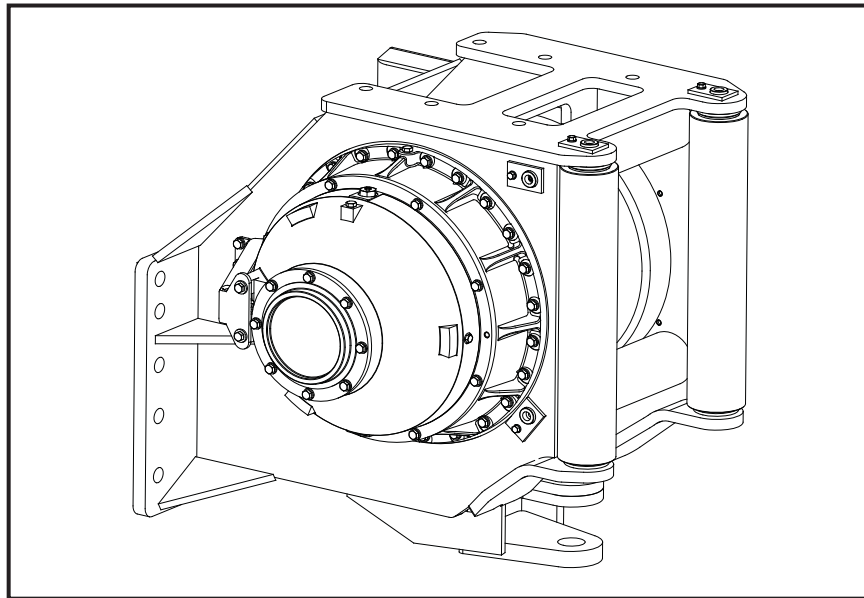


CARCO

BASE WINCH PARTS MANUAL MODELS H110B AND H140A



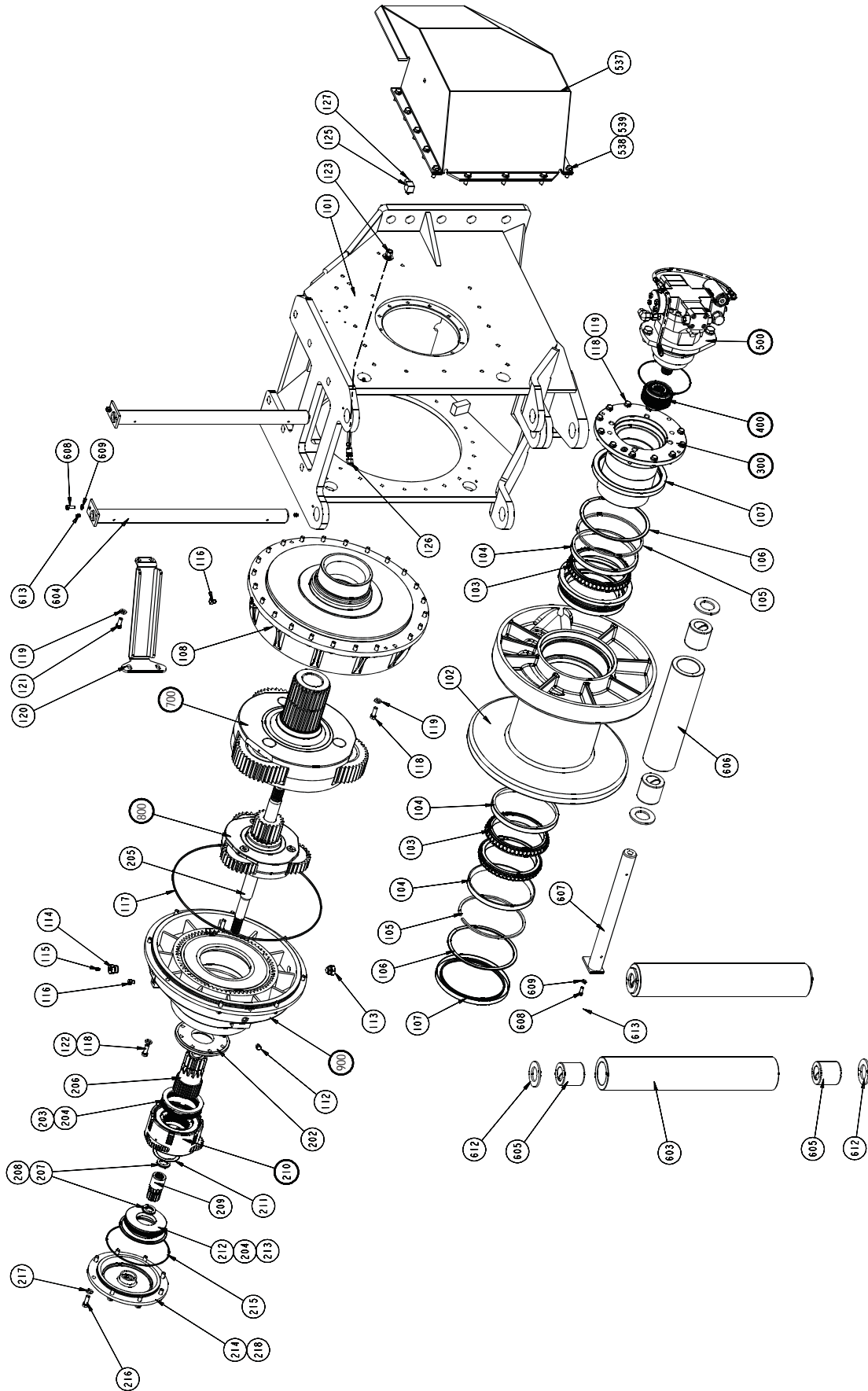
MODEL NUMBER DESCRIPTION

H110B	156	V	065/022	0	3
BASIC WINCH MODEL H110B 110,000 LBS MAX H140A 140,000 LBS MAX	OVERALL GEAR RATIO 156:1 245:1 316:1	MOTOR TYPE F - FIXED DISPLACEMENT V-VARIABLE DISPLACEMENT	MOTOR SIZE CU. IN. DISPLACEMENT PER REVOLUTION EXAMPLE 065 = 6.5 CU. IN. MAX 022 = 2.2 CU. IN. MIN	CONTROL OPTION 0 - AUTO SPEED/ LOCK IN LOW SPEED 2 - 2 SPEED	Fairlead 3 - 3 roller 4 - 4 roller

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MODEL H110B AND H140A WINCH ASSEMBLY



MODEL H110B AND H140A WINCH ASSEMBLY

ITEM	PART NO	DESCRIPTION	QTY	
			H110B	H140A
101	40207	HOUSING, MACH	1	1
102	107271	CABLE DRUM	1	-
	107272	CABLE DRUM	-	1
103	29277	BEARING CONE	4	4
104	29278	BEARING CUP	4	4
105	29279	SPACER RING	2	2
106	29280	RETAINING RING	2	2
107	29281	OIL SEAL	2	2
108	103988	RING GEAR (REFER TO PAGE 10)	1	1
112	26686	PLUG	1	1
113	40161	PLUG, MAGNETIC DRAIN	1	1
114	29678	FILL PLUG	1	1
115	10074	VENT PLUG	1	1
116	10009	CAPSCREW (1/2 - 13 X 1/2 G8 Z)	2	2
117	29296	O-RING	1	1
118	104322	CAPSCREW (1/2 - 13 X 1-1/2 G8 Z)	54	54
119	100859	WASHER (1/2)	54	54
120	29792	HOSE GUARD	1	1
121	104174	CAPSCREW (1/2 - 13 X 1-1/4 G8 Z)	2	2
122	102987	WASHER, HARD (1/2)	2	2
123	101261	HOSE ASSY -6 X 36 in. (914 mm)	1	1
125	101287	UNION 90 DEG	1	1
126	101286	ELBOW 45 DEG	1	1
127	101581	CAP	1	1
201	83113	RING GEAR ASSEMBLY (156:1 AND 245:1 RATIO) (REFER TO PAGE 9)	1	-
	83106	RING GEAR ASSEMBLY (316:1 RATIO) (REFER TO PAGE 9)	-	1
202	103979	SPRING RETAINER	1	1
203	NLA	THRUST WASHER (USED PRIOR TO S/N 1000900)	1	1
	105148	THRUST WASHER	1	1
204	103176	NEEDLE ROLLER BEARING	2	2
205	103976	INPUT SHAFT	1	1
206	103972	SECONDARY SUN GEAR	1	1
207	73294	THRUST RACE	4	4
208	24305	BEARING	2	2
209	104075	PRIMARY SUN GEAR (156:1 RATIO)	1	-
	104074	PRIMARY SUN GEAR (245:1 RATIO)	1	-
	103977	PRIMARY SUN GEAR (316:1 RATIO)	-	1
210	83860	CARRIER CLUTCH ASSEMBLY (156:1 RATIO) (REFER TO PAGE 8)	1	-
	83857	CARRIER CLUTCH ASSEMBLY (245:1 RATIO) (REFER TO PAGE 8)	1	-
	83859	CARRIER CLUTCH ASSEMBLY (316:1 RATIO) (REFER TO PAGE 8)	-	1
211	103179	THRUST WASHER	1	1
212	NLA	BEARING RETAINER (USED PRIOR TO S/N 1000900)	1	1
	108144	BEARING RETAINER (BEGINNING WITH S/N 1000900, REFER TO NOTE 1)	1	1
213	NLA	THRUST WASHER (USED PRIOR TO S/N 1000900)	1	1
	108143	THRUST WASHER (BEGINNING WITH S/N 1000900, REFER TO NOTE 1)	1	1
214	NLA	COVER (USED PRIOR TO S/N 1000900)	1	1
	108142	COVER (BEGINNING WITH S/N 1000900, REFER TO NOTE 1)	1	1
215	103980	O-RING	1	1
216	104322	CAPSCREW (1/2 - 13 X 1-1/2 G8 Z)	8	8
217	100859	WASHER	8	8
218	108929	BUSHING	1	1
219	103102	HITCH PIN (NOT SHOWN)	1	1
220	70148	COTTER PIN (3/8 X 3 in.) (NOT SHOWN)	2	2
221	29428	FERRULE, 1-1/8 in. (28 mm) (NOT SHOWN)	1	1
	29429	FERRULE, 1-1/4 in. (32 mm) (NOT SHOWN)	1	1
300	83107	BRAKE ASSEMBLY (REFER TO PAGE 6)	1	1
400	83109	OVERRUNNING CLUTCH ASSEMBLY (REFER TO PAGE 7)	1	1
500	-	HYD MOTOR GROUP (REFER TO SPECIFIC TRACTOR INSTALL. MANUAL)		
537	29682	MOTOR COVER	1	1
538	104174	CAPSCREW (1/2 - 13 X 1-1/4 G8 Z)	11	11
539	100859	WASHER (1/2)	11	11
600	62291	FAIRLEAD PARTS GROUP (SEE BELOW)	1	1
700	83111	OUTPUT CARRIER ASSEMBLY (156:1 AND 245:1 RATIO) (REFER TO PAGE 12)	1	-
	83103	OUTPUT CARRIER ASSEMBLY (316:1 RATIO) (REFER TO PAGE 12)	-	1
800	83104	SECONDARY PLANET CARRIER ASSEMBLY (REFER TO PAGE 11)	1	1
900	-	RING GEAR ASSEMBLY (REFER TO PAGE 10)	1	1

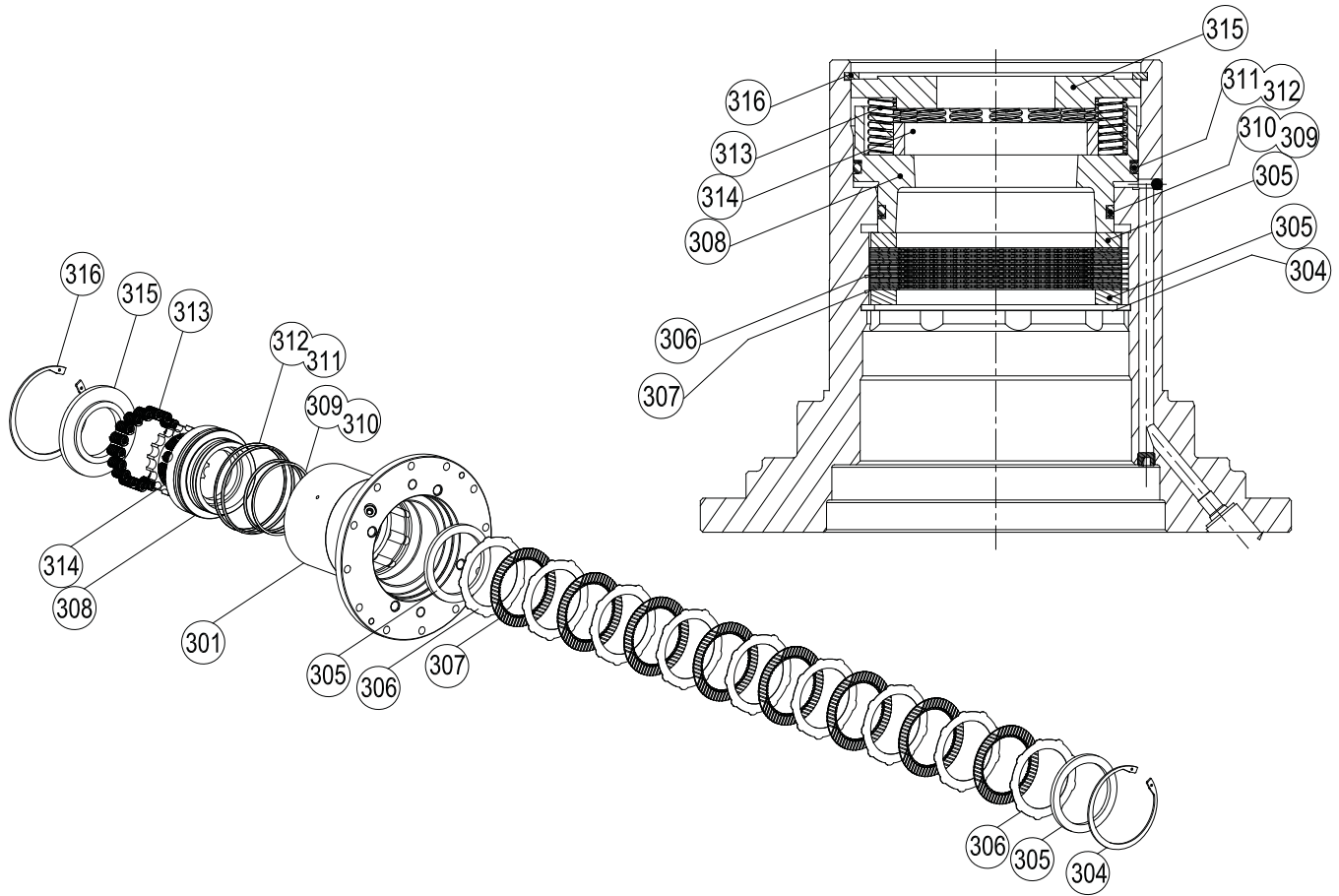
NLA = NO LONGER AVAILABLE

NOTE 1: REFER TO SERVICE BULLETIN LIT2517 FOR PRODUCT IMPROVEMENT INFORMATION

FAIRLEAD ROLLER GROUP

ITEM #	PART #	DESCRIPTION	QTY.	
			3 ROLLER	4 ROLLER
603	40208	VERTICAL ROLLER	2	2
604	40209	VERTICAL SHAFT ASSEMBLY	2	2
605	29314	BUSHING	6	8
606	29315	HORIZONTAL ROLLER	1	2
607	103770	HORIZONTAL SHAFT ASSEMBLY	1	2
608	104309	CAPSCREW, 3/8-16 UNC X 1 in. HEX HD, GD8	3	4
609	101440	WASHER, HARD, 3/8	3	4
612	29742	WASHER - ROLLER	6	8
613	18047	GREASE FITTING	6	8
-	62474	FOURTH ROLLER KIT (INCLUDES ITEMS 605 - 613 TO ADD SECOND HORIZONTAL ROLLER)	-	-

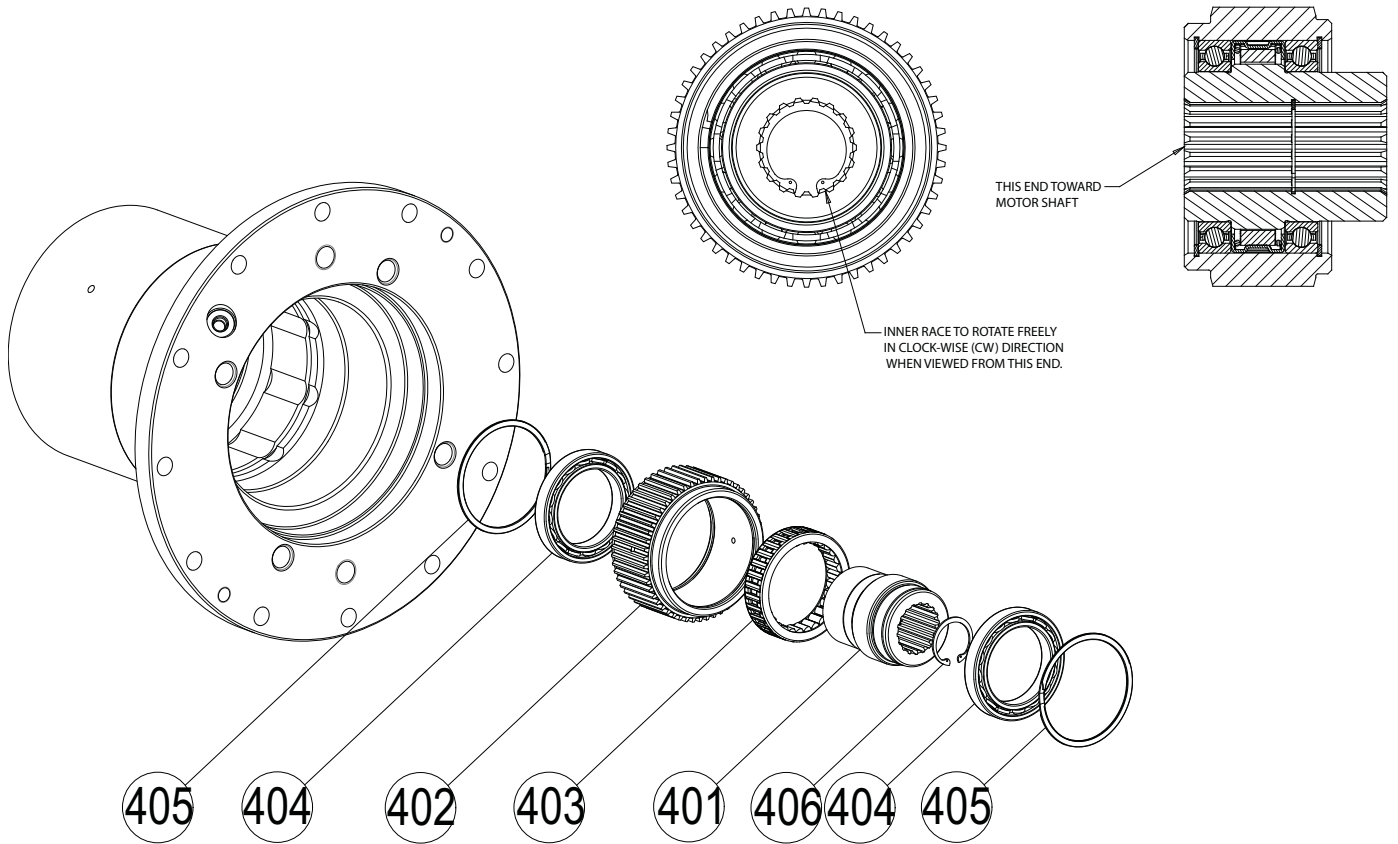
MODEL H110B AND H140A BRAKE ASSEMBLY



ITEM NO.	PART NO.	DESCRIPTION	QTY.
-	83107	BRAKE ASSEMBLY	1
301	103982	BRAKE HOUSING (SEE NOTE 1)	1
302	70126	STEEL BALL (SEE NOTE 1)	1
303	22374	PLUG (SEE NOTE 1)	1
304	27924	RETAINING RING	1
305	103169	BRAKE PLATE SPACER	2
306	102954	BRAKE DISC	9
307	103167	FRICTION DISC	8
308	103983	BRAKE PISTON	1
309	29302	O-RING	1
310	29370	BACK-UP RING	1
311	100707	O-RING	1
312	103987	BACK-UP RING	1
313	29301	SPRING	16
314	103147	SPRING SPACER	1
315	103984	SPRING RETAINER	1
316	103985	RETAINING RING	1

NOTE 1: IF REQUESTING ITEM 301, BRAKE HOUSING
ITEMS 302 AND 303 MUST BE REQUESTED ALSO.

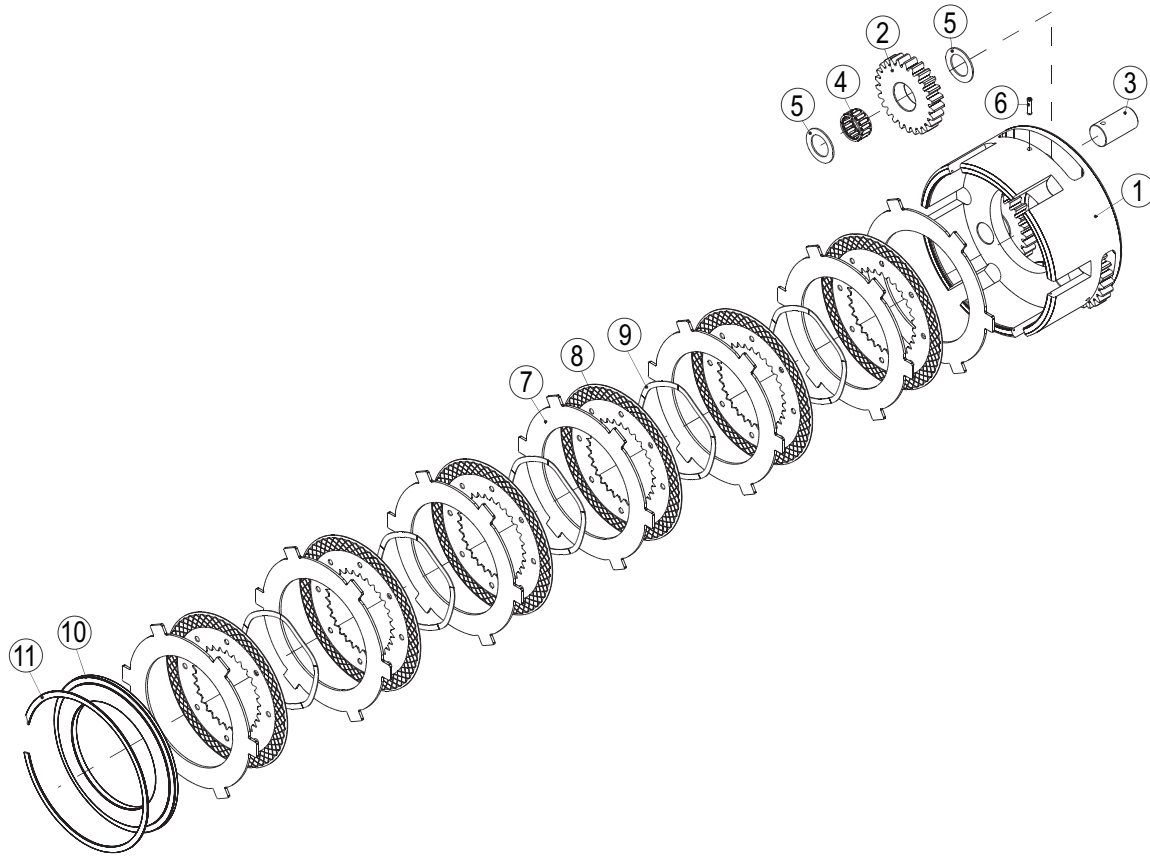
**MODEL H110B AND H140A
OVERRUNNING CLUTCH ASSEMBLY**



ITEM NO.	PART NO.	DESCRIPTION	QTY.
-	83109	OVERRUNNING CLUTCH ASSEMBLY	1
401	NSS	INNER RACE	-
402	NSS	OUTER RACE	-
403	NSS	OVERRUNNING CLUTCH	-
404	103104	BALL BEARING	2
405	103110	RETAINING RING	2
406	70161	RETAINING RING	1

NSS - NOT SERVICED SEPARATELY

**MODEL H110B AND H140A
CARRIER CLUTCH ASSEMBLY**

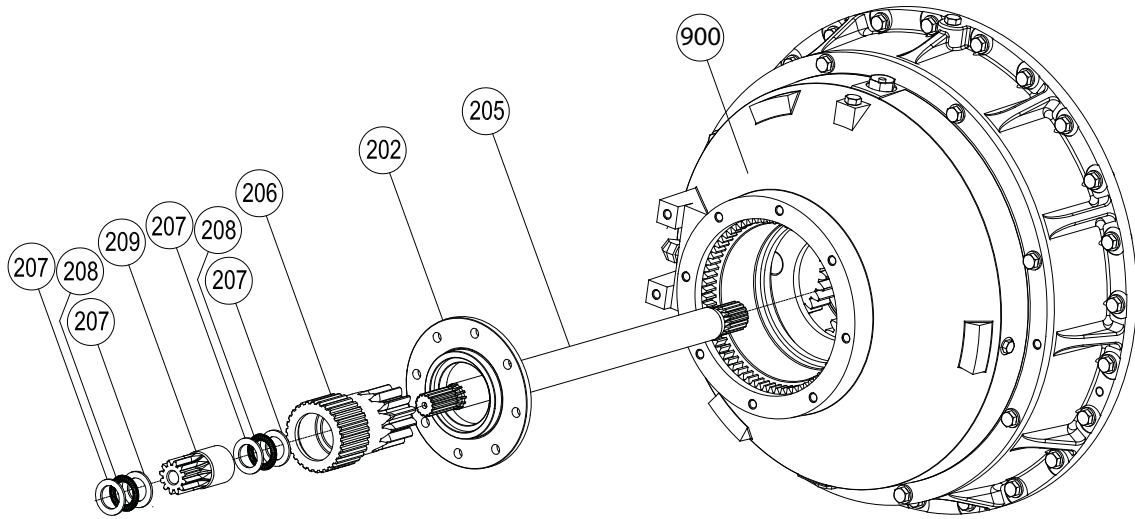


ITEM	PART NO	DESCRIPTION	QTY		
			156:1	245:1	316:1
-	83860	CARRIER CLUTCH ASSEMBLY	1	-	-
	83857	CARRIER CLUTCH ASSEMBLY	-	1	-
	83859	CARRIER CLUTCH ASSEMBLY	-	-	1
1	104077	CARRIER CLUTCH	1	-	-
	102780	CARRIER CLUTCH	-	1	-
	103973	CARRIER CLUTCH	-	-	1
2	104076	PRIMARY PLANET GEAR	3	-	-
	40237	PRIMARY PLANET GEAR	-	3	-
	103974	PRIMARY PLANET GEAR	-	-	3
3	25614	PRIMARY PLANET GEAR SHAFT	3	3	3
4	24175	ROLLER BEARING	3	3	3
5	25361	BEARING RACE	6	6	6
6	24113	SPIROL PIN	3	3	3
7	101377	BRAKE PLATE	7	7	7
8	101378	FRICTION DISC	6	6	6
9	103182	WAVE SPRING	5	5	5
10	NLA	THRUST WASHER (USED PRIOR TO S/N 1000900)	1	1	1
	108143	THRUST WASHER (BEGINNING WITH S/N 100900, REFER TO NOTE 1)	1	1	1
11	26147	RETAINING RING	1	1	1

NLA = NO LONGER AVAILABLE

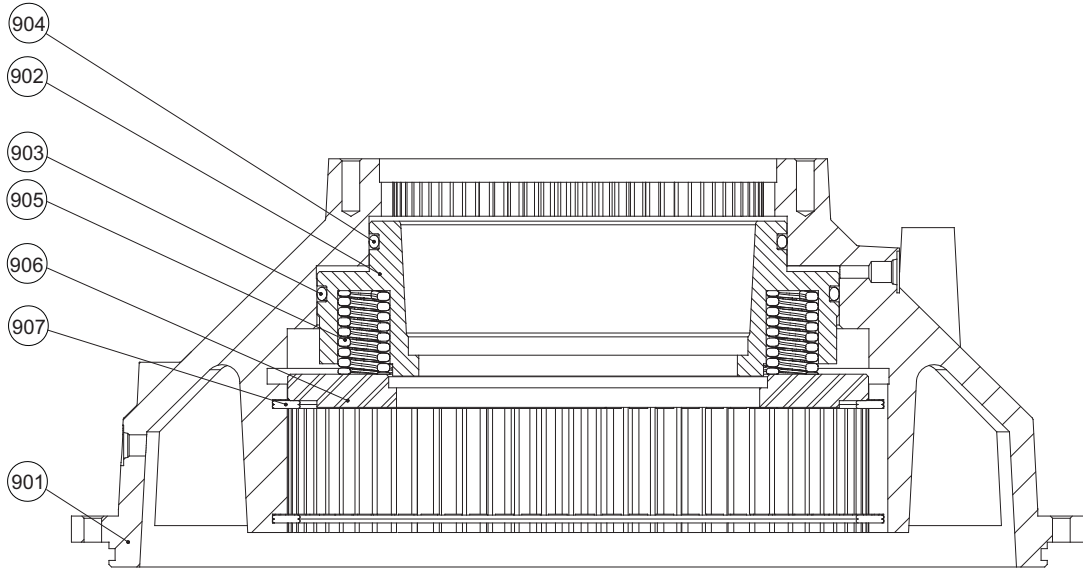
NOTE1: REFER TO SERVICE BULLETIN LIT2517 FOR PRODUCT IMPROVEMENT INFORMATION.

**MODEL H110B AND H140A
INPUT SHAFT DETAIL**



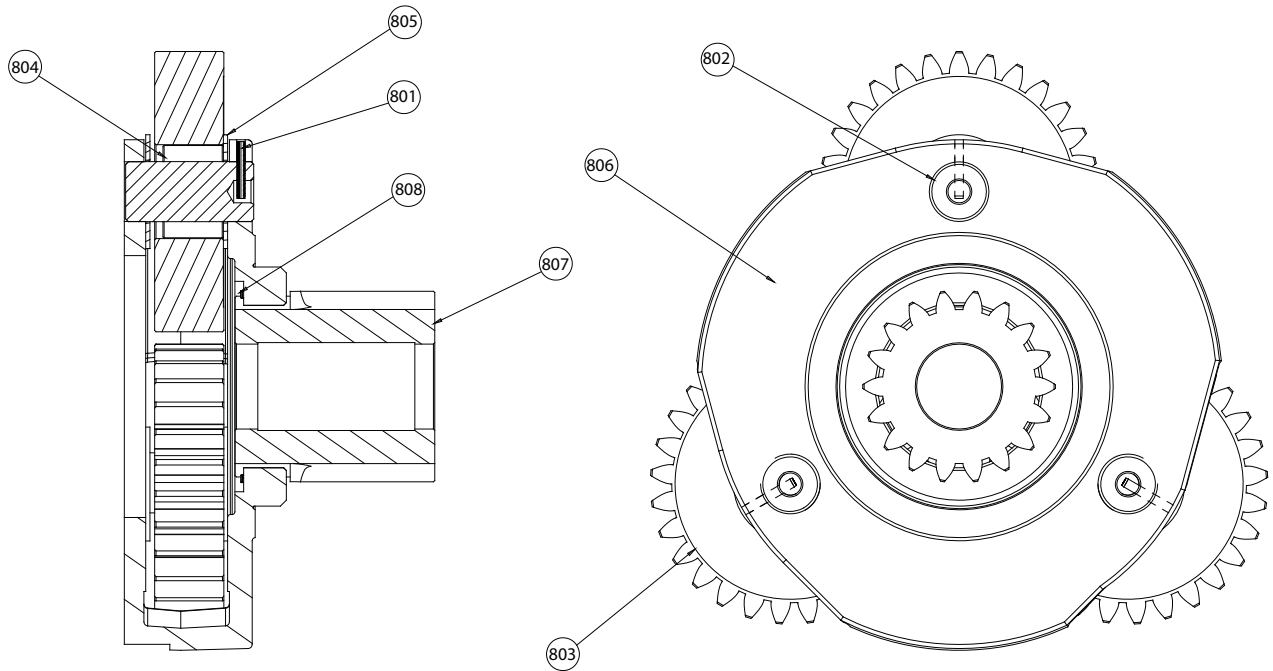
ITEM	PART NO	DESCRIPTION	QTY		
			156:1	245:1	316:1
900	83113	RING GEAR ASSEMBLY (156:1 RATIO) (Refer to Page 10)	1	-	-
	83113	RING GEAR ASSEMBLY (245:1 RATIO) (Refer to Page 10)	-	1	-
	83106	RING GEAR ASSEMBLY (316:1 RATIO) (Refer to Page 10)	-	-	1
202	103979	SPRING RETAINER	1	1	1
203	105148	THRUST WASHER	1	1	1
205	103976	INPUT SHAFT	1	1	1
206	103972	SECONDARY SUN GEAR	1	1	1
207	73294	THRUST RACE	4	4	4
208	24305	BEARING	2	2	2
209	104075	PRIMARY SUN GEAR (156:1 RATIO)	1	-	-
	104074	PRIMARY SUN GEAR (245:1 RATIO)	-	1	-
	103977	PRIMARY SUN GEAR (316:1 RATIO)	-	-	1

MODEL H110B AND H140A RING GEAR ASSEMBLY



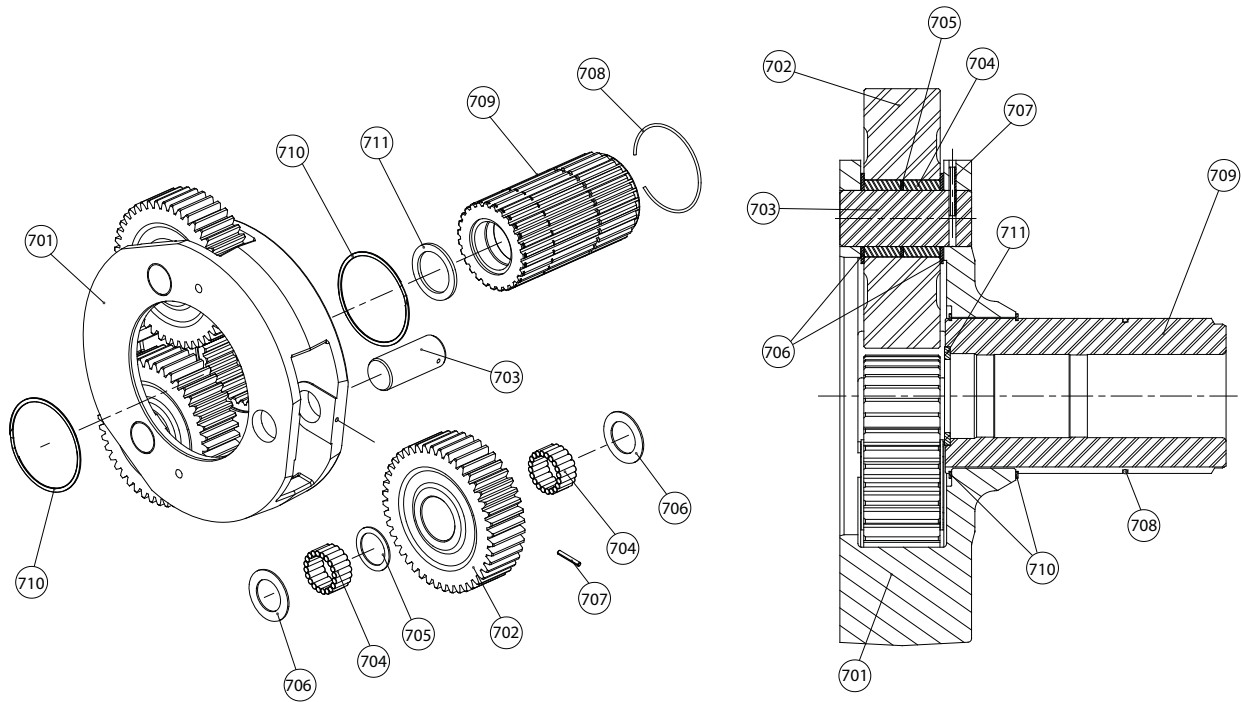
ITEM	PART NO	DESCRIPTION	QTY		
			156:1	245:1	316:1
-	83113	RING GEAR ASSEMBLY (156:1 RATIO)	1	-	-
	83113	RING GEAR ASSEMBLY (245:1 RATIO)	-	1	-
	83106	RING GEAR ASSEMBLY (316:1 RATIO)	-	-	1
901	104078	RING GEAR HOUSING (156:1 RATIO)	1	-	-
	104078	RING GEAR HOUSING (245:1 RATIO)	-	1	-
	103966	RING GEAR HOUSING (316:1 RATIO)	-	-	1
902	103967	CLUTCH PISTON	1	1	1
903	103970	O-RING	1	1	1
904	103971	O-RING	1	1	1
905	29305	SPRING	16	16	16
906	103968	PRESSURE PLATE	1	1	1
907	103969	RETAINING RING	2	2	2

**MODEL H110B AND H140A
SECONDARY PLANET CARRIER ASSEMBLY**



ITEM #	PART #	DESCRIPTION	QTY.
-	83104	SECONDARY PLANET CARRIER ASSEMBLY	1
801	24582	SPIROL PIN	3
802	27923	PLANET PIN	3
803	103964	PLANET GEAR	3
804	27911	ROLLER	42
805	28729	THRUST WASHER	6
806	27933	SECONDARY PLANET CARRIER	1
807	103965	SUN GEAR	1
808	28736	RETAINING RING	1

MODEL H110B AND H140A OUTPUT PLANET CARRIER ASSEMBLY



ITEM	PART NO	DESCRIPTION	QTY		
			156:1	245:1	316:1
-	83111	OUTPUT PLANET CARRIER ASSEMBLY (156:1 RATIO)	1	-	-
	83111	OUTPUT PLANET CARRIER ASSEMBLY (245:1 RATIO)	-	1	-
	83103	OUTPUT PLANET CARRIER ASSEMBLY (316:1 RATIO)	-	-	1
701	29348	OUTPUT PLANET CARRIER	1	1	1
702	102798	PLANET GEAR (156:1 RATIO)	3	-	-
	102798	PLANET GEAR (245:1 RATIO)	-	3	-
	103989	PLANET GEAR (316:1 RATIO)	-	-	3
703	29262	PLANET PIN	3	3	3
704	27911	ROLLER	120	120	120
705	29299	BEARING SPACER	3	3	3
706	29300	THRUST WASHER	6	6	6
707	13028	ROLLPIN	3	3	3
708	29291	RETAINING RING	1	1	1
709	29322	DRUM SHAFT	1	1	1
710	29349	RETAINING RING	2	2	2
711	29294	THRUST RACE	1	1	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