

## SHUT-OFF PROCEDURE - GASOLINE ENGINE

1. Park the Mini-Skid on level ground. If it is necessary to park on a slope, park across the grade and block the wheels.
2. Lower the lift arms and ground the bucket.
3. Return throttle control to "idle" position, and allow engine to idle for a short while.
4. Turn ignition key off.
5. Place control levers in neutral position, and remove the key.

### IMPORTANT

*Be Sure Ignition Key Is In OFF Position,  
Or Even Removed, When The Engine  
Is Not Running.*

## STARTING PROCEDURE - DIESEL ENGINE

1. Move fuel shut-off forward to the "On" position.
2. Open throttle lever slightly.
3. Turn key clockwise to the first, "Preheat" position and hold for a few seconds.
4. Turn key further clockwise to the "Start" position to crank engine.
5. Once engine starts, release key.
6. Set throttle lever to idling speed to allow engine to warm up.
7. If engine fails to start after cranking 10 seconds, repeat steps 3 and 4, allowing a longer "Preheat" period.
8. To restart a warm engine, move fuel shut-off to the "On" position and turn key to start.

## SHUT-OFF PROCEDURE - DIESEL ENGINE

1. Park the Mini-Skid on level ground. If it is necessary to park on a slope, park across the grade and block the wheels.
2. Lower the lift arms and ground the bucket.
3. Move throttle to a slow idling position and allow the engine to run for a few minutes to cool down.
4. Pull fuel shut-off knob back to the "Off" position to stop engine.
5. Turn key counter - clockwise to the off position.

## MOUNTING ATTACHMENTS

### INSTALLATION OF ATTACHMENT

1. Rotate lock pins to the unlocked position (handle pointing outwards).
2. Tilt the attachment frame forward as shown in **Figure 7**, so that the top round edge of the attachment frame will fit under the lip on the attachment.
3. Drive into the attachment, raising the arms so that the top of the attachment frame slips under the lip on the attachment, and attachment lifts slightly.
4. Using the tilt cylinder, roll back the attachment so it drops into place, as shown in **Figure 8**.
5. Rotate the lock pins to the locked position (handles facing inwards), and check that the lock pins are fully inserted through the lock holes in the attachment.
6. Connect attachment hydraulic hoses (if required) to the quick couplers as shown in **Figure 9**.



FIGURE 8

### WARNING

*After Hook-Up To Attachment, Check To Be Sure Lock Pins Are Fully Engaged, And Locked Into Position.*

### REMOVAL OF ATTACHMENT

1. Lower lift arms and tilt forward on the attachment so that the attachment is resting on the ground.
2. If attachment is hydraulically equipped, stop the engine, relieve hydraulic pressure in the attachment lines by shifting the auxiliary lever back and forth, and disconnect the attachment hydraulic hoses.
3. Rotate the lock pins to the unlocked (handles pointing outwards) position.
4. Start engine, tilt the attachment forwards (dump) until the top edge of the attachment mount frame clears the lip on the attachment, and back the Mini-Skid away from the attachment.



FIGURE 9A

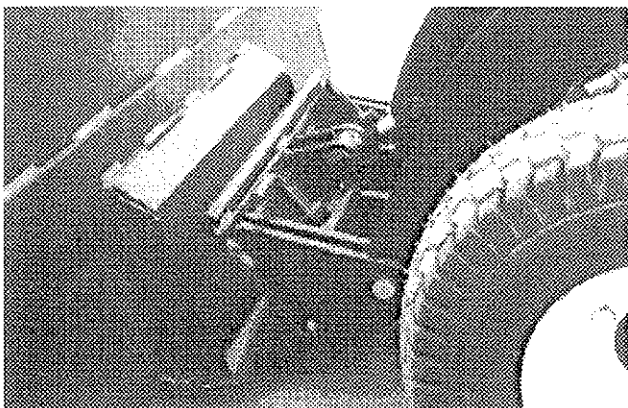


FIGURE 7

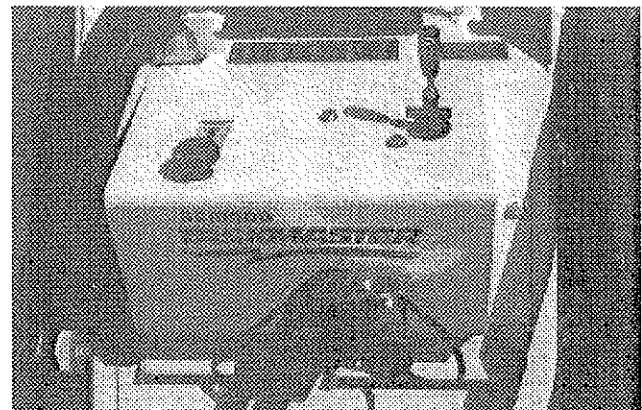


FIGURE 9B

## OPERATIONAL PROCEDURE

Mini-Skid operational procedure and suggestions in this manual are based on the use of a bucket. Operating procedure and suggestions for such other attachments as dozer blade, post hole auger, trencher, rock hammer, etc., are included in the respective attachment bundle.

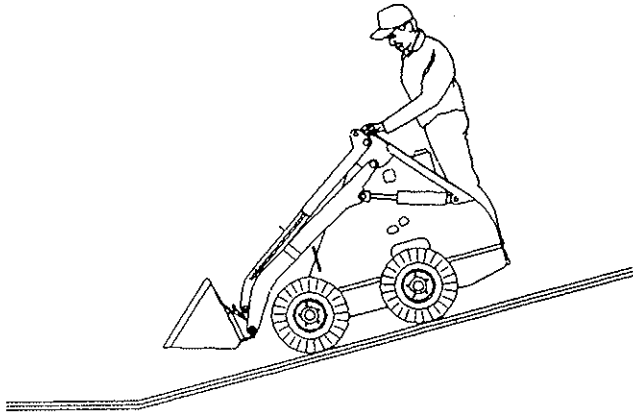


FIGURE 10 - EMPTY BUCKET

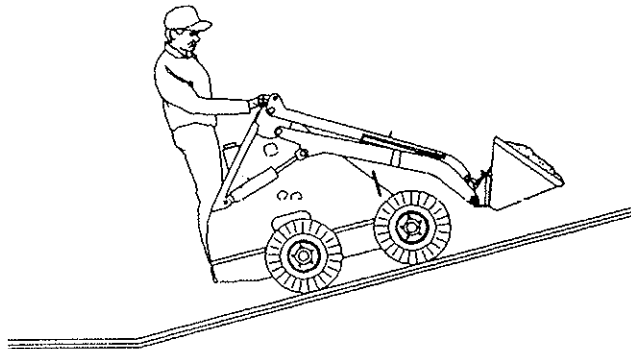


FIGURE 11 - FULL BUCKET

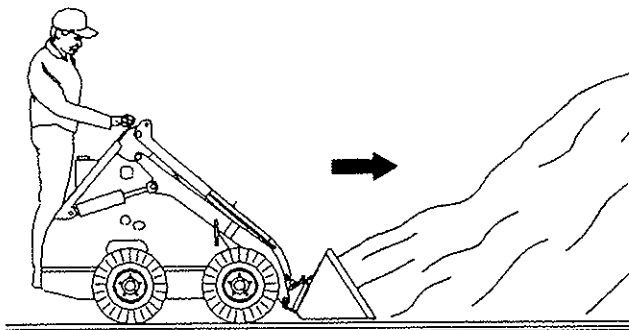


FIGURE 12

### OPERATING SUGGESTIONS

1. Install an attachment (bucket). Drive carefully to a clean and level area and practice operating the Mini-Skid at a slow rate until familiar with the operation of all controls.
2. Hydraulic power transmission is instantaneous. When using the drive levers, sudden movement will result in acceleration to full speed and a very jerky ride. Use smooth and gradual movements when using the drive levers.
3. For efficient operation of the Mini-Skid, keep the work area small, and as level as possible.
4. Decrease cycle time by "SKID" turning rather than backing up, using a slow turn, then going forward.
5. When driving on slopes keep the heaviest end of the Mini-Skid upward. When driving on a slope with an empty bucket, back up the slope in reverse, and drive down a slope forward as in **Figure 10**. When driving on a slope with a load, drive up the slope forward and back down the slope in reverse as in **Figure 11**.
6. Fill the bucket to rated capacity. Turning is easier with a full load than with a partial load.
7. To increase machine life, let the engine warm completely before starting operations each day. Avoid "over-loading" or "lugging" the Mini-Skid.

### WARNING

*Always Carry The Bucket Low While Moving. Drive Directly Up And Down Instead Of Across A Slope.*

### WARNING

*If Operating Mini-Skid Indoors, Make Sure Building Is Well Ventilated.*

### FILLING AND DUMPING A BUCKET

1. Approach the pile with the lift arms fully down and bucket cutting edge just skimming the top of the ground as in **Figure 12**.

# OPERATION

2. As soon as the bucket is full, tilt bucket back and back away from the pile, as shown in **Figure 13** and **14**.
3. When dumping, raise bucket high enough to clear stock pile or sides of container being loaded.
4. Drive slowly forward until bucket is over dumping area and tilt bucket forward until it completely empties.
5. Tilt bucket, back up if necessary to clear container side and back away.

## WARNING

*Use Extreme Caution When Stopping. If The Bucket Or Attachment Is Raised, The Machine Can Tip. Keep All Movements Smooth And Gradual When Manoeuvring With Lift Arms Raised. All New Operators Must Work The Machine In A Safe Open Area To Become Familiar With Its Operating Characteristics.*

## WARNING

*Never Step Off The Operator Platform With The Load Raised.*

### DIGGING WITH A BUCKET

1. Lower lift arms fully and tilt bucket forward until cutting edge is on the ground.
2. Drive machine forward slowly and continue to tilt bucket forward until it enters the ground to desired depth and then tilt it back a small amount to keep an even depth, as shown in **Figure 15**.
3. Continue driving forward until bucket is full and then tilt bucket fully back while driving slowly forward or stopping the machine.

### LEVELLING

1. To spread material on uneven ground, raise lift arms and tilt bucket forward while driving slowly forward, as in **Figure 16**.

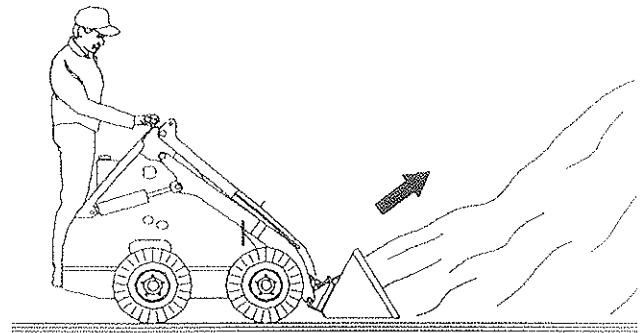


FIGURE 13

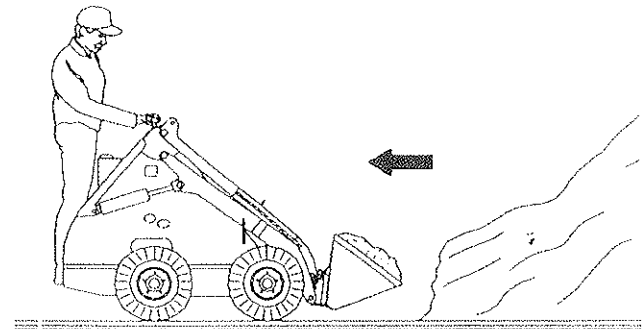


FIGURE 14

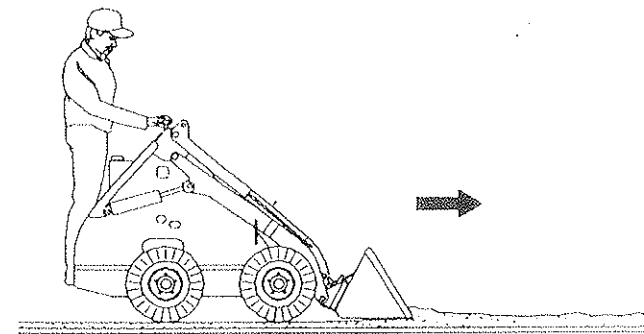


FIGURE 15

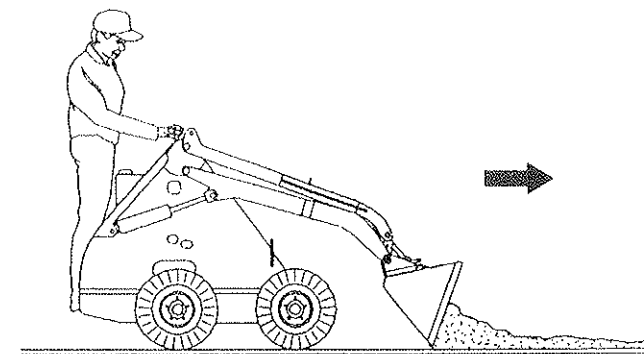


FIGURE 16

# OPERATION

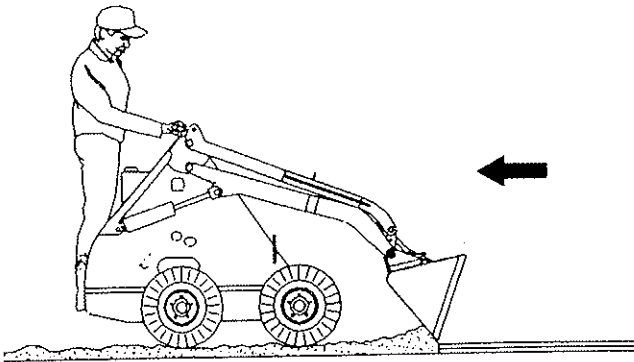


FIGURE 17

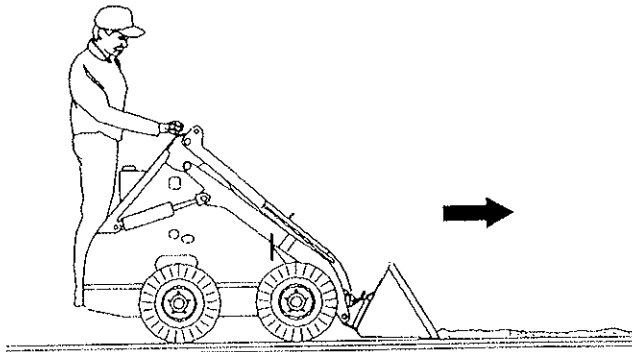


FIGURE 18

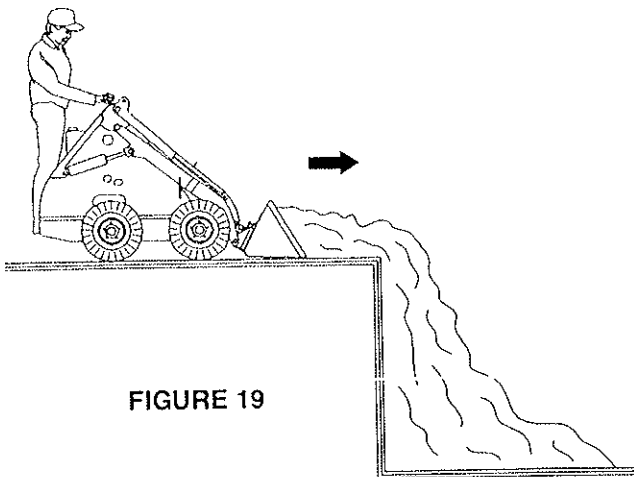


FIGURE 19

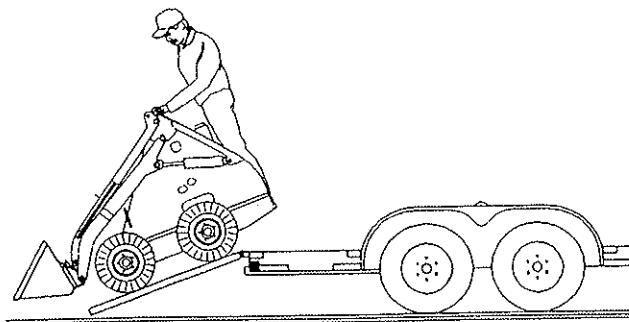


FIGURE 20

2. To level a filled area, tilt bucket forward and drive machine backwards to drag bucket and spread material, as in **Figure 17**.
3. Another method of levelling is to travel forward with bucket down and level, full of material and pushing excess into low areas. Depth is controlled by tilting the bucket slightly up or down, as in **Figure 18**.

## BACKFILLING

1. When filling a trench or a hole, drive up the hole with bucket low or push material up to edge, as in **Figure 19**.
2. Tilt bucket forward as soon as it reaches the edge of the hole and when necessary raise the arms to empty the bucket.

## TRANSPORTING THE MINI-SKID

### IMPORTANT

*Never Tow The Mini-Skid.  
Damage May Result.*

When the machine is transported on a truck or trailer, proper ramps must be used for loading.

A Mini-Skid with an empty bucket, or no attachment should be driven backwards up a ramp onto the trailer or forward down a ramp, as shown in **Figure 20**.

After the Mini-Skid is driven onto the transporting vehicle, lower any attachments, and install chains to hold Mini-Skid from moving during sudden stops or when travelling up and down grades.

Close the fuel valve when the Mini-Skid is to be transported. Vibration during transport could cause the carburetor to flood.

### WARNING

*When Transporting On A Road Or Highway During The Day Or At Night, Be Sure That The Trailer Is Equipped With Lights And Signs As Required By Law.*

ASSEMBLY  
DIAGRAM

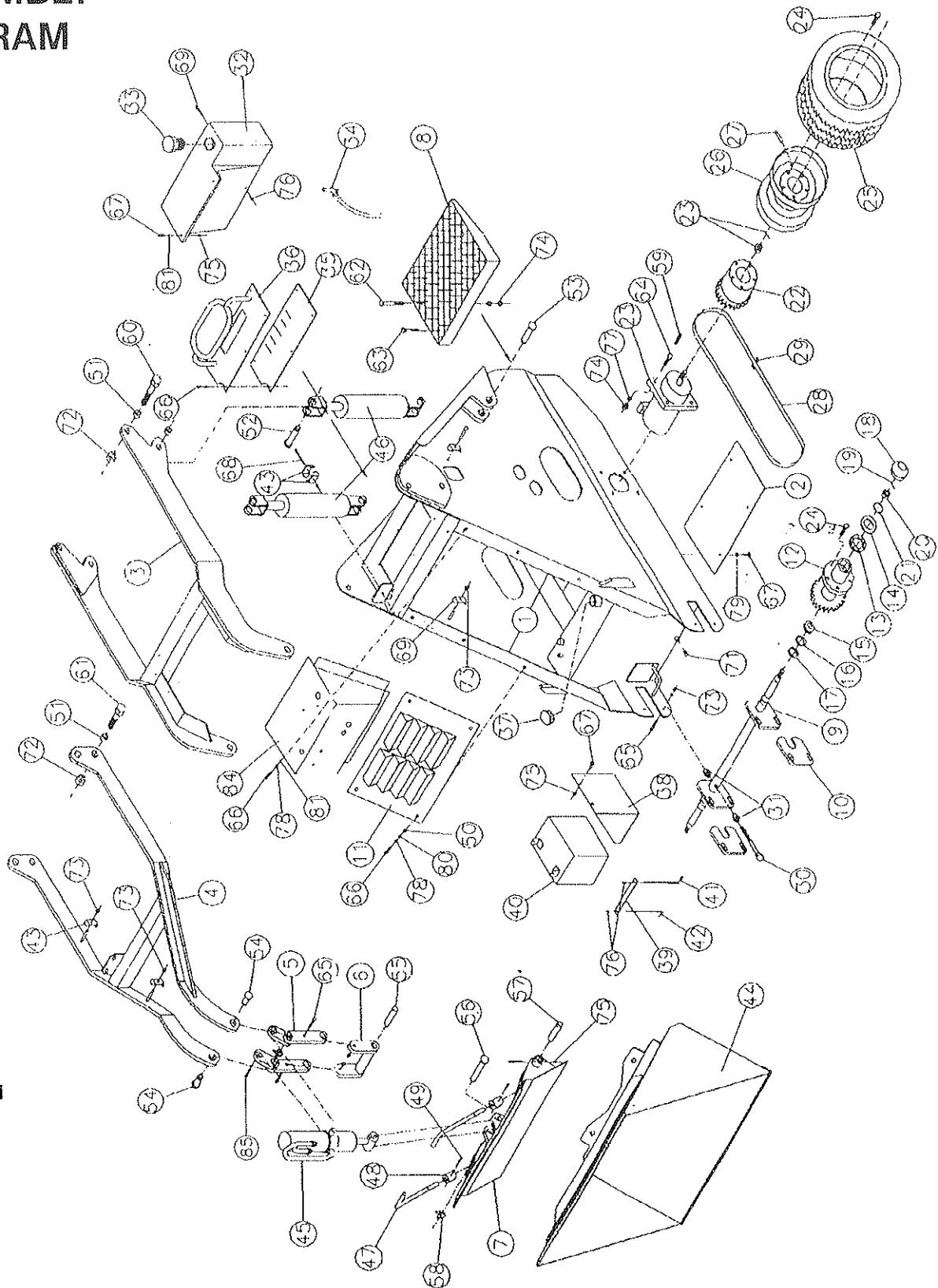


FIGURE 21



# MAINTENANCE

## RAMROD 900T PARTS LIST

Item	Part No.	Description	No. Used
1	1231000	Body Weldment .....	1
2	1231018	Bottom Plate .....	1
3	1231103	Lift Arms .....	1
4	1231109	Self Levelling Arms .....	1
5	1231111	Self Levelling Link (Left) .....	1
5	1231112	Self Levelling Link (Right) .....	1
6	1231123	Cylinder Spacer .....	1
7	1231122	Front Mount Frame .....	1
8	1144241	Counterweight .....	1
9	1231070	Front Axle .....	1
10	1231071	Axle Spacer (Not on all Models) .....	2
11	1117146	Front Cover (Plastic) .....	1
12	1230624	Front Hub/Sprocket Weldment (4" Tires) .....	2
12	1230619	Front Hub/Sprocket Weldment (6" & 8" Tires) .....	2
13	1135343	Cup, Bearing Race, Outer .....	2
14	1135344	Bearing, Roller cone, Outer .....	2
15	1135251	Cup, Bearing Race, Inner .....	2
16	1135250	Bearing, Roller Cone, Inner .....	2
17	1135252	Seal, Inner .....	2
18	1135345	Dust Cap .....	2
19	1102768	Cotter Pin .....	2
20	1105400	Slotted Nut .....	2
21	1102637	Machine Bushing .....	2
22	1230110	Rear Hub (6" Tires) .....	2
22	1230626	Rear Hub (6" & 8" Tires) .....	2
23	See Page 23	Hydraulic Motor c/w Nut & Cotter Pin .....	2
24	1135341	Wheel Bolt .....	20
25	1135070	Tire, 4.00 x 8 - 4 Ply .....	4
25	1135071	Tire, 16 x 6.5 - 8, 4 Ply .....	4
25	1135072	Tire, 18 x 8.5 - 8, 4 Ply .....	4
25	1135088	Tire, 16 x 6.5 - 8, Chevron Type .....	4
26	1135034	Rim, 8 x 4, 5 Bolt .....	4
26	1135035	Rim, 8 x 5.25, 5 Bolt .....	4
26	1135036	Rim, 8 x 7, 5 Bolt .....	4
27	1135154	Valve Stem .....	4
28	1113366	Drive Chain .....	2
29	1113349	Connector Link .....	2
30	1231023	Chain Tensioner Bolt .....	2
31	1102540	Hex Nut, 5/8" UNC .....	4
32	1117147	Fuel Tank .....	1
33	1179230	Fuel Filler Cap .....	1
34	1123206	Fuel Shut-Off Valve .....	1
35	1231061	Valve Grommet .....	1
36	1231059	Valve Cover Plate .....	1
37	1179194	Oil Filler Spout Cap .....	1
38	1230542	Battery Mount Bracket .....	1
39	1230534	Battery Cross Bar .....	1
40	1179130	Battery, 12 Volt .....	1
41	1230532	Long Battery Tie Bolt .....	1
42	1230533	Short Battery Tie Bolt .....	1
43	1707130	Line Clamp, 2 Pipe .....	6
44	1231024	Bucket, 31" Wide .....	1
44	1231027	Bucket, 36" Wide .....	1
44	1231030	Bucket, 42" Wide .....	1
45	1127336	Hydraulic Cylinder (Tilt) .....	1
46	1126288	Hydraulic Cylinder (Lift) .....	2
47	1231118	Quick Attach Pin .....	2
48	1231120	Pin Pivot .....	2
49	1102798	Roll Pin .....	2
50	1230684	Front Cover Spacer .....	6
51	1115510	"Connex" Spring Bushing .....	20
52	1230284	Top Lift Cylinder Pin .....	2
53	1231040	Bottom Cylinder Pin .....	2
54	1231042	Pin, 1" x 2 1/8" .....	3



# MAINTENANCE

## RAMROD 900T PARTS LIST continued

Item	Part No.	Description	No. Used
55	1231046	Drilled Pin, 1" x 8 3/8" .....	1
56	1231044	Pin, 1" x 3 1/2" .....	1
57	1231047	Drilled Pin, 1" x 2 5/8" .....	2
58	1500115	Pin Retainer .....	7
59	1127208	Key, Wheel Motor .....	2
60	1102255	Hex Bolt, 1" UNC x 4" .....	2
61	1102253	Hex Bolt, 1" UNC x 3" .....	2
62	1102567	Hex Bolt, 1/2" x 3 1/2" .....	2
63	1102055	Hex Bolt, 1/2" x 2 1/2" .....	2
64	1102051	Hex Bolt, 1/2" x 1 1/2" .....	8
65	1102002	Hex Bolt, 3/8" x 1 1/2" .....	6
66	1101990	Hex Bolt, 3/8" x 1" .....	16
67	1101950	Hex Bolt, 5/16" x 1" .....	4
68	1101929	Hex Bolt, 1/4" x 2 1/2" .....	2
69	1707125	Line Clamp, 4 Pipe .....	1
70	1102555	1" Hex Nut .....	2
71	1122919	Drain Plug .....	1
72	1102567	1" Jam Nut .....	2
73	1102526	3/8" Locknut .....	20
74	1102535	1/2" Hex Nut .....	12
75	1102520	Hex Nut .....	13
76	1102515	1/4" Hex Nut .....	3
77	1102592	1/2" Lockwasher .....	12
78	1102590	3/8" Lockwasher .....	12
79	1102589	5/16" Lockwasher .....	13
80	1102641	3/8" Flatwasher .....	12
81	1102607	5/16" Flatwasher .....	6
82	1102525	3/8" Nut .....	2
83	1102611	1/2" Flatwasher .....	4
84	1231154	Auxiliary Mount Plate .....	1
85	1231171	Cylinder Retaining Bolt .....	2

BRIGGS & STRATTON  
GASOLINE/DIESEL  
ENGINE LAYOUT

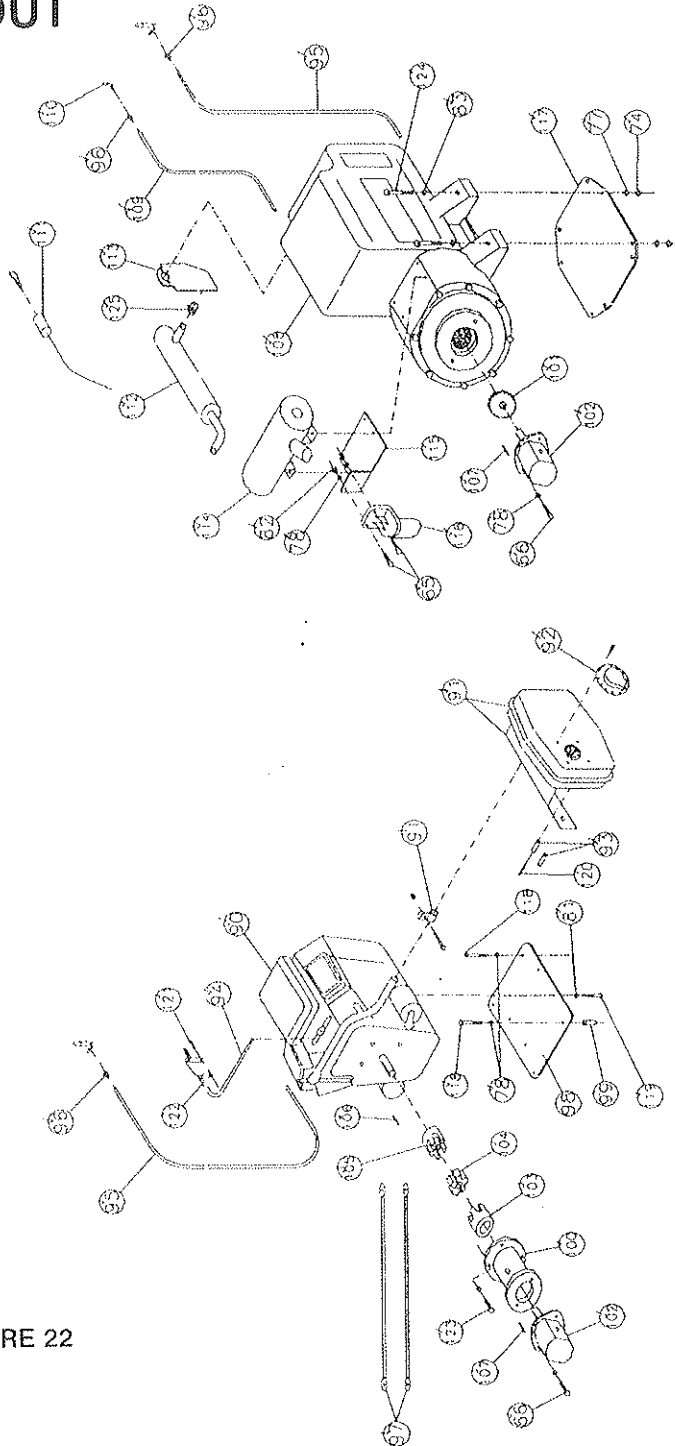


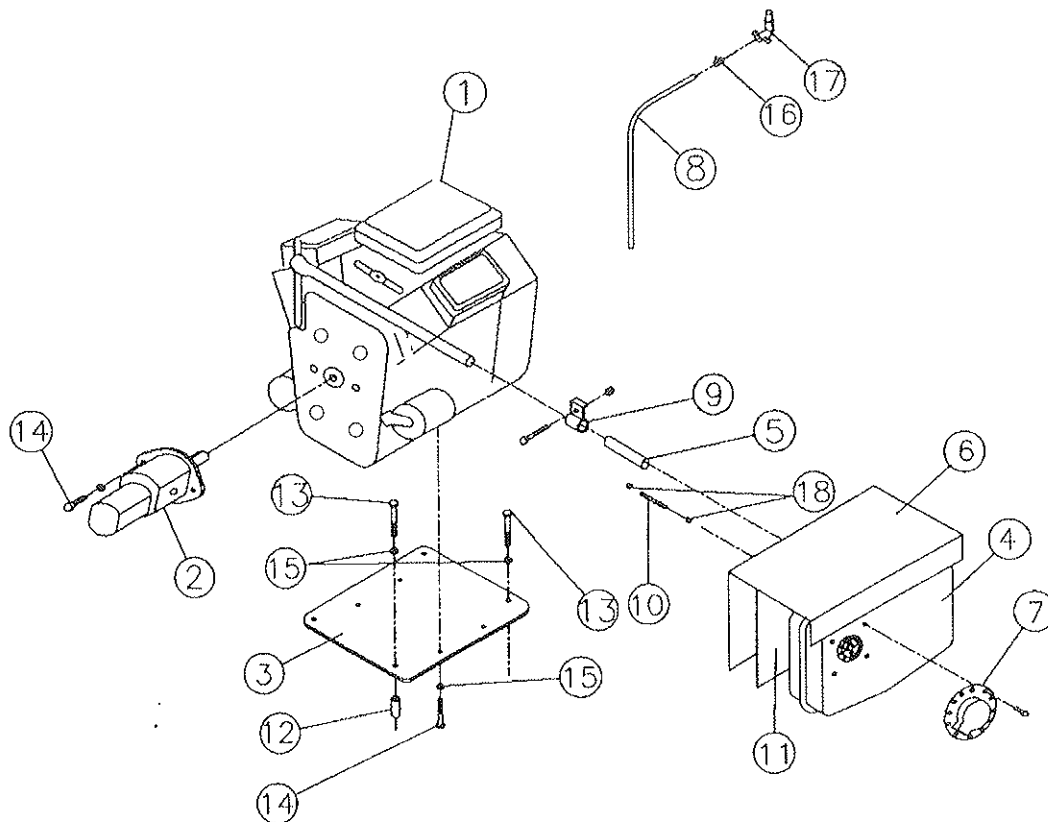
FIGURE 22

# MAINTENANCE

## ENGINE OPTIONS (Note - Parts Not Shown Twice Are Common To Both Gas And Diesel Models)

Item	Part No.	Description	No. Used
90	1117152	Gas Engine - Briggs & Stratton 20 hp .....	1
91	1123204	Muffler c/w Heat Shield and Clamp .....	1
92	1123205	Muffler Deflector .....	1
93	1230683	Muffler Spacer .....	2
94	1117125	Throttle Assembly .....	1
95	1123188	Gas Line .....	1
96	1123184	1/4" Gas Line Hose Clamps .....	2
97	1230541	Battery Cable .....	2
98	1231050	Motor Base Plate - Gas Engine .....	1
99	1230528	Motor Base Plate Spacer .....	4
100	1230351	Pump Mount Bracket - Gas Engine .....	1
101	1230365	Pump Coupler - Diesel Engine .....	1
102	See Page 23	Hydraulic Pump, B & P .....	1
103	1117074	Half Coupling .....	1
104	1117076	Spider .....	1
105	1117083	Half Coupling - Gas Engine .....	1
106	1105190	Key - Engine .....	1
107	1127207	Key - Pump .....	1
108	1179255	Diesel Engine - Lister Petter #LPA-2 .....	1
109	1117260	Fuel / Return Line .....	2
110	1179261	Barbed Connector - Return Line .....	1
111	1179256	Diesel Keyswitch Box .....	1
112	1179257	Muffler - Diesel Engine .....	1
113	1231065	Muffler Extension .....	1
114	1179258	Air Cleaner Assembly .....	1
115	1231021	Fuel Filter Mount Plate .....	1
116	1179259	Fuel Filter Assembly .....	1
117	1231020	Motor Mount Plate - Diesel Engine .....	1
118	1102004	3/8" x 2 1/2" Bolt .....	4
119	1101954	5/16" x 2" Bolt .....	7
120	1101927	1/4" x 1 3/4" Bolt .....	2
121	1101942	#10 Hex Head Screw .....	2
122	1102578	#10 Hex Nut .....	2
123	1101975	5/16" x 1" U.N.F. Hex Bolt .....	4
124	1102053	1/2" x 2" Bolt .....	4
125	1179262	Muffler Clamp .....	1

# MAINTENANCE



## KOHLER 23 HP ENGINE LAYOUT

Item	Part No.	Description	No. Used
1	1179269	Gas Engine - Kohler 23 Hp .....	1
2	1172970	Twin Hyd. Pump - Splined Shaft .....	1
3	1231053	Motor Base Plate - Kohler .....	1
4	1179275	Muffler .....	1
5	1179276	Muffler Extension .....	1
6	1231058	Heat Shield (Outer) .....	1
7	1179277	Exhaust Deflector .....	1
8	1123183	Fuel Line .....	1
9	1102425	Muffler Clamp .....	1
10	1231069	Muffler Mount Screws .....	4
11	1231049	Heat Shield (Inner) .....	4
12	1230529	Motor Base Plate Spacer .....	2
13	1102004	3/8" x 2 1/2" Bolt .....	4
14	1102003	3/8" x 2" Bolt .....	4
15	1102590	3/8" Lockwasher .....	8
16	1123184	1/4" Gas Line Hose Clamps .....	2
17	1123206	Fuel Shut-Off Valve .....	1
18	1102515	1/4" Nuts .....	8