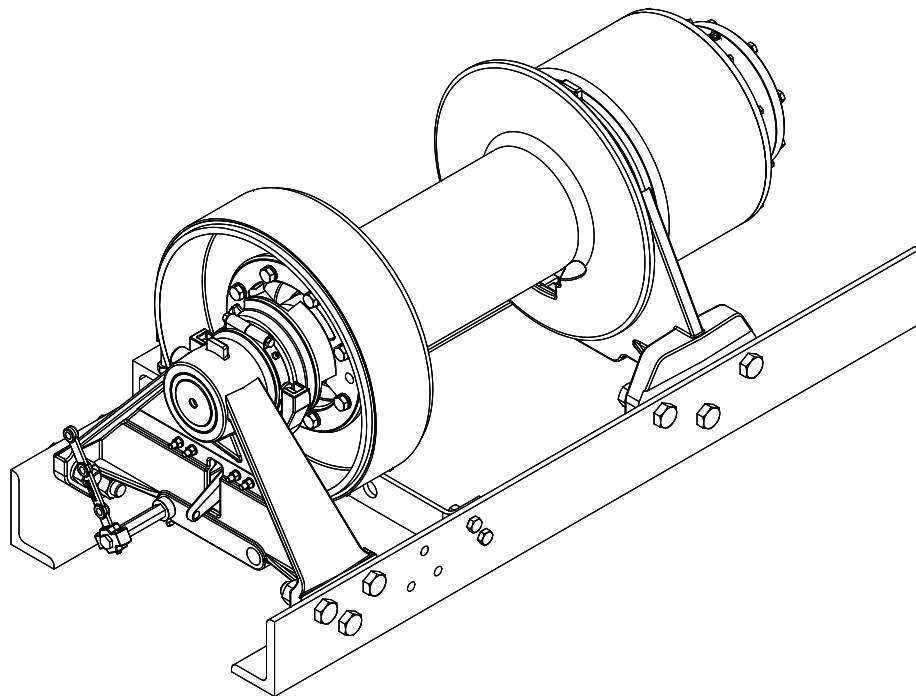


BRADEN®

HP125B

MATERIAL LIST

HYDRAULIC PLANETARY RECOVERY WINCH



Authorized Distributor:
Pacific Marine & Industrial
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PACCAR WINCH DIVISION
P.O. BOX 547 BROKEN ARROW, OK U.S.A. 74013
PHONE (918) 251-8511 FAX (918) 259-1575
www.paccarwinch.com

FOREWORD

Read and understand the entire publication before operating or servicing your BRADEN winch. Retain this manual for future reference.

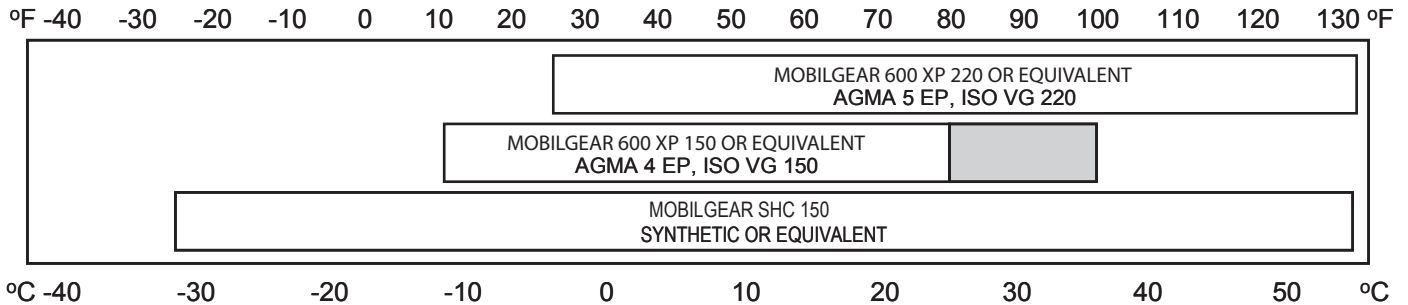
The following service illustrations have been prepared to provide assembly, disassembly, and maintenance information for the units covered in this publication. It is suggested that before doing any work on these units, all assembly and disassembly instructions should be read and understood. (Refer to the HP125B Service Manual.)

Some illustrations in this manual may show details or attachments which may be differed from your winch. Also, some components may be removed for illustrative purposes.

Continuing product improvement may cause changes in your unit which may not be included in this manual. When a question arises regarding your unit or this manual, contact your nearest BRADEN/GEARMATIC dealer or the factory Technical Support Department at 918-251-8511, Monday - Friday. Always provide the hoist model and serial number when making inquiries.

RECOMMENDED PLANETARY GEAR OIL

PREVAILING AMBIENT TEMPERATURE



NOTE: SHADED TEMPERATURE RANGE IN THE CHART ABOVE NOT RECOMMENDED FOR SEVERE APPLICATIONS FOR EXAMPLE, SUSTAINED FAST DUTY CYCLES

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

M			T
Mobilgear 600 XP 220	Oil	AGMA 5 EP, ISO VG 220	Mobilgear 600
Mobilgear 600 XP 150	Oil	AGMA 4 EP, ISO VG 150	Mobilgear 600
Mobilgear SHC 150	Synthetic or equivalent		Mobilgear 600

Unless otherwise specified, it is recommended that the gear oil be changed after the first one hundred (100) hours or thirty (30) days of machine operation, then every one thousand (1,000) hours or twelve (12) months, whichever occurs first. The gear oil should also be changed whenever the ambient temperature changes significantly and an oil from a different temperature range would be more appropriate.

A warm-up procedure is recommended at each start-up and is essential at ambient temperatures below +40°F (4°C).

The prime mover should be run at its lowest recommended RPM with the hydraulic winch control valve in neutral allowing sufficient time to warm up the system. The winch should then be operated at low speeds, forward and reverse, several times to prime all lines with warm hydraulic oil and to circulate gear lubricant through the planetary gear sets.

EXPLANATION OF MODEL NUMBER

HP	125	B	LP	157	128/064	01
HYDRAULIC PLANETARY	MAX RATING	DESIGN MODEL	LOW PROFILE	GEAR RATIO	MOTOR SIZE	DRUM SIZE

- HP DESIGNATES HYDRAULIC PLANETARY RECOVERY WINCH
- 125 DESIGNATES 125,000 LB FIRST LAYER LINE PULL
- B DESIGNATES MODEL SERIES RELATING TO DESIGN CHANGES
- LP DESIGNATES LOW PROFILE
- 157 DESIGNATES TOTAL GEAR RATIO (157:1)
- 128/064 DESIGNATES MOTOR DISPLACEMENT (12.8 CU. IN. / 6.4 CU. IN.)
- 01 DESIGNATES DRUM OPTION (01)



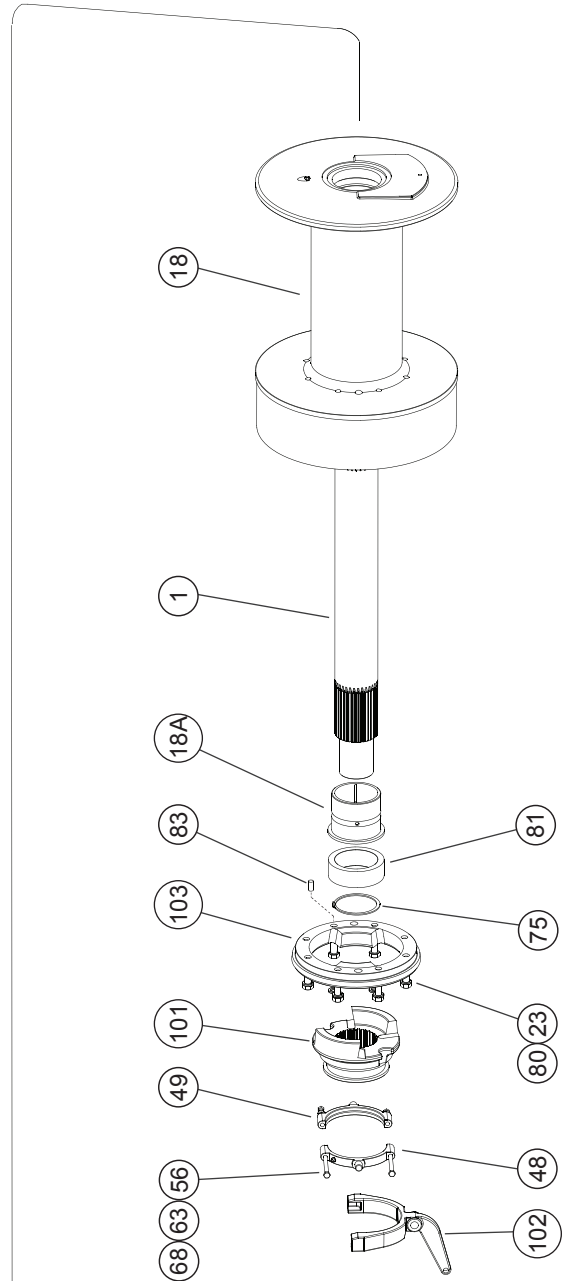
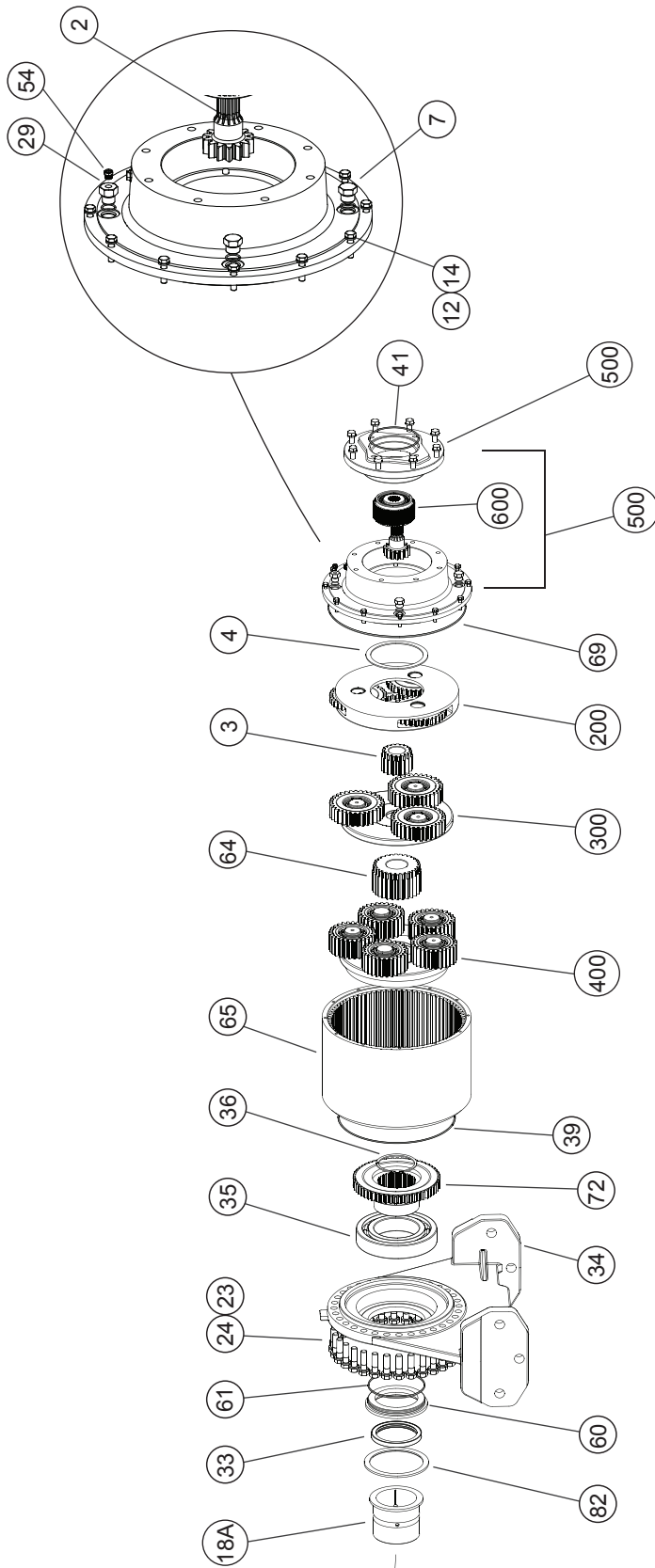
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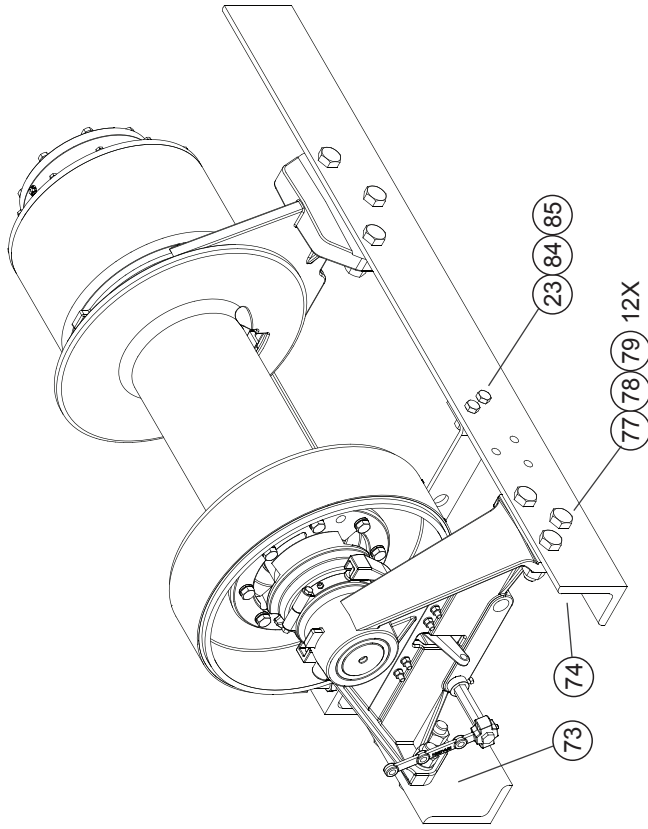
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COMMON PARTS



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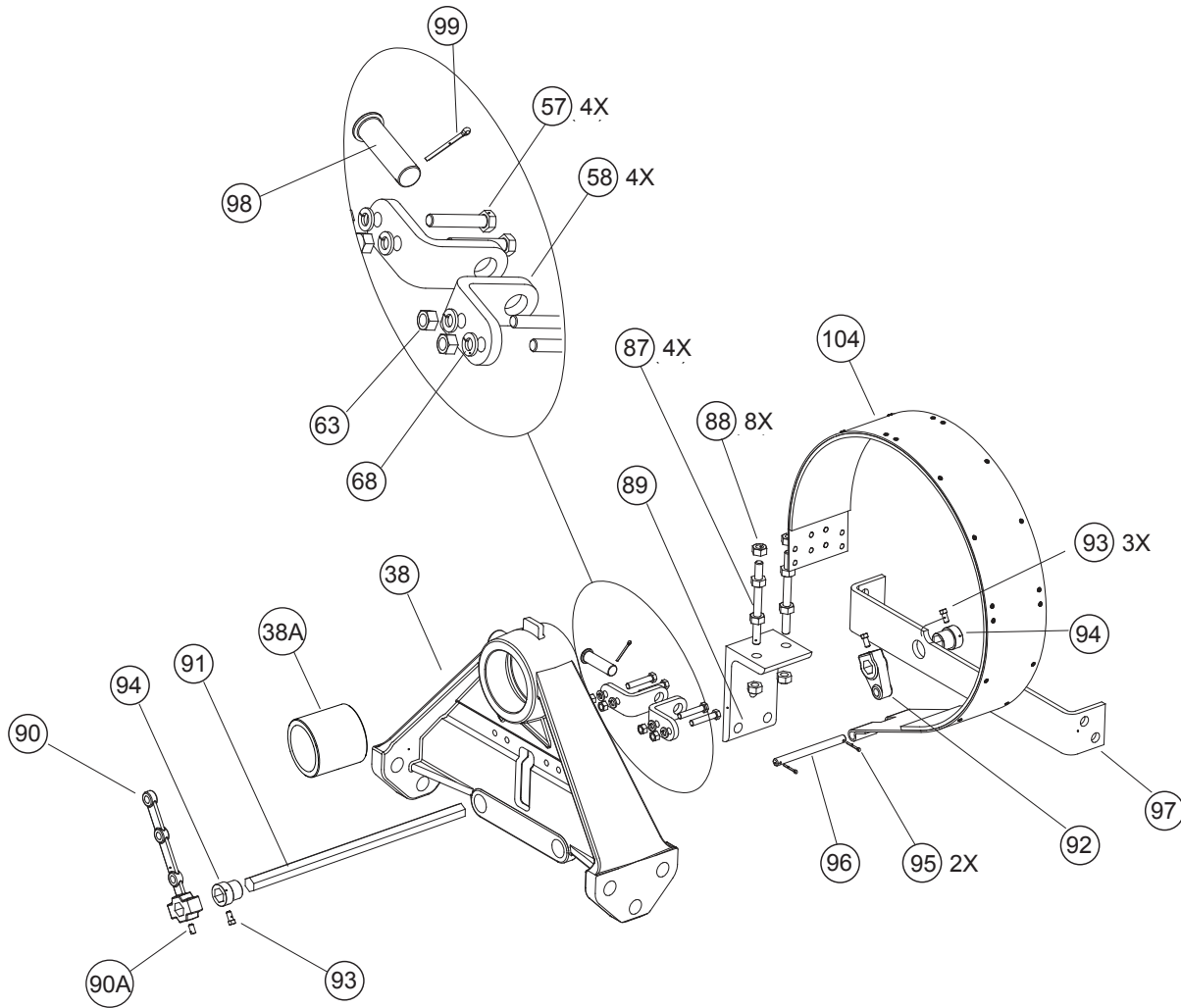
COMMON PARTS



ITEM	DESCRIPTION	PART NO	QTY
1	CABLE DRUM SHAFT	101637	1
2	INPUT SUN GEAR	104031	1
3	SECONDARY SUN GEAR	102323	1
4	WASHER, THRUST	28728	1
12	CAPSCREW 5/16-18 X 1-1/4 GD8 Z HX HD	27683	12
14	LOCKWASHER (5/16 Z)	11024	12
18	CABLE DRUM ASSEMBLY	101634	1
18A	BUSHING, CABLE DRUM	101869	2
23	LOCKWASHER (5/8 Z)	102423	43
24	CAPSCREW 1/2-13 X 1-3/4 GD8 Z HX HD	100051	32
29	REDUCER STR THD ADAPTER, ORB TO FM PIPE -8/-2	26868	1
31	LOCKWASHER (1/2 Z)	11026	8
33	LIPSEAL	103062	1
34	BRACKET, END	105052	1
35	BEARING, BALL	101706	1
36	RETAINING RING	70158	1
39	O-RING	72801	1
41	O-RING	10330	1
48	CLUTCH RIDER	11671	1
49	CLUTCH RIDER WITH GREASE PORT	11672	1
51	CAPSCREW 1/2-13 X 1-1/2 GD8 Z HX HD	104322	4
54	VENT RELIEF VALVE 7.5-15 PSI	18062	1
56	CAPSCREW 3/8-16 X 4 GD8 Z HX HD	21477	2
60	SEAL CONTAINER	106294	1
61	O-RING	24981	1
63	NUT 3/8-16	11780	2
64	GEAR, FINAL SUN	102408	1
65	GEAR, RING	103874	1
68	LOCKWASHER (3/8 Z)	27152	3
69	O-RING	25016	1
72	ADAPTER, OUTPUT	103896	1
73	BASE ANGLE	101640	1
74	BASE ANGLE	101639	1
75	RETAINING RING	101884	1

ITEM	DESCRIPTION	PART NO	QTY
77	CAPSCREW 1-8 X 3-1/2 GD8 Z HX HD	103580	12
78	LOCKWASHER (1 Z)	13986	12
79	NUT 1-8	22887	12
80	CAPSCREW 5/8-18 X 2-3/4 GD8 Z HX HD	13982	8
81	SPACER	101882	1
82	THRUST WASHER	106295	1
83	CLUTCH PLATE DOWEL PIN	12769	2
84	NUT 5/8-18	22702	7
85	CAPSCREW 5/8-18 X 2 GD8 Z HX HD	22699	4
101	CLUTCH	101638	1
102	CLUTCH SHIFT FORK	11673	1
103	CLUTCH PLATE	11259	1
200	PRIMARY PLANET CARRIER ASSEMBLY (PG 10)	83079	1
300	SECONDARY PLANET CARRIER ASSEMBLY (PG 11)	83080	1
400	FINAL PLANET CARRIER ASSEMBLY (PG 12)	82780	1
500	BRAKE CYLINDER ASSEMBLY (PG 13)	83100	1
600	OVERRUNNING CLUTCH ASSEMBLY (PG 14)	83148	1

BEARING LEG AND BRAKE BAND ASSEMBLIES (MECHANICAL SHIFT)



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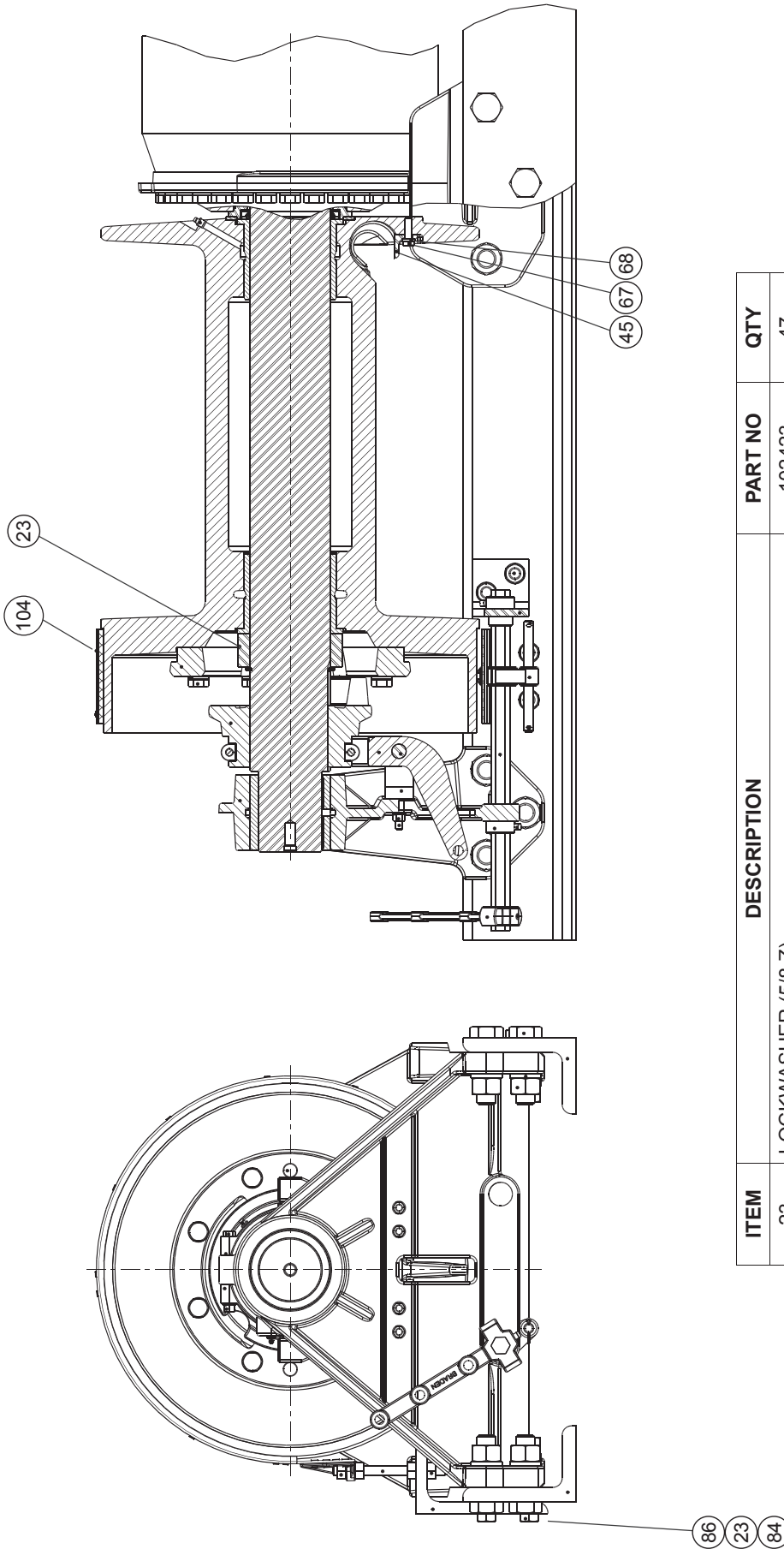
BEARING LEG AND BRAKE BAND ASSEMBLIES (MECHANICAL SHIFT)

ITEM	DESCRIPTION	PART NO	QTY
38	BEARING LEG ASSEMBLY	83251	1
38A	BEARING LEG BUSHING	12876	1
57	CAPSCREW 3/8-16 X 2 GD8 Z HX HD	104136	4
58	SHIFT FORK BRACKET	11656	2
63	NUT 3/8-16	11780	2
68	LOCKWASHER (3/8 Z)	27152	3
76	GREASE FITTING	18047	4
87	STUD	105027	2
88	NUT 1/2-20	22701	8
89	BRAKE BAND LOCATING BRACKET	105049	1
90	LEVER ASSEMBLY	81208	1
90A	SETSCREW 5/16-18 X 5/8 SKT CUP POINT	12206	1
91	CONTROL SHAFT	24658	1
92	BRAKE LEVER	11678	1
93	SETSCREW 5/16-18 X 5/8 SQ HD CUP POINT	13957	3
94	COLLAR BEARING	11669	2
95	COTTER PIN 1/8 X 1	18008	2
96	BRAKE BAND PIN	12773	1
97	SUPPORT BRACKET	104866	1
98	CLUTCH SHIFT FORK PIVOT PIN	11657	1
99	COTTER PIN 1/8 X 1-1/4	13959	1



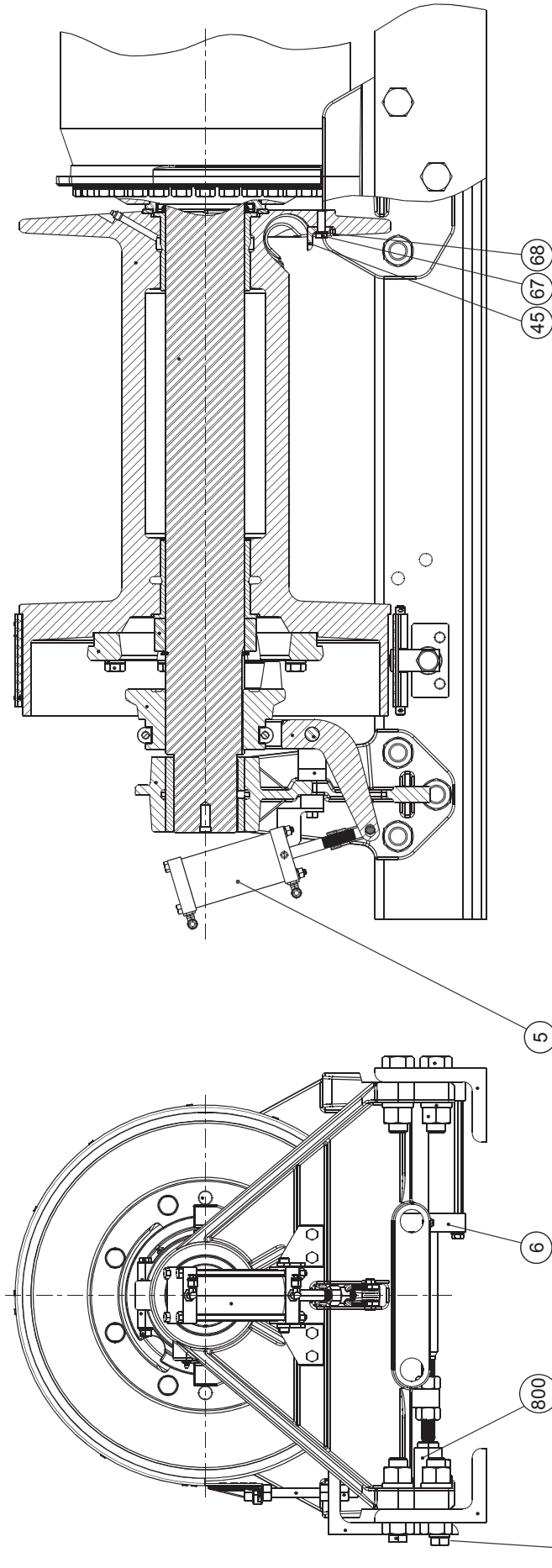
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WINCH ASSEMBLY (MECHANICAL SHIFT)



ITEM	DESCRIPTION	PART NO	QTY
23	LOCKWASHER (5/8 Z)	102423	47
45	PLATE, ANCHOR RETAINER	101950	1
51	CAPSCREW 1/2-13 X 1-1/2 GD8 Z HX HD	104322	4
67	CAPSCREW 3/8-16 X 1-1/4 GD8 Z HX HD	104132	1
68	LOCKWASHER (3/8 Z)	27152	7
84	NUT 5/8-18	22702	7
86	CAPSCREW 5/8-18 X 2-1/4 GD8 Z HX HD	11475	3
104	BRAKE BAND ASSEMBLY	83216	1

WINCH ASSEMBLY (AIR SHIFT)

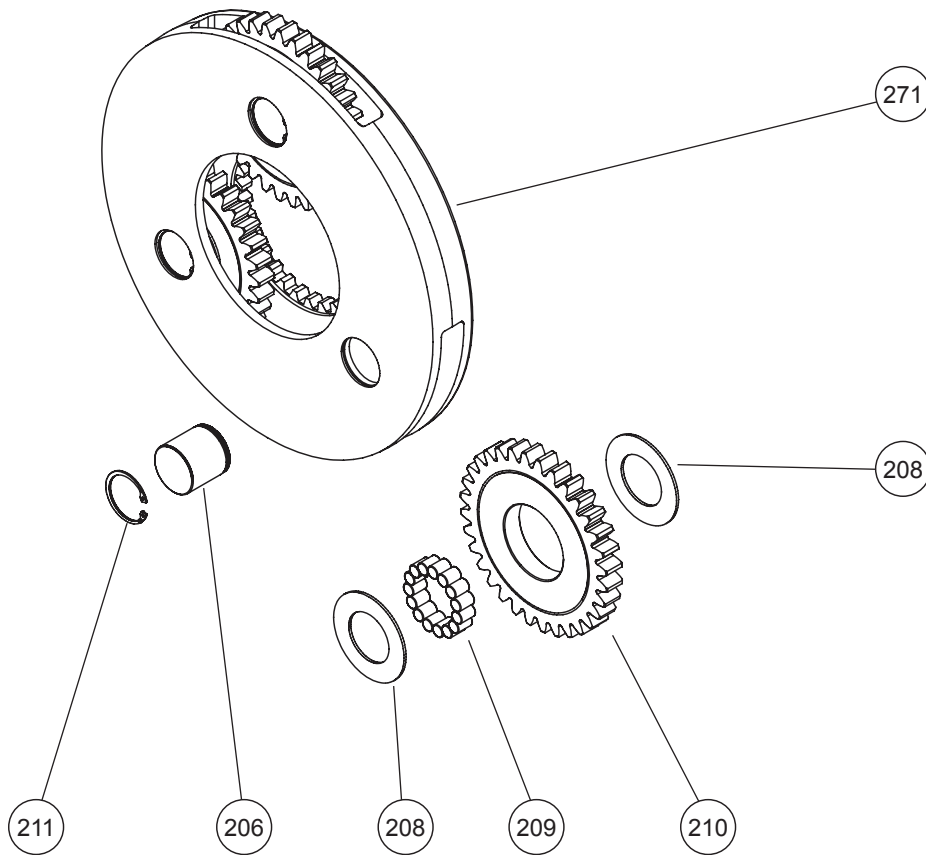


ITEM	DESCRIPTION	PART NO	QTY
5	APSCO AIR CLUTCH KIT	83774	1
6	APSCO AIR BRAKE KIT	83775	1
23	LOCKWASHER (5/8 Z)	102423	47
45	PLATE, ANCHOR RETAINER	101950	1
58	SHIFT FORK BRACKET	11656	2
63	NUT 3/8-16	11780	2
67	CAPSCREW 3/8-16 X 1-1/4 GD8 Z HX HD	104132	1
68	LOCKWASHER (3/8 Z)	27152	7
84	NUT 5/8-18	22702	7
86	CAPSCREW 5/8-18 X 2-1/4 GD8 Z HX HD	11475	3
800	APSCO AIR MISC PARTS GROUP	64318	1



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PRIMARY PLANET CARRIER

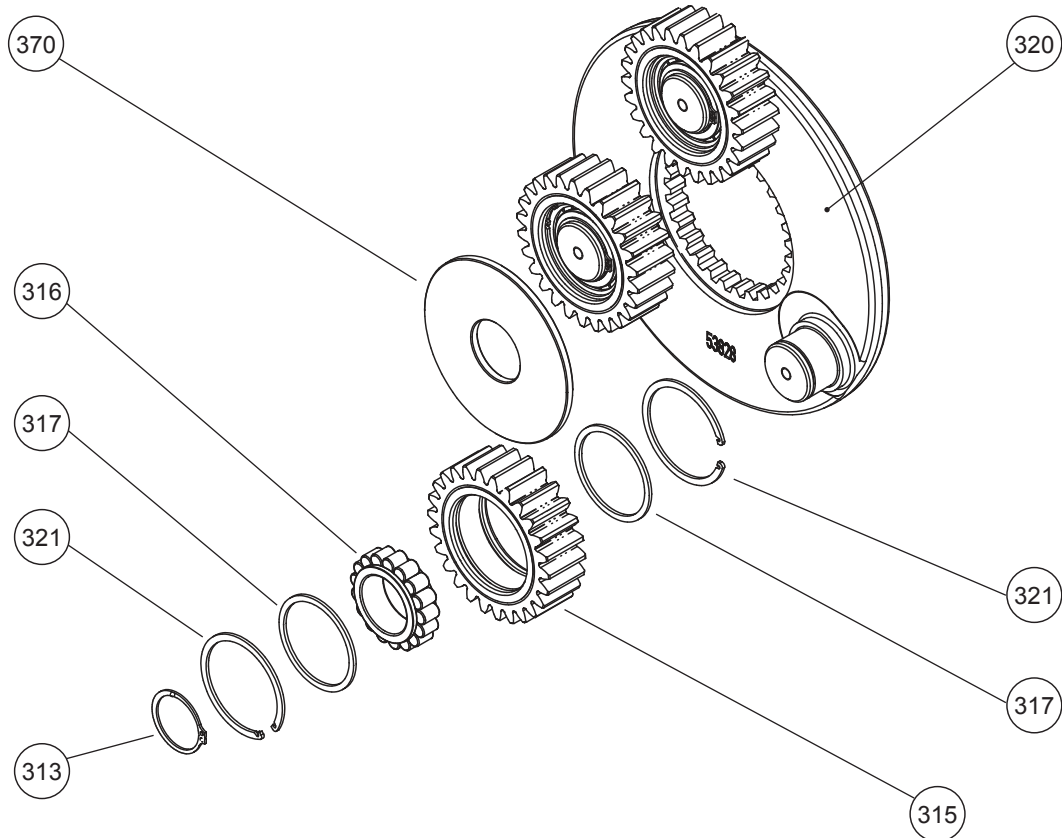


ITEM	DESCRIPTION	PART NO	QTY
200	PRIMARY PLANET CARRIER ASSEMBLY	83079	1
206	PIN, PRIMARY PLANET	101921	3
208	WASHER, THRUST	102324	6
209	BEARING, ROLLER	102325	45
210	GEAR, PLANET	102396	3
211	RING, RETAINING INTERNAL	28734	3
271	CARRIER, PLANET	102744	1



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SECONDARY PLANET CARRIER

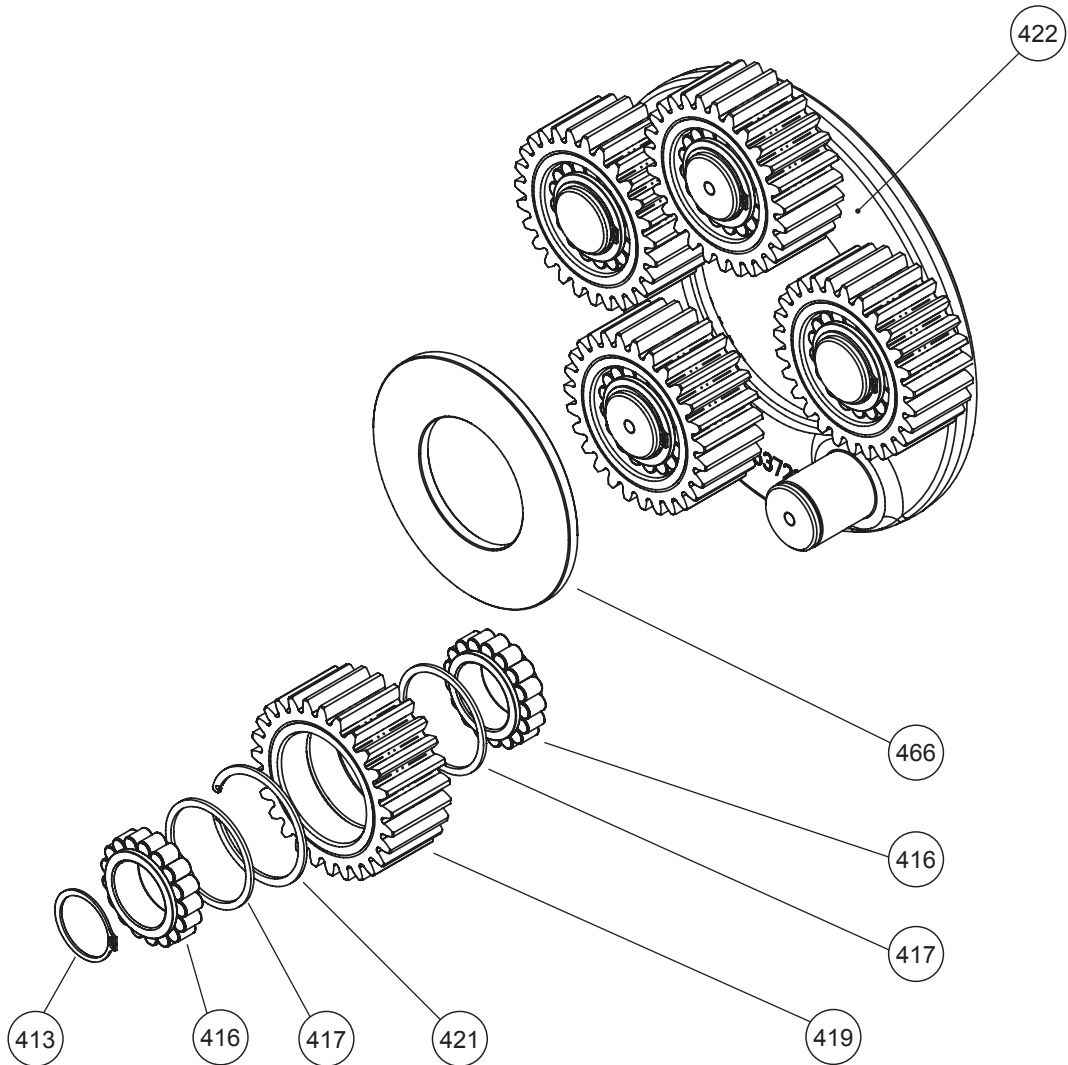


ITEM	DESCRIPTION	PART NO	QTY
300	SECONDARY PLANET CARRIER ASSEMBLY	83080	1
313	SNAP RING	12034	3
315	GEAR, PLANET	102376	3
316	BEARING, CYLINDRICAL ROLLER	102288	3
317	THRUST SPACER	102296	6
320	CARRIER, PLANET	102739	1
321	RETAINING RING, INTERNAL	102330	6
370	SPACER, THRUST	102339	1



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FINAL PLANET CARRIER

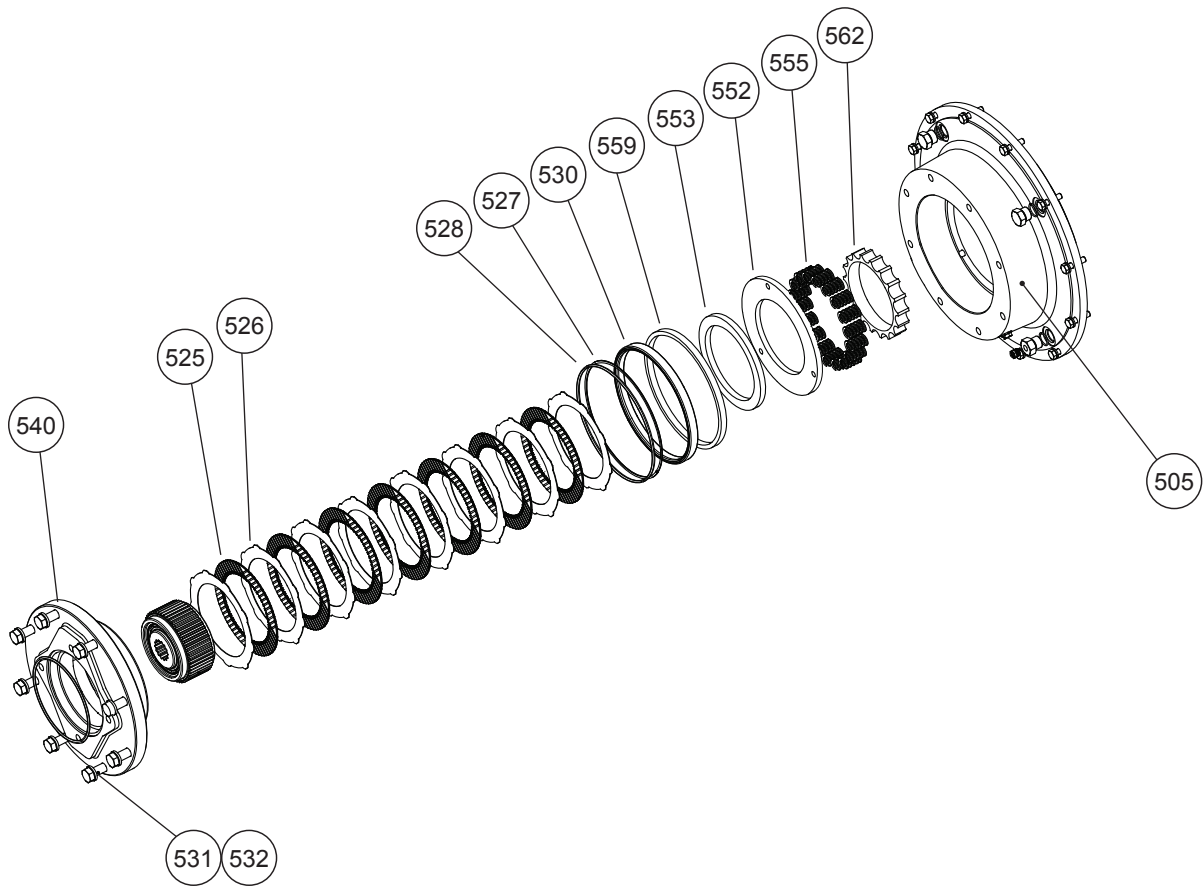


ITEM	DESCRIPTION	PART NO	QTY
400	FINAL PLANET CARRIER ASSEMBLY	82780	1
413	SNAP RING	12034	5
416	BEARING, CYLINDRICAL ROLLER	102288	10
417	THRUST SPACER	102296	10
419	GEAR, FINAL PLANET	102332	5
421	RETAINING RING, INTERNAL	102330	5
422	CARRIER, FINAL PLANET	101868	1
466	SPACER, THRUST	102338	1



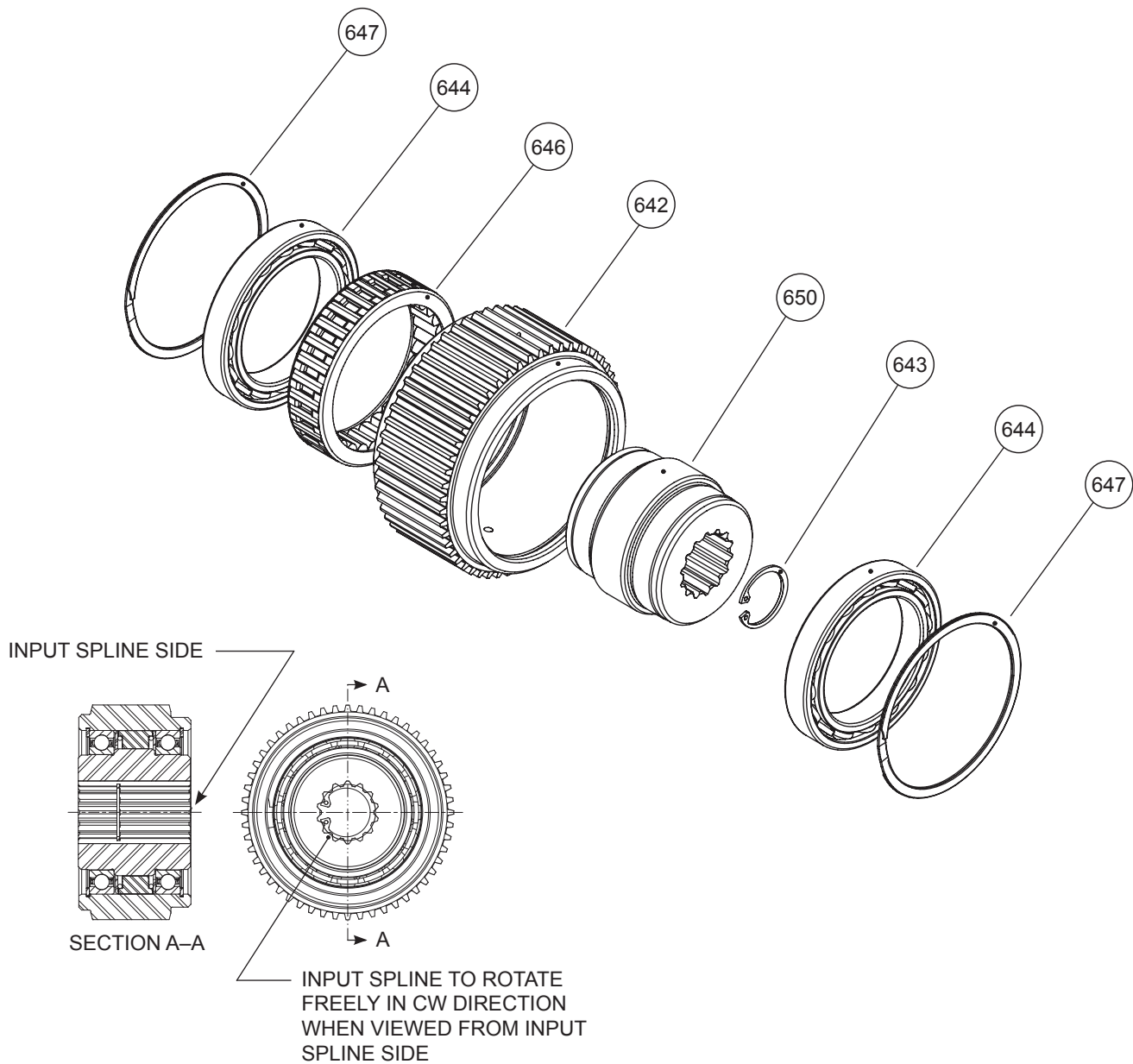
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BRAKE CYLINDER ASSEMBLY



ITEM	DESCRIPTION	PART NO	QTY
500	BRAKE CYLINDER ASSEMBLY	83100	1
505	HOUSING, BRAKE	103661	1
525	FRICITION DISC	103167	7
526	BRAKE DISC	102954	8
527	BACK-UP RING	77278	1
528	O-RING	22357	1
530	SEAL, U-CUP	103441	1
531	LOCKWASHER (1/2 Z)	11026	8
532	CAPSCREW 1/2-13 X 1-3/4 GD8 Z HX HD	104323	8
540	ADAPTER, MOTOR	103905	1
552	PRESSURE PLATE	103168	1
553	BRAKE PLATE SPACER	103169	1
555	BRAKE SPRING	24108	18
559	PISTON BACKUP RING	25746	1
562	SPRING SPACER	103147	1

OVERRUNNING CLUTCH ASSEMBLY

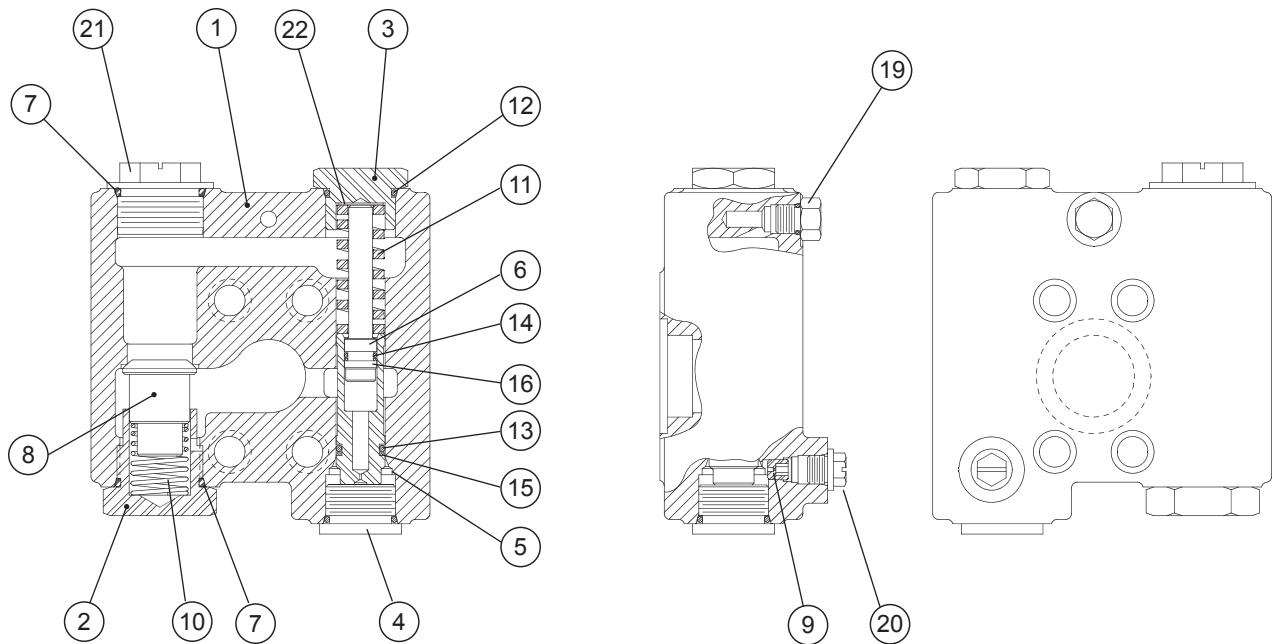


ITEM	DESCRIPTION	PART NO	QTY
600	OVERRUNNING BRAKE CLUTCH ASSEMBLY	83148	1
642	OUTER RACE	NSS	1
646	OVERRUNNING CLUTCH	NSS	1
644	BALL BEARING	103104	2
647	RETAINING RING	103110	2
643	RETAINING RING	24506	1
650	INNER RACE	NSS	1



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BRAKE VALVE ASSEMBLY



ITEM	DESCRIPTION	PART NO	QTY
	BRAKE VALVE ASSEMBLY	81984	1
1	BRAKE VALVE HOUSING	NSS	1
2	CHECK VALVE SPRING RETAINER	24424	1
3	SPRING RETAINER	24183	1
4	PLUG	22450	1
5	SPOOL	NSS	1
6	DAMPER PISTON	NSS	1
7	O-RING	24186	2
8	CHECK VALVE POPPET	24423	1
9	PILOT ORIFICE	24200	1
10	CHECK VALVE SPRING	24190	1
11	SPOOL SPRING	24192	1
12	O-RING*	23601	1
13	O-RING*	24193	1
14	O-RING*	24194	1
15	BACK-UP RING*	24195	1
16	BACK-UP RING*	24196	1
19	HEX HEAD PLUG -4 ORB	25663	1
20	SHIPPING PLUG HYD -4 ORB	25403	1
21	SHIPPING PLUG	25487	1
22	SHIM, VALVE SPRING	25661	0-2

* SEAL KIT

61567

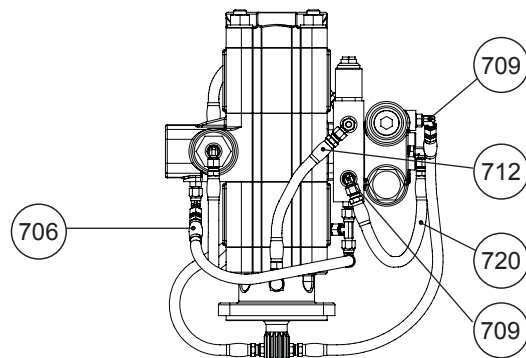
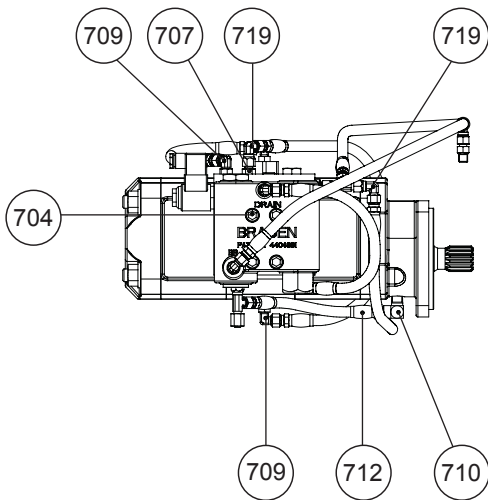
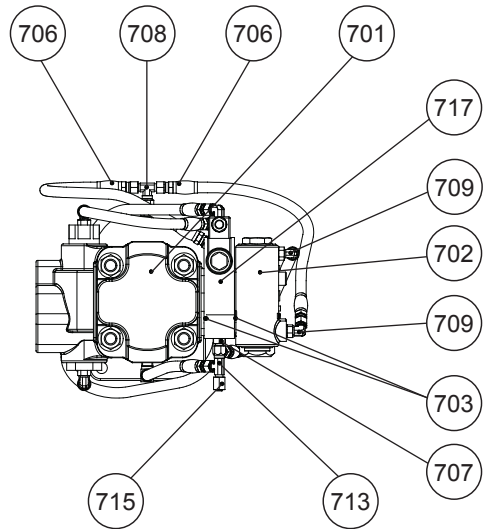
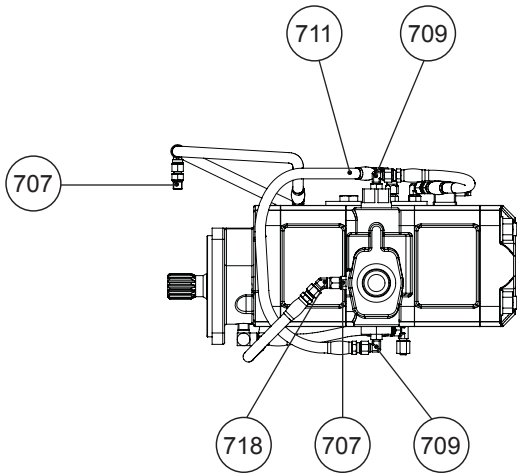
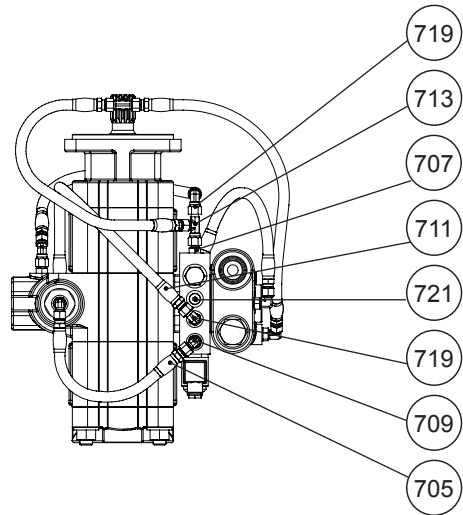
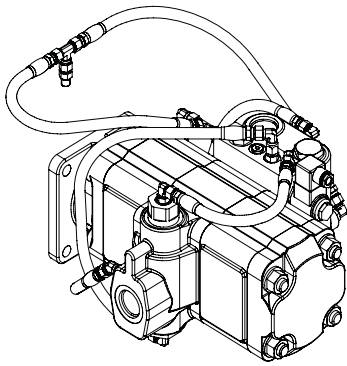
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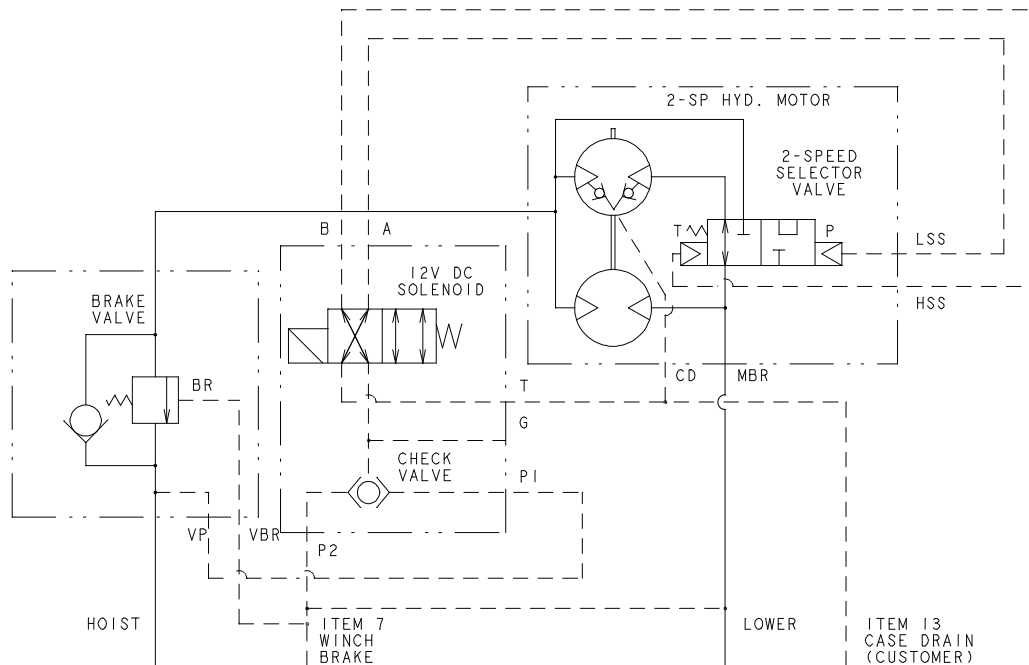
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HYDRAULIC 2-SPEED GEAR MOTOR (PARKER)



HYDRAULIC 2-SPEED GEAR MOTOR (PARKER)

ITEM	DESCRIPTION	PART NO	QTY
700	HYD MOTOR GROUP	63215	1
701	HYD MOTOR 2 SPEED	25651	1
702	BRAKE VALVE ASSEMBLY - 1.25-61	81984	1
703	O-RING	13838	2
704	CAPSCREW 7/16-14 x 4-1/2 SKT HD	102476	4
705	HOSE ASSY -4 X 10-IN. (254 MM)	25936	1
706	HOSE ASSY -4 X 17-IN. (431.8 MM)	25750	3
707	ADAPTER -4 ORB TO -4 JIC	25864	5
708	SWIVEL TEE -4 JIC	25748	1
709	ELBOW FITTING -4 ORB TO -4 JIC	25302	6
710	REDUCER ELBOW 1/4 NPT TO -4 JIC	24236	1
711	HOSE ASSY -4 X 20-IN. (508 MM)	25952	1
712	HOSE ASSY -2 NPT MALE TO -4 JIC FEMALE X 10-IN. (254 MM)	13711	1
713	SWIVEL TEE -4, MOTOR DRAIN	26002	2
714	WARNING TAG (MOTOR DRAIN - NOT SHOWN)	29080	1
715	CAP NUT -4, MOTOR DRAIN	70182	1
717	MANIFOLD, 2-SPD, SHIFT (SEE PG 21)	102922	1
718	MALE UNION -4 JIC, 45 DEG	70122	1
719	SWIVEL NUT 90 DEG ELBOW -4 JIC	26140	2
720	HOSE ASSY -4 X 14-IN. (355 MM)	25935	1
721	PLUG -4 ORB	69325	1

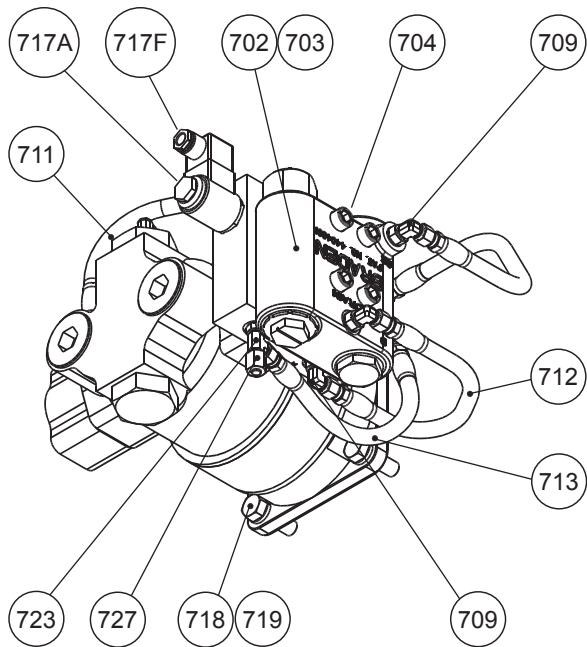
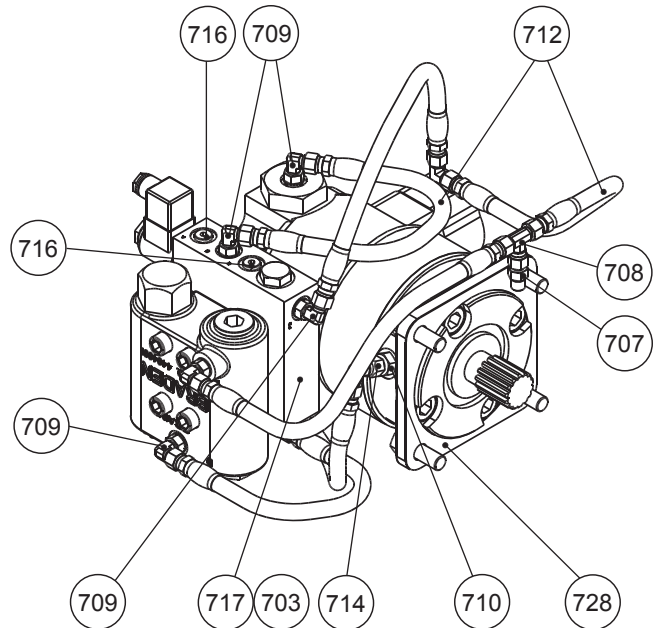
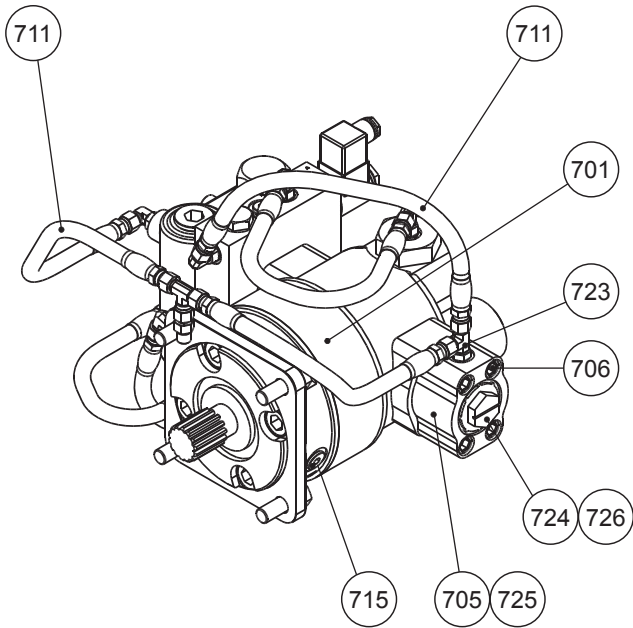


CONTROL CIRCUIT



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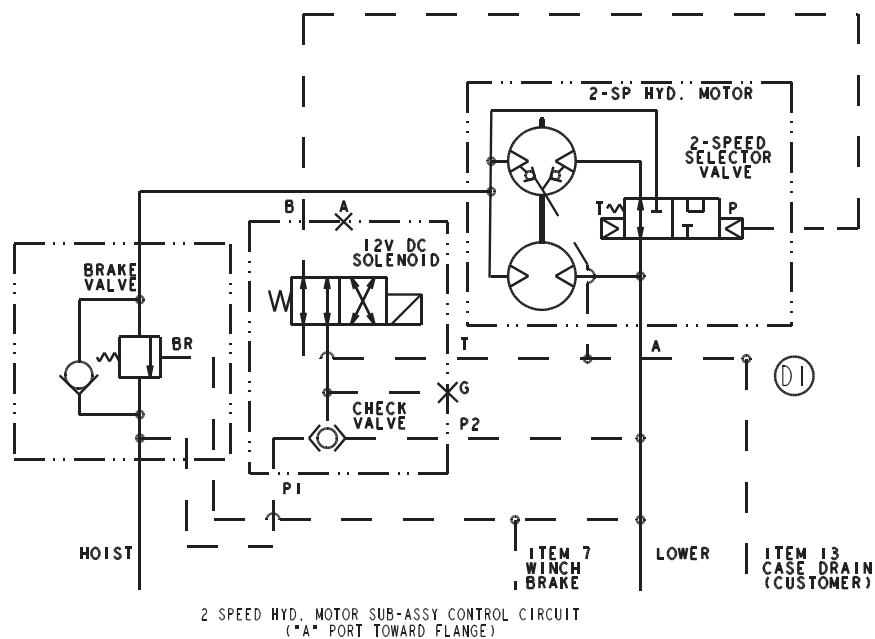
HYDRAULIC 2-SPEED VANE MOTOR (RINEER)



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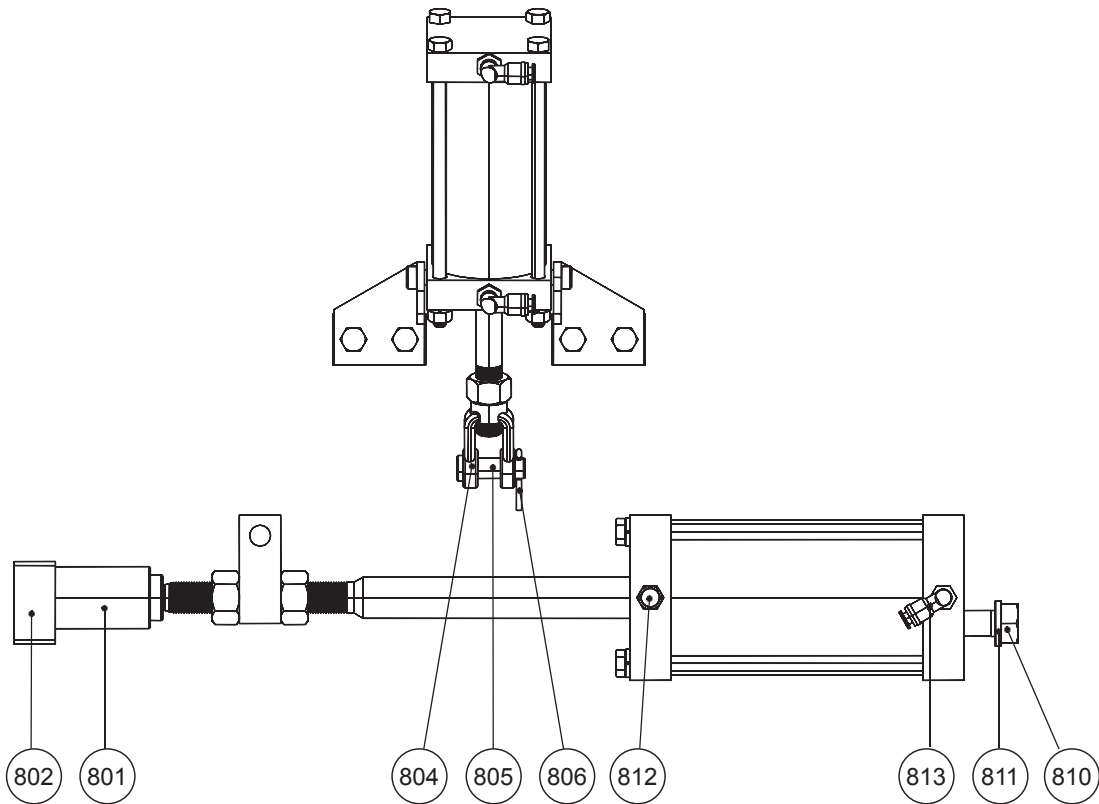
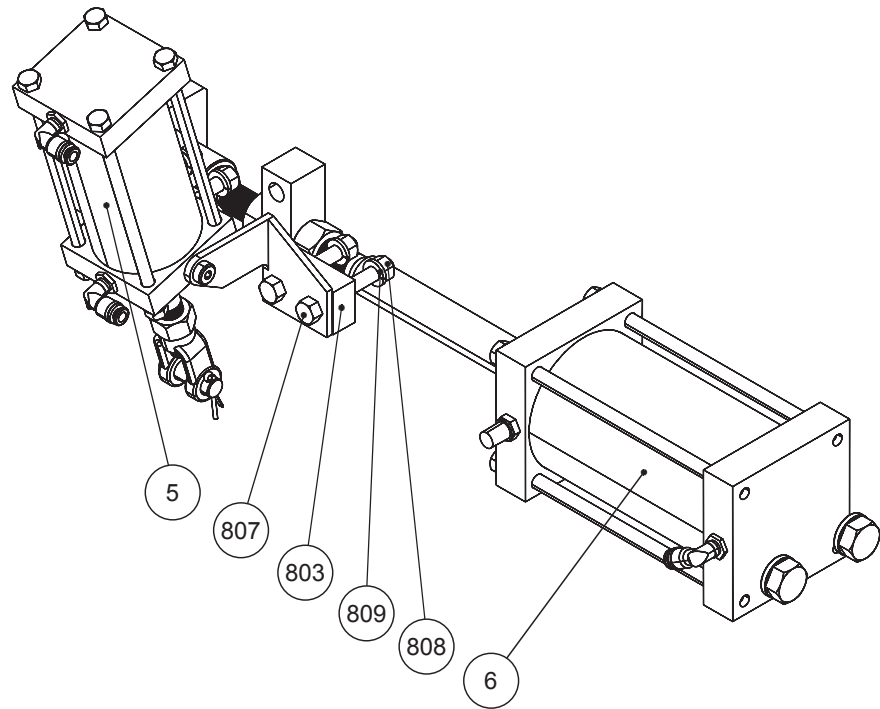
HYDRAULIC 2-SPEED VANE MOTOR (RINEER)

ITEM	DESCRIPTION	PART NO	QTY
700	HYD MOTOR GROUP	64187	1
701	HYD MOTOR, RINEER 2-SPD 130/065	107285	1
702	BRAKE VALVE ASSEMBLY - 1.25-61 (SEE PG 19)	81984	1
703	O-RING	13838	2
704	CAPSCREW 7/16-14 X 4-1/4 Z SKT HD	102476	4
705	MANIFOLD 1.25-61 1.31 ORB	27434	1
706	CAPSCREW 7/16-14 X 2 GD5 SKT HD Z	21144	4
707	ADAPTER -4 ORB TO -4 JIC	25864	1
708	SWIVEL TEE -4 JIC	25748	1
709	ELBOW FITTING -4 ORB TO -4 JIC	25302	6
710	ADAPTER JIC TO ORB -4/6	31284	1
711	HOSE ASSY -4 X 16-IN. JIC (406 MM)	76499	2
712	HOSE ASSY -4 X 14-IN. (355 MM)	25935	3
713	HOSE ASSY -4 X 10-IN. (254 MM)	25936	1
714	SWIVEL NUT 90 DEG ELBOW -4 JIC	26140	1
715	PLUG ORB -6	25665	1
716	PLUG ORB -4 FLUSH	69325	2
717	MANIFOLD, 2-SPD, SHIFT (SEE PG 21)	102922	1
718	LOCKWASHER (1/2 Z)	11026	4
719	CAPSCREW 1/2-13 X 1-1/4 GD8-Z HX HD	104174	4
723	TEE, RUN -4 JIC/-4 JIC/-4 ORB	107314	2
724	SHIPPING PLUG	25487	1
725	O-RING	21150	1
726	O-RING	24186	1
727	CAP NUT -4 JIC	70182	1
728	GASKET, MOTOR	13684	1



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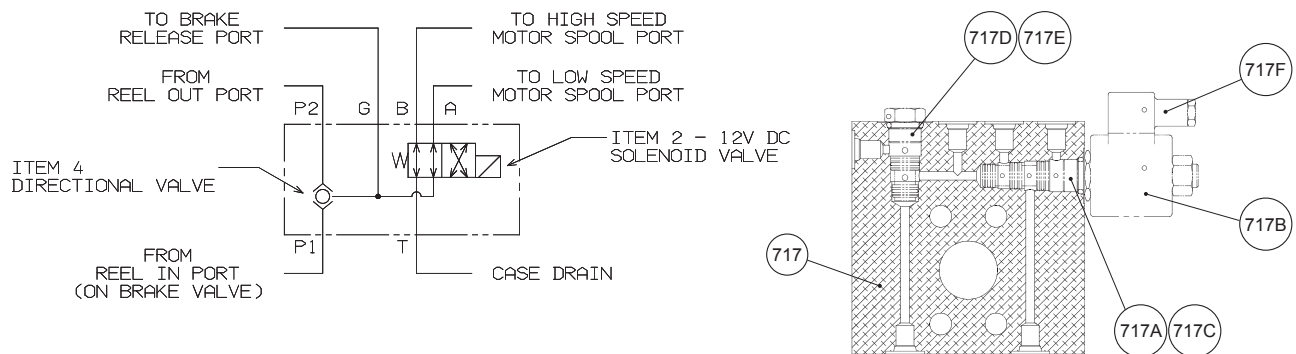
APSCO AIR KIT



APSCO AIR KIT MATERIALS LIST

ITEM	DESCRIPTION	BRADEN PART NO	APSCO PART NO	QTY
5	APSCO AIR CLUTCH KIT	83774	—	1
6	APSCO AIR BRAKE KIT	83775	—	1
801	TUBE, GUIDE		5090	1
802	BLOCK, GUIDE MOUNTING		5111	1
803	SPACER, BRACKET		5103	2
804	CLEVIS, 5/8-18 DIA X 1/2 DIA PIN		3162	1
805	CLEVIS PIN DIA 1/2 X 1-1/2 LG		3163	1
806	COTTER PIN, 1/8 DIA X 1 LG		2357	3
807	CAPSCREW 3/8-16 X 2-3/4 LG HEX HD PL		5113	4
808	NUT 3/8-16 HX FULL		1988	4
809	LOCKWASHER 3/8		1266	4
810	CAPSCREW 5/8-18 X 1-1/2 LG HEX HD PL		5114	2
811	WASHER SPLIT LOCK 5/8 PL		2752	2
812	MUFFLER, SINTERED BRONZE 1/4 NPT		3545	1
813	FITTING, ELBOW QC 1/4 TUBE X 1/4 NPT		3761	3

MANIFOLD, 2-SPEED SHIFT



ITEM	DESCRIPTION	PART NO	QTY
717	MANIFOLD, 2-SPD, SHIFT (INCLUDES 717A-717F)	102922	1
717A	SOLENOID VALVE	102853	1
717B	SEAL KIT, SOLENOID VALVE	104004	1
717C	COIL, SOLENOID VALVE	104007	1
717D	SHUTTLE VALVE	104006	1
717E	SEAL KIT, SHUTTLE VA	104005	1
717F	CONNECTOR DIN	103171	1

METRIC CONVERSION TABLE

English to Metric

Metric to English

LINEAR					
inches (in.)	X 25.4	= millimeters (mm)	millimeters (mm)	X 0.3937	= inches (in.)
feet (ft.)	X 0.3048	= meters (m)	meters (m)	X 3.281	= feet (ft.)
miles (mi.)	X 1.6093	= kilometers (km)	kilometers (km)	X 0.6214	= miles (mi.)
AREA					
inches ² (sq.in.)	X 645.15	= millimeters ² (mm ²)	millimeters ² (mm ²)	X 0.000155	= inches ² (sq.in.)
feet ² (sq.ft.)	X 0.0929	= meters ² (m ²)	meters ² (m ²)	X 10.764	= feet ² (sq.ft.)
VOLUME					
inches ³ (cu.in.)	X 0.01639	= liters (l)	liters (l)	X 61.024	= inches ³ (cu.in.)
quarts (qts.)	X 0.94635	= liters (l)	liters (l)	X 1.0567	= quarts (qts.)
gallons (gal.)	X 3.7854	= liters (l)	liters (l)	X 0.2642	= gallon (gal.)
inches ³ (cu.in.)	X 16.39	= centimeters ³ (cc)	centimeters ³ (cc)	X 0.06102	= inches ³ (cu.in.)
feet ³ (cu.ft.)	X 28.317	= liters (l)	liters (l)	X 0.03531	= feet ³ (cu.ft.)
feet ³ (cu.ft.)	X 0.02832	= meters ³ (m ³)	meters ³ (m ³)	X 35.315	= feet ³ (cu.ft.)
fluid ounce (fl.oz.)	X 29.57	= milliliters (ml)	milliliters (ml)	X 0.03381	= fluid ounce (fl.oz.)
MASS					
ounces (oz.)	X 28.35	= grams (g)	grams (g)	X 0.03527	= ounces (oz.)
pounds (lbs.)	X 0.4536	= kilograms (kg)	kilograms (kg)	X 2.2046	= pounds (lbs.)
tons (2000 lbs.)	X 907.18	= kilograms (kg)	kilograms (kg)	X 0.001102	= tons (2000 lbs.)
tons (2000 lbs.)	X 0.90718	= metric tons (t)	metric tons (t)	X 1.1023	= tons (2000 lbs.)
tons (long) (2240 lbs.)	X 1013.05	= kilograms (kg)	kilograms (kg)	X 0.000984	= tons (long) (2240 lbs.)
PRESSURE					
inches Hg (60 °F)	X 3600	= kilopascals (kPa)	kilopascals (kPa)	X 0.2961	= inches Hg (60°F)
pounds/sq.in. (PSI)	X 6.895	= kilopascals (kPa)	kilopascals (kPa)	X 0.145	= pounds/sq.in. (PSI)
pounds/sq.in. (PSI)	X 0.0703	= kilograms/sq.cm. (kg/cm ²)	kilograms/sq.cm. (kg/cm ²)	X 14.22	= pounds/sq.in. (PSI)
pounds/sq.in. (PSI)	X 0.069	= bars	bars	X 14.5	= pounds/sq.in. (PSI)
inches H ₂ O (60°F)	X 0.2488	= kilopascals (kPa)	kilopascals (kPa)	X 4.0193	= inches H ₂ O (60°F)
bars	X 100	= kilopascals (kPa)	kilopascals (kPa)	X 0.01	= bars
POWER					
horsepower (hp)	X 0.746	= kilowatts (kW)	kilowatts (kW)	X 1.34	= horsepower (hp)
ft.-lbs./min.	X 0.0226	= watts (W)	watts (W)	X 44.25	= ft.-lbs./min.
TORQUE					
pound-inches (in.-lbs.)	X 0.11298	= newton-meters (N-m)	newton-meters (N-m)	X 8.851	= pound-inches (in.lbs.)
pound-feet (ft.-lbs.)	X 1.3558	= newton-meters (N-m)	newton-meters (N-m)	X 0.7376	= pound-feet (ft.-lbs.)
pound-feet (ft.-lbs.)	X .1383	= kilograms/meter (kg-m)	kilogram/meter (kg-m)	X 7.233	= pound-feet (ft.-lbs.)
VELOCITY					
miles/hour (m/h)	X 0.11298	= kilometers/hour (km/hr)	kilometers/hour (km/hr)	X 0.6214	= miles/hour (m/h)
feet/second (ft./sec.)	X 0.3048	= meter/second (m/s)	meters/second (m/s)	X 3.281	= feet/second (ft./sec.)
feet/minute (ft./min.)	X 0.3048	= meter/minute (m/min)	meters/minute (m/min)	X 3.281	= feet/minute (ft./min.)
TEMPERATURE					
°Celsius = 0.556 (°F - 32)			°Fahrenheit = (1.8 X °C) +32		
COMMON METRIC PREFIXES					
mega	(M)	= 1,000,000 or 10 ⁶	deci	(d)	= 0.1 or 10 ⁻¹
kilo	(k)	= 1,000 or 10 ³	centi	(c)	= 0.01 or 10 ⁻²
hecto	(h)	= 100 or 10 ²	milli	(m)	= 0.001 or 10 ⁻³
deka	(da)	= 10 or 10 ¹	micro	(µ)	= 0.000.001 or 10 ⁻⁶