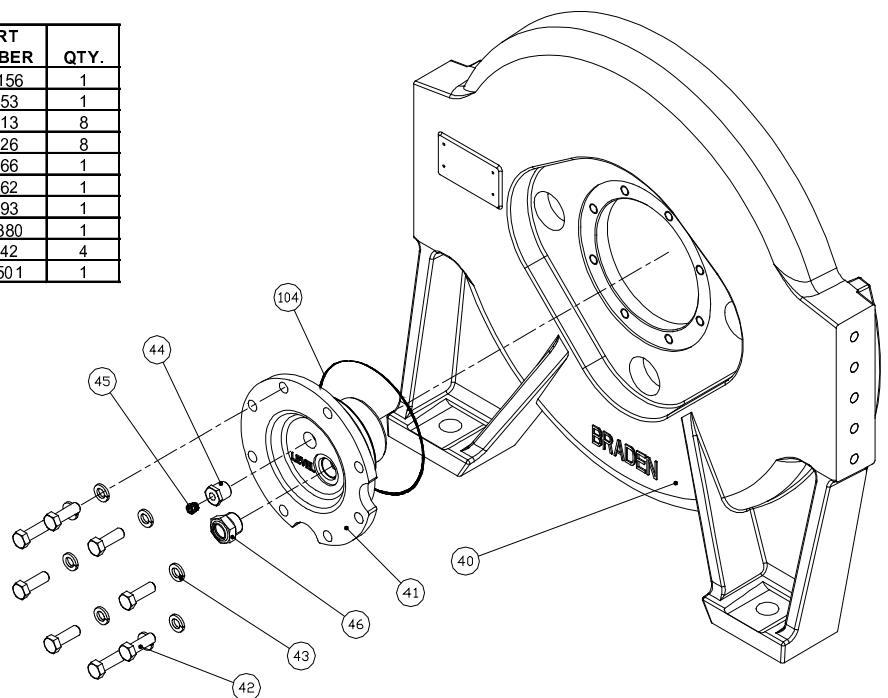


OUTPUT PLANET CARRIER ASSEMBLY

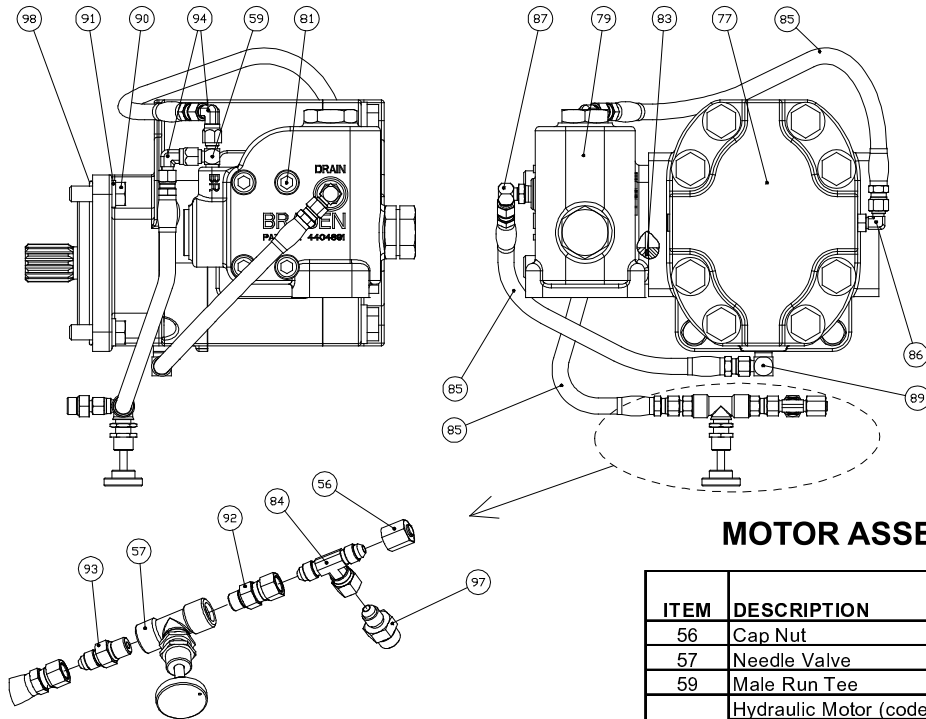
ITEM	DESCRIPTION	PART NUMBER	QTY.
34	Output Planet Carrier	103060	1
35	Output Planet Gear	103236	3
36	Output Planet Gear Shaft	103138	3
37	Thrust Washer	103681	6
38	Loose Rollers	103683	132
39	Spirol Pin	24582	3
101	Bearing Spacer	103682	3
102	Thrust Plate	103279	1

DRUM SUPPORT ASSEMBLY (w/o Auxiliary Brake)

ITEM	DESCRIPTION	PART NUMBER	QTY.
40	Support Endplate	103156	1
41	Bearing Support	24453	1
42	Capscrew (1/2 NC X 1-1/2 G5)	13413	8
43	Lockwasher (1/2)	11026	8
44	Reducer Bushing	18066	1
45	Vent Plug	18062	1
46	Sight Gauge	70193	1
104	V-Ring Seal	103380	1
105	Drive Screw (not shown)	11842	4
106	Approval Plate (not shown)	103501	1

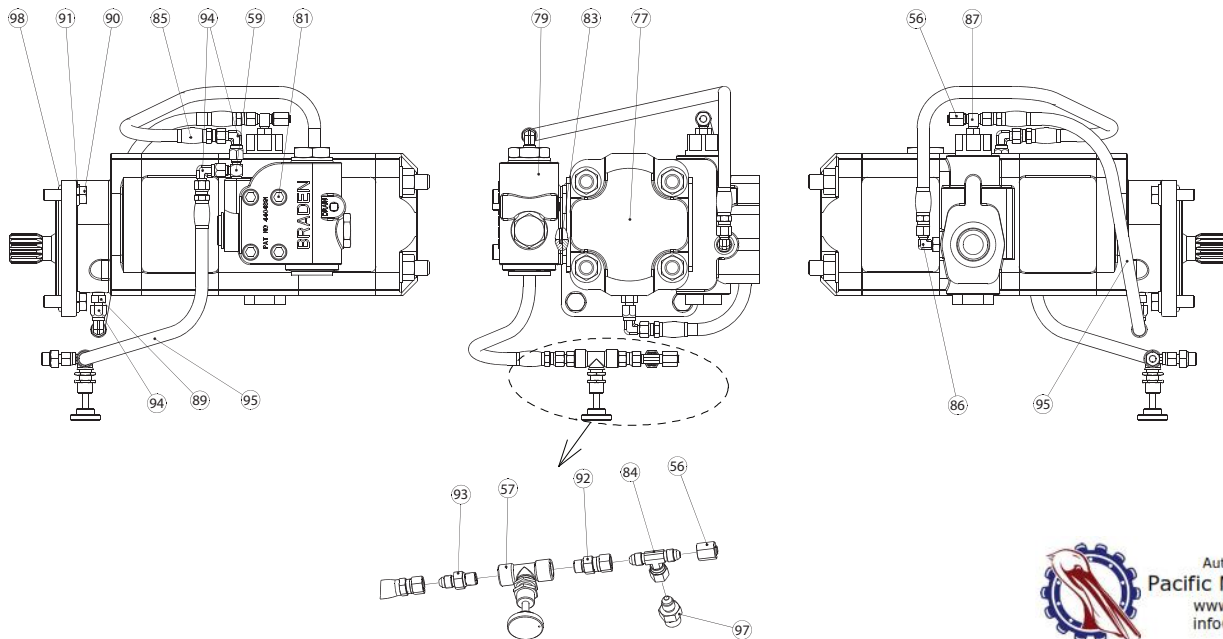


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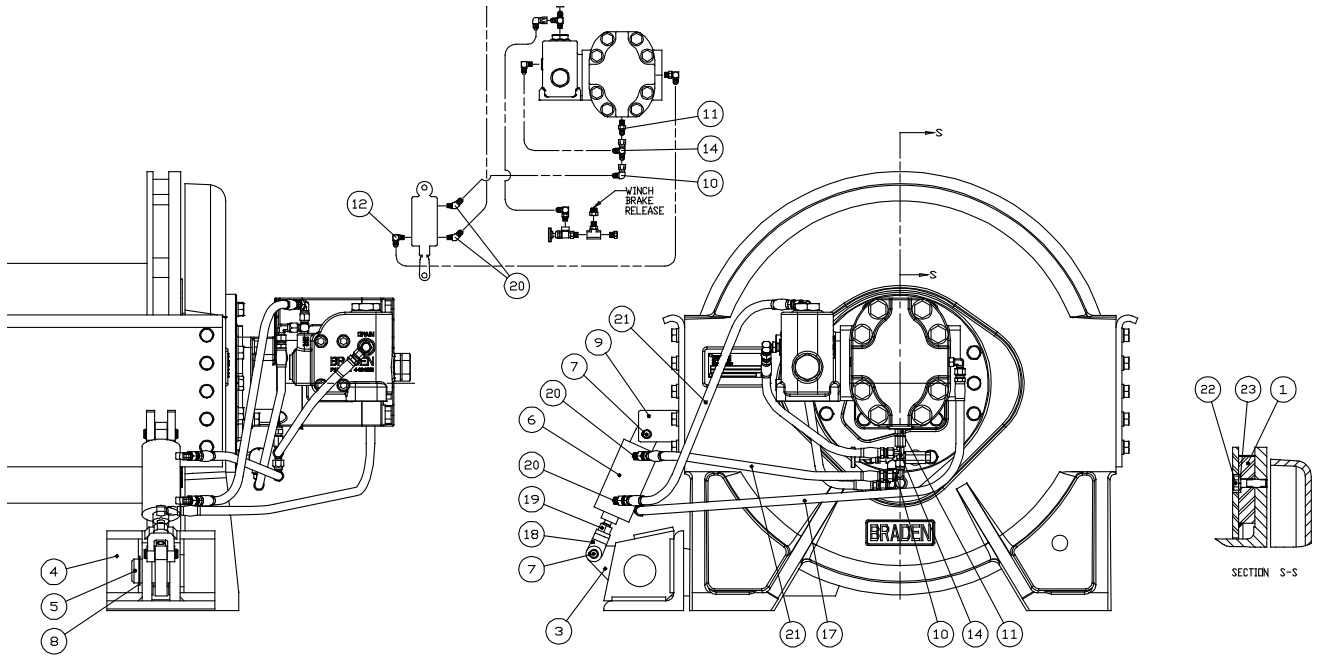


MOTOR ASSEMBLY (Single Speed)

ITEM	DESCRIPTION	PART NUMBER	QTY.
56	Cap Nut	70182	1
57	Needle Valve	103936	1
59	Male Run Tee	24526	1
77	Hydraulic Motor (code 090)	25272	1
	Hydraulic Motor (code 110)	25273	1
	Hydraulic Motor (code 120)	25274	1
79	Brake Valve	81609	1
81	Capscrew (1/2 - 13 x 4-1/2 G8 Sock Hd)	23690	4
83	O-Ring	13542	1
84	Swivel Tee Fitting	25748	1
85	Hose Assembly (2 each w/ratchet & pawl)	25935	3
86	Elbow Fitting	25302	1
87	Elbow Fitting	21163	1
89	Elbow Fitting (not used w/ratchet & pawl)	31341	1
90	Capscrew (1/2 - NC x 1-1/2 G8 Z)	104322	4
91	Lockwasher (1/2)	11026	4
92	Adapter	103947	1
93	Adapter	25864	1
94	Swivel Nut Elbow, 90 degree	26140	2
97	Adapter	31284	1
98	O-Ring	10330	1
	Warning Tag (not shown)	25257	1



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RATCHET & PAWL ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Ratchet Half	83074	2
3	Pawl Assembly	81651	1
4	Pivot Base	24871	1
5	Pin	24876	1
6	Cylinder Assembly	81663	1
7	Pivot Pin	24881	2
8	Retaining Ring	12035	1
9	Mounting Plate	52495	2
10	Swivel Nut Elbow, 90 degree	26140	3
11	Adapter	26001	1
12	Elbow Fitting	21163	1
14	Swivel Tee	26002	2
17	Hose Assembly	34197	1
18	Clevis	24882	1
19	Jam Nut	18004	1
20	Elbow Fitting	21165	2
21	Hose Assembly	25749	2
22	Capscrew (1/2 NC x 1-3/4 G8 Z)	104323	12
23	Lockwasher (1/2)	11026	12

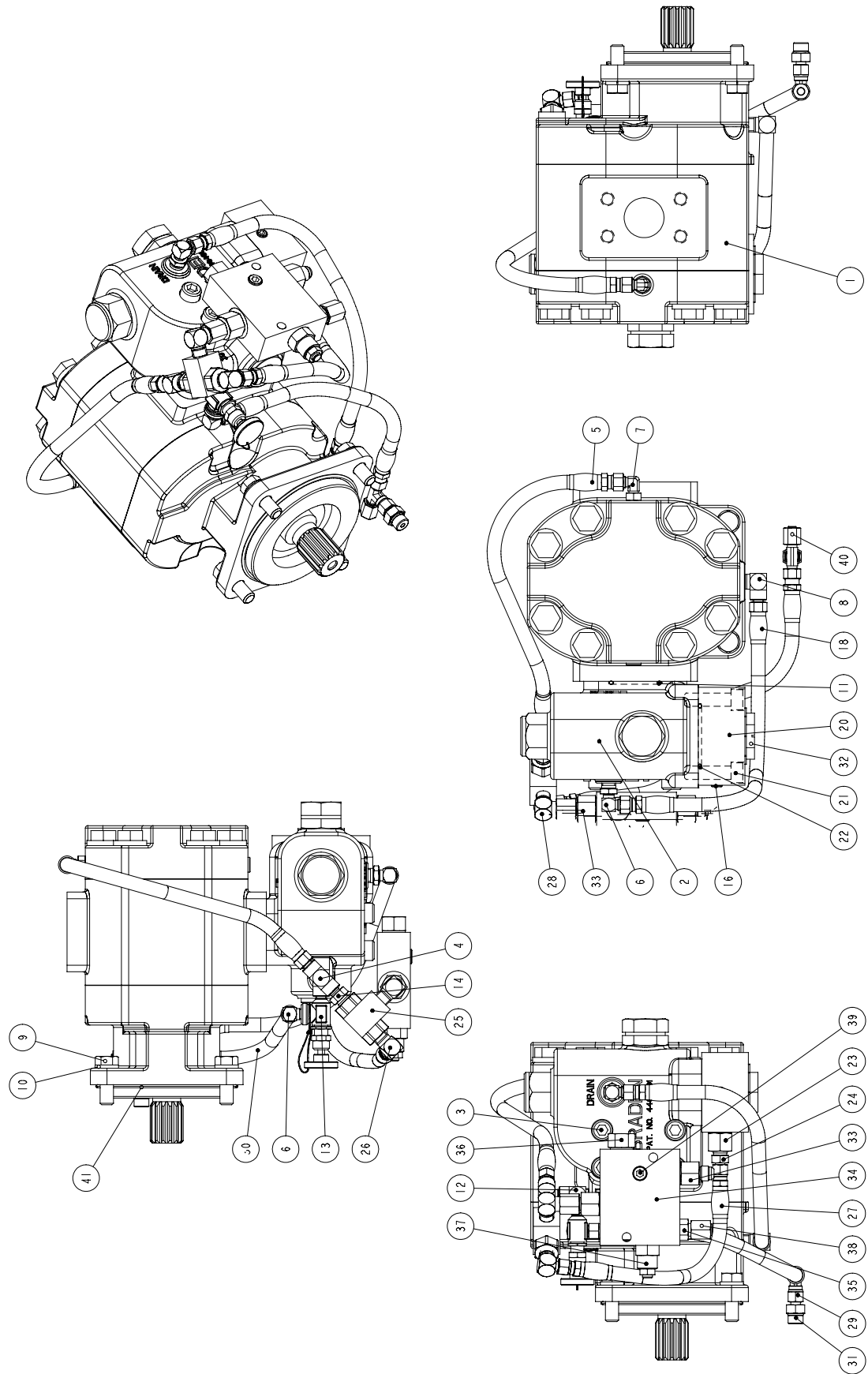
MOTOR ASSEMBLY (Two Speed)

ITEM	DESCRIPTION	PART NUMBER	QTY.
56	Cap Nut	70182	1
57	Needle Valve	103936	1
59	Male Run Tee	24526	1
77	Hydraulic Motor (code 128/064)	25337	1
79	Brake Valve	81586	1
81	Capscrew (7/16 NC x 3 G8 Sock Hd)	21134	4
83	O-Ring	21150	1
84	Swivel Tee Fitting	25748	1
85	Hose Assembly	25750	1
86	Elbow Fitting	25302	1
87	Tee, -4 ORB	29078	1
89	Adapter	26001	1
90	Capscrew (1/2 - NC x 1-1/2 G8 Z)	104322	4
91	Lockwasher (1/2)	11026	4
92	Adapter	103947	1
93	Adapter	25864	1
94	Swivel Nut Elbow, 90 degree	26140	3
95	Hose Assembly	25935	2
97	Adapter	31284	1
98	O-Ring	10330	1
	Warning Tag (not shown)	25257	1



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MOTOR ASSEMBLY
(Single Speed with Auxiliary Brake)

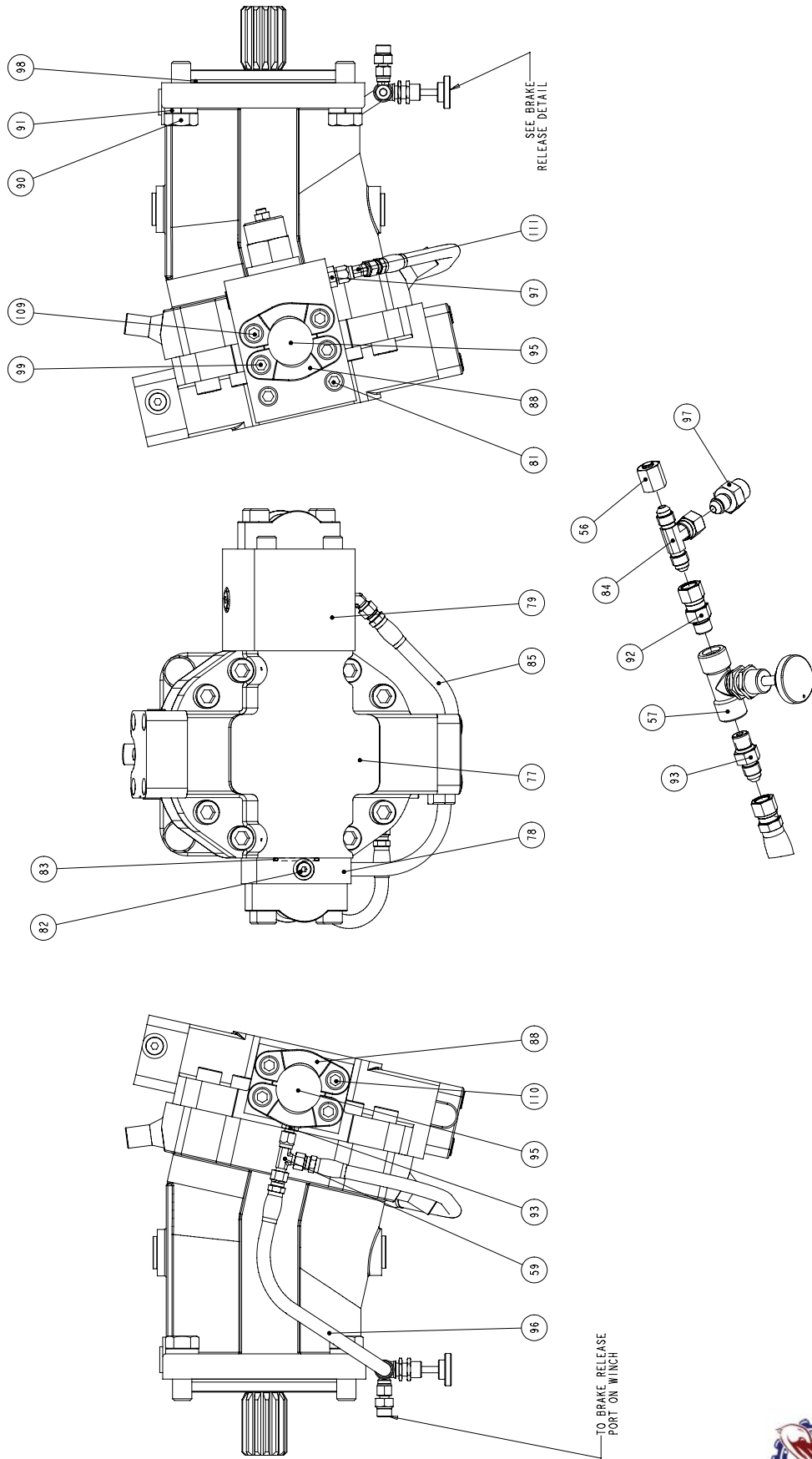


1	Hyd Motor.wm 76 12.03 cu. In.	25274	1
2	1 1/2" Brake Valve Assy.	83133	1
3	Capscrew	23690	4
4	Tee-Male Branch	22934	1
5	Hose Assy	13706	1
6	Elbow Fitting	21163	2
7	Elbow Fitting	25302	1
8	Reducer Elbow	24236	1
9	Capscrew	104322	4
10	Lockwasher	11026	4
11	O'Ring	13542	1
12	Tee-Female Pipe	23769	1
13	Needle Valve	25258	1
14	Pipe Nipple Male	29920	1
15	Warning Tag	25257	1
16	Pipe Plug	22374	1
18	Hose Assy	13705	1
19	Bolted Flange Protector	100169	1
20	Manifold	28970	1
21	Capscrew	23044	4
22	O'Ring	22574	1
23	Reducer (ORB/JIC)	40044	1
24	Male Connector	70104	1
25	Shuttle Valve	72331	1
26	Elbow, 90 Degree	31341	1
27	Hose Assy	25936	1
28	Elbow 90 Deg Swivel	40041	1
29	Swivel Tee	25748	1
30	Hose Assy	25935	1
31	Adapter	31284	1
33	Adapter, Straight	26891	2
34	Valve Body	105346	1
35	Connector	75069	1
37	Cartridge, Pressure Reducing	104216	1
38	Fitting-Cap	75281	1
39	Plug	70120	1
40	Cap Nut	70182	1
41	O'Ring	10330	1



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MOTOR ASSEMBLY (Variable Speed with Auxiliary Brake)

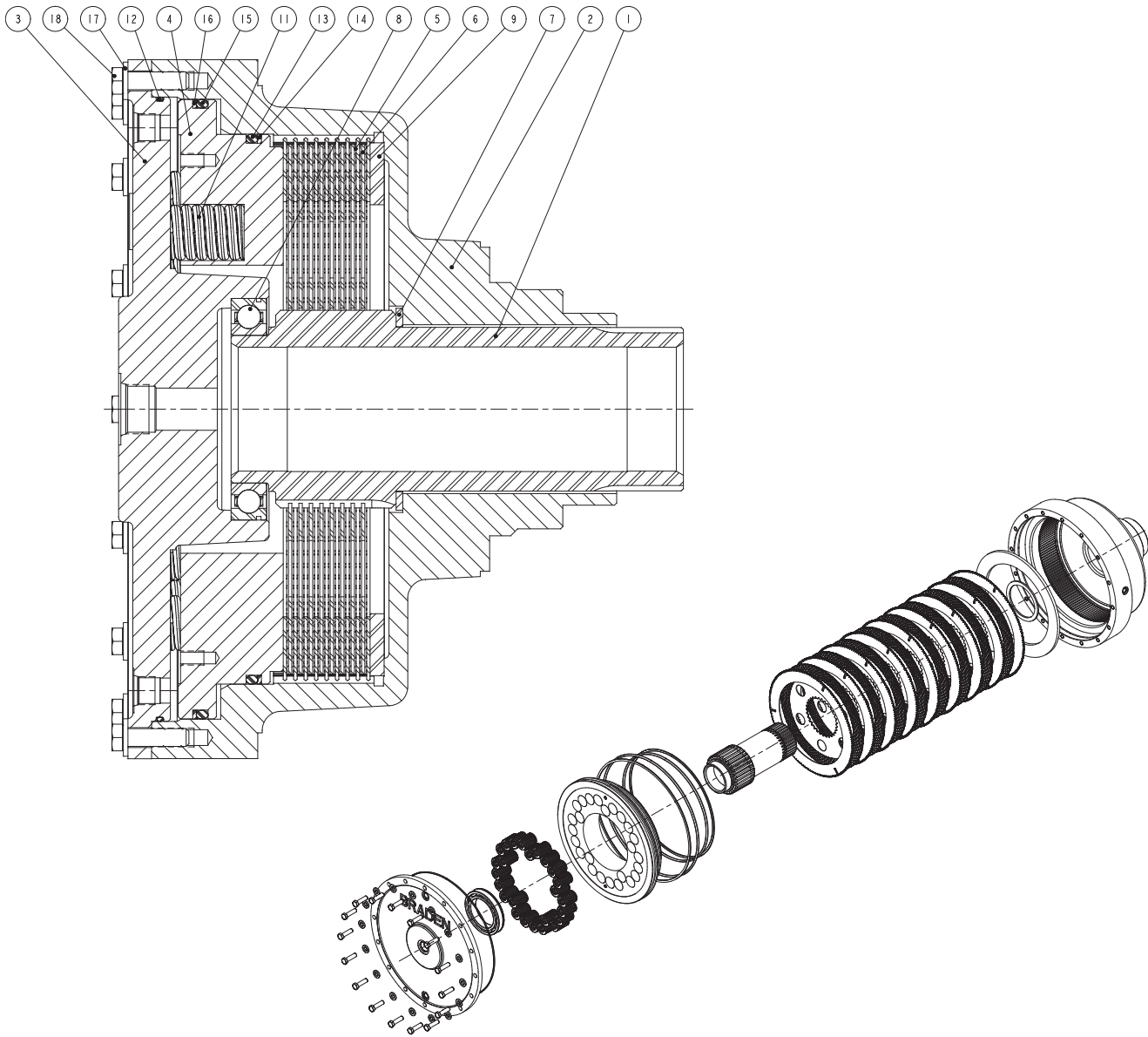


**Motor Assembly
(Variable Speed with Auxiliary Brake)**

ITEM	DESCRIPTION	PART NUMBER	QTY.
	Warning Tag	25257	1
56	Cap Nut	70182	1
57	Needle Valve	103936	1
59	Swivel Tee	26002	1
77	Hydraulic Motor	104179	1
78	Manifold	100846	1
79	Brake Valve Assy	101673	1
81	Capcrew	23690	2
82	Plug	69325	1
83	O'Ring	13838	1
84	Swivel Tee	25748	1
85	Hose Assy	25750	1
88	Split Flange	102921	2
90	Capcrew	104175	4
91	Lockwasher	13435	4
92	Adapter Swivel	103947	1
93	Adapter	25864	2
96	Hose Assy	25935	1
97	Adapter	31284	2
98	O'Ring	10052	1
99	Capcrew	23445	2
109	Capcrew	21908	2
110	Capcrew	75861	4
111	Male Union	70122	1



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CH210 Auxiliary Brake Parts

ITEM NO.	QTY	DESCRIPTION	PART NO.
1	1	Brake Shaft	104157
2	1	Brake Housing	104419
3	1	Cover	104156
4	1	Piston	104159
5	9	Divider Plate	72204
6	8	Brake Plate	73164
7	1	Thrust Washer	28727
8	1	Ball Bearing	70073
9	1	Spacer	29757

ITEM NO.	QTY	DESCRIPTION	PART NO.
11	25	Spring	104168
12	1	O-Ring	72113
13	1	O-Ring	26459
14	1	Backup Ring	29857
15	1	O-Ring	29856
16	1	Backup Ring	29858
17	16	Washer	100859
18	16	Capscrew	104322

AUXILIARY BRAKE SEAL KIT - 63614

72113	O-RING	1
26459	O-RING	1
29857	BACK-UP, O-RING	1
29856	O-RING	1
29858	BACK-UP, O-RING	1

