

SECTION 8. PARTS INFORMATION

8.1 PART ORDERING PROCEDURE

A. Contact your local dealer, distributor, or authorized service center

B. Contact Capitol Gears inc. if the above cannot supply the part(s) you need. Write:

Customer service	Cable address:
Capitol Gears inc.	"Cap marine"
349 North Hamline ave	tel: 645-9491
St. Paul MN 55104	Area code: 612
USA	telex: 28-7081

C. Always give complete part description as shown in the sample column below:

Necessary Information sample

1. Model	HP-28000 AER
2. Option code	2-28010-03011-10111
3. Serial #	10403-0578
4. Ratio	6.00 to 1
5. Eng.Mfg.No (if any)	218196
6. Part Number	1-01116-3600
7. Description	Drum, clutch driving
8. Fig number and reference number	fig.41 item 10
9. Quantity being Ordered	one (1)

NOTE: Please do not use the terms "set" or "complete" when ordering parts but specify exactly each part required

A list of distributors for Capitol Gear Equipment may be obtained by writing to the Customers service department at the address mentioned above. DO NOT send any equipment to the factory without authorization from the Customer service department..

Capitol gears will route parts with customers best interest in mind if routing is not specified when ordering.

Capitol gears inc. will provide its distributors, dealers and service centers with current changes and additions to service literature.

Contact your local Capitol representative for up to date service material

8.2 UNIT RECORD

"CAPITOL" Marine Gear Model	_____
Serial No.	_____
Installed in (Name of Vessel)	_____
Installed by	_____ Date _____
Address	_____
For Use with (Engine & Model)	_____
Type of Service	_____
Purchased from (Dealer's name and address)	_____
Date purchased	_____

8.3 OIL PUMP

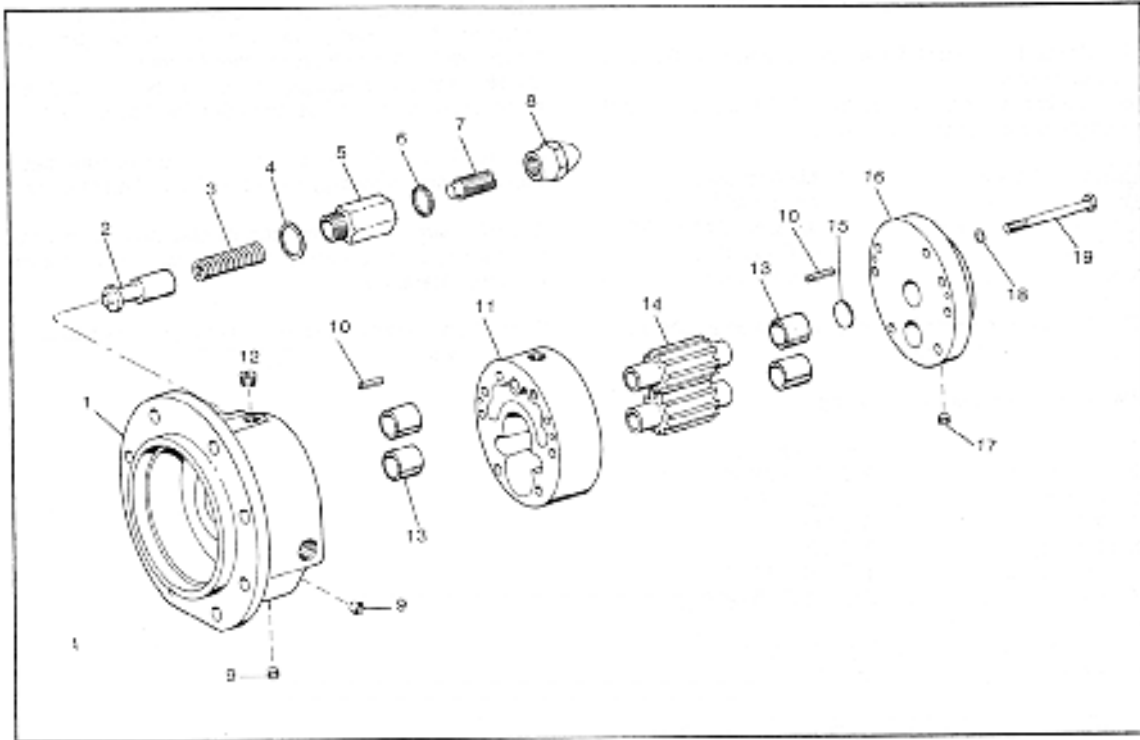


Fig. 39. Oil Pump Assembly

ITEM	DESCRIPTION	PART NO	QTY
REF	ASSEMBLY, OIL PUMP	1-13041-1000	1
1	ADAPTER OIL PUMP	1-13045-0000	1
2	PLUNGER	1-07725-0800	1
3	SPRING, PRESSURE REGULATING	1-12602-0000	1
4	WASHER	1-12901-0000	1
5	INSERT, RELIEF VALVE	1-12603-0000	1
6	WASHER	1-12902-0000	1
7	SCREW, PRESSURE RELIEF	1-06660-0800	1
8	NUT, DOME	1-06667-0800	1
9	PIPE PLUG, HEX SOCKET	1-11279-0200	2
10	SPRING PIN	1-12097-1200	4
11	BODY, OIL PUMP	1-07856-3100	1
12	PIPE PLUG	1-11279-0300	1
13	BUSHING, SPLIT	1-11380-0000	4
14	GEAR, DRIVE	1-09688-3100	2
15	DISC, FLAT	1-13731-0000	1
16	COVER, OIL PUMP	1-07723-1100	1
17	PIPE PLUG, HEX SOCKET	1-11279-0100	1
18	LOCKWASHER	1-09458-0800	7
19	CAPSCREW, HEX HEAD	1-12692-0000	7

8.4 SELECTOR VALVE

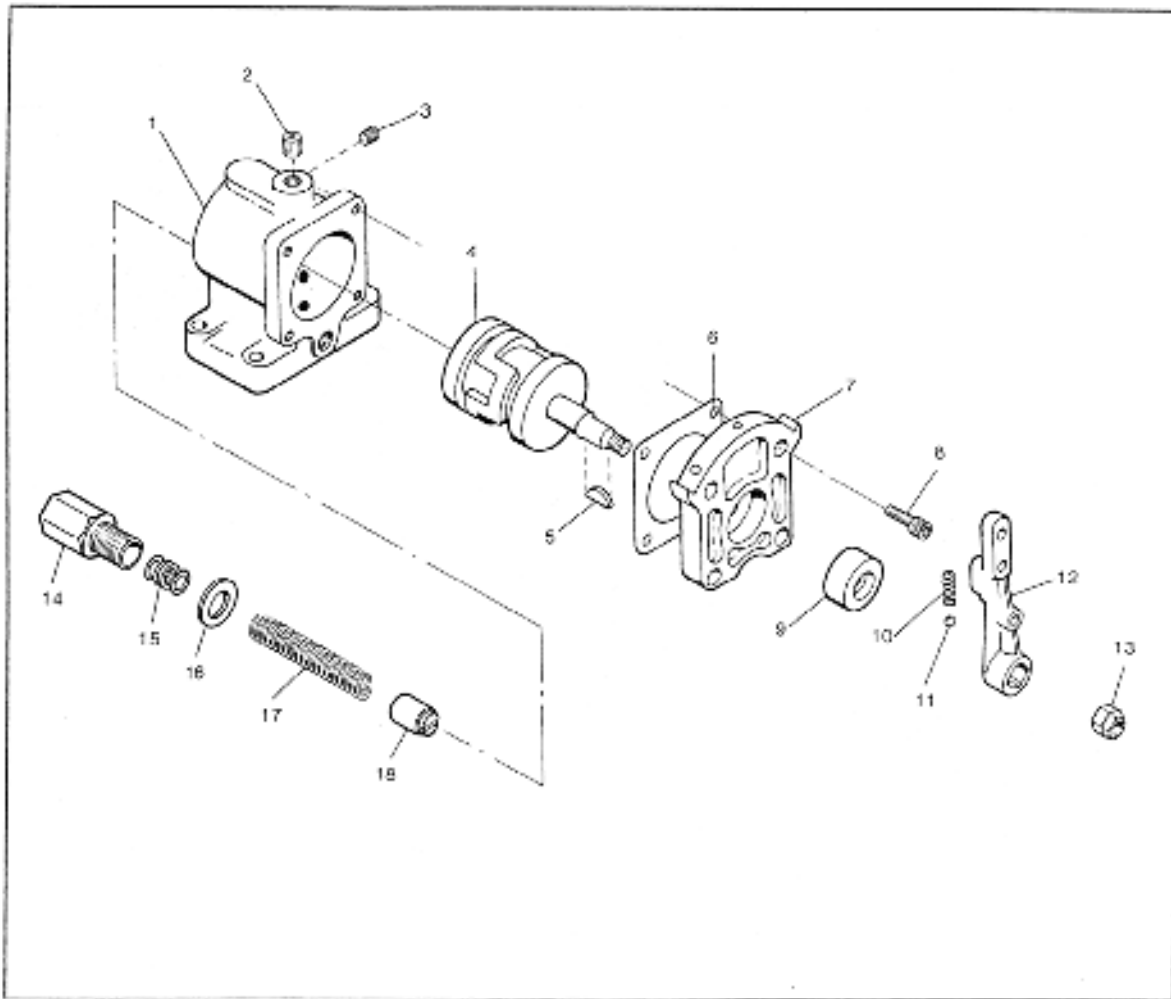


Fig. 40. Selector Valve Assembly

ITEM	DESCRIPTION	PART NO	QTY
REF	ASSEMBLY, SELECTOR VALVE	1-09427-0800	1
1	BODY	1-01141-3500	1
2	PIPE PLUG, HEX SOCKET	1-11279-0300	1
3	PIPE PLUG, HEX SOCKET	1-11279-0200	1
4	ROTARY VALVE	1-01144-3500	1
5	WOODRUFF KEY	1-01164-3200	1
6	GASKET, VALVE COVER	1-01156-3700	1
7	COVER	1-01142-3200	1
8	CAPSCREW, SOCKET HEAD	1-09432-0800	4
9	OIL SEAL	1-01152-3200	1
10	SPRING, INDEXING	1-01132-1700	1
11	BALL, INDEXING	1-01151-1600	1
12	LEVER	1-01143-3900	1
13	NUT, LEVER	1-09474-0800	1
14	ADJUSTMENT SCREW, RELIEF	1-12617-0000	1
15	WASHER	1-12619-0000	5
16	WASHER	1-10288-0700	1
17	SPRING RELIEF VALVE	1-12618-0000	1
18	PLUNGER, SAFETY RELIEF	1-12616-0000	1

8.5 ADAPTER GROUP
'HY' 28000 MARINE GEAR

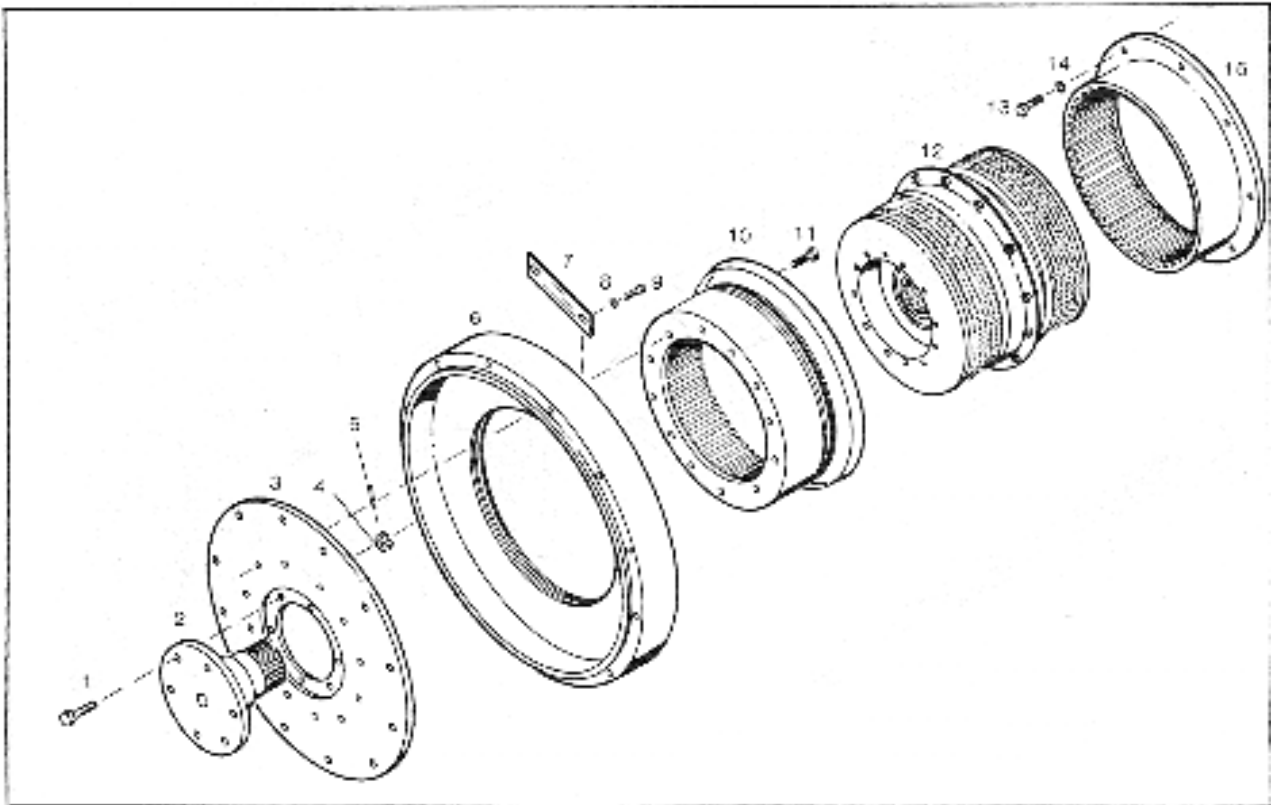


Figure 41. 'HY' Adapter Group and Clutch Pack

ITEM	DESCRIPTION	PART NO	QTY
1	CAPSCREW, HEX HD. DRILLED END	1-06972-0800	6
2	DRIVE FLANGE ASSEMBLY (SEE HY INSTALLATION DRAWINGS)		1
3	FLYWHEEL ADAPTER (SEE HY...)		1
4	HEX. NUT HEAVY SLOTTED	1-06973-0800	6
5	COTTER PIN	1-12769-5400	6
6	OIL DAM ADAPTER (SEE HY...)		1
7	COVER, AIR VENT	1-01118-2700	1
8	LOCKWASHER, 5/16 DIA	1-09458-0800	9
9	CAPSCREW, HEX HD. 5/16-18X 1/2"	1-12145-0000	4
10	DRUM CLUTCH, DRIVING	1-01116-3600	1
11	CAPSCREW, HEX HD. (POLYLOK)	1-13804-0000	12
12	CLUTCH ASSEMBLY "HY"	1-00100-5900	1
13	CAPSCREW, HEX.HD. 5/16-18X 1/2"	1-09450-0800	8
14	LOCK WASHER 1/2" DIA	1-11083-0000	18
15	DRUM, REVERSE	1-13472-0000	1

8.5 ADAPTER GROUP
HP 28000 MARINE GEAR

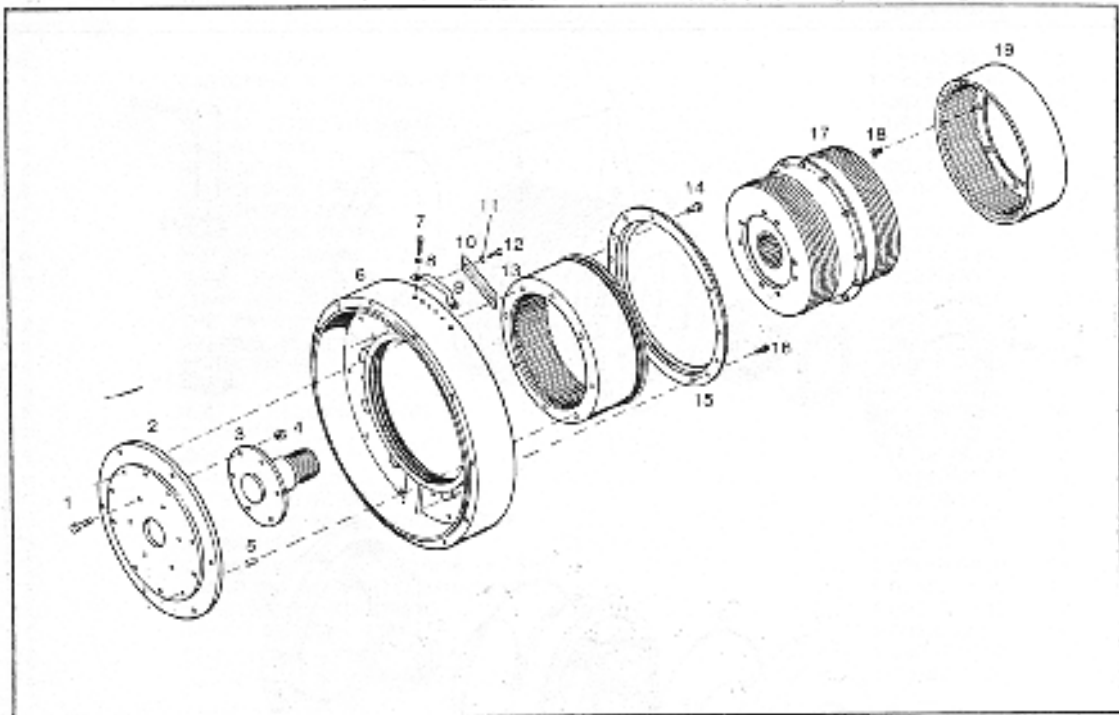


Figure 42. 'HP' Adapter Group and Clutch Pack

ITEM	DESCRIPTION	PART NO	QTY
1	CAPSCREW, HEX.HD. 3/4-10X 2"	1-12793-0000	6
2	FLYWHEEL ADAPTER (SEE HP INSTAL.)		1
3	DRIVE FLANGE ASS'Y (SE HP INSTAL.)		1
4	NUT, SELF LOCKING 3/4-10 NC	1-13095-0000	6
5	DOWEL PIN 1/2" DIA X 1 1/2"	1-11142-0000	2
6	OIL DAM ADAPTER (SEE HP INSTAL.LATION)		1
7	CAPSCREW, HEX HD. 1/4-20 X 3/4"	1-11101-0000	2
8	LOCKWASHER, 1/4" DIA	1-05309-0800	2
9	COVER, AIR VENT	1-10528-0000	1
10	COVER, AIR VENT	1-01118-2700	1
11	LOCKWASHER 5/16" DIA	1-09458-0800	1
12	CAPSCREW HEX HEAD 5/16"-18 X 5/8"	1-06987-0800	2
13	DRUM, CLUTCH DRIVING	1-01116-6800	1
14	CAPSCREW, HEX HEAD (POLYLOK)	1-13134-0000	8
15	SLINGER SHIELD	1-01119-2700	1
16	CLUTCH ASSEMBLY, 'HP'	1-00100-2418	1
17	CAPSCREW, FLAT SOCKET HEAD 1/2"-13X 1"	1-09741-0800	1
18	CAPSCREW, FLAT SOCKET HEAD 1/2"-13 X 1"	1-09741-0800	8
19	DRUM, REVERSE	1-00250-4100	1

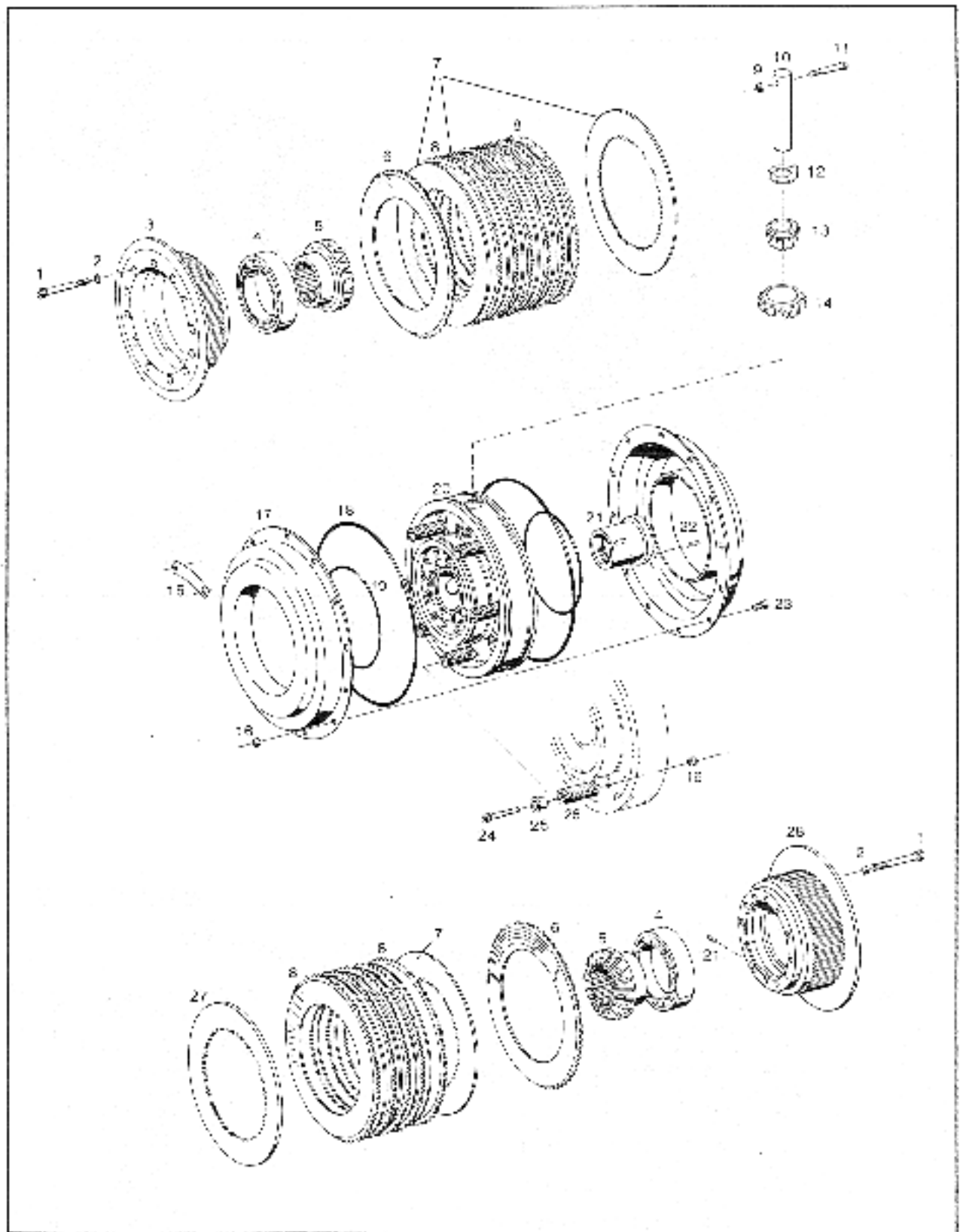


Figure 43. 'HY' - 28000 Clutch and Gear Carrier Assembly

CLUTCH AND GEAR CARRIER
HY 28000

ITEM	DESCRIPTION	PART NO	QTY
REF	CLUTCH ASSEMBLY	1-00100-5900	1
1	CAPSCREW, SOCKET HD. 3/8-16 X 31/4"	1-12247-0000	24
2	LOCKWASHER 3/8 STD	1-08755-0800	24
3	FLANGE CLUTCH (FORWARD)	1-00212-4100	1
4	BALL BEARING	1-00211-2500	2
5	GEAR BEVEL	1-00215-2600	2
6	CLUTCH DISC, DRIVING	1-00230-4400	2
7	CLUTCH DISC, DRIVEN	1-00233-1200	12
8	CLUTCH DISC, DRIVING	1-00230-4000	11
9	NUT, SELF LOCKING 1/4-28 NF	1-00226-3600	3
10	SHAFT, BEVEL PINION	1-00220-3600	3
11	CAPSCREW, SOCKET HD 1/4-28X 2"	1-09433-0800	3
12	THRUST WASHER	1-00221-3600	3
13	BEARING, BEVEL PINION	1-00218-2500	3
14	PINON, BEVEL	1-00217-2600	3
15	NAMEPLATE	1-11208-0000	1
16	NUT, SELF LOCKING 5/16-18 NC	1-11399-0000	36
17	CYLINDER	1-00234-5500	2
18	QUAD RING	1-00237-3600	2
19	QUAD RING	1-00238-5800	2
20	CARRIER, BEVEL GEAR	1-00219-3700	1
21	BUSHING, FORWARD COMMUTATOR	1-00247-3600	1
22	SPRING PIN	1-12096-1000	9
23	CAPSCREW, SOCKET HD 5/16-18 X 5/8"	1-09468-0800	24
24	CAPSCREW, SOCKET HD 5/16-18X2"	1-05386-0800	12
25	RETAINER, RETURN SPRING	1-00243-3600	12
26	SPRING, RETURN	1-00239-3700	12
27	CLUTCH DISC, DRIVEN	1-00233-2900	1
28	FLANGE, CLUTCH (REVERSE)	1-00212-3600	1

8.6 CLUTCH AND GEAR CARRIER

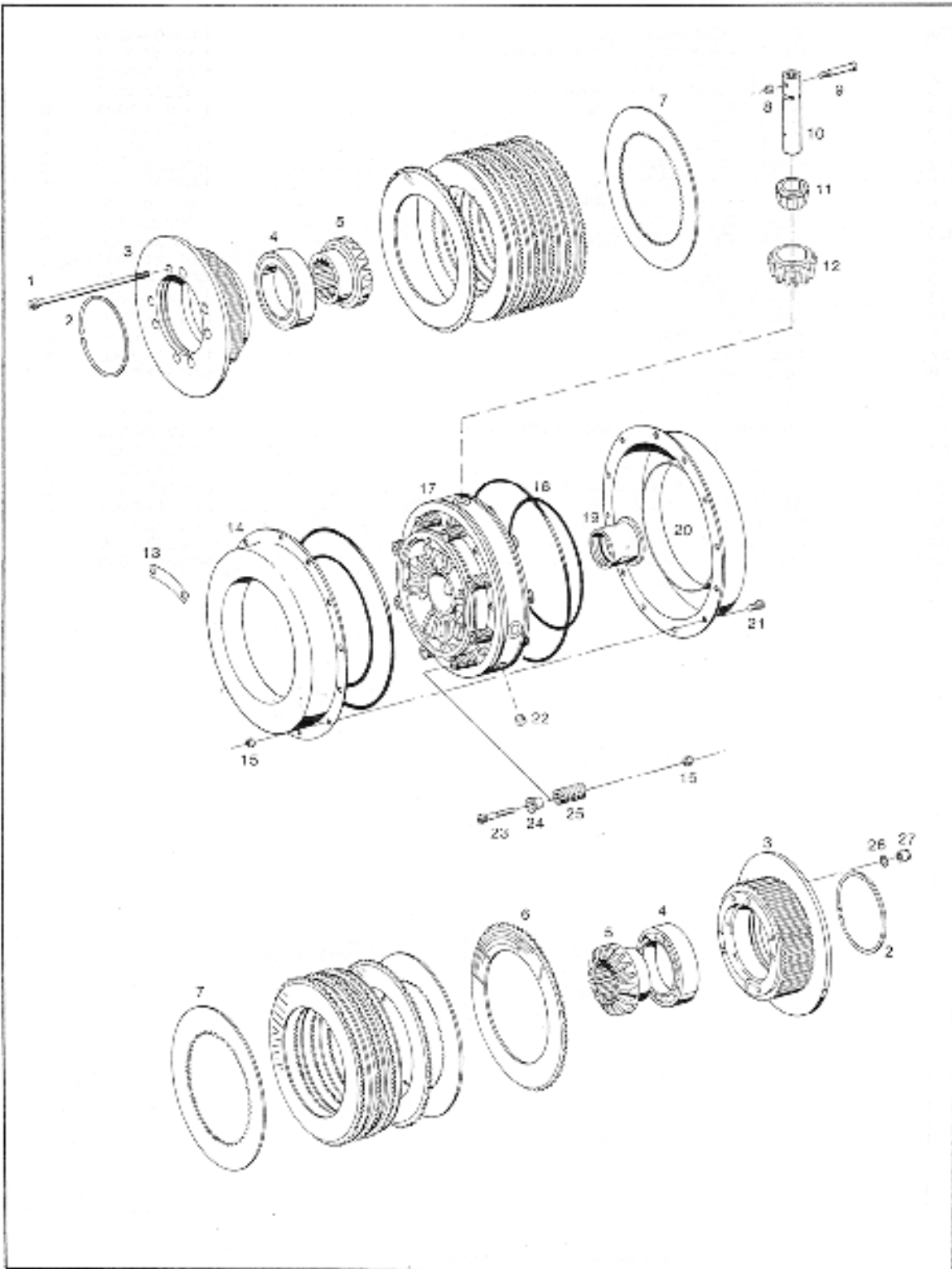


Figure 44. 'HP'-28000 Clutch and Gear Carrier Assembly

CLUTCH AND GEAR CARRIER

HP 28000

ITEM	DESCRIPTION	PART NO	QTY
REF	CLUTCH ASSEMBLY	1-00100-2418	1
1	CAPSCREW, SOCKET HEAD 3/8-24X 8 1/4"	1-12973-0000	8
2	SNAP RING, TRUARC	1-00222-3200	2
3	END FLANGE	1-00210-2500	2
4	BALL BEARING	1-00211-5400	2
5	GEAR, BEVEL (DRIVEN AND DRIVING)	1-00216-2400	2
6	CLUTCH DISC DRIVING	1-00230-2800	11
7	CLUTCH DISC DRIVEN	1-00233-2400	11
8	NUT FLEX-LOC 1/4 -20	1-07846-0800	4
9	CAPSCREW, SOCKET HD 1/4-20X 2	1-12028-0000	4
10	SHAFT, BEVEL PINION	1-00220-2400	4
11	BEARING, PINION	1-00218-2500	4
12	GEAR, BEVEL PINION	1-00217-1800	4
13	NAME PLATE	1-11208-0000	1
14	CYLINDER	1-00234-2400	2
15	NUT, FLEX-LOC 5/16-18	1-11399-0000	28
16	O RING	1-12785-0000	2
17	CARRIER, BEVEL GEAR	1-00219-2400	1
18	O RING	1-12784-0000	2
19	COMMUTATOR BUSHING	1-00247-3200	1
20	SPRING PIN	1-12096-1000	3
21	CAPSCREW, SOCKET HD 5/16-18 X 3/4"	1-07546-0800	12
22	PIPE PLUG, HEX SOCKET 1/4-18 NPT	1-11279-0300	2
23	CAPSCREW, SOCKET HD 5/16-18 X 2"	1-09439-0800	16
24	RETAINER RETURN SPRING	1-00243-2400	16
25	SPRING RETURN	1-00239-3700	16
26	LOCKWASHER, HIGH COLLAR 3/8 DIA	1-08755-0800	8
27	ALLENUT, 3/8-24	1-12999-0000	8

8.7 MARINE GEAR ASSEMBLY

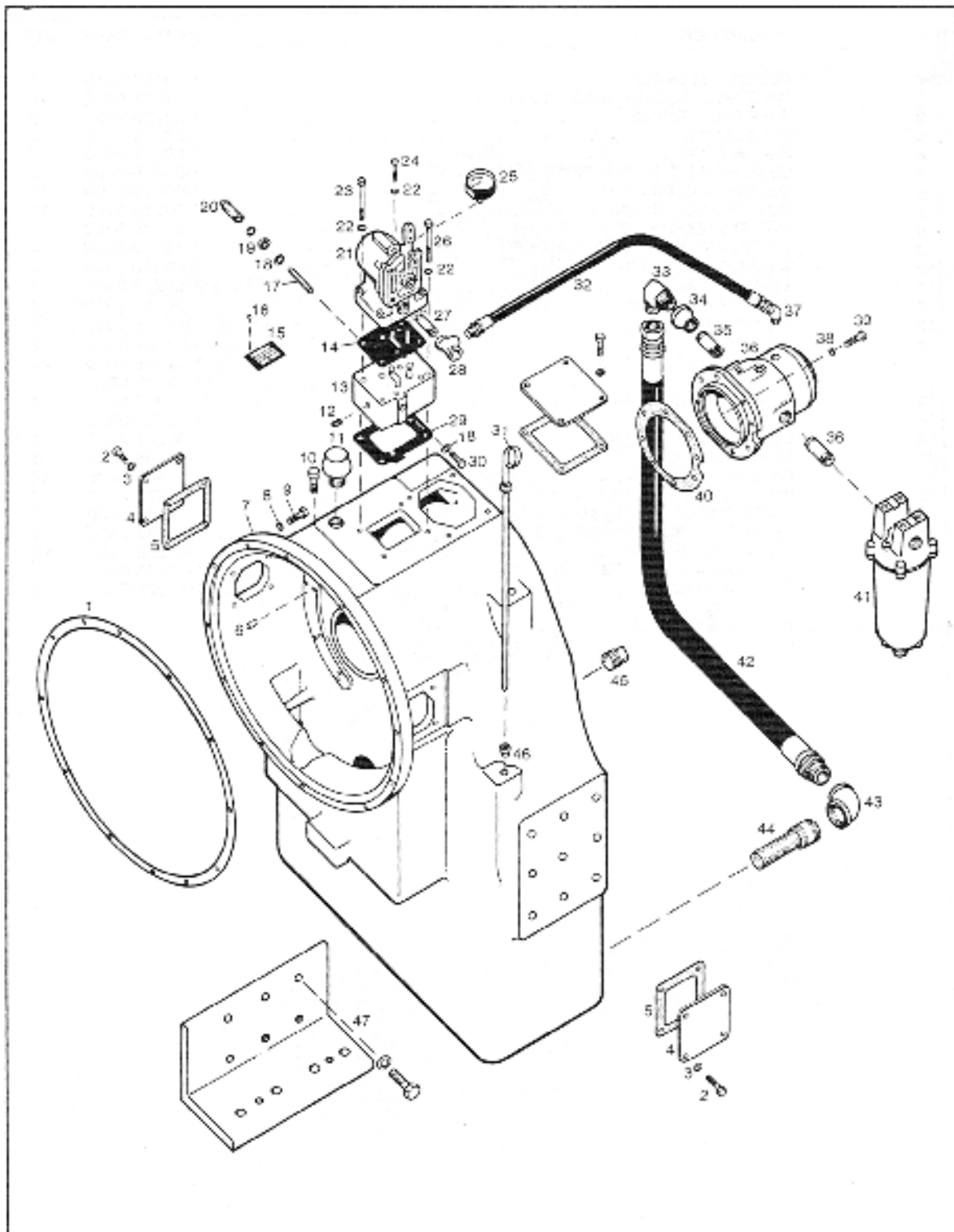


Fig. 45. Marine Gear Assembly, Part A

MARINE GEAR ASSEMBLY

PART A

ITEM	DESCRIPTION	PART NO	QTY
1	GASKET, HSG TO OIL DAM	1-1102-3600	1
2	CAPSCREW HEX HD 3/8-16 X 3/4"	1-10965-0000	12
3	LOCKWASHER, 3/8" DIA	1-09460-0800	24
4	COVER	1-12405-0000	3
5	GASKET COVER	1-12438-0000	3
6	DOWEL PIN 1/2 DIA X 3/4	1-13077-0000	2
7	HOUSING (ALL RATIOS LESS IDLER)	1-13482-0000	1
	(4:5:1 WITH IDLER)	1-13482-0200	1
	(5:0:1 WITH IDLER)	1-13482-0300	1
	(6:0:1 WITH IDLER)	1-13482-0500	1
8	LOCKWASHER 7/16 DIA	1-09462-0800	12
	LOCKWASHER 3/8 DIA	1-09460-0800	12
9	CAPSCREW DEX HD 7/16-14 X 2"	1-13327-0000	12
	CAPSCREW, HEX HD. 1/2-20 X 3/4"	1-09662-0800	12
10	CAPSCREW HEX HD 1/2-20 X 3/4"	1-11649-0000	1
11	BREATHER	1-13511-0000	1
12	PIPE PLUG, HEX SOCKET	1-11279-0300	1
13	BASE PLATE	1-13860-0000	1
14	GASKET, VALVE	1-13861-0000	1
15	NAME PLATE	1-11210-0000	1
16	DRIVE SCREW	1-13275-0000	2
17	SET SCREW, SOC	1-09466-0800	1
18	GASKET	1-09471-0800	3
19	LOCKNUT, LIGHT 5/16-18 NC	1-09464-0800	1
20	DOME NUT	1-09461-0800	1
21	CONTROL VALVE ASSEMBLY	1-09427-0800	1
22	LOCKWASHER, 5/16-18 NC	1-09458-0800	9
23	CAPSCREW, HEX HD. 5/16-18 X 31/4"	1-12278-0000	2
24	CAPSCREW, HEX HD. 5/16-18X 11/4"	1-12339-0000	2
25	PRESSURE GAUGE	1-09669-0900	1
26	CAPSCREW, HEX HD. 5/16-18 X 23/4"	1-12259-0000	2
27	NIPPLE, 3/8x2"	1-11259-0100	1
28	REDUCING TEE	1-11260-0200	1
29	GASKET, BASE PLATE	1-13613-0000	1
30	CAPSCREW, HEX. HD. 5/16-18X 1/2"	1-12145-0000	2
31	DIP STICK	1-00330-3600	1
32	HOSE	1-01335-1500	1
33	90 DEG. MALE ELBOW	1-11221-2400	1
34	REDUCER 1" 3/4"	1-11224-1100	1
35	PIPE NIPPLE	1-11259-0700	2
36	OIL PUMP ASSEMBLY	1-13041-1000	1
37	45 DEG. ELBOW	1-11220-1100	1
38	LOCKWASHER, 7/16 DIA	1-09462-0800	8
39	CAPSCREW HEX HD 7/16-14 X 21/4"	1-13608-0000	8
40	GASKET, BRG, CONTAINER TO PUMP	1-13049-0000	1
41	OIL FILTER	1-13811-1000	1
42	HOSE	1-13621-0000	1
43	90 DEG. PIPE ELBOW	1-11246-0700	1
44	SUCTION SCREEN	1-13802-0000	1
45	PIPE PLUG, SQ. HD	1-11251-0700	1
46	NUT, INVERTED FLARE	1-11227-0400	1
47	MOUNTINF FOOT KIT	1-13635-0000	1

8.7 MARINE GEAR ASSEMBLY

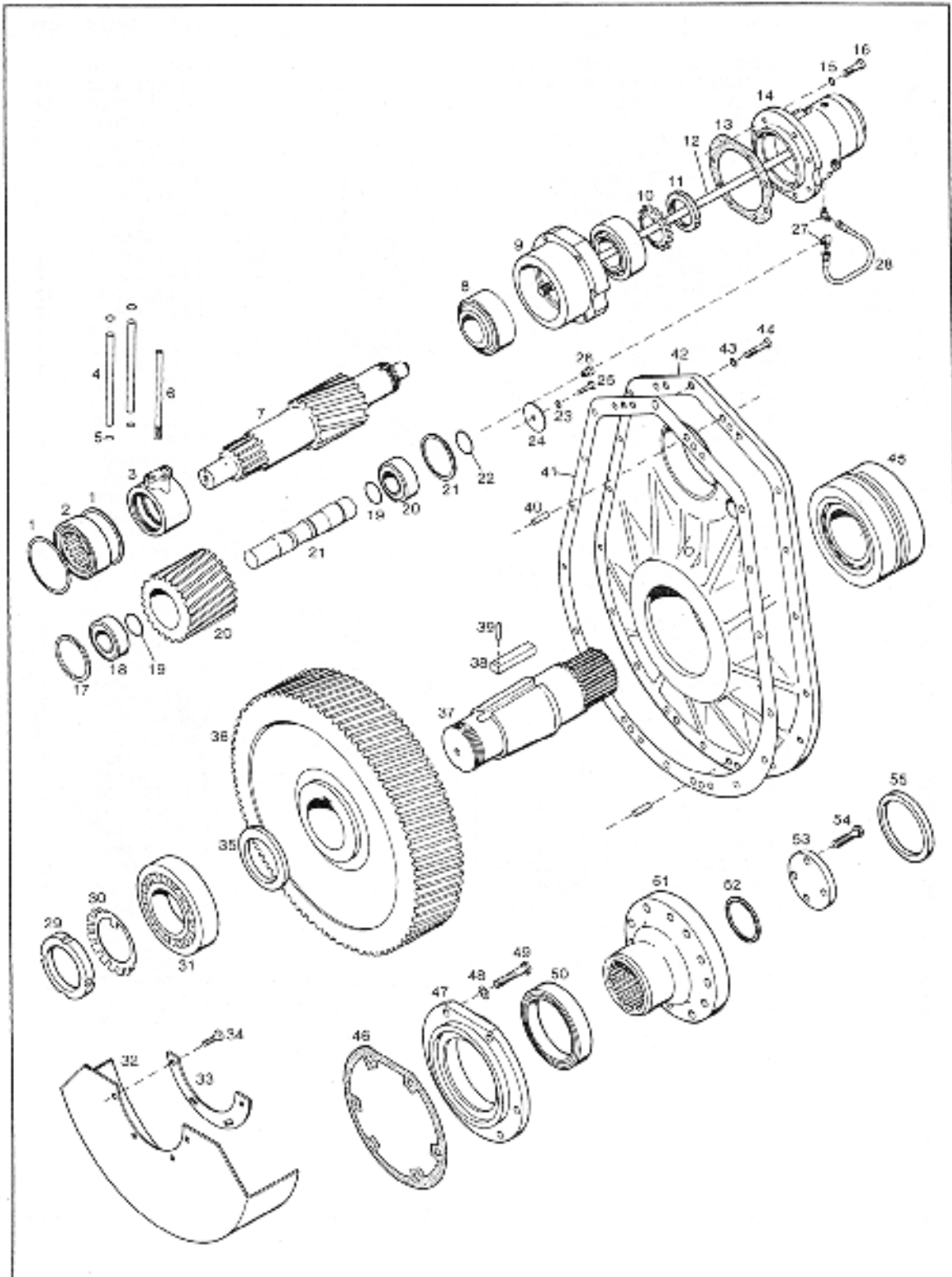


Fig. 46 Marine Gear Assembly, Part B

MARINE GEAR ASSEMBLY

PART B

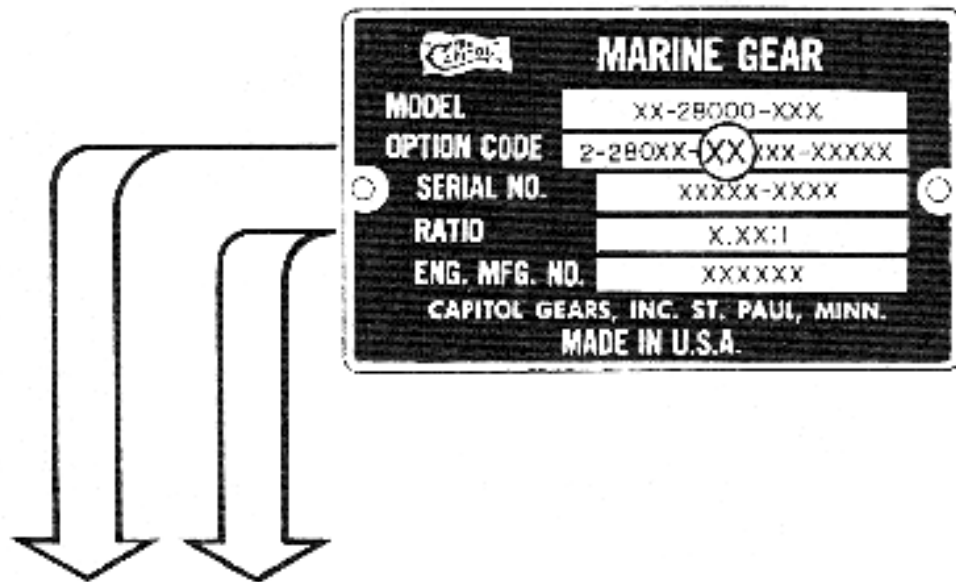
ITEM	DESCRIPTION	PART NO	QTY
1	SNAP RING	1-13479-0000	2
2	BEARING, FORWARD PINION	1-13507-0000	1
3	COMMUTATOR	1-13471-0000	1
4	TUBE, COMMUTATOR	1-13474-0000	2
5	"O" RING	1-13076-0000	4
6	STUD, ANTI-ROTATION	1-10641-0000	1
7	PINION SHAFT ASSEMBLY	(see page 45)	
8	BEARING ASSEMBLY	1-13476-0000	1
9	CONTAINER, BEARING	1-13470-1000	1
10	LOCKWASHER, BEARING	1-10036-0000	1
11	LOCKNUT, BEARING	1-10037-0000	1
12	SHAFT, PUMP DRIVE	1-13615-0000	1
13	GASKET, BEARING CONTAINER TO PUMP	1-13049-0000	1
14	OIL PUMP ASSEMBLY	1-13041-1000	1
15	LOCK WASHER, 7/16" DIA	1-09462-0800	8
16	CAPSCREW, HEX. 7/16-14 x2 1/4"	1-13608-0000	8
17	SNAP RING	1-10112-0000	2
18	BEARING ASSEMBLY	1-10117-0000	2
19	SNAP RING	1-12763-0000	2
20	GEAR, IDLER	1-10107-0000	1
21	SHAFT, IDLER	1-10105-0200	1
22	"O" RING	1-10336-0000	1
23	WROUGHT WASHER	1-10338-0000	1
24	LOCKWASHER	1-09458-0800	9
25	CAPSCREW, HEX. HD. 5/16-18x 1/2" LG	1-12145-0000	4
26	PIPE ADAPTER	1-12320-0000	1
27	MALE ELBOW	1-11237-0300	2
28	HOSE	1-07875-1000	1
29	LOCKNUT, BEARING	1-06830-0800	1
30	LOCKWASHER, BEARING	1-06846-0800	1
31	BEARING, FORWARD	1-10811-0000	1
32	OIL PAN	1-13803-0000	1
33	RETAINER, BEARING	1-10640-0000	1
34	CAPSCREW, HEX. HD. 5/16-18x 1/2" LG	1-13768-0000	4
35	SPACER, BEARING	1-13484-0000	1
36	GEAR OUTPUT	(see page 45)	
37	SHAFT, DRIVEN GEAR	1-10635-0000	1
38	KEY	1-10815-0000	1
39	SPRING PIN, 3/16 DIA. x 1" LG	1-12096-1600	1
40	DOWEL PIN, 1/2" DIA. x 1 1/4" LG	1-12311-0000	2
41	GASKET, COVER TO HOUSING	1-13614-0000	1
42	COVER, REAR, ALL RATIOS LESS IDLER	1-13483-0000	1
	(4.5: 1 WITH IDLER)	1-13483-0200	1
	(5.0:1 WITH IDLER)	1-13483-0300	1
	(6.0:1 WITH IDLER)	1-13483-0500	1
43	LOCKWASHER, 1/2" DIA	1-11083-0000	18
44	CAPSCREW, HEX. HD. 1/2-13x1 3/4" LG	1-10058-0000	18
45	BEARING & SPACER ASSEMBLY	1-13070-0000	1
46	GASKET, RETAINER	1-13194-0000	1

47	BEARING, RETAINER	1-13043-0000	1
48	LOCKWASHER, 5/8" DIA	1-06074-0800	6
49	CAPSCREW, HEX. HD. 5/8-11 x 2" LG.	1-07754-0800	6
50	SEAL, DRIVEN SHAFT	1-13197-0000	1
51	FLANGE, OUTPUT	1-13825-0000	1
52	"O" RING	1-10637-0000	1
53	PLATE, RETAINER	1-10638-0000	1
54	CAPSCREW, HEX. HD. 3/4-10 x 2 1/4" LG	1-13628-0000	4
55	PILOT RING	1-06022-0800	1

8.7 MARINE GEAR ASSEMBLY
PART B

ITEMS 7 and 36:
(pictured page
43)

Choose correct parts listed below according to the ratio number (e.g. 4.518:1 E.R.) and the option code (i.e. **XX**). These numbers are located on the nameplate on the top of the marine gear housing.



ITEM NO.	PART NAME	OPTION CODE	RATIO	TEETH	PART NUMBER — HY 28000	PART NUMBER — HP 28000
7	PINION	01	4.50:1 A.E.R.	28	1-13590-0000	1-13800-0000
36	GEAR			125	1-10527-3000	1-10827-3000
7	PINION	02	5.160:1 A.E.R.	25	1-13592-0000	1-13802-0000
36	GEAR			129	1-10807-3000	1-10807-3300
7	PINION	03	6.00:1 A.E.R.	22	1-13595-0000	1-13605-2000
36	GEAR			132	1-10808-2000	1-10808-3000
7	PINION	04	4.518:1 E.R.	27	1-13591-0000	1-13601-0000
36	GEAR			122	1-10830-3000	1-10830-3000
7	PINION	05	5.166:1 E.R.	24	1-13593-0000	1-13603-0000
36	GEAR			124	1-10826-3000	1-10826-3000
7	PINION	06	6.095:1 E.R.	21	1-13596-0000	1-13606-0000
36	GEAR			128	1-10810-3000	1-10810-3000
7	PINION	07	6.00:1 A.E.R.	22		1-13605-0000
36	GEAR			132		1-10808-2000

8.8 OIL COOLERS

8.8 OIL COOLERS

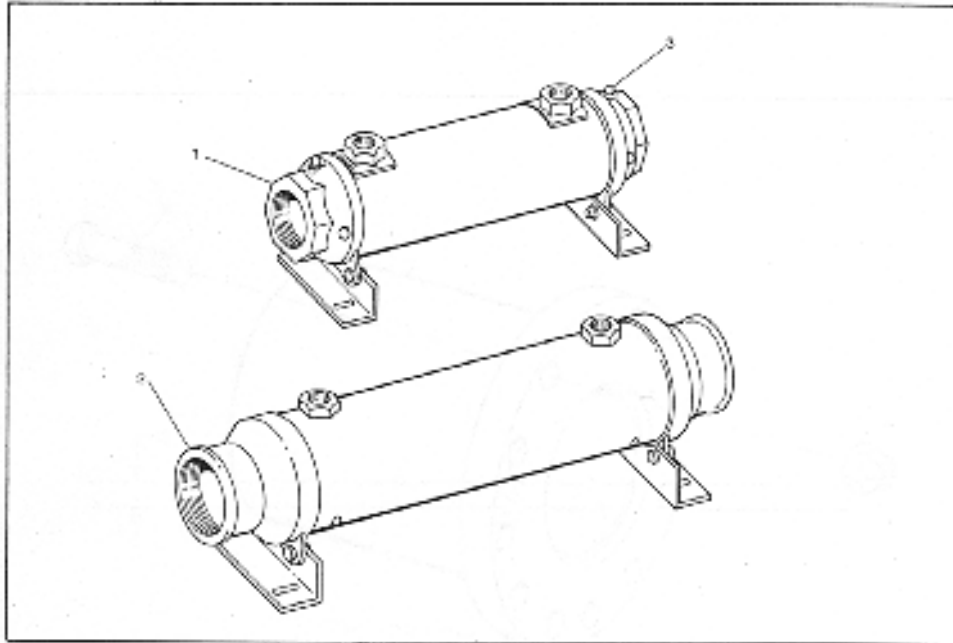


Fig. 47. Oil Coolers

ITEM	DESCRIPTION	PART NO	QTY
'HY'-28000 OIL COOLERS			
1	SEA WATER, 12 3/4" x 4 1/8" DIA	1-07808-5000*	1
	SEA WATER KIT, 12 3/4 x 4 1/8" DIA (includes hose and fittings)	1-07808-5100*	1
	HOSE (1/2" I.D. x 6 FT.)	1-11505-0000	1
	MALE FITTING	1-11283-0800	2
	BUSHING, 1" x 3/4"	1-11253-1200	2
	FEMALE FITTING	1-11282-0500	2
	90 DEG. ELBOW (JIC)	1-11221-1700	2
	BUSHING, 3/4" x 1/2"	1-11253-0900	1
	SEA WATER, 17" x 5 1/8" DIA	1-13769-0000*	1
	SEAWATER KIT 17" x 5 1/8" DIA (includes hoses and fittings)	1-13769-1000*	1
	HOSE (1/2" I.D. x 6 FT.)	1-11505-0000	1
	MALE FITTING	1-11283-0800	2
	BUSHING, 1" x 3/4	1-11253-1200	2
	FEMALE FITTING	1-11282-0500	2
	90 DEG. ELBOW (JIC)	1-11221-1700	2
	BUSHING, 3/4" x 1/2"	1-11253-0900	1
2	FRESH WATER, 19 1/2" x 6 1/8" DIA	1-13795-0000	1
	FRESH WATER, 30 3/4" x 6 1/8" DIA	1-13814-0000	1
3	ZINC PENCILS	1-12445-0400	2
'HP'- 28000 OIL COOLERS			
1	SEA WATER, 17" x 5 1/8" DIA	1-13769-0000*	1
	SEA WATER KIT, 17" x 5 1/8" DIA. (see above)	1-13769-1000*	1
2	FRESHWATER, 30 3/4" x 3 1/8" DIA	1-13814-0000	1
3	ZINC PENCILS	1-12445-0400	2

8.9 PROP COUPLING KIT

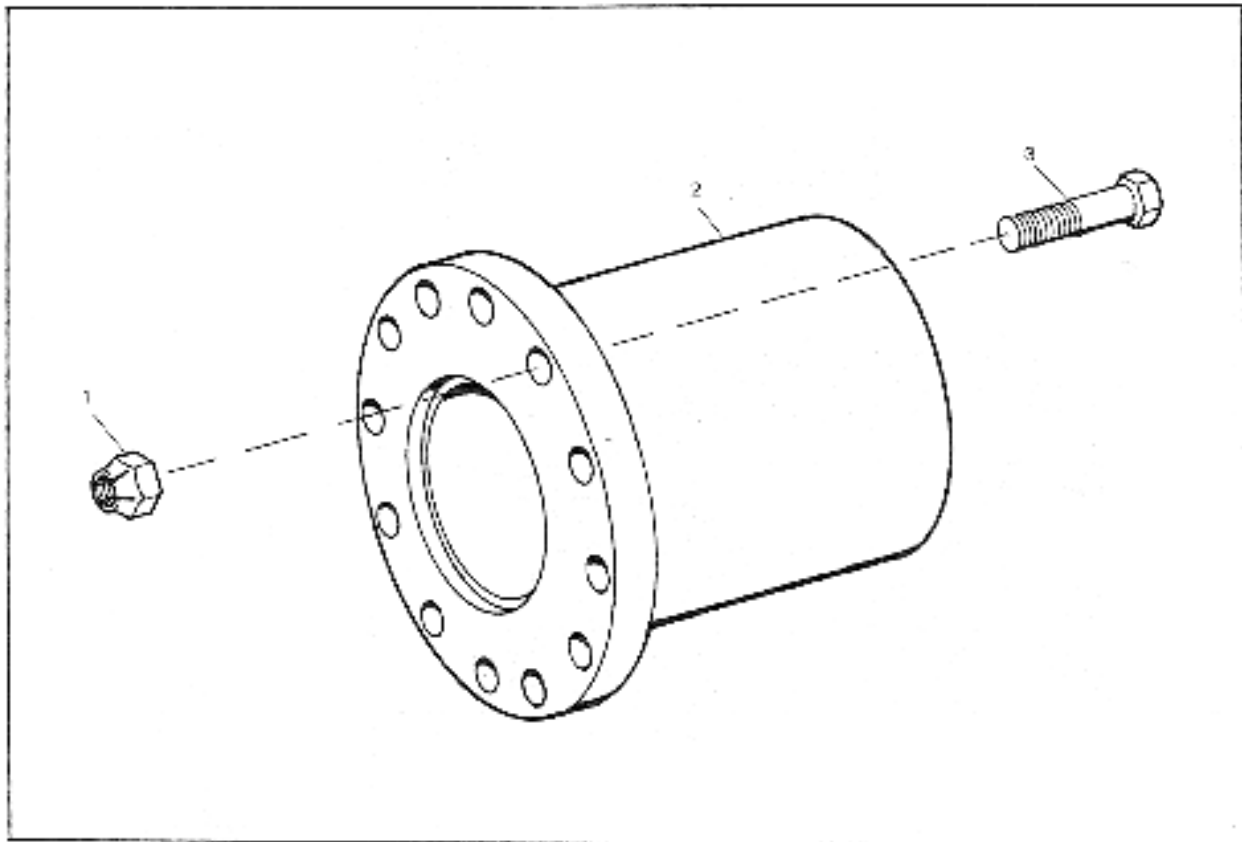


Fig. 18. Prop Coupling Kit

ITEM	DESCRIPTION	PART NUMBER	QTY
REF	PROPELLER COUPLING KIT	1-13577-1000	1
1	NUT, SELF LOCKING, 3/4-10 NC	1-13095-0000	12
2	COUPLING, PROP SHAFT	1-13826-0000	1
3	CAPSCREW, HEX HEAD 3/4-10 NC X 3 1/4"	1-08793-0800	12