

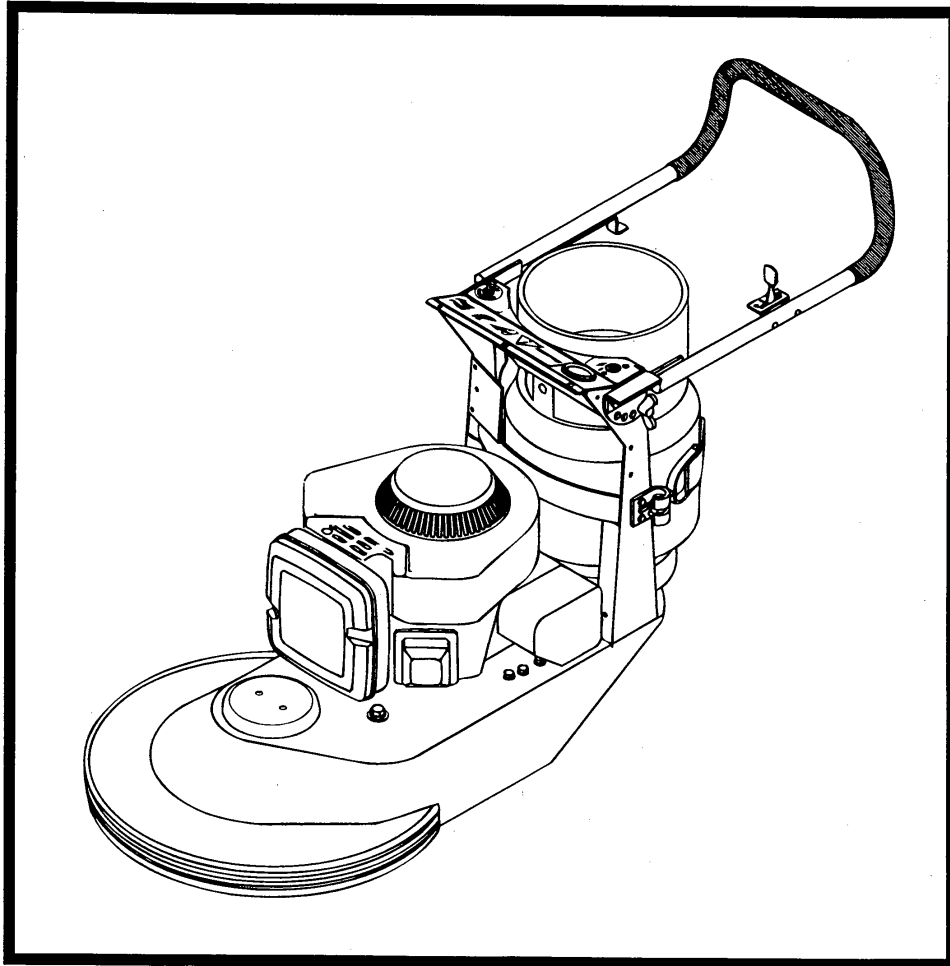
Mirage® Propane Burnisher

Model:

M220021K17
M220021K17C
M220024K17
M220024K17C
M220028K17
M220028K17C

M220024KA
M220028KA
M220021N14
M220024N20
M220028N20

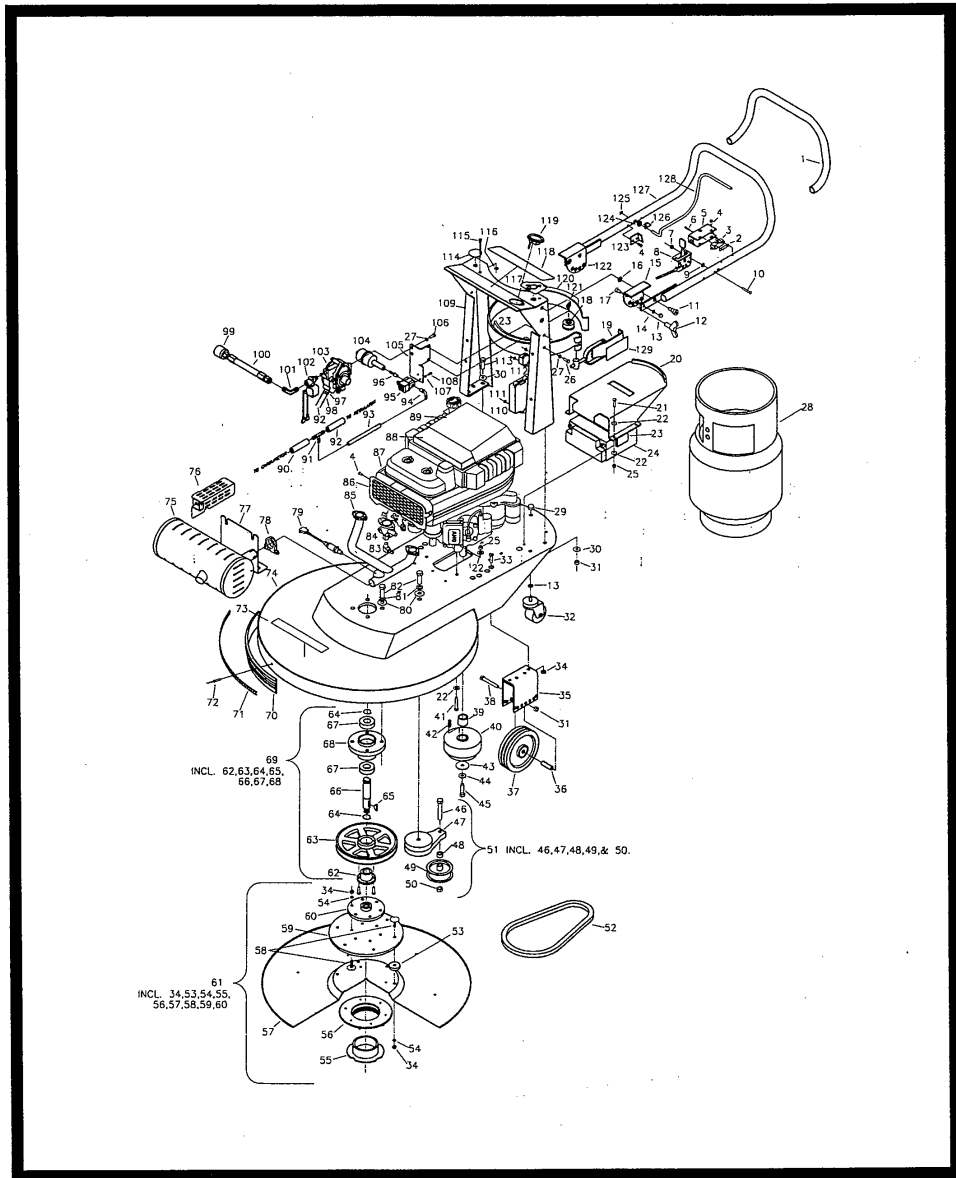
■ OPERATION ■ SERVICE ■ PARTS ■ CARE



Revised 03/99

Minuteman®

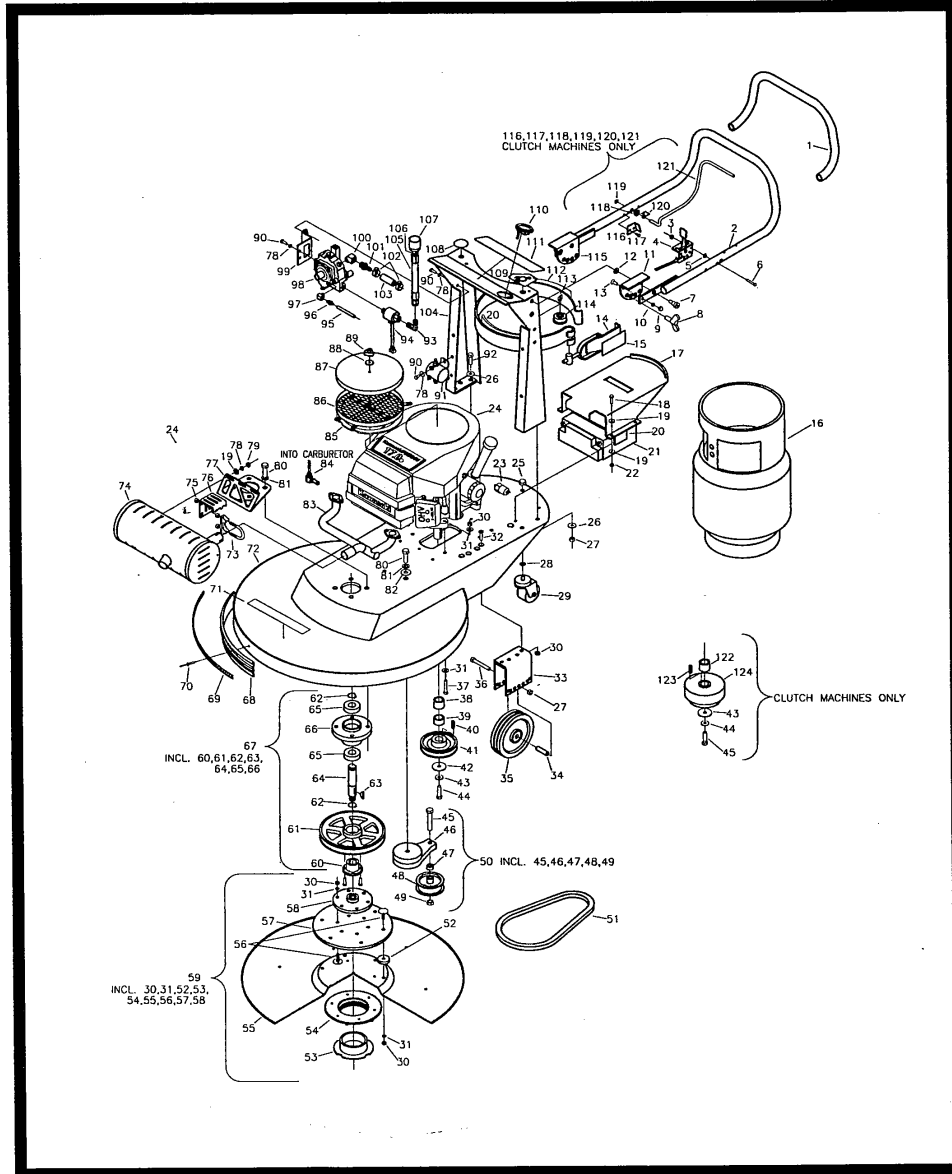
ENGINE: 16 HP KAWASAKI



PARTS LIST for 16 HP KAWASAKI

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	360108	1	Handle Sleeve	67	762093	2	Bearing
2	711430	1	Nut, Tinneman (M220028KA)	68	220023MCH	1	Bearing Housing
3	740029	1	Switch (M220028KA)	69	220026	1	Pulley Assy. (M220024KA)
4	711104	6	SCR-ST-A 10 x .50	69A	220178	1	Pulley Assy. (M220028KA)
5	220116	1	Switch Box (M220028KA)	70	220120	1	Skirt (M220024KA)
6	710207	2	SCR-MC 6-32 x .87 (M220028KA)	70A	220062	1	Skirt (M220028KA)
7	712638	2	Nut-Hex 10-24 Nyloc	71	220121	1	Skirt Retainer (M220024KA)
8	83-25-B-36	1	Throttle Cable Assy.	71A	220122	1	Skirt Retainer (M220028KA)
9	711503	14	WSR-Flat #10	72	828893	12	Pop Rivet
10	515-10-24	2	SCR-RD HD 10-24 x 1 1/2	73	715385	1	Decal - Minuteman
11	712099PLT	2	BLT-SHLDR 1/2 x 1/2	74	220024PTD	1	Casting (M220024KA)
12	260287	2	Wing Bolt 1/2-13	74A	220028PTD	1	Casting (M220028KA)
13	711353	2	Nut-Acorn 5/16-18	75	220156	1	Muffler (M220024KA)
14	711545	2	WSR-Helical 5/16	75A	220186	1	Muffler (M220028KA)
15	220036	1	Pivot Bracket - Left	76	220188	1	Heat Shield (M220024KA)
16	81-166-A	2	Special Washer	76A	220189	1	Heat Shield (M220028KA)
17	710200	2	SCR-FH 5/16-18 x .375	77	220210	1	Muffler Bracket (M220024KA)
18	741056	1	Keyswitch w/Ground	77A	220195	1	Muffler Bracket (M220028KA)
19	220131	1	Buckle TB2-61	78	220099	1	Muffler Clamp
20	220393	1	Battery Cover Weldment	79	741081-1	1	Oxygen Sensor Assy.
21	713007	4	BLT-HH 1/4-20 x 2.00	80	711509	5	WSR-Flat 1/2
22	711505	16	WSR-Flat 1/4	81	711547	5	WSR-Helical 1/2
23	220056	3	Felt 2 x 10	82	713071	5	BLT-HH 1/2-13 x 1 1/2
24	956725	1	Battery 12V	83	220174	1	Hose Barb 3/8 x 1/4 MPT
25	711377	8	Nut-Nyloc 1/4-20	84	220154	1	Propane Kit
26	713000	4	BLT-HH 1/4-20 x 1/2 #5	85	220162	1	Exhaust Manifold
27	711544	6	WSR-Helical 1/4	86	220386	1	Finger Guard Weldment
28	220117	1	Propane Tank Polished	87	220150	1	Engine 16 HP Kawasaki
29	711354	1	Nut-Acorn 3/8-16	88	220084	1	Foam Filter
30	711507	8	WSR-Flat .37 x 1.12 x .06	89	220211	1	Filter Cover
31	711380	6	Nut-Nyloc 3/8-16	90	220169	1	Fuel Hose 3/8 ID x 1" 18"
32	430029	1	Caster	91	220388	1	Tee Union
33	713168	8	SCR-FH SC 5/16-18 x 1.25	92	220170	1	Fuel Hose 3/8 ID x 4"
34	711374	8	Nut-Nyloc 5/16	93	220389	1	Air Bleed Hose
35	220053	2	Wheel Bracket Weldment	94	220171	1	Hose Barb 1/4 x 1/8 MPT
36	220049	2	Bushing .381 x .5 x 1.75	95	741083	1	Air Solenoid
37	430138-1	2	Wheel 6" w/Ballbearing	96	220172	1	Hose Barb 1/4 x 1/8 MPT
38	713049	2	BLT-HH 3/8-16 x 2.75	97	220165	1	Hose Barb Assy.
39	220182	1	Spacer	98	450076	4	Crimp Clamp
40	220185	1	Clutch	99	62-252-A	1	Connector - Female
41	713007	4	BLT-HH 1/4-20 x 2.00	100	341201	1	High Pressure Hose
42	220181	1	Key 1/4 x 1/4 x 2.69	101	80-113-A	1	90° Male El Flared
43	82-138-B-3	1	Special Washer	102	220103	1	Electric Lockoff Assy.
44	350242	1	Belleville Washer 7/16	103	220101	1	Regulator
45	60-716-24	1	BLT-HH 7/16-20 x 1.5	104	741084	1	Air Filter Assy.
46	712112	1	BLT-HH 1/2-13 x 2.75	105	220176	1	Regulator Bracket
47	220040	1	Rotary Tensioner	106	711203	2	BLT-HH 1/4-20 x .62
48	77-81-A	1	Spacer	107	711542	2	WSR-Helical #8
49	220041	1	Belt Idler w/Bushing	108	710329	2	SCR-MC 8-32 x .50
50	711334	1	Nut-Hex 1/2-13	109	220147	1	Tank Frame Weldment
51	220010	1	Belt Tensioner Assy.	110	741080	1	Emissions Control Unit
52	220097	1	V Belt BX44T (M220024KA)	111	711350	6	Nut-Hex 10-32 Nyloc
52A	220180	1	V Belt BX50T (M220028KA)	112	741300	1	Terminal Block
53	220019	6	Gimbal Spacer Disc	113	713043	4	BLT-HH 3/8-16 x 1 1/4 #5
54	711506	12	WSR-Flat 5/16	114	715501	1	Decal - Made in USA
55	760401	1	Center Cup	115	741082	1	Led Assy.
56	760402	1	Center Cup Retainer	116	711449	1	Pushnut - 5/16
57	220051	1	Metal Spinning (M220024KA)	117	715245	1	Decal - Ignition Switch
57A	220061	1	Metal Spinning (M220028KA)	118	715192	1	Decal - Dashboard
58	220020	12	BLT-Special Elevator	119	741007	1	Hour Meter
59	220018	1	Gimbal Disc	120	715242	1	Decal - Propane Warning
60	220022	1	Adapter	121	220212	2	Key - Ignition Replacement
61	220152	1	Pad Driver Assy. (M220024KA)	122	220037	1	Pivot Bracket - Right
61A	220153	1	Pad Driver Assy. (M220028KA)	123	220137	1	Bail Stop (M220028KA)
62	220045	1	Split Tapered Bushing	124	829052	2	Nylon Bushing (M220028KA)
63	220044	1	Pulley (M220024KA)	125	711721	2	Retaining Ring (M220028KA)
63A	220179	1	Pulley (M220028KA)	126	220112	1	Torsion Spring (M220028KA)
64	711719	2	Retaining Ring - Ext. 1.00	127	220025	1	Handle Tube Weldment
65	220003	1	Key-Woodruff 5/16 x 1	128	220115	1	Switch Bail (M220028KA)
66	220002	1	Drive Shaft	129	715343	1	Decal, Propane Warning

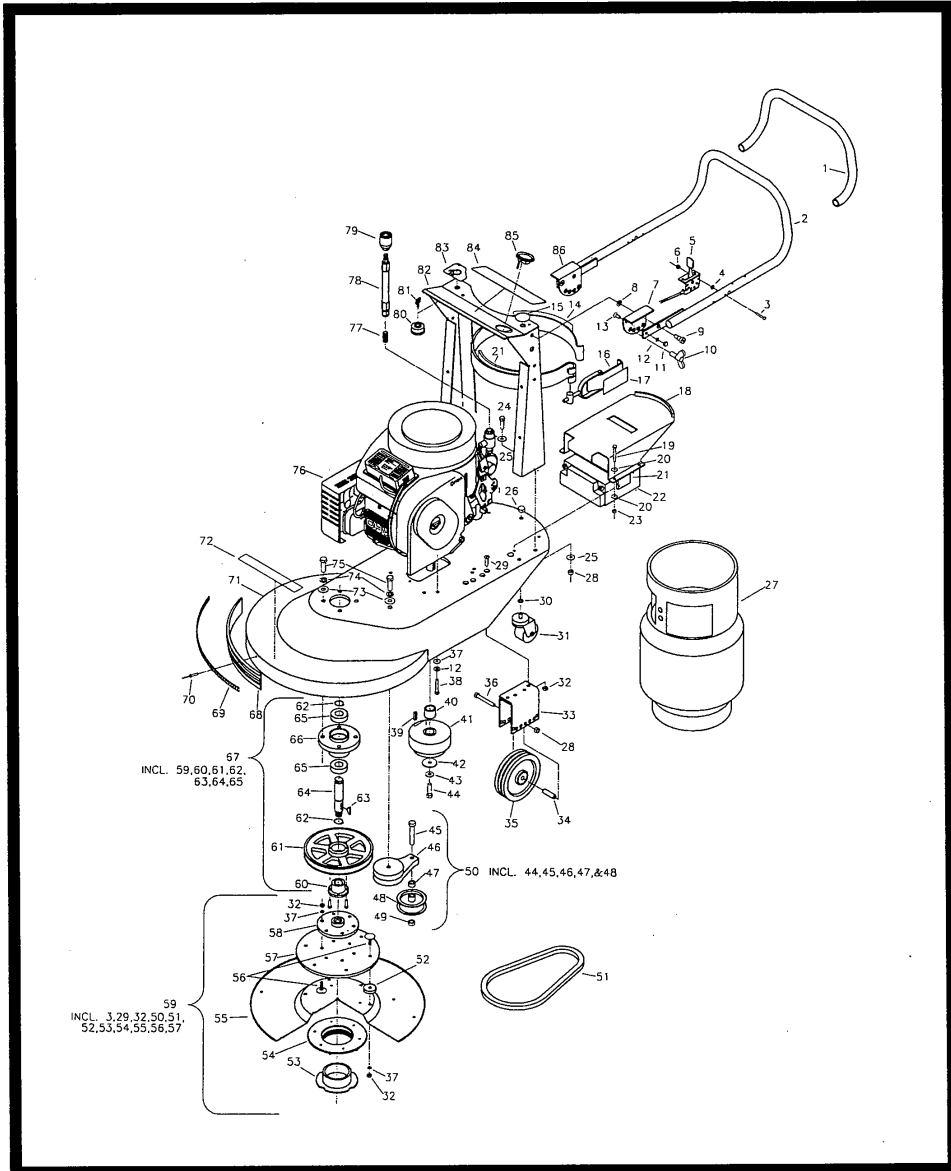
ENGINE: 17 HP AIR COOLED KAWASAKI



PARTS LIST for 17 HP AIR COOLED KAWASAKI

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	360108	1	Handle Sleeve	65	762093	2	Bearing
2	220025	1	Handle Tube Weldment	66	220023MCH	1	Bearing Housing
3	712638	2	Nut-Hex 10-24 Nyloc	67	220026	1	Pulley Assy.
4	220226	1	Throttle Cable Assembly	67A	220178	1	Pulley Assy. (M220028K17, K17C)
5	711503	4	WSR-Flat #10	68	220016	1	Skirt (M220021K17, K17C)
6	515-10-24	2	SCR-RD HD 10-24 x 1 1/2	68A	220120	1	Skirt (M220024K17, K17C)
7	712099PLT	2	BLT-Shoulder 1/2 x 1/2	68B	220062	1	Skirt (M220028K17, K17C)
8	260287	2	Wing Bolt 1/2-13	69	220119	1	Skirt Retainer (M220021K17, K17C)
9	711353	2	Nut-Acorn 5/16-18	69A	220121	1	Skirt Retainer (M220024K17, K17C)
10	711545	2	WSR-Helical 5/16	69B	220122	1	Skirt Retainer (M220028K17, K17C)
11	220036	1	Pivot Bracket - Left	70	828894	12	Pop Rivet
12	81-166-A	2	Special Washer	71	715385	1	Decal - Minuteman
13	710200	2	SCR-FH 5/16-18 x .375	72	220021PTD	1	Casting (M220021K17, K17C)
14	220131	1	Buckle TB2-61	72A	220024PTD	1	Casting (M220024K17, K17C)
15	715343	1	Decal, Propane Warning	72B	220028PTD	1	Casting (M220028K17, K17C)
16	220118	1	Propane Tank Steel	73	220242	1	Muffler Clamp
17	220393	1	Battery Cover Weldment	74	220156	1	Muffler
18	713007	6	BLT-HH 1/4-20 x 2.00	75	711383	2	Nut-Hex Ctr. Loc 5/16-18
19	711505	13	WSR-Flat 1/4	76	220188	1	Heat Shield
20	220056	3	Felt 2x10	77	220236	1	Muffler Bracket
21	956725	1	Battery 12V	77A	220248	1	Muffler Bracket (M220028K17, K17C)
22	711373	6	Nut-Nyloc 1/4-20	78	711544	7	WSR-Helical 1/4
23	741175	1	Oil Pressure Switch	79	711316	1	Nut-Hex 1/4-20
24	220214	1	Engine 17HP Kawasaki	80	713071	5	BLT-HH 1/2-13 x 1 1/2
25	711354	1	Nut-Acorn 3/8-16	81	711547	5	WSR-Helical 1/2
26	711515	8	WSR-Flat .406 x .812 x .06	82	711509	5	WSR-Flat 1/2
27	711380	6	Nut-Nyloc 3/8-16	83	220213	1	Exhaust Manifold
28	711546	1	WSR-Helical 3/8	83A	220244	1	Exhaust Manifold (M220028K17, K17C)
29	430029	1	Caster	84	220233	1	Spud-In Tube
30	711374	24	Nut-Nyloc 5/16	85	220241	1	Debris Guard Gasket
31	711506	28	WSR-Flat 5/16	86	220240	1	Debris Guard
32	713168	8	SCR-FH SC 5/16-18 x 1.25	87	220111	1	Debris Filter
33	220053	2	Wheel Bracket Weldment	88	711519	1	WSR-Flat .25 x 1.01 x .06
34	220049	2	Bushing .381 x .5 x 1.75	89	833214	1	Knob - 3-Sided
35	430138-1	2	Wheel 6" w/Bushing	90	713000	6	BLT-HH 1/4-20 x 1/2 #5
36	713049	2	BLT-HH 3/8-16 x 2.75	91	742201	1	Solenoid
37	713031	4	BLT-HH 5/16-18 x 2.00	92	713043	4	BLT-HH 3/8-16 x 1 1/4 #5
38	220198	1	Spacer	93	80-113-A	1	90° Male El Flared
39	72-179-A	1	Spacer	94	220221	1	Electric Lockoff Assy.
40	833621	1	Key 1/4 x 1/4 x 1.00	95	220267	1	Vacuum Hose 30"
41	220197	1	Pulley - 4.6 OD	96	350280	1	Hose Barb 1/8 x 1/8 NPT
41A	220196	1	Pulley - 4.0 OD (M220028K17, K17C)	97	220246	1	Elbow - 90 1/8 MPT x 1/8 FPT
42	82-138-B-3	1	Special Washer	98	220217	1	Regulator
43	350242	1	Belleville Washer 7/16	99	220237	1	Regulator Bracket
44	60-716-24	1	BLT-HH 7/16-20 x 1.5	100	220245	1	Elbow - 45 3/8 MPT x 1/8 FPT
45	712112	1	BLT-HH 1/2-13 x 2.75	101	342430	1	Hose Barb
46	220040	1	Rotary Tensioner	102	450076	2	Crimp Clamp
47	77-81-A	1	Spacer	103	220067	1	Fuel Hose - 3/8 ID x 24"
48	220041	1	Belt Idler w/Bushing	104	220266	1	Tank Frame Weldment
49	364-816	1	Nut-Nyloc 1/2-13	105	220070	1	High Pressure Hose
50	220010	1	Belt Tensioner Assy.	106	220065	1	45° Male Elbow 1/4 x 3/8
51	220097	1	V Belt BX44T (M220021K17, K17C)	107	62-252-A	1	Connector - Female
51A	220144	1	V Belt BX47T (M220024K17, K17C)	108	715501	1	Decal - Made in USA
51B	220187	1	V Belt BX55T (M220028K17, K17C)	109	715245	1	Decal - Ignition Switch
52	220019	6	Gimbal Spacer Disc	110	741007	1	Hour Meter
53	760401	1	Center Cup	111	715192	1	Decal - Dashboard
54	760402	1	Center Cup Retainer	112	715242	1	Decal - Propane Warning
55	220005	1	Metal Spinning (M220021K17, K17C)	113	220212	2	Key - Ignition, Replacement
55A	220051	1	Metal Spinning (M220024K17, K17C)	114	741056	1	Keyswitch w/Ground
55B	220061	1	Metal Spinning (M220028K17, K17C)	115	220037	1	Pivot Bracket - Right
56	220020	12	BLT-Special Elevator	116	220137	1	Bail Stop
57	220018	1	Gimbal Disc	117	711104	1	SCR-ST-A 10 x .50
58	220022	1	Adapter	118	829052	2	Nylon Bushing
59	220151	1	Pad Driver Assy. (M220021K17, K17C)	119	711721	2	Retaining Ring
59A	220152	1	Pad Driver Assy. (M220024K17, K17C)	120	220112	1	Torsion Spring
59B	220153	1	Pad Driver Assy. (M220028K17, K17C)	121	220115	1	Switch Bail
60	220045	1	Split Tapered Bushing	122	220182	1	Spacer
61	220044	1	Pulley	123	220181	1	Key 1/4 x 1/4 x 2.69
61A	220179	1	Pulley (M220028K17, K17C)	124	220185	1	Clutch
62	711719	2	Retaining Ring - Ext. 1.00		220234	1	Spark Plug
63	220003	1	Key - Woodruff 5/16 x 1		220235	1	Air Filter
64	220002	1	Drive Shaft		K220-3	1	Optional Clutch Kit

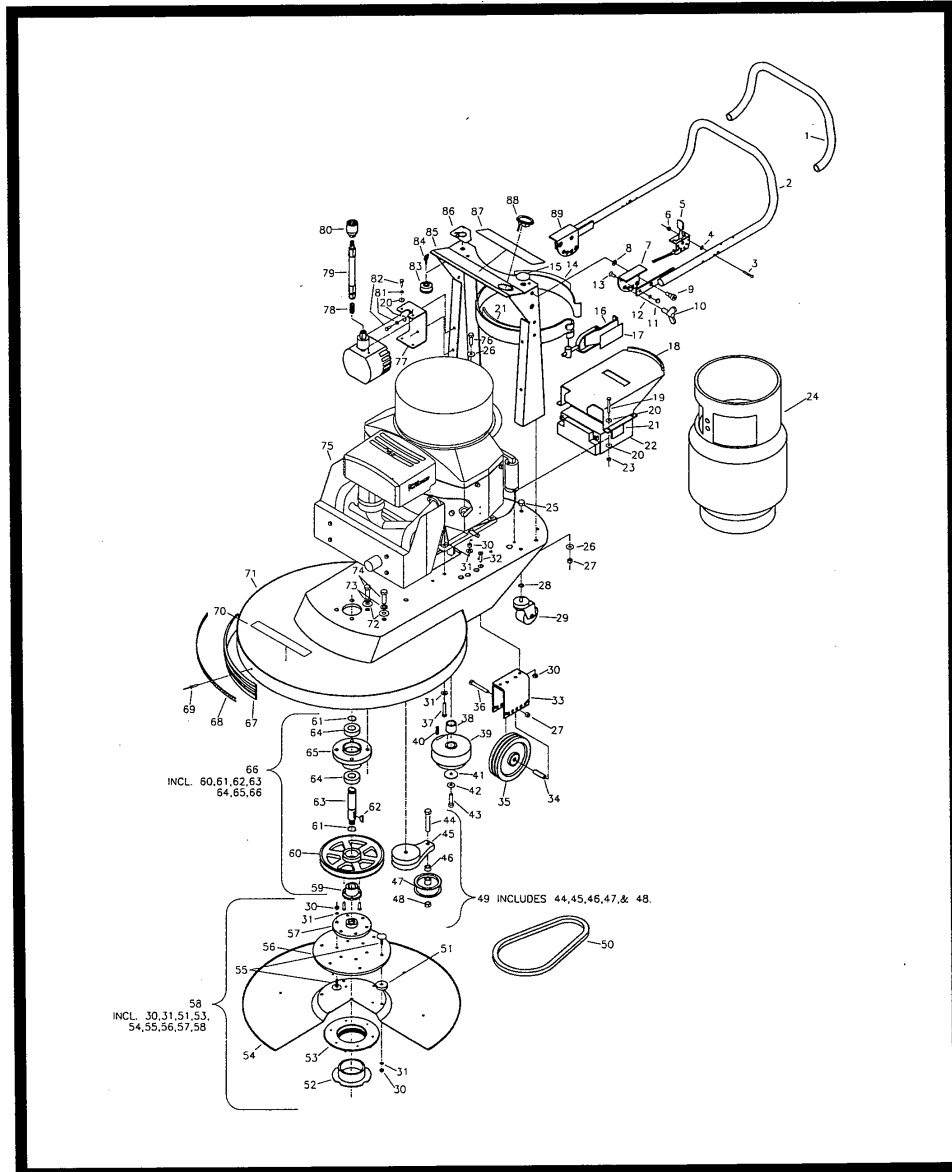
ENGINE: 14 HP ONAN



PARTS LIST for 14 HP ONAN

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	360108	1	Handle Sleeve	44	60-716-24	1	BLT-HH 7/16-20 x 1.5
2	220025	1	Handle Tube Weldment	45	712112	1	BLT-HH 1/2-13 x 2.75
3	515-10-24	2	SCR-RD HD 10-24 X 1 1/2	46	220040	1	Rotary Tensioner
4	711503	14	WSR-Flat #10	47	77-81-A	1	Spacer
5	83-25-B-33	1	Throttle Cable Assy.	48	220041	1	Belt Idler w/Bushing
6	712638	2	Nut-Hex 10-24 Nyloc	49	364-816	1	Nut-Hex 1/2-13
7	220036	1	Pivot Bracket - Left	50	220010	1	Belt Tensioner Assy.
8	81-166-A	2	Special Washer	51	220097	1	V Belt BX44T
9	712099PLT	2	BLT-SHLDR 1/2 x 1/2	52	220019	6	Gimbal Spacer Disc
10	260287	2	Wing, Bolt 1/2-13	53	760401	1	Center Cup
11	711353	2	Nut, Acom 5/16-18	54	760402	1	Center Cup Retainer
12	711545	2	WSR-Helical 5/16	55	220005	1	Metal Backing Plate
13	710200	2	SCR-FH 5/16 x 3/4	56	220020	12	BLT-Special Elevator
14	715242	1	Decal-Propane Warning	57	220018	1	Gimbal Disc
15	715501	1	Decal - Made in USA	58	220022	1	Adapter
16	220131	1	Buckle TB2-61	59	220151	1	Pad Driver Assy.
17	715343	1	Decal - Propane Warning	60	220045	1	Split Tapered Bushing
18	220393	1	Battery Cover Weldment	61	220044	1	Pulley
19	713007	4	BLT-HH 1/4-20 x 2.00	62	711719	2	Retaining Ring, Ext. 1.00
20	711505	16	WSR-Flat 1/4	63	220003	1	Key, Woodruff 5/16 x 1
21	220056	3	Felt 2 x 10	64	220002	1	Drive Shaft
22	956725	1	Battery 12V	65	762083	2	Bearing
23	711373	8	Nut-Nyloc 1/4-20	66	220023MCH	1	Bearing Housing
24	713043	4	BLT-HH 3/8-16 x 1 1/4 #5	67	220026	1	Pulley Bearing Assy.
25	711515	8	WSR-Flat .406 x .812 x .06	68	220016	1	Skirt
26	711354	1	Nut-Acom 3/8-16	69	220119	1	Skirt Retainer
27	220118	1	Propane Tank	70	828894	6	Pop Rivet
28	711380	6	Nut-Nyloc 3/8-16	71	220021PTD	1	Casting
29	713168	8	SCR-FH 5/16-18 x 1.25	72	715385	1	Decal - Minuteman
30	711546	1	WSR-Helical 3/8	73	711509	5	WSR-Flat 1/2
31	430029	1	Caster	74	711547	5	WSR-Helical 1/2
32	711374	24	Nut-Nyloc 5/16	75	713071	5	BLT-HH 1/2-13 x 1 1/2
33	220053	2	Wheel Bracket Weldment	76	220300	1	Engine, 14 HP Onan
34	220049	2	Bushing .381 x .5 x 1.75	77	341210	1	Flared Male Connector
35	430138-1	2	Wheel 6" w/Ballbearing	78	220070	1	High Pressure Hose
36	713049	2	BLT-HH 3/8-16 x 2.75	79	62-252-A	1	Connector, Female
37	711506	4	WSR-Flat 5/16	80	741366	1	Keyswitch
38	713170	4	BLT-HWH 5/16-18 x 1.25 Taptitte	81	220212	1	Key - Ignition, Replacement
39	220182	1	Spacer	82	220192	1	Tank Frame Weldment
40	220181	1	Key .25 x .25 x 2.69	83	715266	1	Decal - Ignition
41	220185	1	Clutch	84	715192	1	Decal - Dash
42	82-138-B-3	1	Special Washer	85	741007	1	Hour Meter
43	350242	1	Belleville Washer 7/16	86	220037	1	Pivot Bracket - Right

ENGINE: 20 HP ONAN



PARTS LIST for 20 HP ONAN

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	360108	1	Handle Sleeve	50	220194	1	V Belt BX50 (M220024N20)
2	220025	1	Handle Tube Weldment	50A	220199	1	V Belt BX50 (M220028N20)
3	515-10-24	2	SCR 10-24 X 1 1/2	51	220019	6	Gimbal Spacer Disc
4	711503	14	WSR-Flat #10	52	760401	1	Center Cup
5	83-25-B-33	1	Throttle Cable Assy.	53	760402	1	Center Cup Retainer
6	712638	2	Nut-Hex 10-24 Nyloc	54	220051	1	Metal Plate (M220024N20)
7	220036	1	Pivot Bracket - Left	54A	220061	1	Metal Plate (M220028N20)
8	81-166-A	2	Special Washer	55	220020	12	BLT-Special Elevator
9	712099PLT	2	BLT-SHLDR 1/2 x 1/2	56	220018	1	Gimbal Disc
10	260287	2	Wing, Bolt 1/2-13	57	220022	1	Adapter
11	711353	2	Nut, Acorn 5/16-18	58	220152	1	Pad Driver Assy. (M220024N20)
12	711545	2	WSR-Helical 5/16	58A	220153	1	Pad Driver Assy. (M220028N20)
13	710200	2	SCR-FH 5/16-18 x .375	59	220045	1	Split Tapered Bushing
14	715242	1	Decal-Propane Warning	60	220044	1	Pulley (M220024N20)
15	715501	1	Decal - Made in USA	60A	220179	1	Pulley (M220028N20)
16	220131	1	Buckle TB2-61	61	711719	2	Retaining Ring, Ext. 1.00
17	715343	1	Decal - Propane Warning	62	220003	1	Key, Woodruff 5/16 x 1
18	220393	1	Battery Cover Weldment	63	220002	1	Drive Shaft
19	713007	4	BLT-HH 1/4-20 x 2.00	64	762093	2	Bearing
20	711505	16	WSR-Flat 1/4	65	220023MCH	1	Bearing Housing
21	220056	3	Felt 2 x 10	66	220026	1	Pulley Assy. (M220024N20)
22	956725	1	Battery 12V	66A	220178	1	Pulley Assy. (M220028N20)
23	711373	8	Nut-Nyloc 1/4-20	67	220120	1	Skirt (M220024N20)
24	220117	1	Propane Tank Polished	67A	220062	1	Skirt (M20028N20)
25	711354	1	Nut-Acorn 3/8-16	68	220121	1	Skirt Retainer (M220024N20)
26	711507	8	WSR-Flat .37 X 1.12 X .06	68A	220122	1	Skirt Retainer (M220028N20)
27	711380	6	Nut-Nyloc 3/8-16	69	628894	12	Pop Rivet
28	711546	1	WSR-Helical 3/8	70	715385	1	Decal - Minuteman
29	430029	1	Caster	71	220024PTD	1	Castng (M220024N20)
30	711374	12	Nut-Nyloc 5/16	71A	220028PTD	1	Castng (M220028N20)
31	711506	16	WSR-Flat 5/16	72	711509	5	WSR-Flat 1/2
32	713168	8	SCR-FH SC 5/16-18 x 1.25	73	711547	5	WSR-Helical 1/2
33	220053	2	Wheel Bracket Weldment	74	713071	5	BLT-HH 1/2-13 x 1 1/2
34	220049	2	Bushing .381 x .5 x 1.75	75	220350	1	Engine, Onan 20 HP
35	430138-1	2	Wheel 6" w/Ballbearing	76	713043	4	BLT-HH 1/2-13 x 1 1/2
36	713049	2	BLT-HH 3/8-16 x 2.75	77	220193	1	Regulator Mounting Bracket
37	713030	4	BLT-HH 5/16-18 x 1 3/4 #5	78	341210	1	Flared Male Connector
38	220182	1	Spacer	79	220070	1	High Pressure Hose
39	220185	1	Clutch	80	62-252-A	1	Connector, Female
40	220181	1	Key 1/4 x 1/4 x 2.69	81	711544	6	WSR-Helical 1/4
41	82-138-B-3	1	Special Washer	82	713002	6	BLT-HH 1/4-20 x 3/4 #5
42	350242	1	Belleville Washer 7/16	83	741366	1	Keyswitch
43	60-716-24	1	BLT-HH 7/16-20 x 1.5	84	220212	1	Key - Ignition, Replacement
44	712112	1	BLT-HH 1/2-13 x 2.75	85	220192	1	Tank Frame Weldment
45	220040	1	Rotary Tensioner	86	715266	1	Decal - Ignition
46	77-81-A	1	Spacer	87	715192	1	Decal - Dashboard
47	220041	1	Belt Idler w/Bushing	88	741007	1	Hour Meter
48	364-816	1	Nut-Hex 1/2-13	89	220037	1	Pivot Bracket - Right
49	220010	1	Belt Tensioner Assy.				