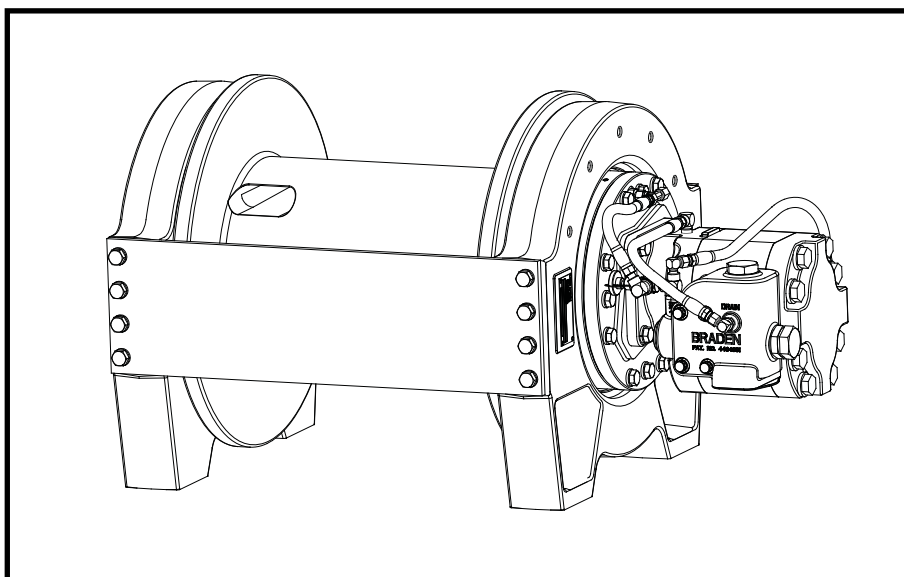


# BRADEN

# CH175B

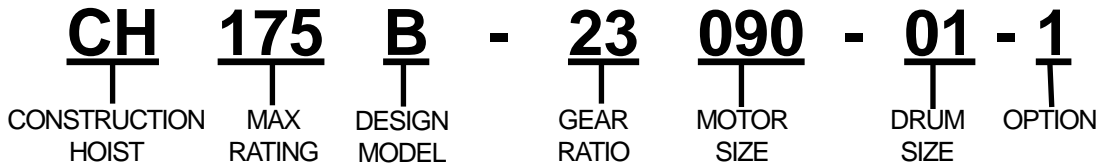
## MATERIAL LIST



**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](http://www.paccarwinch.com)



# EXPLANATION OF MODEL NUMBER



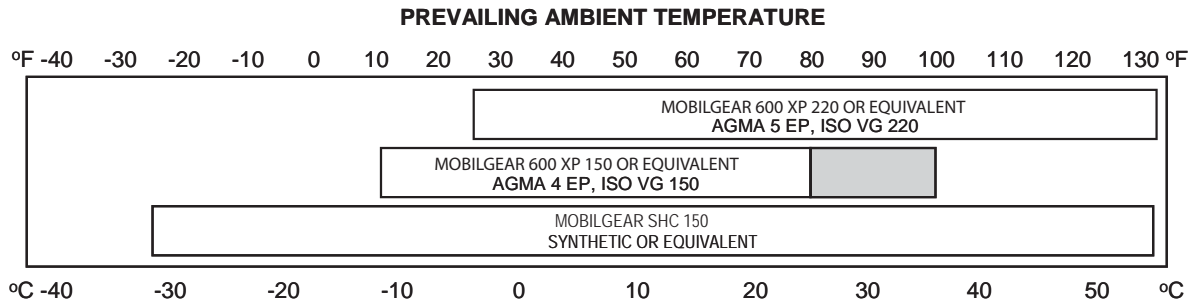
- CH** DESIGNATES CONSTRUCTION HOIST (C2H DESIGNATES TWO SPEED)
- 175** DESIGNATES 17,500 LB FIRST LAYER LINE PULL
- B** DESIGNATES THE MODEL SERIES RELATING TO DESIGN CHANGES
- 23** DESIGNATES TOTAL GEAR REDUCTION
- 90** DESIGNATES HYDRAULIC MOTOR DISPLACEMENT IN CU IN/REV (DECIMAL POINT ELIMINATED EXAMPLE 090 – 9.0 CU IN/REV)
- 01** DESIGNATES THE DRUM OPTION
- 1** PERMITS TESTING AND INSPECTION PER API 2C FOR OFFSHORE CRANES

## TO ORDER PARTS -

- (1) List model and serial numbers of the hoist.
- (2) Refer to exploded view and select the component(s) needed and note item number.
- (3) Find item number on material list, show part number, description and quantity required on your order.
- (4) Refer to Parts Price list and show price for each component or assembly.

## RECOMMENDED PLANETARY GEAR OIL

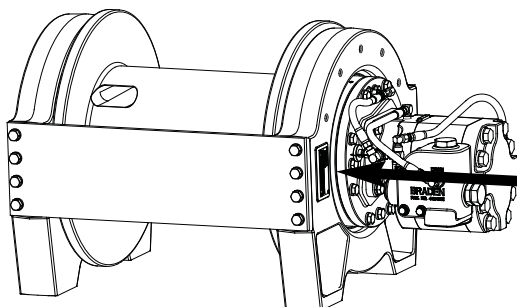
We have published the following specification to help you determine which lubricant is best suited to your application. Your lubricant supplier should assure you that his product meets these specifications. If there is still any doubt as to the suitability of a lubricant, contact the Braden Service Department.



**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

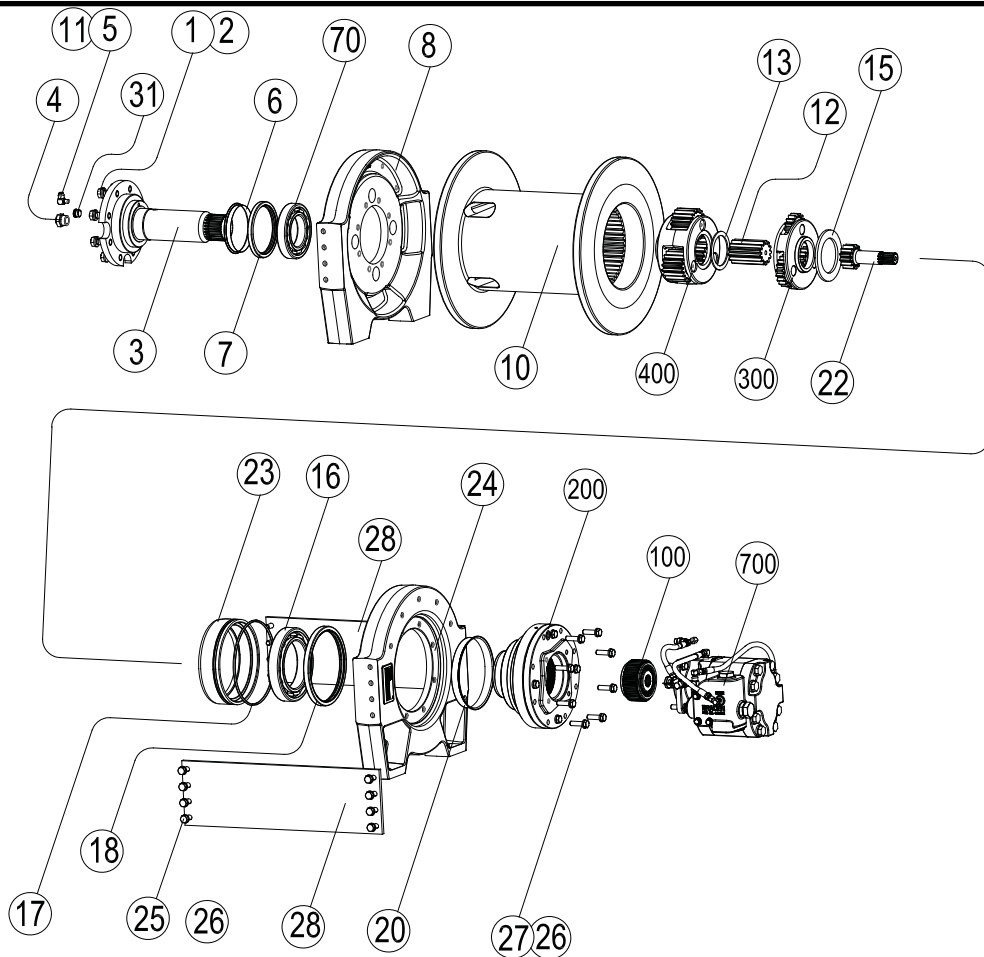


The hoist model number and serial number are stamped onto the data plate of the motor side end plate. Both of these numbers are extremely important in the shipment of the proper replacement parts, and your order should always reference them.

**WINCH SERIAL NUMBER**

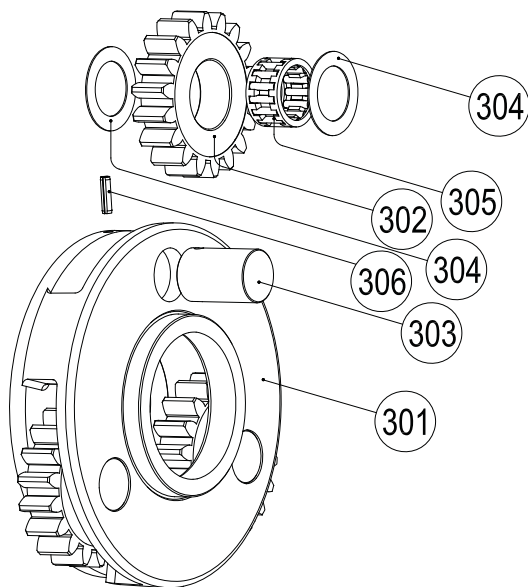
**WINCH MODEL NUMBER**

# MAIN ASSEMBLY



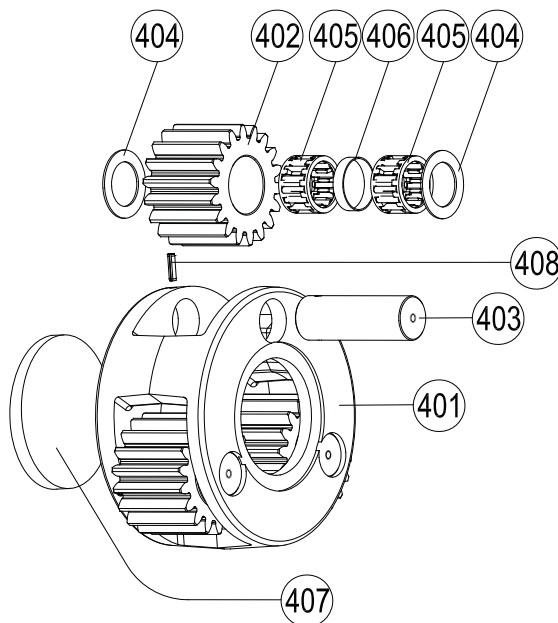
ITEM	DESCRIPTION	PART #	QTY
1	CAPSCREW, 5/8-11 X 1 3/4	103249	8
2	LOCKWASHER, 5/8 SPLIT	102423	8
3	BEARING SUPPORT	106134	1
4	SIGHT GAUGE	70193	1
4A	O-RING FOR 70193	23601	1
5	RELIEF VALVE 7.5-15 PSI	18062	1
6	SPEEDI-SLEEVE	106265	1
7	SEAL-OIL	107297	1
8	ENDPLATE, SUPPORT	106127	1
9	BALL BEARING	24486	1
10	CABLE DRUM	106128	1
11	ELBOW, 90 DEGREE	13708	1
12	OUTPUT SUN GEAR	24444	1
13	THRUST WASHER	24485	1
15	THRUST WASHER	29512	1
16	BALL BEARING	24487	1
17	O-RING, 8.725-INCH I.D.	106203	1
18	SEAL	70167	1
20	SPEEDI-SLEEVE	106266	1
22	INPUT SUN GEAR	106125	1
23	DRUM CLOSURE	106076	1
24	ENDPLATE, MOTOR	106126	1
25	CAPSCREW, 1/2-13 X 1 1/2	103314	16
26	LOCKWASHER, 1/2 SPLIT	11026	24
27	CAPSCREW, 1/2-13 X 1 3/4	104323	8
28	TIE PLATE	106226	2
31	PLUG,O-RING FLUSH (DRAIN)	32411	1
100	OVERRUNNING CLUTCH ASSY	83021	1
200	BRAKE CYLINDER SUB-ASSEMBLY	83412	1
300	PLANET CARRIER ASSEMBLY	83404	1
400	PLANET CARRIER ASSEMBLY	83403	1

## PRIMARY PLANETARY CARRIER



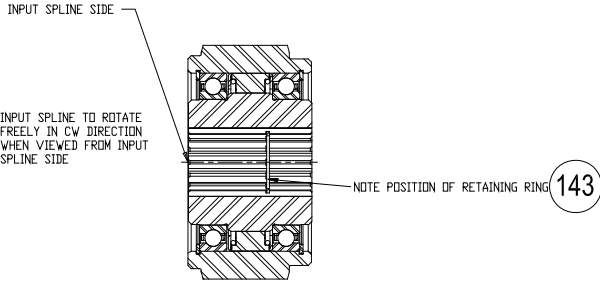
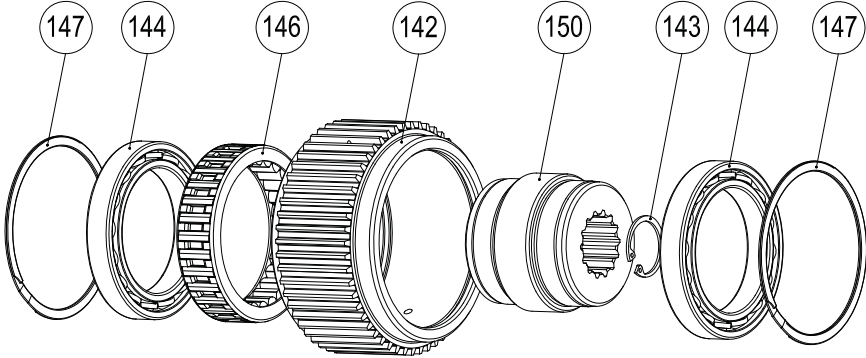
ITEM	DESCRIPTION	PART #	QTY
300	PLANET CARRIER ASSEMBLY	83404	1
301	PRIMARY PLANET CARRIER	26292	1
302	PRIMARY PLANET GEAR	40021	3
303	PRIMARY PLANET GEAR SHAFT	26294	3
304	THRUST BEARING	24479	6
305	ROLLER BEARING	24480	3
306	SPIROL PIN	24113	3

## SECONDARY PLANETARY CARRIER



ITEM	DESCRIPTION	PART #	QTY
400	PLANET CARRIER ASSEMBLY	83403	1
401	PLANET CARRIER	106133	1
402	PLANET GEAR	106200	3
403	PLANET GEAR SHAFT *	25613	3
404	THRUST WASHER	24306	6
405	ROLLER BEARING	25292	6
406	BEARING SPACER	25443	3
407	SPACER, OUTPUT	25638	1
408	SPIROL PIN	24113	3

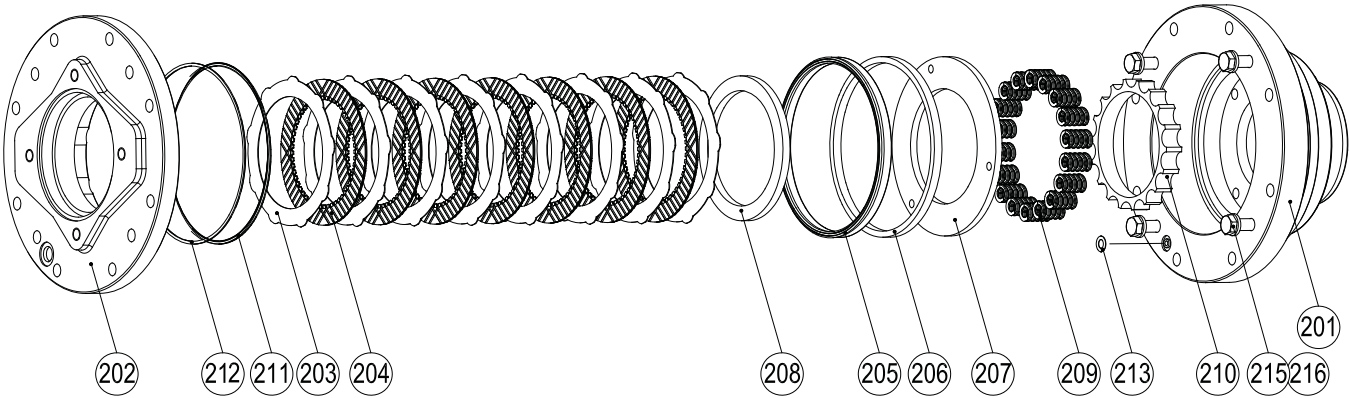
# OVERRUNNING CLUTCH ASSEMBLY



ITEM	DESCRIPTION	PART #	QTY
100	OVERRUNNING CLUTCH ASSY	83021	-
150	INNER RACE	NSS	1
142	OUTER RACE	NSS	1
146	OVERRUNNING CLUTCH	NSS	1
144	BALL BEARING	103104	2
147	RETAINING RING	103110	2
143	RETAINING RING	24506	1

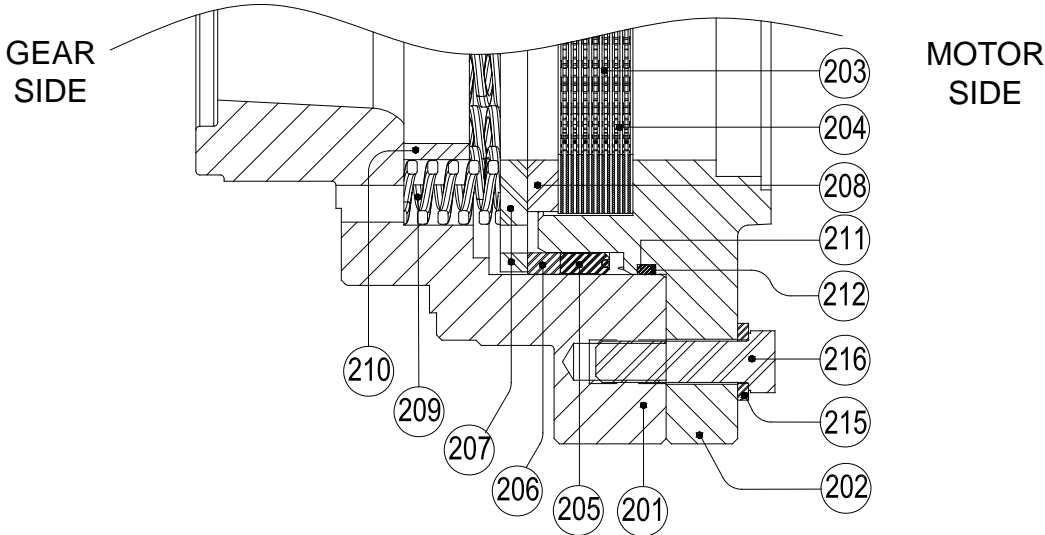
NSS= NOT SERVICED SEPERATELY

# BRAKE CYLINDER ASSEMBLY

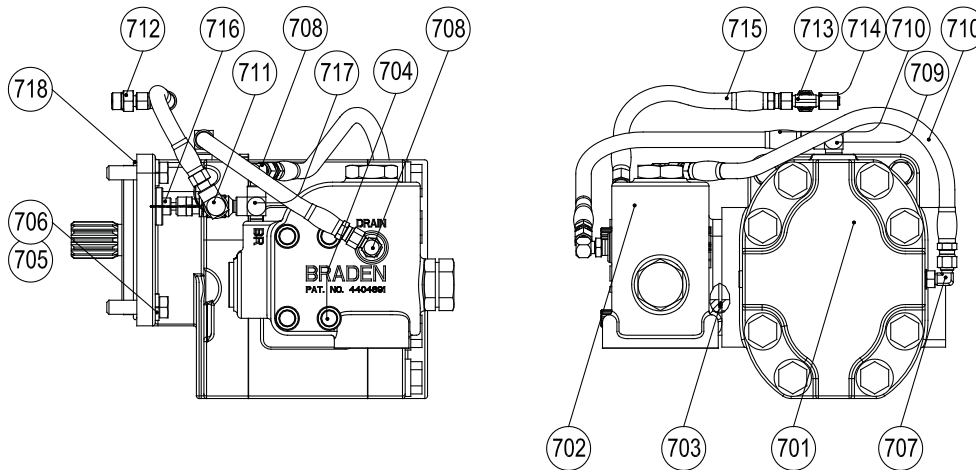


ITEM	DESCRIPTION	PART #	QTY
200	BRAKE CYLINDER SUB-ASSEMBLY	83412	1
201	BRAKE CYLINDER	106268	1
202	MOTOR ADAPTER	103035	1
203	BRAKE DISC	102954	8
204	FRICTION DISC	103167	7
205	SEAL, U-CUP	103441	1
206	PISTON BACK-UP RING	25746	1
207	PRESSURE PLATE	103168	1
208	BRAKE PLATE SPACER	103169	1
209	BRAKE SPRING	24108	18
210	SPRING SPACER	103147	1
211	O-RING, 6.98-INCH I.D.	22357	1
212	58933 BACK-UP WASHER	77278	1
213	O-RING, .424-INCH I.D.	13017	1
215	LOCKWASHER, 1/2 SPLIT	11026	4
216	CAPSCREW, 1/2-13 X 1 3/4	104323	4

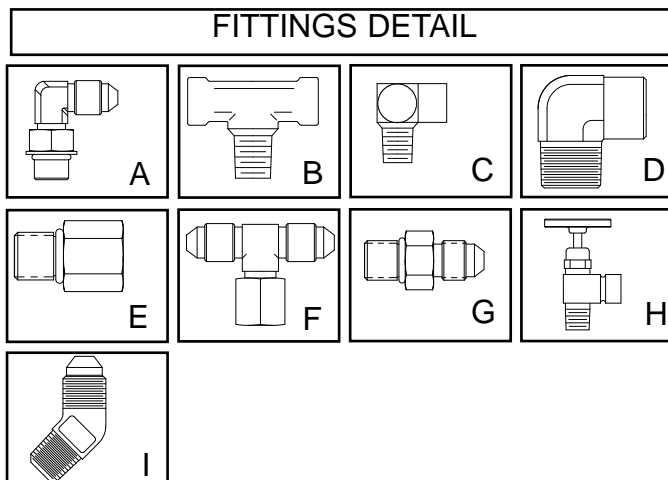
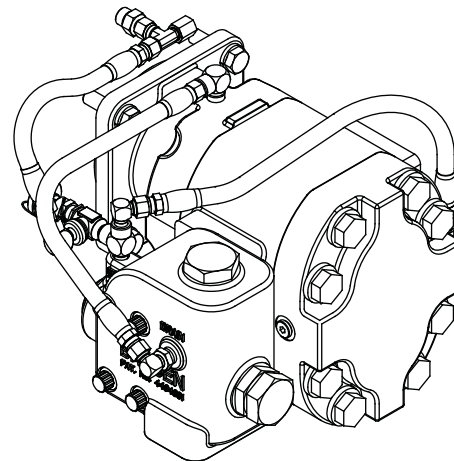
## CROSS-SECTION



# MOTOR GROUP ASSEMBLY

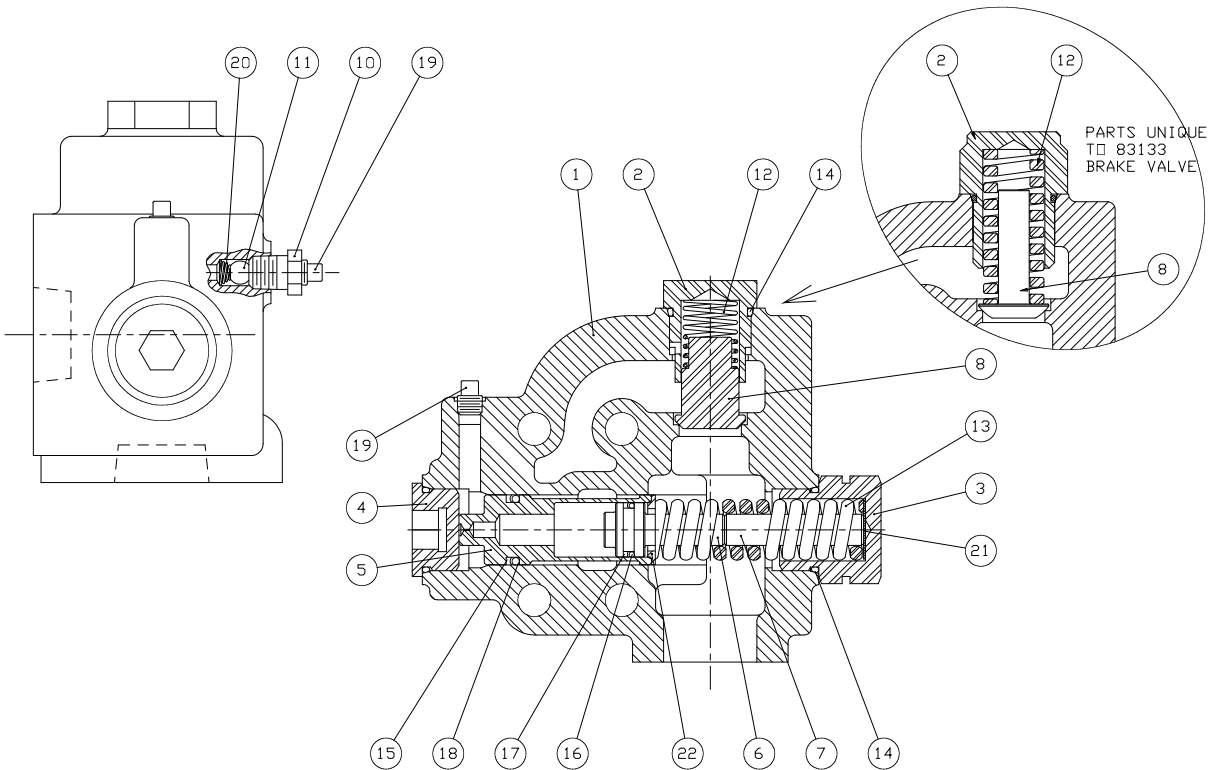


ITEM	DESCRIPTION	PART #	QTY	DETAIL
700	HYD MOTOR GROUP	63721	1	-
701	HYD MOTOR WM 76 12.03 CU IN	25274	1	-
702	1-1/2" BRAKE VALVE ASSY	81609	1	-
703	O-RING, 1.734-INCH I.D.	13542	1	-
704	CAPSCREW, 1/2-13 X 4 1/2	103407	4	-
705	CAPSCREW, 1/2-13 X 1 3/4	104323	4	-
706	LOCKWASHER, 1/2 SPLIT	11026	4	-
707	ELBOW FITTING	25302	1	A
708	ELBOW TBG FTG	21163	2	B
709	REDUCER ELBOW	24236	1	C
710	HOSE ASSY	13705	2	-
711	ELBOW-STREET 90DEG	13708	1	D
712	ADAPTER	31284	1	E
713	SWIVEL TEE	25748	1	F
714	CAP NUT	70182	1	G
715	HOSE ASSY	25750	1	-
716	NEEDLE VALVE	25258	1	H
717	PIPE TEE FEMALE	23769	1	I
718	O-RING, 4.984-INCH I.D.	10330	1	-





# BRAKE VALVE ASSEMBLY



ITEM	DESCRIPTION	QTY	PART #
1	BRAKE VALVE HOUSING	1	NSS
1	1-1/2" BRAKE VALVE ASSEMBLY	1	81609
2	VALVE SPRING RETAINER	1	24424
3	SPRING RETAINER	1	101016
4	PLUG	1	24420
5	BRAKE VALVE PISTON	1	NSS
6	DAMPER PISTON	1	NSS
7	DAMPER PISTON EXTENSION	1	101017
8	CHECK VALVE POPPET	1	24423
10	REDUCER	1	24436
11	CHECK VALVE BALL, STEEL	1	24428
12	CHECK VALVE SPRING	1	24190
13	MAIN PISTON SPRING	1	24434
14	O-RING	2	24186
15	BACK-UP RING	1	24778
16	O-RING	1	24776
17	BACK-UP RING	1	24777
18	O-RING	1	21123
19	PIPE PLUG	2	18009
20	CHECK SPRING	1	25373
21	VALVE SPRING SHIM	1	25662
22	SPRING SEAT	1	101015

NSS= NOT SERVICED SEPERATELY

## BRAKE VALVE SEAL KIT #61616

DESCRIPTION	PART NO.	QTY.
O-RING	24776	1
O-RING	21123	1
O-RING	24186	3
BACK-UP RING	24777	1
BACK-UP RING	24778	1
O-RING	13542	1



# METRIC CONVERSION TABLE

**MULTIPLY: BY: TO GET: MULTIPLY: BY: TO GET:**

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>