

# AGGRESSOR CLUTCHES

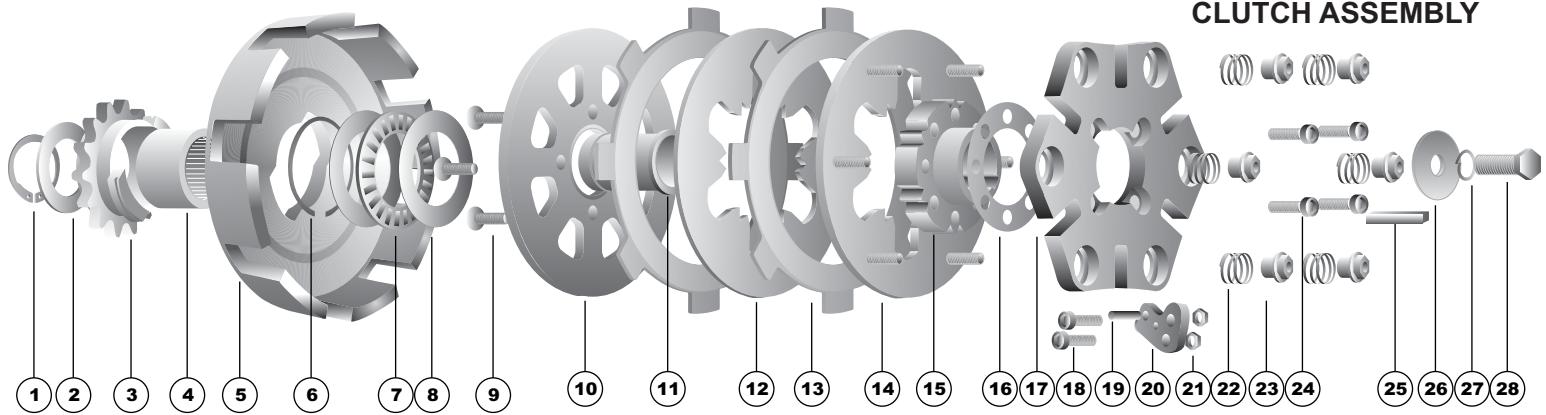


kartclutches.com

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## TWO DISC CLUTCH for KART RACING ENGINES



CLUTCH ASSEMBLY

**SMC Roller Levers**

**DO NOT USE AN IMPACT WRENCH.**

### AGGRESSOR Parts

Ref. No.	Part No.	Price Each	Description (Dimensions) (Number Required)
	<b>4902</b>	<b>265.00</b>	<b>AGGRESSOR Roller Lever, Two Disc Clutch</b>
1	4087	0.50	Retaining Ring, Inner Race (0.042 thick)
2	4010	1.25	Outside Washer ( 0.080 thick)
	4023	1.25	Outside Washer (1) (#35-13T & #219-15T)
	4049	1.25	Outside Washer (1) (#35-12T & #219-14T)
3	*		Sprocket (see sprocket chart)
4	4012	7.00	Needle Roller Bearing
5	4908	24.95	SMC Drum, 8-Slots, Two Disc Clutch
6	4037	1.50	Retaining Ring, High RPM
7	4924	3.24	Thrust Bearing
8	4919	2.15	Thrust Washer (1.417x0.880x0.015 thick) (2)
9	4925	0.60	Flat Head Cap Screw (#10-32 x 5/8) (4)
10	4916	16.00	Back Plate
11	4917	7.00	Bearing Race
12	4912	12.87	Floating Plate (0.075) Floater
13	4931	24.75	SMC Clutch Disc, Eight Tabs (2)
14	4907	35.55	Pressure Plate
15	4911	40.00	Drive Hub
16	4910	1.13	Shim (.007)
17	4909	36.00	Lever Support
18	4928	0.30	Socket Head Cap Screw (10-32x1/2)(18-8 ss)
19	4914	0.75	Dowel Pin, SMC Roller Lever (6)
20	4935	16.00	SMC Roller Lever, Bully (6)
21	4929	0.15	Nylon Insert Hex Locknut (#10-32)
22	4915	1.62	Spring (.090 wire) (6)
23	4906	2.95	Flange Nut (#10-32) (6)
24	4920	1.35	Key (3/16 x 1/8 x 1)
25	4927	0.30	Socket Head Cap Screw (10/32 x 5/8) (4)
26	4227	2.00	Crankshaft Washer
27	4025	0.06	Split Lock Washer
28	4217	0.35	Hex Head Machine Screw (5/16 - 24 x 3/4)

**Maintenance** - Proper care will extend the life of the clutch and maximize performance.

- **SMC** clutch discs are made of aircraft brake friction materials, therefore brake cleaner in combination with compressed air and stainless steel Platers Brush (#4216) is recommend for removing dirt, oil, dust etc.

- The drive plates and pressure plate are very hard and can be aggressively cleaned with coarse sand paper without affecting their thicknesses. In contrast, the clutch discs should not be sanded because they are soft and "broken in" or "bedded" to match the tiny deflections that occur in the drive plates during racing. No minimum thickness dimensions are specified. Clutch discs and drive plates should be replaced when a noticeable drop in clutch performance occurs. Do not use re-ground drive plates or pressure plates.

- The sprocket bearing should be cleaned with a solvent (such as brake cleaner), dried thoroughly and lubricated with Mobile 1 Synthetic Grease.

- Moisture in the atmosphere, calcium or mud from the race track, power washing, rain etc. will cause steel parts to rust. Corrosion will cause clutch performance to diminish. Attention immediately after the race day is finished might be necessary to protect the clutch from corrosion. Clutches stored in damp basements, garages or trailers during winter months will corrode and require more extensive maintenance when spring arrives.

A 300 pound kart with a stock Briggs & Stratton flat head engine, on a dirt oval running two practice sessions and three heats per day will typically go 20 race days before a Rebuild Kit is required. That is assuming proper maintenance and tuning.

Recommended spare parts:  
SMC Aggressor Rebuild Kit P/N 4934,  
Six Compression Springs P/N 4915.

## FLATS - SPROCKET CHARTS

		Part No.	Price Each	Description
<b>#35 CHAIN</b>	<b>PTO Assembly</b>	4611	23.00	11T Sprocket
		4612	23.00	12T Sprocket & Bushing
		4613	23.00	13T Sprocket & Bushing
		4614	23.00	14T Sprocket & Needle Roller Bearing
		4615	23.00	15T Sprocket & Needle Roller Bearing
		4616	23.00	16T Sprocket & Needle Roller Bearing
		4617	23.00	17T Sprocket & Needle Roller Bearing
		4618	23.00	18T Sprocket & Needle Roller Bearing
		4619	23.00	19T Sprocket & Needle Roller Bearing
		4620	26.45	20T Sprocket & Needle Roller Bearing
		4621	26.45	21T Sprocket & Needle Roller Bearing
		4622	26.45	22T Sprocket & Needle Roller Bearing
4623	26.45	23T Sprocket & Needle Roller Bearing		

		Part No.	Price Each	Description
<b>#219 CHAIN</b>	<b>PTO Assembly</b>	4713	22.00	13T Sprocket
		4714	23.00	14T Sprocket
		4715	23.00	15T Sprocket & Bushing
		4716	23.00	16T Sprocket & Needle Roller Bearing
		4717	23.00	17T Sprocket & Needle Roller Bearing
		4718	23.00	18T Sprocket & Needle Roller Bearing
		4719	23.00	19T Sprocket & Needle Roller Bearing
		4720	23.00	20T Sprocket & Needle Roller Bearing
		4721	23.00	21T Sprocket & Needle Roller Bearing
		4722	23.00	22T Sprocket & Needle Roller Bearing
		4723	23.00	23T Sprocket & Needle Roller Bearing
		4724	26.45	24T Sprocket & Needle Roller Bearing
		4725	26.45	25T Sprocket & Needle Roller Bearing
		4726	26.45	26T Sprocket & Needle Roller Bearing
		4727	26.45	27T Sprocket & Needle Roller Bearing
		4728	26.45	28T Sprocket & Needle Roller Bearing
4729	26.45	29T Sprocket & Needle Roller Bearing		

		Part No.	Price Each	Description
<b>#428 CHAIN</b>	<b>PTO Assembly</b>	4631	45.00	11T Sprocket & Needle Roller Bearing
		4632	45.00	12T Sprocket & Needle Roller Bearing
		4633	45.00	13T Sprocket & Needle Roller Bearing
		4634	45.00	14T Sprocket & Needle Roller Bearing
		4635	48.00	15T Sprocket & Needle Roller Bearing
		4636	48.00	16T Sprocket & Needle Roller Bearing
		4637	48.00	17T Sprocket & Needle Roller Bearing
		4638	48.00	18T Sprocket & Needle Roller Bearing

### PULLEY CHART

		Part No.	Price Each	Description
<b>8mm PULLEY</b>	<b>PTO Assembly</b>	4523	75.00	23t-8mm20m HTD Pulley
		4524	75.00	24t-8mm20m HTD Pulley
		4525	75.00	25t-8mm20m HTD Pulley
		4526	75.00	26t-8mm20m HTD Pulley
		4527	75.00	27t-8mm20m HTD Pulley
		4528	75.00	28t-8mm20m HTD Pulley
		4529	75.00	29t-8mm20m HTD Pulley
		4530	75.00	30t-8mm20m HTD Pulley
		4532	75.00	32t-8mm20m HTD Pulley



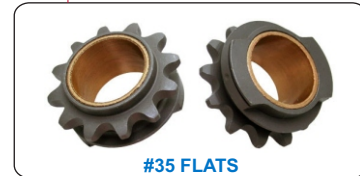
#219 FLATS



#35 FLATS



#219 FLATS



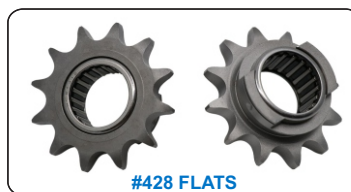
#35 FLATS



#219 FLATS



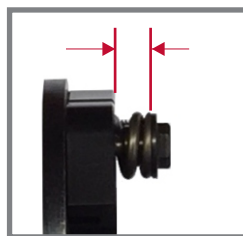
#35 FLATS



#428 FLATS



PULLEY



### SPRING DIMENSION

### SPRING CHART

ENGINES	WEIGHTED LEVER	SPRING DIMENSION	APPROXIMATE RPM
<b>200cc 4-STROKE ENGINE</b>		0.240	2700
		0.220	3100
		0.200	3500
		0.240	3600
		0.220	4000
		0.200	4400
		0.240	4500
		0.240	4900
		0.200	5300

The data listed in this table are estimates or starting points. It is your responsibility to fine-tune the clutch to achieve maximum performance. Guidelines are as follows:

In theory, a clutch should be adjusted to engage the engine at the rpm that produces the greatest torque. In practice, clutches of this type will cause the engine to "bog" anywhere from 200 to 600 rpms and the engagement rpm should be increased slightly. Use caution to prevent over-slipping and the consequential damage to clutch discs and drive plates.

