



MARINE PARTS SUPPLY (800) 661-5353

ALTO PRODUCTS CORP.

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— 2008 - 2009 —

MARINE FRICTION MATERIAL & TRANSMISSION PARTS

Fishing • Pleasure • Workboats • Fishing • Pleasure • Workboats • Fishing • Pleasure • Workboats



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MARINE FRICTION MATERIAL & TRANSMISSION PARTS

BORG WARNER VELVET DRIVE ®

71 & 72	1
71 & 72 V DRIVE	4
1500	5
7000	6
CR-2 Velvet Drive	5
S500	5
S5000, S5000 V Drive	1
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W-1000	5
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YANMAR

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DAMPER ASSEMBLIES

Hurth	18
Velvet Drive®	18
Volvo Penta	18

VELVET DRIVE® S5000, S5000 "V" Drive

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
340800	2001-410-001	OVERHAUL KIT S5000 Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	
340800V	2002-410-001	OVERHAUL KIT S5000 V Drive Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	
340901	NL	MASTER OVERHAUL KIT S5000 Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
340901V	NL	MASTER OVERHAUL KIT S5000 V Drive Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
340750	NL	CLUTCH PLATE MODULE Includes 16 Bronze Plates and 18 Steel Plates	1	
CLUTCHES				
340702	2001-666-001	Friction - Drive	16	Bronze .066
340703	2001-166-002	Steel - Drive	14	Flat .077
340705	2001-062-002	Steel	4	Flat .044
MISC. PARTS				
340020	2001-045-005	Gasket - Front Pump S5000 & V Drive	1	
340021	2001-045-003	Gasket - Valve Housing S5000 & V Drive	1	
340022	2001-145-002	Gasket - Adapter - S5000	1	
340021V	2002-045-002	Gasket - Adapter - V Drive	1	
018101	2000-016-050	Sealing Ring - Pinion Carrier	AR	S5000 1Pc,V Drive 4 Pcs
340101	1000-016-021	Sealing Ring - In Shaft	AR	S5000 1Pc,V Drive 2 Pcs
340420	1000-044-065	Metal Clad Seal - Adapter S5000 & V Drive	2	
340421	1000-044-066	Metal Clad Seal - Coupling S5000	1	
340422	2000-044-003	Metal Clad Seal - Output Shaft Side V Drive	1	
340423	2000-044-004	Metal Clad Seal - Output Flange Side V Drive	1	
010045	1000-141-045	Oring - Piston	2	
010123	1000-141-123	Oring - Control Valve	1	
010130	1000-141-130	Oring - Clutch Piston	2	
010214	1000-141-214	Oring - Tube Assembly	1	
010241	1000-141-241	Oring - Clutch Piston	2	
340051	1000-016-020	Seal - Piston In	2	
340052	1000-016-019	Seal - Piston Out	2	
340053	2000-141-502	Oring - Pump V Drive	1	
340054	2000-141-500	Oring - Output V Drive	1	
340055	2000-141-501	Oring - Pump Housing V Drive	1	
340251	1000-139-069	Snap Ring	2	
340252	1000-139-071	Snap Ring	1	
340253	1000-139-068	Snap Ring	5	
099328	1000-640-004	Neutral Safety Switch	1	
023320	1000-149-034	Nut - Output Shaft with Washer	1	
023331	A4740G	Breather Assembly	1	
340321	2001-031-001	Output Flange	1	
340322	1000-132-055	Needle Bearing	6	
340940	2001-238-001	Filter - Oil Screen	1	

VELVET DRIVE® 71 & 72

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
023801	10-17-410-002	GASKET SET (Includes Rubber Parts)	1	
023801B	A4867HA	OVERHAUL KIT (Includes Gasket Set)	1	
023901LS	NL	BANNER KIT Includes Overhaul Kit and Bronze Plates	1	
023901	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	

VELVET DRIVE® 71 & 72

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS (Continued)				
023750D	NL	CLUTCH PLATE MODULE Includes 10 Bronze Plates and 6 Steel Plates	1	
023750H	NL	CLUTCH PLATE MODULE - VD71 Only Includes 7 Bronze Plates and 5 Steel Plates	1	
023752D	NL	FRICTION PLATE MODULE Includes 10 Bronze Plates	1	
023755	A4867AE	10-17 FORWARD CLUTCH PACK Only Includes Forward Clutch Bronze Plates, Steel Plates and Front & Rear Pressure Plates	1	
023755A	A4867AB	10-18 FORWARD CLUTCH PACK Only Includes Forward Clutch Bronze Plates, Steel Plates and Front & Rear Pressure Plates	1	
CLUTCHES				
049722	W-1597A	Friction Forward Small K2 (Grooved)	5-7	HEG .063
049700BR	5C-A66A	Friction Forward Small	5-7	Bronze .060
023701	3-176	Steel Forward Small	4-6	Flat .068
023701A	10-16-166-001	Steel Forward Small	4-6	Flat .068 3 Teeth Missing
023701-120	NL	Steel Forward Small - Hi-Performance	AR	Flat .047
023701-140	NL	Steel Forward Small - Hi-Performance	AR	Flat .058
023703	3-65	Steel Forward - MODEL 73 Only		Dish .068
023760	5C-175A	Pressure Plate Forward/ Front	1	
023761	5L-67	Pressure Plate Forward/Rear	1	
023738	10-17-666-001	Friction Reverse Large	1-3	Fiber .115
023738BR	72-A66B	Friction Reverse Large	1-3	Bronze .115
023738BR155	72-A66	Friction Reverse Large	2	Bronze .061
023739	72-176	Steel Reverse Large	0-2	Flat .070
023767	3-37	Steel Forward Belleville Spring	1	Dish
MISC. PARTS				
023020	71-144B	Gasket - Forward/Reverse Adapter	1	
023021	L4-145	Gasket - Front Adapter	1	
023022	71-14	Gasket - Valve Cover	1	
023023	L4-146	Gasket - Rear Adapter	1	
023024	L4-147	Gasket - Rear Retainer - Reduction Early	1	
023025	71-147	Gasket - Rear Retainer - MODEL 10-17	1	
023026	72-147	Gasket - Rear Retainer - MODEL 10-18	1	
023002	3-61	Seal - Front Pump	1	
023050A	4805A	Seal - Reverse Clutch Outer	1	
023054A	5L-36	Seal - Forward Clutch Outer	1	
1390734	4804H	Oring - Control Valve	1	
010226A	5M122	Oring - Forward Clutch Inner	1	Old# 1391984
010226A	4804G	Oring - Reverse Inner	1	Old# 1391984
023941	1000-238-002 72C-98	Filter - Oil	1	
099328	1000-640-004	Neutral Safety Switch	1	
099329	1000-140-004	Switch - Oil Temperature 190°	1	
099329A	87-88031	Switch - Oil Temperature 230°	1	
018101	4806B TAW-408	Sealing Ring - Pinion Carrier	4	2.0 x .0935 HJ
038105	4806J TAW-1320	Sealing Ring - Drive Gear	2	1.7465 x .0935 HJ
023420	1000-044-014 UE-0282E	Metal Clad Seal - Front Pump		OD: 53mm/2.08"
023422	1000-044-017 UH-0049E	Metal Clad Seal - Coupling		OD: 83mm/3.271" Late Type Reduction
023421	71C-110 UH-0341E	Metal Clad Seal - Coupling		OD: 68mm/2.69" Early Type Reduction
023320	1000-149-034	Output Shaft Nut - Coupling Nut with Washer		All Late Reduction Units

VELVET DRIVE® 71 & 72

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
MISC. PARTS (Continued)				
023604	NL	Sealing Ring Kit		Contains: 4 Pc. 018101, 2 Pc. 038105
023680	1095-410-002	Snap Ring Service Kit	1	
023250	4766	Snap Ring - Adapter	1	
023251	4821	Snap Ring - Control Valve	1	
023252	4822	Snap Ring - Reverse Gear	1	
023253	R6A-7-1/2	Snap Ring - Drive Gear Large MODEL 10-17 Only	1	
023254	4766B	Snap Ring - Drive Gear Large MODEL 10-18 Only	1	
023255	4734	Snap Ring - Drive Gear Small MODEL 10-17 Only	2	
023256	4559A	Snap Ring - Drive Gear Small MODEL 10-18 Only	1	
023257	4755	Snap Ring - Ring Gear	1	
023258	1000-139-048	Snap Ring - Ring Gear Yellow MODEL 10-17	1	.033-.037
023258-130	1000-139-049	Snap Ring - Ring Gear Pink MODEL 10-17	1	.050-.054
023258A130	4768	Snap Ring - Ring Gear Green MODEL 10-18	2	.050-.054
023258A160	1000-139-018	Snap Ring - Ring Gear Purple MODEL 10-18	1	.062-.066
023258A190	4768A	Snap Ring - Ring Gear Orange MODEL 10-18	1	.074-.078
023258A250	4768B	Snap Ring - Ring Gear White MODEL 10-18	1	.096-.100
023259	4495	Snap Ring - Drive Gear Assembly	1	
023260	4756D	Snap Ring - Drive Gear Assembly	1	Reduction Only
023261	4756E	Snap Ring - Drive Gear Assembly	1	Reduction Only
023262	4816	Snap Ring - Drive Gear Assembly	1	Reduction Only
023263	4766A	Snap Ring - Drive Gear Assembly	1	Reduction Only
023276	71-97	Spring - Reverse Pressure Plate	11	
023338	5C-33 1000-139-101	Bearing Ring VD72 Forward Clutch Shuttle		
023337	4920	Tapered Roller Bearing		Timken NA 44163/90048
023337A	4920A	Tapered Roller Bearing		Timken NA 44143/90035
023337B	4920B	Tapered Roller Bearing		Timken NA53178/90062
023350A	71CA60	Oil Pump	1	
023339	71C-3A16	Drive Gear & Pump Assembly	1	
023322	4840D	Needle Bearing - Forward & Reverse Adapter		
023325	B308AGS 1000-130-018	Roller Bearing	1	
023326	B107A (6007J)	Roller Bearing	1	
023326A	B108A (6008J) 1000-130-016	Roller Bearing	1	
023247	71-28C (4867VVKIT)	Bushing - Case Housing Forward/Reverse	2	
023248	71-9C (4867DDKIT)	Bushing - Carrier Assembly	2	
023323	4547AY	Coupling 5 - MODEL 10-18 Only	1	
023324	4547BA	Coupling 4 - MODEL 10-17 Only	1	
023327	1000-031-001	Coupling - Current Reduction	1	Fine Spline
023328	4912	Coupling - Early Reduction	1	Fine Spline
023196	71-17	Thrust Washer	1	
023187	1016-193-001	Washer	1	
023188	71-15B	Washer	1	
023189	73C-15	Thrust Washer	1	
023329	1016-124-001	Piston - Forward	1	Original OEM
023330	1016-179-001	Hub - Forward	1	Original OEM
023331	A4740G	Breather	1	

VELVET DRIVE® 71 & 72 "V" Drive

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
023801CB	1308-410-001	OVERHAUL KIT Includes Gasket Set, Orings, Metal Clad Seals and Nut	1	
MISC. PARTS				
023027	1308-045-001	Gasket - V DRIVE Housing Up to 1991	1	
023028	1308-045-004	Gasket - V DRIVE Housing 1992-On	1	
023029	1308-045-002	Gasket - V DRIVE Trans	1	
023030	1308-045-003	Gasket	1	
1393109	1000-141-235	Oring - Pre-Load Cap	2	
023421	71C-110	Metal Clad Oil Seal - Output UP to 1989	1	
023422	1000-044-017	Metal Clad Oil Seal - Output 1990-On	1	
023320	1000-149-034	Nut - Output Shaft	1	
023335	1308-410-015	Flange Kit - V DRIVE Conversion Kit	1	
023332	1308-027-005	Flange - Housing	1	
023333	942-1652	Bolt - Flange Housing	6	
023334	NL	Lockwasher - Flange Housing Bolt	6	
023335	1308-410-015 25662	Flange Kit - V DRIVE Conversion Kit HEAVY DUTY	1	

VELVET DRIVE® 71 & 72 Damper Assemblies

DAMPER ASSEMBLIES				
DA-101	1004-650-001		1	
DA-102	1004-650-002 AS4-K1C	6.18" OD, 1.353 Spline	1	26 Teeth
DA-103	1004-650-003	8.0" OD, 1.35 Spline (8 Equally Spaced Holes)	1	26 Teeth
DA-106	1004-650-006 AS4-K2C	6.66" RAD (Triangle), 1.353 Spline	1	26 Teeth
DA-106A	120-8-1446 AS8-K2C	6.66" RAD Same as DA-106 except with Cut Off Rounded Ears	1	26 Teeth
DA-107	1004-650-007 AS7-K2C	13.25" OD Fits Engines up to 430 C.U. 1.353 spline	1	26 Teeth Purple Spring
DA-108	1004-650-008 AS5-K2C	13.25" OD Fits Engines up to 370 C.U.	1	White Spring
DA-111	132-008-2246	Lite "Maximum Rating 500 H.P." 13.25" OD	1	26 Teeth
DA-302	2301-650-001	152mm x 123mm 10/23/29 Teeth DIN 5464 with Dowel Pin Holes	1	45 Degree x 8

BORG WARNER T-22

CLUTCHES				
308700	1008-666-004	Friction	16	Black PL 2.8mm/.110" 44 Teeth
308700A	AT-220-66 1008-666-001	Friction	16	Bronze 2.8mm/.110" 44 Teeth
308701	22-176	Steel	16	Flat 1.7mm/.068"
308703	1008-166-001	Steel	8	Flat 3.5mm/.138"

**BORG WARNER (CR-2) / VELVET DRIVE
1013/14 DROP CENTER**

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
023801DB	1013-410-001	OVERHAUL KIT Includes Gaskets, Metal Clad Seals and Sealing Rings	1	
023901B	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
023901BLS	NL	BANNER KIT Includes Overhaul Kit and Bronze Plates	1	
023750D	NL	CLUTCH PLATE MODULE Includes 10 Bronze Plates and 6 Steel Plates	1	
CLUTCHES				
049700BR	5C-A66A	Friction Forward	5-7	Bronze .060
023738BR	72A-66B	Friction Reverse	1-3	Bronze .115
023701	3-176	Steel Forward	4-6	Flat .068
023739	72-176	Steel Reverse	1-2	Flat .070
MISC. PARTS				
023050A	4805A	Seal - Reverse Clutch Outer	1	
023054A	5L-36	Seal - Forward Clutch Outer	1	
023002	3-61	Seal - Front Pump	1	
023020	71-144B	Gasket - Case & Adapter	1	
023022	71-14	Gasket - Valve Cover	1	
023041	1013-045-002	Gasket - Reduction Housing	1	
023042	1013-045-001	Gasket - Adapter	1	
1390734	4804H	Oring - Control Valve		
010226A	5M-122	Oring - Forward Clutch Inner		Old# 1391984
010226A	4804G	Oring - Reverse Clutch Inner		Old# 1391984
023420	1000-044-014	Metal Clad Seal - Front Pump		
023428	1000-044-003	Metal Clad Seal - Coupling		
023111	4806S 4806L	Sealing Ring - Teflon	2	
038105	4806J	Sealing Ring	5	

CLUTCHES				
340700	2301-666-001	Friction	10	Bronze .062
340701	2301-166-001	Steel	8	Flat .068

VELVET DRIVE ® S500

CLUTCHES				
044700	1023-666-001	Friction Forward/Reverse	7	Fiber .090
044701	1023-166-001	Steel Forward/Reverse	7	Flat .071

VELVET DRIVE ® 1500

CLUTCHES				
027700	1023-666-003	Friction Forward/Reverse	7	Fiber .086
027701	1023-166-002	Steel Forward	7	Flat .068

VELVET DRIVE ® 7000

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
023748	1026-666-001	Friction Forward/Reverse	15	Fiber .061
023749	1026-166-001	Steel Forward/Reverse	15	Flat .068

PARAGON MODELS P21, P31, OW1 (SN5M-P)

KITS				
023809D	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809DB	Z-7601	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909D	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	Combo Fits SN5M-5P & 6A & Later
023750E	KN-10031X	CLUTCH PLATE MODULE Includes 6 Bronze Plates and 7 Steel Plates	1	
CLUTCHES				
049700BR	11759	Friction	6	Bronze .060
023751	11758	Steel	7	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023034	11083	Gasket - Rear	1	
2101100	16196	Oring	1	
1395734	10280	Oring - Outer	1	
1391609	11352	Oring - Forward & Rear Coupling	2	
1393234	12221	Oring - Reverse Piston	1	
1030737	12222	Oring - Piston	1	
0701364	11769	Oring - Control Valve	1	
1030612	11779	Oring - Relief Valve	1	
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023427	2XE-446A	Metal Clad Seal - Rear	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODELS P32A-P35B, P22-P25, OW2-OW5
(SN5M-5P & 6A & LATER)

KITS				
023809	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809B	Z-7988 Z-7603	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	Combo Fits SN5M-5P & 6A & Later
023750G	KN-10031	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 9 Steel Plates, 2 Clips and 2 Screws	1	

PARAGON MODELS P32A-P35B, P22-P25, OW2-OW5
(SN5M-5P & 6A & LATER)

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES (Continued)				
049700BR	11759	Friction	6-8	Bronze .060
023751	11758	Steel	7-9	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023032A	12576	Gasket - Cover	1	SN6A & Later
023034	11083	Gasket - Rear	1	
023039	RA20-15A	Gasket - Reduction	1	1.5:1 & 2:1 Only
023040	RB20-15A	Gasket - Reduction	1	2.5:1 & 3:1 Only
1395734	10280	Oring - Outer	1	
1391609	11352	Oring - Forward & Rear Coupling	2	
1393234	12221	Oring - Reverse Piston	1	
1030737	12222	Oring - Piston	1	
0701364	11769	Oring - Control Valve	1	
1030612	11779	Oring - Relief Valve	1	
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023423	11518	Metal Clad Seal - Coupling	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODELS P34-P35, P42-P45
(SN5M-5P & 6A & LATER)

KITS				
023809A	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809AB	Z-7989 Z-7604	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909A	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	Combo Fits SN5M-5P & 6A & Later
023750G	KN-10031	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 9 Steel Plates, 2 Clips and 2 Screws	1	
CLUTCHES				
049700BR	11759	Friction	6-8	Bronze .060
023751	11758	Steel	7-9	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023032A	12576	Gasket - Cover	1	SN6A & Later
023034	11083	Gasket - Rear	1	
023035	RC20-15A	Gasket - Reduction	1	
023036	P11397	Gasket - Reverse-Gear Ring	1	
023040	RB20-15A	Gasket - Reduction	1	2.5:1 & 3:1 Only
1395734	10280	Oring - Outer	1	
1391609	11352	Oring - Forward & Rear Coupling	2	
1393234	12221	Oring - Reverse Piston	1	
1030737	12222	Oring - Piston	1	

**PARAGON MODELS P34-P35, P42-P45
(SN5M-5P & 6A & LATER)**

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
MISC. PARTS (Continued)				
0701364	11769	Oring - Control Valve	1	
1030612	11779	Oring - Relief Valve	1	
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023423	11518	Metal Clad Seal - Coupling	1	
023424	12316	Metal Clad Seal - Coupling	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

**PARAGON MODEL P41
(SN5M-5P & 6A & LATER)**

KITS				
023809E	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809EB	Z-7802 Z-7987	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909E	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	SN5M-5P
023909F	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	SN6A & Later
023750J	NL	CLUTCH PLATE MODULE Includes 7 Bronze Plates, 8 Steel Plates, 2 Clips and 2 Screws	1	
CLUTCHES				
049700BR	11759	Friction	7-8	Bronze .060
023751	11758	Steel	8-9	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023032A	12576	Gasket - Cover	1	SN6A & Later
023036	P11397	Gasket - Reverse-Gear Ring	1	
1395734	10280	Oring - Outer	1	
1391609	11352	Oring - Forward & Rear Coupling	2	
1393234	12221	Oring - Reverse Piston	1	
1030737	12222	Oring - Piston	1	
0701364	11769	Oring - Control Valve	1	
1030612	11779	Oring - Relief Valve	1	
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023426	RB446	Metal Clad Seal - Coupling	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODEL P200, 300, 400

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
049740	11759-P	Friction Forward	6-8	Fiber .060
049700BR	11759	Friction Forward	6-8	Bronze .060
023751	11758	Steel Forward	7-9	Flat .060

PARAGON MODEL HF7 (Direct Drive)

KITS				
023811A	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809CB	Z-7279	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	
023911B	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
023750E	KN-10031X	CLUTCH PLATE MODULE Includes 6 Bronze Plates, 7 Steel Plates, 2 Clips and 2 Screws	1	
CLUTCHES				
049700BR	11759	Friction	6	Bronze .060
023751	11758	Steel	7	Flat .060
MISC. PARTS				
023033	11736	Gasket - Front Housing	1	
023034	Y-11083	Gasket - Rear Housing	1	
023037	Y-11767	Gasket - Cover Housing	1	
0700801	X-11683	Oring	1	
0701364	X-11769	Oring - Control Valve	1	
1030612	X-11779	Oring - Relief Valve	1	
1032737	X-11777	Oring	1	
1391609	X-11352	Oring - Coupling	1	
1395734	X-10280	Oring - Outer	1	
2101100	X-16196	Oring	1	
023425	X-11791	Metal Clad Seal - Front	1	
023427	2X3-446A	Metal Clad Seal - Rear	1	
023096	X-11726	Seal - Washer	1	
023098	X-11353	Seal - Washer	12	
023099	11573	Washer - Seal	1	
023110	HF-1094	Sealing Ring - Oil Dist.	2	
023501	112409	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODEL HJ7

KITS				
023811C	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809BB	Z-7401	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
023911	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
023750J	NL	CLUTCH PLATE MODULE Includes 7 Bronze Plates, 8 Steel Plates, 2 Clips and 2 Screws	1	

PARAGON MODEL HJ7

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES (Continued)				
049700BR	11759	Friction	7	Bronze .060
023751	11758	Steel	8	Flat .060
MISC. PARTS				
023031	Z-12640	Gasket - Front Housing	1	
023037	Y-11767	Gasket - Cover Housing	1	
023038	Y-11397	Gasket - Rear Housing	1	
0700801	X-11683	Oring	1	
0701364	X-11769	Oring - Control Valve	1	
1030612	X-11779	Oring - Relief Valve	1	
1032737	X-11777	Oring	1	
1391609	X-11352	Oring - Coupling	1	
1395734	X-10280	Oring - Outer	1	
023425	X-11791	Metal Clad Seal - Front	1	
023426	RB446	Metal Clad Seal - Rear	1	
023096	X-11726	Washer - Seal	1	
023097	11176	Washer - Seal	6	
023098	11353	Washer - Seal	6	
023099	11573	Washer - Seal Detent	1	
023110	HF-1094	Sealing Ring - Oil Dist.	2	
023501	112409	Clip	2	
023502	11237	Lock Screw	2	

MERCURUISER II-TR, S

CLUTCHES				
049740	C9AP-7B164A B-62691A1-KIT	Friction Forward	8	Fiber .060
049702	C9AP-7B164SEL B-62691A1-KIT	Friction Forward	1	Fiber .072
023736	C9AP-7B164SEL B-62691A1-KIT	Friction Forward	1	Fiber .0876
023701	C8AZ-7B442A B-62691A1-KIT	Steel Forward	4	Flat .068
049700	E0AZ-7B164A C9AZ-7B164A B6AZ-7B164R B5AZ-7B164B 3193139 3186574	Friction		Tan PL .061
049700BR	5C-A66A B5AZ-7B164A B6AZ-7B164A	Friction		Bronze .061
049700BR235	NL	Friction		Bronze .093
023738BR	72-A66B	Friction		Bronze .115
023739	72-176	Steel		Flat



CAPITOL HYDRASMOOTH

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
087700	17-80032	Friction Direct Small	9	Fiber .072
087701	17-80029	Steel Direct Small	AR	Flat .071
087711	17-80029	Steel Direct Small	AR	Flat .061
087702	17-80031	Friction Reverse Large	5	Fiber .092

CAPITOL MARINE

HY400, 6900, HY7700, 24000, 25000

CLUTCHES				
305700	1-00230-4900	Friction	12-14	Bronze .155
305701	1-00233-1200	Steel	12-14	Flat .091

CAPITOL MARINE

5HD-200, HE 10200, 10700, 11200, 11720

CLUTCHES				
305702	1-00230-2000	Friction	12-14	Bronze .135
305703	1-00233-0070	Steel	12-14	Flat .095
305703-390	1-00229-1700	Steel		Flat .155

CAPITOL MARINE

M105, 125

CLUTCHES				
305704	1-14186-0000	Friction	12	Bronze .125
305705	1-14185-0000	Steel	12	Flat .065

YAMAHA 7.4 Liter Hydra-Drive

CLUTCHES				
338700	6U1-16321-00	Friction	14	Bronze .085
338701	6U1-16324-00	Steel	14	Flat .048

YANMAR MARINE KBW-10, KBW-20

CLUTCHES				
336700	177090-03080	Friction - Forward / Reverse	8	Bronze 1.7mm / .067
336701	177090-03090	Steel - Forward / Reverse	6	Steel 1.4mm / .056

HURTH/ZF REBUILD KITS



Kit, Overhaul, Hurth HSW450A-2

Code: **250-315800**

Overhaul Kit for Hurth HSW450A-2 Transmissions.

Includes Gaskets, O-rings, Metal Clad Seals and Sealing Rings



Kit, Master Overhaul, Hurth HSW450A-2

Code: **250-315900**

Master Overhaul Kit for Hurth HSW450A-2 Transmissions.

Includes Overhaul Kit, Bronze Plates and Steel Plates



Kit, Overhaul, Hurth HBW 5, 50, 100

Code: **250-316801B**

This is a Gasket Set for Hurth HBW 5/50/100 Transmissions. It Includes Paper and Rubber Parts Only. This item replace OEM: 500427.



Kit, Overhaul, Hurth HBW 10, 150

Code: **250-316803B**

Overhaul Gasket Set for Hurth HBW 10/150 Transmissions.

Includes Gaskets, O-rings and Metal Clad Seals

OEM: 500428

HURTH/ZF REBUILD KITS



Kit, Overhaul, Hurth HBW150V
Code: **250-316803VB**

Overhaul Gasket Set for Hurth HBW150V Transmissions
Includes Gaskets, O-rings, Metal Clad Seals and Sealing Rings
OEM: 500429



Kit, Overhaul, Hurth HBW 20, 220, 250
Code: **250-316805B**

This is an Overhaul Kit for Hurth HBW 20/220/250 Transmissions. It Includes Gaskets, O-rings, Metal Clad Seals and Sealing Rings. This item replaces OEM: 500430.



Kit, Overhaul, Hurth HSW 630A V Drive
Code: **250-316807AB**

This is an Overhaul Kit for a Hurth HSW630A V Drive. It Includes Gaskets, O-rings, Metal Clad Seals and Sealing Rings. This item replaces OEM: 500-423.



Kit, Overhaul, Hurth HSW-630A-1 Hydraulic
Code: **250-316807B**

This is an Overhaul Kit for Hurth HSW630A-1 Hydraulic Transmissions. It Includes Gaskets, O-rings, Metal Clad Seals and Sealing Rings



Kit, Master Overhaul, Hurth HBW 5, 50, 100
Code: **250-316901**

This is a Master Overhaul Kit for Hurth HBW 5/50/100 Transmissions. It Includes Overhaul Kit, Bronze Plates and Steel Plates. This item replaces OEM: 500437.

HURTH/ZF REBUILD KITS



Kit, Master Overhaul, Hurth HBW 10, 150
Code: **250-316903**

This is a Master Overhaul Kit for Hurth HBW 10/150 Transmissions. It Includes Overhaul Kit, Bronze Plates and Steel Plates. This item replaces OEM: 500438.



Master Overhaul Kit, Hurth HBW150V
Code: **250-316903V**



Master Overhaul Kit for Hurth HBW150V
Includes Overhaul Kit, Bronze Plates and Steel Plates
OEM: 500439



Kit, Master Overhaul, Hurth HBW 20, 200, 250
Code: **250-316905**



Master Overhaul Kit for Hurth HBW 20/200/250 Transmissions Includes Overhaul Kit, Bronze Plates, and Steel Plates OEM: 500440



Kit, Master Overhaul, Hurth 630A1
Code: **250-316907**



Master Overhaul Kit for Hurth 630A1 Transmissions
Includes Overhaul Kit, Bronze Plates and Steel Plates

TWIN DISC MG-502

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
332701	B3337	Steel Forward/Reverse	18	52 Teeth Flat .051
332700	B3336A	Friction Forward/Reverse	16	79 Teeth Bronze .085

TWIN DISC MG-506

CLUTCHES				
332703	204097	Steel Forward/Reverse	18	42 Teeth Flat .061
332702	B3060B	Friction Forward/Reverse	16	Bronze .085

TWIN DISC MG-509-512

CLUTCHES				
332705	A-4939 P-4371	Steel Forward/Reverse - MG-509 Only	14	45 Teeth Flat .062
332704	A-4480A,B,M P-4251A,B,C	Friction Forward/Reverse - MG-509 & MG-512	14	Bronze .112

TWIN DISC MG-514A, B, C

CLUTCHES				
332707	A-6567C	Steel MG-514A, MG-514B - Early	14	Flat .091
332709	A-6567E	Steel MG-514A, MG-514B - Late		Step .091
332709	A-6567E	Steel MG-514C		Step .091
332706	A-6566E	Friction - All Models	14	Bronze .122

TWIN DISC (Various)

CLUTCHES				
332708	206177M	Friction		
332711-228	215736	Steel - MG-518		Flat .090
332712	206106X	Friction - MG-518		Grn WF .125
MISC. PARTS				
332501UP12	B1432	Bearing Retainer (Pack of 12 Pcs.)	12	
332502UP26	B3073C	Drive Block, Rubber - Large (Pack of 26 Pcs.)	26	
332503UP26	A3905E	Drive Block, Rubber - Small (Pack of 26 Pcs.)	26	

HURTH MARINE HBW 5, 50, 100

KITS				
316801B	500427	GASKET SET Includes Paper and Rubber Parts Only	1	
316901	500437	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 6 Steel Plates	1	
CLUTCHES				
316700	288757	Friction	8	Bronze .063
316701	288758	Steel	6	Flat .056
MISC. PARTS				
316003	288739	Gasket	4	
316005	254716	Gasket - Shift Cover	1	
316410	106864	Metal Seal - Lever	1	OD: 26mm ID: 20mm
316401	280135	Metal Seal	1	OD: 37mm ID: 27mm
316402	105153	Metal Seal	1	OD: 45mm ID: 32mm
2000950	105524	Oring - Shift Shaft HBW-50	1	

HURTH MARINE HBW 5, 50, 100

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
MISC. PARTS (Continued)				
2401230	105679	Oring - Intermediate Shaft HBW-100	1	
316187	288748	Thrust Washer	2	
316187-396	288748	Thrust Washer (OE Design)	2	
316645		Shim Kit - Bearing (Contains 1 Each Shim)	1	
316150-050	288735	Shim Bearing	1	.50mm
316150-030	288734	Shim Bearing	1	.30mm
316150-020	288733	Shim Bearing	1	.20mm
316150-015	288732	Shim Bearing	1	.15mm
316150-010	288731	Shim Bearing	1	.10mm
316646		Shim Kit - Clutch (Contains 1 Each Shim)	1	
316151-040	288760	Shim Clutch	1	.40mm
316151-050	288761	Shim Clutch	1	.50mm
316151-060	288762	Shim Clutch	1	.60mm
316151-070	288763	Shim Clutch	1	.70mm

HURTH MARINE HBW 10, 150

KITS				
316803B	500428	GASKET SET Includes Gaskets, Orings and Metal Clad Seals	1	
316903	500438	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316903A	NL	MASTER OVERHAUL KIT - LATE Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750A	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 6 Steel Plates	1	
316750E	NL	CLUTCH PLATE MODULE - LATE Includes 8 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
316702	288912	Friction	8	Bronze .063
316702-150	407231	Friction - Thin	8	Bronze .059
316703	187872	Steel	6	Flat .056
316703-100	NL	Steel - Thin	8	Flat .039
MISC. PARTS				
316002	254715	Gasket	4	
316005	254716	Gasket - Shift Cover	1	
316410	106864	Metal Clad Seal - Lever	1	OD: 26mm ID: 20mm
316403	215875	Metal Clad Seal - Front	1	OD: 52mm ID: 30mm
316404	105159	Metal Clad Seal - Rear	1	OD: 52mm ID: 40mm
3001400	105530	Oring - Intermediate Shaft HBW 150	1	
316188	344787	Thrust Washer	2	
316645A		Shim Kit - Bearing (Contains 1 Each Shim)		
316150A010	206474	Shim - Bearing	1	.10mm
316150A015	206475	Shim - Bearing	1	.15mm
316150A020	206476	Shim - Bearing	1	.20mm
316150A050	228540	Shim - Bearing	1	.50mm
316150A100	228539	Shim - Bearing	1	1.0mm
316646A		Shim Kit - Clutch (Contains 1 Each Shim)		
316151A040	195714	Shim - Clutch	1	.40mm
316151A050	195715	Shim - Clutch	1	.50mm
316151A060	195716	Shim - Clutch	1	.60mm
316151A070	195717	Shim - Clutch	1	.70mm

HURTH MARINE HBW 150V

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
316803VB	500429	GASKET SET Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316903V	500439	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316903VA	NL	MASTER OVERHAUL KIT - LATE Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750A	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 6 Steel Plates	1	
316750E	NL	CLUTCH PLATE MODULE - LATE Includes 8 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
316702	288912	Friction	8	Bronze .063
316702-150	407231	Friction - Thin	8	Bronze .059
316703	187872	Steel	6	Flat .056
316703-100	NL	Steel - Thin	8	Flat .039
MISC. PARTS				
316002	254715	Gasket	2	
316005	254716	Gasket - Shift Cover	1	
316410	106864	Metal Clad Seal - Lever	1	OD: 26mm ID: 20mm
316403	215875	Metal Clad Seal - Front	1	OD: 52mm ID: 30mm
316406	401647	Metal Clad Seal - Rear	2	OD: 90mm ID: 65mm
3004950	105590	Oring	1	
2508500	291618	Oring	2	

HURTH MARINE HBW 20, 220, 250

KITS				
316805B	500430	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316905	500440	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750B	NL	CLUTCH PLATE MODULE Includes 10 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
316704	288889	Friction	10	Bronze .063
316705	206026	Steel	8	Flat .056
MISC. PARTS				
316001	274251	Gasket	4	
316410	106864	Metal Clad Seal - Lever	1	OD: 26mm ID: 20mm
316404	105159	Metal Clad Seal	1	OD: 52mm ID: 40mm
316405	284260	Metal Clad Seal	1	OD: 90mm ID: 65mm
316189	327395 277109	Oring	1	
316645B		Shim Kit - Bearing (Contains 1 Each Shim)		
316150B010	274252	Shim - Bearing	1	.10mm
316150B015	274253	Shim - Bearing	1	.15mm
316150B020	274254	Shim - Bearing	1	.20mm
316150B050	274255	Shim - Bearing	1	.50mm
316150B100	274256	Shim - Bearing	1	1.0mm
316646A		Shim Kit - Clutch (Contains 1 Each Shim)		
316151A040	195714	Shim - Clutch	1	.40mm
316151A050	195715	Shim - Clutch	1	.50mm
316151A060	195716	Shim - Clutch	1	.60mm
316151A070	195717	Shim - Clutch	1	.70mm

HURTH MARINE HBW 360, 450, 630

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
316706	326380	Friction	AR	Paper .063
316707	408265	Steel	AR	Flat .056

HURTH MARINE Damper Assemblies

DAMPER ASSEMBLIES				
DA-301	947-77-601-02 254750	121.5mm X 100mm 10/23/29 Teeth DIN 5464	1	45 Degree x 8
DA-302	947-44-601-03 254762	152mm x 123mm 10/23/29 Teeth DIN 5464 w/DOWEL PIN HOLES	1	45 Degree x 8
DA-303	288240	157mm X 123mm 10/23/29 Teeth DIN 5464	1	72 Degree x 5

HURTH MARINE HSW 800 SERIES (Reduction) & V DRIVE

KITS				
316807CB	NA	OVERHAUL KIT - (800 REDUCTION) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316807BB	NL	OVERHAUL KIT - (V DRIVE) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316907A	500435	MASTER OVERHAUL KIT - (800 REDUCTION) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316907AV	NL	MASTER OVERHAUL KIT - (V DRIVE) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750D	NL	CLUTCH PLATE MODULE - (800 REDUCTION AND V DRIVE) Includes 10 Bronze Plates and 12 Steel Plates		
CLUTCHES				
316708	97827315013 455-786 813319	Friction	10	Bronze .079
316709	97827314013 455-787 813320	Steel	12	Wave .067
MISC. PARTS				
316004	27-813301 408-388	Gasket - Shift Cover	1	
316051	0634303505	Oring - Output Shaft	1	OD: 61.5mm
316405	26-813286 413-883	Metal Clad Seal - Input	1	OD: 52mm ID: 35mm
316407A	634319104	Metal Clad Seal - Output - REDUCTION	1	OD: 95mm ID: 73mm
316408A	105-113	Seal - Output V DRIVE	1	105 X 130 X 12
316409A	480-762	Seal - Output V DRIVE	1	80 X 100 X 10
TBA		Metal Clad Seal - Control Valve	1	OD: 43mm ID: 30mm
316940	438337	Filter	1	
FK316940	463772	Filter Kit - Includes Filter & 2 Orings		
1180748	25-813406 105-542	Oring - Inner Filter Cover	1	
2362244	25-813407 442-731	Oring - Outer Filter Cover	1	
1581496	25-813329 105-571	Oring - Output Flange	1	
0790882	NL	Oring - Control Valve	2	
316102	53-813312 447-038	Sealing Ring - Shaft	3	

HURTH MARINE HSW 630A-1 (Hydraulic) & 630 V DRIVE

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
316807B	NL	OVERHAUL KIT - (630A-1 HYDRAULIC) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316807AB	500-423	OVERHAUL KIT - (630 V DRIVE) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316907	NL	MASTER OVERHAUL KIT - (630A-1 HYDRAULIC) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316907V	NL	MASTER OVERHAUL KIT - (630 V DRIVE) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750C	NL	CLUTCH PLATE MODULE - (630A-1 HYD & 630 V DRIVE) Includes 8 Bronze Plates and 10 Steel Plates	1	
CLUTCHES				
316708	97827315013 455-786 813319	Friction	8	Bronze 2.0mm / .079 OD: 134mm / 5.27 36 Teeth
316709	97827314013 455-787 813320	Steel	10	Wave 1.77mm / .067 ID: 96.5mm / 3.8
MISC. PARTS				
316004	27-813301 408-388	Gasket - Shift Cover	1	
316405	26-813286 413883	Metal Clad Seal - Input	1	OD: 52mm ID: 35mm
316407	26-813292 442-135	Metal Clad Seal - Output	1	OD: 72mm ID: 55mm
316940	438337	Filter	1	
FK316940	463772	Filter Kit - Includes Filter & 2 Orings	1	
1180748	25-813406 105-542	Oring - Inner Filter Cover	1	
2362244	25-813407 442-731	Oring - Outer Filter Cover	1	
1581496	25-813329 105571	Oring - Output Flange	1	
0790882	101-101	Oring - Control Valve	2	
TBA	101-100	Metal Clad Seal - Control Valve	1	OD: 43mm ID: 30mm
316102	53-813312 447-038	Sealing Ring - Shaft	3	
316408	444-070	Seal - Output V DRIVE	1	85 x 110 x 12
316409	444-071	Seal - Output V DRIVE	1	65 x 85 x 12

HURTH MARINE HSW 450A-2

KITS				
315800	NL	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
315900	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
315750	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 10 Steel Plates	1	
CLUTCHES				
315700BR	489120	Friction	8	Bronze 1.7mm / .066 OD: 110mm / 4.325 27 Teeth
315701	489119	Steel	10	Wave 1.5mm / .059 ID: 85mm / 3.335 6 Teeth

HURTH MARINE HSW 450A-2

MISC. PARTS (Continued)				
316004	408388	Gasket - Control Block	1	
315401	374056	Metal Clad Seal - Output Shaft	1	45 x 62 x 8
315402	500065	Metal Clad Seal - Dist. Shaft	1	30 x 43 x 8/9.5
316405	413883	Metal Clad Seal - Input Shaft	1	52 x 35 x 8
1581181	105559	Oring - Output Shaft	1	
TBA	438742 437653	Seal - Suction Pipe	1	
315250	489122	Retainer Ring	1	
315251	393124	Snap Ring	2	
316940	438337	Filter	1	
FK316940	463772	Filter Kit - Includes Filter & 2 Orings	1	

HURTH MARINE / ZF IRM 220, 220A

KITS				
322800	3205199501	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
322901	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
322750	3205199504	CLUTCH PLATE MODULE Includes 26 Bronze Plates, 24 Steel Plates, 2 Pressure Plates	1	
322750X	3205199504X	CLUTCH PLATE MODULE Includes 26 Bronze Plates, 24 Steel Plates	1	
CLUTCHES				
322700-220	3205302057	Friction Forward & Reverse	22	Bronze .087
322702-180	3205302056	Friction Forward & Reverse (1 Sided)	4	Bronze .071
322701-140	3205302062	Steel Forward & Reverse	24	Waved .055
322760A700	3205302059	Steel Forward & Reverse Pressure Plate	2	Step
MISC. PARTS				
322100	0634402538 03380100	Ring, Sealing Lock	4	
322400	0634319110	Metal Clad Seal - Input	1	
322402	063400069	Metal Clad Seal - Output	1	

HURTH MARINE / ZF 301, 301A

KITS				
322802	0741728	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
322903	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
322750A	NL	CLUTCH PLATE MODULE Includes 9 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
322704-200	044114009	Friction	9	Bronze .079
322705-150	3209303035 043013457254	Steel	8	Flat .059
MISC. PARTS				
322020	NL	Gasket	1	
322420	NL	Seal	1	75-95-10
322421	NL	Seal	1	42-55-8
322101	NL	Ring, Sealing Lock	4	

AltoUpdate...

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MAKE	TRANSMISSION	APPLICATION	YEAR
Hurth	ZF IRM 220 & 220A	Clutch Plates & Overhaul Kits	

DESCRIPTION & NOTES...

MARINE PARTS SUPPLY (800) 661-5353

Hurth Marine ZF IRM 220, 220A Clutch Plates and Overhaul Kits...

We are pleased to announce our clutch plates and overhaul kits for Hurth Marine ZF IRM 220 and 220A transmissions.



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KITS

ALTO #	REF #	DESCRIPTION	USAGE
322800	32051995501	Overhaul Kit - Gaskets, Orings, Metal Clad Seals & Sealing Rings	1
322901	NL	Master Overhaul Kit - Overhaul Kit, Bronze & Steel Plates	1
322750	3205199504	Clutch Plate Module - Includes 26 Bronze, 24 Steel & 2 Pressure Plates	1
322750X	3205199504X	Clutch Plate Module - Includes 26 Bronze & 24 Steel Plates	1

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CLUTCHES

ALTO #	REF #	DESCRIPTION	USAGE
322700-220	3205302057	Friction Forward & Reverse, Bronze .087"	22
322702-180	3205302056	Friction Forward & Reverse, 1-sided, Bronze .071"	4
322701-140	3205302062	Steel Forward & Reverse, Waved .055"	24
322760A700	3205302059	Steel Forward & Reverse Pressure Plate with Step	2

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SEALING RING

ALTO #	REF #	DESCRIPTION	USAGE
322100	0634402538, 03380100	Lock Sealing Ring	4

METAL CLAD SEALS

ALTO #	REF #	DESCRIPTION	USAGE
322400	0634319110	Input	1
322402	063400069	Output	1

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DRIVE DAMPERS (SPRING MODELS)



Drive Damper, Velvet Drive 71, 72, Heavy Duty Diesel, 13.875 OD

Code: **250-DA-101**

This is a Drive Damper Assembly. The diameter is 13.875", and is commonly used on Velvet Drive 71, 72 Heavy Duty Diesel. This item replaces Borg Warner # 1004-650-001.

Drive Damper, Velvet Drive 71, 72, Volvo 6.18 OD 26 Spline

Code: **250-DA-102**

Drive Damper Assembly for Velvet Drive 71, 72
6.18" OD, 1.353 Spline, 26 tooth
OEM: 1004-650-002, AS4-K1C



Drive Damper, Velvet Drive 72, 73, GM 53 Series Detroit

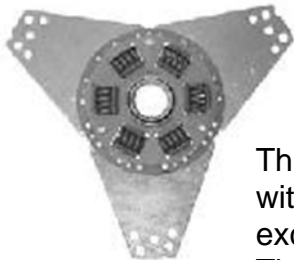
Code: **250-DA-103**

This is a Drive Damper Assembly for GM 53 Series Detroit Diesel, Velvet Drive 71 & 72. This item replaces Borg Warner OEM: 1004-650-003

Drive Damper, 14" Flywheel, Triangle, Velvet Drive 71, 72

Code: **250-DA-106**

This is a Triangular Drive Damper Assembly for a Velvet Drive 71, 72 with a 14" flywheel. Common use 6.66" RAD. (triangle) 1.353 Spline 26 Tooth. This item replaces Borg Warner # 1004-650-006 AS4-K2C. OEM: 1004-650-006, AS4-K2C



Drive Damper, 12" Flywheel, Triangle, Velvet Drive 71, 72

Code: **250-DA-106A**

This is a Triangular Drive Damper Assembly for Velvet Drive 71 & 72 with 12" flywheel. Common use 6.66" RAD Same as 250-DA-106, except with cut Off rounded ears; 26 Tooth. This item replaces Borg Warner OEM: 120-8-1446

Drive Damper, Round, 13.25 OD, Velvet Drive 71, 72

Code: **250-DA-107**

This is a Round Drive Damper Assembly with Purple Springs for Velvet Drive 71 & 72 with heavy duty 14" flywheel 13.25" OD, 1.353 Spline; 26 Tooth. common use
OEM: 1004-650-007, AS7-K2C
Up to 430 cu. in. engines





Drive Damper, Round, 13.25 OD, Velvet Drive 71, 72

Code: **250-DA-108**

Round Drive Damper Assembly for common use on Velvet Drive 71 & 72 with White Spring, 13.25" OD

OEM: 1004-650-008 up to 370 cu. In. engines

Drive Damper, Round, 13.25 OD, Velvet Drive 71, 72 Code: **250-DA-111**

Max 500 hp OEM 132-008-2246 ([click here to go to 250-DA111 link](#))

Drive Damper, Round, 13.25 OD, Velvet Drive 71, 72 Code: **250-DA-112**

OEM 070-008-1918

Drive Damper, Volvo B30, D21, D40 Eng

Code: **250-DA-201**

Drive Damper Assembly for Volvo Penta B30, D21, D40 ENG.

287 mm X 123 mm; 26 Tooth

OEM: 841893-1



Drive Damper, Volvo D20, D32 Eng

Code: **250-DA-202**

841896-4 267mm xs 123mm 10 Teeth

Drive Damper, Volvo ,MD21, MD32 Eng

Code: **250-DA-203**

841894-9 MD21, MD32 ENG. 287mm x 133mm 26 Teeth

Drive Damper, Volvo MD21 Eng

Code: **250-DA-204**

841892-3 MD21/RB ENG 267mm x 123mm 10 Teeth



Drive Damper, Volvo TAMD41, 26 Spline

Code: **250-DA-205**

Drive Damper Assembly for Volvo Penta TAM D41 Eng.

287 mm X 159 mm; 26 Tooth

OEM: 855617-7

Drive Damper, Volvo AQ Model 4 Cylinder

Code: **250-DA-206**

This is a Drive Damper Assembly for Volvo Penta AQ Model

4 Cylinder B21, B23 Engines. This item replaces Volvo

OEM: 855389-3



Drive Damper, Hurth

Code: **250-DA-301**

This is a Drive Damper Assembly for Hurth Marine 121.5 mm X 100 mm; 10/23/29 Teeth DIN 5464; 45° X 8
OEM: 254750.



Drive Damper, Hurth, Velvet Drive 71, 72

Code: **250-DA-302**

This is a Drive Damper Assembly for Velvet Drive 71 & 72; Hurth Marine, 152 mm X 123 mm 10/23/29 Teeth DIN 5464; 45° X 8 Velvet Drive with Dowel Pins. Also fits Volvo Penta.
Borg Warner OEM: 2301-650-001; Hurth OEM: 947-44-601-03, 254762.

Drive Damper, Hurth

Code: **250-DA-303**

Drive Damper Assembly for Hurth Marine 157 mm X 123 mm
10/23/29 Teeth DIN5464; 72° X 5 OEM: 288240



Drive Damper, Hurth, Velvet Drive 5000

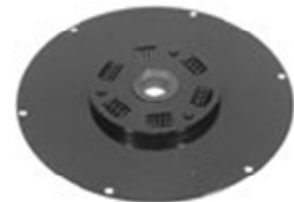
Code: **250-DA511**

Drive Damper fits all engines utilizing a Hurth or Borg Warner 5000 series

Drive Damper, Hurth, Velvet Drive 5000

Code: **860125T**

This is a Drive Damper/Drive Plate for a Mercruiser Inboard. It will fit MIE Models & Ski Models with a Hurth or a Borg Warner 5000 Series Transmission. This is a Genuine Mercruiser Part.



MARINE DAMPER ASSEMBLIES

VELVET DRIVE ®

DAMPER ASSEMBLIES				
DA-101	1004-650-001		1	
DA-102	1004-650-002 AS4-K1C	6.18" OD, 1.353 Spline	1	26 Teeth
DA-103	1004-650-003	8.0" OD, 1.35 Spline (8 Equally Spaced Holes)	1	26 Teeth
DA-106	1004-650-006 AS4-K2C	6.66" RAD (Triangle), 1.353 Spline	1	26 Teeth
DA-106A	120-8-1446	6.66" RAD Same as DA-106 except with Cut Off Rounded Ears	1	26 Teeth
DA-107	1004-650-007 AS7-K2C	13.25" OD Fits Engines up to 430 C.U. 1.353 spline	1	26 Teeth Purple Spring
DA-108	1004-650-008	13.25" OD Fits Engines up to 370 C.U.	1	White Spring
DA-111	132-008-2246	Lite "Maximum Rating 500 H.P."	1	
DA-112	070-008-1918		1	

Velvet Drive is a registered trademark of Borg Warner Corporation

VOLVO PENTA

DAMPER ASSEMBLIES				
DA-302	2301-650-001	152mm x 123mm 10/23/29 Teeth DIN 5464 with Dowel Pin Holes	1	45 Degree x 8
DA-201	841893-1	B30, D21, D40 ENG. 287mm x 123mm	1	6 Teeth
DA-202	841896-4	D20, D32 ENG. 267mm x 123mm	1	10 Teeth
DA-203	841894-9	MD21, MD32 ENG. 287mm x 133mm	1	26 Teeth
DA-204	841892-3	MD21/RB ENG 267mm x 123mm	1	10 Teeth
DA-205	855617-7	TAM D41 ENG 287mm x 159mm	1	26 Teeth
DA-206	855389-3	B21, B21 ENG	1	

HURTH MARINE

DAMPER ASSEMBLIES				
DA-301	947-77-601-02 254750	121.5mm X 100mm 10/23/29 Teeth DIN 5464	1	45 Degree x 8
DA-302	947-44-601-03 254762	152mm x 123mm 10/23/29 Teeth DIN 5464 w/DOWEL PIN HOLES	1	45 Degree x 8
DA-303	288240	157mm X 123mm 10/23/29 Teeth DIN 5464	1	72 Degree x 5

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MAKE

Borg Warner

TRANSMISSION

Velvet Drive

APPLICATION

454 Engines

YEAR

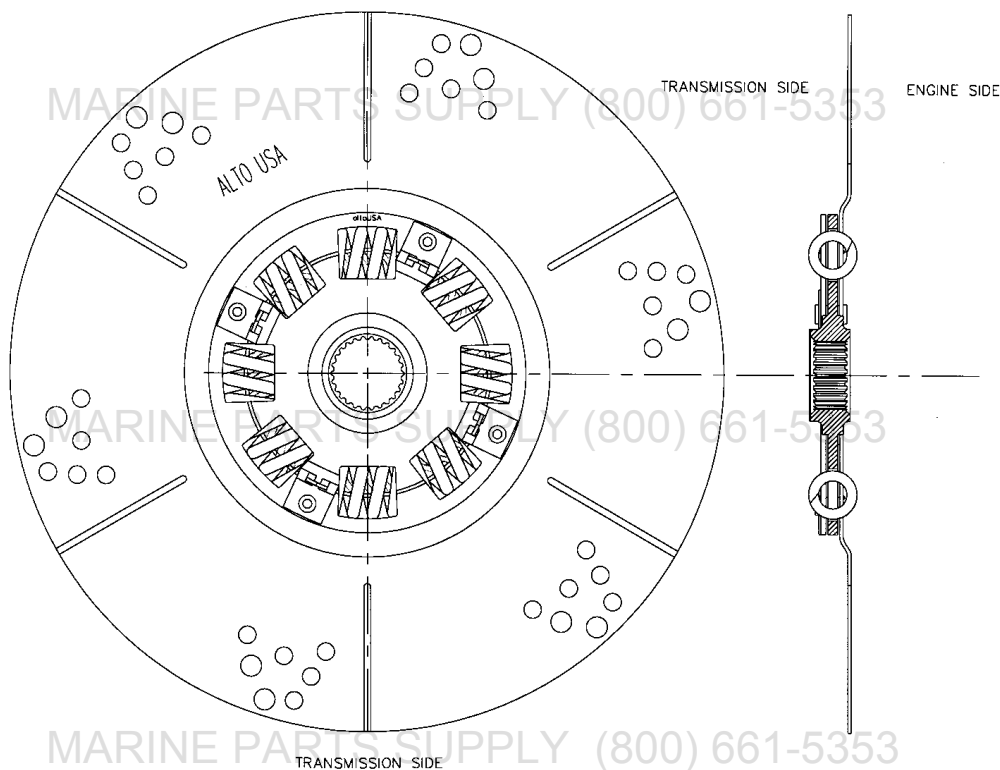
Various

DESCRIPTION & NOTES...

MARINE PARTS SUPPLY (800) 661-5353

Durability & Performance Benefits of the DA-111 Alto Part #DA-111...

This hi-performance Isolator Assembly is designed to be used with the GM 454 cubic inch engine (350 foot lbs of torque rating) having a maximum of 500 horsepower. To handle the increased horsepower the DA-111 has a thicker mounting plate (.096") and multiple torsional dampener springs (2 springs per pocket). The DA-111 is an upgrade to 132-008-2246, 1004-650-007, 1004-650-008, 1004-650-407, 1004-650-408, AS5-K2C or AS7-K2C.



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