

# OPERATING INSTRUCTIONS AND PARTS LIST FOR

CATALOG NUMBER  
**4552**



MILWAUKEE ELECTRIC TOOL CORP.

AC ALTERNATOR

DEPENDABLE POWER

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING  
INFORMATION AS SHOWN IN THIS LIST:

- |                                 |                                    |
|---------------------------------|------------------------------------|
| 1. M.E.T.CO. PART NUMBER        | 3. M.E.T.CO. CAT. NO. 4552         |
| 2. The PART NAME                | 4. The NAME of Item: AC ALTERNATOR |
| 5. STARTING SERIAL NO. 507-1001 |                                    |

**MILWAUKEE ELECTRIC TOOL CORPORATION  
13135 WEST LISBON ROAD  
BROOKFIELD, WISCONSIN 53005**



Printed in USA-100

**IMPORTANT . . . SAVE THIS FOR FUTURE REFERENCE**

**FULL LOAD WATTS  
OF  
MILWAUKEE ELECTRIC TOOLS**

MODEL NO.	FULL LOAD		MODEL NO.	FULL LOAD		MODEL NO.	FULL LOAD	
	WATTS	AMPS		WATTS	AMPS		WATTS	AMPS
0101	340	3.0	1700-1	1100	10.0	5590	1050	10.0
0102-1	370	3.0	1750	1250	11.0	5610	900	8.0
0120	340	3.0	1750-1	1100	10.0	5650	950	10.0
0121	370	3.25	1850	1250	11.0	6000	220	2.0
0122-1	370	3.25	1850-1	1100	10.0	6020	1200	11.5
0140	340	3.0	2200-1	1250	10.0	6060	1200	11.5
0160	340	3.0	2400-1	1250	10.0	6200	1600	13.0
0180	340	3.0	3820	1600	15.0	6250	360	2.3
0181	370	3.25	3880	1600	15.0	6280	360	4.0
0190	340	3.0	3940	1600	15.0	6293	1100	10.5
0191	370	3.25	4020	1600	15.0	6320	1400	12.0
0200	340	3.0	4030	1600	15.0	6331	1200	10.5
0220	340	3.0	4035	1600	15.0	6360	1250	12.0
0221	370	3.25	4250-1	400	4.0	6370	1300	13.0
0222-1	370	3.25	4260-1	1100	11.5	6400	1400	12.0
0800	400	4.0	4270-1	1100	11.5	6505	460	4.0
0850	400	4.0	4280-1	1100	11.5	6510	460	4.0
0870	400	4.0	4290-1	1100	11.5	6541-1	370	3.25
0890	400	4.0	4295-1	1100	11.5	6542-1	370	3.25
1000	400	4.0	5191	350	3.3	6571-1	370	3.25
1000-1	400	4.0	5200	1000	10.0	6581-1	370	3.25
1100	400	4.0	5220	1300	11.5	6582-1	370	3.25
1100-1	400	4.0	5240	1300	11.5	6620-1	400	4.0
1120	250	15.5	5260	1300	11.5	6640-1	400	4.0
1200	400	4.0	5265	460	4.4	6747-1	500	4.5
1200-1	400	4.0	5300	1150	10.0	6781-1	310	3.25
1600	660	6.0	5350	650	6.0	6798-1	515	4.5
1600-1	660	6.0	5360	390	4.0	6800	240	2.1
1620-1	660	6.0	5390	515	4.5	6810	300	3.0
1650	660	6.0	5400	300	3.0	6820	700	6.4
1650-1	660	6.0	5410	680	6.4	6830	700	6.4
1675-1	750	7.5	5450	1100	10.0	8600	360	3.2
1700	1250	11.0	5530	1100	10.0	9050	----	4.0

## RULES FOR SAFE OPERATION

1. Gasoline engines give off deadly carbon monoxide. Never run a gasoline engine in the basement or other areas in a building.
2. This alternator has an air cooled engine which must have good circulation of air.
3. Gasoline engines should not be stored or operated in holds of boats or ships.
4. Check the local code as to the laws governing storing gasoline in confined areas.
5. Never fill a gasoline engine in the dark or when the engine is hot.
6. Check the oil every time you fill the gas tank or every 5 hours.
7. Under no condition should the gasoline engine be hooked up to any pressure fuel pump (auto, tractor or auxiliary line).
8. Always check wattage requirements on labeled motors and appliances before attempting to operate.
9. If an extension cord is necessary, always use as short a length as possible. The longer the cord the greater the voltage drop resulting in less power applied to the tube.
10. The load should be applied to the alternator after it has reached its operating speed. Never start alternator with load.
11. Engine speed is pre-set at the factory. If this speed is incorrectly re-adjusted by the customer, serious damage may be incurred in the tools or appliances connected to the alternator.

### CAUTION

This product has been engineered and manufactured to provide trouble free operation, if properly cared for and used within its rated specifications. Always use care when operating or repairing this alternator, lethal voltages are present and the same caution should be exercised as is used with the electrical wiring in your home. Follow a regular maintenance and service schedule to provide efficient and safe operation.

### ENGINE SPECIFICATIONS

**TYPE:** 4 cycle, L head, single cylinder, 2-5/8" bore, 2 1/2" stroke, 13.55 cu. in. displacement, 6 H.P.

**COOLING:** Pressure Air Cooled

**GOVERNOR:** Mechanical Type Preset

**IGNITION:** Flywheel Magneto

**STARTING:** Recoil

**OIL SYSTEM:** Splash lube, 19 oz.

**FUEL TANK:** 1 gallon capacity

## ALTERNATOR

2500 WATT – Manual Start

**TYPE:** Revolving field two pole, single phase, 115/230 volt at 21.7/10.8 amps. 60 cycle drip proof design.

**ROTOR:** Laminated electrical steel, pressed on shaft, sintered brass collection rings. Windings are precision semi-automatic wound.

**STATOR:** Laminated electrical steel pressed into steel stator band. Precision wound, automatic tied-coils, pressed end returns.

**BEARINGS:** Life Time sealed ball bearings running in a steel bearing insert.

**VARNISH:** Class "H" Westinghouse double dip 7 hr. cure cycle.

**INSULATION:** Modified class "H" insulating system, DMD liners, heavy polythermaleze wire insulation. Dacron tie tape, modified fiber wafes.

**COOLING:** Centrifugal blower directly connected to the rotor shaft.

**COLOR:** Metco Red

### INSTALLING & OPERATING

1. ( ) Uncrate and inspect for shipping damage.
2. ( ) Ventilation: Adequate ventilation must be provided for safe, efficient operation.
3. ( ) Follow the detailed instructions in the following section on filling with oil.
1. ( ) Fill engine with 19 oz. of oil.

**NOTE:** Oil weight Recommendations

Summer – SAE 30

Winter – 5W20

2. ( ) Fill fuel tank, with regular or non-leaded gasoline.

### MAINTENANCE

1. Periodically (approximately every 200 operating hours) inspect the alternator brushes and clean the slip rings. To gain access to these parts, remove (3) screws, (item 21, dwg. 38858) and the fan cover (item 20). Next remove the fan bolt (item 12) and the fan (item 10). This will expose the rectifier (item 15) and the brush holder (item 16). Brushes which are chipped, cracked or worn to a length of less than 5/16" should be replaced.

**CAUTION:** Under no condition should the alternator be operated without first replacing the fan bolt. Operation without the bolt may cause serious non-warranty damage.

2. To clean slip rings, polish with a piece of fine sandpaper while rotor is turning. **DO NOT USE EMERY PAPER.** Disconnect spark plug wire and turn engine with starter to polish slip rings.

3. The alternator should be kept clean and reasonably dry.

4. Maximum engine life can be obtained if oil is changed every 200 operating hours or 30 days, whichever occurs first. After engine is drained, repeat "Filling Engine".

### ILLUSTRATED PARTS LIST

All replacement parts for the alternator are shown on the exploded view illustrations. Each part is identified with an index number which is keyed to the parts list. The index numbers are used solely for identification — not for ordering parts.

To save time — to make sure that you get the correct part — be sure to include the following information with your parts order;

1. Part name and part number (NOT the index number shown on the exploded view.)
2. The alternator model and serial number (found on the nameplate.)
3. Quantity of each part ordered.

### 1. STARTING PROCEDURE

- a. Fill gas tank with gasoline.
- b. Check Oil.
- c. Open fuel line valve (if applicable).
- d. Press start button or use starter rope.

### 2. STOPPING & STORAGE OF ALTERNATOR

To stop, press starter button to off position.

If alternator is placed in storage for any period of time. The fuel tank should be drained. Then run the engine to burn up the gasoline in the carburetor. Remove the spark plug and place a teaspoon of oil in the head. Turn the engine over a few times then replace the spark plug.

The engine should be run in by operating at loads not in excess of 1/2 the name plate rating for the first two full tanks of gasoline. This will greatly extend the useful life of your engine.

Loads may be applied to the alternator by plugging into one or more of the receptacles on the panel. Check the individual wiring diagram for specific loads that may be applied. It is very important that polarized plugs be used in order to maintain a common ground between the alternator and its load. All alternators of 2000 watts or larger are equipped with automatic reset, thermal overload switches, which will open under extreme overloads, thereby shutting off the AC to the receptacles. The overload device will close, when the operating temperature drops to a safe level. Smaller units are inherently protected by oversize windings which cannot overheat.

### TYPICAL HORSEPOWER RATINGS

Item	Horsepower
Furnace — Stoker	1/4
Furnace — Oil Burner	1/6
Furnace — Blower	1/4
Freezer	1/3
10" Table Saw	1
Centrifugal Pump	1/4 to 1-1/2
Submersible Pump	1/2 to 1-1/2
Sump Pump	1/3 to 1/2

### MOTOR STARTING REQUIREMENTS (NO LOAD)

Motor H.P. Rating	Approx. Running Watts	Universal Motors	Repulsion Induction Motors	Capacitor Motors	Split Phase Motors
1/4	275	400	600	850	1200
1/4	400	500	850	1050	1700
1/2	450	600	975	1350	1950
1/2	600	750	1300	1800	2600
3/4	850	1000	1900	2600	*
1	1000	1250	2300	3000	*
1 1/2	1600	*	3200	4200	*
2	2000	*	3900	5100	*
3	3000	*	5200	6800	*
5	4800	*	7500	9800	*

\*Motors of higher horsepower shown in this classification are not generally used.

### ALTERNATOR CAPABILITY FOR ELECTRIC MOTOR STARTING (NO LOAD)

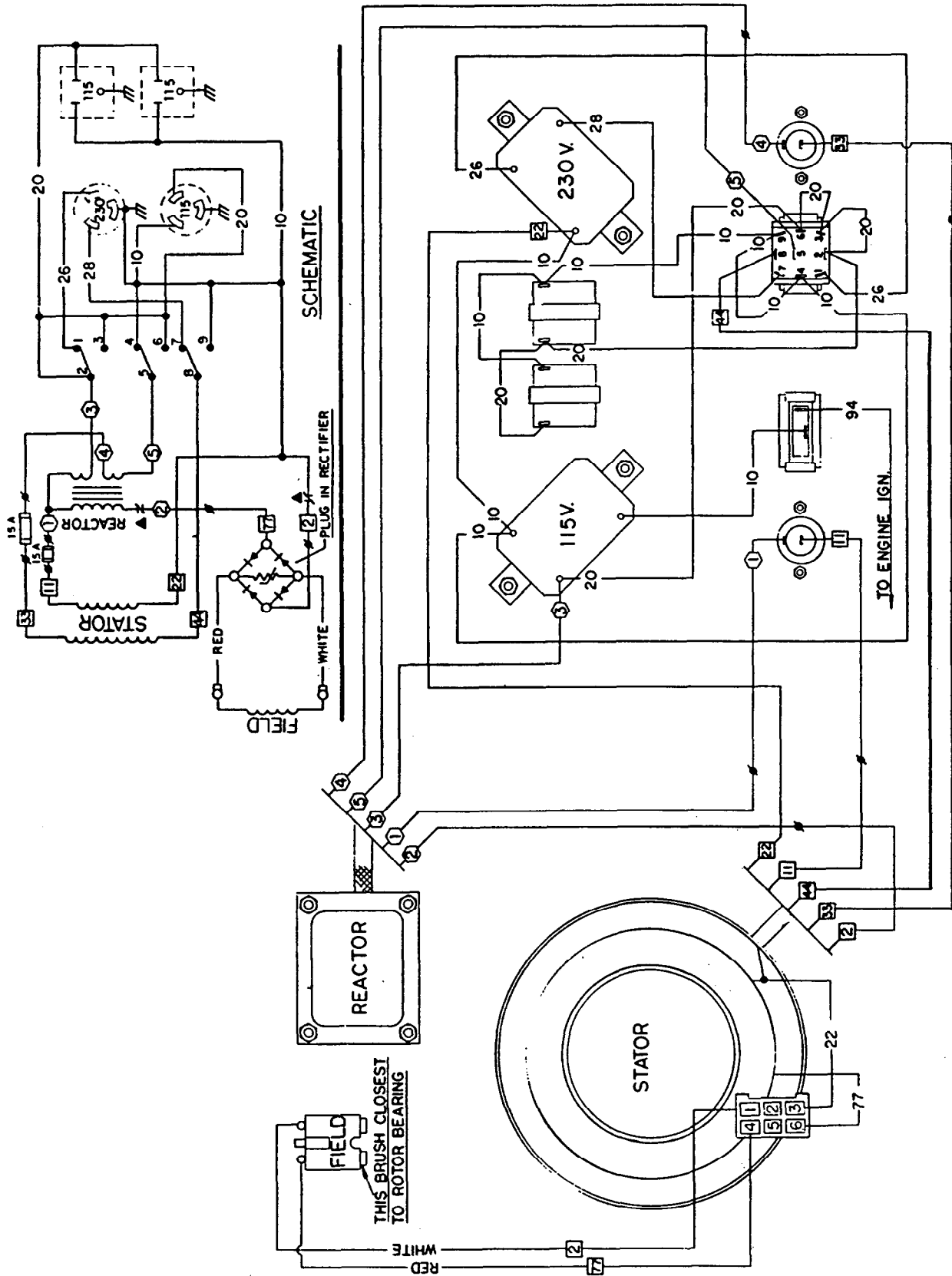
Alternator Rating in Watts	TYPE OF MOTOR AND HP RATING						
	Universal	Repulsion Heavy Start Load	Induction Light Start Load	Capacitor Heavy Start Load	Capacitor Light Start Load	Split Phase Heavy Start Load	Split Phase Light Start Load
1000	1/2	—	—	—	—	—	—
1250	1	1/2	—	1/4	—	1/4	—
1750	1	1/2	3/4	1/4	1/2	1/2	—
2650	1 1/2	1	1 1/2	1/2	1	1/2	1/4
3500	*	2	2 1/2	1 1/2	2	*	*
5000	*	2 1/2	3	2	*	*	*
7500	*	4	5	2 1/2	*	*	*
**LL1500	1	1/2	1/2	1/4	1/4	1/4	1/4
**LL3000	2	1 1/2	2	3/4	1	3/4	3/4
**LL5000	*	2 1/2	3	2 1/2	3	*	*

\*Motors of higher horsepower rating than shown in this classification are not generally used.

\*\*LL—2400 RPM units.

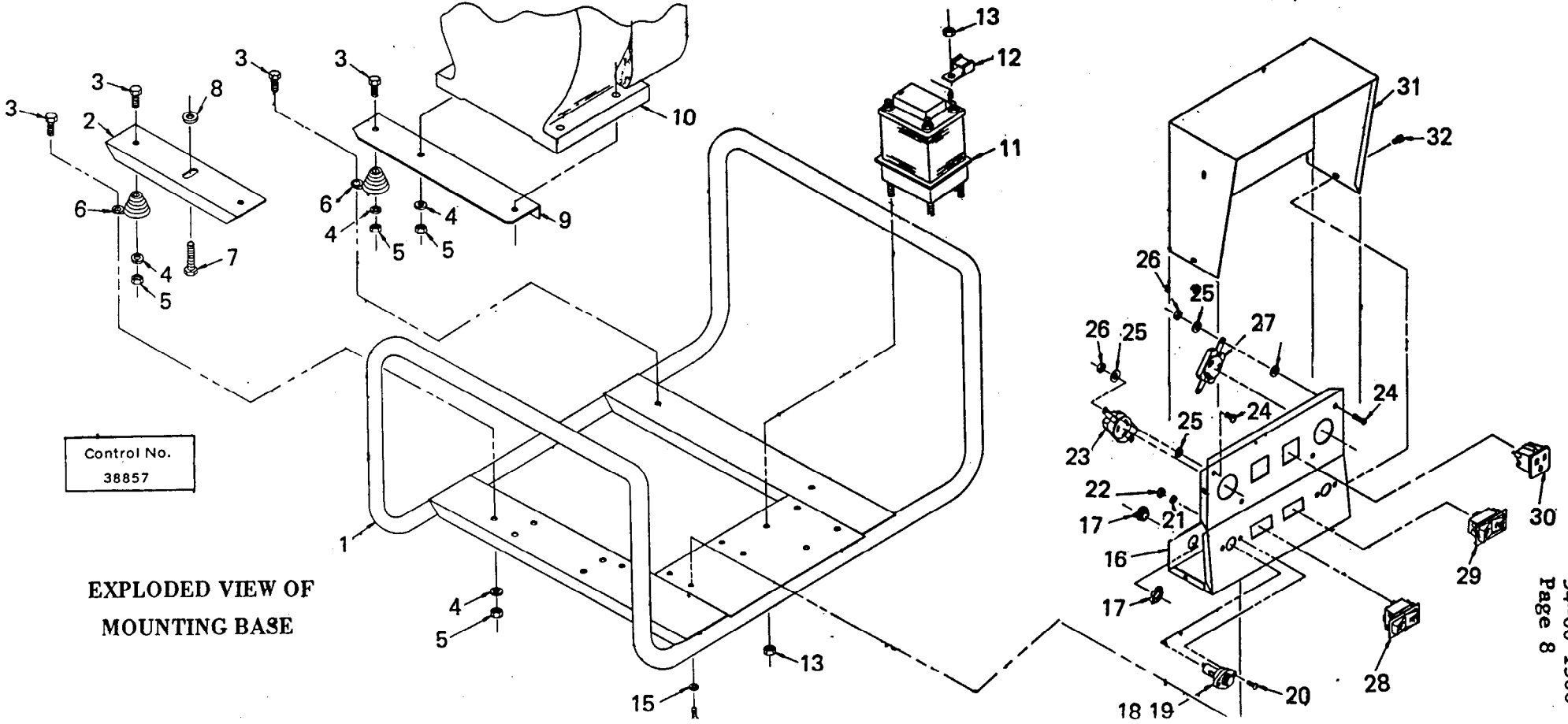
Note: To Order An Exact Replacement Engine, Order From M.E.T.CO. Part No. 43-20-1510

Control No.  
38855

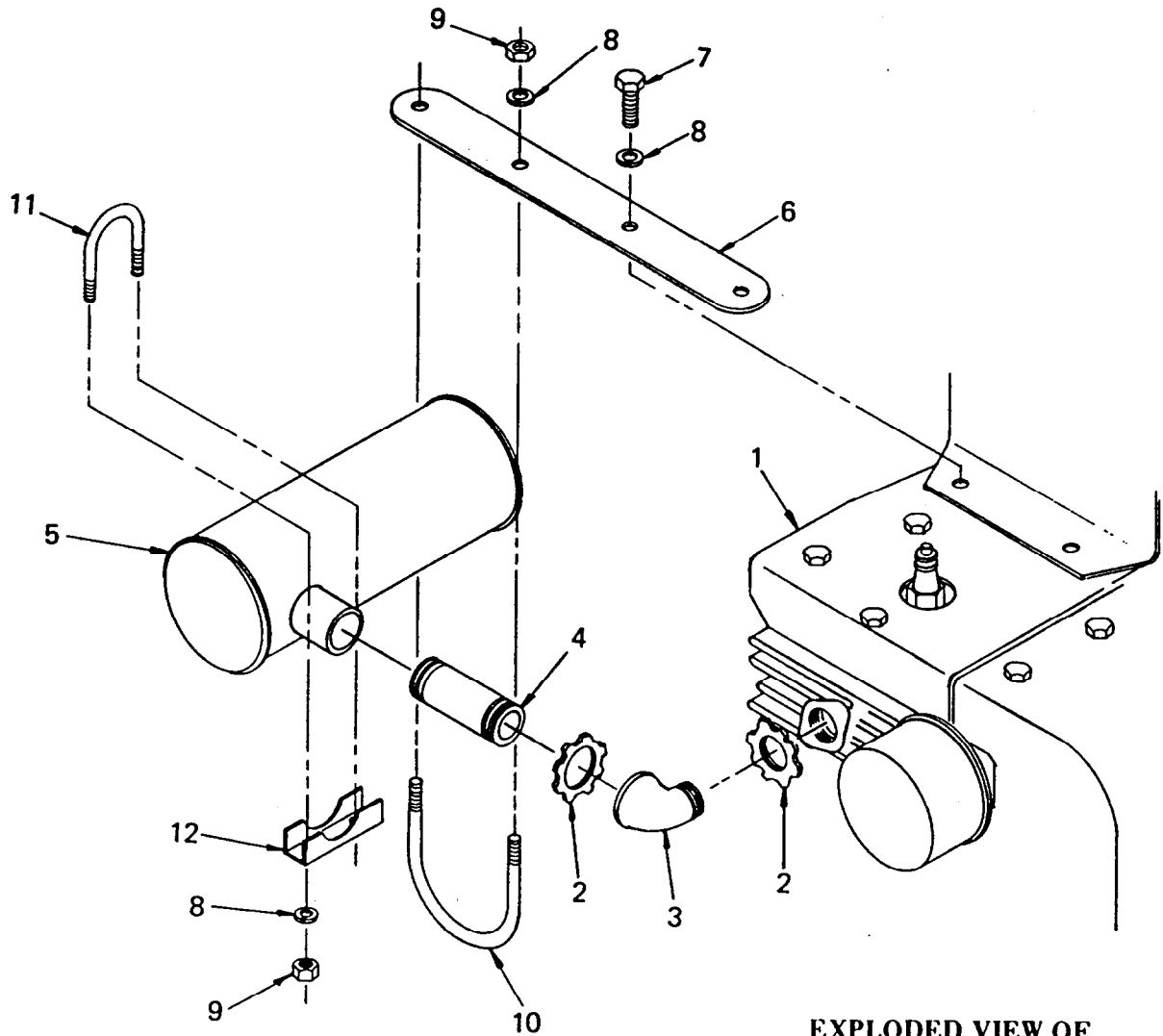


WIRING  
DIAGRAM

No.	Part No.	Req'd	Description	Item	Part No.	Req'd	Description
1	42-20-0435	1	Mounting Base	17	22-56-0060	2	3/8" Straight Connector
2	42-36-0895	1	Alternator Support	18	23-04-0060	2	Fuse Holder
3	06-75-3975	8	5/16-18 x 1" Lg.Hex.Hd.Cpsc.	19	22-89-0060	2	Fuse
4	06-97-4100	9	5/16" Lockwasher	20	06-81-5630	4	8-32 x 1/2" Lg.Phil.Pan Hd.Mach.Sc.
5	06-55-1980	9	5/16 - 18 Hex. Nut	21	06-97-3200	4	No. 8 Lockwasher
6	40-50-6900	4	Spring	22	06-55-0825	4	8-32 Hex. Nut
7	06-81-0035	1	5/16 x 1" Lg. Taptite	23	23-33-0235	1	250 Volt, 20 amp. Twist Lock Outlet
8	45-88-5245	1	5/16 Flat Washer	24	06-81-4212	4	10-32 x 1/2" Lg.Phil.Pan Hd.Mach.Sc.
9	42-36-0900	1	Engine Support	25	06-97-0870	4	No. 10 Ext.Tooth Shakeproof
10	43-20-1510	1	6 H.P. Engine	26	06-55-1100	4	10-32 Hex. Nut
11	23-81-0195	1	Reactor	27	23-33-0240	1	125 Volt, 30 amp, Twist Lock
12	23-74-0480	1	Grounding Terminal	28	23-66-0945	1	3 P.D.T. Rocker Switch
13	06-57-3000	5	10-32 Lokut Hex. Nut	29	23-66-0950	1	Spdt Rocker Switch
14	06-75-0020	4	10-32 x 3/4" Lg.Hex.Hd.Mch.Sc.	30	23-33-0130	2	115 Volt, 15 amp. Parallel Blade Outlet
15	06-97-3400	4	No. 10 Lockwasher	31	45-12-0280	1	Panel Shroud
16	23-35-0160	1	Control Panel	32	06-81-0275	4	10-32 x 1/4" Lg.Whiz Sc.
				33	23-33-0245	1	125 Volt, 30 amp. Twist Lock Plug
				34	23-33-0250	1	250 Volt, 20 amp. Twist Lock Plug



No.	Part No.	Req'd	Description
1	43-20-1510	1	Engine 6 H.P.
2	06-57-7475	2	3/4" Pipe Lock Nut
3	43-33-0455	1	90° - 3/4" Street Elbow
4	43-33-0450	1	3/4 x 4" Pipe Nipple
5	43-31-0255	1	Muffler
6	45-60-0340	1	Muffler Support
7	06-75-0343	2	5/16 - 18 x 2 1/2" Lg.Hex.Head Cpsec.
8	06-97-4100	6	5/16" Lockwasher
9	06-55-1980	4	5/16 - 18 Hex Nut
10	42-68-0310	1	3/4" Dia. "U" Bolt
11	42-68-0295	1	"U" Bolt 1 1/4"
12	42-68-0300	1	Saddle 1 1/4"



**EXPLODED VIEW OF  
EXHAUST SYSTEM**

Control No.  
38856

No.	Part No.	Req'd	Description	Item	Part No.	Req'd	Description
1	42-20-0435	1	Mounting Base	17	22-56-0060	2	3/8" Straight Connector
2	42-36-0895	1	Alternator Support	18	23-04-0060	2	Fuse Holder
3	06-75-3975	8	5/16-18 x 1" Lg.Hex.Hd.Cpsc.	19	22-89-0060	2	Fuse
4	06-97-4100	9	5/16" Lockwasher	20	06-81-5630	4	8-32 x 1/2" Lg.Phil.Pan Hd.Mach.Sc.
5	06-55-1980	9	5/16 - 18 Hex. Nut	21	06-97-3200	4	No. 8 Lockwasher
6	40-50-6900	4	Spring	22	06-55-0825	4	8-32 Hex. Nut
7	06-81-0035	1	5/16 x 1" Lg. Taptite	23	23-33-0235	1	250 Volt,20 amp.Twist Lock Outlet
8	45-88-5245	1	5/16 Flat Washer	24	06-81-4212	4	10-32 x 1/2" Lg.Phil.Pan Hd.Mach.Sc.
9	42-36-0900	1	Engine Support	25	06-97-0870	4	No. 10 Ext.Tooth Shakeproof
10	43-20-1510	1	6 H.P. Engine	26	06-55-1100	4	10-32 Hex. Nut
11	23-81-0195	1	Reactor	27	23-33-0240	1	125 Volt, 30 amp,Twist Lock
12	23-74-0480	1	Grounding Terminal	28	23-66-0945	1	3 P.D.T.Rocker Switch
13	06-57-3000	5	10-32 Lokut Hex. Nut	29	23-66-0950	1	Spdt Rocker Switch
14	06-75-0020	4	10-32 x 3/4" Lg.Hex.Hd.Mch.Sc.	30	23-33-0130	2	115 Volt,15 amp.Parallel Blade Outlet
15	06-97-3400	4	No. 10 Lockwasher	31	45-12-0280	1	Panel Shroud
16	23-35-0160	1	Control Panel	32	06-81-0275	4	10-32 x 1/4" Lg.Whiz Sc.
				33	23-33-0245	1	125 Volt,30 amp. Twist Lock Plug
				34	23-33-0250	1	250 Volt,20 amp. Twist Lock Plug

