



Placing Orders Using This Catalog

The following must be on all inquiries:

Trade Customers:

TMI Customer ID number.
Company Name
Persons name placing order
Purchase order number (if applicable)
Model Number, Serial number
Page number & key numbers
Quantity needed
Form of payment*

Retail Customers:

Full Name & address
Phone & fax #
Model & serial #
Page # from catalog
Key numbers needed
Quantity needed.
Form of payment*

Online Ordering : www.marinegears.com

Phone orders: 800-462-8848 (954-467-1540). Have Model/Serial #'s, page(s) & key # ('s) ready.
Office hours: Monday – Friday 8:30am to 5:00pm.

Fax orders: 800-344-3277 (954-467-1525) Print page (s), circle key #'s. List Model number, Serial number, and fax.
Ordering by fax will speed up the time it takes to process your order. Orders can be placed 24hours a day, 7 days a week.

Mail orders: Print page(s) needed, circle key #(s). List Model/Serial #'s and mail to:

**Transmission Marine Inc.
P.O. Box 21086
Ft. Lauderdale, FL. 33335-1086**

***Forms of Payment:** Visa, MasterCard, Discover/Novus cards. Personal & Company checks.

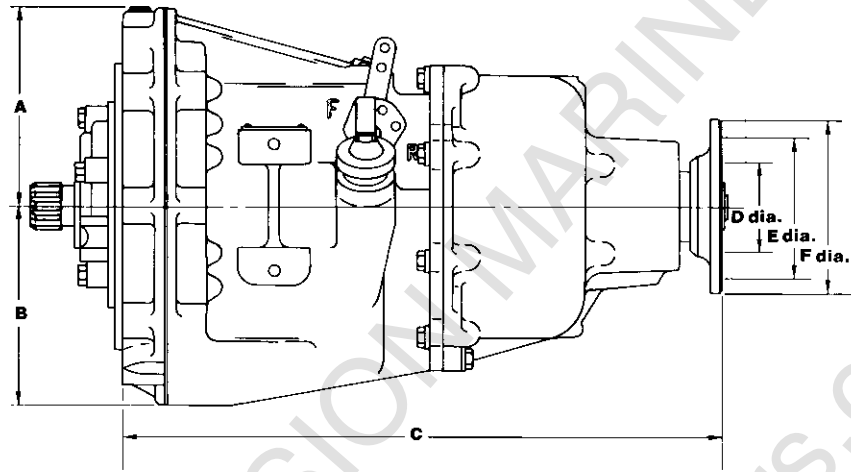
223 SW 33 Ct. Ft. Lauderdale FL 33315

800-462-8848

Table of Contents

Velvet Drive Transmissions	2	<i>Dimensions / Ratings: HBW 450A</i>	<i>90</i>
<i>In-Line: Ratings/Dimensions</i>	<i>2</i>	<i>Dimensions / Ratings: HBW 450D</i>	<i>91</i>
<i>CR2-Drop Center: Ratings/Dimensions</i>	<i>3</i>	<i>Dimensions / Ratings: HBW 630</i>	<i>92</i>
<i>V-Drive: Ratings/Dimensions</i>	<i>4</i>	<i>Dimensions / Ratings: HSW 630A / ZF63A</i>	<i>93</i>
<i>Series 5000: Ratings/Dimensions</i>	<i>5</i>	<i>Dimensions / Ratings: HSW 630H / ZF63</i>	<i>94</i>
<i>Series 5000V: Ratings/Dimensions</i>	<i>6</i>	<i>Dimensions / Ratings: HSW 800A / ZF80A</i>	<i>95</i>
<i>Direct Drive Units / Forward and Reverse portion</i>		<i>Dimensions / Ratings: HSW 800V / ZF80IV</i>	<i>96</i>
<i>Inline and V-Drive</i>	<i>7</i>	<i>Mechanical Units</i>	<i>97</i>
<i>Inline Unit Reductions</i>	<i>8</i>	<i>Hydraulic Units</i>	<i>104</i>
<i>CR2-Drop Center Units</i>	<i>12</i>	Walter V-Drives	114
<i>V Drive Unit Reductions</i>	<i>14</i>	<i>General Literature</i>	<i>114</i>
<i>Series 1000</i>	<i>15</i>	<i>RV10 Direct Mount</i>	<i>116</i>
<i>Series 1500</i>	<i>17</i>	<i>RV20 Direct Mount</i>	<i>117</i>
<i>Series 7000</i>	<i>18</i>	<i>RV26 Direct Mount</i>	<i>118</i>
<i>73 Series</i>	<i>20</i>	<i>RV30 Direct Mount</i>	<i>119</i>
<i>Series 500</i>	<i>23</i>	<i>RV40 Direct Mount</i>	<i>120</i>
<i>Series 5000</i>	<i>24</i>	<i>RV26</i>	<i>121</i>
<i>Series 5000V</i>	<i>26</i>	<i>RV20-30 Independent Mount</i>	<i>122</i>
Velvet "Shuttle"	28	<i>RV36 Independent Mount</i>	<i>123</i>
<i>1016 (T-72 Industrial)</i>	<i>28</i>	<i>RV40 Independent Mount</i>	<i>124</i>
<i>1006 (T-73 Industrial)</i>	<i>30</i>	<i>RV48 Independent Mount</i>	<i>125</i>
<i>Paragon Power</i>	<i>31</i>	Twin Disc	126
<i>P Series</i>	<i>31</i>	<i>MG502</i>	<i>126</i>
<i>PV Series</i>	<i>34</i>	<i>MG5050</i>	<i>132</i>
<i>PM, PL, PMB Series</i>	<i>35</i>	<i>MG5050A</i>	<i>138</i>
<i>PMV, PLV Series</i>	<i>36</i>	<i>MG506A</i>	<i>144</i>
<i>P Series (Continued)</i>	<i>37</i>	<i>MG506-1</i>	<i>150</i>
<i>PV Series Water Jacket</i>	<i>44</i>	<i>MG5061A</i>	<i>153</i>
<i>PV Series Split Case</i>	<i>45</i>	<i>MG5062V</i>	<i>159</i>
<i>PV Series Split Case, 3 Gear Set</i>	<i>46</i>	<i>MG507</i>	<i>167</i>
<i>Manual Gear Box (SA0, 1XE)</i>	<i>47</i>	<i>MG507A</i>	<i>172</i>
<i>Manual Gear, reverse band assembly</i>	<i>50</i>	<i>MG508</i>	<i>176</i>
Capitol Marine Transmissions	52	<i>MG509</i>	<i>181</i>
<i>Dimensions/Ratings</i>	<i>52</i>	<i>MG5091</i>	<i>189</i>
<i>Standard Clutch Assembly</i>	<i>56</i>	<i>MG510</i>	<i>194</i>
<i>Standard Control Valve Assembly</i>	<i>58</i>	<i>MG510A</i>	<i>201</i>
<i>Oil Pump Assembly</i>	<i>59</i>	<i>MG5111</i>	<i>207</i>
<i>Oil Dam / Driving Parts</i>	<i>62</i>	<i>MG5111A</i>	<i>213</i>
<i>Main Housing Parts</i>	<i>67</i>	<i>MG5111V</i>	<i>220</i>
<i>Oil Filter Assemblies</i>	<i>79</i>	<i>MG513</i>	<i>227</i>
Hurth / ZF	81	<i>MG514C</i>	<i>232</i>
<i>Dimensions / Ratings: HBW 50 / ZF5M</i>	<i>81</i>	<i>MG518</i>	<i>238</i>
<i>Dimensions / Ratings: HBW 100 / ZF10M</i>	<i>82</i>	<i>MG520</i>	<i>249</i>
<i>Dimensions / Ratings: HBW 150 / ZF15M</i>	<i>83</i>	<i>MG527</i>	<i>260</i>
<i>Dimensions / Ratings: HBW 150A / ZF15MA</i>	<i>84</i>	Globe Marine Products	263
<i>Dimensions / Ratings: HBW 150V / ZF15MIV....</i>	<i>85</i>	<i>Drivesaver Specifications</i>	<i>265</i>
<i>Dimensions / Ratings: HBW 250 / ZF25M</i>	<i>86</i>	<i>Globe Impeller Dimensions</i>	<i>266</i>
<i>Dimensions / Ratings: HBW 360</i>	<i>87</i>	<i>Globe Pump Replacement Parts Cross Reference</i>	<i>267</i>
<i>Dimensions / Ratings: HBW 360A</i>	<i>88</i>	<i>Cams and Cam/Pumpliners</i>	<i>269</i>
<i>Dimensions / Ratings: HBW 450</i>	<i>89</i>	<i>Engine Mounts, Alignment Wedges</i>	<i>271</i>

In-Line: Ratings/Dimensions



DIMENSIONS Inches (millimeters)

Model	A	B	C ¹	D dia.	E dia.	F dia.
71C (10-17)	5.63 (143.00)	5.69 (144.53)	16.89 (429.01)	2.50 (63.50)	4.25 (107.95)	5.00 ² (127.00)
72C (10-18)	5.63 (143.00)	5.69 (144.53)	17.79 (451.86)	2.50 (63.50)	4.25 (107.95)	5.00 (127.00)

MODEL 71C (10-17) GENERAL INFORMATION

Available ratios	1.00, 1.52, 1.91,* 2.10, 2.57, 2.91 : 1.00
Shaft rotation	output same as engine unless noted by asterisk (*)
Approximate dry weight (direct drive)	109 lb. (49.4 kg.)
Approximate dry weight (reduction)	153 lb. (69.4 kg.)

MODEL 72C (10-18) GENERAL INFORMATION

Available ratios	1.00, 1.52, 1.91,* 2.10, 2.57, 2.91 : 1.00
Shaft rotation	output same as engine unless noted by asterisk (*)
Approximate dry weight (direct drive)	109 lb. (49.4 kg.)
Approximate dry weight (reduction)	153 lb. (69.4 kg.)

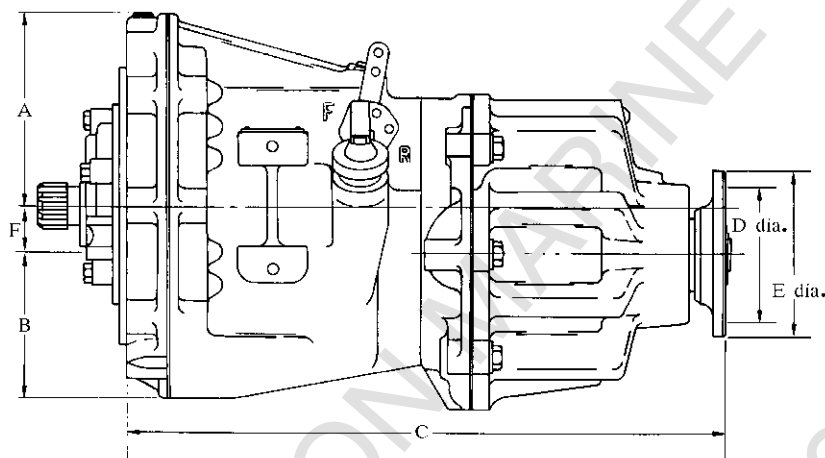
NOTE: ¹For "C" dimension—direct drive units.

71C (10-17)	10.50	72C (10-18)	11.44
	(266.70)		(290.58)

²Direct drive model 71 (only) uses 4" (101.60) coupling.

BW-DR1

CR2-Drop Center: Ratings/Dimensions



DIMENSIONS Inches (millimeters)

Model	A	B	C	D dia	E dia	Reductions	F Offset	Output Engine	Rotation Opposite:
71C (10-13)	5.63 (143.00)	4.75 (120.65)	18.42 (467.87)	4.25 (107.95)	5.00 (127.00)	1.58	1.23 (31.24)	1.06 (26.92)	
						2.03	1.66 (42.16)	1.49 (37.85)	
						2.47	1.95 (49.53)	1.77 (44.96)	
						2.93	2.16 (54.86)	1.99 (50.55)	
72C (10-14)	5.63 (143.00)	4.75 (120.65)	19.36 (491.74)	4.25 (107.95)	5.00 (127.00)	1.58	1.23 (31.24)	1.06 (26.92)	
						2.03	1.66 (42.16)	1.49 (37.85)	
						2.47	1.95 (49.53)	1.77 (44.96)	
						2.93	2.16 (54.86)	1.99 (50.55)	

MODEL 71C (10-13) GENERAL INFORMATION

Available ratios	1.58, 2.03, 2.47, 2.93 : 1.00
Shaft rotation*	Specify output shaft rotation to be same as or opposite to engine rotation when ordering.
Dry weight	162 lb. (73.5 kg.)

MODEL 72C (10-14) GENERAL INFORMATION

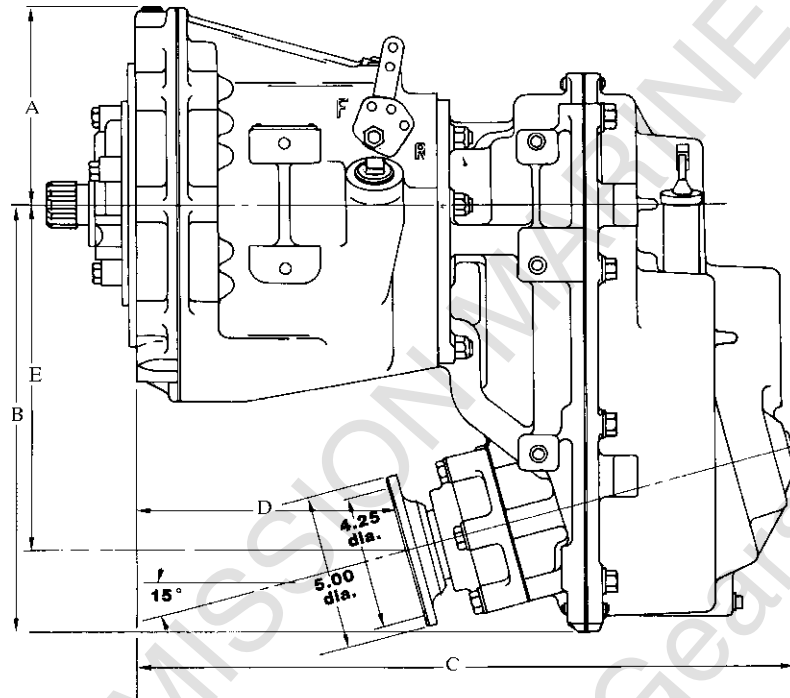
Available ratios	1.58, 2.03, 2.47, 2.93 : 1.00
Shaft rotation*	Specify output shaft rotation to be same as or opposite to engine rotation when ordering.
Dry weight	175 lb. (79.4 kg.)

NOTE: * The front pumps are not to be rotated to match engine rotation. Only available for automotive rotation engines.

Paranthetical dimensions are in millimeters.

BW-DR2

V-Drive: Ratings/Dimensions



DIMENSIONS Inches (millimeters)

Model	A	B	C	D	E	Reduction
71C (10-04)	5.63 (142.88)	12.72 (323.09)	19.15 (486.41)	7.64 (194.06)	10.19 (258.83)	1.21:1
						2.49:1
					10.14 (257.56)	1.51:1 1.99:1
72C (10-05)	5.63 (142.88)	12.72 (323.09)	20.06 (509.52)	8.58 (217.93)	10.19 (258.83)	1.21:1
						2.49:1
					10.14 (257.56)	1.51:1 1.99:1

MODEL 71C (10-04) GENERAL INFORMATION

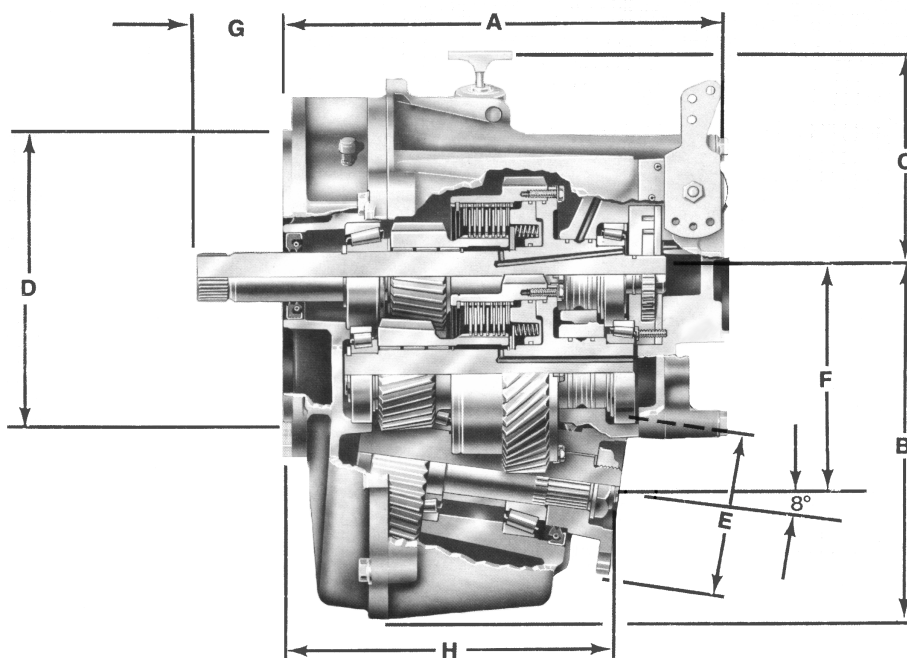
Available ratios	1.21, 1.51, 1.99, 2.49 : 1.00
Shaft rotation	Specify output shaft rotation to be same as or opposite to engine rotation when ordering.
Dry weight	190 lb. (86.2 kg.)

MODEL 72C (10-05) GENERAL INFORMATION

Available ratios	1.21, 1.51, 1.99, 2.49 : 1.00
Shaft rotation	Specify output shaft rotation to be same as or opposite to engine rotation when ordering.
Dry weight	203 lb. (92.1 kg.)

NOTE: Parenthetical dimensions are in millimeters.

Series 5000: Ratings/Dimensions



Dimensions Inches (millimeters)

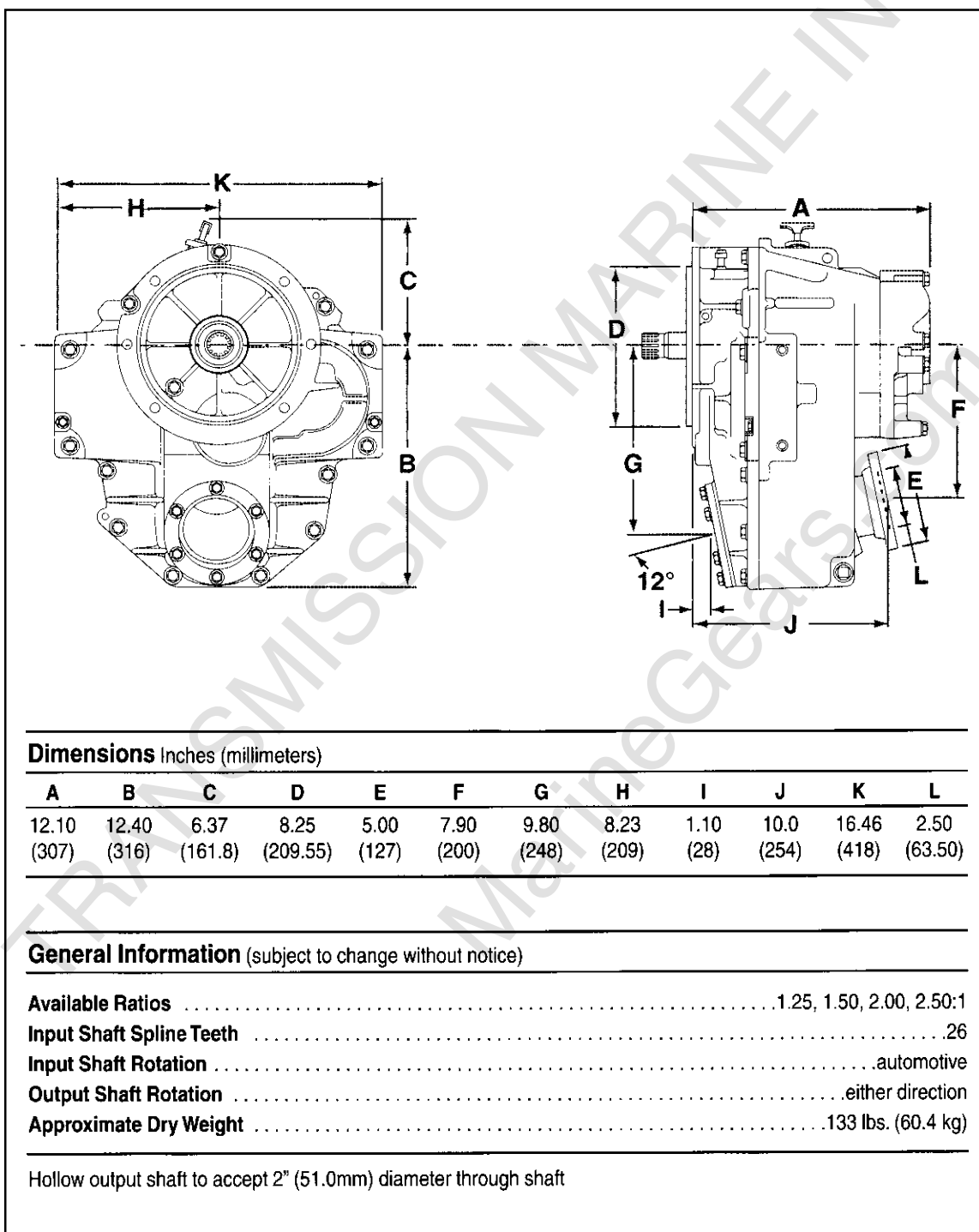
A	B	C	D	E	F	G	H
12.09 (307.0)	9.78 (248.5)	6.38 (162.0)	8.25 (209.5)	5.00 (127.0)	5.95 (151.2)	2.56 (65.0)	8.98 (228.1)

General Information (subject to change without notice)

Available Ratios	1.05, 1.3, 1.6, 2.0, 2.45, 2.8:1
Both directions of output rotation	
Input Shaft Spline Teeth	26
Input Shaft Rotation	automotive
Output Shaft Rotation	either direction
Approximate Dry Weight	109 lbs. (49.4 kg)

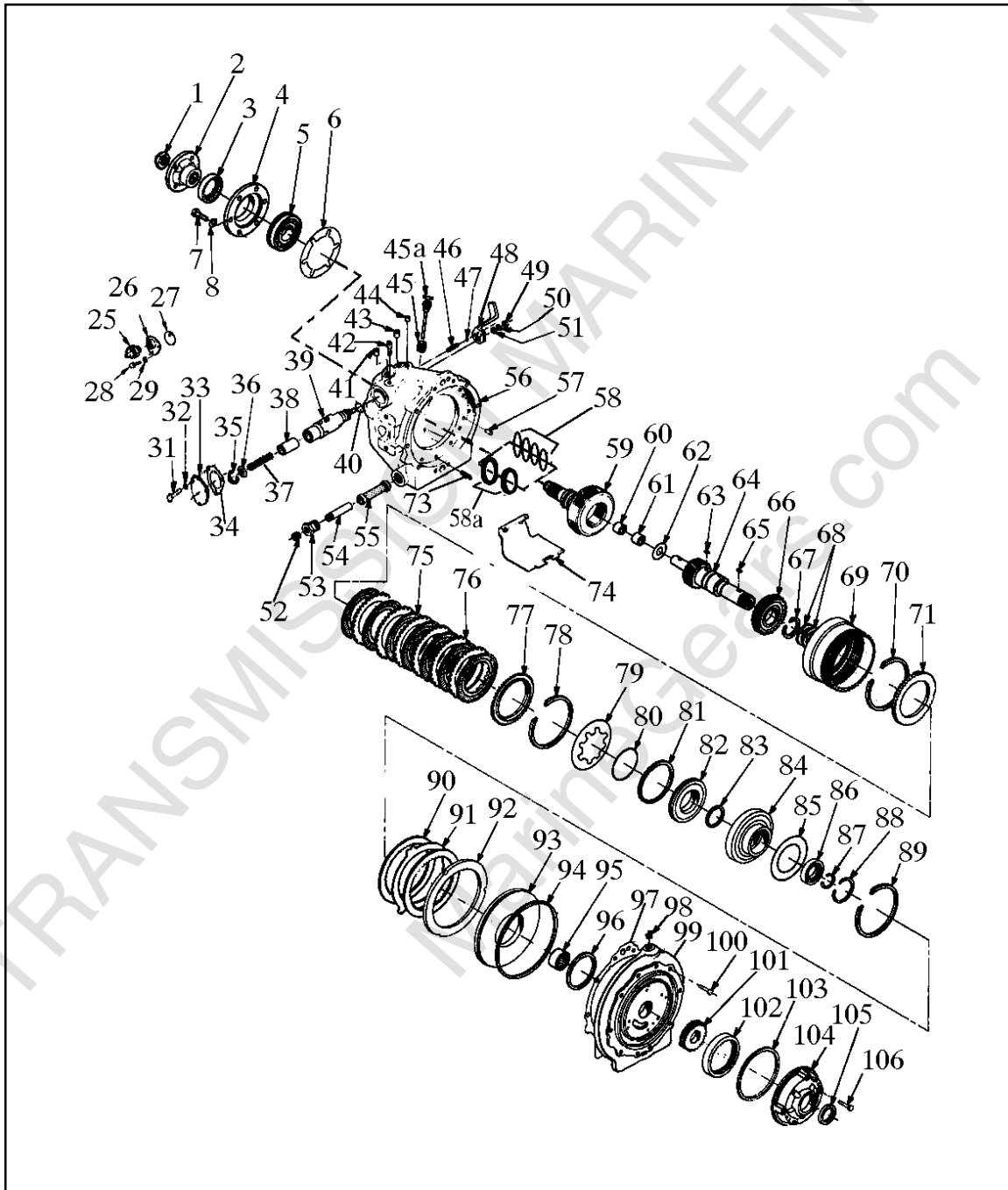


Series 5000V: Ratings/Dimensions



Direct Drive Units / Forward and Reverse portion Inline and V-Drive

Exploded view of models 71(1017), 72(1018) Direct Drive Units. Forward & Reverse portion Inline and V-Drive configurations.

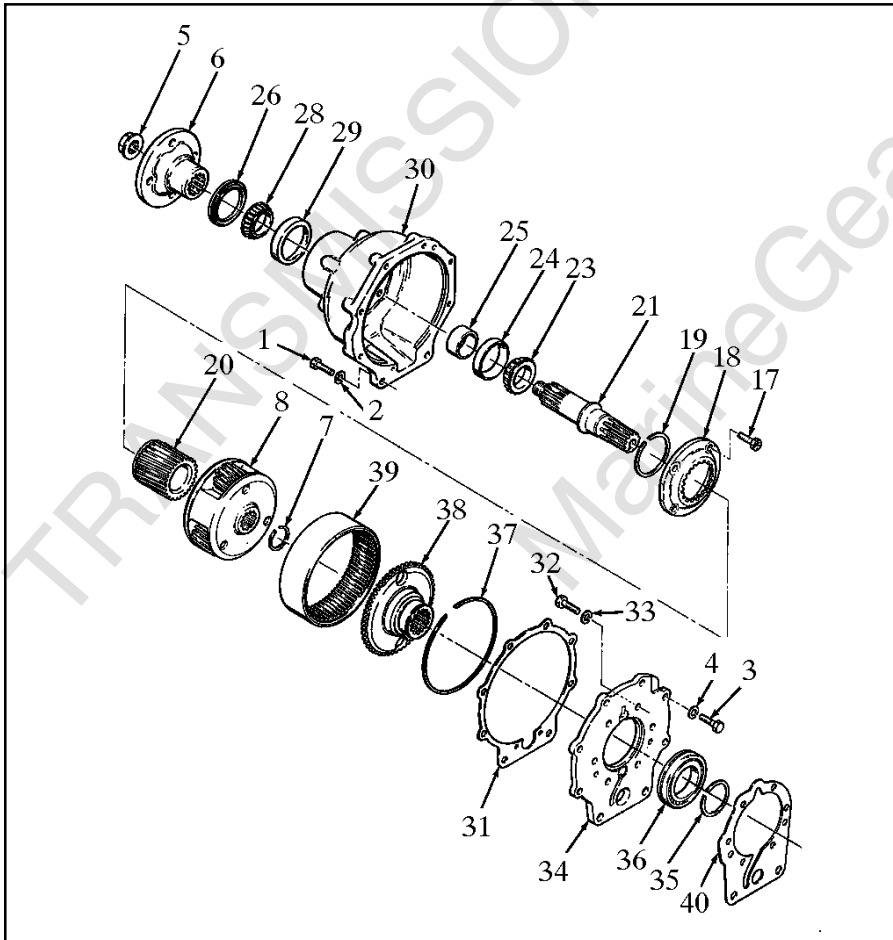
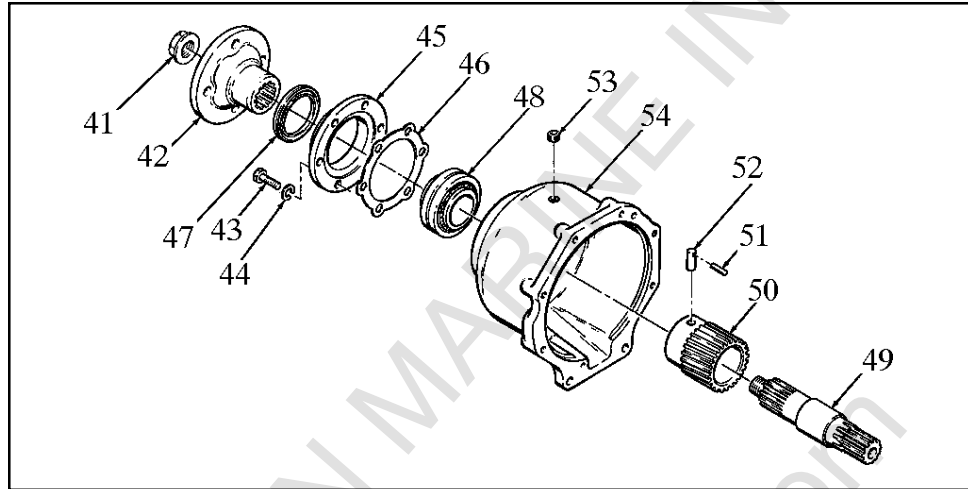


Key numbers **1** through **8** are for **Direct Drive Units** only! All other key numbers are the same for Direct Drive, Inline and V-Drive Units.

BW-01

Inline Unit Reductions

Early production
model 71C, 72C with
ratio 1.523:1.

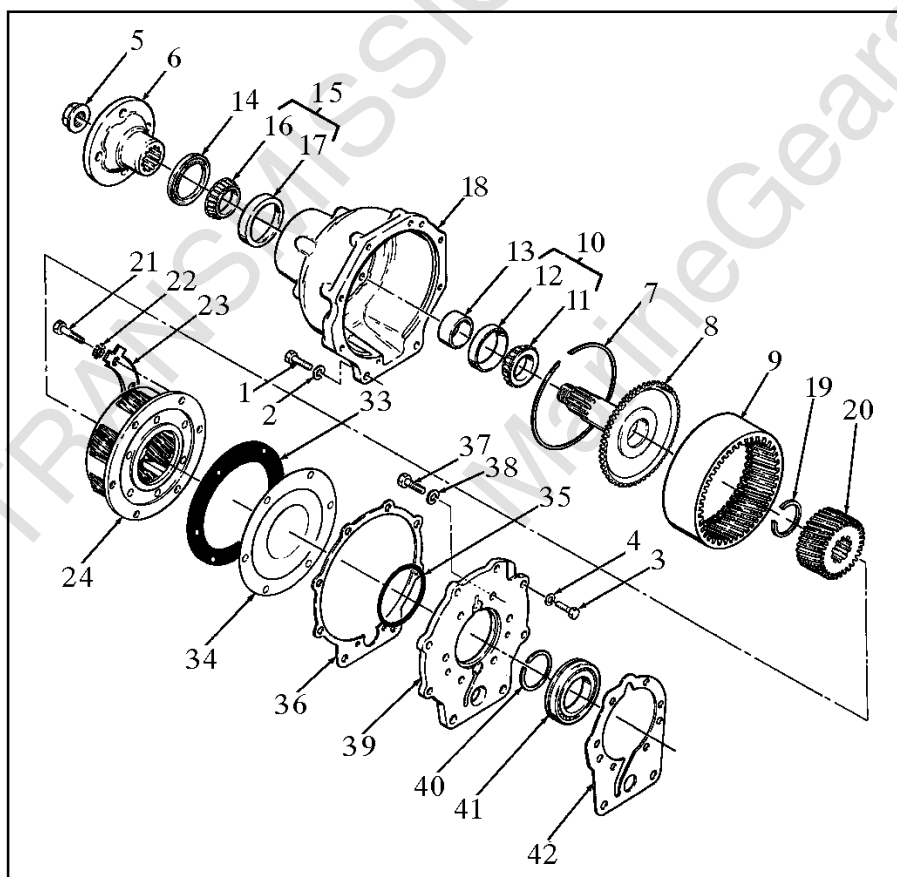
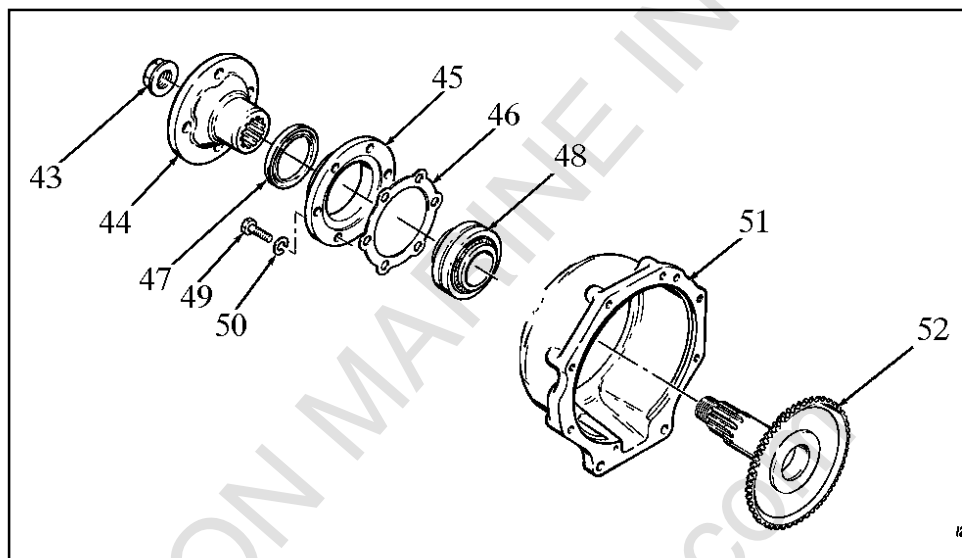


Current production
models 1017, 1018,
ratio 1.523:1.

BW-02

Inline Unit Reductions (Continued)

Early production
model 71C, 72C with
ratio 1.91:1.

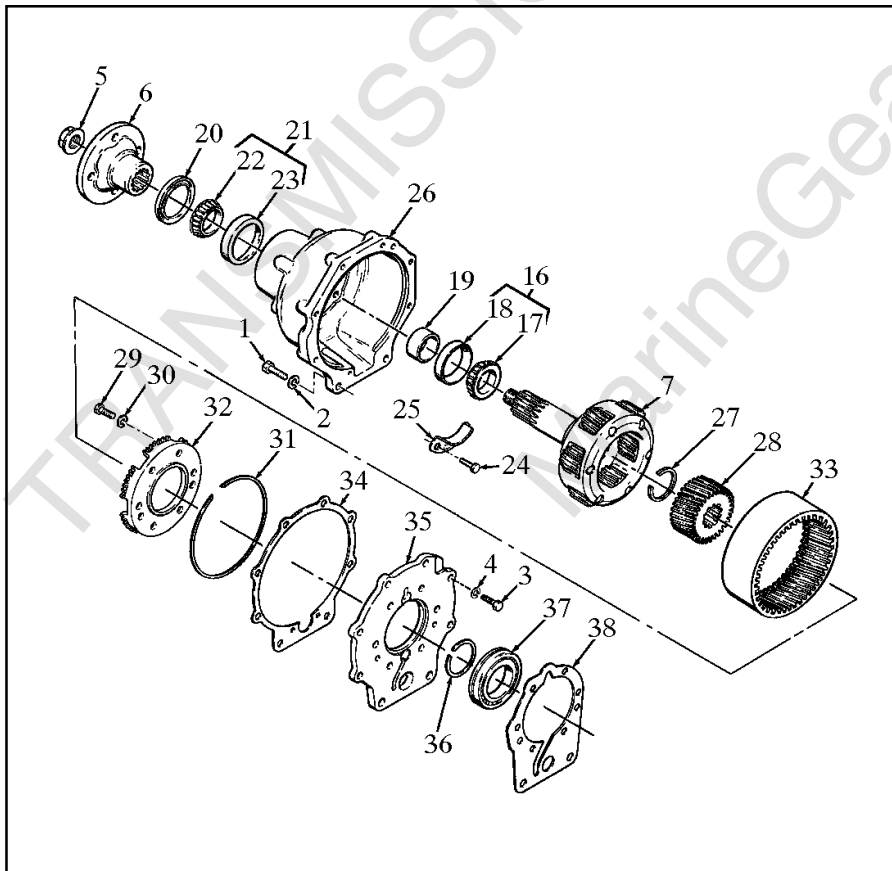
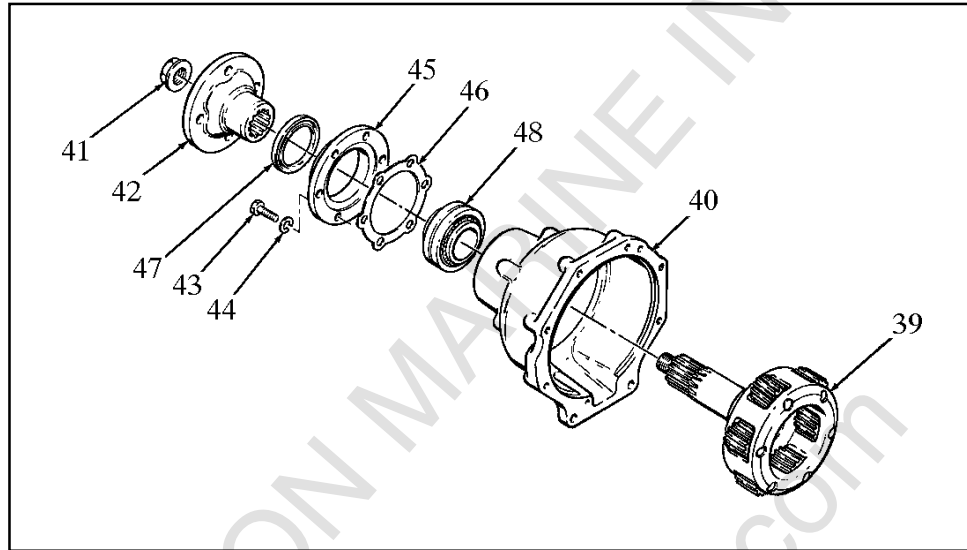


Current production
models 1017, 1018,
ratio 1.88/1.99:1.

BW-03

Inline Unit Reductions (Continued)

Early production
model 71C, 72C with
ratio 2.57/2.91:1.

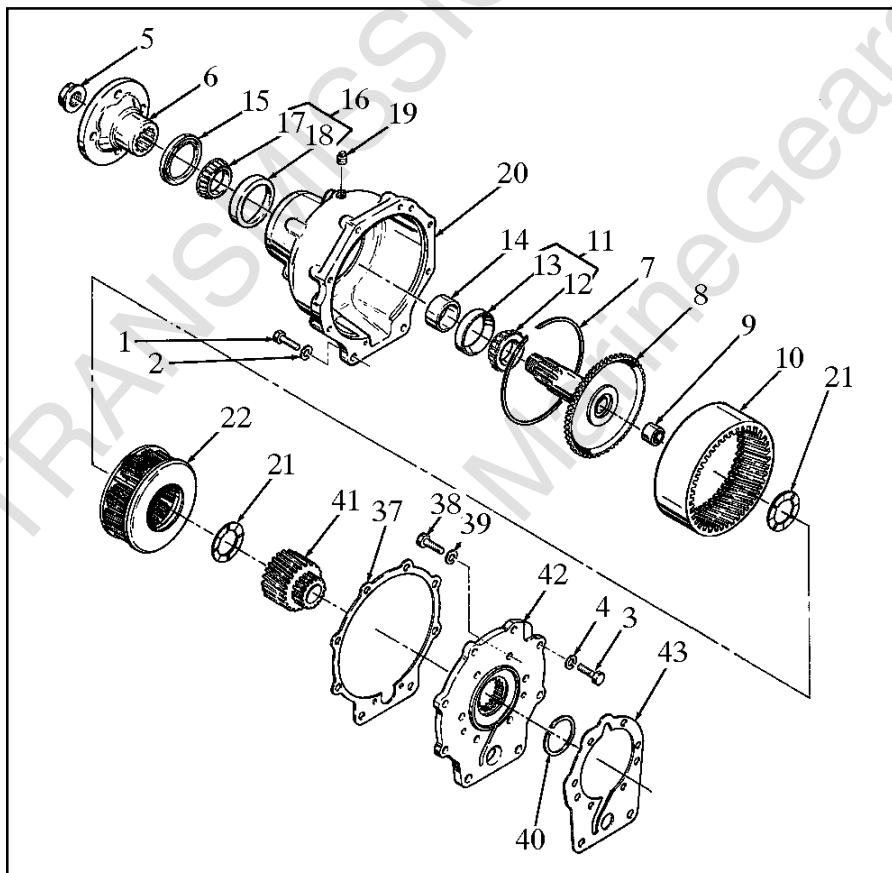
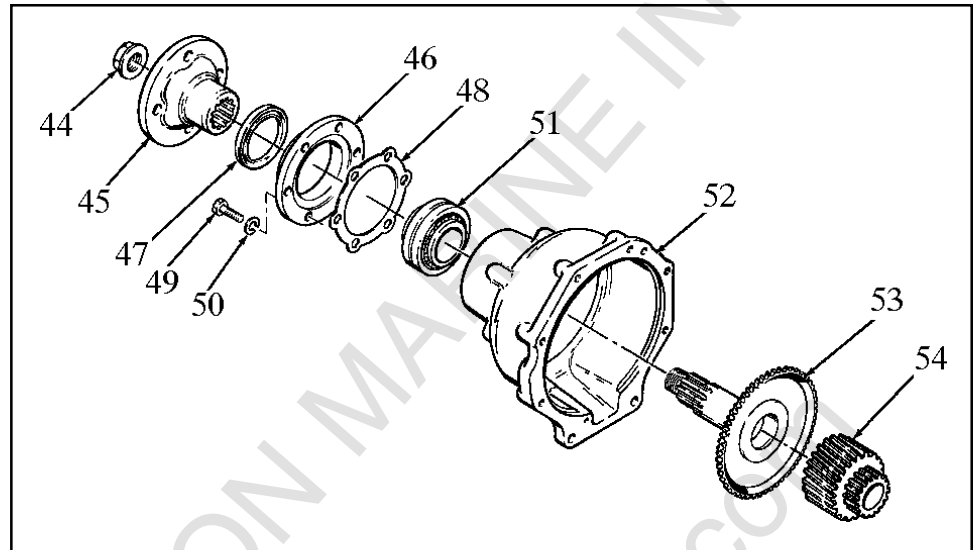


Current production
models 1017, 1018,
ratio 2.57/2.91:1.

BW-04

Inline Unit Reductions (Continued)

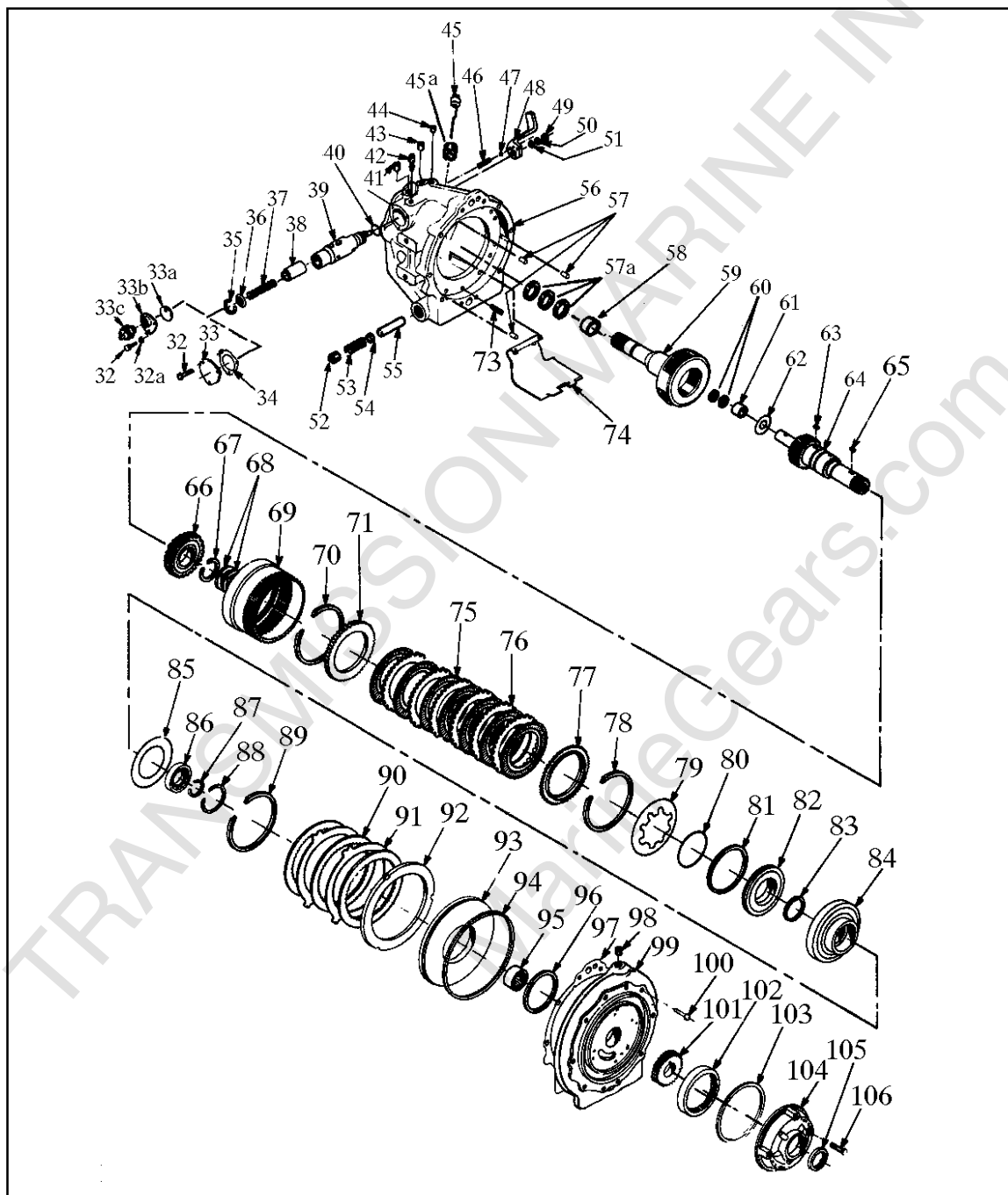
Early production
model 71C, 72C with
ratio 2.10:1.



Current production
models 1017, 1018,
ratio 2.10:1.

BW-05

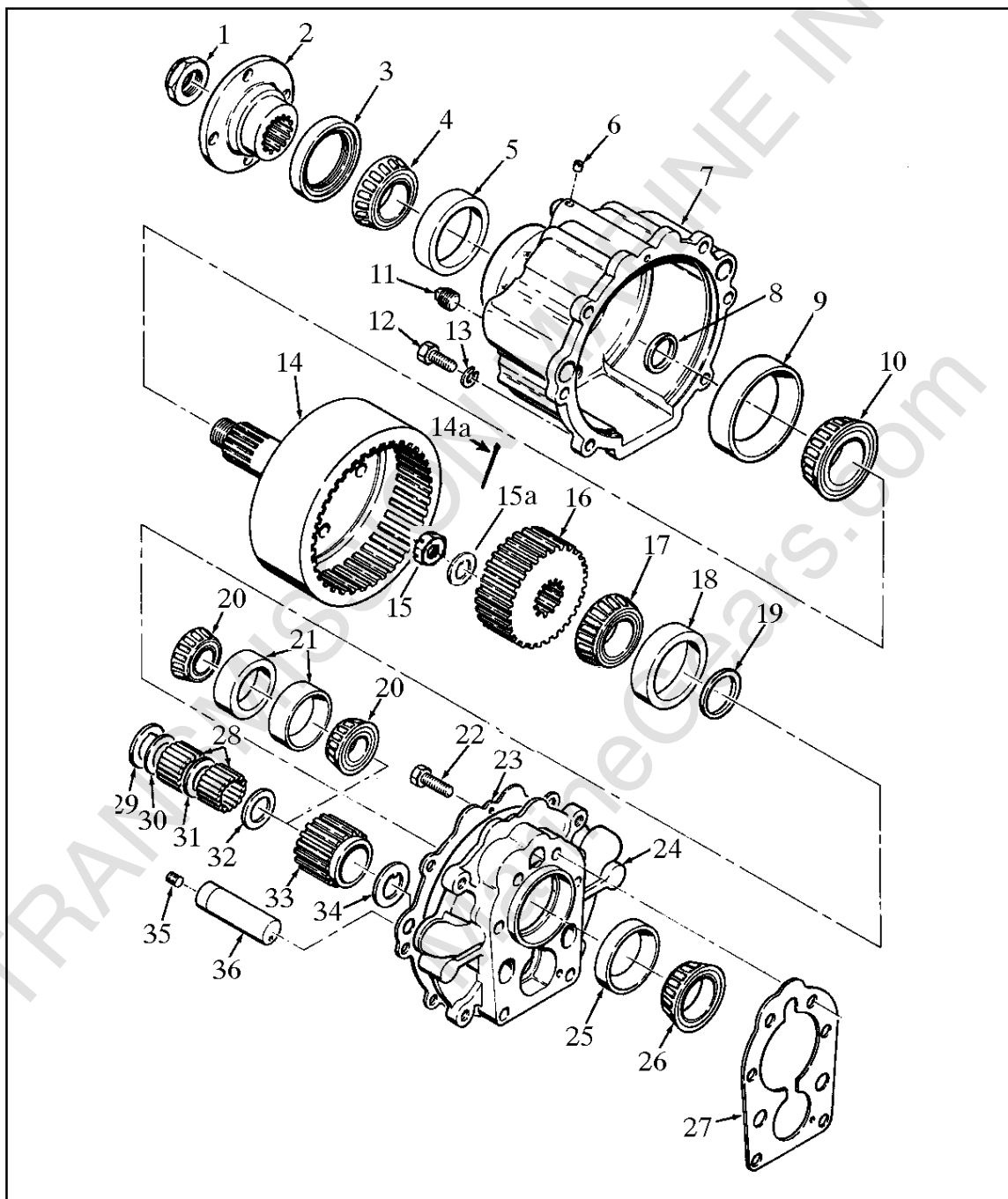
CR2-Drop Center Units



Forward and Reverse portion, model 1013, 1014.

BW-06

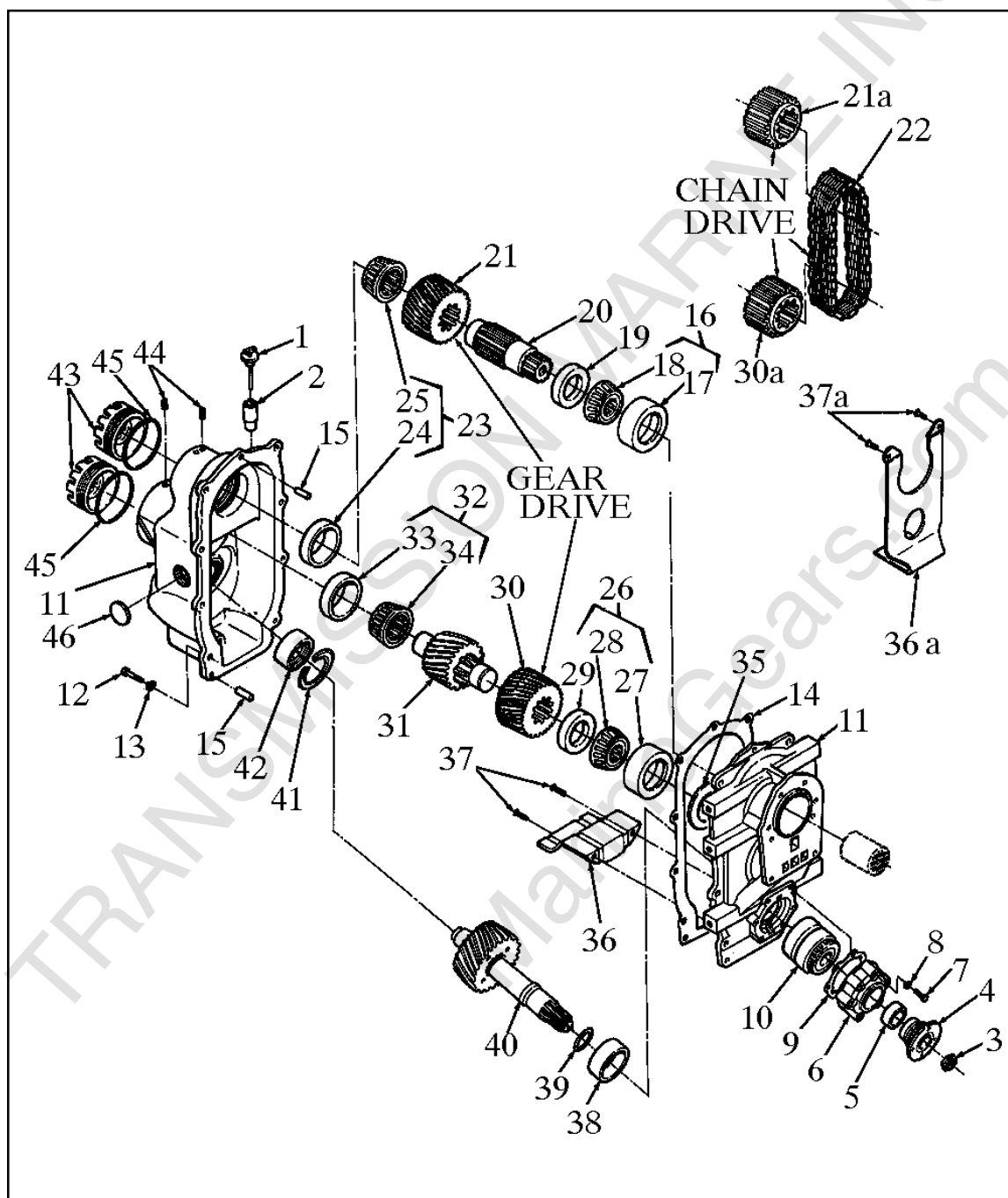
CR2-Drop Center Units (Continued)



Reaction (Idler & Nonidler) portion models 1013, 1014.

BW-07

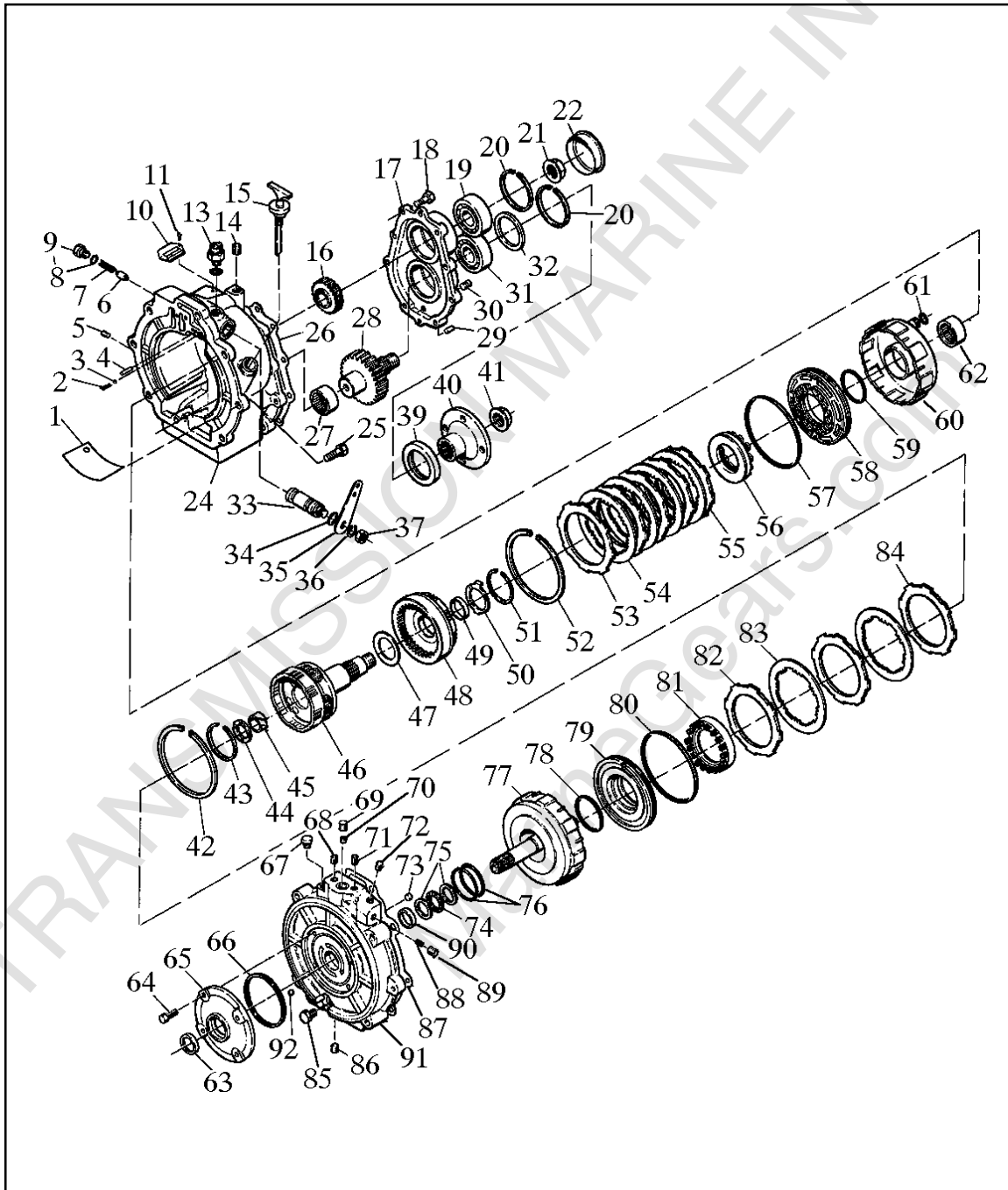
V Drive Unit Reductions



Model 1004, 1005, gear and chain reduction assembly.

BW-08

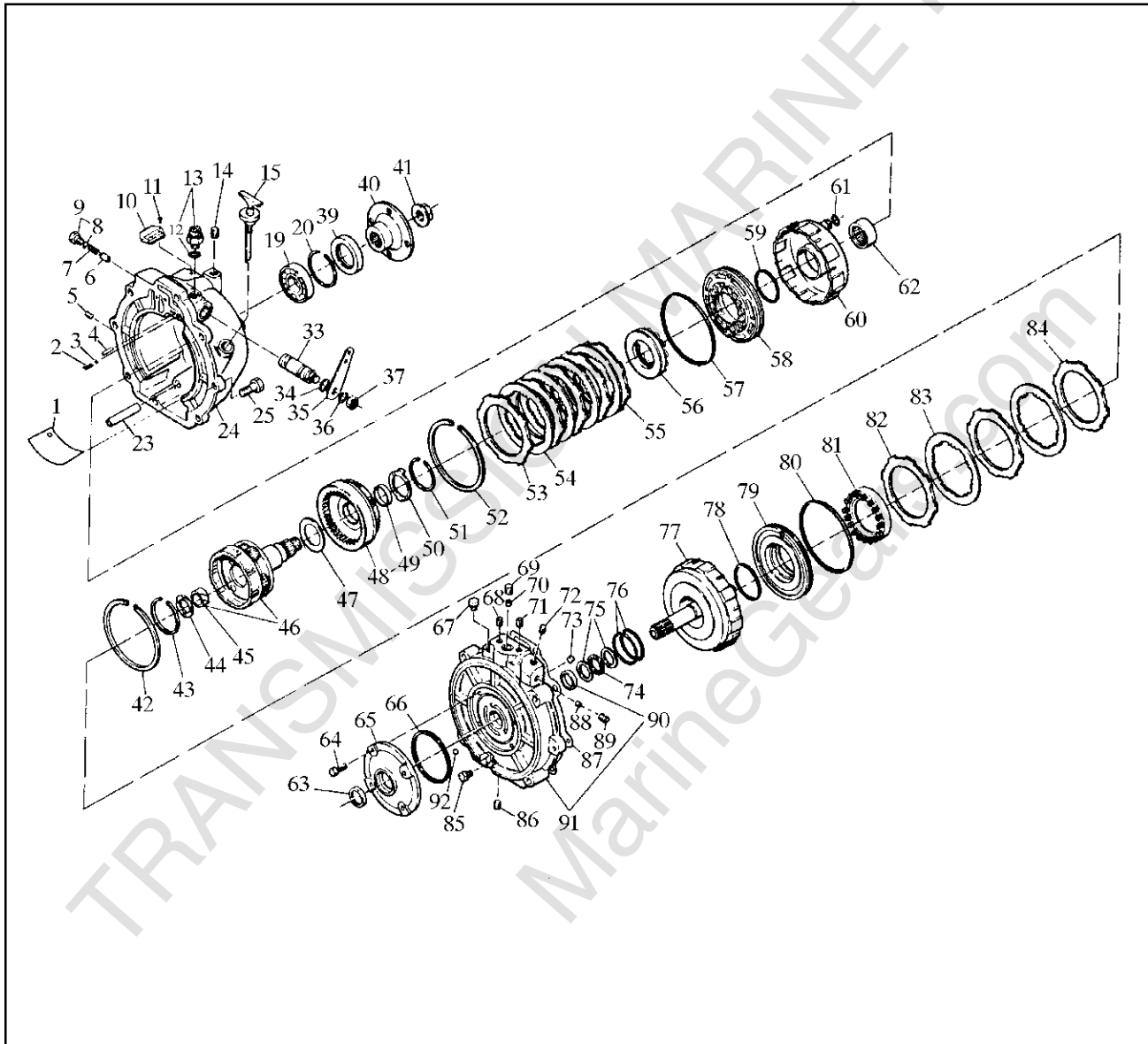
Series 1000



Series 1000, offset reduction assembly.

BW-09

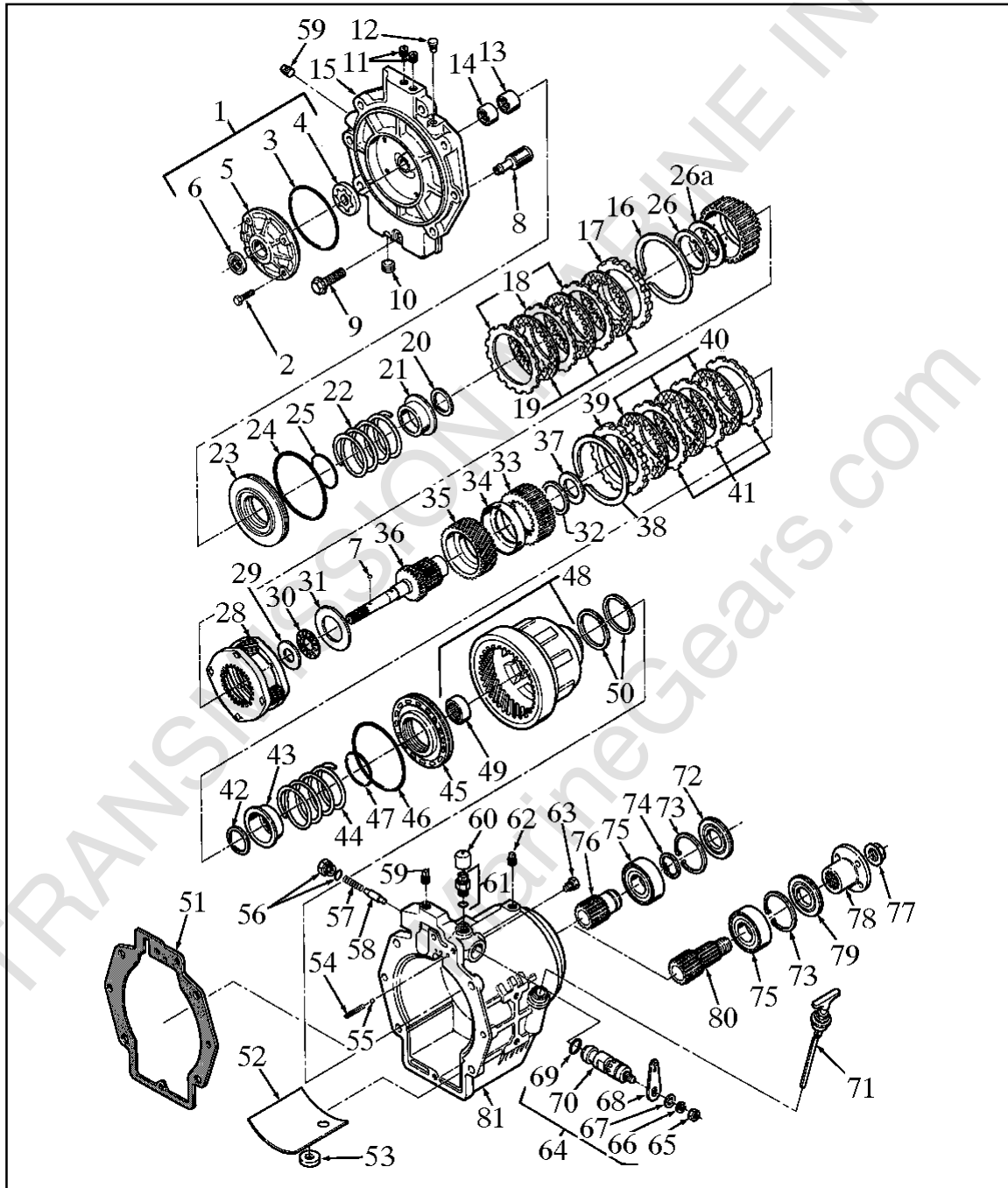
Series 1000 (Continued)



Series 1000 Inline / Direct Drive Assembly.

BW-10

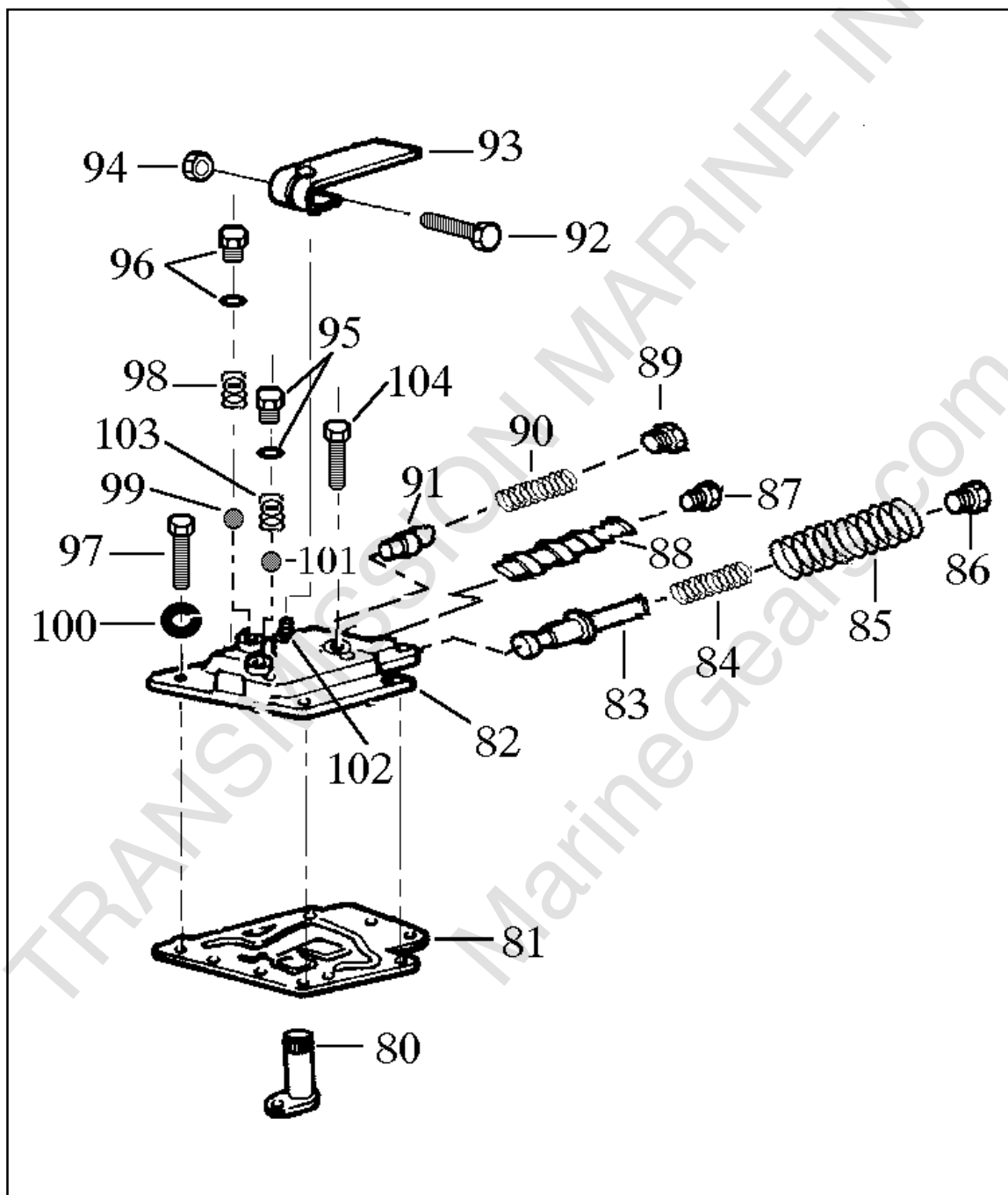
Series 1500



Series 1500, Direct Drive Unit.

BW-11

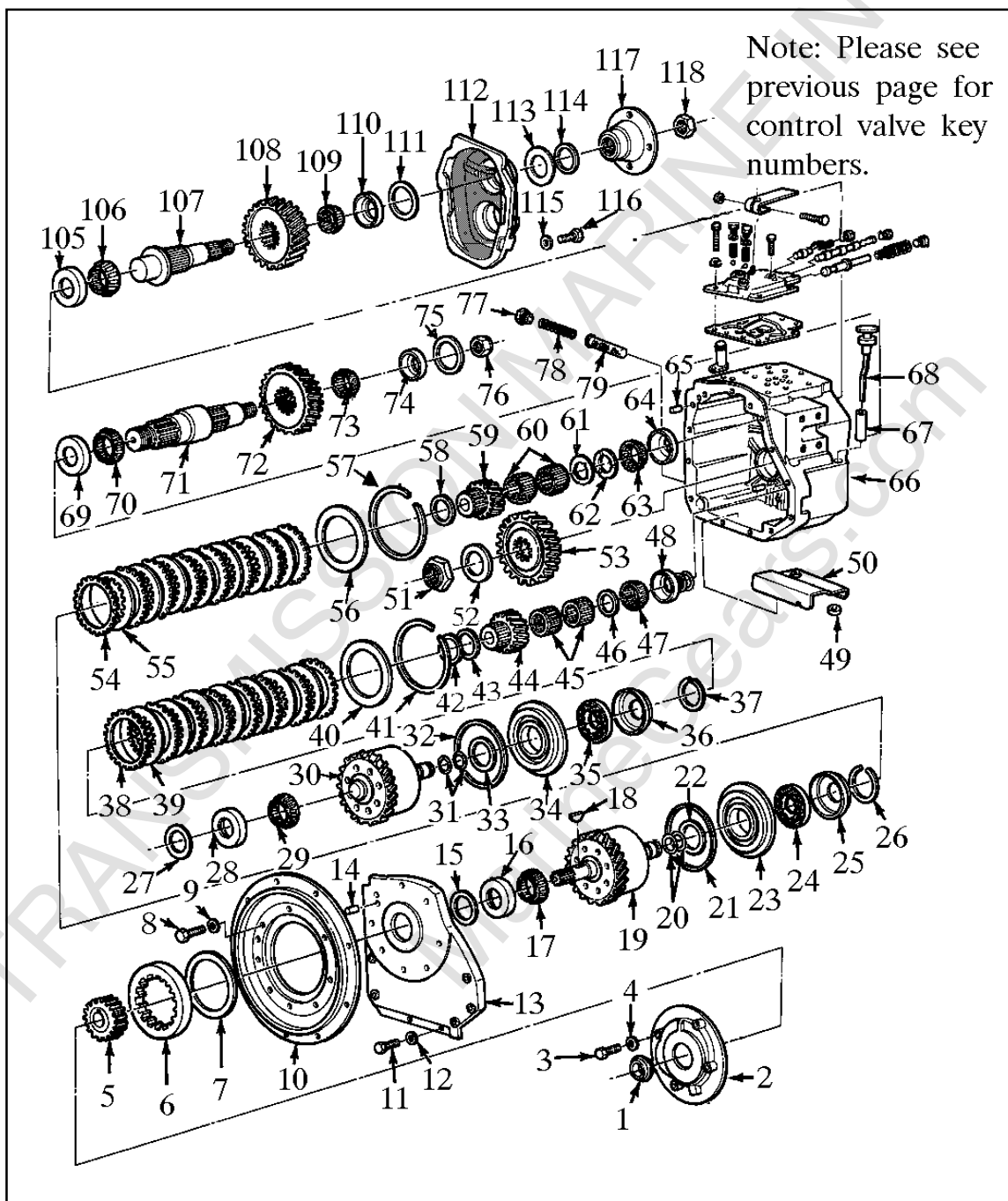
Series 7000



Model 7000 control valve assembly.

BW-12

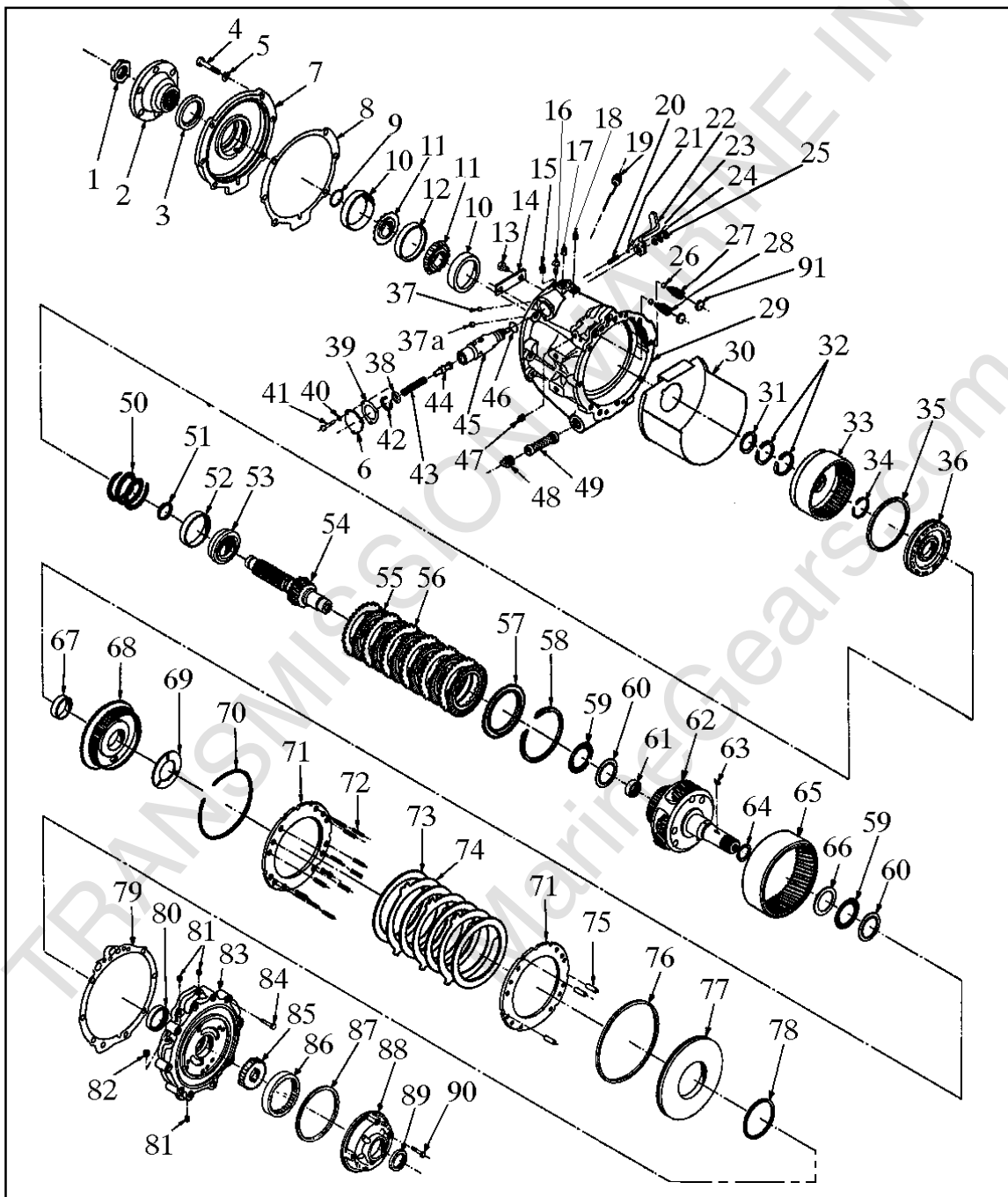
Series 7000 (Continued)



Series 7000, Inline configuration.

BW-13

73 Series

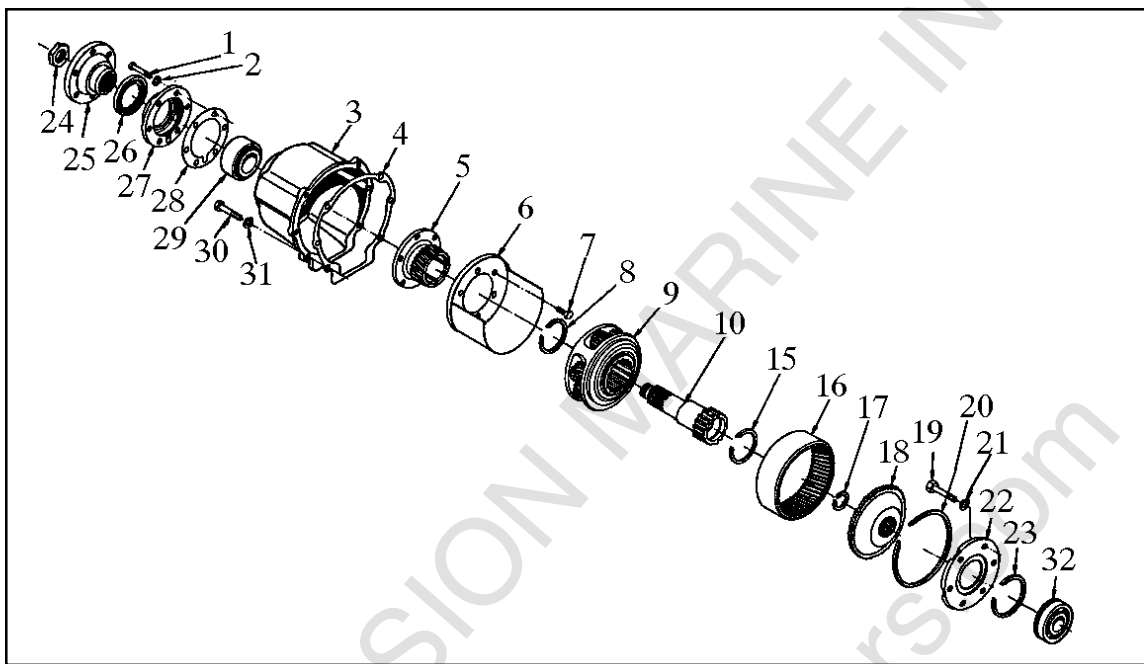


73 Series Direct Drive, Forward & Reverse portion of reduction models.

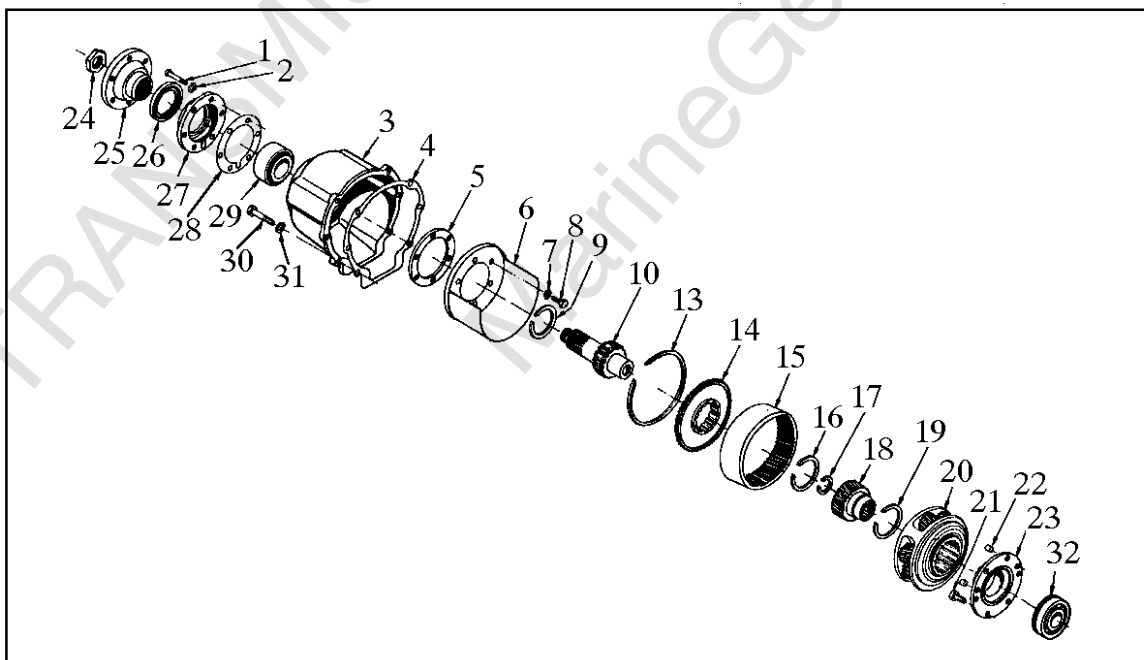
BW-14



73 Series (Reductions)



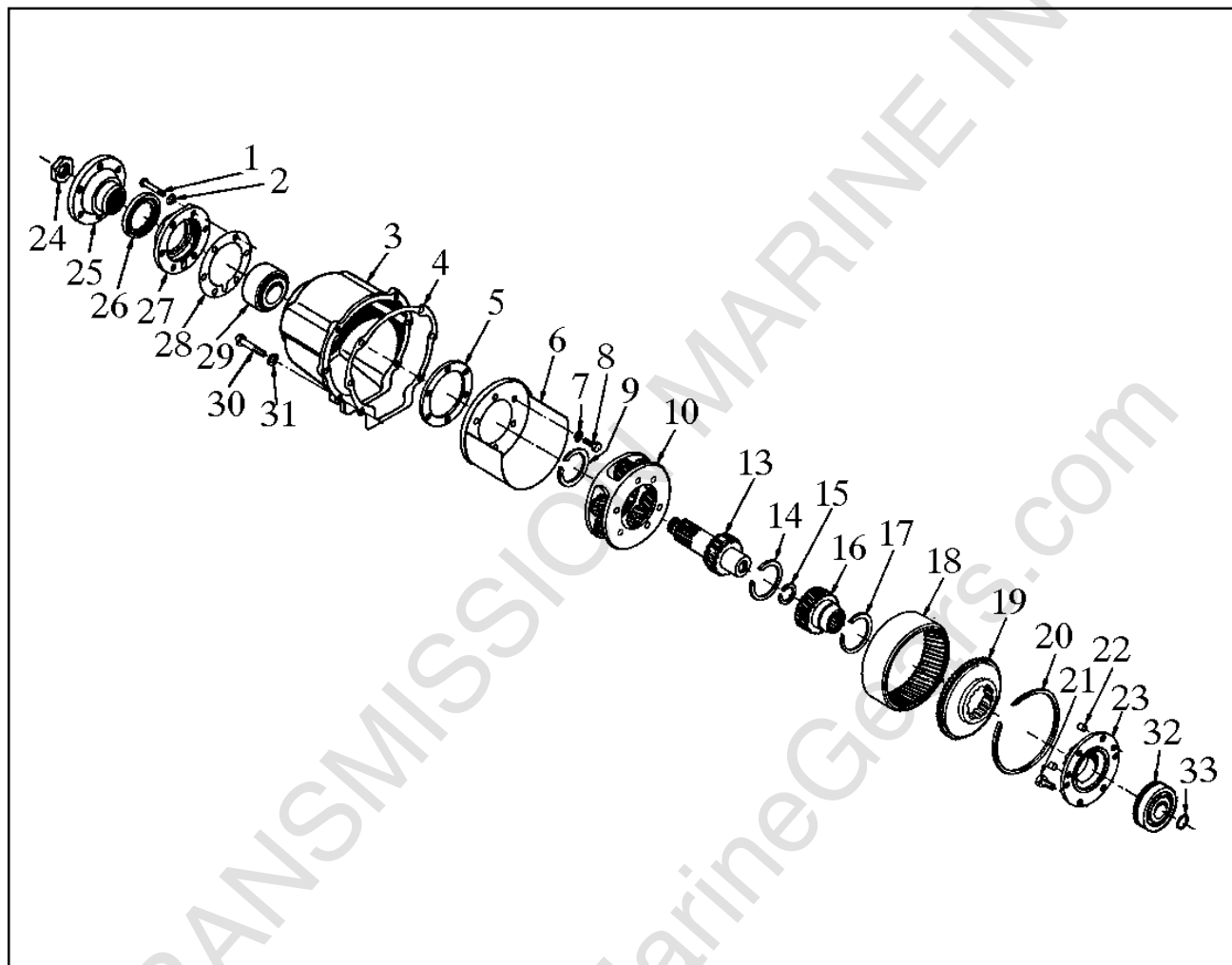
Reduction ration 1.50:1.



Reduction ration 2.00:1.

BW-15

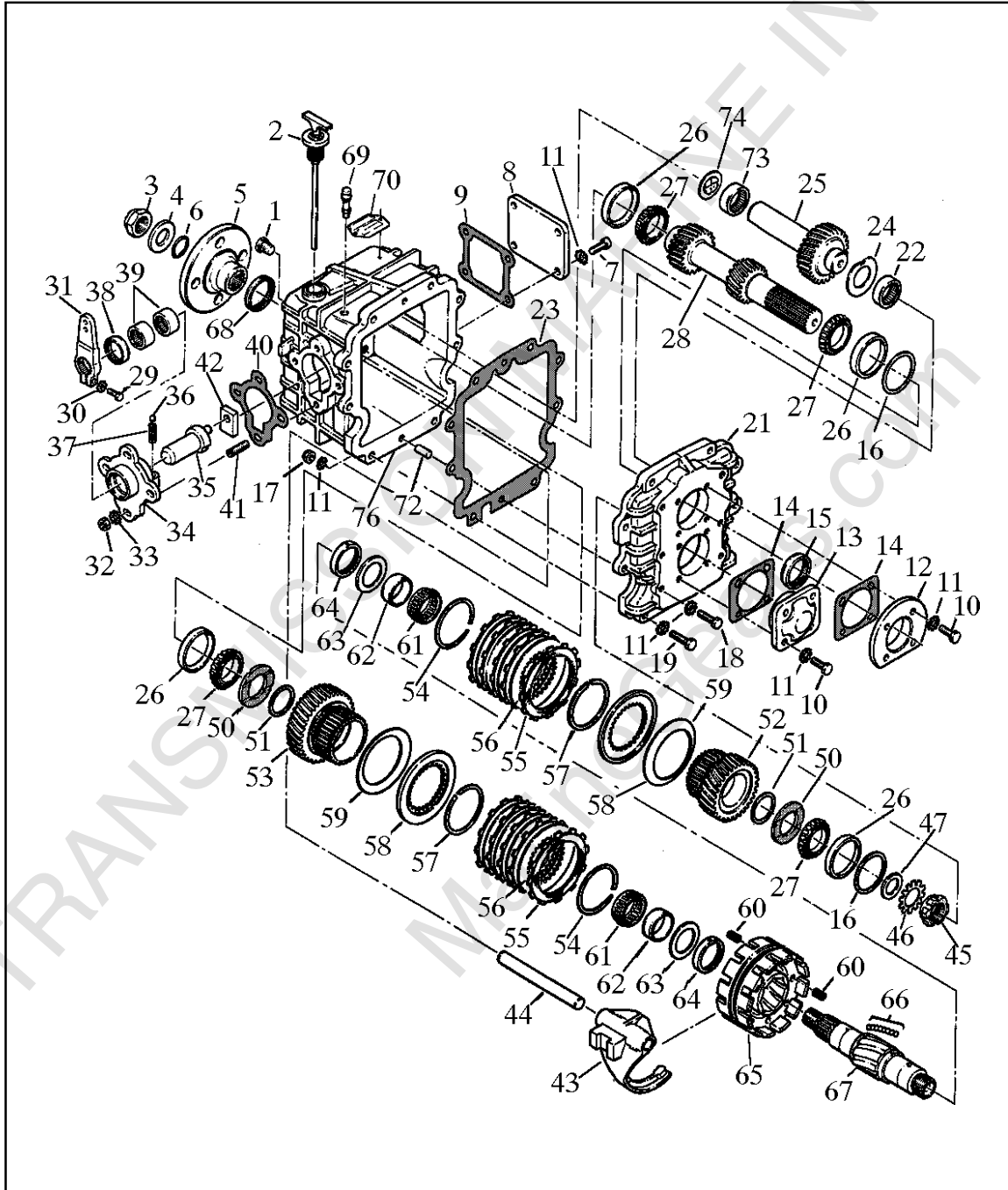
73 Series (Reductions)



Reduction ratio: 3.00:1.

BW-16

Series 500

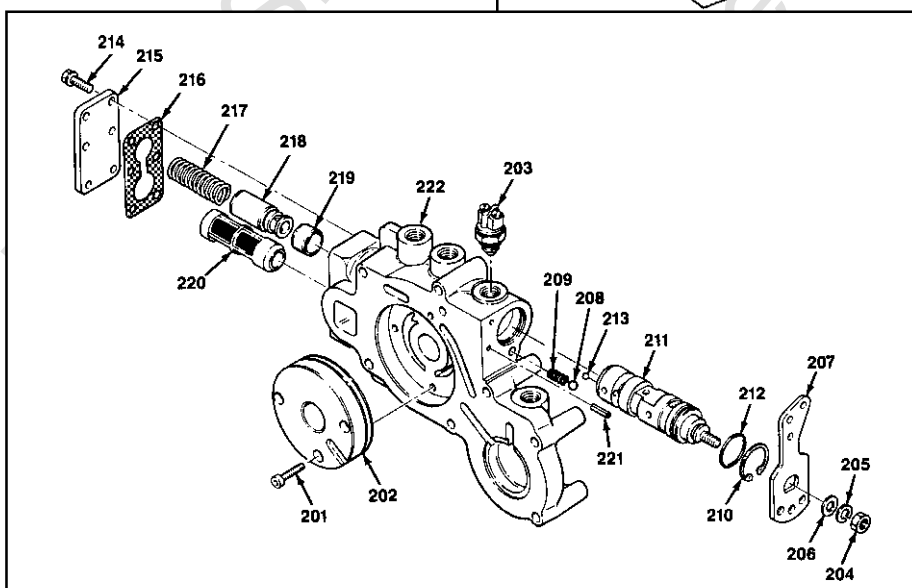
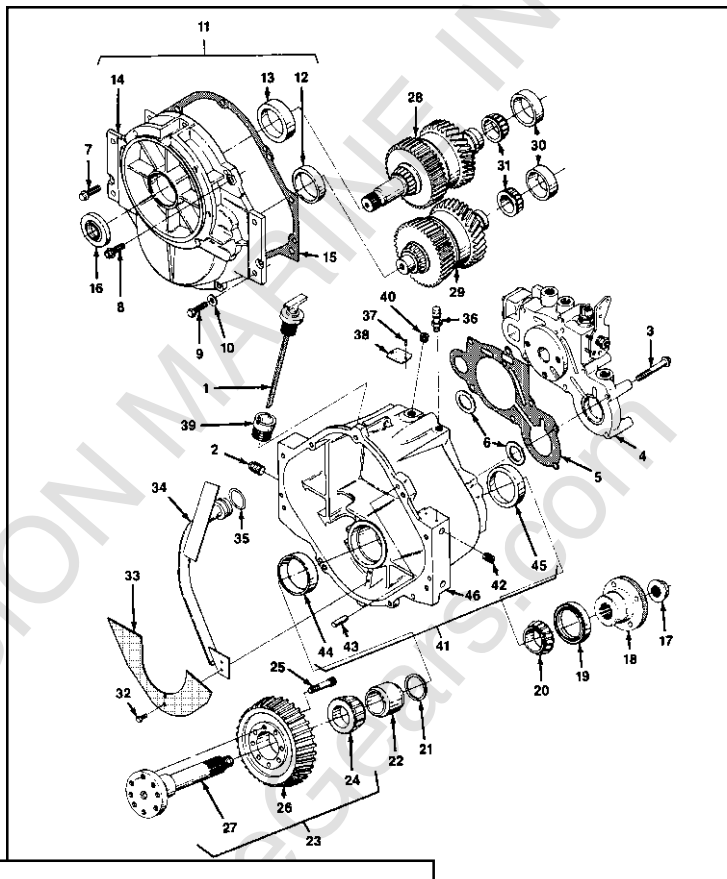


Series 500, Mechanical gearbox. Available ratios: 1.48, 2.05, 2.53, 2.94:1.

BW-17

Series 5000

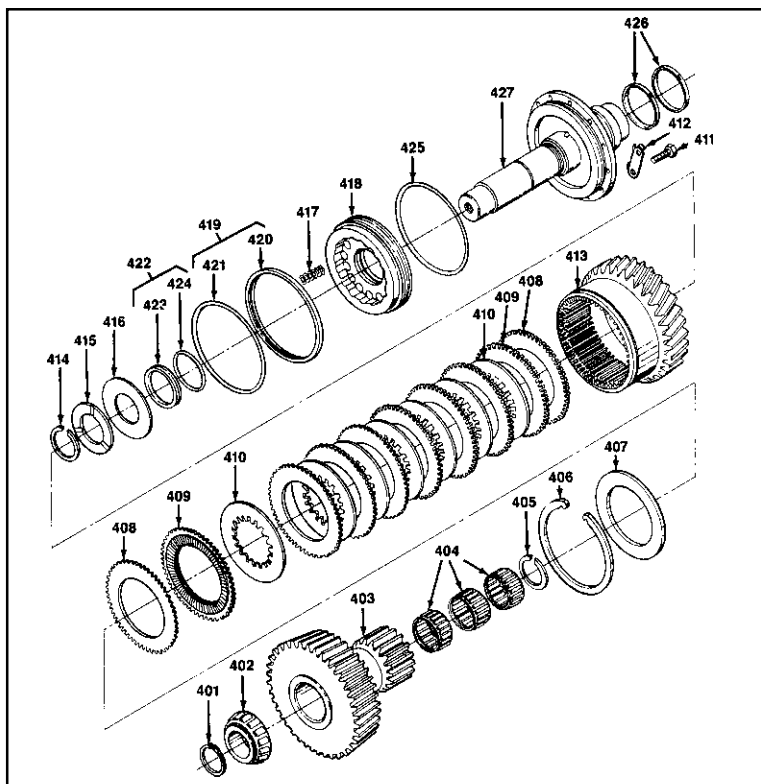
Transmission Assembly.



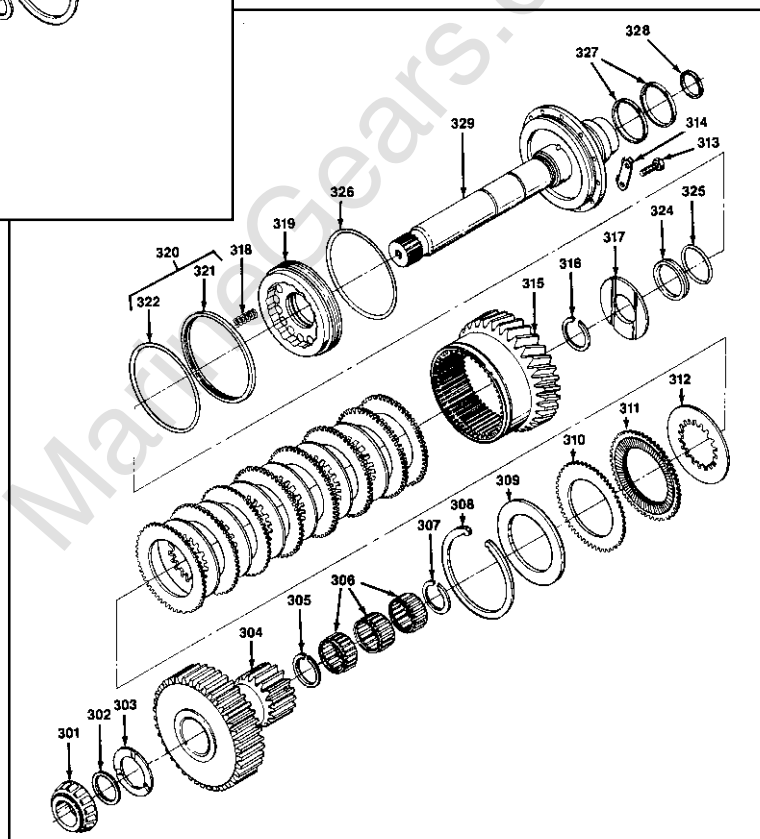
Valve & Pump Assembly.

BW-18

Series 5000 (Continued)



Intermediate shaft assembly.

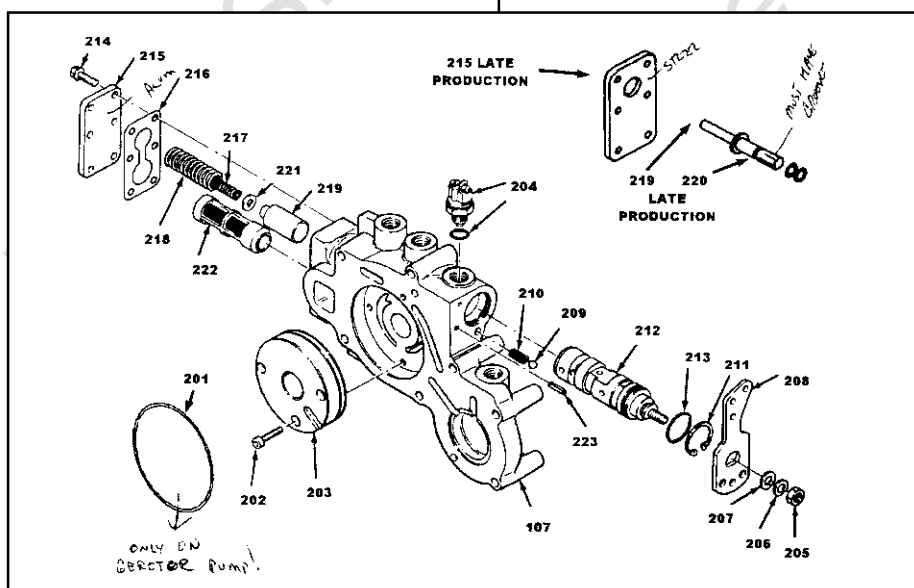
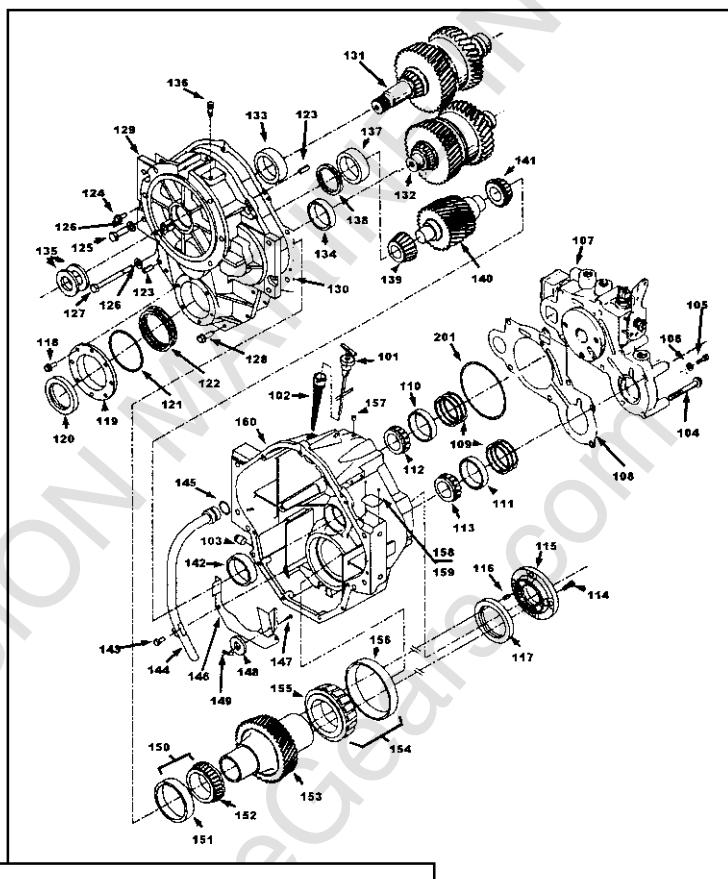


Input shaft assembly.

BW-19

Series 5000V

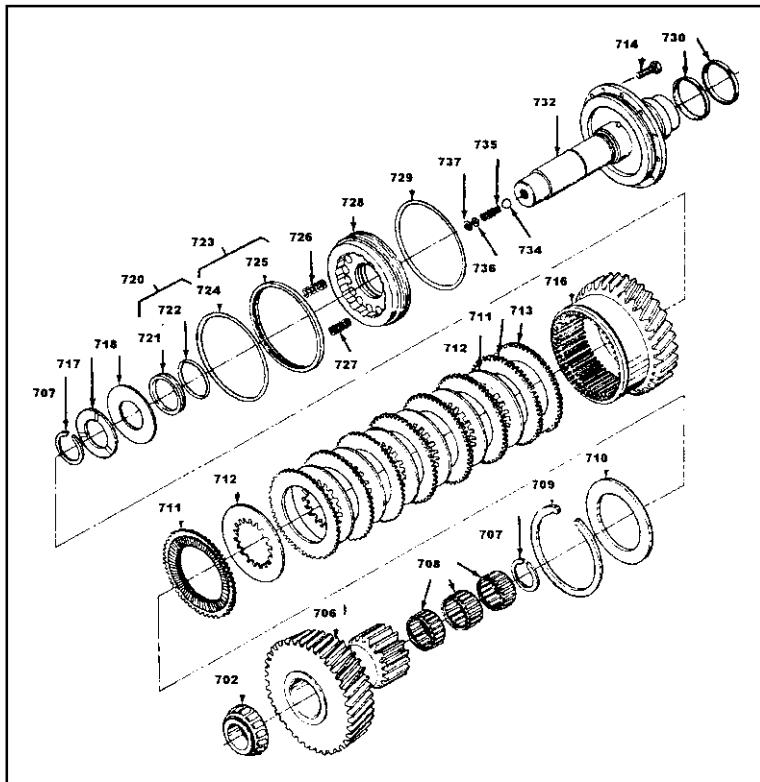
Transmission Assembly.



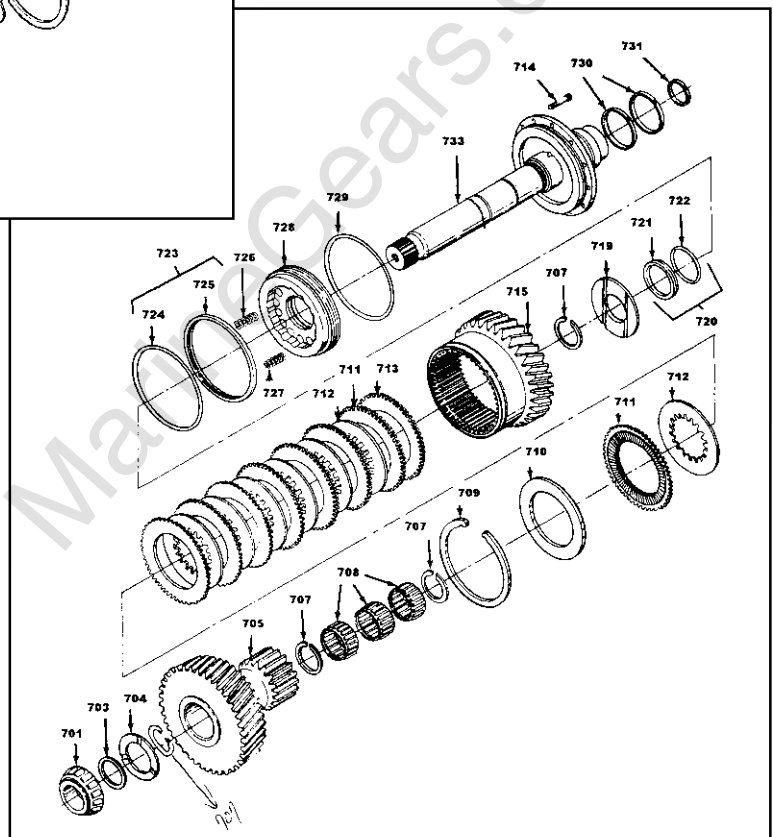
Valve & Pump Assembly.

BW-20

Series 5000V (Continued)



Intermediate shaft assembly.

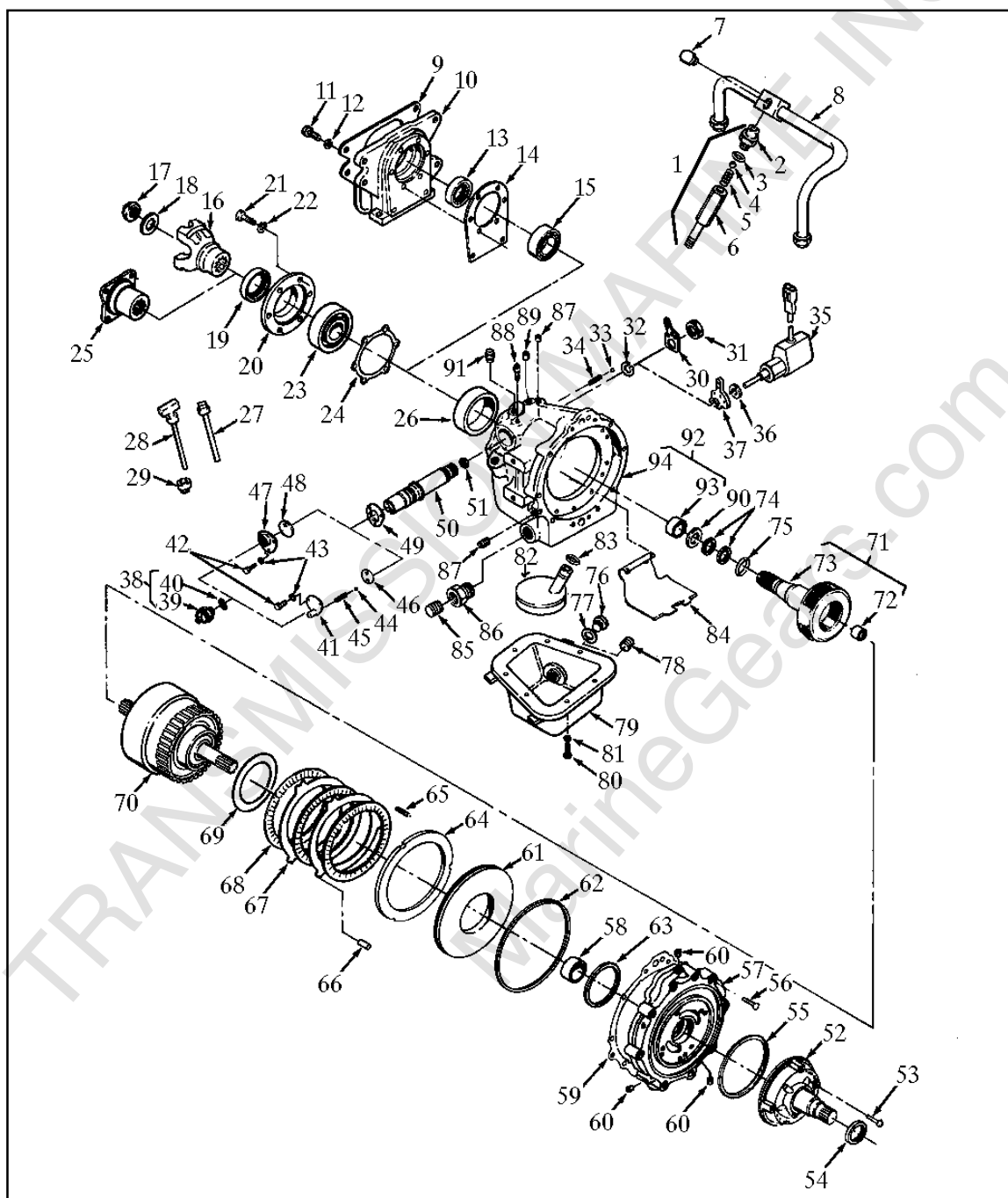


Input shaft assembly.

BW-21



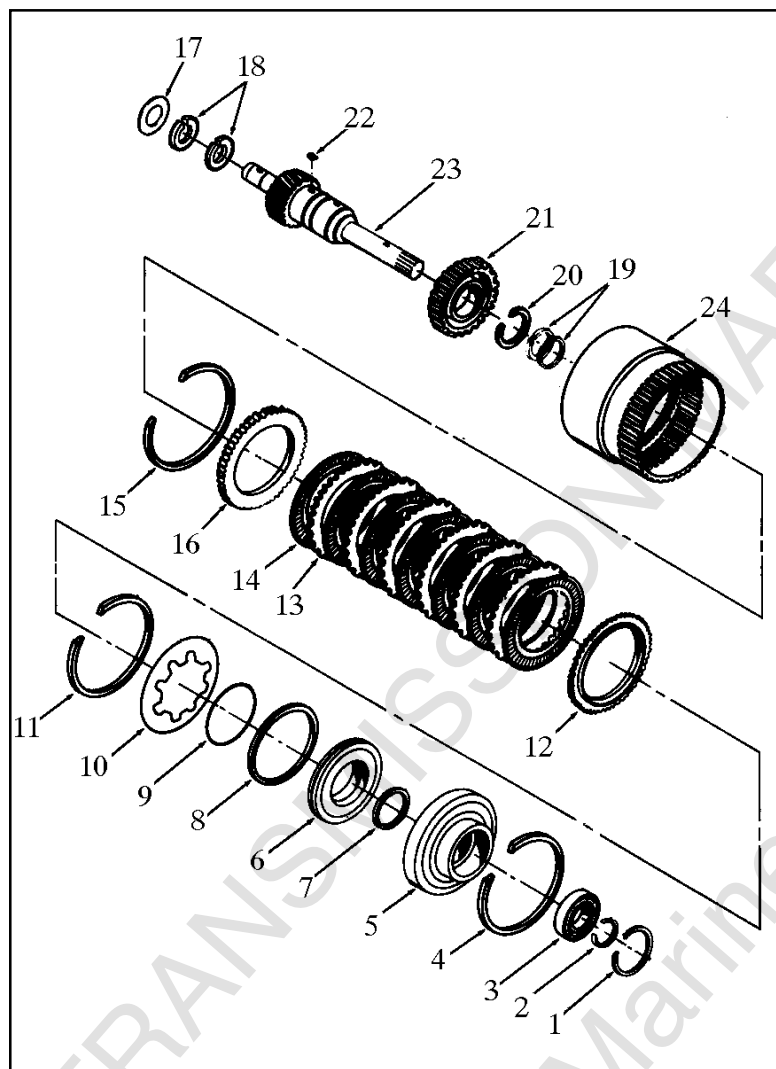
1016 (T-72 Industrial)



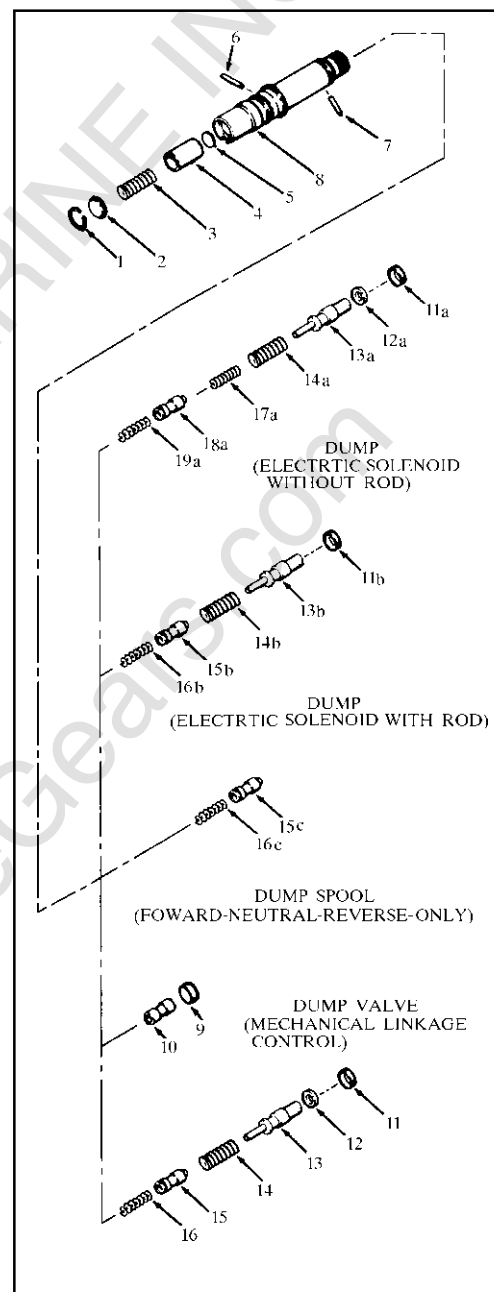
1016 (T-72) Main housing assembly.

BW-22

1016 (T-72 Industrial)

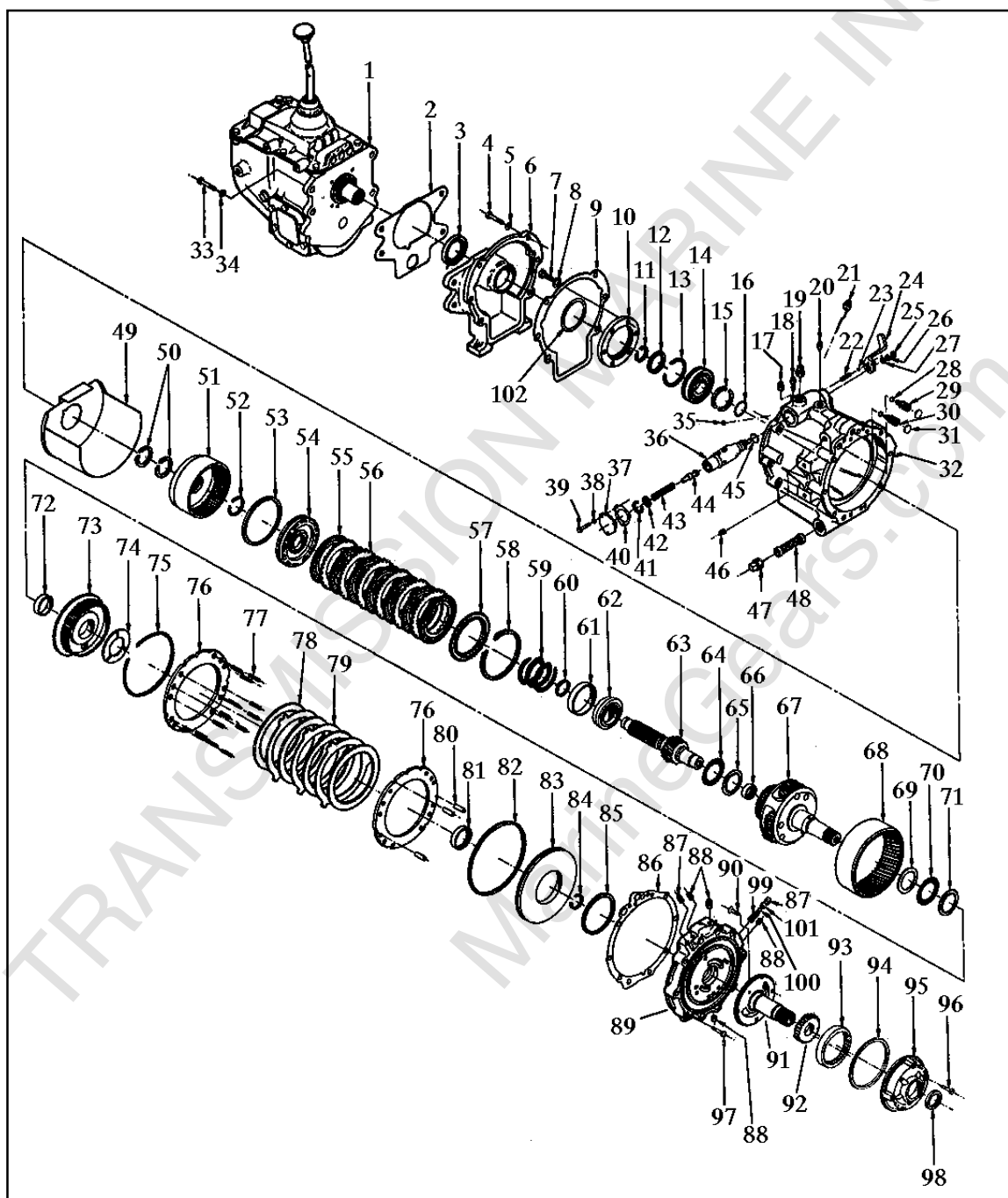


1016 (T-72) Main housing assembly.



1016 (T-72) inching valve assembly.

1006 (T-73 Industrial)



1006 (T-73 Industrial) Complete assembly.

BW-24

P Series

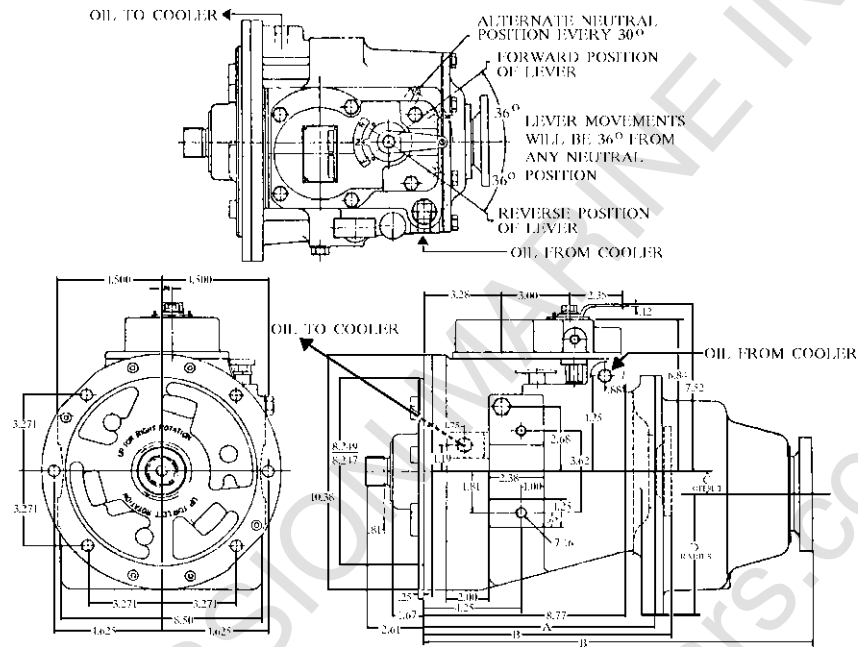


TABLE OF LENGTHS

MODEL	A	B	C	D
P 21	—	10.80	—	—
P 22	9.97	16.85	.85	4.50
P 23	9.97	16.85	1.30	4.50
P 24	10.12	17.16	1.90	5.25
P 25	10.12	17.16	2.10	5.25

DESCRIPTION

MODEL	REDUCTION RATIO	MAX. H.P. @ MAX R.P.M.	MAX DISPLACE- MENT { cubic inches }	APPROX. DRY WEIGHT { pounds }
P 21	Direct	220 @ 4000	315	100
P 22	1.50:1	220 @ 4000	315	150
P 23	2.04:1	220 @ 4000	315	150
P 24	2.52:1	220 @ 4000	315	170
P 25	3.00:1	220 @ 4000	315	170

Note: Ratings are for guidance only for gasoline engine pleasure craft applications. Ratings for heavy duty gasoline and Diesel engine applications are appropriately smaller. Firm recommendations will be made upon request.

P Series (Continued)

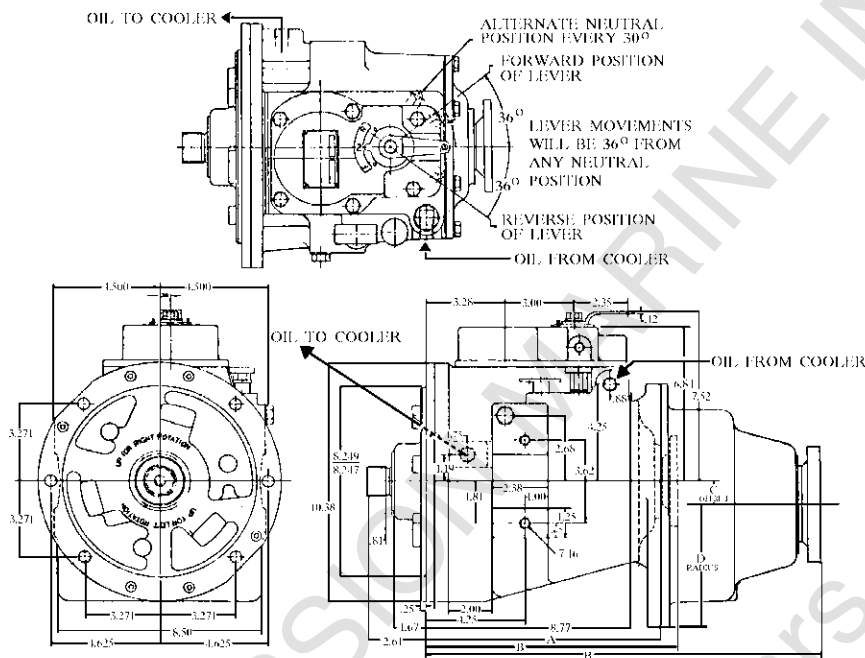


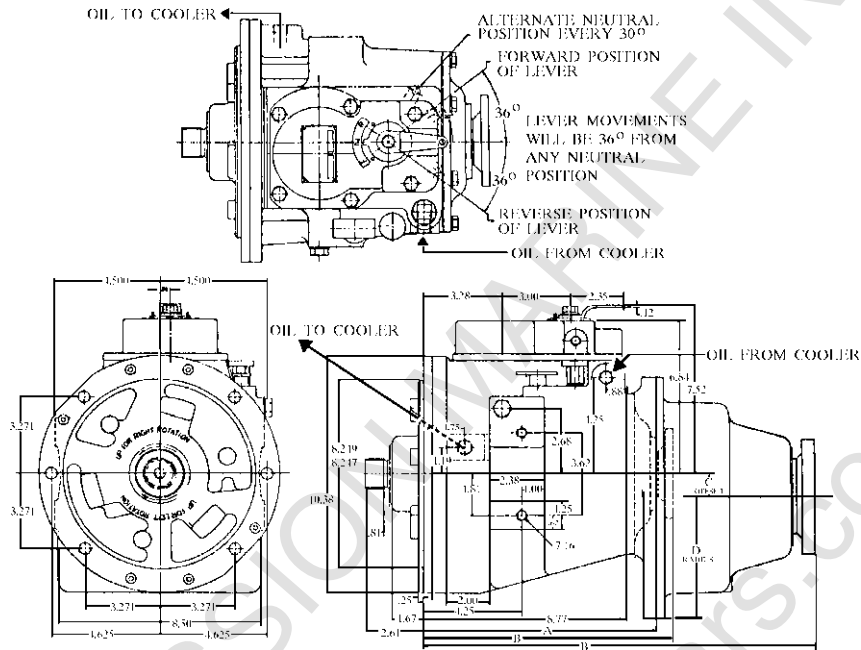
TABLE OF LENGTHS

MODEL	A	B	C	D
P 31	—	10.80	—	—
P 32	10.03	17.08	1.05	5.25
P 33	10.03	17.08	1.60	5.25
P 34	10.17	17.54	2.31	6.12
P 35	10.17	17.54	2.56	6.12

DESCRIPTION

MODEL	REDUCTION RATIO	MAX. H.P. (@ MAX R.P.M.)	MAX DISPLACEMENT (cubic inches)	APPROX. DRY WEIGHT (pounds)
P 31	Direct	260 @ 4000	375	100
P 32	1.50:1	260 @ 4000	375	170
P 33	2.03:1	260 @ 4000	375	170
P 34	2.54:1	260 @ 4000	375	205
P 35	3.05:1	260 @ 4000	375	205

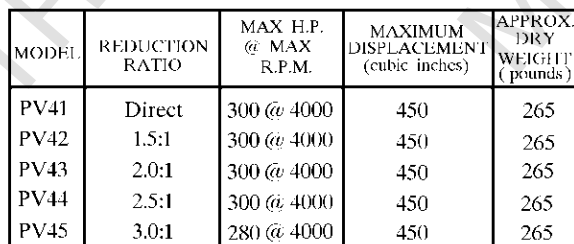
Note: Ratings are for guidance only for gasoline engine pleasure craft applications. Ratings for heavy duty gasoline and Diesel engine applications are appropriately smaller. Firm recommendations will be made upon request.



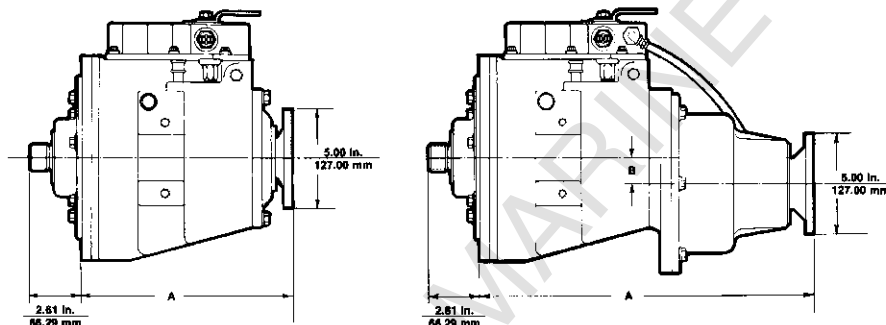
MODEL	A	B	C	D
P 41	—	11.75	—	—
P 42	10.77	17.81	1.05	5.25
P 43	10.87	18.25	1.93	6.12
P 44	10.87	18.25	2.31	6.12
P 45	10.87	18.25	2.56	6.12

MODEL	REDUCTION RATIO	MAX. H.P. @ MAX R.P.M.	MAX DISPLACE- MENT (cubic inches)	APPROX. DRY WEIGHT (pounds)
P 41	Direct	300 @ 4000	450	120
P 42	1.50:1	300 @ 4000	450	190
P 43	2.03:1	300 @ 4000	450	230
P 44	2.54:1	300 @ 4000	450	230
P 45	3.05:1	300 @ 4000	450	230

PV Series



PM, PL, PMB Series



MODEL	RATIO	A	B	DRY WEIGHT	MAXIMUM	HP INPUT
		INCHES/mm	INCHES/mm		GASOLINE @ 4400 RPM	DIESEL @ 3200 RPM
PM10R, PM10L	DIRECT	10.78/273.81	— —	108/48.99	277	170
PM131R, PM131L	1.31:1	17.29/439.17	.62/15.75	150/68.04	251	154
PM15R, PM15L	1.50:1	17.29/439.17	.85/21.59	155/70.31	251	154
PM20R, PM20L	2.04:1	17.29/439.17	1.30/33.02	155/70.31	251	154
PM200L*	2.04:1	19.09/484.89	1.30/33.02	177/80.29	251	154
PM25R, PM25L	2.55:1	17.29/439.17	1.55/39.37	155/70.31	198	122
PM30R, PM30L	3.00:1	17.29/439.17	1.70/43.18	155/70.31	157	96
PMB15R, PMB15L	1.50:1	17.70/449.58	1.06/26.92	172/78.02	277	170
PMB20R, PMB20L	2.04:1	17.70/449.58	1.62/41.15	172/78.02	277	170
PMB200L*	2.04:1	19.50/495.30	1.62/41.15	192/81.09	277	170
PMB25R, PMB25L	2.55:1	17.70/449.58	1.94/49.28	172/78.02	277	170
PMB30R, PMB30L	3.00:1	17.70/449.58	2.12/53.85	172/78.02	277	170

NOTE: R or L suffix on model designation refers to engine output rotation. All models provide same output as engine rotation except * above. Models PM200L and PMB200L provide output opposite to engine rotation.

NOTE: Horsepower ratings are furnished as a guide only. Please request our recommendations for proper selection.

NOTE: PMB models are PM Series with heavy duty output groups.

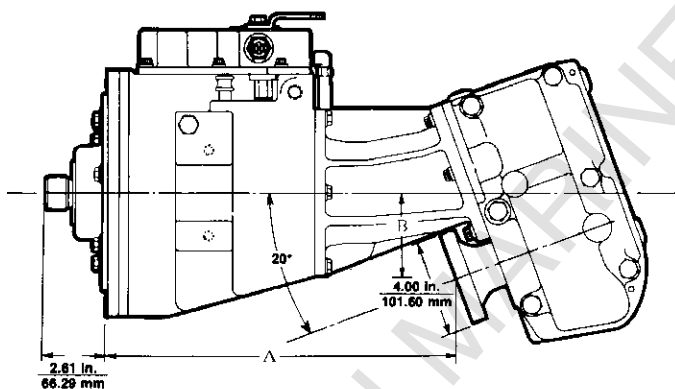
PL Series	MODEL	RATIO	A	B	DRY WEIGHT	MAXIMUM	HP INPUT
			INCHES/mm	INCHES/mm	LBS./kg	GASOLINE @ 4400 RPM	DIESEL @ 3200 RPM
	PM10R, PM10L	DIRECT	11.25/285.75	— —	115/52.16	325	205
	PM131R, PM131L	1.31:1	17.70/449.58	.75/19.05	172/78.05	335	205
	PL15R, PL15L	1.50:1	17.70/449.58	1.06/26.92	179/81.19	335	205
	PL20R, PL20L	2.04:1	17.70/449.58	1.62/41.15	179/81.19	335	205
	PL200L*	2.04:1	19.50/495.30	1.62/41.15	199/90.26	277	170
	PL25R, PL25L	2.55:1	17.70/449.58	1.94/49.28	179/81.19	335	205
	PL30R, PL30L	3.00:1	17.70/449.58	2.12/53.85	179/81.19	335	205

NOTE: R or L suffix on model designation refers to engine output rotation. All models provide same output as engine rotation except * above. Model PL200L provides output opposite to engine rotation.

NOTE: Horsepower ratings are furnished as a guide only. Please request our recommendations for proper selection.

NOTE: All horsepower ratings are furnished as a guide only. Please request specific application assistance from your local Paragon Power dealer.

PMV, PLV Series



MODEL	RATIO	A	B	DRY WEIGHT	MAXIMUM	HP INPUT	
		INCHES/mm	INCHES/mm	LBS./kg	GASOLINE @ 4400 RPM	DIESEL @ 3200 RPM	
PMV Series	PMV10R, PMV10L	DIRECT	14.72/373.89	3.69/92.71	190/86.18	277	170
	PMV100L*	DIRECT	14.72/373.89	3.65/92.71	205/92.98	277	170
	PMV15R, PMV15L	1.52:1	14.72/373.89	3.65/92.71	190/86.18	277	170
	PMV150L*	1.52:1	14.72/373.89	3.65/92.71	205/92.98	277	170
	PMV20R, PMV20L	1.96:1	14.72/373.89	3.65/92.71	190/86.18	277	170
	PMV200L*	1.96:1	14.72/373.89	3.65/92.71	205/92.98	277	170
	PMV25R, PMV25L	2.58:1	14.72/373.89	3.65/92.71	190/86.18	277	170
	PMV250L*	2.58:1	14.72/373.89	3.65/92.71	205/92.98	277	170

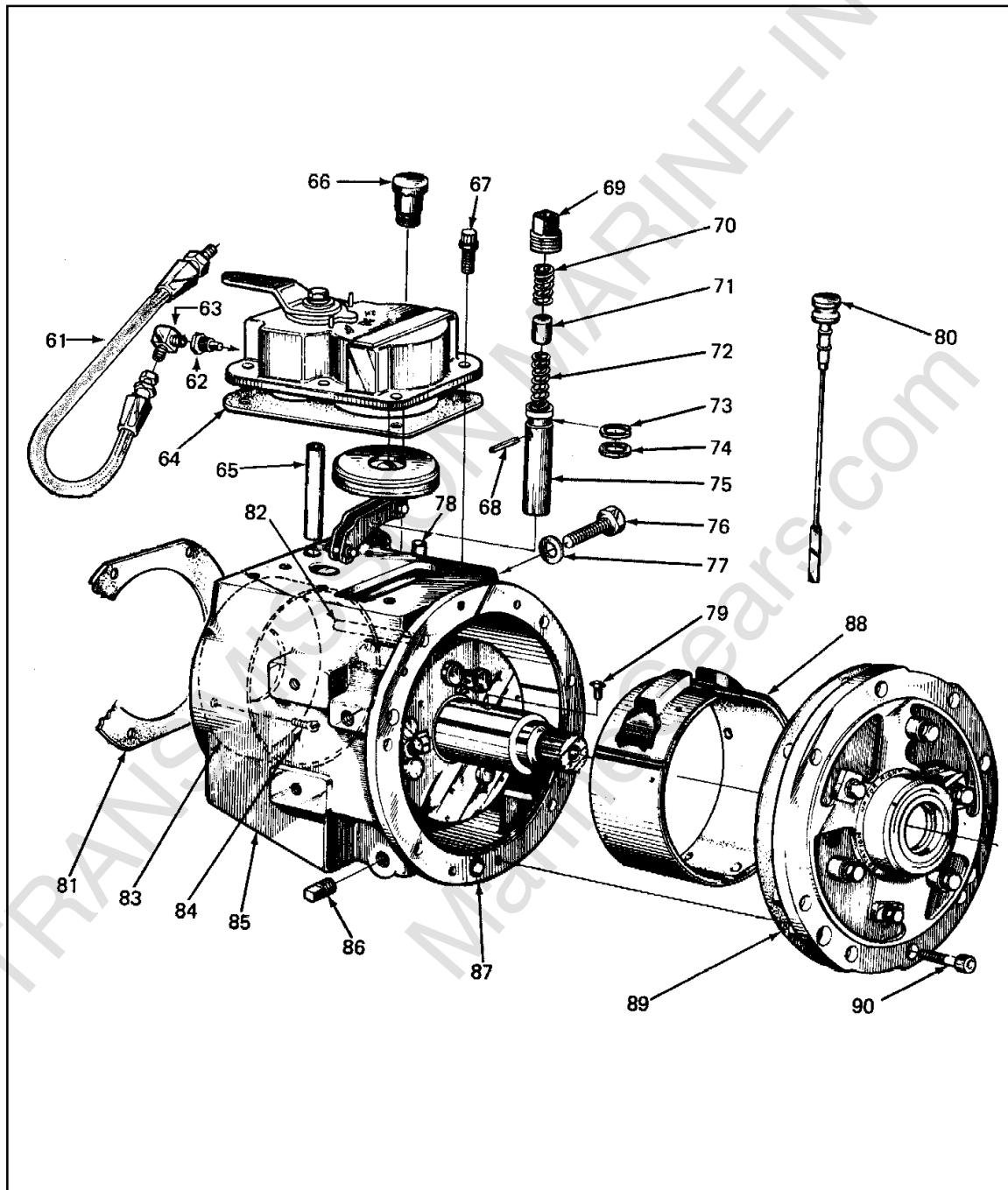
MODEL	RATIO	A	B	DRY WEIGHT	MAXIMUM	HP INPUT	
		INCHES/mm	INCHES/mm		LBS./kg	GASOLINE	DIESEL
				@ 4400 RPM		@ 3200 RPM	
PLV Series	PLV10R, PLV10L	DIRECT	15.19/385.83	4.16/105.66	204/92.53	335	205
	PLV100L*	DIRECT	15.19/385.83	4.16/105.66	220/99.79	335	205
	PLV15R, PLV15L	1.46:1	15.19/385.83	4.16/105.66	204/92.53	335	205
	PLV150L*	1.46:1	15.19/385.83	4.16/105.66	220/99.79	335	205
	PLV20R, PLV20L	1.96:1	15.19/385.83	4.16/105.66	204/92.53	335	205
	PLV200L*	1.96:1	15.19/385.83	4.16/105.66	220/99.79	335	205
	PLV25R, PLV25L	2.52:1	15.19/385.83	4.16/105.66	204/92.53	335	205
	PLV250L*	2.52:1	15.19/385.83	4.16/105.66	220/99.79	335	205

NOTE: R or L suffix on model designation refers to engine output rotation. All models provide opposite output to engine rotation except * above. Models PLV100L, PLV150L, PLV200L, PLV250L, PMV100L, PMV150L, PMV200L and

PMV250L provide output same as engine rotation.

NOTE: Horsepower ratings are furnished as a guide only. Please request our recommendations for proper selection.

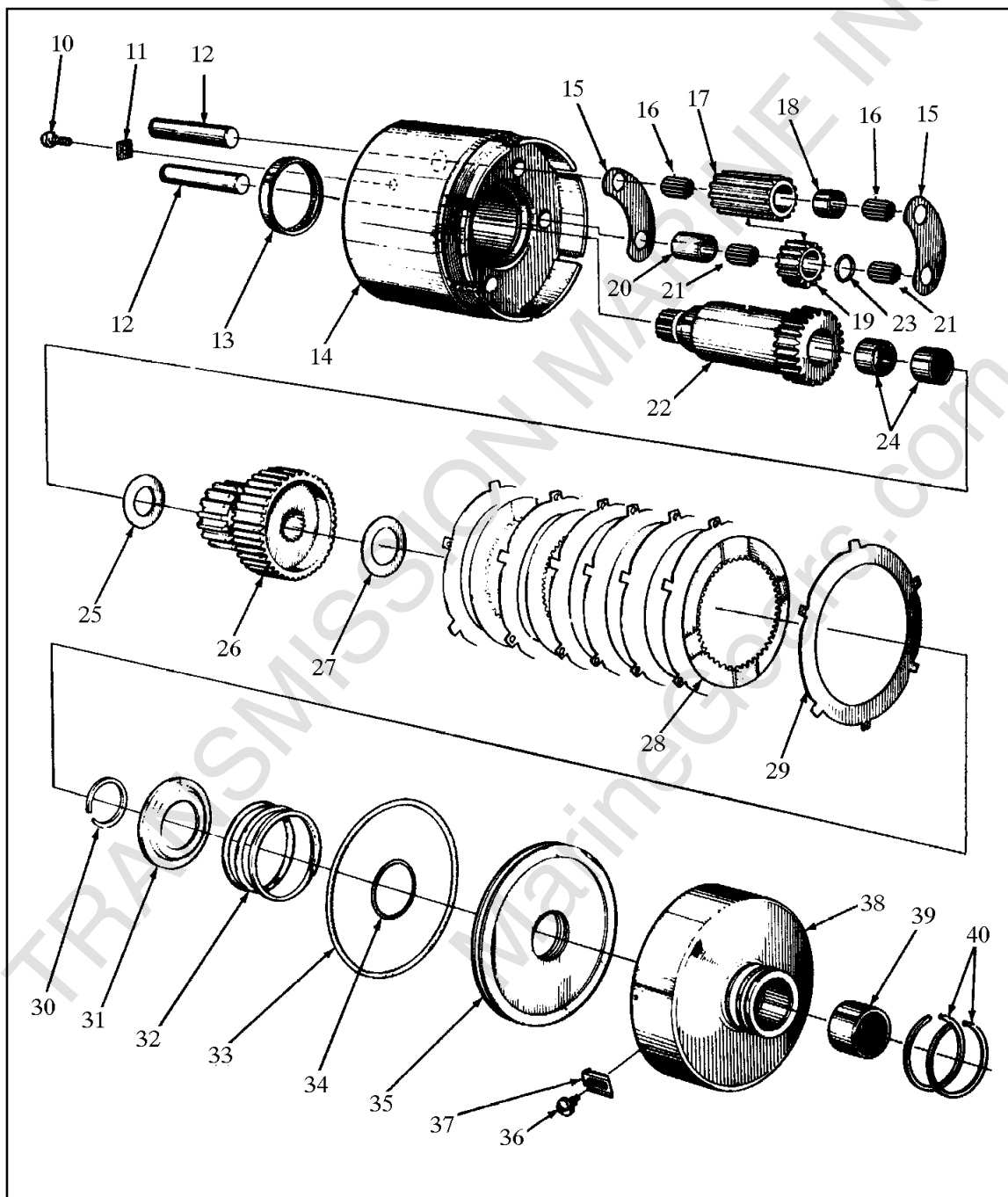
P Series (Continued)



P Series, forward & reverse portion.

PP-01

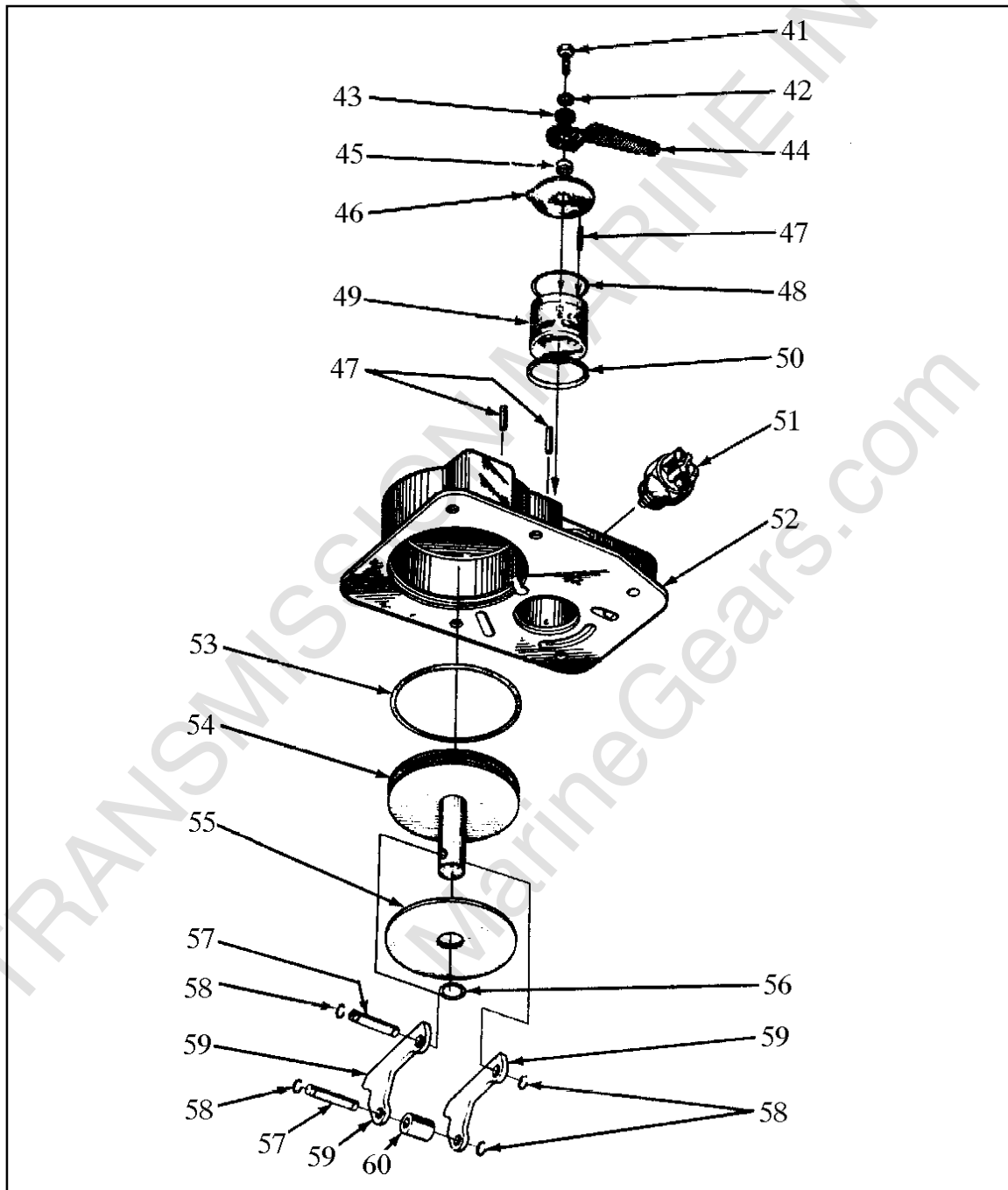
P Series (Continued)



P Series, clutch assembly.

PP-02

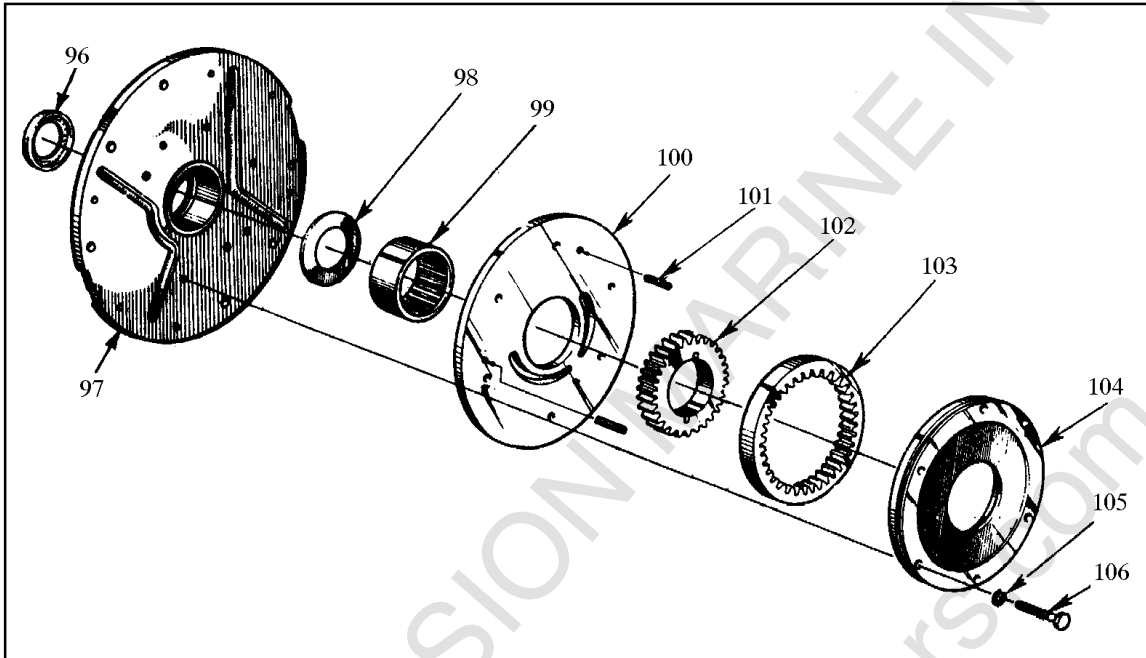
P Series (Continued)



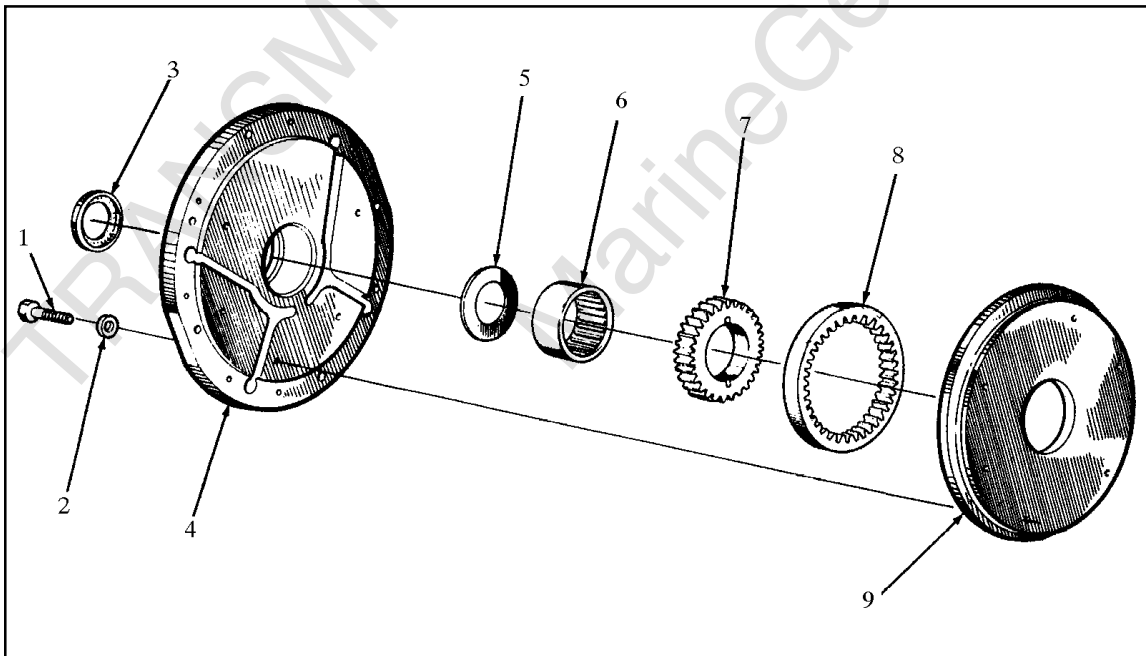
P Series, control valve assembly.

PP-03

P Series (Continued)



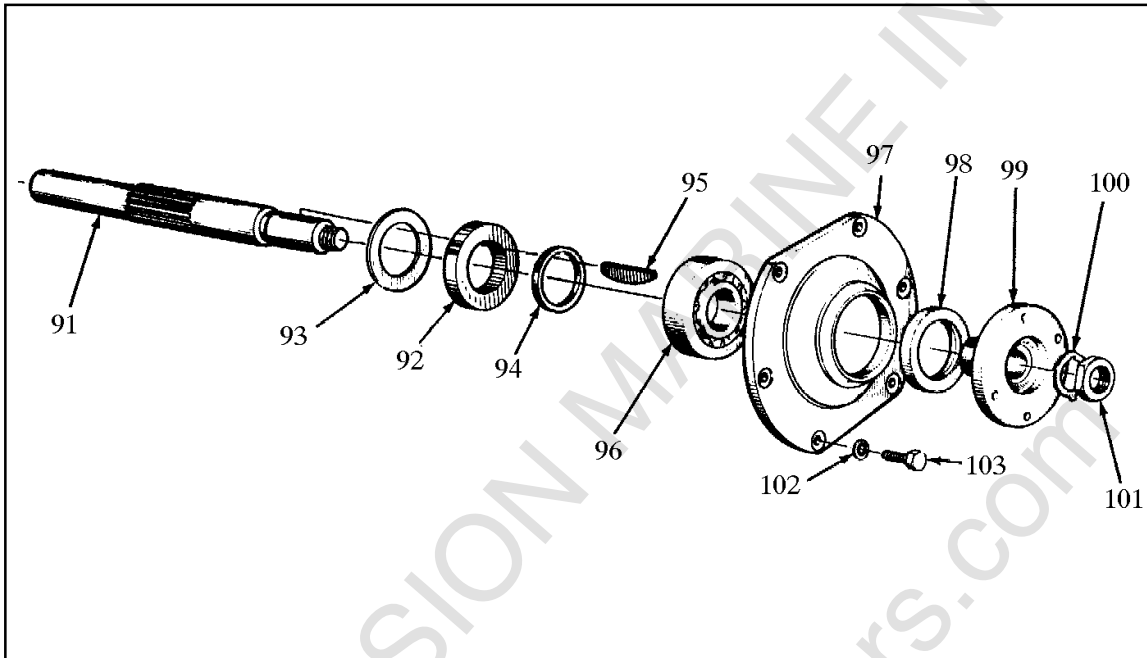
P Series, early style pump assembly.



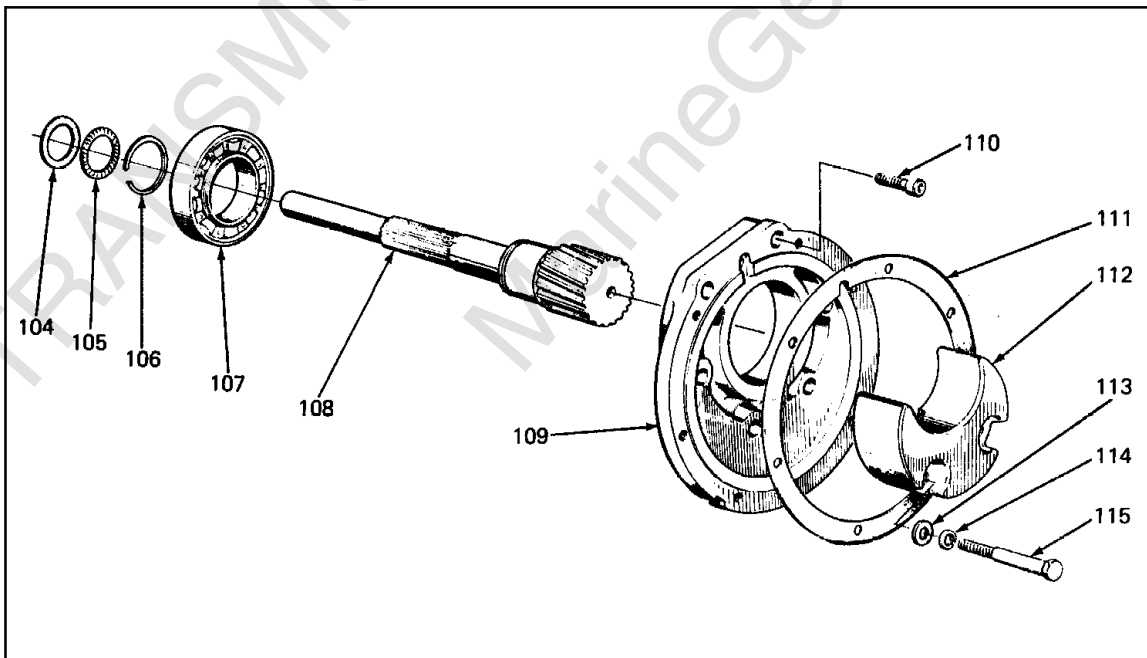
P Series, current pump assembly.

PP-04

P Series (Continued)



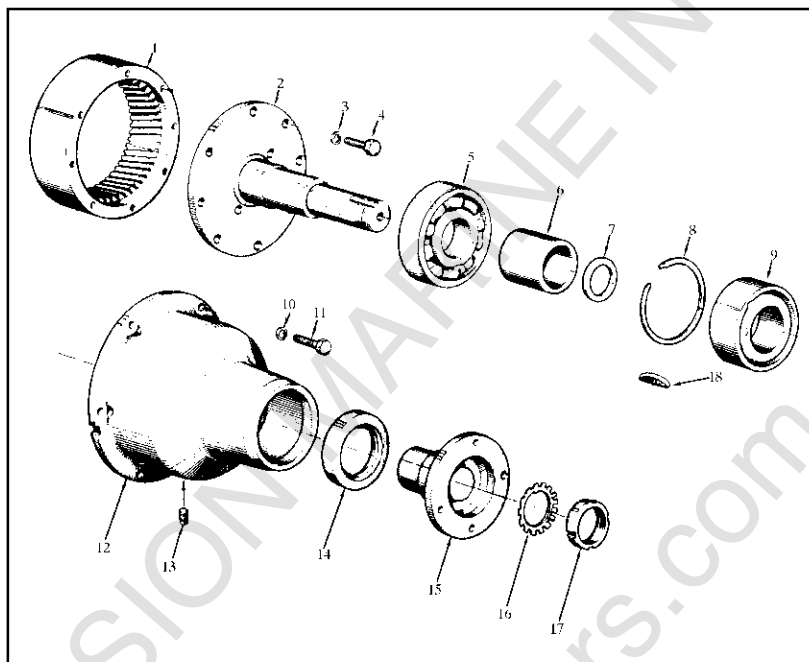
P Series, direct drive assembly.



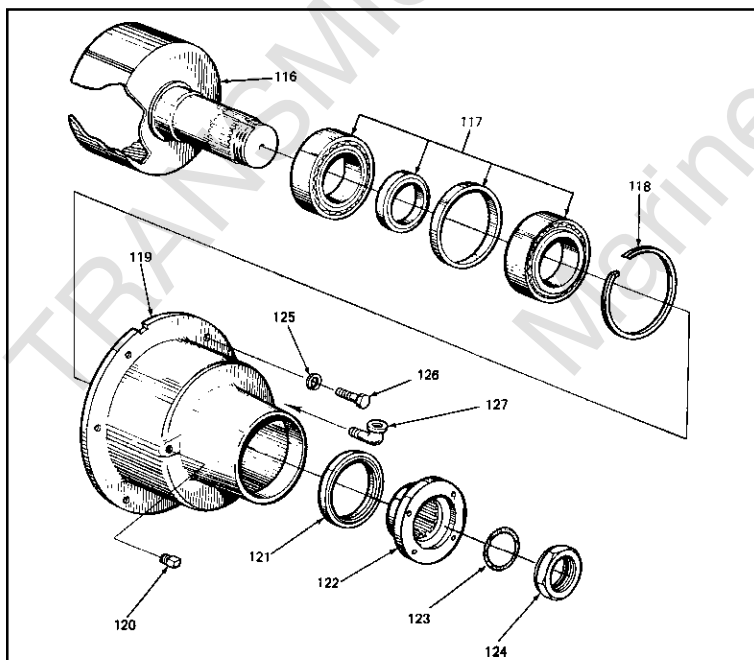
P Series, reduction assembly.

PP-05

P Series (Continued)



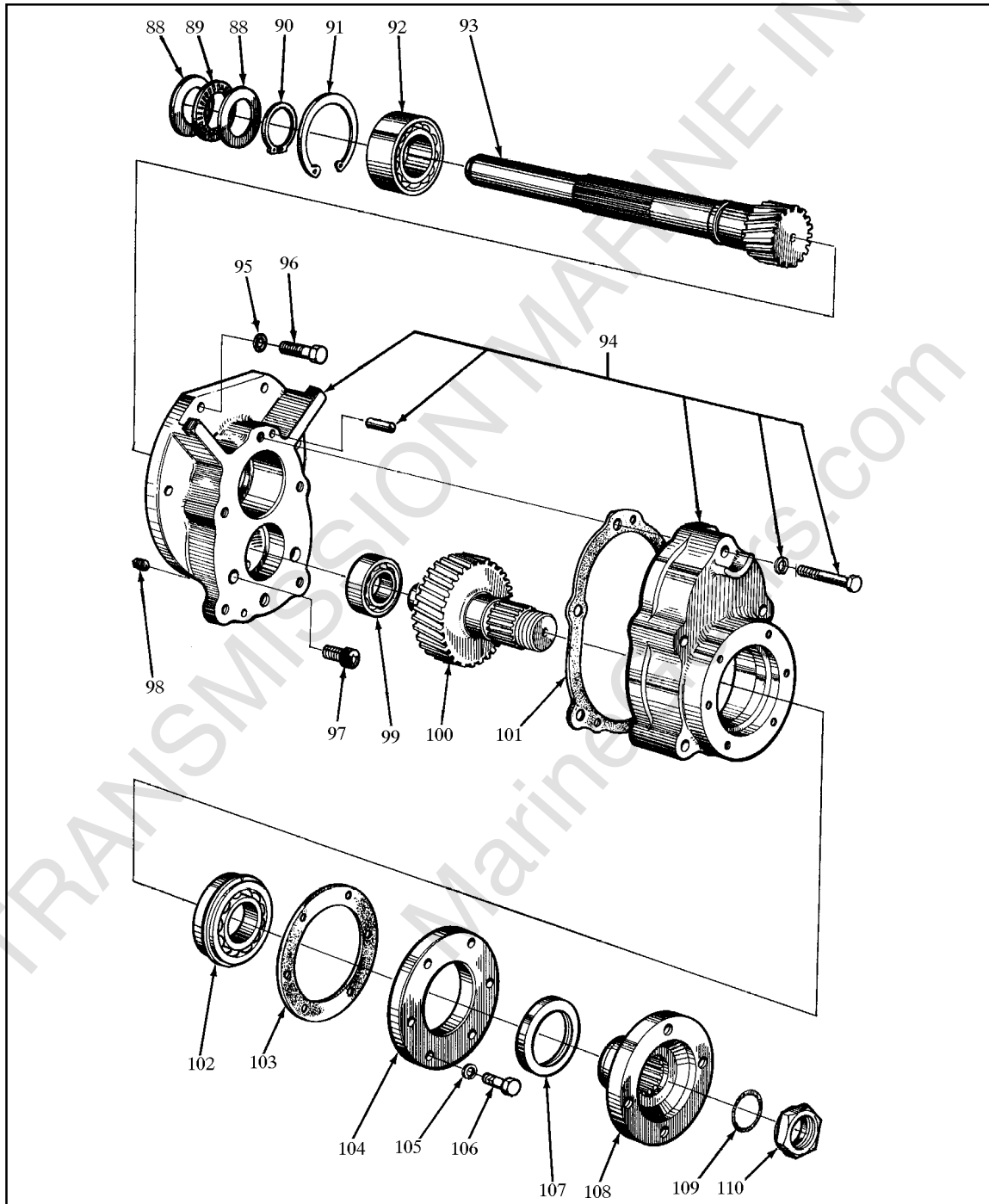
P Series, early style reduction assembly.



P Series, current reduction assembly.

PP-06

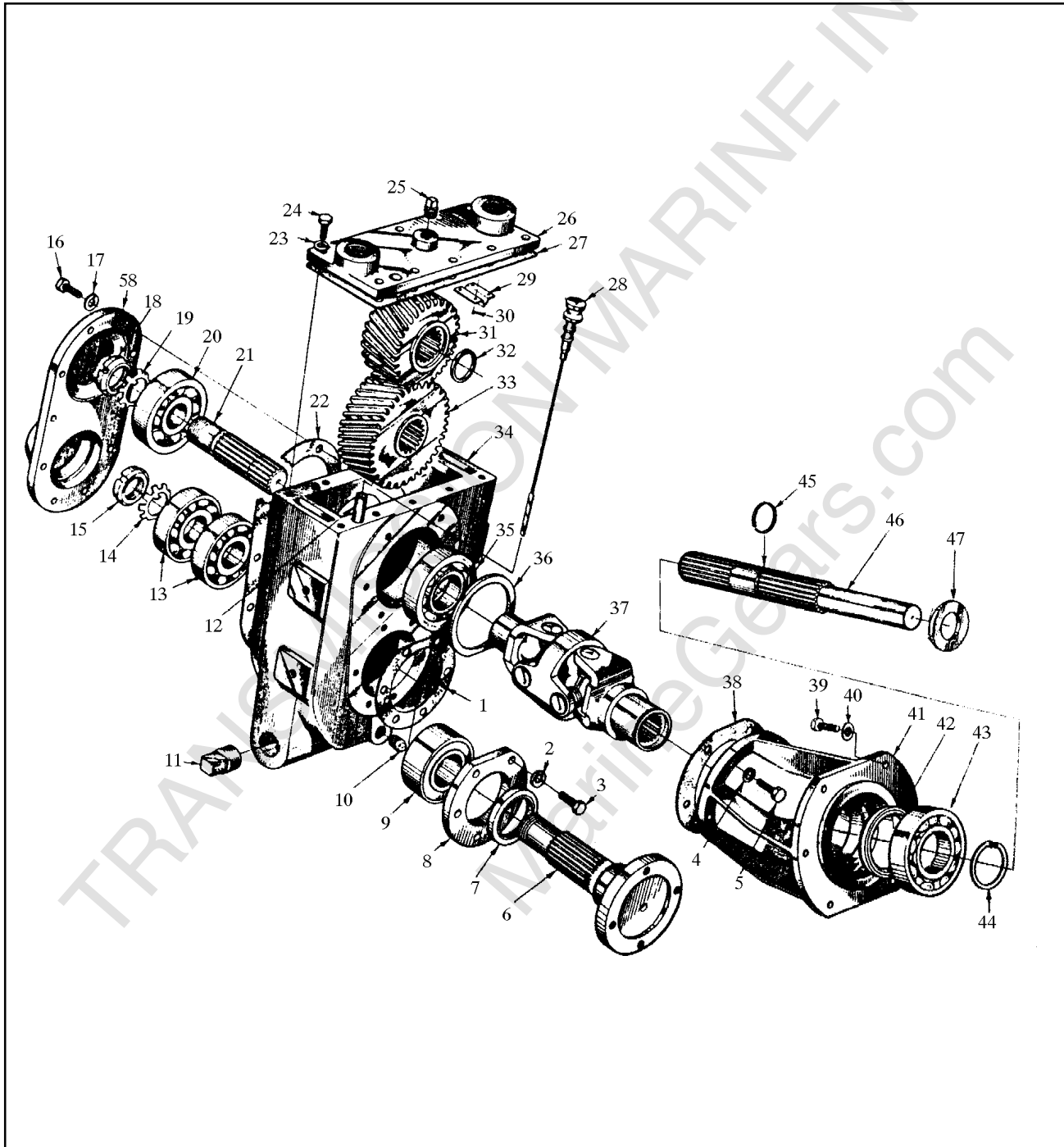
P Series (Continued)



P Series, reduction assembly.

PP-07

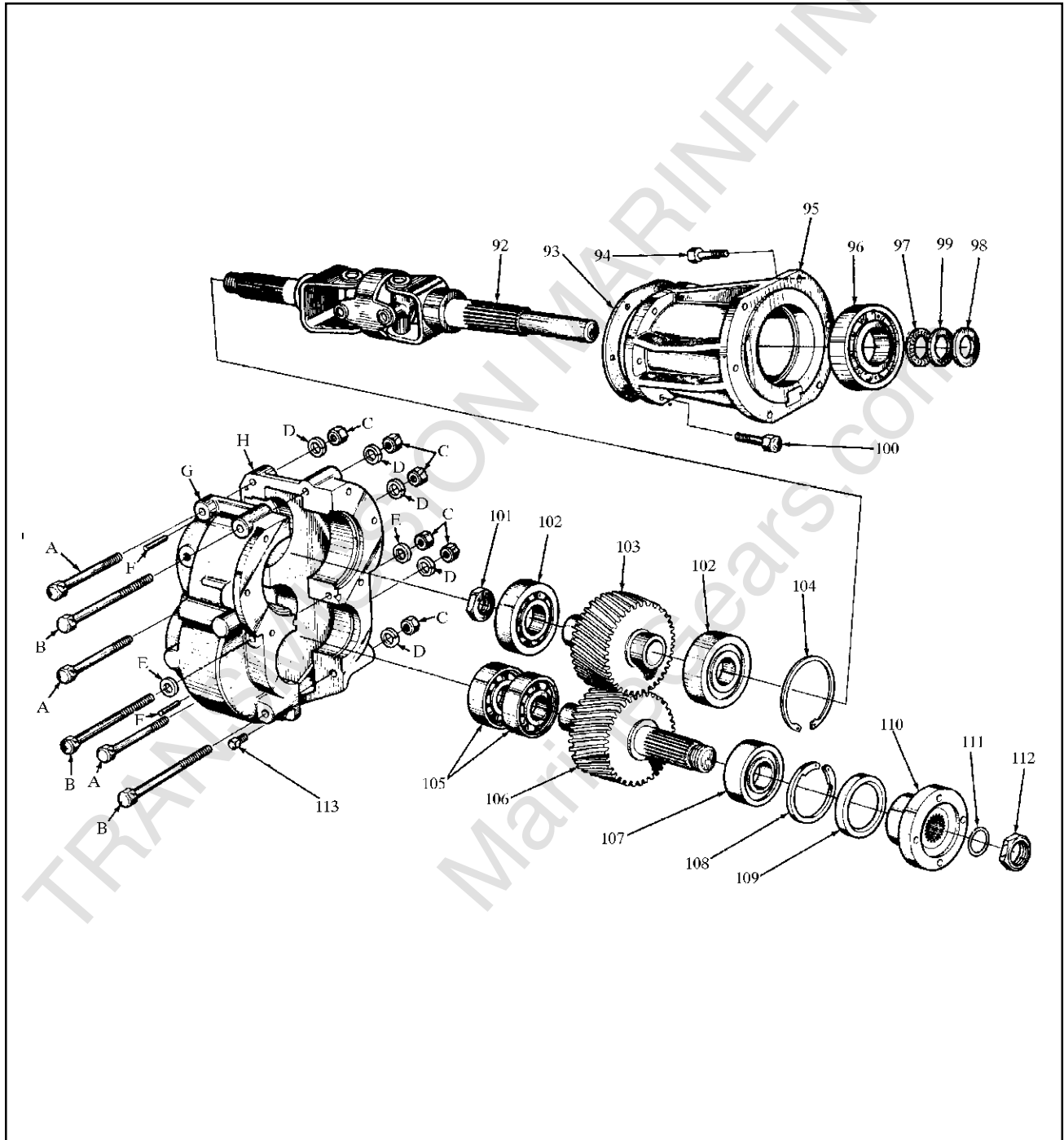
PV Series Water Jacket



P Series V-drive portion (water-jacketed housing). assembly.

PP-08

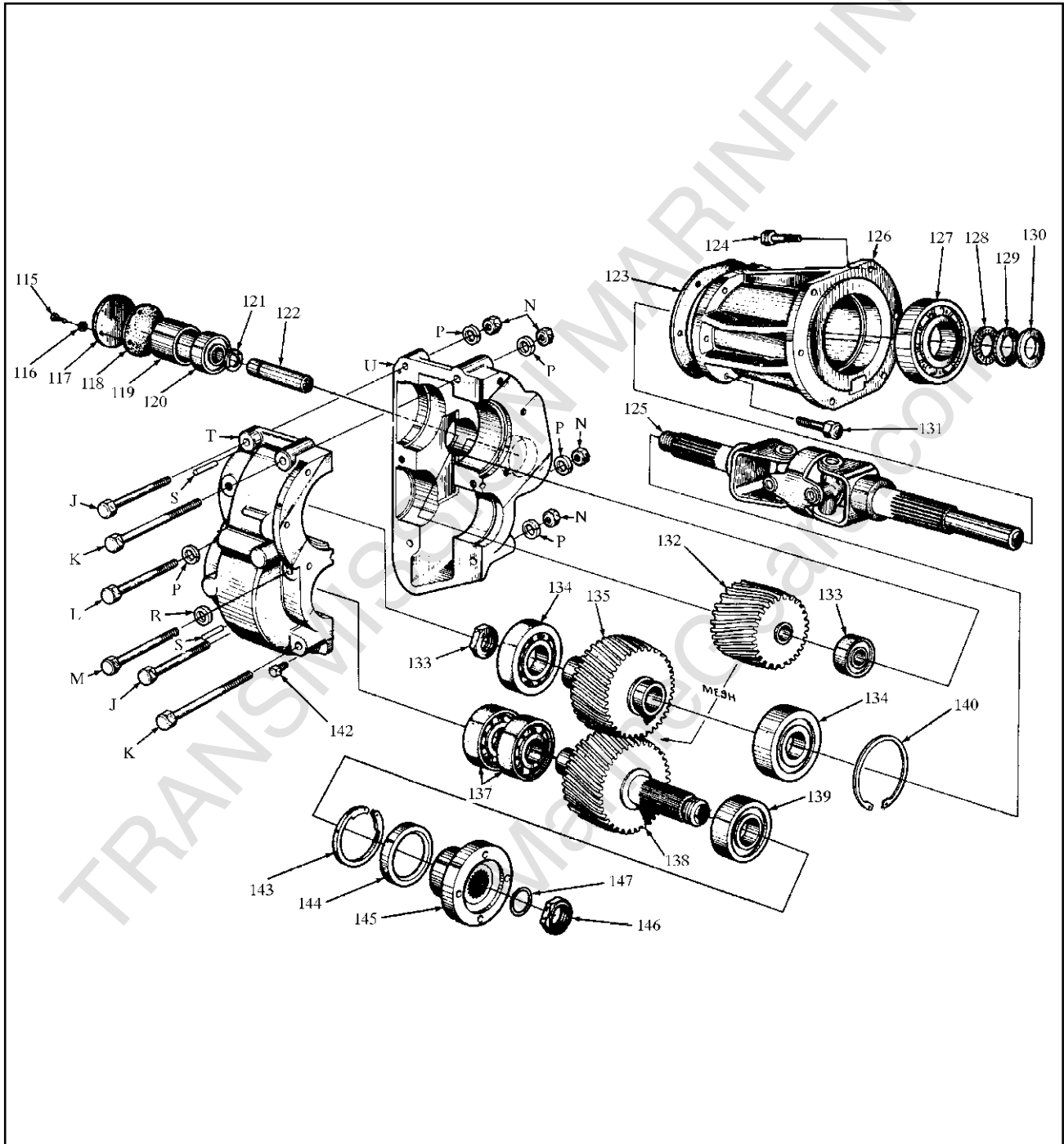
PV Series Split Case



P Series V-drive portion (2 gear) assembly.

PP-09

PV Series Split Case, 3 Gear Set

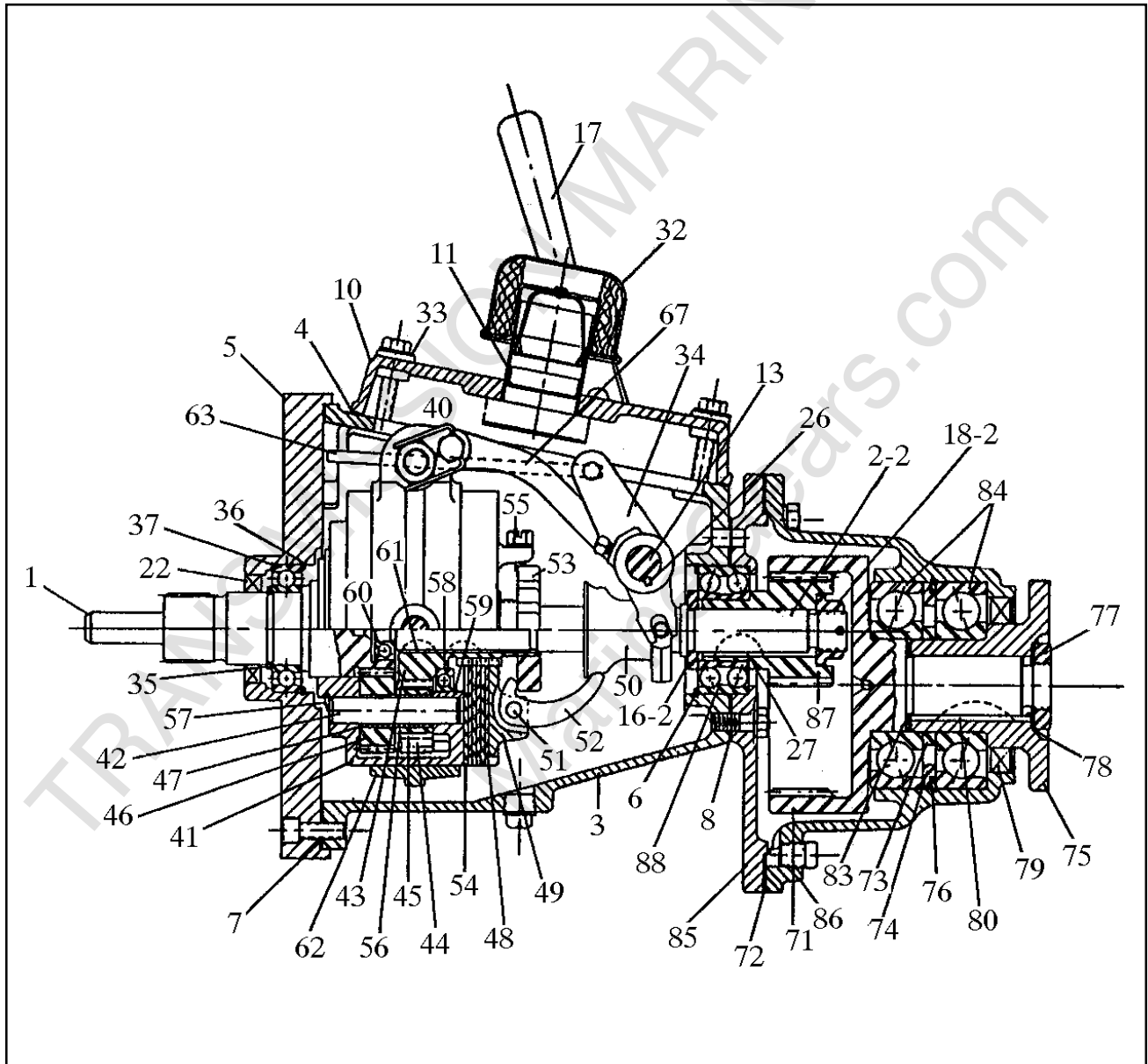


P Series V-drive, split-case (3 gear) assembly.

PP-10

Manual Gear Box (SA0, 1XE)

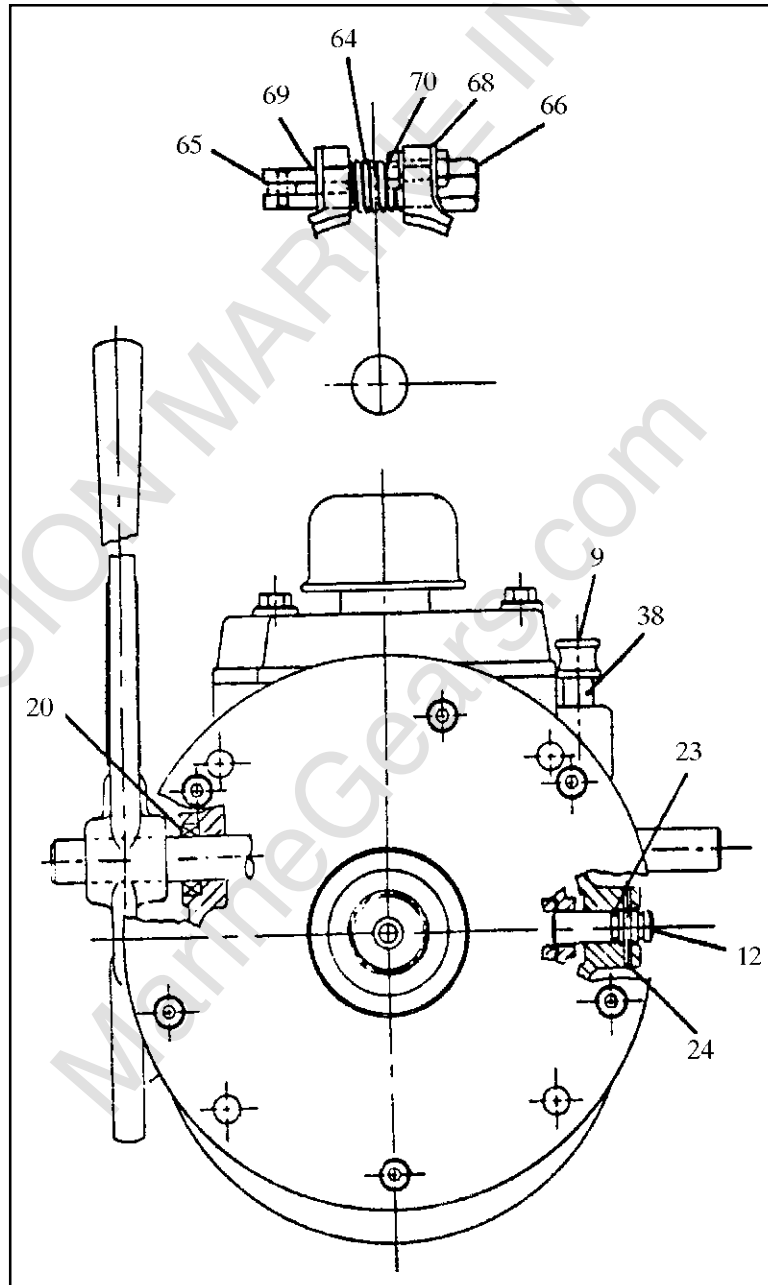
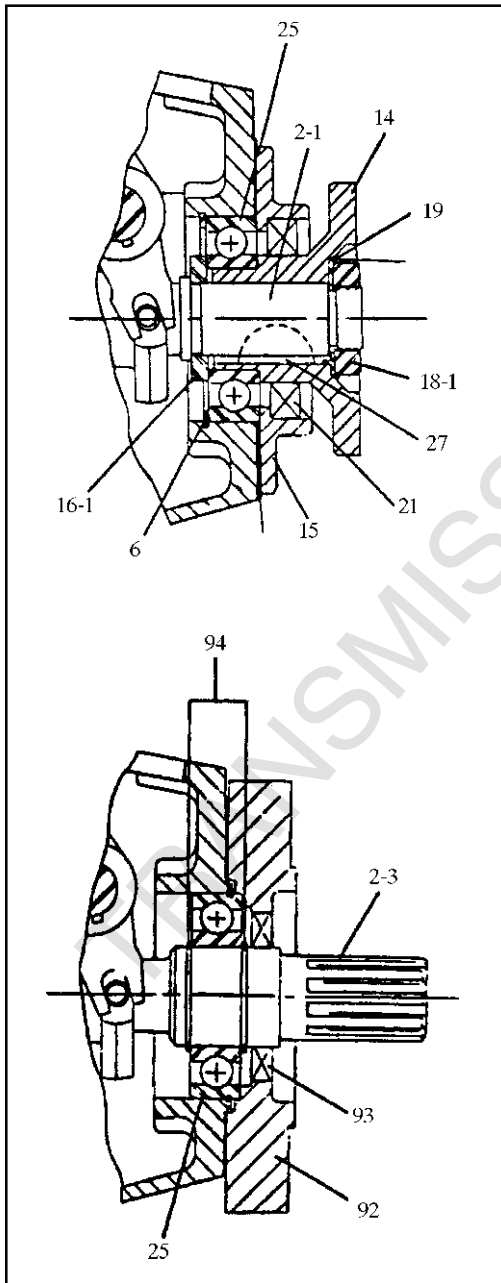
This section covers the **0XKB, 1XE, 2XE, 25XE, 3XE, 35XE** and **4XE** manual reverse gears. Due to the similarity of these units, this section is based upon the **0XKB** and **1XE** size units. Please furnish model and serial number usually located on the top cover, or the gear case drum assembly.



Manual SA0, 1XE, etc...

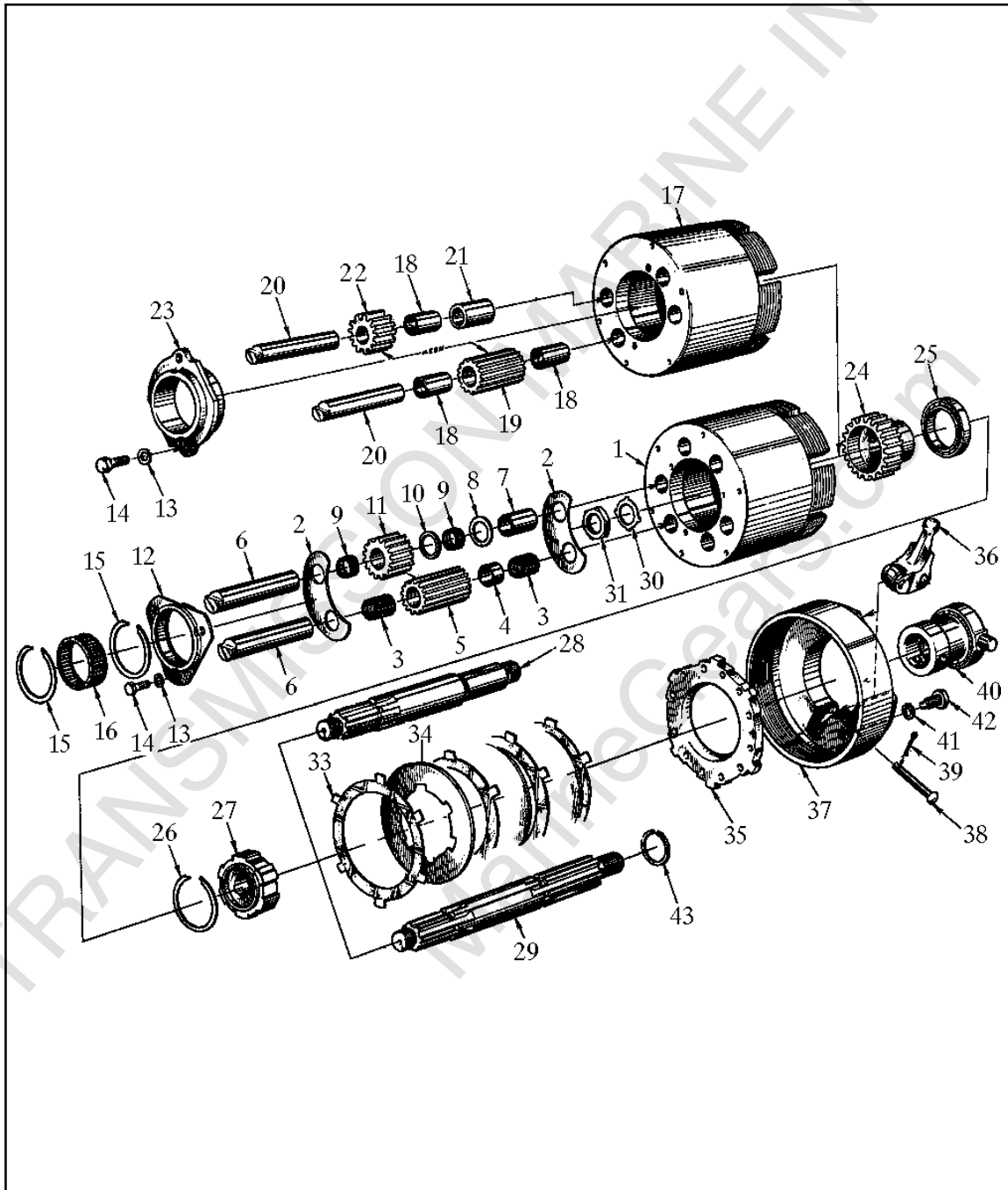


Manual Gear Box (Continued)



PP-12

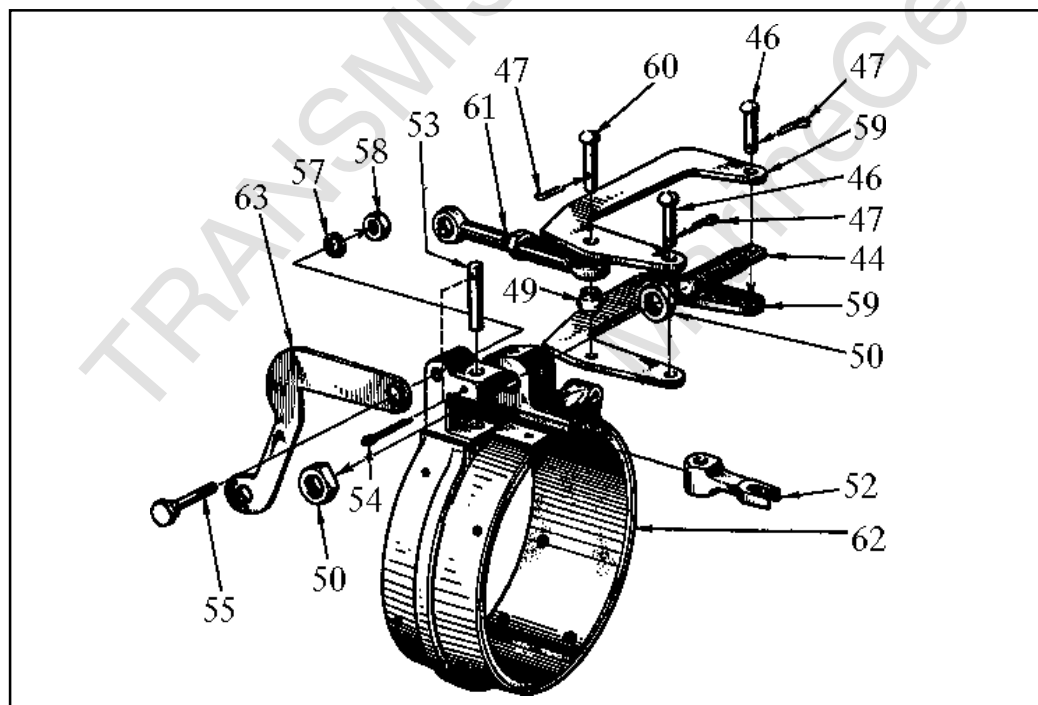
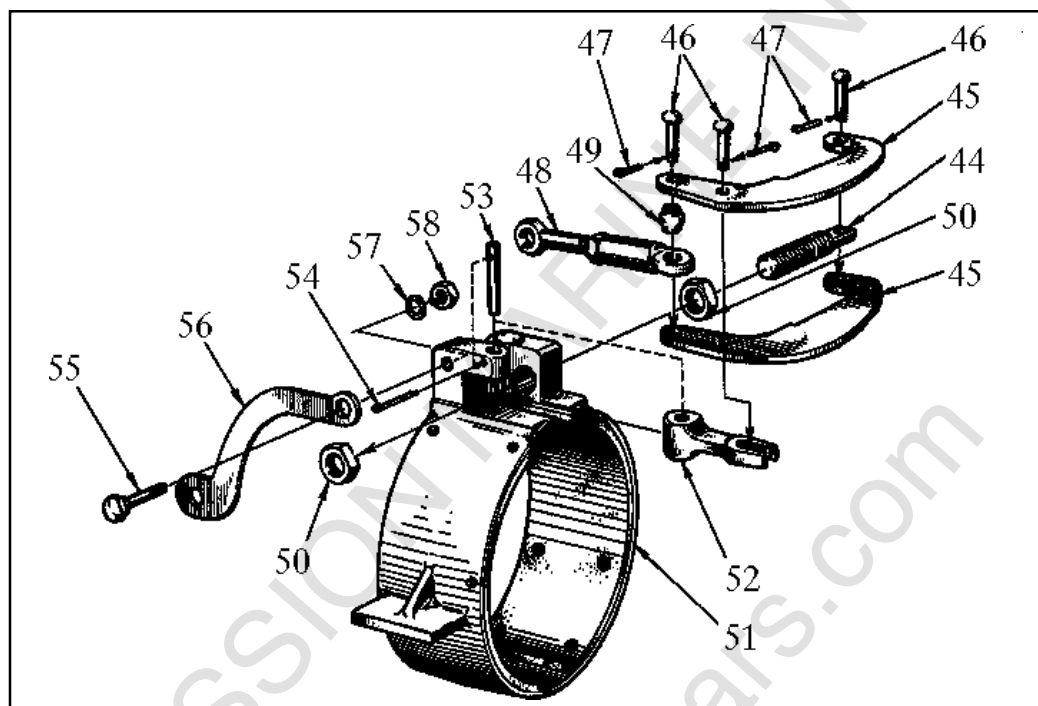
Manual Gear Box (Continued)



Typical manual gear clutch assembly.

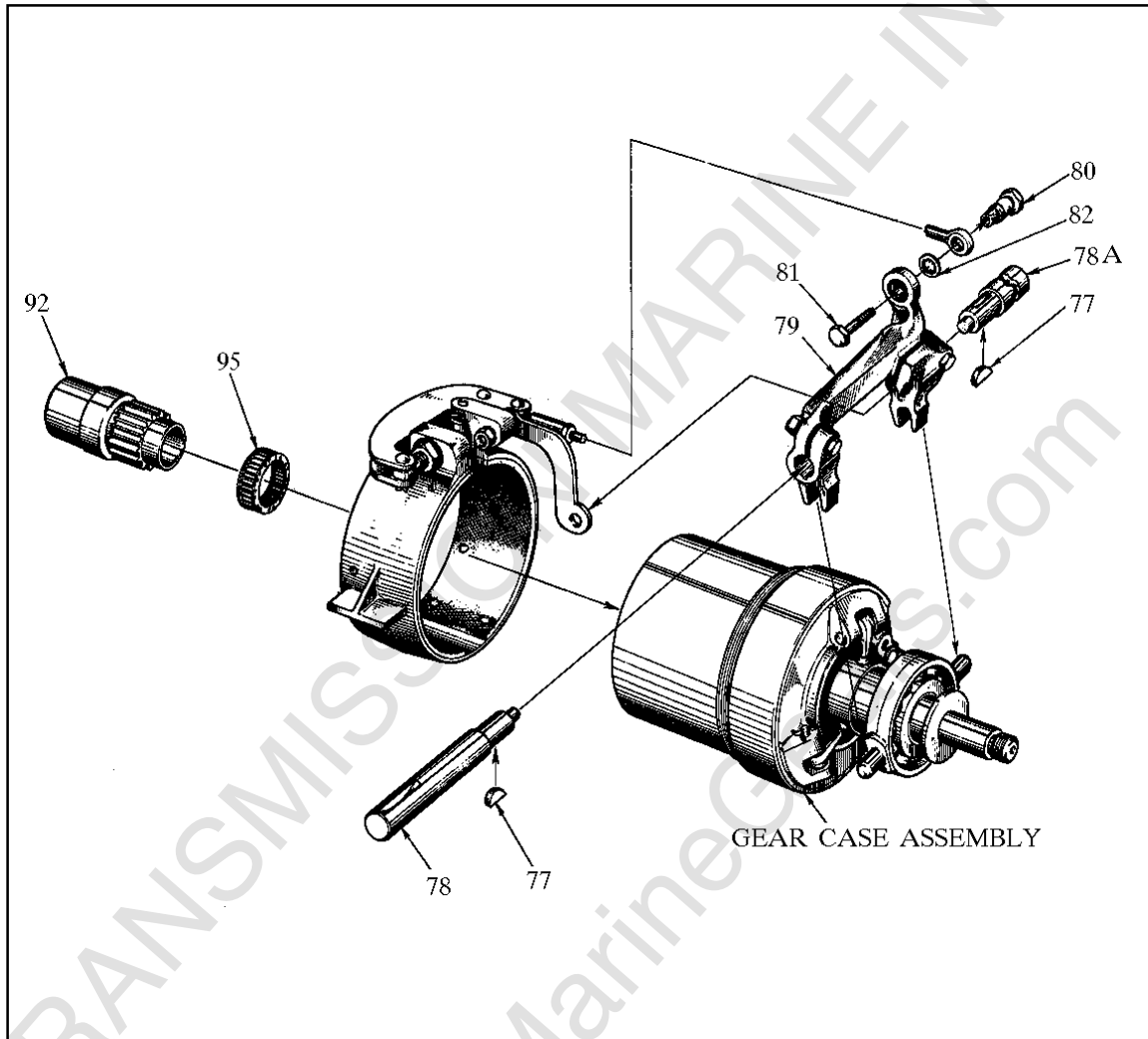


Manual Gear, reverse band assembly



PP-14

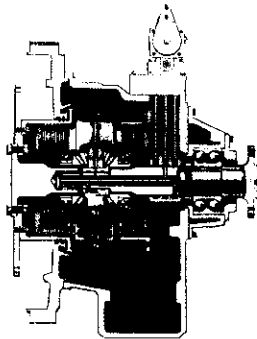
Manual Gear, reverse band assembly (Continued)



Typical manual gear clutch assembly.

Dimensions/Ratings

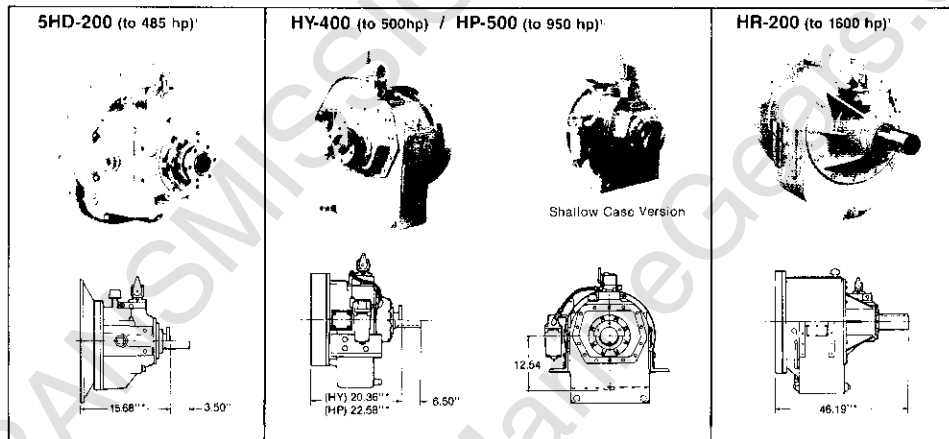
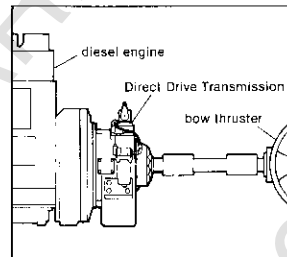
Direct Drive Models—marine & industrial application: 100 to 1600 hp (75-1193 kW)



Capitol Direct Drive Transmissions are not 1:1 reduction gearboxes, but rather straight-through reversing clutches. A choice of variations, including forward clutch only and keyed or flanged output shaft, make them ideal in a wide range of applications. The advantages of a hydraulic clutch include the use of remote mounted controls and freedom from adjustment for normal wear of clutch plates.

Direct Drives may be used for main propulsion, as a PTO, or in conjunction with bow thrusters, steerable propellers, or V-drives. Current marine applications include bulk carriers, tuna seiners, vehicular ferries, hydrofoils, and hovercraft.

Some of the many industrial applications include railroad wrecking cranes, gravel spreaders, irrigation pumps, packers and crushers.



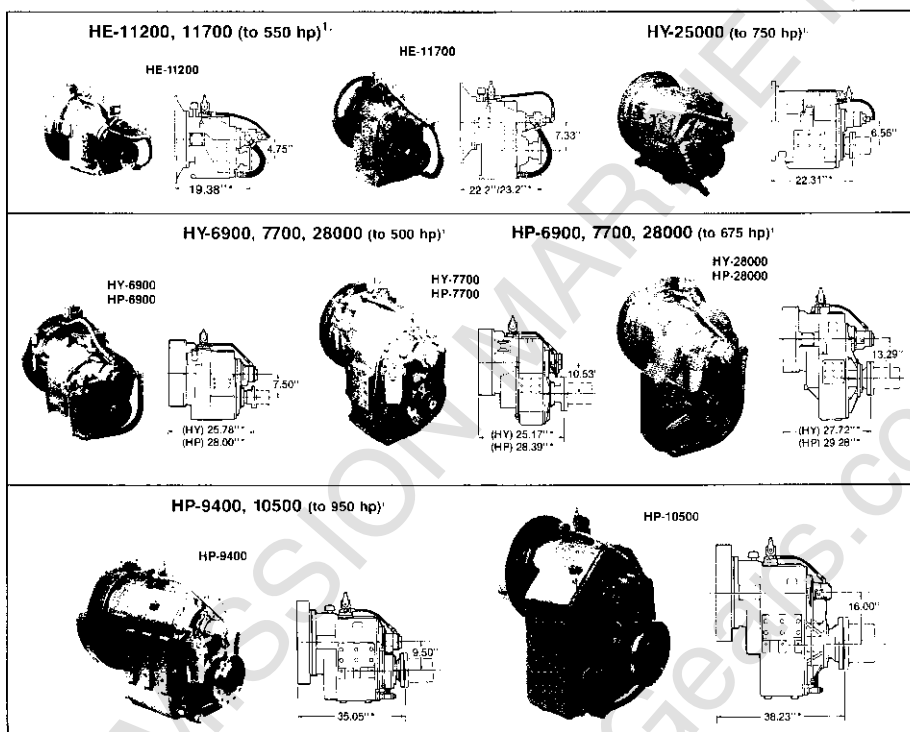
*For SAE adapters. Depending on engine, dimension may be less. Use certified drawing.

Range hp(kW) ¹	Model	Typical Engine Applications	Dry Wt. (lbs.) ²	SAE Housing	O.C. Clutch
to 485 hp (364 kW)	5HD-200	Alfo-Fiat 821M. Caterpillar 3306. Detroit Diesel 6V-92, 8V-71. Cummins VT903M, N855M.	235	1,2,3	10", 11 1/2", 14"
to 500 hp (373 kW)	HY-400	Caterpillar 3406, 3408. Cummins NT855M, KT 1150M. Detroit Diesel 8V-71, 8V-92, 12V-71.	505	0,1	14"
to 950 hp (708 kW)	HP-500	Caterpillar 3412 TA, D353. Cummins KTA 1150M VTA 1710M, KT 2300. Detroit Diesel 12V-71, 12V-149, 16V-71.	725	0,1	14", 18"
to 1600 hp (1193 kW)	HR-200	Caterpillar D398, D399. Cummins KTA 2300M. Detroit Diesel 16V-149TI. Waukesha L5792 DSIM.	3500	00, 0	18", 21", 24"

1. Depending on input speed and duty. Consult factory or distributor.
2. Weights may vary depending on clutch and adaptation.

Dimensions/Ratings

Reduction Models: 100 to 950 hp (75-708 kW)

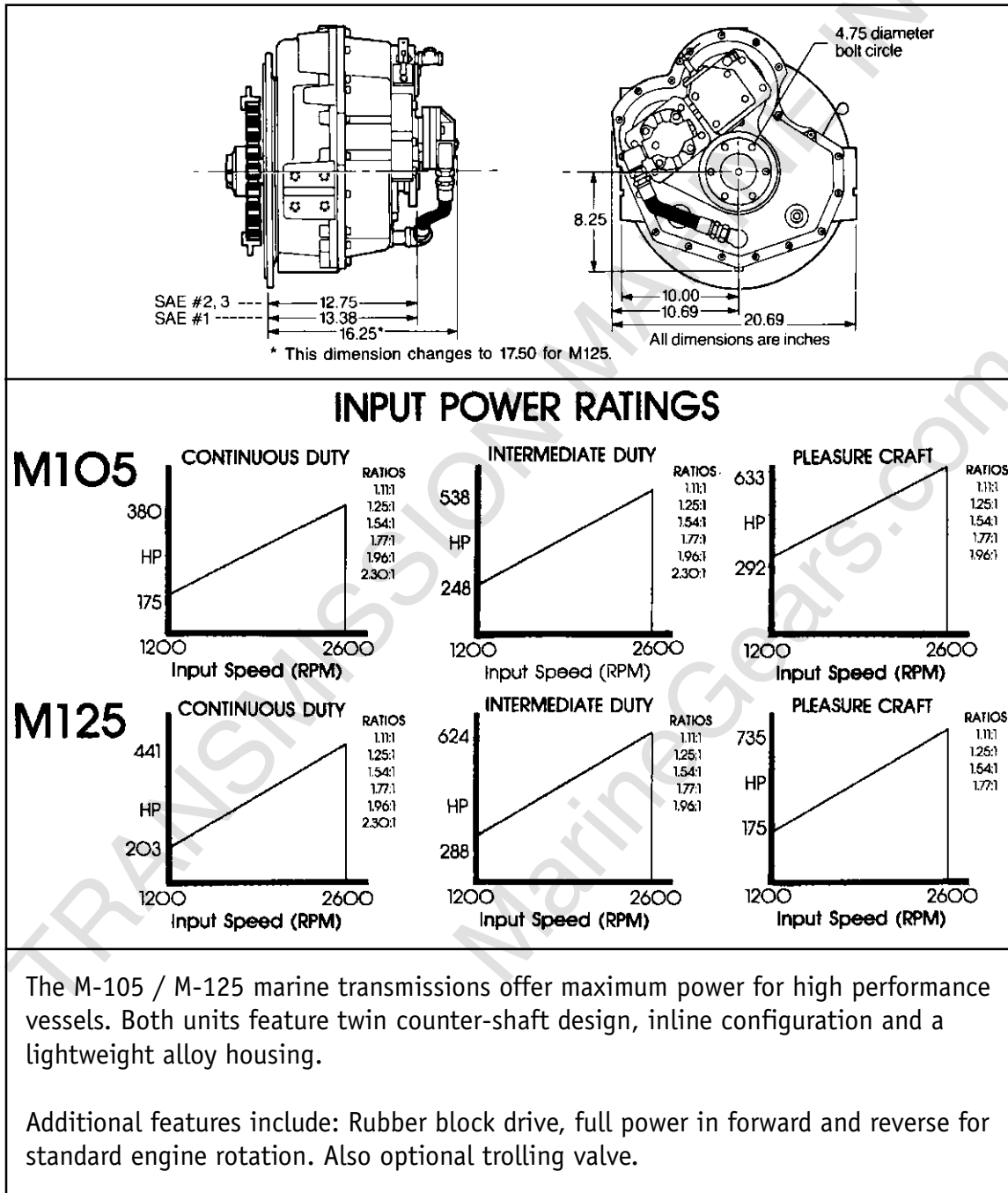


¹For SAE adapters. Depending on engine, dims

Range hp (kW) ¹	Model	Ratios for Anti-Engine Rotation Output	Ratios for Engine Rotation Output	Dry Wt. ² (lbs.)	SAE Housing	O.C. Clutch
to 550 hp (410 kW)	HE-11200	1.04, 1.20, 1.50, 1.75 2.00, 2.44, 2.93	1.08, 1.50, 2.00	380	#1,2 3,4	10", 11½" 14"
	HE-11700	2.54, 3.05, 3.47, 4.00 4.53, 5.00	2.48, 3.00, 3.44 4.00, 4.53, 5.00	490		
to 750 hp (563 kW)	HY-25000	1.00, 1.24, 1.53, 2.04	1.00, 1.53, 2.04	570	#1,2	11½", 14"
to 500 hp (373 kW)	HY-6900	1.15, 1.29, 1.49, 2.11 2.48, 2.95	1.28, 1.49, 2.04 2.52	870	#1,0	14"
	HY-7700	2.49, 2.70, 3.07, 3.52 3.88, 4.54	3.03, 3.50, 3.88 4.52	1230		
	HY-28000	4.50, 5.16, 6.00	4.52, 5.17, 6.09	1620		
to 675 hp (503 kW)	HP-6900	1.25, 1.48, 2.11, 2.48	1.48, 2.11, 2.52	1050	#1,0	14", 18"
	HP-7700	3.07, 3.88	3.03, 3.88	1410		
	HP-28000	4.50, 5.16, 6.00	4.52, 5.17, 6.09	1780		
to 950 hp (708 kW)	HP-9400	1.04, 1.34, 1.50 2.06, 3.07	1.02, 1.50, 2.03 3.04	1800	#1,0	14", 18"
	HP-10500	4.00, 4.96, 6.11	4.00, 4.96, 6.12	2970		

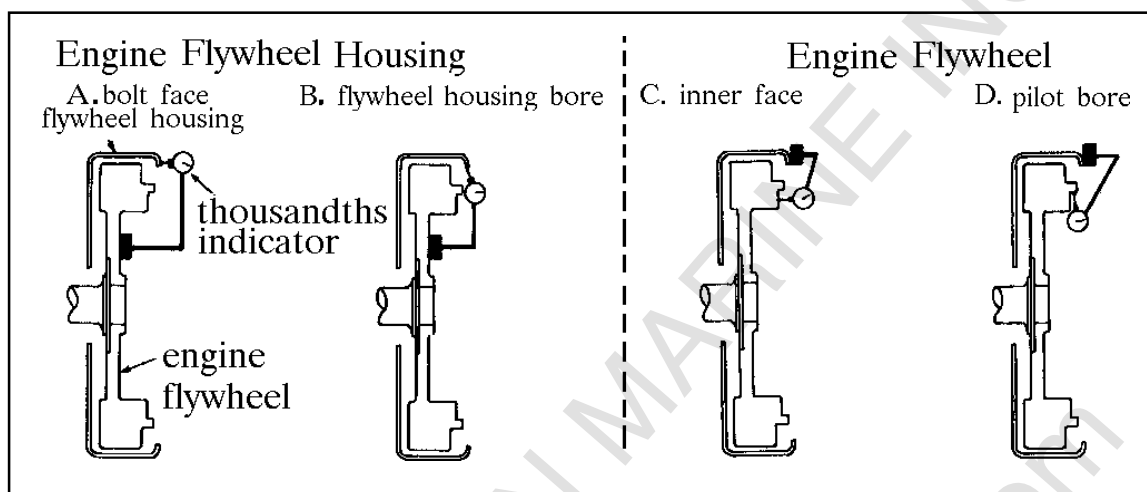
1. Depending on input speed, ratio, rotation and duty. Consult factory or distributor.
 2. Weights may vary depending on clutch and adaptation.

Dimensions/Ratings

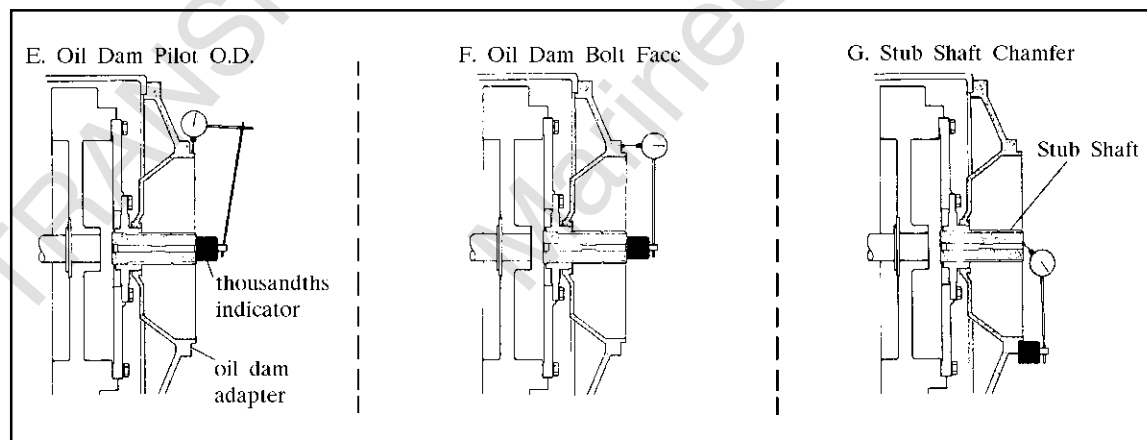


Dimensions/Ratings

Dial indicating the Flywheel Housing, Flywheel, Oil Dam and Stub Shaft



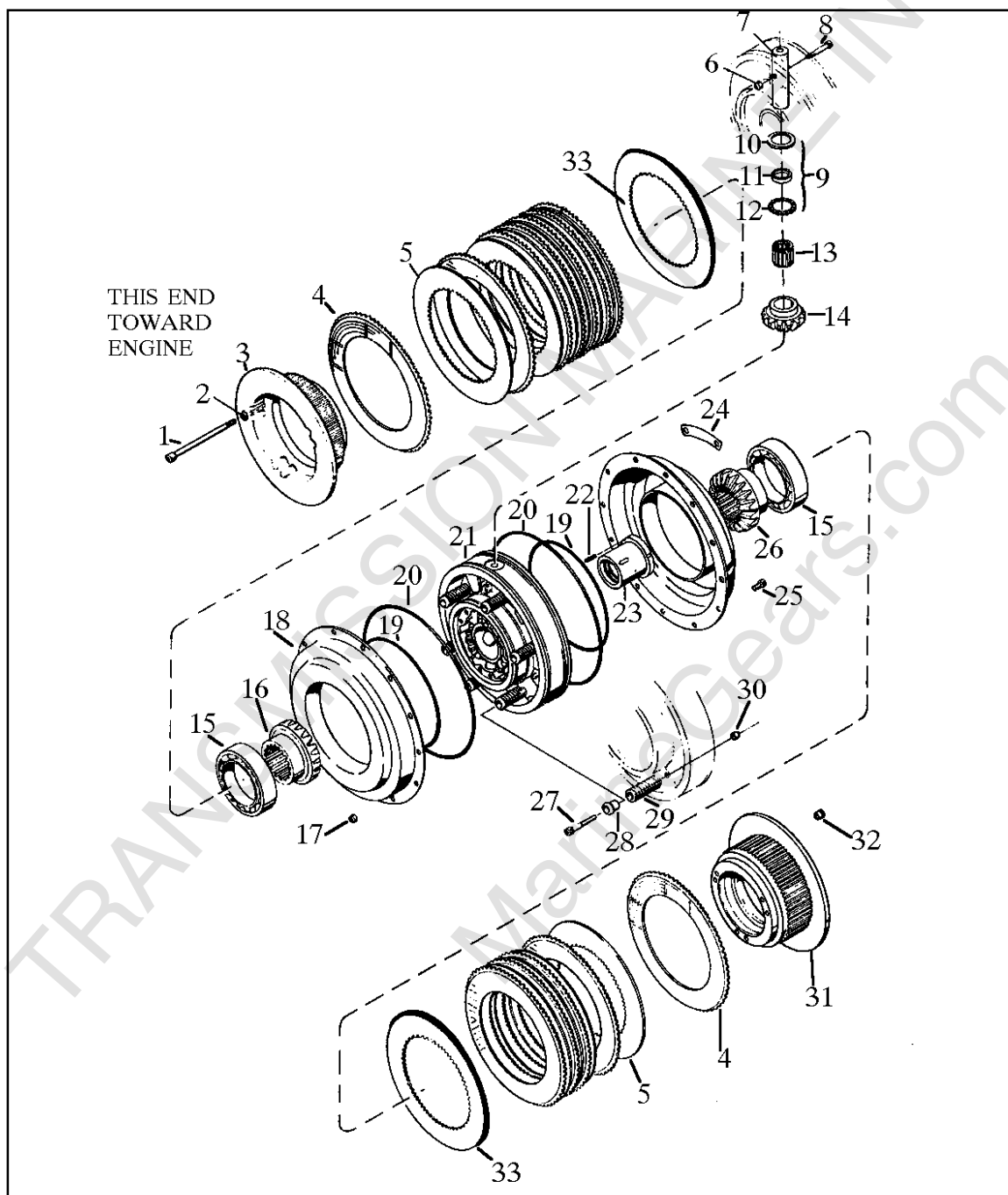
(Fig A.) Dial indicate the bolt face of the engine flywheel housing flange. Rotate engine flywheel. Record reading. Face deviation must not exceed a total indicator reading of .007 inch. (Fig B) Mount indicator with stem riding on flywheel housing bore as shown. Rotate flywheel and record reading. The bore ECCENTRICITY must not exceed a total indicator reading of .007 inch. (Fig C) Mount indicator to flywheel, so that stem is on inner face of flywheel. record deviation of face runout. It must not exceed a total indicator of .007 inch. (Fig D) Set stem to ride on the pilot bore of the engine flywheel as shown. Record reading. Pilot bore ECCENTRICITY must not exceed a total indicator reading of .007 inch. **THE SUM OF ALL READINGS MUST NOT EXCEED .007 INCH.**



Place oil dam housing on engine flywheel housing. "Top" mark goes up. Tighten 2 capscrews to hold oil dam in place. Dial indicate rear oil dam pilot O.D. as shown in (Fig E). Dial indicate bolt face as shown in (Fig F). Record both readings. Total indicator readings must not exceed .007 inch. Dial indicate the stub shaft as shown in (Fig G). Record the reading. Total indicator readings must not exceed .007 inch.

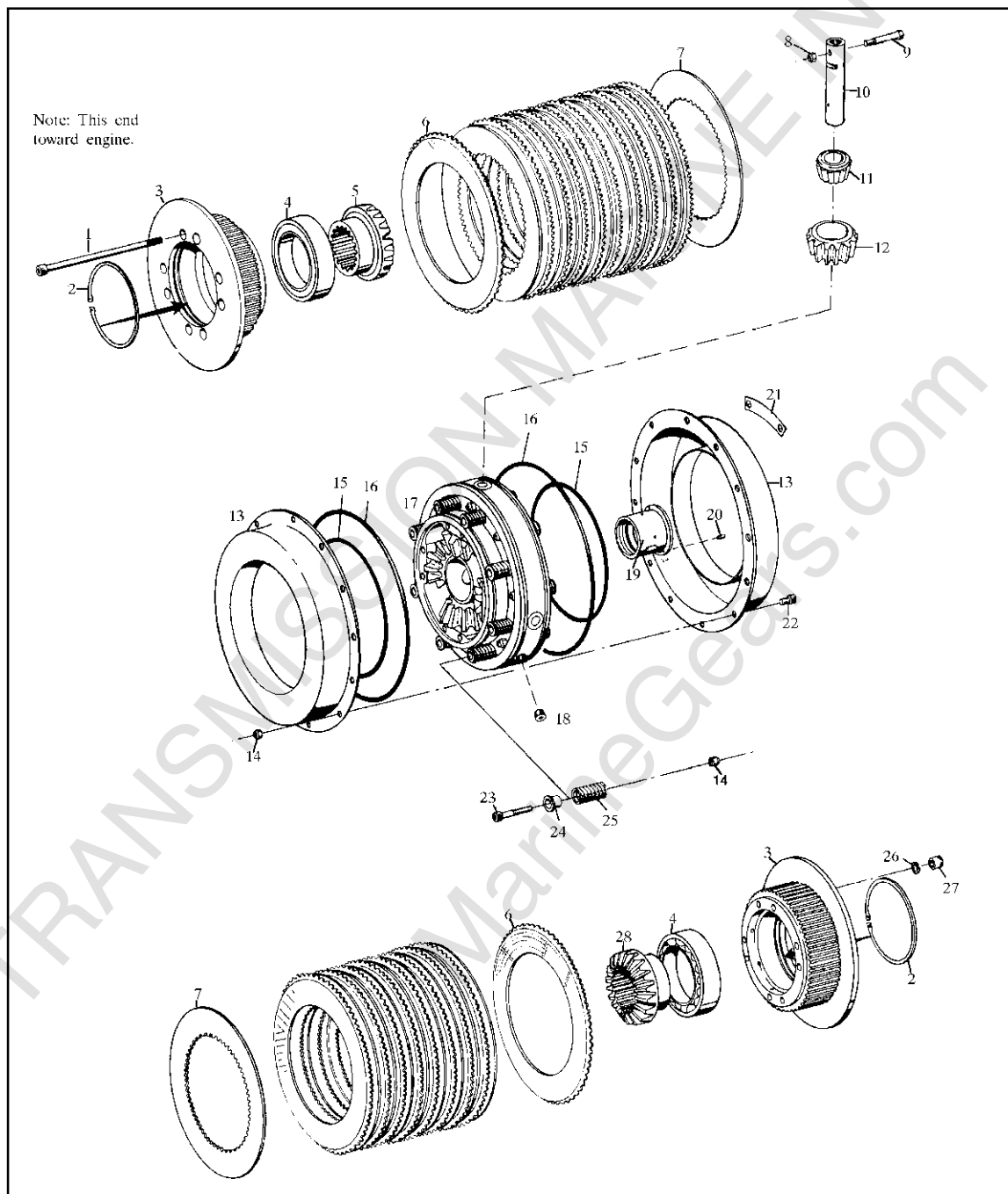
CM-04

Standard Clutch Assembly



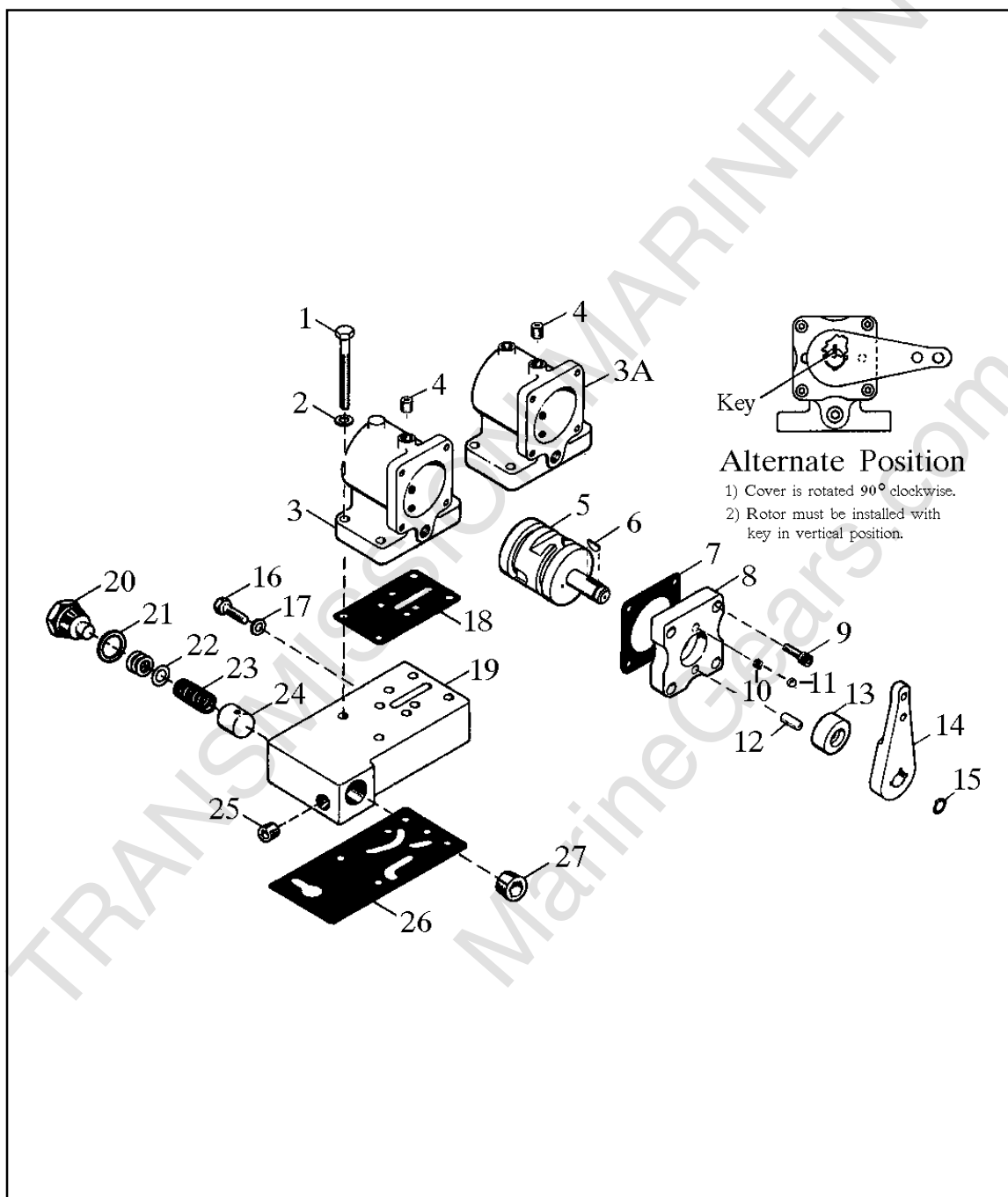
CM-05

Standard Clutch Assembly (Continued)



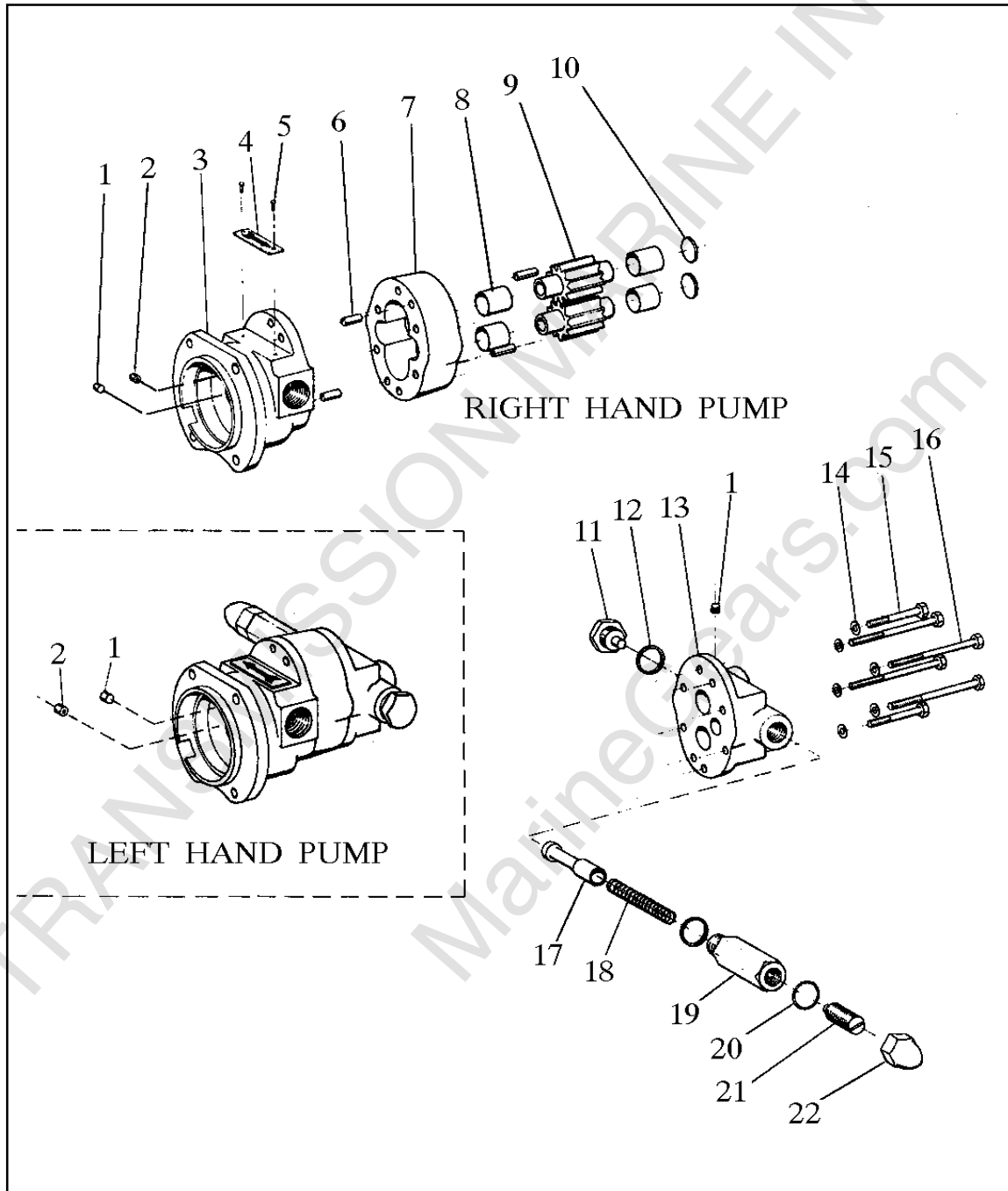
CM-06

Standard Control Valve Assembly



CM-07

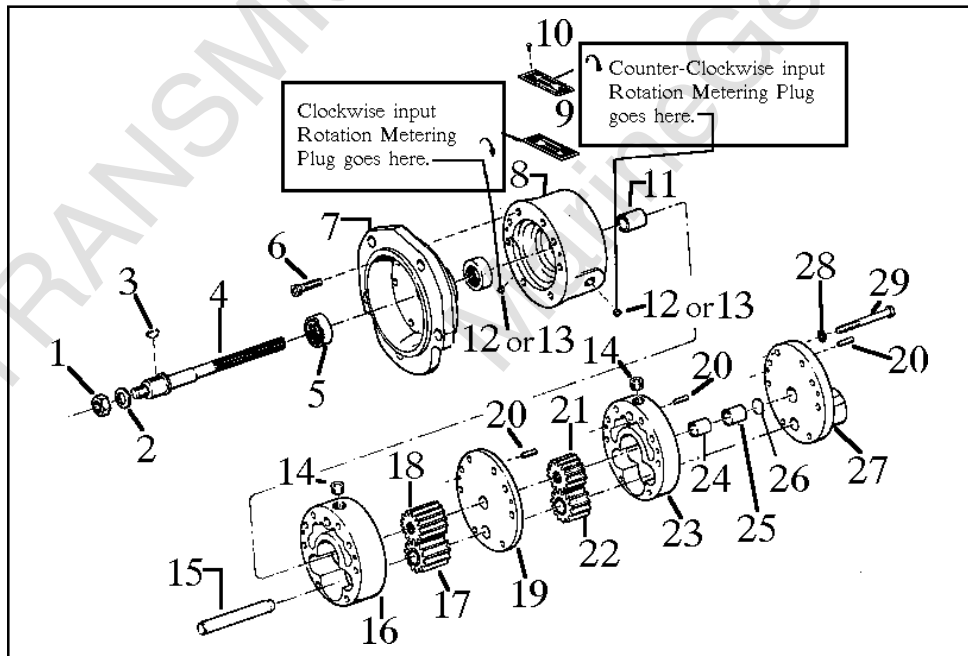
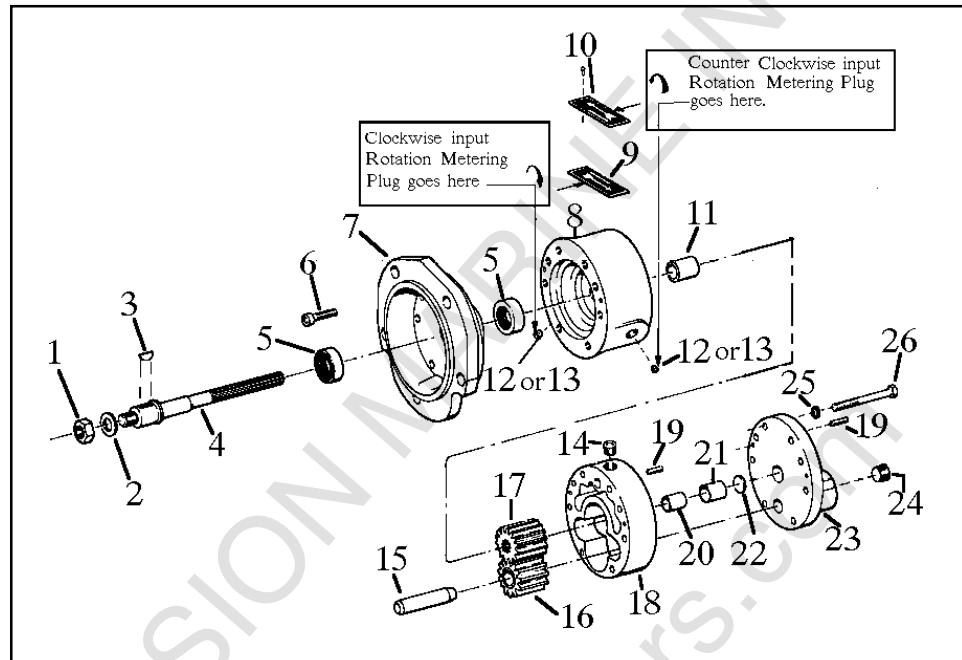
Oil Pump Assembly



Transmission mounted assembly.

CM-08

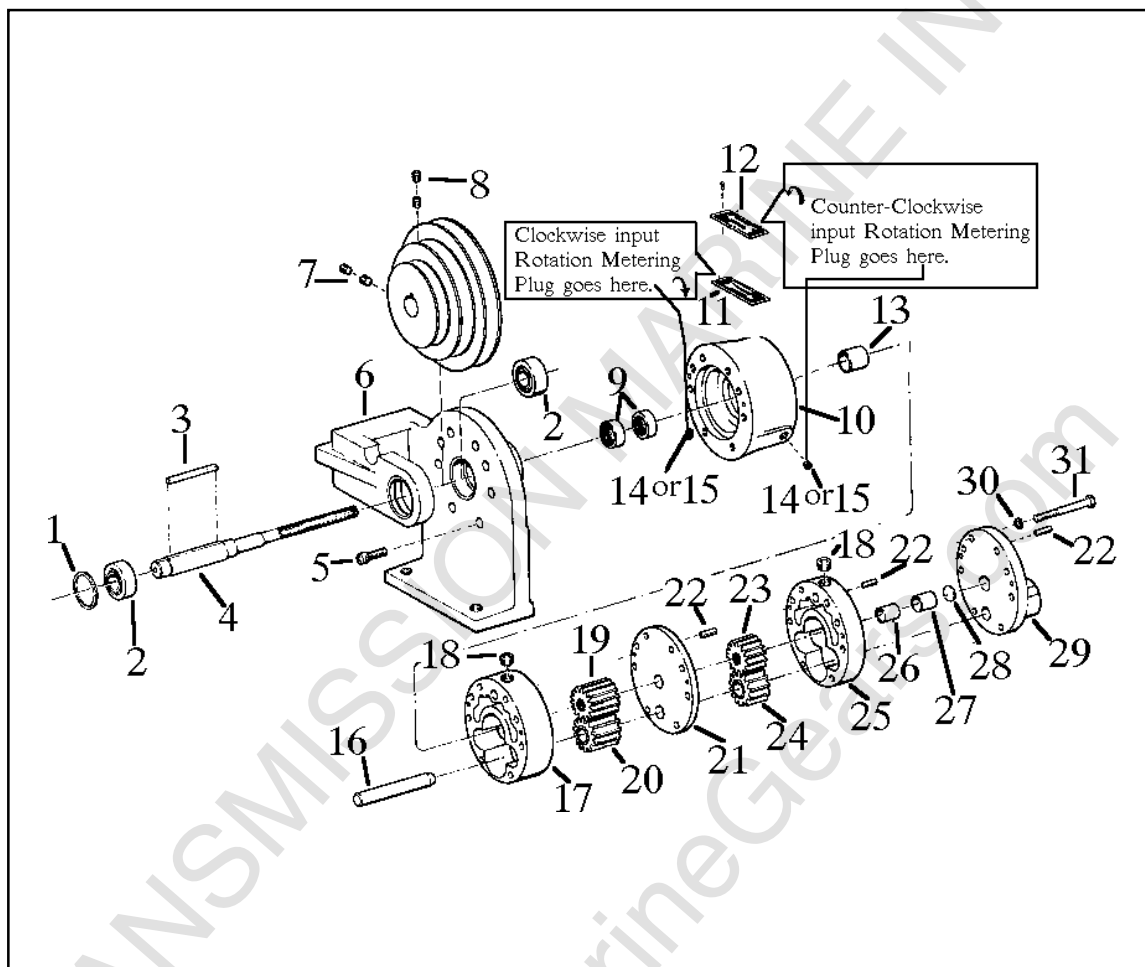
Oil Pump Assembly (Continued)



Engine mounted assemblies.

CM-09

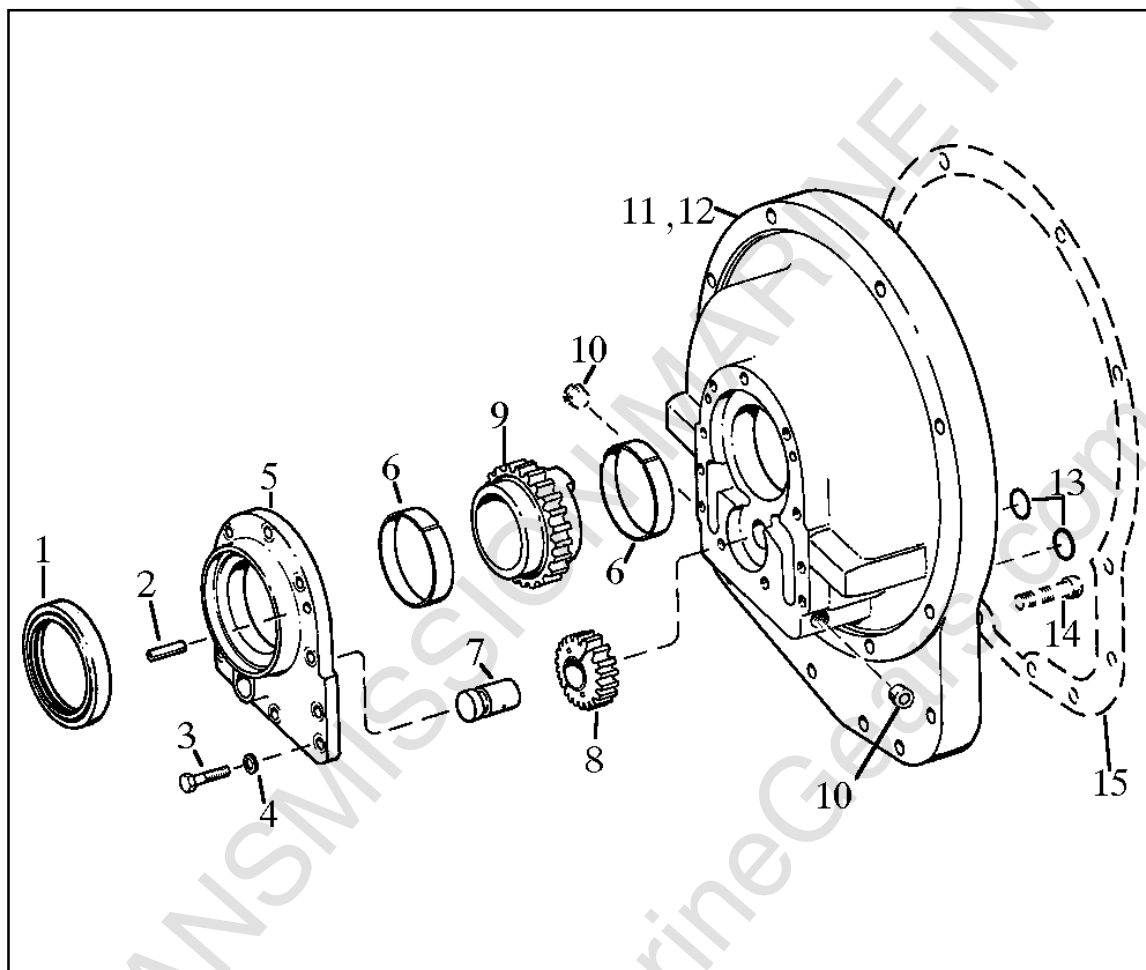
Oil Pump Assembly (Continued)



Pulley driven assembly.

CM-10

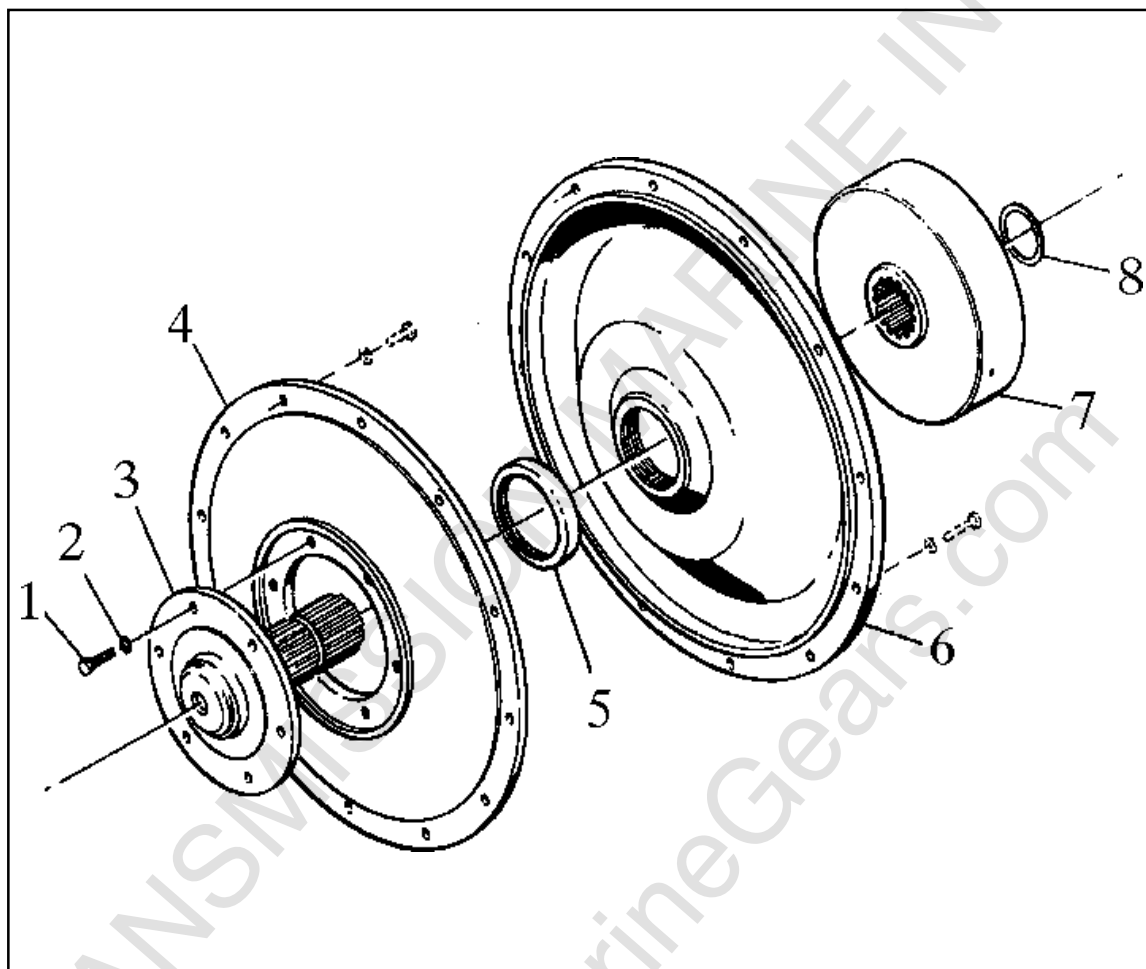
Oil Dam / Driving Parts



Model 5HD-200

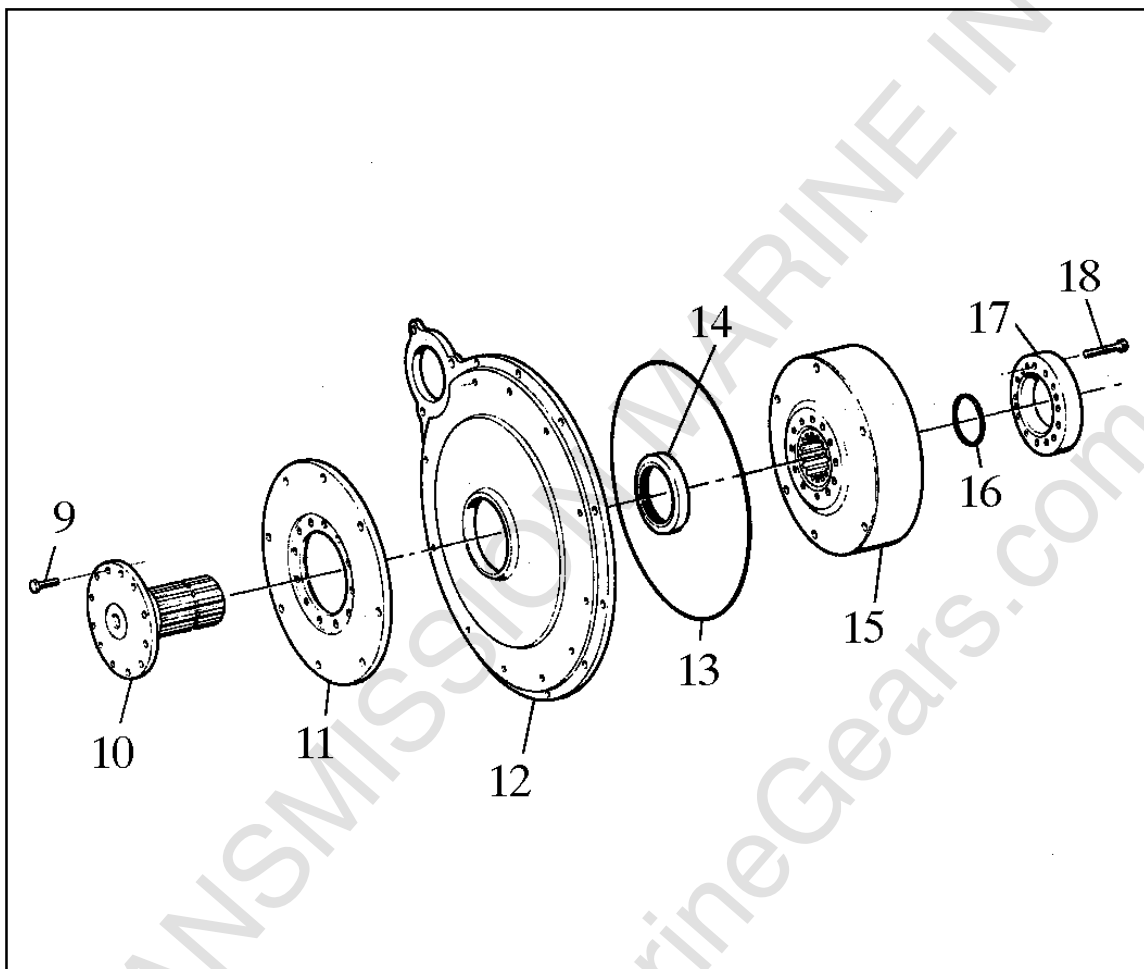
CM-11

Oil Dam / Driving Parts (Continued)



Models HE-10200/10700, HE-11200/11700.

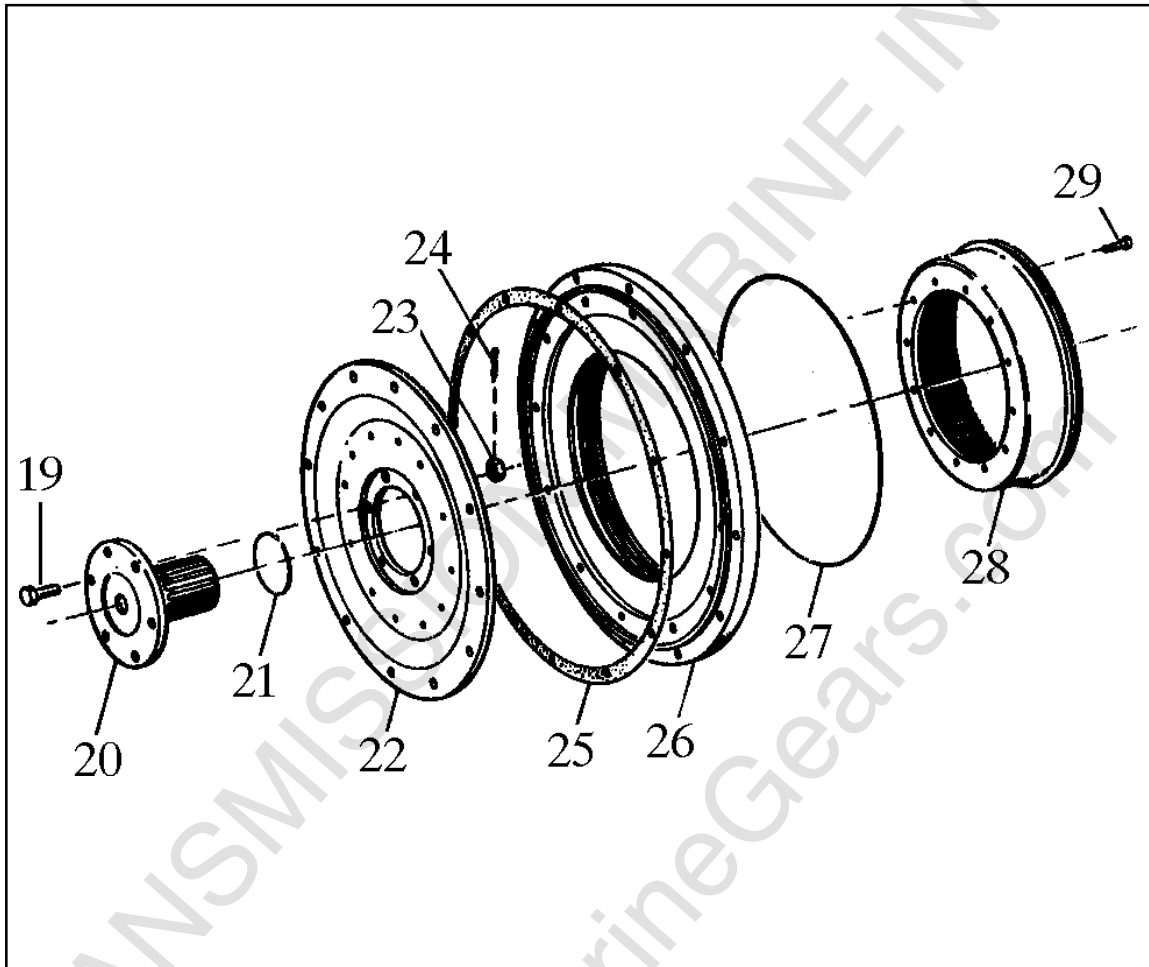
Oil Dam / Driving Parts (Continued)



Models HY-24000/25000.

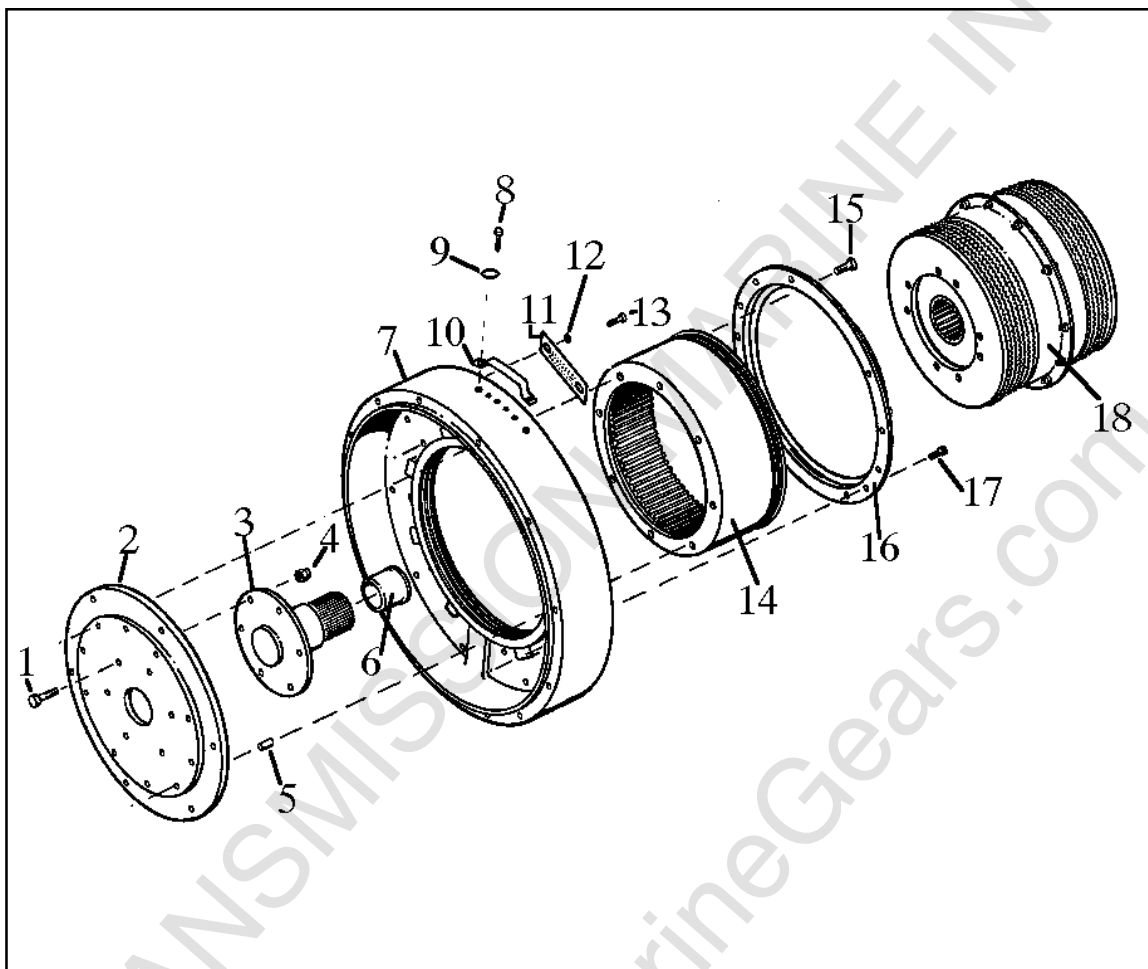
CM-13

Oil Dam / Driving Parts (Continued)



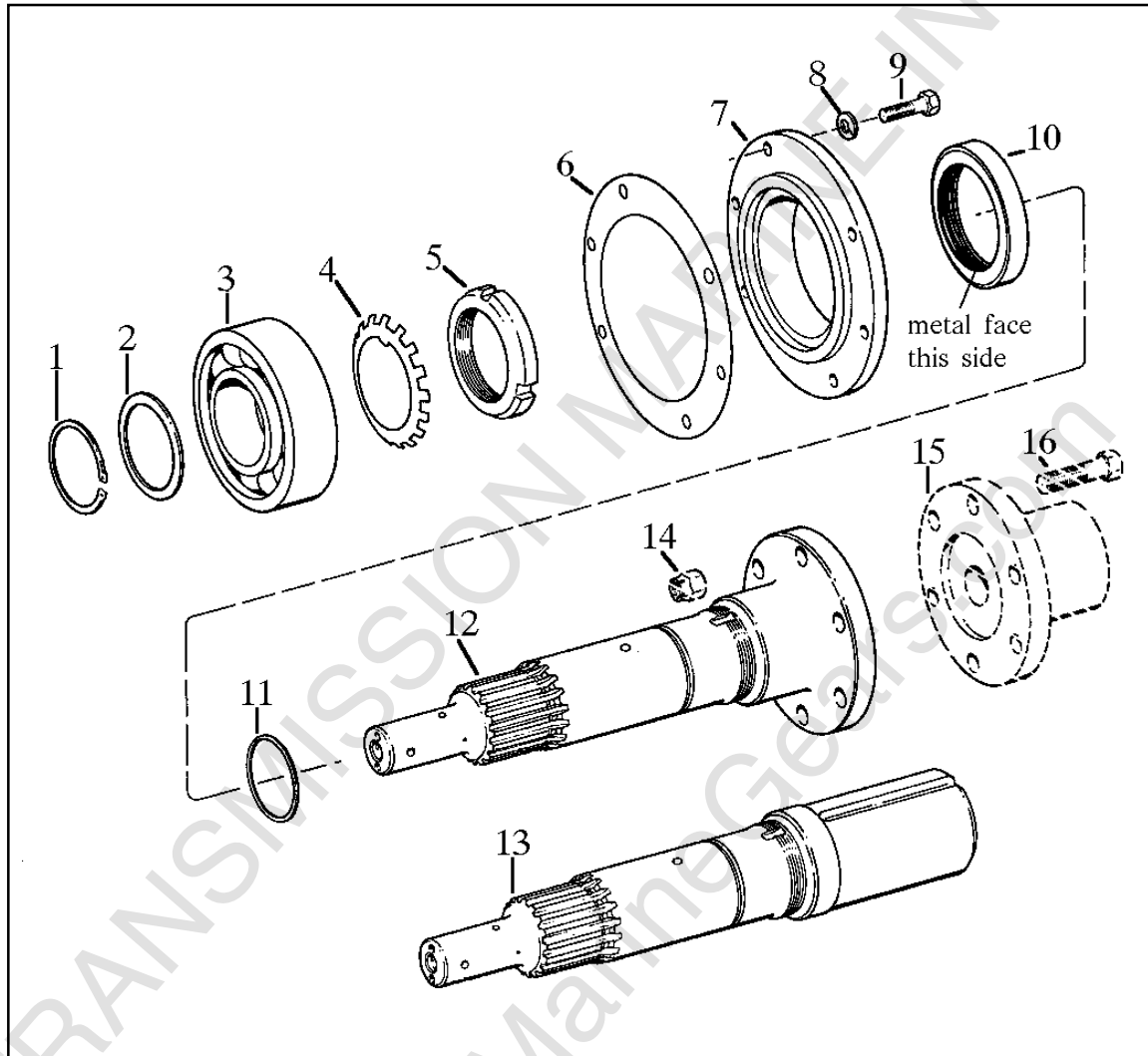
Models HY-25000 with slinger.

Oil Dam / Driving Parts (Continued)



Models HP-400/500.

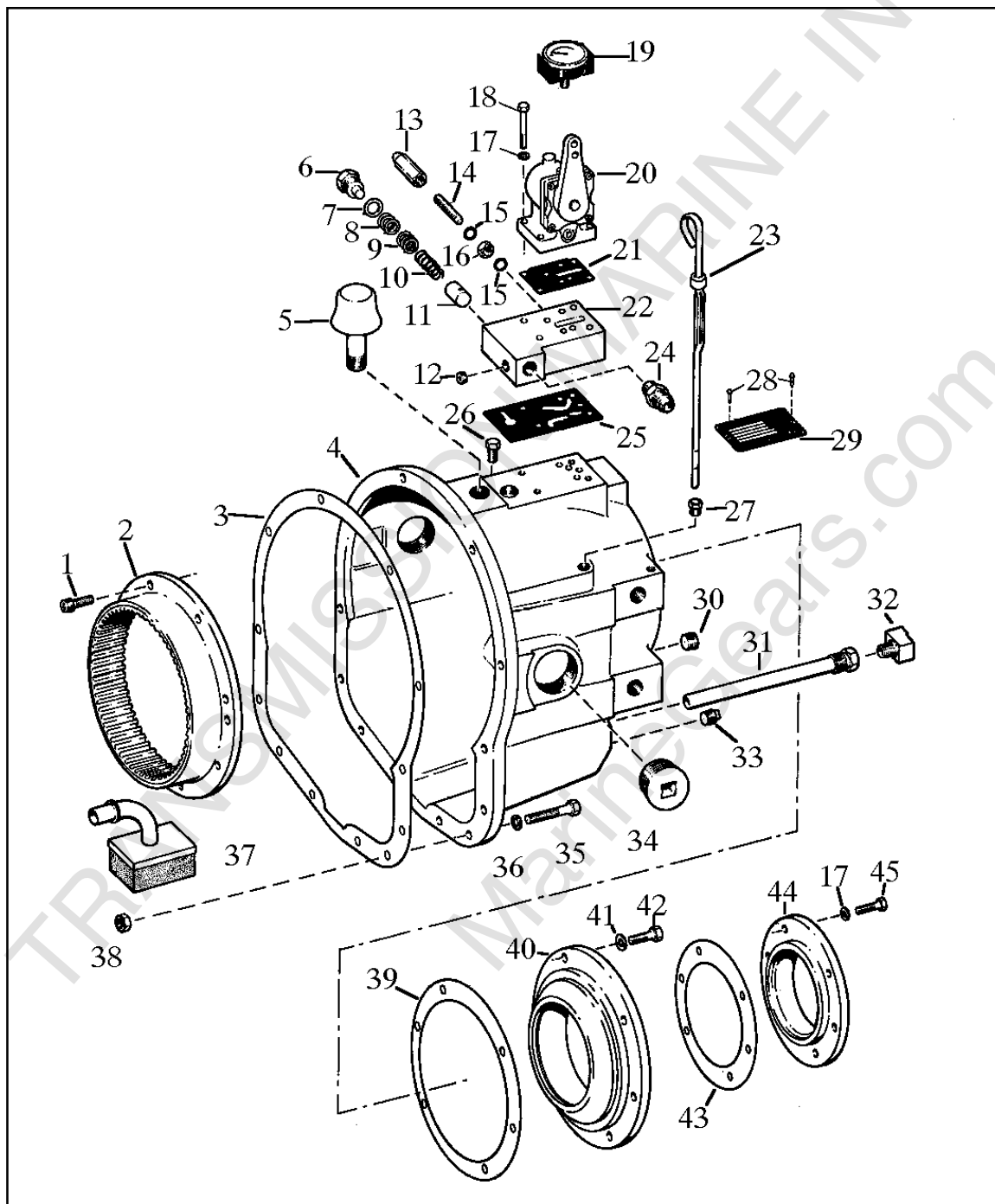
Main Housing Parts



Models 5HD-200.

CM-16

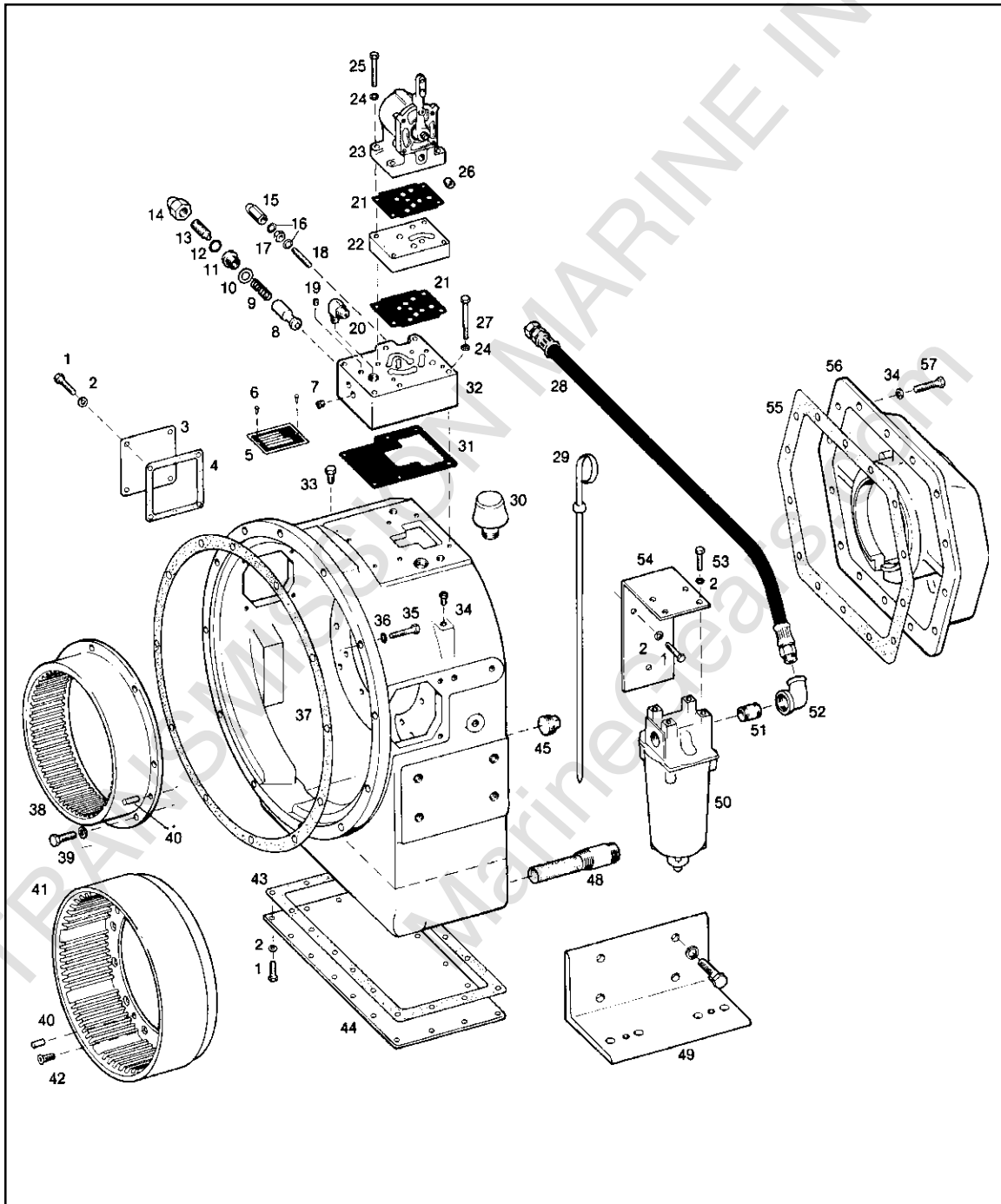
Main Housing Parts (Continued)



Models 5HD-200.

CM-17

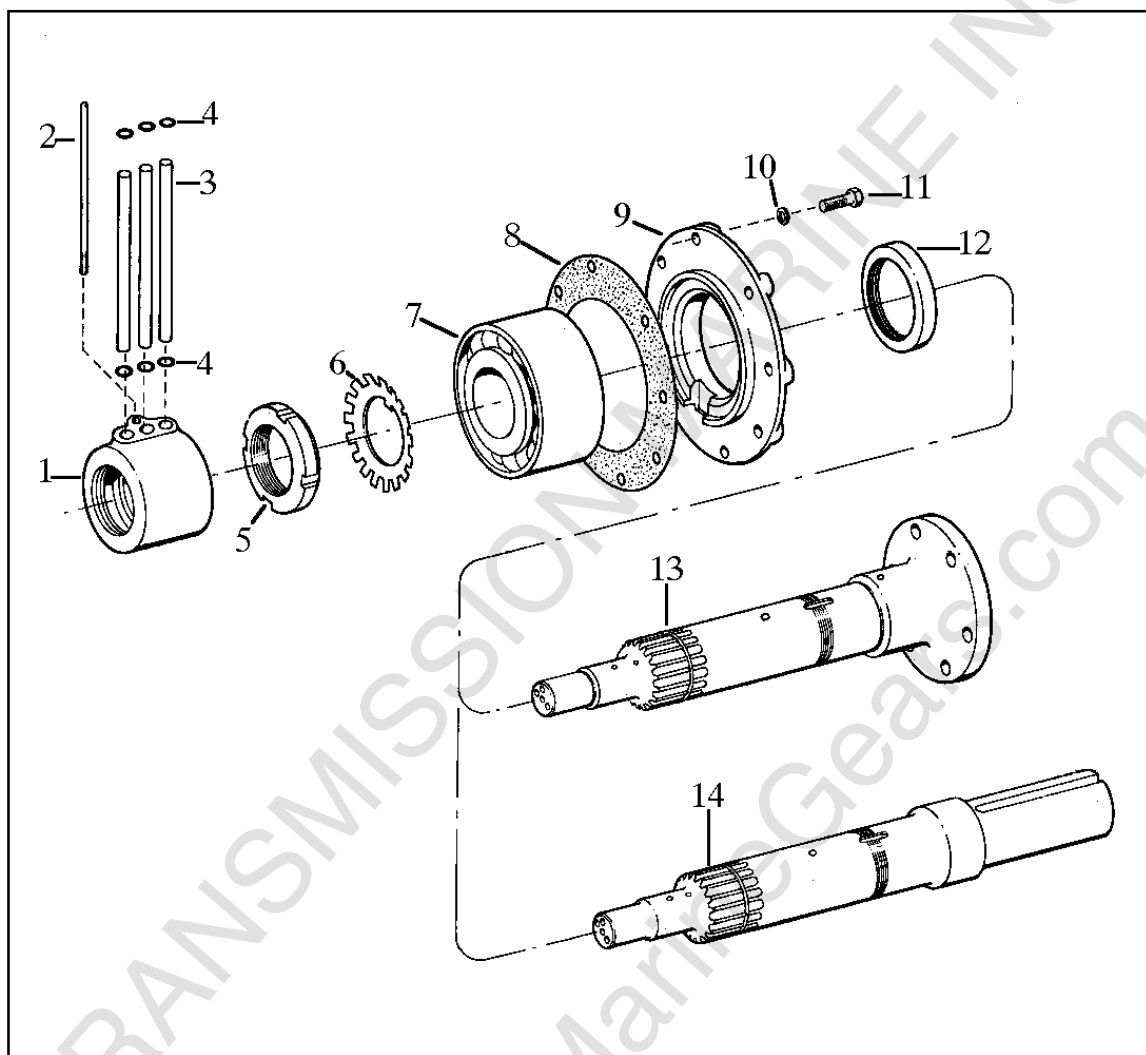
Main Housing Parts (Continued)



Models HY-400/HP-500.

CM-18

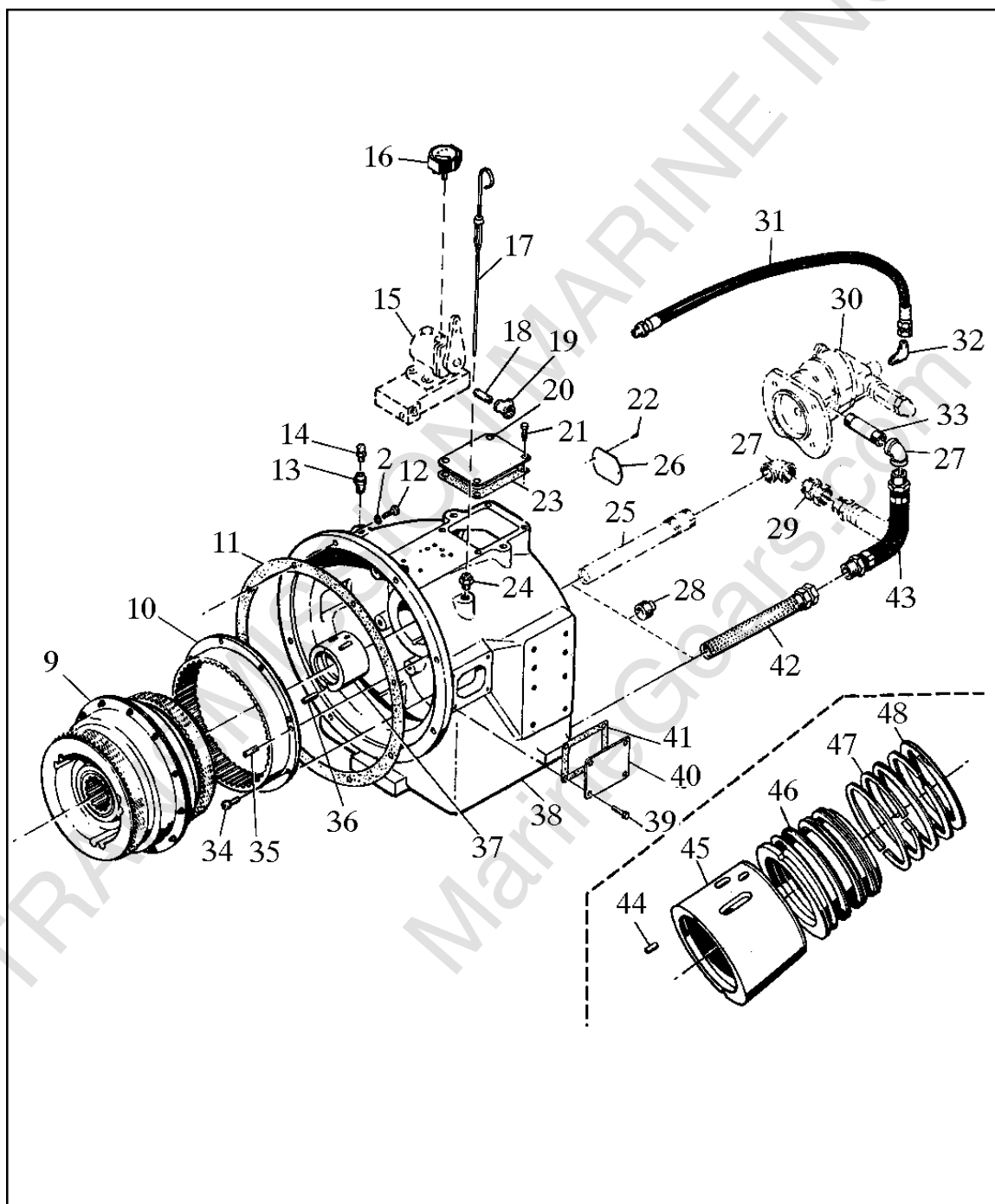
Main Housing Parts (Continued)



Models HY-400/HP-500.

CM-19

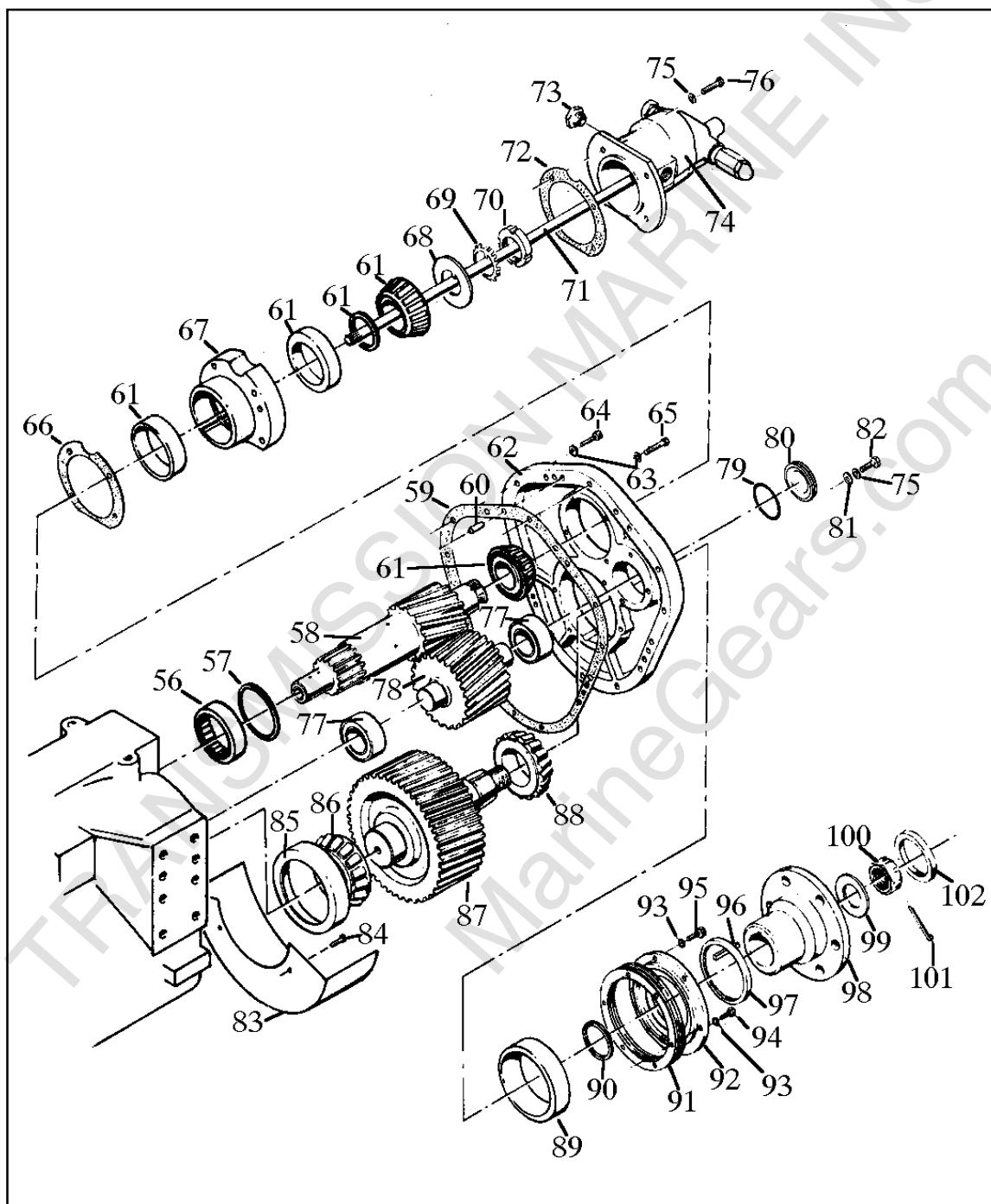
Main Housing Parts (Continued)



Models HE-10200, 10700 / HE-11200, 11700.

CM-20

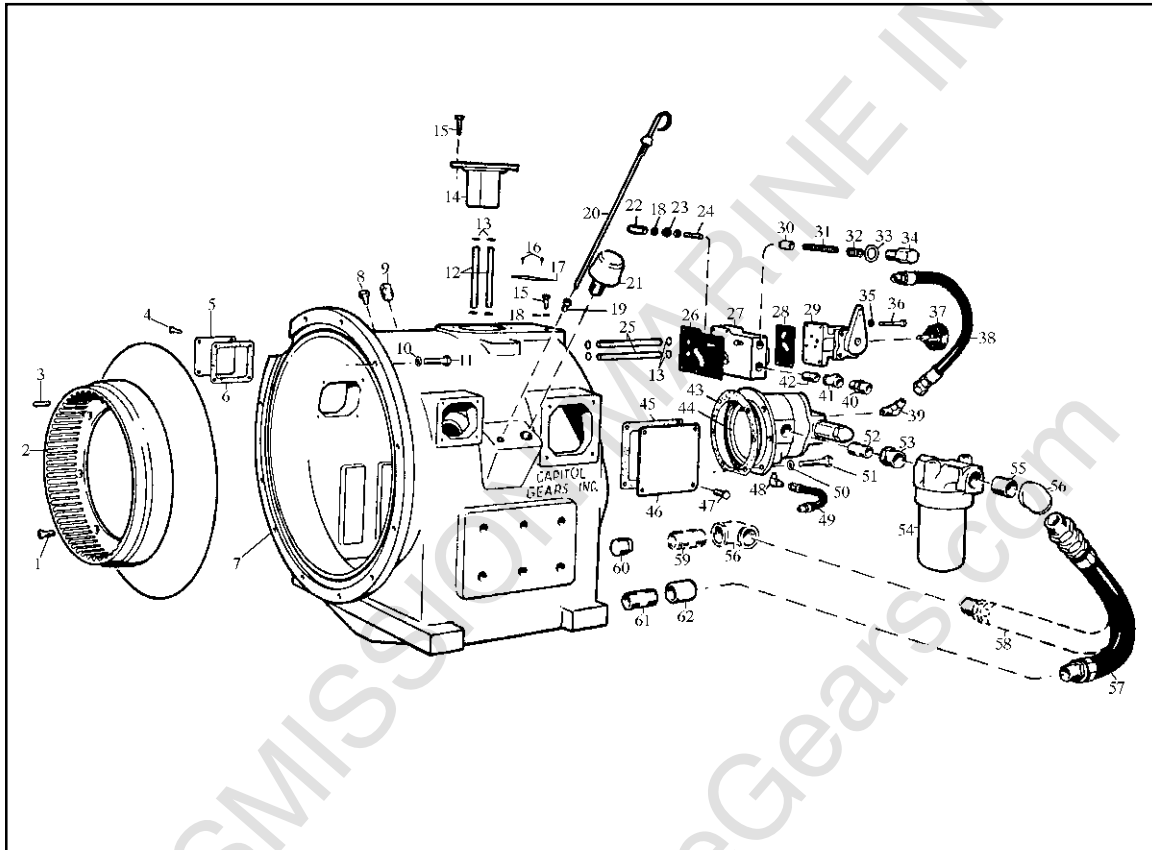
Main Housing Parts (Continued)



Models HE-10200, 10700 / HE-11200, 11700.

CM-21

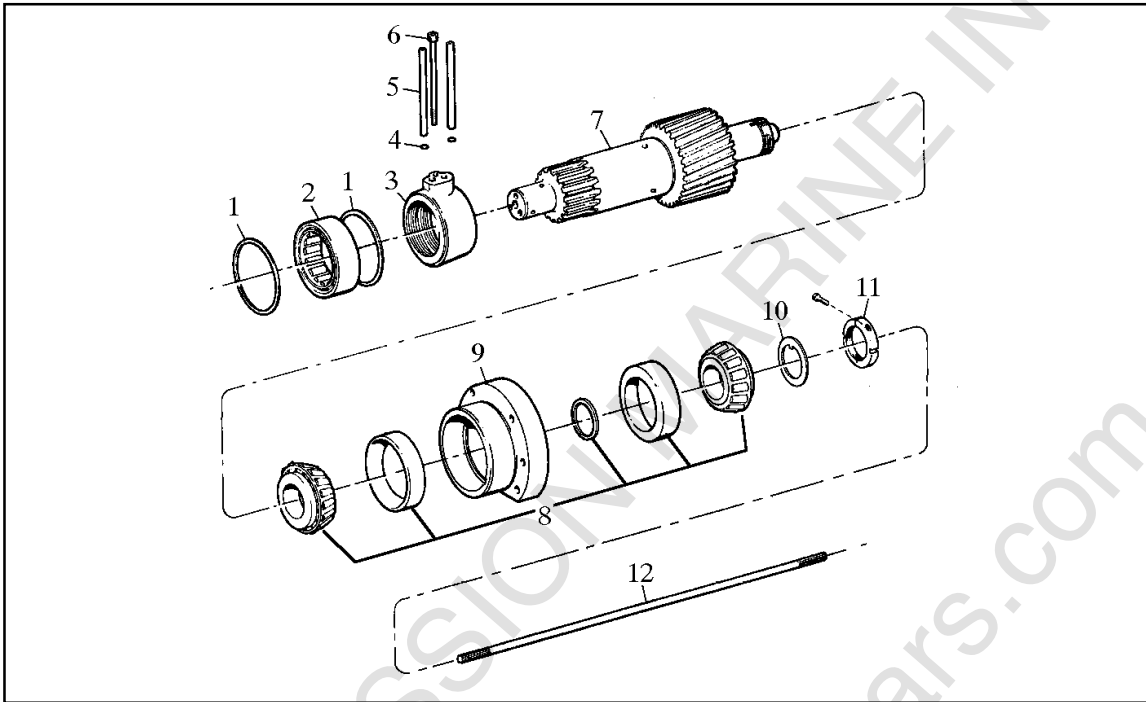
Main Housing Parts (Continued)



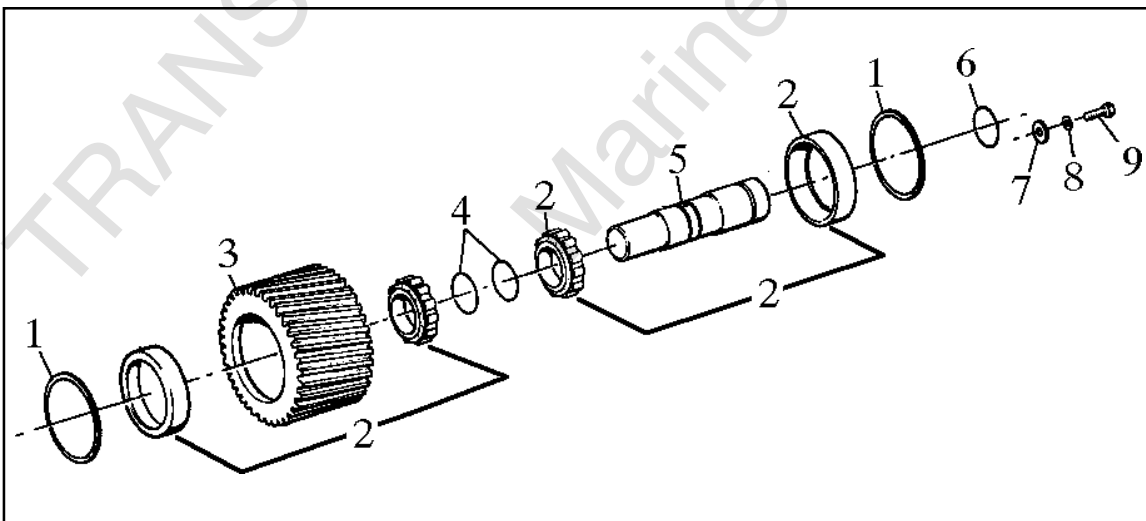
Models HE-10200, 10700 / HE-11200, 11700.

CM-22

Main Housing Parts (Continued)



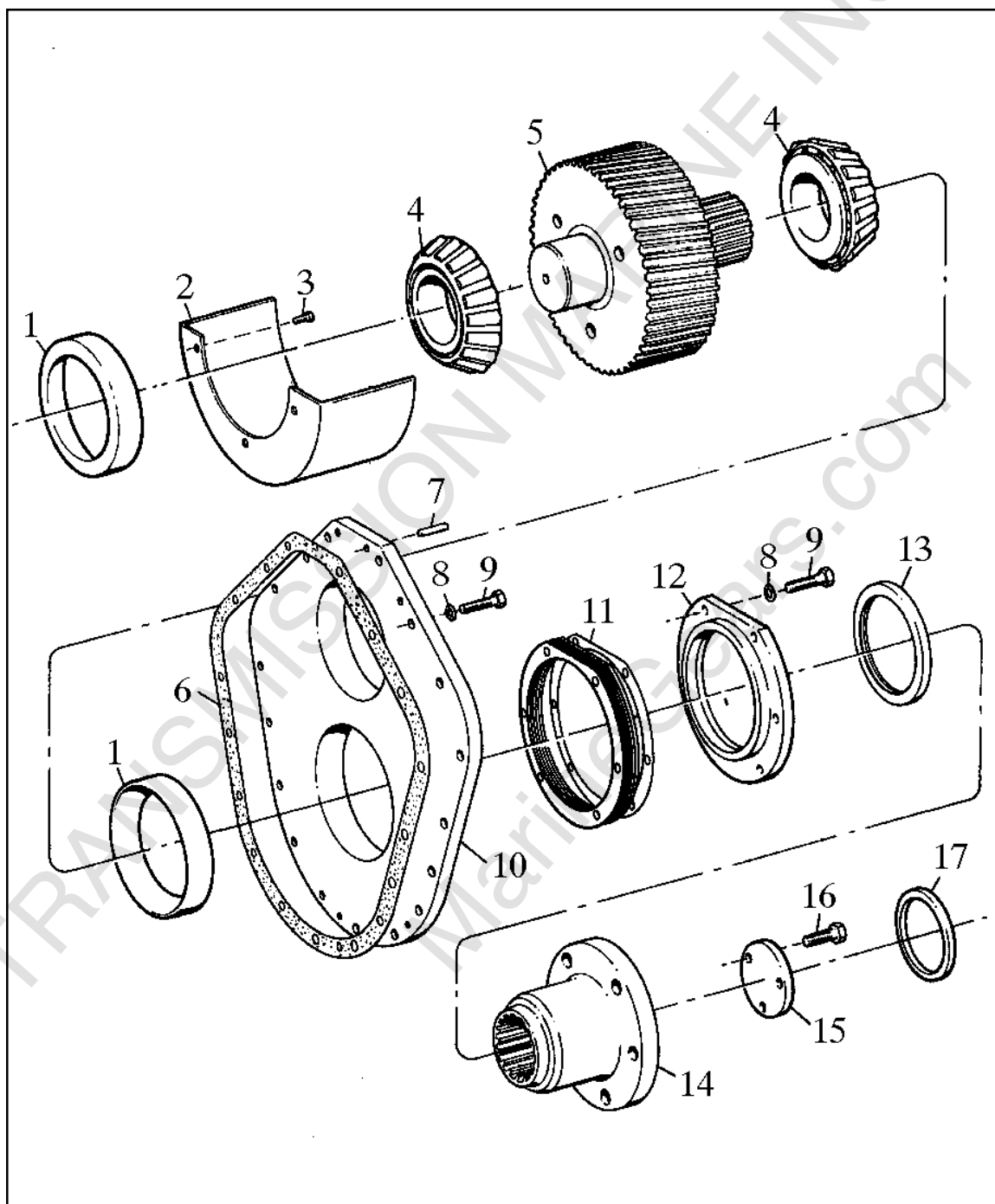
Models HY-22000, 2400, 25000, pinion shaft assembly.



Models HY-22000, 2400, 25000, idler gear assembly.

CM-23

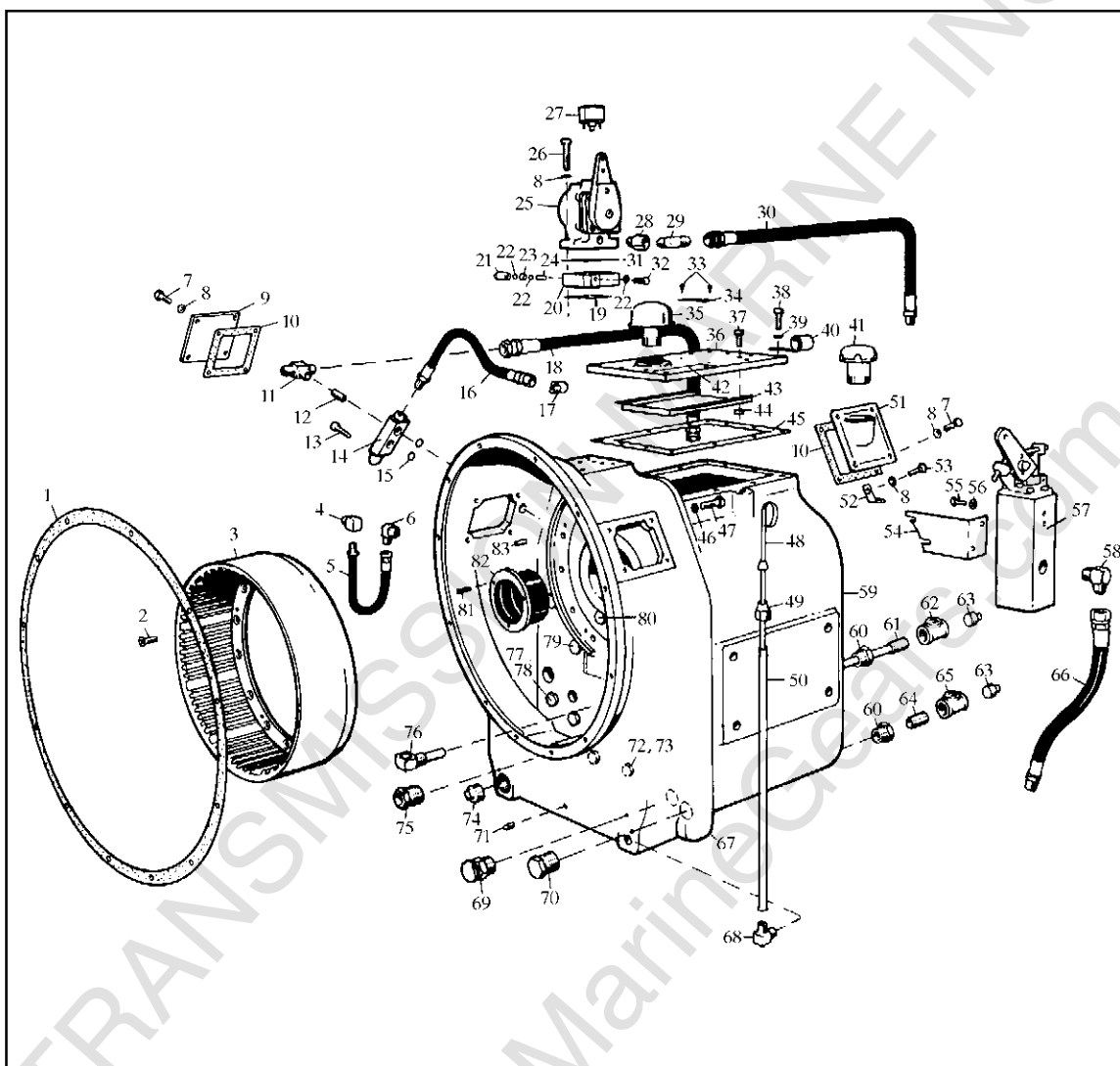
Main Housing Parts (Continued)



Models HY-22000, 24000, 25000, rear housing assembly.

CM-24

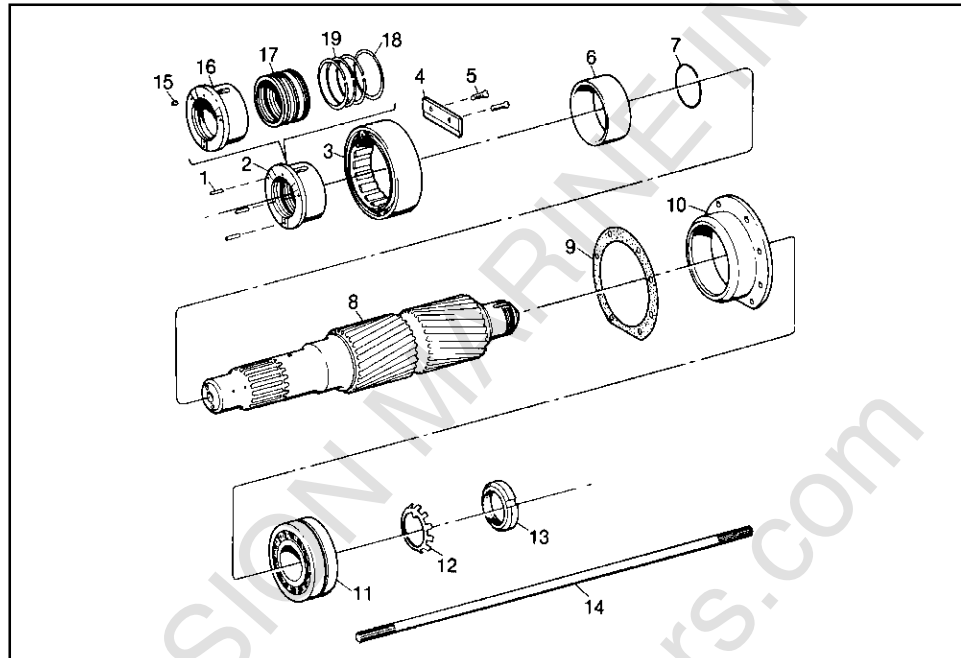
Main Housing Parts (Continued)



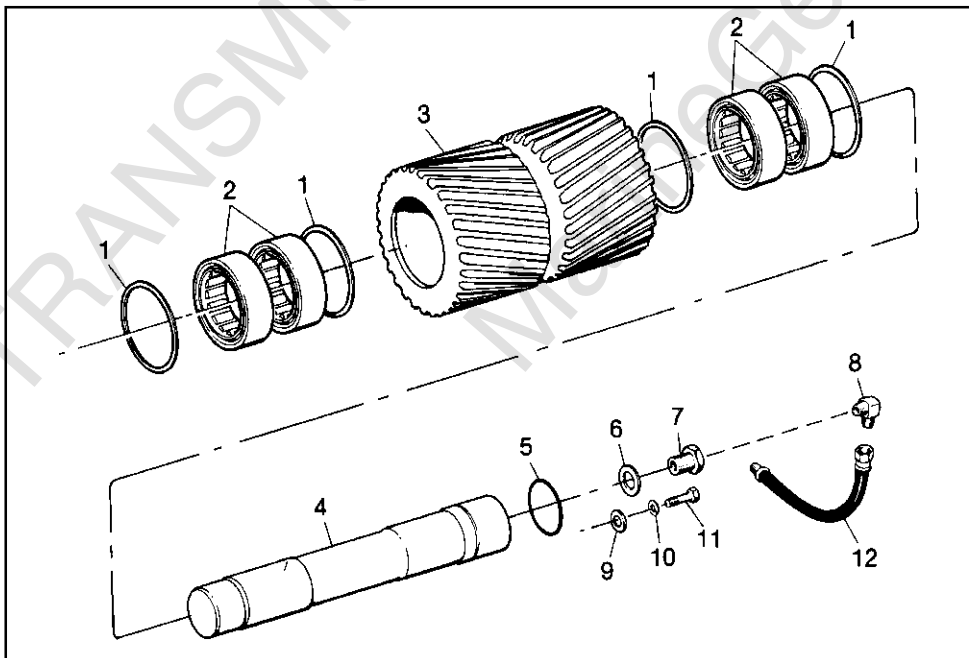
Model HPV-9400, main assembly.

CM-25

Main Housing Parts (Continued)



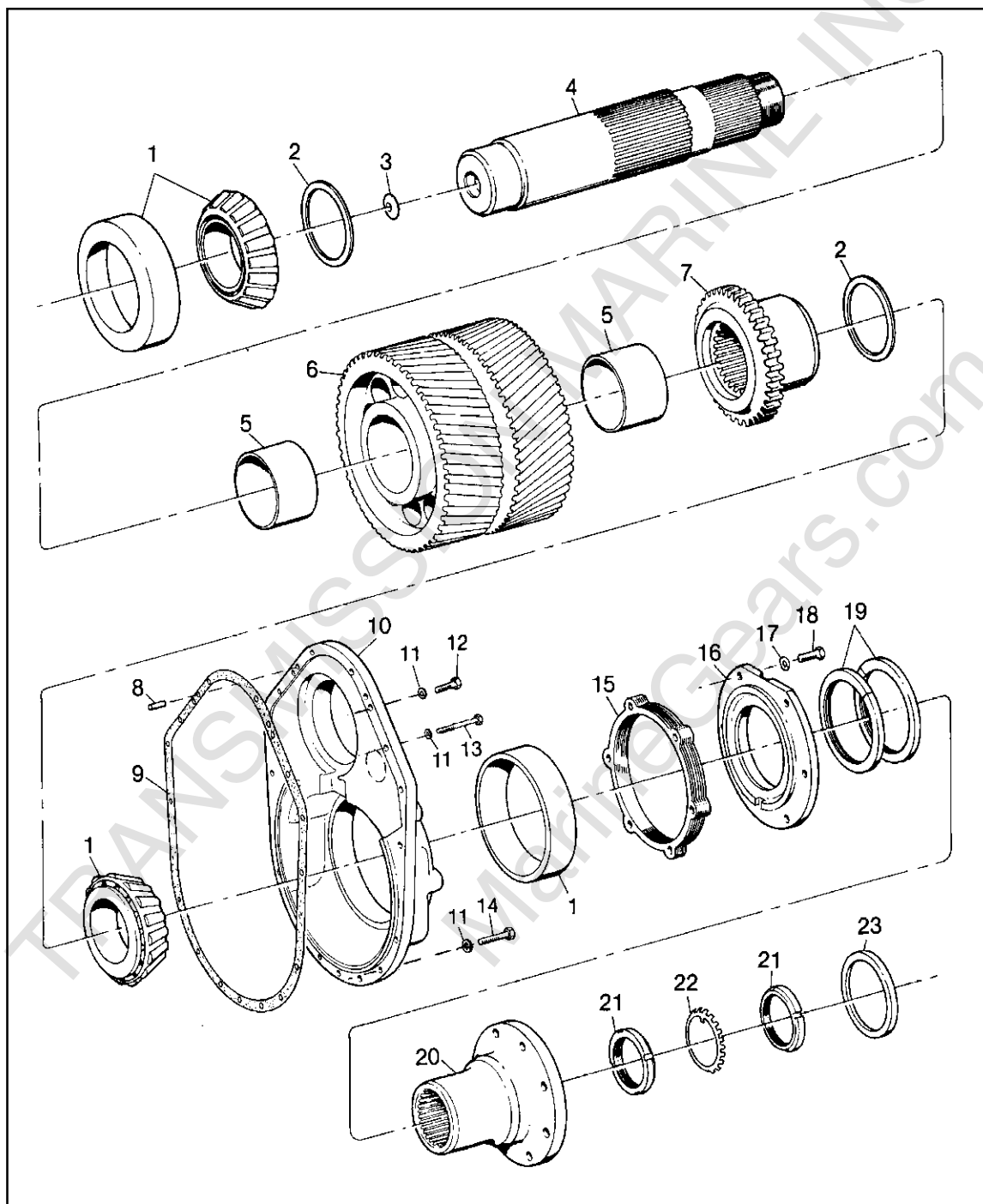
HPV-9400, pinion shaft assembly.



HPV-9400, idler gear assembly.

CM-26

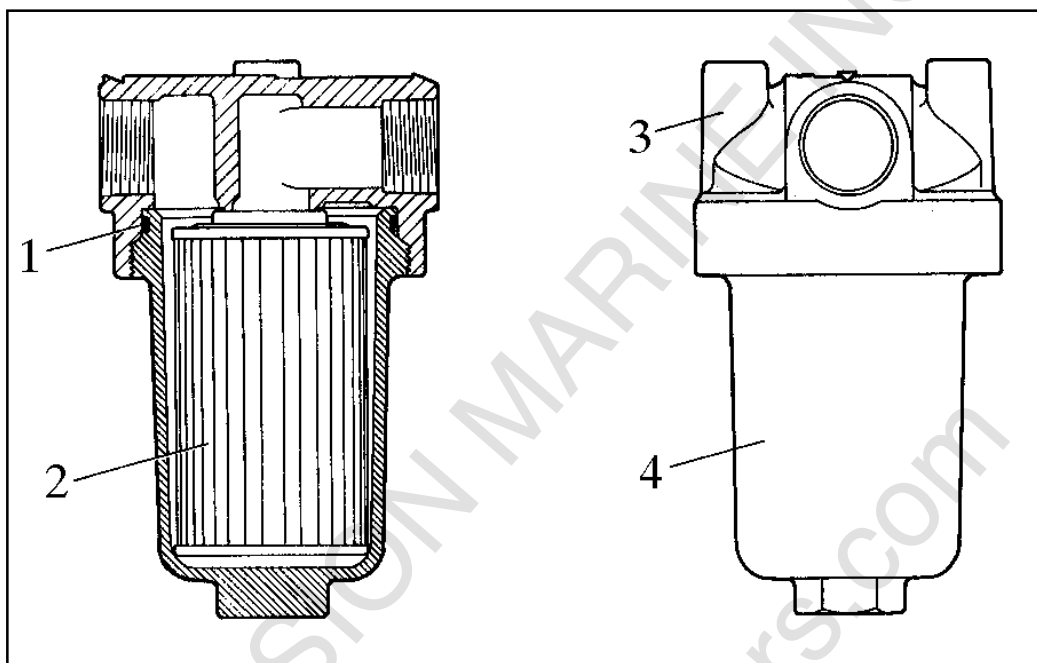
Main Housing Parts (Continued)



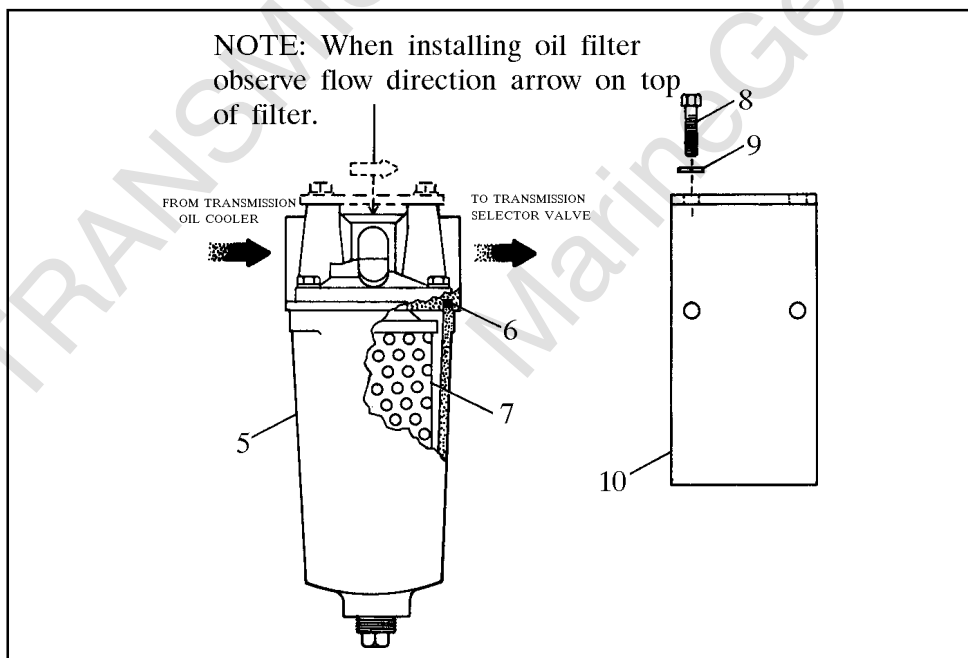
Model HPV-9400, rear housing assembly.

CM-27

Oil Filter Assemblies



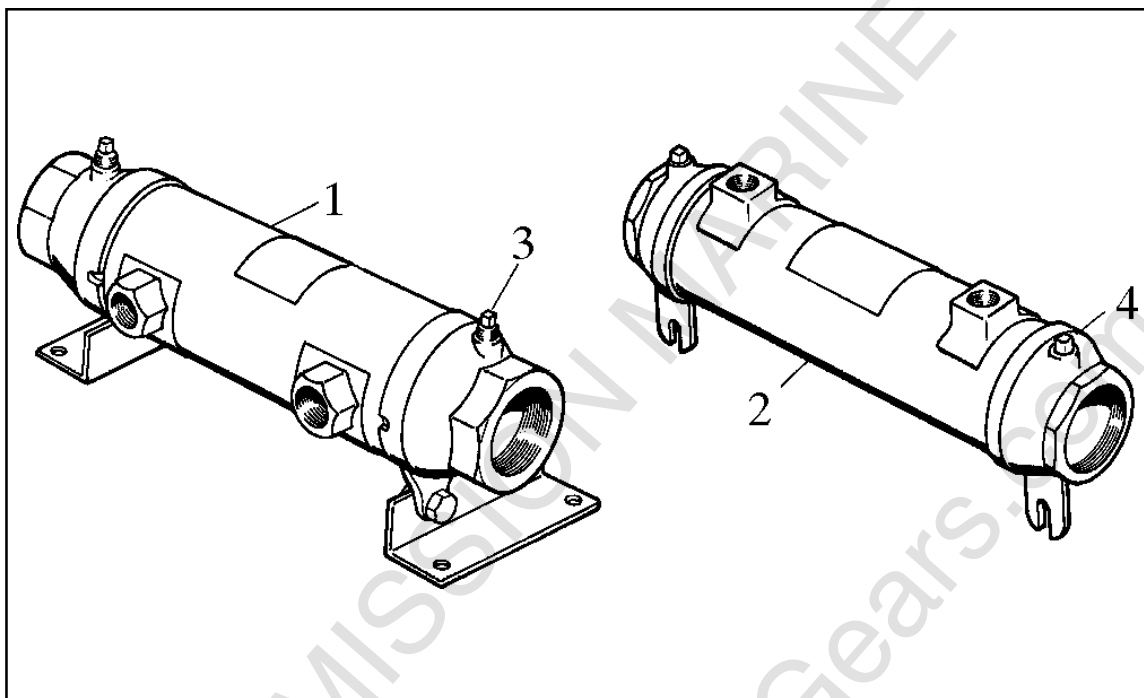
Metal element type (washable).



Paper element type (non-washable).

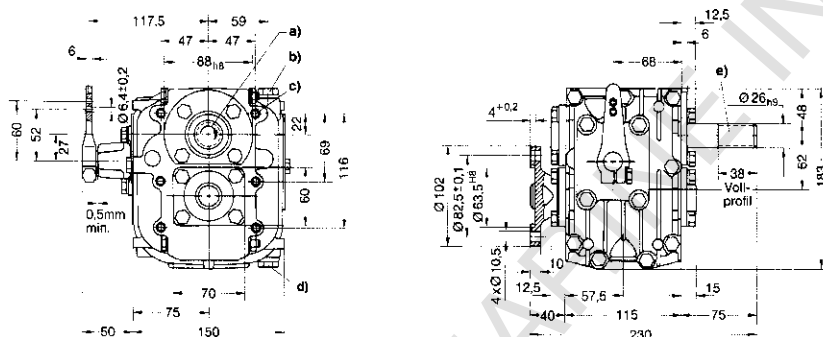
CM-28

Oil Cooler Assemblies



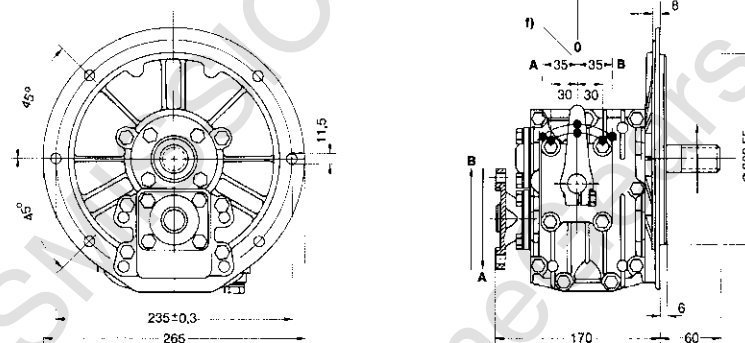
Typical Capital oil coolers.

Dimensions / Ratings: HBW 50 / ZF5M



MODEL WITHOUT MOUNTING FLANGE

a) Clockwise rotation b) Oil dipstick and filler screw 17mm c) M 8/12 deep, holes same on both sides d) Oil drain plug 17mm width across flats e) Spline profile similar B 10x23x29 DIN 5464 f) Minimum lever travel



MODEL WITH MOUNTING FLANGE

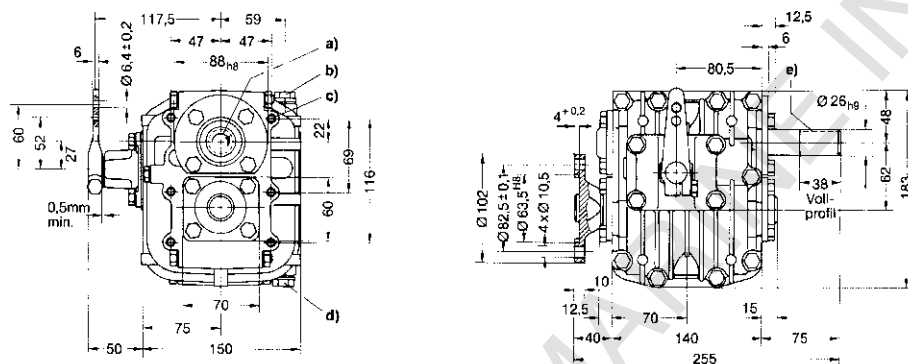
Technical data

HBW 50-2

HBW 50-3

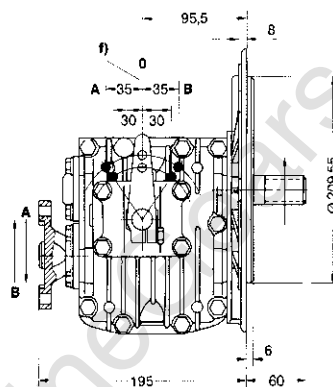
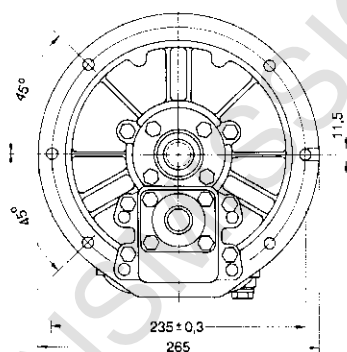
Forward gear 'A', ratio	i	2.05	2.72
Reverse gear 'B', ratio	i	1.86	1.86
Input torque M_{max}	pleasure craft	Nm	50
	commercial craft	Nm	50
Power input P_{max}	pleasure craft	kW(hp)	15(20)
	commercial craft	kW(hp)	15(20)
Input speed n_{max}		1/min	5000
Propeller thrust F_{max}		N	775
Weight without oil		kg	8
Oil quantity		l	0.3
Oil grade		Automatic Transmission Fluid (ATF)	

Dimensions / Ratings: HBW 100 / ZF10M



MODEL, WITHOUT MOUNTING FLANGE

a) Clockwise rotation b) Oil dipstick and filler screw 17mm c) M 8/12 deep, holes same on both sides d) Oil drain plug 17mm width across flats e) Spline profile similar B 10x23x29 DIN 5464 f) Minimum lever travel

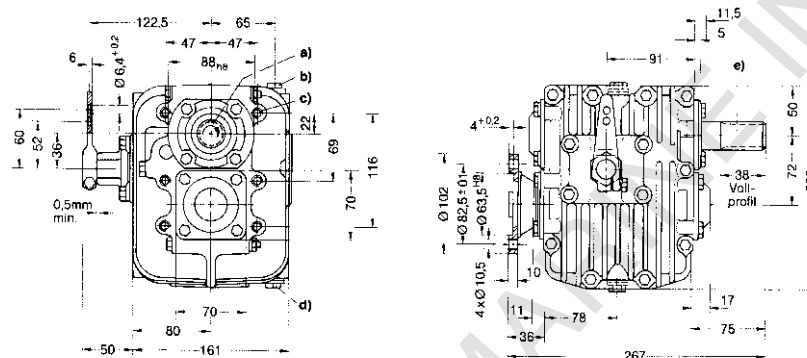


MODEL WITH MOUNTING FLANGE

Technical data		HBW 100-1,5	HBW 100-2	HBW 100-3
Forward gear 'A', ratio	i	1.48	1.79	2.72
Reverse gear 'B', ratio	i	1.86	1.86	1.86
Input torque $M_{\max}$	pleasure craft	Nm	103	65
	commercial craft	Nm	85	55
Power input $P_{\max}$	pleasure craft	kW(hp)	38(52)	
	commercial craft	kW(hp)	28(38)	
Input speed $n_{\max}$	1/min	5000		
Propeller thrust $F_{\max}$	N	1500		
Weight without oil	kg	9.5		
Oil quantity	l	0.35		
Oil grade	Automatic Transmission Fluid (ATF)			

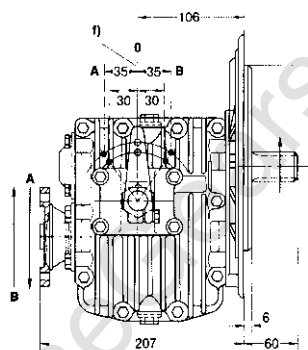
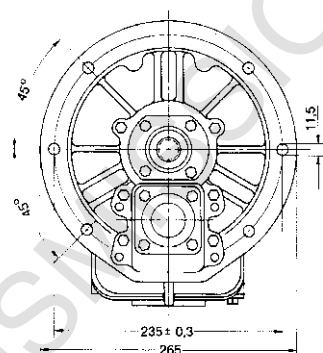


Dimensions / Ratings: HBW 150 / ZF15M



MODEL WITHOUT MOUNTING FLANGE

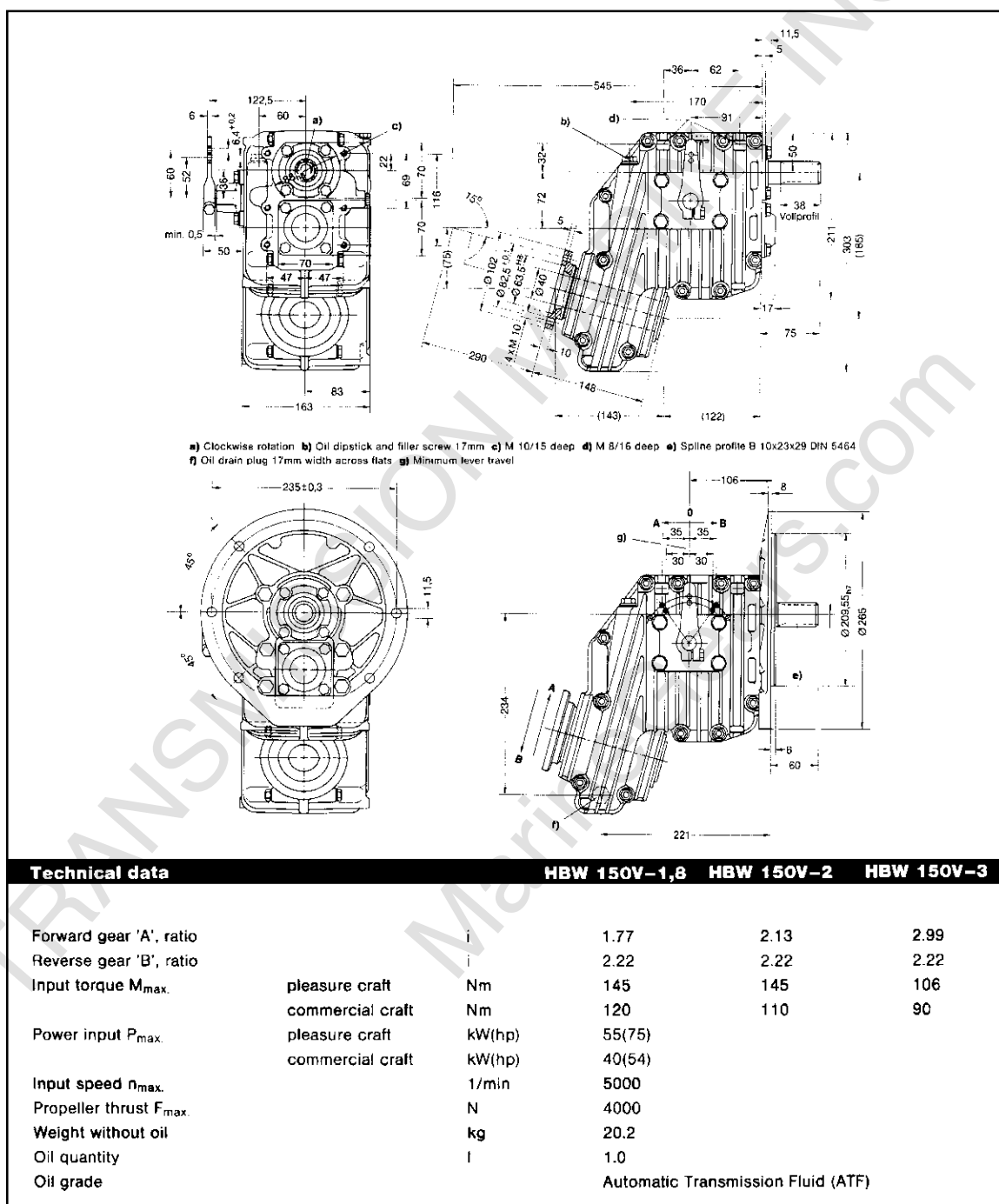
a) Clockwise rotation b) Oil dipstick and filler screw 17mm c) M 8/12 deep, holes same on both sides d) Oil drain plug 17mm width across flats e) Spline profile similar B 10x23x29 DIN 5464 f) Minimum lever travel



MODEL WITH MOUNTING FLANGE

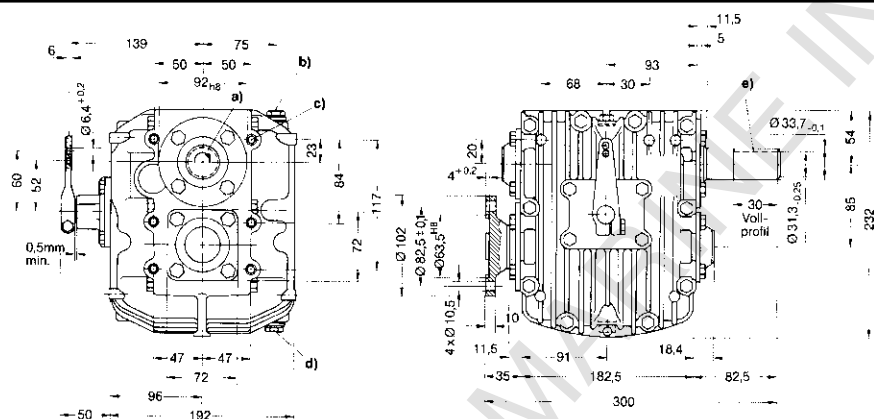
Technical data			HBW 150-1,5	HBW 150-2	HBW 150-2,5
Forward gear 'A', ratio	i		1.56	1.88	2.63
Reverse gear 'B', ratio	i		1.95	1.95	1.95
Input torque M_{max}	pleasure craft	Nm	145	145	106
	commercial craft	Nm	120	110	90
Power input P_{max}	pleasure craft	kW(hp)	55(75)		
	commercial craft	kW(hp)	40(54)		
Input speed n_{max}		1/min	5000		
Propeller thrust F_{max}		N	3000		
Weight without oil		kg	13		
Oil quantity		l	0.56		
Oil grade			Automatic Transmission Fluid (ATF)		

Dimensions / Ratings: HBW 150V / ZF15MIV



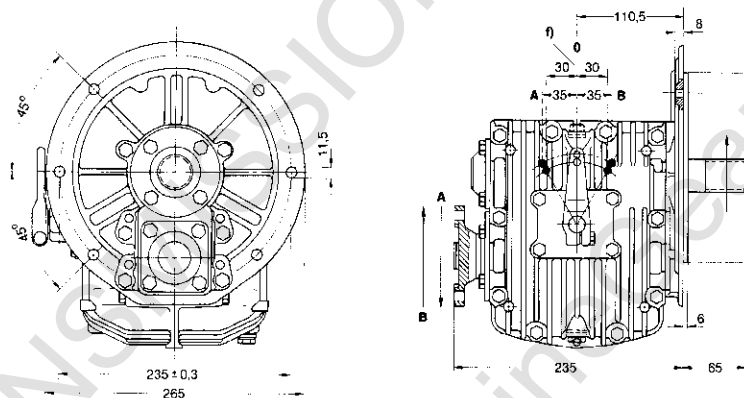
HM-05

Dimensions / Ratings: HBW 250 / ZF25M



MODEL WITHOUT MOUNTING FLANGE

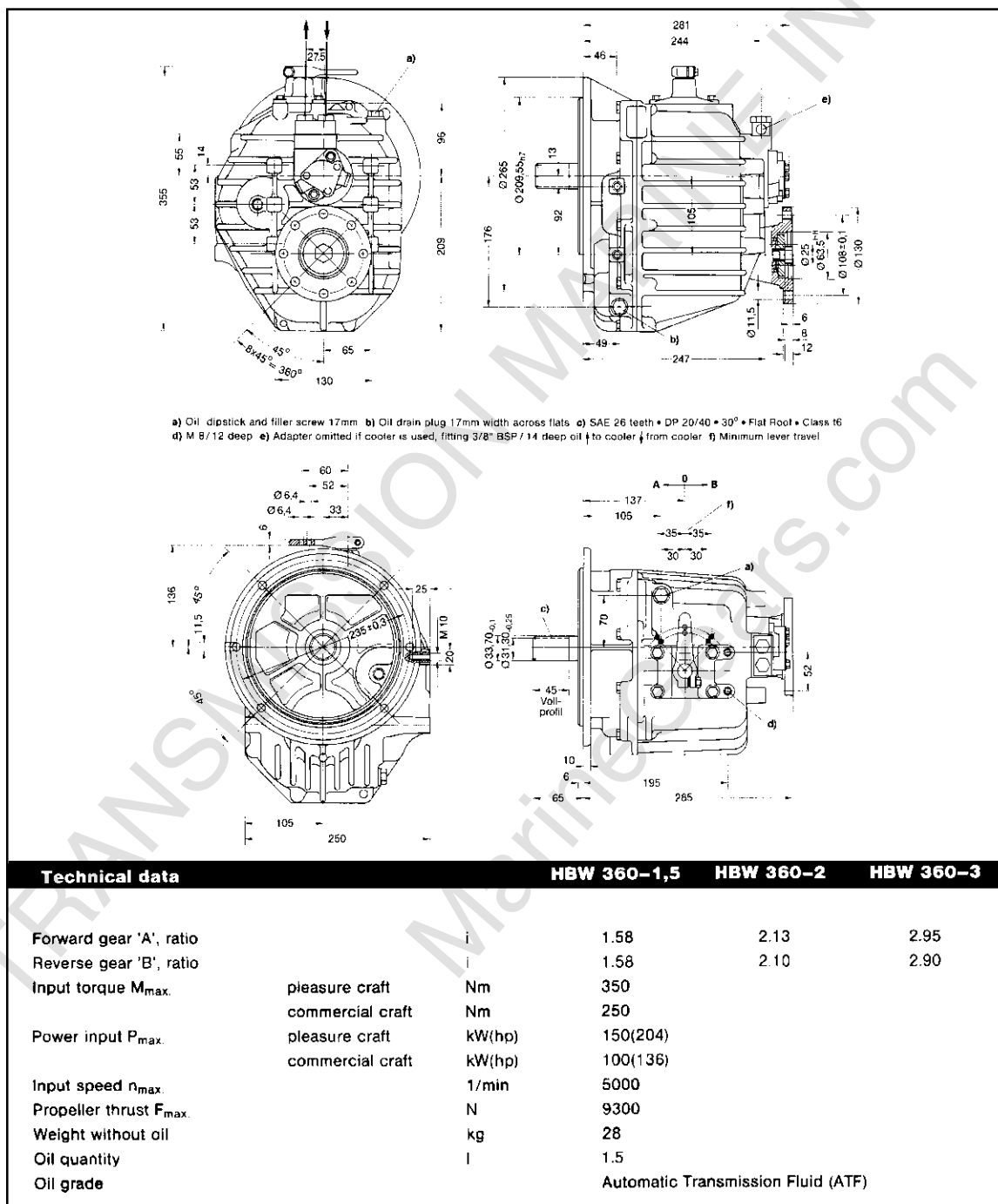
a) Clockwise rotation b) Oil dipstick and filler screw 17mm c) M 10/15 deep, holes same on both sides d) Oil drain plug 17mm width across flats e) SAE 25 teeth • DP 20/40 • 30° • Flat Root • Class 16 f) Minimum lever travel



MODEL WITH MOUNTING FLANGE

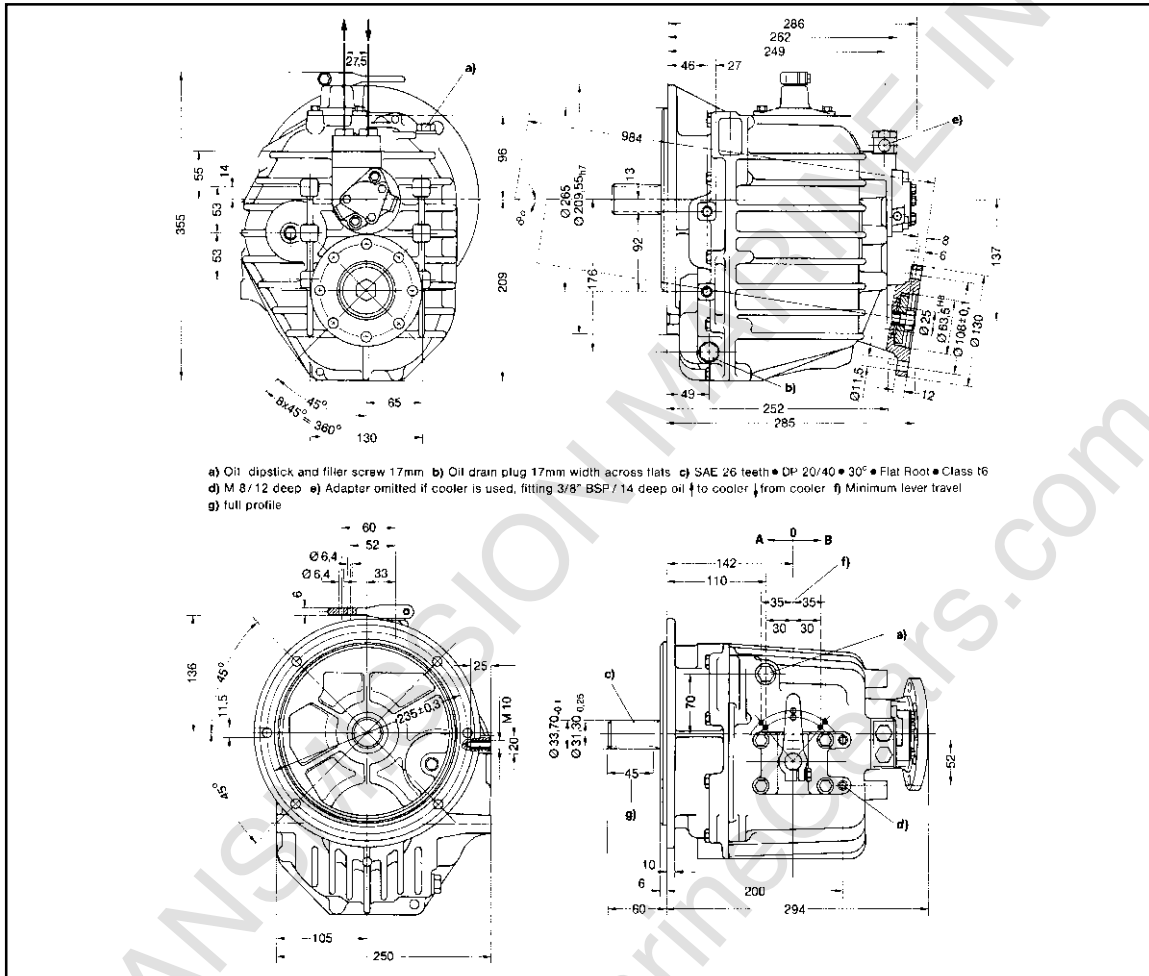
Technical data			HBW 250-1,5	HBW 250-2	HBW 250-3
Forward gear 'A', ratio		i	1.54	1.88	2.74
Reverse gear 'B', ratio		i	2.10	2.10	2.72
Input torque M_{max}	pleasure craft	Nm	250	250	170
	commercial craft	Nm	180	180	120
Power input P_{max}	pleasure craft	kW(hp)	80(109)		
	commercial craft	kW(hp)	57(78)		
Input speed n_{max}		1/min	5000		
Propeller thrust F_{max}		N	4300		
Weight without oil		kg	18		
Oil quantity		l	0.75		
Oil grade			Automatic Transmission Fluid (ATF)		

Dimensions / Ratings: HBW 360





Dimensions / Ratings: HBW 360A



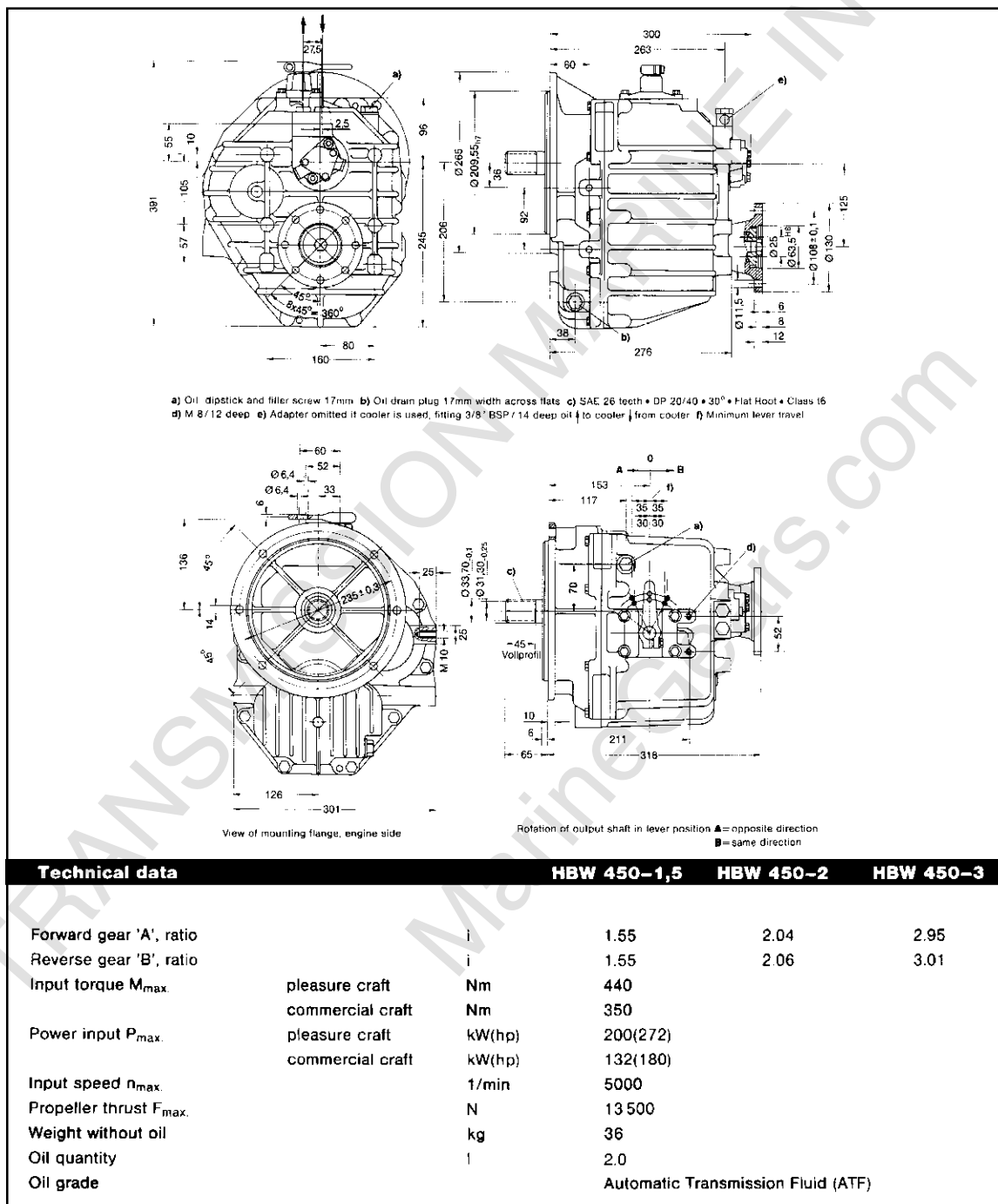
Technical data

HBW 360A-1.5 HBW 360A-2 HBW 360A-3

Forward gear 'A', ratio	i	1.65	2.22	3.05
Reverse gear 'B', ratio	i	1.64	2.19	3.14
Input torque M_{max}	pleasure craft commercial craft	Nm Nm	350 250	
Power input P_{max}	pleasure craft commercial craft	kW(hp) kW(hp)	150(204) 100(136)	
Input speed n_{max}		1/min.	5000	
Propeller thrust F_{max}		N	9300	
Weight without oil		kg	30	
Oil quantity		l	1.5	
Oil grade			Automatic Transmission Fluid (ATF)	

HM-08

Dimensions / Ratings: HBW 450



Dimensions / Ratings: HBW 450A

HSW 450 A2

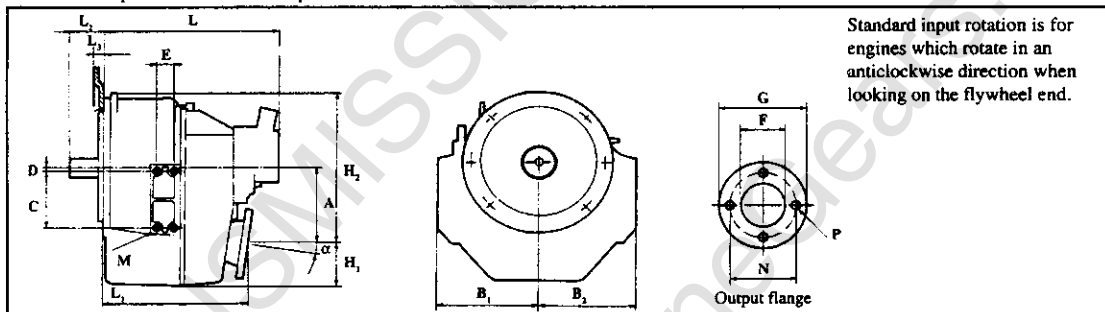
Technical data and Installation dimensions

REDUCTION RATIOS	DIESEL SAE HORSEPOWER (KILOWATTS)							
	CONTINUOUS		MEDIUM		LIGHT		PLEASURE	
	1800 RPM	2400 RPM	2100 RPM	2800 RPM	2100 RPM	2800 RPM	2300 RPM	3200 RPM
1.26	75 (56)	100 (75)	108 (80)	143 (107)	127 (95)	169 (126)	145 (108)	202 (151)
1.51 : 2.03	75 (56)	100 (75)	108 (80)	143 (107)	127 (95)	169 (126)	145 (108)	202 (151)
2.43	69 (52)	92 (69)	101 (75)	134 (100)	118 (88)	157 (117)	136 (101)	189 (141)

POWER / SPEED RATIOS (KW/RPM)				
1.26	0.0312	0.0382	0.0450	0.0471
1.51 : 2.03	0.0312	0.0382	0.0450	0.0471
2.43	0.0287	0.0357	0.0418	0.0440

Max/Min. engine speed limits: 5500/400 rpm
 Ratings for Gasoline engines see Marine Transmission
 Fluid grade: Automatic Transmission Fluid (ATF)
 Selection Guide
 Maximum limit for continuous duty: 3200 rpm
 Metric Horsepower = SAE Horsepower x 1.014

Duty Classification definition see Marine Transmission
 Selection Guide with Light Duty annual usage limited at
 2000 hours.
 approx. dry weight 28 kg (62 lbs)
 approx. oil capacity 2.0 liter (2.3 US gals.)



Dimens.	A	B ₁	B ₂	C	D	E	F	G*	H ₁	H ₂	L	L ₁	L ₂	L ₃ (SAE 3)	M	N*	α	P
mm	125.5	157.5	157.5	109	5.5	32	Ø 63.5	Ø 127	78.5	270	305	227.7	65	11	M12	108	8°	4xØ11.5
inches	4.94	6.20	6.20	4.29	0.21	1.25	Ø 2.5	Ø 5	3.09	10.62	12	8.96	2.55	0.43	M12	4.25	8°	4xØ0.45

* ratio 1.25 G = 101.6 mm (4 inches) N = 82.55 mm (3.25 inches)

TORSIONAL RESPONSIBILITY:

The responsibility for ensuring torsional compatibility rests with the assembler of the drive and driven equipment. ZF can accept no liability for gearbox noise caused by vibrations or for damage to the gearbox, the flexible coupling or to other parts of the drive unit caused by this kind of vibration. Contact ZF for further information and assistance. Ratings apply to marine transmissions currently in production and are subject to change without prior notice.

SAFE OPERATION NOTICE:

The safe operation of ZF products depends upon adherence to technical data presented in our brochures. Safe operation also depends upon proper installation, operation and routine maintenance and inspection under prevailing conditions and recommendations set forth by ZF. Damage to transmissions caused by repeated or continuous emergency manoeuvres or abnormal operation is not covered under warranty. It is the responsibility of users and not ZF to provide and install guards and safety devices which may be required by recognized safety standards of the respective country (e.g. for U.S.A. - the Occupational Safety Act of 1970 and its subsequent provisions).

Dimensions / Ratings: HBW 450D

ZF 45 C / 63 C / 88 C (HSW 450 D / 630 D / 880 D)

Technical data and Installation dimensions

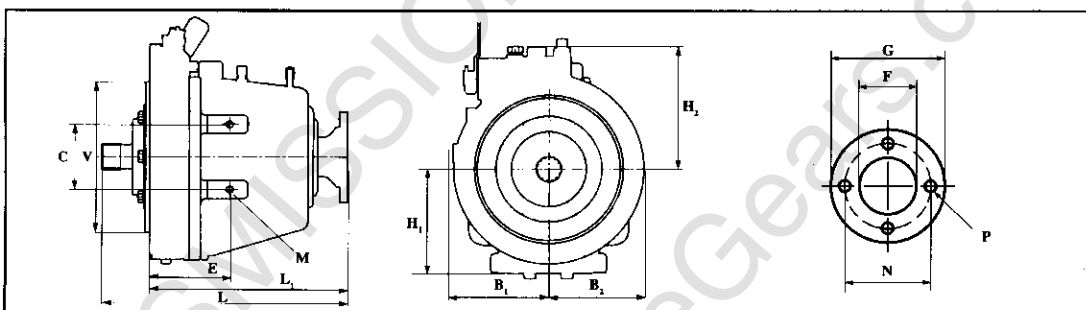
REDUCTION RATIOS	DIESEL SAE HORSEPOWER (KILOWATTS)				
	LIGHT		PLEASURE		
45 C	1.00	1.03	117 (87)	155 (116)	171 (128)
63 C	1.00	1.03	141 (105)	188 (140)	220 (164)
88 C	1.00	1.03	141 (105)	188 (140)	284 (212)

POWER / SPEED RATIOS (KW/RPM)

45 C	1.00	1.03	0.0414	0.0555
63 C	1.00	1.03	0.0500	0.0712
88 C	1.00	1.03	0.0500	0.0921

Max/Min. engine speed limits: 5500/400 rpm
Ratings for Gasoline engines see Marine Transmission
Selection Guide
Metric Horsepower = SAE Horsepower x 1.014
Fluid grade: Automatic Transmission Fluid (ATF)

Duty Classification definition see Marine Transmission Selection
Guide
with Light Duty annual usage limited at 2000 hours.
approx. dry weight 45 C: 30 kg (66 lbs)
approx. dry weight 63 C / 88 C: 32 kg (70 lbs)
approx. oil capacity 2.0 liter (2.12 qts.)



ZF 45 C / (HSW 450 D) DIMENSIONS mm / inches													
B ₁	B ₂	C	E	F	G	H ₁	H ₂	L	L ₁	M	N	P	V
111/4.37	111/4.37	92/3.62	108/4.27	Ø 63.5/ Ø 2.50	Ø 101.6/ Ø 4	145/5.71	171.5/6.75	331.7/13.05	266.7/10.50	7/16-14 UNC	82.55/3.25	4xØ10.2/ 4xØ0.40	209.5/8.25

ZF 63 C / (HSW 630 D) ZF 88 C (HSW 880 D) DIMENSIONS mm / inches													
B ₁	B ₂	C	E	F	G	H ₁	H ₂	L	L ₁	M	N	P	V
111/4.37	111/4.37	92/3.62	108/4.27	Ø 63.5/ Ø 2.50	Ø 127/ Ø 5	145/5.71	171.5/6.75	331.7/13.05	266.7/10.50	7/16-14 UNC	108/4.25	4xØ11.5/ 4xØ0.45	209.5/8.25

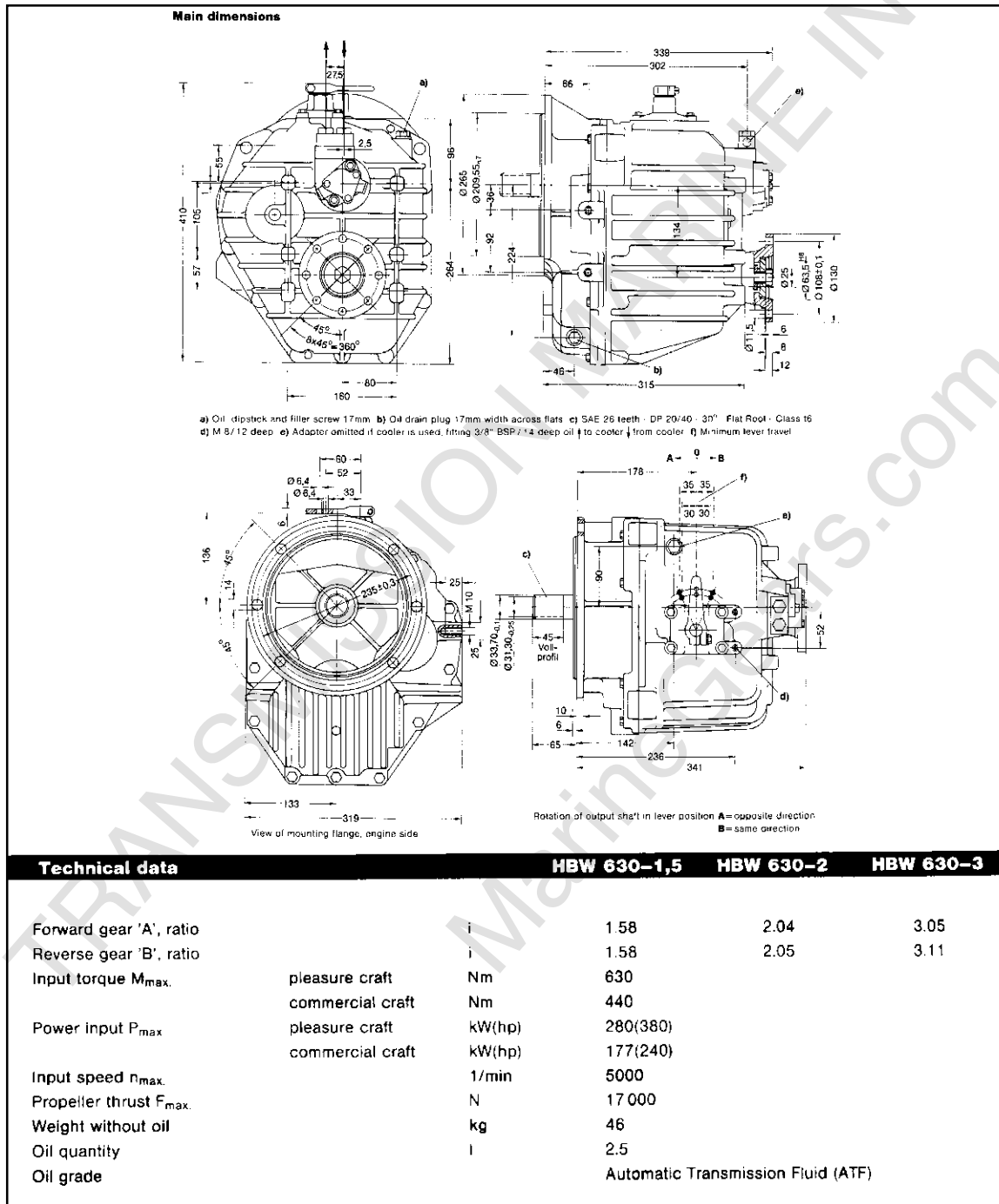
TORSIONAL RESPONSIBILITY:

The responsibility for ensuring torsional compatibility rests with the assembler of the drive and driven equipment.
ZF can accept no liability for gearbox noise caused by vibrations or for damage to the gearbox, the flexible coupling or to other parts of the drive unit caused by this kind of vibration. Contact ZF for further information and assistance.
Ratings apply to marine transmissions currently in production and are subject to change without prior notice.

SAFE OPERATION NOTICE:

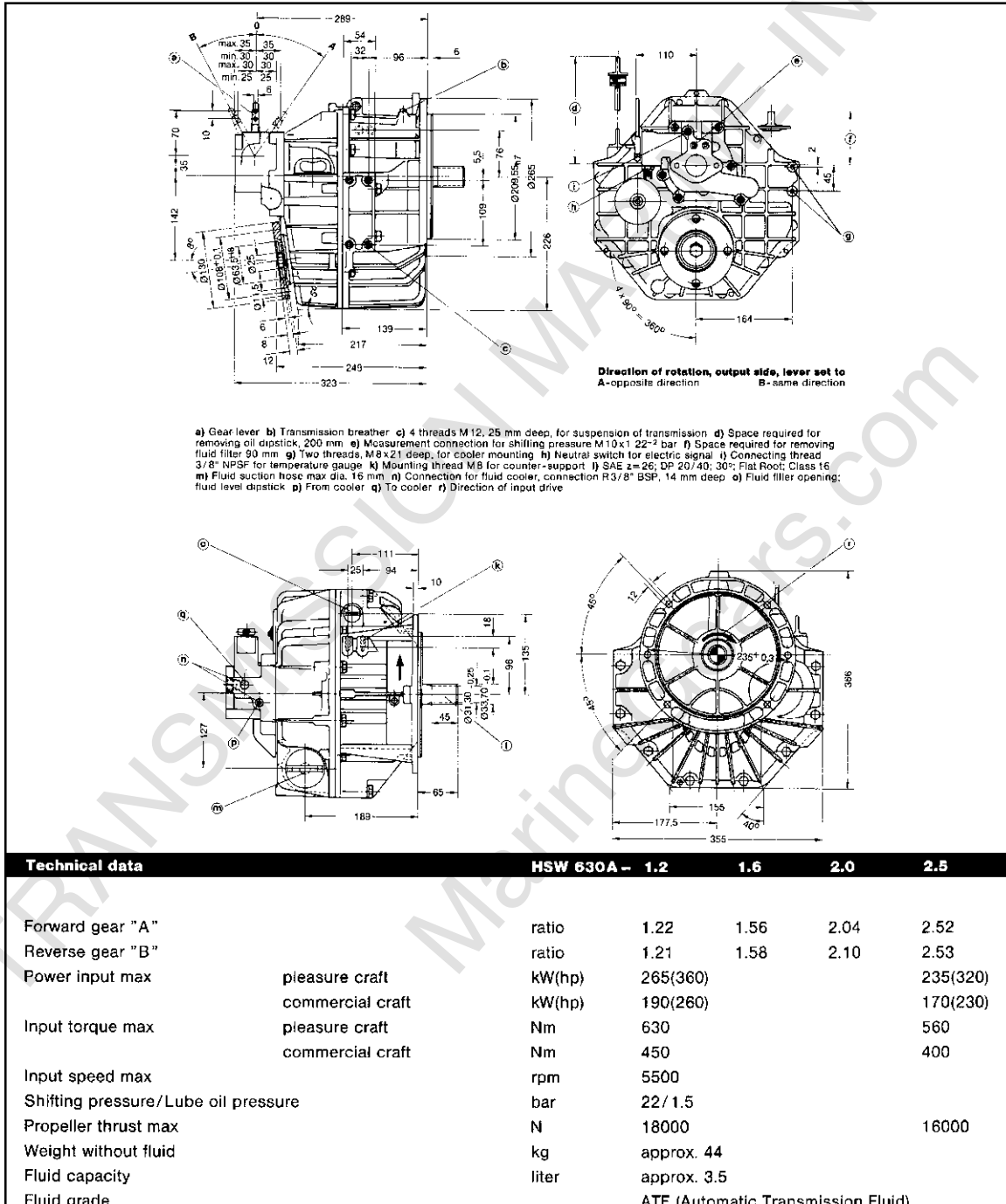
The safe operation of ZF products depends upon adherence to technical data presented in our brochures. Safe operation also depends upon proper installation, operation and routine maintenance and inspection under prevailing conditions and recommendations set forth by ZF. Damage to transmissions caused by repeated or continuous emergency manoeuvres or abnormal operation is not covered under warranty. It is the responsibility of users and not ZF to provide and install guards and safety devices which may be required by recognized safety standards of the respective country (e.g. for U.S.A. - the Occupational Safety Act of 1970 and its subsequent provisions).

Dimensions / Ratings: HBW 630

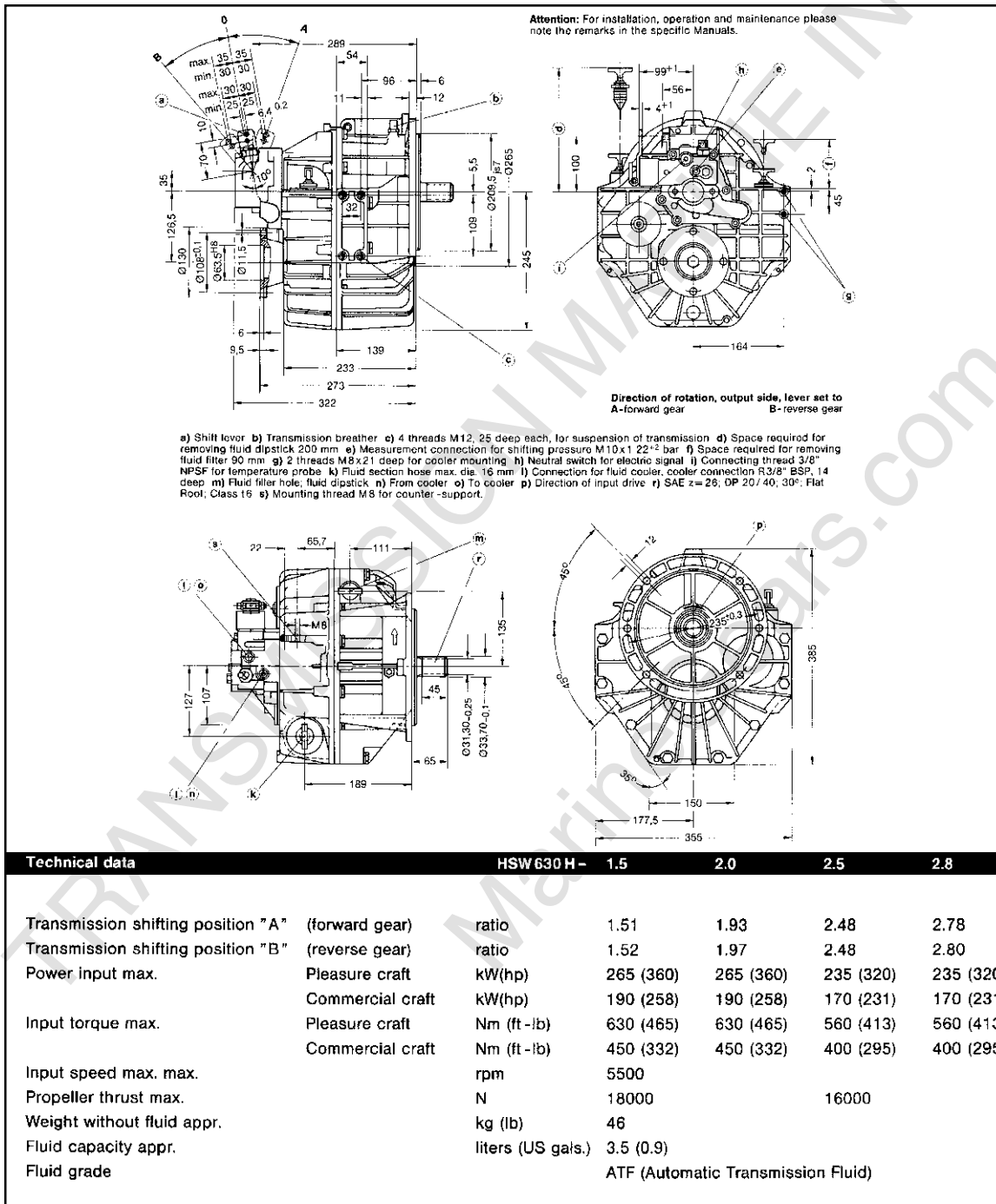


HM-12

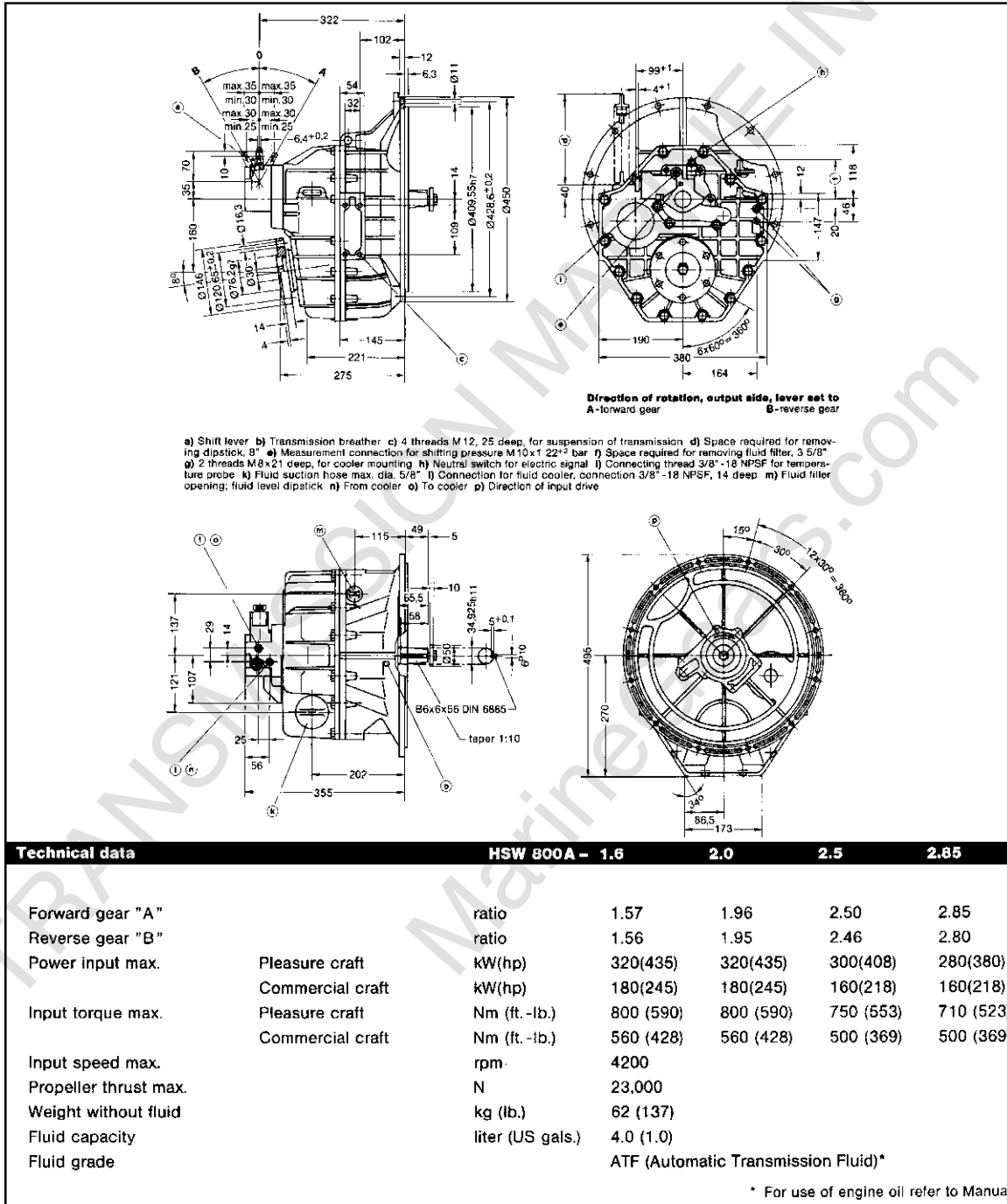
Dimensions / Ratings: HSW 630A / ZF63A



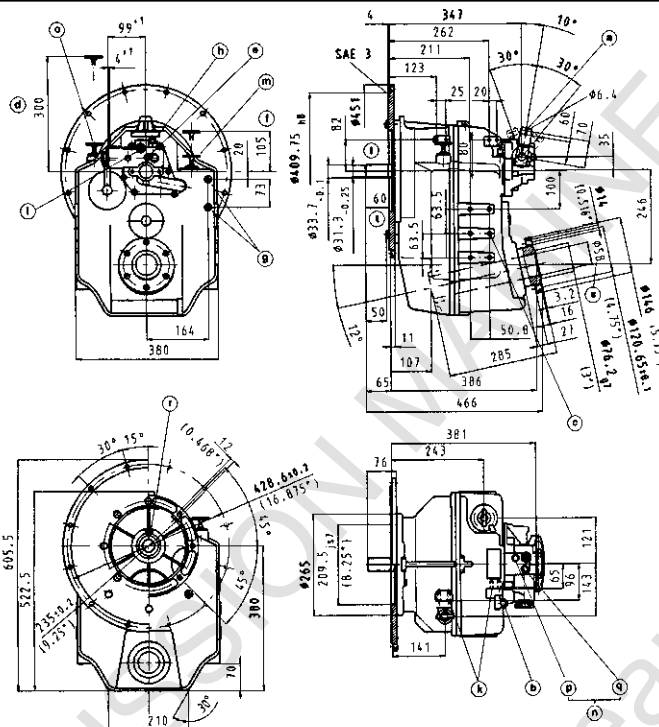
Dimensions / Ratings: HSW 630H / ZF63



Dimensions / Ratings: HSW 800A / ZF80A



Dimensions / Ratings: HSW 800V / ZF80IV

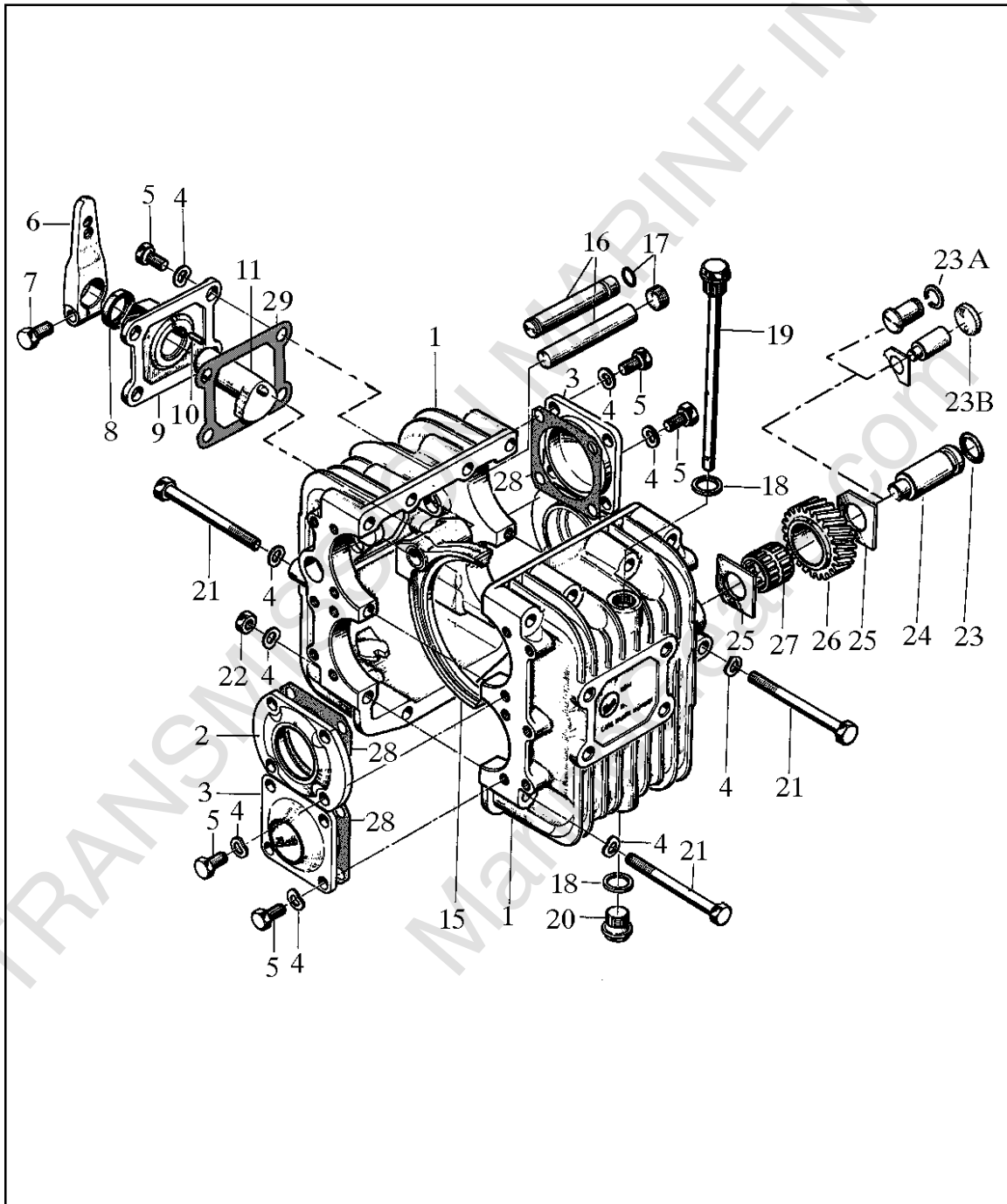


a) Shift lever dia. 6.4 ± 0.2 mm; b) Transmission breather; c) 6 Threads M12, 23 deep, for suspension of transmission; d) Space required for removing dipstick; e) Measurement connection for shifting pressure M 10x1; f) Space required for removing fluid filter; g) 2 threads M 8 x 21 deep, for cooler mounting; h) Neutral switch for electric signal; i) Connecting thread 3/8" NPSF for temperature probe; k) Mounting thread M 8 for counter-support; l) SAE z = 26; DP 20/40; 30°; Flat Foot; Class 16; m) Fluid filter and fluid suction holes; n) Connections from and to fluid cooler 3/8" - 18 NPSF, 14 deep; o) Fluid dipstick; p) From cooler; q) To cooler; r) Direction of input drive; s) Shaft diameter max. 58 mm; t) Full profile length 60 mm. All dimensions in mm

Technical data		HSW 800V -	1.5	2.0	2.5
Reverse gear "A"			1.52	2.1	2.49
Forward gear "B"			1.52	2.0	2.47
Power input max.	Pleasure craft	kW(hp)	377(512)		
	Commercial craft	kW(hp)	188(255)		
Input torque max.	Pleasure craft	Nm	800		
	Commercial craft	Nm	560		
Input speed max.		rpm	5000		
Propeller thrust max.	Pleasure craft	N	27000	25000	32000
	Commercial craft	N	15000	17000	19000
Weight with SAE 3 flange, but without fluid approx.		kg(lb.)	93(205)		
Fluid grade			ATF (Automatic Transmission Fluid)		



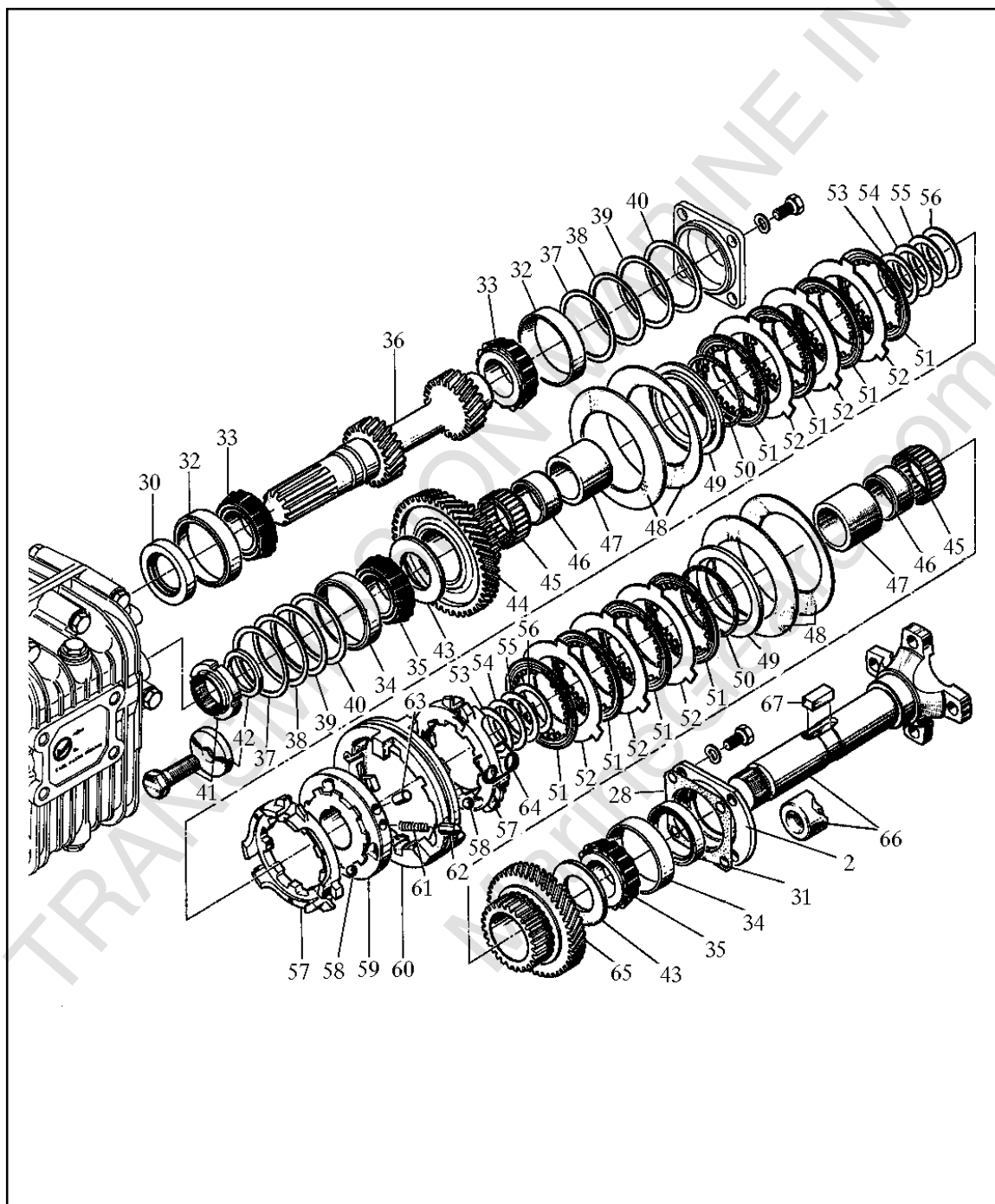
Mechanical Units



HBW 50 through 250 (HBW 5 through 20), (ZF5 - ZF25M) case assemblies.

HM-17

Mechanical Units (Continued)

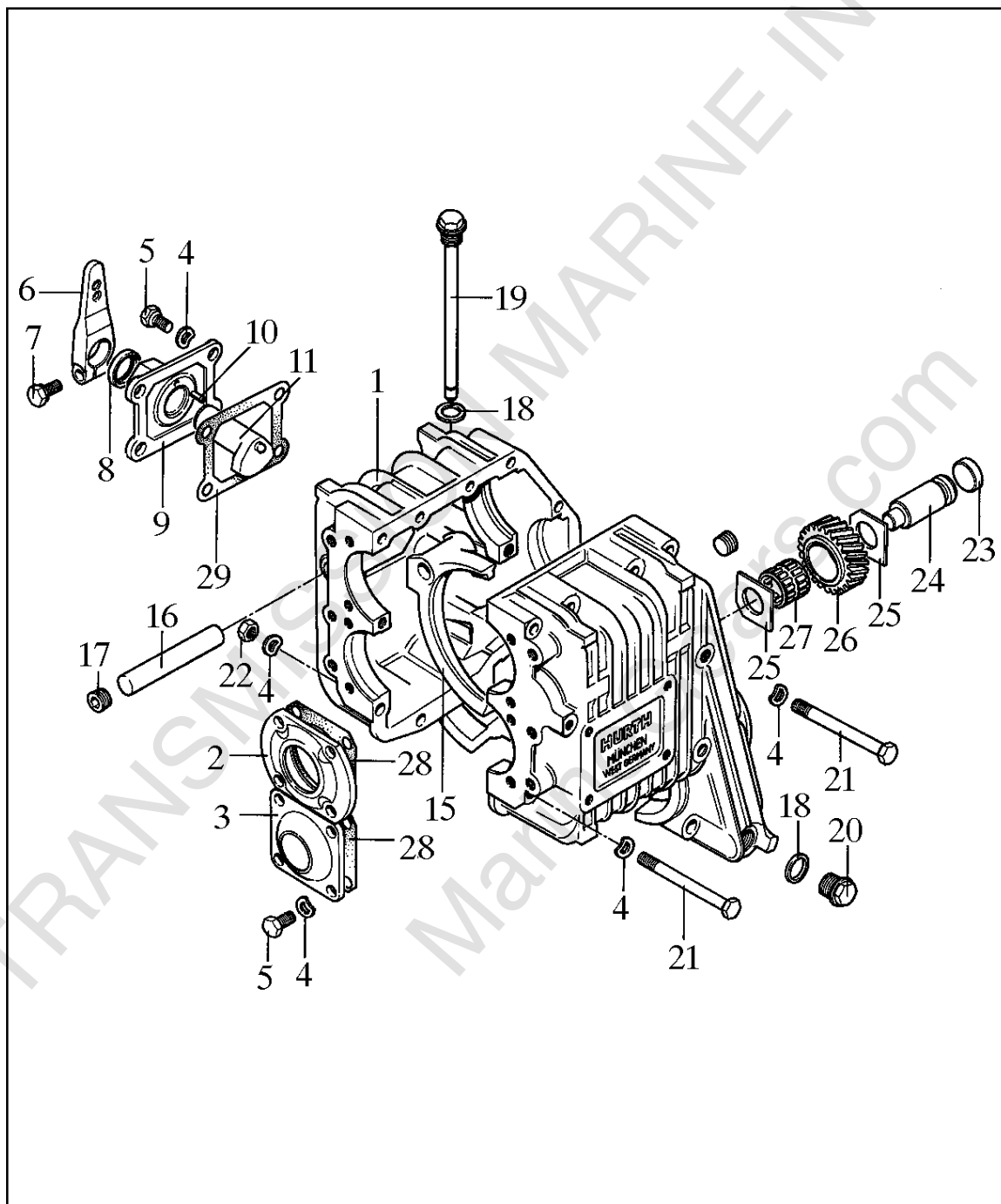


HBW 50 through 250 (HBW 5 through 20), (ZF5M - ZF25M) internal gear assemblies.

HM-18



Mechanical Units (Continued)

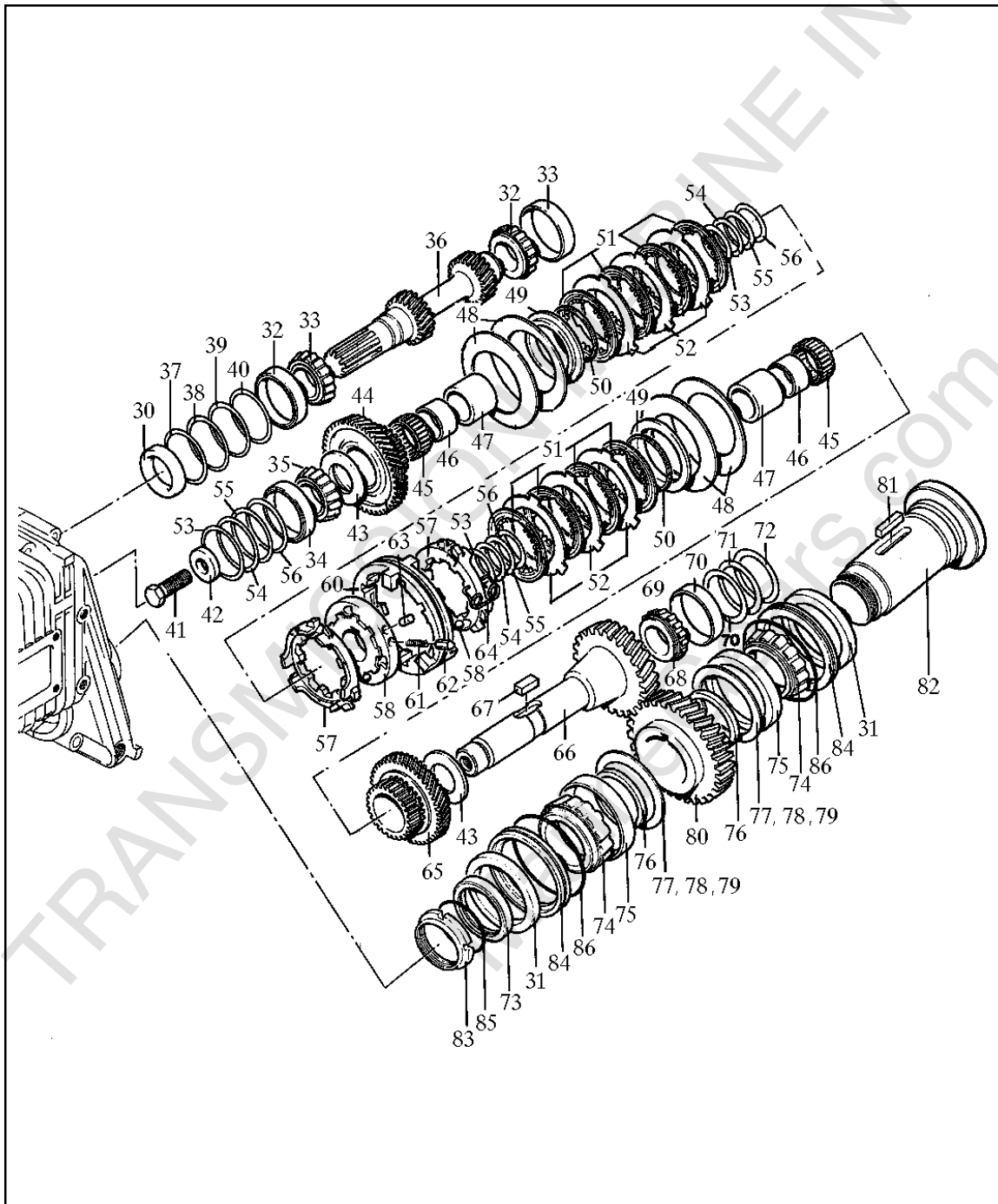


HBW 150V (V-Drive),(ZF15MIV) case assembly.

HM-19



Mechanical Units (Continued)

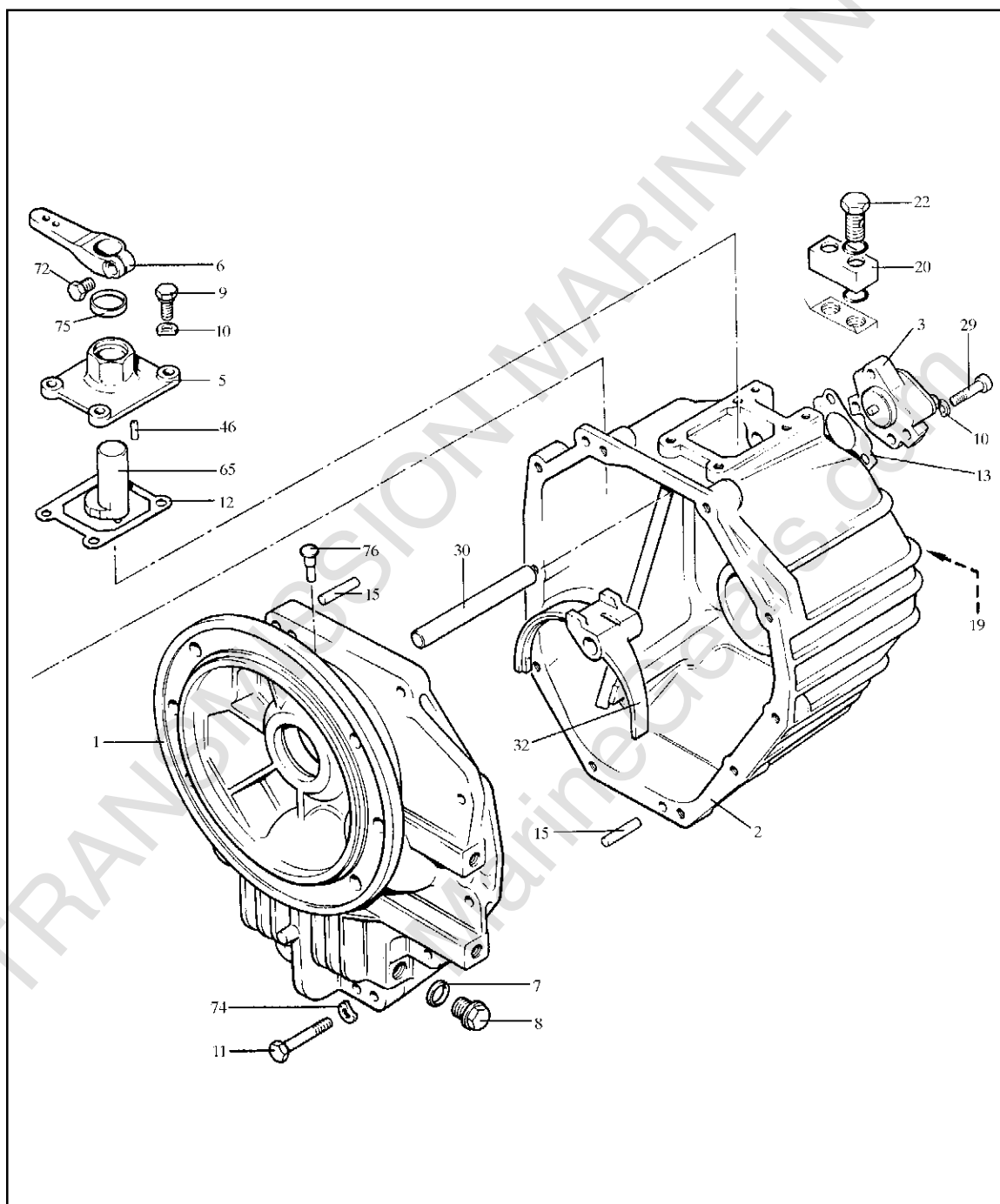


HBW 150V (V-Drive), (ZF15MIV) internal gear assembly.

HM-20



Mechanical Units (Continued)

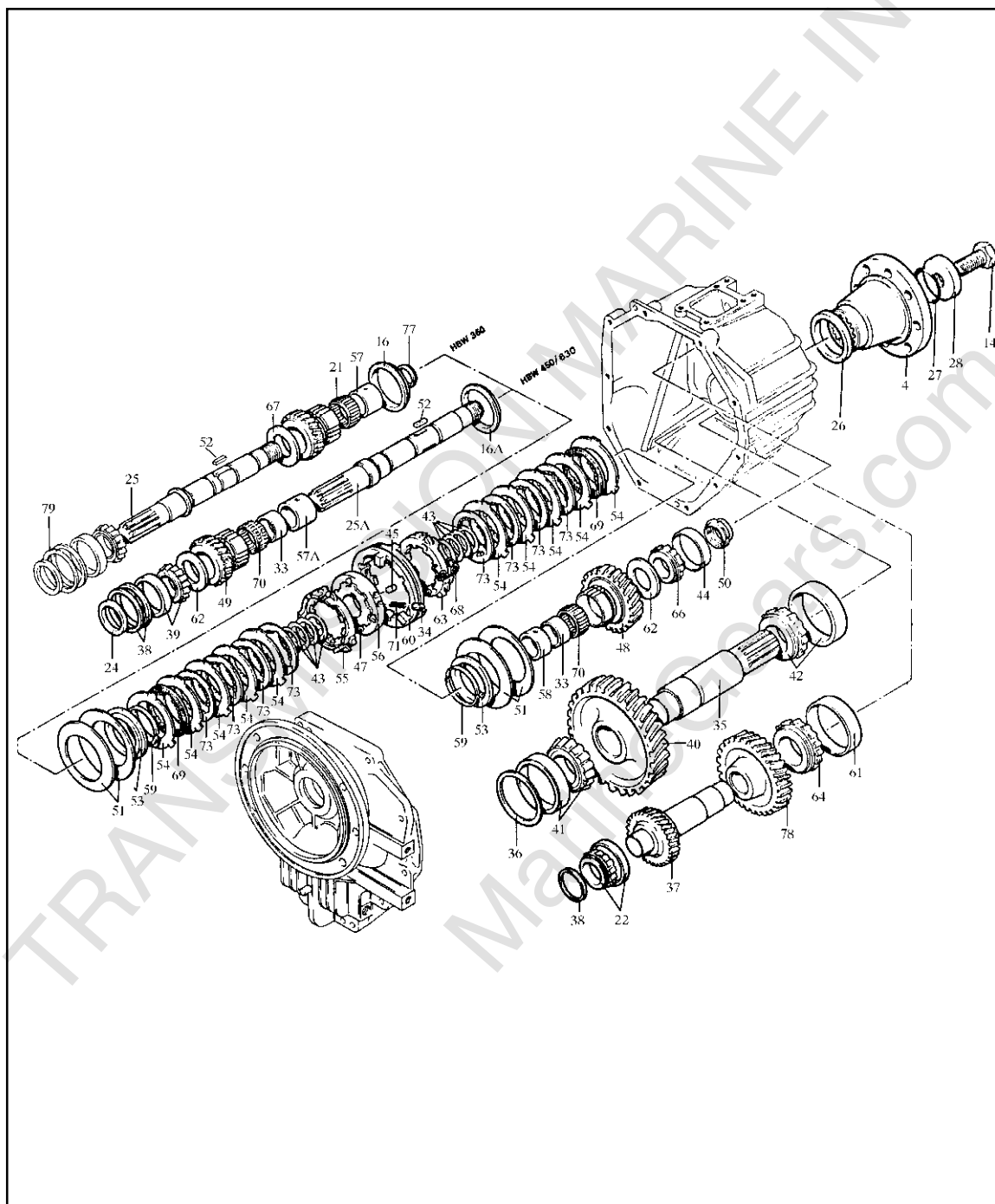


HBW 360 through 630, case assembly.

HM-21



Mechanical Units (Continued)

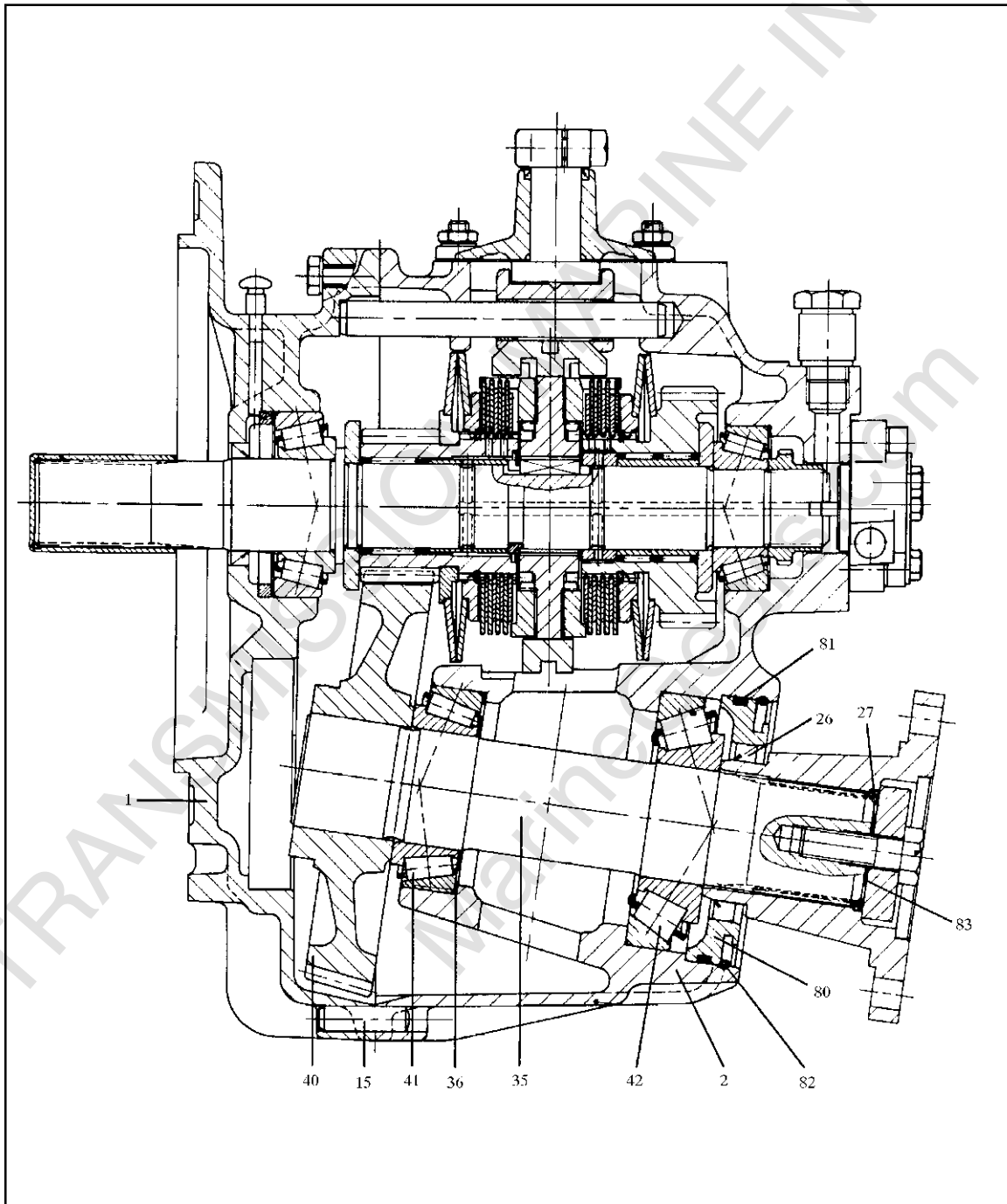


HBW 360 through 630, internal gear assemblies.

HM-22



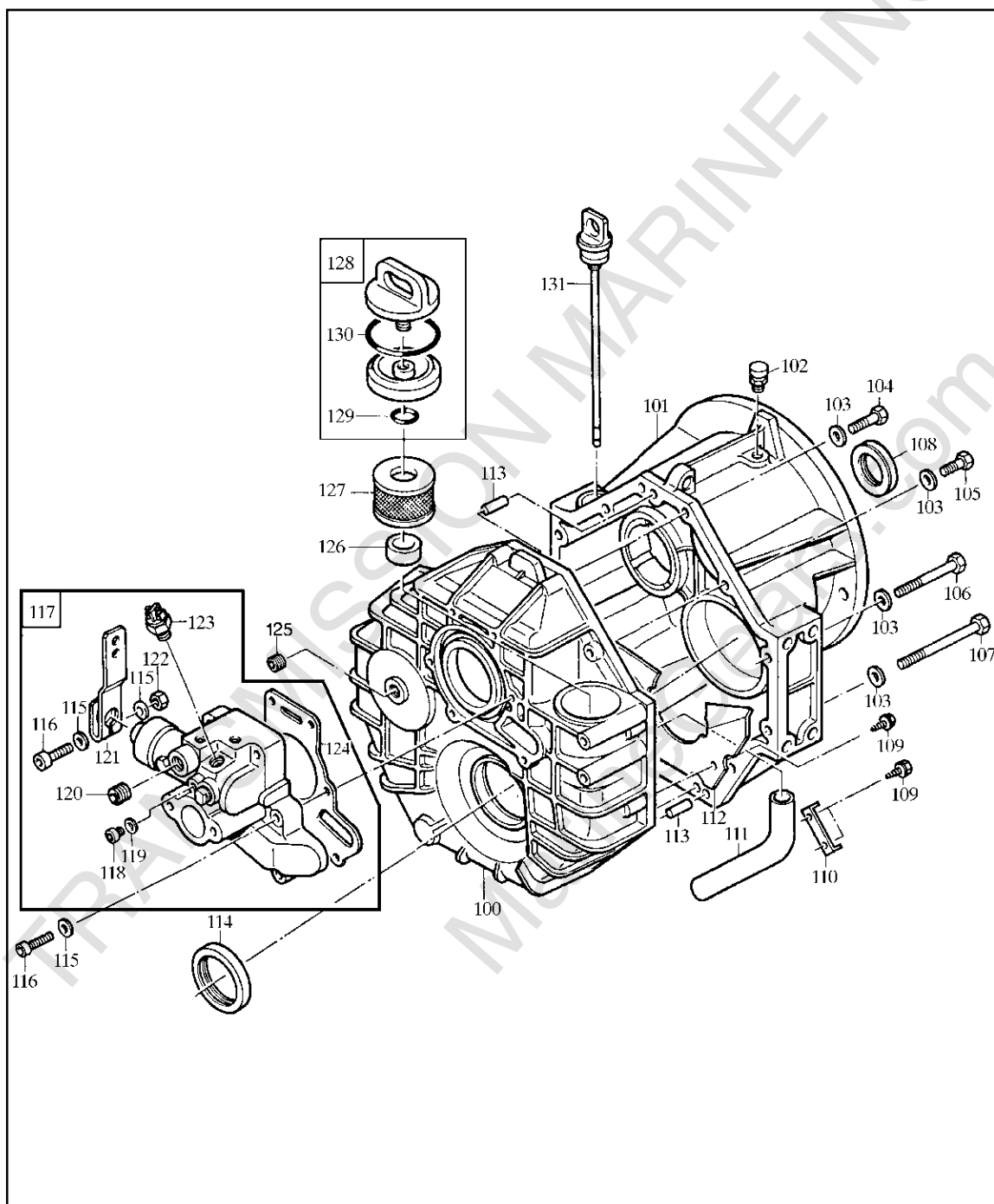
Mechanical Units (Continued)



HBW 360A, down angle.

HM-23

Hydraulic Units

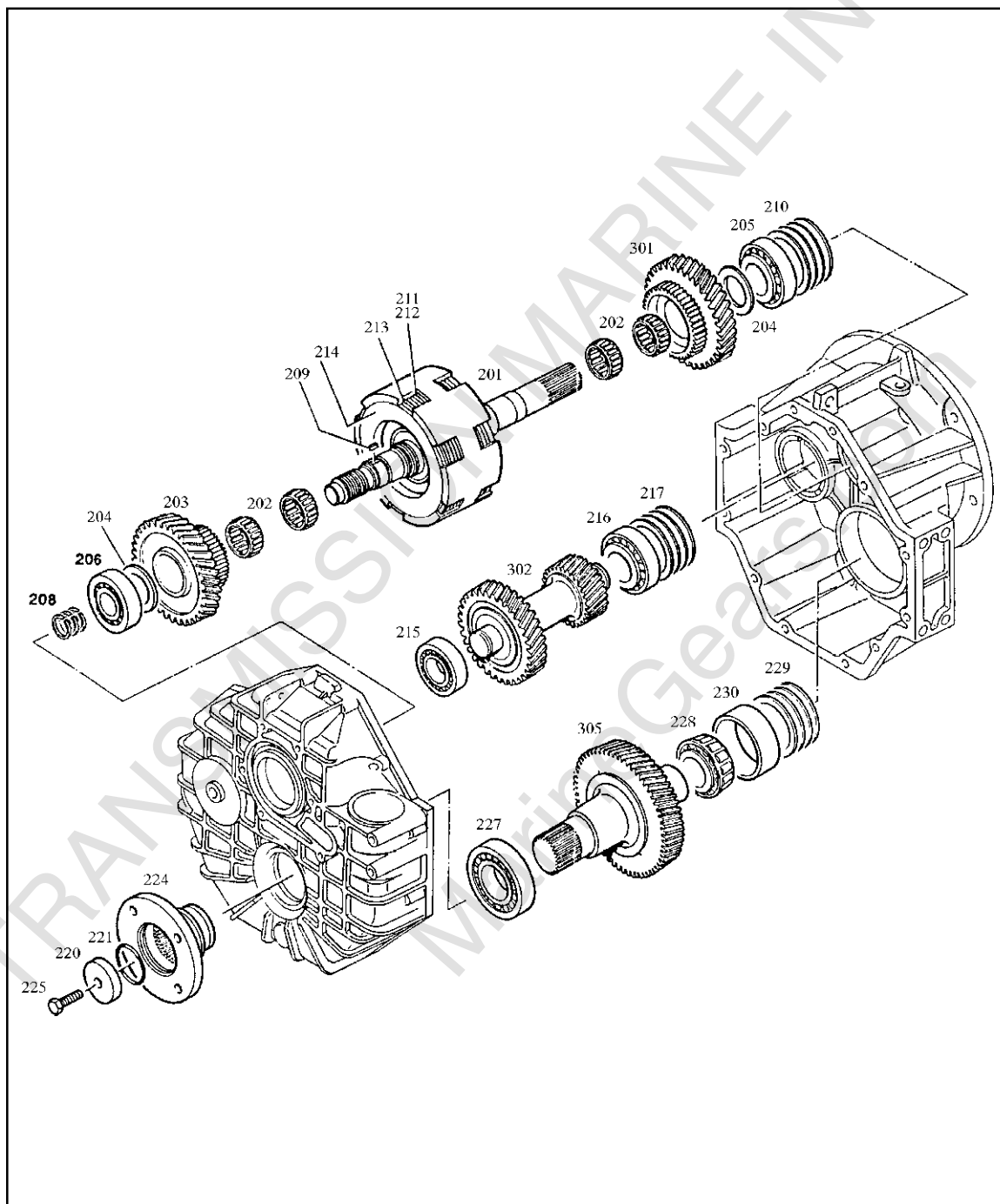


HSW 630A (down angle), (ZF63A) case assembly.

HM-24



Hydraulic Units (Continued)

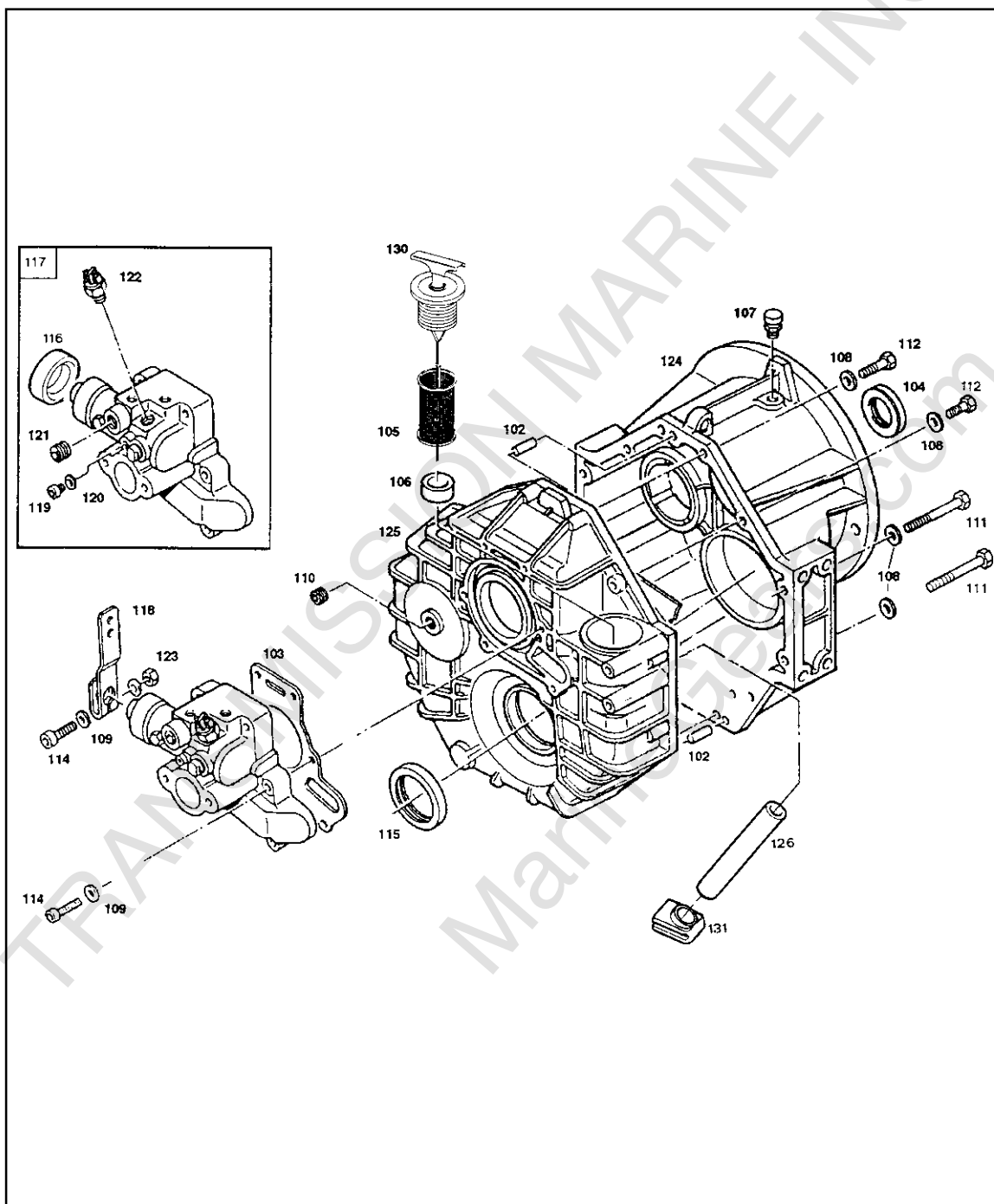


HSW 630A (ZF63) (down angle), internal gear assembly.

HM-25



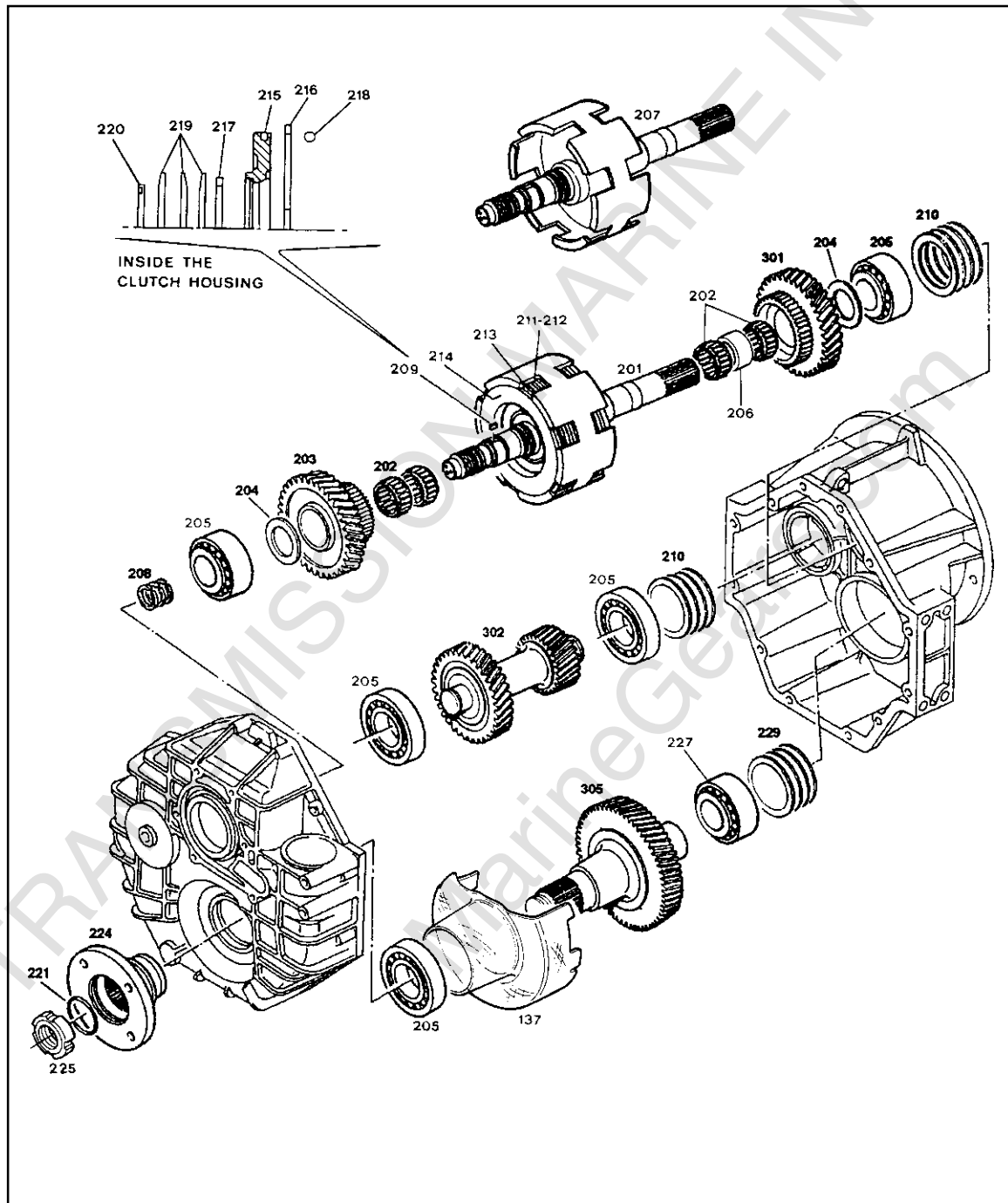
Hydraulic Units (Continued)



HSW 450A case assembly.

HM-26

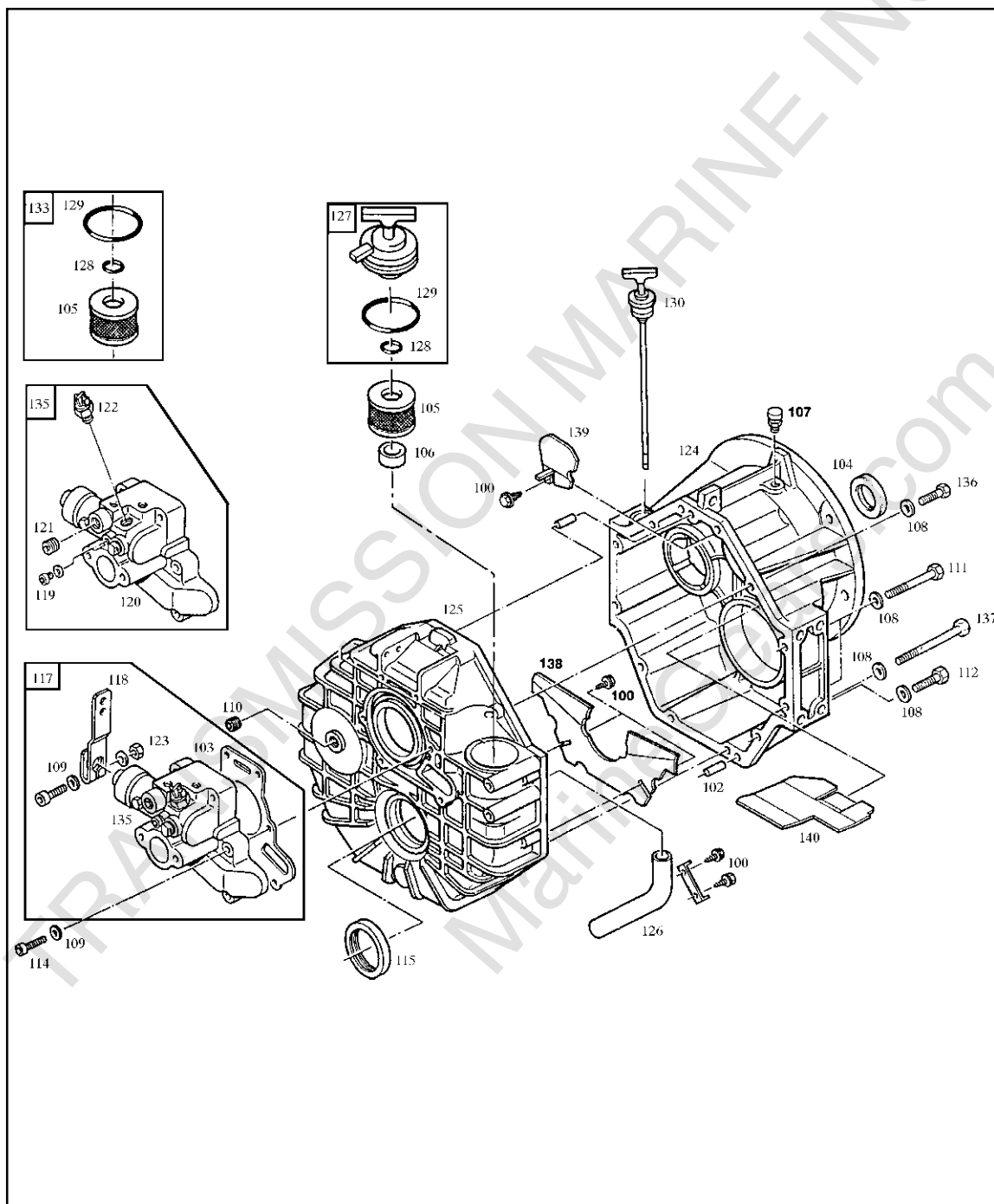
Hydraulic Units (Continued)



HSW 450A, internal gear assembly.

HM-27

Hydraulic Units (Continued)

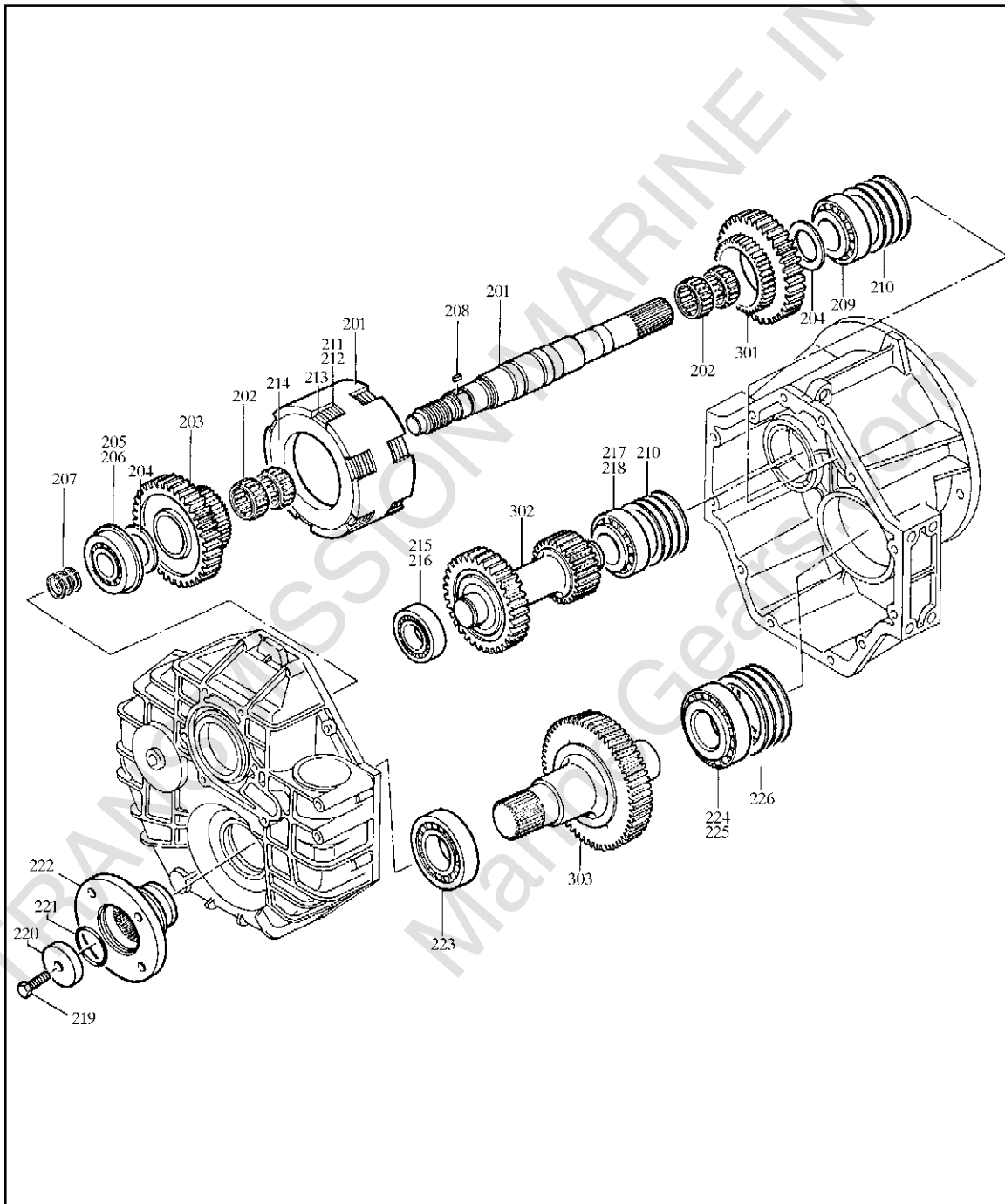


HSW 630H (ZF63A) (drop center), case assembly.

HM-28



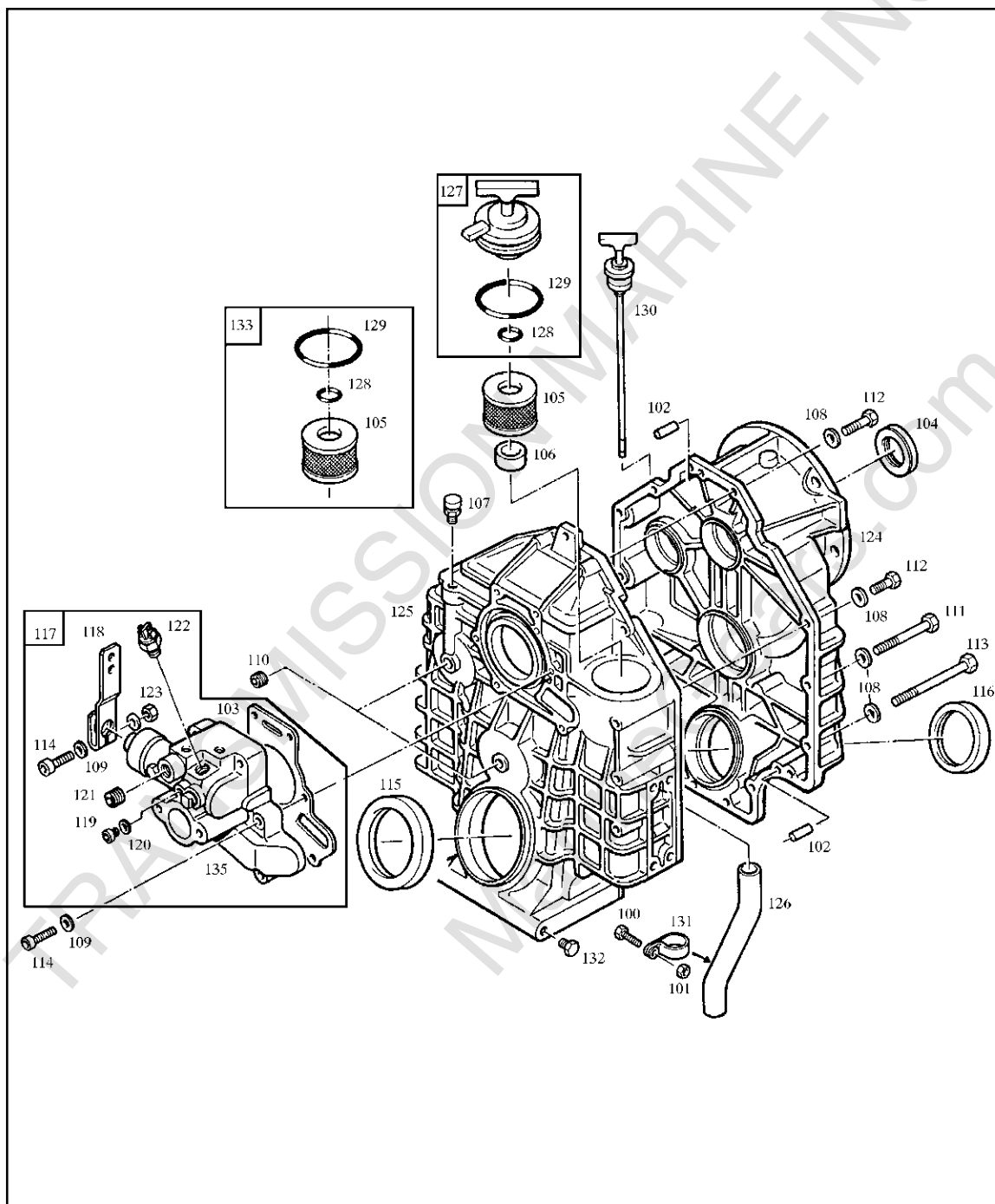
Hydraulic Units (Continued)



HSW 630H (ZF63) (drop center), internal gear assembly.

HM-29

Hydraulic Units (Continued)

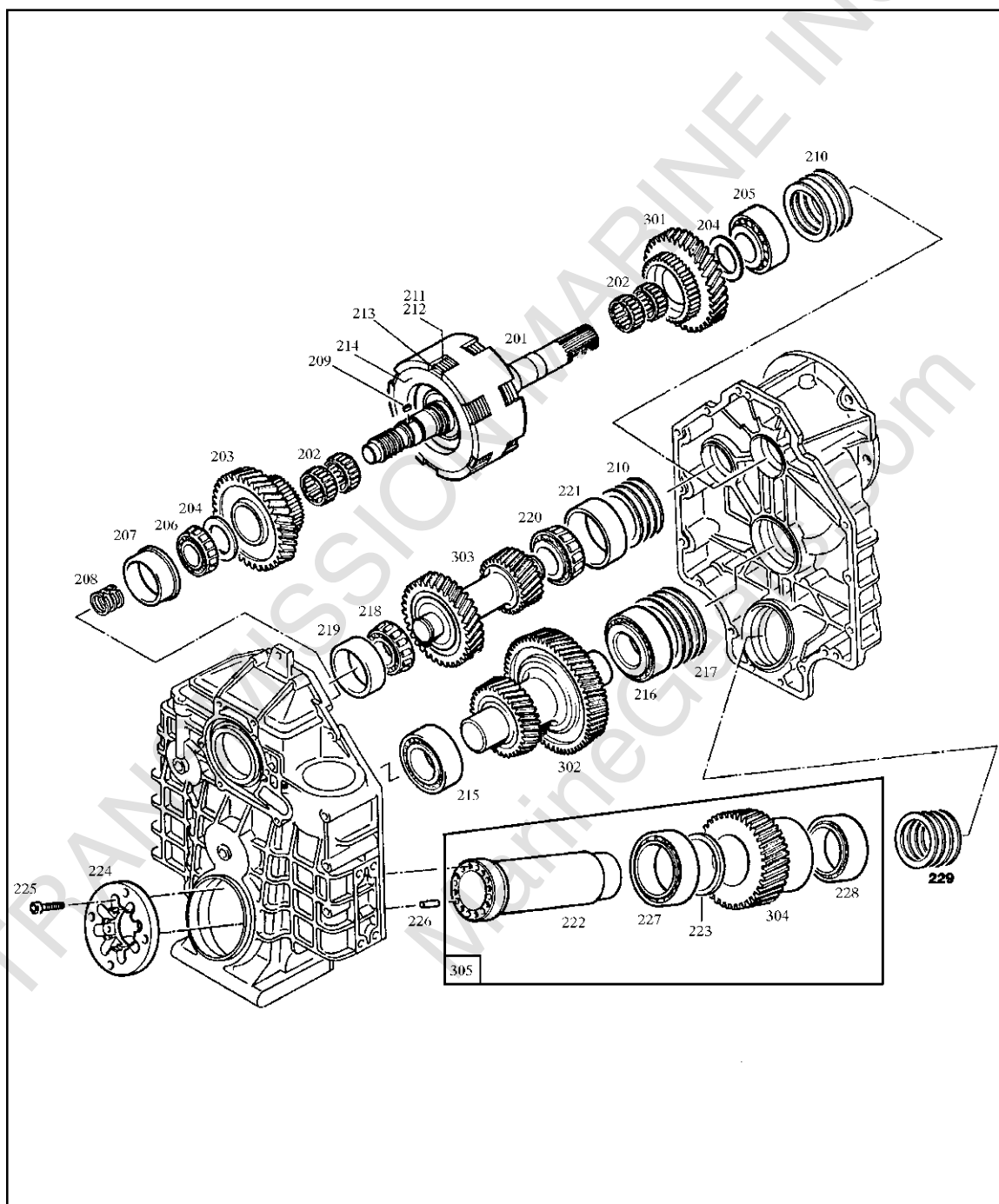


HSW 630V (V-Drive), (ZF63IV) case assembly.

HM-30



Hydraulic Units (Continued)

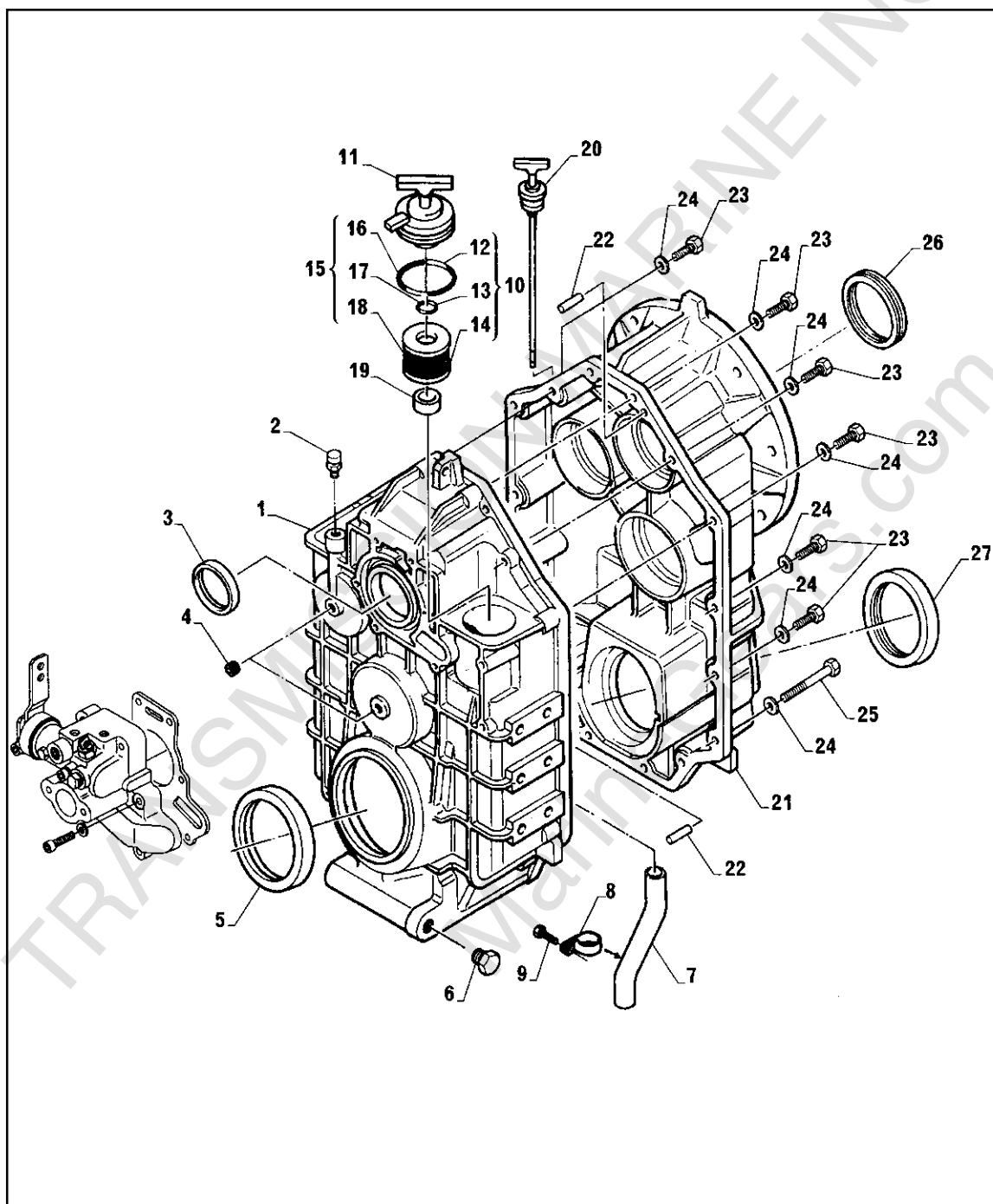


HSW 630V (ZF63IV) (V-Drive), internal gear assembly.

HM-31



Hydraulic Units (Continued)

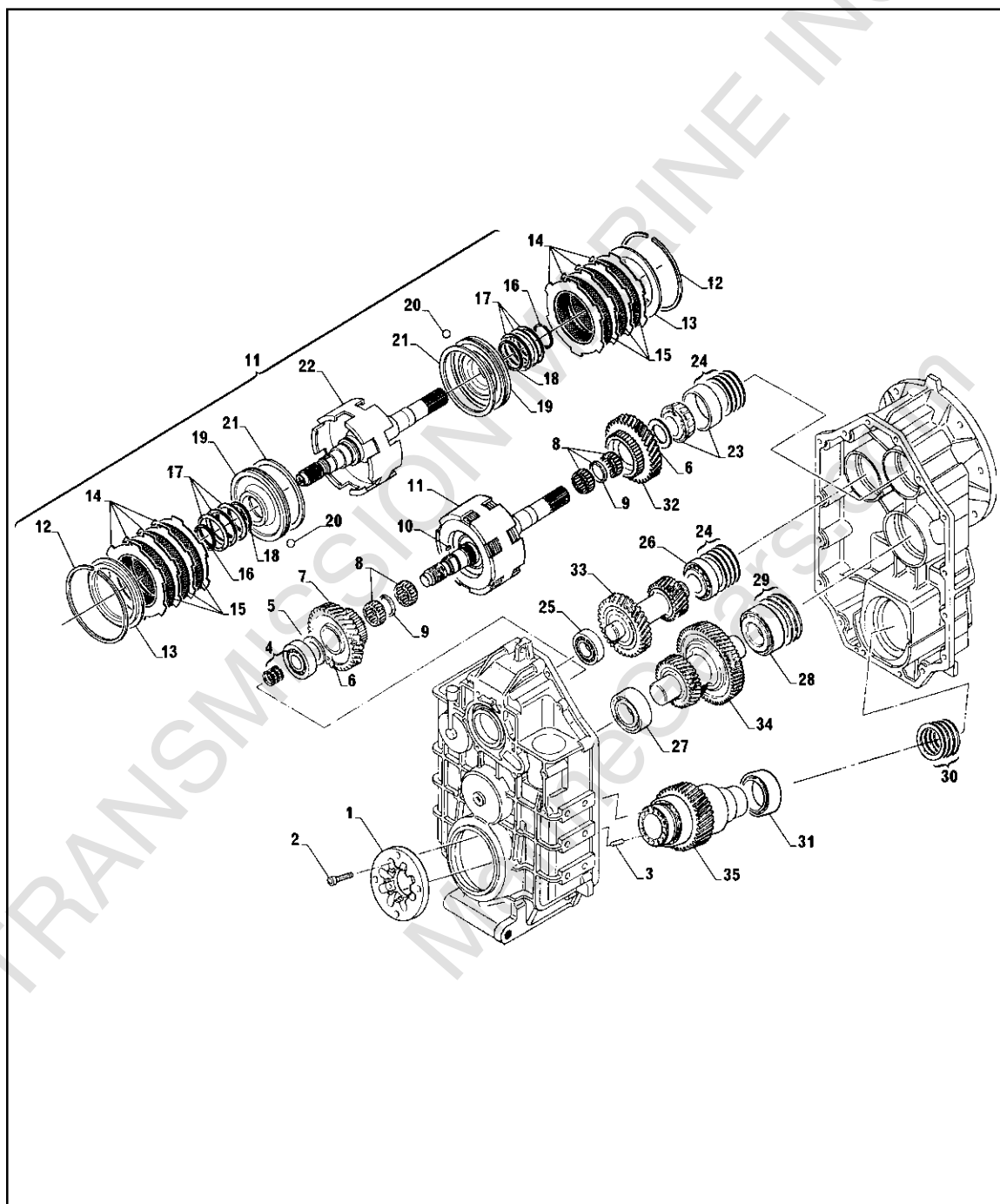


HSW 800V (V-Drive), case assembly.

HM-32



Hydraulic Units (Continued)

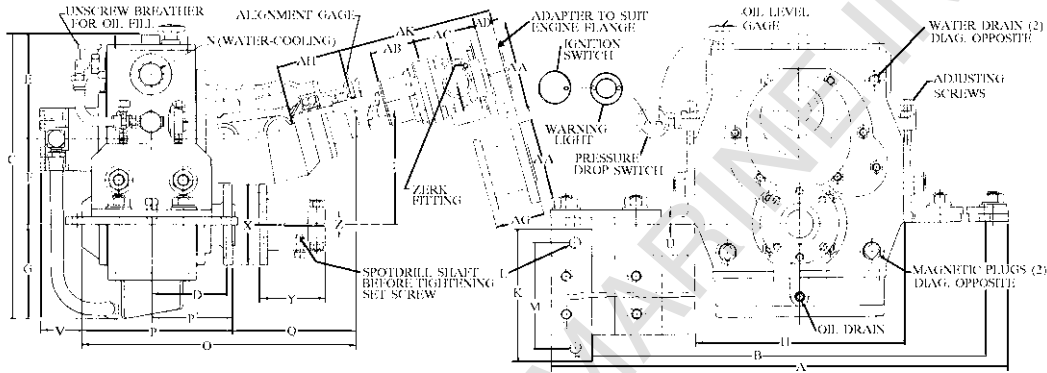


HSW 800V

HM-33

General Literature

WALTER V-DRIVES Models RV-10 thru RV-50

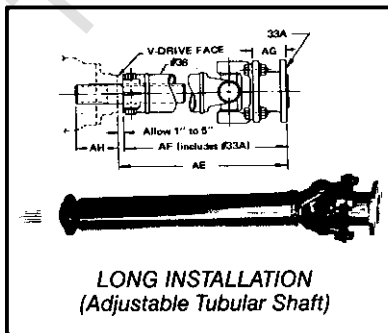
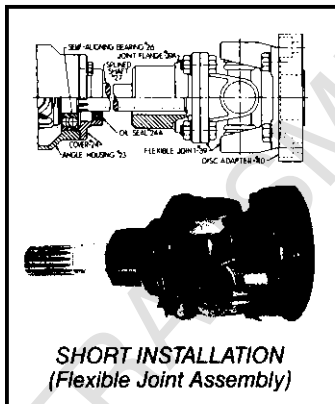
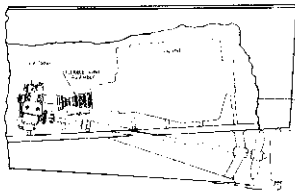


HP RATINGS Reduction ratio must be taken in V-Drive; use 1:1 transmission. HP/100 RPM ratings are for pleasure craft with gasoline engines. Multiply by .75 for diesel, multiply by additional .75 for commercial and/or heavy duty use, and multiply by additional .9 for V-Drives with IDLER ASSEMBLY. Large and/or single screw boats may require heavy duty rating; all displacement hulls require heavy duty rating. Ratings assume propeller will allow the engine to reach its rated RPM. All new applications must be approved by The Walter Machine Co., Inc.

Gas Ratings	RV-10	RV-26	RV-36	RV-40	RV-48	RV-50
Ratio	1.00:1	*1.00:1	1.00:1	1.00:1a	1.00:1a	1.00:1
HP/100RPM	2.7	8.0	9.5	11.5	14.0	18.0
Ratio	1.29:1	1.46:1	1.52:1	1.50:1a	1.50:1a	1.47:1
HP/100RPM	2.5	7.5	9.0	11.0	13.5	17.5
Ratio	1.67:1	2.05:1	2.09:1	2.04:1a	2.04:1a	2.00:1
HP/100RPM	2.2	7.0	8.5	10.5	13.0	17.0
Ratio	2.00:1	2.56:1	2.58:1	2.50:1a	2.50:1a	2.50:1
HP/100RPM	2.0	6.5	8.0	9.5	12.0	15.5
Ratio		3.00:1	3.00:1	3.12:1b	3.12:1b	3.00:1
HP/100RPM		6.0	7.5	9.0	11.0	13.5

Note:
RV-26 replaces
RV-20 & RV-30

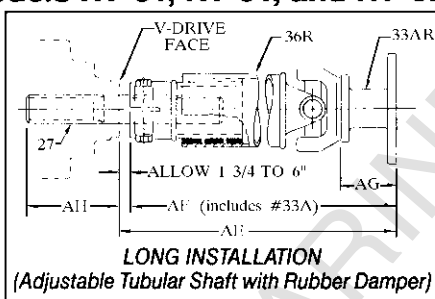
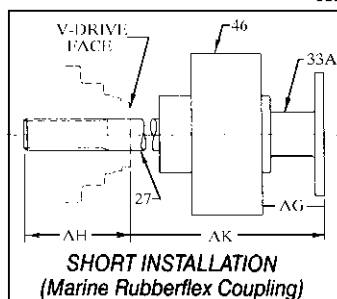
*Not available with idler.



	RV-10	RV-26	RV-36	RV-40	RV-48	RV-50
App. Oil Capacity	1 pint	2 pints	3 pints	4 pints	4 pints	6 pints
Approx. Wgt.	40 lbs.	110 lbs.	130 lbs.	186 lbs.	190 lbs.	250 lbs.
A	13 1/4-14 3/4	22 1/4-24	24 7/8-25 7/8	24 7/8-25 7/8	24 7/8-25 7/8	24 7/8-25 7/8
B	12 1/4-13 1/4	18 1/2-22 1/2	22 1/2-24 1/4	22 1/2-24 1/4	22 1/2-24 1/4	22 1/2-24 1/4
C	9 1/16	13 1/4	14 3/16	a15 1/16 b16 1/16	a15 1/16 b16 1/16	18
D	2 1/4	3 1/4	4 1/4	4 1/4	4 1/4	4 1/4
E	2 1/16	4 1/16	5 1/16	5 1/16	5 1/16	5 1/16
F	3	4	4 1/4	5	5	6
G	3 3/8	4 3/8	4 3/8	a5 b6 1/8	a5 b6 1/8	6 1/4
H	6 1/4	9 1/2	10 1/2	12	12	12
I	4 1/16	5 1/16	5 1/16	6 1/16	6 1/16	7 3/8
K	6	8	10	10	10	10
L	1 1/32	1 1/32	1 1/32	1 1/32	1 1/32	1 1/32
M	4 1/2	6 1/2	8 1/4	8 1/4	8 1/4	8 1/4
N	1/2	1	1 1/4	1 1/4	1 1/4	1 1/4
O	9 7/16	13 1/16	14 1/16	15 1/16	16 1/16	17 1/16
P	4 1/8	7	8	8 1/8	8 1/8	8 1/8
Q	22 1/32	3 1/16	4 1/16	4 1/16	4 1/16	4 1/16
R	4 1/16	6 1/32	6 1/32	7	7 1/8	8 1/4
S	1	1 1/8	1 1/4	1 1/2	1 1/2	1 1/2
Key S	3/8	1/2	5/8	3/4	3/4	3/4
U	1/2	3/4	1	1 1/2	1 1/2	1 1/2
V	1	2 1/4	1 1/2	2	2	2 1/4
X	2 1/2	3 1/2	4	4 1/4	4 1/4	5
Y	2 1/2	2 3/4	3	3 1/4	3 1/4	3 1/4
Z	1 1/4 max.	1 1/2 max.	1 3/4 max.	2 max.	2 max.	2 max.
AA	5 max.	6 1/2 max.	6 3/4 max.	7 1/4 max.	7 1/4 max.	7 1/4 max.
AB	3 1/16	2 1/16	2 1/16	3 1/16	2 3/4	2 3/4
AC	—	3 1/8	3 1/8	3 1/8	3	3
AD	—	3/8	3/8	3/8	3/8	1 1/4
AE min.	21	25	25	25	25	25
max.	59	77	77	77	77	75
AK min.	6 1/16	7 1/16	7 1/16	8 1/16	7 3/8	8
max.	21 1/8	25 3/8	25 3/8	31 1/2	31	31 1/8
AG	2 1/8	2 1/2	2 1/2	2 3/8	3 1/4	3 1/4
AH	2 3/8	3 1/8	3 1/8	3 1/2	3 1/2	3 1/2
AF min.	20	24	24	24	24	24
max.	54	72	72	72	72	70
Choice V-Angle	(15°, 10°, 22°)	(15°, 10°, 22°)	(15°, 10°, 22°)	(12°, 10°, 15°)	(12°, 10°, 15°)	(12°, 10°, 15°)
Max. length for #27	20"	24"	24"	30"	30"	30"

General Literature (Continued)

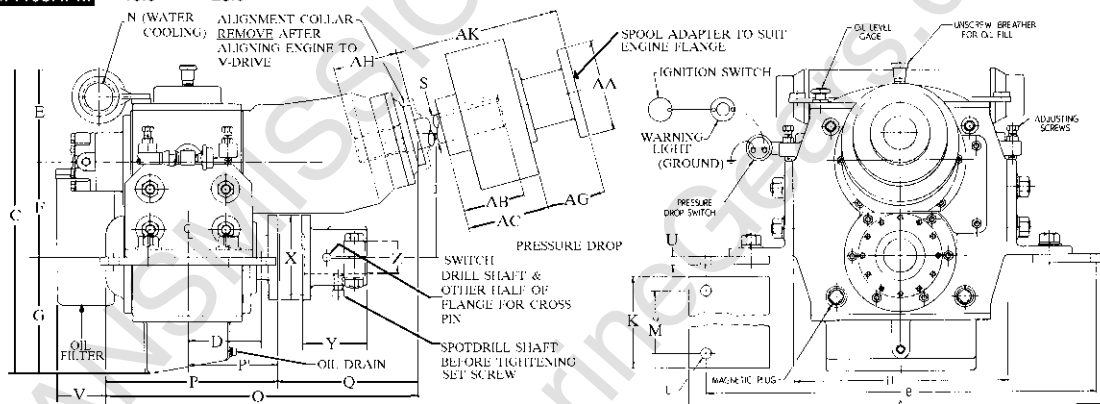
WALTER V-DRIVES Models RV-61, RV-91, and RV-92



Diesel Ratings	RV-61	RV-91	RV-92*
Ratio	1.00:1	1.00:1	—
HP/100RPM	22.5	33.0	—
Ratio	1.50:1	1.50:1	1.50:1
HP/100RPM	21.0	32.5	34.5*
Ratio	2.04:1	2.08:1	2.00:1
HP/100RPM	19.5	31.5	33.5*
Ratio	2.50:1	2.48:1	—
HP/100RPM	19.0	30.0	—
Ratio	3.12:1	3.00:1	—
HP/100RPM	19.0	28.0	—

HP RATINGS Reduction ratio must be taken in V-Drive; use 1:1 transmission. HP/100 RPM ratings are for intermittent use with diesel engines. Multiply by .75 for commercial and/or heavy duty use, and multiply by additional .9 for V-Drive with IDLER ASSEMBLY. Large and/or single screw boats may require heavy duty rating; all displacement hulls require heavy duty rating. Ratings assume propeller will allow the engine to reach its rated RPM. All new applications must be approved by The Walter Machine Co., Inc.

*The RV-92 does not require additional service factors.



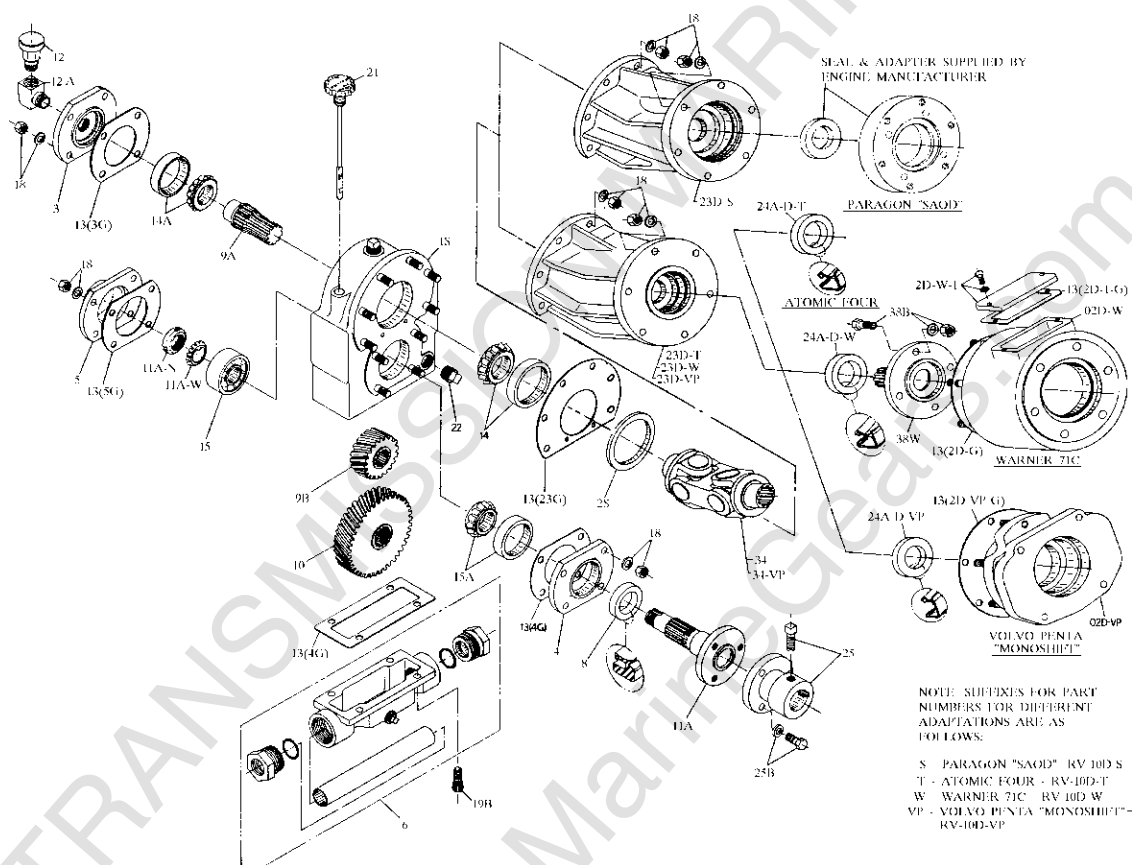
	RV-61	RV-91	RV-92
App. Oil Capacity	18 pints	24 pints	26 pints
Approx. Wgt.	465 lbs.	765 lbs.	850 lbs.
A	26 3/4	34 1/4	34 1/4
B	24 1/4	30 3/4	30 3/4
C	21 1/4	24	25 1/4
D	4 1/4	4 1/2	4 1/2
E	6 1/4	7	7
F	7	8	9
G	8	9	9 1/4
H	15 3/4	18 1/4	18 1/4
I	8 3/4	9 1/4	10 3/4
K	12	12	12
L	2 1/32	2 1/32	2 1/32
M	9 3/4	9	9
N	1 1/2	1 1/2	1 1/2
O	20 1/16	24 1/16	25 7/16
P	11 7/16	15 1/8	15 1/8
P'	5 7/32	8 3/4	8 3/4
Q	9 1/2	8 1/4	9 1/4
S	2	2 3/4	2 3/4
Key S	1/2	3/8	3/8

	RV-61	RV-91	RV-92
U	1/2	3/4	3/4
V	2 3/4	3 1/16	3 1/16
X	5 3/4	7 1/4	7 1/4
Y	4 1/2	5 or 6 1/2	5 or 6 1/2
Z*	2 1/2 max.	3 1/2 max.	3 1/2 max.
AA*	9 max.	10 max.	10 max.
AB	4 7/16	4 1/16	4 1/16
AC	5 1/2	6 1/16	6 1/16
AD	—	—	—
AE min.	28 1/2	30	30
max.	80	80	80
AK min.	10 5/8	12	12
max.	42 1/2	42 3/4	42 3/4
AG	3 3/4	3 3/4	3 3/4
AH	4	4 1/2	4 1/2
AF min.	26 3/4	26 1/4	28 1/4
max.	72	72	72
Choice V-Angle	(12°, 10°, 15°)	(12°, 10°, 15°)	(12°, 10°, 15°)
Max. length for #27	42"	42"	42"



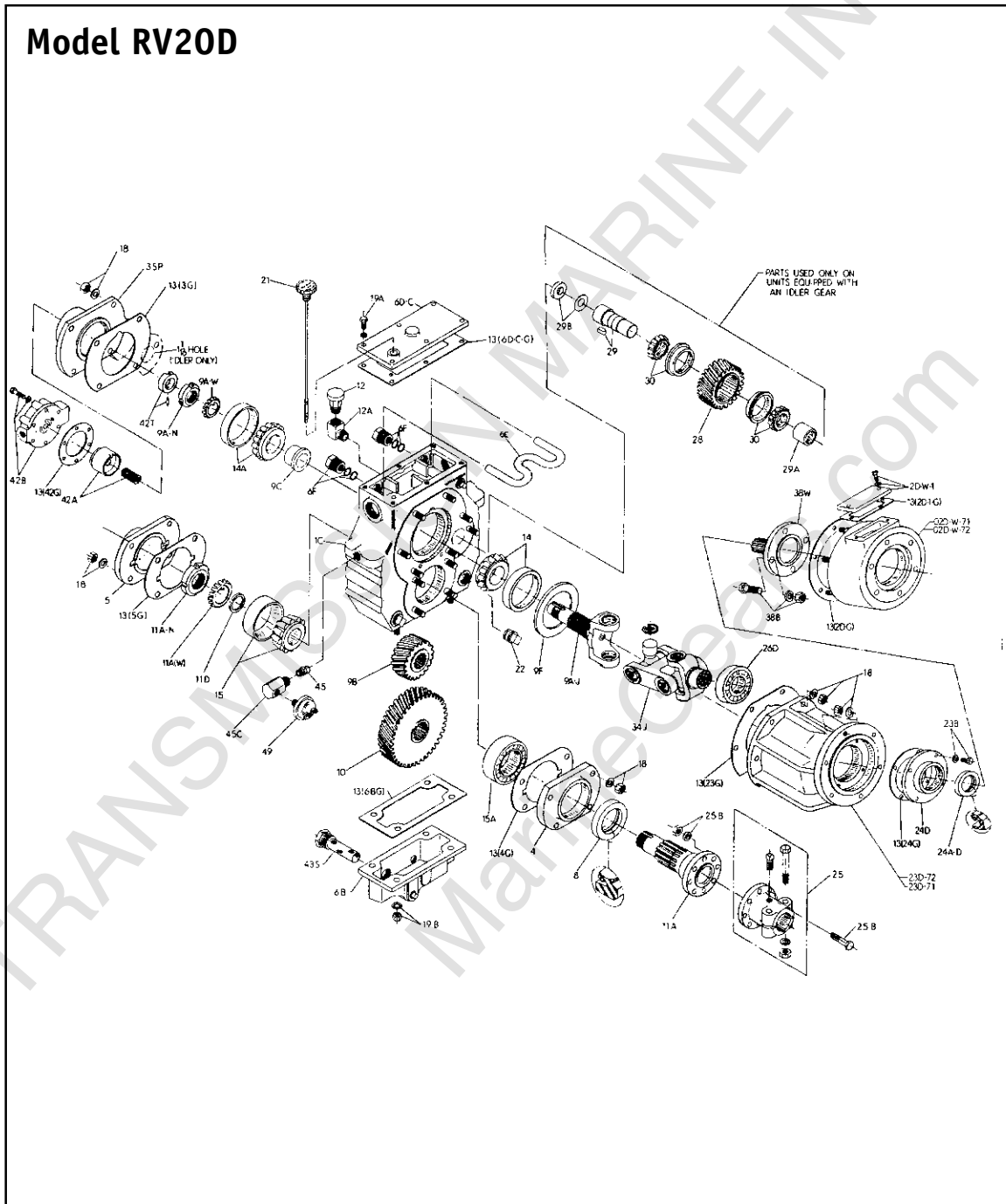
RV10 Direct Mount

Model RV10D



WAL-03

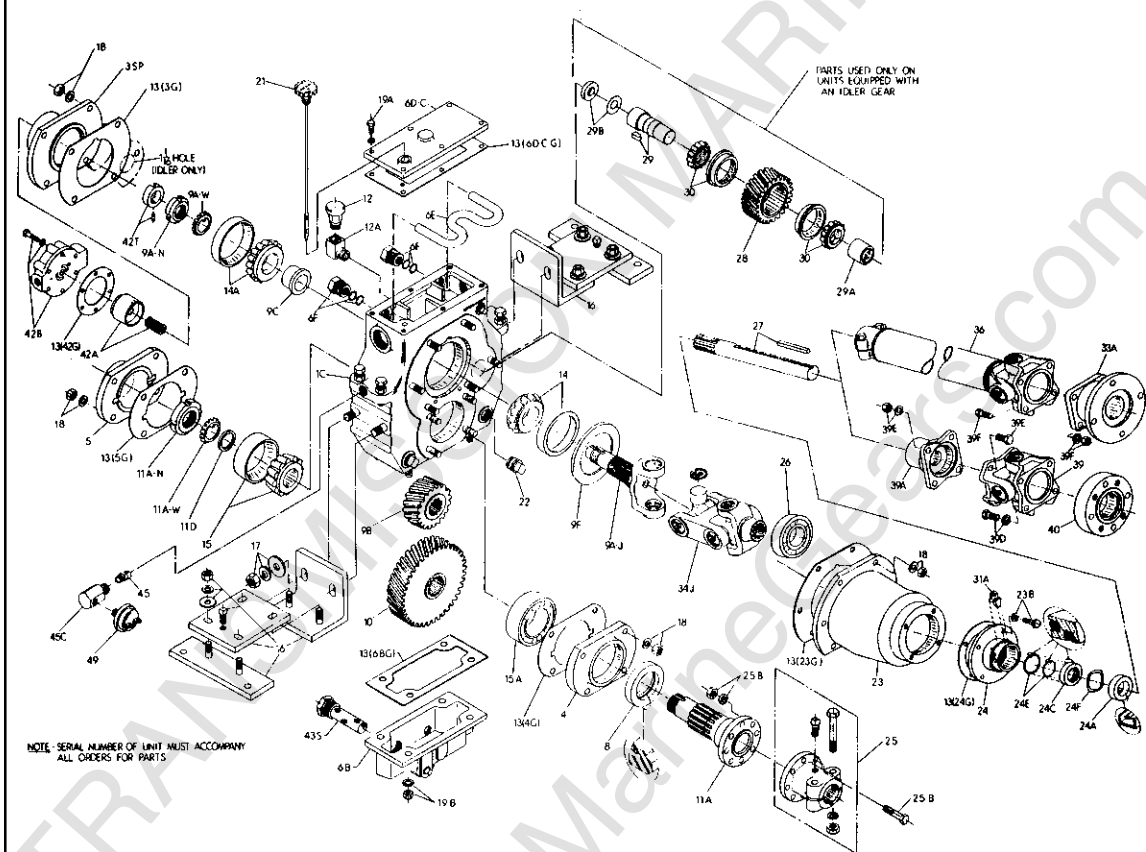
Model RV20D



117

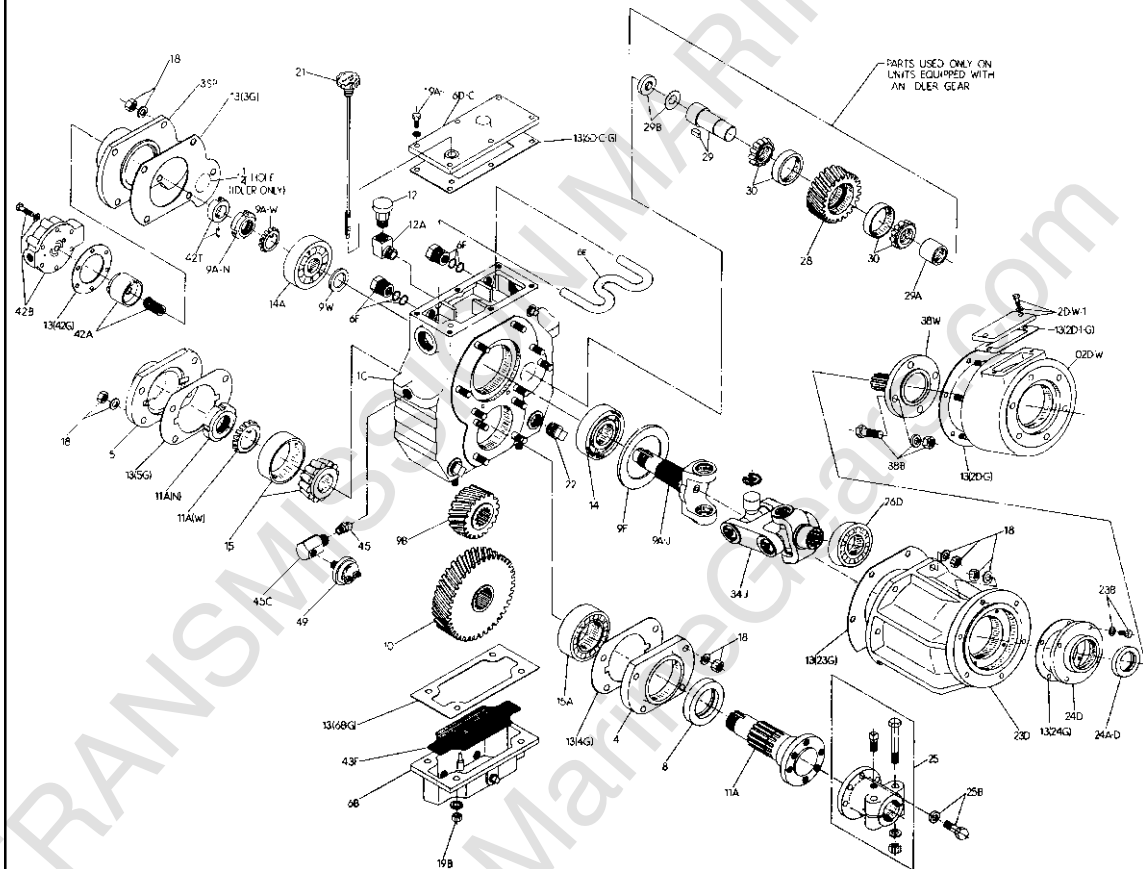
RV26 Direct Mount

Model RV26D



WAL-05

Model RV30D

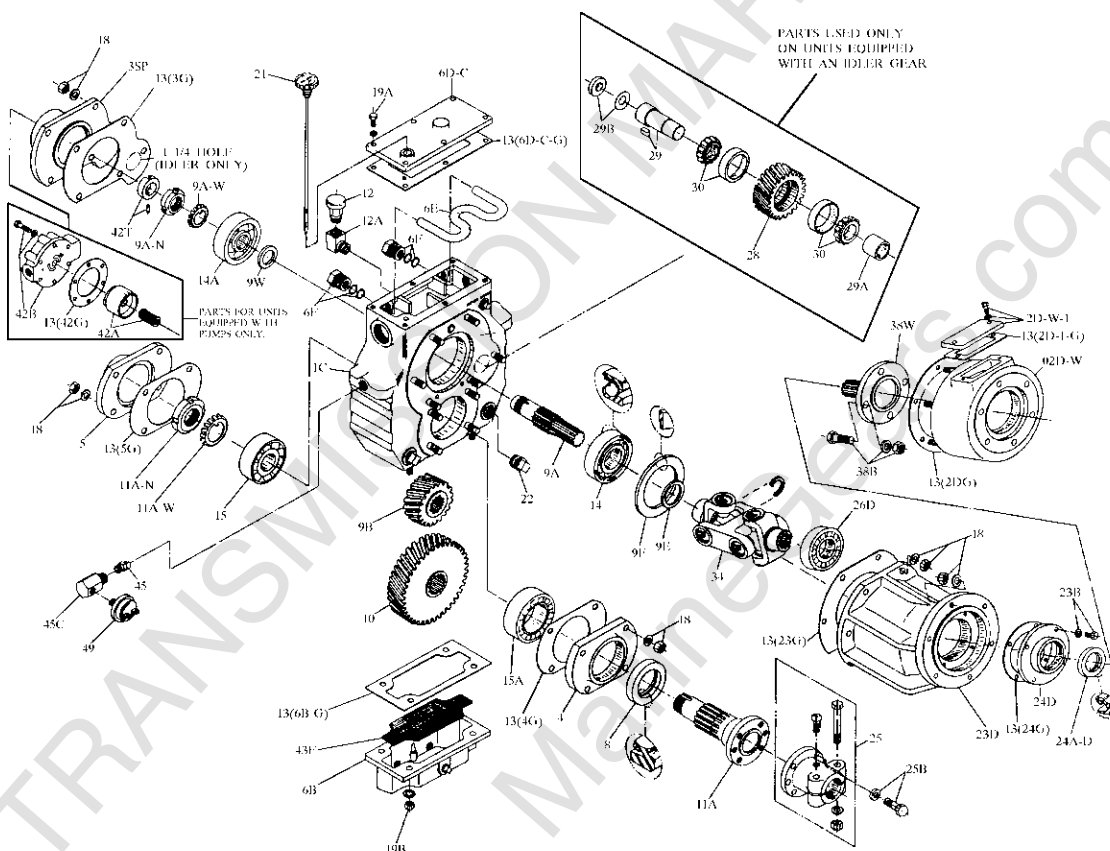


119



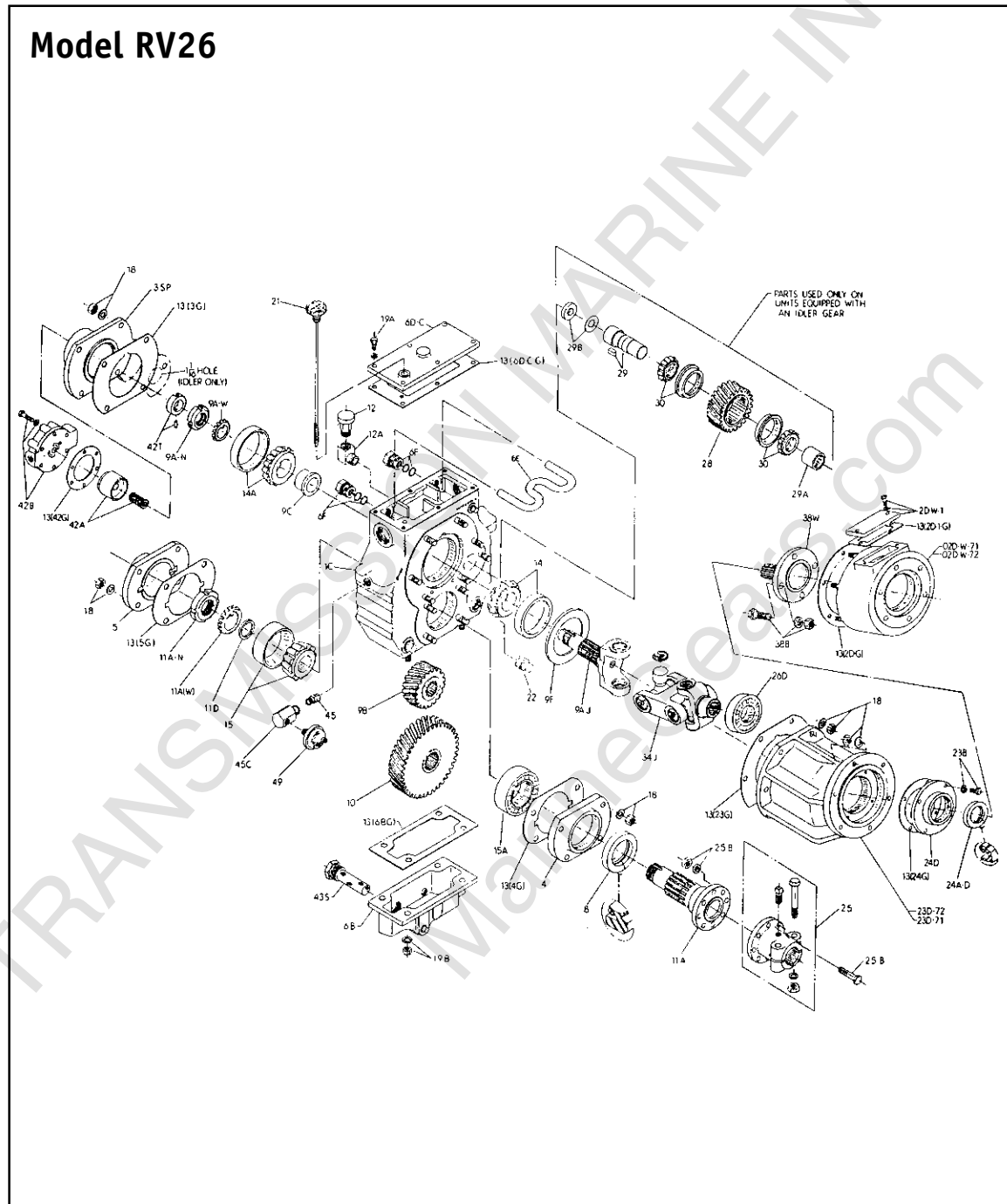
RV40 Direct Mount

Model RV40-48D



WAL-07

RV26



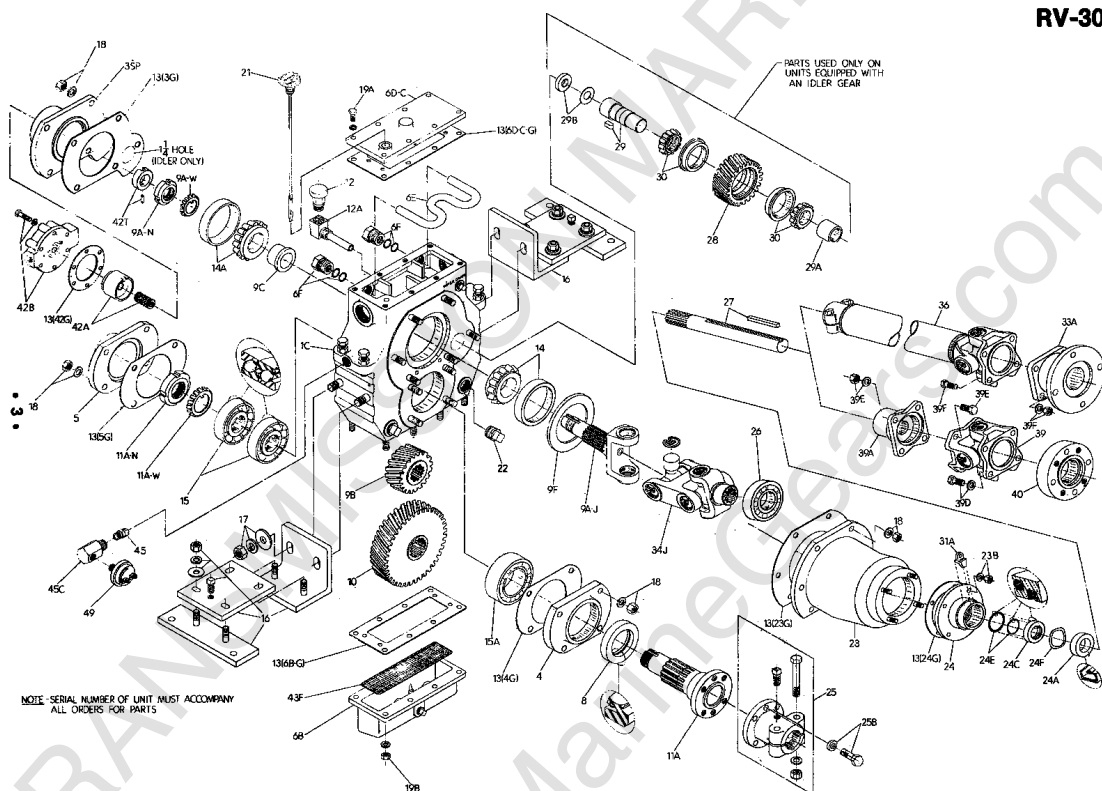
WAL-08



RV20-30 Independent Mount

Model RV20-30IM

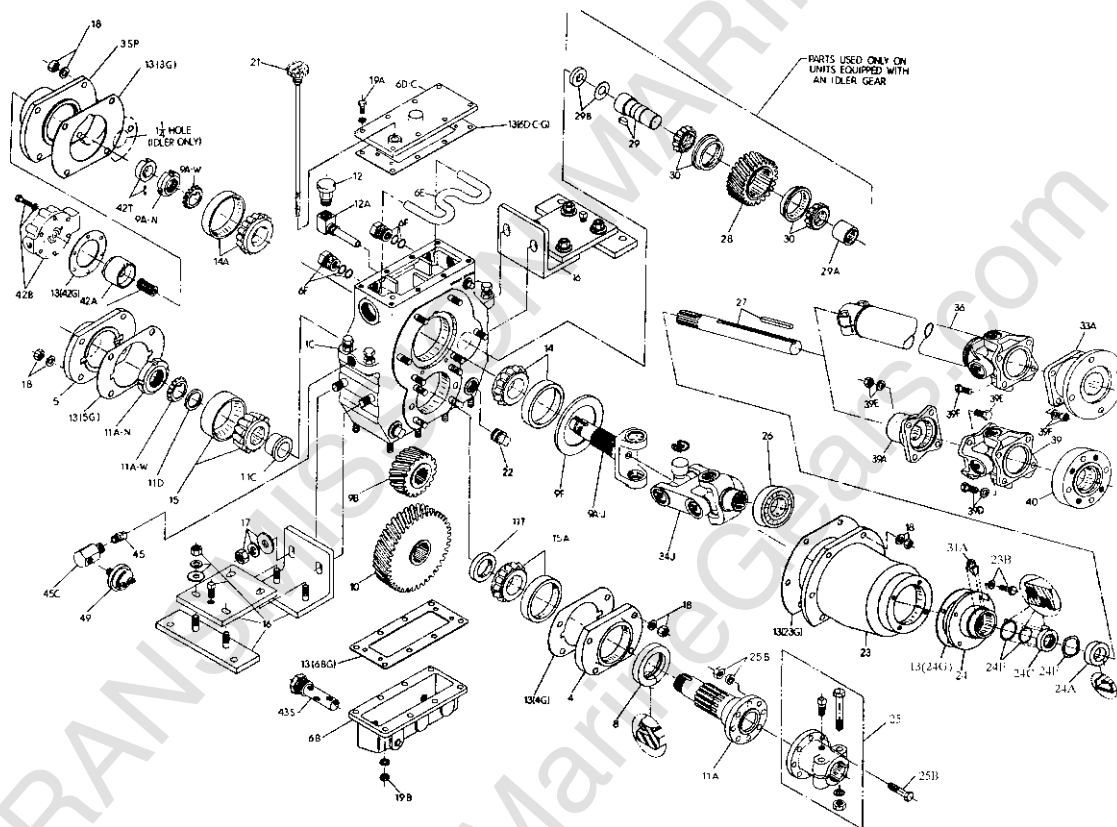
RV-30



WAL-09

RV36 Independent Mount

Model RV36-IM

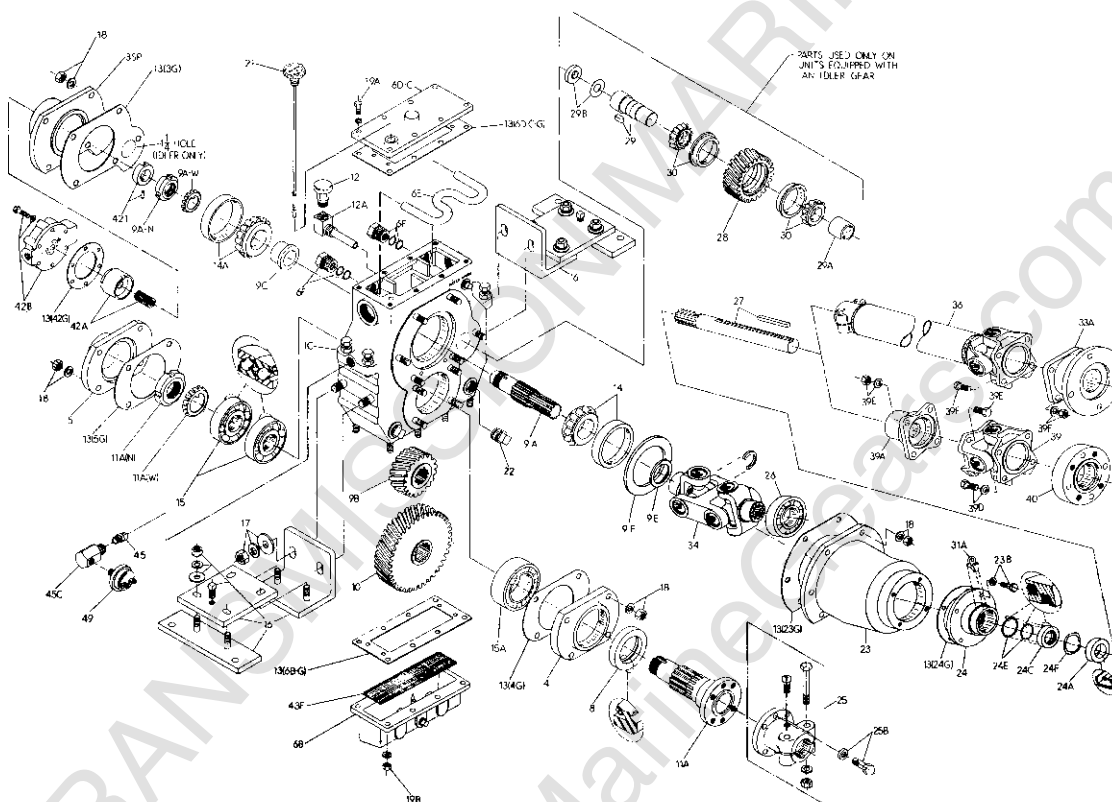


WAL-10



RV40 Independent Mount

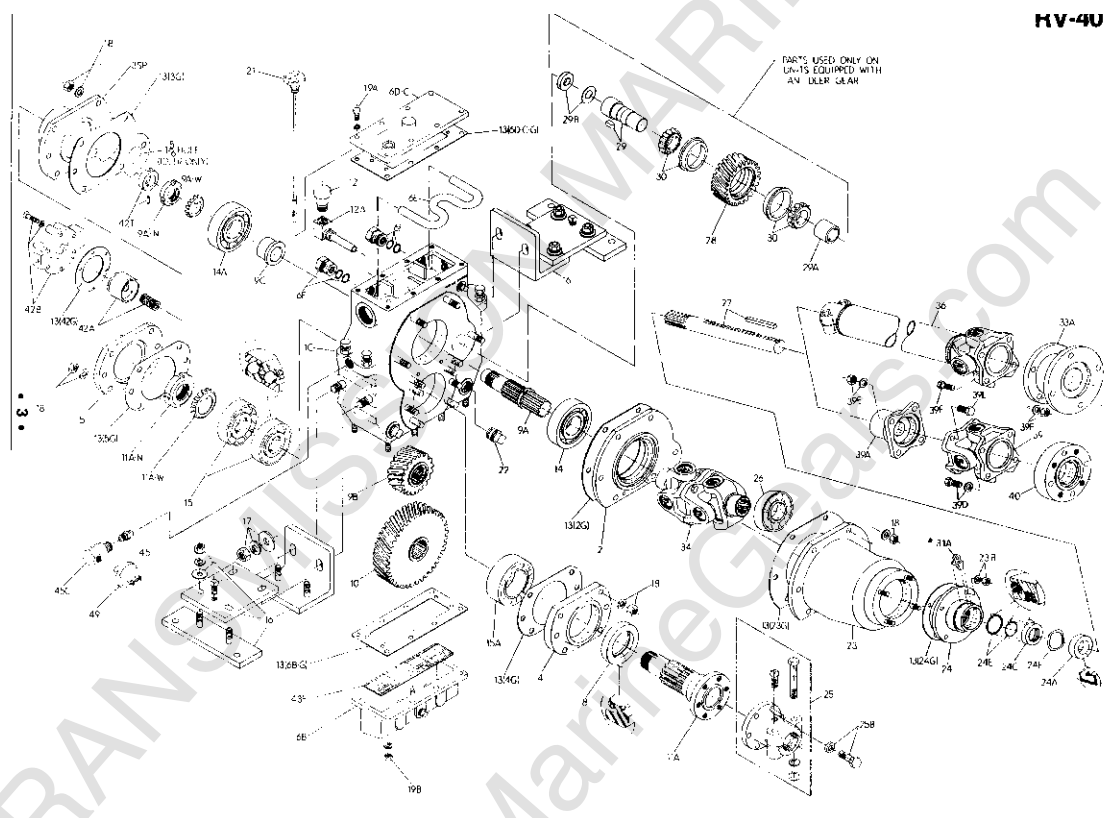
Model RV40-IM



WAL-11

RV48 Independent Mount

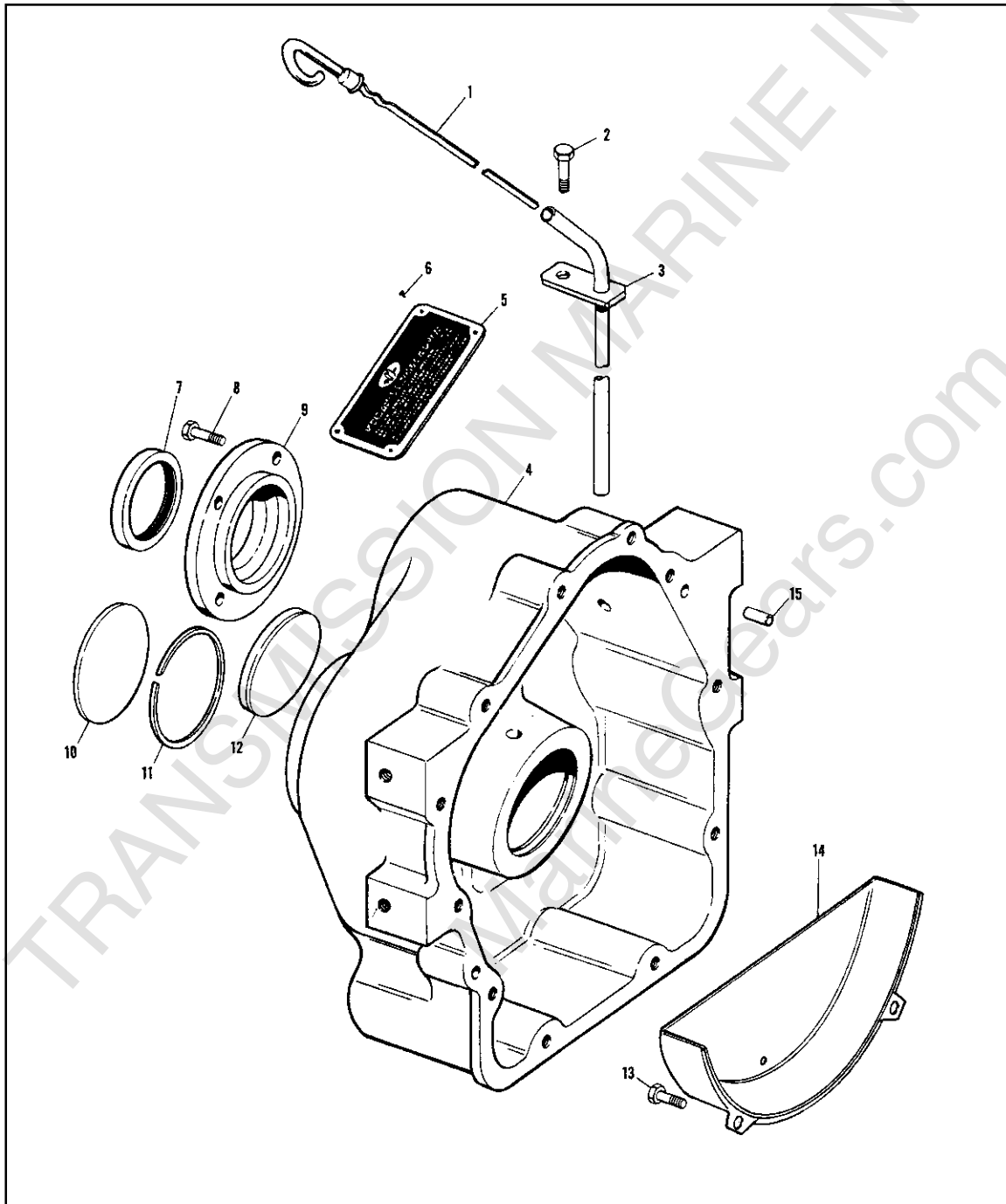
Model RV48-IM



WAL-12



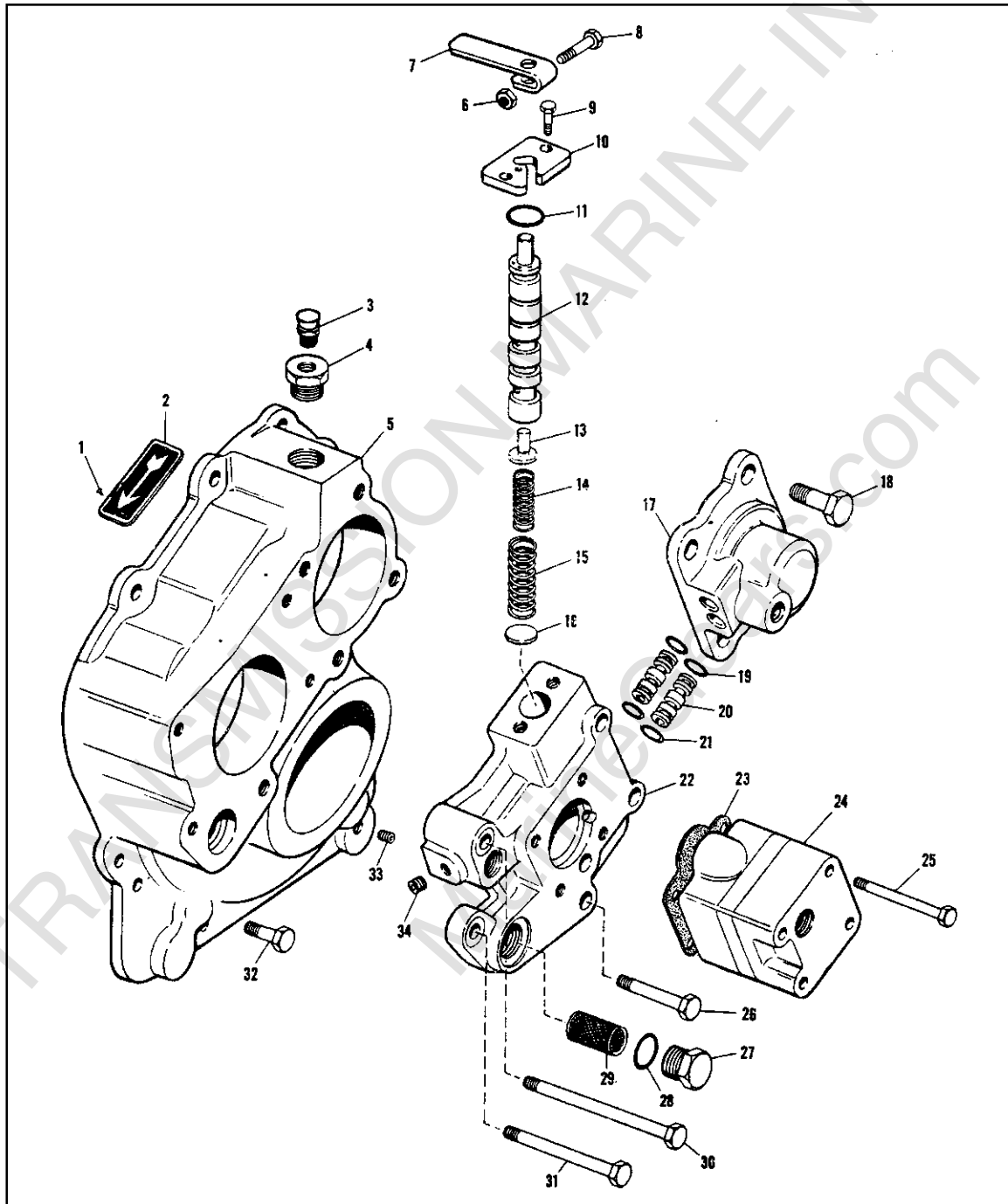
MG502



Main Housing.

MG-01

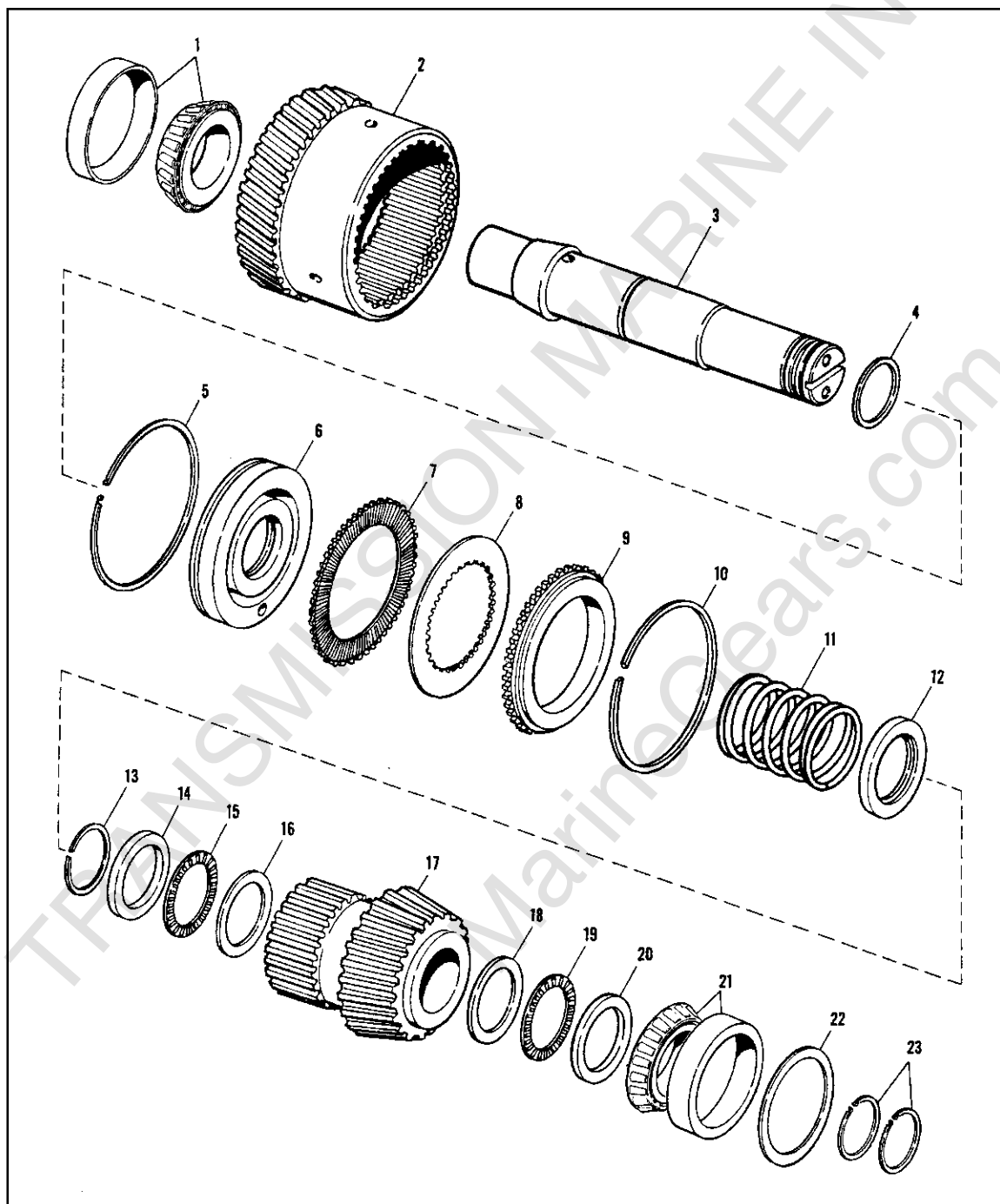
MG502



Main Housing & Control Valve Assembly.

MG-02

MG502

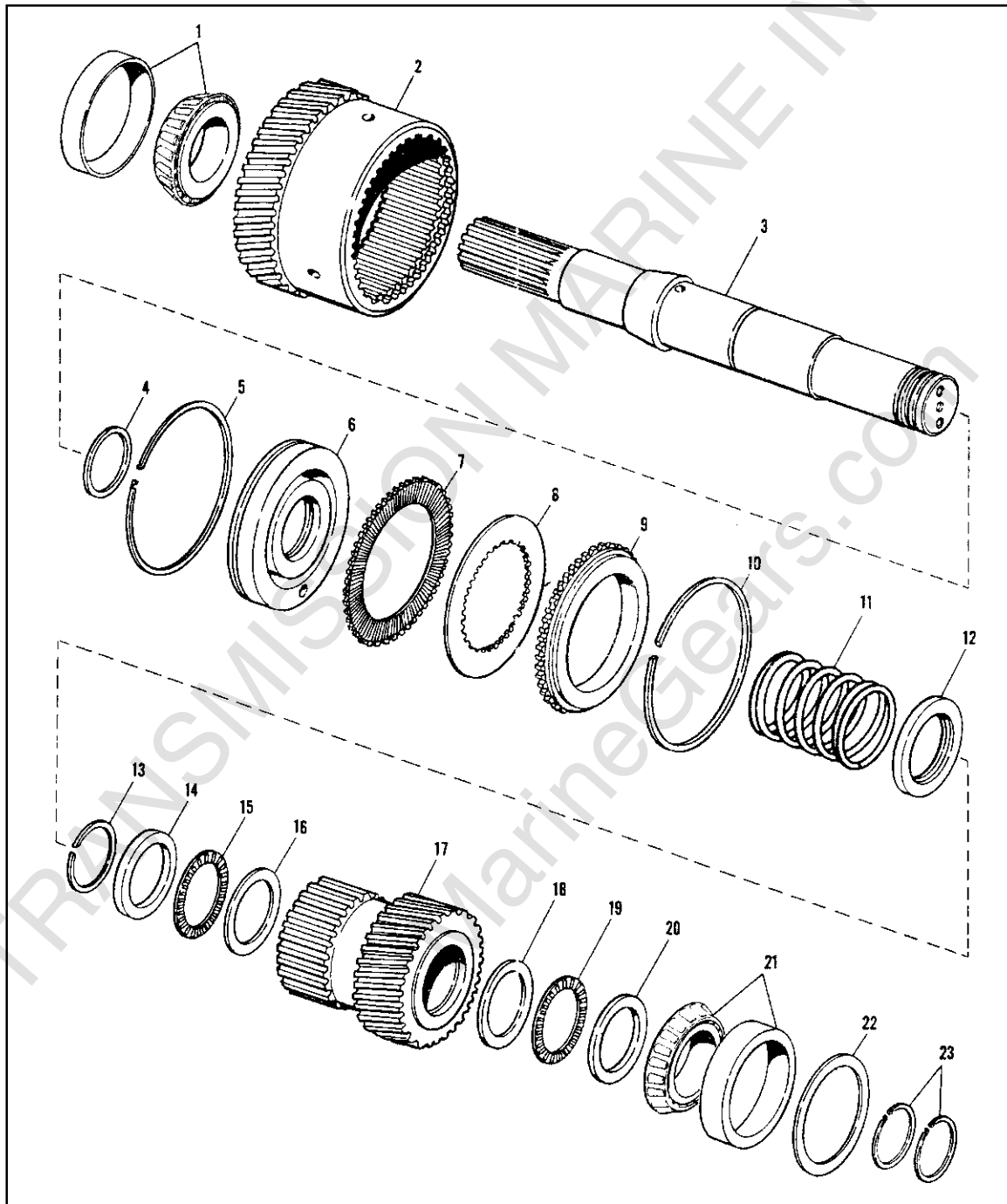


Clutch Assembly Lay Shaft.

MG-03

Twin Disc

MG502

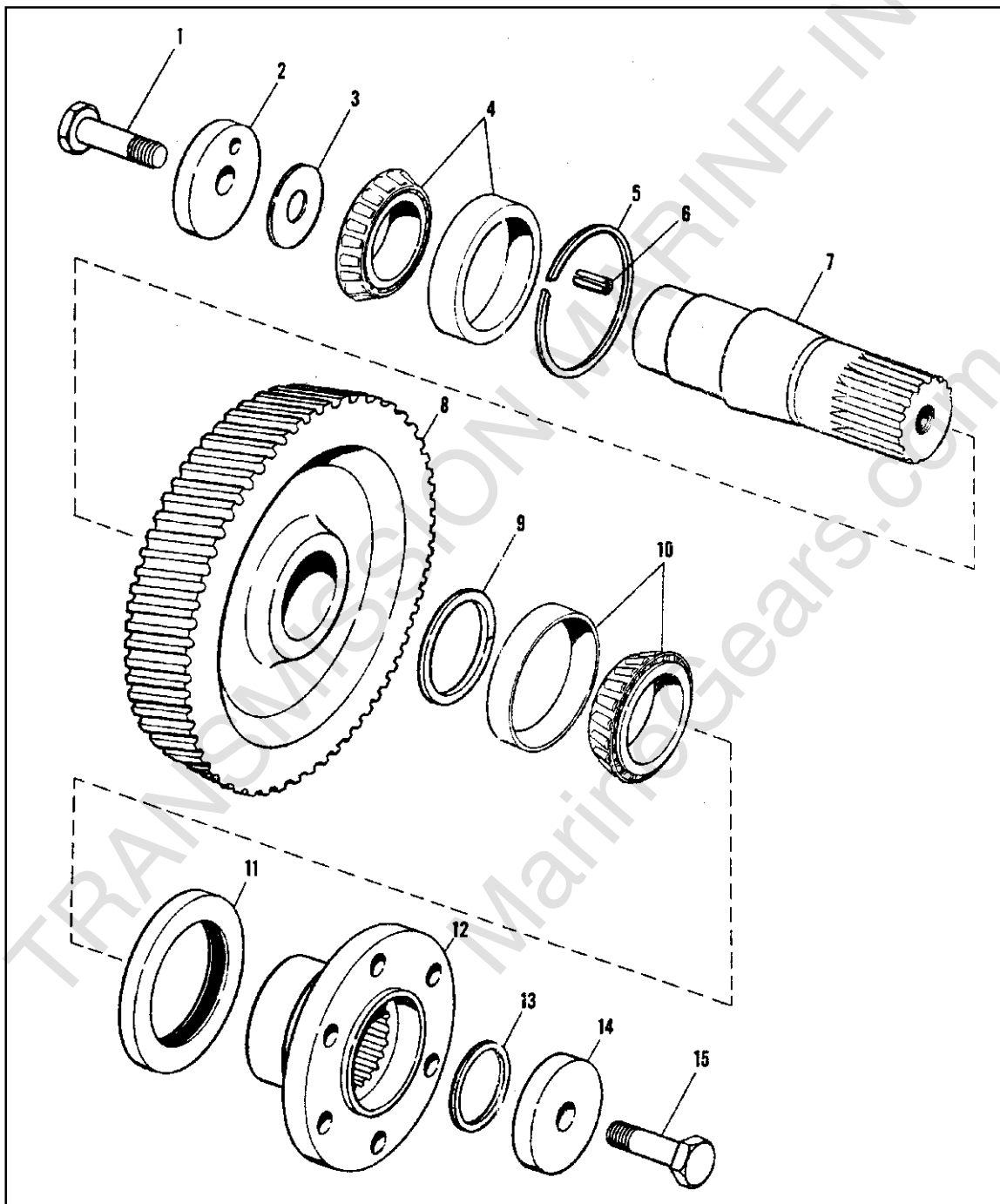


Clutch Assembly Input Shaft.

MG-04



MG502

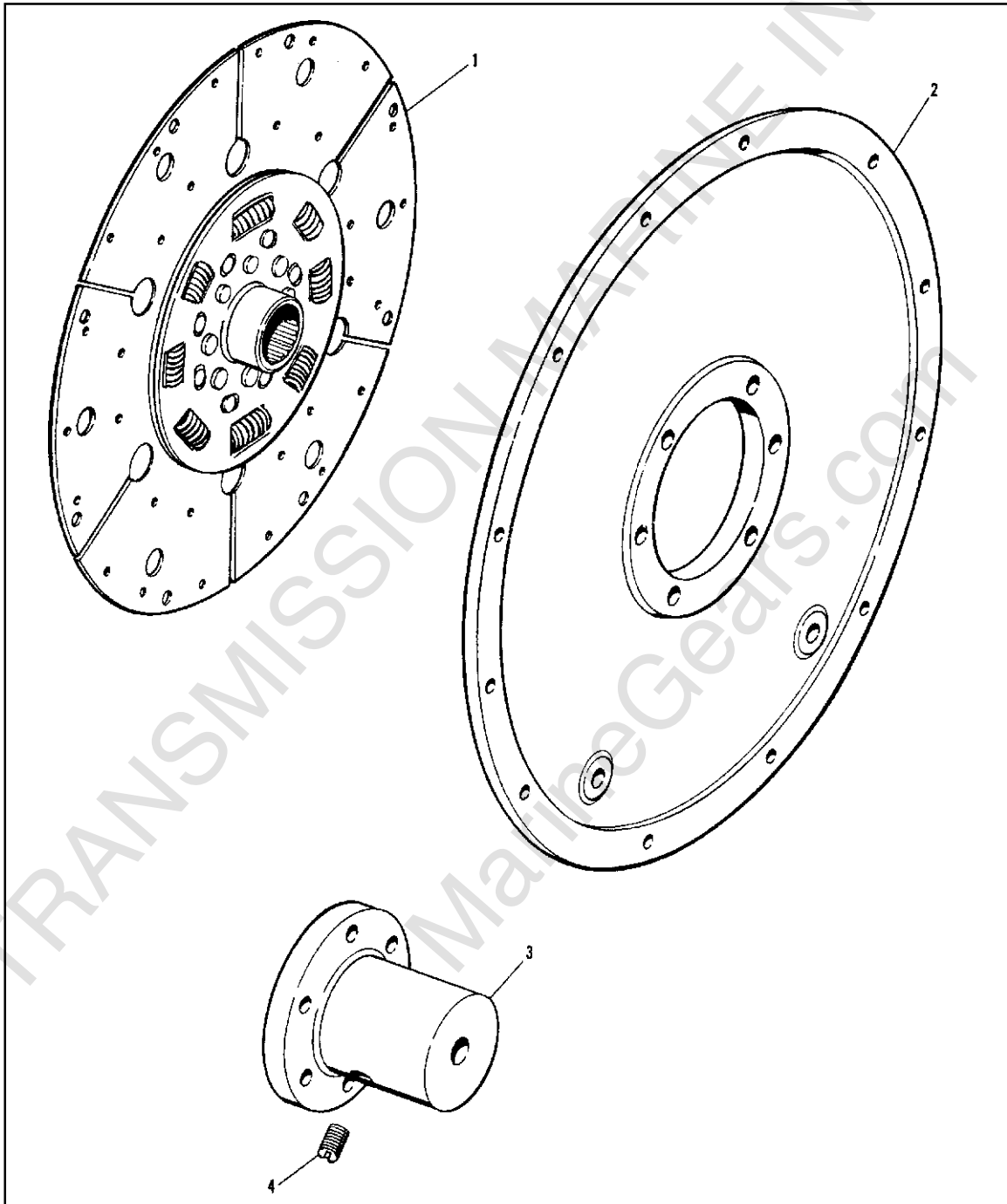


Output Shaft Assembly.

MG-05

Twin Disc

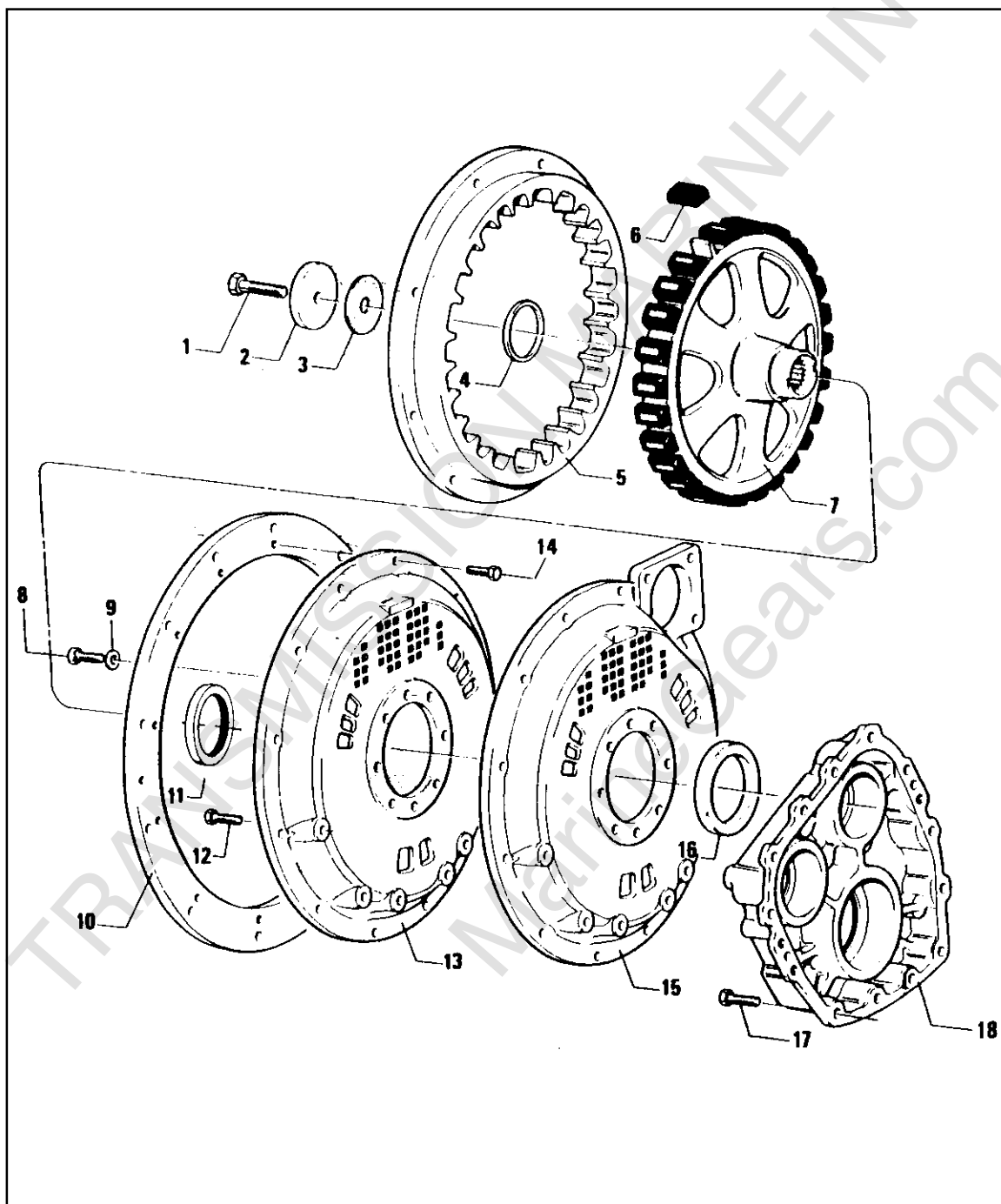
MG502



Damper & Adapter Assembly.

MG-06

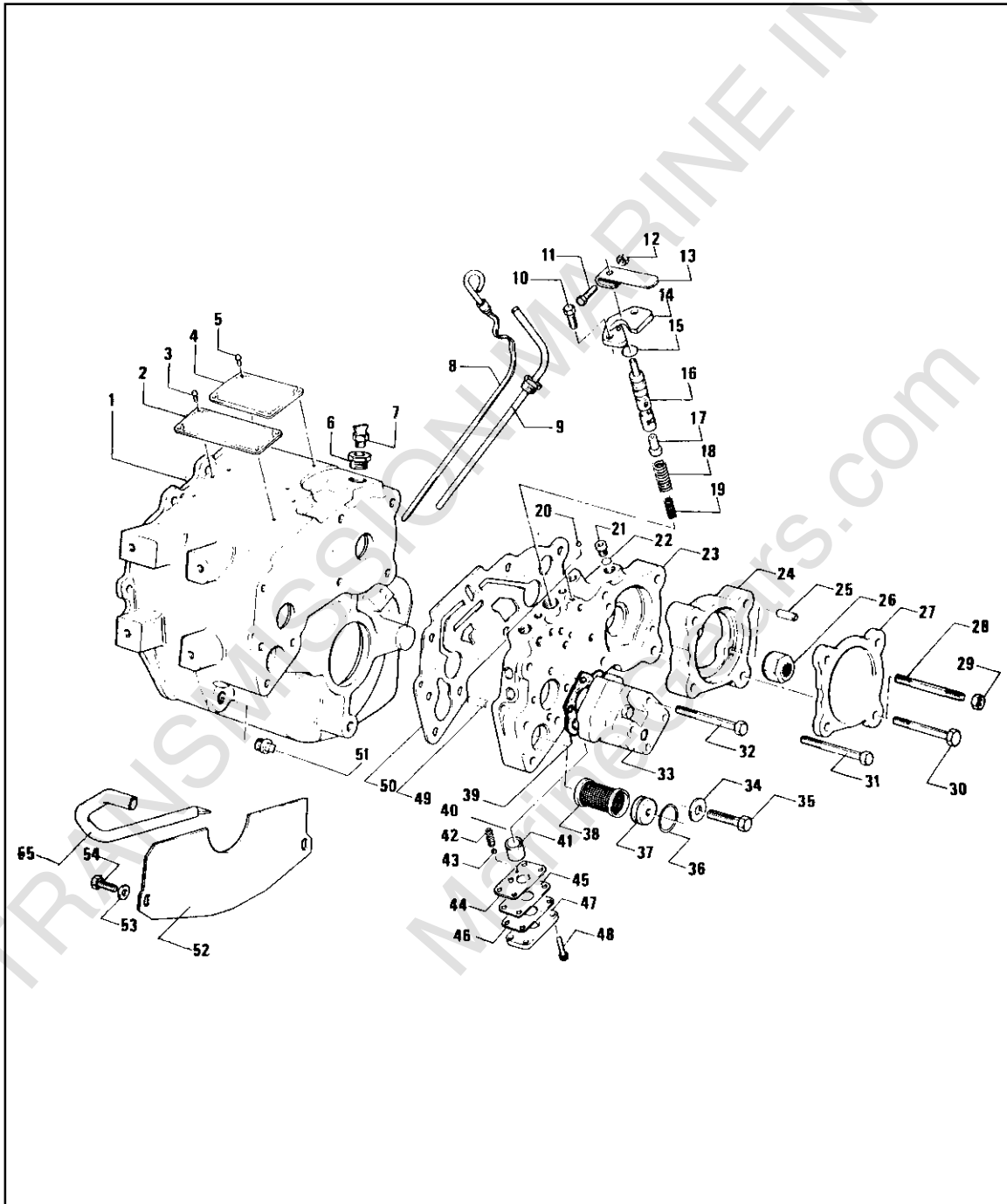
MG5050



Adapter Plates & Spider Drive.

MG-07

MG5050

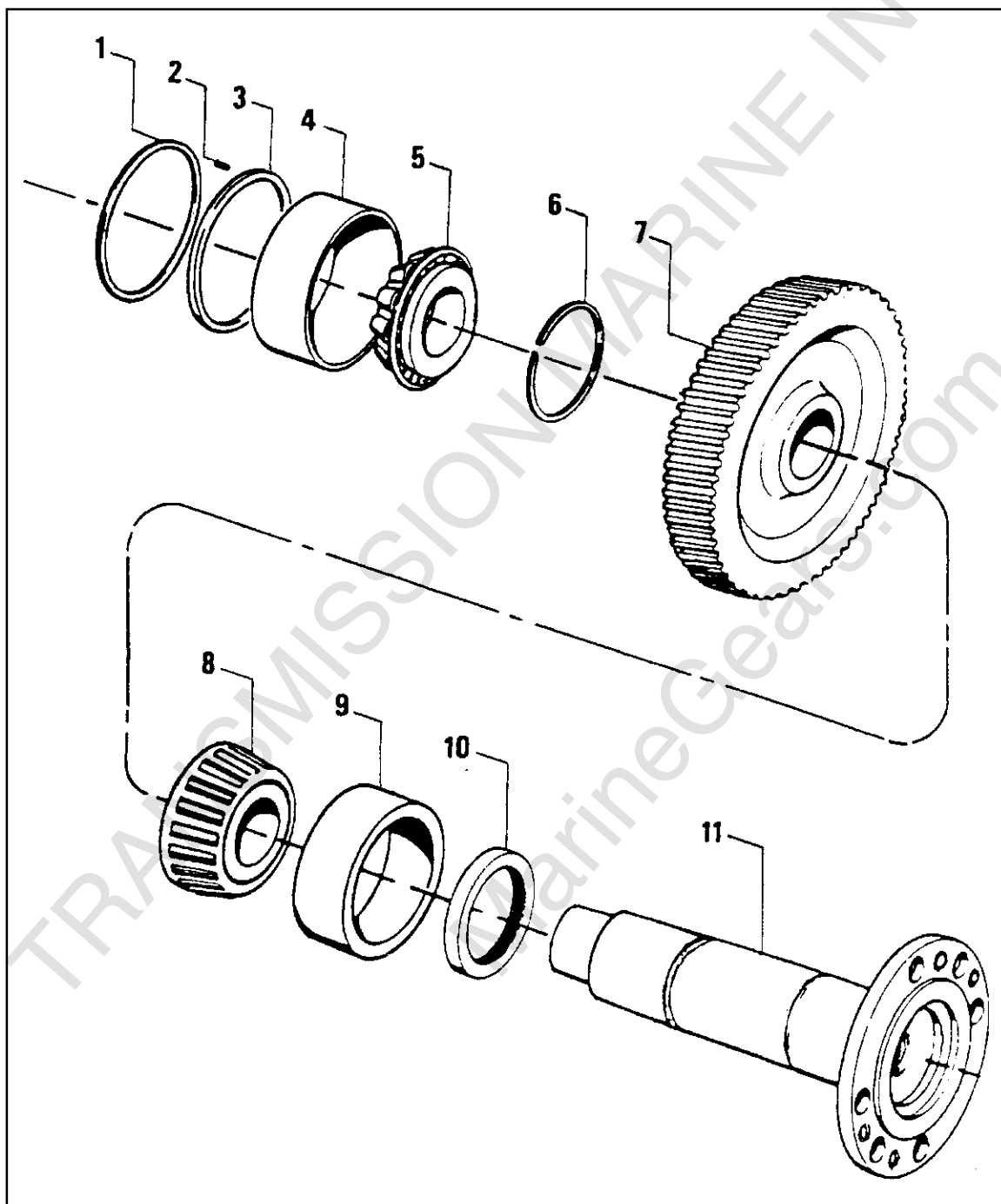


Main Housing Manifold & Pump Assembly.

MG-08



MG5050

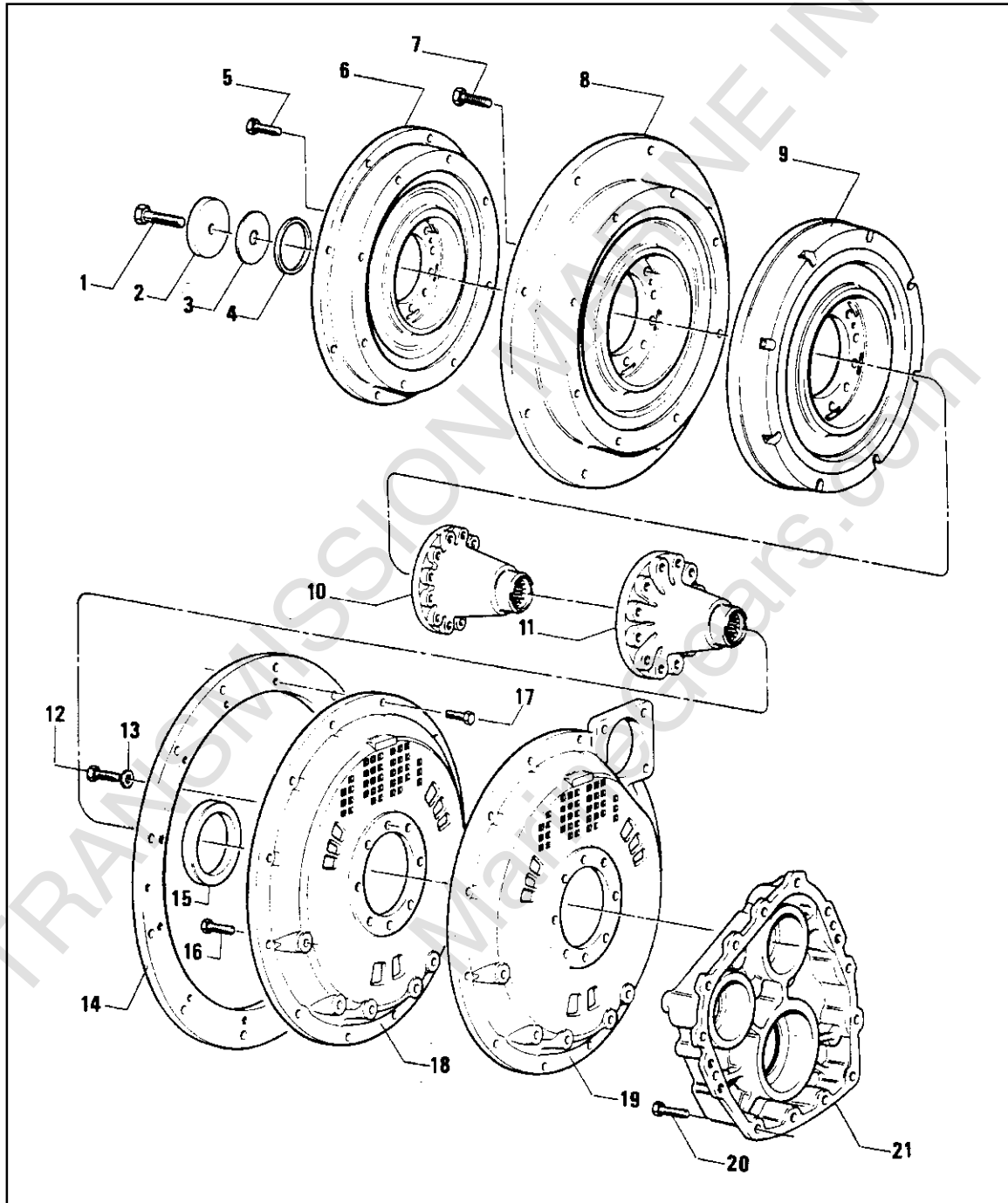


Output Shaft Assembly.

MG-09

Twin Disc

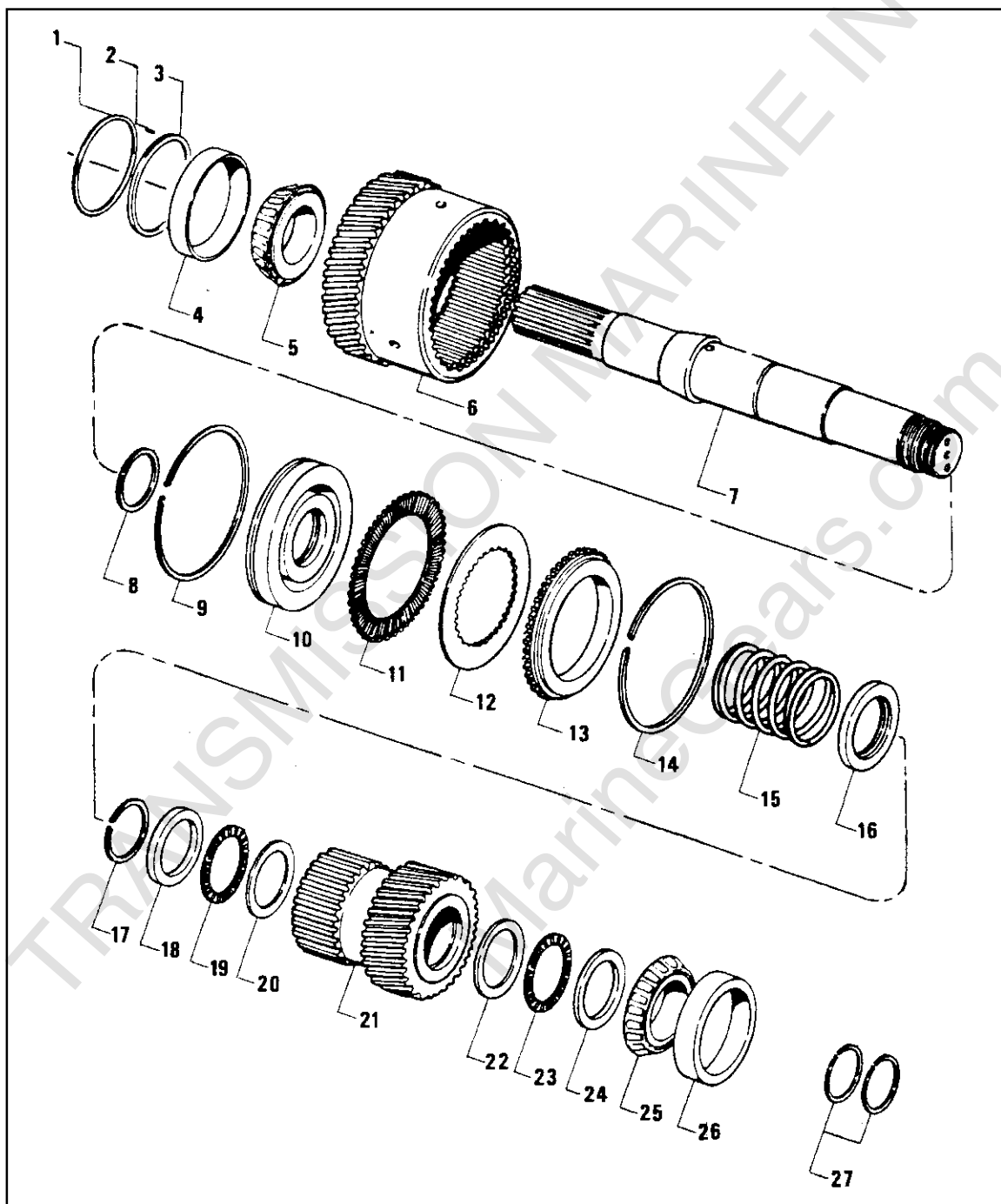
MG5050



Input Adapter & Drive Assembly.

MG-10

MG5050

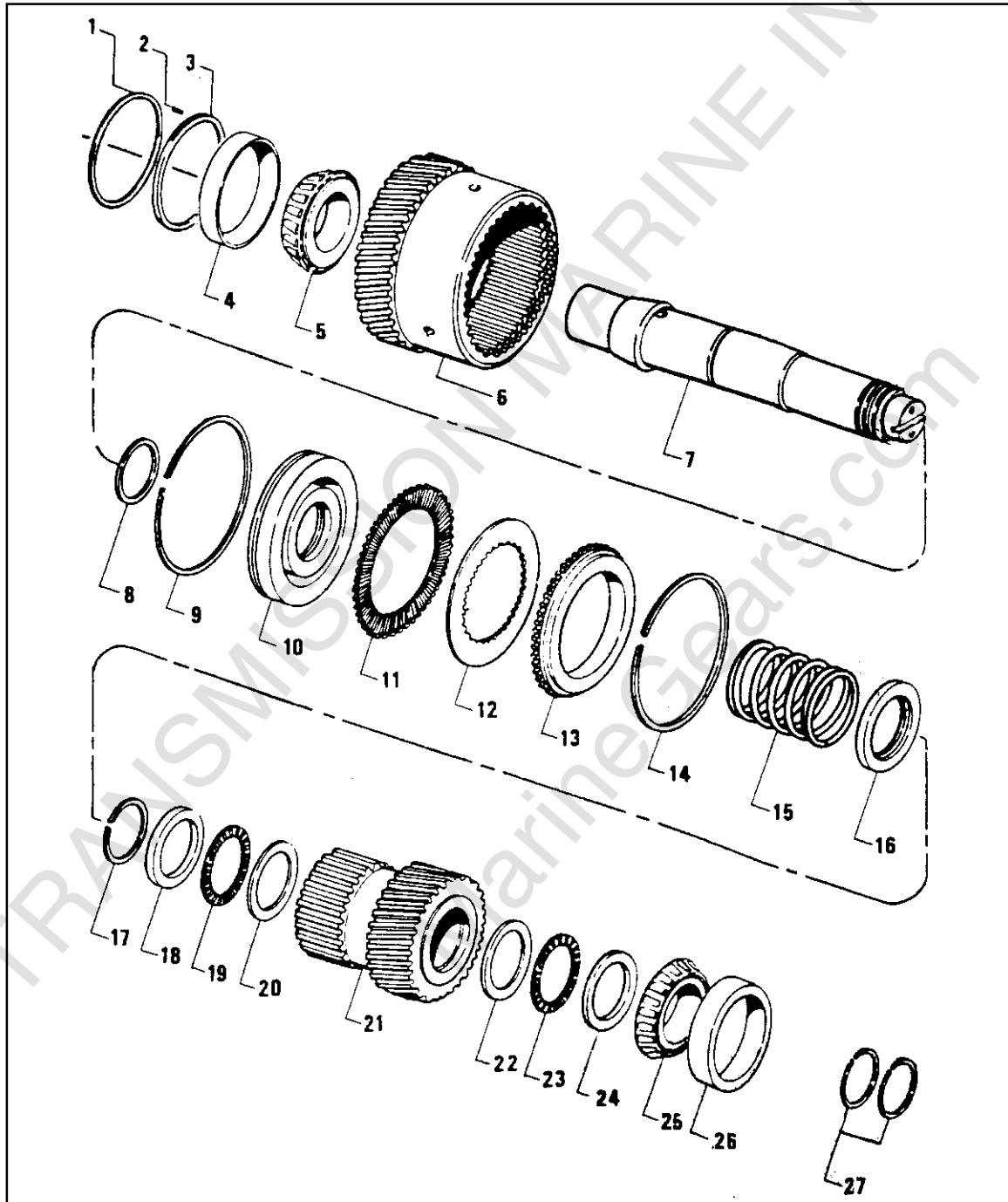


Input Shaft Assembly.

MG-11

Twin Disc

MG5050

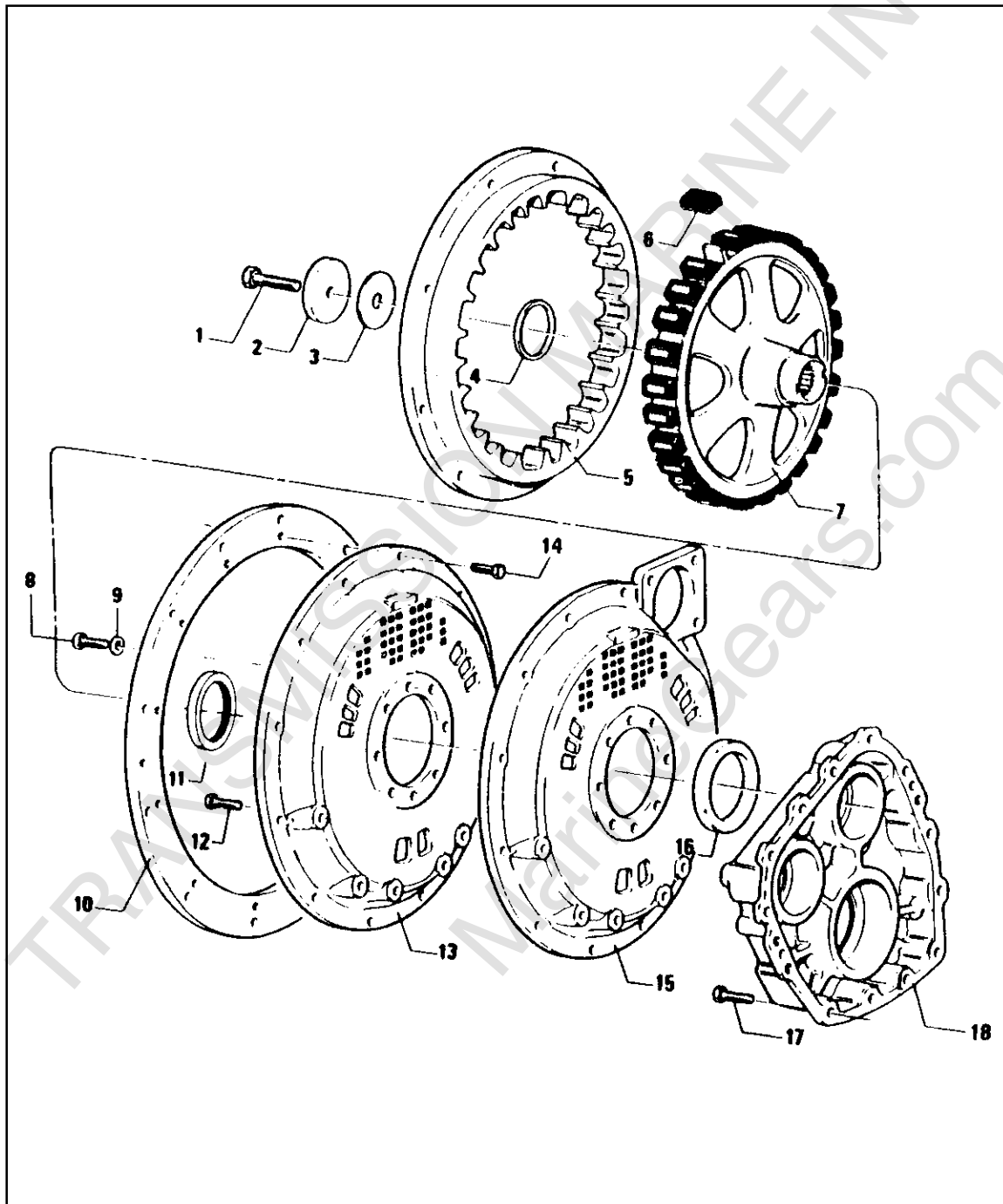


Lay Shaft Assembly.

MG-12



MG5050A

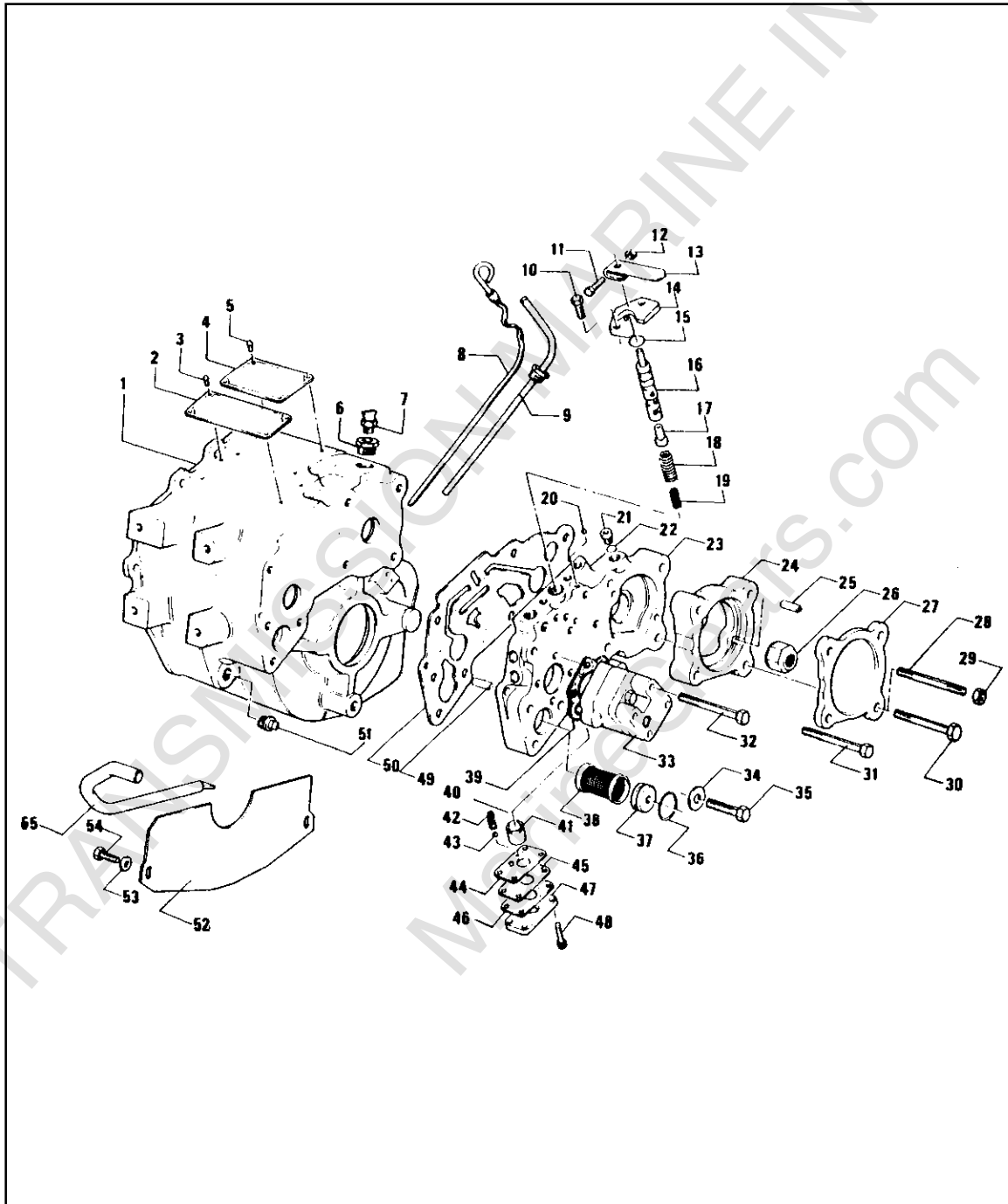


Input Adapter & Spider Drive.

MG-13

Twin Disc

MG5050A

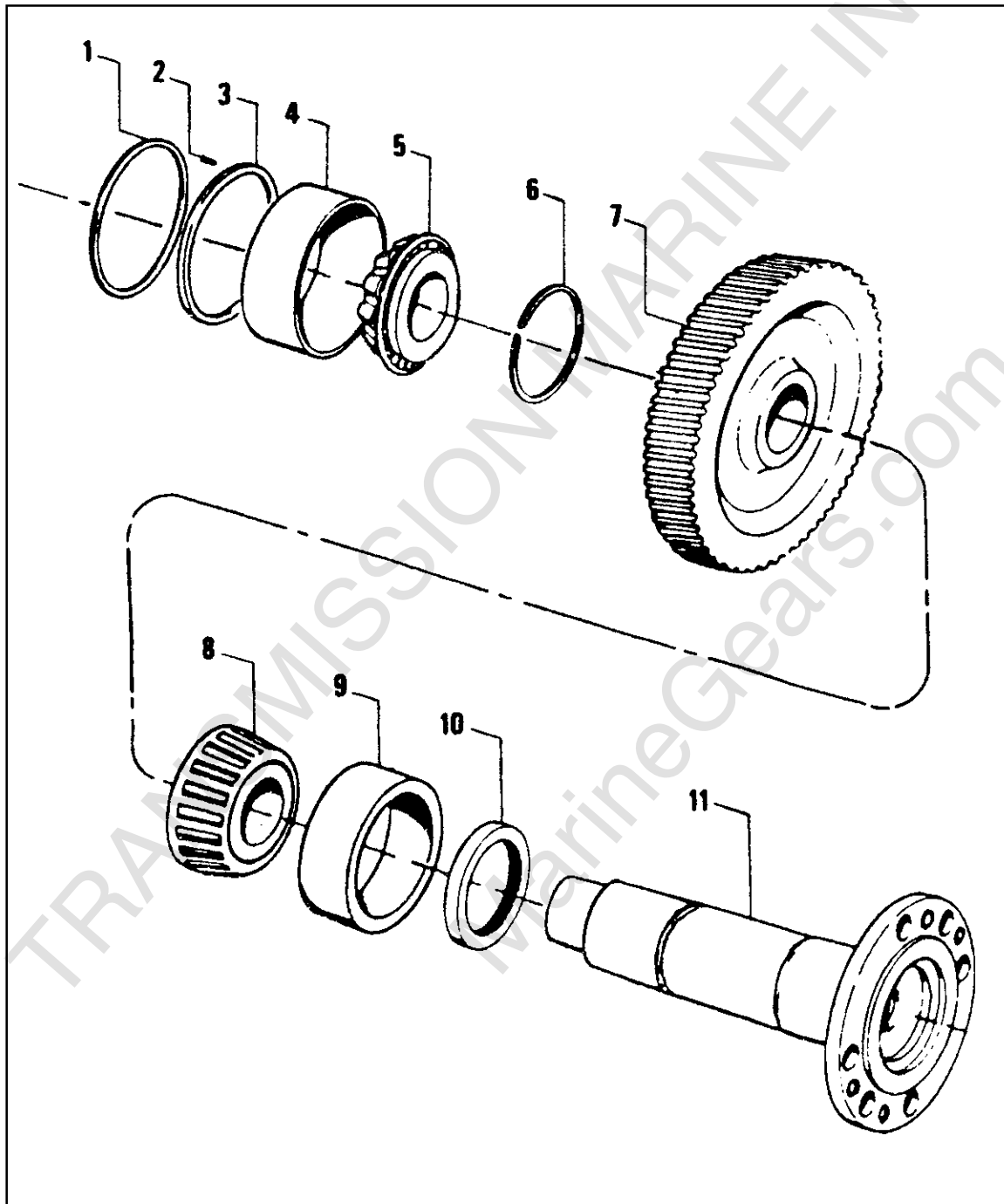


Main Housing, Manifold & Pump Assembly.

MG-14



MG5050A

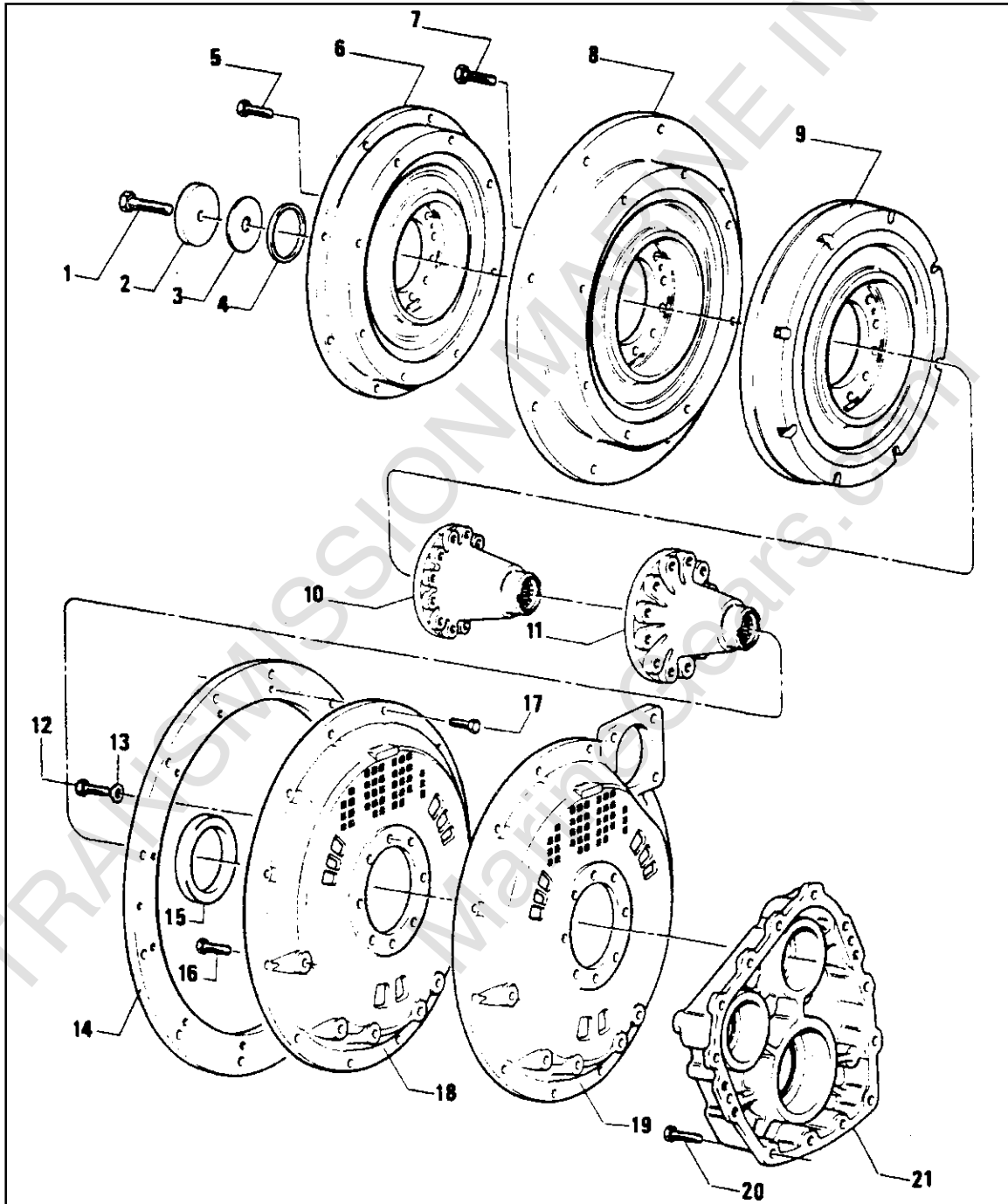


Output Shaft Assembly.

MG-15

Twin Disc

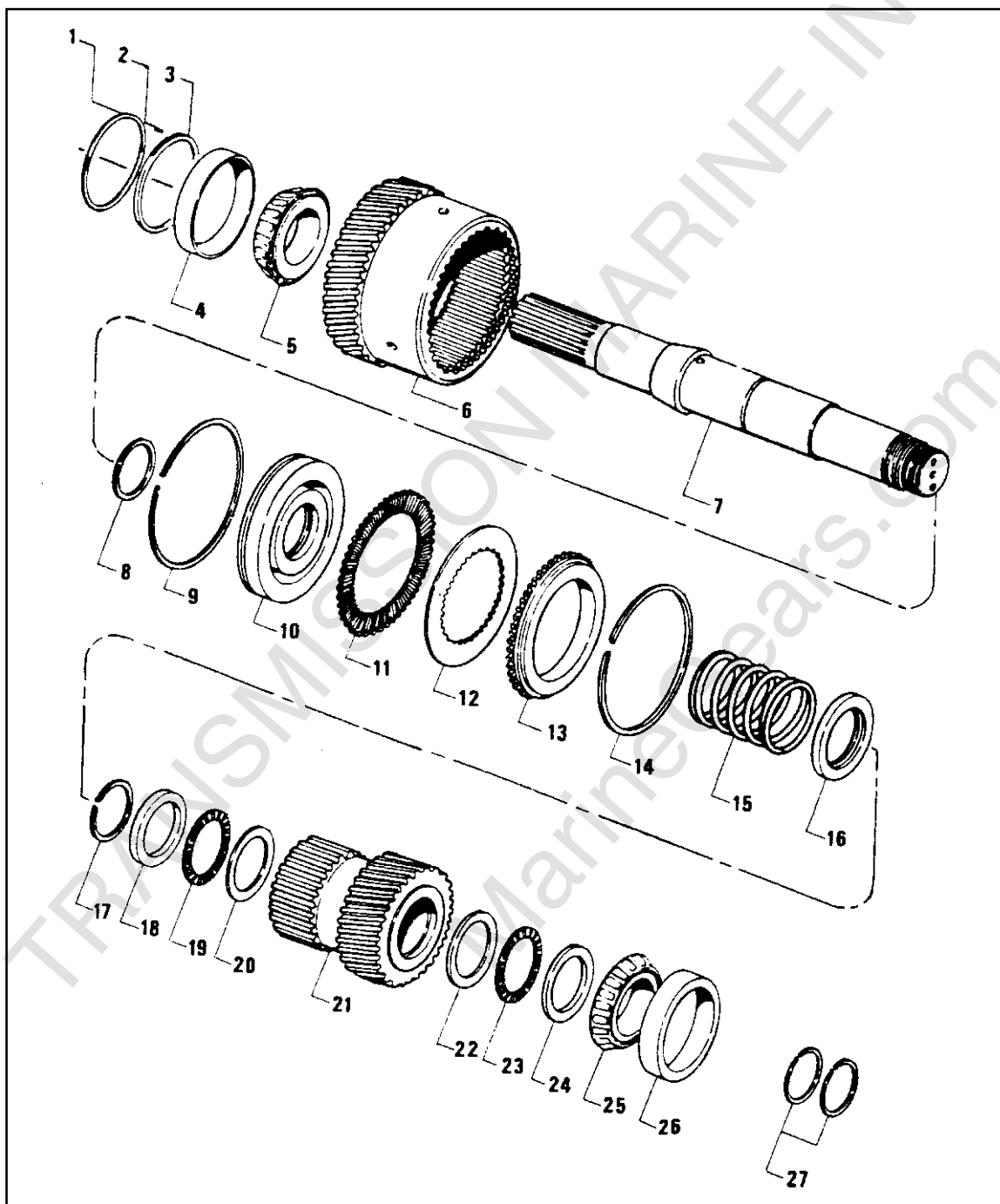
MG5050A



Main Adapters & Drive Coupling.

MG-16

MG5050A

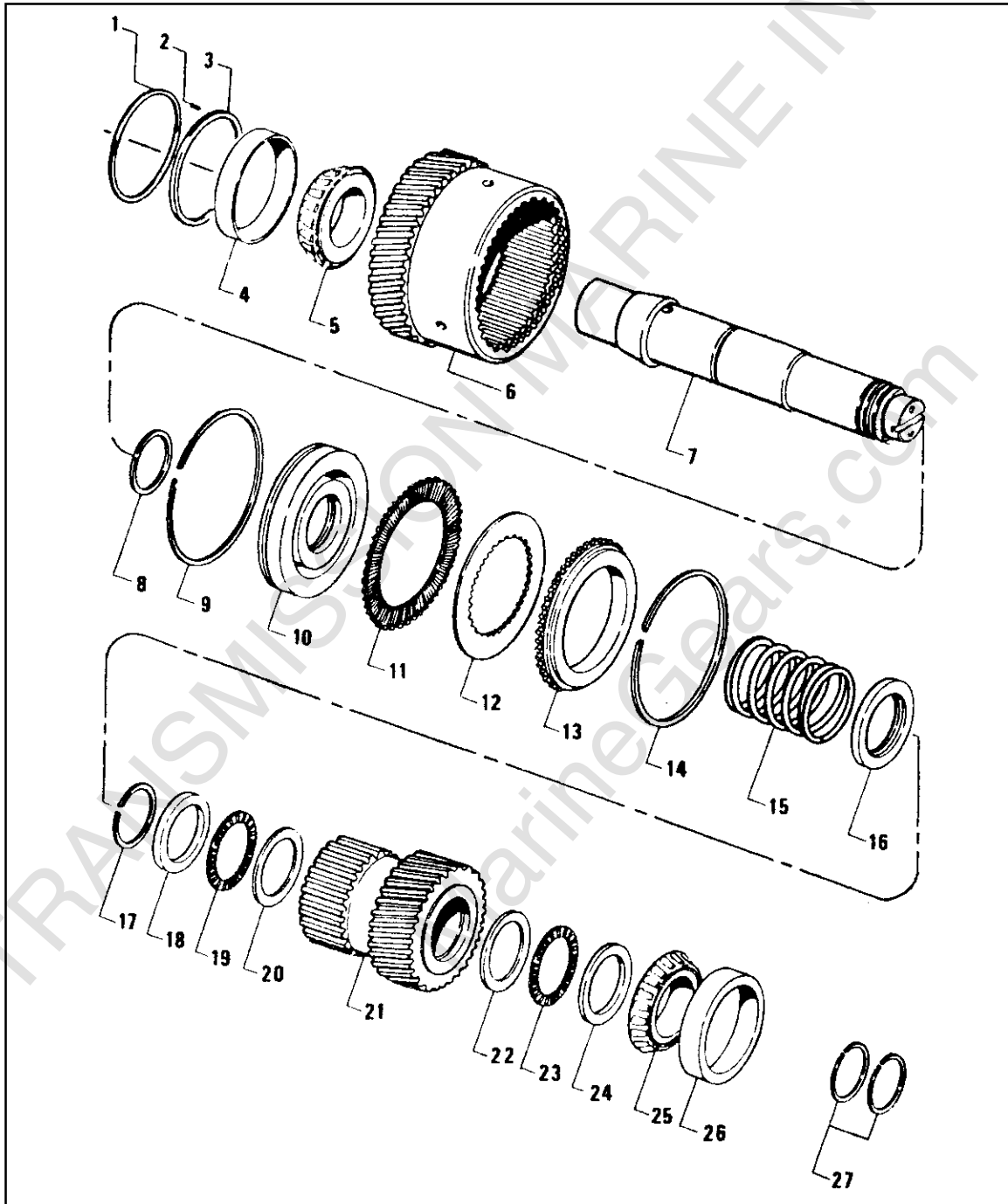


Input Shaft Assembly.

MG-17

Twin Disc

MG5050A

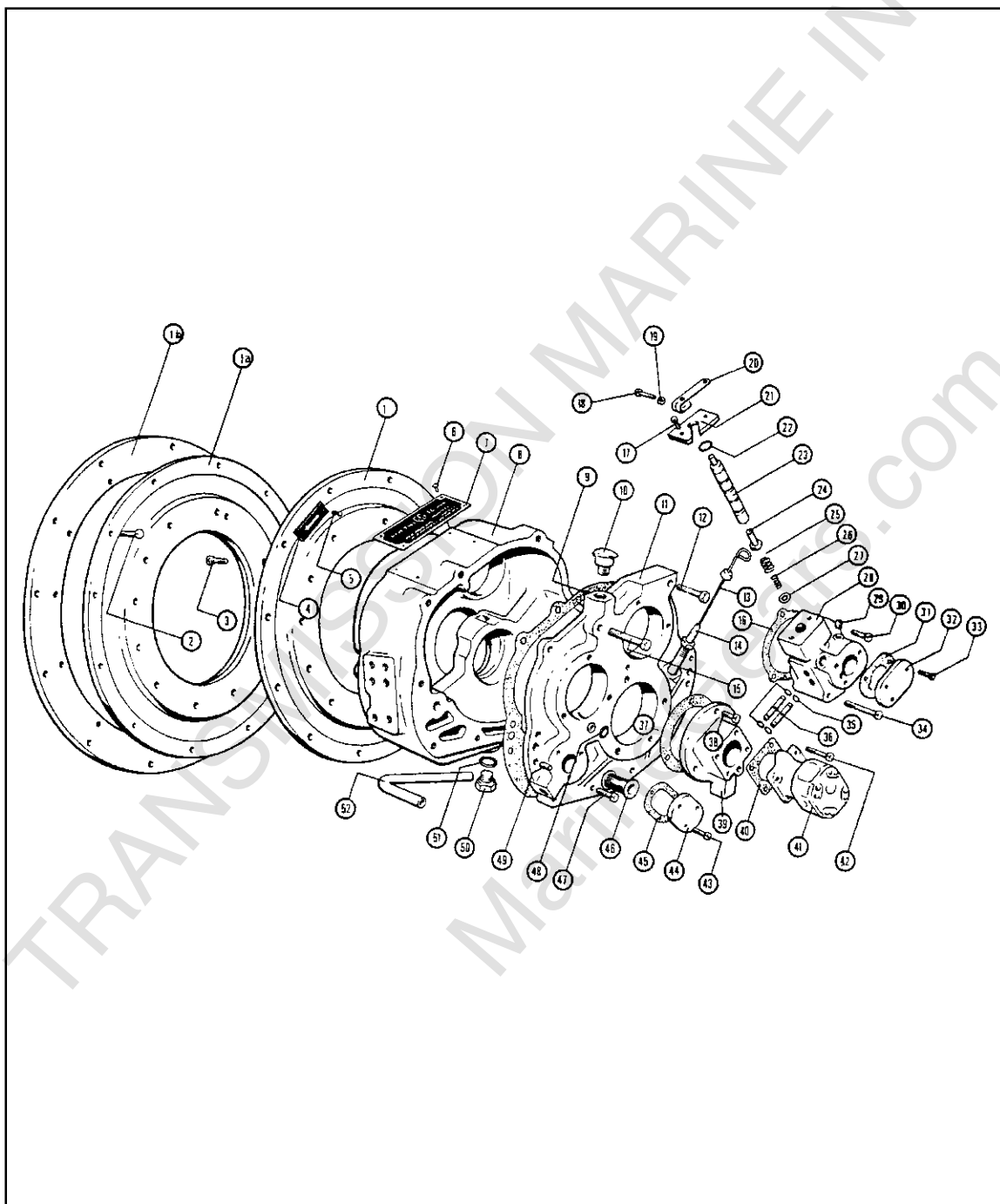


Lay Shaft Assembly.

MG-18



MG506A

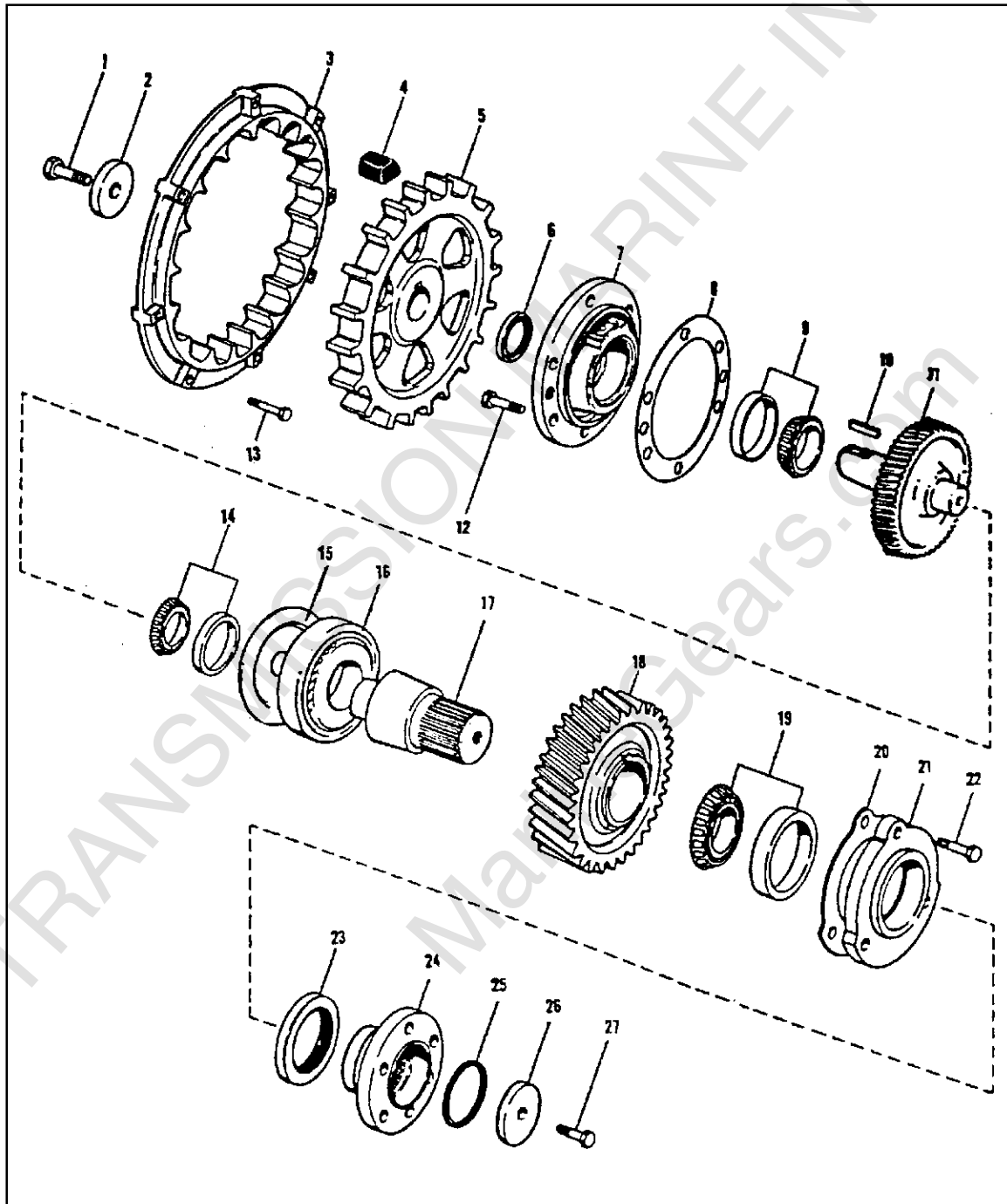


Main Housing Adapters & Pump Assembly.

MG-19

Twin Disc

MG506A

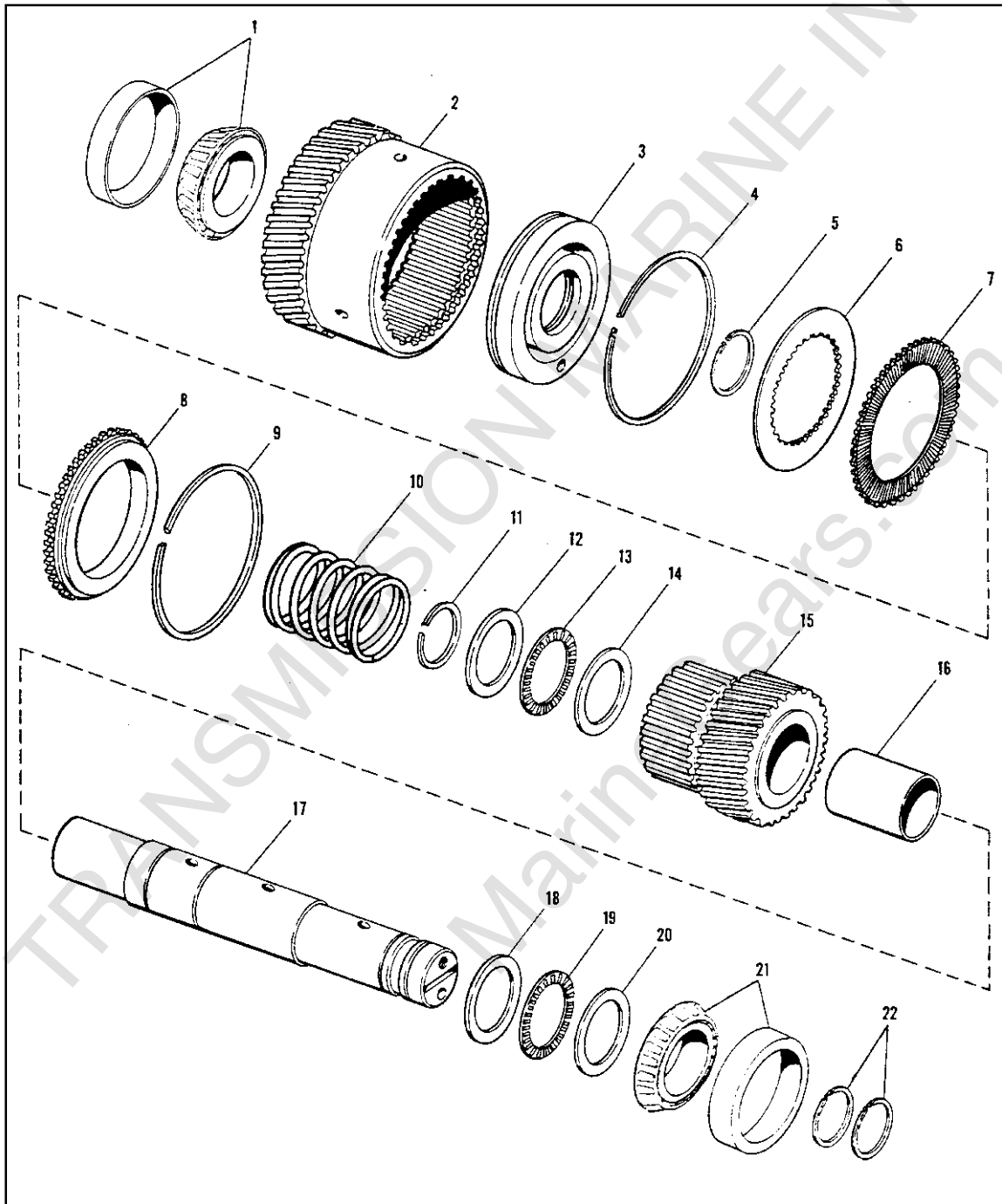


Input & Output Shaft Assemblies.

MG-20



MG506A

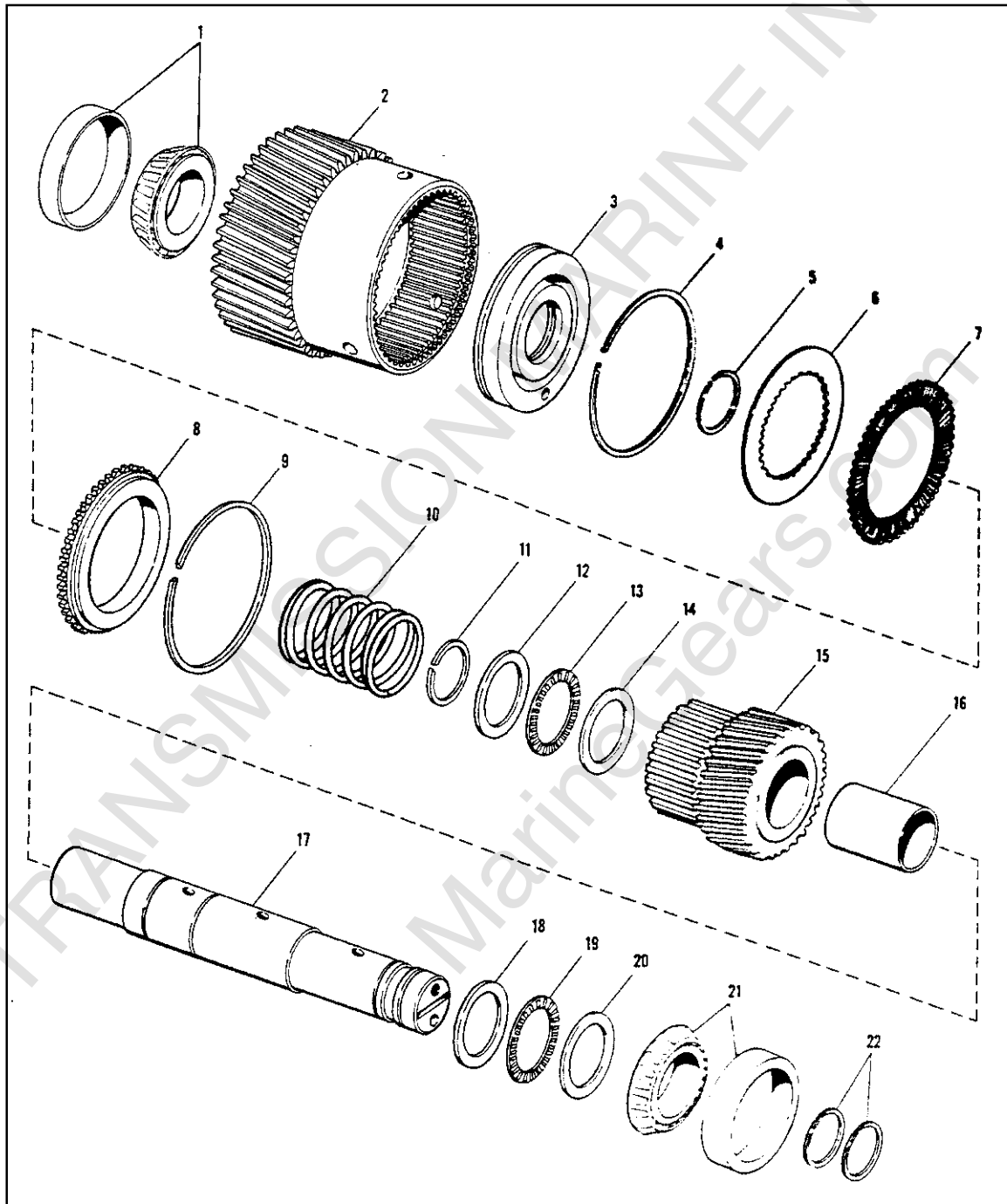


Lay Shaft Clutch Assembly.

MG-21

Twin Disc

MG506A

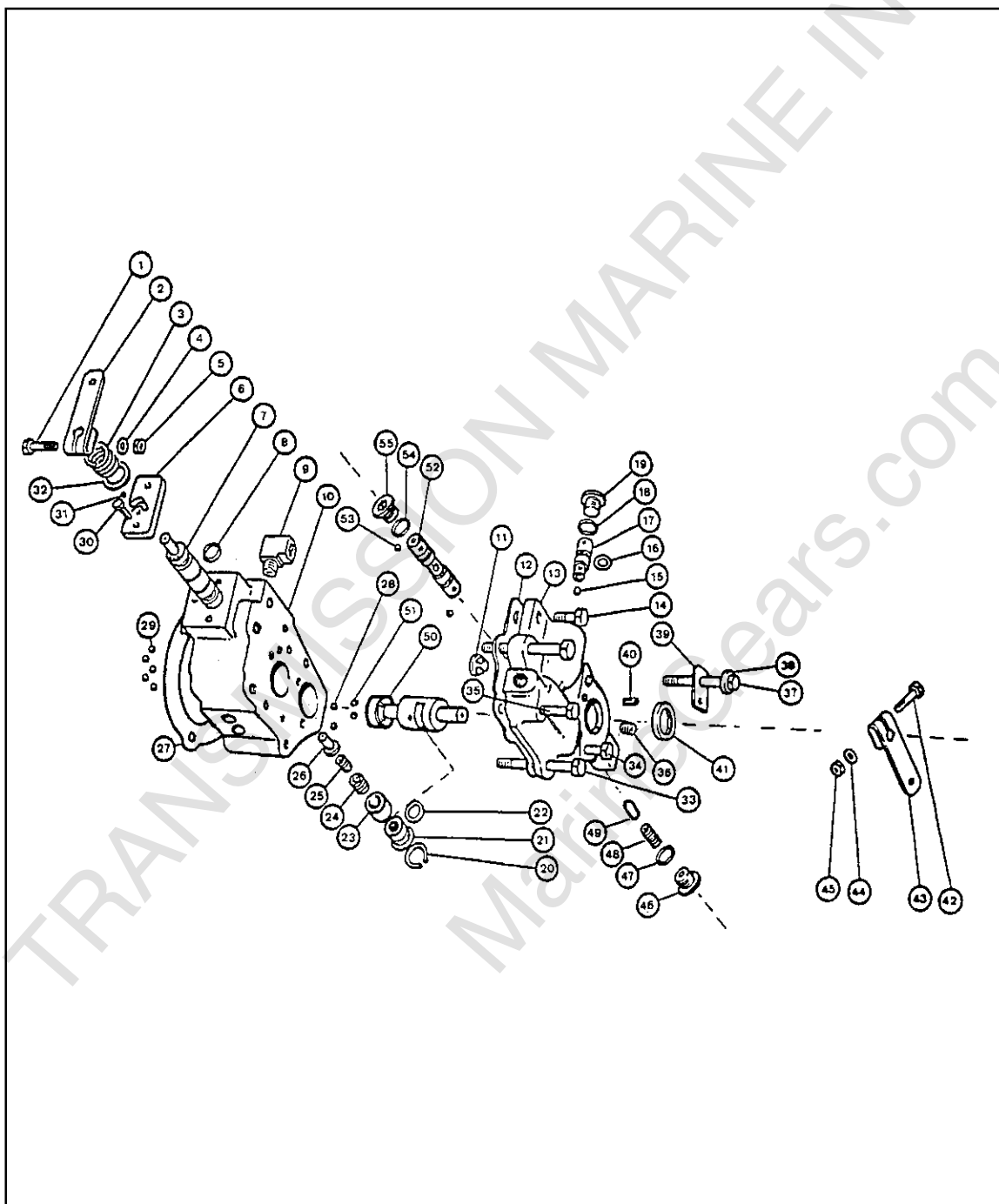


Input Clutch Assembly.

MG-22



MG506A

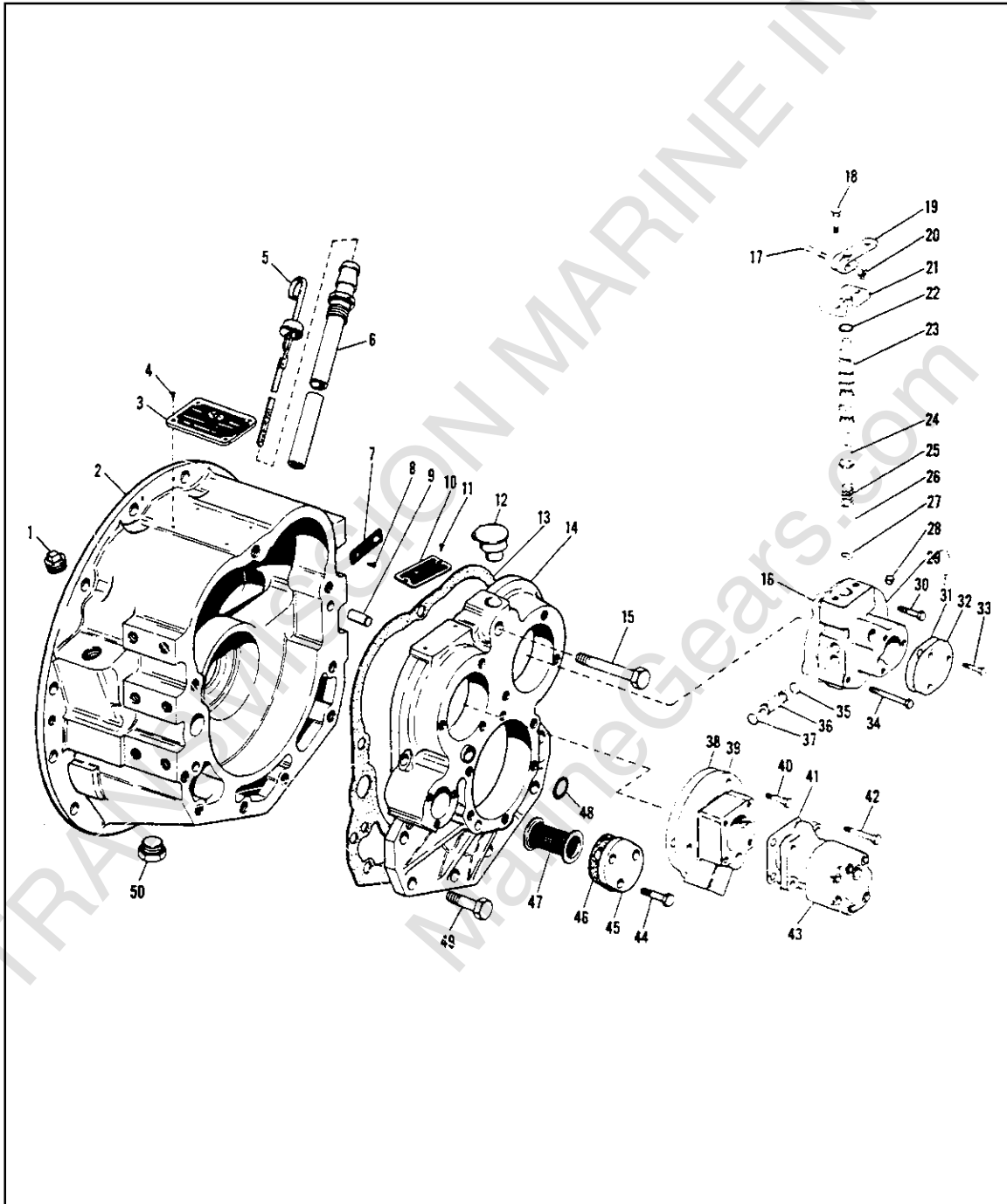


Control Valve Assembly.

MG-23

Twin Disc

MG506-1

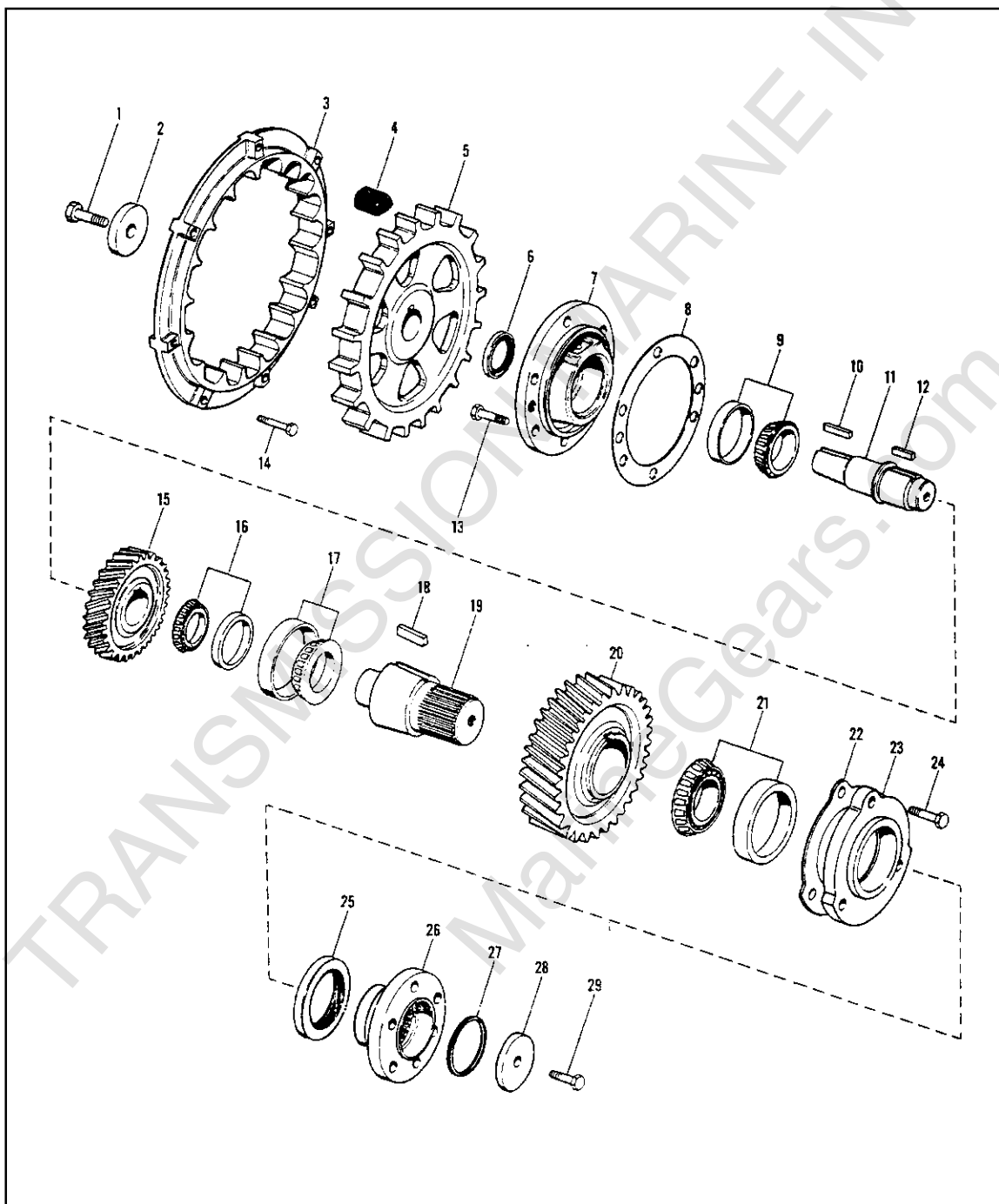


Main Housing & Pump Assembly.

MG-24



MG506-1

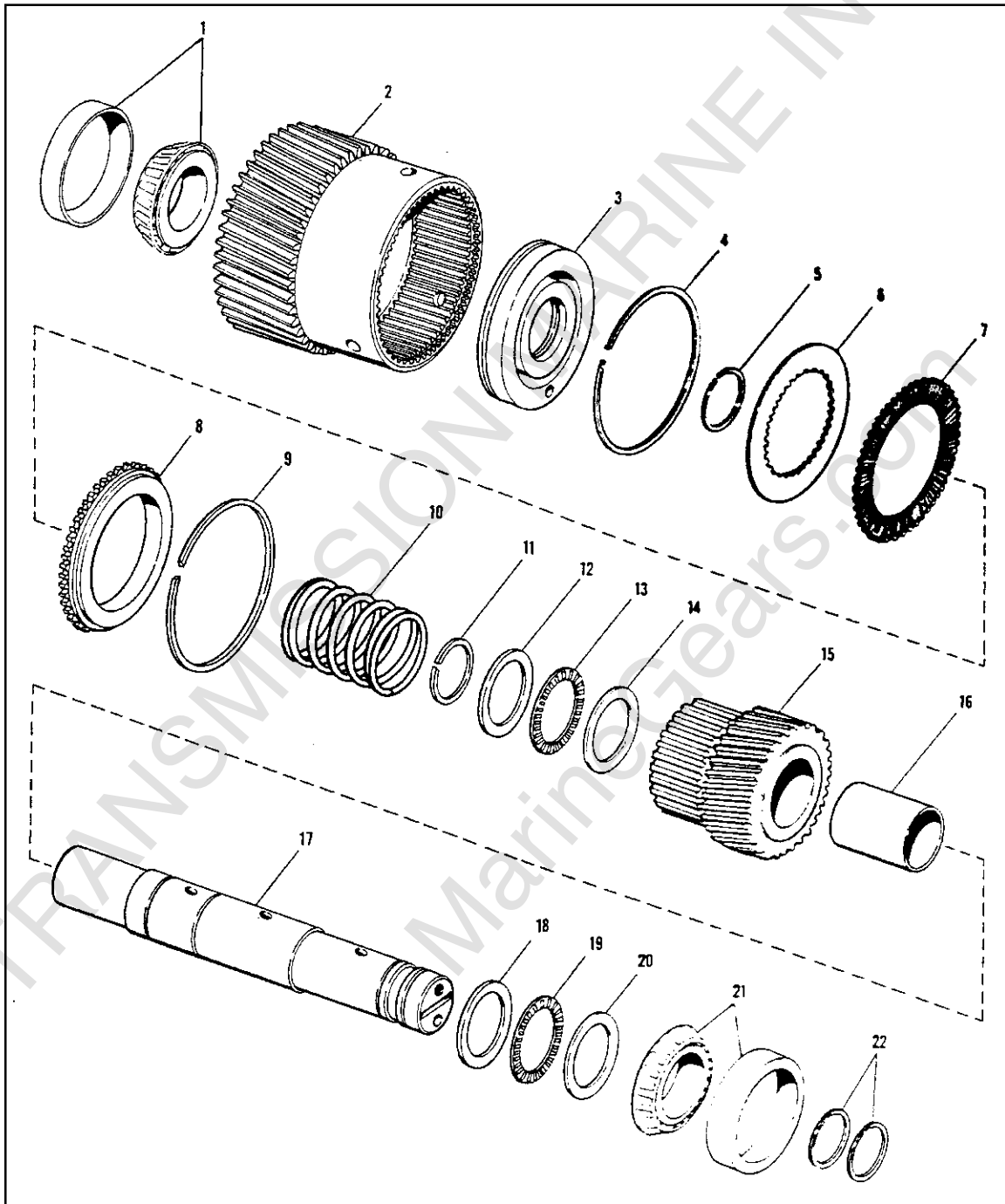


Input/Output Shaft Assemblies.

MG-25

Twin Disc

MG506-1

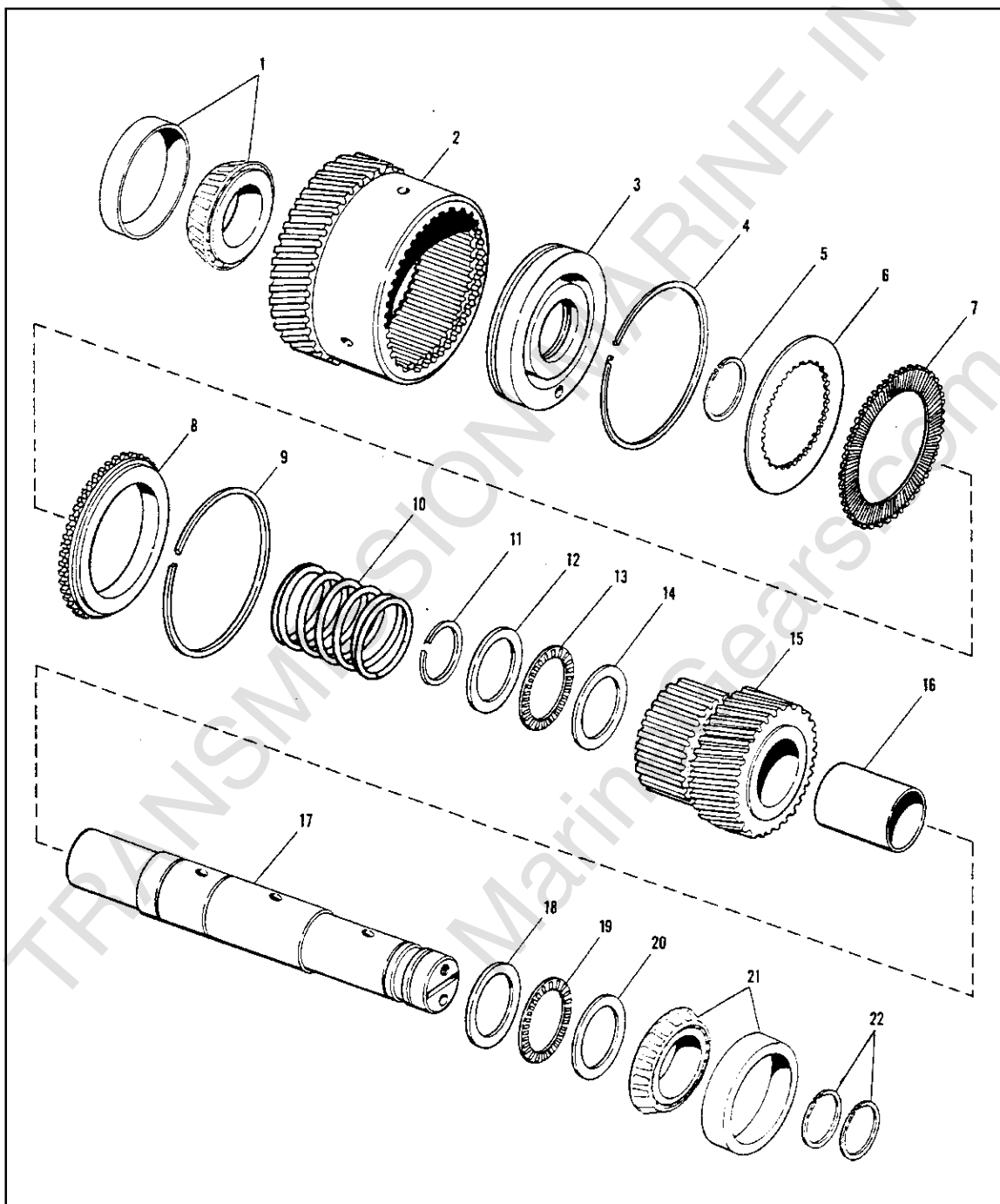


Input Clutch Assembly.

MG-26



MG506-1

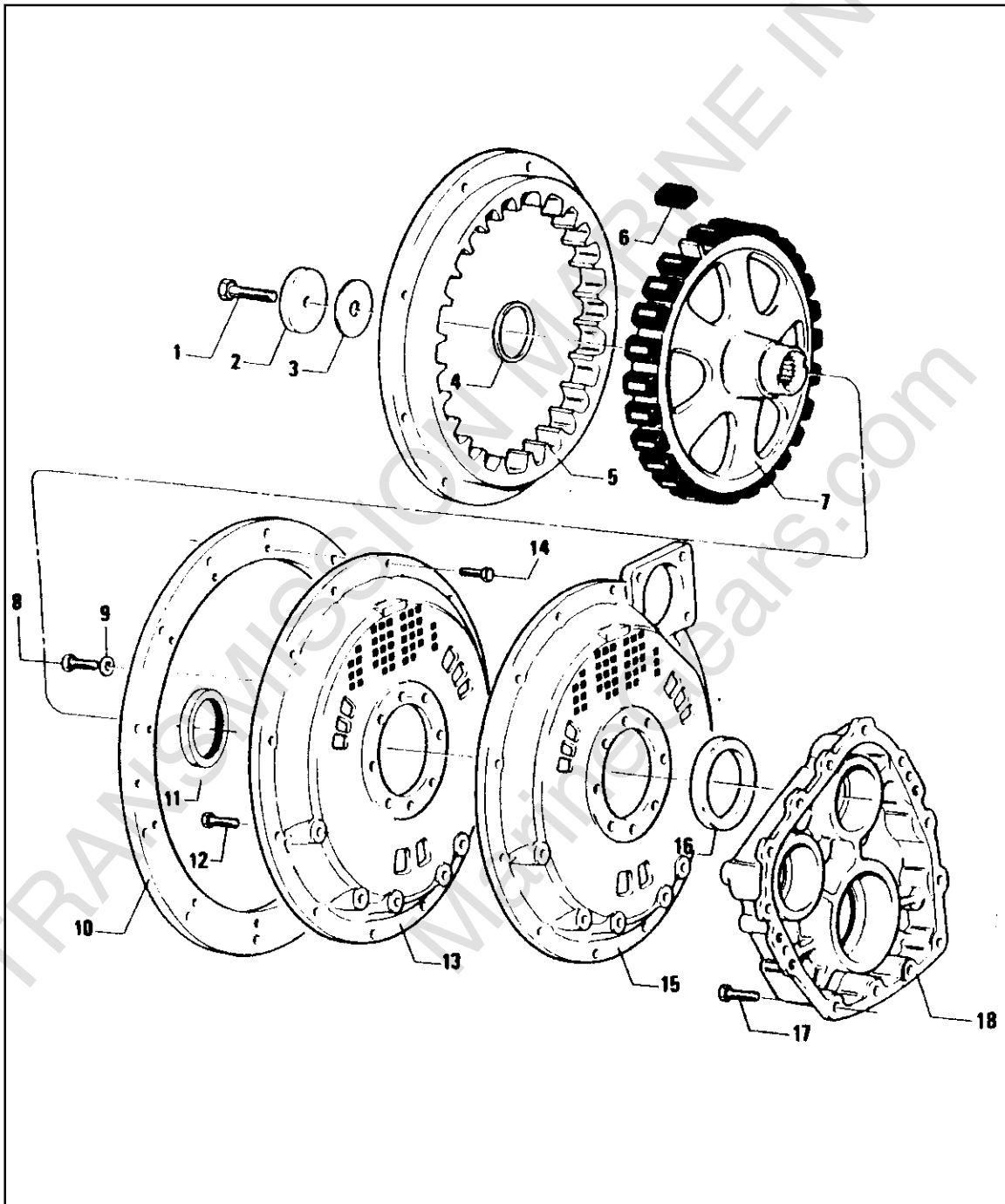


Lay Shaft Clutch Assembly.

MG-27

Twin Disc

MG5061A

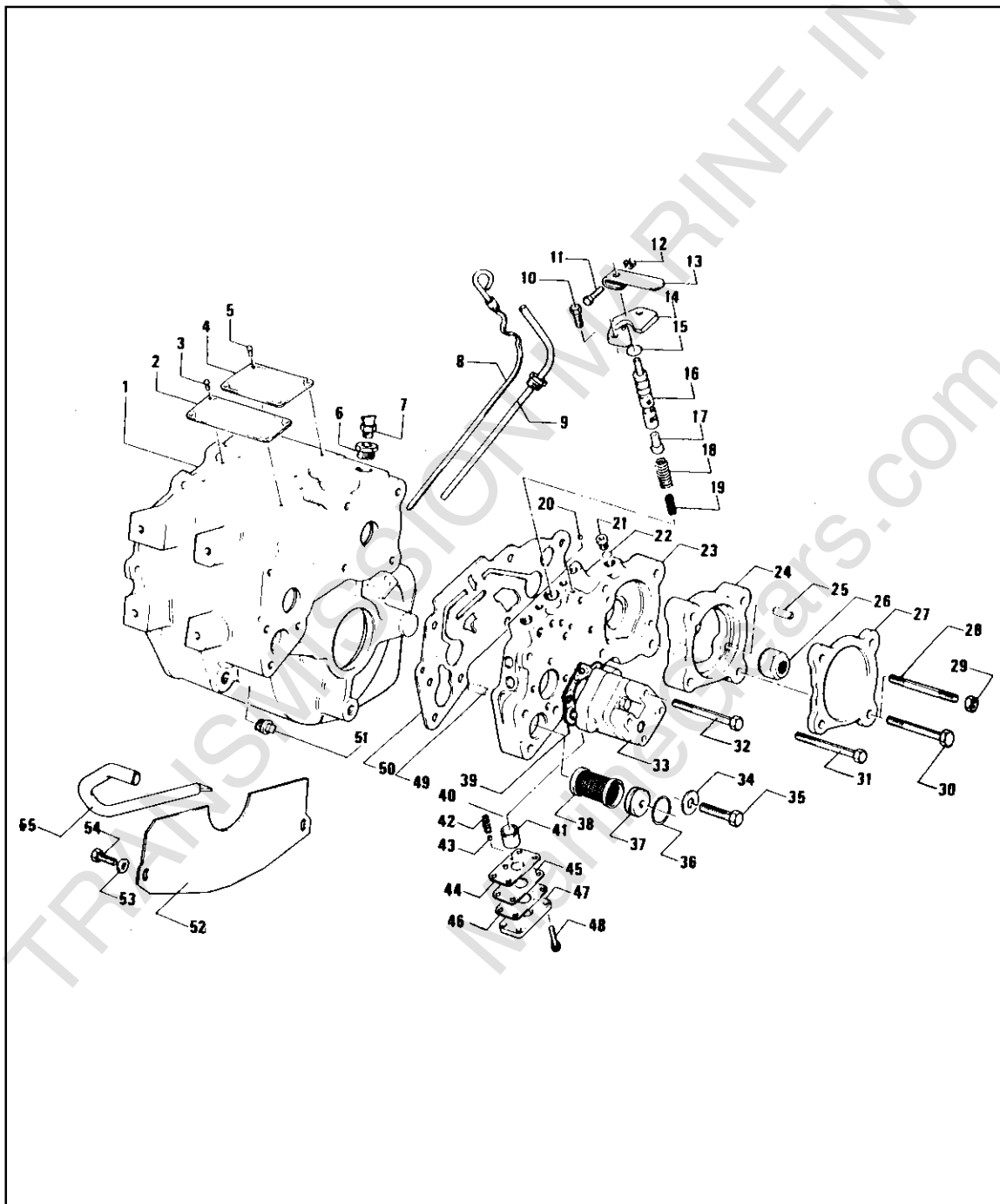


Adapter & Spider Assembly.

MG-28



MG5061A

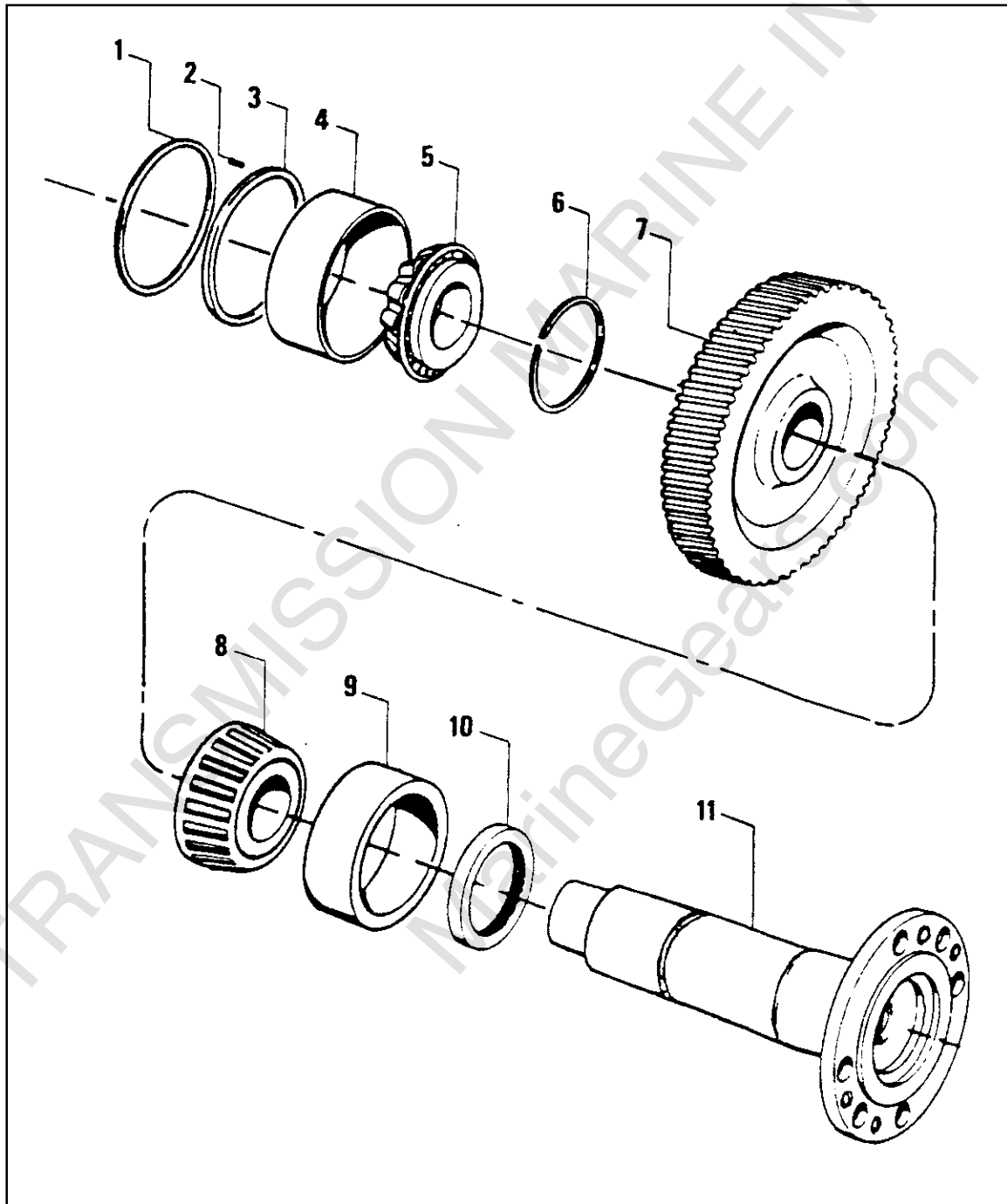


Main Housing & Pump Assembly.

MG-29

Twin Disc

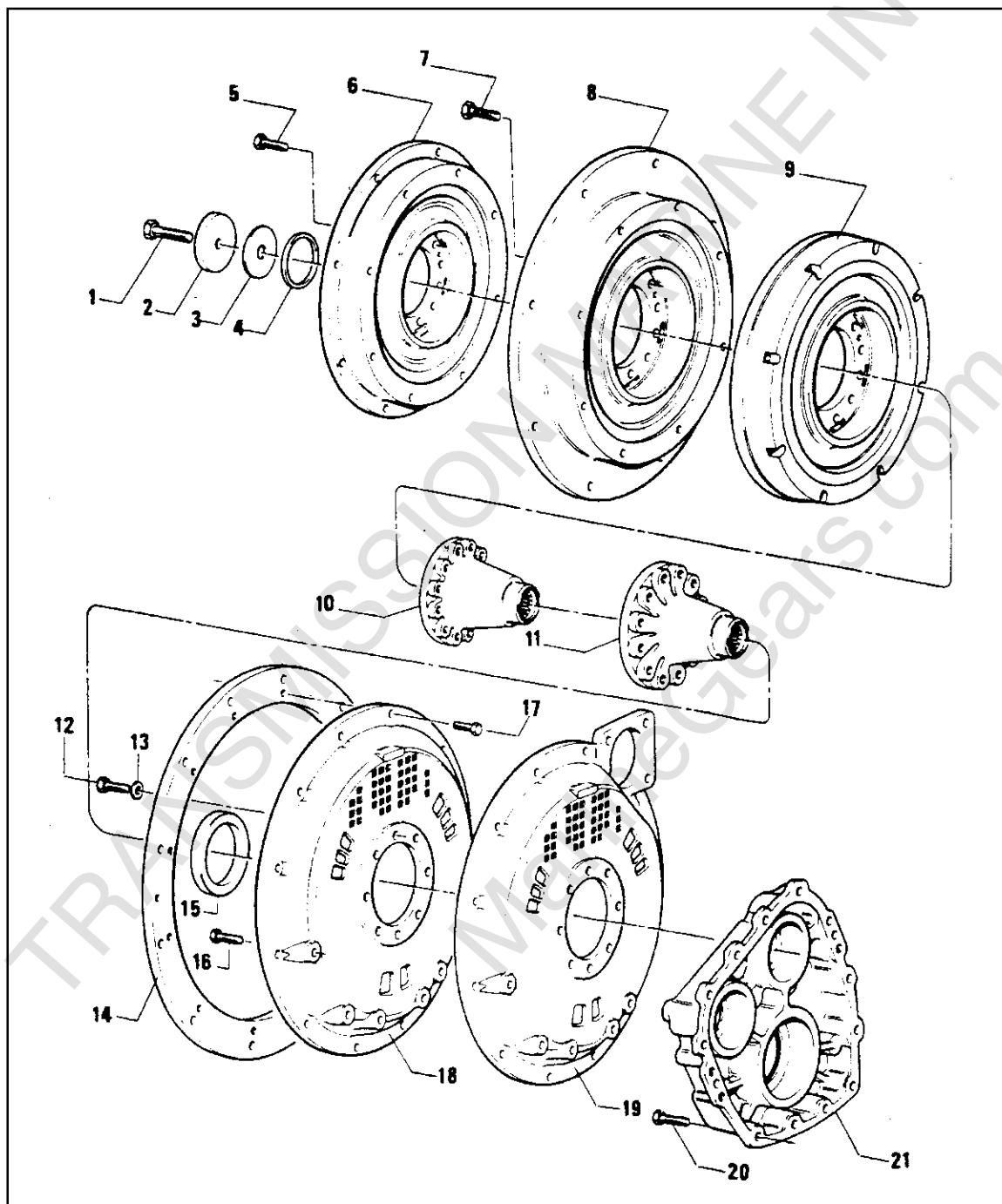
MG5061A



Output Shaft Assembly.

MG-30

MG5061A



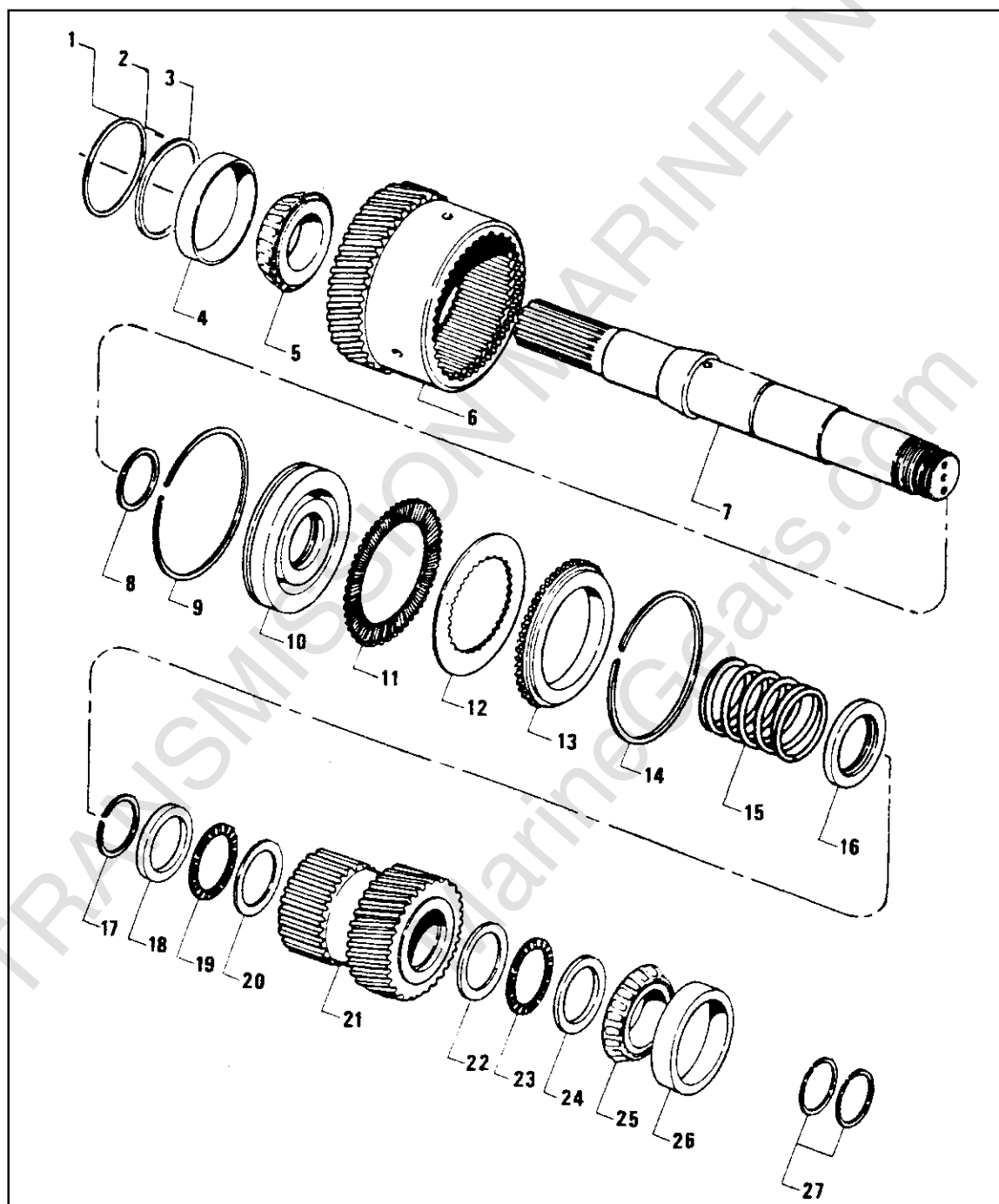
Adapter & Input Coupling Assemblies.

MG-31

Twin Disc

**TRANSMISSION
MARINE INC.**

MG5061A

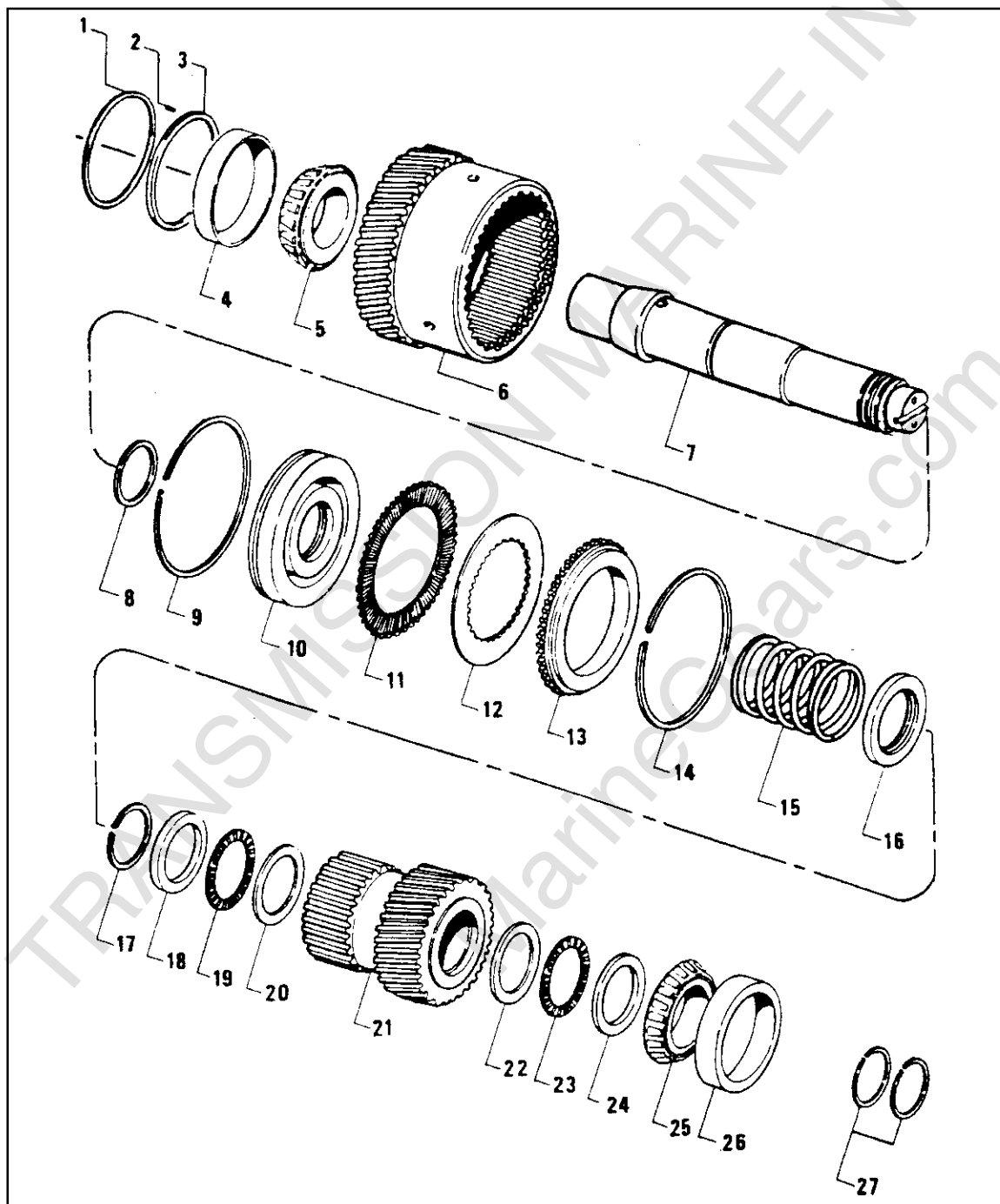


Input Shaft & Clutch Assembly.

MG-32



MG5061A

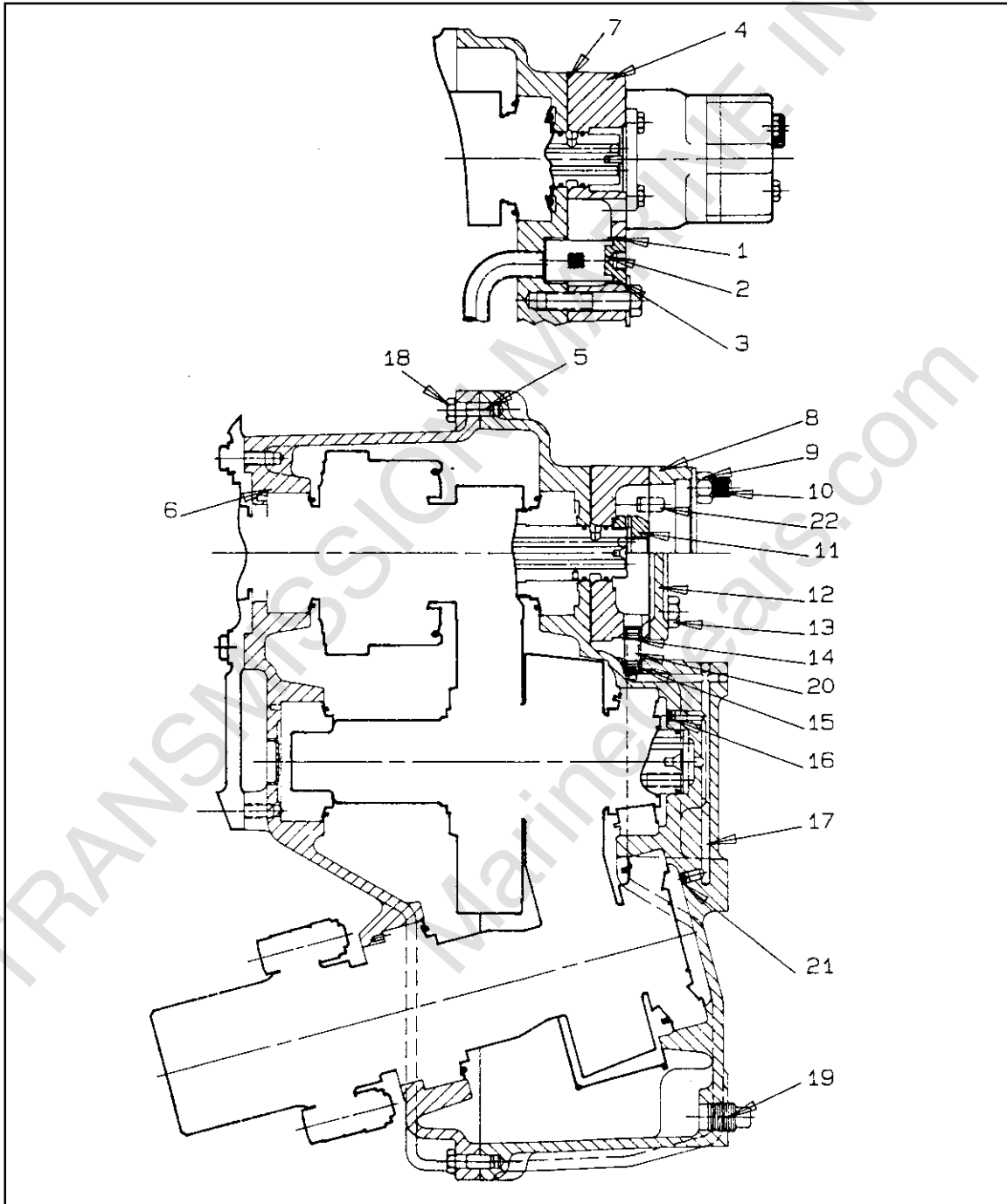


Lay Shaft Clutch Assembly.

MG-33

Twin Disc

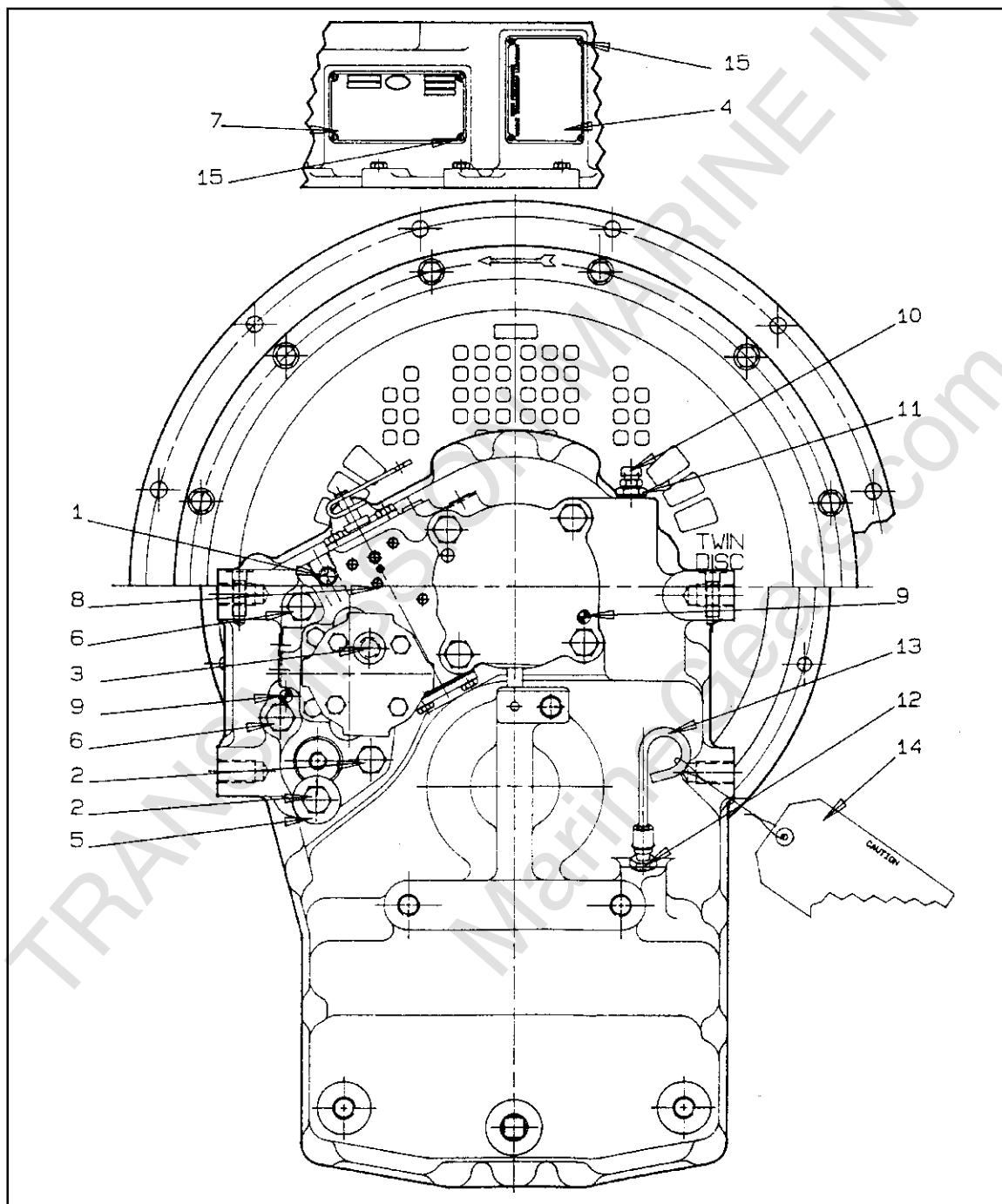
MG5062V



Main Housing.

MG-34

MG5062V

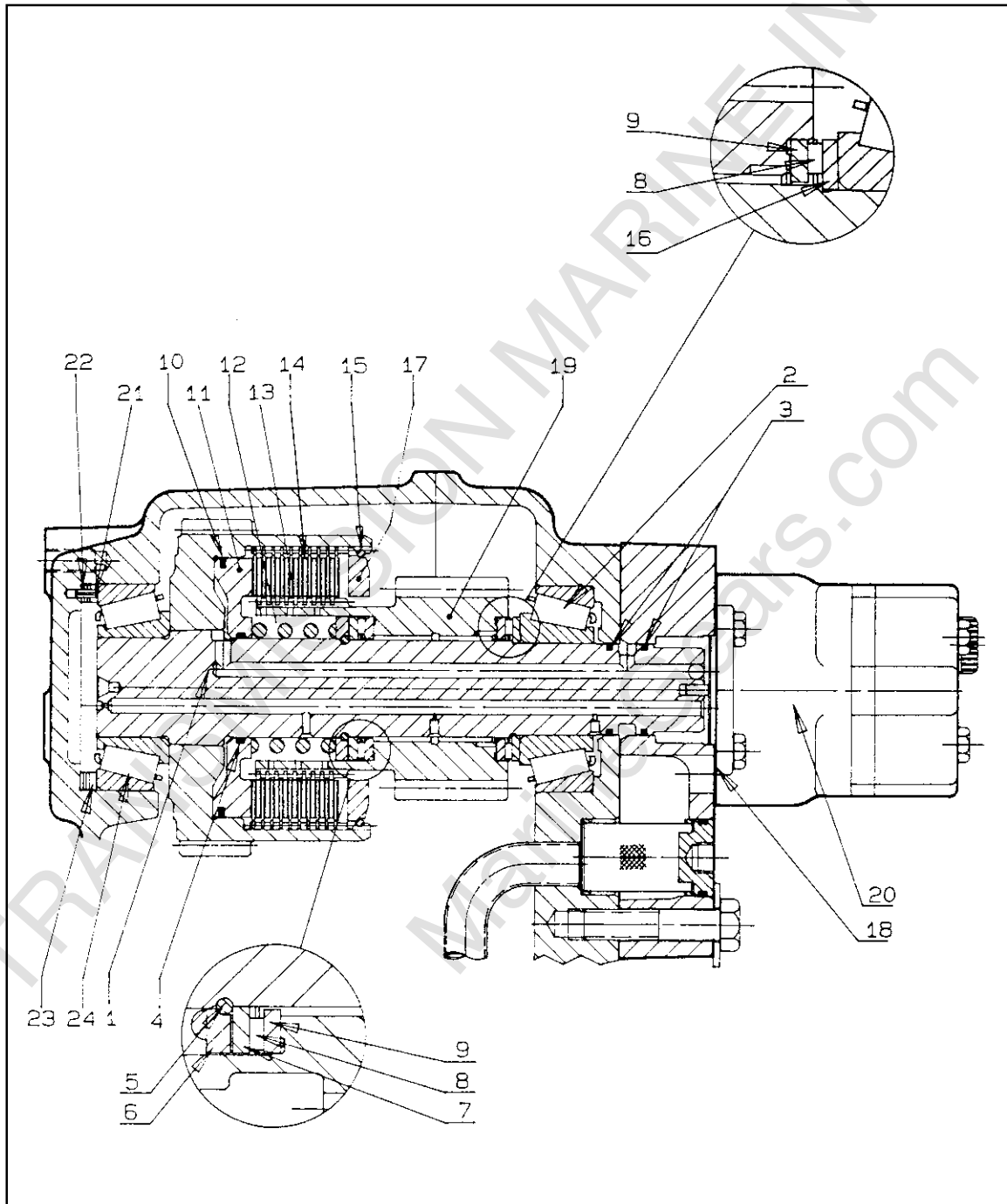


Main Housing (Continued).

MG-35

Twin Disc

MG5062V

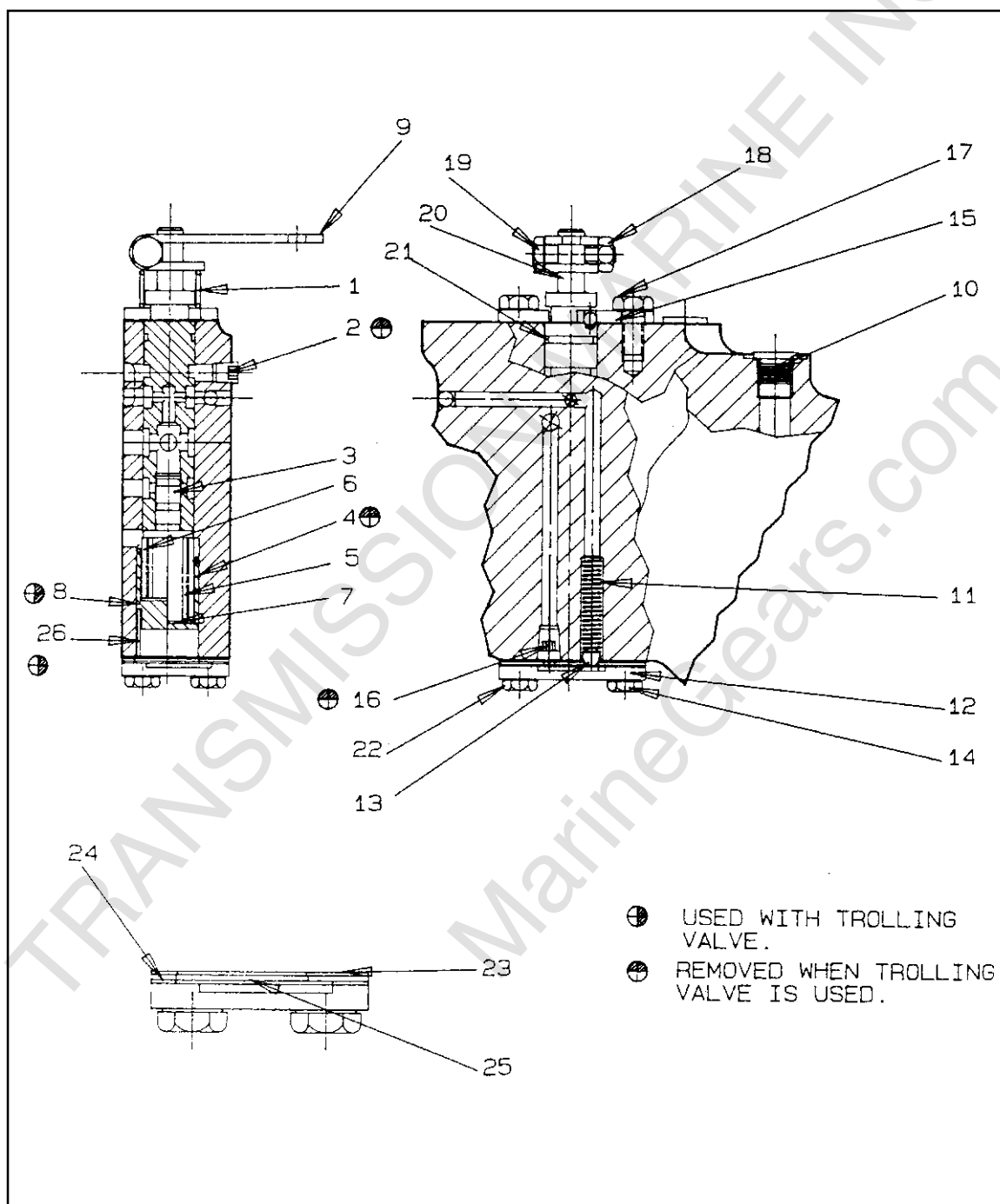


Pump & Clutch Assembly.

MG-36



MG5062V

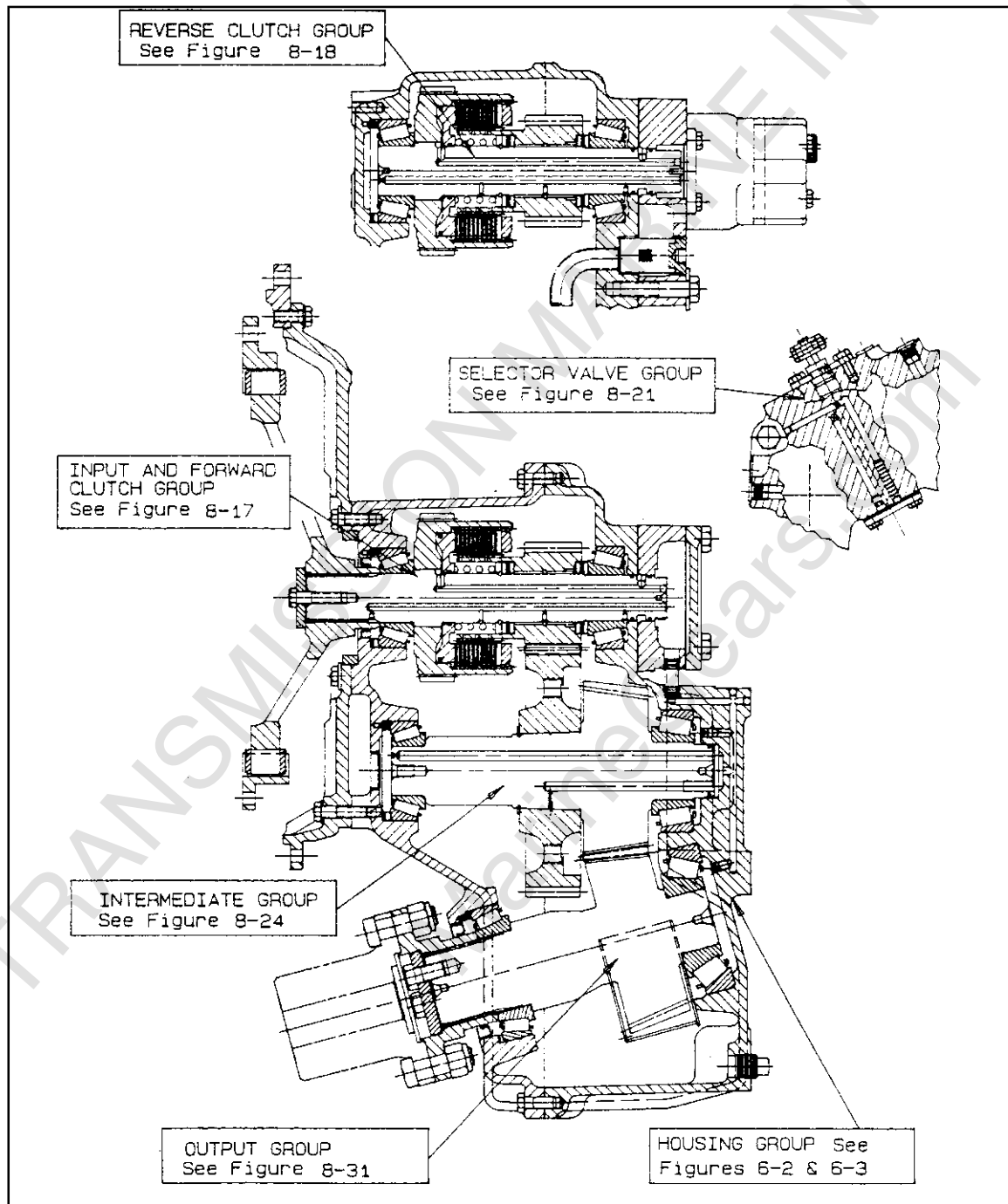


Control Valve Assembly.

MG-37

Twin Disc

MG5062V

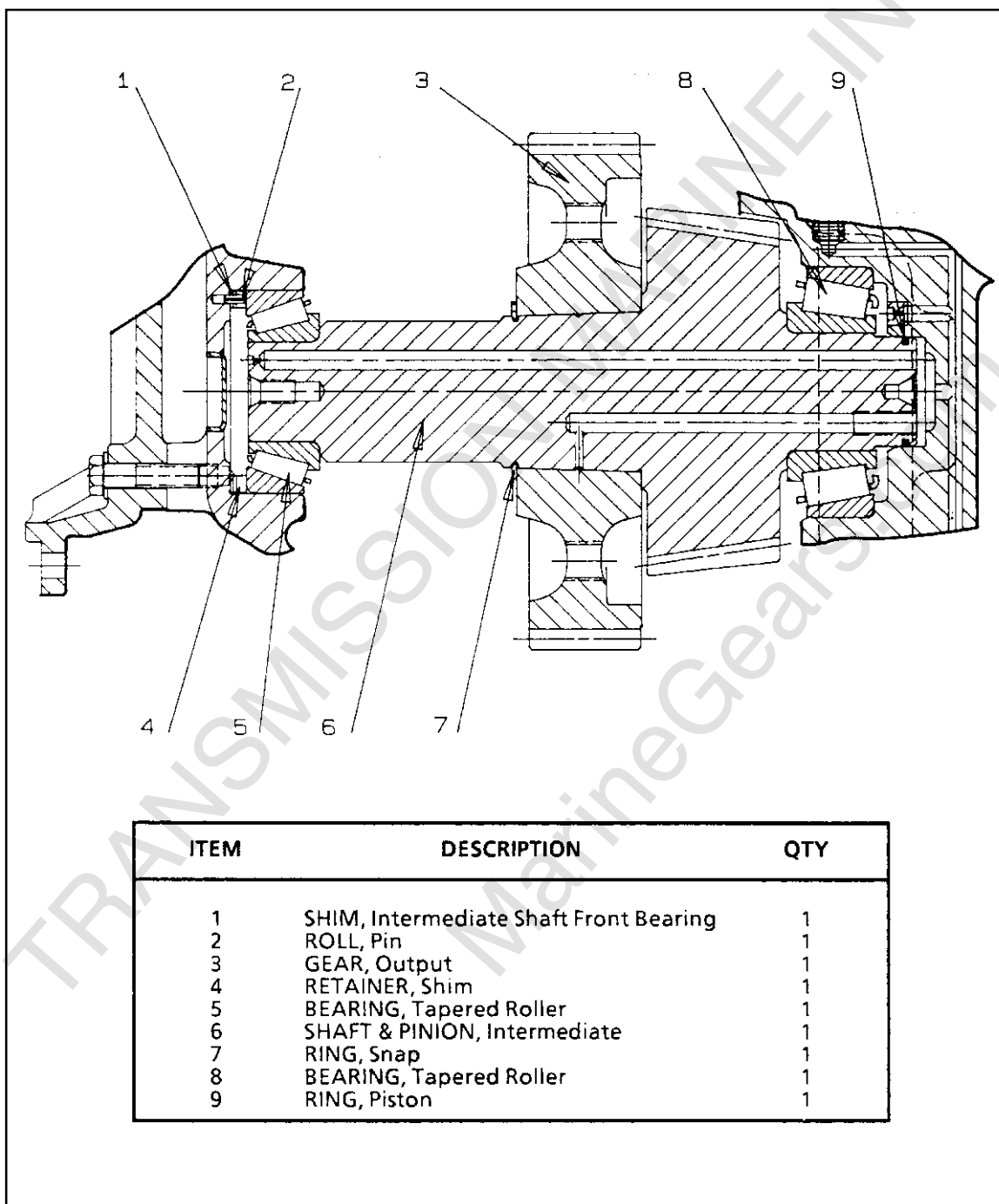


Main Housing.

MG-38



MG5062V



Intermediate Shaft.

MG-39

MG5062V

ASSEMBLY OF TROLLING VALVE.

NOTE

Illustration numbers refer to fig. 8-22.

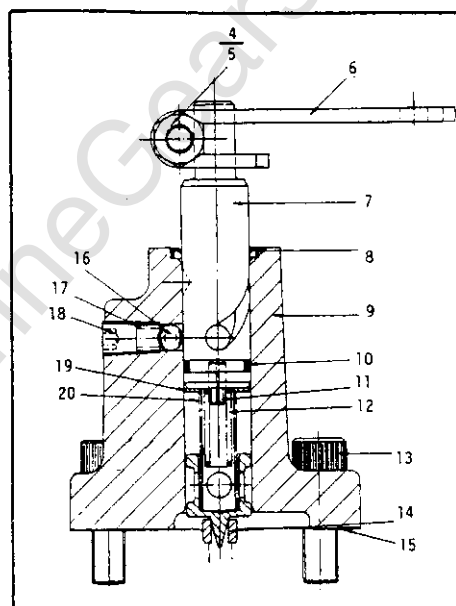
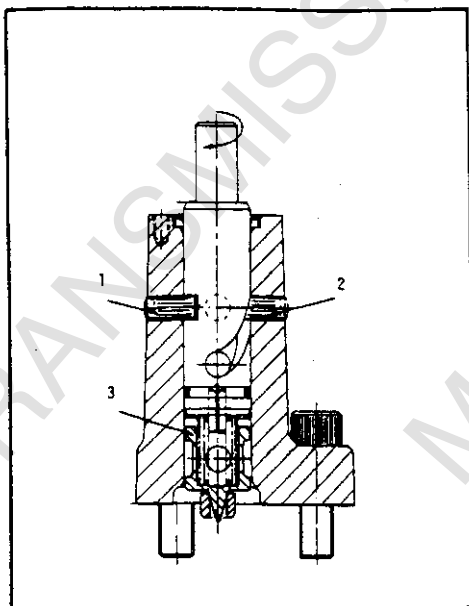
1. Install a new O-ring (10) on to the trolling stem (7).
2. Apply general purpose grease to the trolling stem, and install the stem into the valve body (9).
3. Using a piece of tube slightly larger than the trolling stem press a new oil seal (8) into the valve body.

4. Line up the cam slot in the stem with the pin holes in the valve body and install the two pins (1, 2).

NOTE

Do not push the pins into the valve body too far as this will prevent the stem from turning freely.

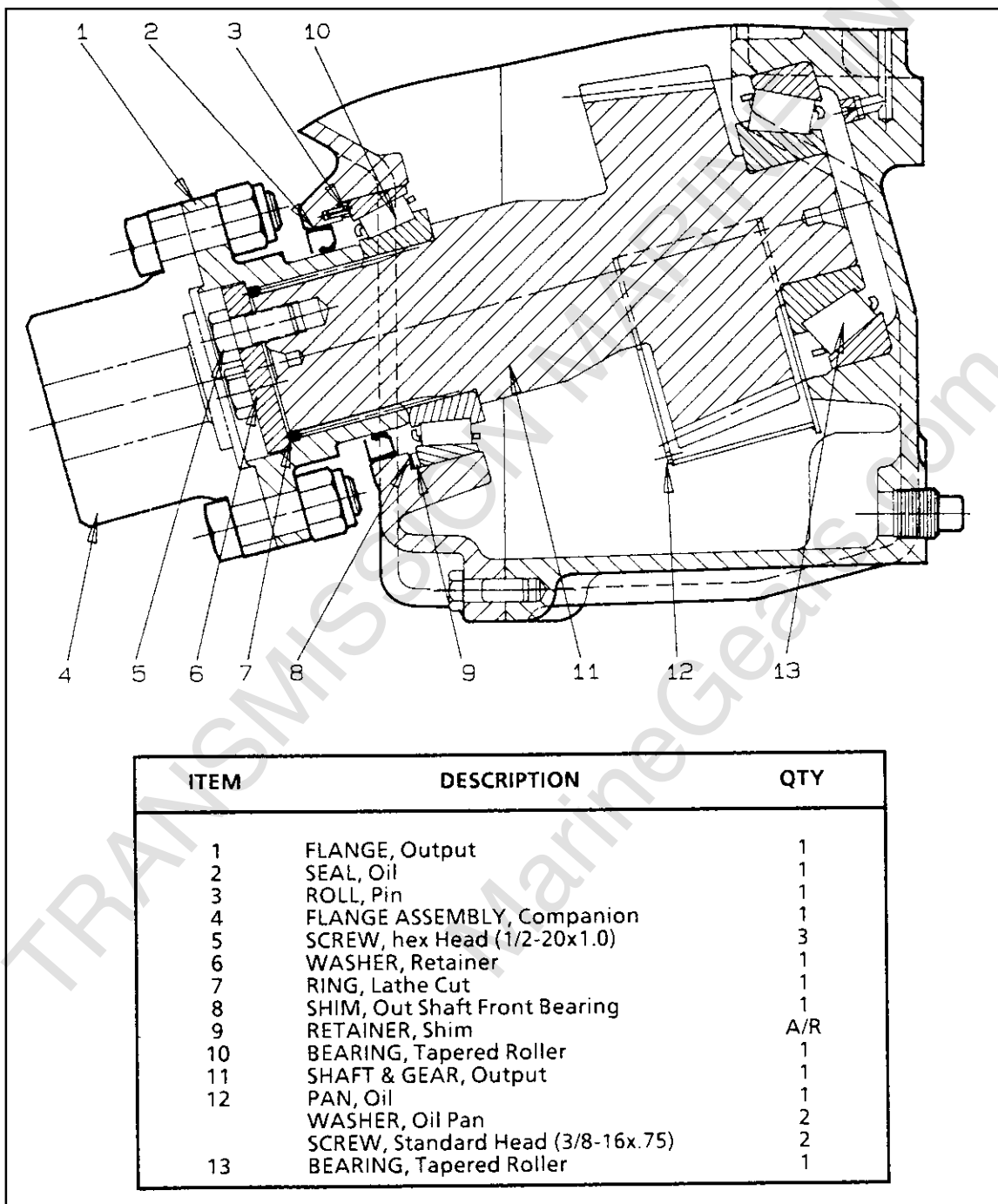
5. Locate the stem in the fully out position and install the washer (19), springs (12, 20) and plunger (3).
6. Install the ball (16), spring (17) and detent plug (18).



Trolling Valve.

MG-40

MG5062V

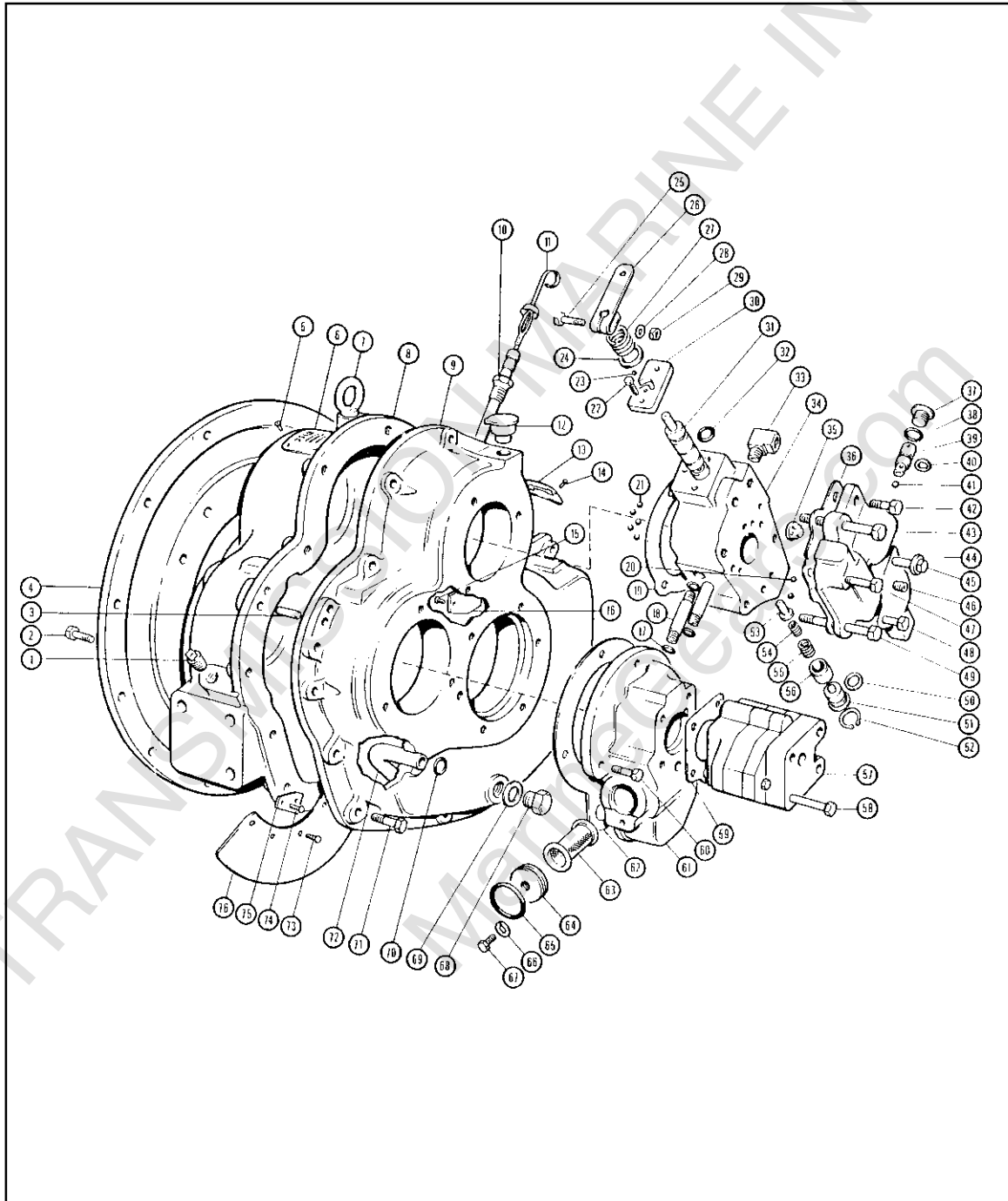


Output Shaft Assembly.

MG-41

Twin Disc

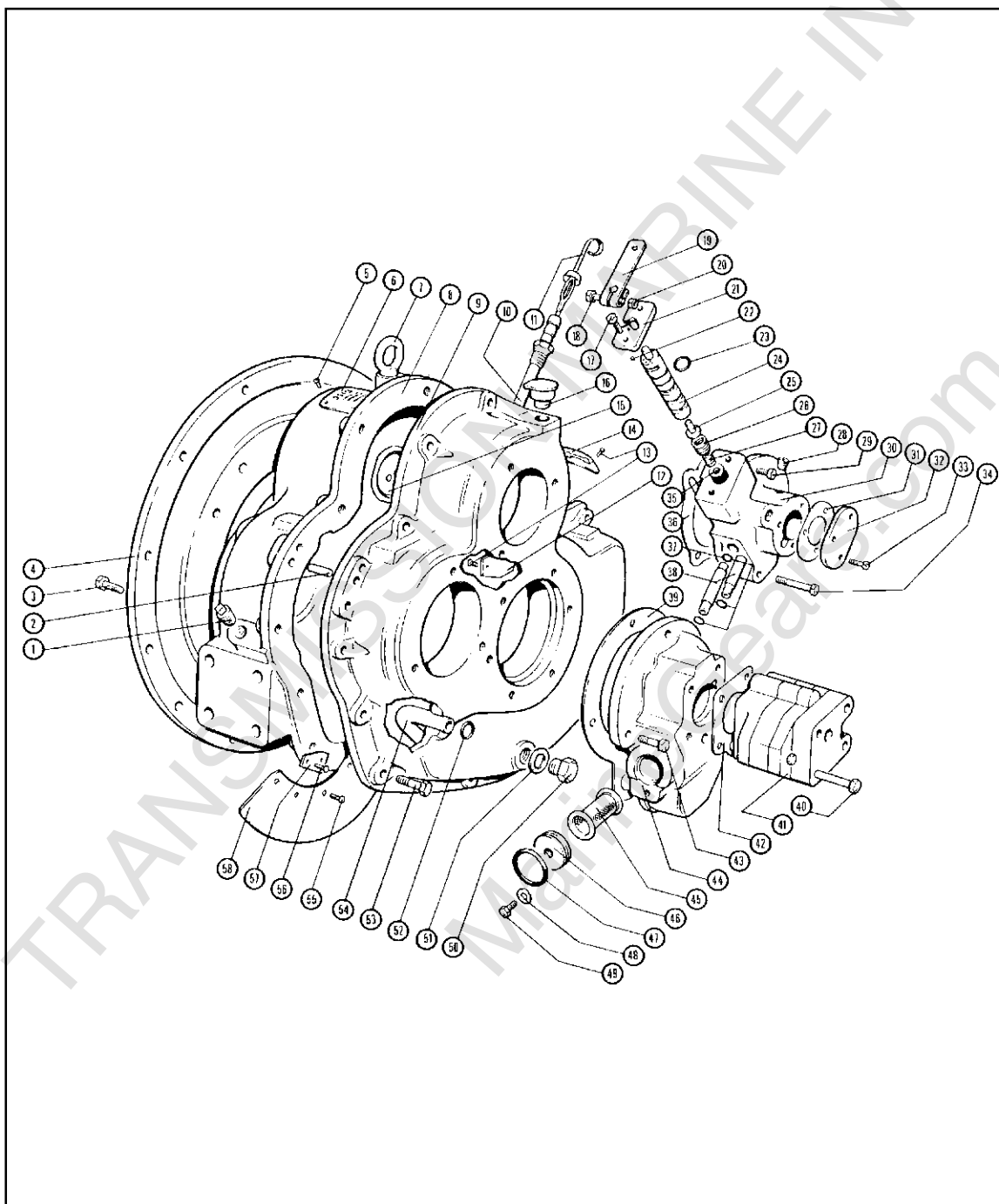
MG507



Main Housing, Pump & Adapters.

MG-42

MG507

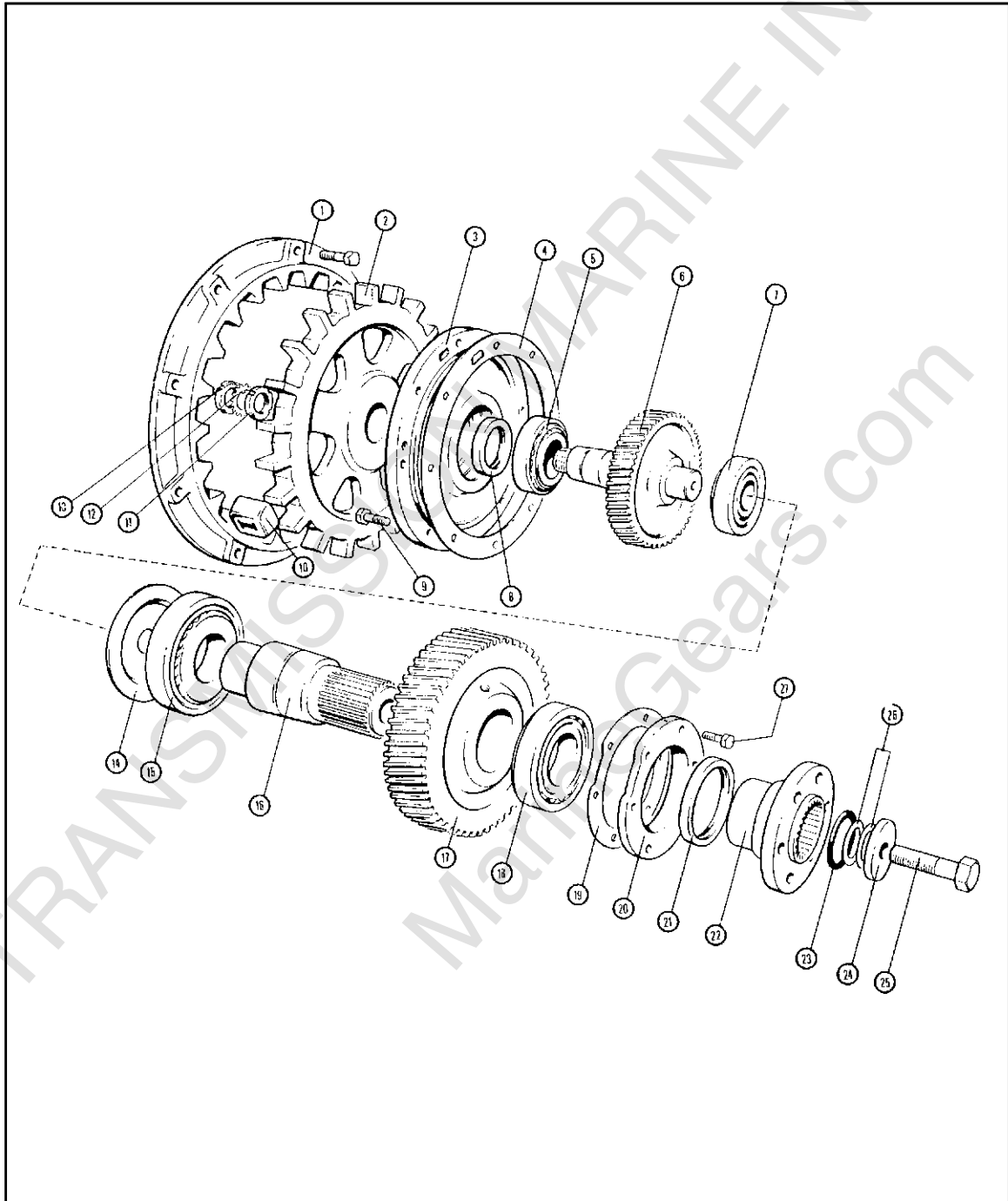


Main Housing, Pump & Manifold Assembly.

MG-43

Twin Disc

MG507

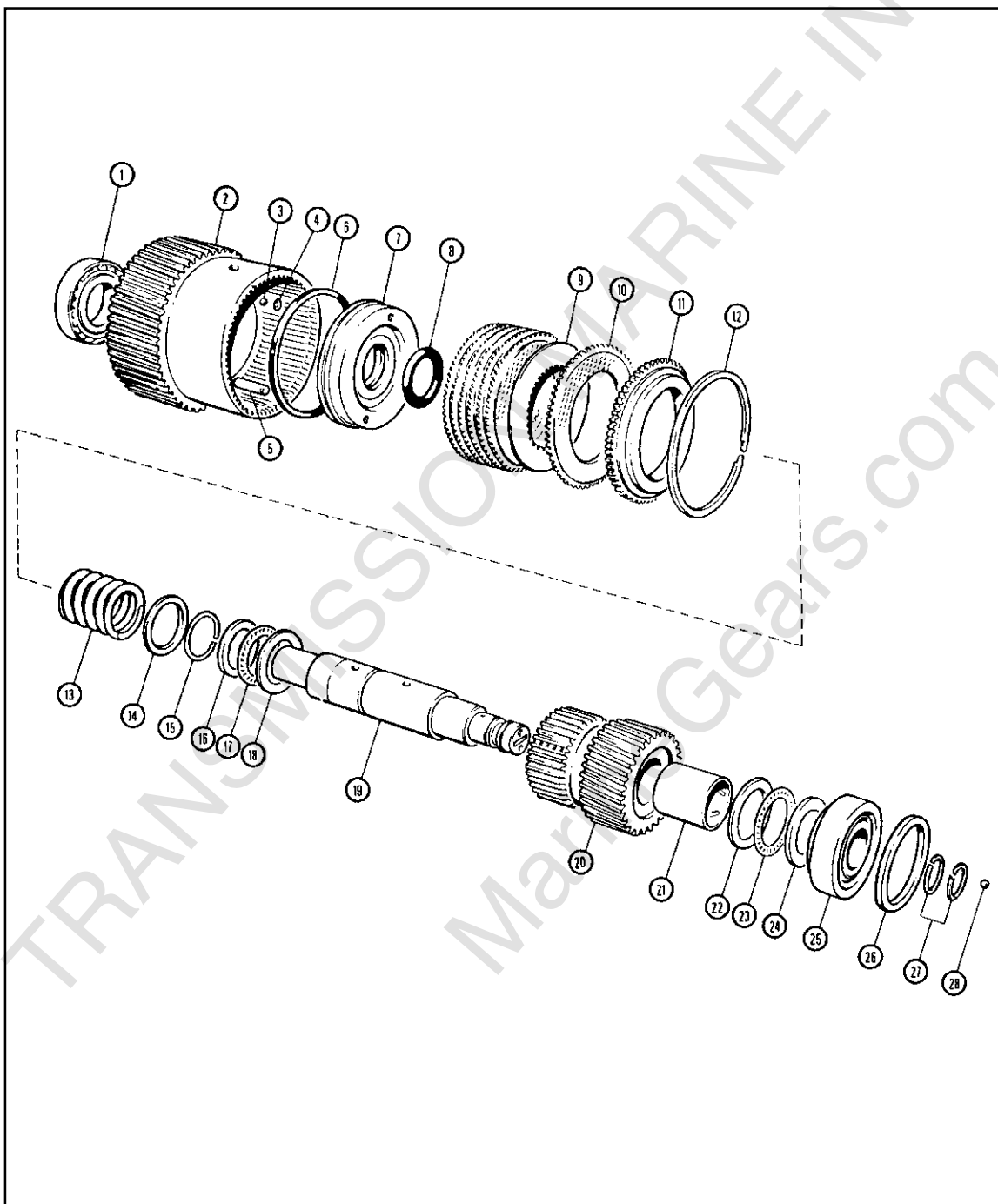


Spider Drive & Output Assembly.

MG-44



MG507

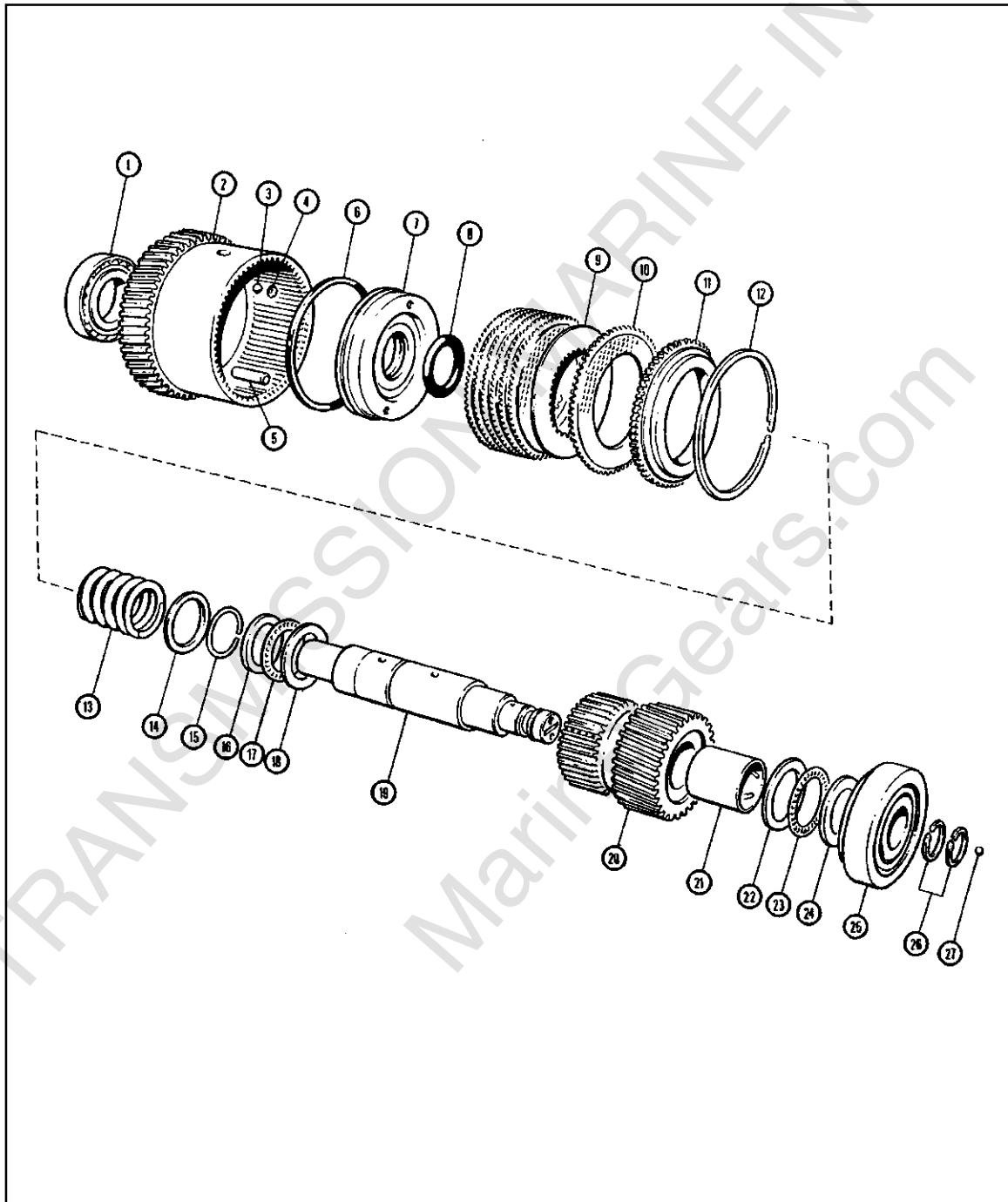


Input Shaft Clutch Assembly.

MG-45

Twin Disc

MG507

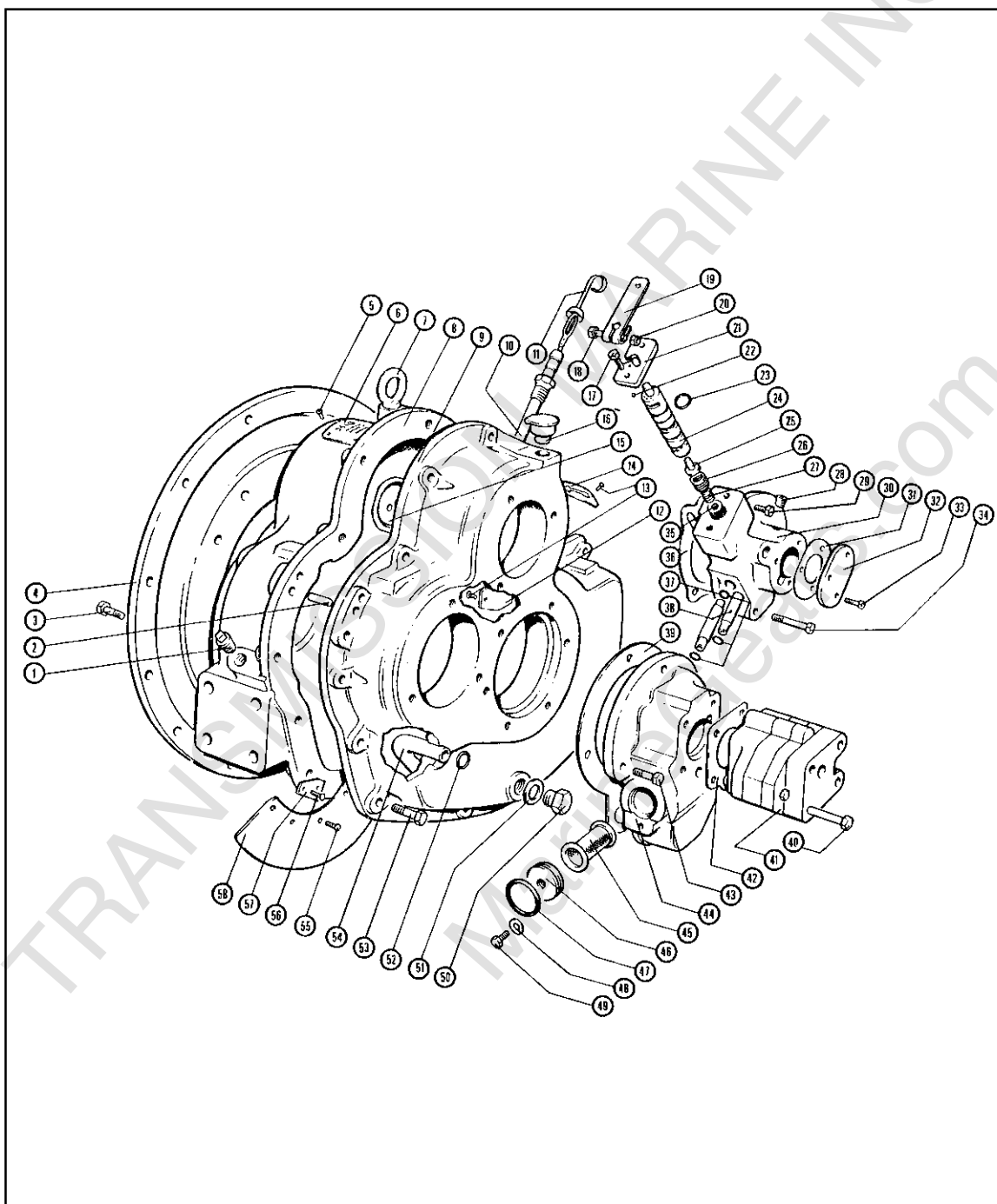


Lay Shaft Clutch Assembly.

MG-46



MG507A

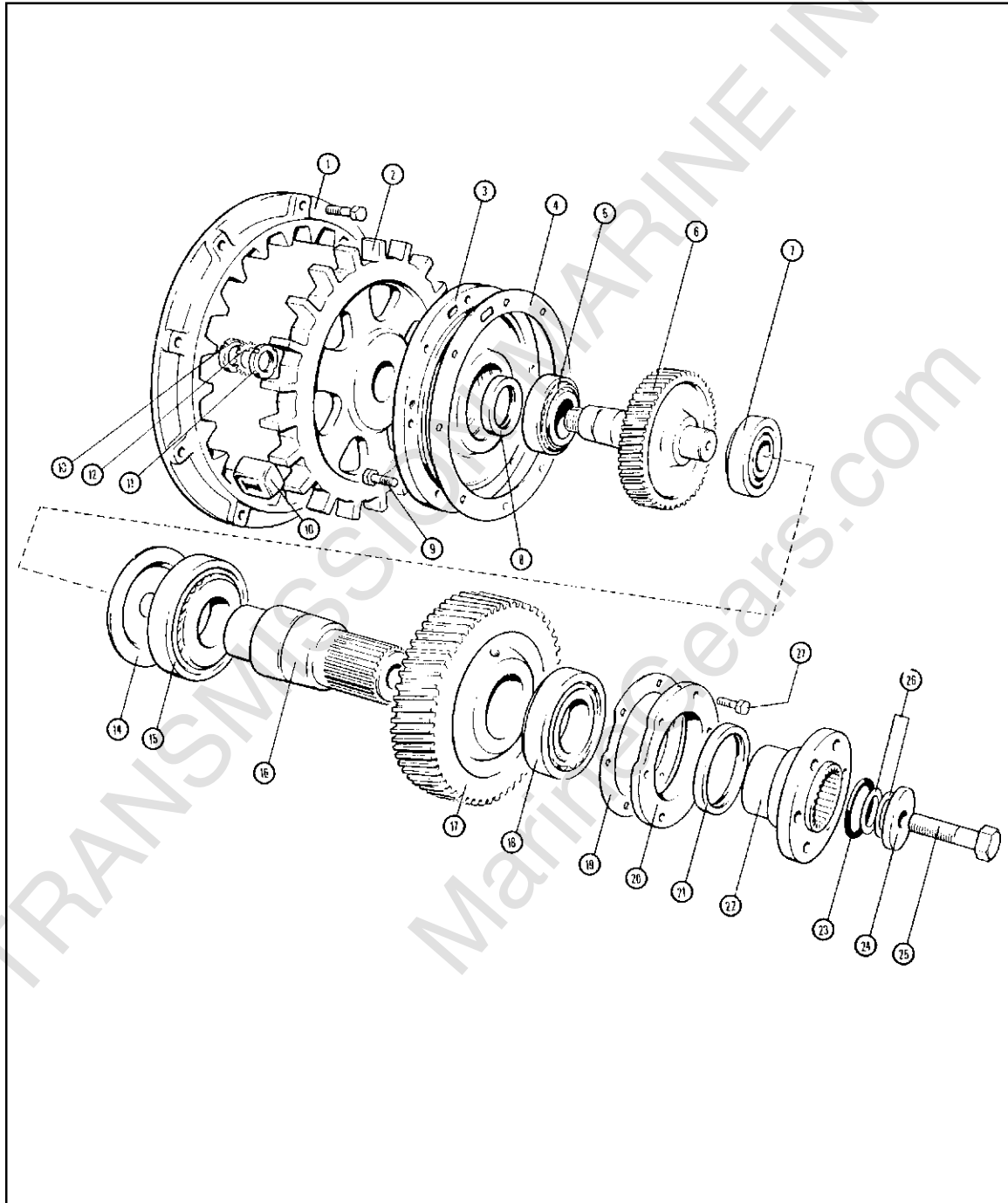


Main Housing, Adapter & Pump Assembly.

MG-47

Twin Disc

MG507A

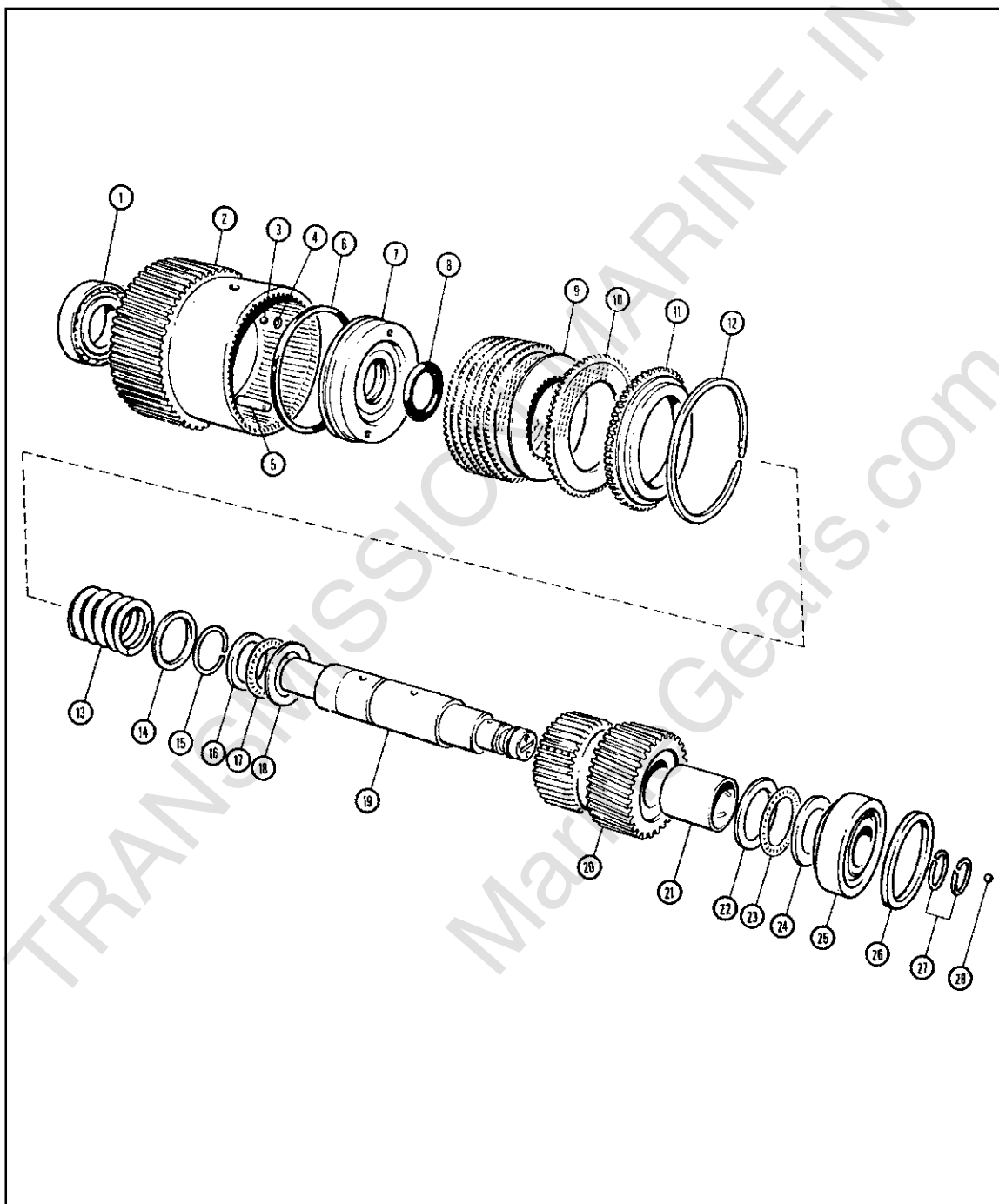


Input Shaft & Output Shaft Assemblies.

MG-48



MG507A

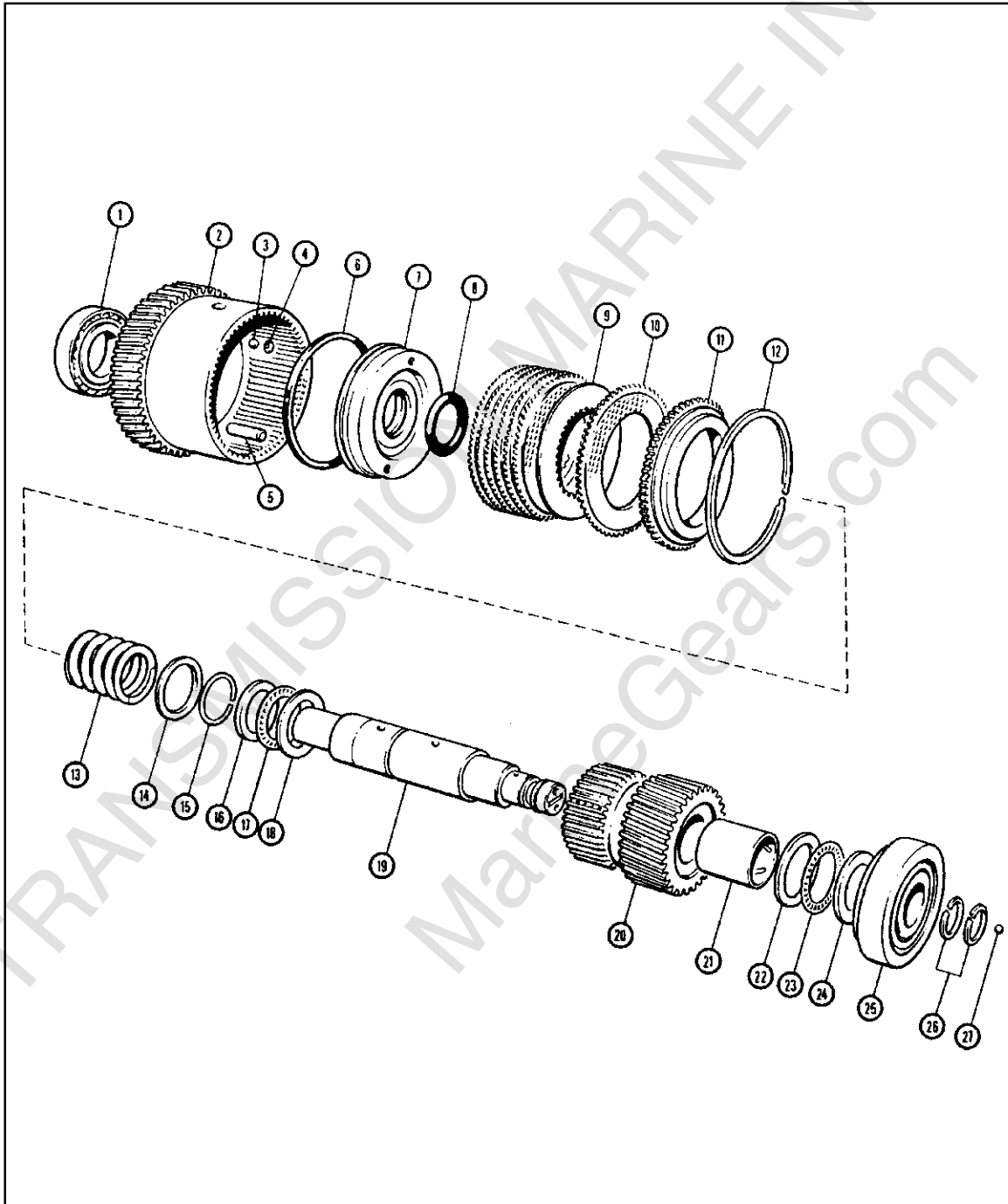


Input Shaft Clutch Assembly.

MG-49

Twin Disc

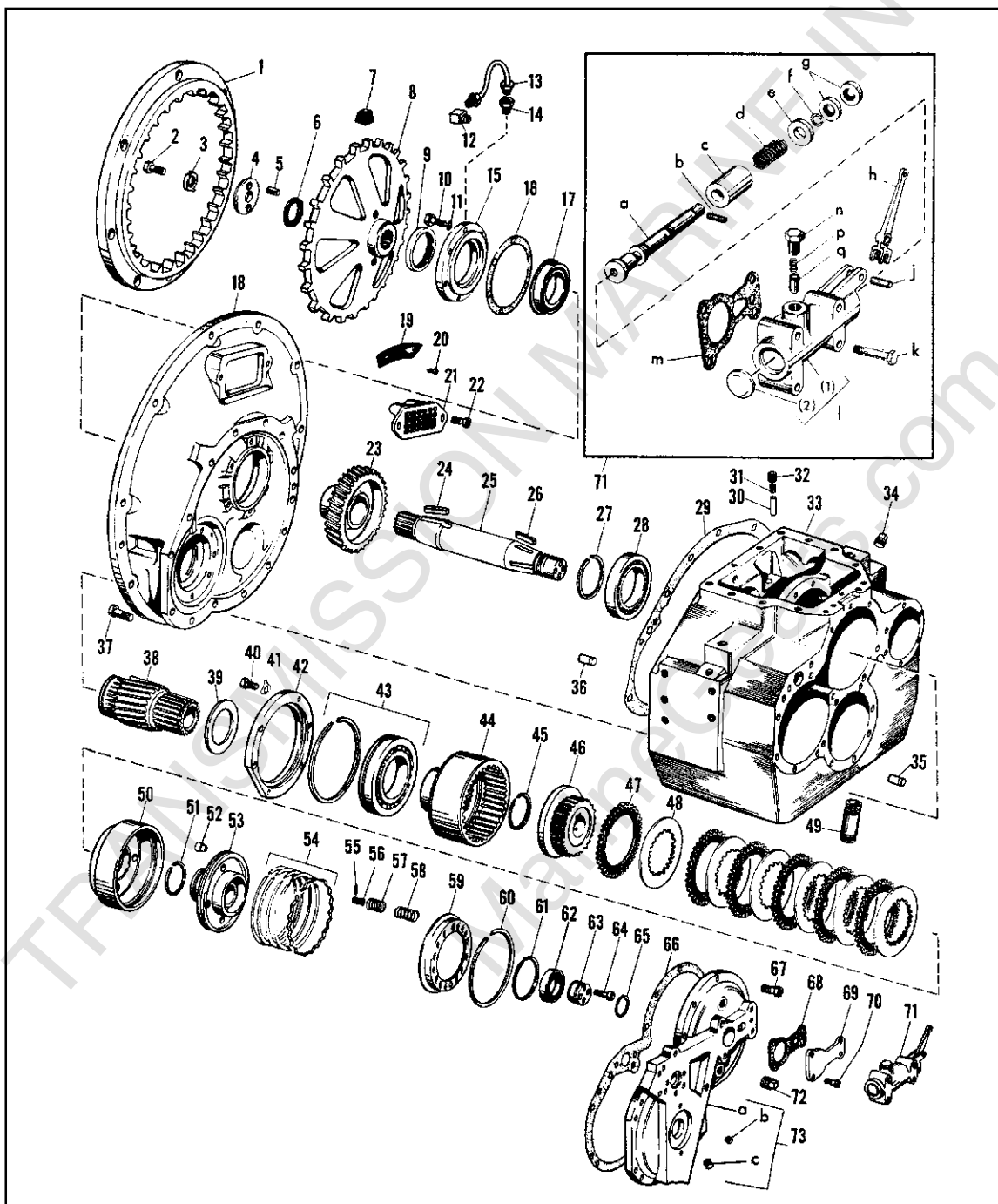
MG507A



Lay Shaft Clutch Assembly.

MG-50

MG508

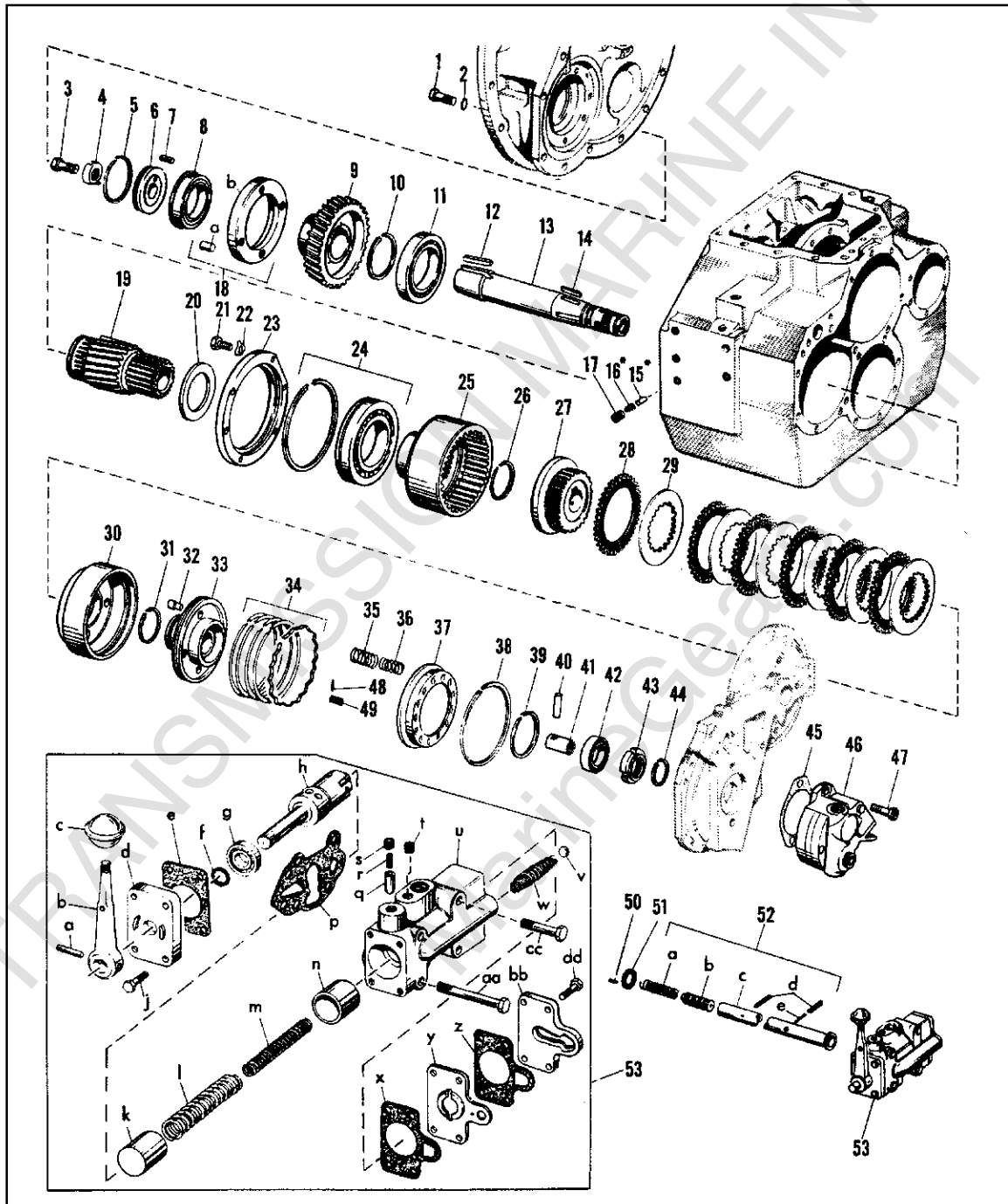


Spider Drive & Input Shaft Assembly.

MG-51

Twin Disc

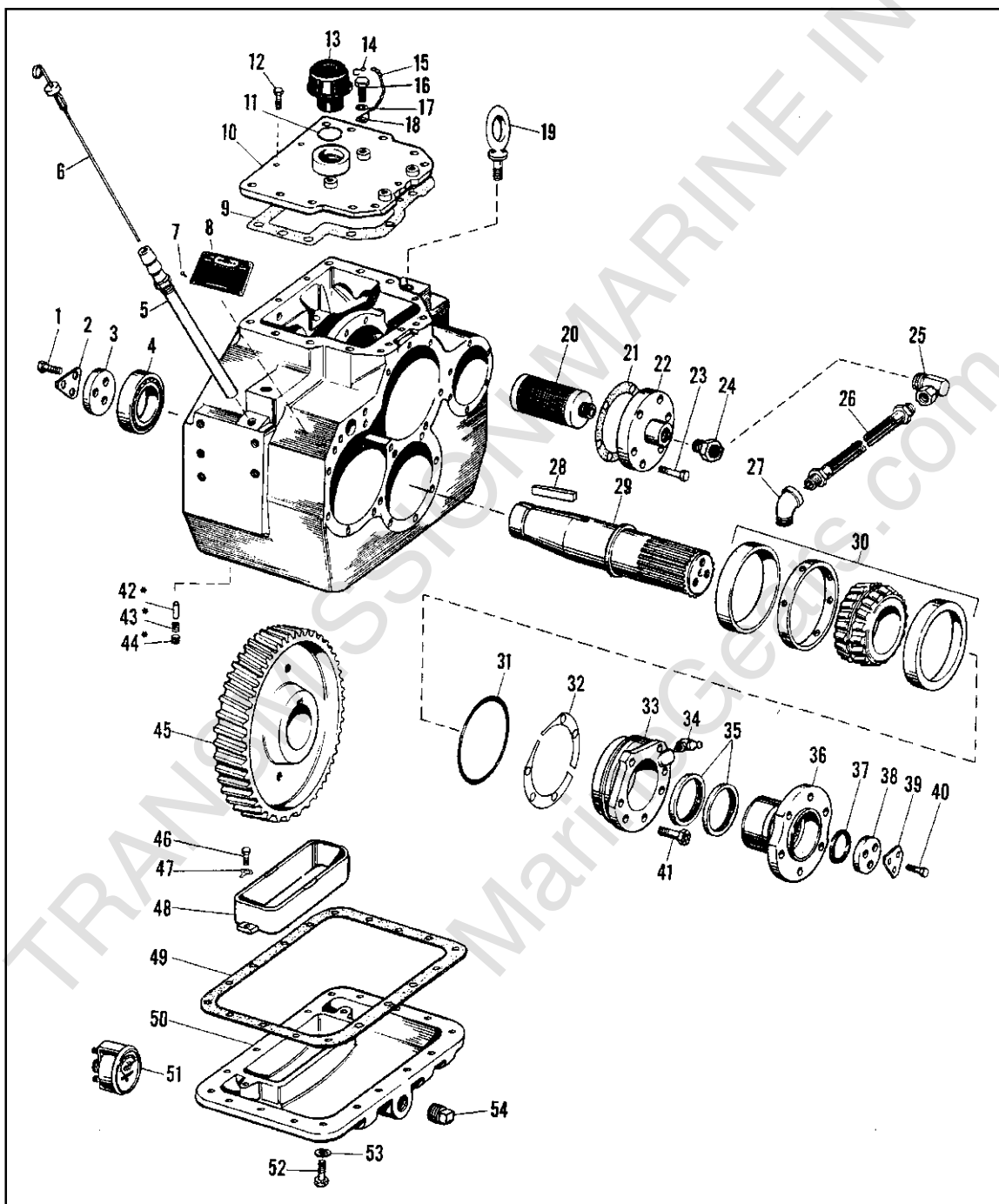
MG508



Lay Shaft & Control Valve Assembly.

MG-57

MG508



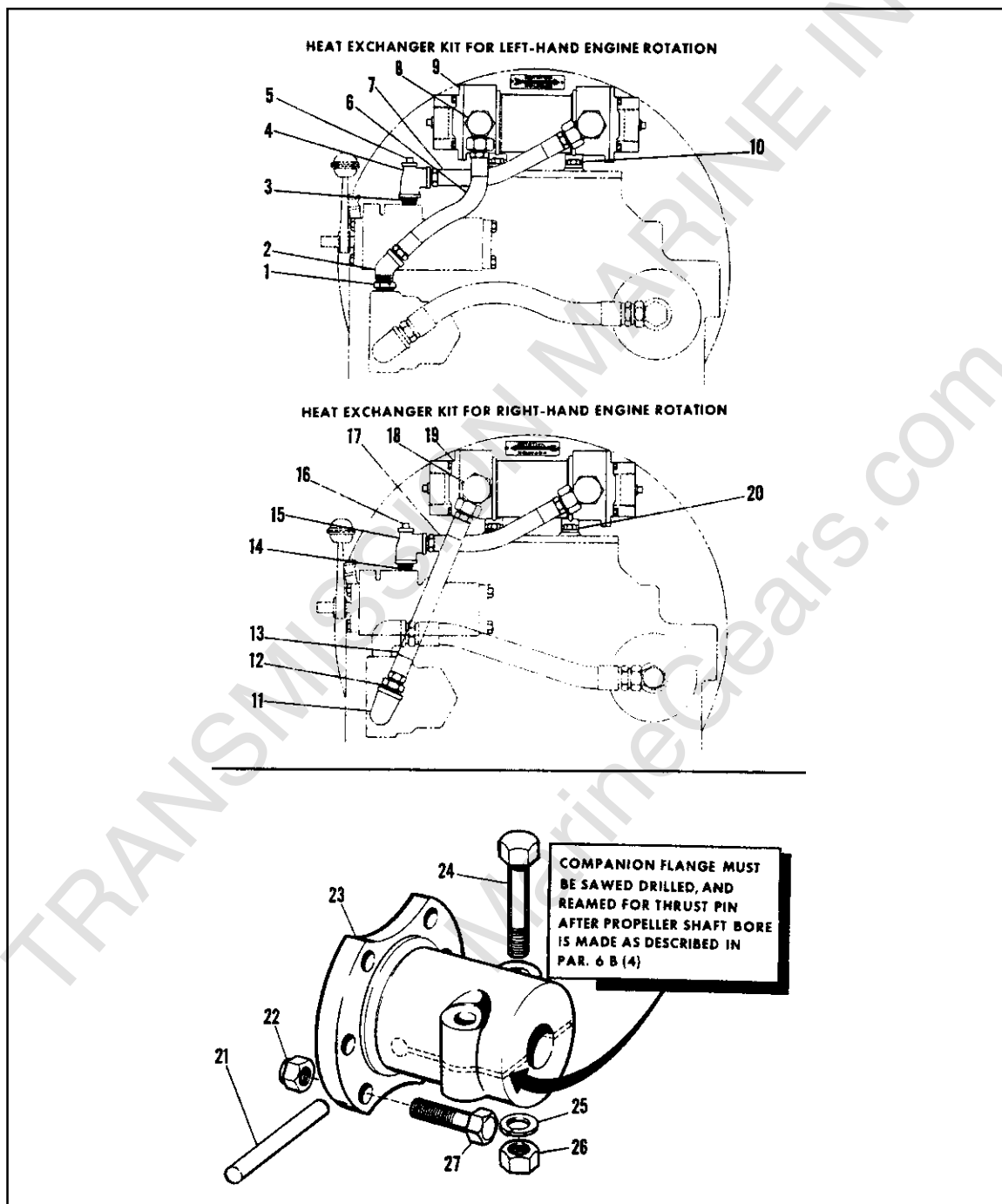
Main Housing & Output Shaft Assembly.

MG-53

TRANSMISSION
MARINE INC.

MG-54

MG508

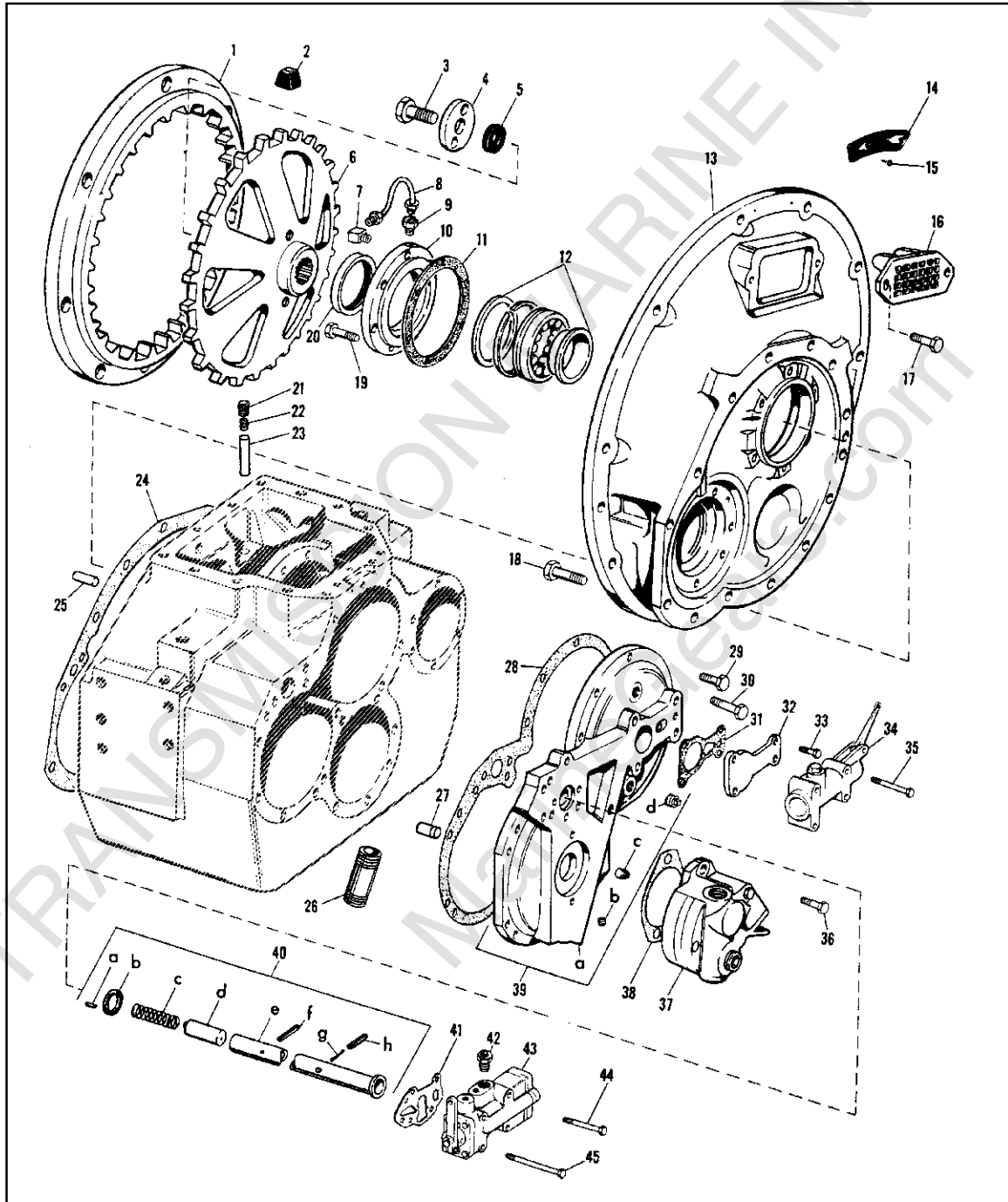


Coolers & Flange Assembly.

MG-55

Twin Disc

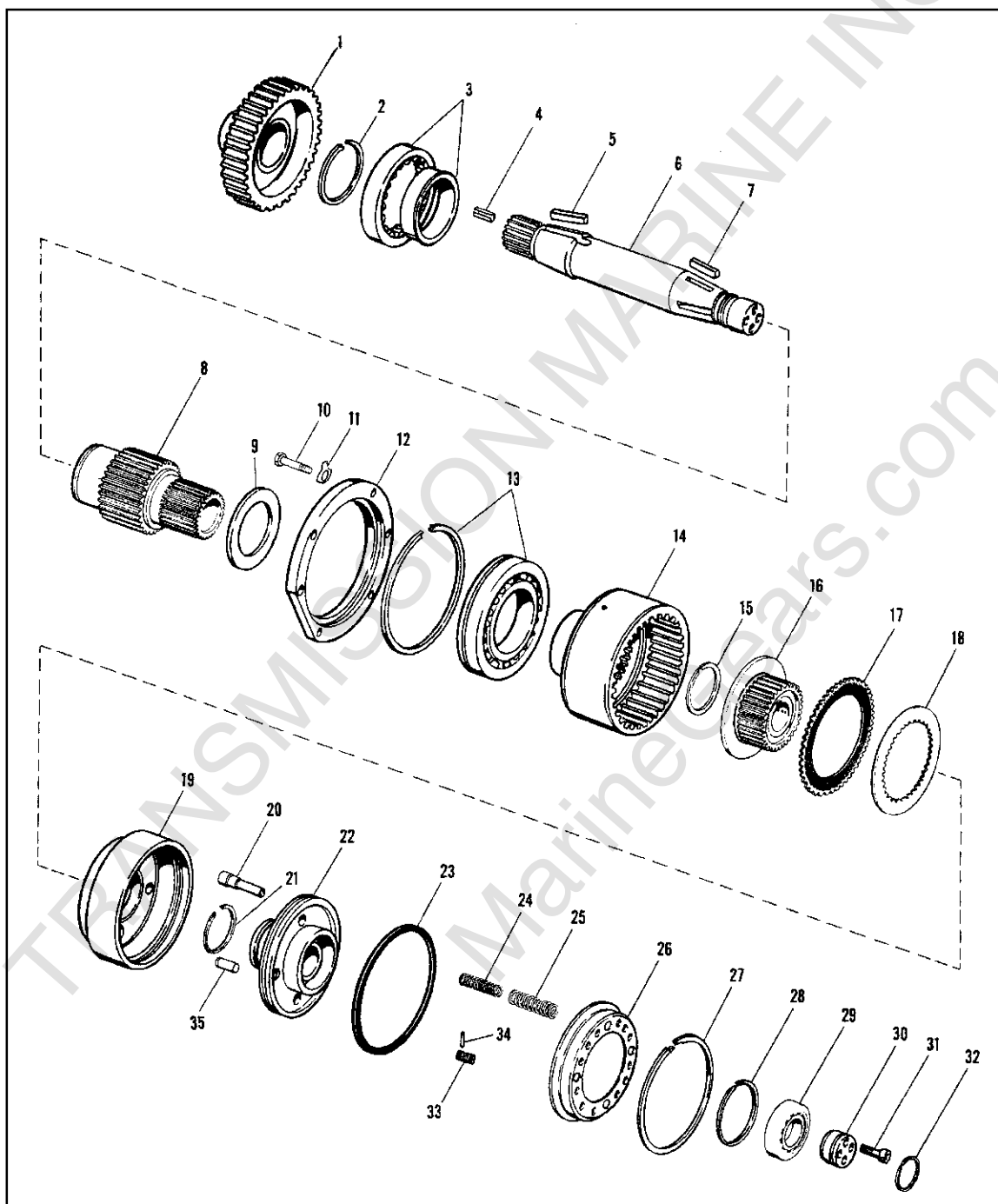
MG509



Main Housing & Adapters.

MG-56

MG509

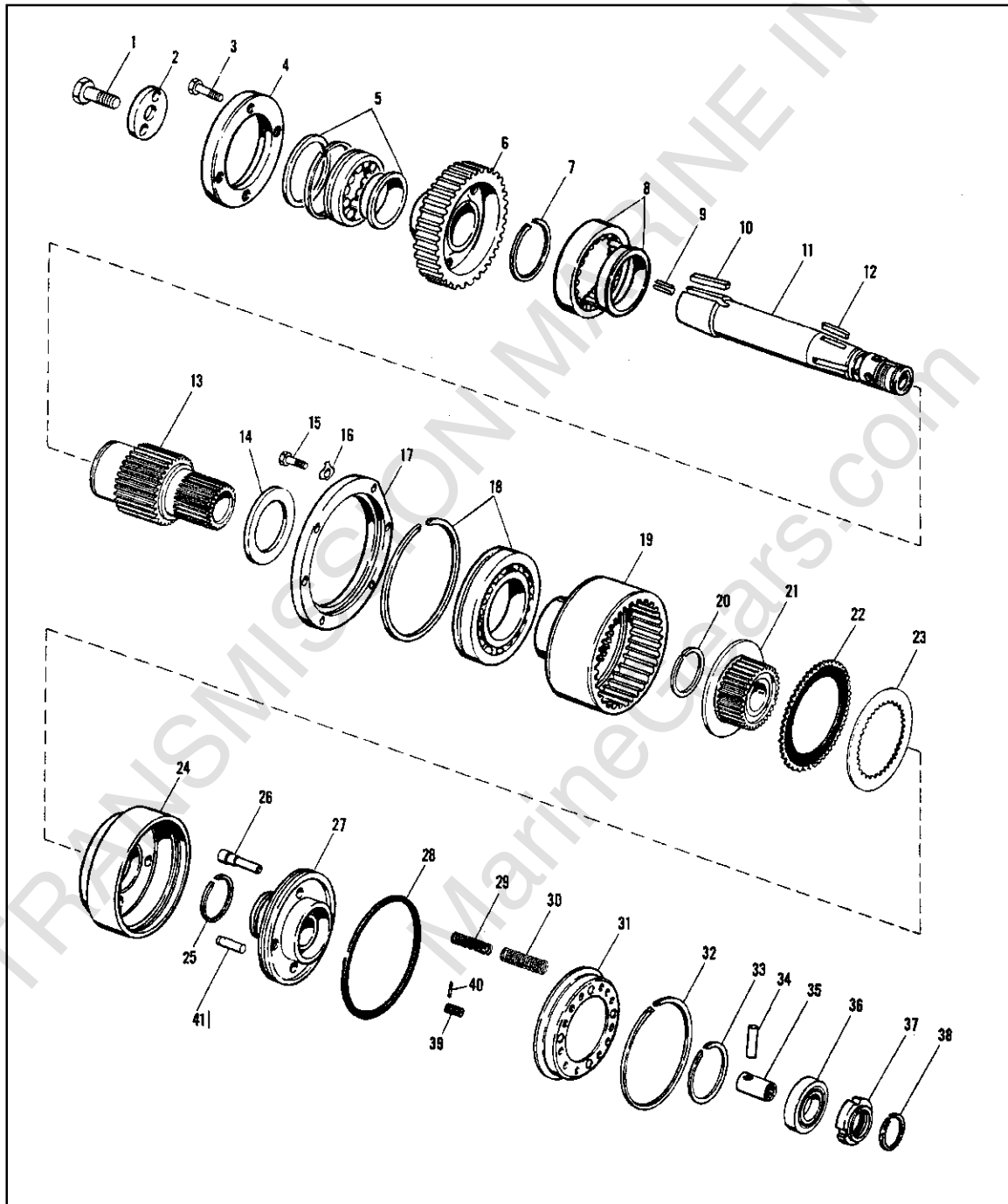


Input Shaft Clutch Assembly.

MG-57

Twin Disc

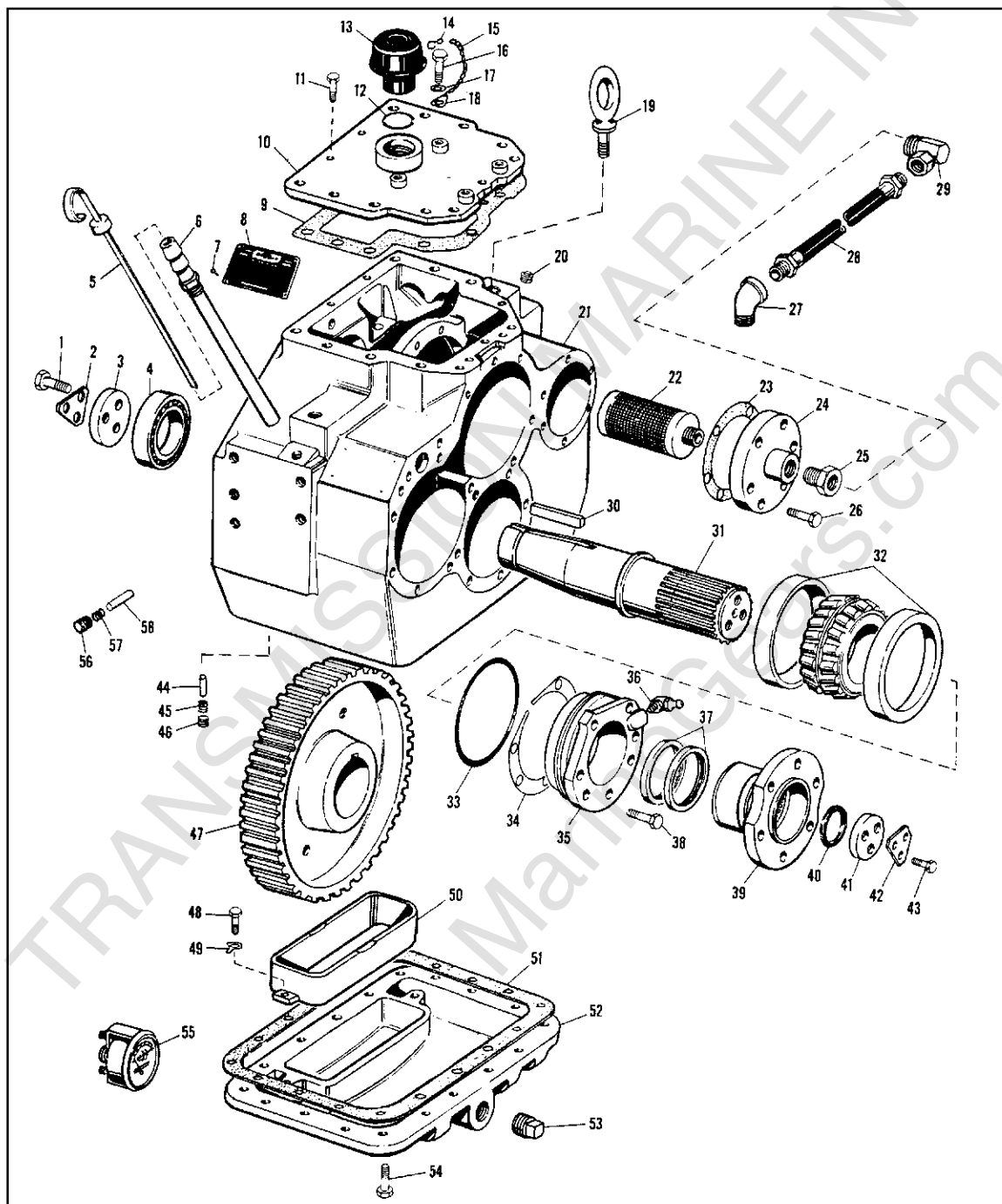
MG509



Lay Shaft Clutch Assembly.

MG-58

MG509

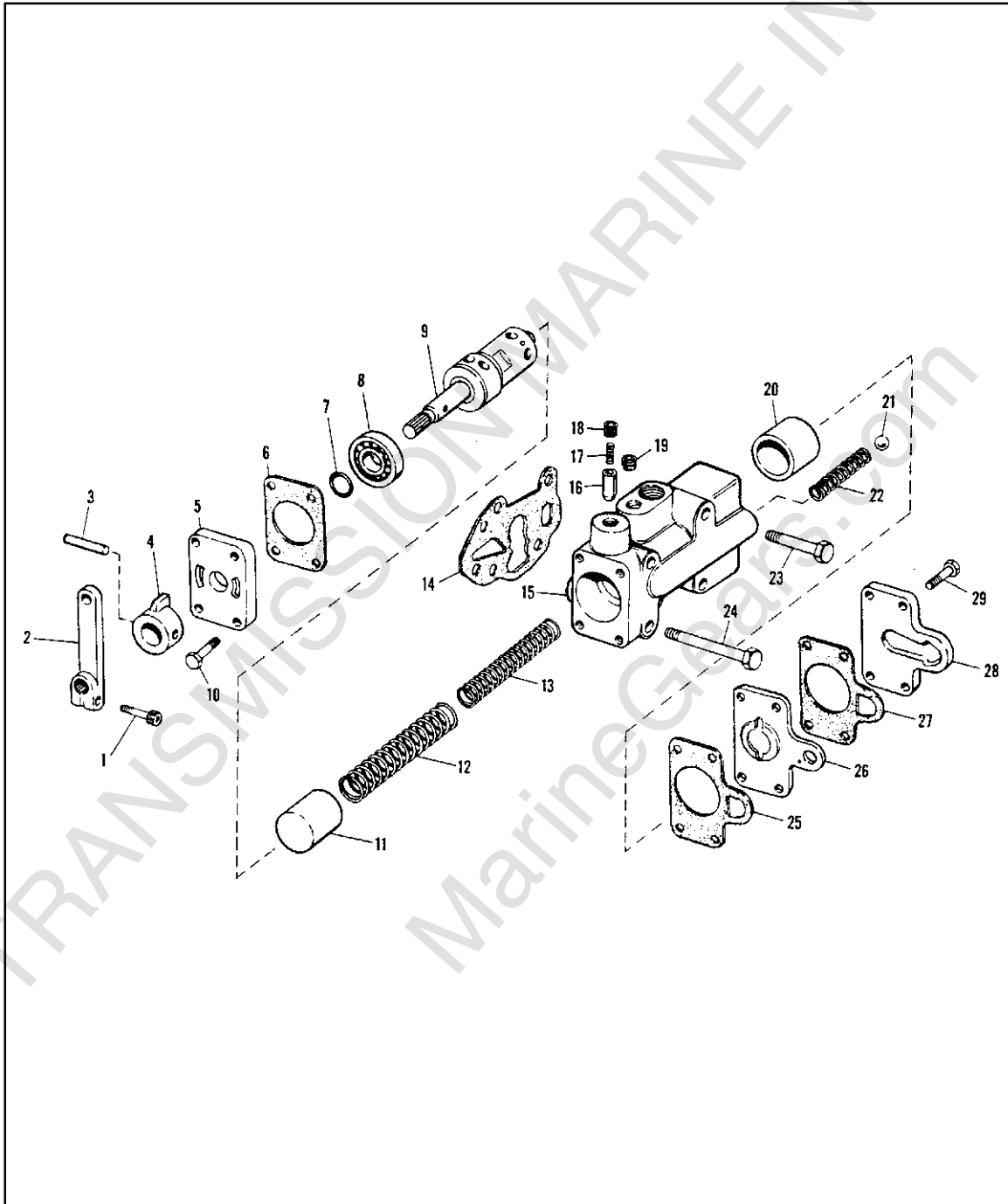


Main Housing & Output Shaft Assembly.

MG-59

Twin Disc

MG509

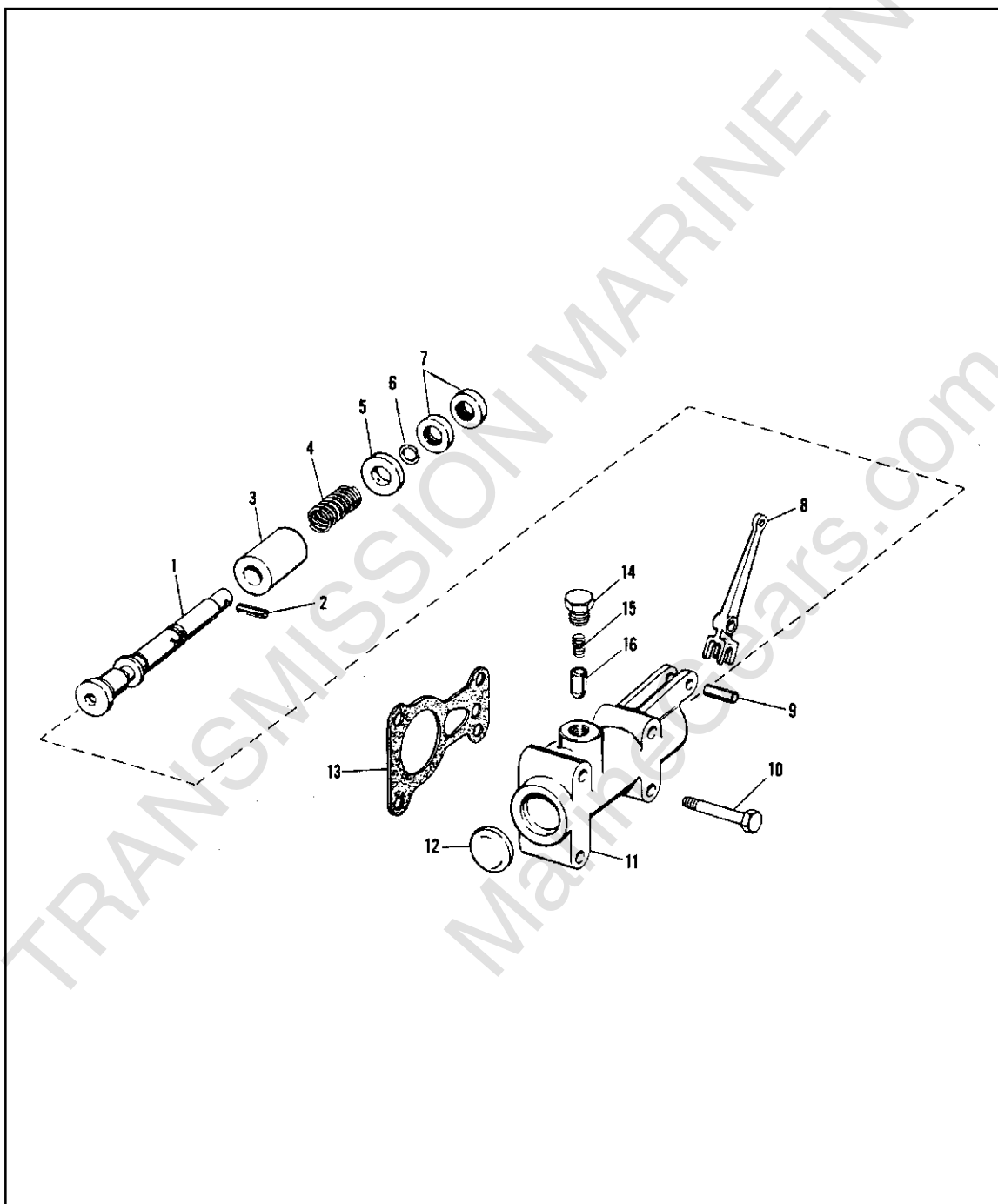


Control Valve Assembly.

MG-60



MG509

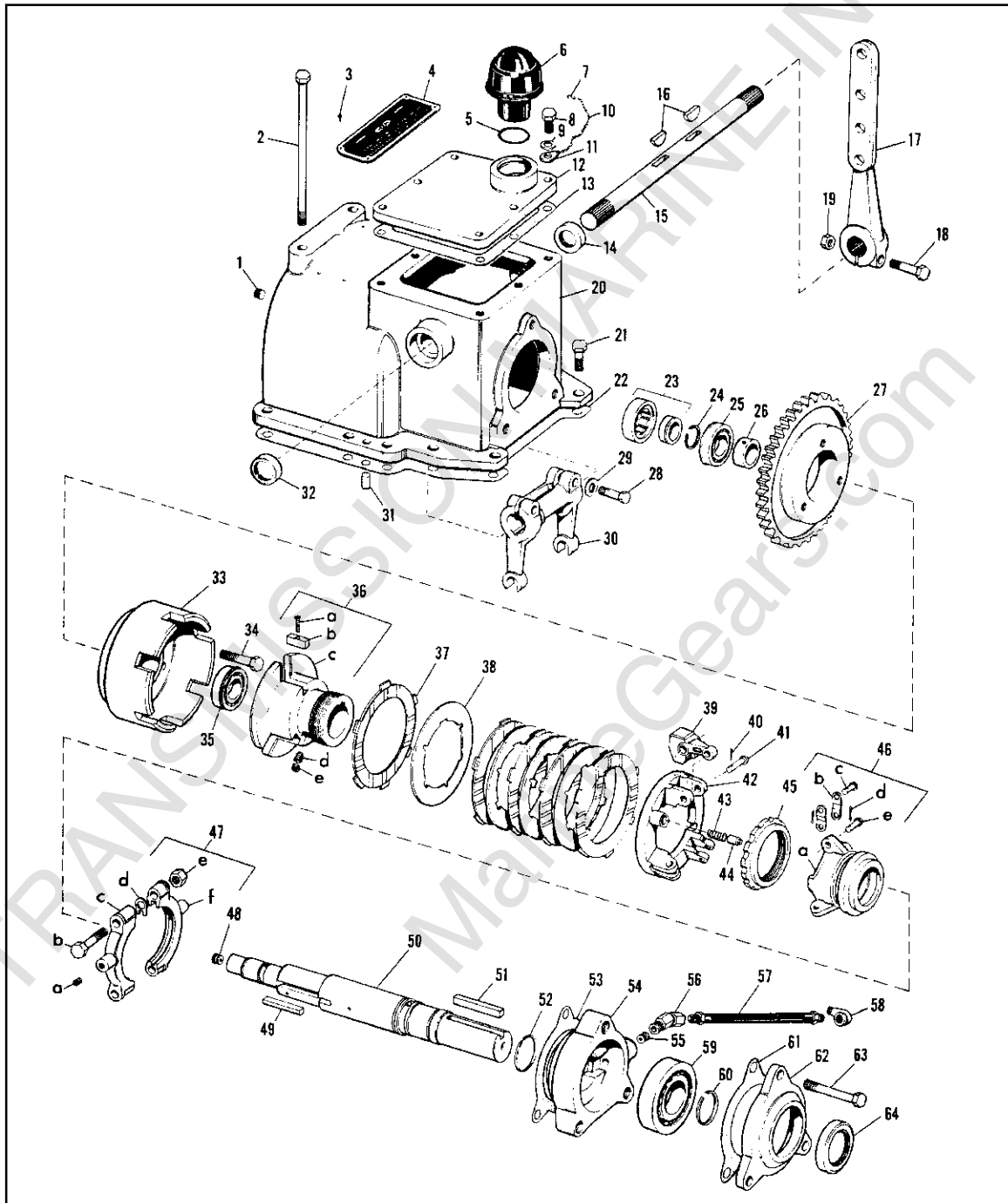


Control Valve Assembly.

MG-61

Twin Disc

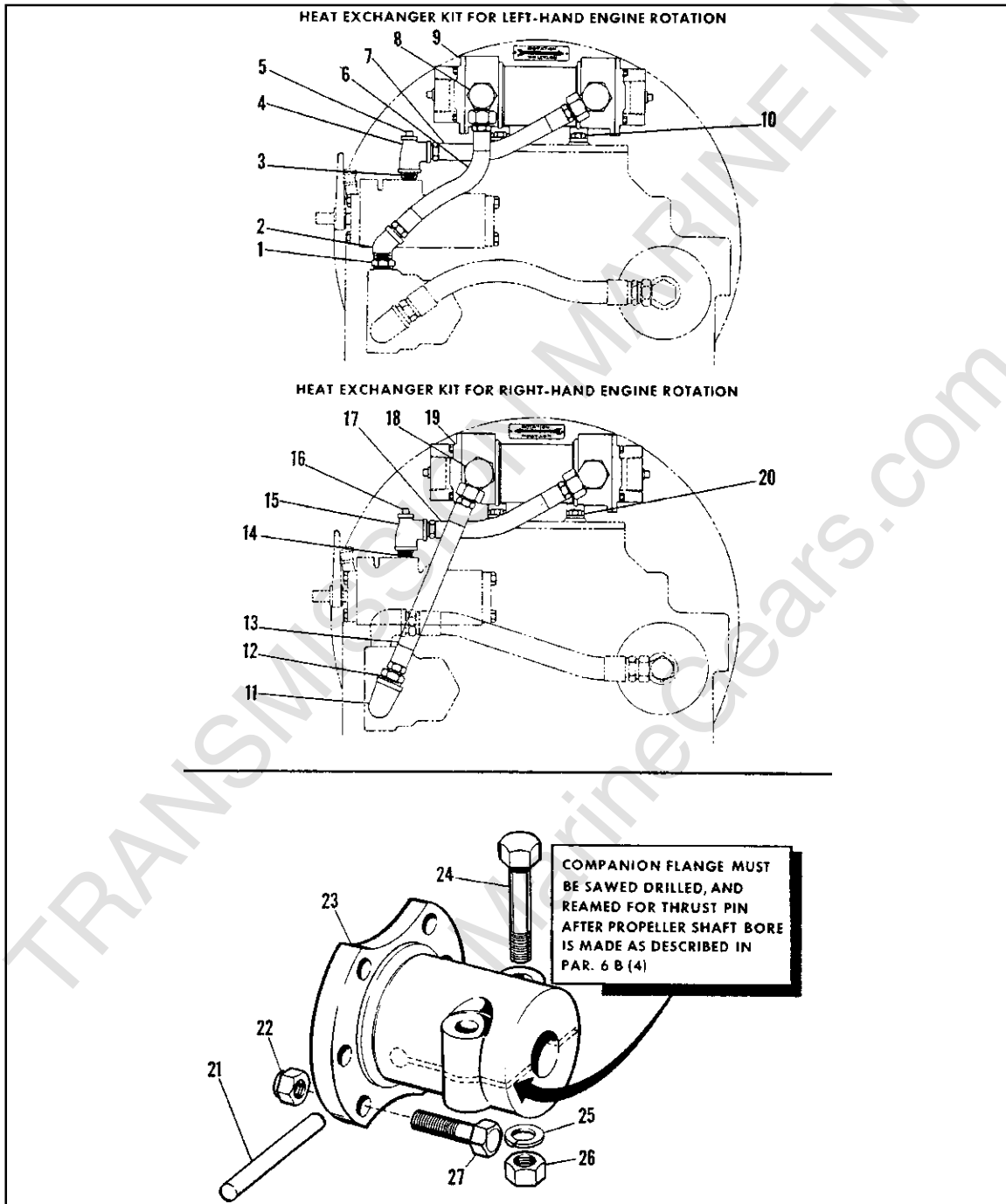
MG509



Top Mount Power Take Off.

MG-62

MG509

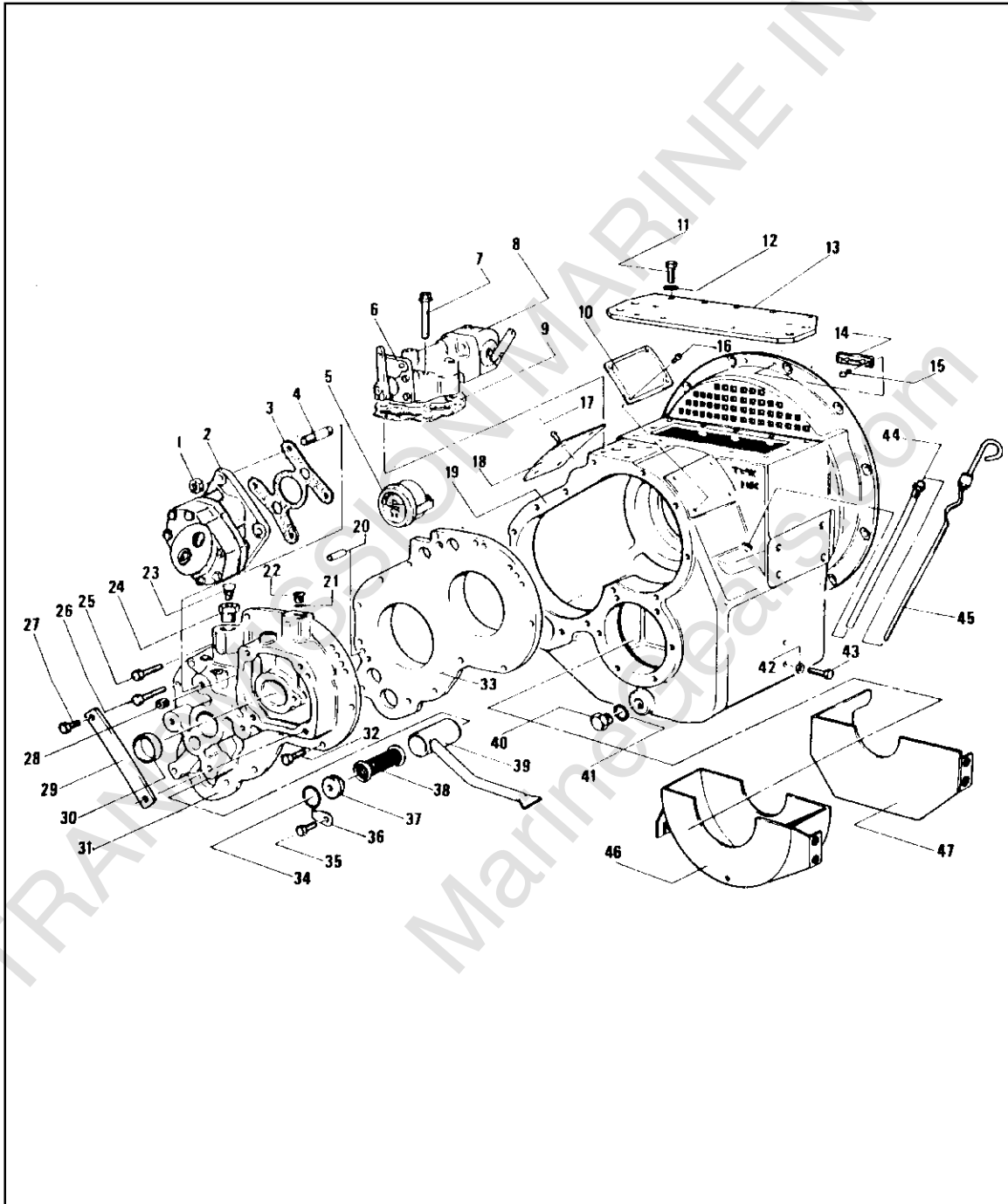


Oil Cooler & Shaft Coupling.

MG-63

Twin Disc

MG5091

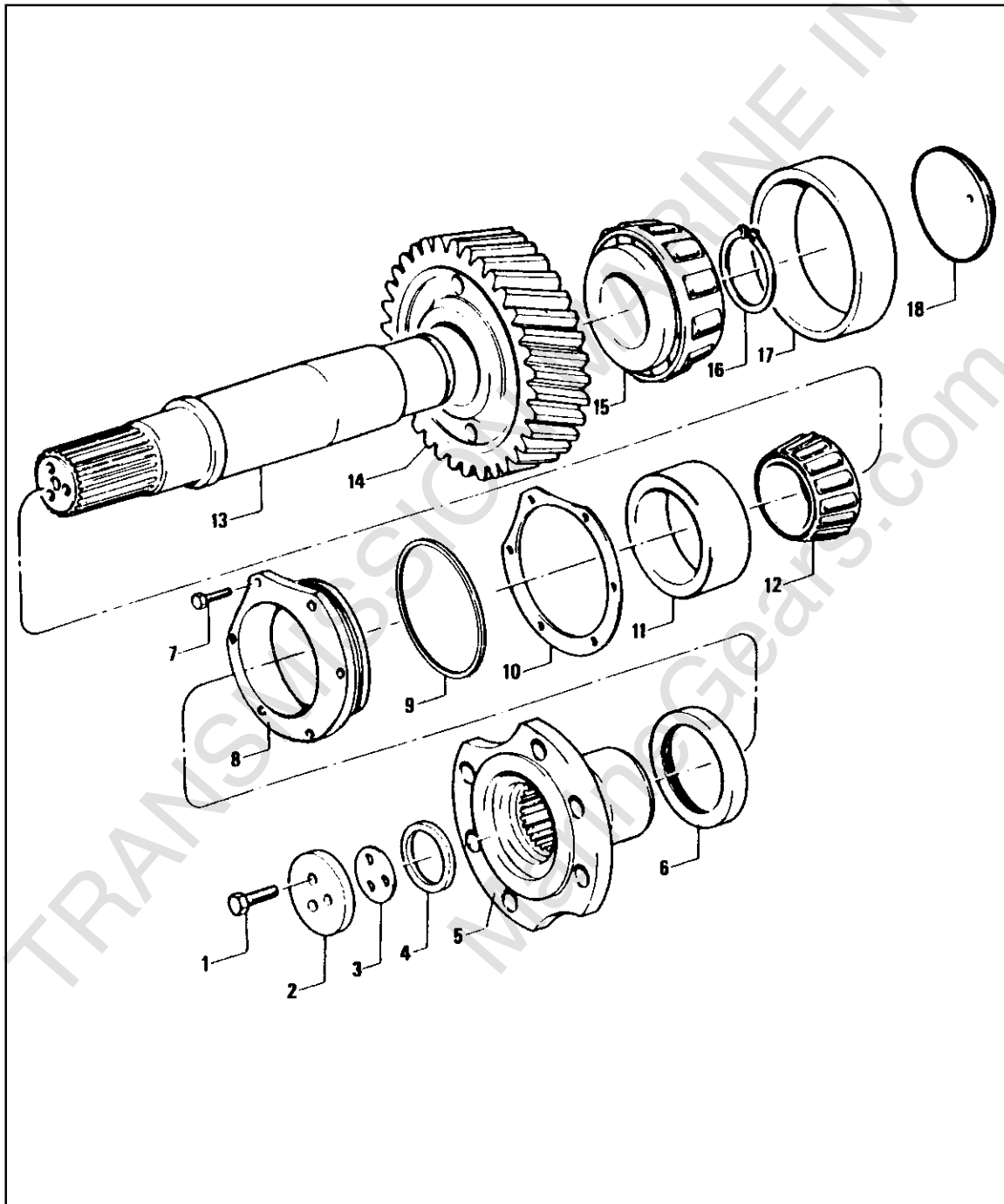


Main Housing & Manifold Assembly.

MG-64



MG5091

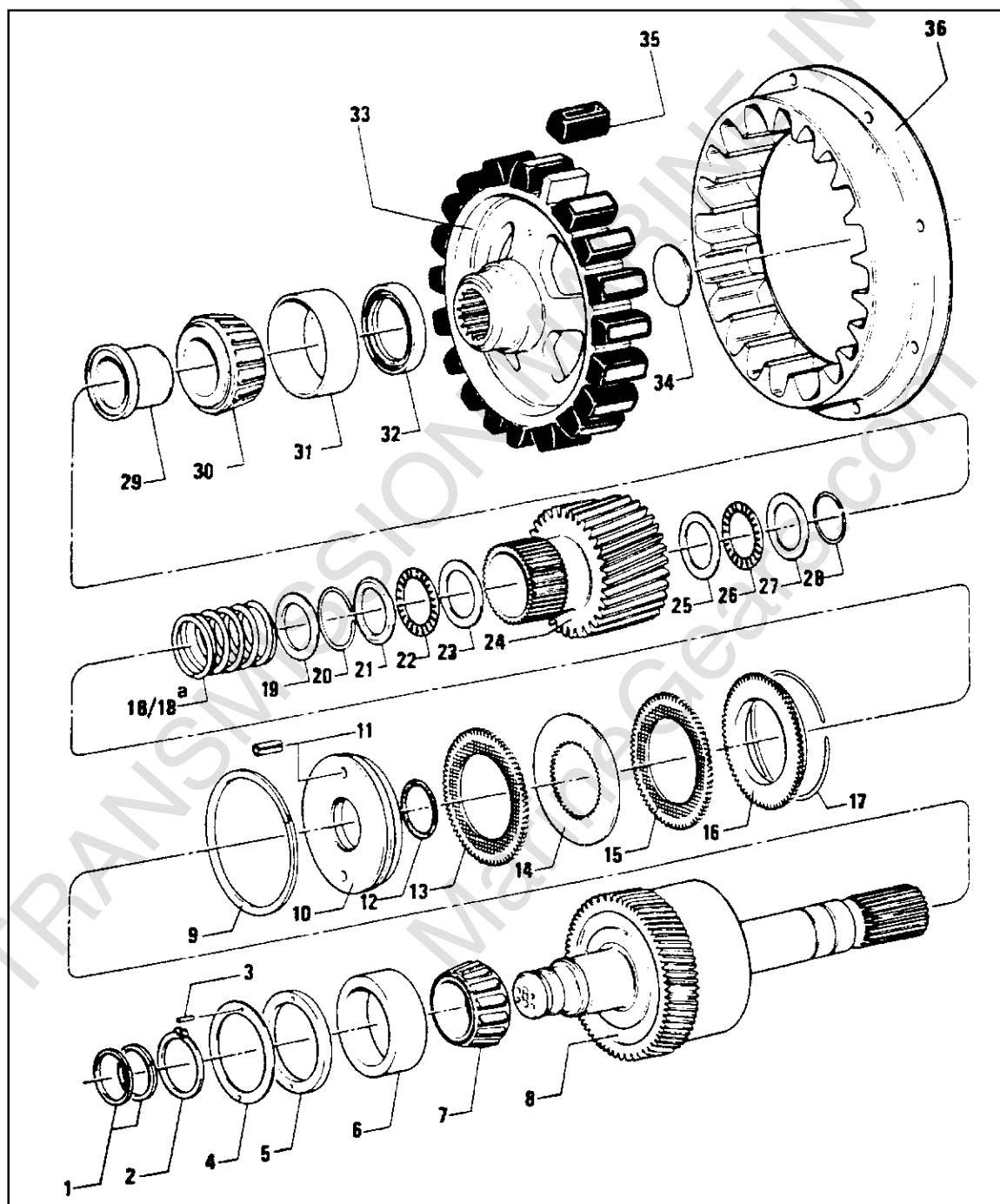


Output Shaft Assembly.

MG-65

Twin Disc

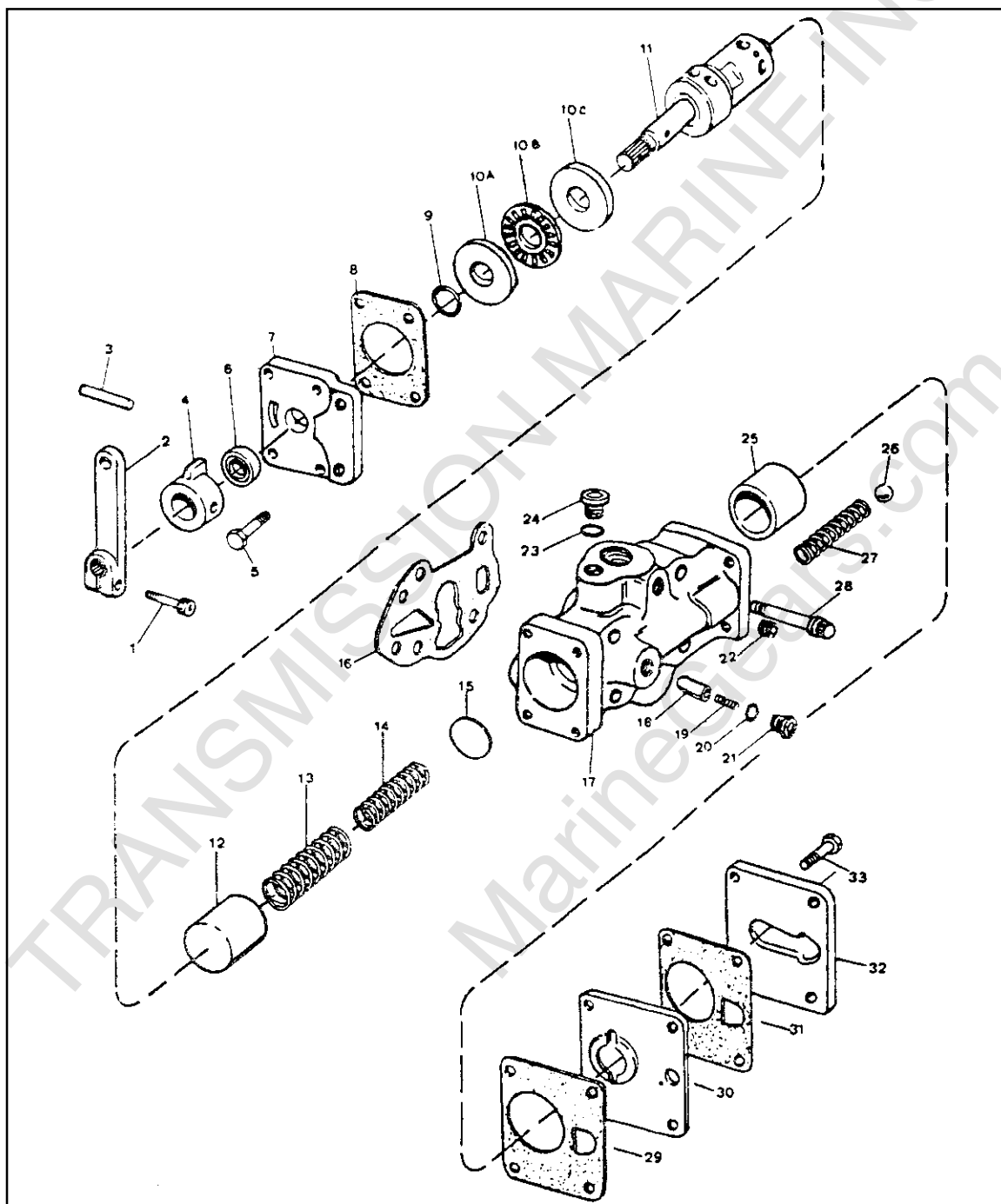
MG5091



Input Shaft & Spider Assembly.

MG-66

MG5091

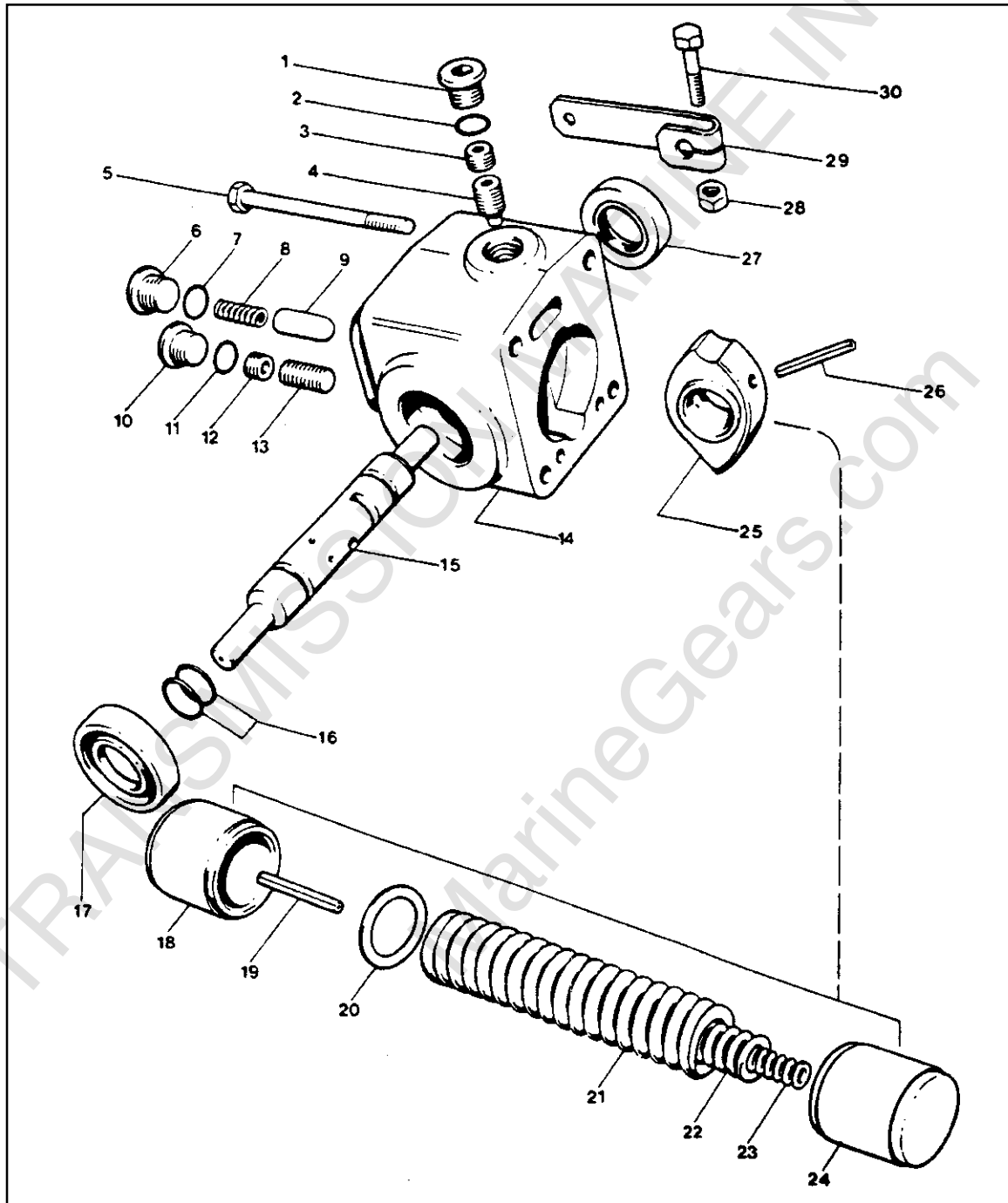


Control Valve Assembly.

MG-67

Twin Disc

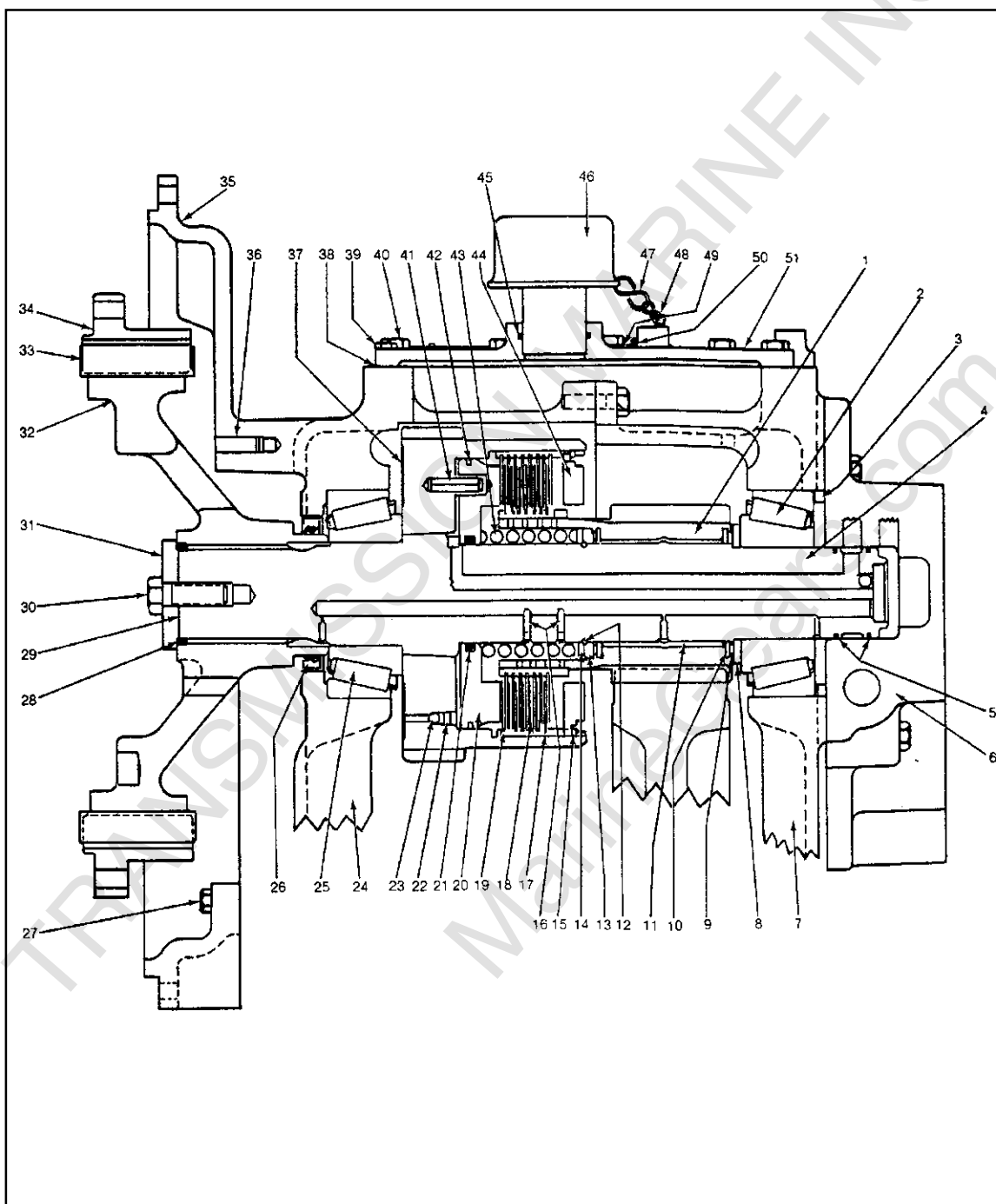
MG5091



Trolling Valve Assembly.

MG-68

MG510

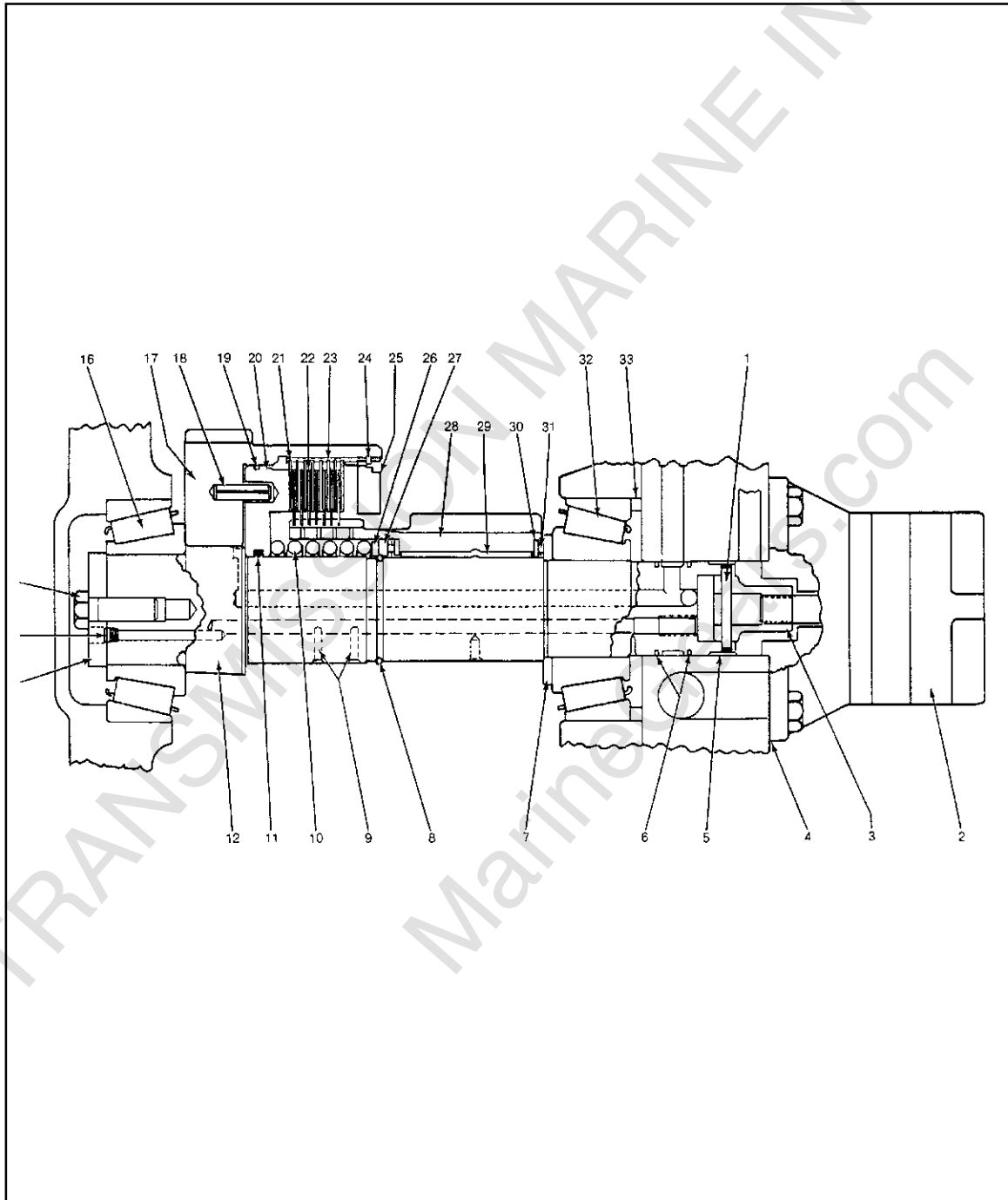


Main Housing & Input Clutch Assemblies.

MG-69

Twin Disc

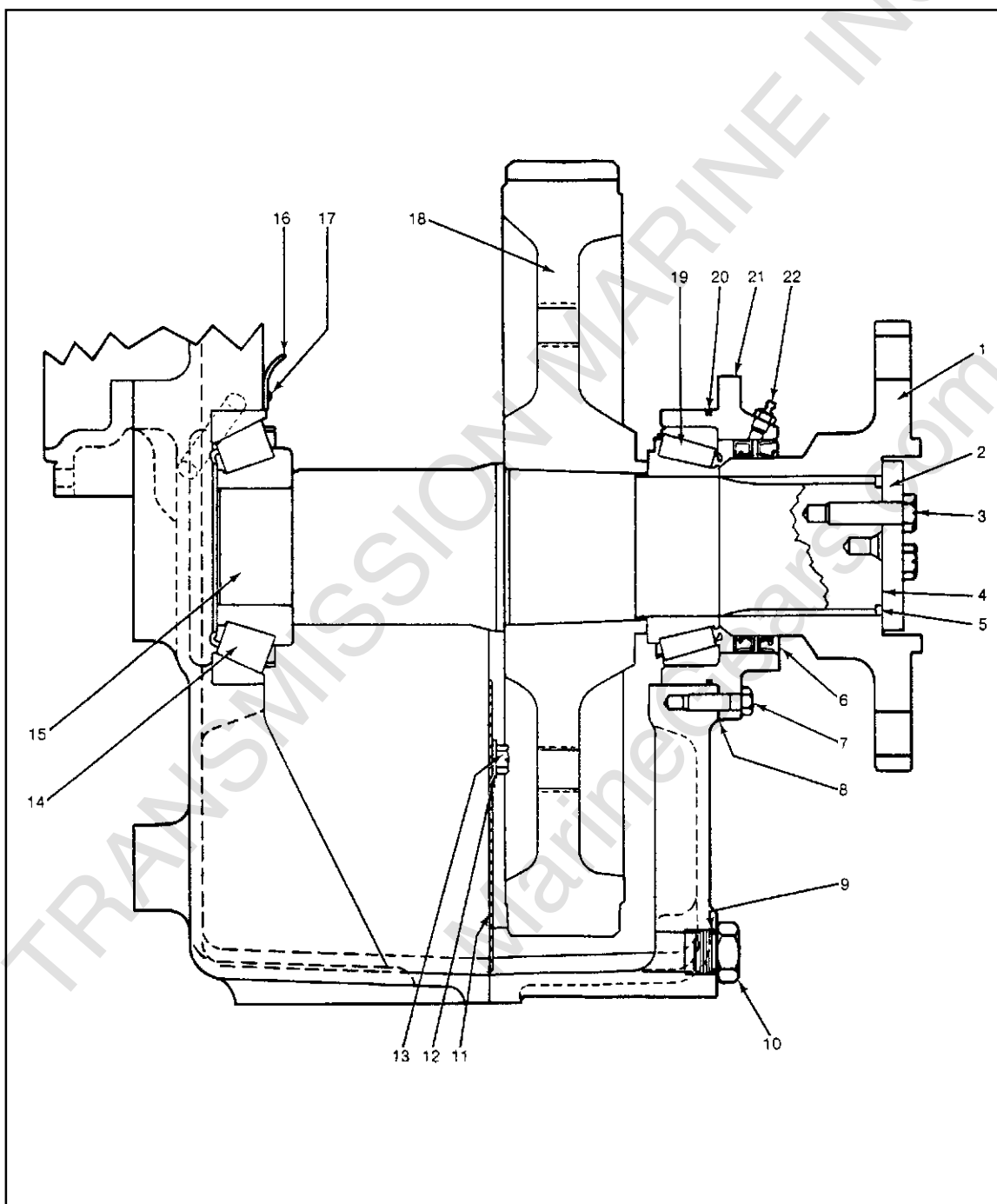
MG510



Lay Shaft Clutch Assembly.

MG-70

MG510

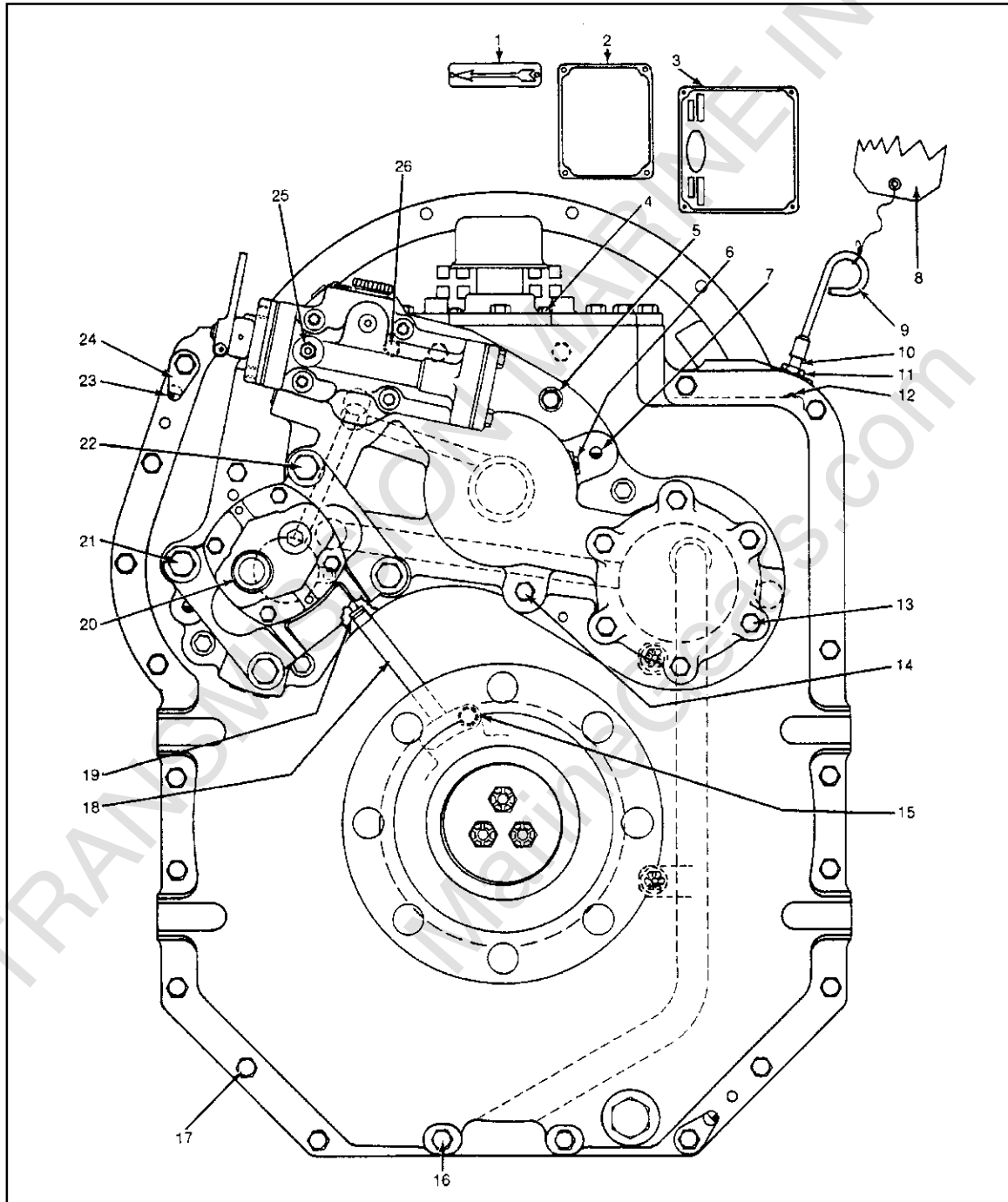


Output Shaft & Bull Gear.

MG-71

Twin Disc

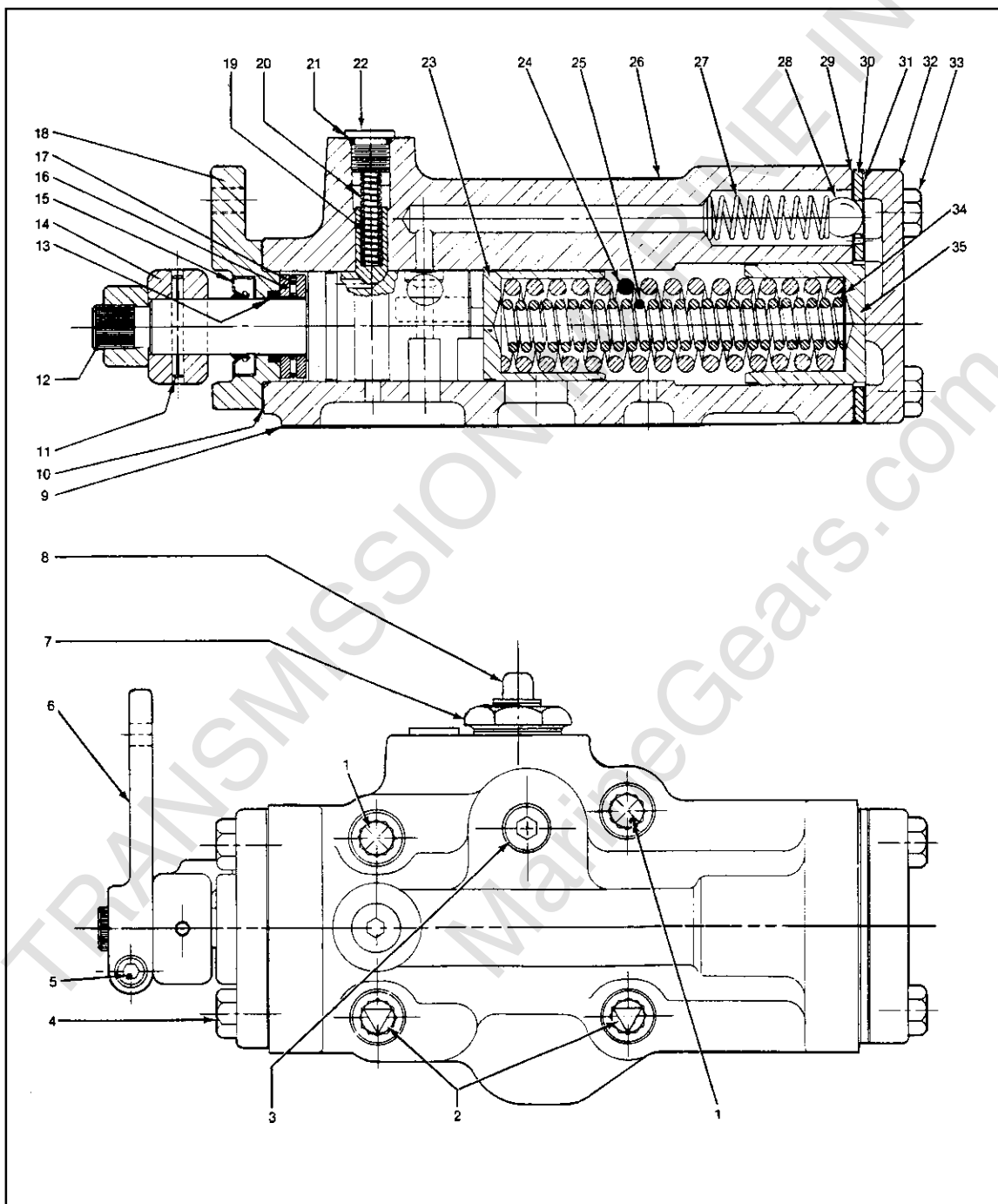
MG510



Main Housing & Manifold Assembly.

MG-72

MG510

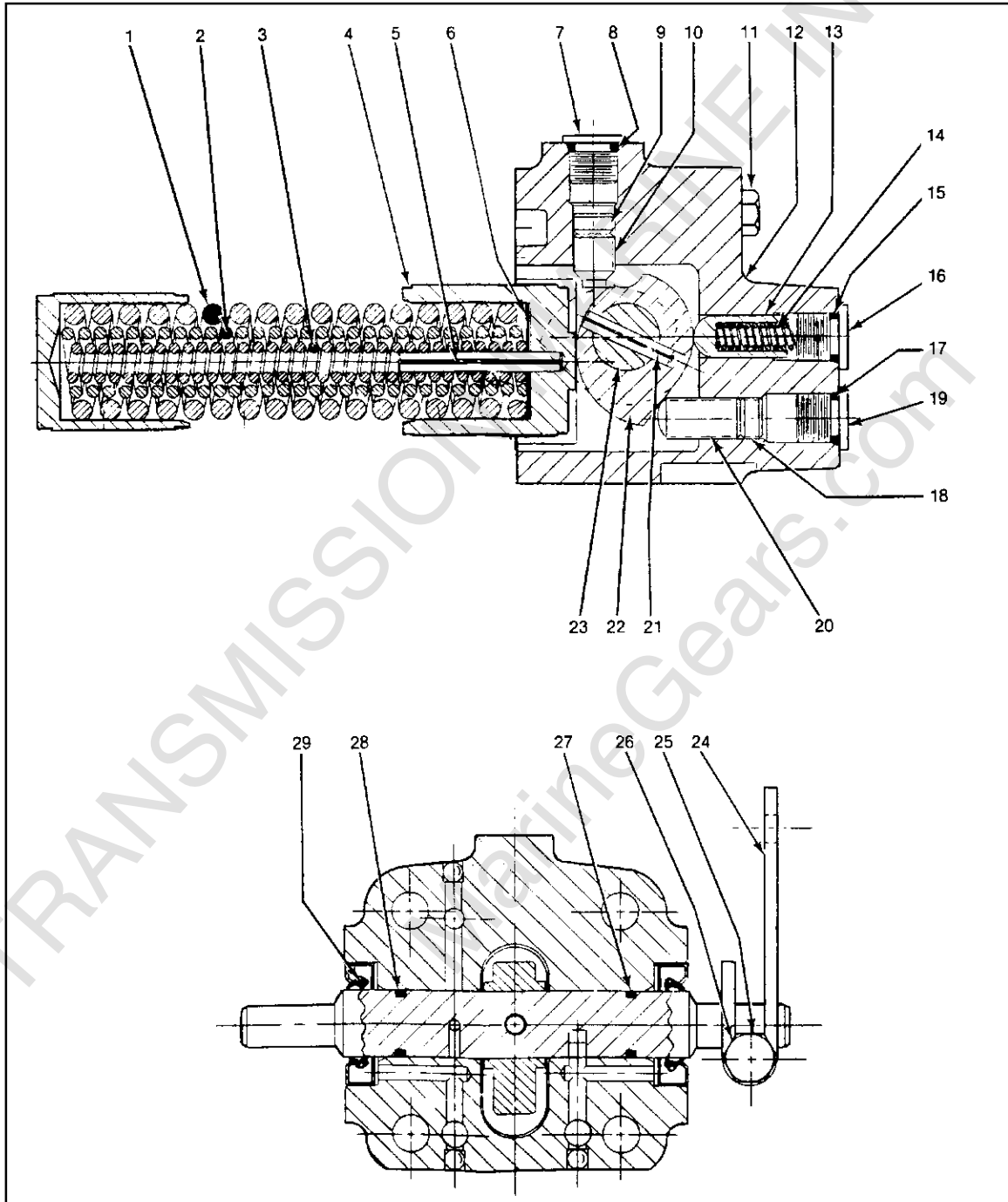


Control Valve Assembly.

MG-73

Twin Disc

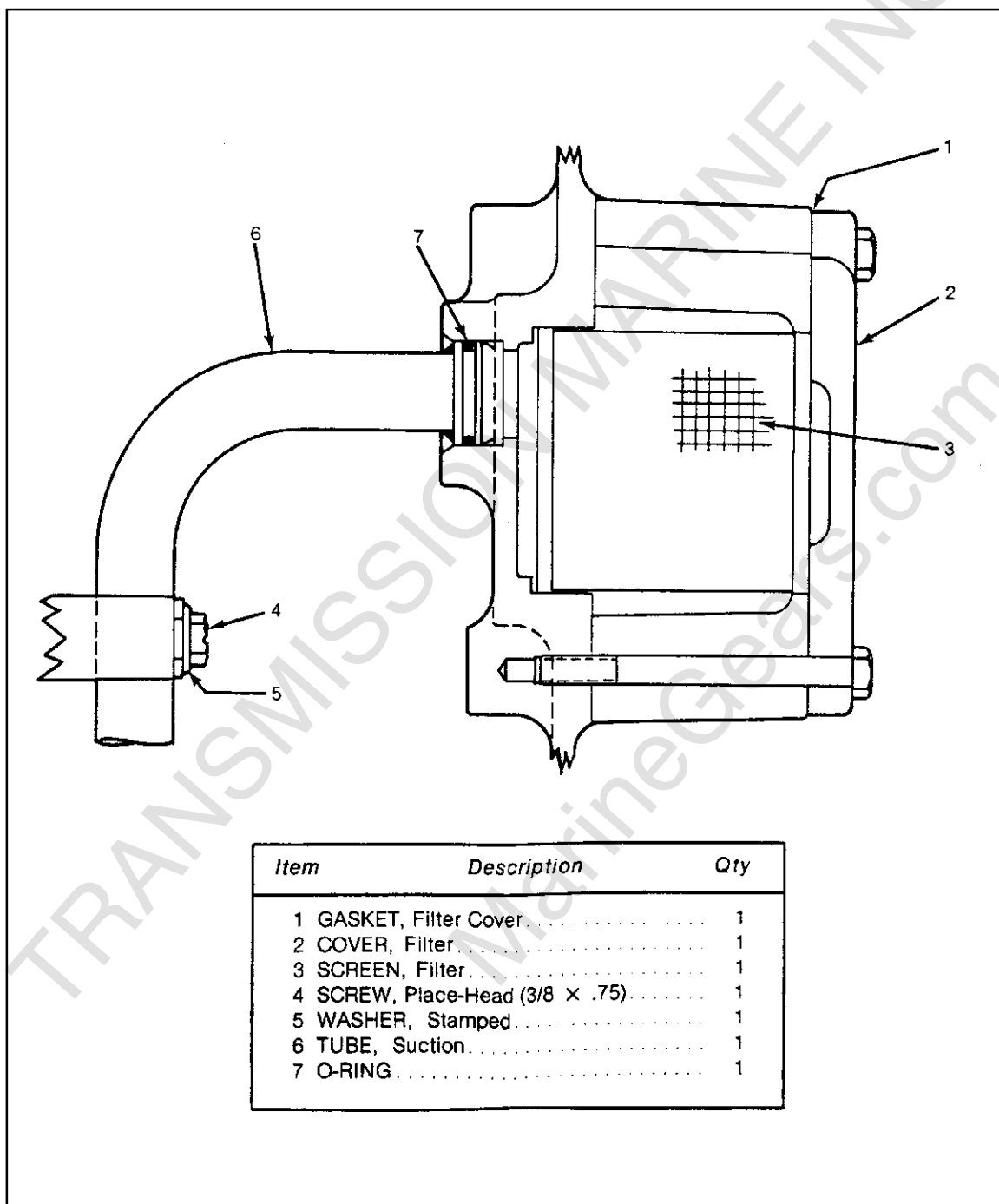
MG510



Trolling Valve Assembly.

MG-74

MG510

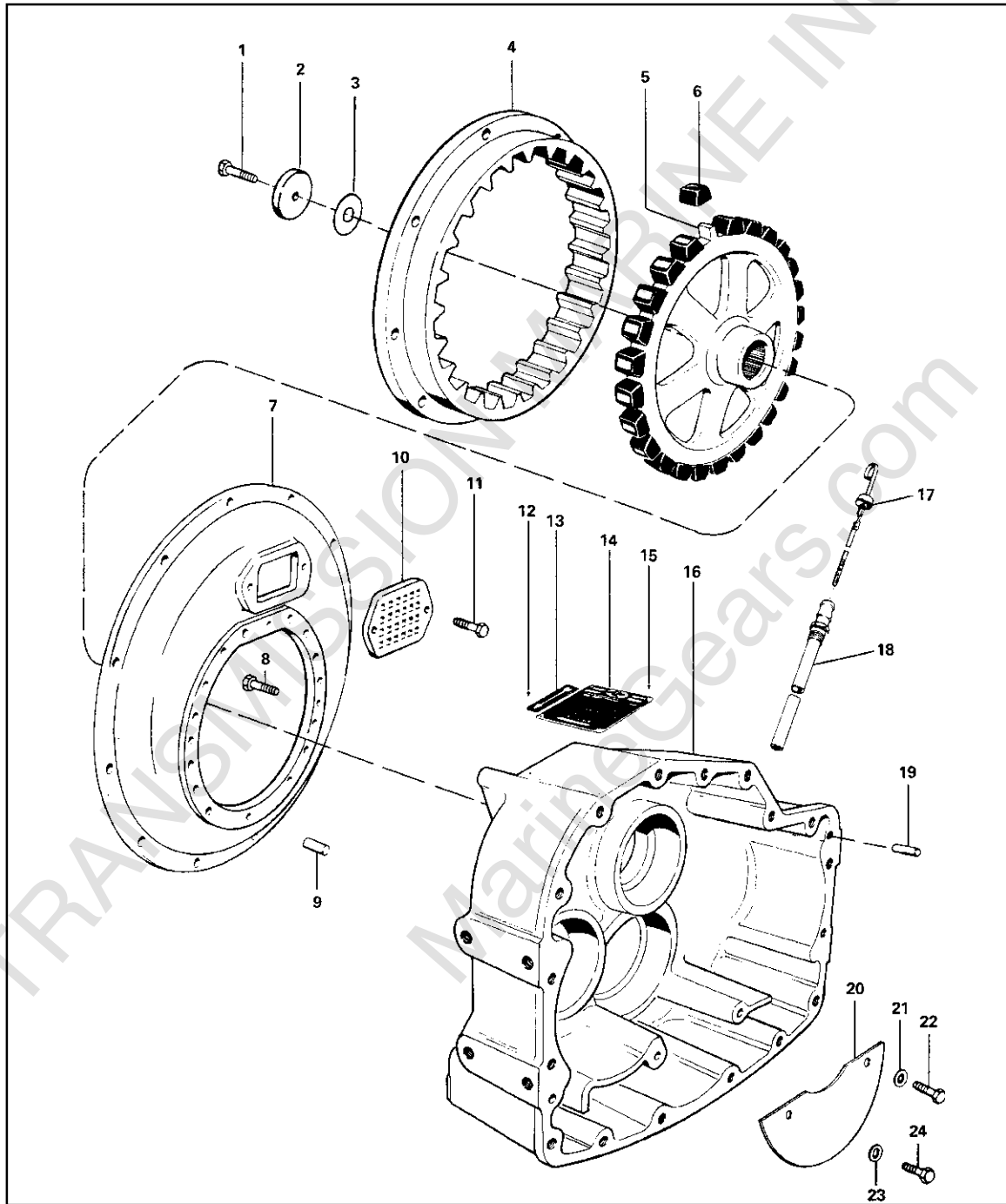


Oil Filter Assembly.

MG-75

Twin Disc

MG510A

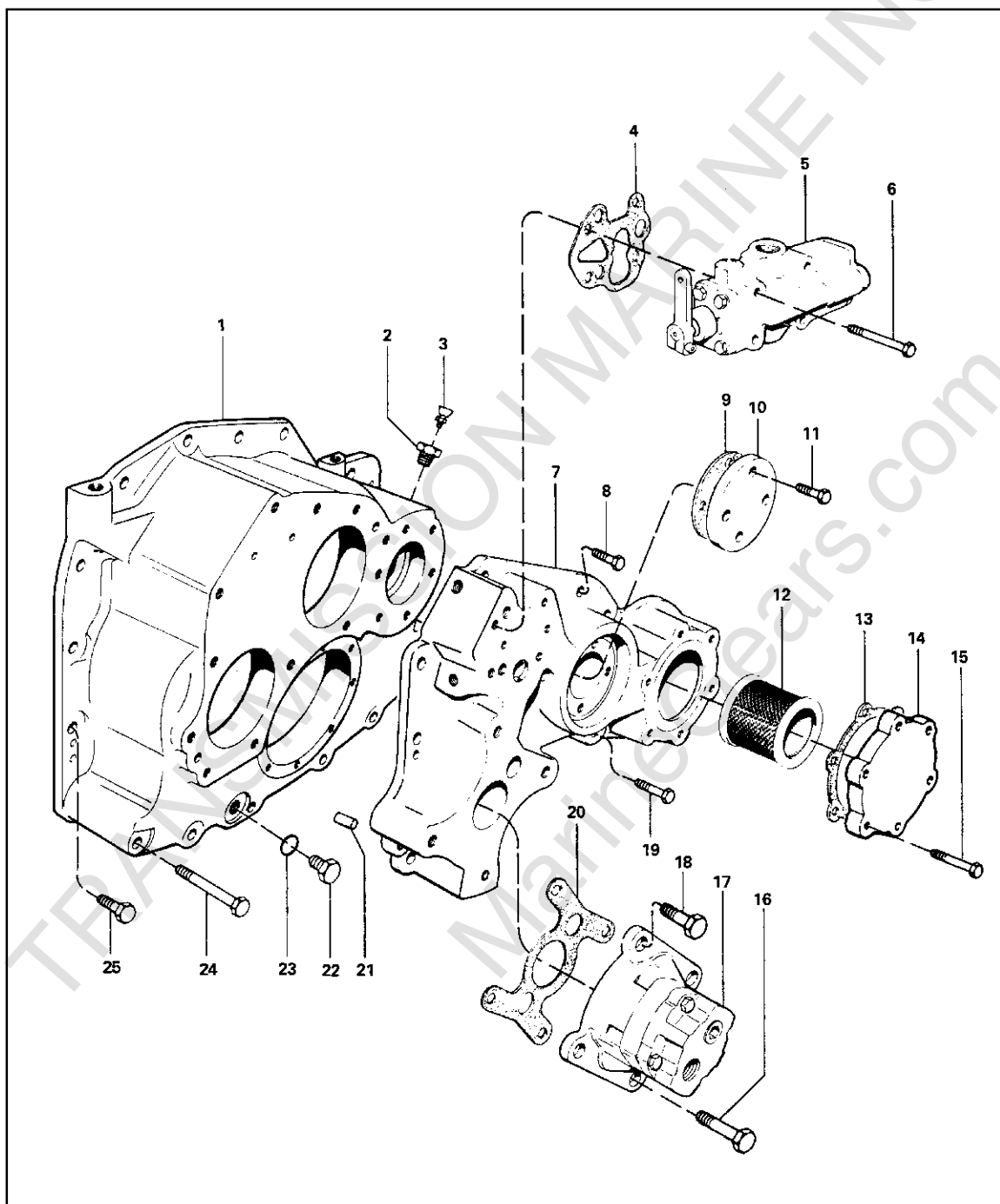


Spider Drive & Main Housing.

MG-76



MG510A

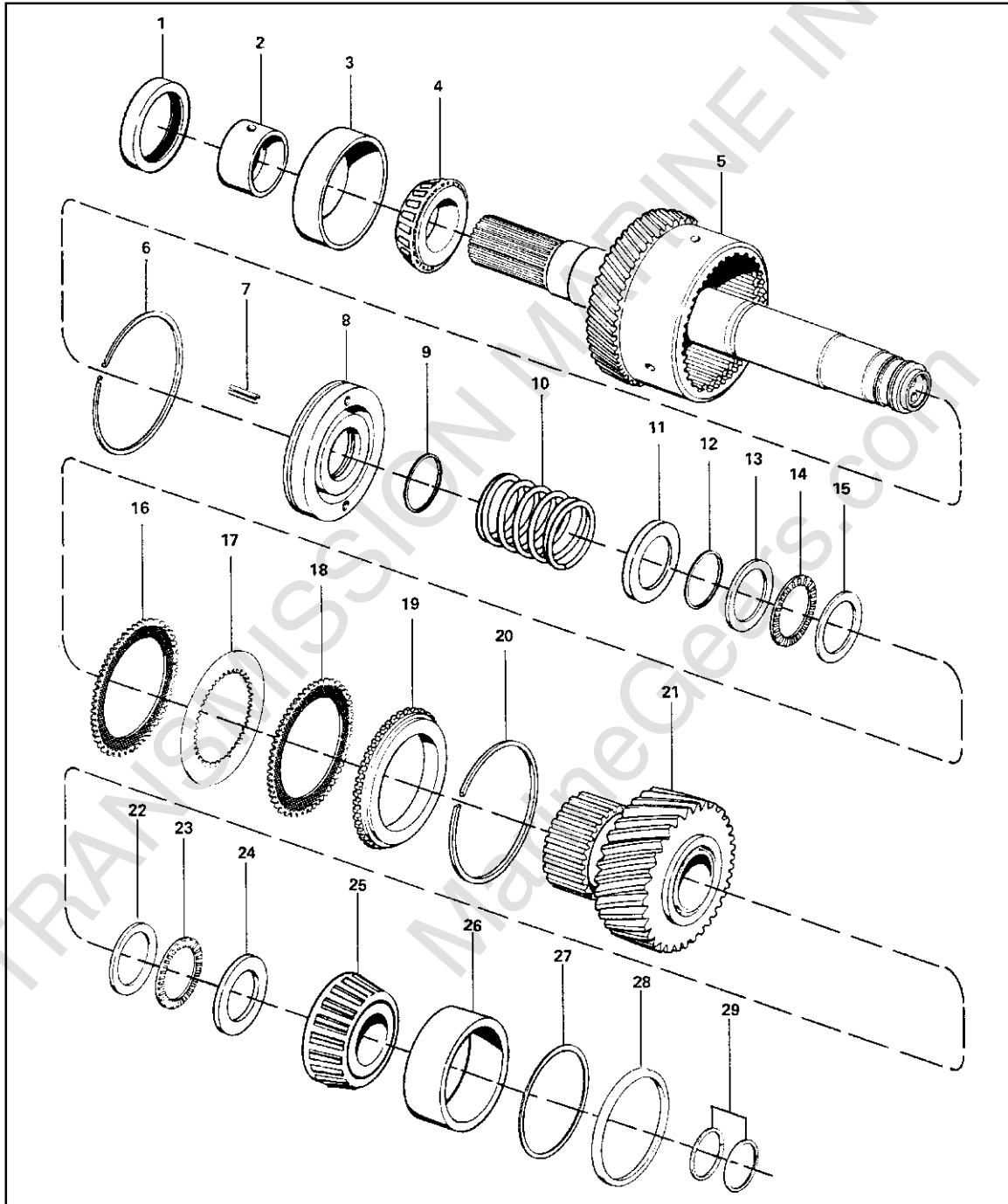


Main Housing, Manifold & Pump Assembly.

MG-77

Twin Disc

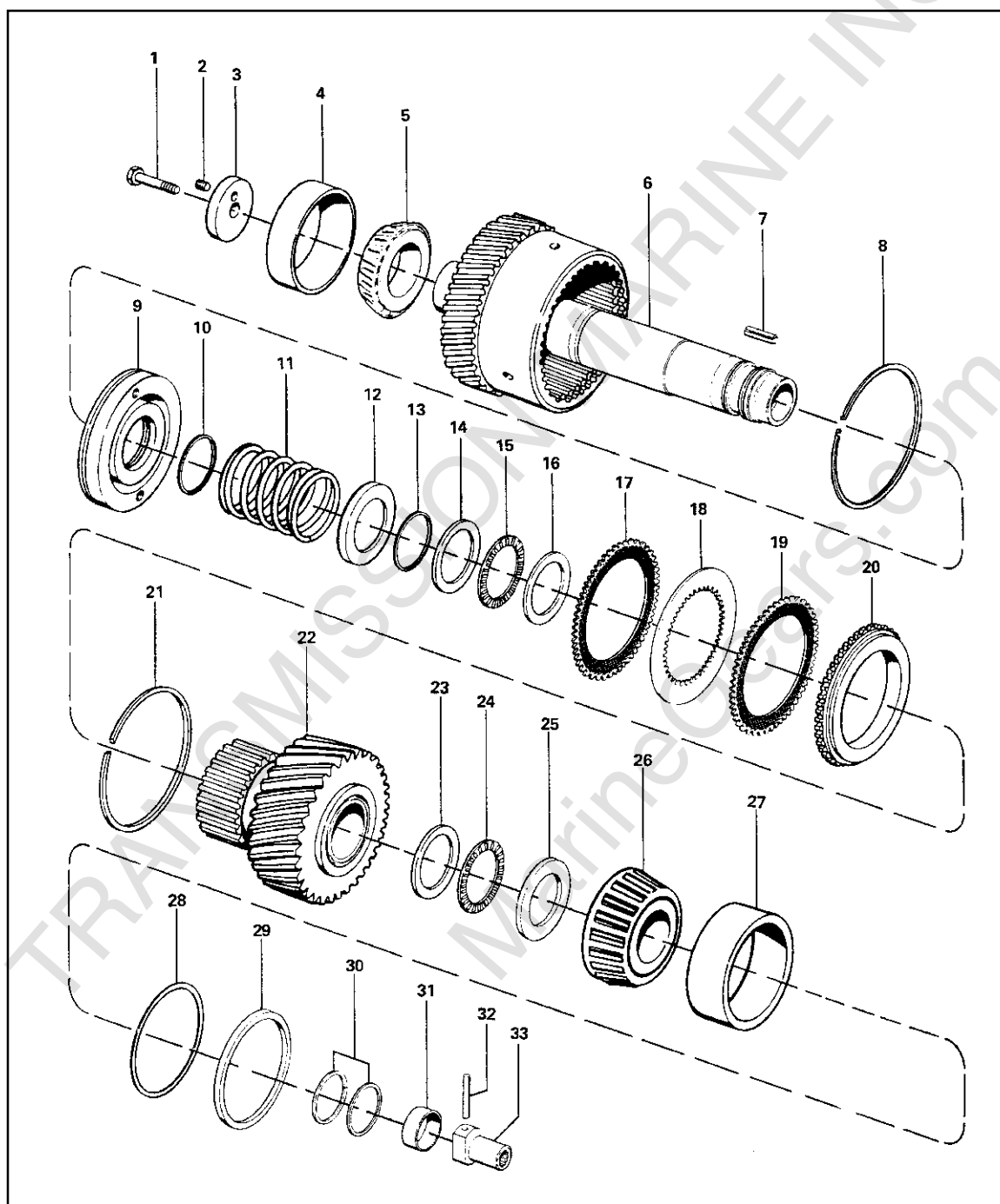
MG510A



Input Shaft Clutch Assembly.

MG-78

MG510A

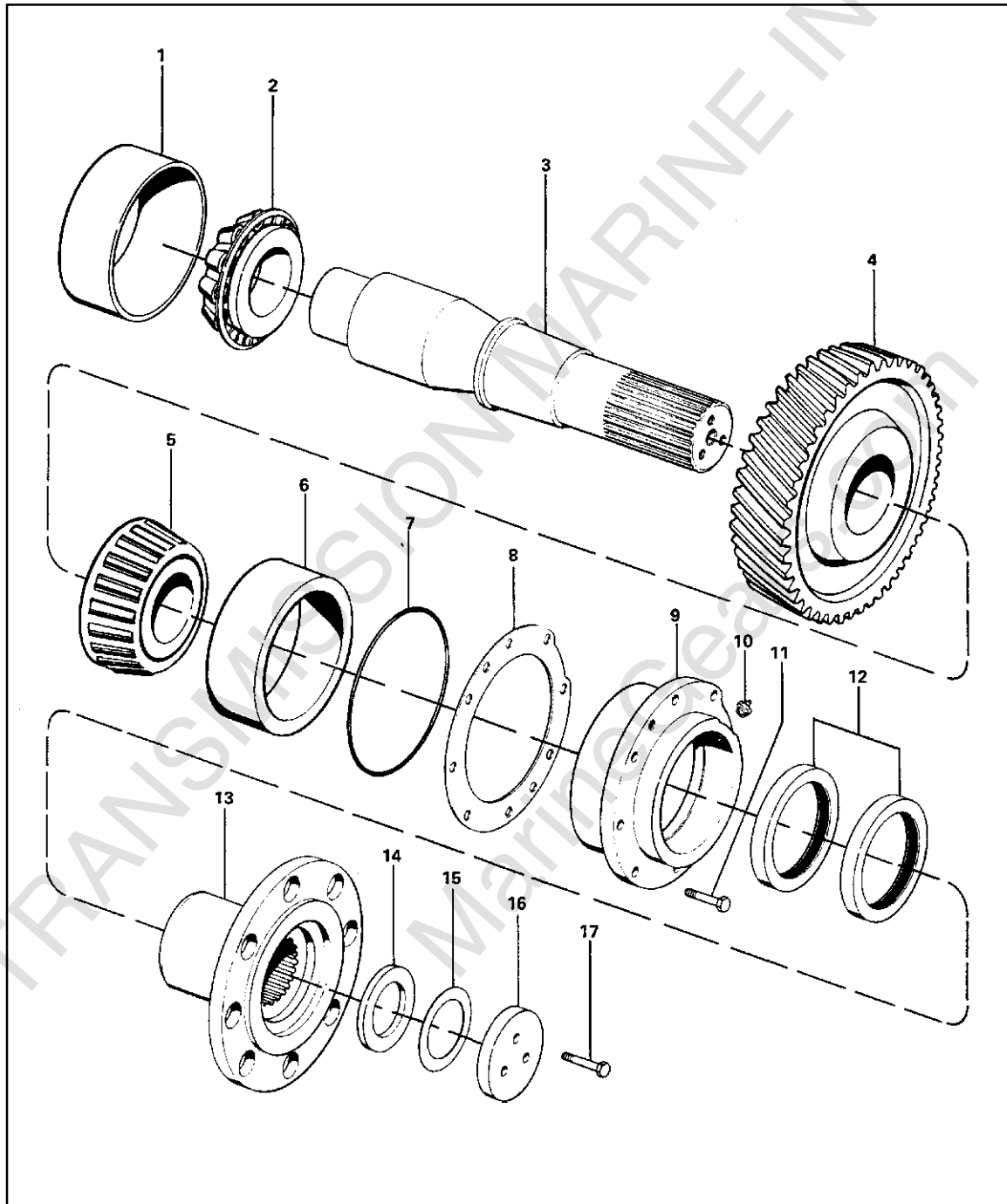


Lay Shaft Clutch Assembly.

MG-79

Twin Disc

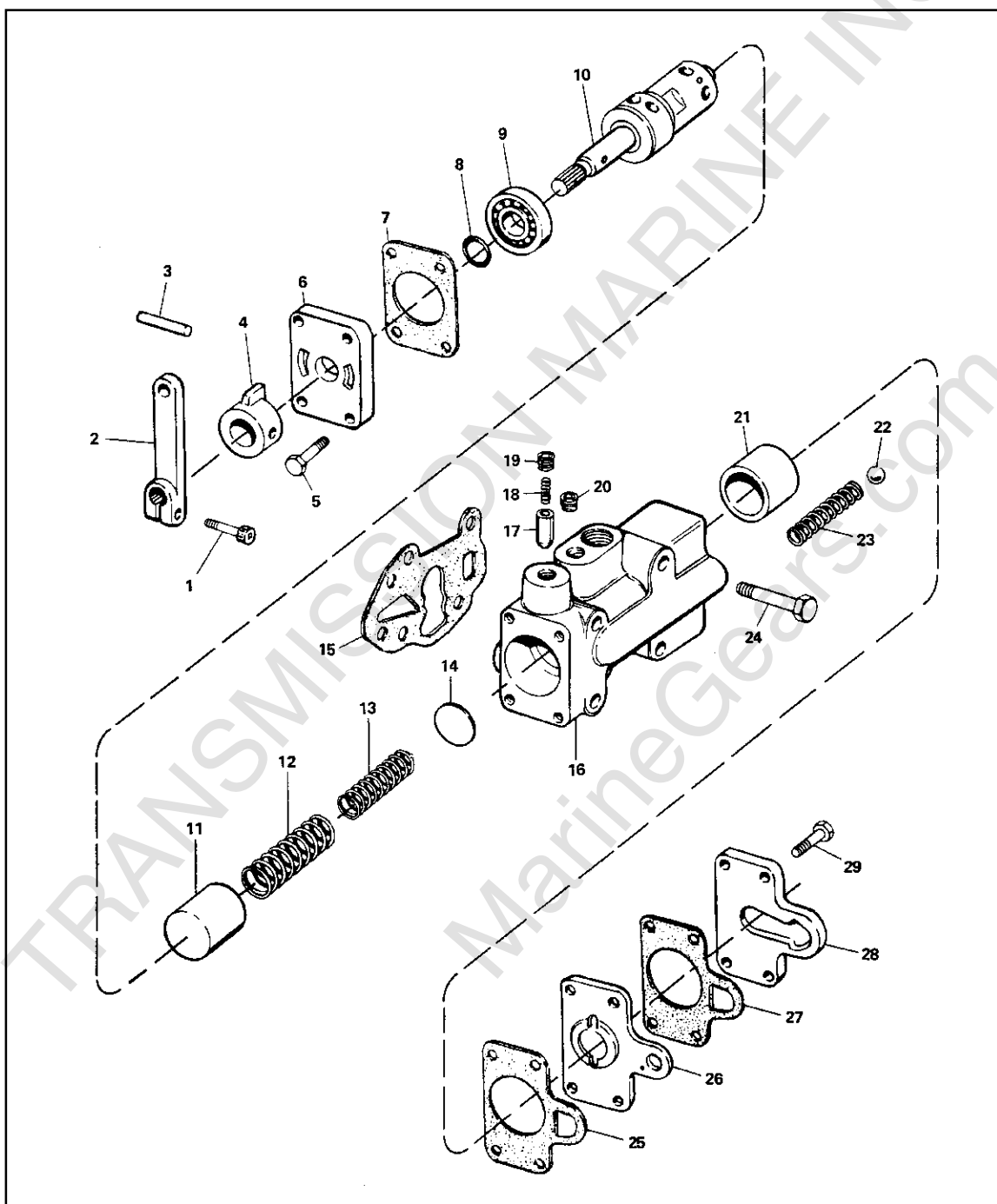
MG510A



Output Shaft & Flange Assembly.

MG-80

MG510A

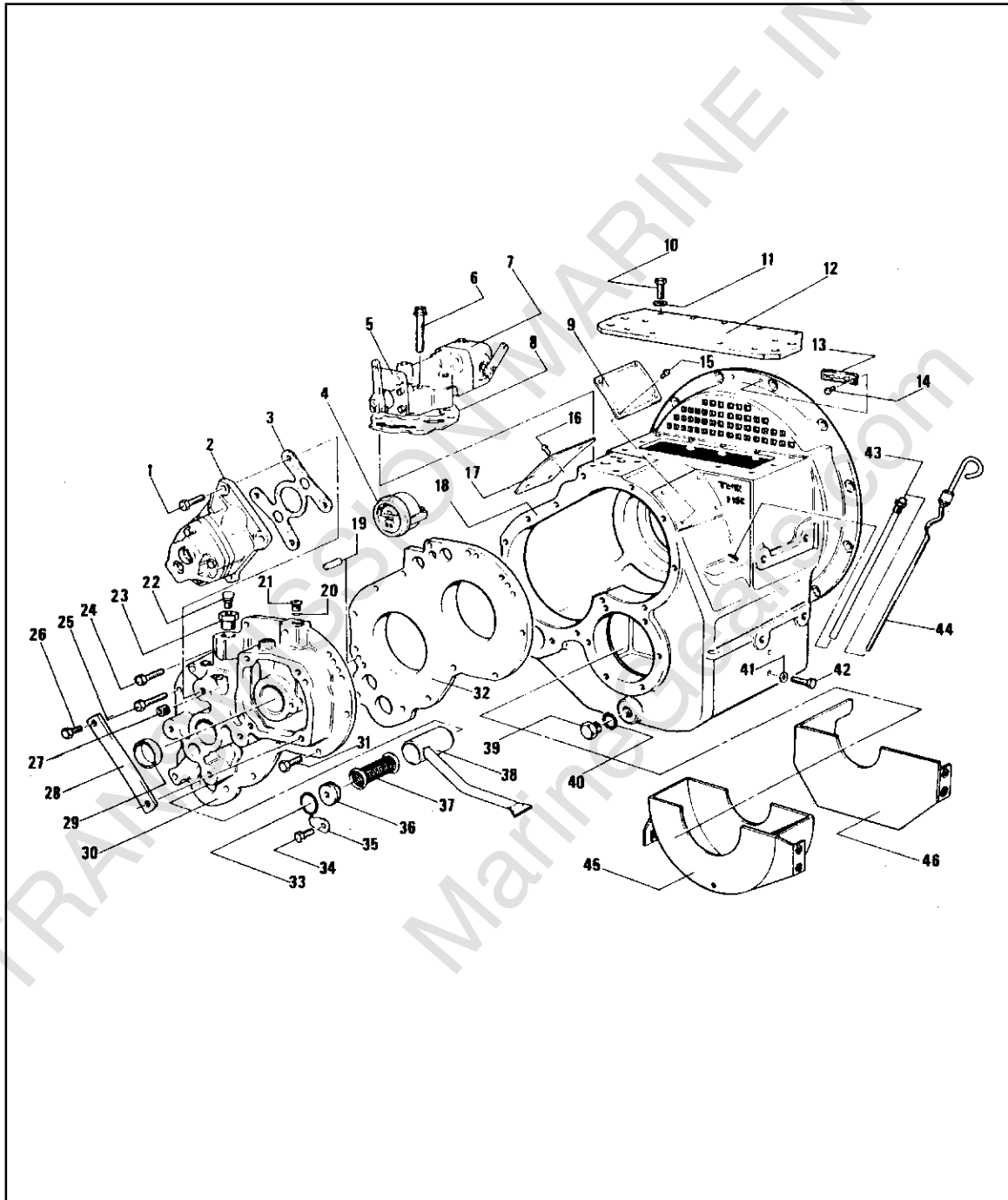


Control Valve Assembly.

MG-81

Twin Disc

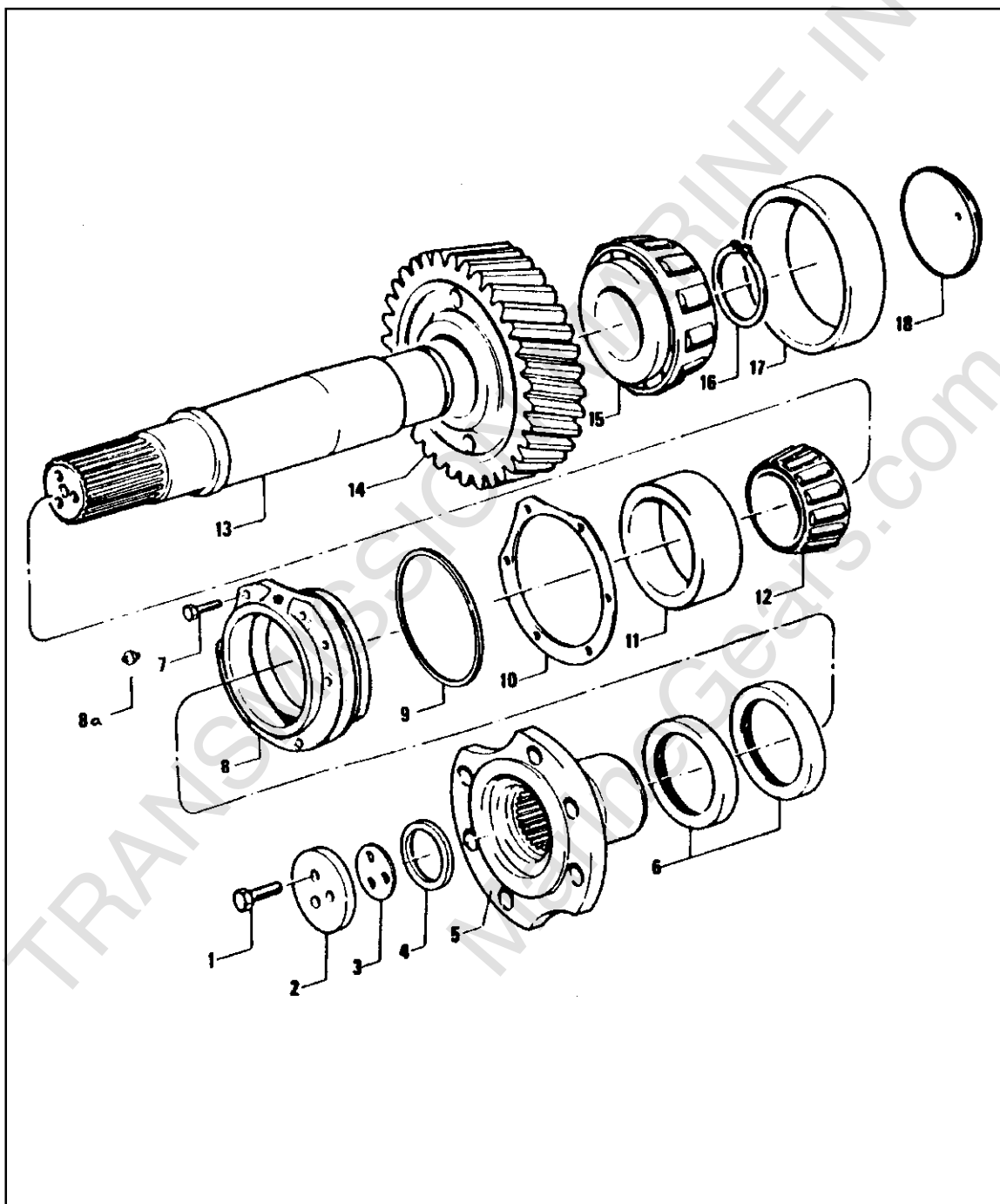
MG5111



Main Housing & Manifold Assembly.

MG-82

MG5111



Output Shaft Assembly.

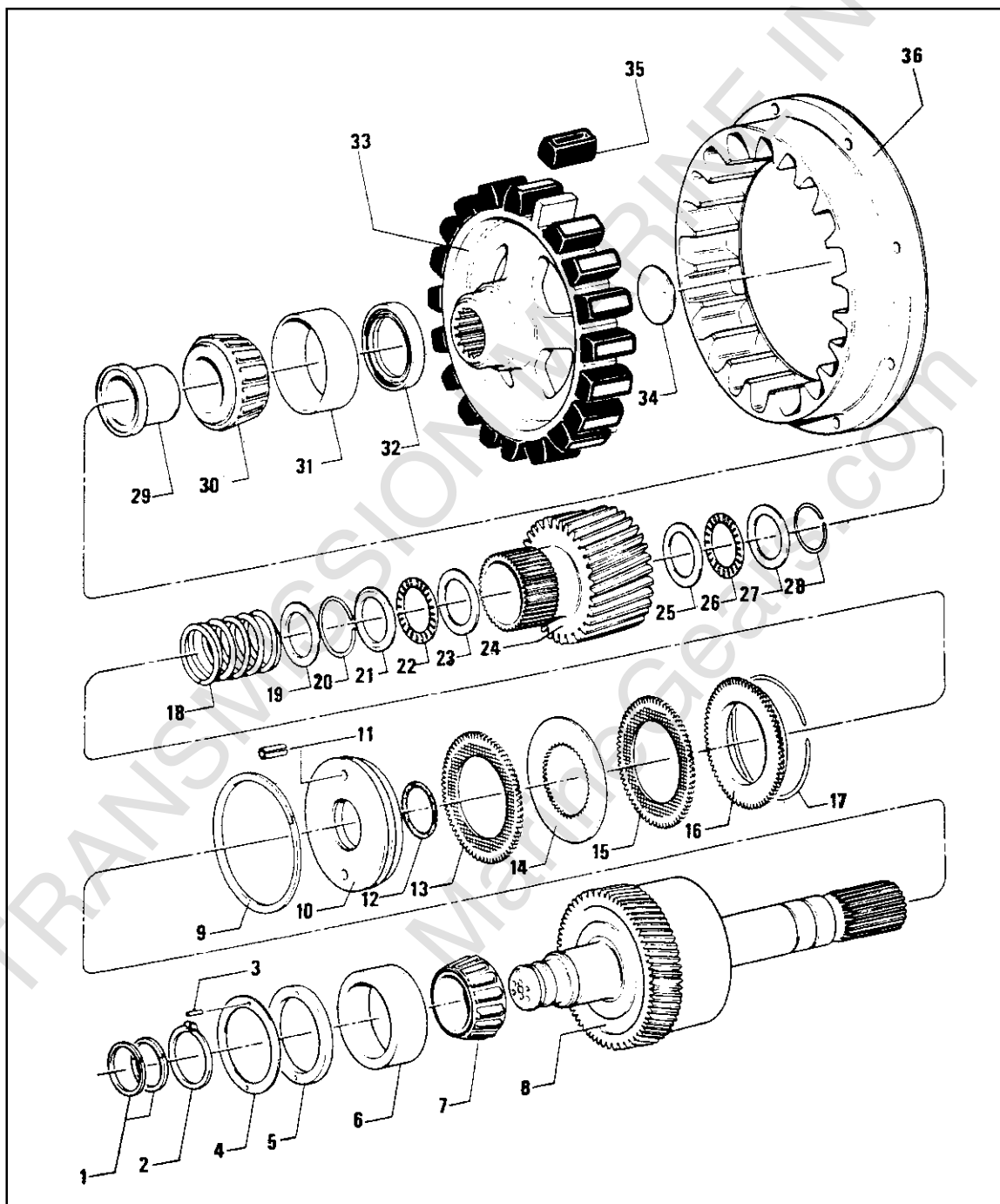
MG-83

Twin Disc

**TRANSMISSION
MARINE INC.**



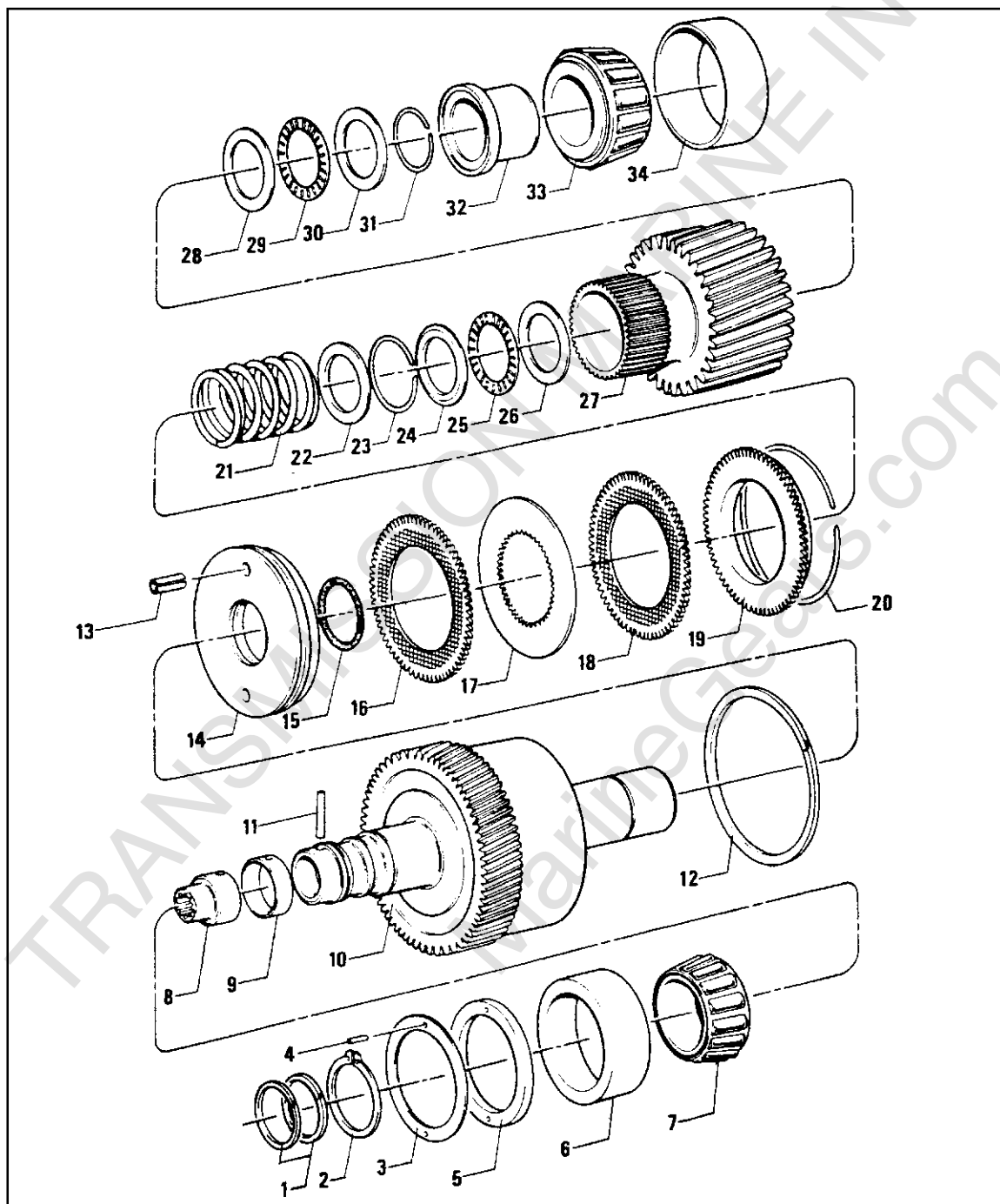
MG5111



Input Shaft & Spider Assembly.

MG-84

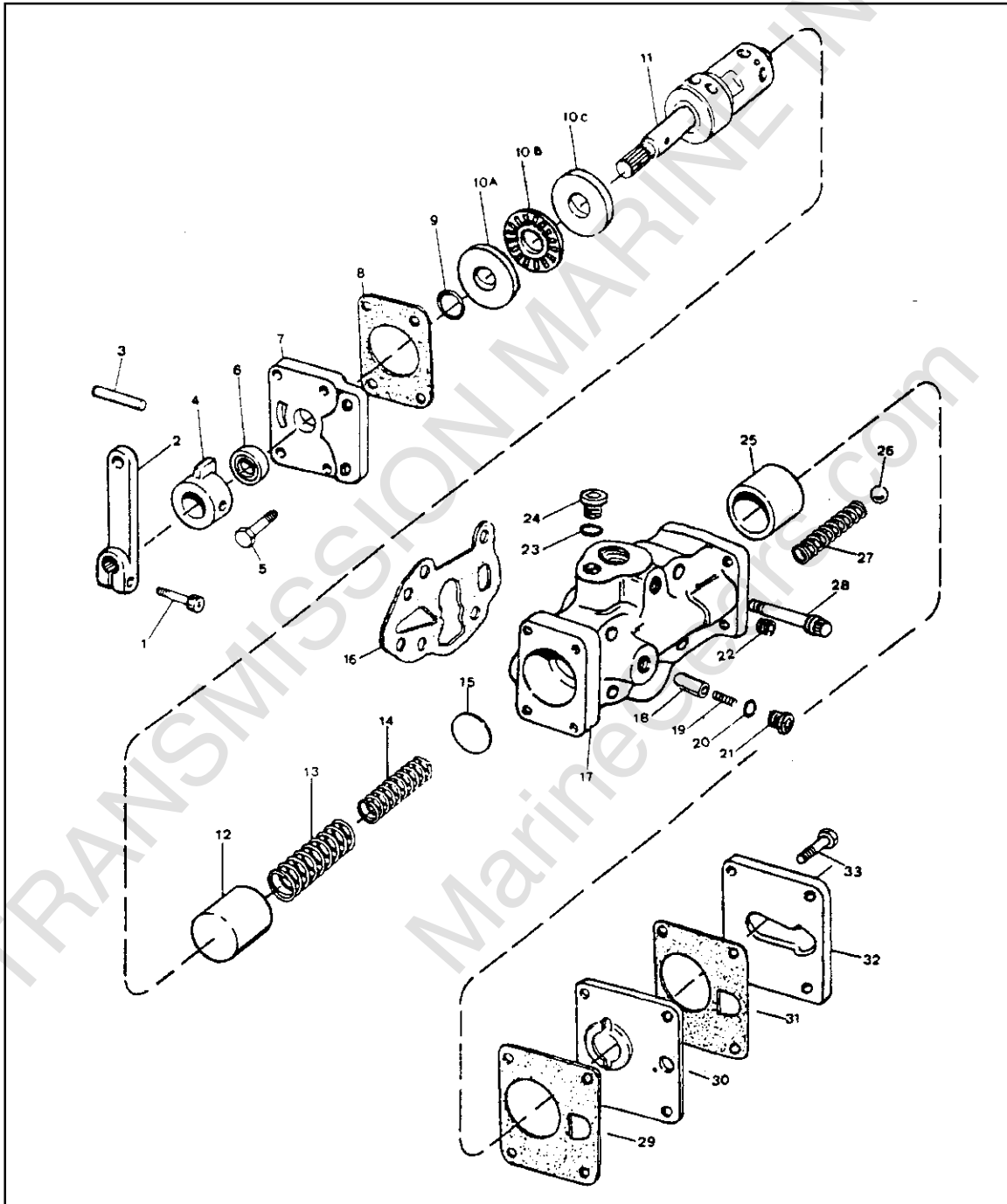
MG5111



Lay Shaft Clutch Assembly.

MG-85

MG5111

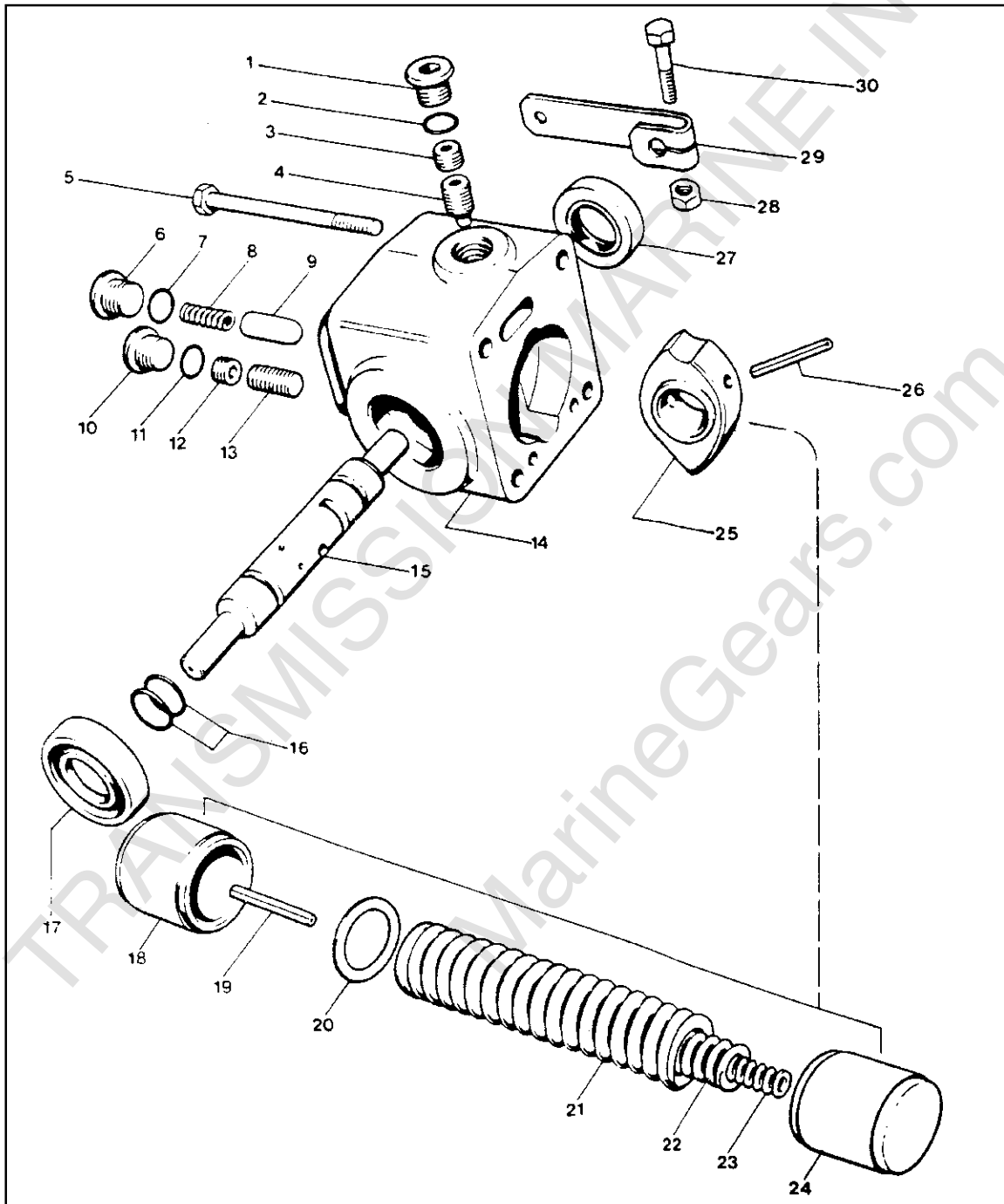


Control Valve Assembly.

MG-86



MG5111

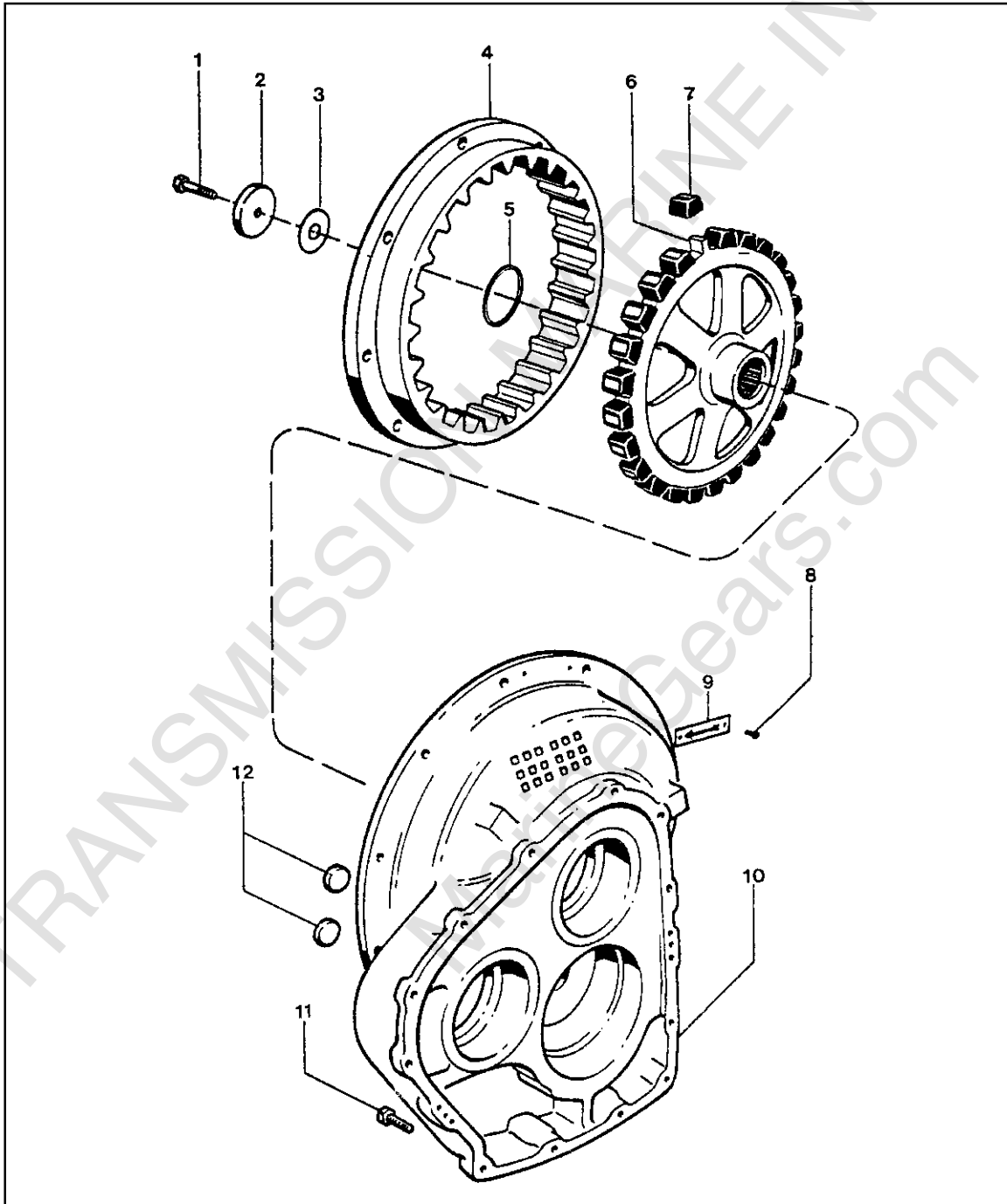


Trolling Valve Assembly.

MG-87

Twin Disc

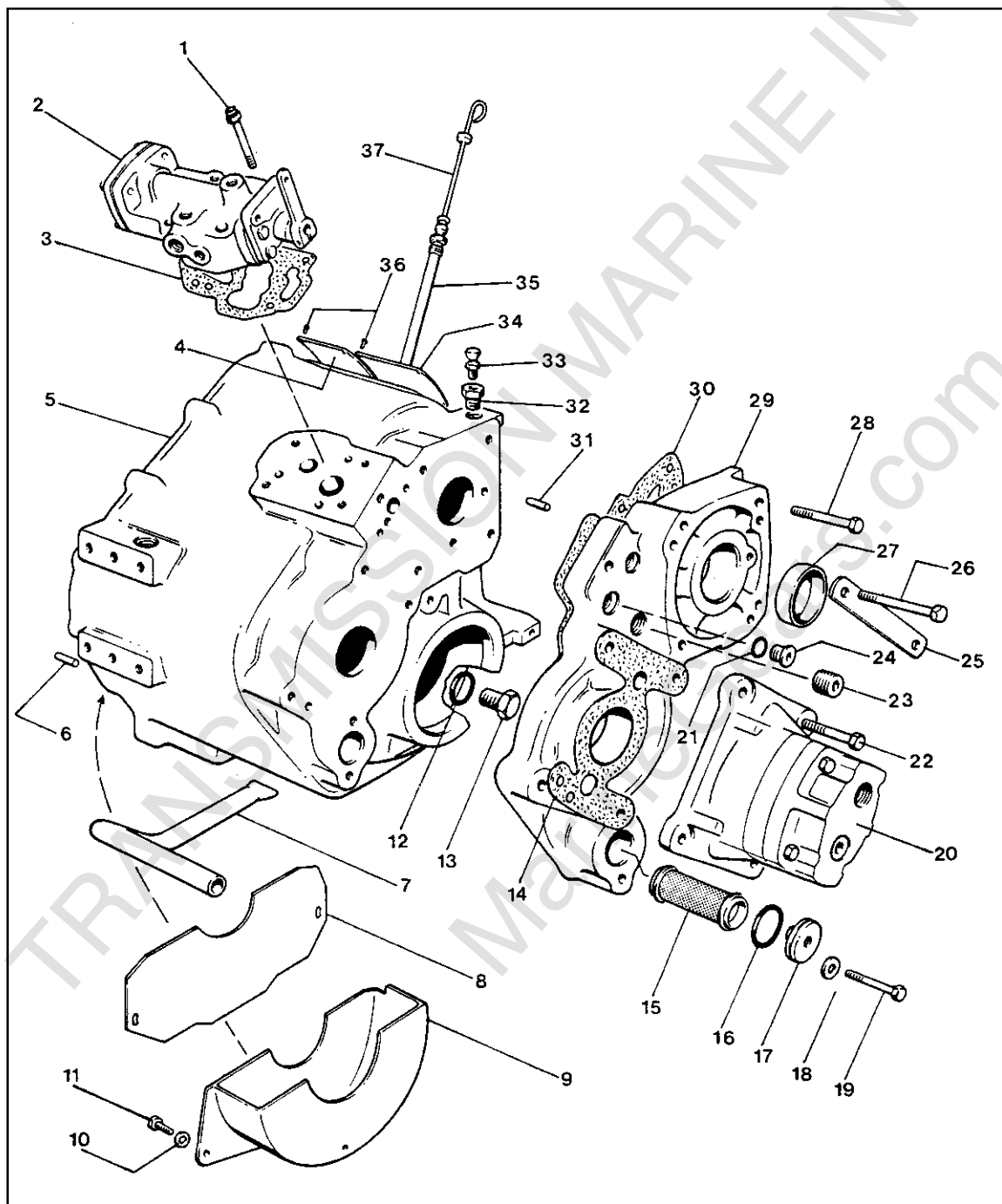
MG5111A



Spider Drive & Front Cover.

MG-88

MG5111A

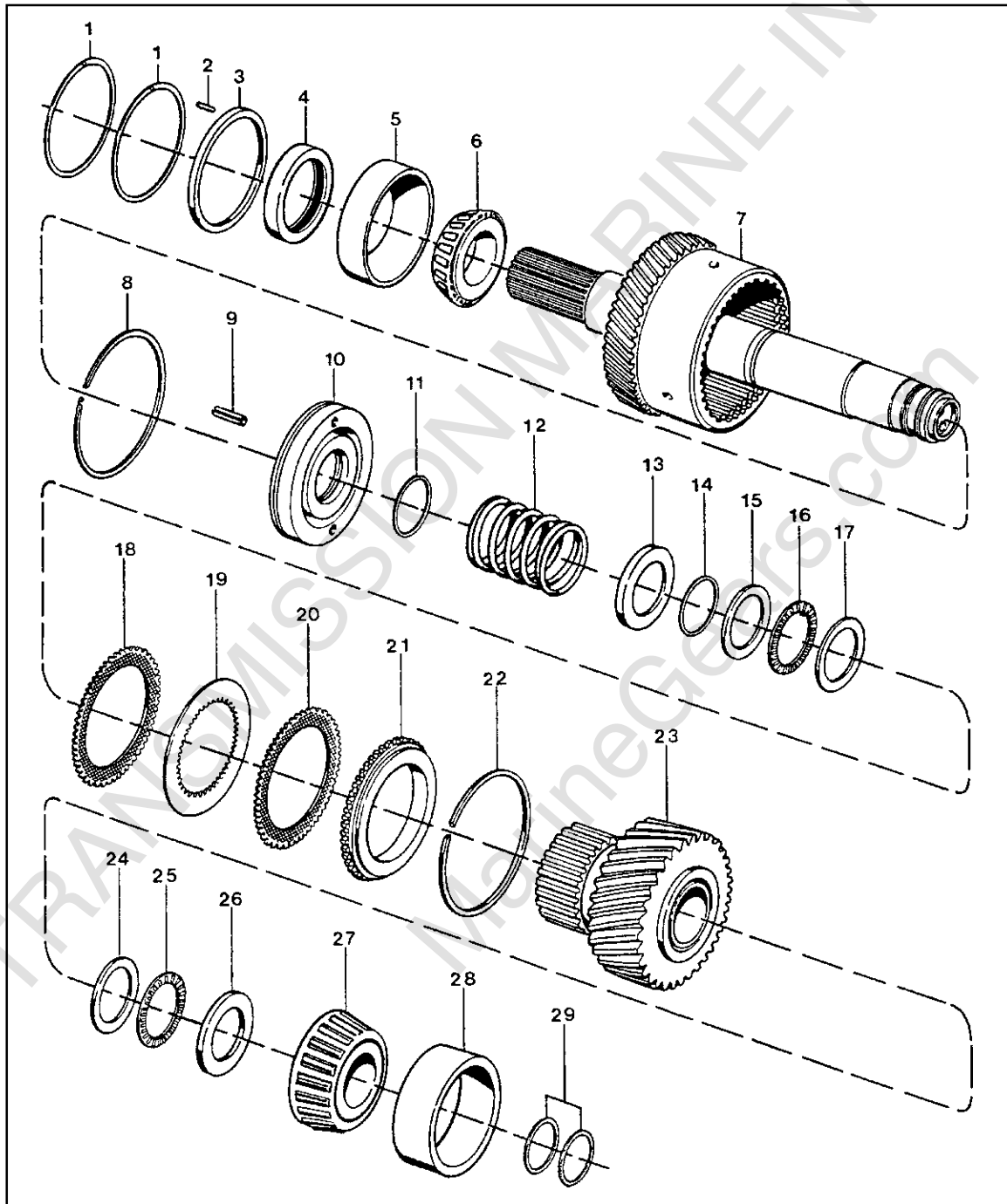


Main Housing, Manifold & Pump Assembly.

MG-89

Twin Disc

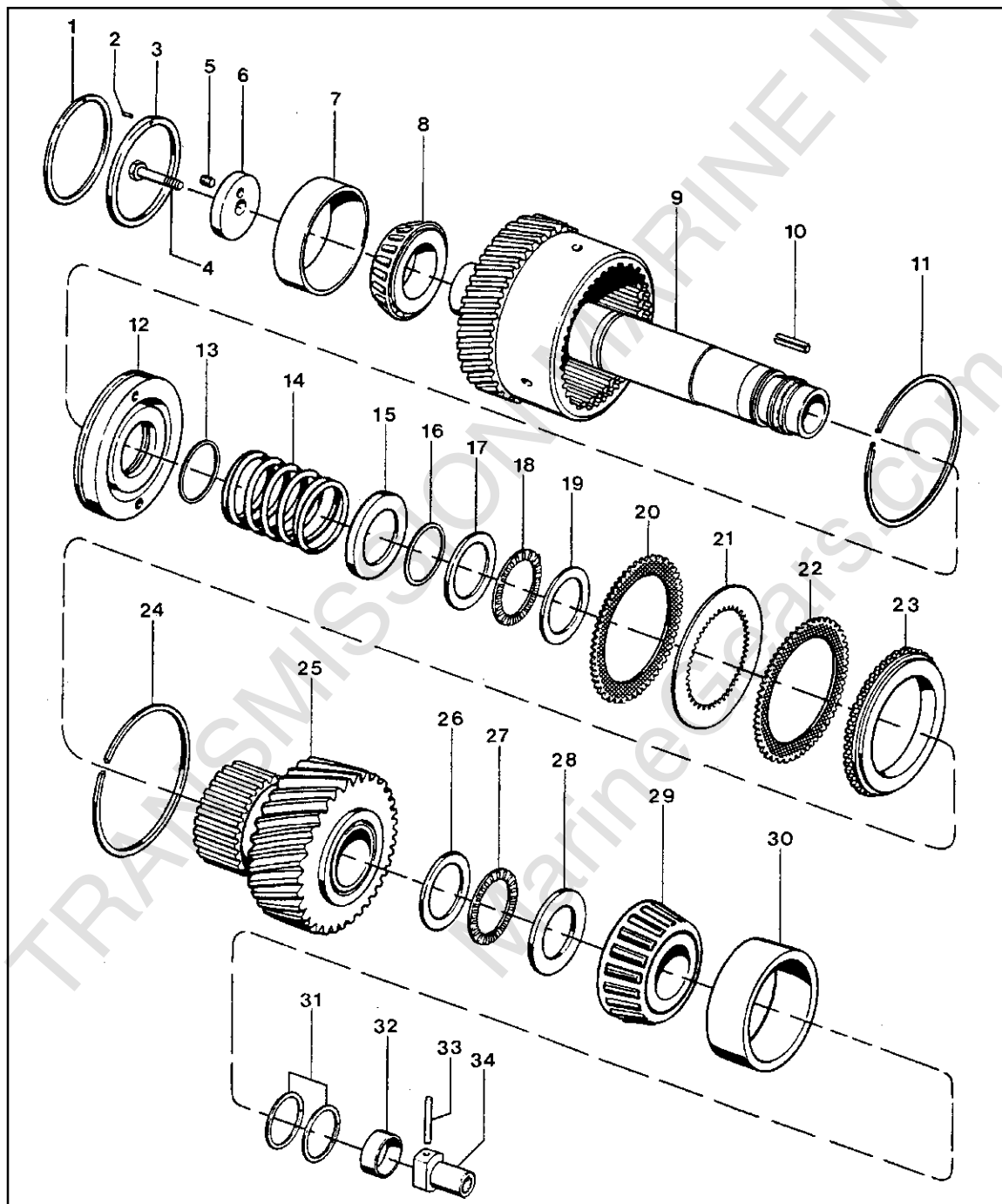
MG5111A



Input Shaft Clutch Assembly.

MG-90

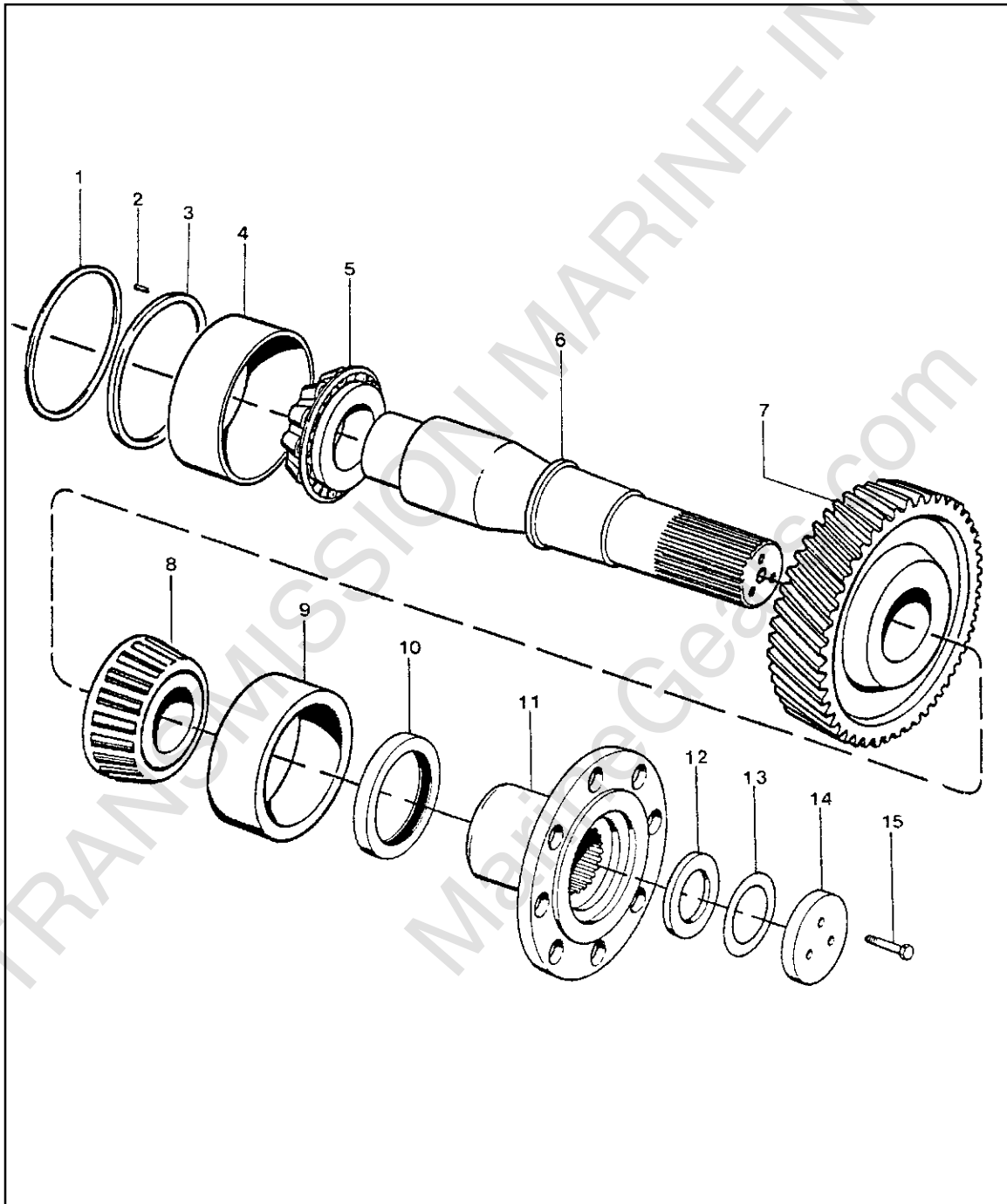
MG5111A



Lay Shaft Clutch Assembly.

MG-91

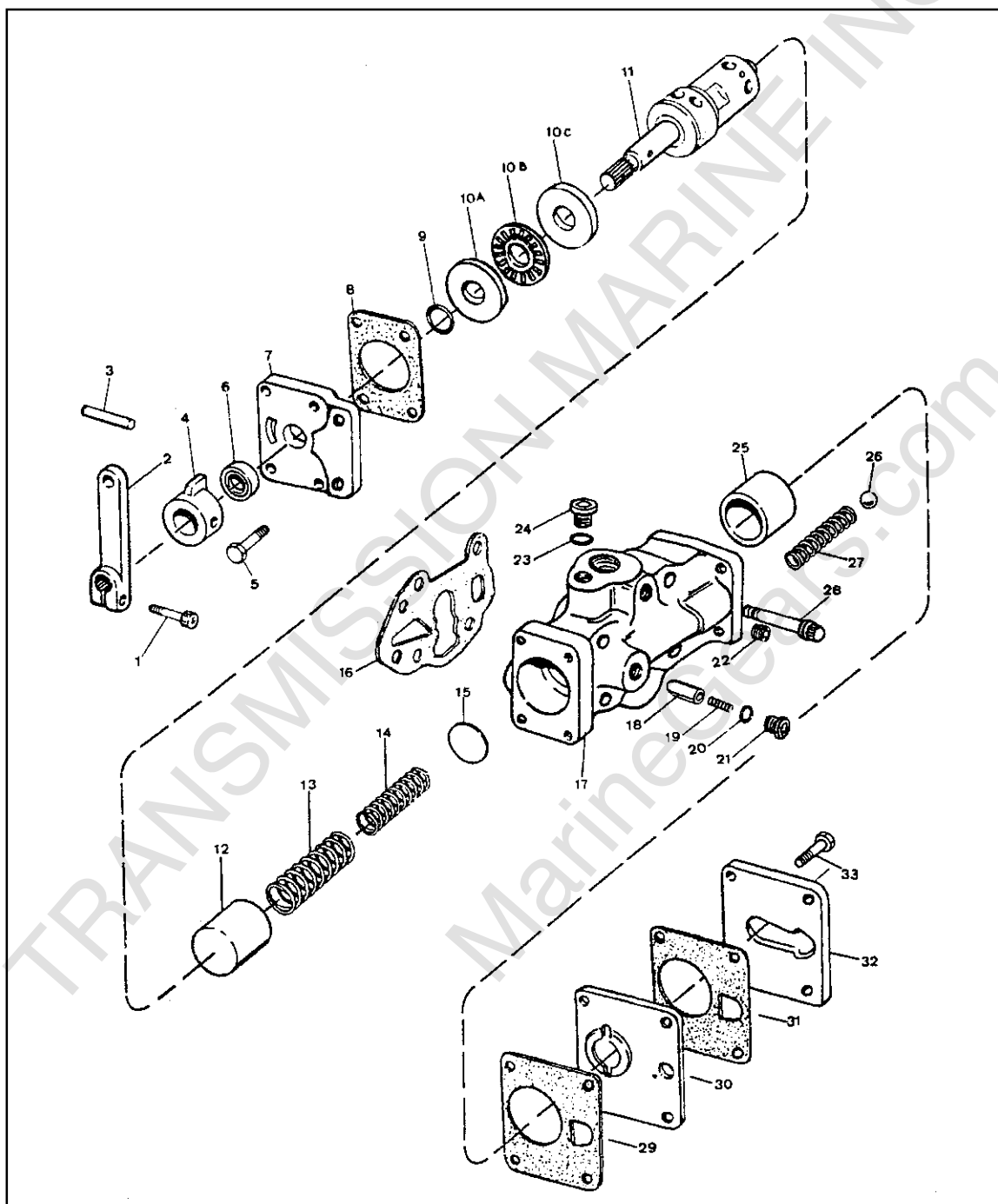
MG5111A



Output Shaft & Flange Assembly

MG-92

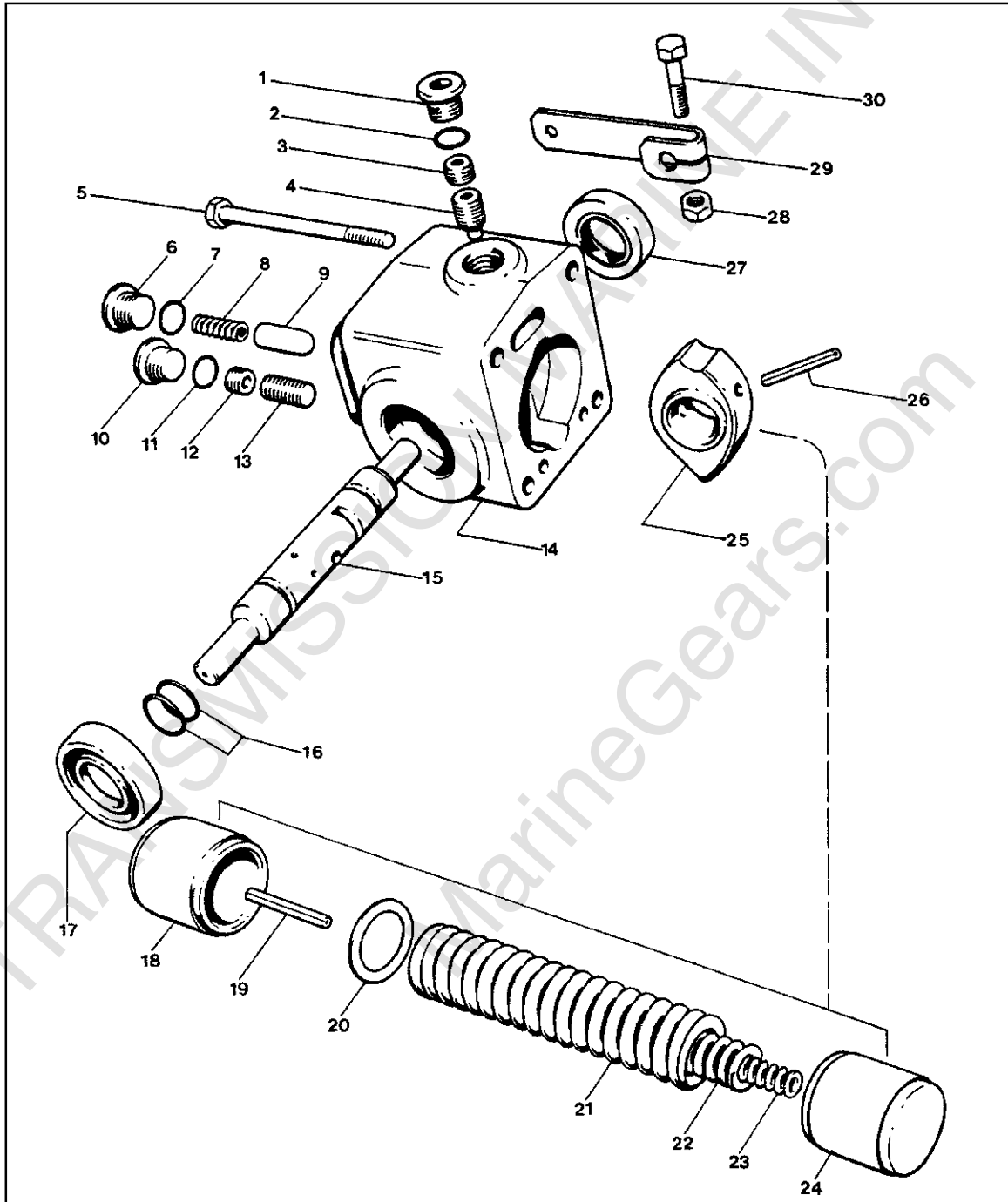
MG5111A



Control Valve Assembly.

MG-93

MG5111A

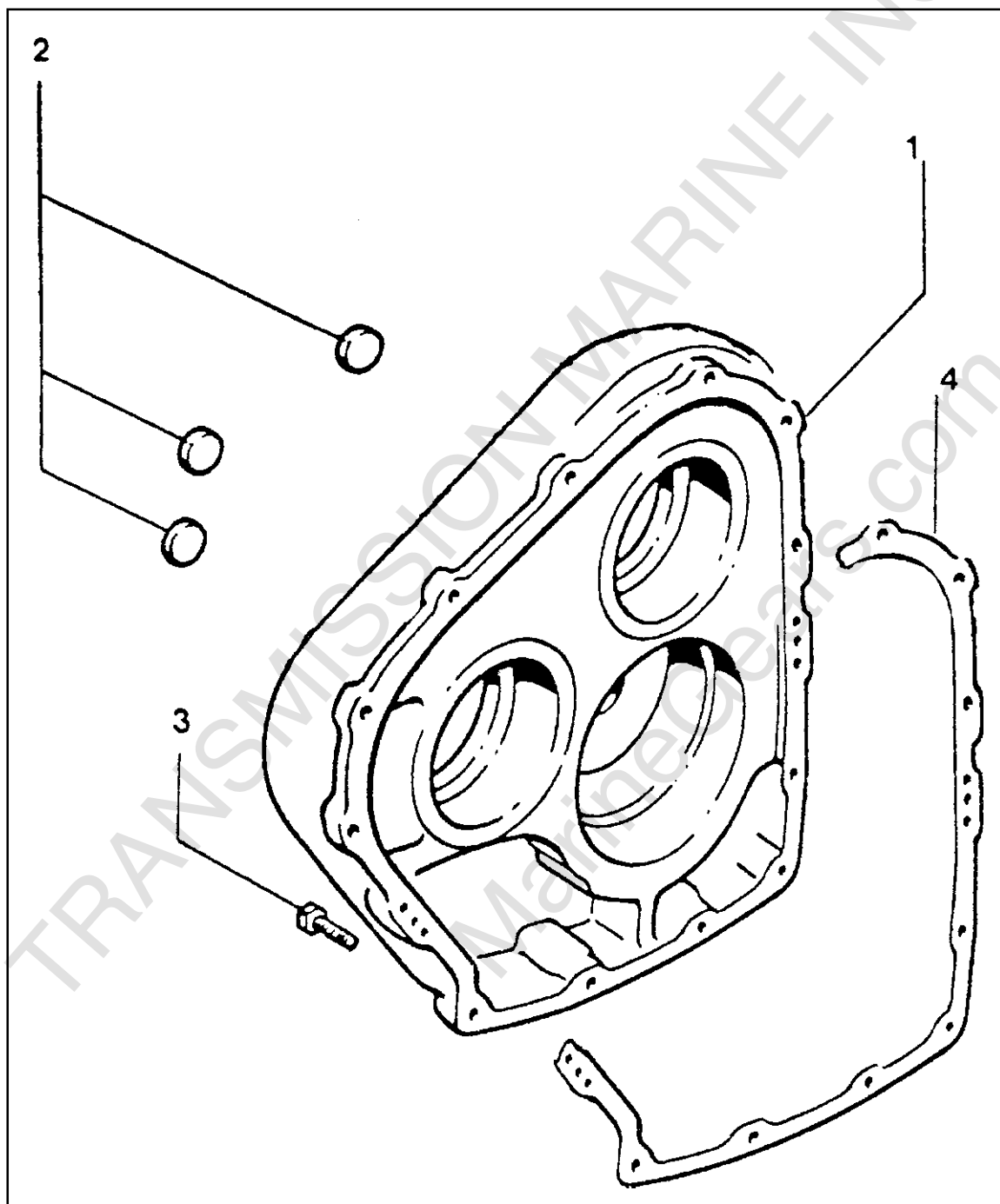


Trolling valve Assembly.

MG-94



MG5111V

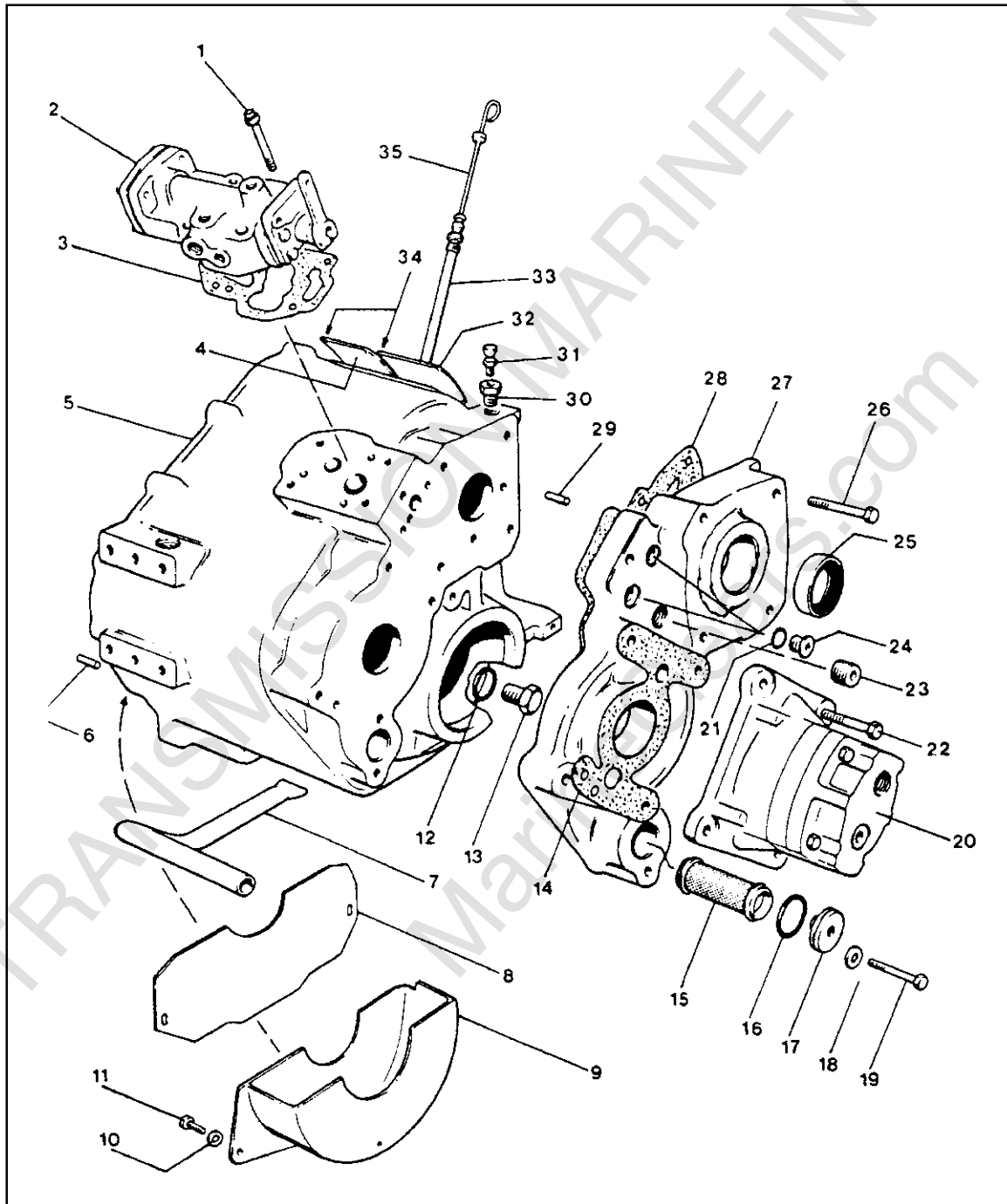


Rear Housing Cover.

MG-95

Twin Disc

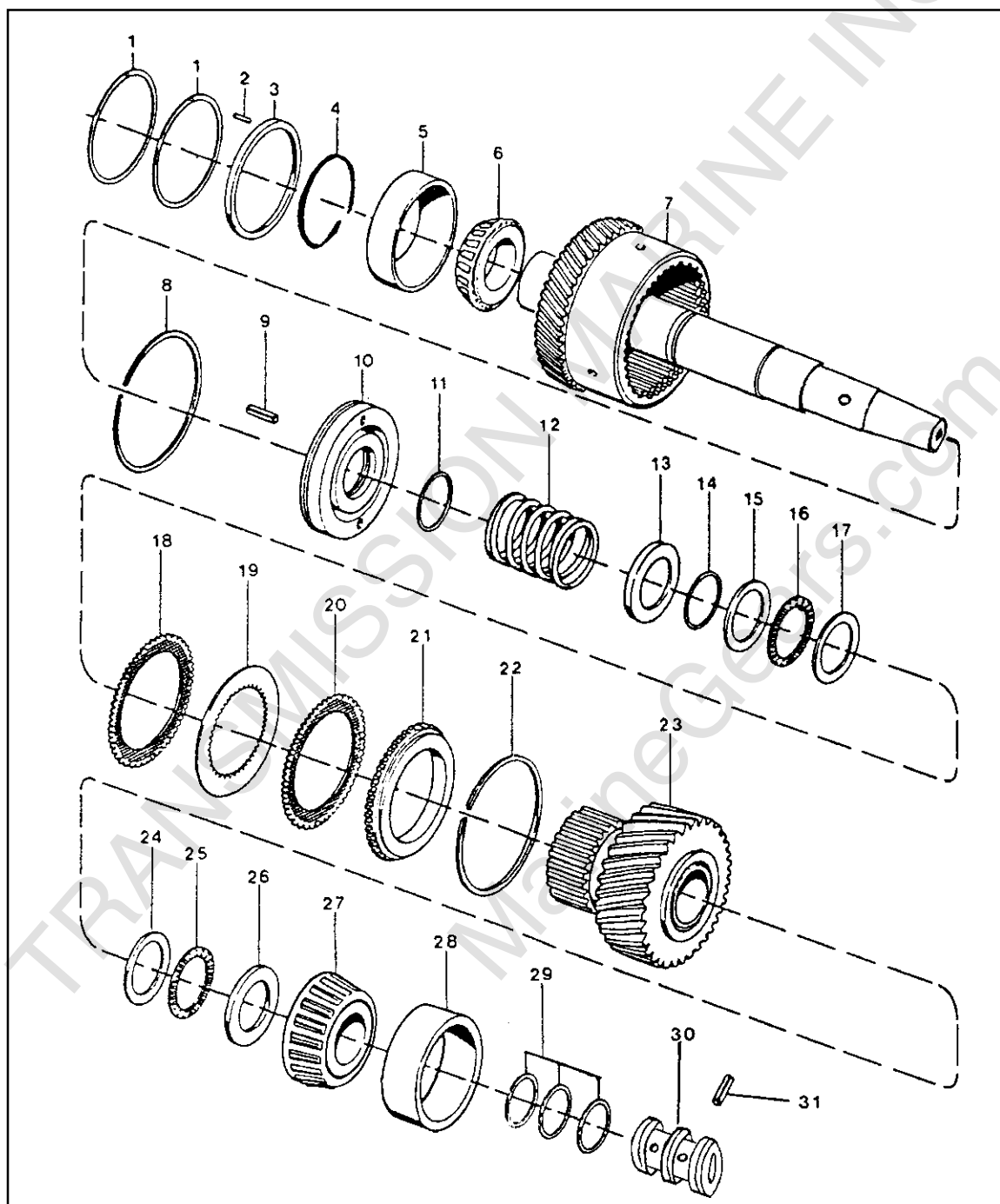
MG5111V



Main Housing & Pump Assembly.

MG-96

MG5111V

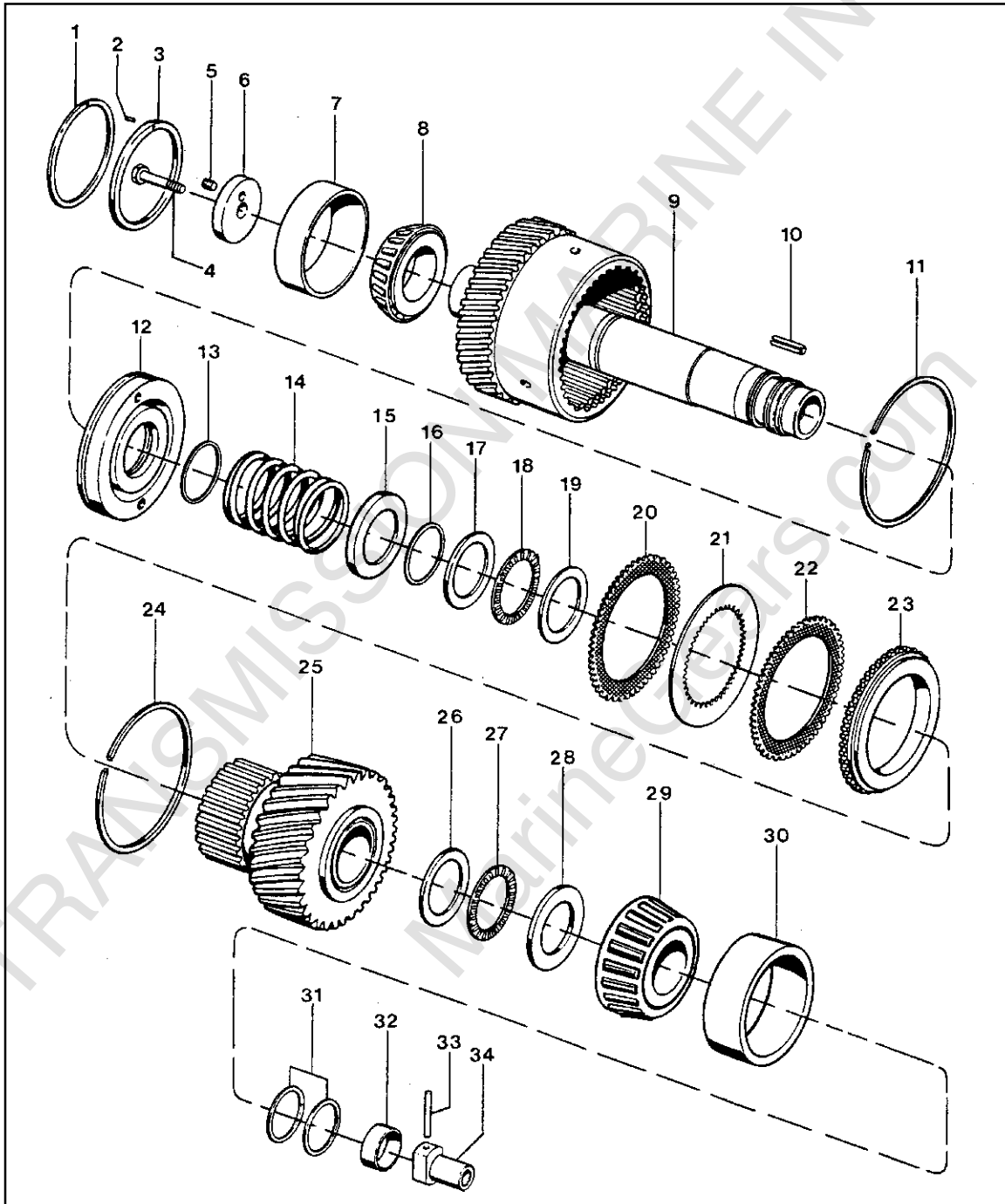


Input Shaft Clutch Assembly.

MG-97

Twin Disc

MG5111V

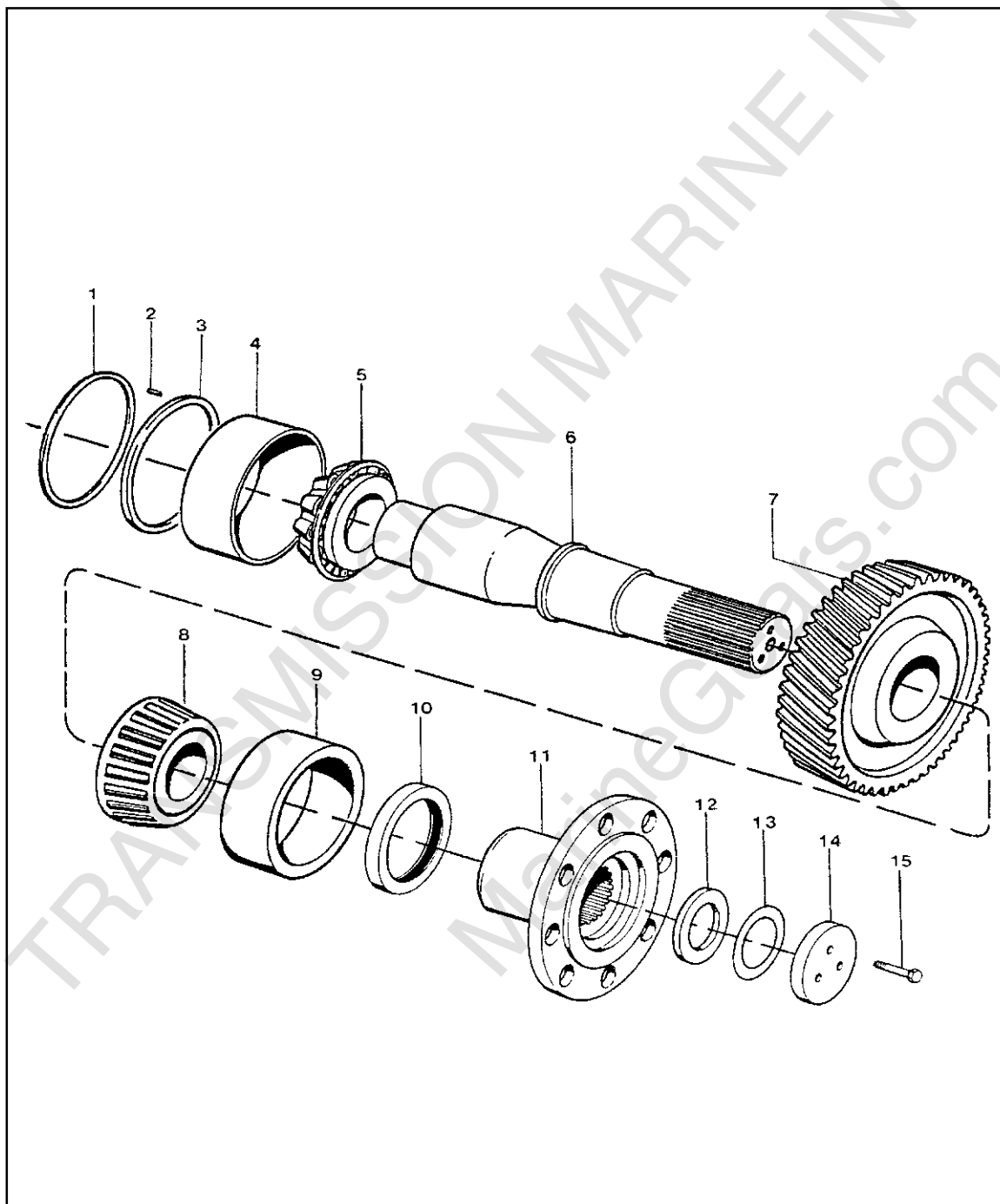


Lay Shaft Clutch Assembly.

MG-98



MG5111V

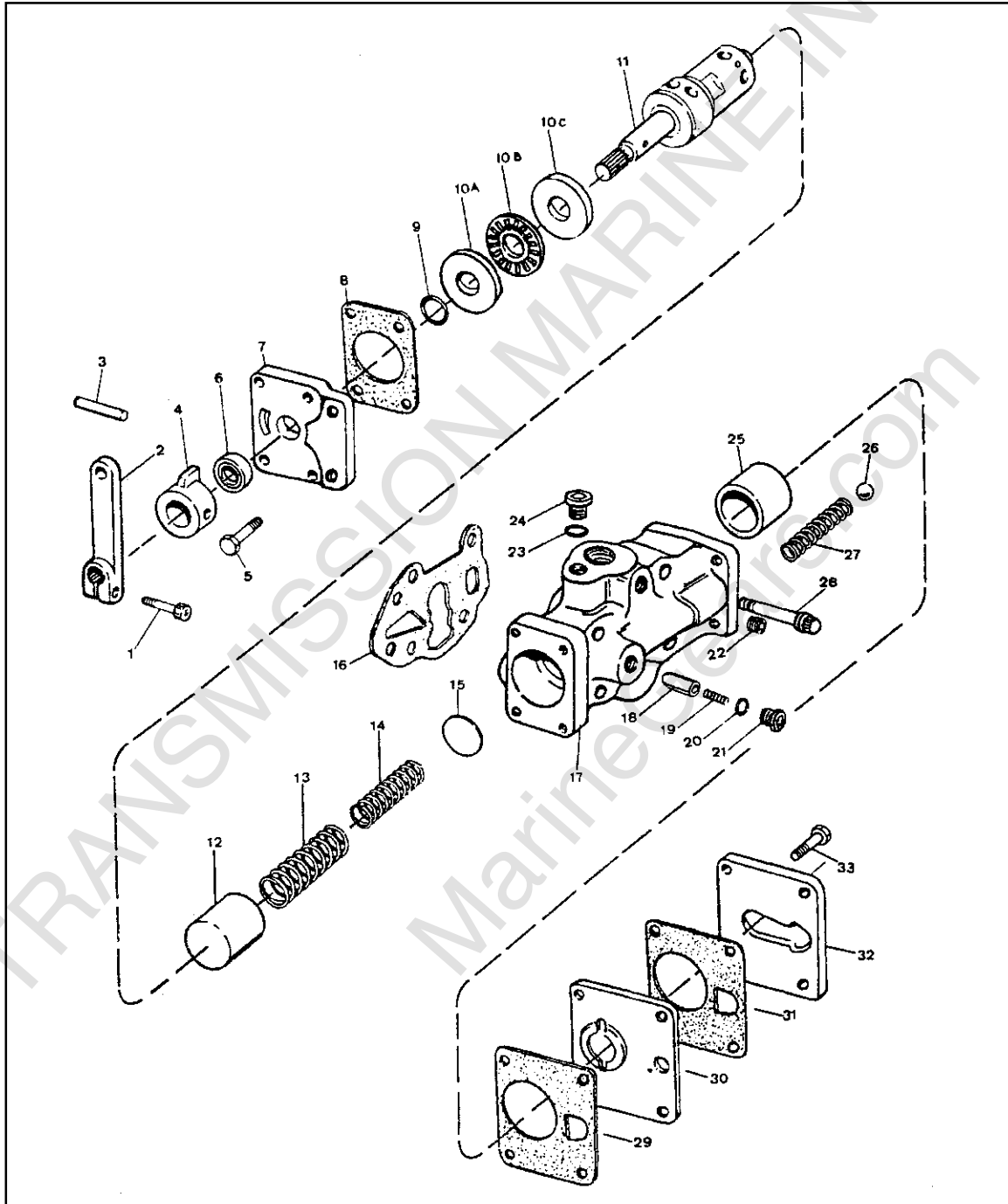


Output Shaft Assembly.

MG-99

Twin Disc

MG5111V

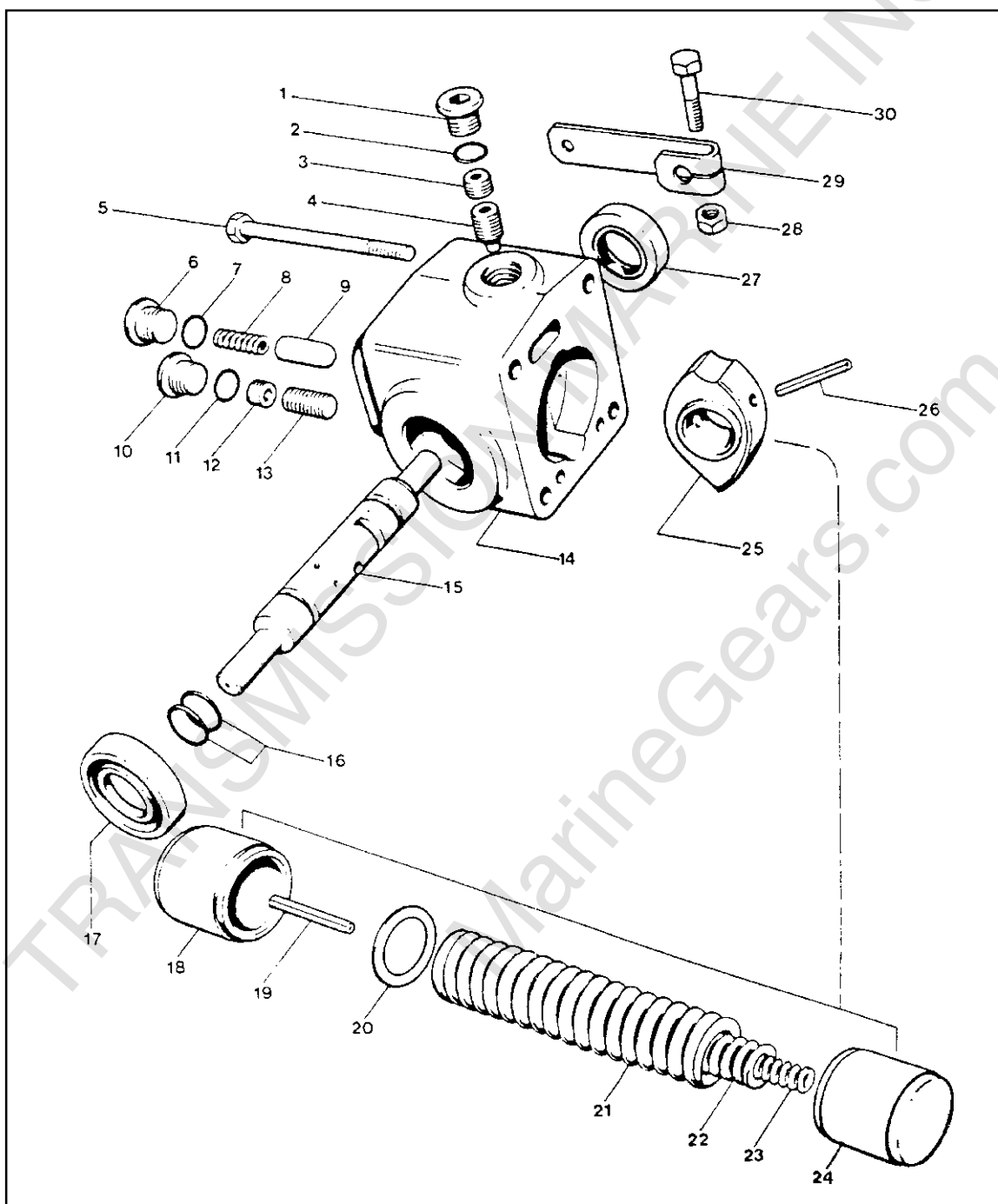


Control Valve Assembly.

MG-100



MG511V

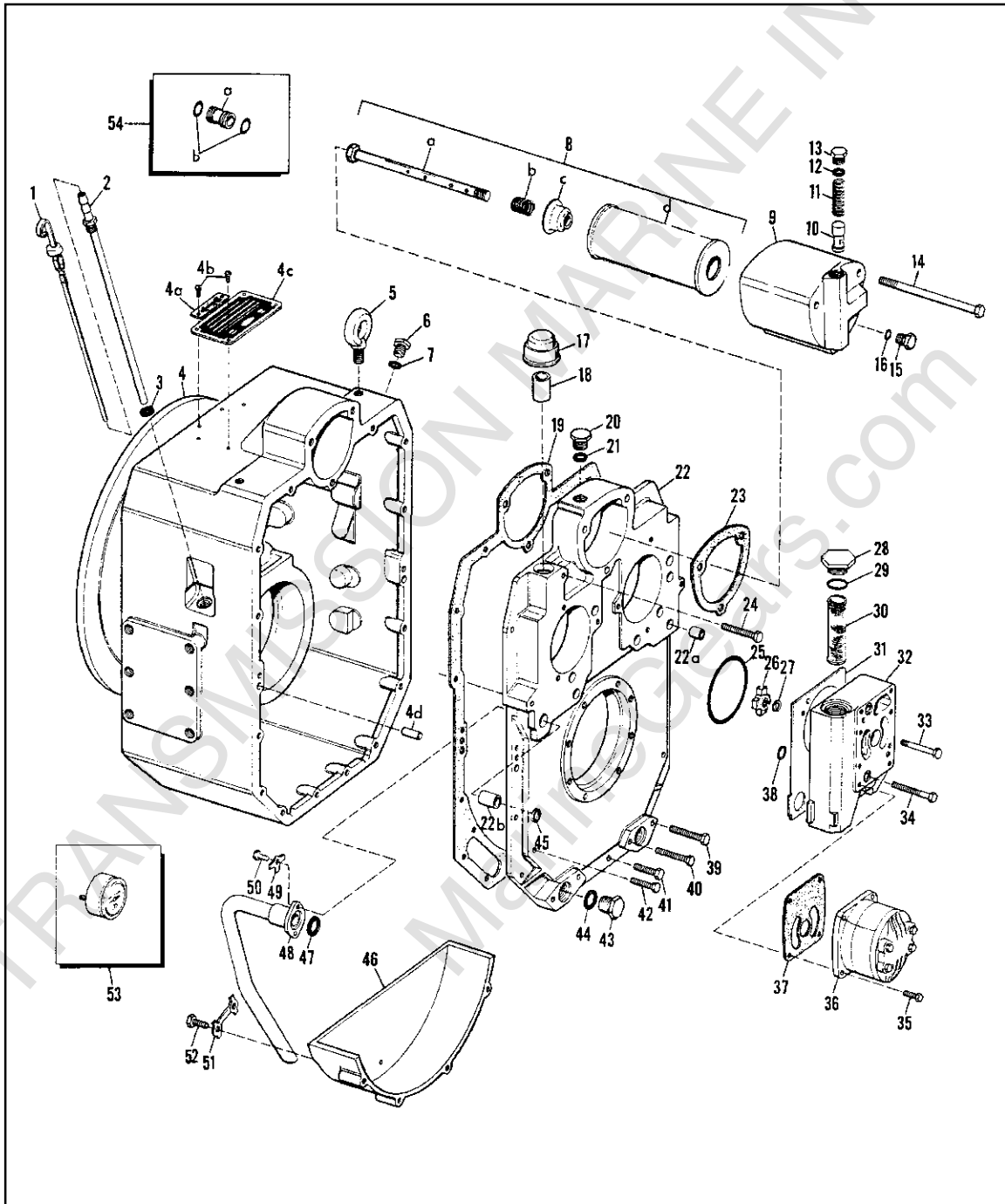


Trolling Valve Assembly.

MG-101

Twin Disc

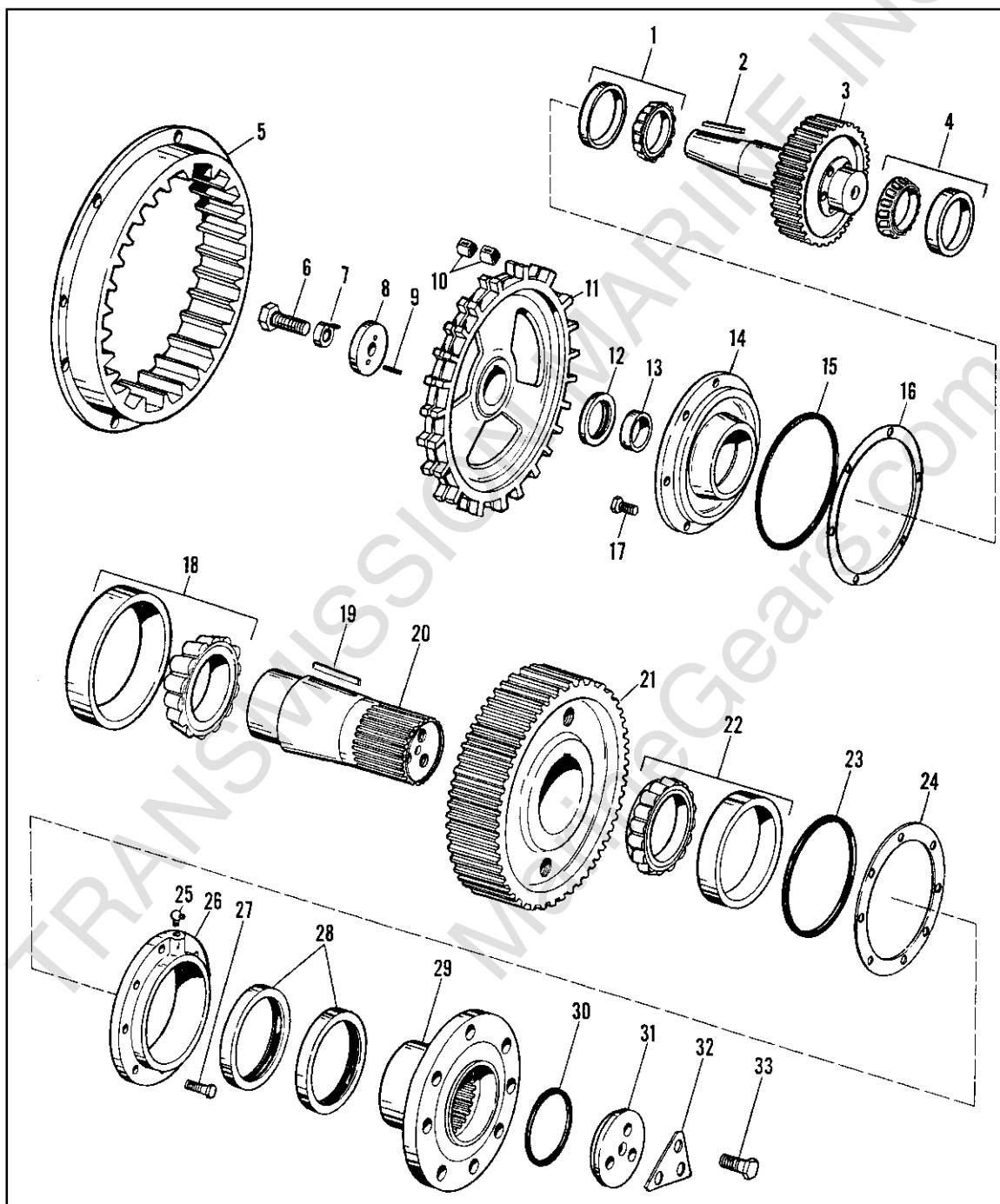
MG513



Main Housing Assembly.

MG-102

MG513

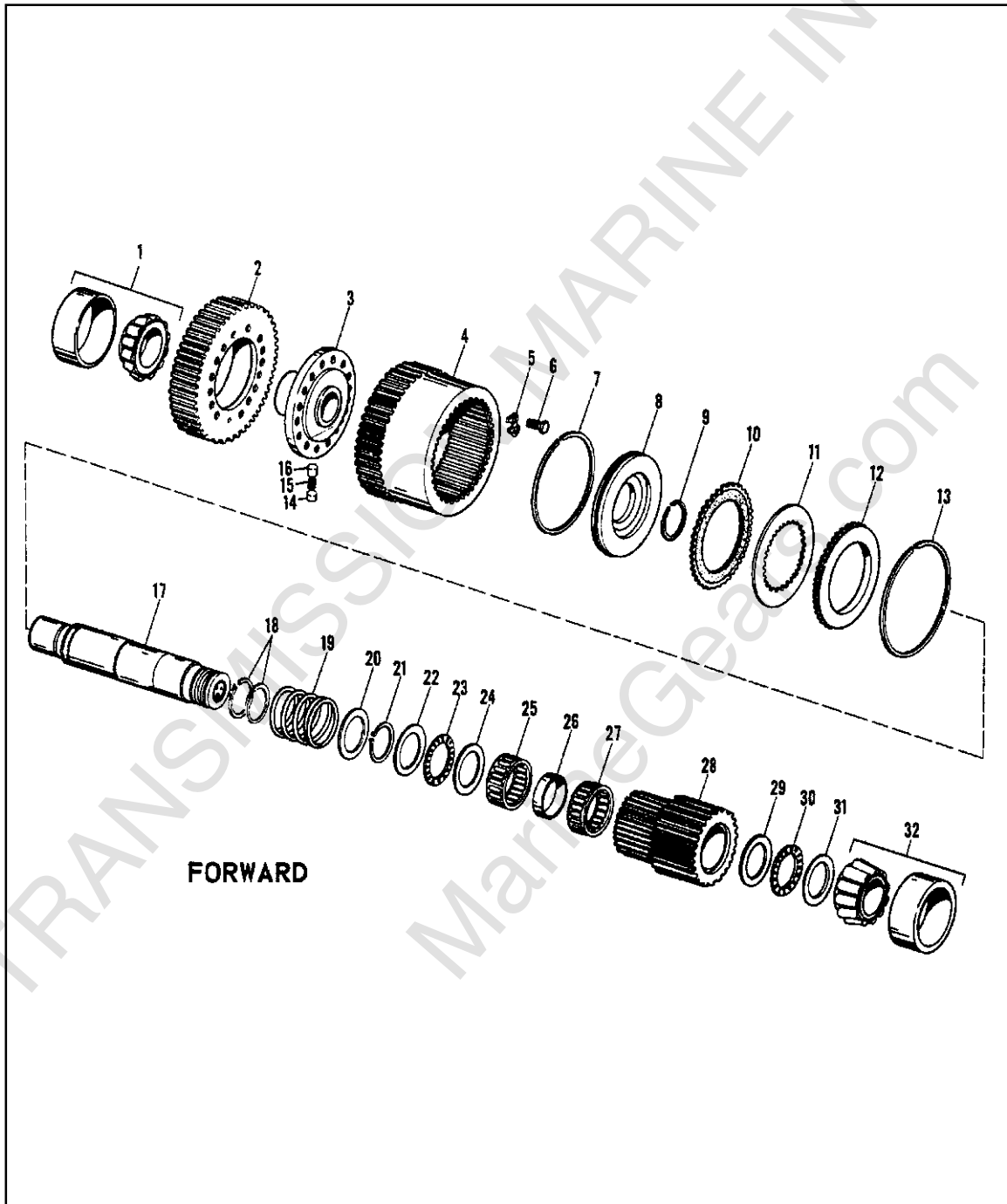


Input/Output Shaft Assemblies.

MG-103

Twin Disc

MG513

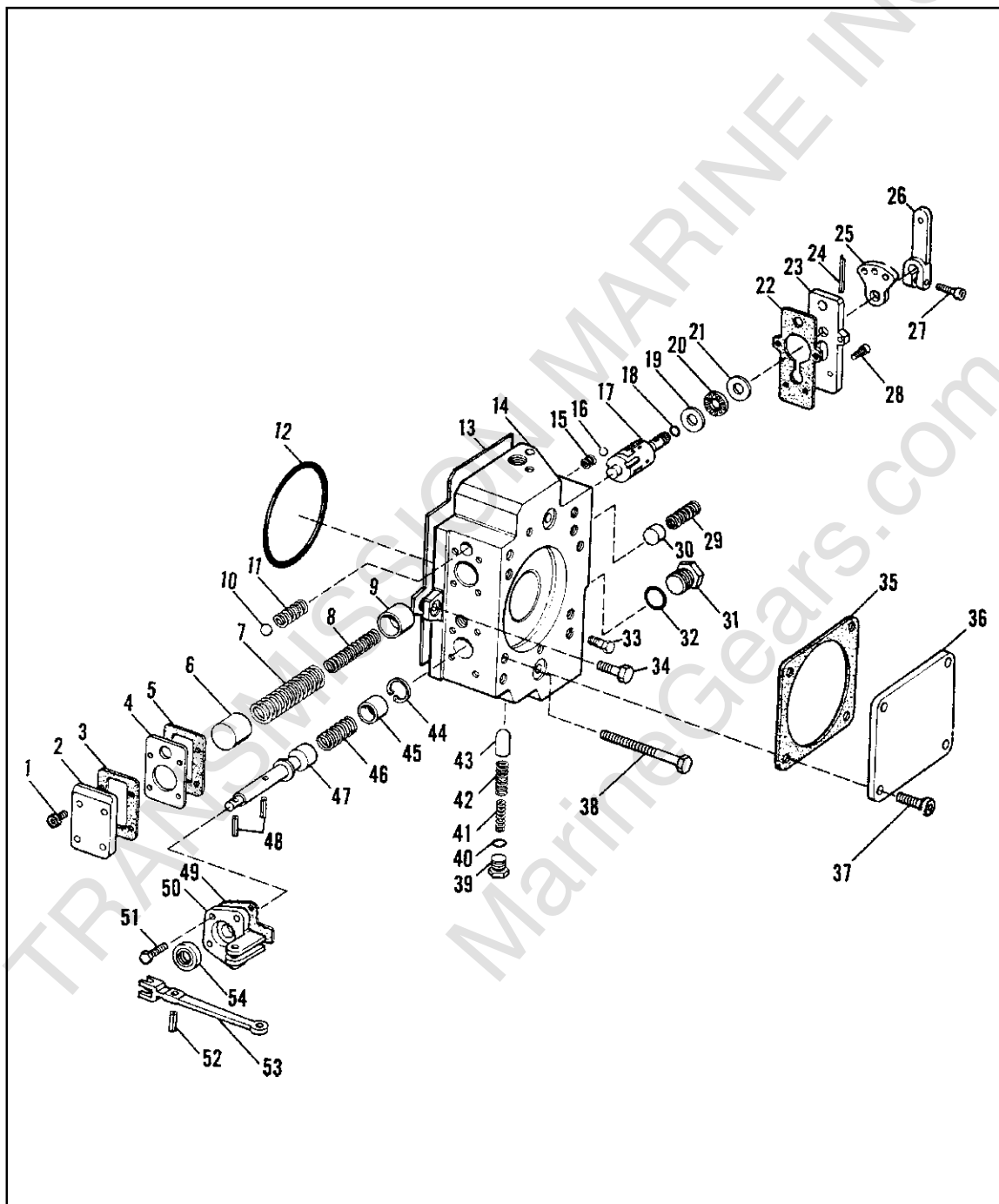


Forward Clutch Assembly.

MG-104



MG513

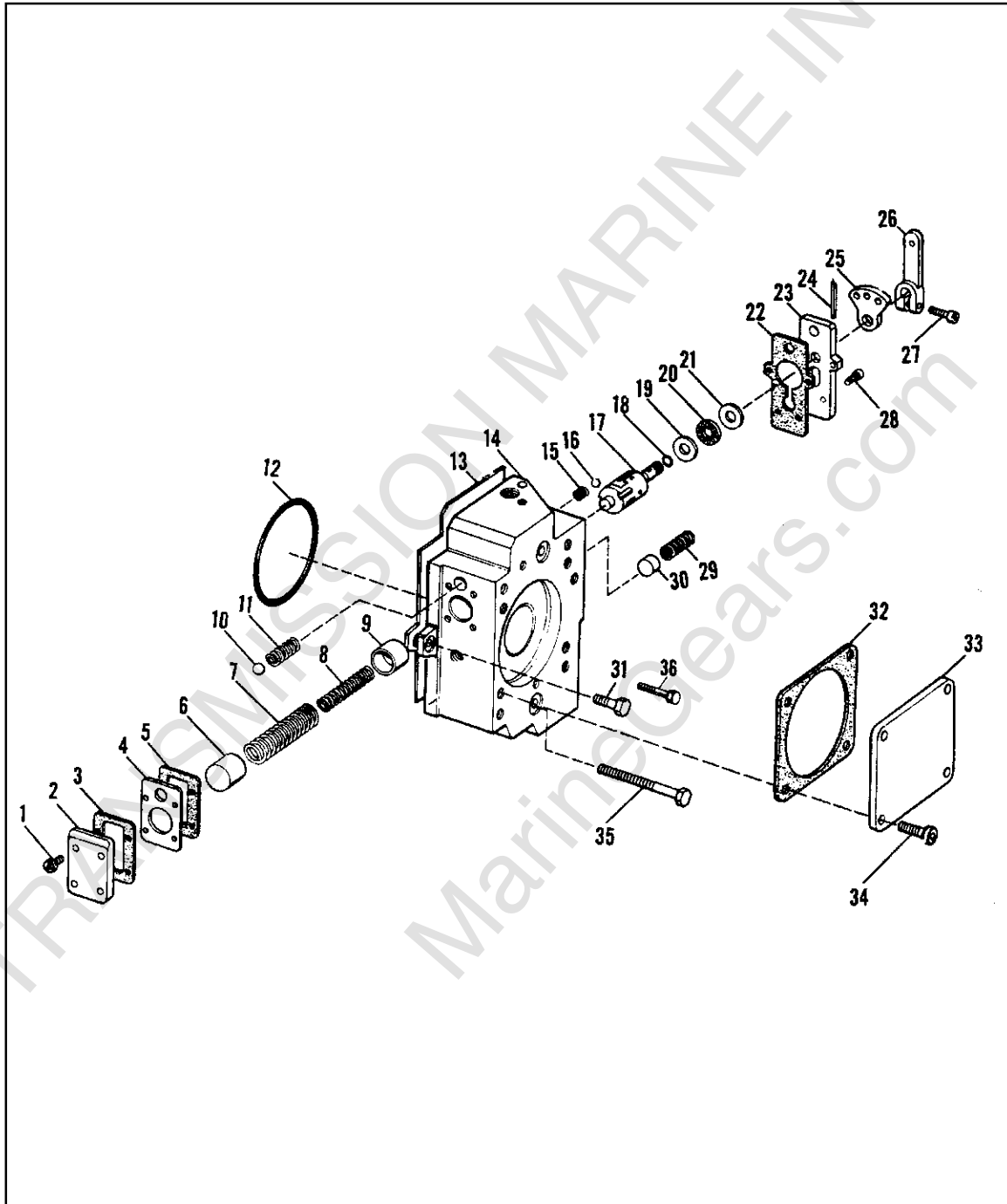


Control Valve/Trolling valve Block.

MG-105

Twin Disc

MG513

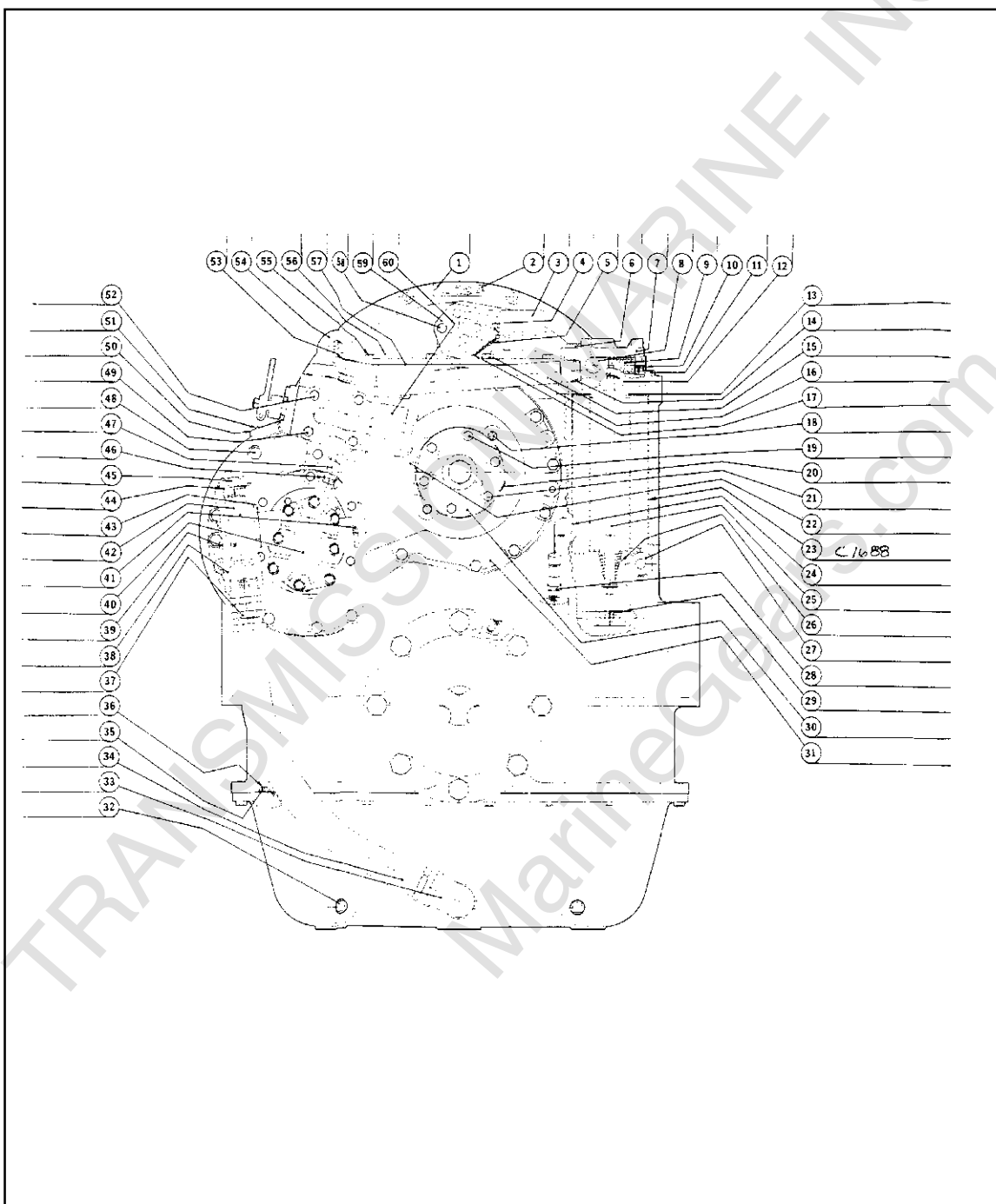


Control Valve Assembly.

MG-106



MG514C

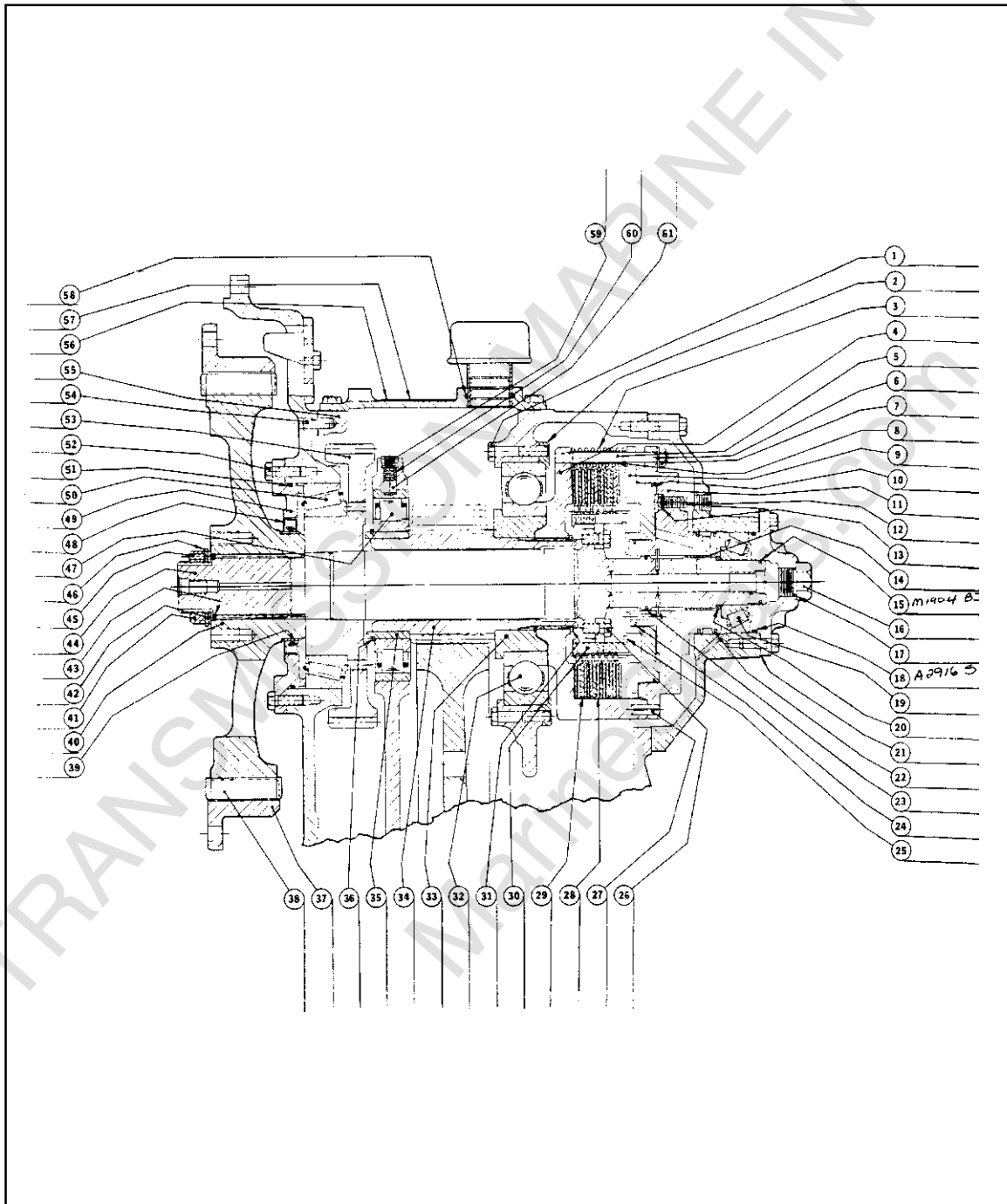


Main Housing & Filter Assembly.

MG-107

Twin Disc

MG514C

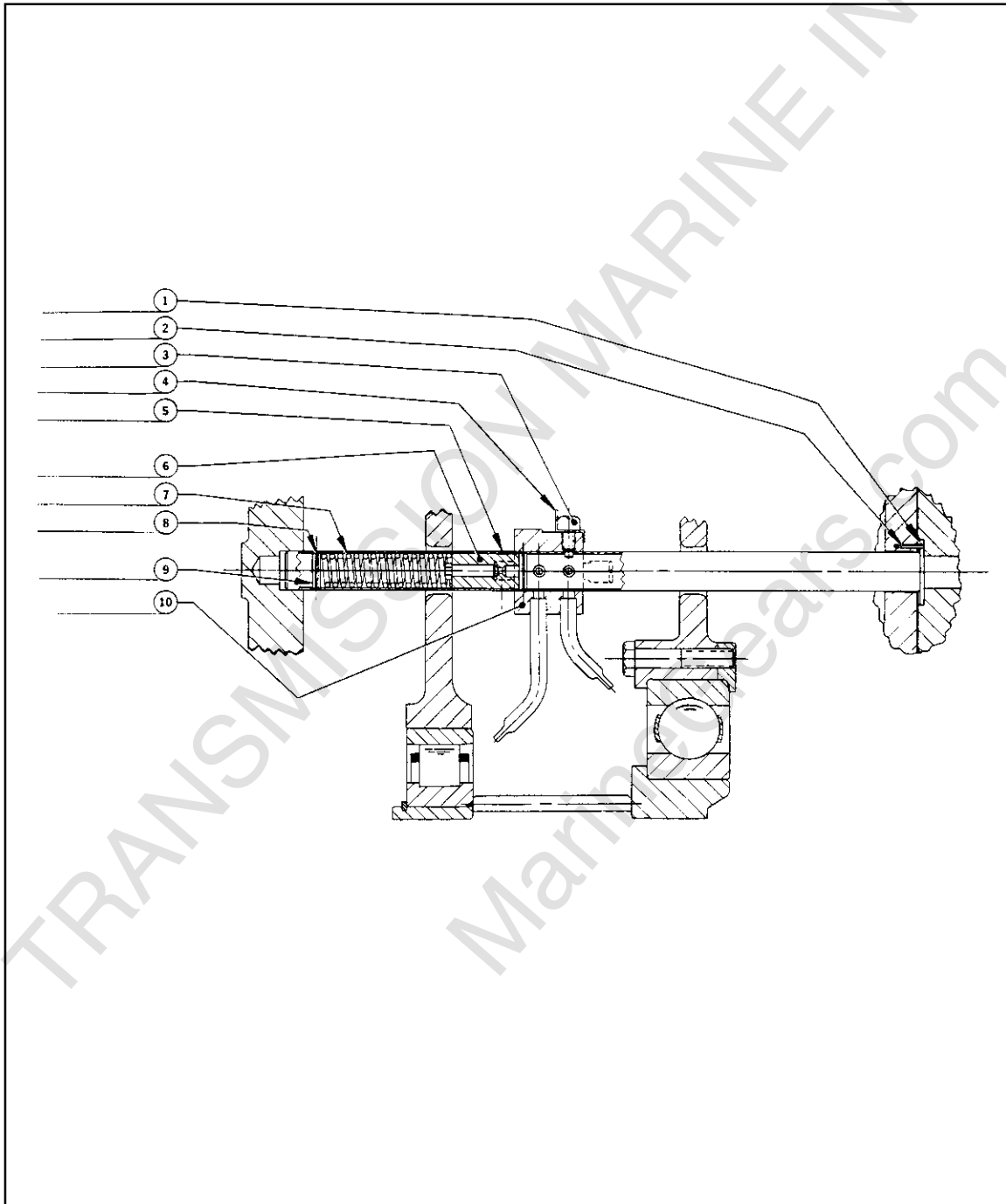


Main Housing & Clutches.

MG-108



MG514C

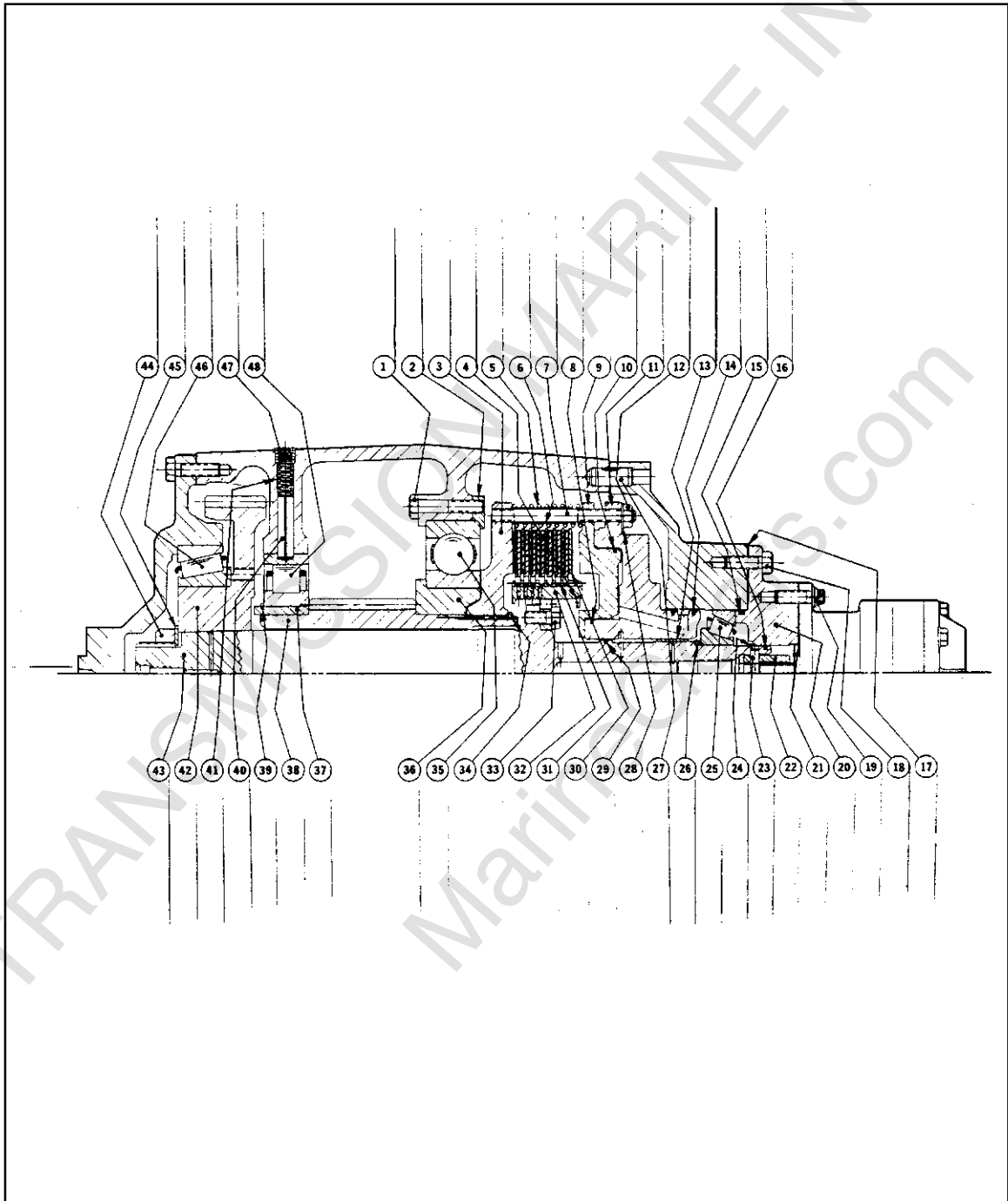


Control Valve Group.

MG-109

Twin Disc

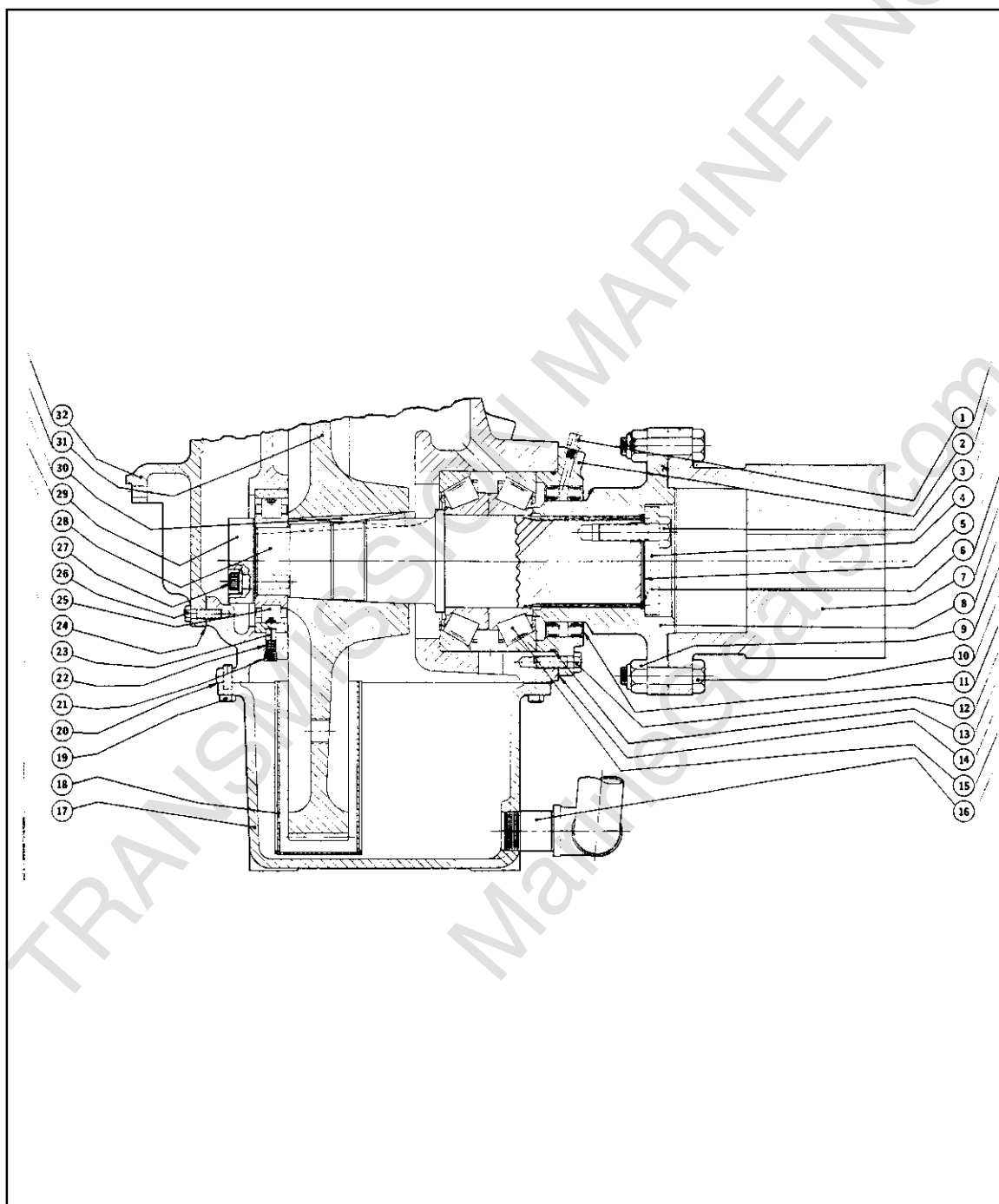
MG514C



Reverse Clutch Group.

MG-110

MG514C

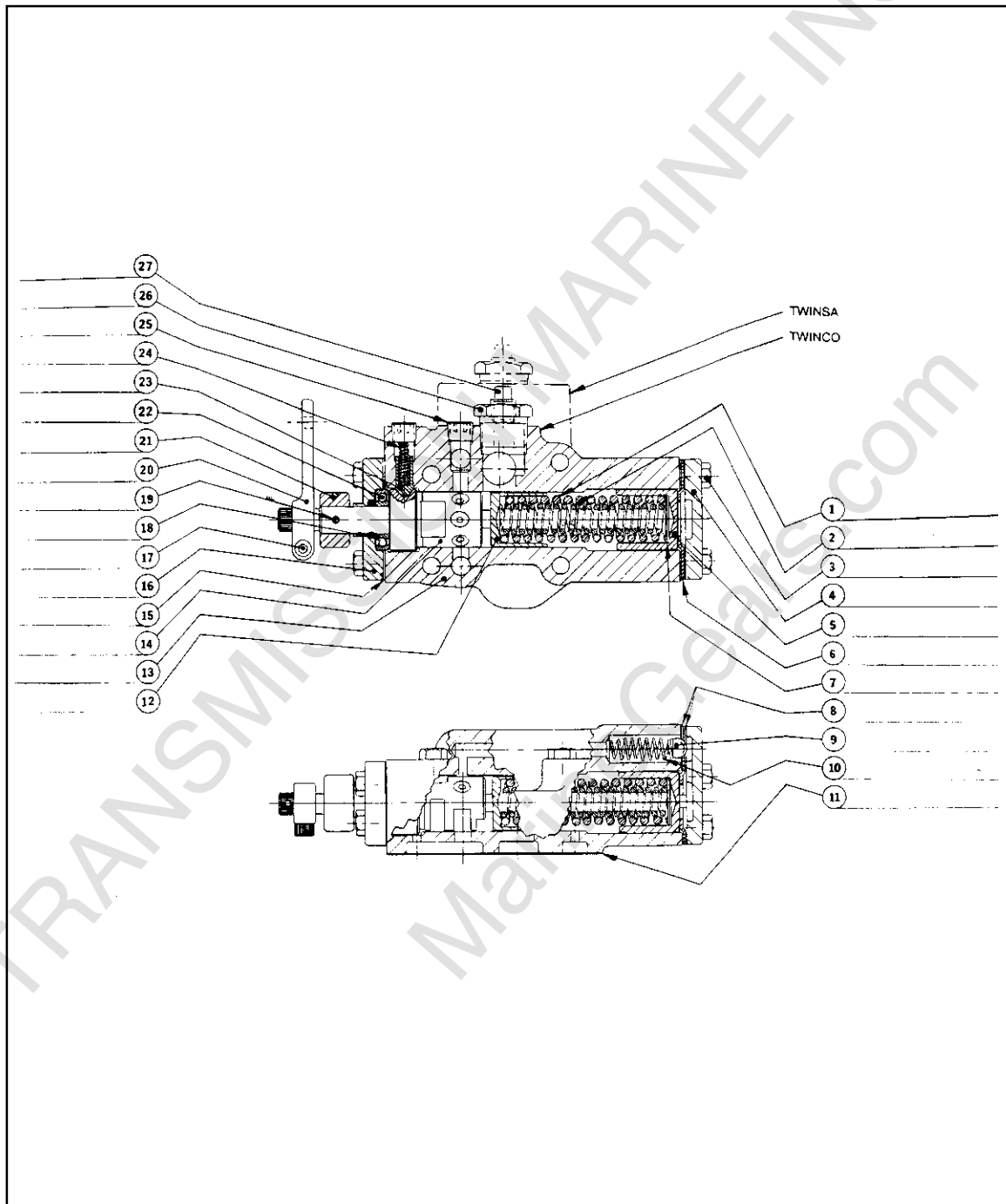


Output Shaft Group.

MG-111

Twin Disc

MG514C



Control & Trolling Valve Group.

MG-112



MG518

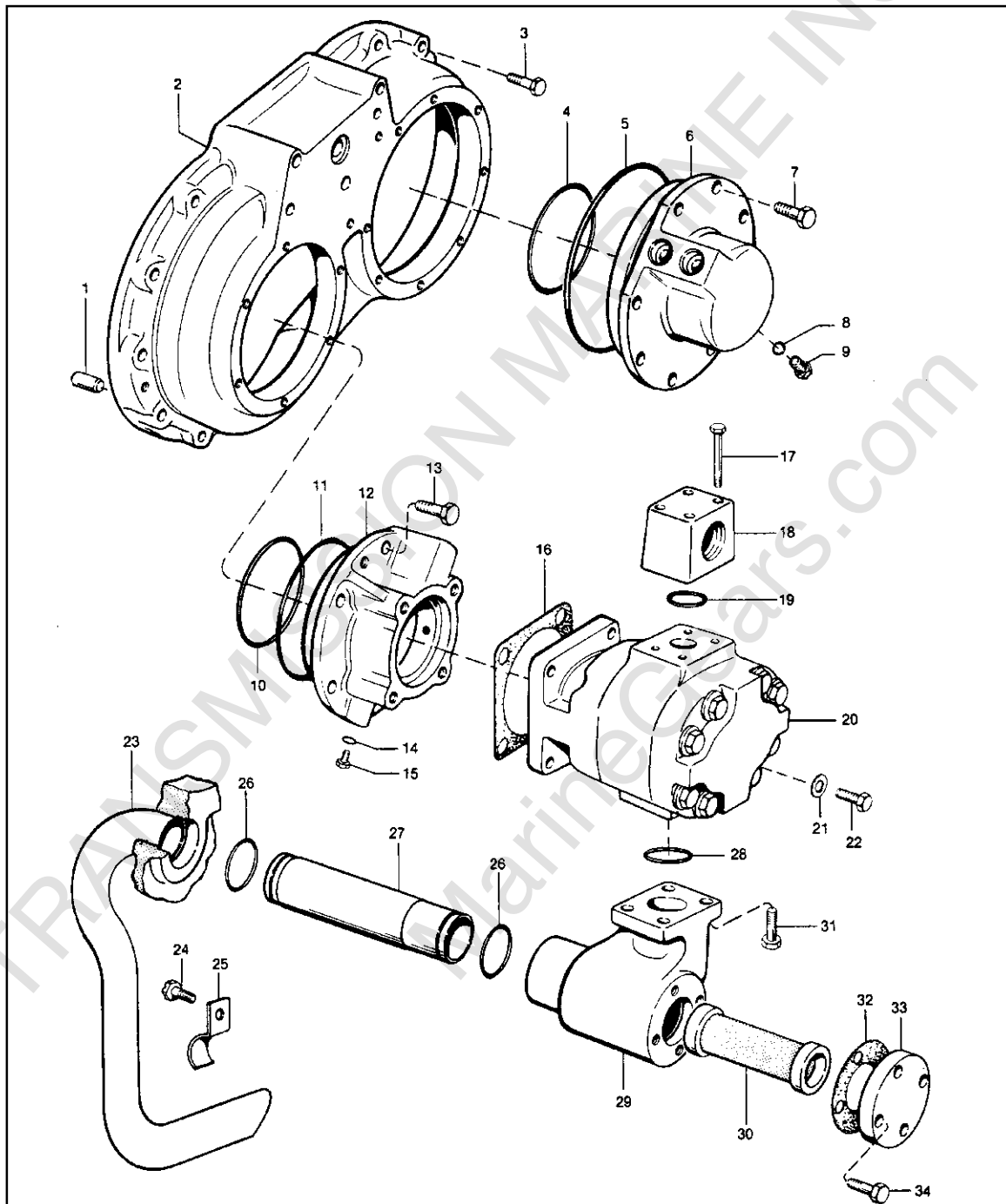
Item	Description	Qty.	Item	Description	Qty.
1	PIN, Dowel	2	22	SCREW, Hex-Head (1/2 x 1.25)	4
2	MANIFOLD	1	23	TUBE, Suction	1
3	SCREW, Hex-Head (3/8 x 2.00)	13	24	SCREW, Place-Head (3/8 x 1.50)	1
4	O-RING	1	25	CLAMP, Tube	1
5	O-RING	1	26	O-RING	2
6	COLLECTOR, Forward Shaft	1	27	TUBE, Connector	1
7	SCREW, Hex-Head (3/8 x 1.0)	8	28	O-RING	1
8	O-RING	1	29	HOUSING, Oil Strainer	1
9	PLUG, O-ring	1	30	STRAINER, Pump Section 31479	1
10	O-RING	1	31	SCREW, Hex-Head (1/2 x 1.25)	4
11	O-RING	1	32	GASKET, Strainer Cover	1
12	COLLECTOR, Reverse Shaft	1	33	COVER, Strainer	1
13	SCREW, Hex-Head (3/8 x 1.0)	6	34	SCREW, Hex-Head (3/8 x 1.0)	4
14	O-RING	1	35	COUPLING ASSEMBLY, Pump	1
15	PLUG, O-ring	1	36	O-RING	1
16	GASKET	1	37	O-RING	1
17	SCREW, Hex-Head (7/16 x 2.75)	4	38	COLLECTOR, Forward Shaft	1
18	BLOCK ASSEMBLY, Pump Outlet	1	39	SCREW, Hex-Head (3/8-16 x 1.12)	8
19	O-RING	1	40	GASKET, Cover Plate	1
20	PUMP, Oil	1	41	PLATE, Cover	1
21	WASHER	2	42	SCREW, Hex-Head (1/2-13 x 1.00)	4

Manifold Assembly.

MG-113

Twin Disc

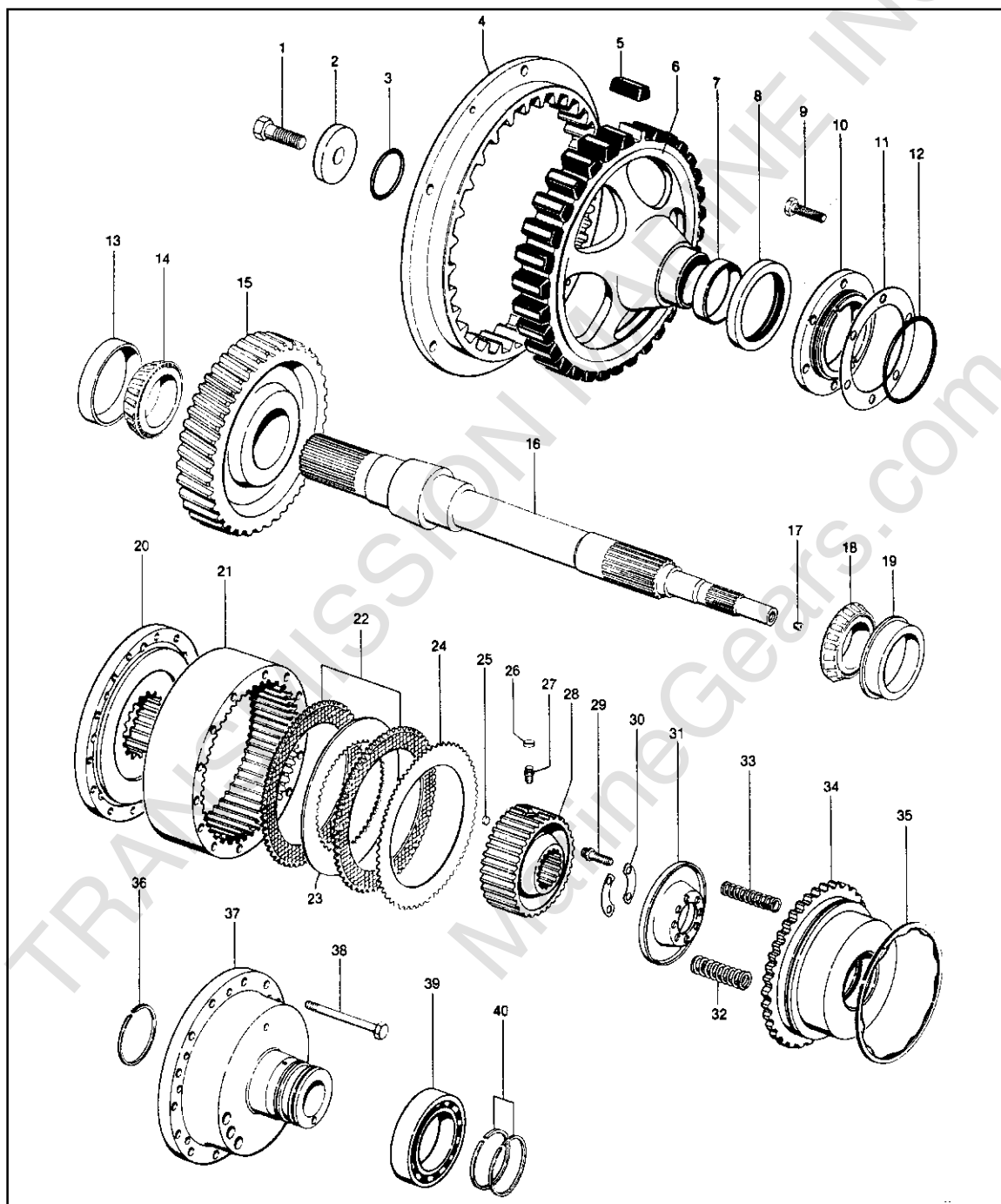
MG518



Pump & Manifold Assembly.

MG-114

MG518

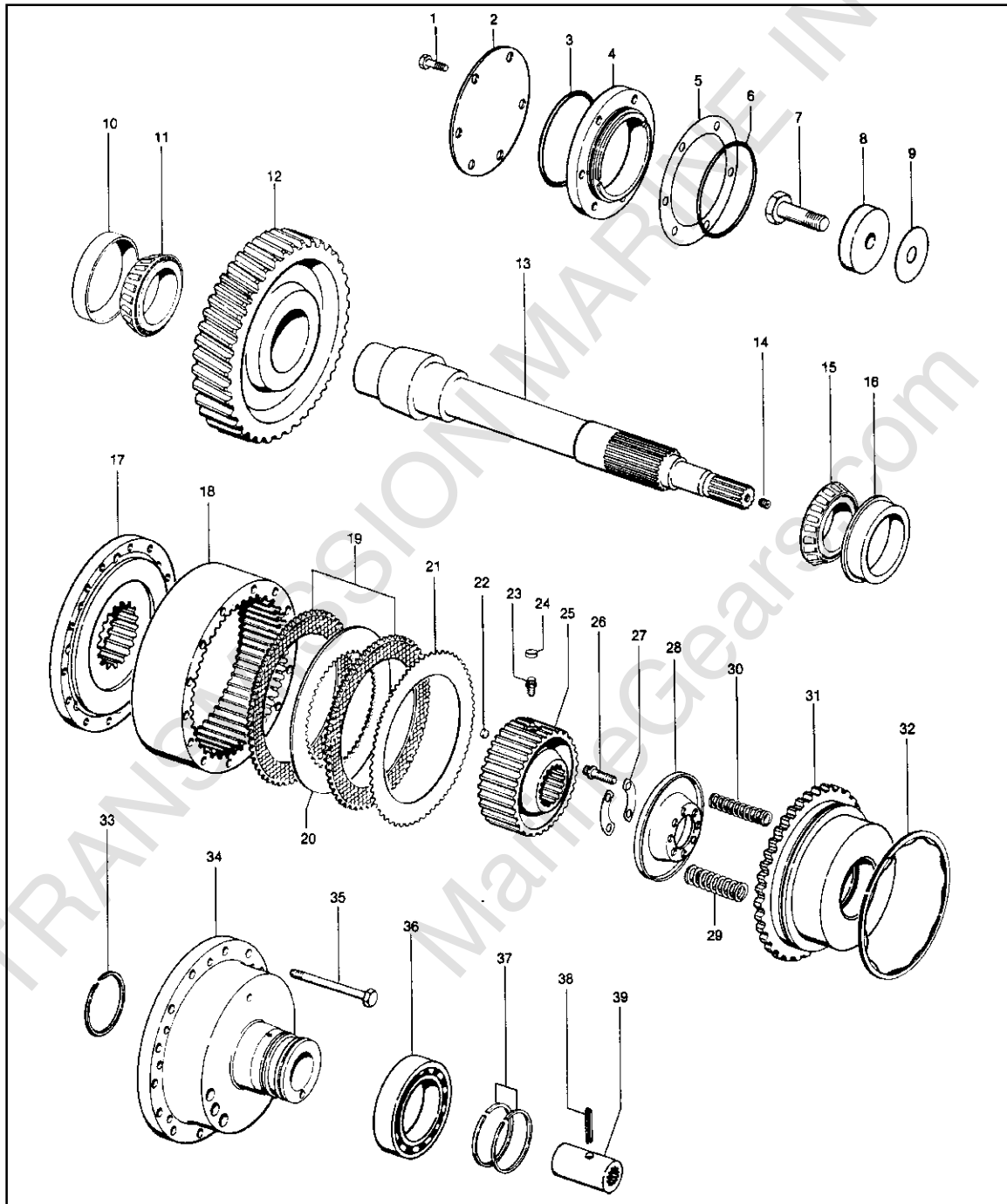


Input Shaft Clutch Group.

MG-115

Twin Disc

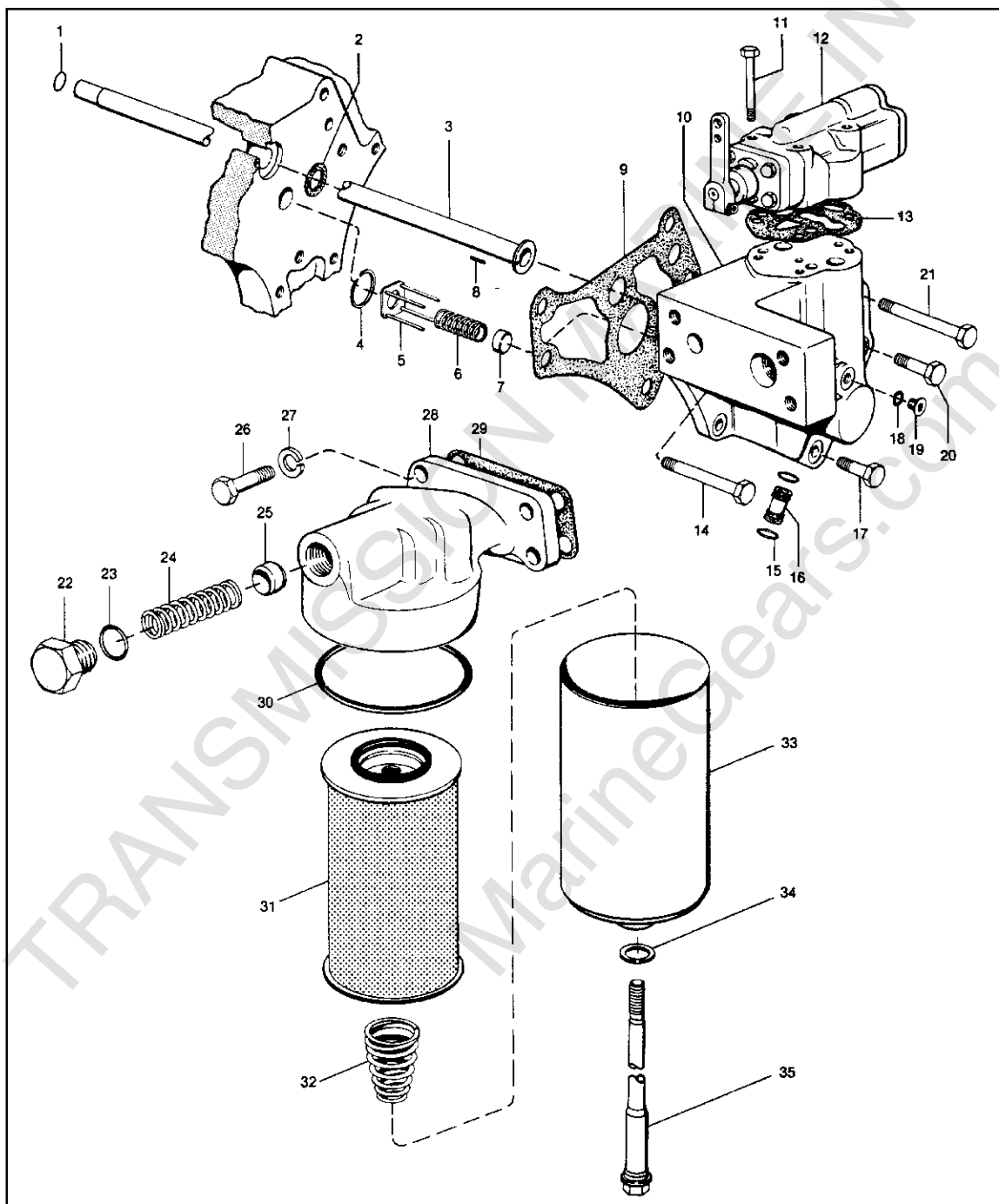
MG518



Lay Shaft Clutch Group.

MG-116

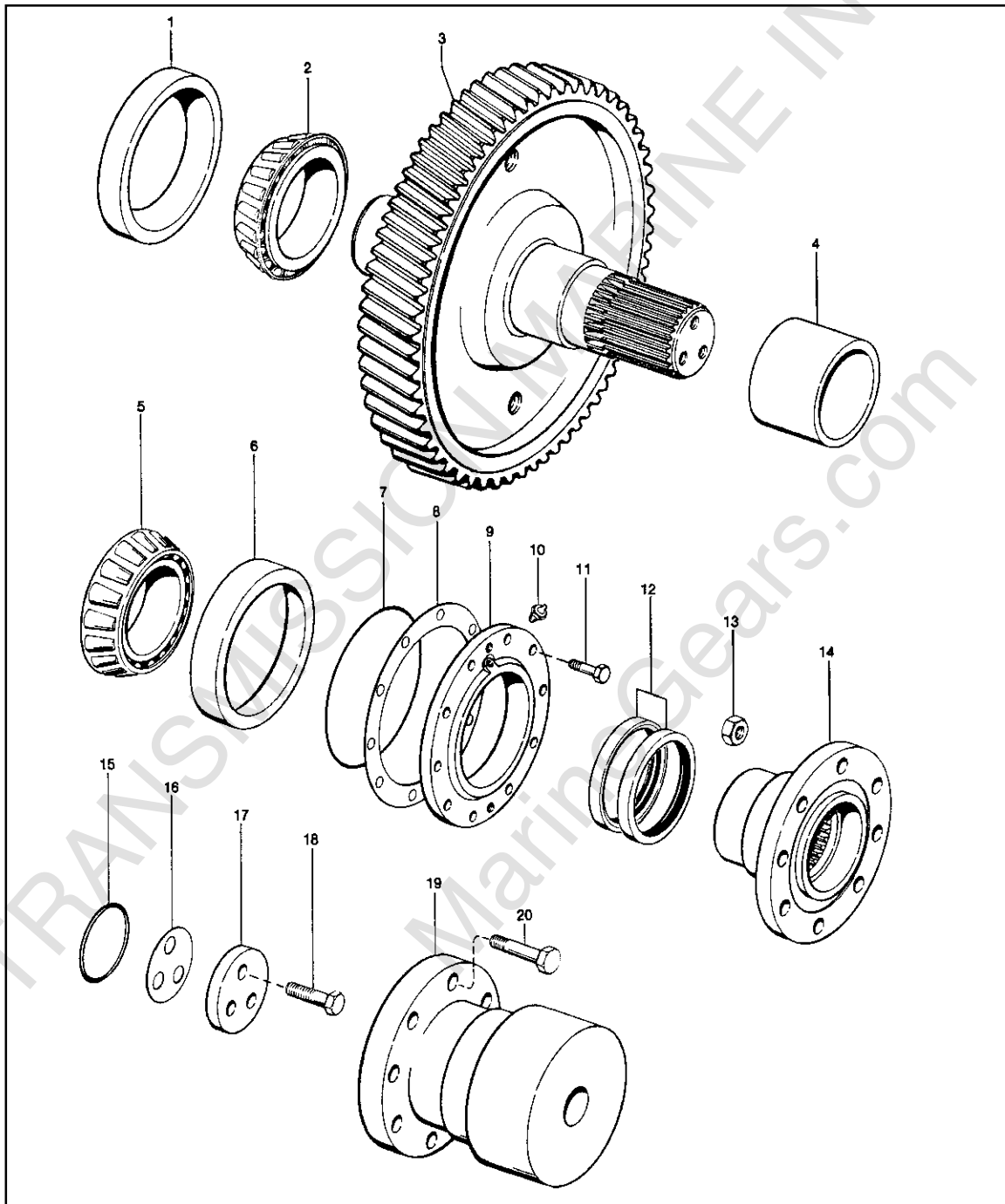
MG518



Control Valve & Oil Filter Assemblies.

MG-117

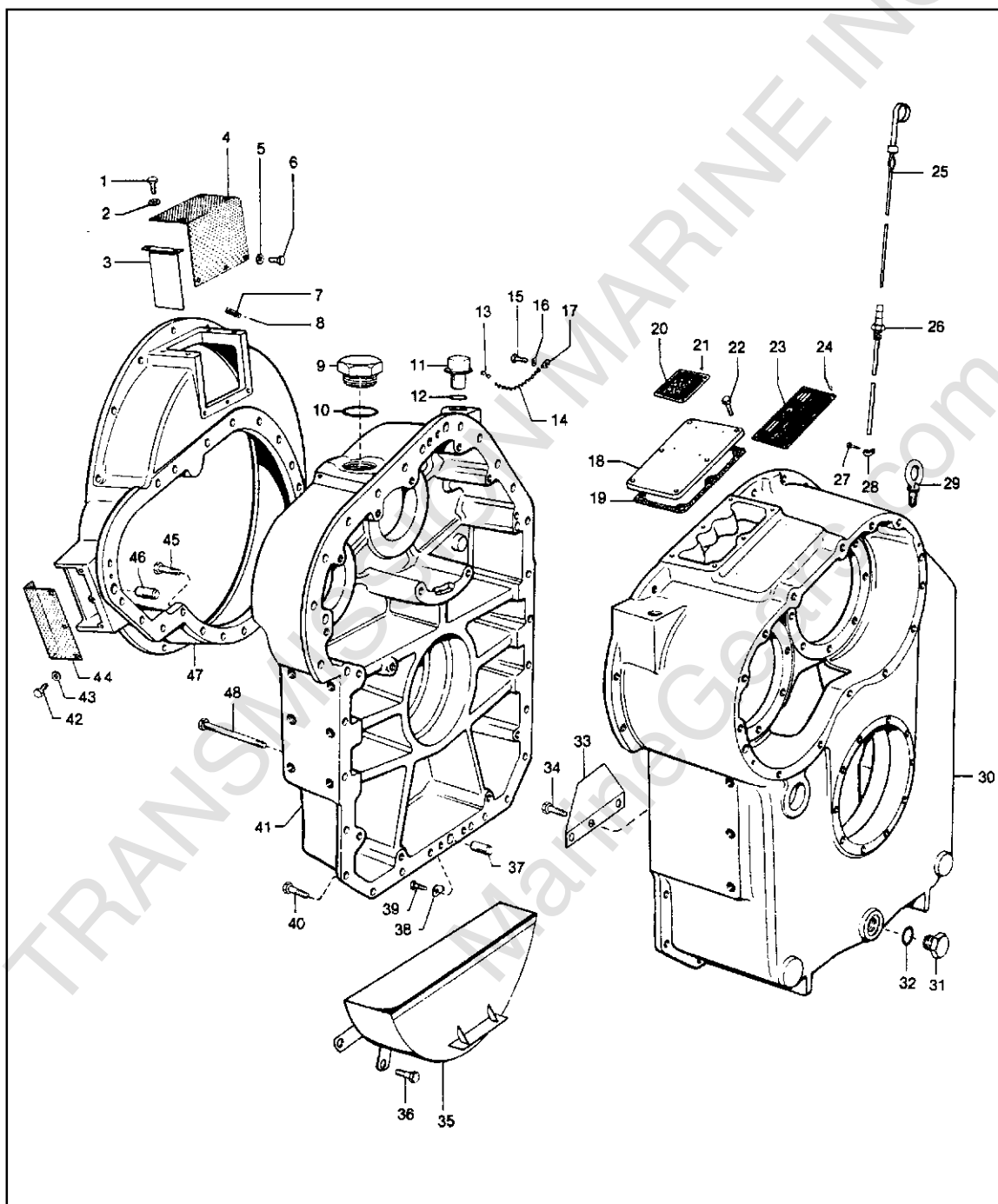
MG518



Output Shaft Group.

MG-118

MG518

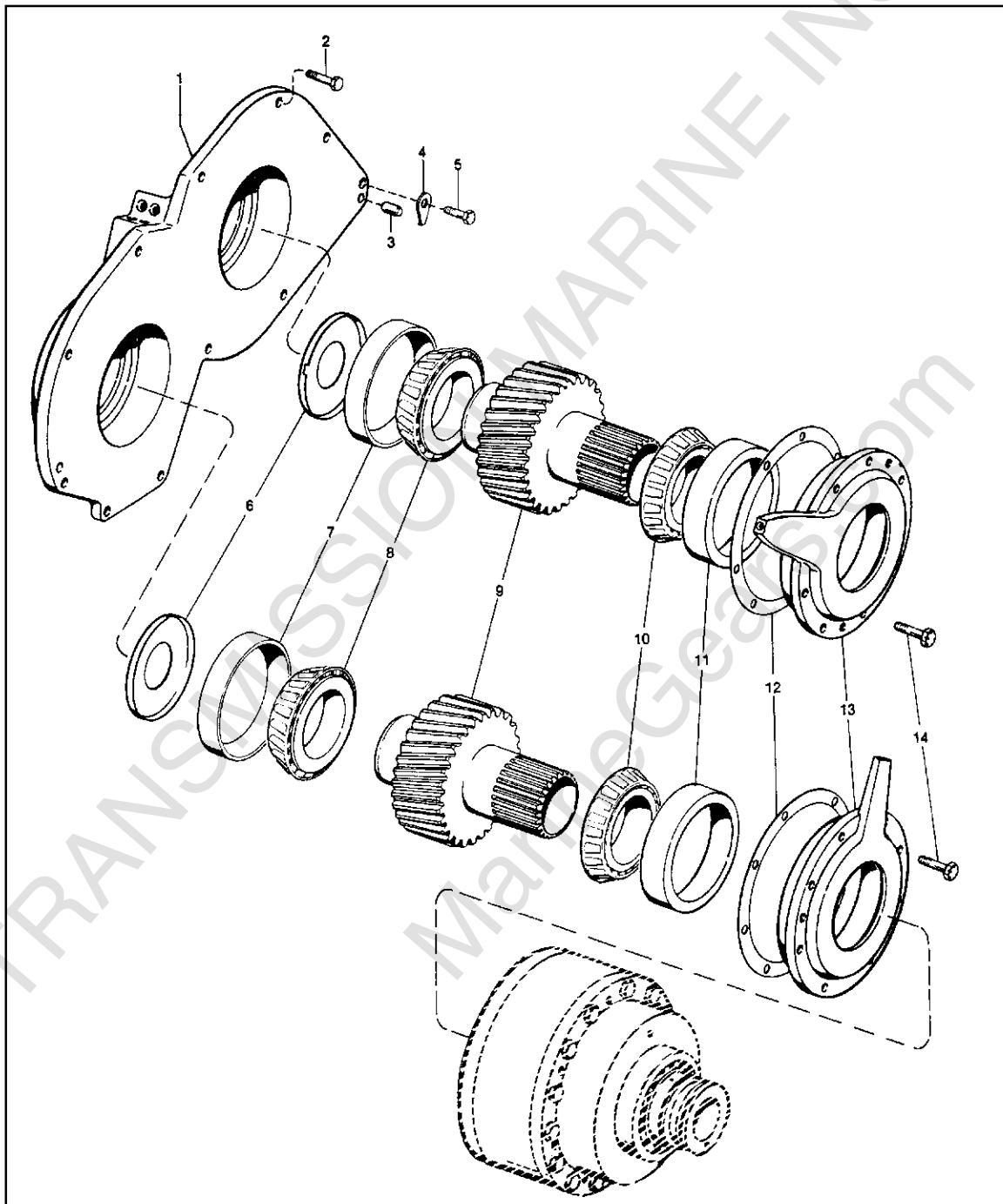


Main Housing Assembly.

MG-119

Twin Disc

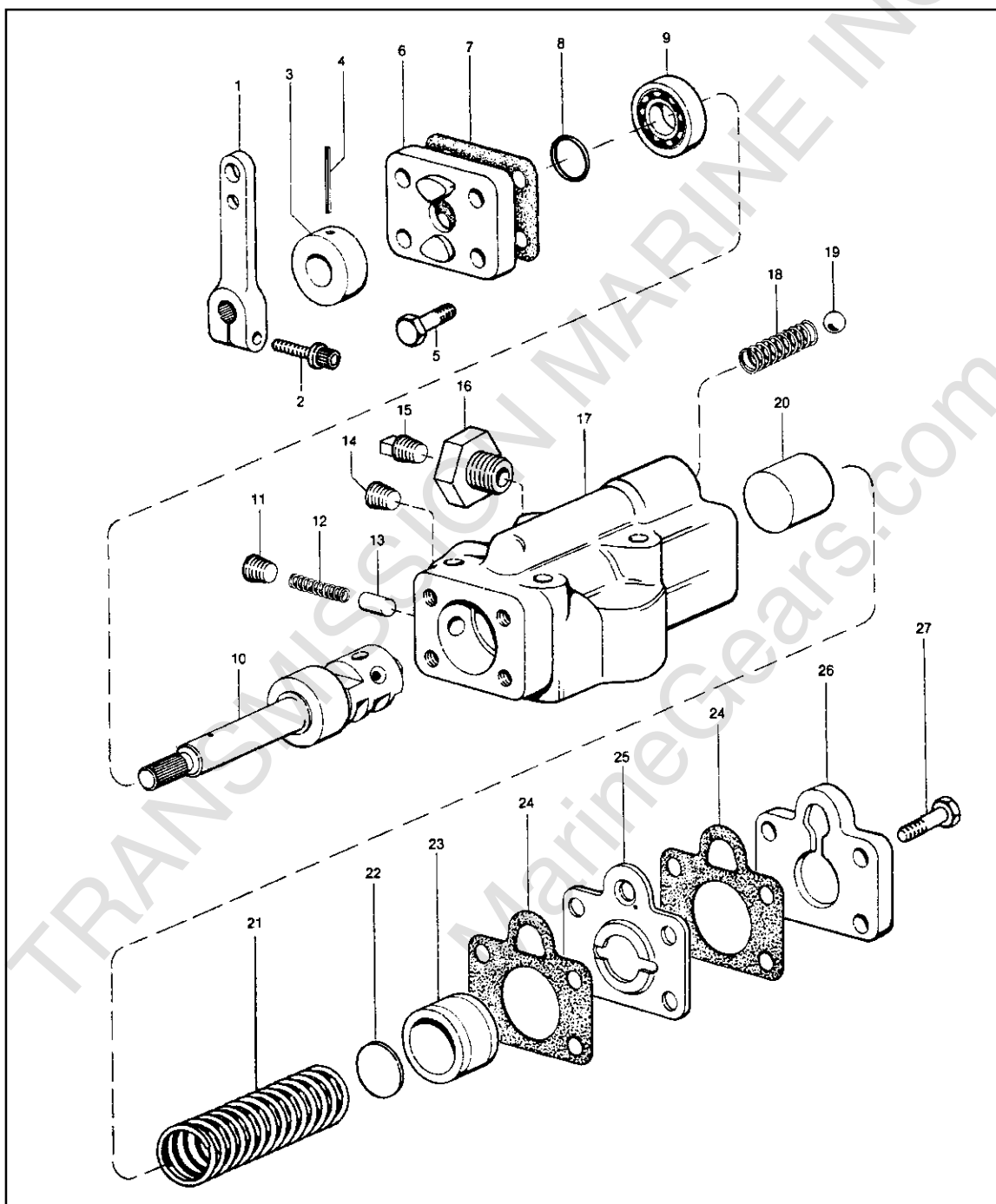
MG518



Pinion Gear Group.

MG-120

MG518

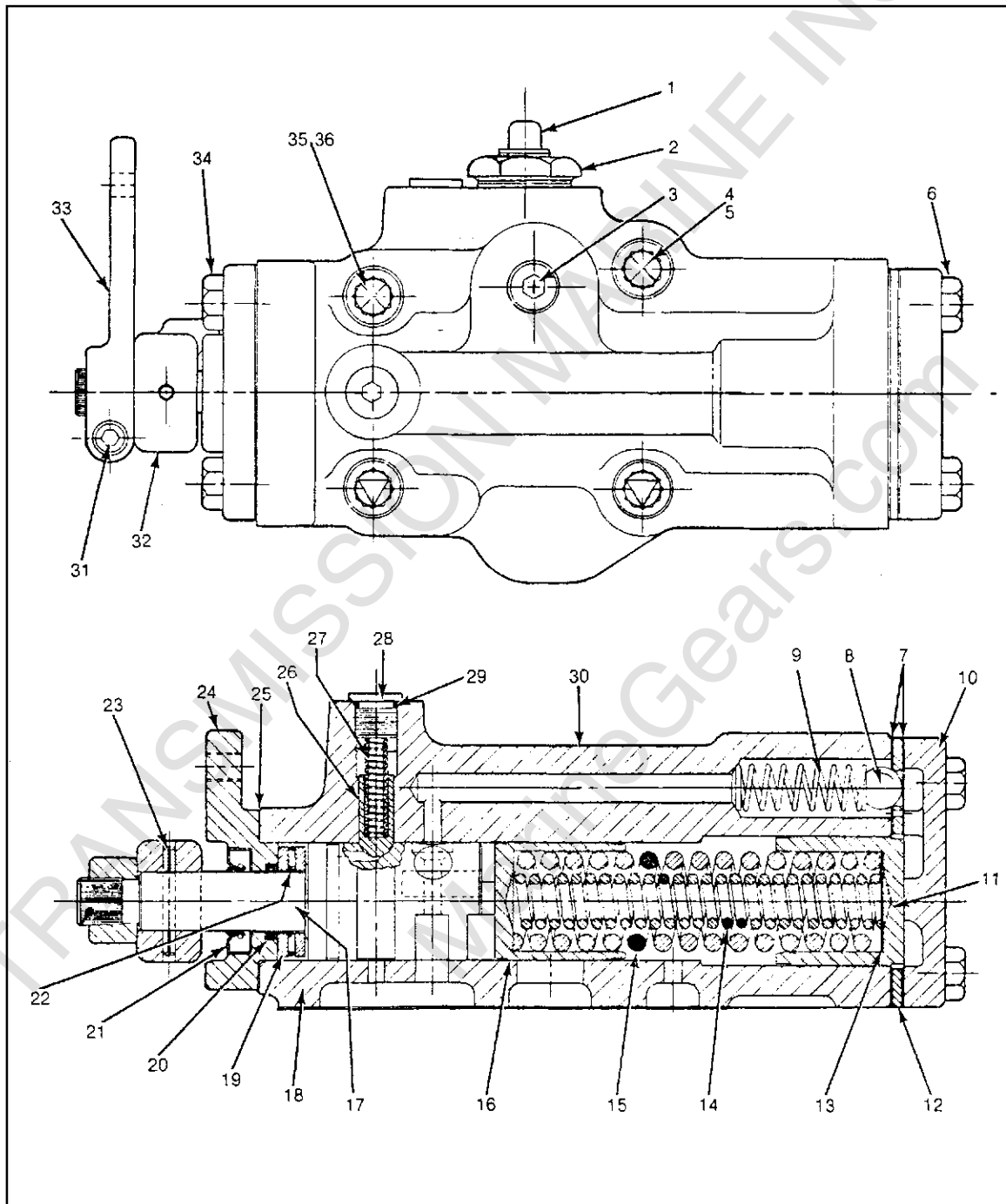


Control Valve Assembly.

MG-121

Twin Disc

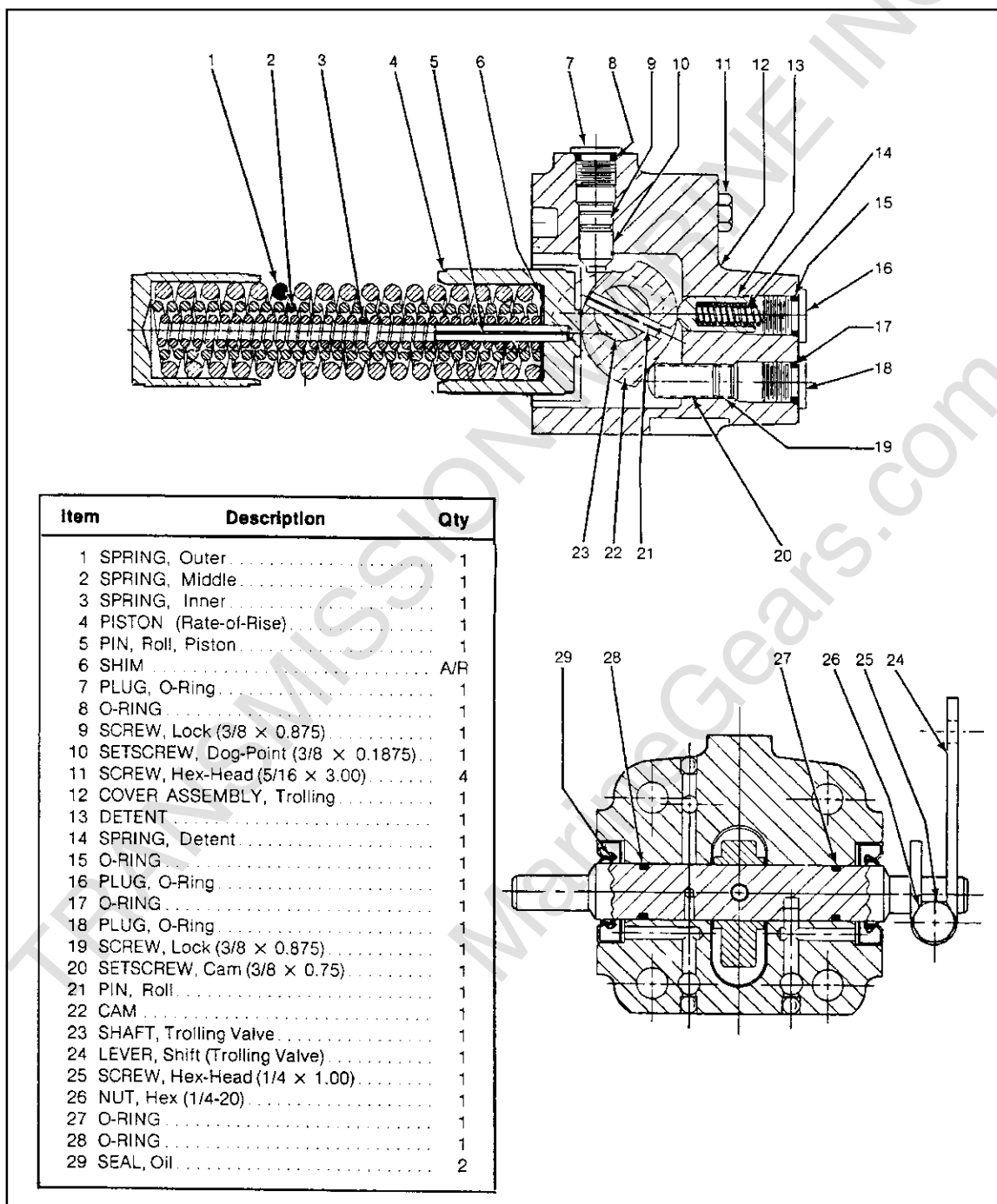
MG518



Control Valve & Trolling Valve Assemblies.

MG-122

MG518

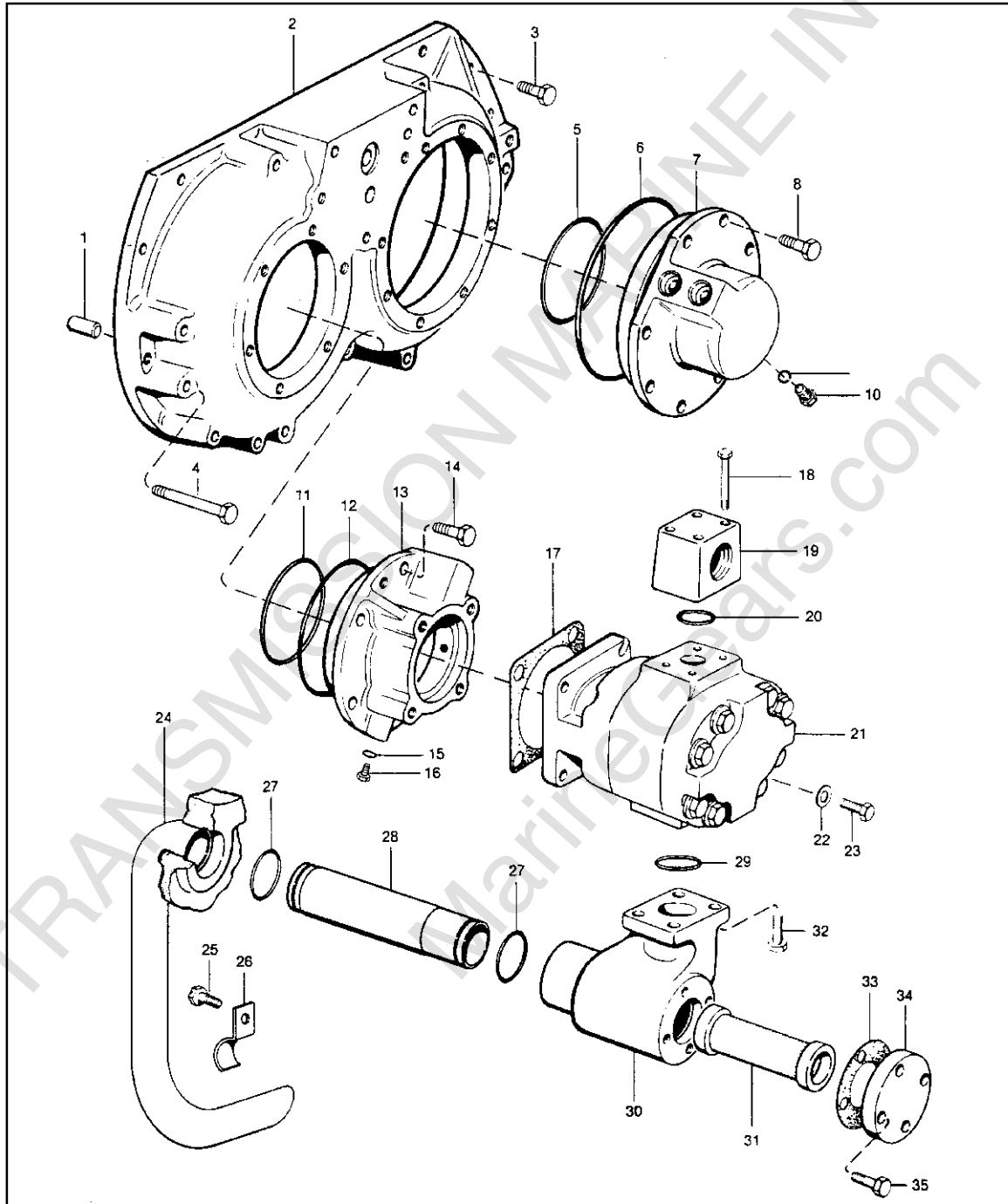


Control Valve Assembly.

MG-123

Twin Disc

MG520



Manifold & Pump Assembly.

MG-124

MG520

Item	Description	Qty.	Item	Description	Qty.
1	PIN, Dowel	2	23	SCREW, Hex-Head (1/2 x 1.25)	4
2	MANIFOLD	1	24	TUBE, Suction	1
3	SCREW, Hex-Head (3/8 x 1.25)	8	25	SCREW, Place-Head (3/8 x 1.50)	1
4	SCREW, Hex-Head (3/8 x 3.50)	9	26	CLAMP, Tube	1
5	O-RING	1	27	O-RING	2
6	O-RING	1	28	TUBE, Connector	1
7	COLLECTOR, Forward Shaft	1	29	O-RING	1
8	SCREW, Hex-Head (3/8 x 1.0)	8	30	HOUSING, Oil Strainer	1
9	O-RING	1	31	STRAINER, Pump Section	1
10	PLUG, O-Ring	1	32	SCREW, Hex-Head (1/2 x 1.25)	4
11	O-RING	1	33	GASKET, Strainer Cover	1
12	O-RING	1	34	COVER, Strainer	1
13	COLLECTOR, Reverse Shaft	1	35	SCREW, Hex-Head (3/8 x 1.0)	4
14	SCREW, Hex-Head (3/8 x 1.0)	6	36	COUPLING ASSEMBLY, Pump	1
15	O-RING	1	37	O-RING	1
16	PLUG, O-Ring	1	38	O-RING	1
17	GASKET	1	39	COLLECTOR, Forward Shaft	1
18	SCREW, Hex-Head (7/16 x 2.75)	4	40	SCREW, Hex-Head (3/8-16 x 1.12)	8
19	BLOCK ASSEMBLY, Pump Outlet	1	41	GASKET, Cover Plate	1
20	O-RING	1	42	PLATE, Cover	1
21	PUMP, Oil	1	43	SCREW, Hex-Head (1/2-13 x 1.00)	4
22	WASHER	2			

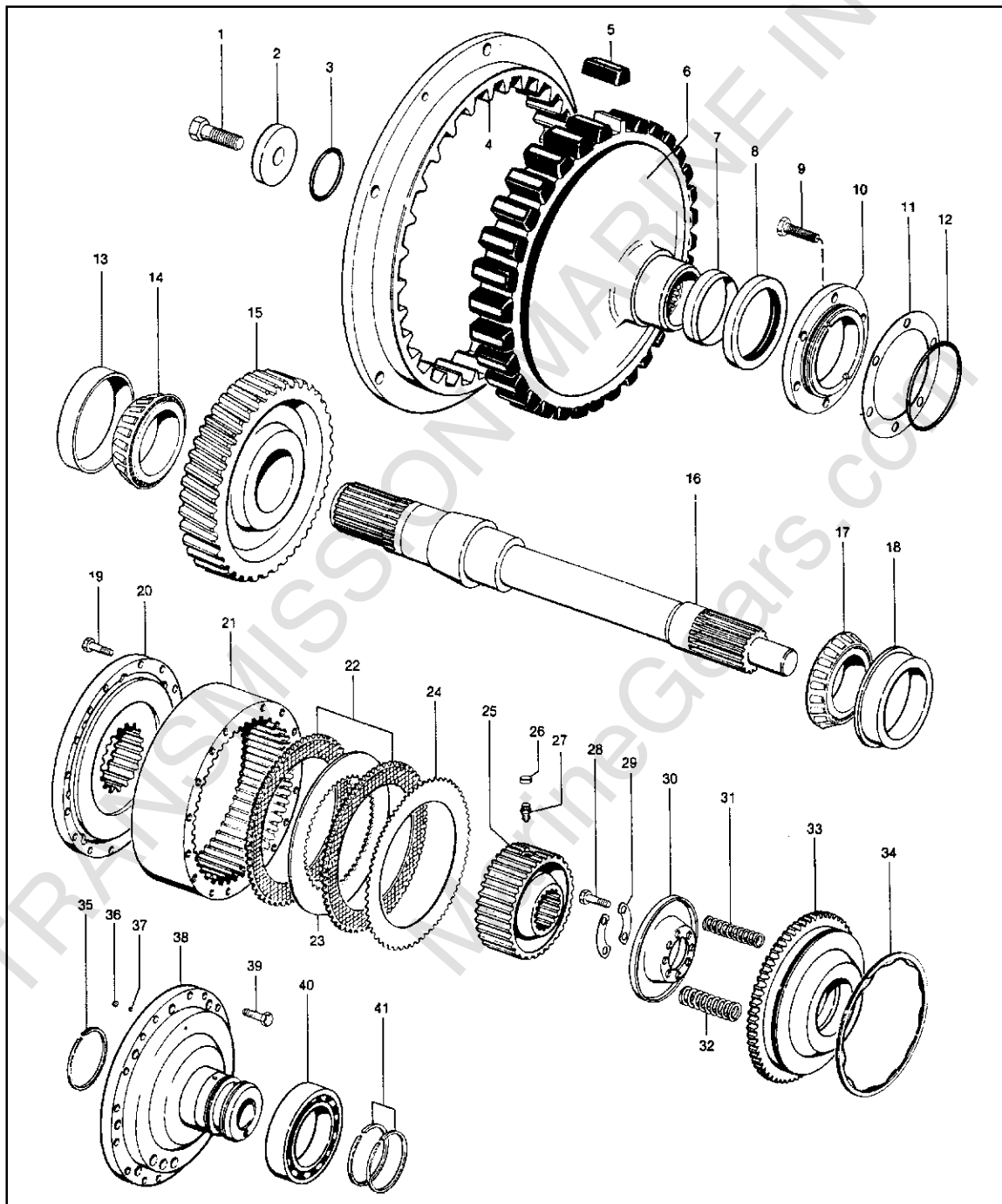
Forward shaft pump drive adapter parts.

Manifold Assembly.

MG-125

Twin Disc

MG520

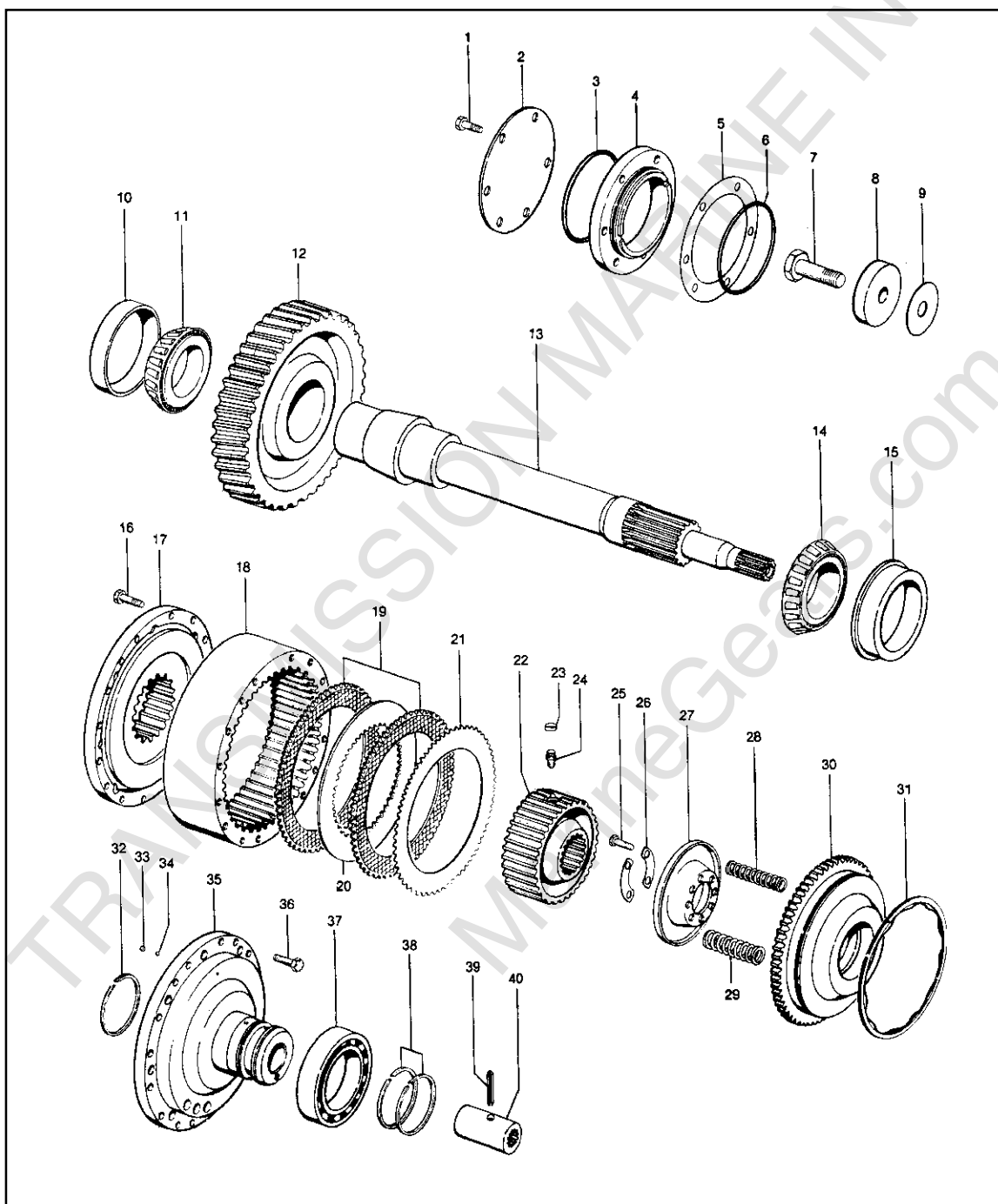


Spider Drive & Input Shaft Assembly.

MG-126



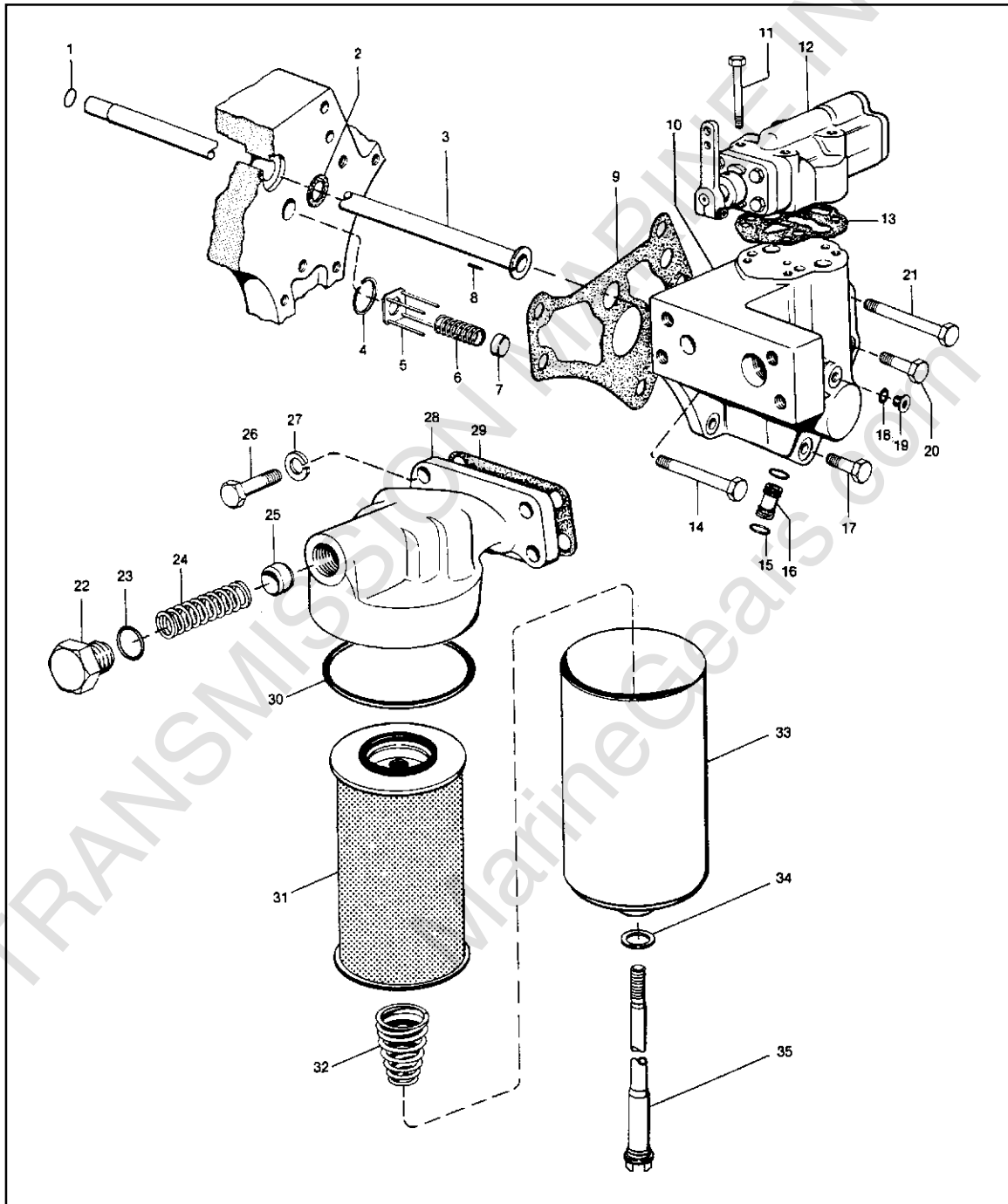
MG520



Lay Shaft Assembly.

MG-127

MG520

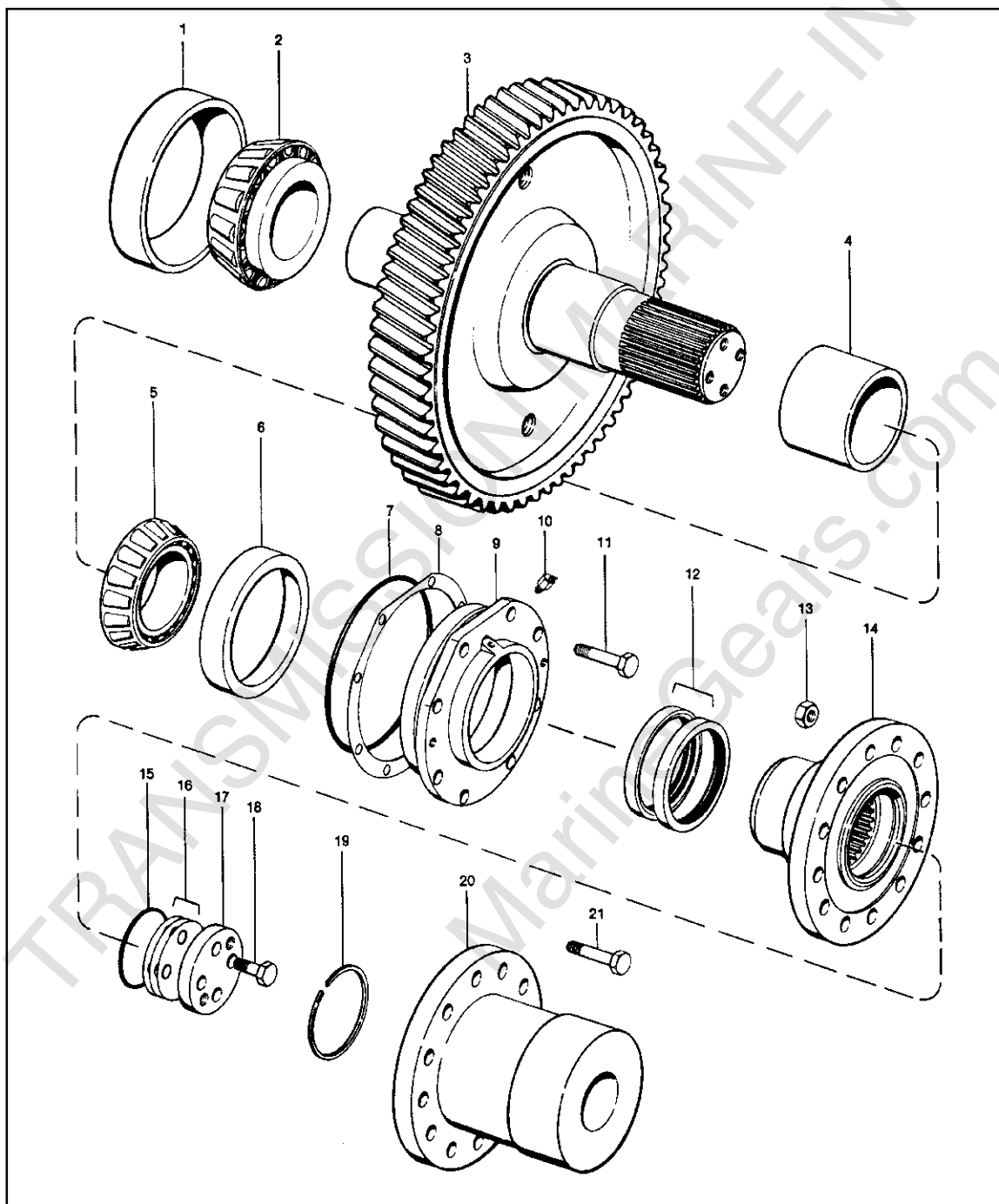


Oil Filter & Control valve Assemblies.

MG-128



MG520

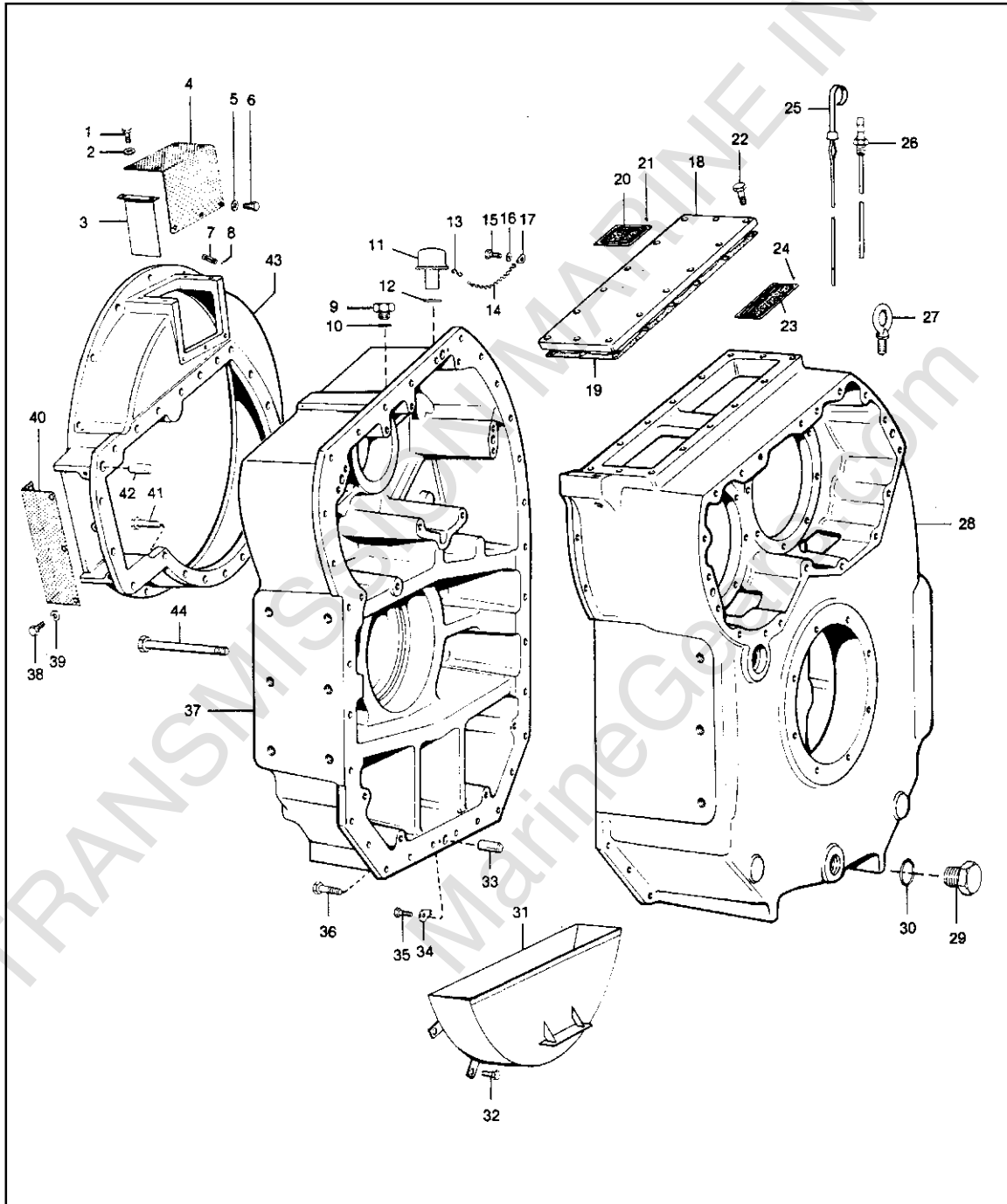


Output Shaft Group.

MG-129

Twin Disc

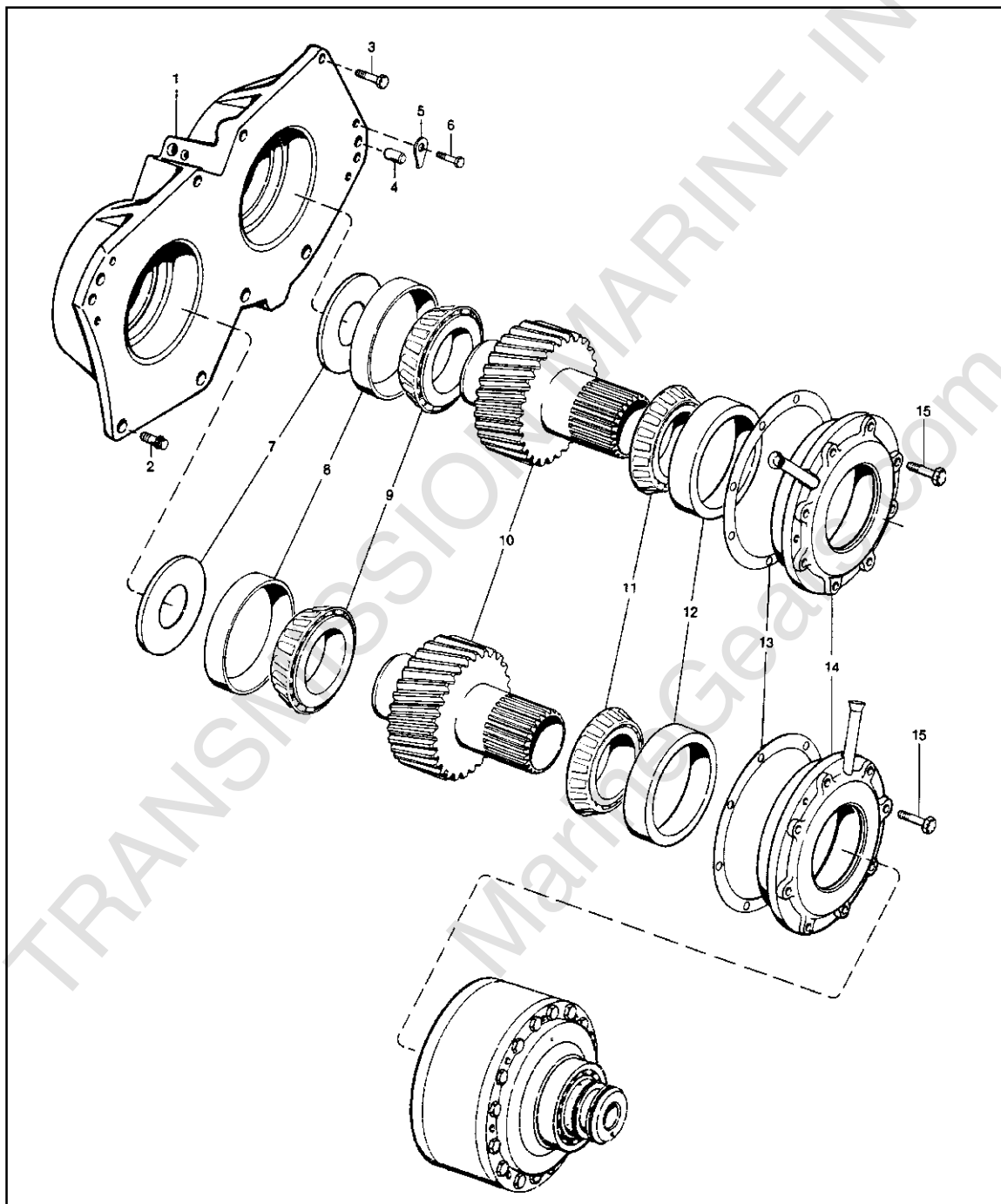
MG520



Main Housing Assembly.

MG-130

MG520



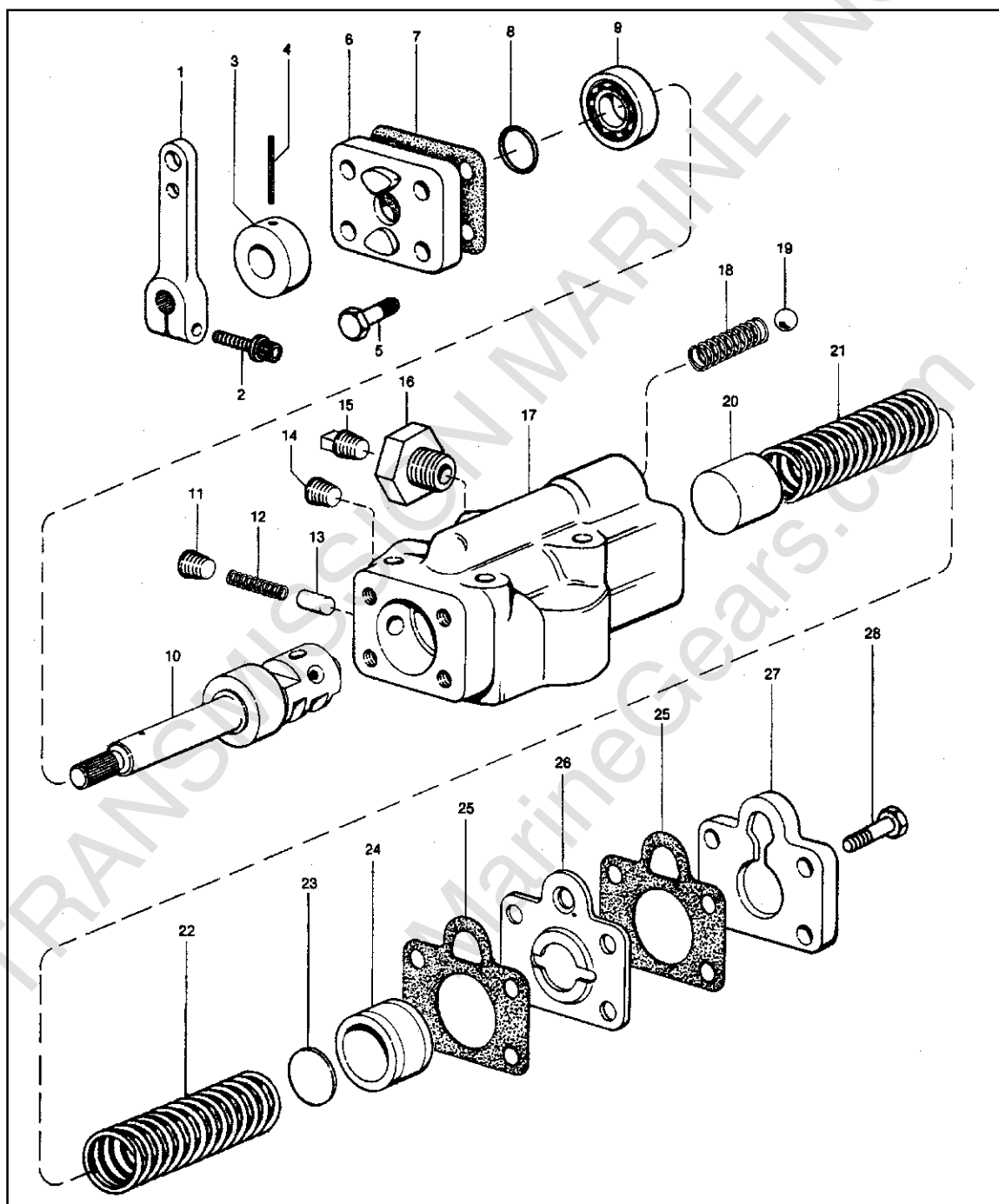
Pinion Gear Assemblies.

MG-131

Twin Disc

**TRANSMISSION
MARINE INC.**

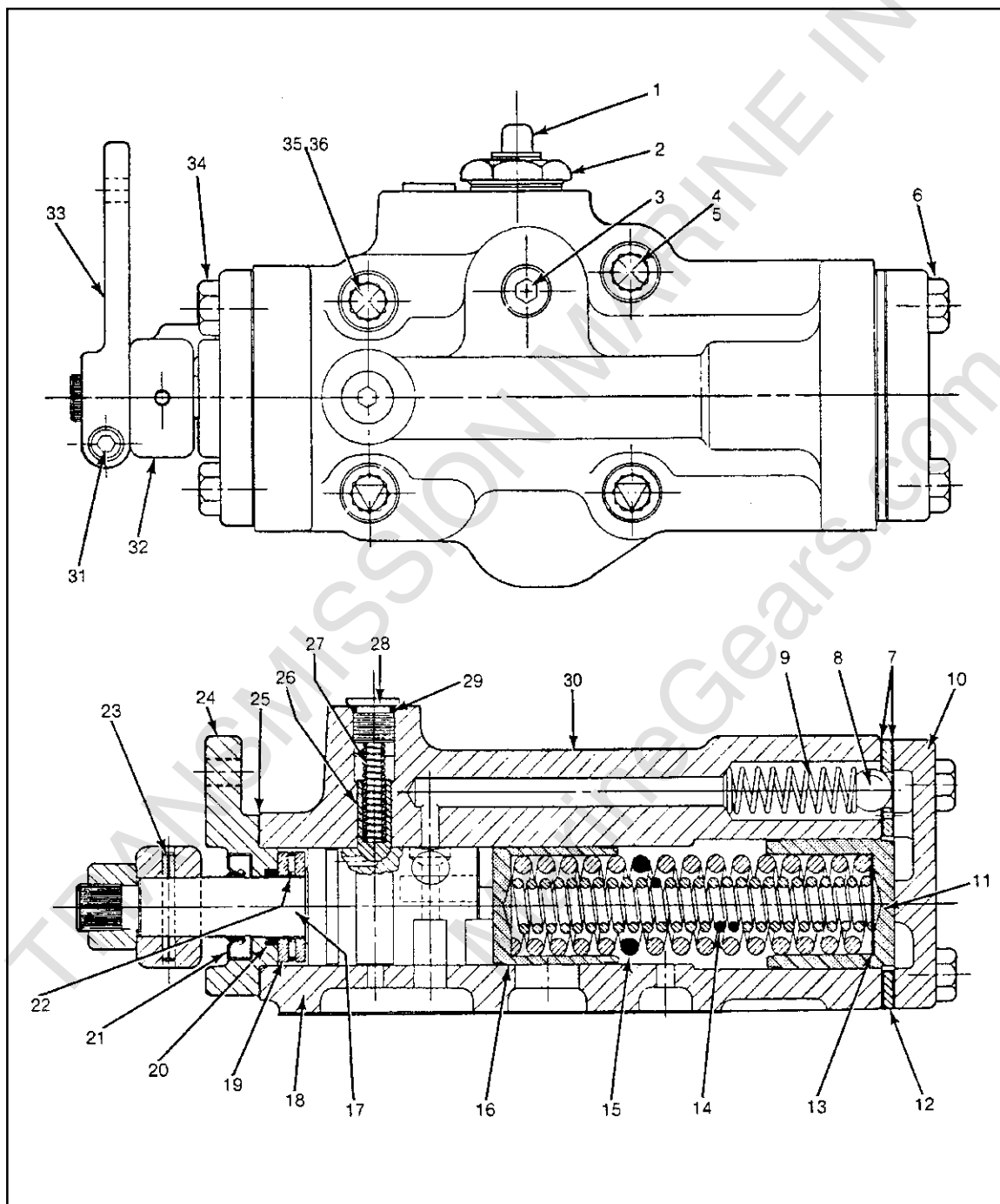
MG520



Control Valve Assembly.

MG-132

MG520

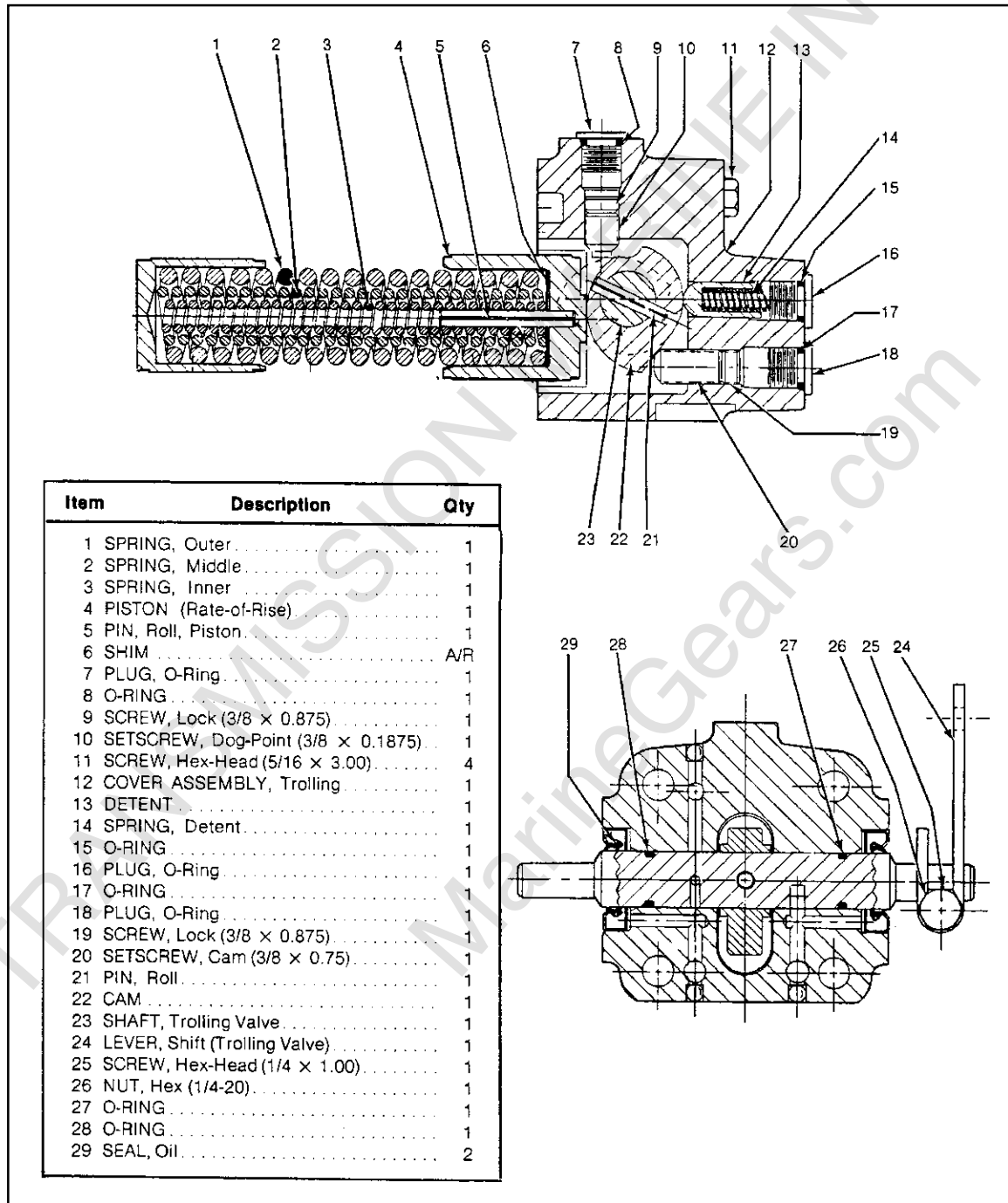


Control Valve & Trolling Valve Assemblies.

MG-133

Twin Disc

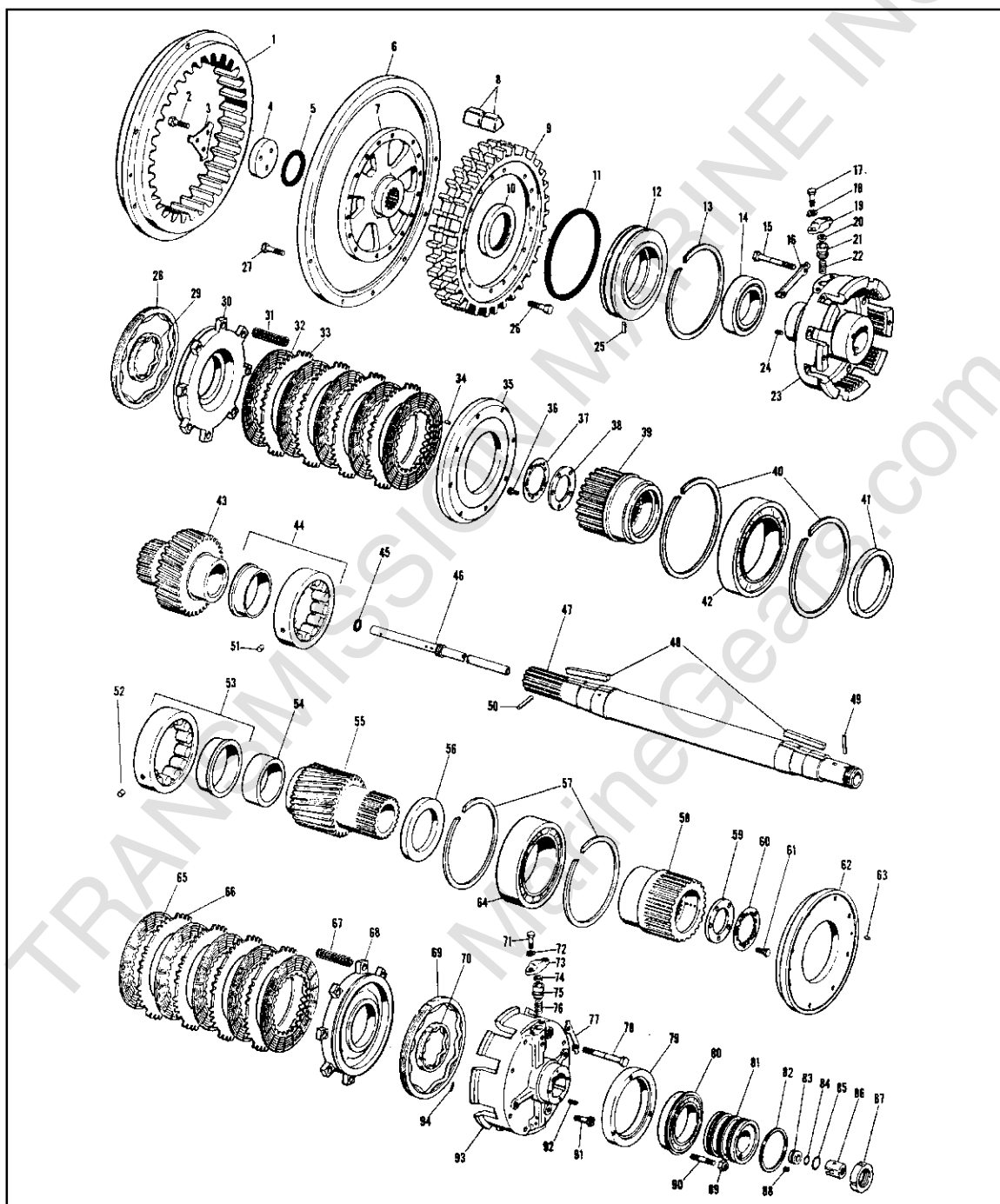
MG520



Control Valve Assembly.

MG-134

MG527

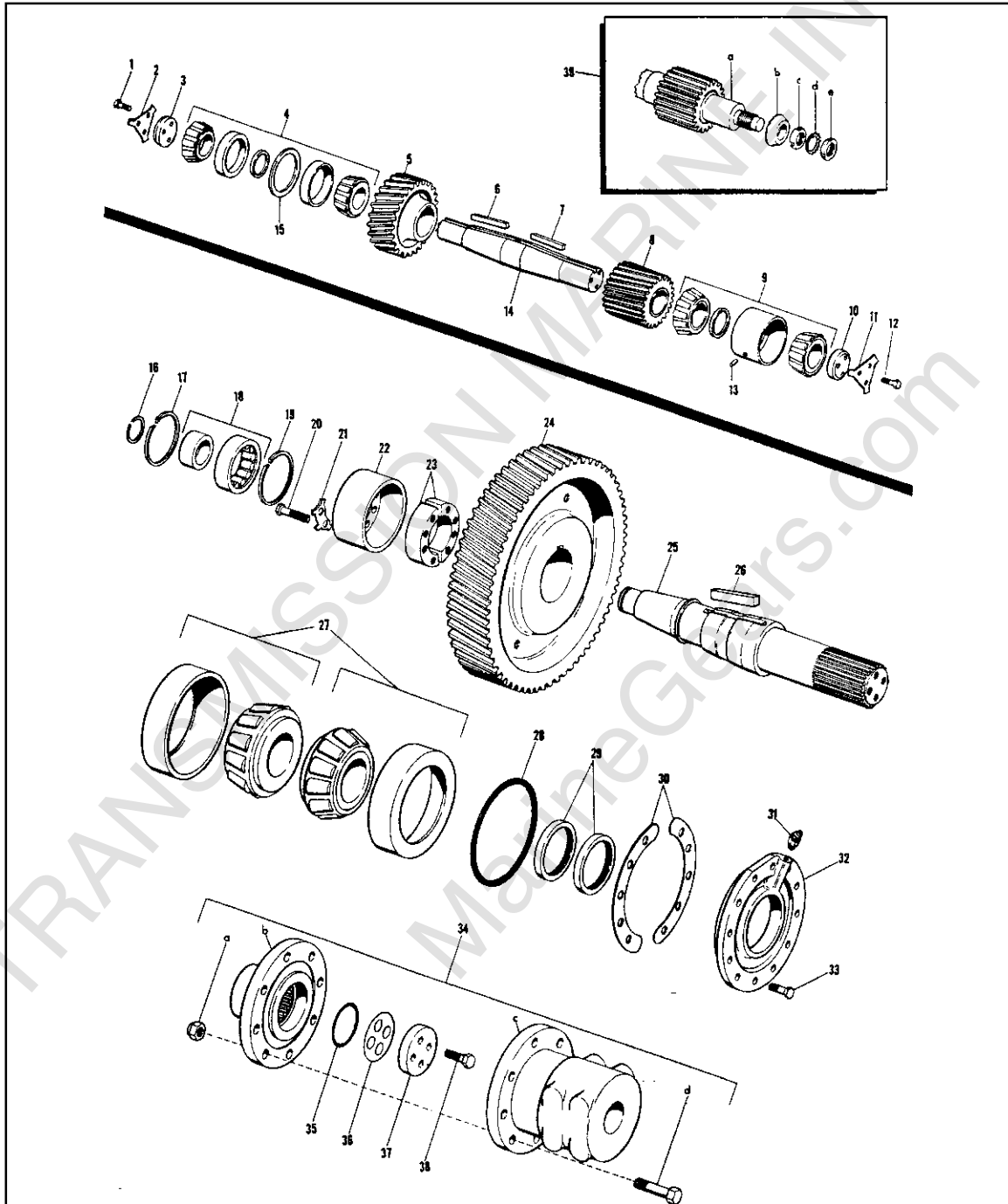


Input/Output Clutch Assembly.

MG-135

Twin Disc

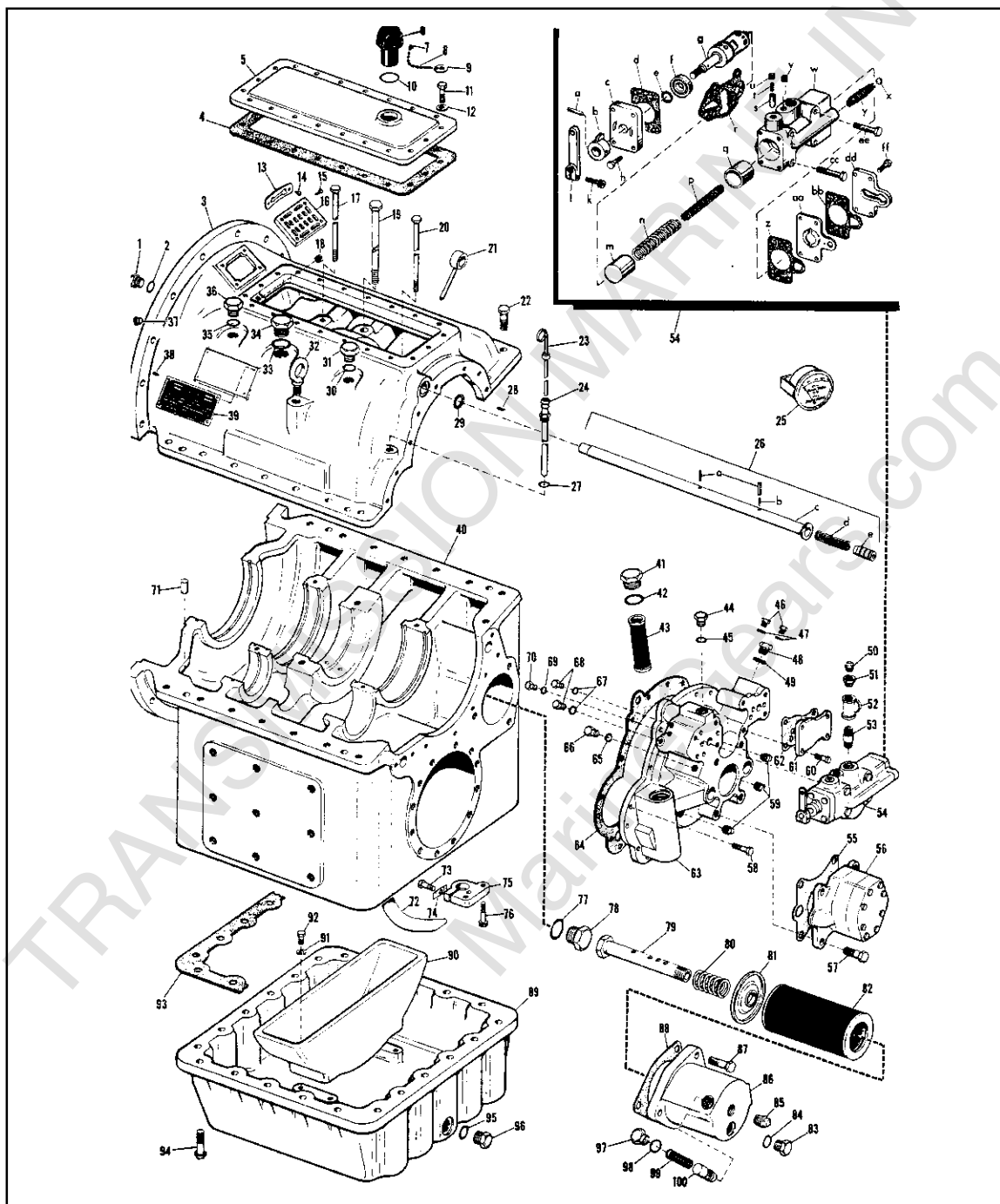
MG527



Output Group & Flange Assembly.

MG-136

MG527

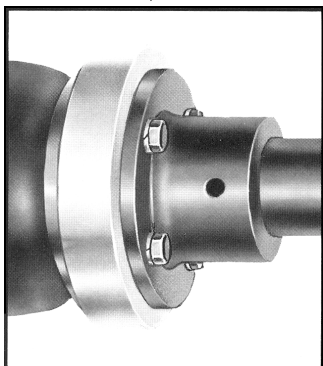


Main Housing & Filter Assembly.

MG-137

THE DRIVESAVER

Total Protection for your drive train.



Absorbs vibration, reducing noise.

THE DRIVESAVER provides a flexible, non-metallic barrier between your transmission and shaft. This barrier reduces not only drive train vibration, but the transmission of vibration and noise to you, your crew and the water. Both you and your vessel are more efficient in this quieter environment.

Absorbs shock.

THE DRIVESAVER effectively absorbs thrust and torque from the propeller shaft, as well as excessive shock from changing gears and high speed planing. It also helps control damage and misalignment from torsional engine movement. And it keeps on working, under normal conditions, for the life of the drive train, with no lubrication or maintenance.

Prevents electrolysis.

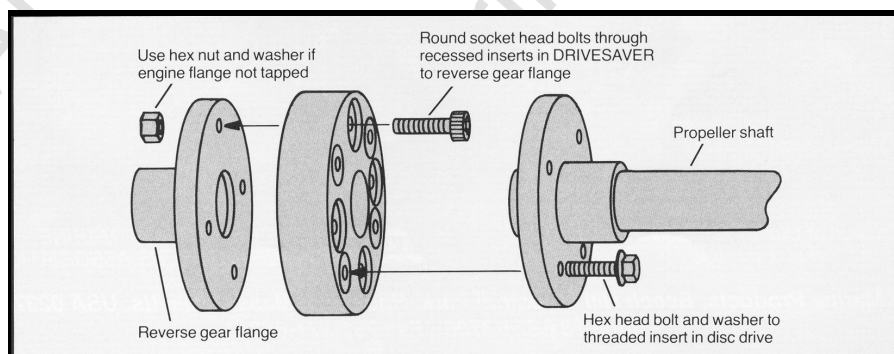
THE DRIVESAVER provides an impervious barrier that blocks electrical currents from the water. Your engine and transmission are protected from damaging corrosion.

Acts as a circuit breaker.

Repeat users of THE DRIVESAVER install new ones not because an old one wore out, but because of a hidden log, line, or rock that destroyed the coupling. That's right, THE DRIVESAVER was destroyed, not the costly transmission and engine. By acting like a circuit breaker, THE DRIVESAVER absorbs the extreme shock and torque of collision, breaks apart, and leaves your transmission and engine intact. You're back in operation faster, at a minimum cost. That's the kind of total protection you can't afford to be without!

Installs easily.

THE DRIVESAVER installs simply and quickly. Without cutting or machining the shaft. And without hauling your boat out of the water. Just separate the drive flanges, insert the coupling, align and bolt.



To determine torque rating use this formula:
Engine Horsepower x 5252 x Reduction Ratio
Engine R.P.M.

GMP-1



GLOBE RESILIENT BLUE IMPELLERS

**RUN DRY FOR 15 MINUTES
DEMAND THE BLUE ONE!**

TRIPLE service life at competitive prices, means less down time and less cost. That's what it's all about.

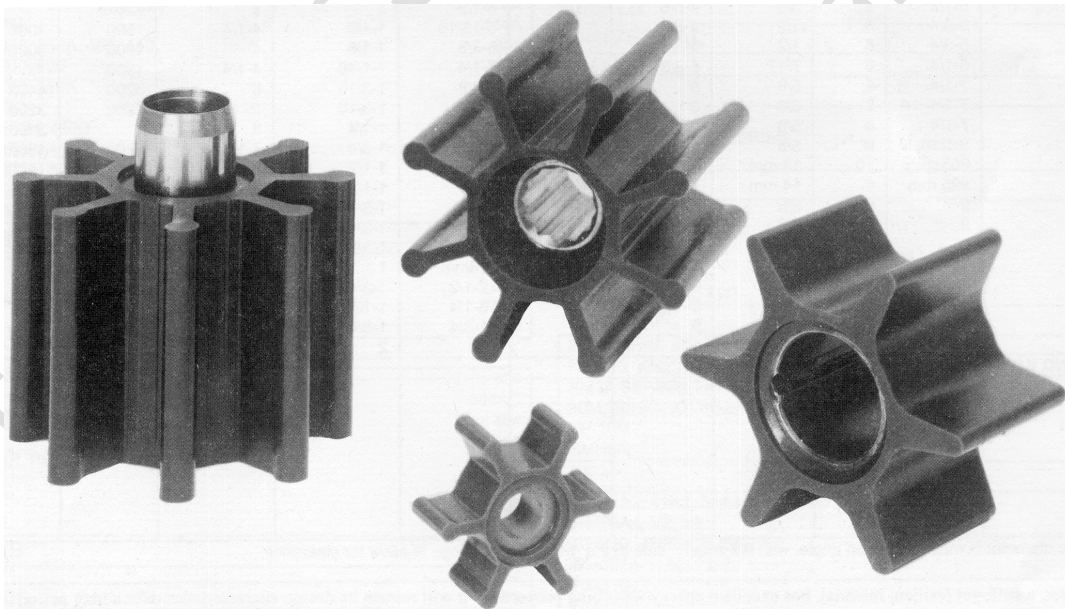
The only impeller in the world guaranteed to **RUN DRY FOR 15 MINUTES!** GLOBE impellers are made of elastomer compounds, developed for optimum performance and self lubricating for run dry protection.

All **GLOBE** impellers are made from elastomers giving them the combined characteristics and multiple properties of rubber, nitrile, viton and neoprene. For diesel fuel transfer, request the Red Globe Impeller.

Additionally, **GLOBE** impellers have **greater resistance to sand and dirt abrasion.**

GLOBE manufactures most popular replacement impellers: JABSCO, JOHNSON PUMPS, CATERPILLAR, CRUSADER, CUMMINS DIESEL, DETROIT DIESEL, KOHLER, MERCRUISER, MERLIN, NORTHERN LIGHTS, OBERDORFER, UNIVERSAL, VOLVO, WESTERBEKE, YANMAR and others.

GLOBE impellers are specified by the U.S. Coast Guard and the navies of the world.



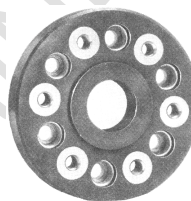
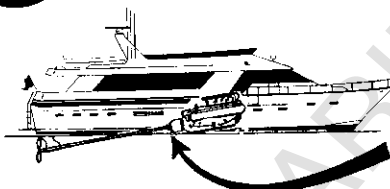
Distribution from Boston to Bora Bora.

Globe Resilient Blue Impellers

GMP-2

THE DRIVESAVER

To determine torque rating use this formula:
 Engine Horsepower x 5252 x Reduction Ratio
 Engine R.P.M



DRIVESAVER SPECIFICATIONS

DRIVESAVER Model	Flange Dia.	# of Bolts	Bolt Dia.	Bolt Circle	Pilot Dia.	Coupling Dia.	Coupling Thickness	Packaged Weight, Pounds	Torque Rating, Ft. Pounds	"Plus Rated", Ft. Pounds
303	3	3	3/8	2-1/2	1-3/4	4	11/16	1	225	
353	3-1/2	3	3/8	2-3/4	1-7/8	4-5/16	11/16	1-1/4	250	
354	3-1/2	4	8mm	2-15/16	1-9/16	4-1/4	1	1-1/2	300	
404	4	4	3/8	3-1/4	2	5	1	1-3/4	550	
404A	4	4	3/8	3-1/4	2-1/2	5	1	1-3/4	550	
404AC	4	4	3/8	3-1/4	2-5/8	5	1	1-3/4	550	
404V	4	4	10mm	8cm	6cm	5	1	1-3/4	550	
404S	4	4	3/8	9cm	6cm	5-1/4	1	2-1/4	550	
424Y	100mm	4	10mm	79mm	50mm	4-1/4	1	1-3/4	550	
454	4-1/2	4	3/8	3-3/4	2-5/8	5-3/8	1	2-1/4	670	
4756	4-3/4	6	7/16	3-7/8	2-1/2	5-3/8	1	2-3/4	675	1600
504	5	4	7/16	4-1/4	2-1/2	6	1	2-1/2	675	1600
504A	5	4	3/8	4-1/8	2-3/4	6	1	2-1/2	675	
504AC	5	4	7/16	4-1/8	2-7/8	6	1	2-1/2	675	
504H	5	4	7/16	4-1/4	2-1/2	5-1/8*	1	2-1/2	675	1600
524Y	120mm	4	10mm	100mm	65mm	5-1/4	1	2-1/4	675	
554	5-1/2	4	3/8	4-5/8	3-1/8	6-1/2	1	3	720	
5756	5-3/4	6	1/2	4-3/4	3	6-13/16	1-1/8	4-1/4	1800	3000
5756A	5-3/4	6	1/2	4-3/4	3	6-3/8	1-1/8	4	1800	3000
6256	6-1/4	6	7/17	5-3/8	3-1/4	7-1/4	1-1/16	4-1/4	1900	
7256	7-1/4	6	5/8	6	3-3/4	8-3/8	1-3/16	8	3200	4400
7306Z	7-1/4	6	5/8	6	3-3/4	7-1/4	1-3/16	8	2200	3200
7258Z	7-1/4	8	5/8	6	3-3/4	7-1/4	1-1/4	8		3200
8078Z	8-1/16	8	5/8	6-11/16	5-1/2	8-1/16	1-3/4	7-1/2	3300	4800
8010Z	205 mm	10	14 mm	170 mm	140 mm	8-5/16	1-1/2	9	3300	
8858Z	225 mm	8	14 mm	196 mm	140 mm	9-1/8	1-1/2	9-1/4	3500	
908	9	8	5/8	7-1/2	6	11	1-3/8	12-1/2	3000	4900
908A	9	8	5/8	7-3/4	5-1/8	11	1-3/8	12	3000	4900
908S	9	8	5/8	7-1/2	6	9-1/8	1-3/8	9	3000	4900
908AC	190mm	8	15mm	155mm	100mm	228mm	1	9	3000	4900
1058	10-1/2	8	3/4	8-3/4	5	12-1/2	1-3/4	22	4200	6500
1108	11	8	3/4	9-1/2	6	13-1/4	1-13/16	23-1/2	4200	6500
1108A	11	8	3/4	9	6	11-3/4	1-3/4	17-1/2	3000	4900
1308	13	8	7/8	11	7	14	2	18-1/2	4400	6700
BUSHING KITS										
5756	5/8" to 1/2"									
7256	3/4" to 5/8"									
908	3/4" to 5/8"									
908BB	7/8" to 5/8"									
1058	1" to 3/4"									
1108	1" to 3/4"									
8010	18.3mm to 14mm									
8858	17mm to 14mm									

*Outside diameter is machined at an angle, with the smaller side to the reverse gear flange to allow for clearance.

Elastomer, a stiff, yet resilient material, has excellent energy absorbing properties. It will remain its design characteristics over a long period of time and will return to original shape even after being under compression. It withstands oil, sludge, salt water and a temperature range of -65° to +225°F. All metal components and hardware are plated for corrosion resistance and long life. Model 5756, 7256, 908, 1058, 1108, 1308, 8010, and 8858 may be used between flanges with a bolt hole size larger than the bolts furnished with THE DRIVESAVER. Specify model number plus the suffix B. Bushing to fit the flange will be furnished with THE DRIVESAVER.

Drivesaver Specifications

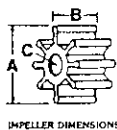
GMP-3



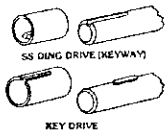
GLOBE IMPELLER DIMENSIONS

SILHOUETTE NUMBER	GLOBE MODEL NUMBERS	IMPELLER DIMENSIONS "A"	"B"	SHAFT DIAMETER "C"	BLADES
I	321	1-1/4	15/32	5/16SF	6
II	421	1-9/16	3/4	3/8PD	6
II	1014	1-9/16	3/4	5/16SF	6
II	1112	1-9/16	3/4	1/2PD	6
III	032SS	2	7/8	1/2SS	6
III	219	2	7/8	5/16PD	6
III	418	2	7/8	1/2K	6
III	815	2	7/8	1/2SF	6
III	912	2	7/8	5/16SF	6
III	6541	2	7/8	1/2PD	6
III	331M	2	7/8	1/2MMPD	6
IV	025	2	7/8	5/16SF	6
	419	2	7/8	1/2DF	8
V	050DF	2	7/8	5/8DF	10
V	223	2	7/8	5/8K	10
VI	1016	1-19/32	3/4	5/16SF	10
VII	050SS	2-1/4	1-1/4	1/2SS	12
VII	075	2-1/4	1-1/4	5/8	12
VII	100J	2-1/4	1-7/8	5/8	12
VII	100V	2-1/4	2	5/8	12
VII	1101	2-1/4	1-1/4	5/8K	12
VII	1130	2-1/4	25/32	1/2K	12
VII	6862	2-1/4	1-1/4	5/8DF	12
VIII	090	2-9/16	1-7/16	5/8	8
VIII	100	2-9/16	2	5/8	8
VIII	100DF	2-9/16	2	5/8DF	8
VIII	100SS	2-9/16	2	5/8SS	8
VIII	1111	2-9/16	3	5/8	8
VIII	1114	2-9/16	2	5/8K	8
VIII	1115	2-9/16	2	5/8K w/stop	8
VIII	2000	2-9/16	2	3/4K	8
IX	610	2-7/16	7/8	5/8K	12
IX	620	2-7/16	1-1/4	5/8K	12
X	625	2-9/16	1-5/8	5/8K	12
X	626	2-9/16	2	5/8K	12
X	757	2-9/16	1-1/4	5/8K	12
XI	1015	2-1/4	3/4	3/8SF	6
XII	690	3-1/4	2-7/8	20MMKW	12
XIII	726	3-7/16	3/4	1-17/32	10
XIII	1127	3-3/4	2-1/2	1DF	10
XIV	200DF	3-3/4	3-1/2	1DF	12
XIV	1019	3-3/4	2-1/2	1DF	12
XIV	1113	3-3/4	2-1/2	1	12
XIV	1213	3-3/4	3-1/2	1	12
XV	125	3-3/4	2-1/2	1	9
XV	200	3-3/4	3-1/2	1	9
XV	723	3-3/4	2-1/2	1K	9
XVI	318	2-1/4	1-1/4	5/8DF	10
XVI	616	2-1/4	1-1/4	5/8	10
XVII	110	2-9/16	2	5/8	10
XVII	110SS	2-9/16	2	5/8SS	10
XVII	845	2-9/16	2-21/32	5/8	10
XVIII	456	4-5/8	3-1/2	1DF	9
XIX	1000	2-11/32	1-19/64	7/8K	6

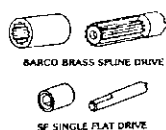
* ALL GLOBE impellers have a 12 point spline drive unless otherwise noted under shaft diameter.



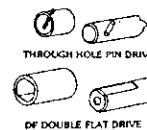
IMPELLER DIMENSIONS



KEY DRIVE



BARCO BRASS SPLINE DRIVE



THROUGH HOLE PIN DRIVE

Globe Impeller Dimensions

GMP-4

GLOBE PUMP REPLACEMENT PARTS

Cross Reference by Manufacturer Or Engine Company Part Number

MODEL NUMBERS		GLOBE MODEL NUMBERS	MODEL NUMBERS		GLOBE MODEL NUMBERS
JABSCO			JABSCO (cont.)		
331-0001	thru 8	125	14549-0001	thru 8	100DF
673-0001	thru 8	6541	14556-0001	thru 8	100DF
702-0001	thru 8	100	14600-0001	thru 8	6862
777-0001		110	14601-0001	thru 8	318
790-0001	thru 8	125	14602-0001	thru 8	100DF
807-0001	thru 8	125	14603-0001	thru 8	100DF
836-0001	thru 8	125	14604-0001	thru 8	125
920-0001		100	14605-0001	thru 8	1127
934-0000		463 (CAM)	14750-0001	thru 8	321
964-0001	thru 8	100	14792-0001	thru 8	321
1111-0001	thru 8	100	14806-0001	thru 8	318
1133-0001	thru 8	6541	14874-0001	thru 8	050DF
1210-0001	thru 8	075	15170-0001	thru 8	456
1414-0001	thru 8	321	17018-0001	thru 8	1111
1427-0001	thru 8	1101	17222-0001	thru 8	1019
2173-0001	thru 8	1114	17370-0001	thru 8	200DF
2820-0001	thru 8	1114	17935-0001	thru 8	1113
2877-0001	thru 8	1101	17936-0001	thru 8	1213
3085-0001	thru 8	616	17937-0001	thru 8	110
3255-0000		463 (CAM)	17992-0001	thru 8	100
3505-0001	thru 8	6541	18018-0001	thru 8	125
4527-0001	thru 8	219	18021-0001	thru 8	125
4528-0001	thru 8	421	18673-0001	thru 8	6541
4568-0001	thru 8	1101	18786-0001	thru 8	456
4598-0001	thru 8	1115	18838-0001	thru 8	620
5816-0001	thru 8	032SS	18948-0001	thru 8	625
5915-0001	thru 8	100	22120-0001	thru 8	10CV
5929-0001	thru 8	050SS	22799-0001	thru 8	418
6056-0001	thru 8	100SS	92700-0080		92700 (SEAL)
6056-NITRILE		110SS	114668-0001	thru 8	100
6050 SERIES			BEARCAT/HOMELITE		
6303-0001	thru 8	025	90354-A		223
6760-0001	thru 8	200	CATERPILLAR		
7273-0001	thru 8	912	1L4774		125
7514-0001	thru 8	6862	3N1906		100
8444-0001	thru 8	318	3N4859		200DF
8566-0001	thru 8	6862	3N5895		1111
8940-0001	thru 8	100DF	3N9009		100
8980-0001	thru 8	318	4L8470		200
8981-0001	thru 8	100DF	4N6582		1111
8983-0001	thru 8	1127	5N9360		1113
8984-0001	thru 8	456	7E0321		630
9200-0001	thru 8	1016	PP1027		456
11979-0001	thru 8	090	CRUSADER		
12222-0001	thru 8	125	20300		625
12326-0001	thru 8	100SS	1003026		620
12516-0001	thru 8	912	CUMMINS DIESEL		
12946-0001	thru 8	6862	R10615		625
12977-0001	thru 8	1014	21601R		125
13554-0001		100J	166758		125
14281-0001	thru 8	318	556540		125
14282-0001	thru 8	100DF	650607		100
14346-0001	thru 8	1019	3008503		200DF
14544-0001	thru 8	6862	3908220		620
14545-0001	thru 8	318	3916852		630

Globe Pump Replacement Parts Cross Reference

GMP-5



Cross Reference by Manufacturer Or Engine Company Part Number

MODEL NUMBERS	GLOBE MODEL NUMBERS	MODEL NUMBERS	GLOBE MODEL NUMBERS
DETROIT DIESEL		PERKINS	
5193553	125	0460024	110
5193562	773	0460027	125
5193602	100	0460038	075
5193603	772	24880031	100
5196168	200	24880190	616
5198419	6408	24880194	6541
5198550	200	24880272	421
8924838	1113	NA900010, 24880178	620
8924839	1213	NA900012	625
8927570	200DF	PLEASURE CRAFT	
8927571	613	RO 061003	075
23502086	456	RO 61003E	100
23502089	457	RO 61015	620
FORD LEHMAN		RO 61017	625
920	100	PROVEN	
1210	075	P100-4	757
HINO/KASHIYAMA		P100-8	1114
16131-1300	845	P100-12	723
ISUZU		RARITAN	
N5-2623-60-06-0	845	CH13	025
JOHNSON PUMP		CH119D1	726
01-42424F8/F9	773	G13	025
01-42445F7	772	SHERWOOD	
08-804B-9	050SS	9000	610
08-810B	6541	9959	620
08-812B	100J	10077	1130
08-1026S	025	10187	1114
08-1029B	125	10815	625
09-801B	1101	11843	625
09-802B	200	12336	1130
09-806B	421	12337, 13328	620
09-808B	1112	12338	1114
09-814B	1213	17000	630
09-1026B	6541	TEEL	
09-1027B	075	1R215	1130
09-1028B	100	1R216	620
MERCURUISER		1R217	1114
47-59362	2000	UNIVERSAL	
47-89984	1000	287439	1130
NORTHERN LIGHTS		295628	815
23-11031	100V	302571	075
25-12002	075	302875	610
145116140	075	VOLVO	
145116180	419	801277	110
OBERDORFER		807904	1113
B6593, 8514	815	808680	1115
B6603, 8515	1114	825940	616
B6620, 8647	1101	825941	100
B86617, 7885	025	825942	1113
C7054	125	834794	100V
C7441	100	835512	620
ONAN		835874	625
131-0160	1014	844683, 842857, 845796	1213
131-0386	1015	875575, 835082, 831182	1101
131-02189 KIT	1014	875583	1112
132-0117	620	875593	100
132-0162	075	875660	125
132-0316	815	875697	1213
132-0317	620	875807, 803729, 83350	421
132B59	421	875808, 804696	6541
		875811, 86203	075
		897055	6541

Continued...

Cross Reference by Manufacturer Or Engine Company Part Number

MODEL NUMBERS	GLOBE MODEL NUMBERS
WESTERBEKE	
11418, 33104	620
11764	1130
11907	620
18184	032SS
32620	1112
33100	1130
344407	6541

MODEL NUMBERS	GLOBE MODEL NUMBERS
YANMAR	
104211-42072	421
124223-42091	418
128170-42070	321
145410-46090	1101
129470-42530	616 or 075

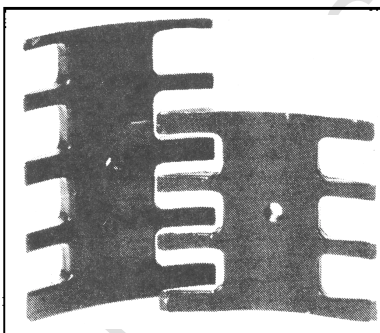
INSTRUCTIONS FOR CHANGING GLOBE IMPELLERS DISASSEMBLY

1. Remove screws that hold end cover.
2. Remove end cover.
3. Remove gasket. We recommend replacing gasket each time pump is disassembled.
4. Using a good pair of pliers, the impeller can be removed by placing a firm grip on the hub of the impeller and pulling outward.
5. The seal can now be removed if necessary. Observe which direction the seal is seated, so that it can be properly replaced.

ASSEMBLY

1. Reassemble seal in pump. Make sure it has a good tight seal.
2. Start new impeller on the shaft and into the pump with a rotating motion in intended direction until proper alignment is made (whether spline, flat, pin, key or ding drive).
3. Replace gasket and align with the holes on the pump housing.
4. Replace end cover and screws.

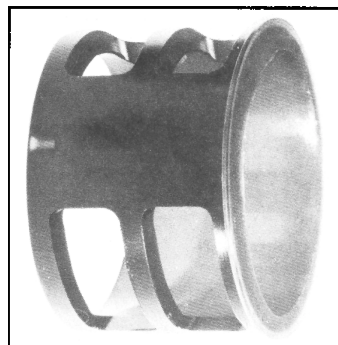
Start-up note: IT IS NOT NECESSARY TO LUBRICATE YOUR NEW GLOBE IMPELLER.



CAMS AND CAM/PUMPLINERS

Non-metallic cams and cam/pumpliners are available as replacements on Jabsco pumps. Non-metallic compounds give longer life and better performance.

GLOBE #	Pump or Engine Numbers
463	77, 2300, 6050, 11860, 584, 4280, 8170-9001 series Jabsco Pumps
464	6590, 6400, 7420, 11870 series Jabsco Pumps
465	18310, 18330, 18370 series Jabsco Pumps
457	V-92 Detroit Diesel and 3412 Caterpillar
613	D336, D343, D353, Caterpillar, V-71 Detroit Diesel



Cams and Cam/Pumpliners

GMP-7



GLOBE IMPELLERS Engine and Generator Cross Reference

Engine	Globe Impeller
CATERPILLAR	
3208T, TA w/ Sherwood	630
3208T w/ Jabsco	100
3208TA w/ Jabsco	1113
3406, 353	2000F
3412	456
4108 w/ Jabsco	075
4108 w/ Sherwood	620

CHRIS CRAFT	
Series K (95-120HP)	075
Series M (131-158HP)	075
Series F (283-327HP) w/ Sherwood	625
Series F (283-327HP) w/ Jabsco	075
A-16, M-10263G, 350	620
M-10264G, 630-2, AW	620
D-05, S-11095G, G-45-1, 307, 3270, 427, 454	625
M10261G, M10095G	1130
M10200G, N10360G	1130
N10200G, 283, 430	1130

CHRYSLER MARINE	
M-80 (CW), E5913M, M-80, M225 x (2)	620
(CCW) E5839M, Slant 6, M80 (CW), M80 (CCW)	620
M225X, M273X, LM318X (double)	620
LM340X, LM318X (Single)	625
M383X, M413E, M440X	620 & 625
360, 318, 4142878	625
P10560G, P10710G, P10610G	620
A03, Q10855G, D75, R10935G	620
D60, N10390G, D65	620
P10550G, D55 (9959) Front	620
P10550G, D55 (10615) Rear	625
C03, G5, G51, F10, G50, G7	625

COMMANDER	
302, 351 Ford	620
610 (Conversions)	625

CRUSADER	
270HP	620
300HP, 350HP (#454)	625
H10, M10270G, M10280G, Q10755G	620
10765G, M10210G, N10410G	620
P10700G, F15	620
S11040G, B04, E35	625
E20	1130

CUMMINS	
210HP (68T5.9M)	620
220HP (68T5.9M)	630
504M	100
VT903, 555	125 or 1113
4B210, 250B, 4 Cyl, Diesel 3907/458	625
4B1250, 6B1300, 6B1400, 300B, 6CTA8.3	630
903T	125

DETROIT DIESEL	
4-53, 8.2	100
6-71, 6V53	1113
6-92, 8V92	456
8V71, 12V71, J & T 6-71	1213

HOMELITE-BEARCAT	
Homelite-Bearcat	815

Engine	Globe Impeller
JABSCO	
9900, 2620	6541
6400, 6590, 7420, 11870, 16059	125
2300, 5330, 11860, 12280, 777	100/110
3270, 1673, 10190, 5850	075
3380, 3680, 14210, 11850	075
18830, 18940	075
12050, 10190	616
4530, 2760, 4540, 17120	421
5320	032SS
11810	050SS
6850, 6050	100SS
6360, 6370, 6380	025 Water Puppy
18690	025

JOHNSON & TOWERS	
G-71 All	1213

JOHNSON PUMPS	
F5B5007, F5B8007, F5B8907	075
F5B3007, F5B3907, F5B3927	075
F5B3927, F5B30007, F5B39007	075
F5B30207, F5B39207, F5B1907	075
F7B5007, F7B50017, F7B8007	100
F7B8907, F7B8037, F7B8937	100
F7B3007, F7B3907, F7B3037	100
F7B3937, F7B3007, F7B39007	100
F7B30307, F7B39307, F7B30207	100
F7B39207	100
F8B5000, F8B50017, F8B8007	125
F8B8907, F8B8037, F8B3000	125
F8B3900, F8B3030, F8B3930	125
F9B5007, F9B3007, F9B3037	200
F9B3027	200
F9B5607, F9B3607, F8B3637	1213
F9B3627	1213
F35B8027	1112
F4B8007, F4B8027, F4B8907	6541
F4B8927, F4B8037, F4B8937	6541
F3B1907	025
T43P1019 Macerator 12/24/32V	025

LEHMAN	
85-135HP	075
200HP and up	100

MACERATOR PUMPS	
ALL Dansforth, Jabsco, Raritan, Wilcox	025

MERCURISERS	
Inboards 1981 to Present (Belt)	2000
Stern Drives, Outboards 80 HP+	1000
Alpha Drive	1000

NORTHERN LIGHTS	
5KW	419
12 KW	075

OVERDORFER	
201DA88, 201DA89, 201DA90	025
201M, 202M	815
211MF34, 214MF34	815
209MA92, 209MA94	025
301M, 305MC75, 305MF77	1101
401M2	100
405M4M26, 405M4N26, M405MK4M26, 404M	1114
405MK4N26, M405M475	1114
501M	125

Continued...

Globe Impellers Engine and Generator Cross Reference

GMP-8

Engine	Globe Impeller
--------	----------------

OMC

G422, G46, H85, G45-2, V8	625
---------------------------	-----

ONAN

4.0kw	421
6.5kw	1014
8.0kw	815
10-12kw	075
20kw, RPPG, K75, 4 cyl. 12MDJC, 15MDJF, 30MDEH, 50 MDEG	620
L10, 5 cyl.	625
6.5kw MCKK (8W)	1015

PATHFINDER

J90	625
4 Cyl. (VW)	620

PERKINS

RPBC, 6354	625
654	100
4107, 4108-Jabsco	075
4108-Sherwood, 4107-Sherwood	620
H5, B06G65, 4154	620

PLEASURE CRAFT

302 C.I. (225HP) Mitsubishi 4 cyl.	620
351 C.I. (#270)	620
454 CI Chevy	625

PROVEN

8F BM	1115
-------	------

Engine	Globe Impeller
--------	----------------

UNIVERSAL

G903	610
Atomic 4	421
Atomic 4/with obendorfer	815

VOLVO

MD1, MD26, MD28, MD10	421
MD6A	421
AQD21A, AQ200-225	075
AQ260-280	075
MD328, TAMD40, TND70	100
AQ200, 225, 250, 270, 290	100V
AQ220A, B, C, AQ225A, B, C	620
AQ255A	620
AQADA40A (TAMD40A)	125
AQ151A	1101

WESTERBEKE

4.5	1112
3.0	032SS
F85, R10870G, 15 KW	620
F85	625
A20, R30G1, H70	1130
3 KW	6541

YAMAHA

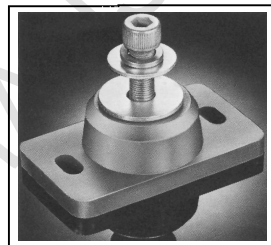
R991, YSC-101-03-01-OC	620
------------------------	-----

YANMAR

1GM	321
3GM30	421
3HM30	418

ENGINE MOUNTS

Globe engine mounts are cast molded from two hardnesses of elastomer. The softer inner core provides vibration, noise and shock dampening, while the stiff outer shell restricts engine movement. They are easy to install with a wide range of sizes to fit almost every engine requirement.



Model	A	B	C	D	E	F	G	H	I	J	Rated Load in Pounds	Deflection at Average Rated Load	Center Bolt Size & Thread	Center Insert Length	Packaged Weight Pounds
M-3A*	3 ¹¹ / ₁₆	1 ³ / ₄	3 ⁵ / ₈	3 ⁵ / ₈	7 ¹ / ₁₆	2 ¹ / ₁₆	1 ¹⁷ / ₃₂	1 ⁵ / ₁₆	1 ⁵ / ₁₆	3 ¹ / ₈	100-200	.017	7 ¹ / ₁₆ -20	3 ¹ / ₄	3 ¹ / ₄
M-3	3 ¹¹ / ₁₆	1 ³ / ₄	3 ⁵ / ₈	3 ⁵ / ₈	7 ¹ / ₁₆	2 ¹ / ₁₆	1 ¹⁷ / ₃₂	1 ⁵ / ₁₆	1 ⁵ / ₁₆	3 ¹ / ₈	125-250	.017	7 ¹ / ₁₆ -20	3 ¹ / ₄	3 ¹ / ₄
M-5	4 ¹ / ₂	2 ⁷ / ₁₆	3 ⁵ / ₈	3 ⁵ / ₈	1 ¹ / ₂	3 ³ / ₁₆	1 ³ / ₄	1 ⁷ / ₁₆	1 ⁷ / ₁₆	7 ¹ / ₁₆	250-500	.030	1 ¹ / ₂ -20	1	1
M-6	5 ³ / ₈	3	1 ¹ / ₈	1 ¹ / ₂	3 ⁵ / ₈	4 ¹ / ₄	2 ⁵ / ₁₆	1 ⁵ / ₁₆	1 ⁵ / ₁₆	1 ¹ / ₂	500-1000	.027	5 ⁸ / ₁₆ -18	7 ¹ / ₈	1 ¹ / ₄
M-7	5 ³ / ₈	3	1 ¹ / ₈	1 ¹ / ₂	3 ⁵ / ₈	4 ¹ / ₄	2 ⁵ / ₁₆	1 ⁵ / ₁₆	1 ⁵ / ₁₆	1 ¹ / ₂	500-1000	.027	5 ⁸ / ₁₆ -18	1	1 ¹ / ₂
M-8	7 ¹ / ₈	4	1 ¹ / ₈	1 ¹ / ₂	1	5 ¹ / ₂	2 ⁷ / ₈	2 ³ / ₈	1 ¹ / ₂	9 ¹ / ₁₆	1000-2000	.030	1-8	1 ¹ / ₂	3

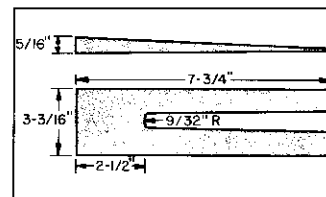
Tolerance on all dimensions $\pm 1/32$.

*Normally used for generators, compressors, air conditioners, pumps and other auxiliary equipment.

NOTE: Do not use less than 80% of the thread length of the metal insert. Engine bracket should cover entire area of center core of the mount. Rear mounts should bear 60% of engine weight. Front mounts should bear 40% of engine weight. Installation Kits include engine bolt, core washer, spacer, and lock washer.

ALIGNMENT WEDGES

Designed specifically for use with Globe engine mounts, these wedges allow engine alignment to micrometer tolerances. Rated load is 1500 pounds (250 pounds/square inch area) and therefore may be used in pairs as vibration dampening pads. These wedges are maintenance free and also impervious to gas, oil, grease, sludge and saltwater.



Engine Mounts, Alignment Wedges

GMP-9