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Eastman Commercial

EASTMAN STRIPER PARTS MANUAL *Including Kawasaki Model FC180V Engine Parts Manual for Eastman Industries Commercial Mower Model ST21-K*

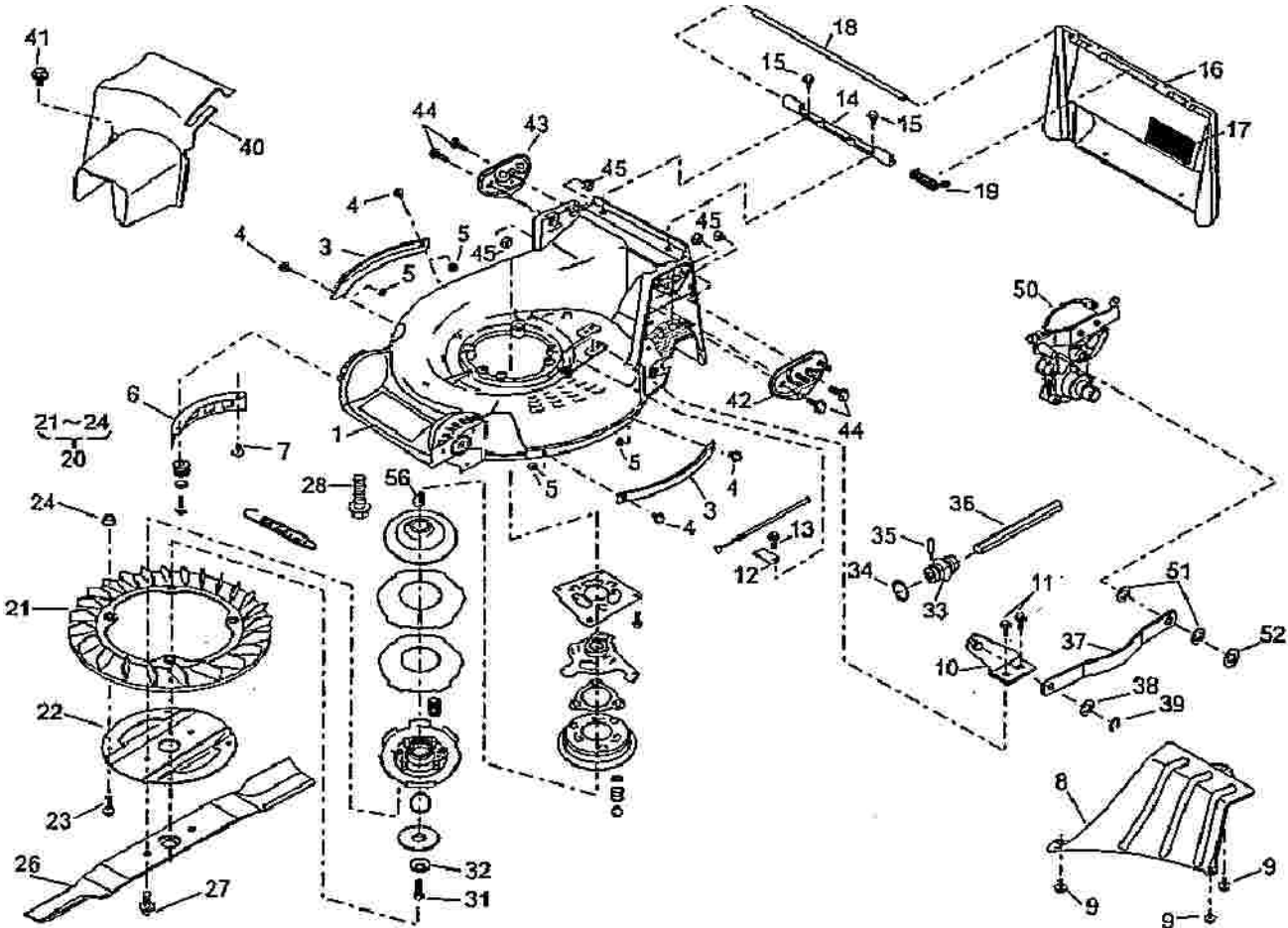


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Figure 1



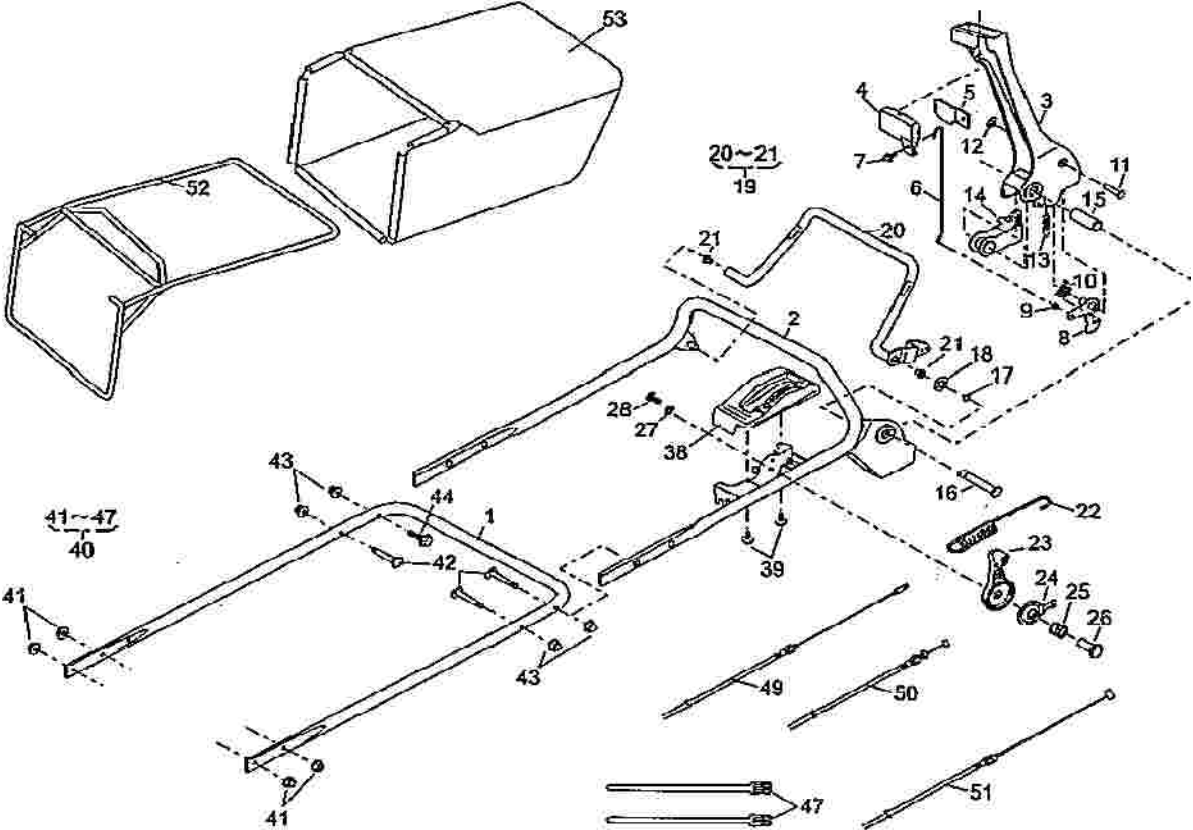
PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	51043-147-100	Deck	1
3	51090-117-09	Wear Plate, Deck	2
4	335L0616	Bolt	4
5	512L0600	Hex Nut	4
6	36065-180	Cover	1
7	342L0612	Bolt	1
8	36065-436	Cover	1
9	342L0612	Bolt	3
10	11006-155	Stay	1
11	342L0612	Bolt	2

PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
12	11113-407	Stay	1
13	342L0612	Bolt	1
14	11113-292	Stay	1
15	342L0612	Bolt	2
16	36068-196-46	Discharge Door	1
17	36080-149	Rubber Damper	1
18	64014-324	Hinge Pin	1
19	68013-336	Spring	1
20	71082-111	Fan Assy	1
21	51125-103	Fan Assy	1
22	11102-151	Blade Adapter	1
23	31062-169	Bolt	4
24	579L0600	Nut	4
26	91014-189	Blade, High Lift (subs from -159)	1
27	335M1020	Bolt	2
28	335L1040	Bolt	4
30	71067-115	Blade Brake Clutch Assy	1
31	31057-259	Hex Bolt	1
32	671V1000	Conical Spring Washer	1
33	91097-101	Universal Joint	1
34	812V2000	C-Snap Ring for Shaft	1
35	717B0418	Pinion	1
36	64014-365	Shaft	1
37	91049-133	Connector	1
38	68036-280	Washer	1
39	816V0800	Snap Ring	1
40	36065-438	Cover	1
41	342L0616	Bolt	1
42	51116-149	Handle Bracket-Left	1
43	51116-150	Handle Bracket-Right	1
44	31057-255	Hex Bolt	3
45	512L0800	Hex Nut	4
46	51044-148	Hook	1
47	311L0840	Hex Bolt	1
48	68036-101	Washer	1
50	71008-369	Gear Case Assy	1
51	68001-110	Fiber Washer	2
52	576V1000	Push Nut	1
55	122044	ENGINE: KAWASAKI FC180V	1
56	92038-2097	Key PTO Shaft	1

Figure 2



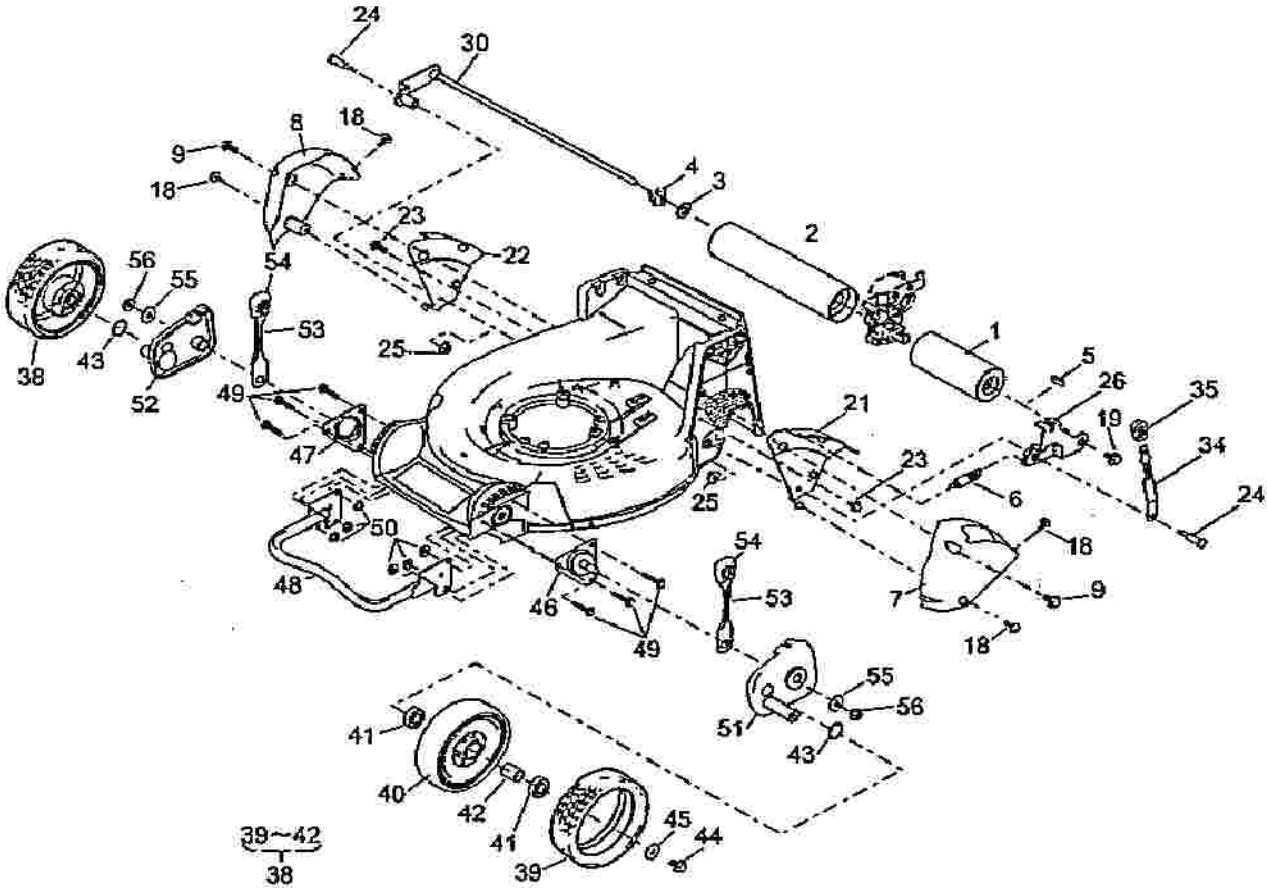
PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	51027-259-49	Handle-Lower	1
2	51027-260-49	Handle-Upper	1
3	11095-172	Lever (BBC)	1
4	36110-102	Button	1
5	11049-109	Slide Plate	1
6	64014-336	Shaft	1
7	335N0612	Bolt	1
8	71203-135	Arm	1
9	76007-183	Bushing	1
10	68013-371	Spring	1
11	31056-127	Pin	1
12	576V0600	Push Nut	1
13	68013-372	Spring	1
14	11109-111	Link	1
15	61023-190	Sleeve	1

PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
16	64014-337	Shaft	1
17	812V0800	C-Sanp Rign for Shaft	1
18	613L0800	Washer	1
19	71161-114-09	Lever Assy	1
21	76007-131	Bushing	2
22	68013-382	Spring	1
23	91010-147	Throttle Lever (FC180V)	1
24	61003-113	Thrust Plate	1
25	68013-356	Spring	1
26	31058-168	Nut	1
27	68036-125	Washer	1
28	318L0612	(+) Hex Bolt (SW)	1
38	71900-795	Cover Assy	1
39	470L0514	(+) Tapping Screw	2
40	71900-936	Bolt Set	1
41	569L0800	Flange Nylon Nut	4
42	31057-256	Bolt	3
43	583L0800	Flange Cap Nut	4
44	335L0845	Flange Bolt	1
45	51044-147	Hook	1
46	68028-103	Wire Band	2
49	91003-165	Clutch Control Cable	1
50	91001-328	Throttle Control Cable	1
51	91003-169	Control Cable (BBC)	1
52	11062-178	Frame, Grass Bag	1
53	36098-151	Grass Bag	1

Figure 3



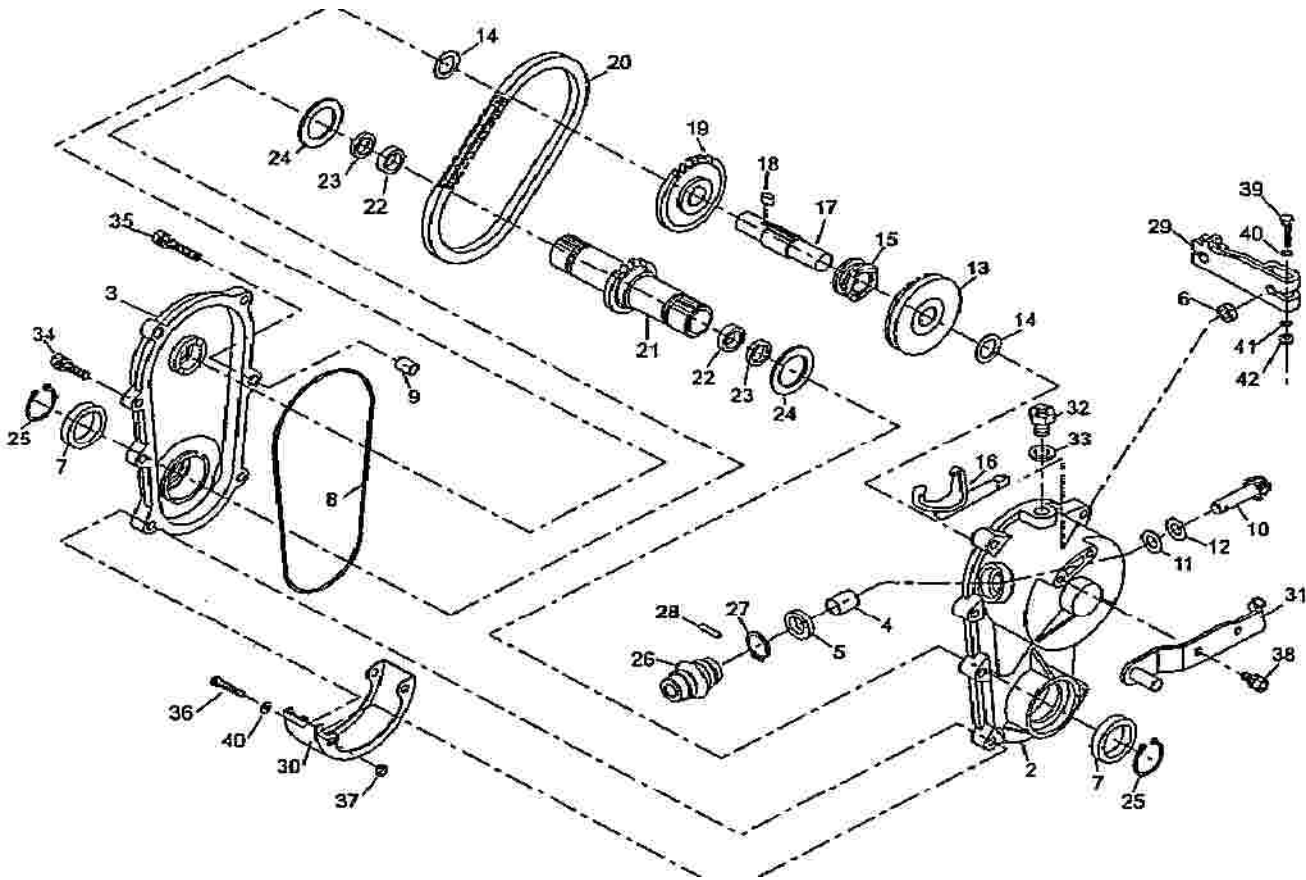
PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	36099-102	Roller (L)	1
2	36099-103	Roller (R)	1
3	61024-118	Spacer	0-2
4	664V-0016	Wave Spring Washer	0-2
5	91020-131	Key	1
6	68013-265	Spring	1
7	36065-444	Cover (Left)	1
8	36065-445	Cover (Right)	1
9	342L0616	Bolt	2

PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
18	475L0516	(+) Tapping Screw	4
19	31057-181	Hex Bolt	1
21	11113-411	Stay (RL)	1
22	11113-412	Stay (RR)	1
23	342L0612	Bolt, Tapping	2
24	31057-261	Hex Bolt	2
25	569L0800	Nylon Nut	2
26	11142-136	Height Adjuster (L)	1
30	11142-137	Height Adjuster (R)	1
34	11150-108-09	Adjust Lever	1
35	36061-121	Knob	1
38	71041-135	Wheel Assy (A.W.)	2
39	91086-113	Tire	2
41	916B6002	Bearing	4
42	11083-332	Collar	2
43	51113-119	Ring	2
44	31057-181	Hex Bolt	2
45	68036-101	Washer	2
46	11006-153	Staty (FL)	1
47	11006-154	Stay (FR)	1
48	11153-112	Bumper	2
49	335L0625	Bolt, Tapping	6
50	569L0600	Nylon Nut	6
51	11142-129	Height Adjuster (FL)	1
52	11142-130	Height Adjuster (FR)	1
53	11150-106-09	Adjuster Lever	2
54	36061-121	Knob	2
55	613L0800	Washer	2
56	569L0800	Nylon Nut	2

Figure 4-Gear Case Assembly



PARTS LIST FOR MODEL ST 21K-BBC

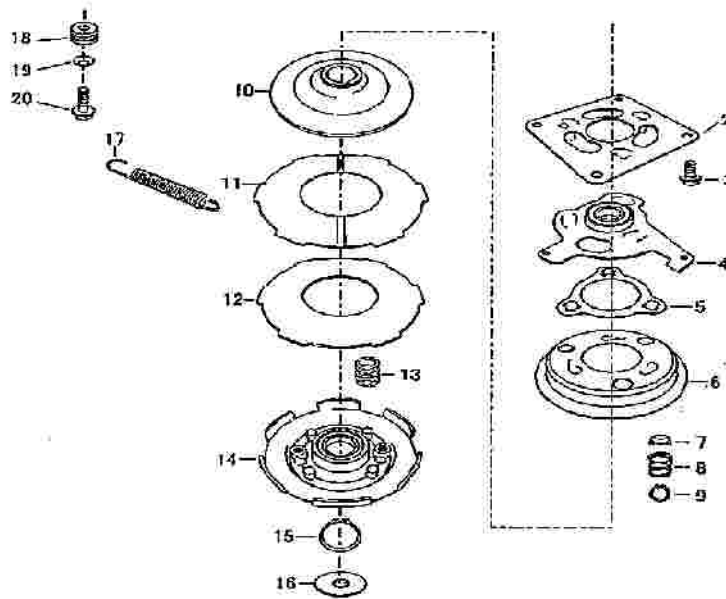
<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	71008-369	Gear Case Assy	1
2	51001-279 *	Gear Case (L)	1
3	51001-280 *	Gear Case (R)	1
4	76007-167	Bushing	1
5	61002-161	Oil Seal	1
6	61002-162	Oil Seal	1
7	61002-188	Oil Seal	2
8	214B1350	O-Ring	1
9	11083-201	Collar	2
10	78003-130	Pinion	1
11	61003-109	Thrust Washer	1
12	68007-132	Shim	0-2

* Not available separately.

PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
13	78001-162	Bevel Gear	1
14	61024-118	Spacer	2
15	11129-107	Clutch	1
16	11097-106	Shifter Fork	1
17	64014-242	Shaft	1
18	91020-147	Key	1
19	36112-115	Sprocket	1
20	91074-107	Chain	1
21	64014-243	Shaft	1
22	927B1512	Needle Bearing	2
23	61002-189	Oil Seal	2
24	61024-171	Spacer	2
25	812V2800	C-Snap Ring for Shaft	2
26	91097-101	Universal Joint	1
27	812V2000	C-Snap Ring for Shaft	1
28	717B0418	Pinion	1
29	11104-169	Arm	1
30	36065-311	Cover	1
31	11006-148	Stay	1
32	31057-126D	Hex Bolt	1
33	68001-110	Fiber Washer	1
34	315L0625	(+)Hex Bolt (SW,PW)	3
35	315L0630	(+)Hex Bolt (SW,PW)	2
36	322L0635	(+)Hex Bolt	2
37	580L0600	Lock Nut	2
38	315L0616	(+)Hex Bolt(SW,PW)	2
39	311M0630	(+)Hex Bolt	1
40	611L0600	Plain Washer	3
41	613L0600	Plain Washer	1
42	571L0600	Flange Nut	1

Figure 5-Brake Blade Clutch (BBC)



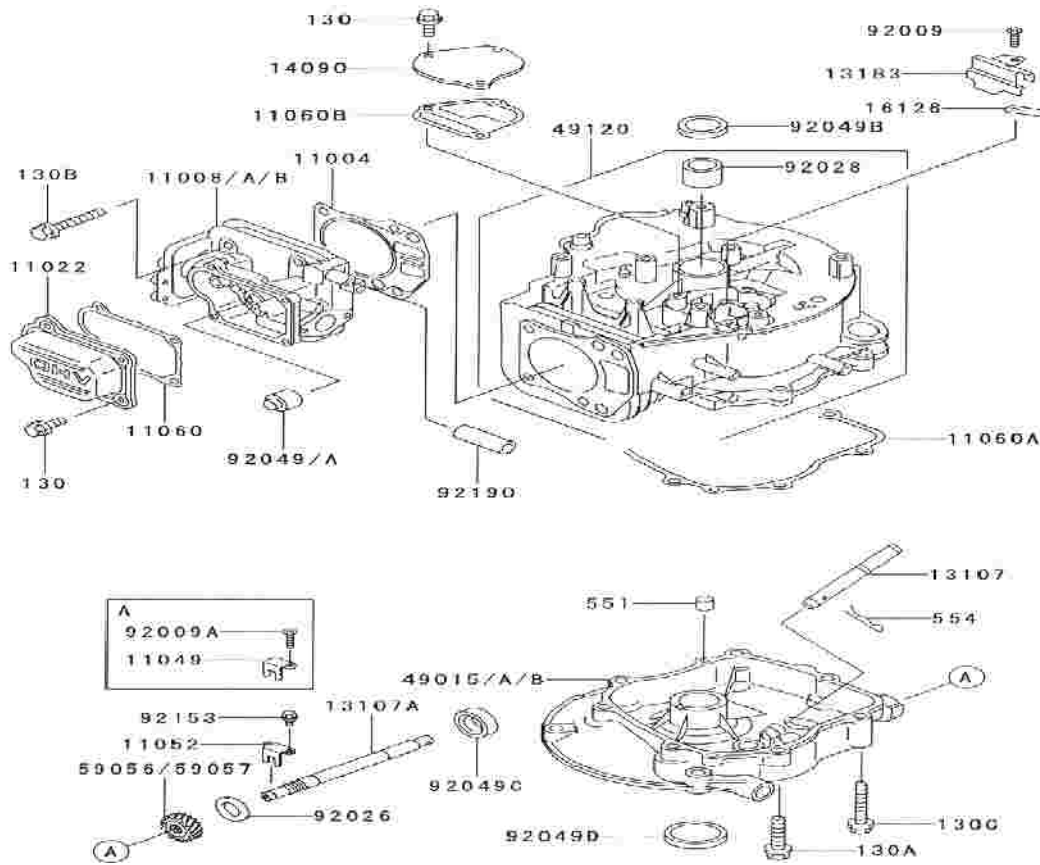
PARTS LIST FOR MODEL ST 21K-BBC

<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	71067-115	Blade Brake Clutch Assy	1
2	11006-158	Stay C.P.	1
3	31057-181	Hex Bolt	4
4	11107-116	Swing Arm	1
5	11106-107	Retainer	1
6	11105-104	Brake Drum	1
7	76007-189	Bushing	3
8	68013-378	Spring	3
9	812V1200	C-Snap Ring	3
10	11096-102	Clutch Disk	1
11	68059-104	Friction Plate w/Slide Plate	1
12	11049-110 *	Slide Plate	1
13	68013-379	Spring	1
14	11108-101	Holder	1
15	812V3000	C-Snap Ring	1
16	68036-174	Washer	1
17	68013-380	Spring	1
18	11083-270	Collar	1
19	671V0600	Conical Spring Washer	1
20	342L0620	Bolt, Tapping	1

See 68059-104

* Not available separately.

Figure 1 CYLINDER/CRANKCASE



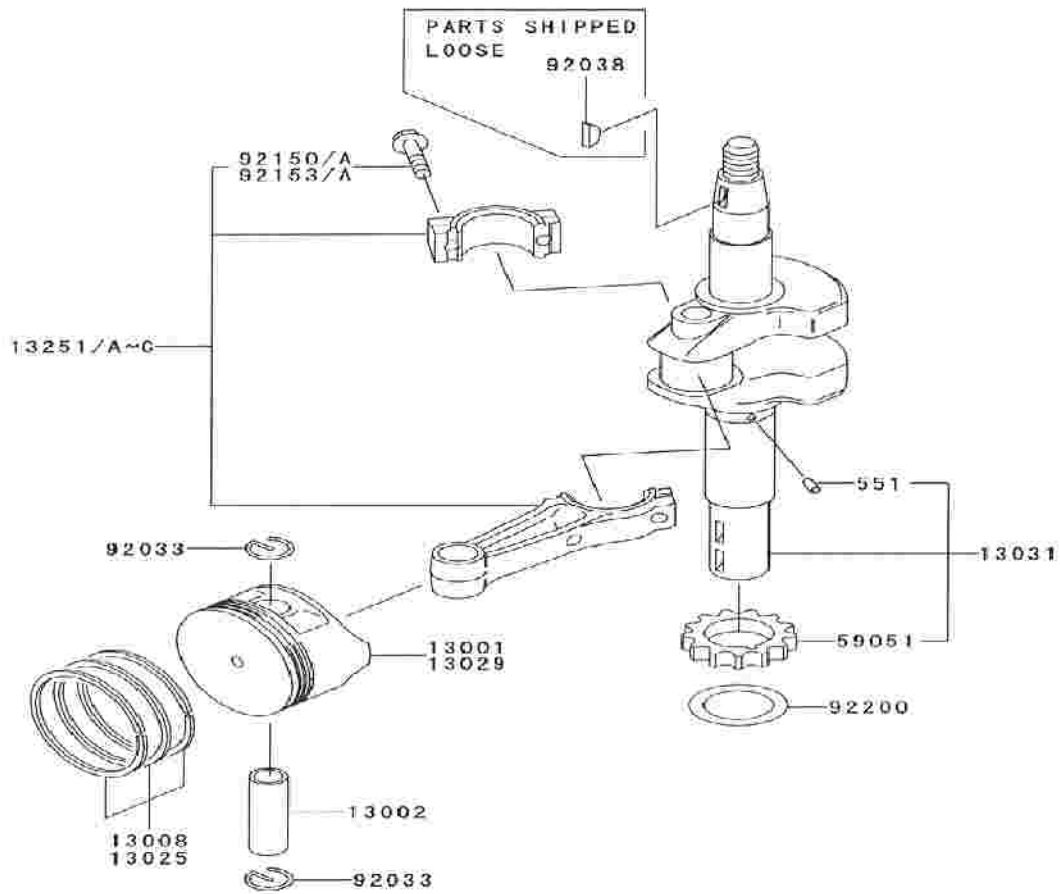
KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	11004	11004-2117	Gasket-Head	1
1	11008A	11008-2097	Head-Comp-Cylinder	1
1	11002	11022-2067	Case - Rocker	1
1	11049	11049-2019	Bracket	1
1	11060	11060-2139	Gasket, Rocker Case	1
1	11060A	11060-2142	Gasket, Crankcase Cover	1
1	11060B	11060-2143	Gasket	1
1	13107	13107-2255	Shaft	1
1	13017A	13107-2272	Shaft	1
1	14090	14090-2094	Cover	1
1	16126	16126-2146	Valve	1
1	49015B	49015-2338	Cover-Crankcase	1

KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
1	49120	49120-6103	Crankcase-Comp	1
1	59056	59056-2790	Gear-Helical	1
1	92009	92009-2166	Screw, 5X8	1
1	92009A	92009-2308	Screw	1
1	92026	92022-269	Spacer	1
1	92028	92028-2017	Bushing	1
1	92049A	92049-1062	Seal-Oil	1
1	92049B	92049-2199	Seal-Oil	1
1	92049C	92049-2204	Seal-Oil	1
1	92049D	92049-2210	Seal-Oil	1
1	92190	92190-2112	Tube, 12X16X46	1
1	130	130B0612	Bolt-Flanged	7
1	130A	130G0835	Bolt-Flanged	4
1	130B	130G0845	Bolt-Flanged	4
1	130C	130G0850	Bolt-Flanged	3
1	551	551A0612	Pin-Dowel	2
1	554	544A0600	Pin-Snap	1

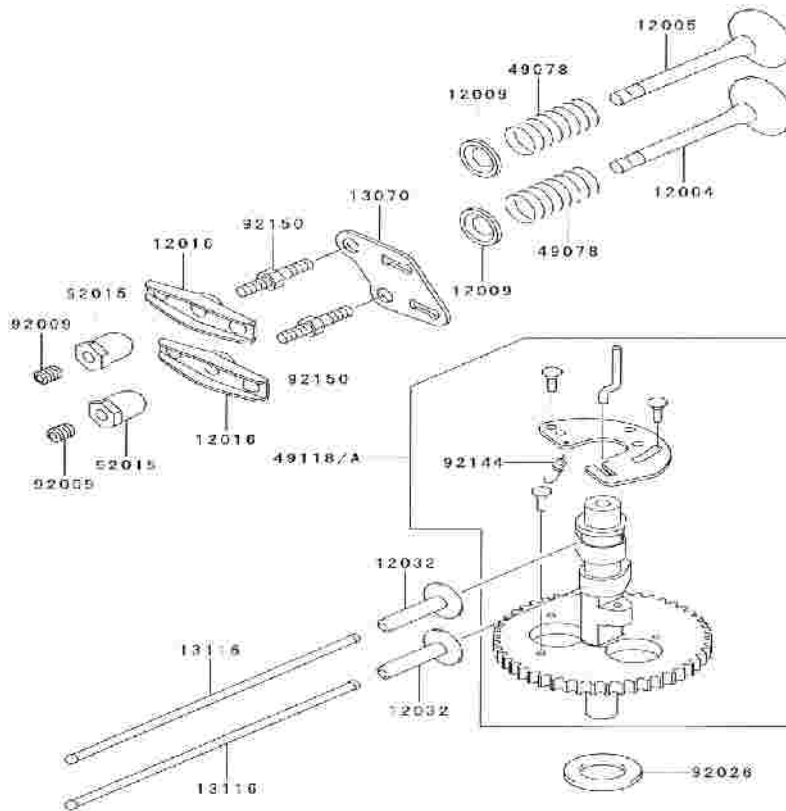
Figure 2 PISTON/CRANKSHAFT



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<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
2	13001	13001-2134	Piston-Engine	1
2	13002	13002-1004	Pin-Piston	1
2	13308	13008-6029	Ring-Set-Piston	1
2	13025	13025-2099	Ring-Set-Piston L,0.5.	
2	13029	13029-2121	Piston-Engine, L,0.50	
2	13031	13031-2072	Crankshaft-Comp	
2	13251	13251-6065	Rod-Assy-Connecting	
2	59051	59051-2330	Gear-Spur	
2	92033	92033-2053	Ring-Snap	2
2	92150	92150-2122	Bolt, Connecting Rod	2
2	92200	92200-2069	Washer	1
2	551	551A0306	Pin-Dowel	1

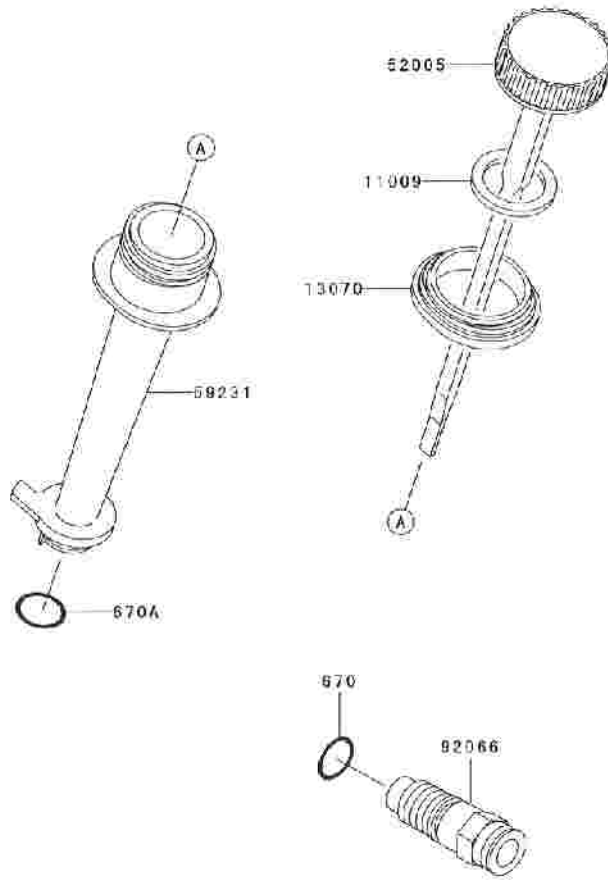
Figure 3 VALVE/CAMSHAFT



KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
3	12004	12004-2101	Valve-Intake	1
3	12005	12005-2089	Valve-Exhaust	1
3	12009	12009-2062	Retainer-Valve Spring	2
3	12016	12016-2057	Arm-Rocker	2
3	12032	12032-2065	Tappet	2
3	13070	13070-2091	Guide	1
3	13116	13116-2065	Rod-Push	2
3	49078	49078-2064	Spring-Engine Valve	2
3	49118	49118-2126	Camshaft-Comp	1
3	92209	92009-2341	Screw	2
3	92015	92015-2253	Nut	2
3	92026	92022-269	Spacer	1
3	92144	92144-2315	Spring	1
3	92150	92150-2248	Bolt	2

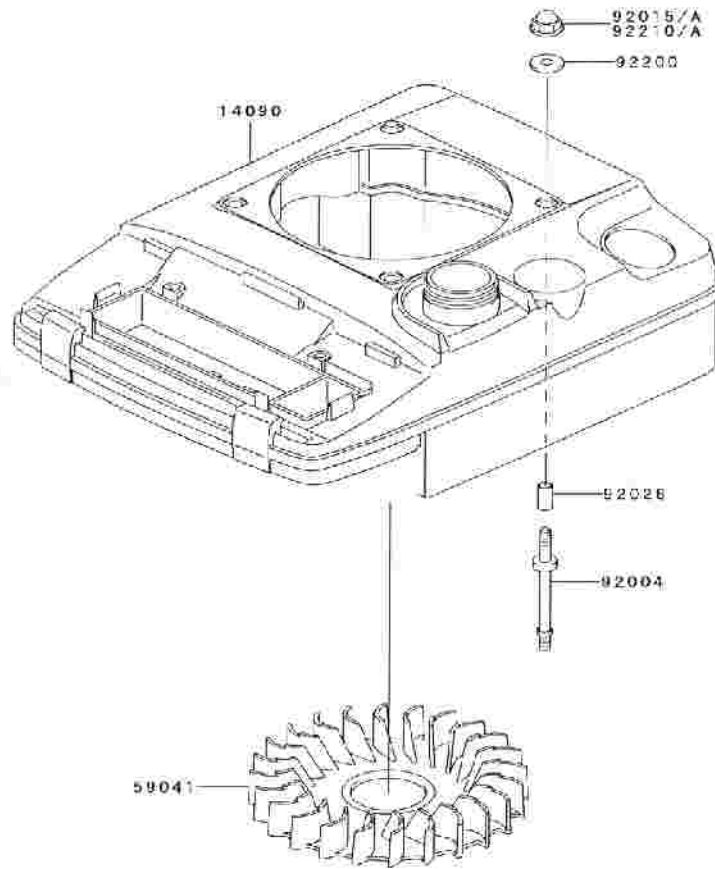
Figure 4 LUBRICATION EQUIPMENT



KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
4	11009	11009-2346	Gasket, Oil Gauge	1
4	13070	13070-2092	Guide	1
4	52005	52005-2124	Gauge	1
4	59231	59231-2077	Filler	1
4	92066	92066-2180	Plug	1
4	670	670D2015	O Ring	1
4	670A	670D2016	O Ring, 16MM	1

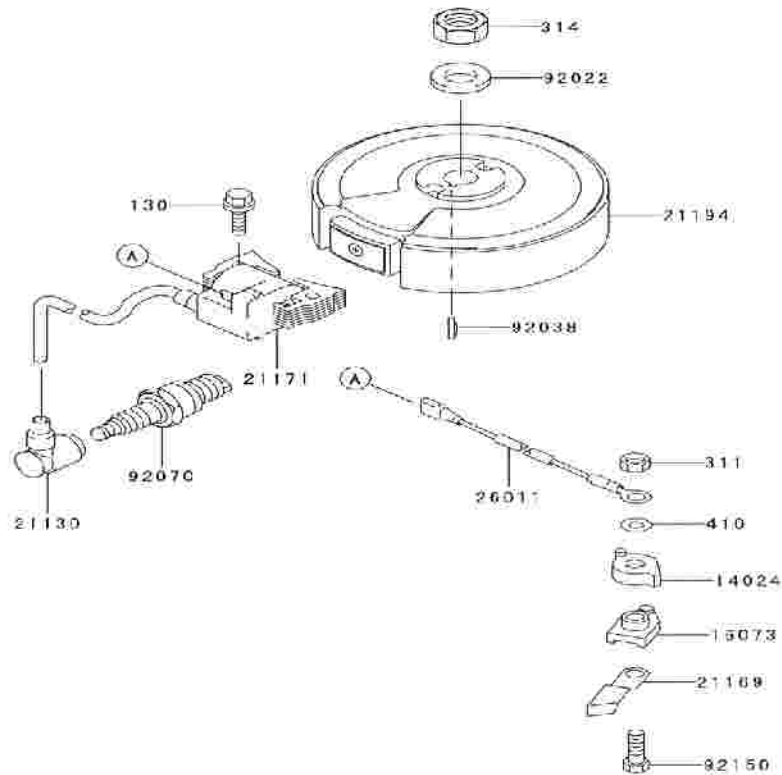
Figure 5 COOLING EQUIPMENT



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<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
5	14090	14090-2097	Cover/Fuel Tank	1
5	59041	59041-2083	Fan	1
5	92004	92004-2135	Stud	4
5	92015	92015-1170	Nut	4
5	92026	92026-2273	Spacer, 6.2X7.8X17	4
5	92200	92200-2037	Washer, 6.5X18X2.0	4

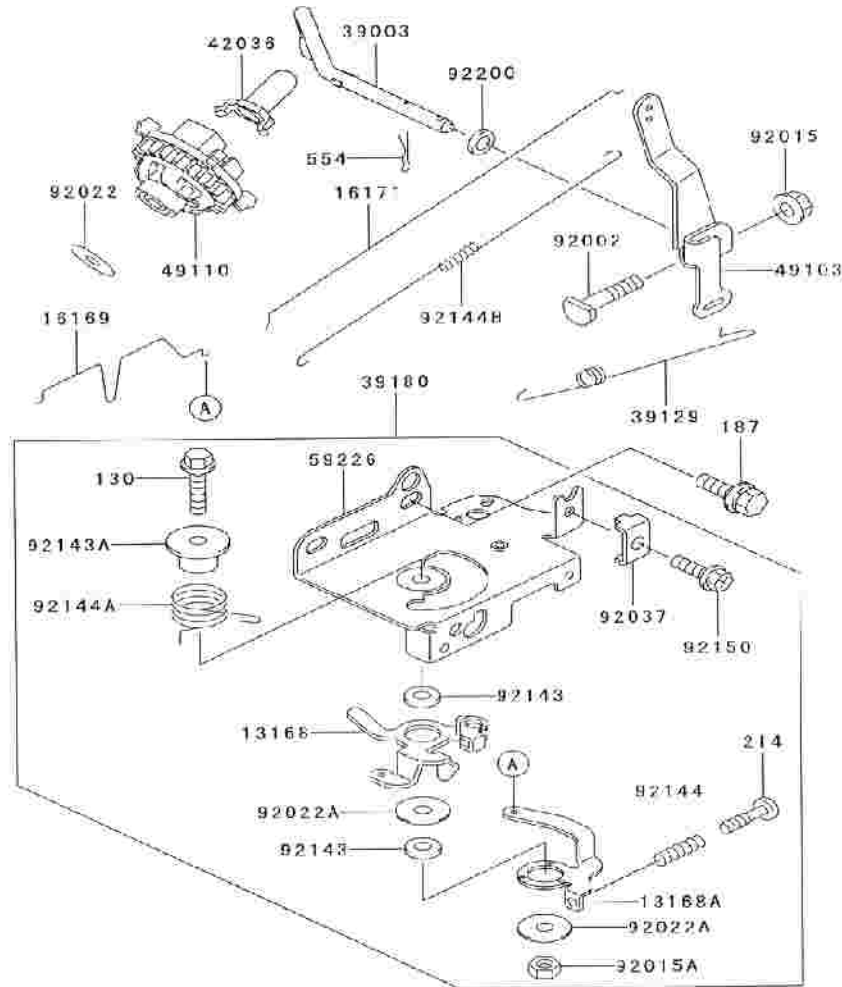
Figure 6 ELECTRIC EQUIPMENT



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<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
6	14024	14024-2183	Cover	1
6	16073	16073-2165	Insulator	1
6	21130	21130-2060	Cap-Spark Plug	1
6	21169	21169-2066	Terminal	1
6	21171	21171-2200	Coil-Assy-Ignition	1
6	21194	21194-2292	Flywheel-Comp	1
6	26011	26011-2355	Wire-Lead, L=300MM	1
6	92022	92022-2102	Washer	1
6	92038	92038-2077	Key	1
6	92070	92070-2077	Plug-Spark,BPR5ES	1
6	92150	92150-2300	Bolt, 4X20	1
6	130	130G0625	Bolt-Flanged	2
6	311	311B0400	Nut-Hex	1
6	314	314G1400	Nut-Hex-Fine	1
6	410	410B0400	W-Plain-S	1

Figure 7 CONTROL EQUIPMENT



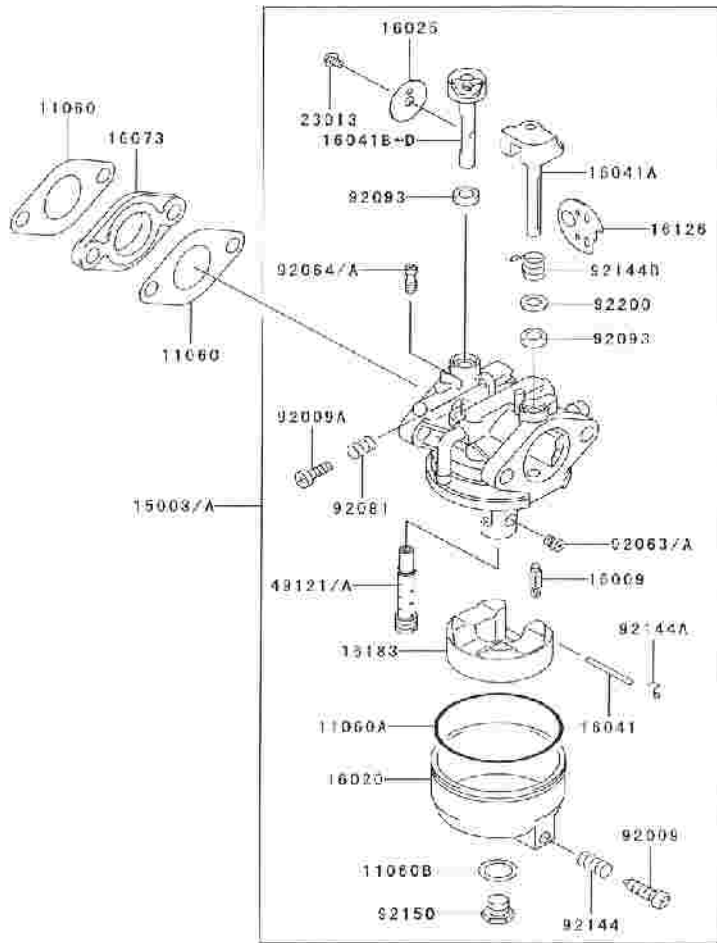
KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
7	13168	13168-2352	Lever	1
7	13168A	13168-2388	Lever	1
7	16169	16169-2111	LinChoke	1
7	16171	16171-2068	LinChoke	1
7	39003	39033-2077	Arm-Pivot	1
7	39129	39129-2054	Spring-Governor	1
7	39180	39180-2895	Panel-Assy-Control	1
7	42036	42036-2051	Sleeve	1
7	49103	49103-2127	Arm-Governor	1
7	49110	49110-2080	Governor-Assy	1

KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
7	59226	59226-2291	Panel-Control	1
7	92002	92002-2269	Bolt	1
7	92015	92015-1193	Nut	1
7	92015A	92015-2051	Nut	1
7	92002	92022-2019	Washer	1
7	92002A	92022-2372	Washer, 6X19X1.20	2
7	92037	92037-2209	Clamp	1
7	92143	92143-2135	Collar, 6X13X2.3	2
7	92143A	92143-2148	Collar	1
7	92144	92144-2266	Spring	1
7	92144A	92144-2316	Spring	1
7	92144B	92144-2329	Spring	1
7	92150	92150-2182	Bolt, 5X18	1
7	92200	92200-2029	Washer, 6.5X11.5X2.0	1
7	130	130B0630	Bolt-Flanged	1
7	187	187B0614	Bolt-Upset-Wsp	2
7	214	214B0420	Screw-Pan+-	1
7	554	554A0600	Pin-Snap	1

Figure 8 CARBURETOR



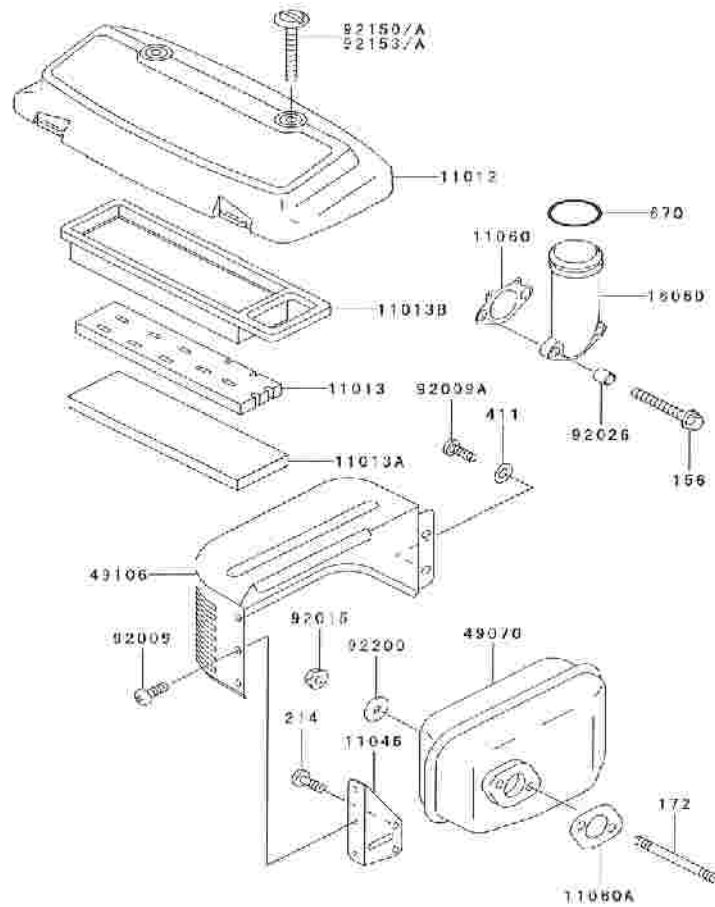
KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
8	11060	11060-2144	Gasket, Carburetor	2
8	11060A	11060-2190	Gasket	1
8	11060B	11060-2191	Gasket	1
8	15003	15003-2618	Carburetor-Assy	1
8	16009	16009-2136	Needle-Jet	1
8	16020	16020-2129	Chamber-Float	1
8	16025	16025-2166	Valve-Throttle	1
8	16041	16041-2224	Shaft-Carburetor, Float	1
8	16041A	16041-2231	Shaft-Carburetor, Choke	1
8	16041D	16041-2258	Shaft-Carburetor	1
8	16073	16073-2164	Insulator	1

KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
8	16126	16126-2191	Valve, Choke	1
8	16183	16183-2002	Float-Assy	1
8	23013	23013-2058	Screw-Assy	1
8	49121	49121-2190	Nozzle-Main	1
8	92009	92009-2348	Screw	1
8	92009A	92009-2349	Screw	1
8	92063	92063-2338	Jet-Main, #84	1
8	92064	92064-2122	Jet-Pilot, #55	1
8	92081	92081-2234	Spring	1
8	92093	92093-2100	Seal	2
8	92144	92144-2333	Spring	1
8	92144A	92144-2335	Spring	1
8	92144B	92144-2364	Spring	1
8	92150	92150-2263	Bolt	1
8	92200	92200-2061	Washer, 9.8X5.5X1.0	1

Figure 9 AIR FILTER/MUFFLER



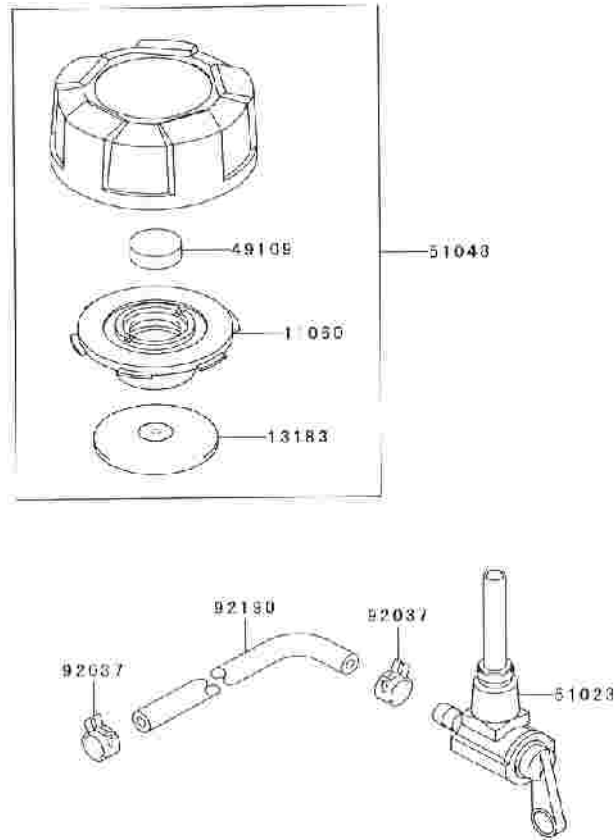
KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
9	11012	11012-2327	Cap, Air Filter	1
9	11013	11013-2152	Element-Air Filter	1
9	11013A	11013-2180	Element-Air Filter	1
9	11013B	11013-2181	Element-Air Filter	1
9	11046	11046-2053	Bracket	1
9	11060	11060-2141	Gasket	1
9	11060A	11060-2185	Gasket, Muffler	1
9	16060	16060-2171	Pipe-Intake	1
9	49070	49070-2461	Muffler-Comp	1
9	49106	49106-2430	Cover-Muffler	1
9	92009	92009-2166	Screw, 5X8	3

KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
9	92009A	92009-2308	Screw	2
9	92015	92015-1193	Nut	2
9	92026	92026-2272	Spacer, 6.2X7.8X8	2
9	92150	92150-2152	Bolt	2
9	92200	92200-2032	Washer, 7X21X2.3	2
9	156	156R0680	Bolt-WP	2
9	172	172G0680	Bolt-Stud	2
9	214	214B0510	Screw-Pan +-	2
9	411	411B0500	Washer-Plain	2
9	670	670B3032	R Ring, 32MM	1

Figure 10 FUEL SYSTEM

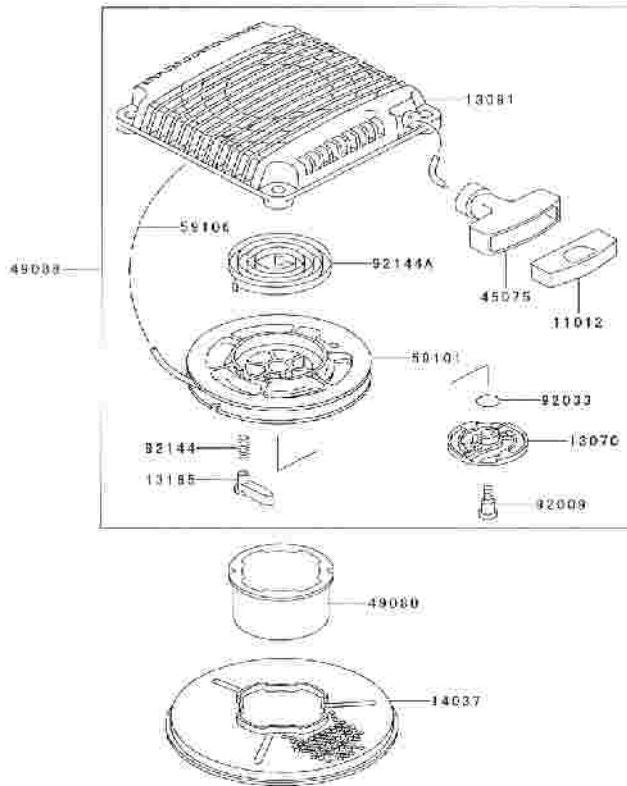


KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
10	11060	11060-2145	Gasket	1
10	13183	13183-2505	Plate	1
10	49109	49109-2054	Element-Breather, Tank	1
10	51023	51023-2167	Tap-Assy	1
10	51048	51048-2072	Cap-Assy-Tank	1
10	92037	92037-2113	Clamp	2
10	92190	92190-2113	Tube, 5X10X223	1

page 7 for fuel tank.

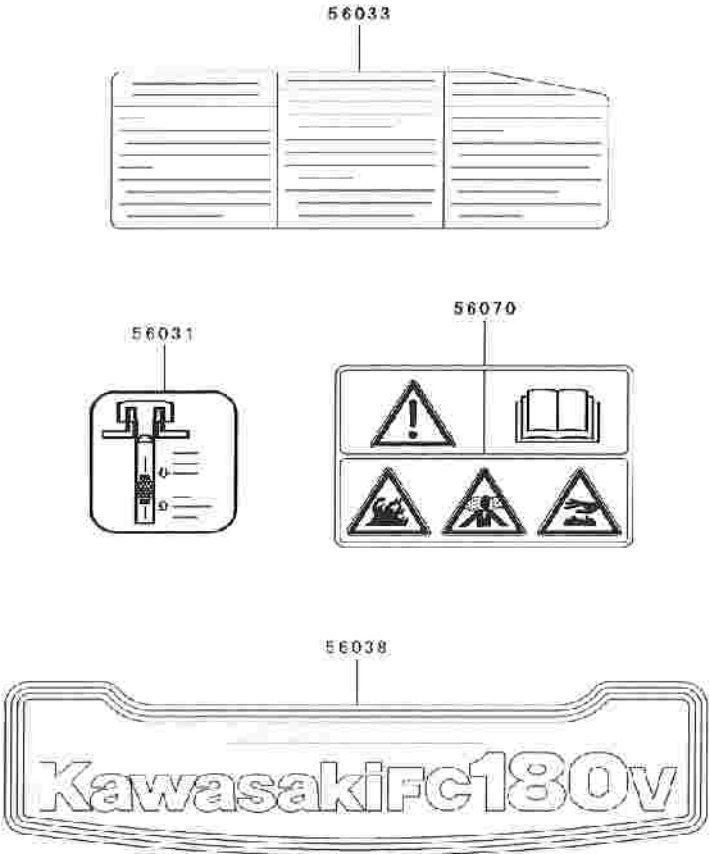
Figure 11 STARTER



KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
11	11012	11012-2255	Cap, Grip	1
11	13070	13070-2088	Guide, Pawl	1
11	13091	13091-2129	Holder, Recoil Stater	1
11	13165	13165-2082	Pawl, Recoil Starter	2
11	14037	14037-2127	Screen	1
11	46075	46075-2082	Grip, Recoil Stater	1
11	49080	49080-2166	Pulley-Starting	1
11	49088	49088-2423	Starter-Recoil	1
11	59101	59101-2095	Reel, Recoil Starter	1
11	59106	59106-2126	Rope, 3.8X1650	1
11	92009	92009-2347	Screw	1
11	92003	92003-2160	Ring-Sanp	1
11	92144	92144-2177	Spring, Return	2
11	92144A	92144-2272	Spring	1

Figure 11 LABEL



KAWASAKI FC180V ENGINE MANUAL

<u>Figure #</u>	<u>Scm #</u>	<u>Part #</u>	<u>Description</u>	<u>Qty</u>
12	56031	56031-2376	Label-Manual	1
12	56033	56033-2062	Label-Manual	1
12	56038	56038-2990	Label-Brand	1
12	56070	56070-2021	Label-Warning	1