

Table of Contents

Air Filter, Briggs	44	Spark plug washers	41
Anti-Chatter spray	18	Spindle spacers	46
Bearings, axle	46	Sprockets (Solid/Split/219/35 Chain)	1
Cassettes, axle	46	Sprocket, direct drive 2 cycle	48
Chain	48	Sprocket Hub	28
Chain breaker tool	48	Sprocket, Guard	45
Chain guard	41	Starter nut, Briggs	41
Clutches, 2 cycle		Stud kit, Briggs	42
DXL	35	Valves, Briggs	40
EXPD IV (Jica class)	32	Valve Guides	40
HDC-3	31	Valve Springs	40
HDC-4	31	Wheel Hubs	47
HDC-5	29	Wrist pin, Briggs	39
HPV	3		
Roadracing (axle mounted)	37		
Steel Nytro	33		
Clutches, 4 cycle			
Arena	17		
GLX-1 Snowmobile	26		
Greased Lightning	21		
Greased Lightning Jr	23		
MDC	19		
Reaper	15		
Rhino	27		
Redhawk	25		
X5-D	12		
Clutch Support	28		
Collars, Locking	45		
Connecting rod, Briggs	38		
Crankcase breather	41		
Crankshaft gear	42		
Engine, HPV100	3		
Engine, Lynx	6		
Fuel pump	38		
Fuel strainer cover	43		
Gasket, Head	42		
Head, Briggs	43		
Head Bolt washer, Yamaha/IAME	45		
Lifter, Briggs	41		
Manifold, Intake	44		
Oil, 2 cycle clutch	33		
Oil, 2 cycle engine	18		
Restrictor, Briggs	43		
Restrictor, Yamaha	45		

Premium Sprockets

*Introducing a new level of high performance sprockets for 2 cycle racing
100% CNC machined cavity design for closer tolerance and ultra light weight*



HXL-100 Aluminum Sprocket

7075-T6 aluminum alloy for long wear and greater strength

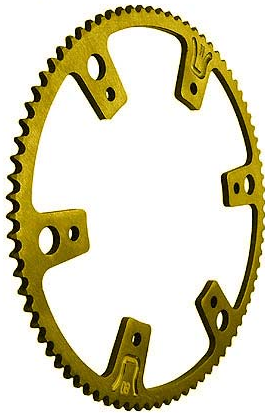
One piece style with long lasting Type III

hard anodize black finish

100cc and 125cc Competition

Available 75T through 92T #219

Sold worldwide to elite level racers



HXL-125 Steel Sprocket

Chromoly steel to stand up to the brute torque and high revs of

125cc TAG engines

Outlasts Plastic and Aluminum

One piece style with gold iridite finish

Available 75T thru 92T #219

A must for the serious racer!

HXL-100 Aluminum Sprocket	Tooth Size	HXL-125 Steel Sprocket
060075	75-219	050075
060076	76-219	050076
060077	77-219	050077
060078	78-219	050078
060079	79-219	050079
060080	80-219	050080
060081	81-219	050081
060082	82-219	050082
060083	83-219	050083
060084	84-219	050084
060085	85-219	050085
060086	86-219	050086
060087	87-219	050087
060088	88-219	050088
060089	89-219	050089
060090	90-219	050090
060091	91-219	050091
060092	92-219	050092

Economy Sprockets

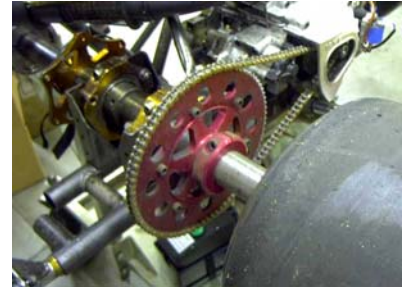
Best Value and Quality since 1970



Split

Solid

Horstman axle sprockets are made from .160" thick aluminum alloy for long lasting reliable performance. Lightening holes reduce rotating weight with red anodized finish for less friction and corrosion protection. The center hole is 4 9/16" with 5 1/4" bolt circle to fit industry standard hubs as well as euro hubs. Look for the Horstman name to insure you are getting the best. Solid style fit outside frame and Split fit inside.



#35 Split Style	#35 Solid Style	Tooth Size	#219 Split Style	#219 Solid Style
035300	045300	53		
035400	045400	54		
035500	045500	55		
035600	045600	56		
035700	045700	57		
035800	045800	58		
035900	045900	59		
036000	046000	60		
036100	046100	61		
036200	046200	62		
036300	046300	63		
036400	046400	64		
036500	046500	65	026500	006500
036600	046600	66	026600	006600
036700	046700	67	026700	006700
036800	046800	68	026800	006800
036900	046900	69	026900	006900
037000	047000	70	027000	007000
037100	047100	71	027100	007100
037200	047200	72	027200	007200
037300	047300	73	027300	007300
037400	047400	74	027400	007400
037500	047500	75	027500	007500
037600	047600	76	027600	007600
037700	047700	77	027700	007700
037800	047800	78	027800	007800
037900	047900	79	027900	007900
038000	048000	80	028000	008000
038100	048100	81	028100	008100
038200	048200	82	028200	008200
038300	048300	83	028300	008300
038400	048400	84	028400	008400
038500	048500	85	028500	008500
		86	028600	008600
		87	028700	008700
		88	028800	008800
		89	028900	008900
		90	029000	009000
		91	029100	009100
		92	029200	009200
		93	029300	009300
		94	029400	009400
		95	029500	009500
		96	029600	009600
		97	029700	009700
		98	029800	009800
		99	029900	009900
		100	021000	001000
		102	021200	001200
		105	021500	001500



Spec Racing Package

In 1994 the HPV100 was introduced with the goal of reducing racing costs. The HPV100 is a world class piston port engine with power controlled by a spec exhaust system and a spec clutch to help level the playing field. A beefy crankshaft was added to eliminate a costly 3rd bearing kit. National and regional classes were added in 1995 which provided credibility as well as stability through a uniform set of rules. Another benefit of the HPV100 spec program is that the engine and clutch remain the same in all classes. At age eight a youth can enter the HPV Cadet class. At age twelve a Cadet can move up to the Junior HPV by a carburetion and exhaust pipe conversion. All other items of the package remain the same. At age 15 the next step is Senior class which requires only an exhaust pipe conversion. Seasoned racers and newcomers are flocking to the HPV program. HPV is the number 1 spec program in America because it combines economy, less tuning, and exciting close action racing.

Number 1 Spec Program in America



Clutch

Model EXPD single disc, dry design with 5000 rpm engagement. Designed to duplicate direct drive feel which places emphasis on driving skill. Less maintenance as heat and wear are reduced with quick lock up.



Carburetion

The Cadet package features a tiny Walbro carburetor to keep power bw for the beginning racer. Junior and Senior HPV100 classes use the popular WB-3A model.

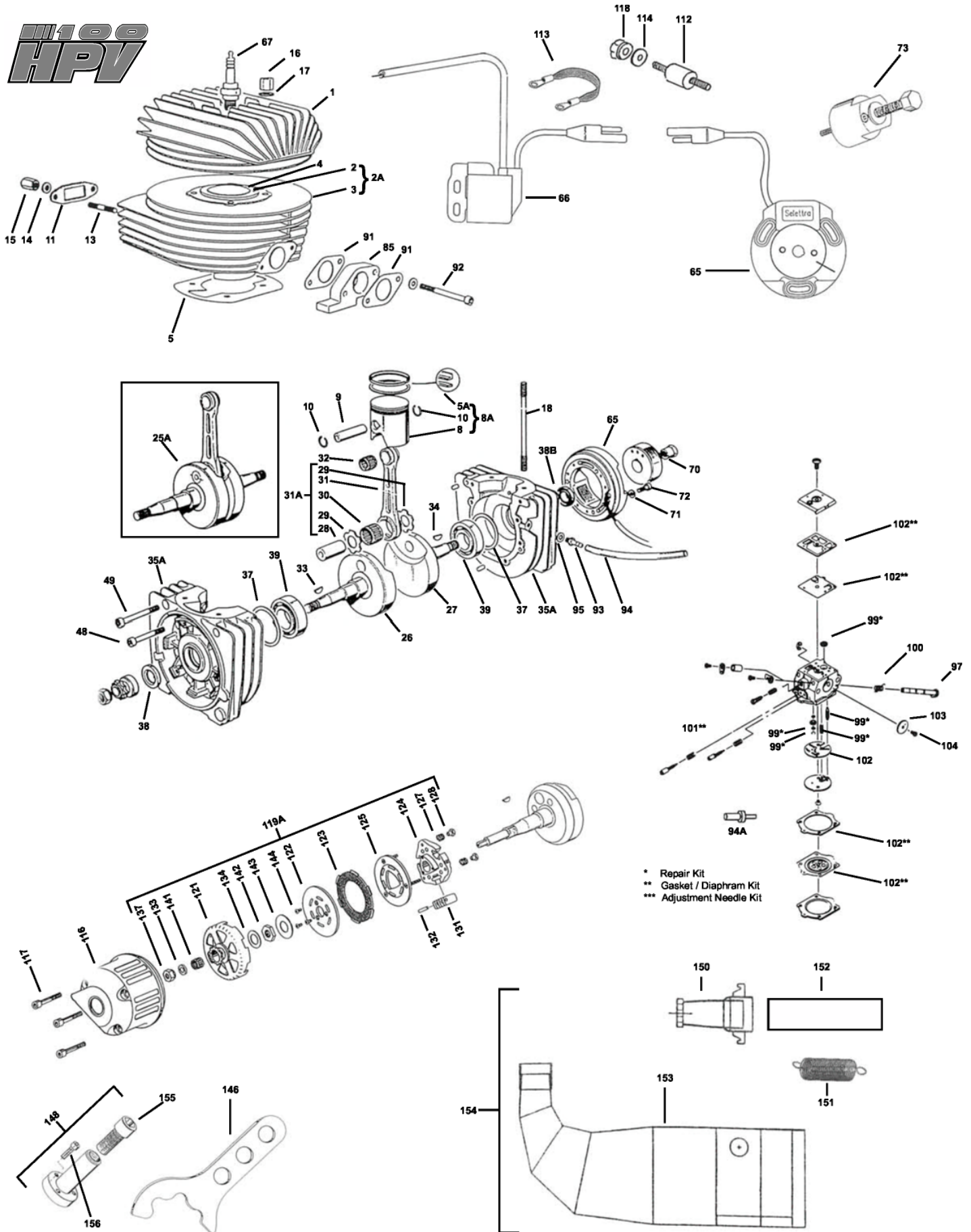


Exhaust

The exhaust system offers a selection to regulate power according to class. Horstman is concerned with noise and believe the HPV exhaust addresses the issue. The chamber is attractive and lightweight. Fourmodels are available.



1100 HPV



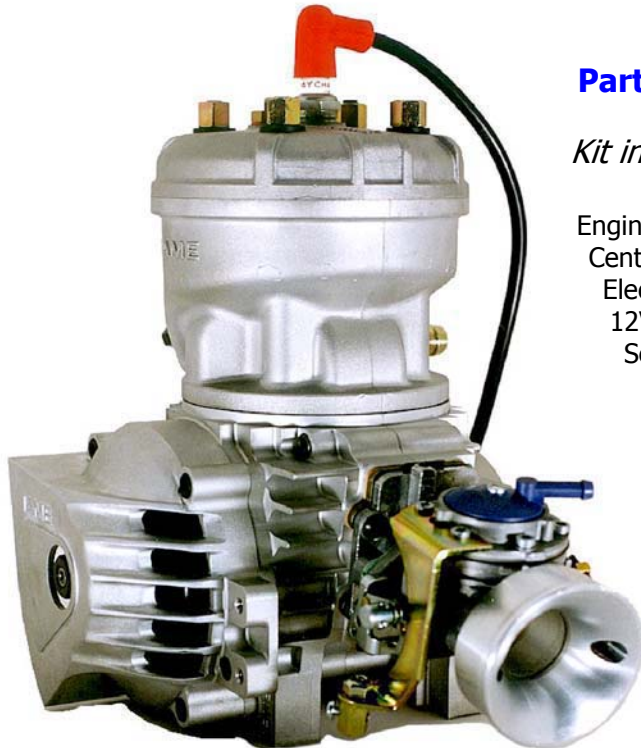
HPV100 Engine Kits and Parts List

	992100 Engine Less Carb, HPV	31A	992188 Con Rod Assy	124	995136 Drive Hub HPV-100
	992101 Engine Kit 7hp HPV1	32	992189 Small End Cage	125	995146 Pressure Plate
	992106 Engine Kit 11hp Jr HPV2	33	992190 PTO Shaft Key	127	995134 Spring
	992103 Engine Kit 14hp Sr HPV3	34	992191 Mag Shaft Key	128	995177 Retainer, Red Color
	992104 Engine Kit 18hp Sr HPV4	35A	992193 Crankcase Assy HPV-100	131	995138 Lever, Solid, EXPD-A
		37	992217 Shim 0.1mm	132	995137 Dowel Pin, EXPD-A
1	992124 Cylinder Head HPV-100		992218 Shim 0.15mm	133	995121 External Thrust Washer
2A	992126 Cylinder HPV-100/K71	38B	992196 Oil Seal 17x32x7	134	995124 Internal Thrust washer
4	992219 Head Gasket .005"	39	992197 Bearing 6205-C4		995125 Internal Thrust washer
	992220 Head Gasket .010"	48	992198 Screw 6x60		995126 Internal Thrust washer
5	992127 Gasket .016" Cyl. Base	49	992199 Screw 6x40	137	995175 Starter Nut HPV-100
	992128 Gasket .008" Cyl. Base	65	992201 Ignition, Less Coil Selettra	141	995123 Roller Bearing
	992129 Gasket .005" Cyl. Base	66	992202 Coil, Selettra	142	995127 Jam Nut HPV-100
5A	992130 Piston Ring Set 52.43	68	992216 Spark Cap	143	995128 Cone Washer HPV-100
	992131 Piston Ring Set 52.53	70	992200 Nut, Magneto	144	995129 Screw, M5x10
	992132 Piston Ring Set 52.63	71	992203 Flat Washer M5	146	995139 Spanner Wrench
	992133 Piston Ring Set 52.73	72	992204 Screw M5	148	995176 Puller, Clutch
	992134 Piston Ring Set 52.83	73	992328 Rotor Puller, Selettra	150	995260 Header
	992135 Piston Ring Set 52.90	74	992327 Rotor Wrench, Selettra		995281 Header, HPV-Pro
8A	992136 Piston w/rings 52.4r	85	992205 Carb Spacer WB3A	151	995265 Springs, Pair
	992137 Piston w/rings 52.4g		992305 Carb Spacer HPV1		995282 Springs, Pair, HPV-Pro
	992138 Piston w/rings 52.42r	86	992321 Manifold HPV1	152	995266 Flex Tube
	992139 Piston w/rings 52.42g	87	992307 Screw Manif/Cyl. HPV1		995268 Flex Tube HPV-4
	992140 Piston w/rings 52.45r	88	992309 Screw Carb/Manif HPV1	153	995271 Exhaust Chamber HPV-1
	992141 Piston w/rings 52.45g	89	992308 Gasket Carb/Manif HPV1		995272 Exhaust Chamber HPV-2
	992142 Piston w/rings 52.5r	91	992206 Gasket Carb/Spacer WB3A		995273 Exhaust Chamber HPV-3
	992143 Piston w/rings 52.5g	92	992207 Screw M6x70 WB3A		995274 Exhaust Chamber HPV-4
	992144 Piston w/rings 52.52r	93	992208 Pulse Fitting WB3A Carb		995280 Exhaust Chamber -Pro
	992145 Piston w/rings 52.52g		992318 Pulse Fitting HPV1	154	995261 Exhaust System HPV-1
	992146 Piston w/rings 52.55r	94	992322 Pulse Tubing WB3A Carb		995262 Exhaust System HPV-2
	992147 Piston w/rings 52.55g		992319 Pulse Tubing HPV1 Carb		995263 Exhaust System HPV-3
	992148 Piston w/rings 52.6r	94A	992317 Reducer, Fuel Line HPV1		995264 Exhaust System HPV-4
	992149 Piston w/rings 52.6g	95	992209 Pulse Fitting Gasket, Universal		995283 Exhaust System -Pro
	992150 Piston w/rings 52.62r	96	992301 Carburetor HPV-1	155	995178 Center Bolt Puller
	992151 Piston w/rings 52.62g			156	995179 Bolt, Puller
	992152 Piston w/rings 52.65r		992310 Carburetor WB-3A	157	995277 End cap, exhaust pipe
	992153 Piston w/rings 52.65g	96A	992299 Throttle Arm, Cable Anchor		
	992154 Piston w/rings 52.7r	97	992300 Throttle Shaft HPV-1		
	992155 Piston w/rings 52.7g	98	992320 Filter Cup HPV-1		
	992156 Piston w/rings 52.72r		992323 Filter Cup WB3A		
	992157 Piston w/rings 52.72g	99	992324 Repair Kit HPV-1 Carb		
	992158 Piston w/rings 52.75r	100	992334 Spring, throttle HPV-1 Carb		
	992159 Piston w/rings 52.75g	101	992329 Adjustment, Needle Kit HPV-1		
	992160 Piston w/rings 52.8r	102	992315 Gasket, / Pumper Kit Carb HPV-1		
	992161 Piston w/rings 52.8g	103	992316 Throttle Shutter, HPV-1		
	992162 Piston w/rings 52.82r	104	992336 Screw, Throttle Shutter, HPV-1		
	992163 Piston w/rings 52.82g	105A	992210 Gasket Set		
	992164 Piston w/rings 52.85r	112	992211 Dampener, Coil		
	992165 Piston w/rings 52.85g	113	992212 Ground Cable, Coil		
	992166 Piston w/rings 52.9r	115	992213 Nut M6		
	992167 Piston w/rings 52.9g	116	992214 Clutch Guard		
9	992168 Piston Pin Sel. 2	117	992215 Screw M6x55		
10	992171 Circlip	118	992225 Nut		
11	992172 Gasket, Exhaust Pipe	119A	995150 Clutch, EXPD-A 9T35 HPV-100		
13	992173 Stud, Exhaust		995151 Clutch, EXPD-A 10T 35		
14	992174 Washer, Flat		995152 Clutch, EXPD-A 11T 35		
15	992175 Exhaust Nut 8mm		995153 Clutch, EXPD-A 10T219 HPV-100		
16	992176 Head Nut		995154 Clutch, EXPD-A 11T219 HPV-100		
17	992177 Washer, Head Nut		995155 Clutch, EXPD-A 12T219 HPV-100		
18	992178 Stud, Cylinder	121	995163 Drum w/brg 9T#35 chain		
25A	992180 Crankshaft Assy HPV-100		995164 Drum w/brg 10T#35		
	992182 Crankhalf PTO HPV-100		995165 Drum w/brg 11T#35		
27	992183 Crankhalf Ign. HPV-100		995166 Drum w/Brg 10T#219 chain		
28	992184 Crankpin 43mm		995167 Drum w/Brg 11T#219		
29	992185 Washer, Bronze		995168 Drum w/Brg 12T#219		
30	992186 Big End Cage 15r		995190 Drum w/Brg 15T#219		
31	992187 Con Rod Only		995169 Drum w/Brg 16T 8mm Htd Belt		
			995188 Drum w/Brg 17T 8mm Htd Belt		
			995189 Drum w/Brg 19T 8mm Htd Belt		
		122	995130 Fixed Plate		
		123	995131 Friction disc		

Lynx 100 cc Tag Engine

25hp Water-cooled and Electric Start

This exciting package is the hot ticket for karters from the recreational level to all out competition. Made by IAME S.p.A. famous for their superb Italian craftsmanship and attention to details. Outlaw racers welcome!



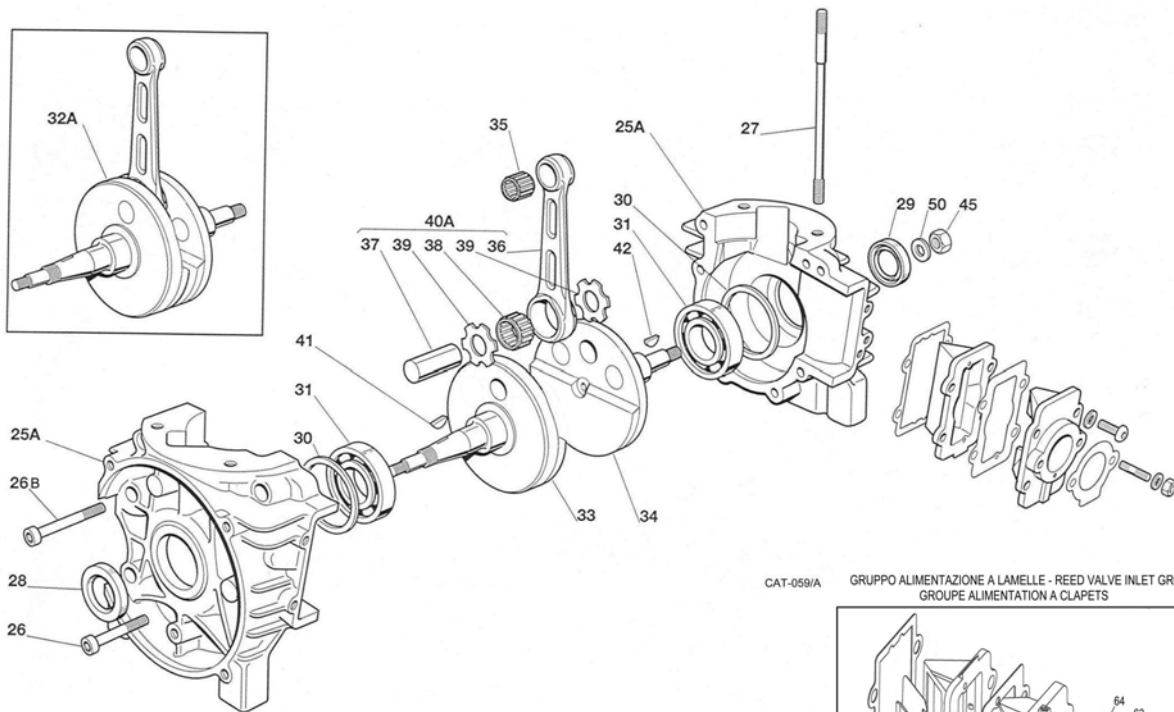
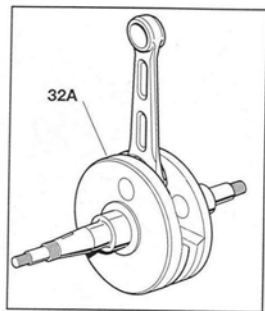
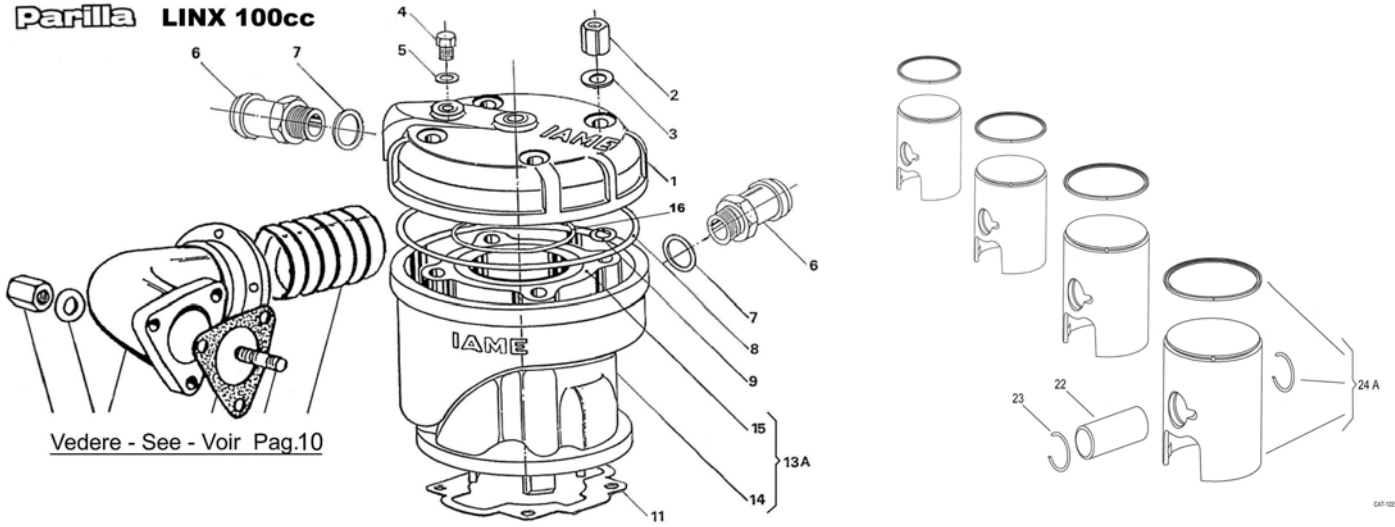
Part Number: 996000 Complete Lynx Kit

Kit includes:

- Engine: IAME S.p.A. 100cc Reed Valve water cooled
- Centrifugal clutch with detachable 10T #219 spk
- Electric push button starting system
- 12V Battery with mounting kit
- Self charging electric system
- 23mm Tillotson carburetor
- Airbox/Silencer
- Hi-Performance exhaust system
- Radiator with mounting hardware
- Water pump with hoses and clamps
- Easy Read Owners manual



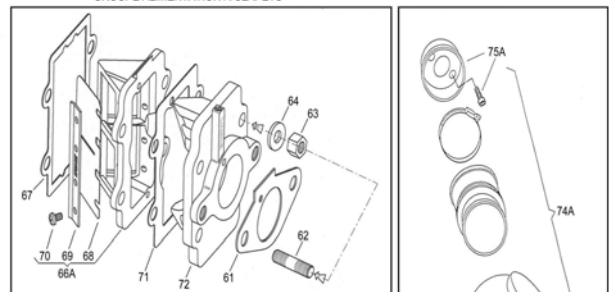
Parilla LINX 100cc



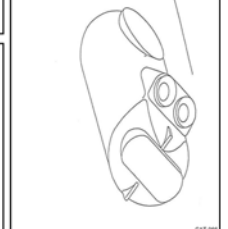
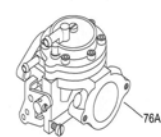
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GRUPPO ALIMENTAZIONE A LAMELLE - REED VALVE INLET GROUP - GROUPE ALIMENTATION A CLAPETS

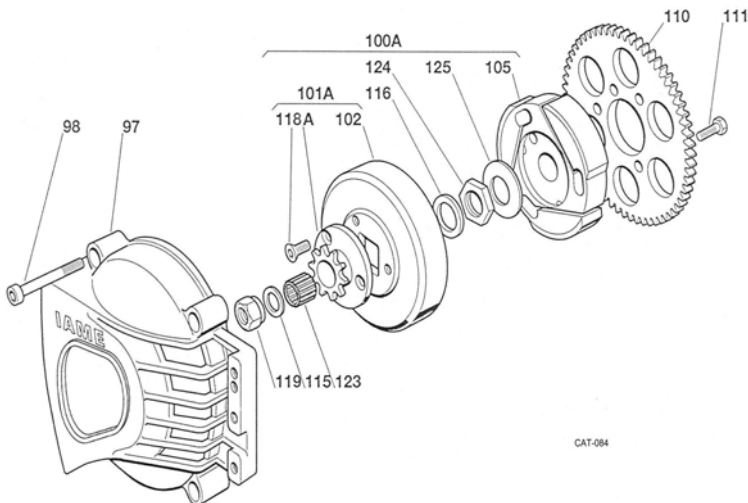
FILTRO ARIA - AIR FILTER - FILTRE AIR



TILLOTSON Ø19.8 - Ø23mm



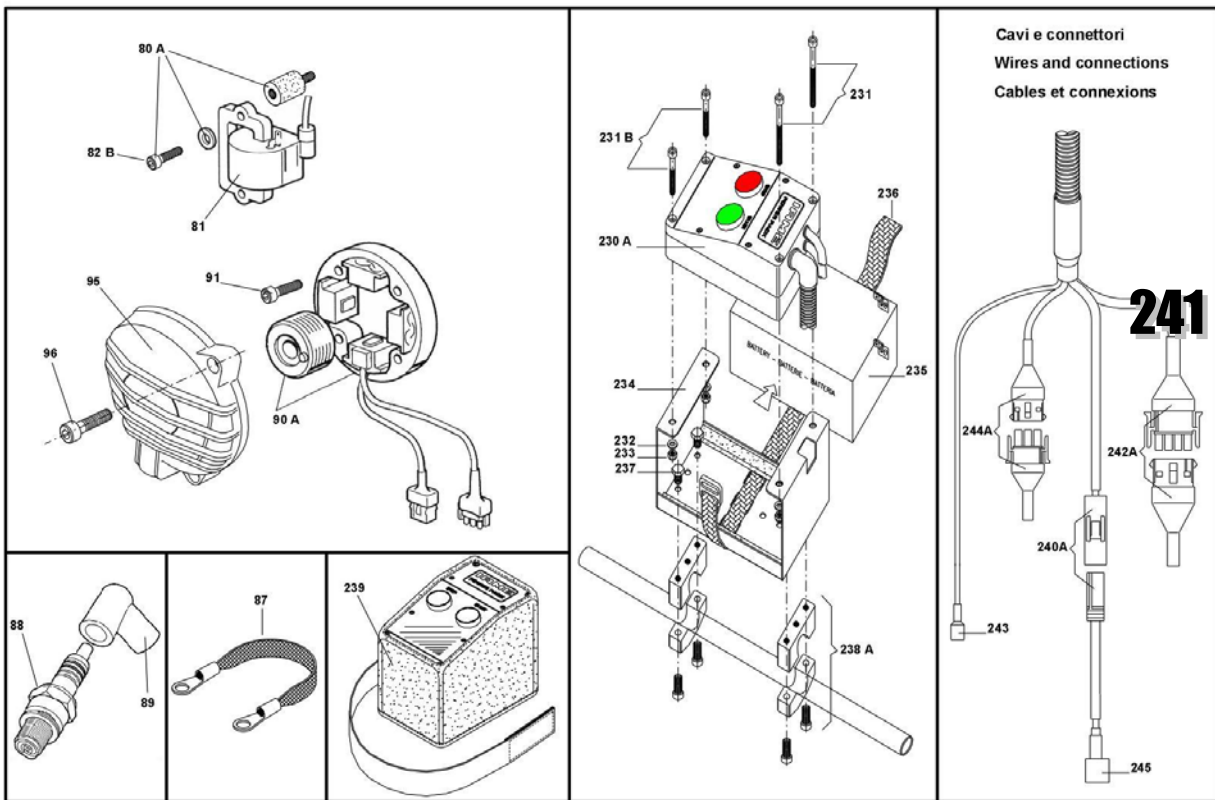
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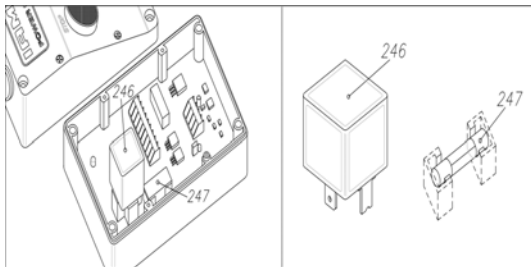
CAT-084

Lynx Parts

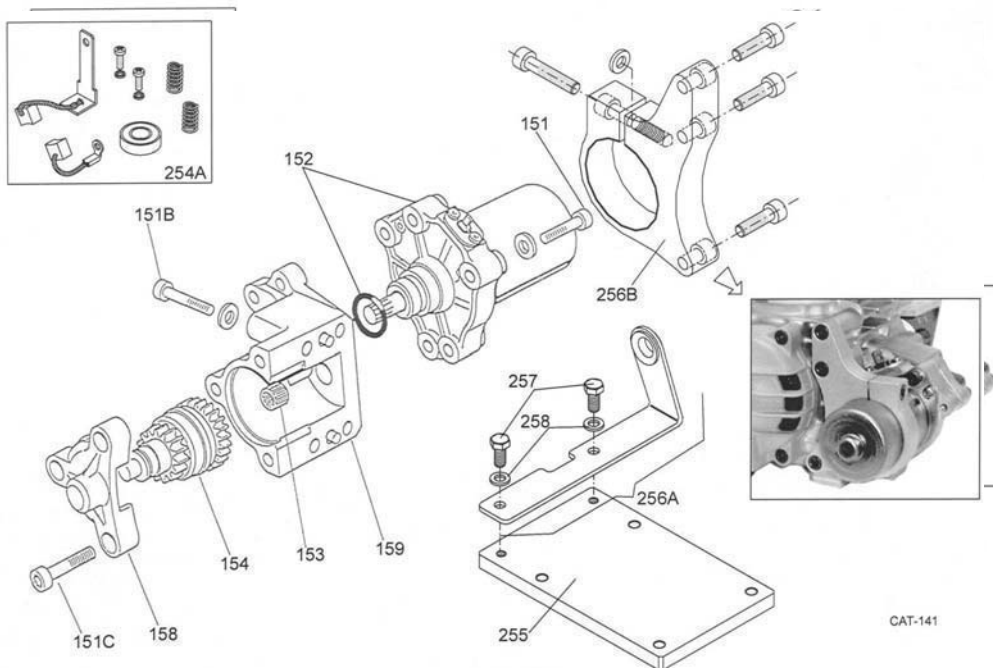
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CAT-049 B

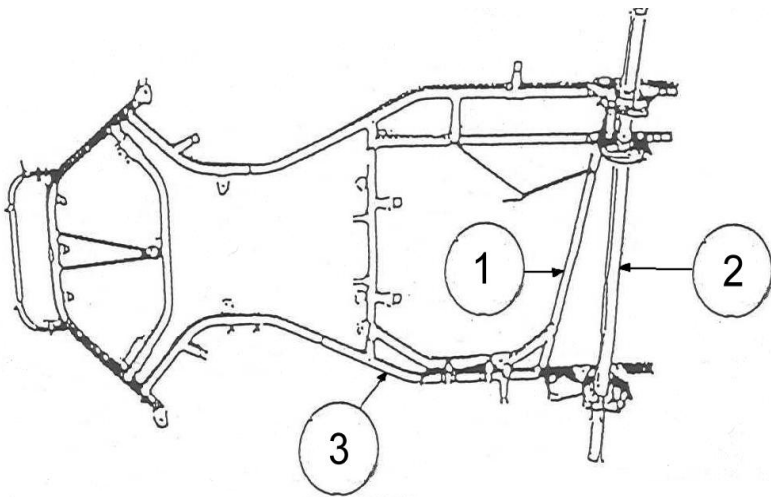
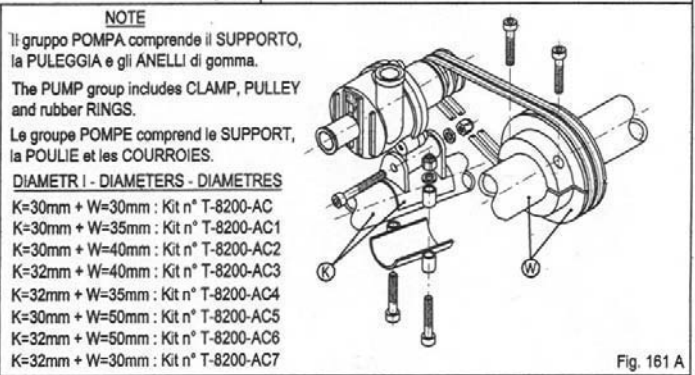
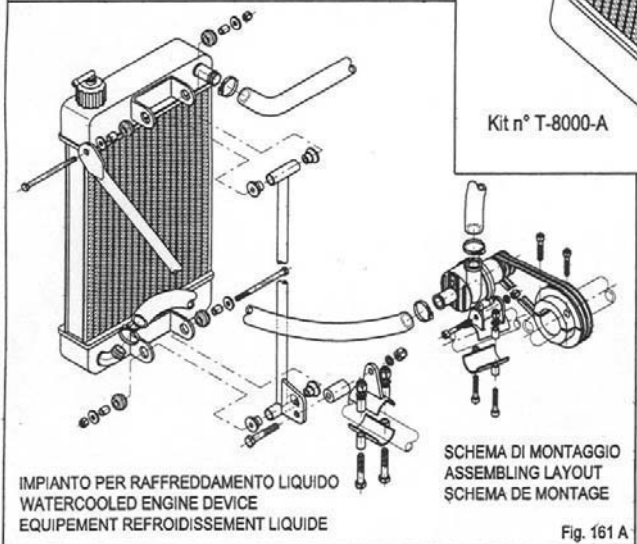
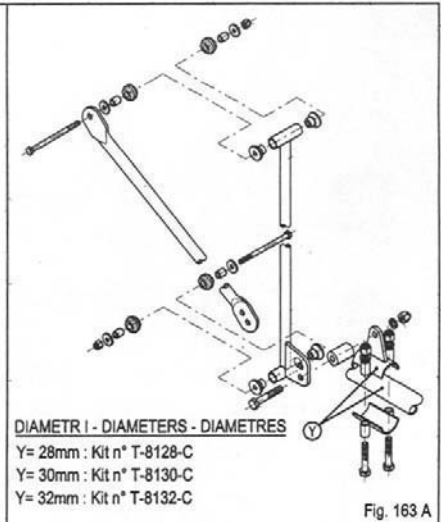
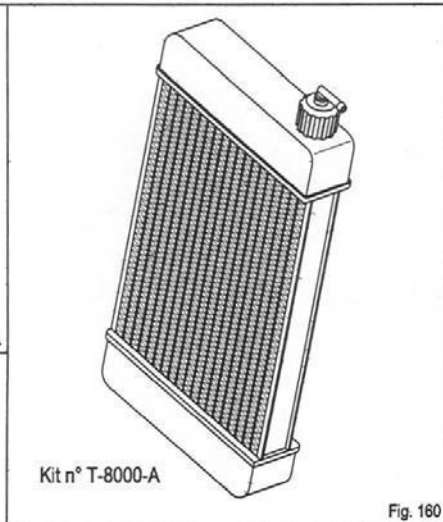
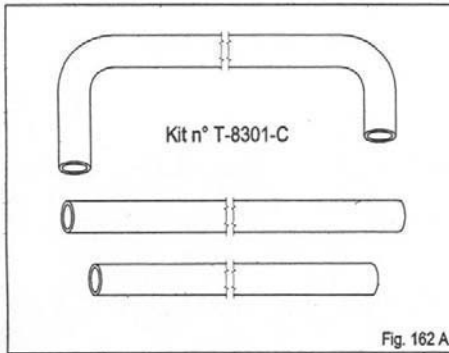


Lynx Parts



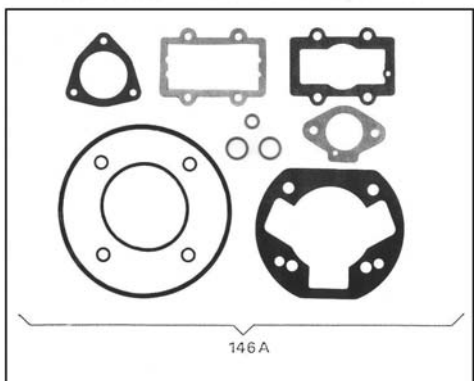
CAT-141

Lynx Parts

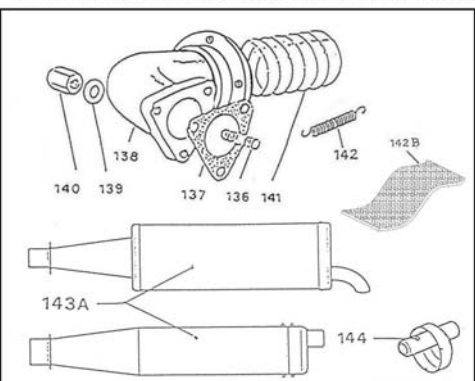


To avoid mistakes when ordering the radiator support kit measure the tubing diameter shown on the chassis drawing. **1** and **2** are for water pump **3** is for radiator bracket

SERIE GUARNIZIONI - GASKET SET - SERIE JOINTS



GRUPPO SCARICO - EXHAUST GROUP - GROUPE ECHAPPEMENT

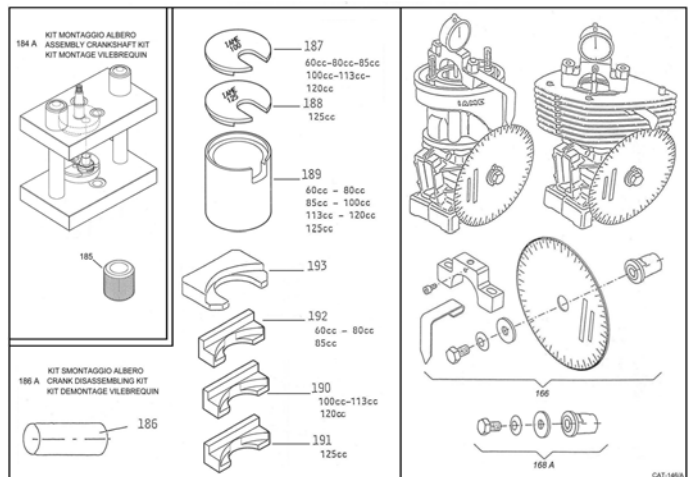
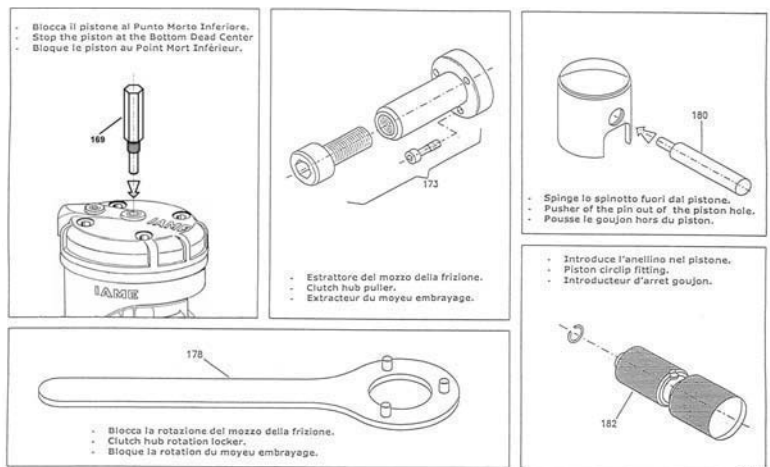


Lynx Part Numbers

Fig	Part No	Description	Fig	Part No	Description
0	996000	Lynx Engine Kit	36	996057	Conrod only D-37460
1	996001	Head, cylinder B-75041	37	996058	Crankpin B-36450
2	992176	Nut, head 10350	38	996059	Big end cage B-10431
3	992177	Washer 10635	39	996060	Washer bronze E-38436
4	996002	Plug,temp Gage B-25840	40A	996061	Conrod complete 100mm D-37460-45
5	996003	Gasket,plug B-25845	41	992190	Key, clutch
6	996004	Fitting, water B-25830A	42	992191	Key, magneto
7	996005	Gasket, pipe B-25835	45	996062	Nut, magneto M8
8	996006	O ring, head B-25820	50	996063	Washer
9	996007	O ring, tie rod B-25825	61	996064	Gasket, carburetor 10360-A
11	996008	Gasket, cyl 4/10 BP-25045	62	996065	Stud, carb M6x25 10525
11	996009	Gasket, cyl 2/10 BP-25046	63	996066	Nut M6
13A	996010	Cylinder B-75033	64	996067	Washer M6
16	996011	Gasket, head D-37049	66A	996068	Reed Cage Group 11828-C
22	996012	Pin, piston B-10321-R	67	996069	Gasket, crankcase/cage 11810
23	992171	Circlip	68	996070	Reed pedal .3mm 11840
24A	996015	Piston complete 50.03G B-36080-CV	69	996071	Clip, reed F-11845
24A	996016	Piston complete 50.03R B-36080-CR	70	996072	Screw, reed
24A	996017	Piston complete 50.05G B-36085-CV	71	996073	Gasket, cage/conveyer 11805-A
24A	996018	Piston complete 50.05R B-36085-CR	72	996074	Manifold B-75816A
24A	996019	Piston complete 50.07G B-36090-CV	74A	996075	Intake Silencer Group 10745-C
24A	996020	Piston complete 50.07R B-36090-CR	75A	996076	Cup w/screws 10771-C
24A	996021	Piston complete 50.09G B-36095-CV	76A	996077	Carburetor Till 23MM
24A	996022	Piston complete 50.09R B-36095-CR	77A	996078	Throttle cable adapter B-35520-C
24A	996023	Piston complete 50.11G B-36100-CV	80A	996079	Coil anti vibration kit A-60520-C
24A	996024	Piston complete 50.11R B-36100-CR	81	996080	Coil, selettra 10025
24A	996025	Piston complete 50.13G B-36105-CV	82B	996081	Screw M5x16
24A	996026	Piston complete 50.13R B-36105-CR	87	992212	Ground Cable
24A	996027	Piston complete 50.15G B-36110-CV	88	996082	Sparkplug NGK BR10EG
24A	996028	Piston complete 50.15R B-36110-CR	89	992216	Sparkplug Cap NGK
24A	996029	Piston complete 50.17G B-36113-CV	90A	996083	Selettra Ignition 10015A
24A	996030	Piston complete 50.17R B-36113-CR	91	996084	Screw, M5 x 25
24A	996031	Piston complete 50.19G B-36116-CV	95	996085	Cover, ignition A-60875B
24A	996032	Piston complete 50.19R B-36116-CR	96	996086	Screw, ignition cover 00034
24A	996033	Piston complete 50.21G B-36119-CV	97	996087	Clutch Guard A-60595B
24A	996034	Piston complete 50.21R B-36119-CR	98	992199	Screw M6x40
24A	996035	Piston complete 50.23G B-36122-CV	100A	996088	Clutch 10T 219 A-120840A-C
24A	996036	Piston complete 50.23R B-36122-CR	101A	996089	Drum w/spk 10T A-60550-C
24A	996037	Piston complete 50.25G B-36125-CV	101A	996090	Drum w/spk 11T A-60551-C
24A	996038	Piston complete 50.25R B-36125-CR	102	996091	Drum only A-60550
24A	996039	Piston complete 50.27G B-36128-CV	105	996092	Hub with shoes A-120840A
24A	996040	Piston complete 50.27R B-36128-CR	110	996093	Starter gear A-100830
24A	996041	Piston complete 50.29G B-36131-CV	111	996094	Screw, starter gear M6x12
24A	996042	Piston complete 50.29R B-36131-CR	115	512100	Thrust washer, external
24A	996043	Piston complete 50.31G B-36134-CV	116	512400	Thrust washer, internal
24A	996044	Piston complete 50.31R B-36134-CR	118A	996095	Sprocket, 10T 219 D-75554-C
24A	996045	Piston complete 50.33G B-36137-CV	118A	996096	Sprocket, 11T 219 D-75555-C
24A	996046	Piston complete 50.33R B-36137-CR	118A	996097	Sprocket, 16T 219
24A	996047	Piston complete 50.35G B-36140-CV	119	511900	Starter nut
24A	996048	Piston complete 50.35R B-36140-CR	123	996098	Roller bearing
25A	996049	Crankcase A-100485A	124	996099	Jam nut
26	996050	Screw M6x45	125	996100	Washer, coned
26B	992215	Screw M6x55	136	996101	Studbolt, exhaust 10358
27	996051	Tie rod B-25347	137	996102	Gasket, exhaust pipe B-85360
28	996052	Seal drive side F-10425	138	996103	Exhaust pipe B-25368-A
29	996052	Seal mag side F-10425	139	992174	Washer M6
30	992217	Shim .1mm 30407	140	996104	Nut, exhaust M6 10660
30	992218	Shim .15mm 30404	141	996105	Flex 10711-B
31	992197	Bearing 6205	142	996106	Spring 10785
32A	996053	Crankshaft complete Lynx A-100618	142B	996107	Fiber Strip A-60735
33	996054	Crank half drive side A-100385	143A	996108	Silencer 10718
34	996055	Crank half mag side A-100390	144	996109	Silencer End 10721-A
35	996056	Small end cage E-10440	146A	996110	Gaskets Set B-85990
149A	996111	Kit for Tillotson Carb 10926			
151	996112	Screw M6 x 35			
151B	996113	Screw M6 x 45			
151C	996114	Screw M6 x 25			
152	996115	Starter A-120850			
153	996116	Roller cage A-60865			
154	996117	Countershaft A-120855			

Lynx Part Numbers

158	996118	Support, countershaft A-60870
159	996119	Starter support A-120860
160	996120	Radiator T-8000A
161A	996122	Pump Kit 30/35MM T-8200-AC1
161A	996123	Pump Kit 30/40MM T-8200-AC2
161A	996124	Pump Kit 32/35MM T-8200-AC4
161A	996125	Pump Kit 32/40MM T-8200-AC3
161A	996126	Pump Kit 30/50MM T-8200-AC5
161A	996127	Pump Kit 32/50MM T-8200-AC6
162A	996129	Hose Kit T-8301A-C
163A	996130	Radiator Supports Kit 28MM T-8128-C
163A	996131	Radiator Supports Kit 30MM T-8130-C
163A	996132	Radiator Supports Kit 32MM T-8132-C
164A	996133	Thermostat 50° T-8400-C
166	996134	Selettra Tag Timing Kit 10822
168A	996135	Timing Adapter 10827A-C
169	996136	Piston Stop 10271
173	996137	Clutch Puller
178	996138	Clutch holder 10270
180	996139	Wrist pin push tool 10200
182	996140	Circlip assembly tool 10120
184A	996141	Crankshaft assembly Die 10110-C
185	996142	Crankpin bush 10150
186	996143	Crankpin puller 10107
186A	996144	Crank disassembly kit 10100-C1
187	996145	Crankshaft plate 10103
189	996146	Disassembly tool 10100
190	996147	Crankshaft insert 10105
230A	996148	Power Pack with wires A-60930D-C
231	996149	Screw M5 x 60
231B	996150	Screw M4 x 40
232	996151	Washer M5
233	996152	Locknut M5
234	996153	Battery Support A-120905B
235	996154	Battery A-120900
236	996155	Fixing strip for battery A-60904A
237	996156	Screw battery support M6 x 10
238A	996157	Locker w/screws 30MM A-60907-C
238A	996158	Locker w/screws 32MM A-60908-C
239	996159	Waterproof cover, Power Pack A-60960
240A	996160	Starter connection with cable A-60919-C
241	996161	Wires Assembly A-60935-C
242A	996162	Ignition connection A-60937-C
243	996163	H.T. Coil connection A-60938
244A	996164	Connection pickup A-60939-C
245	996165	Connection to electric starter A-60940
246	996166	Relay Voltmeter A-60941A
247	996167	Fuse A-60942
254A	996168	Brushes for starter A-60851A-C
255	996169	Additional engine plate A-120800A
256A	996170	Starter support A-120863-C
256B	996171	Starter support billet A-125863-C
257	996172	Screw M8 x 14
258	996173	Washer M8



X5 -D Clutches



Patent D48760 and 6823975

**HORSTMAN'S NEWEST 4 STROKE BEAUTY FOR 2006
NEW JUMBO SIZE LEVERS
60% WIDER, 68% HEAVIER IMPROVES TAKE OFF**

X5-D1 single disc for Briggs Jr. restricted purple or turquoise plate
X5-D2 two disc for Briggs or Honda gold plate or Sr.

2.850" disc size is 14% smaller than 3.5 models"
Fits 3/4" diameter crankshaft

Stock engines benefit significantly from low inertia driveline components. Horstman designed the X5 small size to move the rotating mass closer to the crankshaft centerline for low inertia that results in awesome performance gains. Another benefit of the small size is a better balance factor vs. larger clutches. The better the balance the freer the crank spins. Although small in size a beefy patented 5 x 5 spring/lever design concentrates mass where it is needed in the clamping area for rigidity, heat absorption, and less surface hot spots. A billet one piece drive hub with cooling vanes runs cooler and will not flex under load. Comes with blueprinted springs, cylindrical ground plates, and cryogenic treatment for maximum performance. Billet lightweight steel drum with bolt-on sprocket runs truer and eliminates power robbing distortion through high speed corners.

X5 D-1 One Disc Clutch Assembly		
#35 Chain	Sprocket Size	#219 Chain
477709D	9T	
477710D	10T	
477711D	11T	
477712D	12T	
477713D	13T	
477714D	14T	
477715D	15T	477740D
477716D	16T	
477717D	17T	477741D
477718D	18T	
477719D	19T	477742D
477720D	20T	477743D
477721D	21T	477744D
477723D	23T	477745D

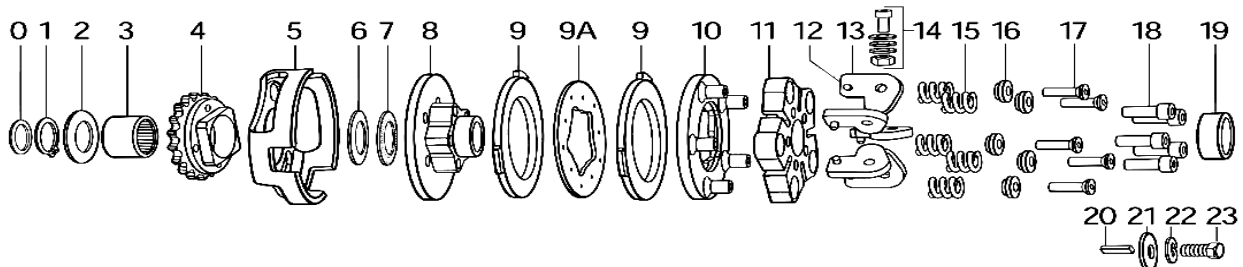
X5-D2 Two Disc Clutch Assembly		
#35 Chain	Sprocket Size	#219 Chain
477809D	9T	
477810D	10T	
477811D	11T	
477812D	12T	
477813D	13T	
477814D	14T	
477815D	15T	477840D
477816D	16T	
477817D	17T	477841D
477818D	18T	
477819D	19T	477842D
477820D	20T	477843D
477821D	21T	477844D
477823D	23T	477845D

Sprocket w/hardware fits X5-D and Reaper		
#35	Sprocket	#219
490049	9	
490050	10	
490051	11	
490052	12	
490053	13	
490054	14	
490055	15	490064
490056	16	
490057	17	490064
490058	18	
490059	19	490066
490060	20	490067
490061	21	490068
490062	23	490069

X5-D Drum & Sprocket Assembly				
One Disc Style			Two Disc Style	
#35	#219	Sprocket Size	#35	#219
477749		9	477849	
477750		10	477850	
477751		11	477851	
477752		12	477852	
477753		13	477853	
477754		14	477854	
477755	477764	15	477855	477864
477756		16	477856	
477757	477765	17	477857	477865
477758		18	477858	
477759	477766	19	477859	477866
477760	477767	20	477860	477867
477761	477768	21	477861	477868
477763	477769	23	477862	477869

Horstman® X5-D Series Parts List

	Part Number	Description	Units Req.
0	490001	Spacer , use with 11T #35 clutch only	1
1	463000	Snap ring, 12T-23T clutch	1
2	490003	Washer, 1 1/8" diameter fits 12T & 13T #35 & 15T #219 clutch	1
	490004	Washer, 1 1/4" diameter fits 14T-23T #35 & 17T-23T #219 clutch	1
3	300300	Bearing, bronze fits 9T #35 Arena Sprocket	1
	300400	Bearing, roller fits 10T #35 Arena Sprocket	1
	463600	Bearing, bronze fits 11T #35 clutch	1
	463400	Bearing, bronze fits 12T & 13T #35 & 15T #219 clutch	1
	463500	Bearing, roller fits 14T-23T #35 & 17T-23T #219 clutch	1
4	See chart	Sprocket Kit, includes bearing and hardware	1
4A	477701	Screw, 10-32 button head	4
5	See Chart	Drum Kit, includes bolt-on sprocket, bearing and hardware	1
5A	477702	Billet steel drum, one disc style	1
	477880	Billet steel drum, two disc style	1
6	490035	Thrust washer, 9T, 10T, & 11T #35 Clutch	1
	480078	Thrust washer, 12T-23T Clutch	1
7	490036	Thrust bearing, 9T, 10T, & 11T #35 Clutch	1
	480079	Thrust bearing, 12T-23T Clutch	1
8	477725	Drive hub, fits 9T, 10T, & 11T #35 one disc Clutch	1
	477726	Drive hub, fits 12T-23T one disc Clutch	1
	477882	Drive hub, fits 9T, 10T, & 11T #35 2 disc Clutch	1
	477883	Drive hub, fits 12T-23T 2 disc Clutch	1
9	477729B	Friction disc, iron (comes in clutch)	1 or 2
	477729	Cerametallic disc (optional)	Optional
9A	477885	Floater, std .085" fits two disc clutch only	0 or 1
	477886	Floater, optional .075"	Optional
	477887	Floater, optional .095"	Optional
10	477727	Pressure plate	1
11	477898	Lever support fits Jumbo Levers	1
12	477897	Dowel pin fits Jumbo Levers	5
13	477896	Jumbo Lever	5
14	477732D	Weight kit, 5 bolts, 20 washers, 5 lock nuts	
15	3130Y	Spring, yellow high tension (Set of 5 blueprinted)	(1 set
	4650Y	Spring, black medium tension (Set of 5 blueprinted)	of 5
	5142Y	Spring, blue for stall speed below 3200 rpm (Set of 5)	Springs)
16	477733	Retainer, color gold	5
17	334800	Screw, 10-32 x 3/4 flat head	5
18	477734	Screw, 1/4-28 x 3/4 socket head	5
19	477738	Spacer	1
20	465100	Key	1
21	465200	Washer, flat	1
22	465500	Washer, lock	1
23	465300	Bolt 5/16-24 x 3/4" hex head grade 5	1
	462700	Bolt, 5/16-24 x 1 1/2" hex head grade 5 fits 9T & 10T Arena Clutch only	1
Opt	477735	Spanner wrench, color gold	Optional
Opt	477889	Outboard Spacer kit	Optional



X5 Update Kit



UPDATE X5 ONE DISC OR X5 2 DISC CLUTCH TO 2006 X5-D SPECS

NEW JUMBO SIZE LEVERS 60% WIDER AND 68% HEAVIER FOR BETTER TAKEOFF

KIT CONTAINS 5 JUMBO LEVERS-5 DOWEL PINS-1 LEVER SUPPORT

X5 UPDATE KIT

P/N 477895 \$ 77.25 Retail

JUMBO LEVERS
DOWEL PINS
ALUMINUM LEVER SUPPORT

P/N 477896 \$ 7.21 EA
P/N 477897 \$ 1.03 EA
P/N 477898 \$ 40.17 Ea



Pat 6,708,807 additional pat pend



Heavy duty Loves horsepower of Animal

The Reaper features a 3.250" diameter friction area to lower rotational inertia over the larger 3.500" clutches. Extrathick plates with cooling vanes insure positive lock up and great heat transfer. Even though the Reaper is smaller than a 3.500" clutch it has 15% more friction surface

for higher hp capacity. Another plus on the Reaper is a bolt-on sprocket that fastens securely to the drum for better rigidity and truer rotation. Drive hub has a thicker wall in the keyway for less chance of cracking. Assembled with 1/4" bolts for improved strength. Lightweight aluminum drum comes with removable clips that last longer to save money. A billet drum is available for heavy duty use on jackshaft applications. All friction bearing components are given Cryogenic treatment at -310° F to last longer and dissipate heat quicker.

Fits 3/4" crankshaft or jackshaft to 20 hp

Removable clip



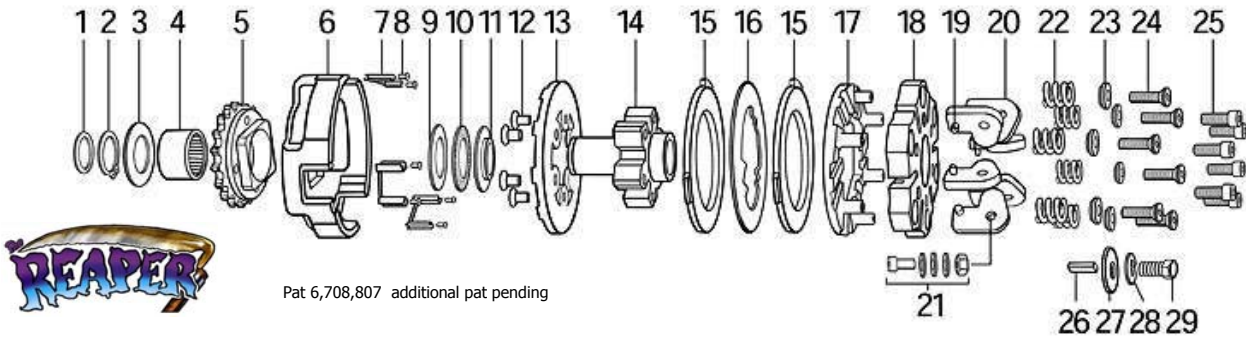
Reaper Clutch Part Number				
Clutch with Aluminum Drum			Clutch with Steel Drum	
#35 Chain	#219 Chain	Sprocket	#35 Chain	#219 Chain
490111		11	490131	
490112		12	490132	
490113		13	490133	
490114		14	490134	
490115	490124	15	490135	490144
490116		16	490136	
490117	490125	17	490137	490145
490118		18	490138	
490119	490126	19	490139	490146
490120	490127	20	490140	490147
490121	490128	21	490141	490148
490122	490129	23	490142	490149

Reaper Drum with sprocket assembly				
Aluminum Drum			Steel Drum	
#35 Chain	#219 Chain	Sprocket Size	#35 chain	#219 chain
490071		11	490091	
490072		12	490092	
490073		13	490093	
490074		14	490094	
490075	490084	15	490095	490105
490076		16	490096	
490077	490085	17	490097	490106
490078		18	490098	
490079	490086	19	490099	490107
490080	490087	20	490101	490108
490081	490088	21	490102	490109
490082	490089	23	490103	490110

Reaper Sprocket with brg/bolts

#35 Chain	Sprocket Size	#219 Chain
490049	9	
490050	10	
490051	11	
490052	12	
490053	13	
490054	14	
490055	15	490064
490056	16	
490057	17	490065
490058	18	
490059	19	490066
490060	20	490067
490061	21	490068
490062	23	490069

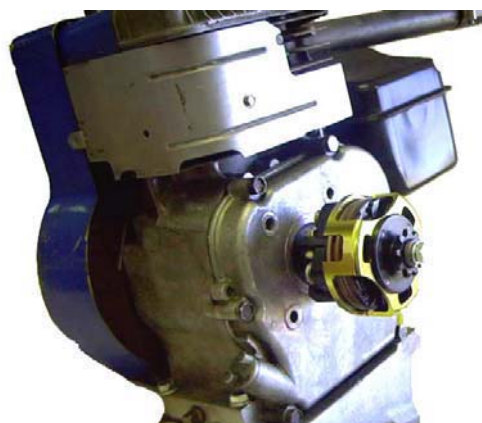
The Reaper Parts List



Pat 6,708,807 additional pat pending

Item	Part Number	Description	Units Required
1	490001	Spacer .985" x .752" x .062" thick universal	1
2	463000	Snap ring, 12T-23T clutch	1
3	490003	Washer, 1 1/8" diameter use with 12T & 13T #35 or 15T #219 sprocket	1
	490004	Washer, 1 1/4" diameter use with 14T-23T #35 or 17T-23T #219 sprocket	1
4	463600	Bearing, bronze fits 11T #35 clutch only	1
	463400	Bearing, bronze fits 12T #35, 13T #35, and 15T #219	1
	463500	Bearing, roller fits 14T-23T #35 and 17T-23T #219	1
5	See Chart under bolt-on sprocket		1
6	490006	Drum, aluminum with clips	1
	490019	Drum, steel	
7	312901	Screw, 10-32 x 5/16 flat head style (4 pack)	1
8	490007	Clips (Set of 3) includes screws	1
9	490035	Thrust washer fits 11T #35 clutch only	1
	490028	Thrust washer fits 12T-23T clutch	1
10	490036	Thrust bearing fits 11T #35 clutch only	1
	480079	Thrust bearing fits 12T-23T clutch	1
11	490005	Spacer, fits 11T #35 clutch only	1
	490025	Spacer, fits 12T-23T clutch	1
12	490026	Screw 1/4-28 x 3/8 flat head (set of 6)	1
13	490014	Fixed plate	1
14	490037	Drive hub fits 11T #35 clutch only	1
	490016	Drive hub fits 12T-23T clutch	1
15	490015	Friction disc	2
16	490013	Floater .085" thick standard size	1
	490020	Floater .065" optional	
	490021	Floater .075" optional	
	490022	Floater .095" optional	
	490023	Floater .105" optional	
17	490012	Pressure plate	1
18	490011	Lever support	1
19	490038	Dowel pins (set of 6)	1
20	490008	Lever	6
21	490039	Weight kit (6 bolts, 18 washers, 6 lock nuts)	1
22	4649-X	Spring, red .091" wire size (set of 6)	1
	4650-X	Spring, black .085" wire size (set of 6) optional	
	5142-X	Spring, blue .075" wire size (set of 6) optional	
23	334701	Retainer (set of 6)	1
24	334801	Screw, stall speed adjusting (set of 6)	1
25	490032	Screw, 1/4-28 (set of 6)	1
26	490029	Key	1
27	490031	Washer	1
28	465500	lock washer	1
29	465300	bolt 5/16-24	1

Arena Clutches



X5 Arena Clutch

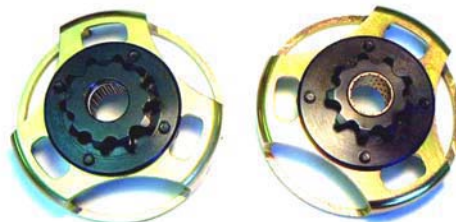
For use indoors or 1/10 mile tracks
Available one disc or two disc style
Includes mounting kit

Part Number

477709D
477710D
477809D
477810D

Description

X5 One disc clutch 9T
X5 One disc clutch 10T
X5 Two disc clutch 9T
X5 Two disc clutch 10T



Arena Clutch Mounting Kit

Kit includes... sleeve spacer, steel shoulder bushing, lock washer, hex head bolt
Converts 11T style clutch to Arena Style

X5 Kit

Part Number 477772

MDC Kit

Part Number 462600

Reaper Kit

Part Number 490047



Spanner

Helps hold the clutch in place during assembly or maintenance

Part Number	Clutch Model	Color
477735	X5	gold
490044	Reaper	purple
333100	DXL 4 spring	red
333200	DXL 6 spring	blue
330036	Steel Nytro	green
330036	HDC-3/HDC-4	green
336062	HDC-5	aluminum
995139	EXPD	yellow



Blueprinted Clutch Spring Sets

Spring tension matched on valve spring tester. Includes selected shot peening and cryogenic treatment.

Part Number	Wire Size	Contents	Clutch
4649-X	.091"	6 pack	Reaper
4650-X	.086"	6 pack	Reaper
5142-X	.075"	6 pack	Reaper
4650-Y	.086"	5 pack	X5
3130-Y	.091"	5 pack	X5 & HDC-5
3282-Y	.086"	5 pack	HDC-5
5142-Y	.075"	5 pack	X5 & HDC-5
3130-X	.091"	6 pack	Steel Nytro
3131-X	.100"	6 pack	DXL 3000

Anti-Chatter Spray

Fights chatter ... Checks Corrosion in dry clutches

Dry clutches have a very aggressive lock up for maximum performance however this often causes a chatter during take off from a standstill. Although chatter does not effect performance on the track it can be annoying. Anti-Chatter contains the right ingredients to fight chatter. Contains no Teflon.

Spraying clutch can be performed without removal from engine. Spray a light squirt onto the perimeter of the clutch so the spray gets on the disc(s). Also between race events spray clutch to fight corrosion. Will not effect stall speed adjustment unless excessive amount is used.



Part Number

444444

Anti-Chatter 8 oz bottle

444445

Case (12) 8 oz bottles

2 Stroke Castor Blend

2T racing castor is a premium 2 cycle premix oil blended for high revving 2 stroke kart engines. Formulated with synthetic esters, degummed castor, and special additives to fight ring sticking and corrosion. Best when mixed with racing gas.

Part Number

220001

2T Racing Castor , pint bottle

220002

Case 2T (12 pints)



MDC Clutch



Horstman's MDC clutch is a proven winner since its introduction in 1990. Crafted from quality components with an emphasis on performance as well as value.

Models available for stock 5 hp engines through ltd modified with 3/4" pto.

Outstanding features:

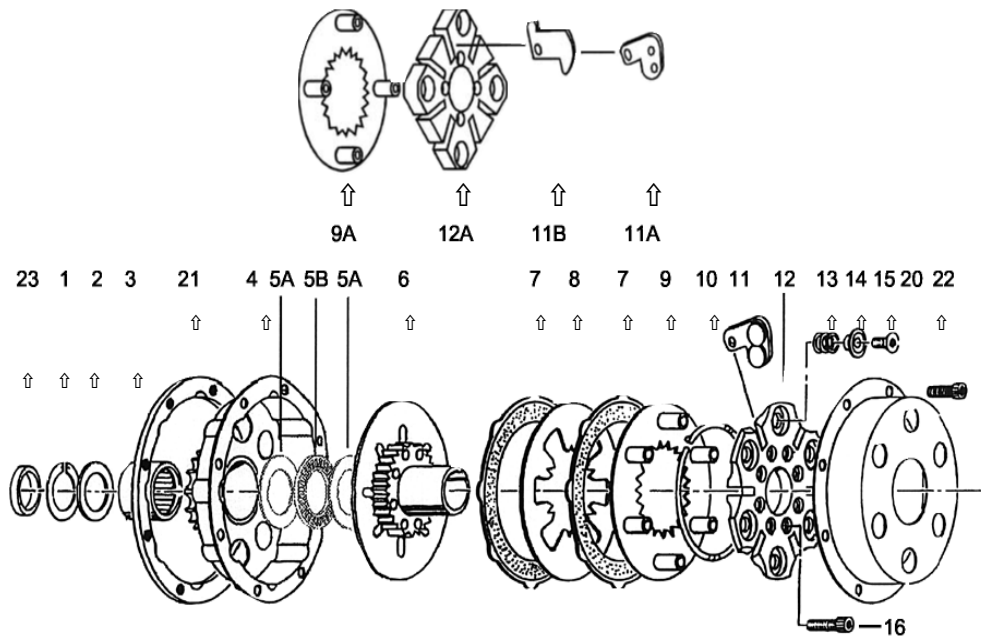
- ~Stall speed easy to adjust with allen wrench
- ~Cam action levers for quick acceleration
- ~Components heat treated to last a long time
- ~Metallic drum with welded on sprocket for long life
- ~Cerametallic friction discs for long life and heat resistance
- ~4 spring models (MDC-444) available for Restricted Stock
- ~6 spring models (MDC-400S) available for Stock classes
- ~6 spring models (MDC-400M) available for Modified classes

Sprocket Size	MDC-444	MDC-400S	MDC-400M
11T #35	456701	461100	471100
12T #35	456702	461200	471200
13T #35	456703	461300	471300
14T #35	456704	461400	471400
15T #35	456705	461500	471500
16T #35	456706	461600	471600
17T #35	456707	461700	471700
18T #35	456708	461800	471800
19T #35	456709	461900	471900
21T #35	456710	462100	472100
23T #35	456711	462300	472300
15T #219	456715	453000	
17T #219	456717	453100	
19T #219	456719	453200	
21T #219	456721	453300	
23T #219	456723	453400	
25T #219	456725	453500	
27T #219	456727	453600	



MDC Arena Clutch
9T #35 460009
10T #35 460010

MDC Arena drum 9T #35 440009
MDC Arena drum 10T #35 440010



MDC Drawing

MDC Clutch Parts List

Fig	Part No	Description	Units Req
1	463000	Snap ring	1
2	463100	Outer thrust washer 7/8" ID x 1 1/8" OD x .030" thick.....	1
	463200	Outer thrust washer 7/8" ID x 1.300" OD x .032" thick	optional
	463300	Thrust washer, use 1 outside and 1 inside with 11T drum	2
3	463400	Bronze bushing, fits 12T & 13T drums only	1
	463500	Needle bearing, fits 14T thru 21T drums	1
	463600	Bushing, fits 11T drum	1
4	chart	See chart below	1
5A	480078	Thrust washer, hardened ea.....	2
5B	480079	Thrust bearing	1
6	480090	Splined drive hub w/thrust washers & bearing kit, replaces part #463800	1
	463900	Splined drive hub, fits 11T #35 clutch only	optional
7	464000	Metallic friction disc	2
8	464100	Floater .075" thick	optional
	464200	Floater .085" thick	1
	464300	Floater .095" thick	optional
	464400	Floater .105" thick	optional
	464500	Floater .065" thick	optional
9	464600	Pressure plate, 6 spring design	1
9A	335000	Pressure plate, 4 spring design	1
10	334400	Lever guide ring	1
11	464700	Lever weighted for stock motors, MDC-400S clutch	6
11A	113500	Lever non-weighted for modified motors, MDC-400M & MDC-444 clutch	6
11B	305100	Lever, short nose, MDC-444	optional
12	464800	Lever support, aluminum 6 spring	1
12A	444700	Lever support, aluminum 4 spring	1
13	464900	Spring, color red, high tension, .091" diameter wire	optional
	465000	Spring, color black, medium tension, .085" diameter wire	6
	514200	Spring, color blue, low tension, .075" diameter wire	optional
14	334700	Spring retainer, fits all MDC springs.....	6
15	334800	Adjusting screw, 10-32 x 3/4" flat head	6
16	334900	Cap screw, 10-32 x 3/8" socket head.....	8
17	465100	Special key 3/16"	1
18	465200	Washer 5/16 ID	1
19	465300	Bolt 5/16-24 x 3/4" hex head	1
20	465400	Clutch cover	1
21	302900	Nut ring	1
22	303900	Cap screw, 8-32 x 1/2" socket head.....	8
23	465600	Outboard mounting spacer kit, 12T thru 21T only.....	optional

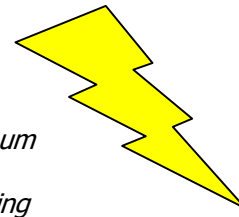
MDC Drums

Part No	#35 Chain	Part No	#219 Chain	Part No	Belt Drive 8mm HTD
441100	Drum & sprocket 11T	451500	Drum & sprocket 15T	440017	Drum & sprocket 17T
441200	Drum & sprocket 12T	451700	Drum & sprocket 17T	440019	Drum & sprocket 19T
441300	Drum & sprocket 13T	451900	Drum & sprocket 19T	440021	Drum & sprocket 21T
441400	Drum & sprocket 14T	452100	Drum & sprocket 21T	440023	Drum & sprocket 23T
441500	Drum & sprocket 15T	452300	Drum & sprocket 23T	440025	Drum & sprocket 25T
441600	Drum & sprocket 16T	452500	Drum & sprocket 25T	440027	Drum & sprocket 27T
441700	Drum & sprocket 17T	452700	Drum & sprocket 27T	440029	Drum & sprocket 29T
441800	Drum & sprocket 18T				
441900	Drum & sprocket 19T				
442100	Drum & sprocket 21T				
442300	Drum & sprocket 23T				

Greased Lightning

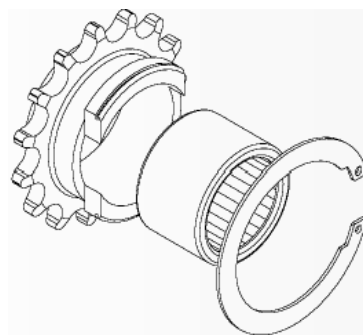
Greased Lightning Clutch is Horstman's 3 1/2" size 4-cycle racing clutch. Designed in 1995 for racers that like to customize their clutch setup to best suit engine power band.

- Designed for Stock and Superstock classes
- Lightweight billet aluminum drum for lower inertia and better heat dissipation
- New removable clips in drum slots last longer, eliminated notching of aluminum
- Removable sprocket saves money
- 120° spaced rectangular lugs in friction disks for better balance as well as less binding
- Cam action levers machined for uniform pressure and better lockup
- Levers pivot on hardened dowel pins for less binding
- Stall speed adjustable



Greased Lightning Clutch Complete

#35 Chain	Sprocket Size	#219 Chain
480036	12	
480037	13	
480038	14	
480039	15	480048
480040	16	
480041	17	480049
480042	18	
480043	19	480050
480046	20	480054
480044	21	480051
480045	23	480052



Sprocket Kit (includes bearing and retaining ring)

#35 Chain	Spk	#219 Chain
480056	12	
480057	13	
480058	14	
480059	15	480069
480060	16	
480061	17	480070
480062	18	
480063	19	480071
480066	20	480074
480064	21	480073
480065	23	480072

Basket Kit (alum drum-spk-brg-retaining ring)

#35 chain	Spk	#219 chain
480012	12	
480013	13	
480014	14	
480015	15	480028
480016	16	
480017	17	480029
480018	18	
480019	19	480030
480020	20	480033
480021	21	480031
480023	23	480032



New style drum with clips

Greased Lightning Parts

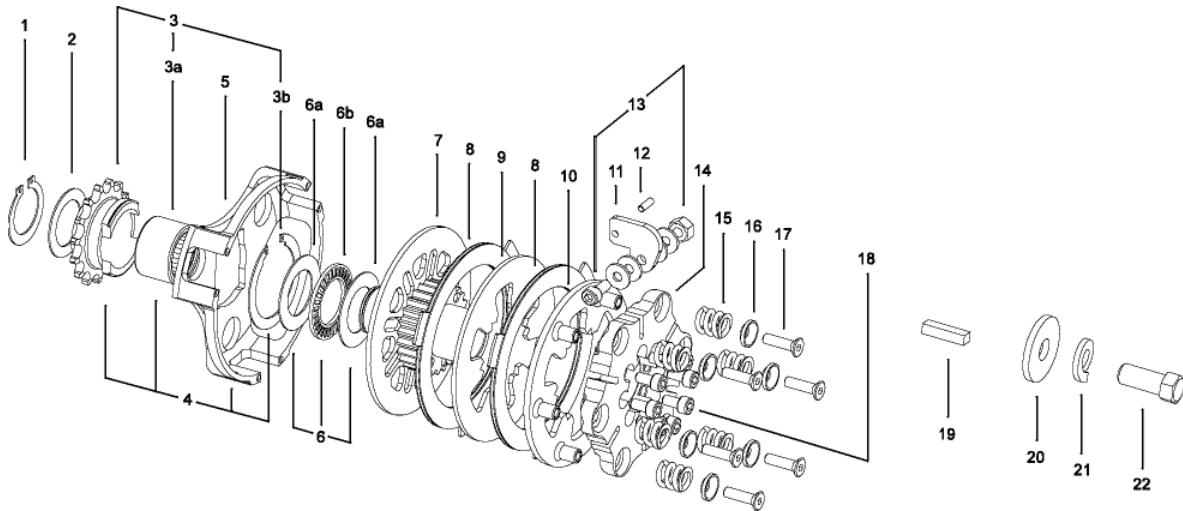


Fig	P/N	Description	Units Req
1	463000	Snap ring	1
2	463100	Outer thrust washer (use with 12T #35, 13T #35, 15T #219 sprockets)	1
	463200	Outer thrust washer (for all sprockets with roller bearing)	1
3	chart	Sprocket kit (see chart on previous page)	1
3A	463400	Bronze bushing (fits 12T #35, 13T #35, 15T #219 sprockets)	1
	463500	Roller bearing (fits 14T-23T #35, 17T-23T #219 sprockets)	1
3B	480075	Retaining ring for sprocket	1
4	chart	Drum Assembly (see chart on previous page)	1
5	480076A	Drum, Aluminum new style with clips	1
	480144	Drum, billet steel	
6	480077	Thrust washers, Kit (2) & thrust bearing	1
6A	480078	Thrust washers, each	2
6B	480079	Thrust bearing, each	1
7	480081	Drive hub	1
8	480082	Friction disc, iron, each	2
9	464200	Floater .085" thick	1
	464500	Floater .065" thick optional	
	464100	Floater .075" thick optional	
	464300	Floater .095" thick optional	
	464400	Floater .105" thick optional	
10	480084	Pressure plate	1
11	480085	Lever (less hardware), each	6
12	480086	Dowel pin, each	6
13	480087	Weight kit (6 bolts, 6 nuts, 24 washers)	1
14	480088	Lever support	1
15	465000	Spring .085", each, black	6
	464900	Spring .091", each, red optional	
	514200	Spring .075", each, blue optional	
16	334700	Retainer, each	6
17	334800	Adjusting screw, each	6
18	334900	Socket head screw, each	8
19	465100	Special key	1
20	465200	Flat washer	1
21	465500	Lock washer	1
22	465300	Hex head bolt	1
	480099	Outboard spacer kit optional	

Horstman Greased Lightning Jr. Clutch

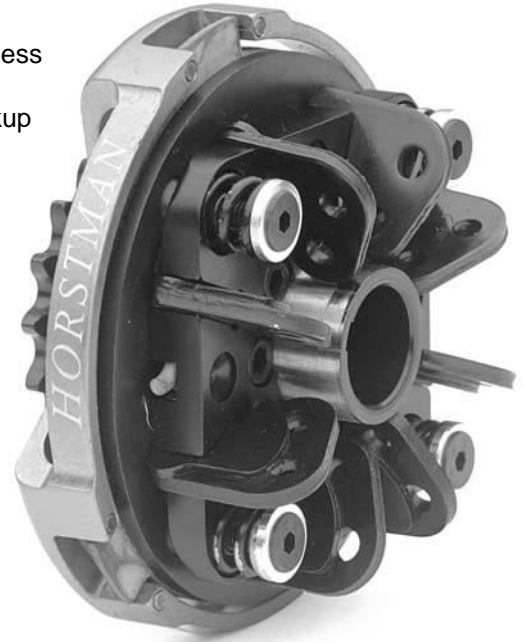
Greased Lightning Jr. was developed for the Jr. restricted flat head Briggs classes.

This is our older technology that performs well and is economical.

3 1/2" disc size

Outstanding features:

- Lightweight billet aluminum drum for low inertia and better air flow
- Removable sprocket reduces cost
- 120° spaced rectangular lugs in friction discs for better balance as well as less bind during lockup and release
- Two stage cam action levers for uniform pressure and smooth/positive lockup
- Stall speed adjustable with spring adjustment without disassembling clutch

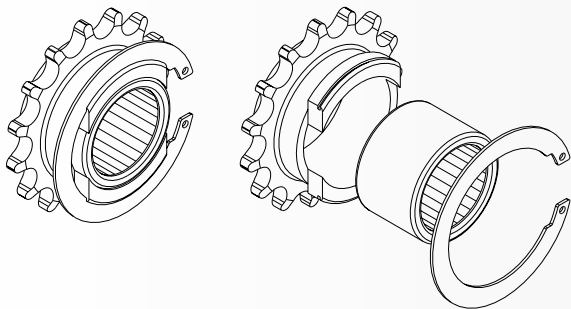


Complete Clutch Assembly

(Aluminum Basket)

Sprocket Size	#35 Chain Part #	#219 Chain Part #
12	482202	--
13	482203	--
14	482204	--
15	482205	482215
16	482206	--
17	482207	482217
18	482208	--
19	482209	482219
20	482210	482220
21	482211	482221
23	482212	482223

Sprocket Kit (sprocket-bearing-retaining ring)

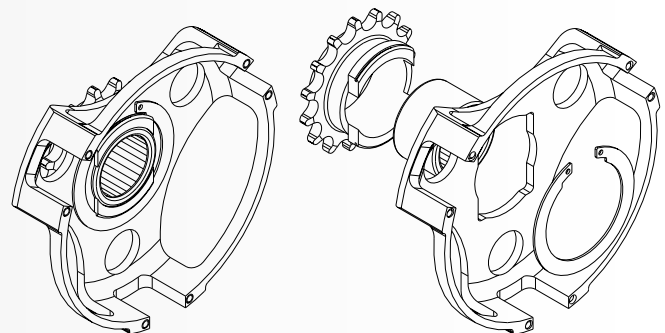


Sprocket Size	#35 Chain Part #	#219 Chain Part #
12	480056	--
13	480057	--
14	480058	--
15	480059	480069
16	480060	--
17	480061	480070
18	480062	--
19	480063	480071
20	480066	480074
21	480064	480073
23	480065	480072

Drum Assembly (sprocket-bearing-retaining ring & drum)

(Aluminum Basket)

Sprocket Size	#35 Chain Part #	#219 Chain Part #
12	482232	--
13	482233	--
14	482234	--
15	482235	482245
16	482236	--
17	482237	482247
18	482238	--
19	482239	482249
20	482240	482250
21	482241	482251
23	482242	482252



Greased Lightning Jr. Parts List

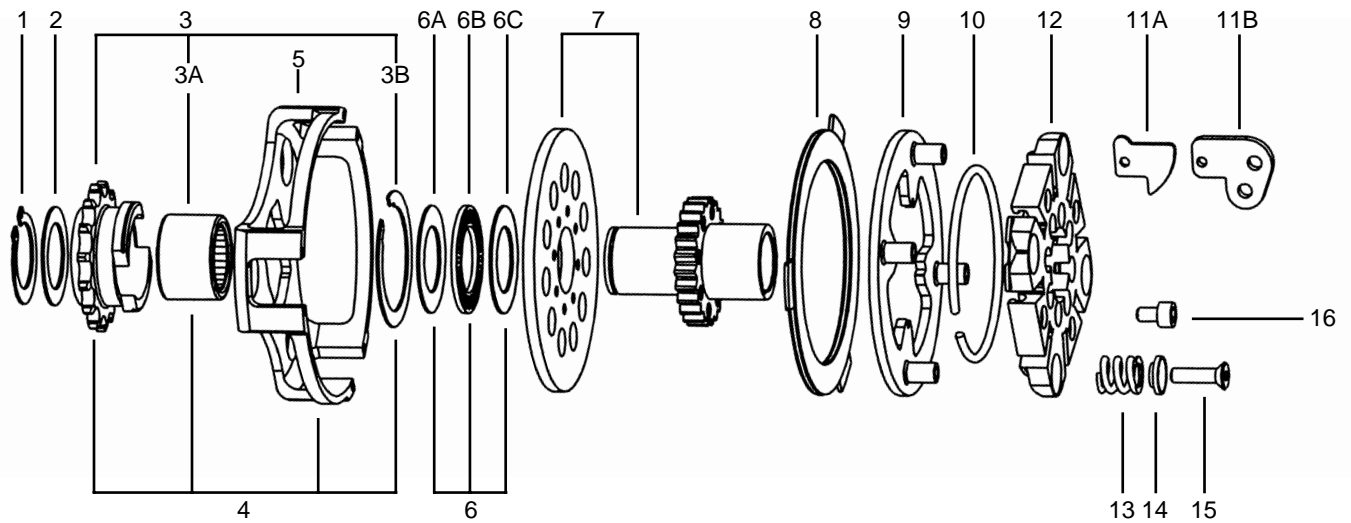


Figure Number	Part Number	Description	# Req'd.
1	463000	Snap ring	1
2	463100	Outer thrust washer (use with 12T #35, 13T #35, 15T #219 sprockets)	1
	463200	Outer thrust washer (for all sprockets with roller bearing)	1
3	chart	Sprocket kit (see chart on previous page)	1
3A	463400	Bronze bushing (fits 12T #35, 13T #35, 15T #219 sprockets)	1
	463500	Roller bearing (fits 14T-23T #35, 17T-23T #219 sprockets)	1
3B	480075	Retaining ring for sprocket	1
4	chart	Drum Assembly (see chart on previous page)	1
5	482260	Drum only (color turquoise)	1
6	480077	Kit, thrust washers (2) & thrust bearing	1
6A	480078	Thrust washers, each	2
6B	480079	Thrust bearing, each	1
7	482261	Drive hub w/front plate and bolts.	1
7A	482262	Front plate only	1
8	480082	Friction disc	1
9	335000	Pressure plate	1
10	334400	Chrome plated lever guide ring.	1
11A	113500	Lever	8
11B	305100	Lever	8
12	444700	Lever support.	1
13	465000	Spring, .085" wire diameter, standard (comes with clutch)	4
	514200	Spring, .075" wire diameter, optional low tension	4(optional)
	464900	Spring, .091" wire diameter, optional high tension	4(optional)
14	334700	Spring retainer	4
15	334800	Adjustng screw.	4
16	482264	Screw, 10/32 x 5/8	8
	465100	Special key.	1
	465200	Washer	1
	465300	Bolt 5/16-24	1
	480002	Sprocket installing tool	optional
	480099	Outboard mounting spacer kit.	optional



Redhawk Clutch

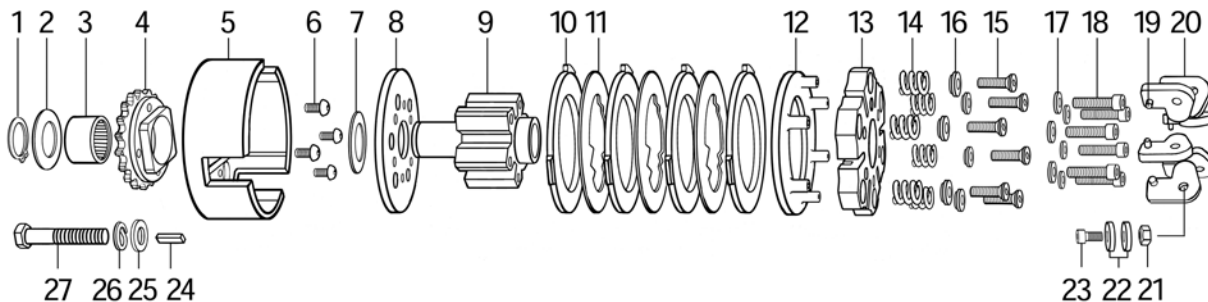
Mounts outboard on Honda GX390 engine with 1" crankshaft.
 Extra thick plates and weighted levers for heat sink and total lockup.
 Bolt-on #35 chain size sprocket for easy ratio changes.

Item	Part No	Description	Units Req
1	560050	Snap ring	1
2	560051	Thrust washer, external fits 12T only	1
2	560052	Thrust washer, external fits 13T-22T	1
3	560053	Bushing fits 12T sprocket only	1
3	560054	Bearing, roller fits 13T-20T sprocket	1
4	560055	Sprocket 12T #35	1
4	560056	Sprocket 13T #35	1
4	560058	Sprocket 15T #35	1
4	560059	Sprocket 16T #35	1
4	560060	Sprocket 17T #35	1
4	560061	Sprocket 18T #35	1
4	560062	Sprocket 19T #35	1
4	560063	Sprocket 20T #35	1
5	560068	Drum, less sprocket	1
6	560084	Screw, button head	4
7	560052	Thrust washer	1
8	560080	Front plate	1
9	560081	Drive hub	1
10	560082	Friction disc	4
11	560083	Floater standard size .085" thick	3
11	560090	Floater optional size .095" thick	
12	560085	Pressure plate	1
13	560086	Lever support	1
14	465000	Spring standard .086" wire size	6
14	464900	Spring high tension .091" wire size optional	
15	334800	Screw, stall speed adjusting	6
16	334700	Retainer	6
17	560094	Washer	6
18	560087	Bolt 1/4-28 socket head	6
19	480086	Dowel pin	6
20	480085	Lever	6
21	560095	lock nut 10-32	6
22	560093	Brass weight (set of 12)	1
23	482264	Screw, 10-32 x 5/8 socket head	6
24	560091	Key	1
25	560089	Washer, flat 3/8	1
26	560092	Washer, lock 3/8	1
27	560088	Bolt, 3/8-24 x 2 grade 5	1

<i>Redhawk Clutch Complete</i>	
Part Number	Sprocket size
560002	12
560003	13
560005	15
560006	16
560007	17
560008	18
560009	19
560010	20



4 Disc Design for MiniCup Racing



GLX-1 Clutch

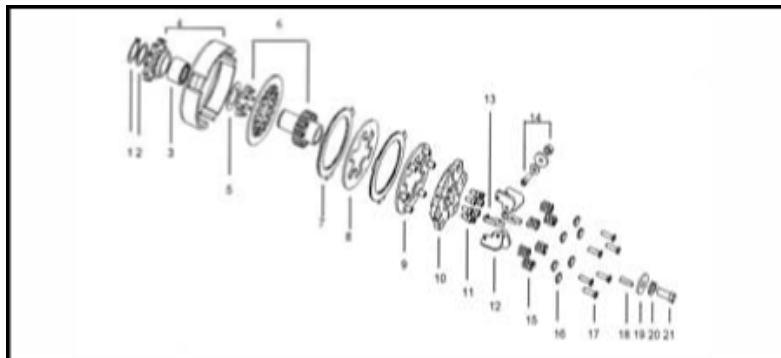
120cc Mini Snowmobile



Outstanding features:

- Unique patented multi disc design
- CNC machined from billet materials for precision and longevity
- Cam action levers for quick starts and positive lock up
- Stall speed easily adjusted without removal from engine
- High grip iron composite friction discs for less fade when hot
- Designed for use in improved stock and modified classes
- Adapts to snow, ice or grass drags
- Comes standard with 10T #420 sprocket
- Optional 11T #420 gear available as well as #35 chain sprockets

Fig	Part number	Description	Units Req
	480290	Clutch GLX-1 10T #420	
	480291	Clutch GLX-1 11T #420	
	480293	Clutch GLX-1 12T #35	
	480294	Clutch GLX-1 13T #35	
	480295	Clutch GLX-1 14T #35	
	480296	Clutch GLX-1 15T #35	
	480298	Clutch GLX-1 17T #35	
	480301	Clutch GLX-1 19T #35	
1	463000	Snap ring	1
2	463100	Thrust washer, outer use with 10T #420 sprocket or 12T & 13T #35	1
2	463200	Thrust washer, outer...use with 11T #420 sprocket or 14T-19T #35	1
3	463400	Bushing...use with 10T #420 and 12T & 13T #35 sprocket	1
3	463500	Bearing...use with 11T #420 and 14T-19T #35 sprocket	1
4	480260	Drum, GLX-1 12T #35	1
4	480261	Drum, GLX-1 13T #35	1
4	480262	Drum, GLX-1 14T #35	1
4	480263	Drum, GLX-1 15T #35	1
4	480265	Drum, GLX-1 17T #35	1
4	480267	Drum, GLX-1 19T #35	1
4	480270	Drum, GLX-1 10T #420	1
4	480271	Drum, GLX-1 11T #420	1
5	480077	Kit, thrust washers (2) and thrust bearing	1
6	480081	Drive hub with front plate	1
7	480082	Friction disc	2
8	464200	Floater .085" thick standard	1
8	464300	Floater .095" optional	
9	480084	Pressure plate	1
10	480088	Lever support	8
11	334900	Cap screw, 10-32 x 5/8" socket head, each	6
12	480085	Lever, less weight and hardware	6
13	480086	Dowel pin	6
14	480097	Weight kit, (6 each 14A, 14B, 14C, 14D)	6
15	465000	Spring, black color .085" wire diameter, standard	
15	464900	Spring, red color .091" wire diameter, high tension	
16	334700	Retainer	6
17	334800	Screw, 10-32 x 3/4" flat soc head	6
18	465100	Key	1
19	465200	Washer, flat	1
20	465500	Washer, lock	1
21	465300	Bolt 5/16-24	1



Rhino Clutch

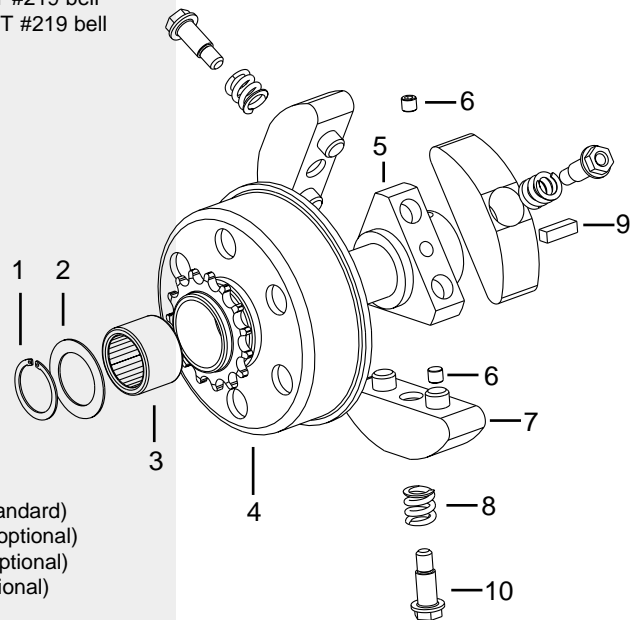
Like it's namesake, the Rhino Clutch is a tough animal ready to take on karting's heavy duty work. Built for the punishment of rental karts as well as the performance of dirt track racing in America or the Pro Honda division in Europe. The Rhino will handle up to 15 hp with models available for 15mm or 3/4 " shaft.

Outstanding Features:

- Extra heavy duty drum includes six cooling holes and wide flanged edge for strength
- Internal surface of drum has precision machined finish for quick seating of shoes
- Triple shoe design for better balance and high torque capacity
- Bi-directional...works either clockwise or counter-clockwise rotation with no modifications
- Simplicity of design for quick disassembly and fast maintenance... saves labor costs for rental track owners



Figure Number	Part Number	Description
1	555125	Retaining ring, fits drive hub # 555155
	463000	Retaining ring, fits drive hub # 555156
2	555127	Thrust washer, .750" ID x 1.000" OD, fits 13T #219 bell to 15mm drive hub
	463100	Thrust washer, .875" ID x 1.125" OD, fits 12T & 13T #35, 15T #219 bell
	463200	Thrust washer, .875" ID x 1.250" OD, fits 14T-19T #35, 16T-22T #219 bell
3	555130	Bronze bushing, .750" ID x .875" OD, fits 13T #219 bell on 15mm drive hub
	555131	Bronze bushing, .750" ID x 1.000" OD, fits 15T #219 bell on 15mm drive hub
	463400	Bronze bushing, .875" ID x 1.000" OD, fits 12T & 13T #35, 15T #219 bell
	463500	Roller bearing, .875" ID x 1.125" OD, fits 14T-19T #35, 16T-22T #219 bell
4	555144	Bell, 12T #35
	555145	Bell, 13T #35
	555146	Bell, 14T #35
	555147	Bell, 15T #35
	555148	Bell, 16T #35
	555149	Bell, 17T #35
	555151	Bell, 19T #35
	555133	Bell, 13T #219
	555134	Bell, 15T #219 with 3/4" x 1" bushing
	555135	Bell, 15T #219 with 7/8" x 1" bushing
	555136	Bell, 16T #219
	555137	Bell, 17T #219
	555140	Bell, 20T #219
	555142	Bell, 22T #219
5	555155	Drive hub, 15mm bore fits GX100 Honda
	555156	Drive hub, 3/4" bore
6	555157	Set screw, M6
7	555158	Shoe
8	514200	Spring, blue stripe, .075" wire, stall speed 2500-2800 RPM (standard)
	555160	Spring, Green stripe, .080" wire, stall speed 2800-3100 RPM (optional)
	465000	Spring, black stripe, .085" wire, stall speed 3100-3400 RPM (optional)
	464900	Spring, red stripe, .090" wire, stall speed 3400-3800 RPM (optional)
9	555165	Key, 5mm fits hub #555155
	555166	Key, 4.7mm fits hub #555156
10	555164	Stripper bolt (non-adjustable)



Rhino Clutch Complete

Sprocket Size	Crankshaft 15mm	Crankshaft 3/4"	Sprocket Size	Crankshaft 15mm	Crankshaft 3/4"
12T #35	--	555112	13T #219	555101	--
13T #35	--	555113	15T #219	555102	555103
14T #35	--	555114	16T #219	--	555104
15T #35	--	555115	17T #219	--	555105
16T #35	--	555116	20T #219	--	555106
17T #35	--	555117	22T #219	--	555108
19T #35	--	555119			

Yamaha Clutch Support

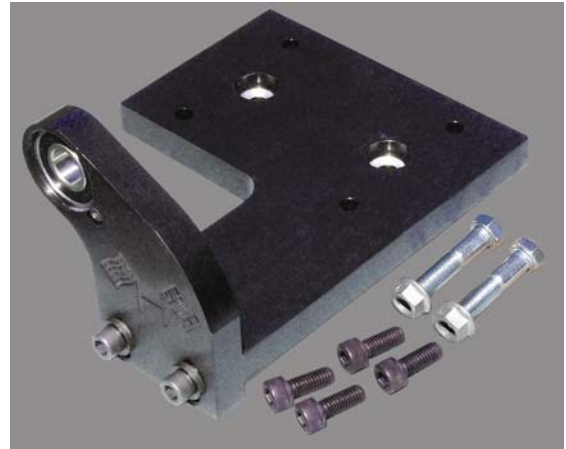
New improved designed to clear side pod bars. 5/8" thick base plate and upright for better support as well as rigidity. Crank runs truer and lasts longer.

Part Number	Description
710001	Clutch Support Kit, Narrow foot print, Fits HDC and DXL Clutch models
710002	Clutch Support Kit, Wide foot print, Fits Steel Nytro Clutch Models
710003	Base plate only, narrow foot print
710004	Base plate only, wide foot print
710005	Upright with bearing
710006	Bearing
710007	Hardware Kit, bolts and washers

Chassis Plate

Billet aluminum with ground finish to keep engine case free from power robbing distortion.

Part Number	Description
706000	Chassis Plate w/clamps American rail size
706100	Chassis Plate w/clamps Euro rail size
704200	Clamp (ea) American
704300	Clamp (ea) Euro



Sprocket Hubs

Heavy duty euro style with two 8mm pinch bolts for improved lock to axle. Made from billet alloy aluminum and anodized for lasting beauty.

Axle Ø	Gold	Black	Red	Blue
1 1/4	670900	671000	671100	671200
1 3/8	671400	671500	671600	671700
40 mm	671800	671900	672000	672100
50 mm	672200	672300	672400	672500



A sturdy sprocket hub improves sprocket life.

HDC-5

Smallest Clutch in karting

SMALLER = LOWER INERTIA = QUICKER ACCELERATION

One Disc Model HDC-5A for Yamaha Junior Sportsman

Two Disc Model HDC-5B for Senior Sportsman/Jr. or Sr. SuperSportsman*

2.5" Ø disc

Improved balance

Cryogenic treated

Greater rigidity

Patent D487,60



Lightweight

Cerametallic disc

Greater heat transfer

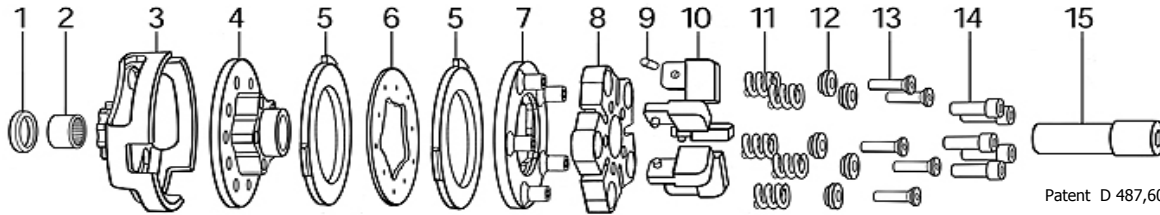
Factory blueprinted

Patented 5 x 5 lever/spring combo provides solid lockup, reduced hot spots, and easy adjustment of stall speed

Yamaha Jr Superbox WKA Mfg Cup Winner Paulie Harraka
 Yamaha Jr Sportsman Winning Clutch at Cal State Championship
 Yamaha Sr Superbox Winning Clutch WKA Mfg Cup West

HDC-5A Clutch One disc P/N	Sprocket	HDC-5B Clutch Two Disc P/N
336000	10 #219	336040
336001	11 #219	336041
336002	12 #219	336042
	13 #219	336043
	15 #219	336045

HDC-5 Parts List



Patent D 487,60

Item No	Part Number	Description	Units Req
1	322300	Spacer .145" x .670" Ø for 10 T#219	1
	323800	Spacer .145" x .740" Ø for 11T #219	1
	325900	Spacer .145" x .830" Ø for 12T-15T #219	1
2	330400	Bearing for 10T #219	1
	300300	Bushing for 11T #219	1
	300400	Bearing for 12T-15T #219	1
3	336010A	Drum, HDC-5A one disc 10T #219 with Lube	1
	336010B	Drum, HDC-5A one disc 10T #219 without Lube	
	336011	Drum, HDC-5A one disc 11T #219 "	1
	336012	Drum, HDC-5A one disc 12T #219 "	1
	336030A	Drum, HDC-5B two disc 10T #219 with Lube	1
	336030B	Drum, HDC-5B two disc 10T #219 without Lube	
	336031	Drum, HDC-5B two disc 11T #219 "	1
	336032	Drum, HDC-5B two disc 12T #219 "	1
	336033	Drum, HDC-5B two disc 13T #219 "	1
	336035	Drum, HDC-5B two disc 15T #219 "	1
4	336020	Drive hub, HDC-5A one disc	1
	336025	Drive hub, HDC-5B two disc	1
5	336023	Friction disc cerametalic standard	A1 or B2
	336064	Trick Disc Optional Pro Only	
6	336027	Floater, .095" standard HDC-5B	1
	336028	Floater, .100" optional HDC-5B	
	336029	Floater, .105" optional HDC-5B	
7	336021	Pressure plate	1
8	336022	Lever support	1
9	330027	Dowel pin	5
10	336036	Lever 12.2 grams	5
11	5142Y	Spring .075" wire Ø Optional (Matched set of 5)	
	3282Y	Spring .085" wire Ø HDC-5A (Matched set of 5)	1
	3130Y	Spring .091" wire Ø HDC-5B (Matched set of 5)	1
12	477733	Retainer	5
13	334800	Screw 10-32 flat head	5
14	336038	Screw 10-32x3/4" socket head	5
15	703600	Starter nut	1
	309300	Woodruff key 3mm	1
	336062	Spanner Wrench	Optional
	336061	Puller	Optional

Puller

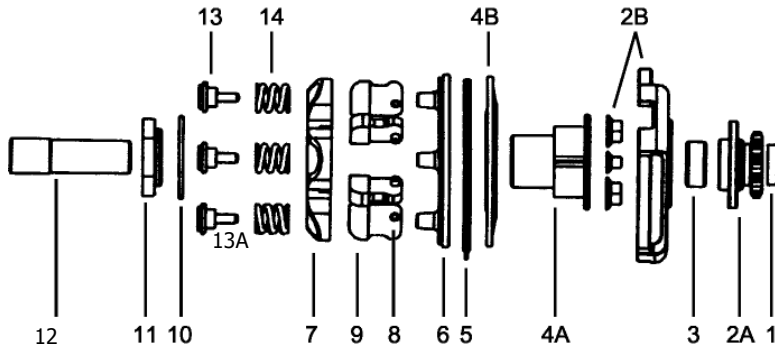
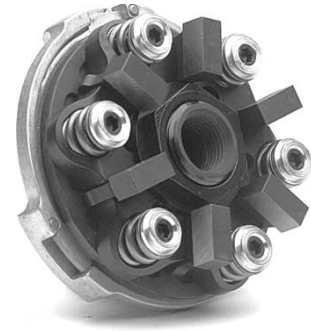


Spanner



HDC-3 and HDC-4 Clutch

HDC-3 and HDC-4 are 3" design clutch models that are now old technology since the release of Horstman's 2 1/2" HDC-5 designs. Spares parts will be available as demand dictates. The HDC-3 drive hub is a one-piece design and the HDC-4 drive hub is a two-piece design with removable front plate and thermal barrier coating. Many components are interchangeable between the HDC-3 and HDC-4 however the non interchangeable part numbers will be in bold print.

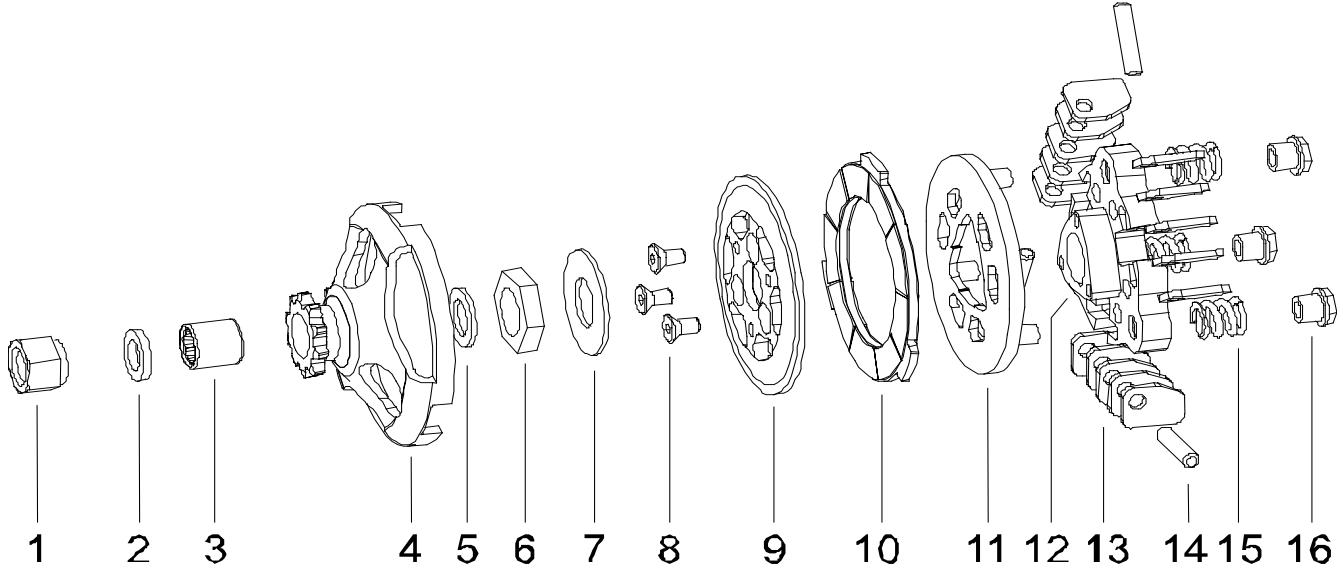


	Part No	Description
1	322300	Spacer, .145" x .670" o.d. 10T #219 only
	323800	Spacer, .145" x .740" o.d. 11T #219 or 9T #35
	325900	Spacer, .145" x .830" o.d. 12T-15T
2	333301	Alum Drum & Spk 10T #219
	333302	Alum Drum & Spk 11T #219
	333303	Alum Drum & Spk 12T #219
	333304	Alum Drum & Spk 9T #35
	333306	Steel Drum & bolt on Spk 10T #219
	333307	Steel Drum & bolt on Spk 11T #219
2A	330134	Sprocket 9T #35
	330135	Sprocket 10T #35
	330137	Sprocket 10T #219
	330138	Sprocket 11T #219
	330139	Sprocket 12T #219
2B	330151	Aluminum drum less sprocket
	330152	Steel drum less sprocket
3	330400	Bearing, fits 10T #219 spk only
	300300	Bushing, fits 11T #219 or 9T #35 spk
	300400	Bearing, fits 12T #219
4	971030	Drive hub HDC-3
4A	333356	Drive hub less floating plate HDC-4
4B	333357	Floating plate with coating HDC-4
5	971031	Friction disc
6	333328	Pressure Plate HDC-3
	333359	Pressure Plate HDC-4
7	330026	Lever support
8	330027	dowel pin (ea) 6 required
9	330043	Lever 10.5 grams (ea) 6 required
10	326600	Coned washer
11	326700	Jam Nut Left Hand Threads
12	703600	Starter Nut
13	334700	Retainer (ea) 6 required
13A	334800	Screw, stall speed adjusting (ea) 6 required
14	313000	Spring (ea) .091" wire, standard
	328200	Spring (ea) .086" wire, opt
	514200	Spring (ea) .075" wire, opt



One Piece Steel Drum
Fits HDC-3 or HDC-4
P/N 330122 10T #219
P/N 330123 11T #219

Horstman EXPD IV Clutch



EXPD IV is a dry one disc clutch designed for the Junior Intercontinental Piston Port class (JICA). The clutch features a stall speed under 5000 rpm as required by CIK. CIK homologation number 350/E/09

Item Number	Part Number	Description
	517000	Clutch, EXPD IV 10T 219
	517100	Clutch, EXPD IV 11T 219
1	511900	Nut 17mm hex
2	512100	Thrust washer, external
3	512300	Bearing
4	515000	Drum with bearing 10T 219
	515100	Drum with bearing 11T 219
5	512400	Thrust washer 1.5mm optional
	512500	Thrust washer 1.7mm standard size
	512600	Thrust washer 1.8 mm optional
6	512700	Jam Nut
7	512800	Coned safety washer
8	512900	Screw, M5 x 10 flat head each 3 required
9	515300	Fixed plate
10	515400	Friction disc
11	515500	Pressure plate
12	515600	Drive hub
13	515700	Lever, each 15 required
14	513700	Dowel, each 3 required
15	513400	Spring, each 3 required
16	514800	Retainer, each 3 required
Optional Accessories		
	513900	Spanner wrench

Horstman Steel Nytro Clutch

Steel Nytro is definitely the top of the line on two-cycle racing clutches. This new high tech oil bath beauty is ready to launch you into the winner's circle.

Outstanding features:

- Small diameter and light weight enables quicker acceleration and more revs on top end
- All billet construction for better balance, rigidity, and durability
- "T" shape cam action levers provide positive lock-up.
- Easy adjustment of stall speed without removing clutch from engine
- A proven winner in Sprint, Speedway, and Road Race divisions



Model	Application
Two Disc	Yamaha Sportsman, YBX exhaust
IKF Super Sportsman	Yamaha Super Sportsman, SSX-V exhaust
Three Disc	Yamaha Lite
Four Disc	Yamaha Heavy

Steel Nytro Clutch Complete

Sprocket Size	Two Disc Yamaha Taper	Three Disc Yamaha Taper	IKF Super Sportsman	Four Disc Yamaha Taper
9T #35	330050	330058	330155	330075
10T #35	330051	330059	330156	330076
15T #35	330052	330038	---	330077
10T #219	330045	330060	330158	330070
11T #219	330046	330061	330159	330071
12T #219	330047	330062	330160	330072
13T #219	330048	330063	---	330073
15T #219	330049	330064	---	330074
11T #215	330161	330165	---	330169
12T #215	330162	330166	---	330170
13T #215	330163	330167	---	330171
15T #215	330164	330168	---	330172



Steel Nytro Accessories

Part #	Description
304400	Clutch Puller
330036	Spanner Wrench, green
330125	Clutch Coolant quart
330022	Rebuild kit*, 2 disc
330023	Rebuild kit*, 3 disc
330024	Rebuild kit*, 4 disc

*contains: linings, floater(s), 6 springs, 6 spring adjustment screws & gasket

Steel Nytro Clutch Coolant

The Steel Nytro clutch must have only Steel Nytro Coolant for maximum efficiency. Steel Nytro Coolant is a special synthetic oil blended for fast heat transfer and high thermal stability for consistency from start to finish.

Steel Nytro Aluminum Drums

Disks	9T #35	10T #35	15T #35	10T #219	11T #219	12T #219	13T #219	15T #219	11T #215	12T #215	13T #215	15T #215
2	330080	330081	330082	330001	330002	330003	330083	330084	215176	215177	215178	215179
3	330090	330091	330092	330004	330005	330006	330093	330094	215180	215181	215182	215183
4	330100	330101	330102	330007	330008	330009	330103	330104	215185	215186	215187	215188

Steel Nytro Parts List

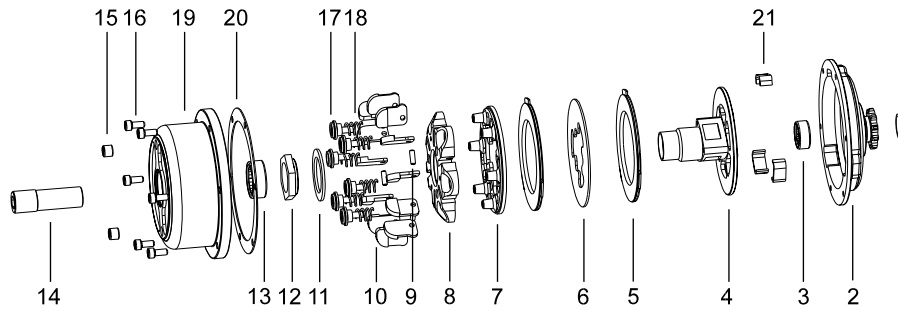
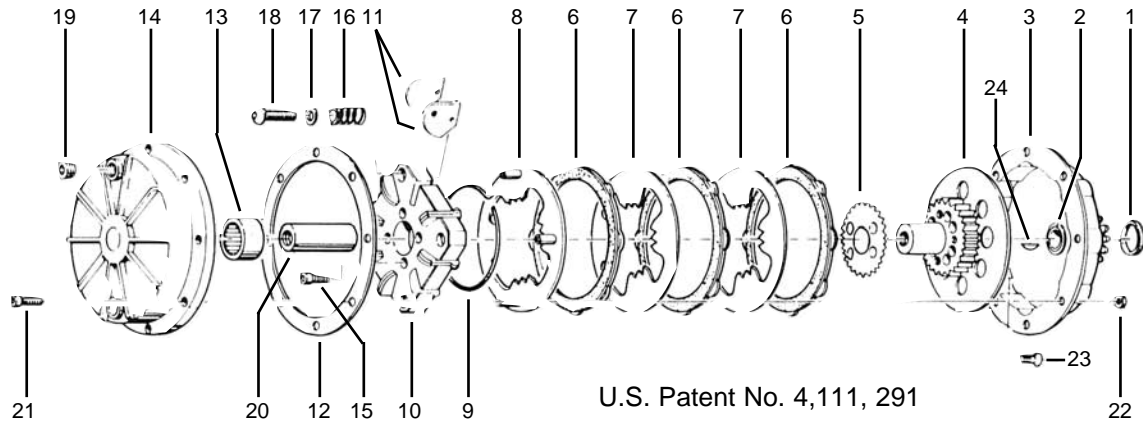


Figure Number	Part Number	Description	# Req'd.
1	322300	Spacer .145" wide x .670" o.d. Use with 10T219 or 11T215 spk.	1
	323800	Spacer .145" wid x .740" o.d. Use with 11T219, 9T35, or 12T215 spk.. . . .	1
	325900	Spacer .145" wide x .830" o.d. Use with 2T219, 10T35, or 13T215 spk.	1
2	chart	See Steel Nytro Aluminum Drums Chart page 7	1
3	330400	Bearing, 10T #219 drums only	1
	300300	Bushing, fits 11T #219 drums & 9T #35 drums (reaming to size required).	1
	300400	Needle bearing, fits 12T-15T #219 drums, 10T-15T #35 drums.	1
4	330015	Drive hub, Yamaha taper, 2 disc	1
	330016	Drive hub, Yamaha taper, 3 disc	1
	330017	Drive hub, Yamaha taper, 4 disc	1
5	325701	Friction disc, semi-metallic	2,3 or 4
6	326000	Floater, .050" thick	1,2 or 3
	327800	Floater, .040" thick	optional
	327900	Floater, .045" thick	optional
	328000	Floater, .055" thick	optional
	328100	Floater, .060" thick	optional
7	333328	Pressure plate	1
8	330026	Lever support.	1
9	330027	Dowel pin.	6
10	330037	10 gram lever, each, for all models except IKF Super Sportsman	6
	330088	10.7 gram lever standard, each, IKF Super Sportsman, color gold	6
	330089	Lever set, contains 6 pcs., 10.7 gram levers.	1
11	326600	Coned washer	1
12	326700	Nut, 1 1/8" hex, lefthand thread	1
13	327500	Bearing, cover	1
14	327400	Starter nut, 3 & 4 disc	1
	703600	Starter nut, 2 disc.	1
15	327600	Plug, oil fill	2
16	327200	Cover bolts, 8/32 x 3/8" sockethead	6
17	334700	Retainer 17A 334800 Adjusting screw	6
18	328200	Spring, .085" wire diameter, 2 disc clutch	6
	313000	Spring, .091" wire diameter, 3 & 4 disc clutch	6
19	330032	Cover, Nytro, standard on 2 disc clutch	1
	330044	Cover, Nytro, finned standard on 3 & 4 disc clutches.	1
	326900	Gasket.	1
20	330033	Drive clip, fits all 2 disc drums	3
21	330034	Drive clip, fits all 3 disc drums	3
	330035	Drive clip, fits all 4 disc drums	3
	2B	330134	Sprocket, 9T35 Replacement Kit*
	330135	Sprocket, 10T35 Replacement Kit*	
	330136	Sprocket, 15T35 Replacement Kit*	
	330137	Sprocket, 10T219 Replacement Kit*	
	330138	Sprocket, 11T219 Replacement Kit*	
	330139	Sprocket, 12T219 Replacement Kit*	
	330140	Sprocket, 13T219 Replacement Kit*	
	330141	Sprocket, 15T219 Replacement Kit*	
	330147	Screw, 10/32 x 1/4", flat socket head	
2A	330148	Drum, 2 Disc w/clips	
	330149	Drum, 3 Disc w/clips	
	330150	Drum, 4 Disc w/clips	

*contains: sprocket, bearing and 8 mounting screws

Horstman DXL Disc Clutch

Horstman's DXL clutches are of the oil bath multiple disc design for two cycle racing. The DXL has been a proven winner since 1978 when they were first introduced. Many upgrades have been made since the originals in order to provide the racer with an economical yet high performance clutch. Features include three discs for positive hook up and easy adjustment of stall speed through the oil cover. For the Sr. Sportsman class and the Yamaha KT Lite class the four spring design DXL-991 is a good choice. For the Yamaha Heavy class the six spring design DXL-3000 is preferred. Vintage McCulloch model DXL-992 for RH thread PTO or Model DXL-993 for LH thread PTO. Both are 4 spring models.



Three disc DXL clutch complete fits Yamaha Kt-100 kart engine

Model DXL-992	Model DXL-993	Sprocket Size	Model DXL-991	Model DXL-3000
350001	350020	9T #35	394900	360900
350002	350021	10T #35	395000	361000
350003	350022	11T #35	395100	361100
350004	350023	12T #35	395200	361200
350005	350024	13T #35	395300	361300
350006	350025	14T #35	395400	361400
350007	350026	15T #35	395500	361500
350010	350027	10T #219	396000	362000
350011	350028	11T #219	396100	362100
350012	350029	12T #219	396200	362200
350013	350030	13T #219	396300	362300
350014	350031	14T #219	396400	362400
350015	350032	15T #219	396500	362500

Horstman now offers spacers in increments of .010" from .065" thru .205" to help you obtain the correct clutch end play. For use with bushing style drums only. For DXL, Steel Nytro and HDC models.



Part #	Width	Part #	Width	Part #	Width
323000	.065"	323600	.125"	324200	.185"
323100	.075"	323700	.135"	324300	.195"
323200	.085"	323800	.145"	324400	.205"
323300	.095"	323900	.155"		
323400	.105"	324000	.165"		
323500	.115"	324100	.175"		

324500 Spacer set, 1 each every size.

Clutch Holder Tool

Made from Aluminum and designed to fit over drive assemble to prevent crank from turning during clutch installation.

Part

- 333100 Clutch tool, fits 4 spring DXL clutch models
- 333200 Clutch tool, fits 6 spring DXL clutch models



Clutch Puller This steel puller threads into end of the clutch hub for fast clutch removal.

Part

- 304400 Clutch puller, fits all model DXL, Steel Nytro and HDC clutches

DXL Clutch Parts List

Figure Number	Part Number	Description
1	322200	Spacer, .665" OD x .105" wide - use with 10T #219 drum
	323600	Spacer, .740" OD x .125" wide - use with 9T #35 or 11T #219 drum
	321300	Spacer, .740" OD x .215" wide. McCulloch - use with 9T35 or 11T219 drum
	324600	Spacer, .830" OD x .125" wide - use with all drums with needle bearing
2	322100	Bronze bushing for 10T #219 drum (reaming required after installation)
	300300	Brass bushing for 9T #35 or 11T #219 drum (reaming required after installation)
3	300400	Needle bearing
	300900	Drum 9T #35
	301000	Drum 10T #35
	301100	Drum 11T #35
	301200	Drum 12T #35
	301300	Drum 13T #35
	301400	Drum 14T #35
	301500	Drum 15T #35
	331000	Drum 10T #219
	331100	Drum 11T #219
	331200	Drum 12T #219
	331300	Drum 13T #219
	331400	Drum 14T #219
	331500	Drum 15T #219
	301600	Drum 16T 8mm belt drive
	301700	Drum 17T 8mm belt drive
	301900	Drum 19T 8mm belt drive
4	390800	Drive hub, standard fits DXL-991 or DXL-3000
	315500	Drive hub, extended fits DXL-991 3B or DXL-3000 3B
5	312000	Shim, .017" thick
	312100	Shim, .010" thick
	312200	Shim, .005" thick
6	334000	Friction disc, DXL-10 hi temp
7	311000	Floater plate .031" thick
	311100	Floater plate .040" thick, optional
8	335000	Pressure plate, fits all 4 spring model clutches
	334200	Pressure plate, fits all 6 spring model clutches
9	334400	Weight guide ring, chrome plated
10	335100	Weight support, Aluminum (4 spring model)
	334500	Weight support, Aluminum (6 spring model)
11	335200	Weight, black (4 spring model)
	335300	Weight, black w/lightening hole (4 spring model)
	334600	Weight, chrome plated (6 spring model)
12	303800	Gasket
13	304200	Bearing for oil cover
	307400	Retaining ring for bearing
14	307000	Cover
15	334900	Socket head cap screw 10/32 x 3/8"
16	313000	Spring
17	334700	Retainer
18	334800	Screw, Stall speed adjusting, 10/32 x 3/4"
19	306100	Oil fill plug
20	703600	Starter nut 10mm x 1.25 thread, fits DXL-991 & DXL-3000
	315100	Starter nut 10mm x 1.25 thread, fits DXL-991 3B & DXL-3000 3B
	316300	Starter nut, RH thread, fits DXL-992
	316400	Starter nut, LH thread, fits DXL-993
21	303900	Socket head cap screw 8/32 x 1/2"
22	309200	Nut 8/32
23	312900	Screw 10/32 x 5/16" flat socket head
24	309300	3mm woodruff key (optional)
25	307500	Cover washer for standard hub clutch
	307600	Cover washer for extended hub clutch

DXL Clutch Rebuild Kits
 Rebuild kit contains necessary number of components to repair the DXL oil clutch. Includes: friction discs, 8 weight support bolts, gasket, springs and floater(s).

Part #

310200	Rebuild Kit for Model DXL-990 & DXL-991
310300	Rebuild Kit for Model DXL-1000A, DXL-2000 & DXL-3000

Nut Ring

Stamped from aluminum. Holds DXL clutch drum to oil cover. Eliminates the 8 outer nuts. Fits all DXL clutches. Enables faster assembly.

Part #

3029 Nut Ring



Horstman Roadrace Axle Clutch

The Horstman Roadrace Axle Clutch is without a doubt one of the best values ever developed in kart clutches since its introduction in 1984. Crafted from only the highest quality billet alloys for long life and consistent performance. Features cam action levers for quick acceleration. A special oil inside the housing is used to absorb heat from the friction discs to better control overheating. If a clutch overheats while engaging its torque capacity drops which means lost power and poor acceleration. Another benefit of a sealed oil bath design is that no outside contaminants can get inside to affect performance. Easy adjustment of stall speed can be made from outside the clutch. Model AX-4056 comes ready to race with any gear ratio from 4.20:1 up to 5.20:1. An optional tungsten weight kit is available to improve performance in the 5.20:1 up to 5.60:1 ratio range.



Part #	Description
110100	Clutch with 1" hub
110200	Clutch with 1 1/4" hub
110600	Clutch with 1" hub & Tungsten weights
110700	Clutch with 1 1/4" hub & Tungsten weights

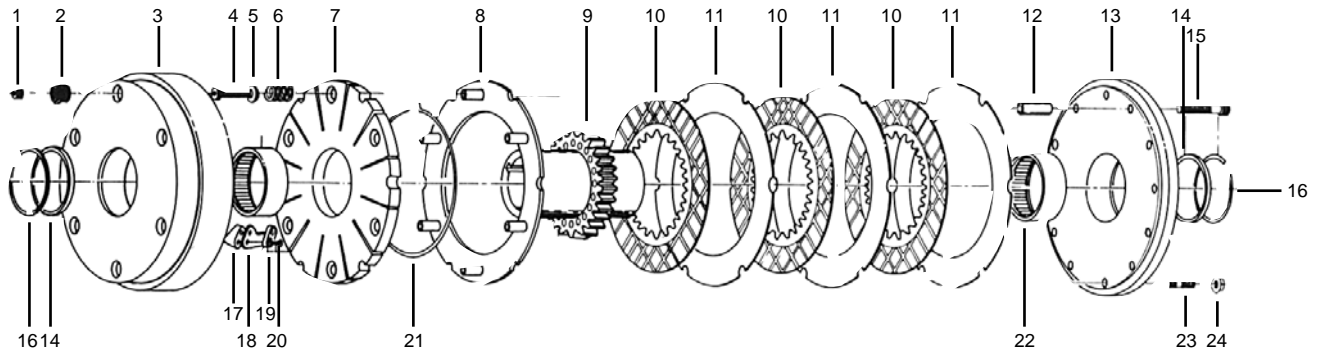


Fig. #	Part #	Description	Fig. #	Part #	Description
1	111100	Steel plug, 1/8" npt	13	113000	Sprocket housing, blue
2	111200	Aluminum bolt	14	113100	Seal
3	111300	Blue main housing with fins	15	113200	Cap screw, 1/4-20 x 1 3/4" socket head
4	111400	Adjusting screw 10/32" x 1" socket head	16	113300	Retaining ring
5	111500	Retainer for black spring	17	113400	Wide brass weight
	111600	Retainer for yellow spring	18	113500	Lever
6	111700	Spring, color black	19	113600	Narrow brass weight for AX-4056
	111800	Spring, color yellow	20	113900	Screw, flat head 10/32 x 1/2"
7	115100	Aluminum lever support, blue		114000	Screw, flat head 10/32 x 5/8"
8	115000	Pressure plate, .150" thick	21	114100	Lever guide ring
9	112100	Hub, 1" bore	22	114200	Bearing
	112200	Hub, 1 1/4" bore	23	114300	Stud
	112300	Hub, 30mm bore	24	114400	Flange nut 1/4-28
	112400	Hub, 35mm bore		114500	Gage tool
	112500	Hub, 1 3/8" bore		114600	Tungsten weight kit (optional) for improving performance on shorter tracks requiring a gear ratio above 5.00:1 thru 5.60:1
10	112600	Friction disc, AX-10	25	115200	Thrust washer, .032" thick
11	112700	Floater, .042" thick, standard			
	112800	Floater, .050" thick, optional			
12	112900	Drive pins			

Horstman Rod



5 hp Briggs & Stratton

CNC Machined from billet 7075-T6 Aluminum Alloy for strength and precision

Sleek rounded edge design for lower shape coefficient reduces windage

Lightweight for quicker revs

Knife edged dipper for less drag

Vibratory finished and peened for longer life

190,000 psi tensile alloy bolts

23.7 gram inserts chamfered

Meets WKA rod rule for stock Raptor class

Part Number	Description
498101	Rod standard length 3.875" center/center
498105	Rod (- .005") 3.870" center/center
498106	Inserts std size 23.7 grams
498107	Inserts (-.002") 23.9 grams
499000	Bolt kit (2 bolts and 2 washers)



Fuel Pump

Genuine Walbro fuel pump famous for reliability and low cost.
Works great with Methanol or gasoline.

Part Number	Description
439200	Walbro Fuel pump

Hi Performance Products

for Briggs & Stratton 5 HP Engine



Billet Rods

Horstman high performance rods are CNC machined from billet 7075-T6 alloy aluminum. They are vibrahoned and shot peened to eliminate unwanted stress inducing tool marks. H beam models are proven to be the most reliable rods available. Horstman I beam models feature a "drilled center" for weight saving without sacrificing strength.

H Beam Part #	Center to Center Distance	I Beam Part #
495100	3.875"	see page 37
495600	4.000"	498600
495700	4.325"	498700
495200	4.375"	498200
--	4.400"	498800
495300	4.425"	498300
495400	4.475"	498400
495500	4.500"	498500



Rod Bolts

Horstman rod bolts are made from premium 8640 alloy steel. The threads are rolled after heat treat for greater dependability. H-beam rods use the bolt and nut concept while I-beam rods use the bolt threaded into the rod.

Part #	Description
404000	Rod bolt kit...fits H-Beam rods...contains 2 bolts, 2 washers, and 2 lock nuts
499000	Rod bolt kit...fits I-Beam rods...contains 2 bolts and 2 special washers
499200	Rod bolt kit...tool steel fits I-Beam rods



Inserts

Horstman inserts are automotive quality replaceable design. The lead-base babbitt on a steel shell is preferred for the fast revs and heavy shock loads of a racing engine. SEE PAGE 28

Part #	Description
499500	Set of inserts, standard size crank journal
499800	Set of inserts, .002" undersize crank journal



Wrist Pins

Horstman now offers a super light wrist pin (under 23 grams). Made from tough heat treated steel. Precision ground to fit .490" pin bore. Legal in limited and modified classes only.

Part #	Description
400800	Tool steel wrist pin

High Performance Products

for Briggs & Stratton 5 hp Engines

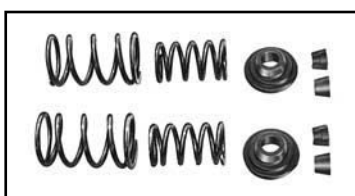


Single Valve Springs Retainers and Keepers

Horstman valve springs are produced from the finest heat treated spring material available. They are engineered with just the right amount of tension as they are strong enough to prevent valve "float" but not too strong so that lifters and cam lobes are not damaged.

Part # Description

426000	Valve spring & retainer kit, includes 2 valve springs, 2 retainers & 4 keepers
425100	Valve springs, set of 2
426100	Retainers, 2 aluminum retainers and 4 keepers



Dual Valve Springs Retainers and Keepers

Dual valve springs provide enough seat pressure to help prevent power-robbing valve bounce when closing as well as controlling the valve throughout the entire intake or exhaust event.

Part # Description

496000	Dual valve spring kit - contains 2 dual springs, 2 aluminum and 2 pair keeper...for cam lift up to .350"
496100	Valve springs only - set of 2
496200	Retainers only - set of 2 aluminum retainers and 2 pair keepers, 2 spacers
496300	Keepers only - 2 pair of keepers
497800	Kit - 2 dual springs, 2 titanium retainers, 2 pair of keepers...for cam lift up to .410"
497600	Valve springs only - set of 2
497700	Titanium retainer - set of 2 retainers and 2 pair keepers, 2 spacers



Big Valves

Custom made from lightweight stainless steel. A great way to boost horsepower.

Part # Description

492500	Valve set 1.125" ex. x 1.250" in.
492600	Intake valve 1.250"
492700	Exhaust valve 1.125"

Part # Description

492100	Valve set 1.165" ex. x 1.340" in.
492200	Intake valve 1.340"
492300	Exhaust valve 1.165"



Big Valve Seats

Designed for use with 1 1/8 exhaust and 1 1/4 intake valves - made from chrome moly alloy steel.

Part # Description

493000	Seat set
493100	Intake seat only
493200	Exhaust seat only



Brass Valve Guide Bushing

Made from wrought nickel-aluminum bronze for its long wearing characteristics. Precision engineered with taper and relief for easier installation. Fits Horstman valves #4925 or any valve with .246" diameter stem.

Part # Description

482000	Valve guide bushings (set of 2)
--------	---------------------------------

High Performance Products

for Briggs & Stratton 5 hp Engines



Billet Lifters - .100" Longer

Made from high chromium alloy for wear resistance and compressive strength. They are CNC machined from billet bar stock...no welding or cold heading. The 1.700" length enables use with newer high lift cams with smaller base circles appearing in the market. Stem must be ground for proper valve clearance.

Part #	Description
493500	Billet lifters (pr)1.700"



Spark Plug Washers

Horstman spark plug washers are just the trick for indexing your spark plug. Each kit contains 10 ea. of three sizes of copper washers. Instructions are provided.

Part #	Description
494500	Spark plug washers (30 pcs.)



Billet Crankcase Breather

Made from 3/8" thick aluminum, this attractive piece is made on CNC equipment and comes with mounting bolts and lightweight brass fittings. There is a choice of attractive anodized colors.

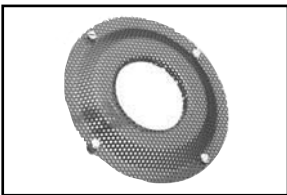
Part #	Description
403100	Breather, color Red
403000	Breather, color Blue
402900	Breather, color Gold
402800	Brass Fitting, each



Starter Nut

Made from steel, this nut is designed for starting your Briggs with the popular hex drive starters.

Part #	Description	Part #	Description	NEW !!!!!
480600	Starter nut , fits flat head engines	480700	Starter nut, fits Animal, metric threads	



Flywheel Screen

Bolts to flywheel shroud - helps prevent injury to fingers by keeping them away from the flywheel - an important safety item.

Part #	Description
407000	Flywheel cover screen - black finish steel
407100	Flywheel screen aluminum - polished
407200	Flywheel screen aluminum - blue
407300	Flywheel screen aluminum - red

Chain Guard

Sturdy yet lightweight stamping - universal design - fits Briggs & Stratton and Tecumseh.



Part #	Description
400100	Chain guard, steel
400200	chain guard, aluminum...1/8" thick for NHRA rules
400400	G.L. and MDC clutch. Made from cast aluminum

*Part # 400400



High Performance Products

for Briggs & Stratton 5 hp Engines



Cylinder Sleeve

Made from electric furnace cast iron, centrifugally cast for close-grain long wearing features. Two sizes are available. 4709 is designed for the aluminum cylinder style engine and it can be overbored to +.080. 4710 is designed for use in the I/C style engine and it can be overbored +.100.

Part #	Description
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470900	Cylinder sleeve 2.690 OD x 2.500 ID x 4.500 long
471000	Cylinder sleeve 2.725 OD x 2.560 ID x 4.500 long

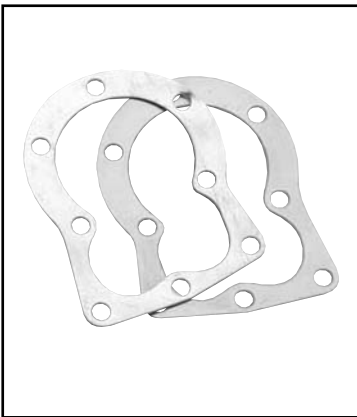


Crankgear

Made from heat treated billet alloy steel to withstand the extreme abuse of high rpm racing. Models available for the .792" diameter crank or the new 1.005" diameter crank from Briggs & Stratton. Gears are available with multiple timing feature 2° retarded, straight up, or 3° advanced.

Part #	Description
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497000	Gear, fits .792" crank, multiple timing
497100	Gear, fits 1.005" crank, multiple timing
497200	Gear, fits 1.005" crank, stock timing only
497300	Gear, fits 1.005" raptor crank, multiple timing



Head Gasket

Precision stamped to fit the stock Briggs head or the Horstman head.

Part #	Description
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406100	Head gasket, .062" copper
406200	Head gasket, .032" copper
406300	Head gasket, .090" aluminum
406400	Head gasket, .032" aluminum
406500	Head gasket, .062" aluminum
406600	Head gasket, .021" copper
406700	Head gasket, .043" copper
406800	Head gasket, .050" copper
406900	Head gasket, .040" aluminum



Stud Kit

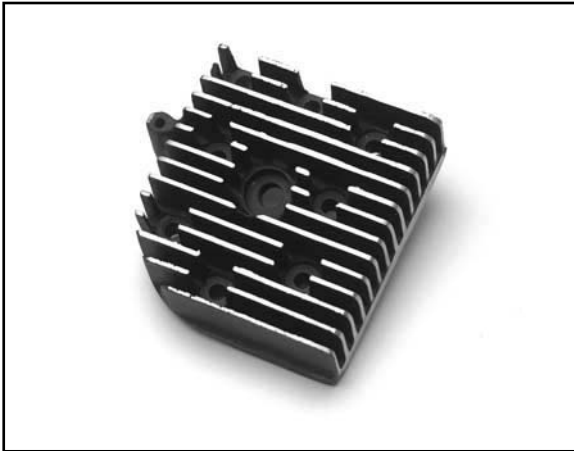
Studs are the proper length for use with factory head and side cover. We have had many requests by racers for studs as they provide a more uniform seal than bolts thereby reducing risk of blowing head gaskets or cracking heads. Also, they reduce risk of stripping threads in block as it is not necessary to remove the studs when working on the engine. Each stud kit contains 8 studs, nuts & washers for head and 6 studs, nuts & washers for the side cover.

Part #	Description
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450000	Stud kit, stock head
450100	Stud kit, Horstman head

High Performance Products

for Briggs & Stratton 5 hp Engines



Fire Slot High Compression Head

The Horstman head has been improved by the addition of a fire slot. The fire slot enables the flame front to travel more efficiently toward the piston dome. Other features include an area deep enough to allow valve clearance on high lift cams, extra large fins for better cooling, and a 7.5:1 ratio for good all around performance on methanol or your favorite fuel blend. Comes complete with grade 5 head bolts and washers and bolts on without any modifications to block.

Part #	Description
404200	Fire slot head



Restrictor Plate Flat head and Animal Styles

IKF & WKA legal for use in specific junior classes. Designed to decrease performance on 5 hp Briggs & Stratton. Color coded.

Part #	Description
433200	Briggs restrictor plate, .425 hole, blue cone shape, IKF
433300	Briggs restrictor plate, .500 hole, red cone shape, IKF
433400	Briggs restrictor plate, .575 hole, gold, WKA
433500	Briggs restrictor plate, .425 hole, purple WKA
433700	Briggs restrictor plate, .500 hole, turquoise WKA
433600	Q Midget Restrictor, .690 hole, black



Billet Fuel Strainer Cover

Designed to fit any HL series Tillotson carb or the Horstman fuel pump. Two-piece design with sturdy brass fitting. Hard anodized in three colors for appearance and fuel resistance.

Part #	Description
439700	Cover, color red
439800	Cover, color blue
439900	Cover, color gold

High Performance Products

for Briggs & Stratton 5 hp Engines



Manifold

Horstman manifolds are machined from billet aluminum alloy bar for superior strength. Models are available for the new Briggs 5 hp block with 1.800" spaced mounting holes. Also we still offer manifolds to fit the old block with 1.400" spaced mounting holes. Manifolds come with a pulse hole designed to activate the Tillotson HL carb. A brass fitting is included to pulse an extra fuel pump.

Part #	Description	Application
420200	Manifold, 1.400" hole spacing	Good mid range and top end, angle design
420300	Manifold, 1.400" hole spacing	Good torque and mid range, angle design
421500	1 1/2" manifold, 1.800" hole spacing	Top end, angle design
422000	2" manifold, 1.800" hole spacing	Mid range
422500	2 1/2 " manifold, 1.800" hole spacing	Torque
423000	2" manifold, 1.800" hole spacing	HL-355A carb, 1 1/16" throttle bore - no taper
421200	Brass fitting, fits 4202 & 4203	
423100	Brass fitting, fits 4215, 4220, 4225, & 4230	
421100	Carb, gasket	
422800	2" manifold, 1.800" hole spacing	1 1/16" throttle bore tapered to .865" outlet
422600	2" manifold, 1.800" hole spacing	Straight port design, 1" throttle bore
422700	2 1/2" manifold, 1.800" hole spacing	Straight port design, 1" throttle bore



Air Filters - HL Carbs

Horstman filters are designed to fit the popular HL series Tillotson carburetor. Tillotson has a new carburetor for 1998 with a wider inlet bolt pattern and Horstman has filter adapters to fit. Horstman filter adapters are CNC machined from billet aluminum for a professional product.

Part #	Description
430100	Air filter kit, foam, fits HL-314E
758100	Foam filter 2 1/16" inlet
430200	Air filter kit, wire mesh, fits HL-314E
758200	Filter 2 1/16" inlet, wire mesh
430300	Adapter only, 2 1/16" diameter, fits HL-314E
757800	Filter with clamp, 2 1/2" ID, straight flange
758000	Optional filter, 2 1/2" ID, 20° angled flange
431100	Adapter only, 2 1/2" diameter, fits HL-342A



Throttle Kit

Designed for use on the Tillotson HL Carburetor. Kit includes 1 plate, 1 brass fitting, 2 screws and 1 throttle arm.

Part #	Description
439500	Throttle kit
439600	Throttle arm only

Kart Accessories



Yamaha Intake Restrictor

Carburetor restrictors are required by racing associations in specific junior classes.

Part #	Engine	Size
7160	Yamaha	.600
7185	Yamaha	.850



Head Bolt Washers

Chromoly head bolt washers, made from 1/8" thick 4130 then precision ground for flatness. ID .315 OD .657. Fits Yamaha and all European 2 cycles.

Part #	Description
7540	6 pack of washers
7541	Bulk pack of 100 washers



Starter Nuts

Made from high strength alloy steel. All have broached 5/16" internal hex. For use with gun starter.

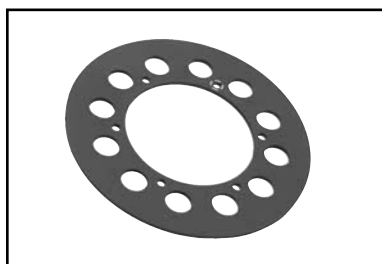
Part #	Description
7070	Ignition side R.H. mounted motors (1 pc.)
7071	Rotary valve, carb side
7072	Ignition side L.H. mounted motors (2 pcs.)



Locking Collars

These are the popular clamp design that firmly grip all around the shaft. Made from steel with black oxide finish or aluminum plain finish.

Part #	Description
7591	1" bore two-piece steel 1/4" keyway
7592	1 1/4" bore two-piece steel 1/4" keyway
7593	1" bore two-piece alum. 1/4" keyway
7594	1 1/4" bore two-piece alum. 1/4" keyway
7595	30mm bore two-piece alum. 1/4" keyway
6696	1" bore one-piece alum. 1/4" keyway
6697	1 1/4" bore one-piece alum. 1/4" keyway
7596	35mm bore two-piece alum. 8mm keyway
7597	1 3/8" bore two-piece alum. 1/4" keyway
7598	40mm bore two-piece alum. 8mm keyway



Sprocket Guard

Designed to protect sprocket from bottoming when vehicle runs off the track.

Part #	Description
0884	Sprocket Guard 8.825 OD
0885	Sprocket Guard 9.250 OD
0886	Sprocket Guard 10.225 OD

Kart Accessories



Conical Washers

Made from billet aluminum for longevity and reliability. Designed for use with flat head screws. 82° angle for American hardware.

Part #	Description
725000	Large washers, use with 5/16" hardware.
725100	Medium washers, use with 1/4" hardware.
725200	Small washers, use with #10 hardware.



Aluminum Spindle Spacers

Made from billet aluminum. Two widths available for spacing your front wheels. 1" OD x 5/8" ID. Packaged two per pack.

Part #	Description
726000	Pair, spindle spacers 1/4" wide
726100	Pair, spindle spacers 1/2" wide



Axle Cassette

Horstman introduced the billet axle cassette in 1989 and now it is an industry standard. Our cassettes outsell all of the copies because we use only the best materials and craftsmanship. Features include CAD/CAM produced from billet aluminum, self-aligning, and hard anodizing for abrasion resistance.

Part #	Description
610400	Kit, contains 2 cassettes to fit 1 1/4" axle, and hardware
610500	Cassette, 1 ea. 6104 less hardware
610000	Cassette, 1 ea. fits 1 3/8" axle, hardware included
610300	Cassette, 1 ea. fits 2 bolt import chassis with 35mm axle mounting holes 8mm, hardware not included



UFR Bearing

Horstman now offers the popular FYH free roller bearings in three sizes. FYH bearing fit the Horstman axle cassettes listed above.

Part #	Description
669800	UFR bearing, fits 1 1/4" axle (1 ea.)
611000	UFR bearing, fits 1 3/8" axle (1 ea.)
611100	UFR bearing, fits 35mm axle (1 ea.)

HPV100 Angle Mount

P/N	Description
704900	Angle Mount w/clamps 30mm tubing
705100	Angle Mount w/clamps 32mm tubing
705800	Angle Mount w/clamps 28mm tubing
705300	28mm clamps (pair)
705400	30mm clamps (pair)
705700	32mm clamps (pair)



Wheel hubs



Part Number	Description
644300	Front hub with 5/8" bearings 1/4" bolts
644000	Front hub with 5/8" bearings 5/16" bolts
645900	Rear hub 1" 1/4" bolts
645000	Rear hub 1" 5/16" bolts
645200	Rear hub 1 1/4" 1/4" bolts
645100	Rear hub 1 1/4" 5/16" bolts



Extended Euro style rear hubs

Horstman hubs come with two 8mm pinch bolts for extra clamping strength. Made from billet alloy aluminum not a casting.

Part Number	Description
647100	Hub 40mm x 120mm blue
647200	Hub 40mm x 120mm black



Kart Racing Chain

#215, #219 & #415

Horstman is a master U.S.A. distributor of D.I.D. #215, #219 & #415 HTM chain. D.I.D. #215, #219 & #415 HTM-DHA is the state of the art in racing chain for high revving 2-cycle kart engines. Insist on D.I.D. with gold colored side links.

Part # Description

089140	114 link box D.I.D. #219 HTM-DHA chain
089100	10 ft. roll D.I.D. #219 HTM-DHA chain
089110	Case (50) 114 link boxes D.I.D. #219 HTM-DHA chain
089150	Case (25) 10 ft. rolls D.I.D. #219 HTM-DHA chain
215114	114 link box D.I.D. # 215 chain
215120	120 link box D.I.D. # 215 chain
415600	60 link box D.I.D. # 415 chain



Chain Breakers

Models available for #35, #215 or #219 chain. Enables quick chain assembly. Heat treated for long life.

Part # Description

721900	Complete chain breaker #219
722000	Bolt with pin #219
723500	Complete chain breaker #35
723600	Bolt with pin #35
723700	Pusher bolt, universal
215125	215 Chain breaker tool
215126	215 replacement bolt w/pin



Direct Drive Sprockets

Available for Yamaha KT-100SC crankshaft taper. Teeth fit toward engine and shank extra long to fit through 3rd bearing upright. Made from heat treated alloy steel.

Part # Description

070010	Sprocket, direct drive 10T219
070011	Sprocket, direct drive 11T219
215011	Sprocket, direct drive 11T215
215012	Sprocket, direct drive 12T215