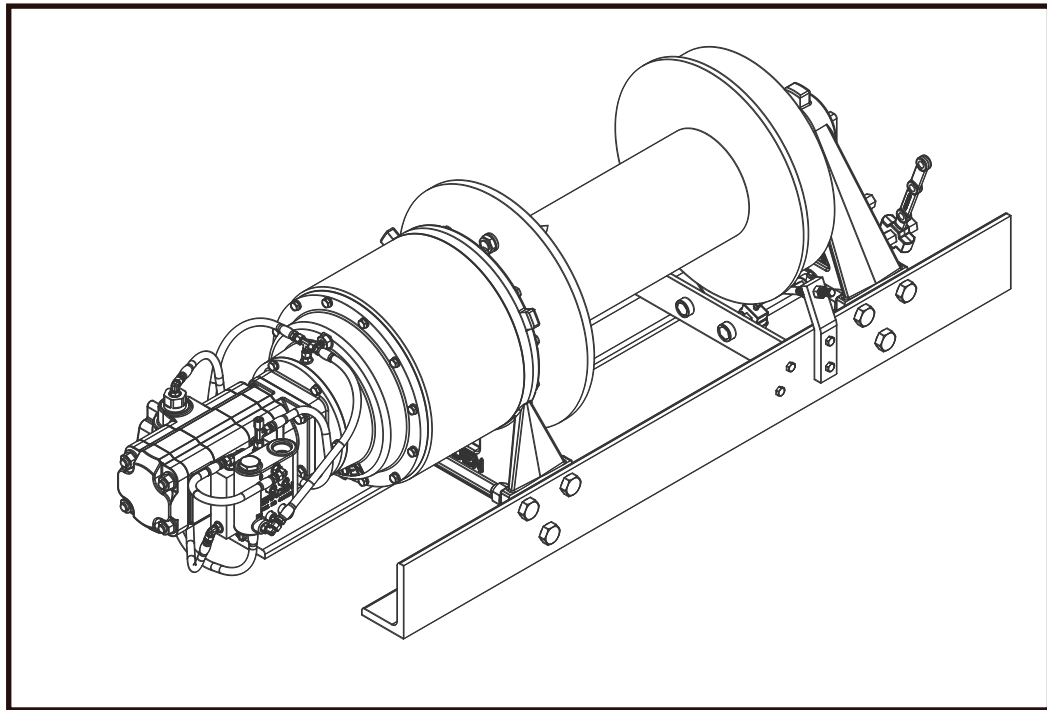


# BRADEN®

# HP75A

## MATERIAL LIST



**PACCAR WINCH DIVISION**  
P.O. Box 547 Broken Arrow, Oklahoma 74013  
PHONE: (918) 851-8511 FAX: (918) 259-1575  
[www.paccarwinch.com](http://www.paccarwinch.com)



## FORWARD

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

The following service illustrations have been prepared to provide assembly, disassembly and maintenance information for the drive 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.

Some illustrations in this manual may show details or attachments which may be differed from your drive. 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 Service Department at 918-251-8511, Monday - Friday, inquiries.

# EXPLANATION OF MODEL NUMBER

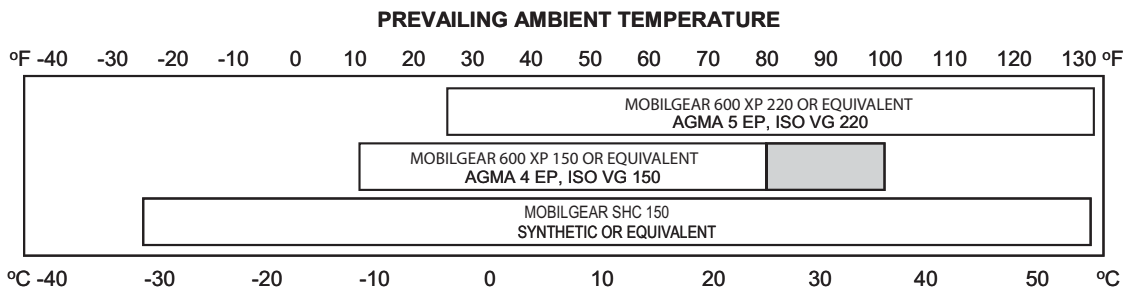


- HP DESIGNATES HYDRAULIC PLANETARY RECOVERY WINCH
- 75 DESIGNATES 7,500 LB FIRST LAYER LINE PULL
- A DESIGNATES THE MODEL SERIES RELATING TO DESIGN CHANGES
- LP DESIGNATES LOW PROFILE
- 122 DESIGNATES TOTAL GEAR RATIO (122:1)
- 089/045 DESIGNATES MOTOR, 2 SPEED (8.9 CU. IN., 4.5 CU. IN.)
- 01 DESIGNATES THE DRUM OPTION

## Oil Capacities - 01 Drum 7 pints

Capacities are approximate. Fill hoist to center of sight gauge in support endplate with drum in a horizontal position.

## RECOMMENDED PLANETARY GEAR OIL

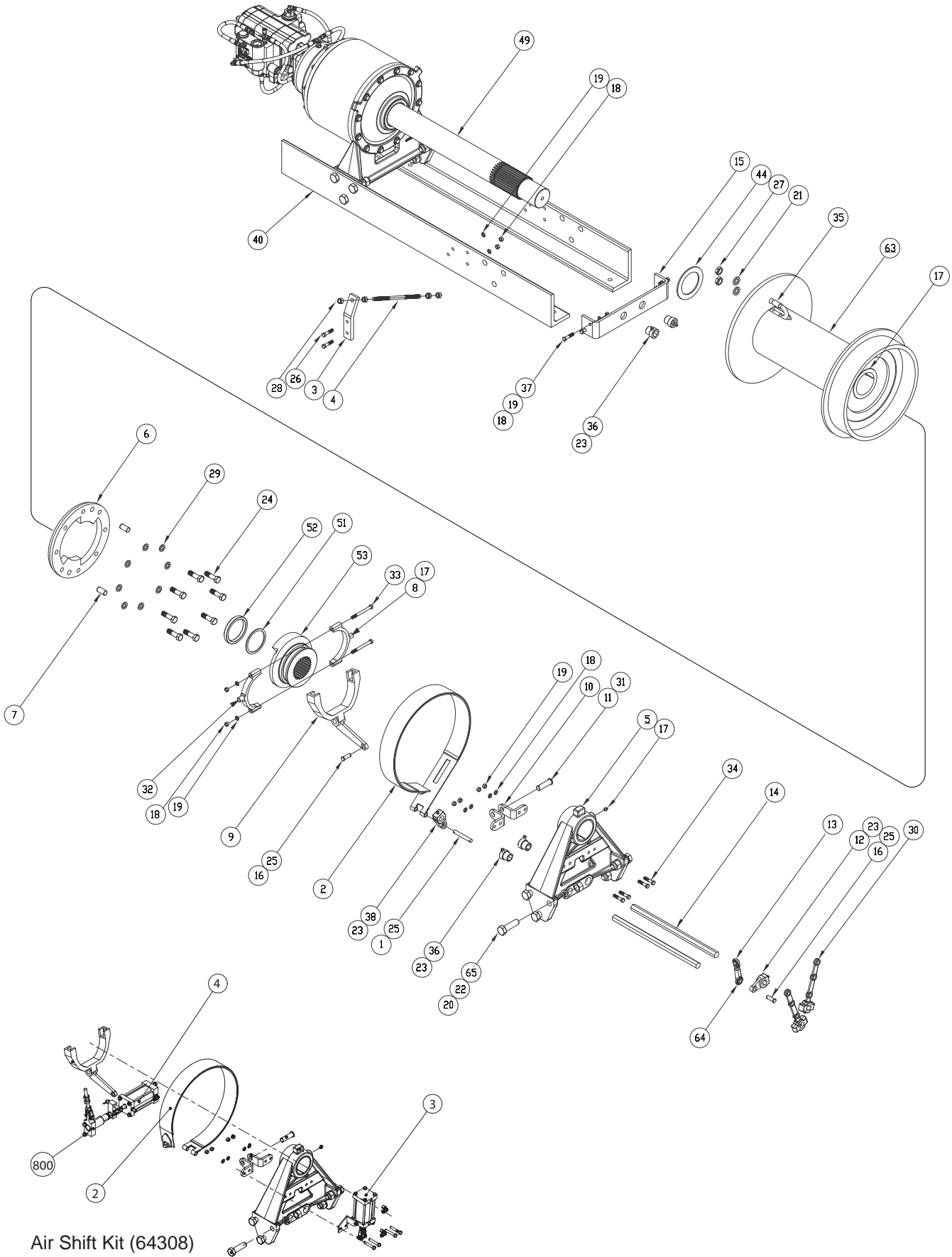


**i** NOTE: SHADED TEMPERATURE RANGE IN THE CHART ABOVE NOT RECOMMENDED FOR SEVERE APPLICATIONS SUCH AS: OFFSHORE CRANES, SUSTAINED FAST DUTY CYCLES OR FREQUENT LIFTING.

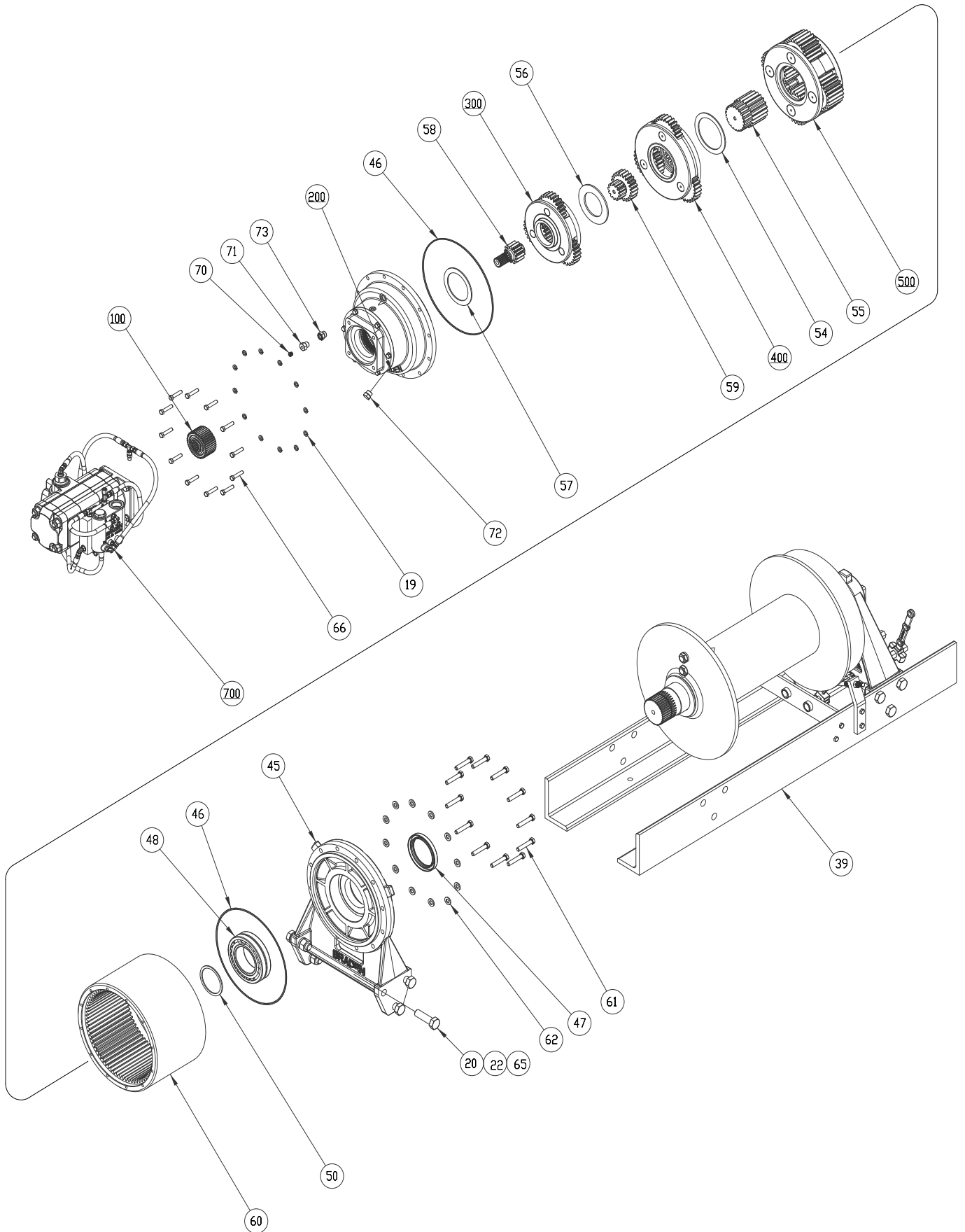
Planetary hoists are factory filled with Mobilgear 600 XP 150, or equivalent. Consult your oil supplier for other equivalent oils if required.

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

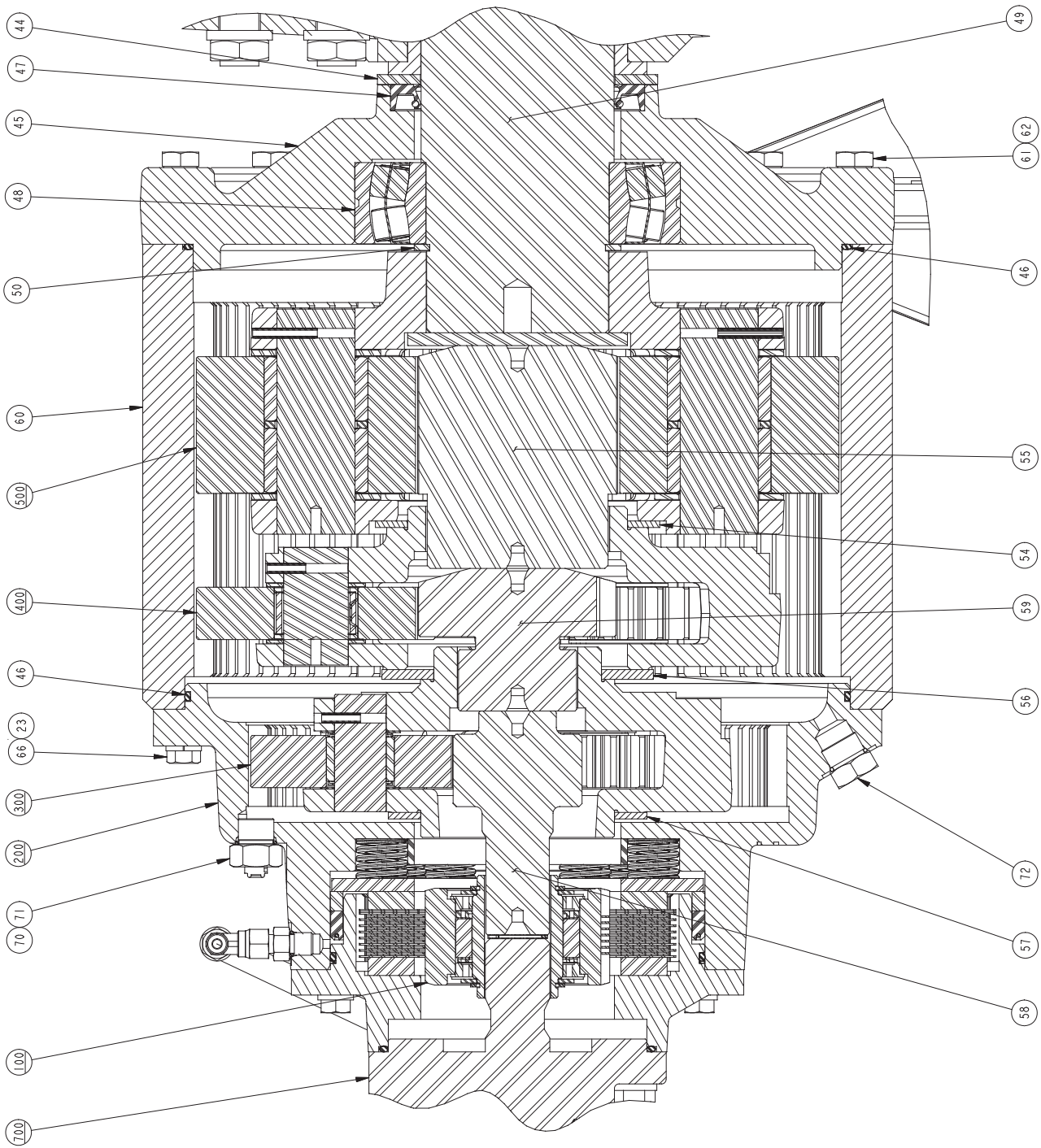
# MAIN WINCH ASSEMBLY



# MAIN WINCH ASSEMBLY



# 05853 CROSS-SECTION



# MAIN WINCH ASSEMBLY PARTS

ITEM	DESCRIPTION	PART NO.	QTY.
33	CAPSCREW (3/8 - 16 NC X 4-1/2 IN. G8)	104177	2
34	CAPSCREW (3/8 - 16 NC X 2-1/4 IN. G8)	104134	4
35	CABLE CLAMP	29036	1
36	COLLAR BEARING	11669	4
37	CAPSCREW (3/8 - 16 NC X 1-1/2 IN. G8)	104313	4
38	BRAKE LEVER	11678	1
39	BASE ANGLE, R.H.	106989	1
40	BASE ANGLE, L.H.	106990	1
41	DECAL, CLUTCH CONTROL (not shown)	100600	1
42	NAMEPLATE (not shown)	76381	1
43	DRIVE SCREW (not shown)	11842	4
44	THRUST WASHER	107051	1
45	SUPPORT, MOTOR END	106943	1
46	O-RING	72801	2
47	LIP SEAL	103906	1
48	SPH ROLLER BEARING	102690	1
49	DRUM SHAFT	106996	1
50	RETAINING RING	102695	1
51	RETAINING RING	102696	1
52	SPACER	102697	1
53	SLIDING CLUTCH	107011	1
54	THRUST WASHER	107021	1
55	SUN GEAR	107012	1
56	THRUST WASHER	107013	1
57	THRUST WASHER	107019	1
58	SUN GEAR - 122:1 (12T)	107977	1
	SUN GEAR - 88:1 (18T)	107020	1
59	SUN GEAR	106986	1
60	RING GEAR	104131	12
61	CAPSCREW (1/2 - 13 NC X 2-1/2 IN. G8)	100859	12
62	WASHER (1/2)	82848	1
63	DRUM ASSEMBLY	102699	2
63A	BUSHING	106914	1
64	ROD END	13447	12
65	LOCKWASHER (7/8)	104311	12
66	CAPSCREW (3/8 - 16 NC X 1-3/4 IN. G8)	18062	1
70	RELIEF VALVE	26868	1
71	REDUCER	70117	1
72	PLUG	26705	1
73	SIGHT GAUGE		

## SEAL KIT PART# 64408

DESCRIPTION	PART NO.	QTY.
Motor Pilot O-ring	10330	1
Mtr/Brk/Vlv O-ring	13838	2
Piston Seal U-cup	103441	1
Back-up Ring	77278	1
O-ring	22357	1

ITEM	DESCRIPTION	PART NO.	QTY.
100	SPRAG CLUTCH ASSEMBLY (refer to pg. 8)	81644	1
200	BRAKE CYLINDER ASSEMBLY (refer to pg. 9)	83610	1
300	PRIMARY PLANET CARRIER ASSY, 122:1 (refer to pg. 10)	83023	1
400	PRIMARY PLANET CARRIER ASSY, 88:1 (refer to pg. 10)	82954	1
500	SECONDARY PLANET CARRIER ASSY (refer to pg. 11)	83548	1
600	OUTPUT PLANET CARRIER ASSEMBLY (refer to pg. 12)	83549	1
700	HYDRAULIC GEAR MOTOR ASSY, 2-SPEED (refer to pg. 14)	64057	1-AR
	HYDRAULIC VANE MOTOR ASSY, 2-SPEED (refer to pg. 16)	64187	1-AR
1	BRAKE BAND PIN	11569	1
2	BRAKE BAND ASSEMBLY *	83491	1
3	BRAKE BAND ADJUSTER PLATE	106739	1
4	BRAKE LINK	11570	1
5	SUPPORT, CLUTCH END ASSEMBLY	83546	1
5A	BUSHING	107055	1
6	CLUTCH PLATE	11654	1
7	DOWEL PIN	12769	2
8	CLUTCH RIDER	11671	1
9	SHIFT FORK	11673	1
10	SHIFT FORK BRACKET	11656	2
11	SHIFT FORK PIVOT PIN	11657	1
12	CLUTCH LEVER	11676	1
13	ROD END	106913	1
14	CONTROL SHAFT	24658	2
15	SUPPORT BRACKET	11579	1
16	CLEVIS PIN	12751	2
17	GREASE FITTING	18047	4
18	NUT-HEX (3/8 NC)	11780	11
19	LOCKWASHER (3/8)	27152	23
20	CAPSCREW (7/8 - 9 UNC X 3 IN. G8)	24708	12
21	LOCKWASHER (3/4)	13435	2
22	NUT-HEAVY (7/8 NC)	22886	12
23	SO HD SETSCREW	13957	6
24	CAPSCREW (5/8 - 11 NC X 2 IN. G8)	72563	8
25	COTTER PIN	18008	4
26	CAPSCREW (3/8 - 16 NC X 1-3/4 IN. G8)	104311	2
27	NUT-JAM (3/4 NC)	11791	2
28	NUT-HEX (1/2 NF)	22701	4
29	LOCKWASHER (5/8)	102423	8
30	LEVER ASSY	81208	2
31	COTTER PIN	13959	1
32	CLUTCH RIDER	11672	1

### \* BRAKE BAND INFORMATION

Winch Model	Assembly Version	Brake Band P/N	Brake Band Lgth (Note 1)
HP75A	Manual Brake	83491	55"
HP75A	Air Shift	83747	45.6"

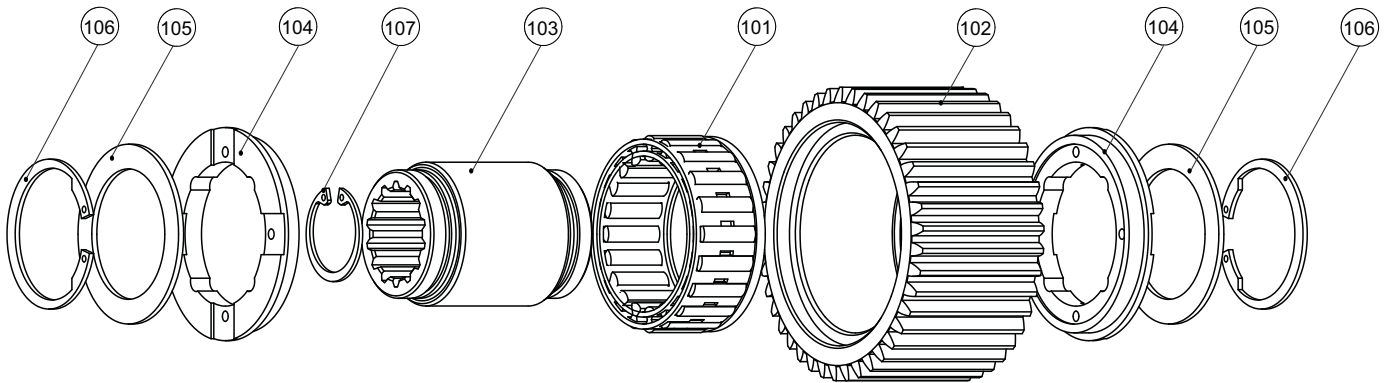
### NOTE:

- 1) Brake Band Length - overall length from end of brake lug to center of brake link eye.

### Air Shift Kit (#64309) for Clutch and Brake

DESCRIPTION	PART NO.	QTY.
Brake Band Assembly	83747	1
Air Kit	64308	1

# SPRAG CLUTCH ASSEMBLY

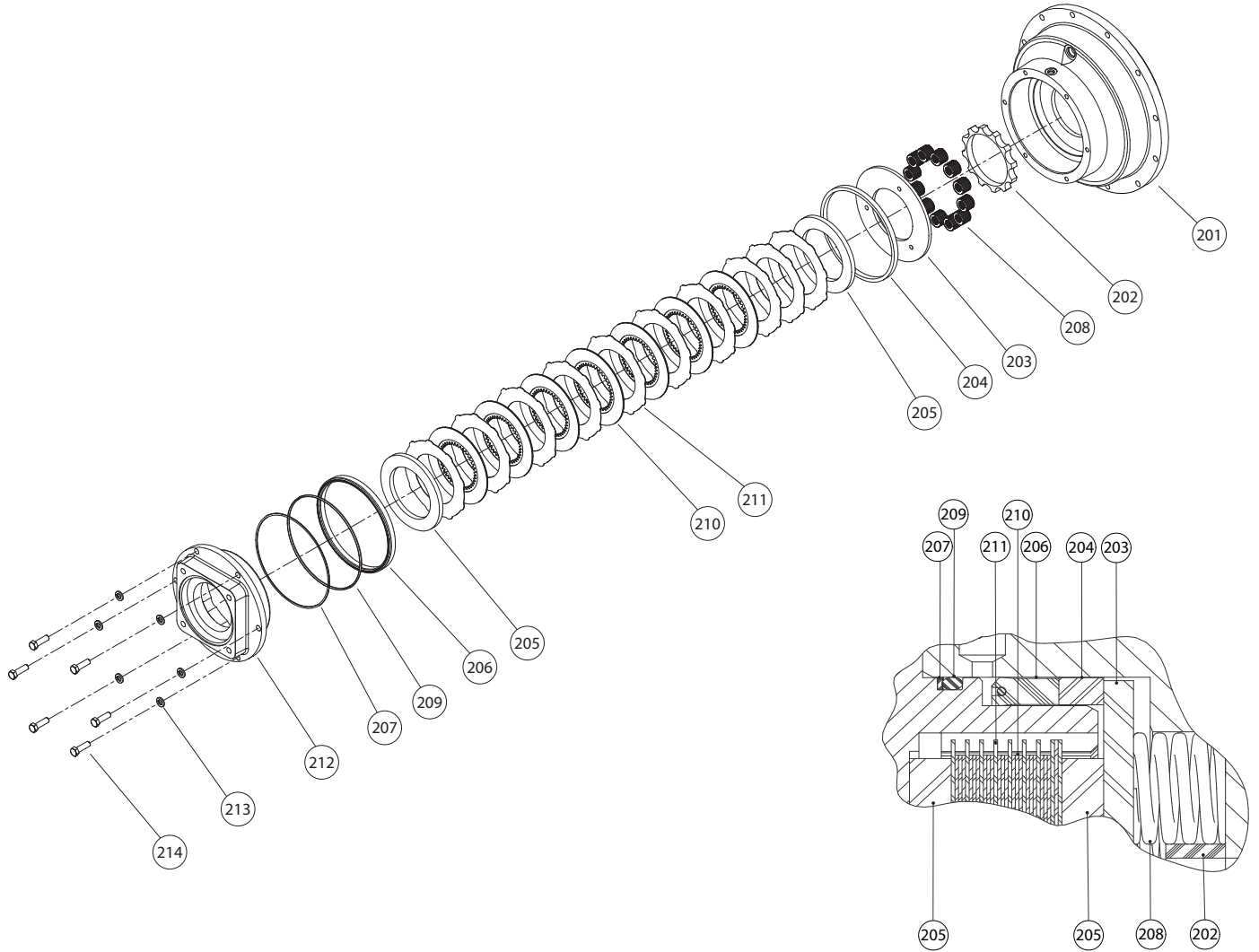


ITEM NO	DESCRIPTION	PART NO.	QTY.
100	SPRAG CLUTCH ASSEMBLY - STD ROTATION	81644	1
101	SPRAG CLUTCH	NSS	1
102	OUTER BRAKE RACE	NSS	1
103	INNER BRAKE RACE	NSS	1
104	SPRAG BEARING	27684	2
105	SPRAG BEARING RETAINER	24862	2
106	SNAP RING	24866	2
107	RETAINING RING	24506	1

NSS - NOT SERVICED SEPARATELY

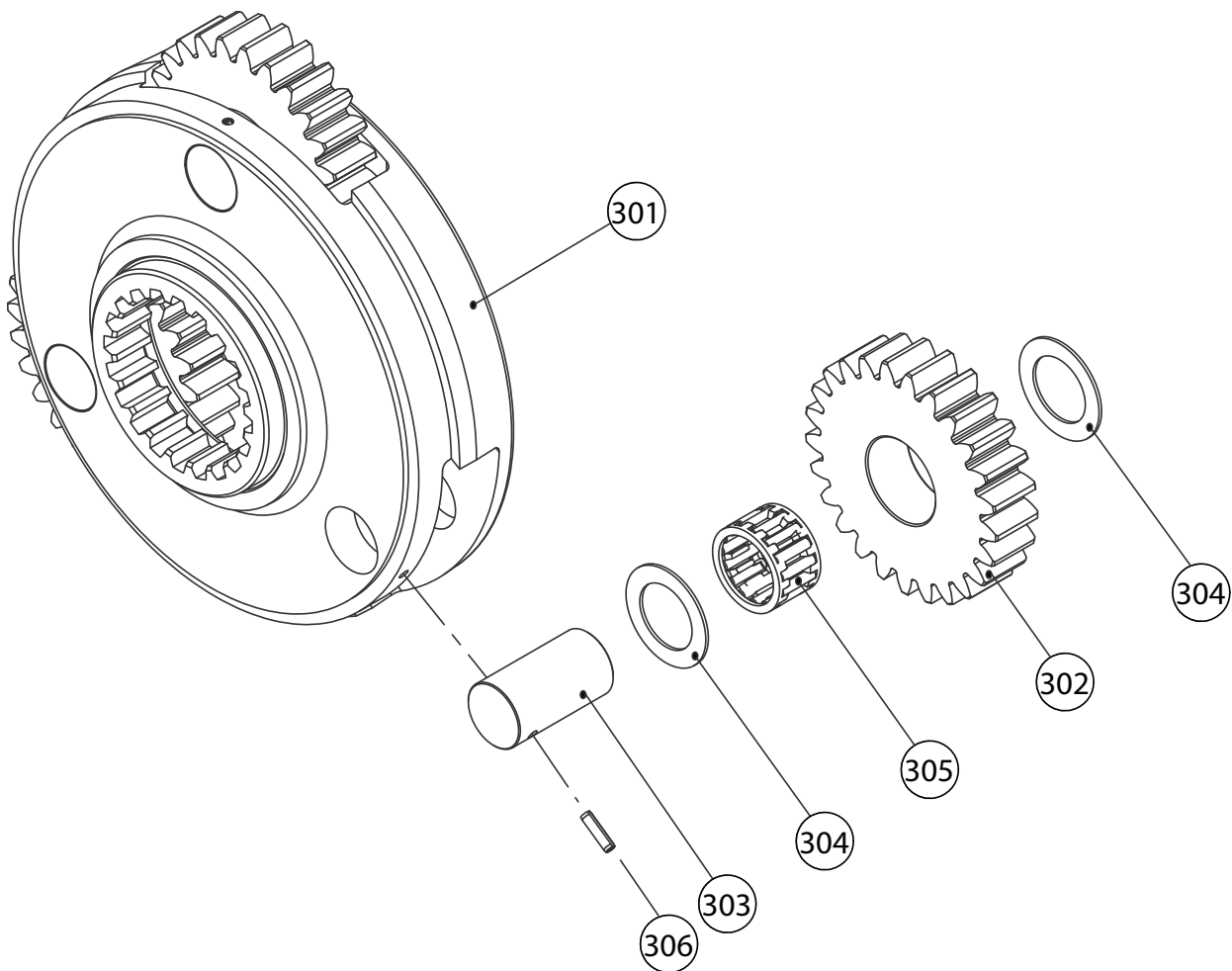


# BRAKE CYLINDER ASSEMBLY



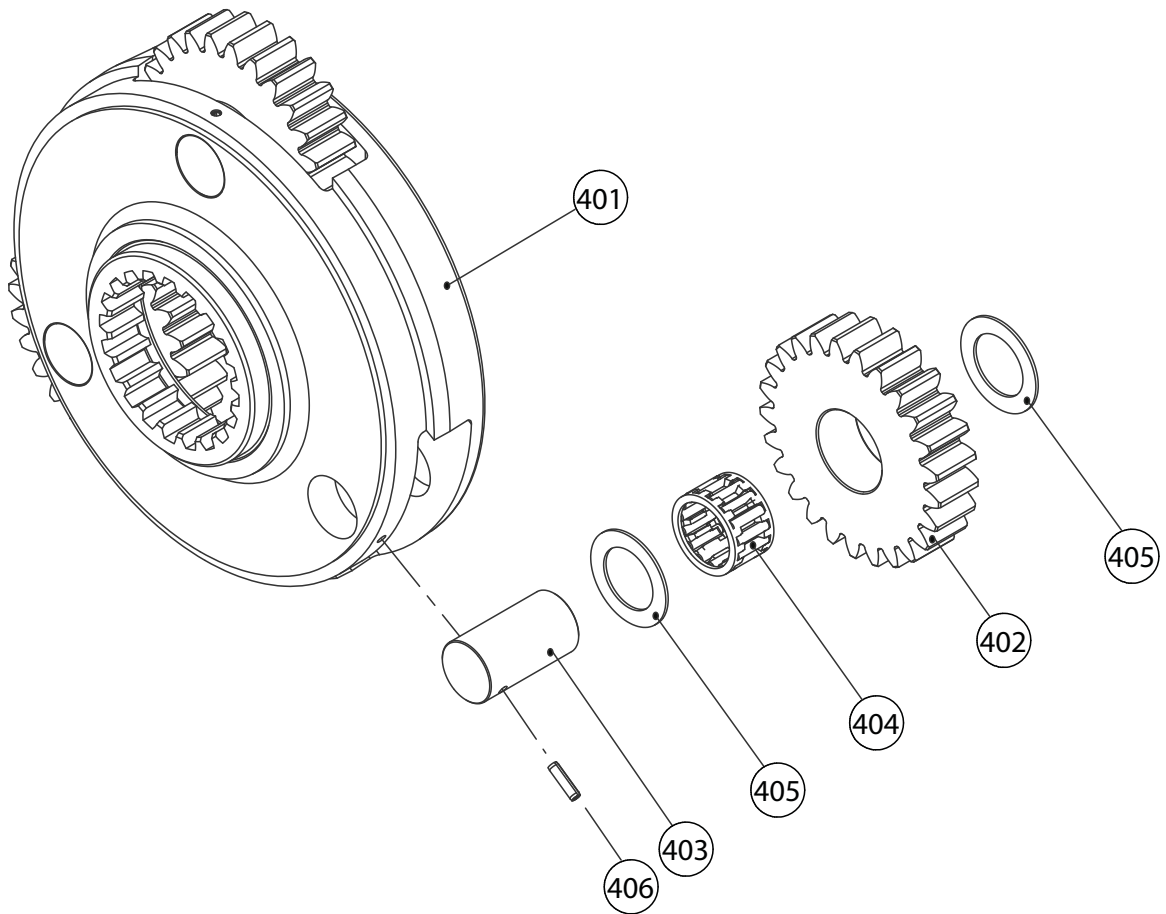
ITEM NO.	DESCRIPTION	PART NO.	QTY.
201	BRAKE CYLINDER	107003	1
202	SPRING SPACER	107032	1
203	SPRING PLATE	25719	1
204	PISTON BACK-UP RING	25746	1
205	BRAKE PLATE SPACER	24489	2
206	SEAL-U CUP	25724	1
207	BACK-UP WASHER	77278	1
208	SPRING	25723	12
209	O-RING	22357	1
210	FRICITION DISC	25530	7
211	BRAKE DISC (S/N 0773216 AND EARLIER)	24490	10
	BRAKE DISC (S/N 0773217 AND LATER)	103592	10
212	MOTOR ADAPTER (S/N 0773216 AND EARLIER)	101633	1
	MOTOR ADAPTER (S/N 0773217 AND LATER)	107257	1
213	CAPSCREW (3/8 - 16 NC X 1-1/4 IN. G8)	104132	4
214	LOCKWASHER (3/8 IN.)	27152	4

# PRIMARY PLANETARY CARRIER ASSEMBLY



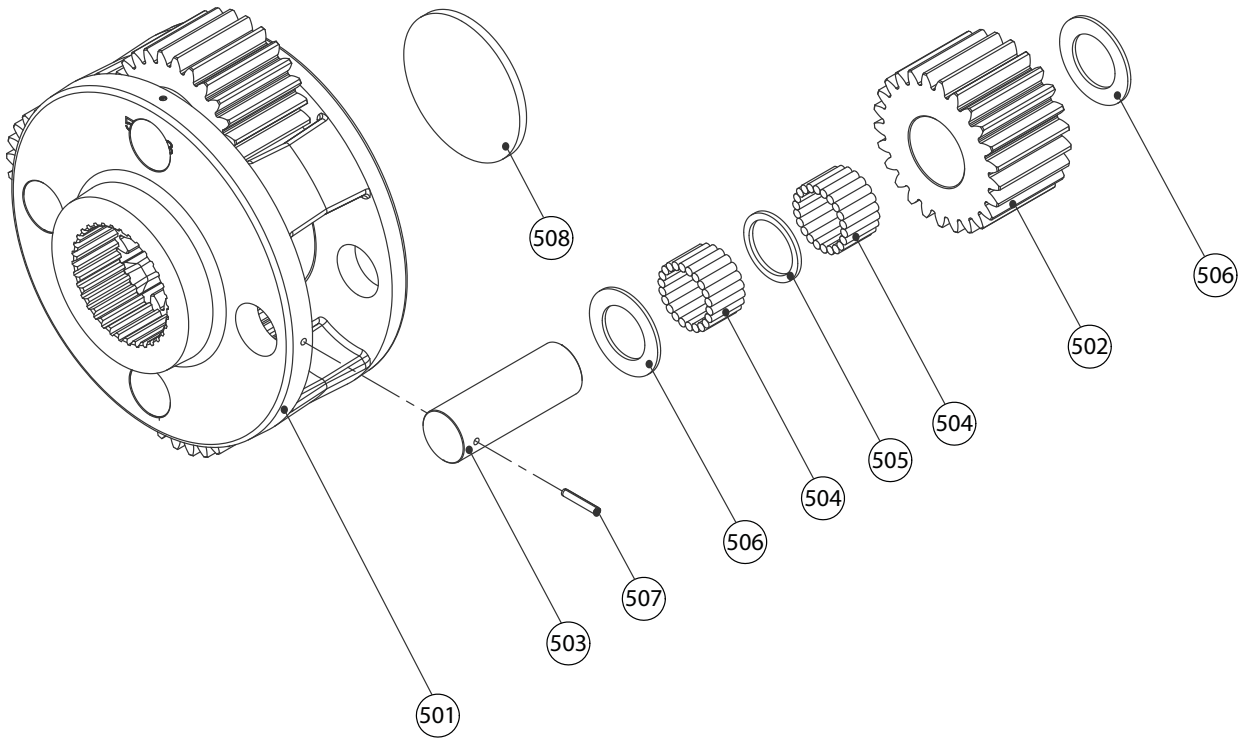
ITEM NO.	DESCRIPTION	PART NO.	QTY.
300	PRIMARY PLANET CARRIER ASSEMBLY (122:1 RATIO)	83023	1
	PRIMARY PLANET CARRIER ASSEMBLY (88:1 RATIO)	82954	1
301	PRIMARY PLANET CARRIER (122:1 RATIO)	26293	1
	PRIMARY PLANET CARRIER (88:1 RATIO)	103396	1
302	PRIMARY PLANET GEAR (122:1 RATIO)	24575	3
	PRIMARY PLANET GEAR (88:1 RATIO)	103398	3
303	PRIMARY PLANET GEAR SHAFT	26295	3
304	THRUST BEARING	24167	6
305	ROLLER BEARING	24579	3
306	SPIROL PIN	24113	3

# SECONDARY PLANET CARRIER ASSEMBLY



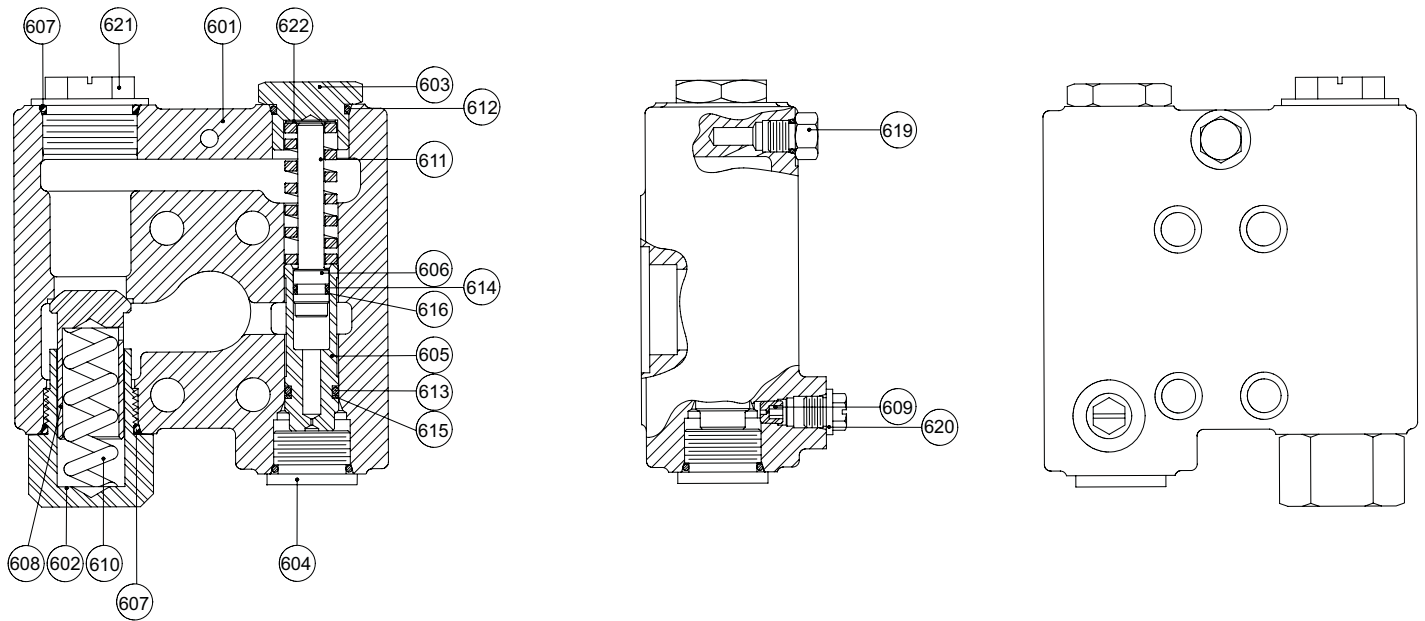
ITEM NO.	DESCRIPTION	PART NO.	QTY.
401	SECONDARY PLANET CARRIER	106984	1
402	SECONDARY PLANET GEAR	104114	3
403	SECONDARY PLANET GEAR SHAFT	104113	3
404	ROLLER BEARING	25292	3
405	THRUST WASHER	24306	6
406	SPIROL PIN	24113	3

# OUTPUT PLANETARY CARRIER ASSEMBLY



ITEM NO.	DESCRIPTION	PART NO.	QTY.
501	OUTPUT PLANET CARRIER	106983	1
502	OUTPUT PLANET GEAR	103236	4
503	OUTPUT PLANT SHAFT	103138	4
504	ROLLER	103683	176
505	SPACER, BEARING	103682	4
506	THRUST WASHER	103681	8
507	SPIROL PIN	24582	4
508	THRUST PLATE	107000	1

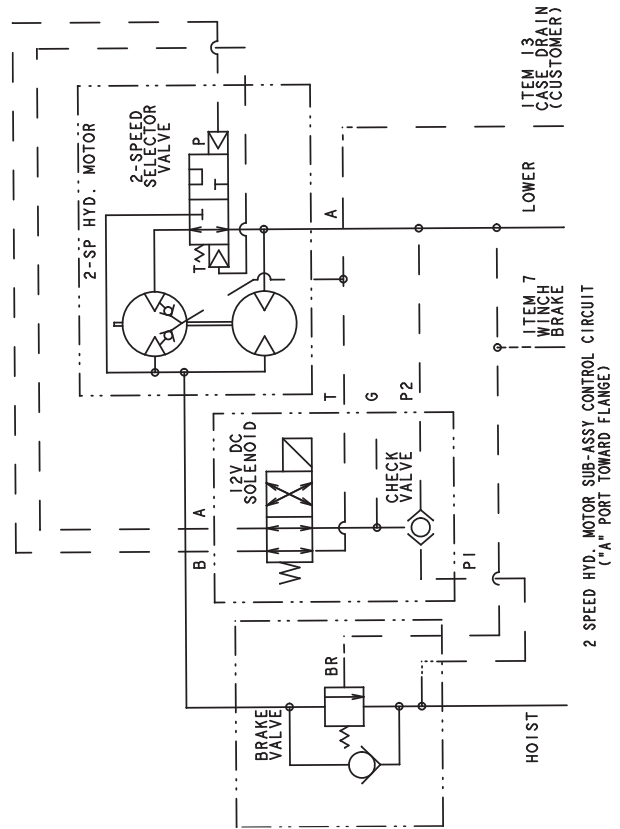
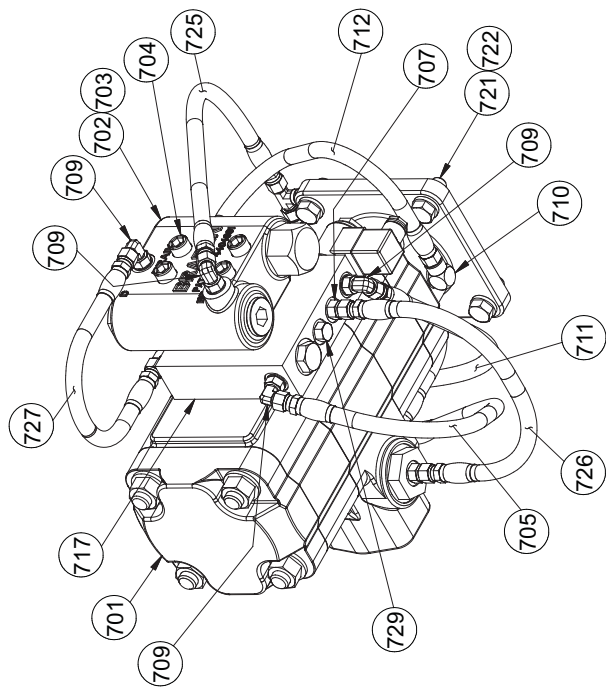
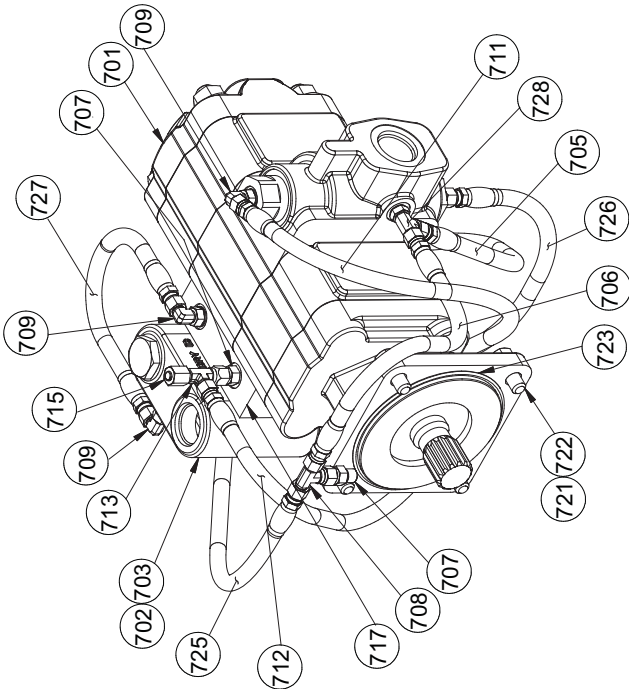
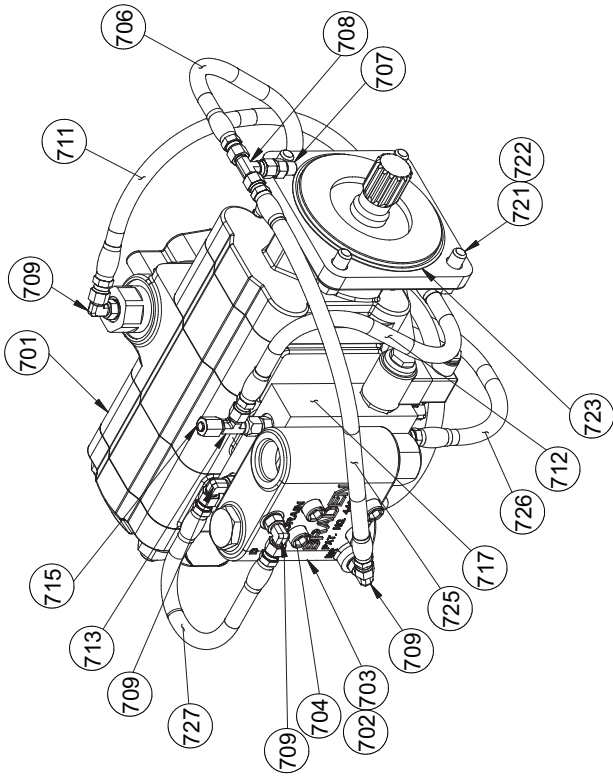
# BRAKE VALVE ASSEMBLY



ITEM	DESCRIPTION	PART NO.	QTY.
-	BRAKE VALVE ASSEMBLY	81984	
601	BRAKE VALVE HOUSING	NSS	1
602	RELIEF VALVE RETAINER	24424	1
603	SPRING RETAINER	24183	1
604	PLUG	22450	1
605	SPOOL	NSS	1
606	DAMPER PISTON	NSS	1
607	O-RING	24186	2
608	CHECK VALVE POPPET	24423	1
609	PILOT ORIFICE	24200	1
610	CHECK VALVE SPRING	24190	1
611	SPOOL SPRING	24192	1
612	O-RING	23601	1
613	O-RING	24193	1
614	O-RING	24194	1
615	BACK-UP RING	24195	1
616	BACK-UP RING	24196	1
619	HEX HEAD PLUG	25663	1
620	SHIPPING PLUG HYD	NSS	1
621	SHIPPING PLUG	NSS	1
622	SHIM, VALVE SPRING	NSS	1

NSS - NOT SERVICED SEPARATELY

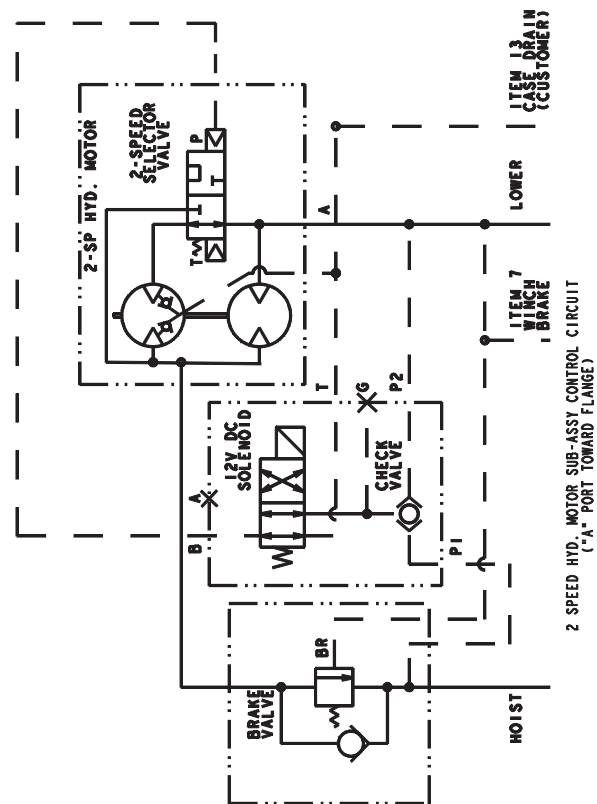
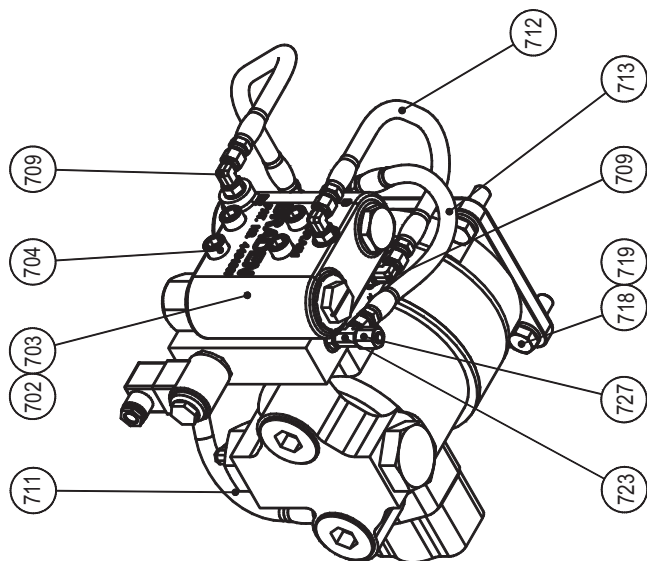
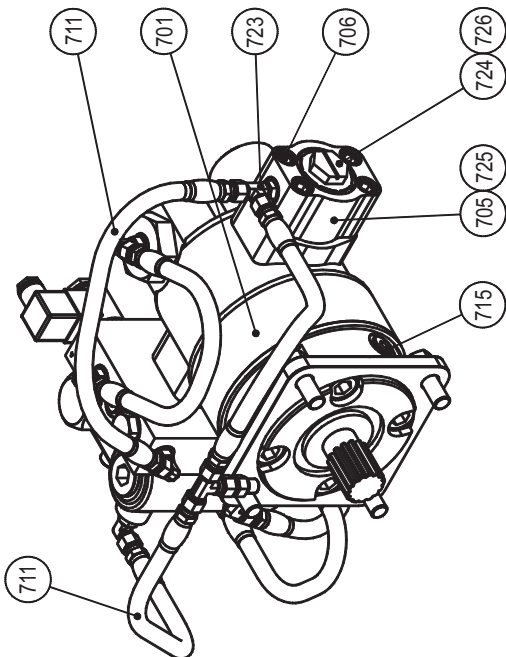
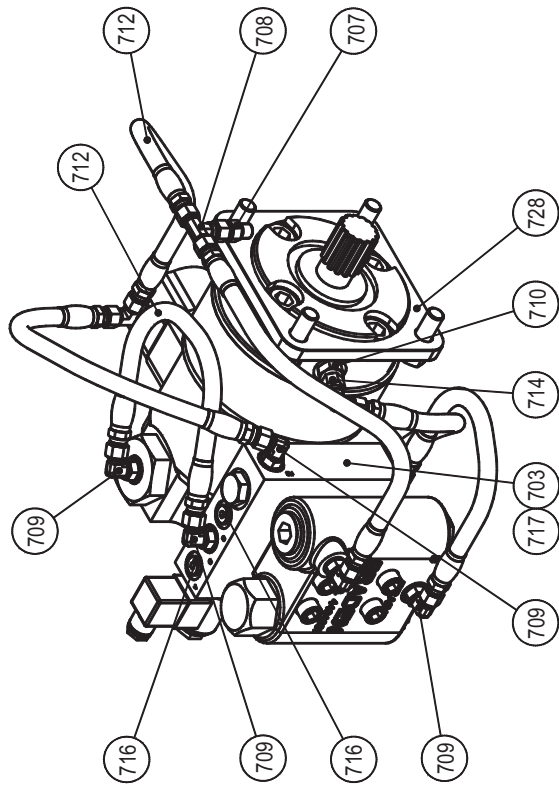
# HYDRAULIC GEAR MOTOR



# HYDRAULIC GEAR MOTOR

ITEM NO.	DESCRIPTION	PART NO.	QTY.
701	HYDRAULIC MOTOR (2-SPEED)	107085	1
702	BRAKE VALVE ASSY (refer to pg. 13)	81984	1
703	O-RING	13838	2
704	CAPSCREW (7/16 - 14 NC X 4-1/2 G8)	102476	4
705	HOSE ASSY (-4 X 17 IN.)	25750	1
706	HOSE ASSY (-4 X 14 IN.)	25935	1
707	ADAPTER	25864	4
708	SWIVEL TEE	25748	1
709	ELBOW FITTING	25302	6
710	REDUCER ELBOW	24236	1
711	HOSE ASSY (-4 X 22.5 IN.)	25749	1
712	HOSE ASSY (-4 X 16 IN.)	13706	1
713	SWIVEL TEE	26002	1
714	WARNING TAG (not shown)	29080	1
715	CAP NUT	70182	1
717	MANIFOLD	102922	1
717A	SOLENOID VALVE	107197	1
717B	COIL, 12 VDC (for item 717A)	104007	1
717C	SEAL KIT (for item 717A)	104004	1
717D	SHUTTLE VALVE	104006	1
717E	SEAL KIT (for item 717D)	104005	1
717F	CONNECTOR	103171	1
720	O-RING	24186	1
721	LOCKWASHER (1/2 IN.)	11026	4
722	CAPSCREW (1/2 - 13 NC X 1-1/4 IN. G8)	104174	4
723	O-RING	10330	1
725	HOSE ASSY (-4 X 18 IN.)	72318	1
726	HOSE ASSY (-4 X 16 IN.)	76499	1
727	HOSE ASSY (-4 X 10 IN.)	25936	1
728	TEE	107314	1
729	PLUG	25663	1

# HYDRAULIC VANE MOTOR





# HYDRAULIC VANE MOTOR

ITEM	DESCRIPTION	PART NO.	QTY
701	HYDRAULIC MOTOR (2-Speed)	107285	1
702	BRAKE VALVE ASSY (refer to pg. 13)	81984	1
703	O-RING	13838	2
704	CAPSCREW (7/16 - 14 X 4-1/4 Socket Hd)	108559	4
705	MANIFOLD	27434	1
706	CAPSCREW (7/16 - 14 x 2 Socket Hd)	21144	4
707	ADAPTER	25864	1
708	SWIVEL TEE	25748	1
709	ELBOW FITTING	25302	6
710	ADAPTER	31284	1
711	HOSE ASSY (-4 X 16 IN.)	76499	2
712	HOSE ASSY (-4 X 14 IN.)	25935	3
713	HOSE ASSY (-4 X 10 IN.)	25936	1
714	SWIVEL NUT 90 DEG. ELBOW	26140	1
715	PLUG	25665	1
716	PLUG	69325	2
717	MANIFOLD	102922	1
717A	SOLENOID VALVE	107197	1
717B	COIL, SOLENOID VALVE	104007	1
717C	SEAL KIT (for item 717A)	104004	1
717D	SHUTTLE VALVE	104006	1
717E	SEAL KIT (for item 717D)	104005	1
717F	CONNECTOR	103171	1
718	LOCKWASHER	11026	4
719	CAPSCREW (1/2 - 13 x 1-1/4 G8 Z)	104174	4
723	TEE	107314	2
724	SHIPPING PLUG	25487	1
725	O-RING	21150	1
726	O-RING	24186	1
727	CAP NUT	70182	1
728	GASKET-MTR PLATE CVR	13684	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 <sup>2</sup> (sq.in.)	X 645.15	= millimeters <sup>2</sup> (mm <sup>2</sup> )	millimeters <sup>2</sup> (mm <sup>2</sup> )	X 0.000155	= inches <sup>2</sup> (sq.in.)
feet <sup>2</sup> (sq.ft.)	X 0.0929	= meters <sup>2</sup> (m <sup>2</sup> )	meters <sup>2</sup> (m <sup>2</sup> )	X 10.764	= feet <sup>2</sup> (sq.ft.)
VOLUME					
inches <sup>3</sup> (cu.in.)	X 0.01639	= liters (l)	liters (l)	X 61.024	= inches <sup>3</sup> (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 <sup>3</sup> (cu.in.)	X 16.39	= centimeters <sup>3</sup> (cc)	centimeters <sup>3</sup> (cc)	X 0.06102	= inches <sup>3</sup> (cu.in.)
feet <sup>3</sup> (cu.ft.)	X 28.317	= liters (l)	liters (l)	X 0.03531	= feet <sup>3</sup> (cu.ft.)
feet <sup>3</sup> (cu.ft.)	X 0.02832	= meters <sup>3</sup> (m <sup>3</sup> )	meters <sup>3</sup> (m <sup>3</sup> )	X 35.315	= feet <sup>3</sup> (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 <sup>2</sup> )	kilograms/sq.cm. (kg/cm <sup>2</sup> )	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 <sub>2</sub> O (60°F)	X 0.2488	= kilopascals (kPa)	kilopascals (kPa)	X 4.0193	= inches H <sub>2</sub> 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 <sup>6</sup>	deci	(d)	= 0.1 or 10 <sup>-1</sup>
kilo	(k)	= 1,000 or 10 <sup>3</sup>	centi	(c)	= 0.01 or 10 <sup>-2</sup>
hecto	(h)	= 100 or 10 <sup>2</sup>	milli	(m)	= 0.001 or 10 <sup>-3</sup>
deka	(da)	= 10 or 10 <sup>1</sup>	micro	(µ)	= 0.000.001 or 10 <sup>-6</sup>