

IV. MAINTENANCE

Maintenance and service of the mini loader 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 loader 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 loader. Periodic maintenance and service is the key to trouble free operation.

When replacement parts are needed for mini loader components, **Figure 21** on Page 14 shows a complete breakdown of the loader. Page 15 & 16 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 loader component.

ORDERING PARTS

When ordering parts from us, be sure to state:

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

4) Loader 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 loader 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 Duetz Ruggenerini 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

- 6 months from date installed.

ASSEMBLY
DIAGRAM

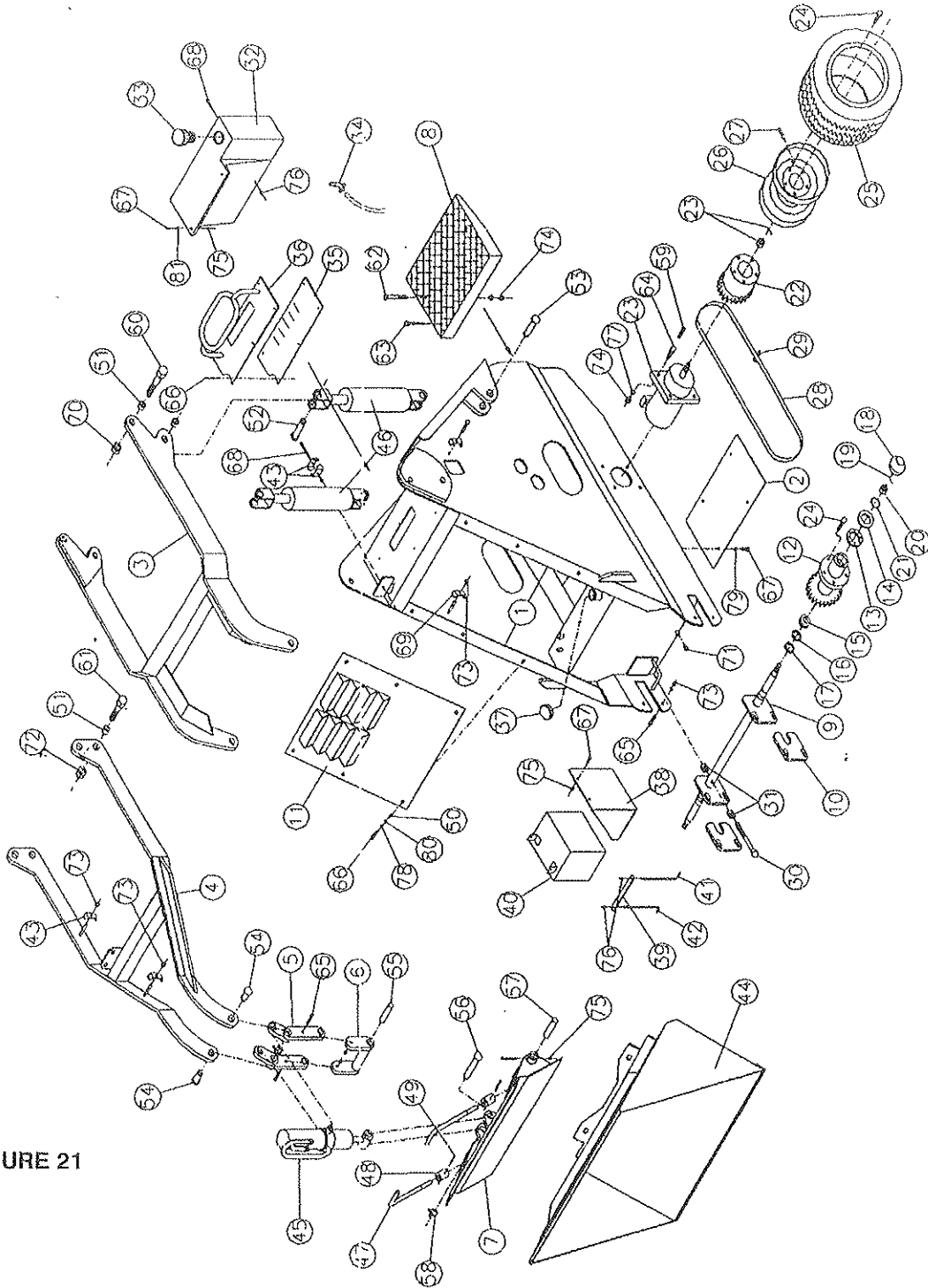


FIGURE 21

MAINTENANCE

RAMROD 550T - 750T 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	1230115	Drive Chain (550T)	2
28	1113366	Drive Chain (750T)	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 550T - 750T 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

GASOLINE/DIESEL ENGINE LAYOUT

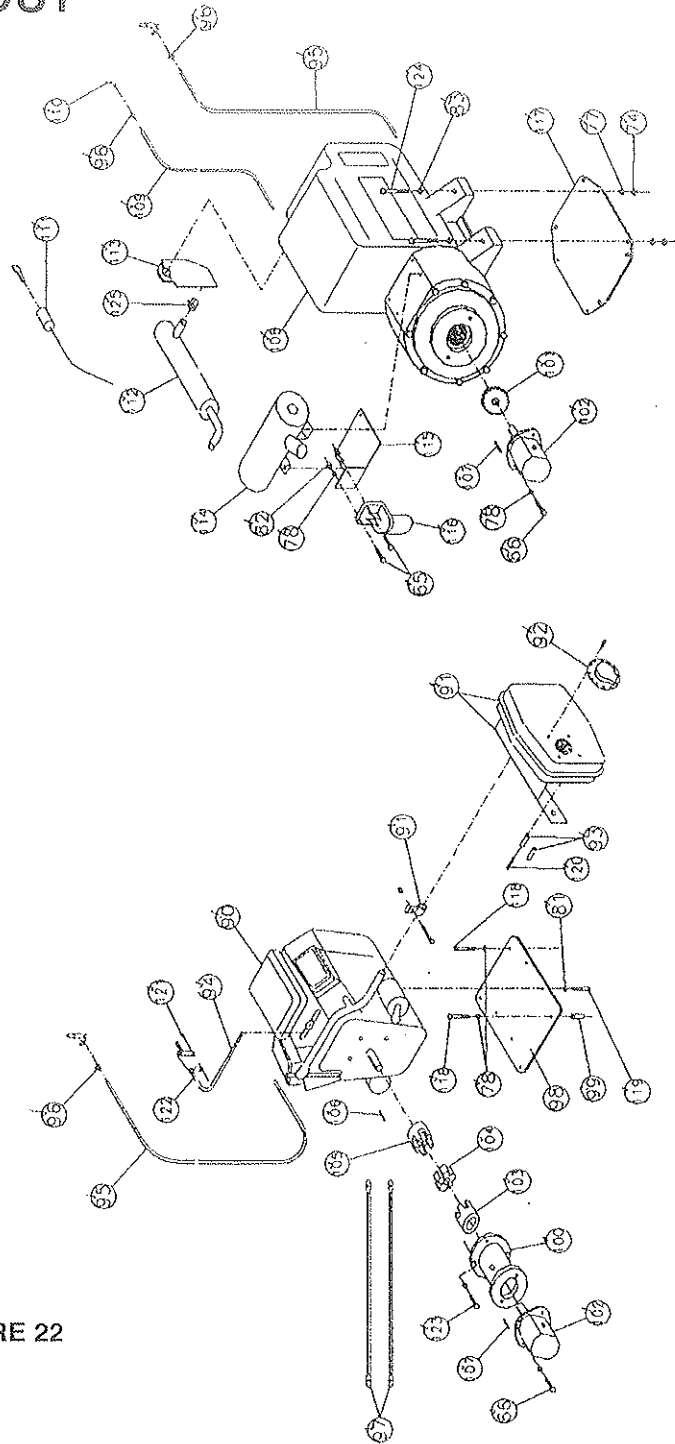
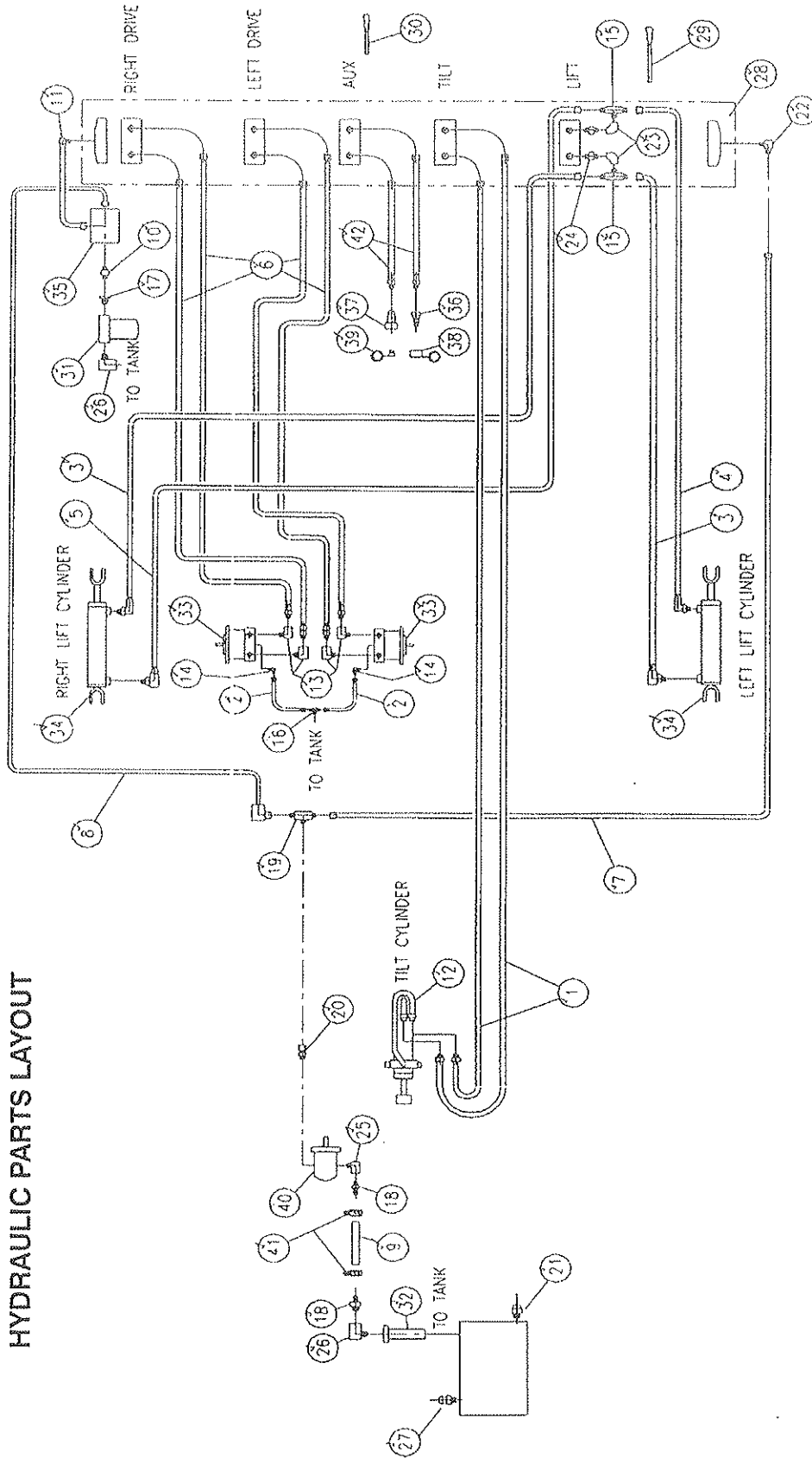


FIGURE 22

MAINTENANCE

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

Item	Part No.	Description	No. Used
90	1117120	Gas Engine - Briggs & Stratton 16 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	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



HYDRAULIC PARTS LAYOUT

MAINTENANCE

HYDRAULIC PARTS


Item	Part No.	Description	No. Used
1	1123207	3/8" x 87" 100R2 Hose	2
2	1123270	14" 100R1 Hose X 13" Long	2
3	1123208	3/8" 100R2 Hose x 32" Long	2
4	1123217	3/8" 100R2 Hose x 25" Long	1
5	1123209	3/8" 100R2 Hose x 36" Long	1
6	1123420	3/8" 100R2 Hose x 60" Long	4
7	1123200	1/2" 100R2 Hose x 30" Long	1
8	1128039	3/8" 100R1 Hose x 21" Long	1
9	1123219	3/4" Suction Hose	1
10	1124717	Adaptor, 1/2" NPTM x 3/4" ORBM	1
11	1128039	1/2" SWB Hose x 21"	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	1124739	3/4" ORBM x 1/2" JIC (2) Tee	1
20	1124738	Reducer, 7/8" ORBM x 3/4" ORBF	1
21	1122920	3/8" NPT Plug	1
22	1123210	3/4" ORBM x 1/2" JICM Elbow	2
23	1122791	1/2" JICF x 1/2" JICM Elbow	1
24	1123212	9/16" ORBM x 1/2" JICM Adaptor	2
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 - Walvoil	1
29	1128336	Long Valve Handle	4
30	1128320	Short Valve Handle	1
31	1127100	Filter Assembly	1
32	1127202	Strainer Assembly	1
33	1127099	Hydraulic Motor	2
34	1126288	Hydraulic Cylinder	3
35	1127330	Overcenter Valve	1
36	1127184	Nipple	1
37	1127183	Coupler	1
38	1127185	Dust Cap	1
39	1127186	Dust Plug	1
40	1179252	Gear Pump, B & P	1
41	1123290	Hose Clamps	2
42	1123218	3/8" 100R2 Hose x 50"	2
-	1107358	Bolt, 8mm x 1.25 x 2.5cm (valve mount)	4

FUELS, LUBRICANTS AND CAPACITIES

The service obtained from your loader 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 loader.

COMPONENT	TEMPERATURES	TYPE OF LUBRICANT/FLUID	CAPACITY Litre (Imp. Gals.)
Engine Oil - must see Briggs & Stratton or Lister Peter 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	Above 10° C (50° F) Below 10° C (50° F) Below -29°C (-20°F)	SAE 30 Hyd Oil Dextron II or III Preheat Oil	44 Litres (39 Quarts)

NOTE: For warm climates a 20 or 30 weight hydraulic oil can be used in place of Dextron II



WARNING

Never Add Fuel To A Loader When
The Engine Is Running Or Is Hot.



WARNING

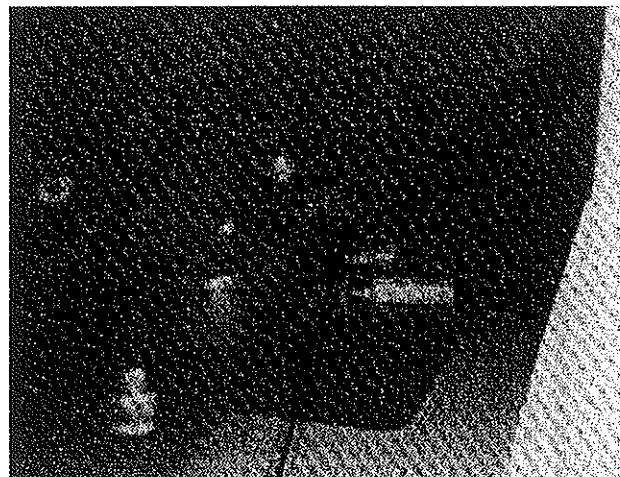
Do Not Service Loader While Engine
Is Running

FUEL FILTER SPOUT



FIGURE 23

FIGURE 24



ENGINE OIL DRAIN LOCATION

FIGURE 25



DIESEL OIL DRAIN LOCATION

MAINTENANCE

FUELS, LUBRICANTS AND CAPACITIES

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Fuel Tank	All Temperatures	91 Octave, Regular	8.5 L. (1.8 Imp. Gal.)
Hydraulic Oil Reservoir	Above 10° C (50° F) Below 10° C (50° F) Below -29°C (-20°F)	SAE 30 Hyd Oil Dextron II or III Preheat Oil	44 Litres (39 Quarts)

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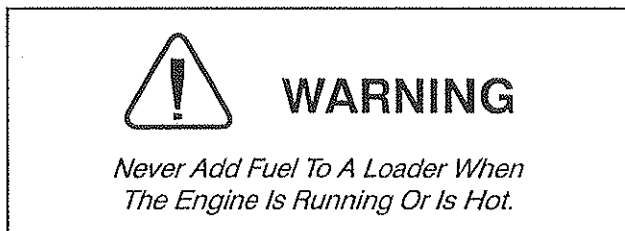
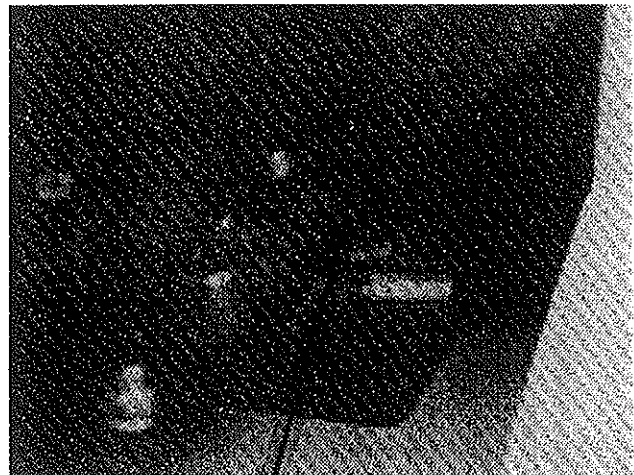


FIGURE 24



ENGINE OIL DRAIN LOCATION

FUEL FILTER SPOUT

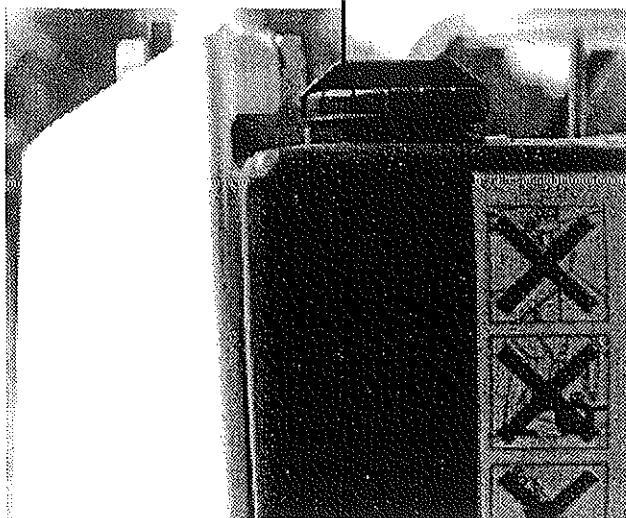


FIGURE 23

FIGURE 25



DIESEL OIL DRAIN LOCATION

MAINTENANCE

ENGINE MAINTENANCE

OIL LEVEL CHECK

1. Ensure that the loader 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 21 if required.

For proper engine maintenance, refer to your Briggs and Stratton Owner's Manual. This pertains to all applicable maintenance on your Briggs and Stratton engine. Maintenance with respect to fluids and lubricants are included in the "Periodic Maintenance and Service Schedule"; on Page 24.

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 Loader.

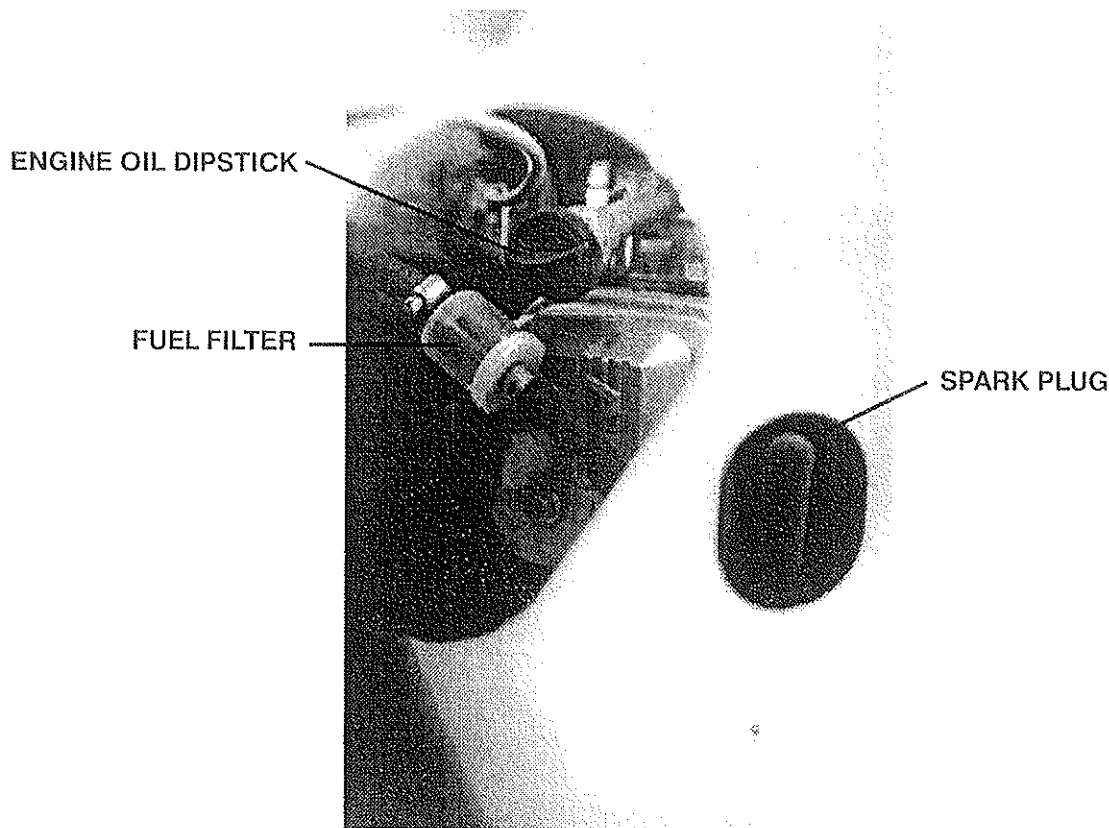


FIGURE 26

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.