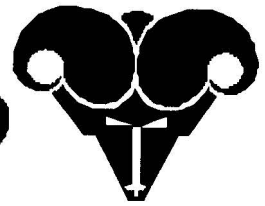


# RAMROD **TASKMASTER**



## SERIES

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# OPERATOR'S MANUAL 900T MINI-SKID®

**910T**

---

910T TRACK PARTS DIAGRAM AT  
REAR OF MANUAL

Ramrod Equipment  
(A Division of Leon's Mfg. Company)

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# INTRODUCTION

## TO OUR CUSTOMER:

**RAMROD EQUIPMENT** is pleased that you have chosen a **RAMROD MINI SKID**. This loader is a simple, compact power source designed and manufactured to give you years of dependable service.

Read this Manual carefully before operating the Mini-Skid. It contains the necessary information for safe and proper operating, routine servicing and preventive maintenance.

We also recommend that you carefully read the Engine Manufacturer's Manual before operating the Mini-Skid. Do not neglect the maintenance that is recommended.

The reference to right-hand and left-hand used throughout this Manual refers to the position when operating the machine, facing forward.

For any additional information required, please refer to your **RAMROD Dealer**.

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July 1999  
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# TABLE OF CONTENTS

SECTION	PAGE
<b>I. SAFETY</b> .....	1
Operator Loader Specifications .....	1
Safety Precautions .....	1 & 2
<b>II. CONTROLS</b> .....	3
<b>Engine Controls - Kohler 23 HP Gasoline</b> .....	3
Ignition Switch .....	3
Throttle Control .....	3
Choke Control .....	3
<b>Engine Controls - Briggs &amp; Stratton 20 HP Gasoline</b> .....	4
Ignition Switch .....	4
Throttle Control .....	4
Choke Control .....	4
<b>Engine Controls - Diesel</b> .....	5
Ignition Switch .....	5
Throttle Control .....	5
Fuel-Shut Off .....	5
<b>Control Panel</b> .....	6
Lift Control .....	7
Tilt Control .....	7
Auxiliary Control .....	7
Secondary Controls .....	7
Auxiliary Lever Operation .....	7
Attachment Lock Pins .....	8
<b>III. OPERATION</b> .....	9
Pre-Starting Inspection and Preparation .....	9
Starting Procedure .....	9
Shut-Off Procedure .....	10
<b>Mounting Attachments</b> .....	11
Installation of Attachment .....	11
Removal of Attachment .....	11
<b>Operational Procedure</b> .....	12
Operating Suggestions .....	12
Filling and Dumping A Bucket .....	12
Digging With A Bucket .....	13
Levelling .....	13
Backfilling .....	14
Transporting The Loader .....	14
<b>IV. MAINTENANCE</b> .....	15
Using The Parts List .....	15
Ordering Parts .....	15
Applied Warranties .....	15
Assembly Diagram .....	16
Assembly Parts List .....	17 & 18
Engine Diagram .....	19
Engine Option List .....	20
Kohler 23 HP Engine Layout .....	21
Hydraulic Parts Layout .....	22
Maintenance Parts List .....	23
Fuel, Lubricants and Capabilities .....	24
<b>Engine Maintenance</b> .....	25
Engine Oil Level Check .....	25
Battery Maintenance .....	25
<b>Hydraulic/Hydrostatic System Maintenance</b> .....	26
Hydraulic Oil Level Check .....	26
Changing Hydraulic Oil .....	26
Changing Hydraulic Filter .....	26
<b>Final Drive Maintenance</b> .....	26
Drive Chain .....	26
<b>Periodic Maintenance and Service Schedule</b> .....	27
Trouble Shooting .....	28
<b>900T LOADER SPECIFICATIONS</b> .....	29 & 30
Decals .....	31 & 32
Mini-Skid Identification .....	33
<b>RAMROD WARRANTY</b> .....	34
New Loader Warranty Registration Form - RAMROD Copy .....	36
New Loader Warranty Registration Form - Dealer Copy .....	38
New Loader Warranty Registration Form - Customer Copy .....	40

# I. SAFETY

## OPERATE MINI-SKID SAFELY

IMPROPER OPERATION OF THIS MINI-SKID MAY RESULT IN SERIOUS INJURY. BEFORE OPERATING THIS MINI-SKID, OPERATORS MUST HAVE PROPER INSTRUCTIONS, BE FAMILIAR WITH THE SAFETY PRECAUTIONS, AND HAVE READ THIS AND THE ENGINE MANUFACTURER'S MANUAL THOROUGHLY.

THIS SAFETY ALERT SYMBOL POINTS OUT IMPORTANT SAFETY PRECAUTIONS.



OPERATORS MUST UNDERSTAND CAPABILITIES AND LIMITATIONS OF THE EQUIPMENT, WITH RESPECT TO SPEED, BRAKING, STEERING, STABILITY AND LOAD CHARACTERISTICS BEFORE STARTING TO OPERATE.

NEW OPERATORS MUST CHECK ALL CONTROLS IN A SAFE, OPEN AREA BEFORE STARTING WORK.









### WARNING

*This Decal Advises Of Actions Or Danger Which Can Cause Personal Injury.*

























### IMPORTANT

*This Decal Identifies Procedures Which Must Be Followed To Prevent Damage To The Mini-Skid.*

## SAFETY PRECAUTIONS

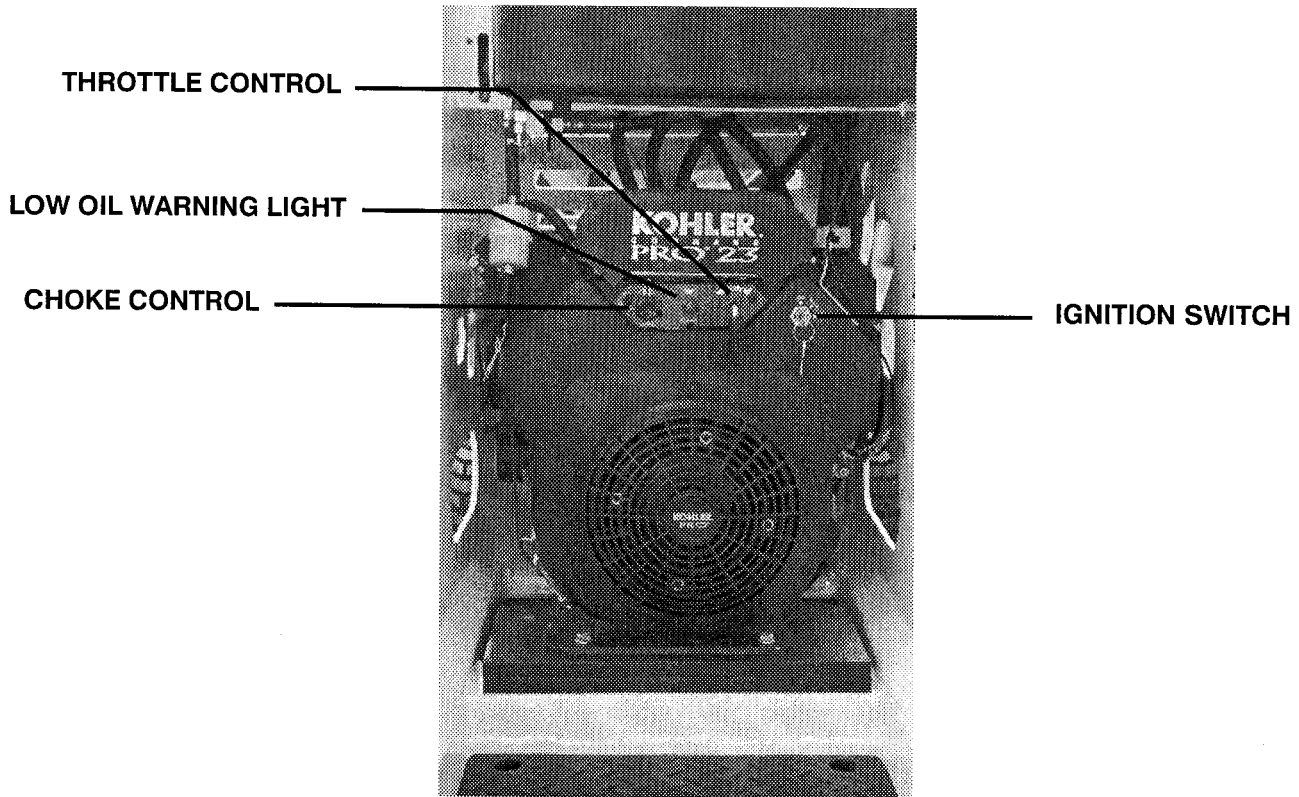
-  READ YOUR OWNER'S MANUAL AND ALL SUPPLEMENTS BEFORE OPERATING YOUR MINI-SKID.
-  WHEN LEARNING TO OPERATE, PROCEED SLOWLY AND CAREFULLY.
-  WEAR CLOSE FITTING PROTECTIVE CLOTHING AND SHOES.
-  DO NOT PLACE FEET UNDER THE PLATFORM.
-  DO NOT OPERATE ANY OF THE CONTROL LEVERS INCLUDING AUXILIARY POWER TAKE-OFF UNLESS YOU ARE STANDING WITH BOTH FEET ON THE PLATFORM AND FIRMLY HOLDING THE GRIP HANDLES.
-  DO NOT JERK THE CONTROL LEVERS, USE A STEADY EVEN MOTION.

## SAFETY PRECAUTIONS - CONTINUED

-  KEEP HANDS, FEET AND CLOTHING AWAY FROM ALL MOVING PARTS AND CYLINDERS.
-  DO NOT RIDE IN BUCKET.
-  DO NOT ALLOW MORE THAN ONE PERSON ON THE MINI-SKID AT ANY TIME.
-  DO NOT ALLOW ANY OTHER PERSON OR ANIMAL CLOSE THE MINI-SKID WHILE IN OPERATION.
-  WATCH FOR OTHER PEOPLE AND EQUIPMENT.
-  KEEP THE BUCKET LOW WHEN TRAVELLING, TURNING OR CHANGING SPEED.
-  TRAVEL SLOWLY OVER ROUGH TERRAIN.
-  BEWARE OF TRENCHES, HOLES, AND SIDE SLOPES.
-  DO NOT DRIVE THE MINI-SKID ACROSS STEEP SLOPES.
-  LOAD, UNLOAD AND TURN AROUND ON FLAT, LEVEL GROUND ONLY.
-  ENSURE ADEQUATE VENTILATION WHEN USING THE MACHINE IN CONFINED SPACES.
-  DO NOT CARRY LOAD WITH ARMS IN A RAISED POSITION. ALWAYS CARRY LOADS CLOSE TO THE GROUND. DO NOT STEP OFF PLATFORM WITH THE LOAD RAISED.
-  TO AVOID FREE-FALL OF LOAD WHEN LOWERING LIFT ARMS, DO NOT PUSH LIFT ARM LEVER FULLY FORWARD.
-  DO NOT EXCEED RATED LOAD CAPACITY.
-  ALWAYS LOWER THE BUCKET AND SHUT OFF THE ENGINE BEFORE LEAVING THE MACHINE.
-  AVOID PARKING ON A SLOPE. IF IT IS NECESSARY, PARK ACROSS THE GRADE, GROUND THE BUCKET AND BLOCK THE WHEELS.
-  WHEN HOOKING UP ATTACHMENTS TO THE MACHINE, CHECK TO BE SURE LOCK PINS ARE FULLY ENGAGED.
-  DO NOT PLACE ANY PART OF THE OPERATOR'S BODY OR ALLOW ANYONE UNDER MINI-SKID ARMS OR ATTACHMENTS.
-  DO NOT REMOVE PROTECTIVE GUARDS ON MACHINE EXCEPT IN THE CASE OF MAINTENANCE.
-  DO NOT LUBRICATE, ADJUST OR REPAIR THE MACHINE WITH THE ENGINE RUNNING.
-  NEVER FUEL A HOT MACHINE.
-  DO NOT SMOKE WHEN FUELING OR OPERATING THE MACHINE.
-  ALWAYS READ THE OWNER'S MANUAL FOR PROCEDURES FOR SERVICING AND MAINTENANCE OF THE MINI-SKID.
-  REMEMBER, **SAFETY FIRST.**

## II. CONTROLS

It is necessary to become familiar with the location and purpose of each control before operating the Mini-Skid.



**FIGURE 1 - GAS ENGINE CONTROLS**  
**ENGINE CONTROLS - KOHLER 23 HP GASOLINE**

### **IGNITION SWITCH - FIGURE 1**

The ignition switch is a three position switch. Clockwise from the OFF position are the ON and START position.

### **THROTTLE CONTROL - FIGURE 1**

When the throttle control lever is set fully to the right the engine is at idle speed. Pushing the control to the left increases the engine speed.

### **CHOKE CONTROL - FIGURE 1**

Pull choke control out to start a cold engine. As the engine warms up push choke control in gradually.

### **LOW OIL WARNING LIGHT - FIGURE 1**

This light illuminates if the engine oil is low. Stop the engine and add oil immediately if this light comes on.

### **IMPORTANT**

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

### **IMPORTANT**

*For Maximum Power While Working  
The Engine Should Be Running At Full  
Throttle.*

## II. CONTROLS

It is necessary to become familiar with the location and purpose of each control before operating the Mini-Skid.

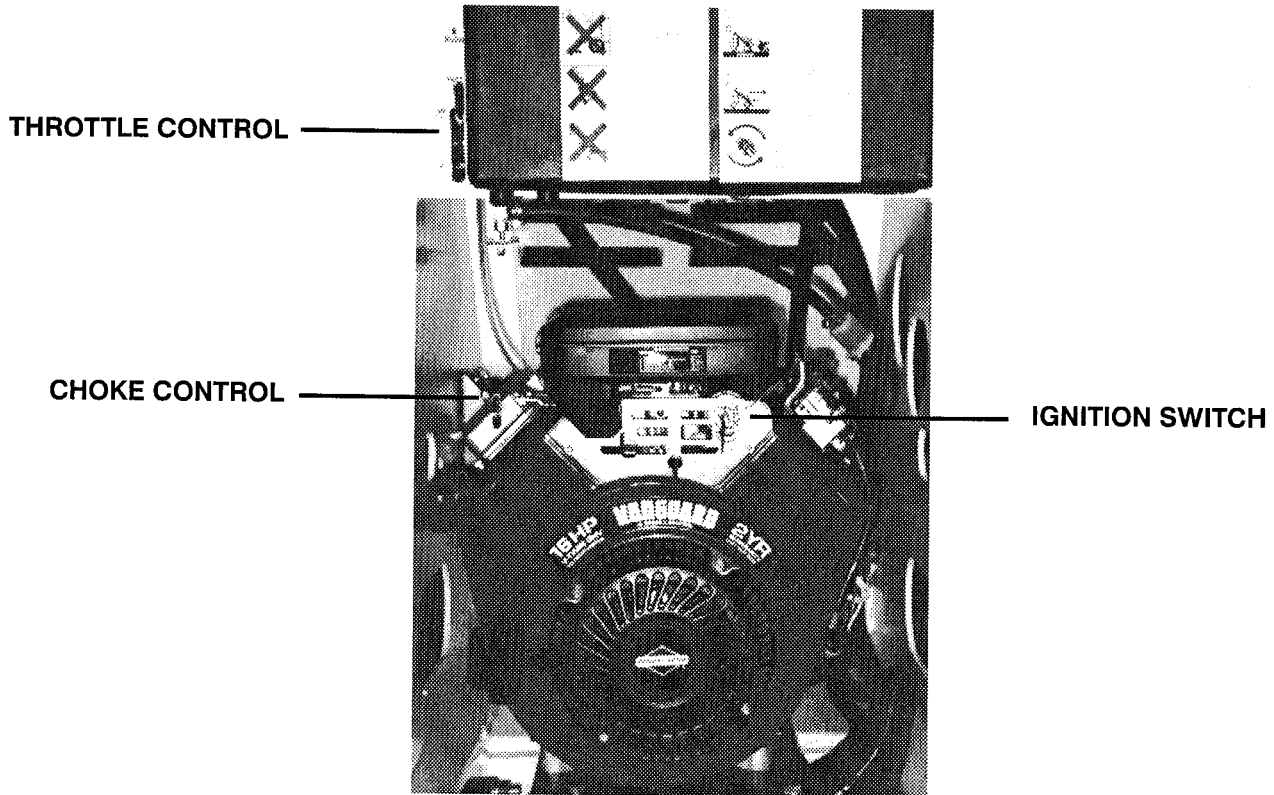


FIGURE 1A - GAS ENGINE CONTROLS

### ENGINE CONTROLS - BRIGGS & STRATTON 20 HP GASOLINE

#### IGNITION SWITCH - FIGURE 1A

The ignition switch is a three position switch. Clockwise from the OFF position are the ON and START position.

#### THROTTLE CONTROL - FIGURE 1A

When the throttle control is set fully up the engine is at idle speed. Pushing the control downward increases the engine speed.

#### CHOKE CONTROL - FIGURE 1A

Pull choke control out to start a cold engine. As the engine warms up push choke control in gradually.

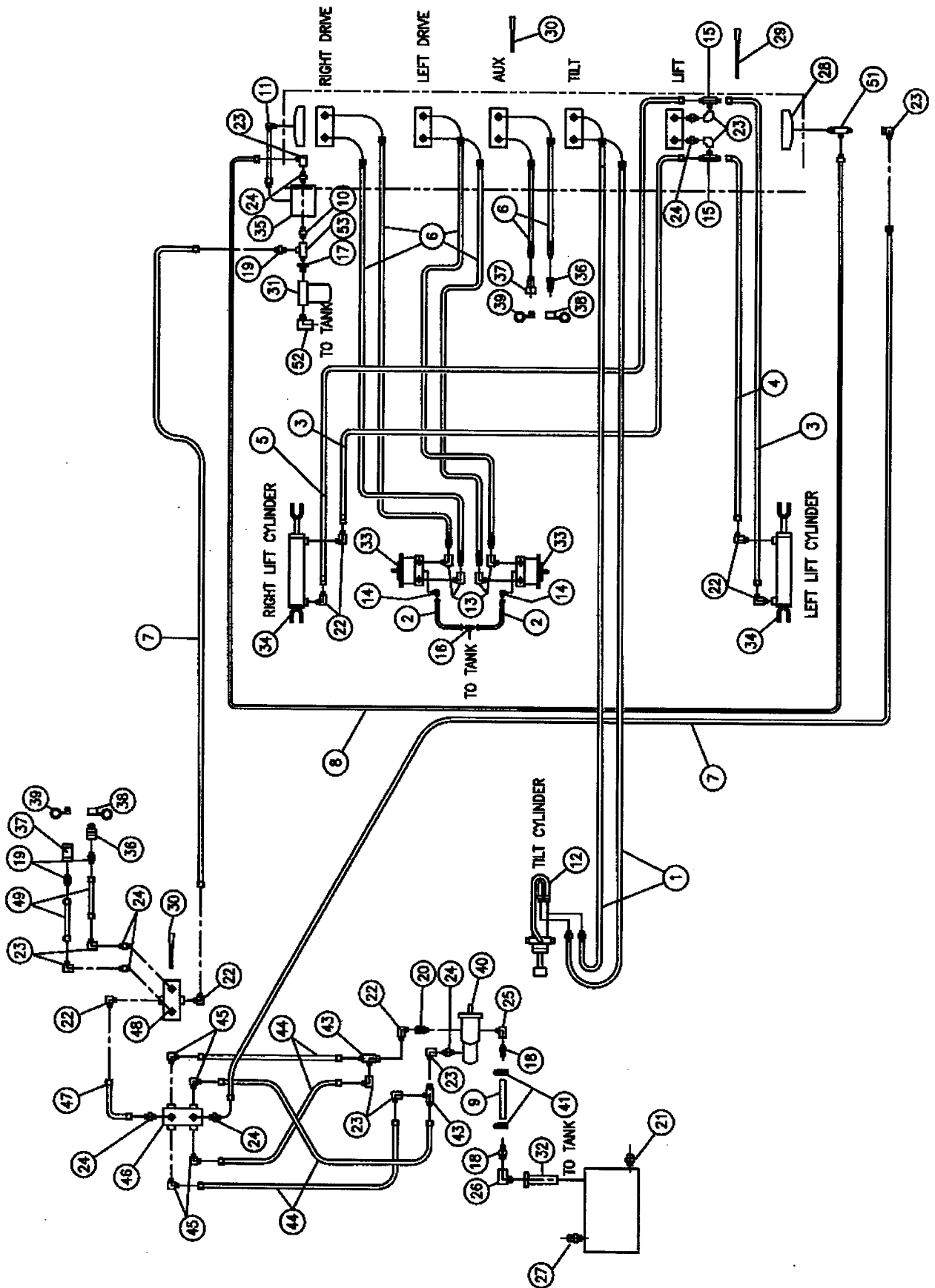
### IMPORTANT

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

### IMPORTANT

*For Maximum Power While Working The Engine Should Be Running At Full Throttle.*

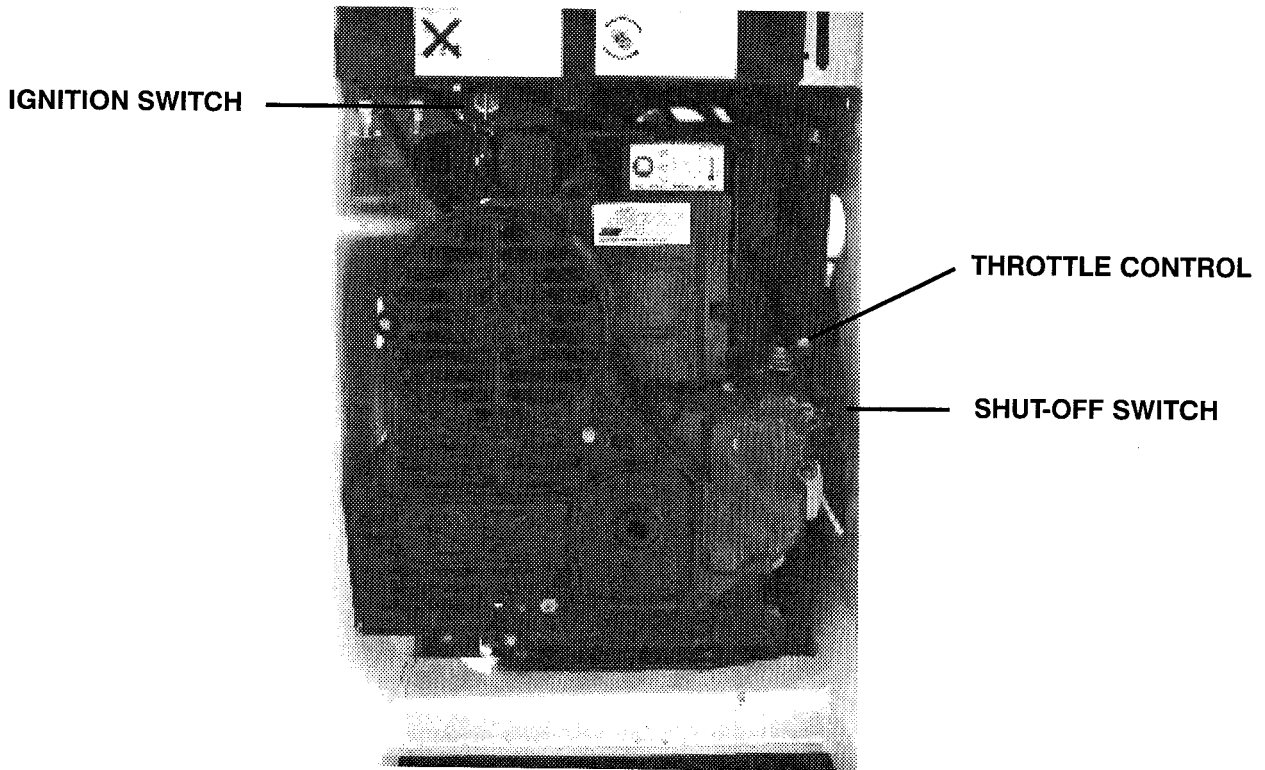
HYDRAULIC PARTS LAYOUT





## II. CONTROLS

It is necessary to become familiar with the location and purpose of each control before operating the Mini-Skid.



**FIGURE 2 - DIESEL ENGINE CONTROLS**

### **ENGINE CONTROLS - DIESEL**

#### **IGNITION SWITCH - FIGURE 2**

The ignition switch is a three position switch. Clockwise from the OFF position are the HEAT and START position.

#### **THROTTLE CONTROL - FIGURE 2**

When the throttle control is set fully left the engine is at idle speed. Pushing the control sideways increases the engine speed.

#### **FUEL SHUT-OFF - FIGURE 2**

Shuts off fuel, pull back to stop and push forward to run.

### **IMPORTANT**

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

### **IMPORTANT**

*For Maximum Power While Working  
The Engine Should Be Running At Full  
Throttle.*

# CONTROLS

The "Taskmaster" 900T features two independent hydraulic systems for loader and attachment operation.

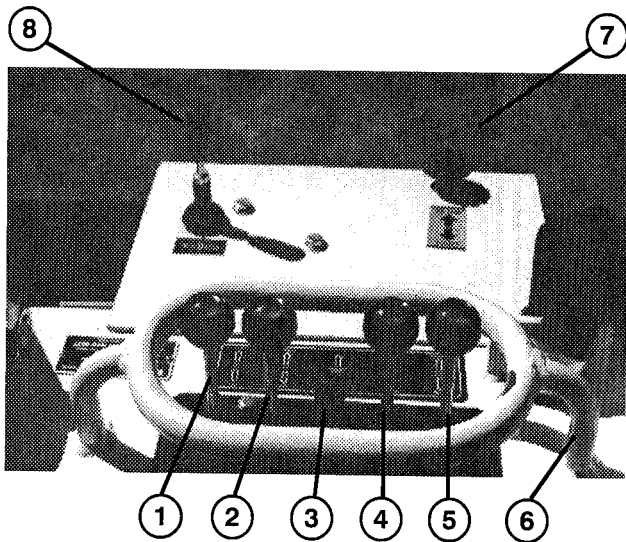
Each of these systems is powered by a separate hydraulic pump. The primary pump produces approximately 9 G.P.M. at full engine speed, while the secondary pump produces approximately 3 G.P.M.

One system is dedicated to attachment operation only, while the second system controls all other functions. The pumps can be instantly switched back and forth between the two systems as the need arises. For example, for normal loader operation, one would have the large, primary pump operating the loader.

However, if one was trenching, one would switch the pumps so that the primary pump was operating the trencher drive, while the small secondary pump was operating the loader thus allowing the operator to drive slowly while trenching.

All functions are controlled from the top consol of the Mini-Skid as shown in **Figure 3**.

**FIGURE 3 - CONTROL PANEL**



### PRIMARY CONTROLS

1. Lift Arm Lever
2. Tilt Lever
3. Auxiliary Lever-Cylinder Operation
4. Left Hand Drive Lever
5. Right Hand Lever
6. Grip Handle

### SECONDARY CONTROLS

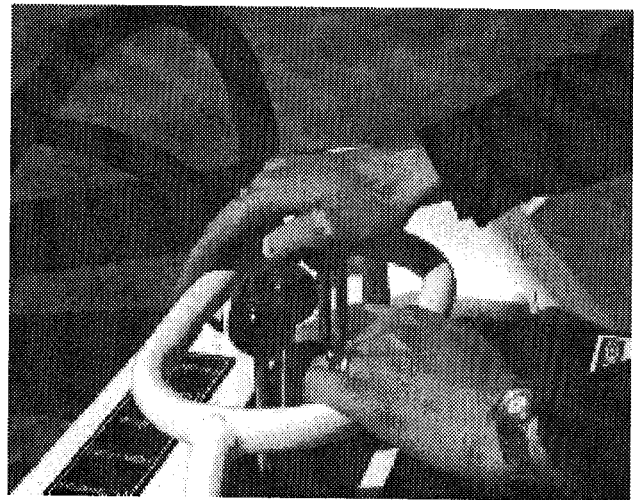
7. Flow Selector Knob
8. Auxiliary Lever - Hydraulic Motor Operation

The left hand drive lever controls the wheels on the left hand side and the right hand drive lever controls the wheels on the right hand side.

Engage the drive levers slowly because even a small movement of the levers will cause motion. All lever movements should be smooth and gradual. To drive the Mini-Skid straight forward, move both control levers forward the same amount. To drive the Mini-Skid straight backward, move control levers back the same amount.

The Mini-Skid is steered by moving one lever further forward than the other. To turn left, move the right lever further ahead than the left lever; to turn right, move the left lever further ahead than the right lever. For the Mini-Skid to for into a spin-turn, or "Skid Steer", move one lever forward and the other backward the same amount.

**FIGURE 4**



The "taskmaster" features single-handed steering. For normal operation, the most comfortable hand positions is to operate the two steering levers with the **palm** of the right hand, with the fingers gripping the grip handle. Flexing the fingers will allow forward travel, and simply rotating the palm will allow normal steering. To reverse, slip the palm back to the rear of the grip handle, and use the tips of the fingers to pull the steering levers backwards.

This position will allow for more precise control of the unit. At the same time, the left hand should grip the grip handle for operator stability, but can also be used to operate the tilt and dump functions as required.



## WARNING

*Do Not Move Any Of The Control Levers Unless Standing With Both Feet On The Platform And Holding The Grip Handles.*

# CONTROLS



## WARNING

Keep **BOTH HANDS** on the grip handle at all times when operating the machine.



## WARNING

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

### LIFT CONTROL LEVER - FIGURE 3

The outside control lever located on the left hand side controls the lift. Pushing the lever forward lowers the lift arm and pulling the lever back raised the lift arm. In these two positions, the lever is spring centered to neutral upon release of the lever.

### TILT CONTROL LEVER - FIGURE 3

The inside control lever located on the left hand side controls the tilting action of attachments such as buckets, forks, etc. Pulling the lever back tilts the attachment back. The lever is spring centered to neutral upon release.

## IMPORTANT

*Ensure That The Auxiliary Lever Is Kept In Neutral When Not Being Used To Avoid Wasting Power. Engine Is Difficult To Start If Lever Is Engaged. Hydraulic Oil May Also Overheat.*

### AUXILIARY CONTROL LEVER-CYLINDER OPERATION - FIGURE 3

The 900T features two separate auxiliary systems. The auxiliary lever shown as item #3 in **Figure 3** is part of the primary controls, and is located between the main levers. This control is connected to the pair of quick couplers located on the right side of the loader arms (**Figure 9A**).

This lever can be used to operate attachments such as post hole augers, trenchers, brooms, and so on, but is mainly intended to operate attachment hydraulic **Cylinders**. This would include such attachments as angling dozer blades, grapple forks, paving stone movers, and loose material handlers, which must operate from this control **only**.

Pushing this lever forward extends the hydraulic cylinder, while pulling it back reverses the motion. This lever is not spring centered and must be returned to neutral (centre position) manually.

### SECONDARY CONTROLS: FLOW SELECTOR KNOB - FIGURE 3

The flow selector knob (item 7) is located ahead and to the right of the primary controls. This knob switches the pumps back and forth between the primary and secondary circuits. This is a "push-pull" knob, which moves up and down.

When this knob is pushed down, the large, primary pump is connected to the loader drives, and the smaller secondary pump is connected to the secondary auxiliary valve. This would be the normal position for most loader operations.

When this knob is pulled up, however, the pumps are reversed so that the larger, primary pump is connected to the auxiliary valve, while the smaller pump is operating the loader drives. This would be the position used when operating attachments such as trenchers, sweepers, roto-tillers, snowblowers, and post hole augers, as it provides for increased speed and power to the attachment while allowing a low speed drive for the loader itself.

As well, when the selector is in this position, it provides a low-speed drive which can be used to allow new operators a learning period to become familiar with operating the Mini-Skid.

When moving this knob up or down, stop the machine, reduce engine speed to an idle, and push or pull the knob quickly and cleanly to the new position. **Do not leave this knob in a middle position. Be sure it is either fully up or fully down.**

### AUXILIARY LEVER-HYDRAULIC MOTOR OPERATION - FIGURE 3

This lever is located to the left and forward of the primary controls, and operates the set of auxiliary couplers located on the left front of the body as shown in **Figure 9B**.

This is a dedicated hydraulic motor control valve, to be used to operate such attachments as trenchers, post hole augers, sweepers, hammers, and similar units. **Do not connect hydraulic cylinders to this control!** When this control is in the neutral (center) position, the auxiliary couplers are connected together,

# CONTROLS

which provides a "free-wheeling" or "slow-down" position for hydraulic motors, preventing attachment damage and internal pressure buildups.

However, **a hydraulic cylinder connected to this line will not hold pressure in the neutral position and will be free to move!** This can result in damage or injury.

**Always use the auxiliary couplers located on the loader lift frame for hydraulic cylinder use!**

This lever operates side to side, moving the lever to the left provides oil pressure to the left coupler, while

moving it to the right pressurizes the right coupler. Centering the lever provides a neutral, off position. This lever locks in all three positions and must be moved manually between them.

**Important! Ensure that this auxiliary lever is in the central neutral position when not being used to avoid wasting power. Engine is difficult to start, power is greatly reduced, and the hydraulic oil will overheat if this lever is engaged without an attachment connected to it!**

## ATTACHMENT LOCK PINS

### ATTACHMENT LOCK PINS

The "Taskmaster" tool bar design allows changing from one attachment to another quickly and easily, without having to remove pins.

Attachments are secured on the unit with two spring loaded pins. Rotating the handles on the pins one-half of a turn moves the pins from the locked to the unlocked position.

To **unlock** attachments, rotate both pins so that their handles are both pointing to the **outside** of the tool bar, as shown in **Figure 5**.

To **lock** attachments, rotate both pins inwards so that both handles are pointing towards the **center** of the machine as shown in **Figure 6**. This will allow the springs to push the pins downwards through the mounting holes in the attachment and secure it to the unit.

LOCK PINS DISENGAGED

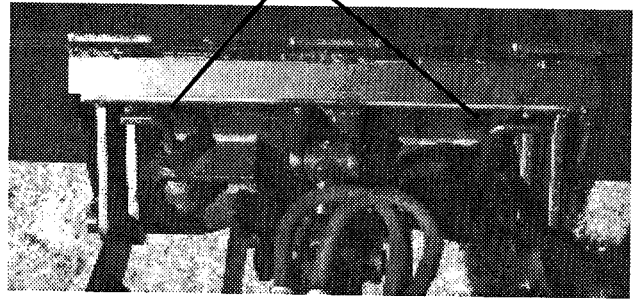


FIGURE 5

LOCK PINS ENGAGED

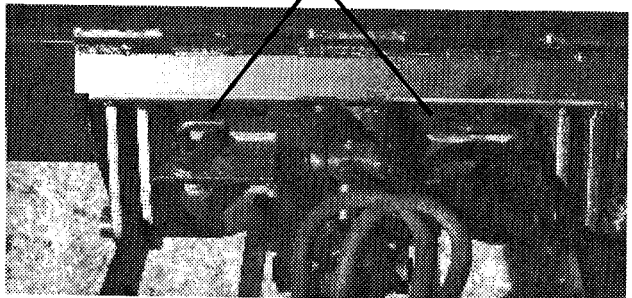


FIGURE 6



### WARNING

*The design of the quick attach system is such that attachments can be lifted and carried without the lock pins being engaged. Before using any attachment, check to be sure that the lock pins are fully engaged and properly in place. The attachment will fall off when dumped if the lock pins are not engaged, resulting in possible damage or injury.*



### WARNING

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

## III. OPERATION

You can take full advantage of all the features of your **RAMROD Mini-Skid** by following the operating information presented here. The Mini-Skid has been designed to do a lot of work with a minimum of operating fatigue.

### PRE-STARTING INSPECTION AND PREPARATION

Before you start the Mini-Skid for the first time each day, perform the following checks and service:

1. Check engine crankcase oil level.
2. Check engine fuel and open fuel shut-off valve if closed.
3. Check hydraulic fluid level in tank.
4. Check for fuel, engine oil or hydraulic leaks. -WARNING- Never check for hydraulic leaks with your bare hand. High pressure fluid could penetrate your skin and cause injury.
5. Visually inspect all hoses, lines, fittings, tires, pivot points, mounting pins, nuts and bolts, safety shields and decals for possible failure or looseness.
6. Check that all controls are in the neutral position.



### WARNING

*Do Not Move Any Of The Control Levers Unless Standing With Both Feet On The Platform And Holding The Grip Handles.*

### STARTING PROCEDURE - GASOLINE ENGINE

1. Push the throttle lever down slightly.
2. Pull choke control completely out.
3. Turn the ignition switch to "ON" and then through to the "START" position. (If the engine fails to start by cranking for 10 seconds, wait 5 seconds before trying again).
4. As the engine warms up, push back the choke control gradually.
5. Set the throttle lever for idling speed. Avoid excessive engine speed during warmup.
6. To restart a warm engine - move throttle control slightly and turn ignition key to "START".

### IMPORTANT

*Do Not Crank Engine With Starter For More Than 10 Seconds At A Time, As This Will Overheat The Starter.*

### IMPORTANT

*Ensure Than The Auxiliary Lever Is Kept Neutral When Not Being Used To Avoid Wasting Power. Engine Is Difficult To Start If Lever Is Engaged. Hydraulic Oil May Also Overheat.*

### IMPORTANT

*Do Not Put Mini-Skid Under Full Load Condition Until It Has Had An Adequate Warm-Up Period.*

**NOTE:** For more information regarding engine starting and operation, refer to your Briggs and Stratton "Owner's Manual".

# OPERATION

## 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.

# OPERATION

## 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**.

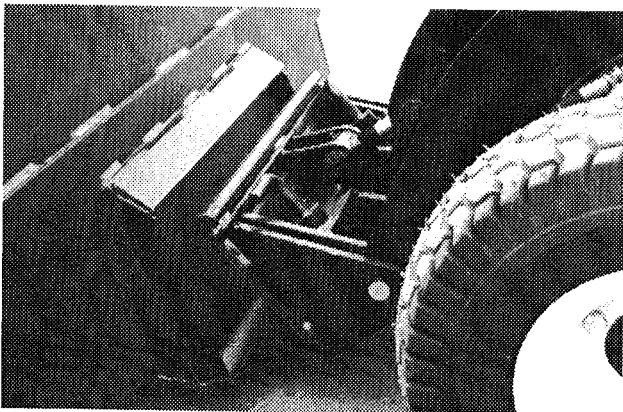


### WARNING

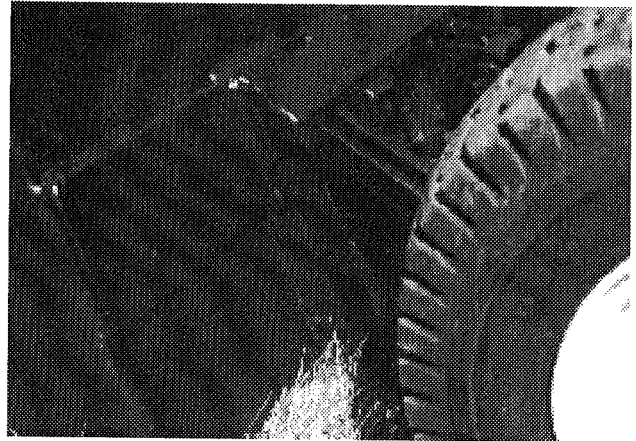
*After Hook-Up To Attachment, Check To Be Sure Lock Pins Are Fully Engaged, And Locked Into Position.*

### REMOVAL OF ATTACHMENT

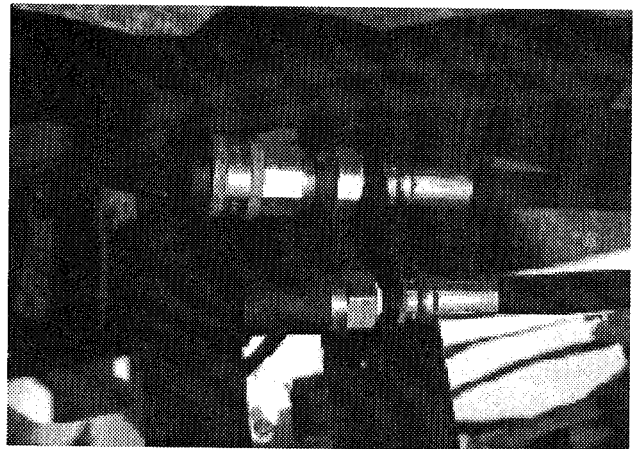
1. Lower lift arms and tilt forward on the attachment so that the attachment is resting on the ground.
2. If attachment is hydraulically equipped, stop the engine, relieve hydraulic pressure in the attachment lines by shifting the auxiliary lever back and forth, and disconnect the attachment hydraulic 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.



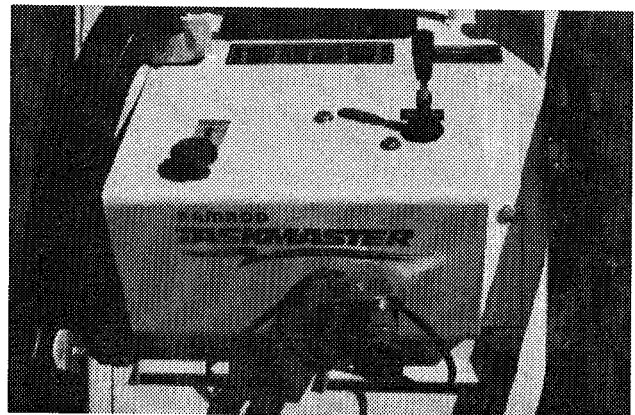
**FIGURE 7**



**FIGURE 8**



**FIGURE 9A**



**FIGURE 9B**

# OPERATION

## 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.

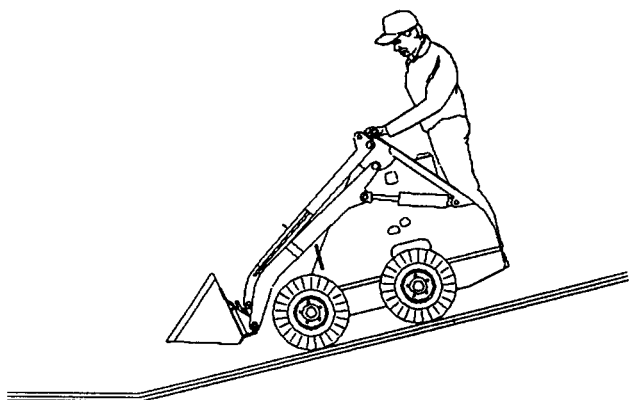


FIGURE 10 - EMPTY BUCKET

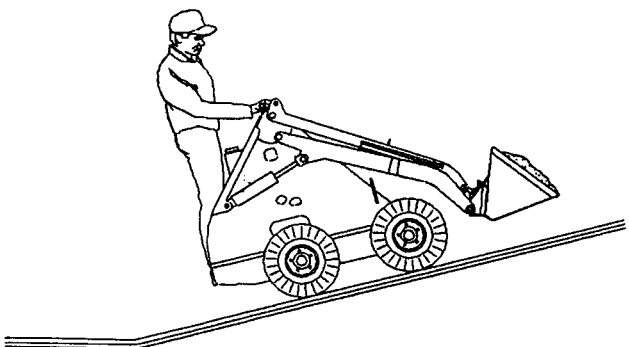


FIGURE 11 - FULL BUCKET

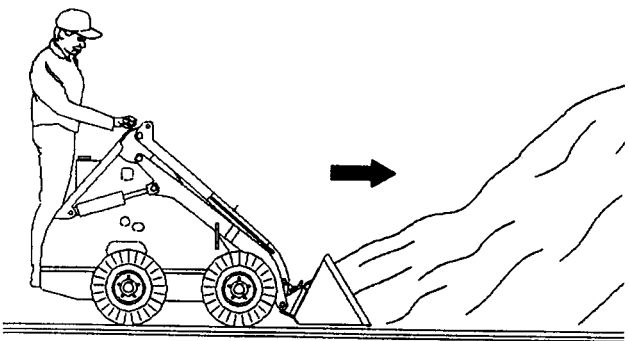


FIGURE 12

### 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.

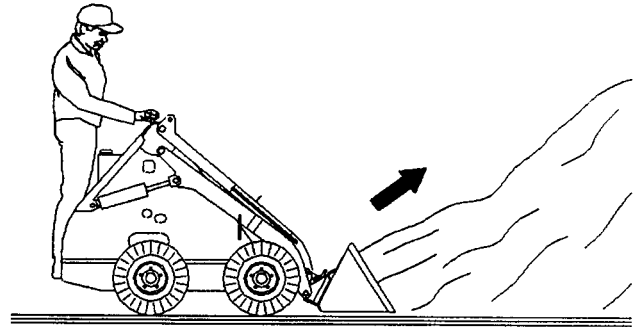


FIGURE 13

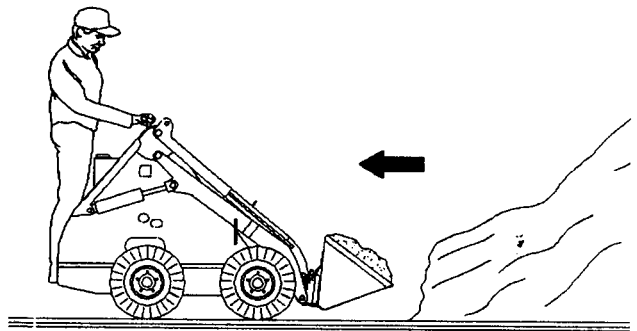


FIGURE 14

## ⚠ 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.

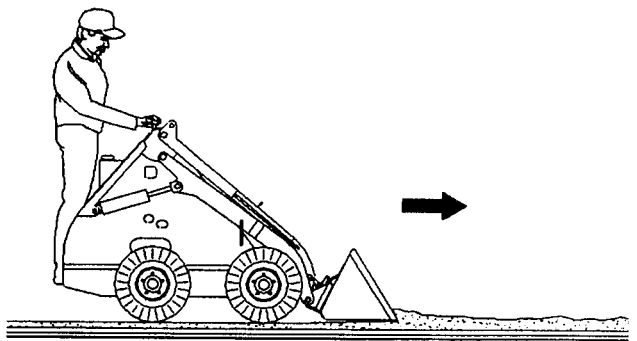


FIGURE 15

### LEVELLING

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

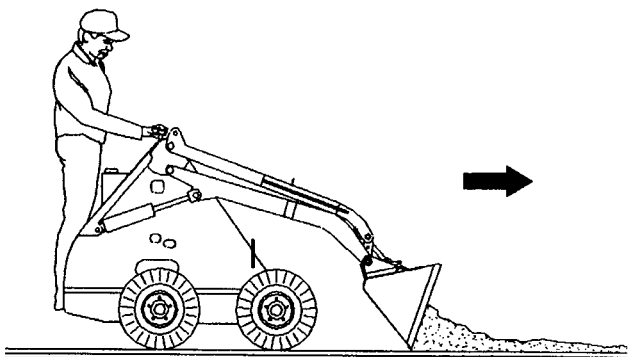


FIGURE 16

## OPERATION

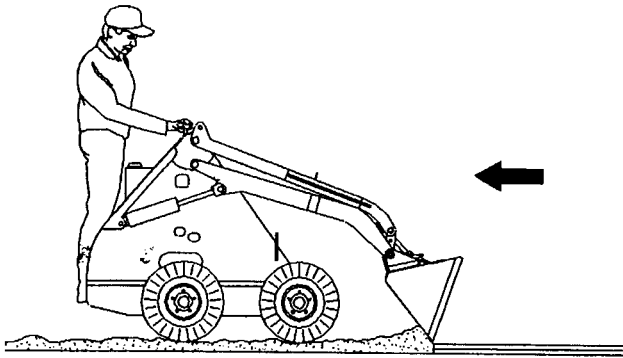


FIGURE 17

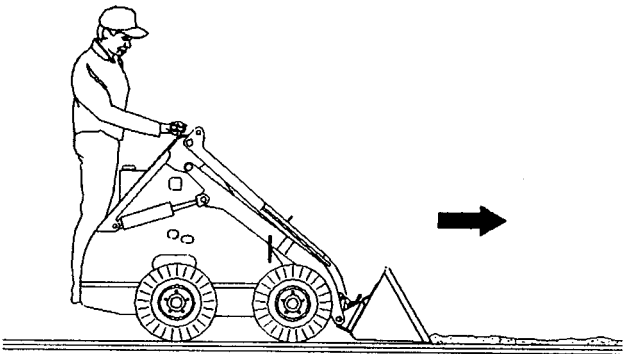


FIGURE 18

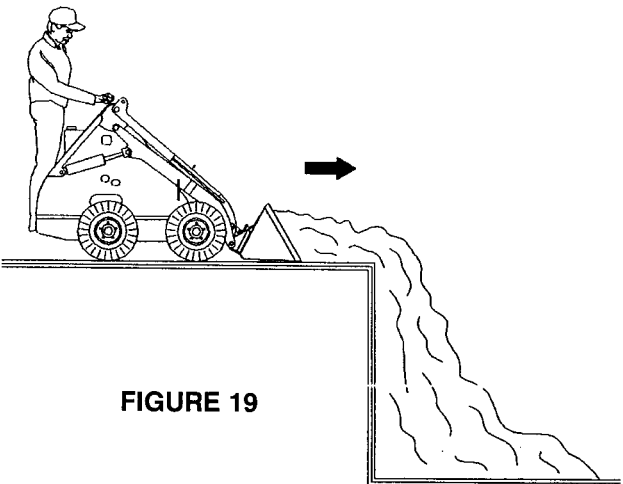


FIGURE 19

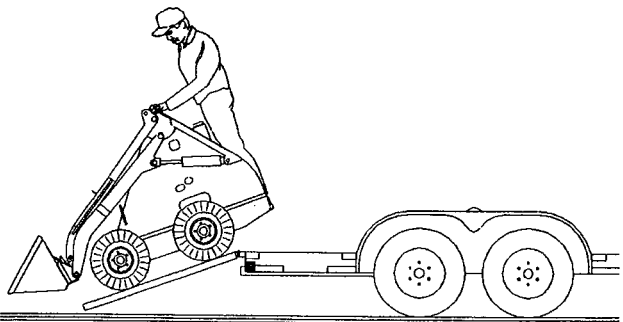


FIGURE 20

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.*

## IV. MAINTENANCE

Maintenance and service of the Mini-Skid is made simple by the use of hydraulics for power transmission and the accessibility to the components.

Maintenance and service intervals recommended in this manual are based on operation under average conditions. When operating the Mini-Skid in severe conditions of heat, cold, dust, high humidity or other extremes, service the loader at more frequent intervals.

Failure to perform regular maintenance will result in damage to the Mini-Skid. Periodic maintenance and service is the key to trouble free operation.

When replacement parts are needed for Mini-Skid components, **Figure 21** on Page 15 shows a complete breakdown of the Mini-Skid. Page 16 & 17 shows the corresponding parts list containing item number, part number, description and quantity.

### USING THE PARTS LIST

**ITEM:**

- The item number is the identifying number from the illustration.

**PART NUMBER:**

- The part numbers that appear in the part number column, are 7 digit numbers by which the components may be identified and ordered from us.

**DESCRIPTION:**

- This column contains the name and description of the part.

**QUANTITY:**

- This column shows the quantity of each part used on that Mini-Skid component.

### ORDERING PARTS

When ordering parts from us, be sure to state:

- 1) Part Number
- 2) Full Description
- 3) Quantity Required

- 4) Mini-Skid Model and Serial Number

**NOTE:** The reference to right and left used throughout this manual, refers to the position when operating the machine, facing forward.

### APPLIED WARRANTIES

Below are listed the warranties for the major components of the Mini-Skid as set by their respective manufacturers at the publication date of this manual. For the complete **RAMROD** warranty, refer to Page 33 of this manual.

For information on the engine warranty, refer to the Briggs and Stratton or Lister-Petter booklet.

**HYDRAULIC PUMP**

- 6 months from the time of 1st delivery to purchaser.

**OVER CENTRE VALVE-FLUID CONTROL**

- 6 months from the time of 1st delivery to purchaser.

**WHEEL MOTOR**

- 18 months from date shipped and/or 12 months from date installed.

**BATTERY**

- 9 months from time installed.

**TIRES**

- 12 months or 25% No Charge replacement on Factory defects. 4 year weather check.

**CYLINDERS - RAM INDUSTRIES**

- 12 months from date installed.

ASSEMBLY  
DIAGRAM

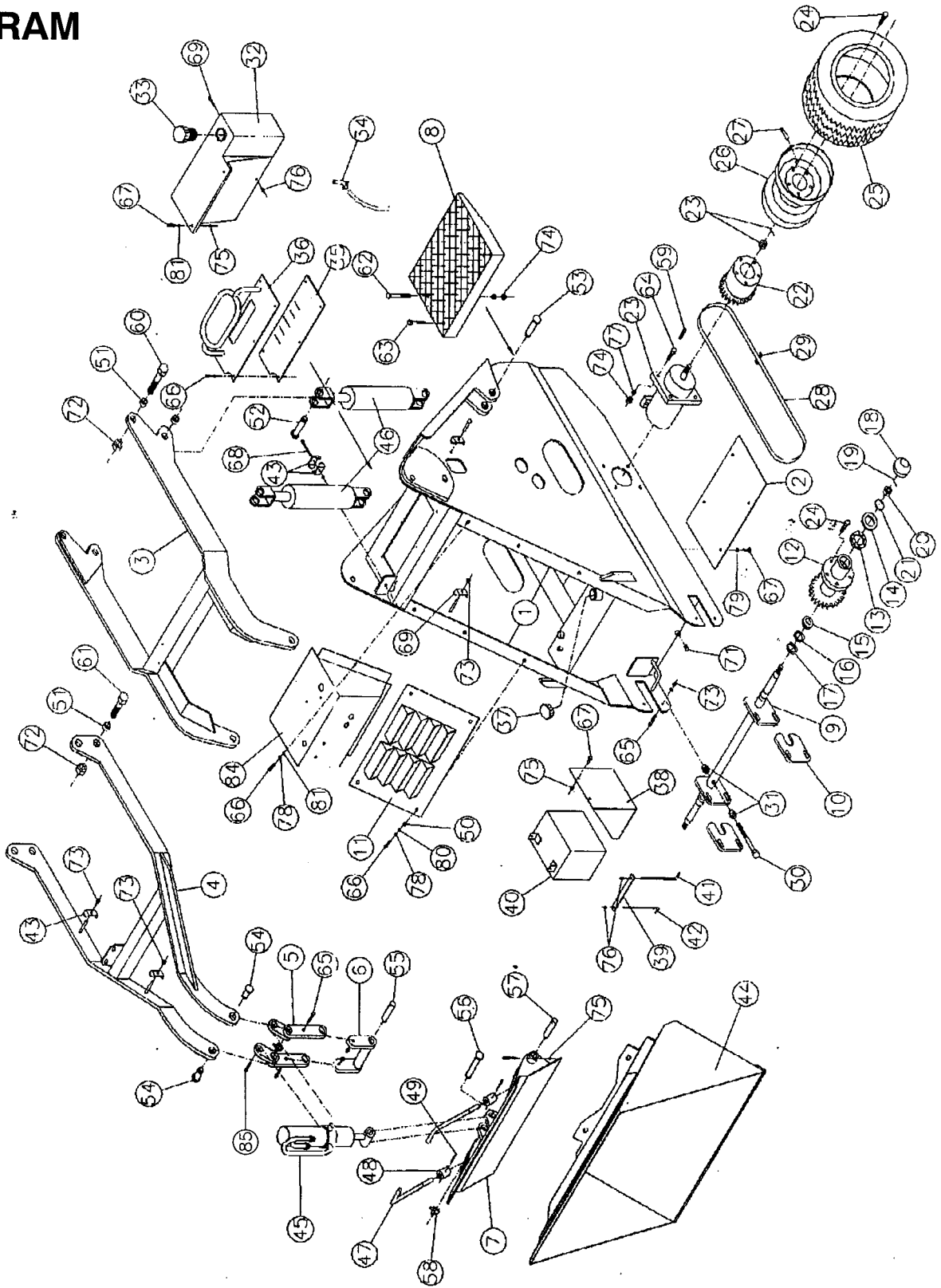


FIGURE 21

# 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	1127099	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

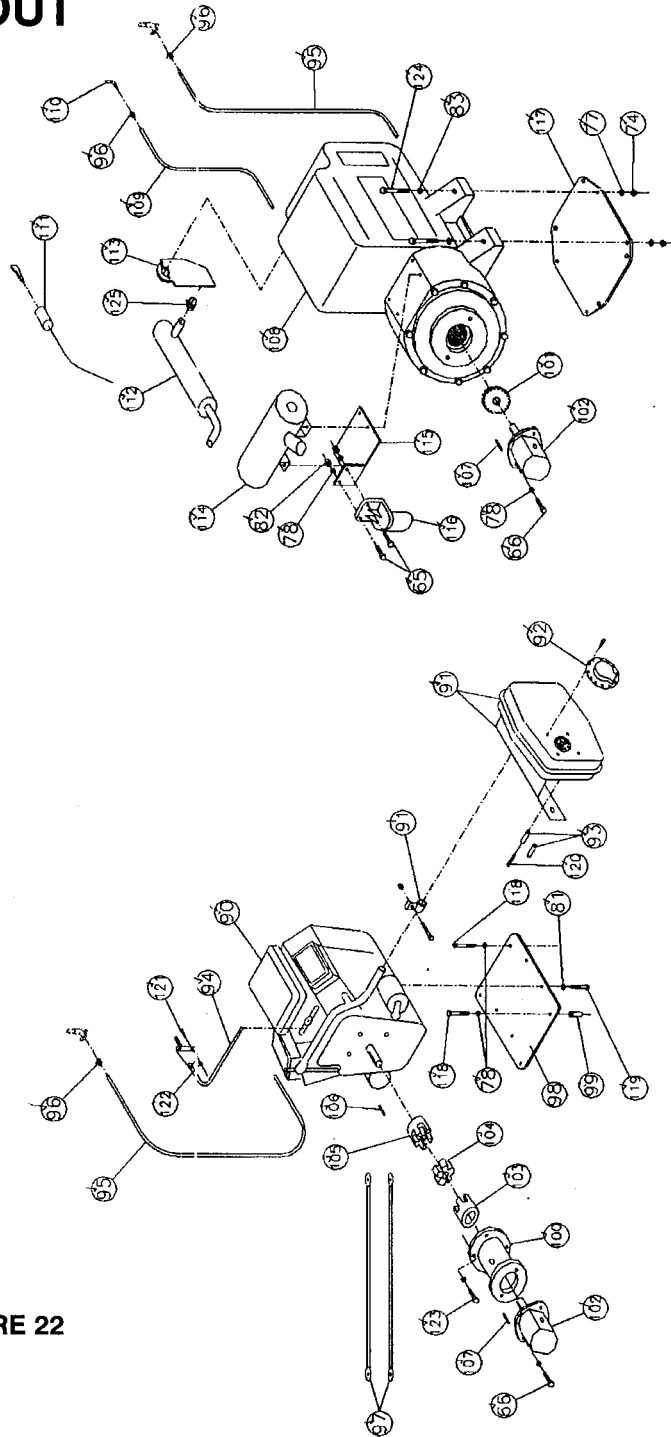


FIGURE 22

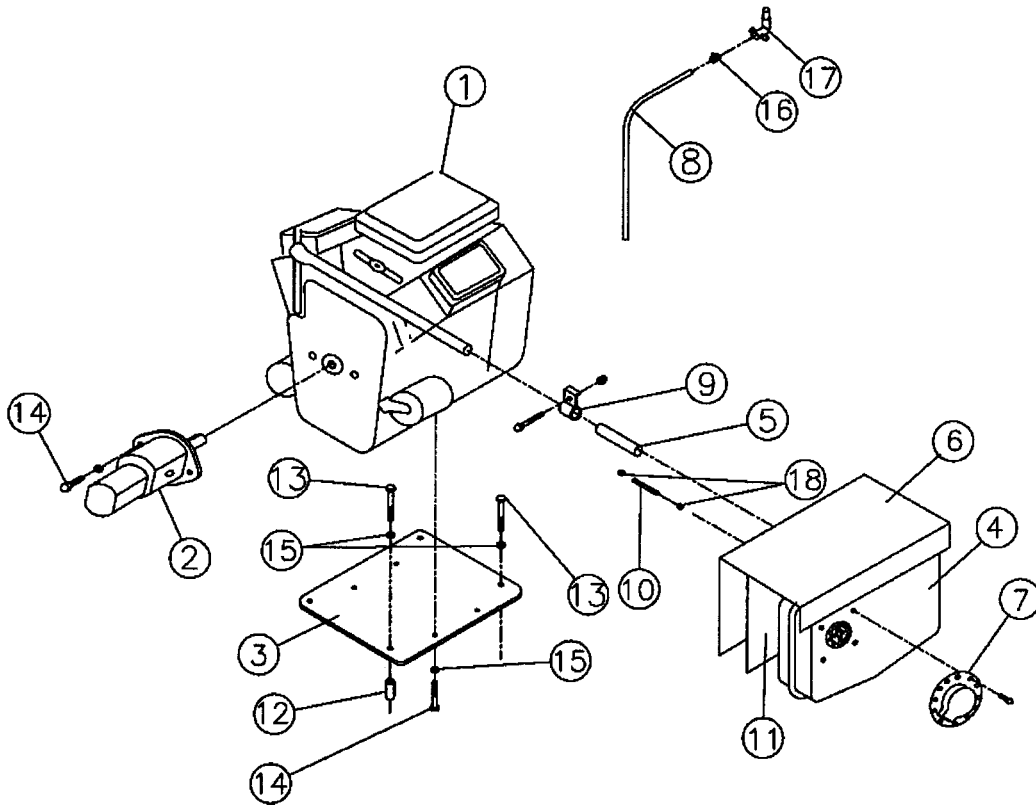
# MAINTENANCE

## 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	1179238	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 <del>1179268</del> .....	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

# MAINTENANCE

Item	Part No.	Description	No. Used
1	1123207	3/8" x 87" 100R2 Hose .....	2
2	1123270	14" x 13" 100R1 Hose .....	2
3	1123208	3/8" x 32" 100R2 Hose .....	2
4	1123217	3/8" x 25" 100R2 Hose .....	1
5	1123209	3/8" x 36" 100R2 Hose .....	1
6	1123218	3/8" x 50" 100R2 Hose .....	6
7	1123447	1/2" x 30" 100R2 Hose (JICF x 2) .....	2
8	1123446	3/8" x 28" 100R1 Hose .....	1
9	1123219	3/4" Suction Hose .....	1
10	1124717	Adaptor, 1/2" NPTM x 3/4" ORBM .....	1
11	1128039	1/2" x 21" SWB Hose .....	1
12	1127336	Tilt Cylinder .....	1
13	1124735	7/8" ORBM x 1/2" Elbow .....	4
14	1124467	1/4" ORBM x 1/4" JICM Elbow .....	2
15	1124400	1/2" JICM Tee .....	2
16	1124466	1/4" JICM (2) x 1/4" NPTM Tee .....	1
17	1122898	3/4" NPTM x 1/2" NPTF Reducer Bushing .....	1
18	1124589	3/4" NPTM x 3/4" Barbed Union .....	2
19	1124407	Adaptor, 1/2" NPTM x 1/2" JICM .....	3
20	1124938	Reducer, 7/8" ORBM x 3/4" ORBF .....	1
21	1122919	3/8" NPT Plug .....	1
22	1123210	3/4" ORBM x 1/2" JICM Elbow .....	7
23	1124405	1/2" JICF x 1/2" JICM Elbow .....	9
24	1123212	9/16" ORBM x 1/2" JICM Adaptor .....	7
25	1122941	1 1/16" ORBM x 3/4" NPTF Elbow .....	1
26	1124468	3/4" NPT Street Elbow .....	2
27	1124461	Breather Plug .....	1
28	1128335	Valve Assembly - Valvoil .....	1
29	1128336	Long Valve Handle .....	4
30	1128320	Short Valve Handle .....	2
31	1127100	Filter Assembly .....	1
32	1127202	Strainer Assembly .....	1
33	1127350	Hydraulic Motor .....	2
34	1126288	Hydraulic Cylinder .....	2
35	1127330	Overcenter Valve .....	1
36	1127184	Nipple .....	2
37	1127183	Coupler .....	2
38	1127185	Dust Cap .....	2
39	1127186	Dust Plug .....	2
40	1179253	Twin Hydraulic Pump - Keyed Shaft (Briggs or Diesel) .....	1
OR	1172970	Twin Hydraulic Pump - Splined Shaft (Kohler) .....	1
41	1123290	Hose Clamps .....	2
42	1124478	Tee, 1/2" NPTM x 1/2" NPTF x 2 .....	1
43	1124422	Tee, 1/2" JICF x 1/2" JICM x 2 .....	2
44	1123423	3/8" x 24" 100R2 Hose .....	4
45	1122804	9/16" ORBM x 3/8" JICM Elbow .....	4
46	1179254	Selector Valve .....	1
47	1123449	3/8" x 8 1/2" 100R2 Hose .....	1
48	1179263	Control Valve-Aux. Motors .....	1
49	1128079	Hydraulic Line .....	2
50	1123372	Tee, 3/4" ORBM x 1/2" JICM .....	1
	1107358	Bolt 8mm x 1.25 x 2.5 cm (Valve Mount) .....	4
	1128287	Seal Kit, Lift Cylinders .....	REF
	1128406	Seal Kit, Tilt Cylinder .....	REF

# MAINTENANCE

## FUELS, LUBRICANTS AND CAPACITIES

The service obtained from your Mini-Skid is greatly affected by the quality of the petroleum products used in it. It requires only common products which are commercially available through the outlets of major refineries. The following chart shows which lubricant to use in the various components of the Mini-Skid.

COMPONENT	TEMPERATURES	TYPE OF LUBRICANT/FLUID	CAPACITY Litres (Imp. Gals.)
Engine Oil - must see Briggs & Stratton or Lister Petter Motor Specifications	Above 25°C (77°F) 0° to 25°C (32° - 77°F) -15°C to 0°C (5° - 32°F) Below -15°C (5°F)	SAE 30 SAE 10W SAE 10W SAE 5W30	1.6 Litres (1.4 Imp. Gal.)
Fuel Tank	All Temperatures	91 Octave, Regular	8.5 L. (1.8 Imp. Gal.)
Hydraulic Oil Reservoir		ISO-46 HYDRAULIC OIL	44 Litres (39 Quarts)



### WARNING

*Never Add Fuel To A Mini-Skid When The Engine Is Running Or Is Hot.*



### WARNING

*Do Not Service Mini-Skid While Engine Is Running*

FUEL FILTER SPOUT

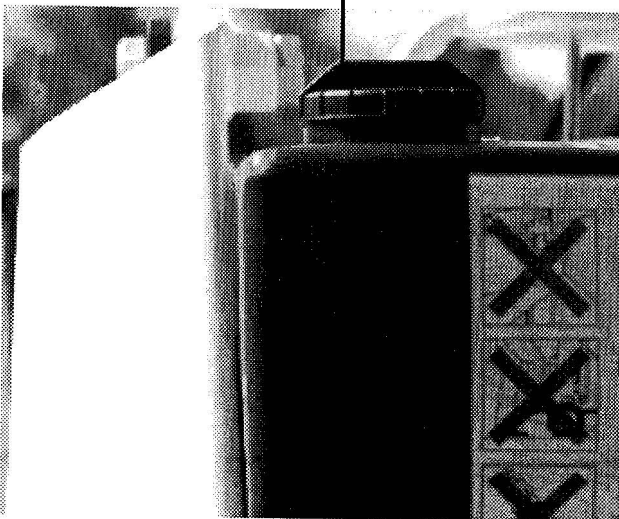
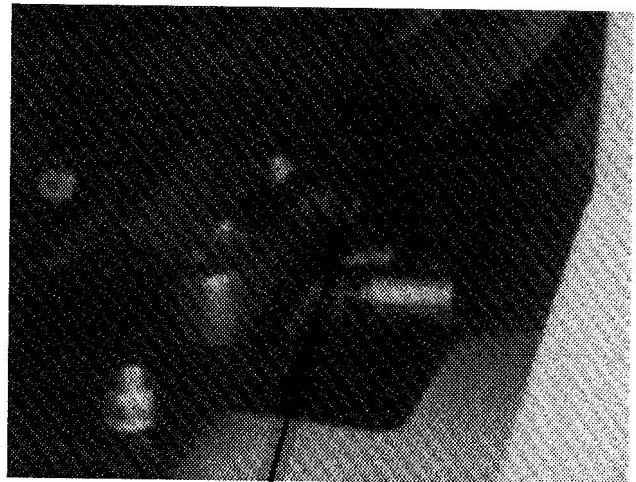


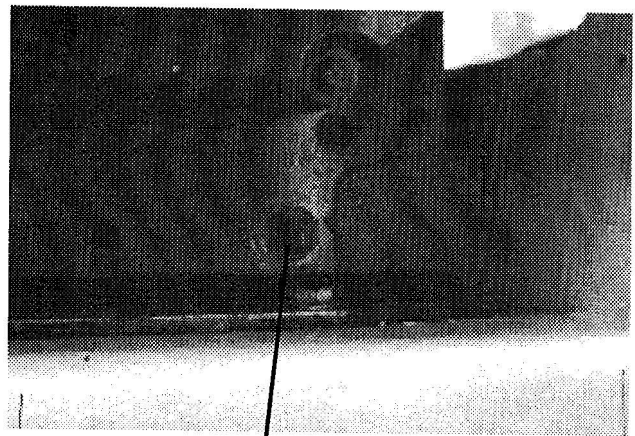
FIGURE 23

FIGURE 24



GASOLINE - ENGINE OIL DRAIN LOCATION

FIGURE 25



DIESEL - ENGINE OIL DRAIN LOCATION

# MAINTENANCE

## ENGINE MAINTENANCE

### OIL LEVEL CHECK

1. Ensure that the Mini-Skid is standing level.
2. Remove dipstick on the right hand side of the engine, **Figure 26**, visibly check the level. Top up with recommended oil; see the chart on Page 24 if required.

For proper engine maintenance, refer to your Engine Owner's Manual. This pertains to all applicable maintenance on your engine. Maintenance with respect to fluids and lubricants are included in the "Periodic Maintenance and Service Schedule"; on Page 27.

### NOTE: Spark Plug Removal

The spark plug is removed by removing spark plug wire and inserting a 5/8" socket wrench through the access holes on either side of Mini-Skid.

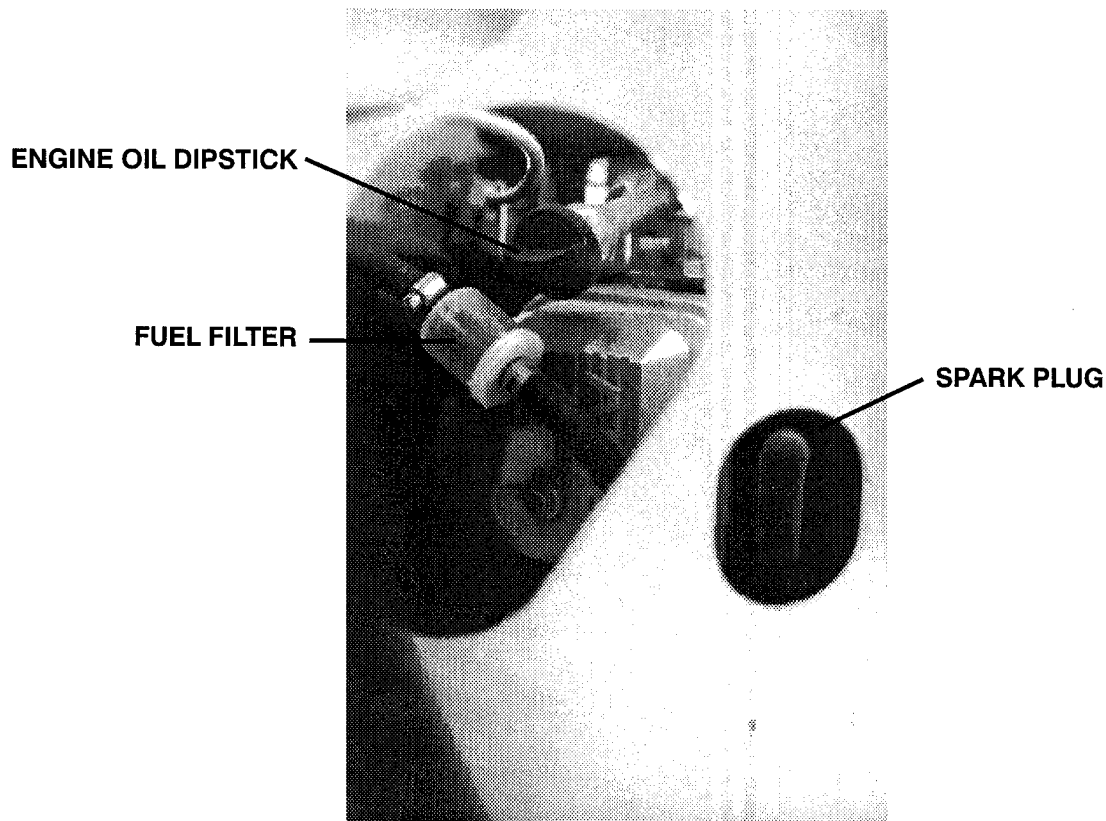


FIGURE 26

## BATTERY MAINTENANCE

**Note:** Remove the Plastic front cover. Check the battery hold down bracket for tightness. Do not overtighten.

Remove any acid corrosion from the battery terminals and cables with baking soda and water solution. Coat the terminals with a high temperature grease.

## HYDRAULIC/HYDROSTATIC SYSTEM MAINTENANCE

**NOTE:** Remove the plastic front cover for access.

HYDRAULIC  
OIL FILTER

BATTERY

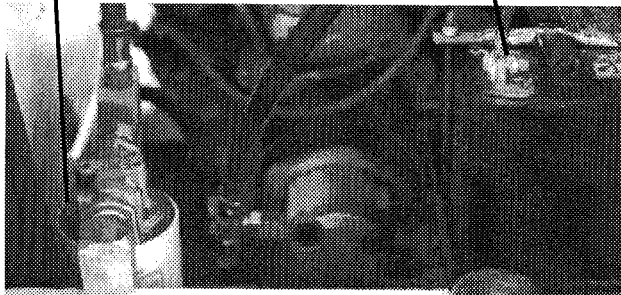


FIGURE 27

HYDRAULIC OIL  
OIL DRAIN

HYDRAULIC OIL  
FILTER CAP

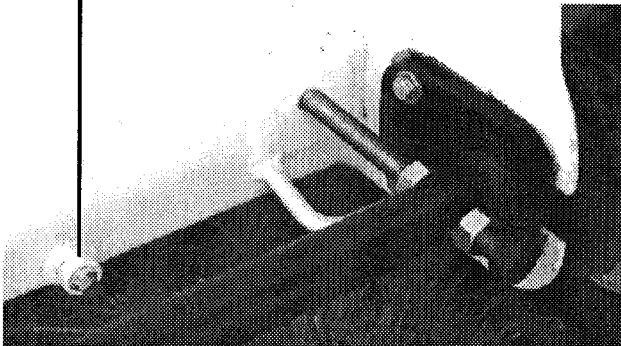


FIGURE 28

### HYDRAULIC OIL LEVEL CHECK

1. Ensure that the Mini-Skid is standing level, the lift arms are down and the tilt cylinder is closed.
2. Remove the oil cap, see **Figure 27**, and check the level. If oil is apparent, the level is satisfactory.
3. If necessary, add the proper type and grade of oil, until it appears at the check point.

### CHANGING HYDRAULIC OIL

The hydraulic oil normally needs to be changed after 1,000 operating hours or annually. However, if the oil becomes contaminated, or a major repair has been done to the hydrostatic transmission, it should be changed at once.

1. Remove the oil drain plug. See **Figure 28**, and drain a the oil. Remove the oil cap to ensure a better flow.
2. Replace the oil drain plug, and refill reservoir with clean oil of proper grade and type.
3. Start engine, and check for leaks. Stop engine and re-check the oil level.

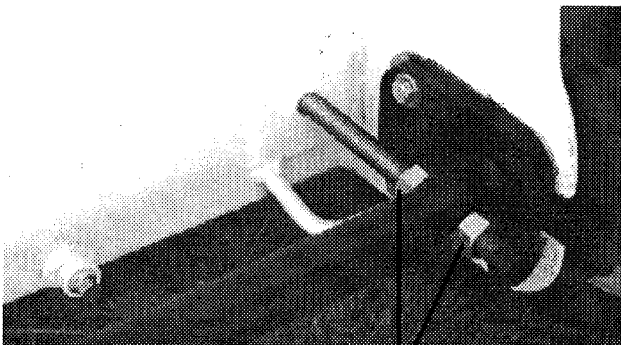
### CHANGING HYDRAULIC OIL FILTER

1. With the engine stopped, unscrew and remove the old oil filter, see **Figure 28**.
2. Clean the oil filter mounting flange.
3. Apply a thin film of oil to the sealing ring and screw the new filter into place. Hand-tighten the filter.
4. Start the engine and check for leaks. Stop the engine, and check the hydraulic oil level.

## IMPORTANT

*Do Not Allow Dirt To Enter Into  
The Hydraulic/Hydrostatic System*

## FINAL DRIVE MAINTENANCE



ADJUSTING NUTS

### DRIVE CHAIN

To obtain proper chain tension, adjust the 4 tensioning nuts, (2 each side) to move the front axle forward or backwards. See **Figure 28**.

# MAINTENANCE

## PERIODIC MAINTENANCE AND SERVICE SCHEDULE

ITEM	MANUAL	SERVICE REQUIRED	HOURS OF OPERATION				
			8 OR DAILY	25 OR WEEKLY	50 OR BI-WEEKLY	100 OR MONTHLY	1000 OR ANNUALLY
Engine Oil	Ramrod Manual	Check level of engine oil and top up if necessary.	X				
Engine Fuel	Ramrod Manual	Check level, and if necessary, top up.	X				
Hydraulic Oil	Ramrod Manual	Check level, and if necessary, top up.	X				
Tires and Wheel Nuts	Ramrod Manual	Check tire pressure and wheel nuts.	X				
Decals	Ramrod Manual	Check if damaged safety or instruction decals Replace if necessary.	X				
Engine Oil	Engine Manual	Change oil after first 20 hours of operation.			X		
Wheel Drive Chain	Ramrod Manual	Check and adjust tension if necessary.		X			
Air Cleaner	Engine Manual	Service element.		X			
Battery	Ramrod & Engine Manuals	Clean and protect battery terminals.			X		
Engine Oil	Engine Manual	Replace engine oil.				X	
Fuel Filter	Engine Manual	Clean and dry thoroughly.				X	
Spark Plug	Engine Manual	Clean and check gap.				X	
Hydraulic System	Ramrod Manual	Check all hoses, tires, fittings, etc. thoroughly. Replace if needed.				X	
Hydraulic Oil Filter	Ramrod Manual	Replace oil filter.				X	
Hydraulic Oil	Ramrod Manual	Change hydraulic oil.					X
Engine Oil Filter	Engine Manual					X	

# OPERATION

## TROUBLE SHOOTING

The following chart is intended to help isolate troubles and possible remedies.

SYMPTOM	POSSIBLE CAUSES	POSSIBLE REMEDIES
Starter does not crank engine	Low battery output Loose or disconnected battery cable	Recharge or replace battery Check and tighten all connections
Engine turns over but does not start	No fuel in tank.  Fuel shut-off valve closed Improper starting procedure Auxiliary control lever engaged Spark plug fouled	Fill tank with clean fuel  Open fuel shut-off valve Refer to starting procedure Set auxiliary lever to neutral Check spark plug gap and clean or replace spark plug
Noisy hydrostatic system	Air in system  Loose suction line and/or fittings Clogged oil filter Hydraulic oil too heavy Internal pump or motor damage	Check oil level, add if necessary Bleed system Tighten all fittings and connections Replace oil filter Warm up hydraulic oil when too cold See your RAMROD Dealer
Erratic or no output on transmission	Hydraulic oil too heavy  Hydraulic oil level too low Drive coupling between engine and pump broken	Use proper viscosity oil. Refer to Page 22. Check oil level. Add if necessary Check couplings, replace if necessary
Loss of hydraulic oil flow from gear pump	Reservoir low on oil  Drive couplings between engine and pump broken Hydraulic gear pump not functioning	Check oil level. Add if necessary  Check couplings, replace if necessary  Inspect and repair if necessary
Hydraulic cylinders do not function properly	Loss hydraulic flow from gear pump  Air in system	See above  Bleed system
Oil overheating	Reservoir low on oil Auxiliary control lever engaged Setting of relief valve too high or too low	Check oil level. Add if necessary Return auxiliary level to neutral Set to correct pressure
No drive of either wheel on one side	Key sheared on motor shaft	Inspect shaft and hub for damage or wear. Replace key and tighten on slotted nut.
No drive of front wheel on one side	Chain failure	Inspect and replace
Noisy operation	Chains too loose Chains dry	Tighten chain Lubricate chain

# MINI-SKID SPECIFICATIONS

## 900T MINI-SKID

### 900T

Rated Operating Capacity ..... 900 lbs (409 Kg)  
1400 (636 mm)

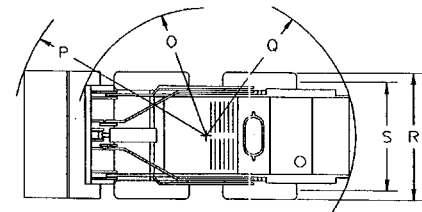
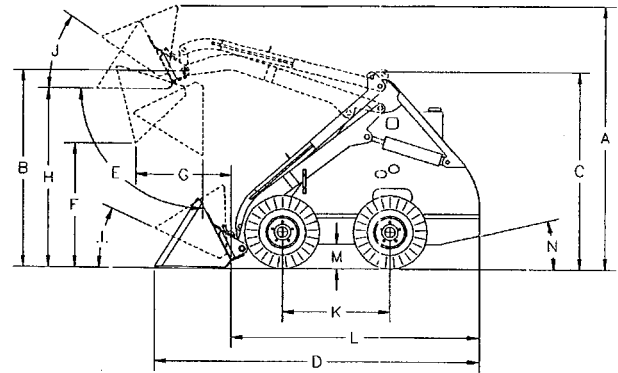
Shipping Weight: (Crated)

with 6" wheels, gasoline engine ..... 1450 lbs (659 Kg)  
with 8" wheels, gasoline engine ..... 1460 lbs (663 Kg)  
with 6" wheels, diesel engine ..... 1600 lbs (727 Kg)  
with 8" wheels, diesel engine ..... 1610 lbs (732 Kg)

Travel Speed ..... 3.5 mph (5.6 kph)

**DIMENSIONS: (4" (10.2 cm) Wide x 8" (20 cm) Rim)**

- A. Overall Operating Height ..... 81 3/4" (2076 mm)
- B. Height to Hinge Pin ..... 65.00" (1651 mm)
- C. Overall Height of Mini-Skid ..... 50 1/8" (1276 mm)
- D. Overall Length with 31" Bucket ..... 80 3/8" (2041 mm)
- E. Dump Angle ..... 85 deg
- F. Dump Height @ 45 deg Dump Angle ..... 45 1/4" (1149 mm)
- G. Reach, Fully Raised @ 45 deg Dump Angle ..... 16.00" (406 mm)
- H. Height to Bottom of 31" Bucket ..... 59.00" (1498 mm)
- I. Maximum Roll Back at Ground ..... 30 deg
- J. Maximum Roll Back Fully Raised ..... 30 deg
- K. Wheel Base ..... 27 1/2" (698 mm)
- L. Overall Length Less Bucket ..... 61.00" (1549 mm)
- M. Ground Clearance ..... 5 1/2" (139 mm)
- N. Angle of Departure ..... 26 deg
- O. Clearance Circle Without Bucket ..... 28.00" (712 mm)
- P. Clearance Circle With 31" Bucket ..... 48.50" (1232 mm)
- Q. Clearance Circle Rear ..... 34.50" (876 mm)
- R. Overall Width Without Bucket ..... 35.00" (889 mm)
- S. Tread Width ..... 29.00" (737 mm)



**FIGURE 29**

**NOTE:** 8" (20 cm) Wide x 8" (20 cm) Rim will increase machine dimensions as follows: All vertical dimensions will decrease by 0.50" (13 mm).

- G. Reach, Fully Raised @ 45 deg Dump Angle ..... 15.00" (552 mm)
- R. Overall Width Without Bucket ..... 39.00" (991 mm)
- S. Tread Width ..... 31.00" (787 mm)



# MINI-SKID SPECIFICATIONS

## 900T MINI-SKID ENGINE - GASOLINE - 23 HP

Make and Model ..... Kohler Command Pro 23  
Cycle, Valve Arrangement ..... 4 cycle, Overhead Valve  
Displacement ..... 41.1 cu in (674 cc)  
Maximum Output (Horsepower) ..... 23 hp (17 KW) @ 3600 RPM  
Dry Weight (Mass) ..... 90 lbs (41 Kg)

## ENGINE - GASOLINE - 20 HP

Make and Model ..... Briggs & Stratton 20 hp Vanguard  
Cycle, Valve Arrangement ..... 4 cycle, Overhead Valve  
Displacement ..... 40.00 cu in (656 cc)  
Maximum Output (Horsepower) ..... 20 hp (15 KW) @ 3600 RPM  
Dry Weight (Mass) ..... 82 lbs (35 Kg)

## ENGINE - DIESEL

Make and Model ..... Lister Petter LPA-2  
Cylinders ..... 2 cycle, Air Cooled Direct Injection  
Displacement ..... 44.00 cu in (726 cc)  
Maximum Out put (hp) ..... 16.0 @ 3600 RPM  
Dry Weight (Mass) ..... 110 lbs (50 Kg)

## HYDROSTATIC/HYDRAULIC SYSTEM & FINAL DRIVE

Pump ..... Gear Type, Fixed Displacement, 0.58 + 0.17 cu in/rev (9.6 + 2.9 cc/rev)  
Pump Capacity ..... 8.5 + 2.6 USGPM (13 + 4 l/min) @ 3600 RPM  
Motor ..... Fixed Displacement, 18.7 cu in/rev (305 cc/rev)  
Control Valve ..... 5 Spool, Series Parallel, Spring Return and Detent on Auxiliary  
System Relief Pressure (Max) ..... 3000 PSI (200 Bar)  
Filtration ..... Return Line: 10 Micron  
Cylinders (3) ..... Double Acting 2.50 Bore, 8.00 Stroke, 1.25 Rod  
Final Drive ..... Primary Chain Number ASA 60

## ELECTRICAL

Battery ..... 12 Volt, Negative Ground, 220 Amp

## FLUID CAPACITIES

Fuel Tank ..... 2.2 US gal (8.3 litres)  
Engine Oil with Filter change ..... 3.5 US pints (1.6 litres)  
Engine Oil ..... 3.0 US pints (1.4 litres)  
Hydraulic Oil Reservoir ..... 11.6 US gal (44 litres)

## TIRES AND BUCKETS

### TIRE

6" (15.2 cm) Wide x 8" (20 cm) Rim ..... 30 psi (207 KPa)  
8" (20 cm) Wide x 8" (20 cm) Rim ..... 20 psi (138 KPa)

### PRESSURE

### BUCKET

36" (914 mm) ..... 3.30 cu ft (0.09 cu M)  
42" (1067 mm) ..... 3.85 cu ft (0.11 cu M)

### CAPACITY

# MINI-SKID SPECIFICATIONS

## DECALS

Operating Instructions  
Part No. 179150

Location: Far L/H side on rear face

**OPERATING INSTRUCTIONS**



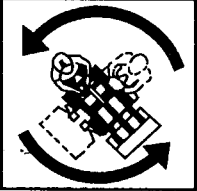
Hydraulic power transmission is instantaneous. When using the drive levers, sudden movement will result in acceleration to full speed and very jerky ride. Ease the levers either forward or reverse.

If the bucket is pivoted down while the arms are down, the front of the Mini-Skid will lift off the ground. This is a standard operation when scraping and leveling. The standing platform will prevent the Mini-Skid from overturning backwards.

**HINTS FOR USE**

1. When attacking the heap or pile, always have the bucket level. To achieve this, lower the Mini-Skid arm and activate bucket tilt cylinder to bring the bucket level with the ground.
2. Towards the end of the run when the bucket is nearly full, gently roll the bucket backwards. This decreases the lifting resistance when the arms are raised and promotes an efficient tear out.
3. When transporting material in the bucket on hill-sides or rough ground, keep the bucket close to ground level. This lowers the centre of gravity of the Mini-Skid and maximizes stability.
4. When scraping, leveling and surface stripping, lower the bucket to ground level, tilt it down and so raise the front wheels slightly off the ground. Drive forward using the back wheels, the bucket will bite into the soil as you move forward.
5. The material may then be dumped into a trailer or utility truck for removal or repositioning on the site. Do not step off the operator platform with the load raised.

Manoeuvring is made possible by individual controls for the hydraulic motor on each side of the Mini-Skid. A turn may be achieved by varying the amount and/or direction of power supplied to each side of the machine. The machine is capable of turning in its own length by applying equal forward and reverse power to opposite sides of the machine.

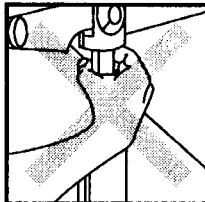
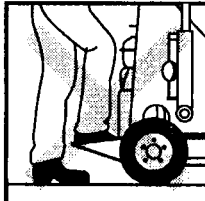
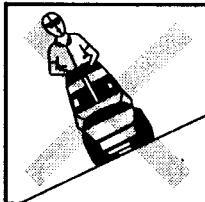
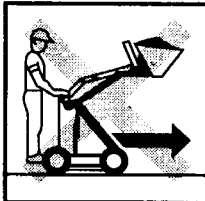
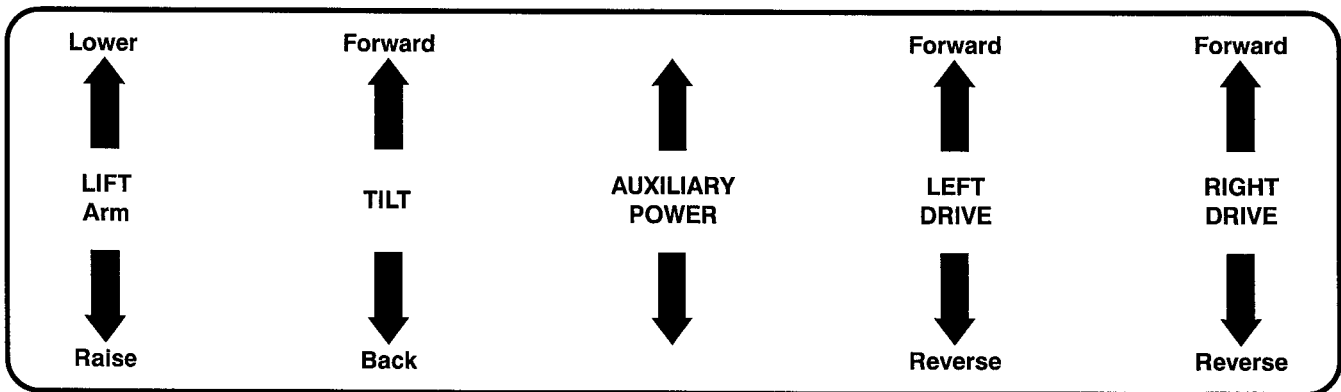




Operating Instructions  
Part No. 179150

Location: Far L/H side on rear face

**1 Safety First**

2. Wear close fitting protective clothing and shoes.
3. Keep hands, feet and clothing away from all moving parts and rams.
4. Do not allow more than one person on the Mini-Skid at any time.
5. Do not smoke while fuelling or operating the Mini-Skid.
6. Do not operate any of the control levers including auxiliary power take-off unless you are standing with both feet on the platform and firmly holding the grip handles.
7. Do not place feet under the platform.
8. Do not ride in the bucket.
9. Do not allow any other person or animal close to the Mini-Skid while in operation.
10. Ensure adequate ventilation when using the machine in confined spaces.
11. Do not drive the Mini-Skid across steep slopes.
12. Always place bucket on ground when parking or leaving the Mini-Skid unattended.
13. Do not carry load with the arms in a raised position. Always carry loads close to the ground. Do not step off platform with load raised.
14. Caution - Never jerk the control levers, use a steady even motion.

Operating Levers Decal  
Part No. 1179159

# MINI-SKID SPECIFICATIONS



Decal: 9" Taskmaster 900T  
 Black c/w Red Stripe  
 Part No. 1179246

Decal: 11" Taskmaster 900T  
 White c/w Red Stripe  
 Part No. 1179247

Decal: 14" Taskmaster 900T  
 Black c/w Red Stripe  
 Part No. 1179248

**RATED OPERATING  
 CAPACITY**  
 900 lbs. (409kg)

Decal: 900 Rated Oper. Cap.  
 Black on Yellow Back  
 Part No. 1179267



Decal: 7" Head + 900T  
 Black  
 Part No. 1179249

Ignition Switch Decal  
 Part No: 1179157



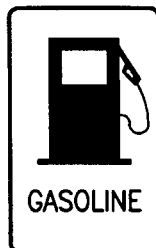
Patent  
 Part No: 179152  
 Location: Top centre of rear face

**INT. REG. PAT. No. PCT-AU83-00165**  
**INT. REG. DESIGN No. 1017838**

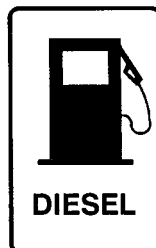
Throttle Control Decal  
 part No: 1179156



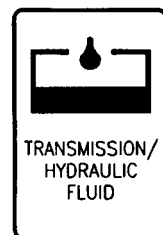
Decal: Gasoline  
 Black on Yellow Back  
 Part No: 1179162



Decal: Diesel  
 Black on Yellow Back  
 Part No: 1179073



Decal: Hydraulic Fluid  
 Black on Yellow Back  
 Part No: 1179163



## MINI-SKID IDENTIFICATION

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The Mini-Skid serial number plate is located on the rear face of the control under the lift arm. The Briggs and Stratton engine serial number is located on the right side of the engine fan shroud. In order to qualify for warranty, the "New Mini-Skid Warranty Registra-

tion Form" must be completed and one copy mailed to **RAMROD EQUIPMENT**. One copy should be retained by the Selling Dealer, and one by the Owner. For engine warranty, refer to the Engine Owners Manual.

## **RAMROD WARRANTY**

The **RAMROD EQUIPMENT** warrants each new **RAMROD** Mini-Skid to be free from proven defects in material and workmanship under normal use and maintenance for a period of six (6) months, commencing with delivery to the original buyer. Under conditions of this warranty, the Mini-Skid must be operated according to manufacturer's instructions and by a competent and careful operator.

This warranty shall not apply to the Mini-Skid on any part thereof which has been subject to misuse, negligence, alteration, accident, or used in any way which, in the manufacturer's option, adversely affects its performance.

It is the responsibility of the Buyer, at his expense, to transport the Mini-Skid or any part thereof in fulfilling this warranty to a designated service shop.

In no event shall the Buyer be entitled to recover for incidental or consequential damages such as, but not limited to, rental of replacement equipment, loss of profits, and loss of Mini-Skid fluids and lubricants.

This warranty does not extend to Mini-Skid components such as, but not limited to, engine, tires, batteries, hydraulic/hydrostatic components which are manufactured by others, and which carry separate warranties of their respective manufacturer's

This warranty is in lieu of all other warranty expressed or implied, and there are no warranties of merchantability or fitness for a particular purpose.

No representative of the manufacturer, nor the selling dealer has authority to change this warranty in any manner whatsoever.

Printed in Canada



# RAMROD EQUIPMENT

## NEW MINI-SKID WARRANTY REGISTRATION FORM

Mini-Skid Serial Number

Model Number

Engine Serial Number

Name of Owner

Name of Dealer

Owner's Address

Dealer's Address

Date Mini-Skid Sold

Date Mini-Skid Delivered

### OPTIONS & ACCESSORIES

### SERIAL NUMBER (IF APPLICABLE)

#### TIRES:

- 4.00 X 8
- 16 X 6.50
- 18 X 8.50

#### BUCKETS:

- 31 inch (787 mm)
- 36 inch (914 mm)
- 42 inch (1067 mm)

#### RAMROD COPY

Please forward to:

**RAMROD EQUIPMENT**

P.O. BOX 5002, 135 YORK ROAD EAST,  
YORKTON, SASKATCHEWAN, CANADA S3N 3Z4

PHONE (306) 786-2600

FAX (306) 782-1884

135 YORK ROAD EAST,  
YORKTON, SASKATCHEWAN, CANADA S3N 3Z4  
PHONE (306) 786-2600  
FAX (306) 782-1884



# RAMROD EQUIPMENT

## NEW MINI-SKID WARRANTY REGISTRATION FORM

\_\_\_\_\_  
Mini-Skid Serial Number

\_\_\_\_\_  
Model Number

\_\_\_\_\_  
Engine Serial Number

\_\_\_\_\_  
Name of Owner

\_\_\_\_\_  
Name of Dealer

\_\_\_\_\_  
Owner's Address

\_\_\_\_\_  
Dealer's Address

\_\_\_\_\_  
Date Mini-Skid Sold

\_\_\_\_\_  
Date Mini-Skid Delivered

### OPTIONS & ACCESSORIES

---

---

### SERIAL NUMBER (IF APPLICABLE)

---

---

#### TIRES:

- 4.00 X 8
- 16 X 6.50
- 18 X 8.50

#### BUCKETS:

- 31 inch (787 mm)
- 36 inch (914 mm)
- 42 inch (1067 mm)

**DEALER COPY**

135 YORK ROAD EAST,  
YORKTON, SASKATCHEWAN, CANADA S3N 3Z4  
PHONE (306) 786-2600  
FAX (306) 782-1884



# RAMROD EQUIPMENT

## NEW MINI-SKID WARRANTY REGISTRATION FORM

\_\_\_\_\_  
Mini-Skid Serial Number

\_\_\_\_\_  
Model Number

\_\_\_\_\_  
Engine Serial Number

\_\_\_\_\_  
Name of Owner

\_\_\_\_\_  
Name of Dealer

\_\_\_\_\_  
Owner's Address

\_\_\_\_\_  
Dealer's Address

\_\_\_\_\_  
Date Mini-Skid Sold

\_\_\_\_\_  
Date Mini-Skid Delivered

### OPTIONS & ACCESSORIES

### SERIAL NUMBER (IF APPLICABLE)

#### TIRES:

- 4.00 X 8
- 16 X 6.50
- 18 X 8.50

#### BUCKETS:

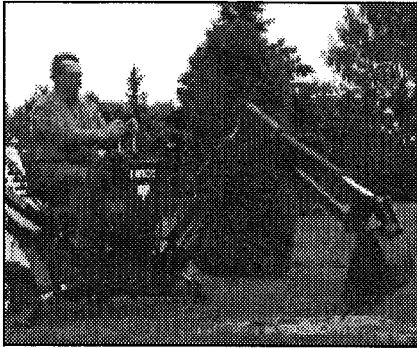
- 31 inch (787 mm)
- 36 inch (914 mm)
- 42 inch (1067 mm)

**CUSTOMER COPY**

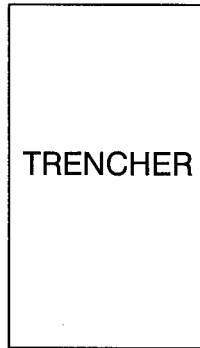


# Attachments Limited Only

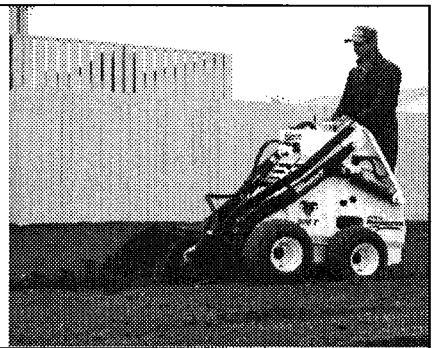
*BY YOUR IMAGINATION!*



B-78  
BACKHOE



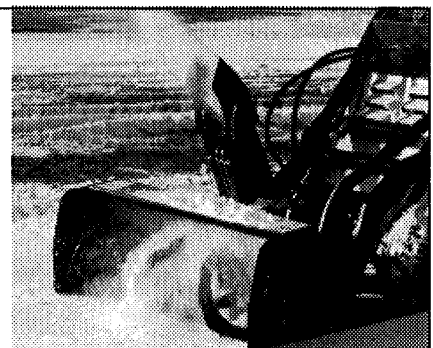
TRENCHER



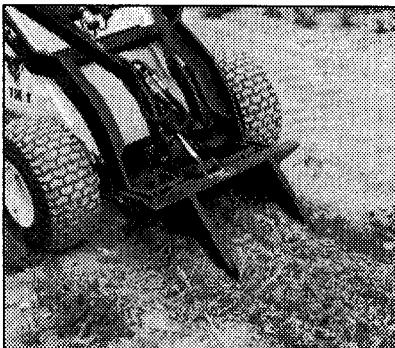
SNOW  
BLOWER



POST  
HOLE  
AUGER



ROTARY  
ANGLE  
BROOM



RIPPER



LOOSE  
MATERIAL  
HANDLER



HYDRAULIC  
DOZER  
BLADE

Grapples, Pallet Forks, Leveller, Etc.

... Attachments are in continuous development. For the latest releases contact your **RAMROD** Dealer or **RAMROD EQUIPMENT** directly.

# RAMROD MODEL 910T RUBBER TRACK MODEL SPECIAL INSTRUCTIONS

## GENERAL:

RAMROD Equipment is pleased to offer the Model 910T Rubber Tracked Mini-Skids as an alternative to the popular Model 900T. The 910T features a dedicated track drive system, which provides for increased floatation and traction in snow, mud, and sand. The Track System also reduces surface damage on turf and delicate surfaces, and allows the operator to move from sand to turf to asphalt without concern for surface damage.

All operating instructions and parts list for the Model 900T apply to the Model 910T, **EXCEPT AS NOTED BELOW:**

## Parts List:

Please refer to the following page for parts that are unique to the Model 910T. **All other parts** (hydraulic parts, structure, engines) are shown on the parts diagrams for the Model 900T. In general, this list applies to those parts which are directly part of the track system.

## Operation:

All controls and functions are as outlined for the Model 900T. However, track drives perform somewhat differently than wheel drives.

When operating on a slope, passing over an obstacle such as a curb or log, or loading the unit on a ramp, be aware that the unit will tend to continue up the slope until it over balances and drops suddenly. This is because the center of the unit is supported by the tracks. This "Rise and Fall" can be quite sever under some conditions, so exercise caution in this regard.

Avoid operating in conditions where the edges of the track are operating along a sharp edge such as a curb, this can twist the track severely, causing premature internal damage and may cause the track to jump off the front idler or drive sprocket.

To remove the track:

- Lift the unit onto stands so that the tracks are off the ground.
- Note the # 9 nuts on the attached parts list. These nuts are locked against each other; separate them on both sides of the unit.
- Tighten the front nut against the back of the bogie wheel mount. This will compress the tension springs and draw the front axle back, loosening the track. NOTE: This must be done on BOTH sides of the unit, or the front axle will jam.
- Tighten the nuts are far as possible in order to provide enough slack to remove the track.

- Remove the track.
- When installing a track, place the track on the drive sprocket **first** and be sure the teeth on the drive sprocket are in the holes provided for them in the track.
- Once the track is in place, back off the # 9 nuts completely, so that the spring is fully extended. Tighten the two nuts against each other to secure them.

### Model 910 Track Assembly

Item Number	Part Number	Description	Quantity
1	1233138	910T Body Weldment	1
2	1232921	Spring Front Axle	1
3	1232902	Front Idler	2
4	1232926	Drive Sprocket	2
5	1232930	Rubber Track	2
6	1102064	Hex Bolt, 1/2"x 9"	4
7	1232931	Track Rollers	8
8	1105571	Track Tension Spring	2

## MODEL 910 T PARTS DIAGRAM

(FOR PARTS NOT SHOWN PLEASE REFER TO MODEL 900 DIAGRAM)

