

OPERATING INSTRUCTIONS AND PARTS LIST FOR

CATALOG NUMBER
4777



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
2. The PART NAME

3. M.E.T.CO. CAT. NO. 4777
4. The NAME of Item: AC ALTERNATOR

5. STARTING SERIAL NO. 510-1001

**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 WATTS	FULL LOAD AMPS	MODEL NO.	FULL LOAD WATTS	FULL LOAD AMPS	MODEL NO.	FULL LOAD WATTS	FULL LOAD 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, 3½" bore, 2-7/8" stroke, 27.66 cu. in. displacement, 12 H.P.

COOLING: Pressure Air Cooled

GOVERNOR: Mechanical Type Preset

IGNITION: Flywheel Magneto

TARTING: Rope

OIL SYSTEM: Splash Lube 32 Oz

FUEL TANK: 2-3/4 gallon capacity

ALTERNATOR

5000 WATT – Manual Start

TYPE: Revolving field four pole, single phase, 115/230 volt at 43.4/21.7 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 wedges.

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 32 oz. of oil.

NOTE: Oil weight Recommendations

Summer – SAE 30 M.S.

Winter – 5W20 M.S.

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.

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

Motor H.P. Rating	Approx. Running Watts	Universal Motors	Repulsion Induction Motors	Capacitor Motors	Split Phase Motors
1/6	275	400	600	850	1200
1/4	400	500	850	1050	1700
1/3	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.

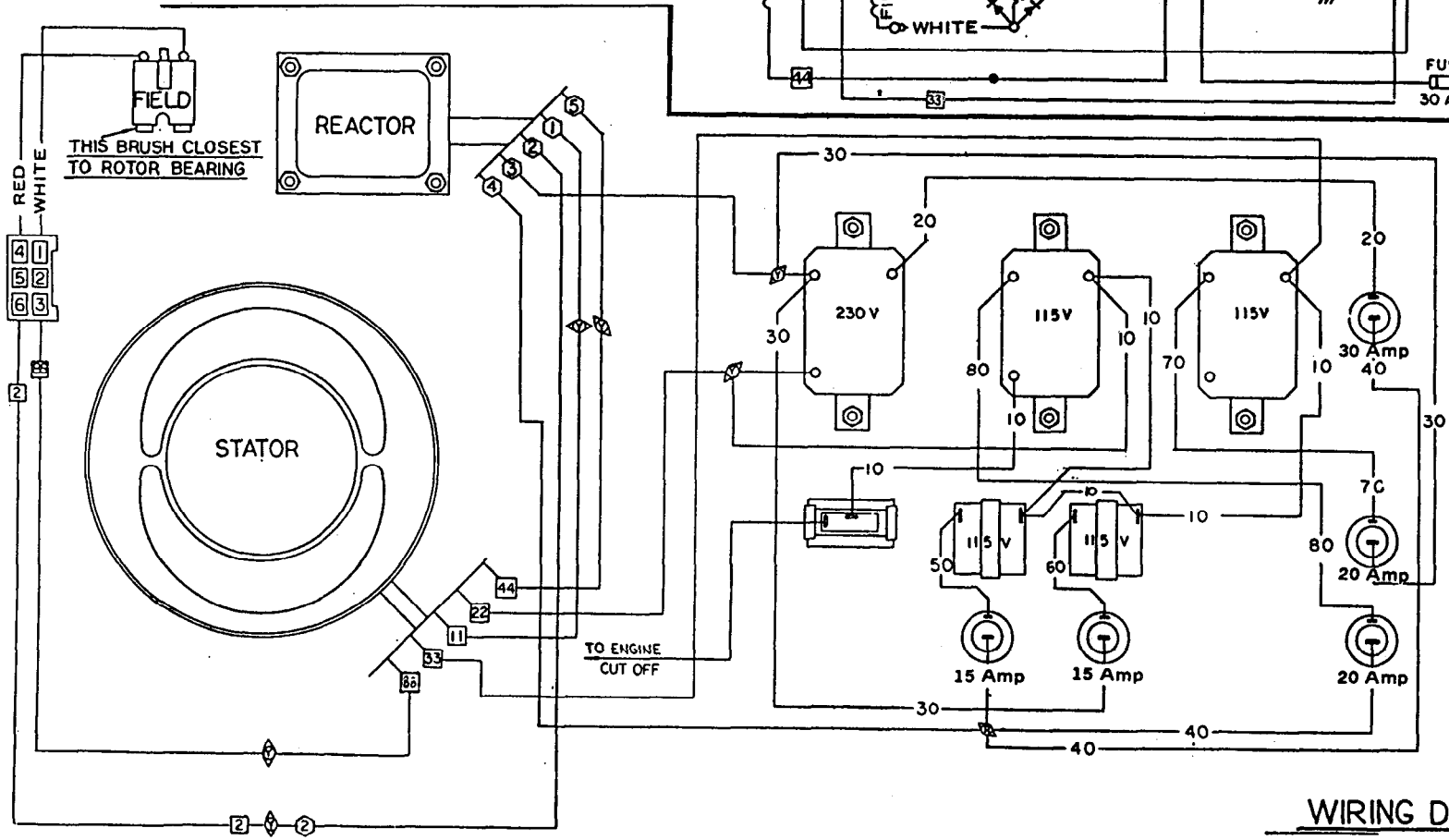
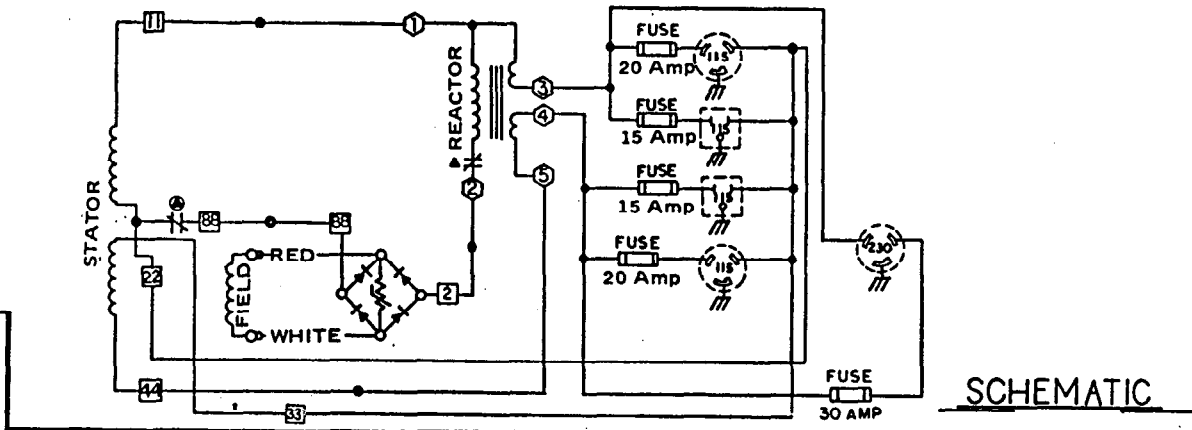
ALTERNATOR CAPABILITY FOR ELECTRIC MOTOR STARTING

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	1/3 / —
2650	1-1/2	1	1 1/2	1/2	1	1/2 / 3/4
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 / 3/4
**LL3000	2	1 1/2	2	3/4	1	3/4 / 3/4
**LL5000	*	2 1/2	3	2 1/2	3	* / *

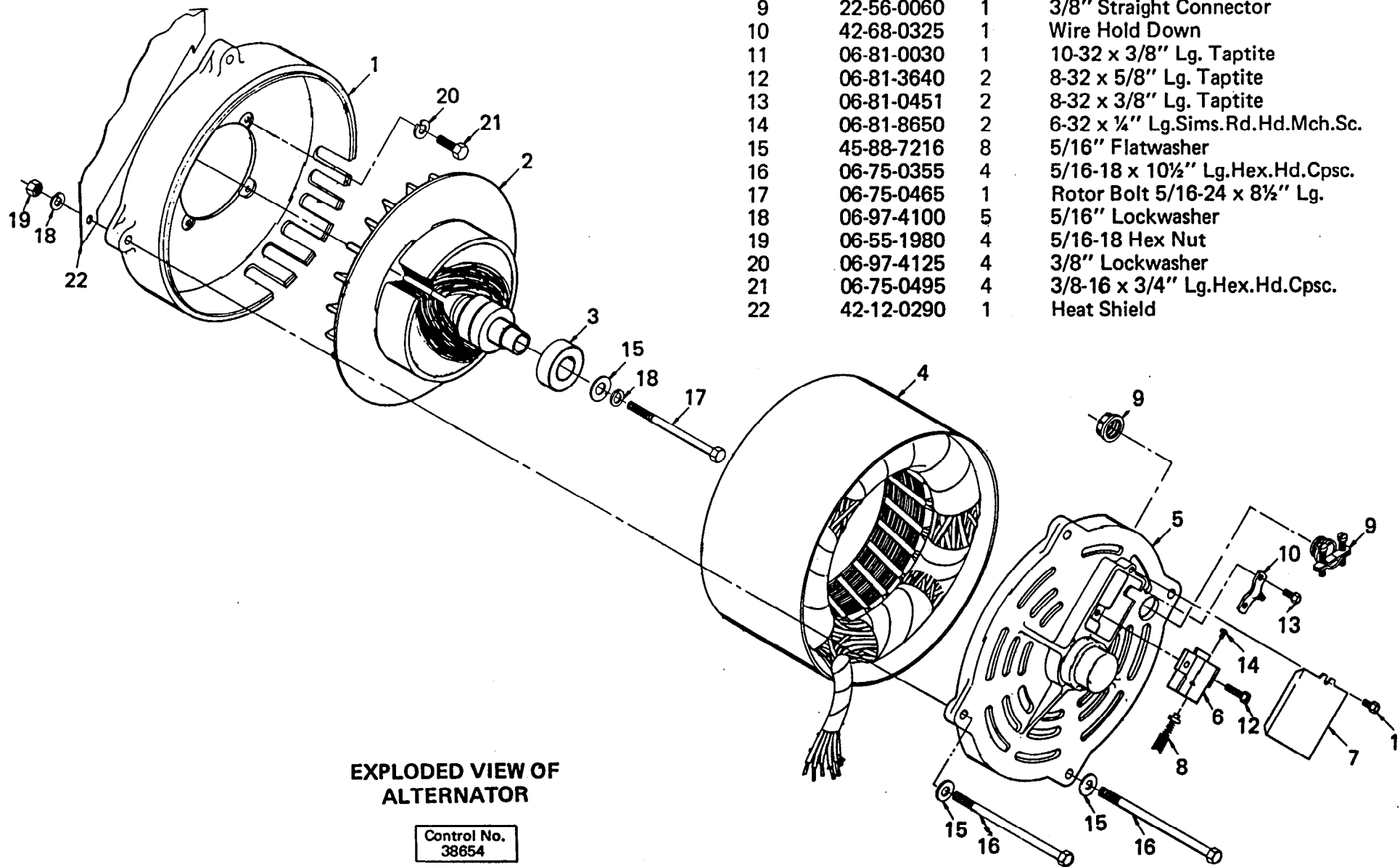
*Motors of higher horsepower rating than shown in the classification are not generally used.
 **LL-2400 RPM units.

- LEGEND**
- FRAME GROUND
 - WIRE NUT (RED)
 - WIRE NUT (YELLOW)

- REACTOR THERMAL PROTECTOR
- STATOR THERMAL PROTECTOR



Control No.
38652

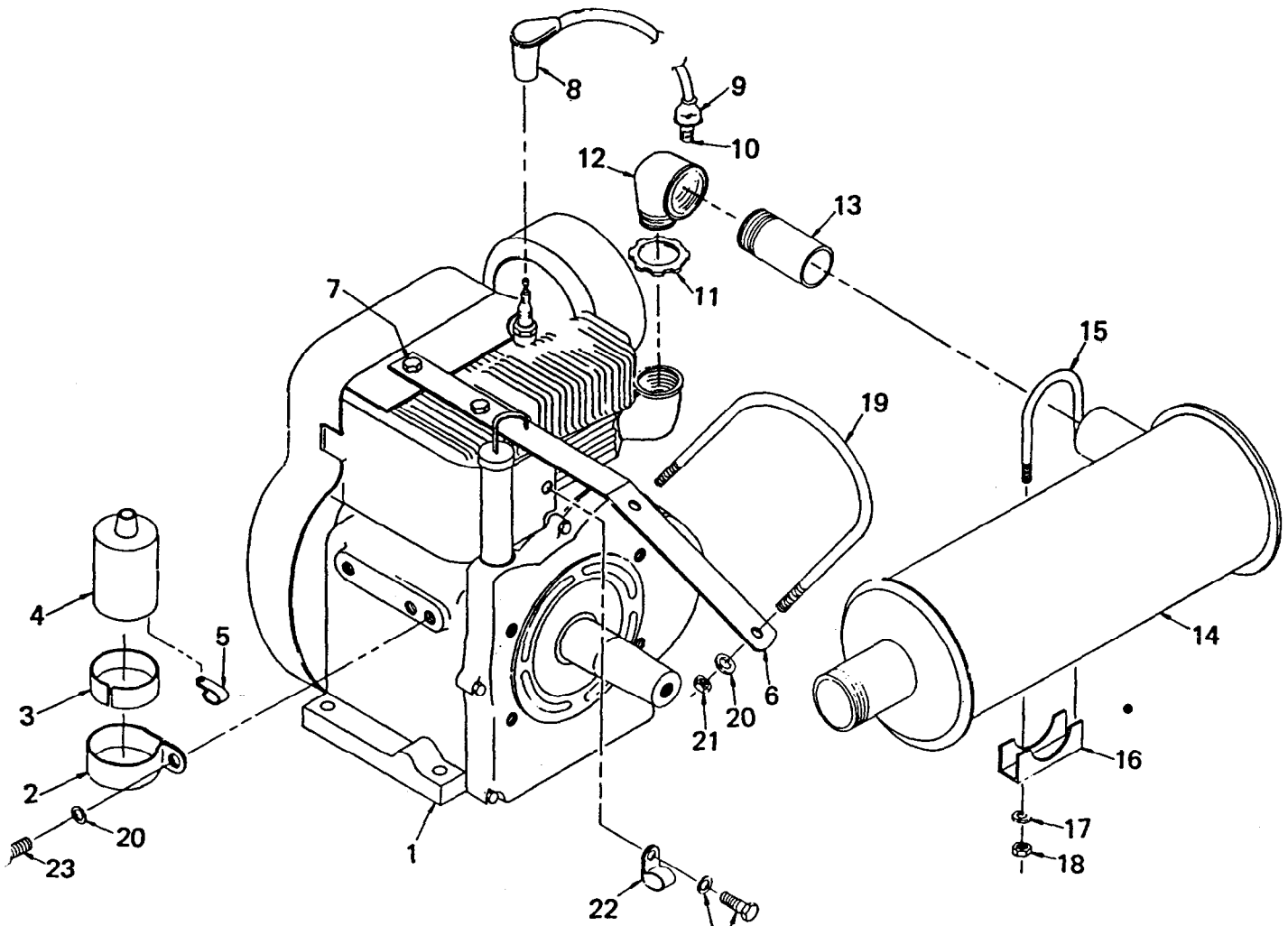


Item	Part No.	Req'd	Description
1	42-04-0475	1	Adaptor Housing
2	23-40-0400	1	Rotor and Fan Assembly
3	02-04-1545	1	Bearing
4	23-58-0480	1	Stator Assembly
5	45-60-0345	1	Rear Bearing Carrier
6	22-20-0220	1	Brush Holder
7	42-92-0345	1	Brush Inspection Cover
8	22-18-0340	2	Brush Assembly
9	22-56-0060	1	3/8" Straight Connector
10	42-68-0325	1	Wire Hold Down
11	06-81-0030	1	10-32 x 3/8" Lg. Taptite
12	06-81-3640	2	8-32 x 5/8" Lg. Taptite
13	06-81-0451	2	8-32 x 3/8" Lg. Taptite
14	06-81-8650	2	6-32 x 1/4" Lg. Sims. Rd. Hd. Mch. Sc.
15	45-88-7216	8	5/16" Flatwasher
16	06-75-0355	4	5/16-18 x 10 1/2" Lg. Hex. Hd. Cpsec.
17	06-75-0465	1	Rotor Bolt 5/16-24 x 8 1/2" Lg.
18	06-97-4100	5	5/16" Lockwasher
19	06-55-1980	4	5/16-18 Hex Nut
20	06-97-4125	4	3/8" Lockwasher
21	06-75-0495	4	3/8-16 x 3/4" Lg. Hex. Hd. Cpsec.
22	42-12-0290	1	Heat Shield

**EXPLODED VIEW OF
ALTERNATOR**

Control No.
38654

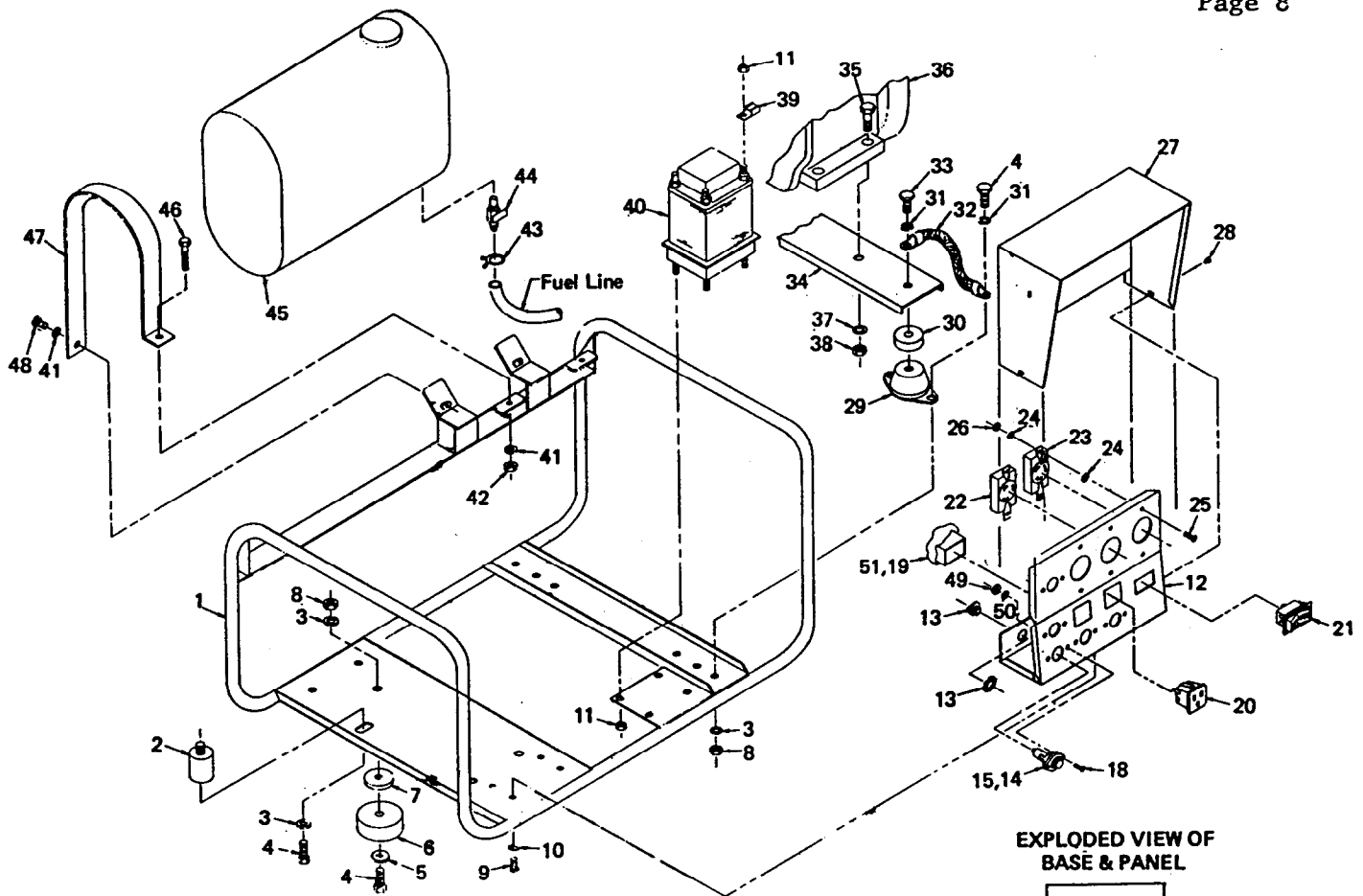
Item	Part No.	Req'd	Description
1	43-20-4400	1	Engine Wisc.TRA 12
2	45-60-0355	1	Coil Support
3	45-36-0790	1	Spacer
4	22-51-0190	1	Ignition Coil
5	42-68-0350	1	Clamp
6	45-60-0350	1	Muffler Support
7	06-75-0345	2	Hex Hd. Cpsc. 5/16-18 x 2-3/4 Lg.
8	23-94-9565	1	Spark Plug Wire
9	23-16-0345	1	Coil Nipple
10	42-70-0170	1	Coil Clip
11	06-57-7480	1	Pipe Lock Nut 1"
12	43-33-0295	1	90° Red. St.Ell. 1 x 1 1/4
13	43-33-0480	1	Half Nipple 1 1/4 x 3
14	43-31-0250	1	Muffler
15	42-68-0330	1	U Bolt
16	42-68-0335	1	Saddle
17	06-97-4100	2	Lock Washer 5/16
18	06-55-1980	2	Hex Nut 5/16-18
19	42-68-0340	1	U Bolt
20	06-97-4125	3	Lock Washer 3/8
21	06-55-2400	2	Hex Nut 3/8-16
22	42-68-0345	1	Clamp
23	06-75-0495	1	Hex Hd.Cpsc. 3/8-16 x 3/4



EXPLODED VIEW OF EXHAUST SYSTEM

Supplied With Engine

Control No. 38622

EXPLODED VIEW OF
BASE & PANELControl No.
38653

Item	Part No.	Req'd	Description	Item	Part No.	Req'd	Description
1	42-20-0450	1	Mounting Base	28	06-81-0275	4	Whiz Screw
2	43-33-0470	1	Vibration Dampner	29	43-33-0310	2	Vibration Dampner
3	06-97-4100	10	5/16 Lock Washer	30	45-36-0785	2	Spacer
4	06-75-0340	9	Hex Hd.Cpsc. 5/16-18 x 1" Lg.	31	06-97-1020	2	5/16 External Shakeproof
5	45-88-5261	4	Flat Washer 3/8	32	45-56-0145	1	Ground Strap
6	43-33-0300	4	Vibration Dampner	33	06-75-0525	2	Hex Hd.Cpsc. 3/8-16 x 1-3/4 Lg.
7	45-88-7200	4	Spacer	34	42-36-0395	1	Engine Support
8	06-55-1980	8	Hex Nut 5/16-18	35	06-75-0600	2	Hex Hd.Cpsc.3/8-16 x 1-3/4 Lg.
9	06-81-4652	4	Hex Hd. Mch.Sc.No.10-32 x 1/2 Lg.	36	Ref. dwg.38622	1	TRA 12-D Engine
10	06-97-3400	4	No. 10 Lock Washer	37	06-97-4125	2	Lock Washer 3/8
11	06-57-3000	5	No. 10-32 Lokut Hex Nut	38	06-55-2400	2	Hex Nut 3/8-16
12	23-35-0170	1	Control Panel	39	23-74-0480	1	Ground Terminal
13	22-56-0060	2	3/8 Straight Connector	40	23-81-0200	1	Reactor Assembly
14	23-04-0060	5	Fuse Holder	41	06-97-1000	4	1/4 Lock Washer
15	22-89-0090	2	Fuse 20 Amp	42	06-55-1500	2	1/4-20 Hex Nut
16	22-89-0100	1	Fuse 30 Amp	43	42-68-0280	2	Hose Clamp
17	22-89-0060	2	Fuse 15 Amp (Not Shown)	44	45-80-0145	1	Shut Off Valve
18	06-81-5630	10	Phil.Pan Hd.Mach.Sc.No.8-32 x 1/2 Lg.	45	45-66-0065	1	Fuel Tank
19	23-38-2585	1	Rectifier Assembly	46	06-75-0200	1	Hex Hd.Cpsc. 1/4-20 x 1 1/4 Lg.
20	23-33-0130	2	115 V Parallel Blade Cutlet	47	45-56-0140	2	Tank Strap
21	23-66-0950	1	Rocker Switch Spst.	48	06-81-4720	2	Rd.Hd.Mach.Sc. 1/4-20 x 5/8 Lg.
22	23-33-0255	2	125 V 20 A Twist-Lok Outlet	49	06-55-0825	10	No. 8-32 Hex Nut
23	23-33-0265	1	250 V 30 A Twist-Lok Outlet	50	06-97-3200	10	No. 8 Lock Washer
24	06-97-0870	12	No. 10 External Shakeproof	51	42-36-0397	1	Rectifier Support Assembly
25	06-81-4212	6	Phil.Pan Hd.Mach.Sc.No. 10-32 x 1/2 Lg.	52	23-33-0260	2	125 V 20 A Twist-Lok Plug (Not Shown)
26	06-55-1100	6	Hex Nut No. 10-32	53	23-33-0270	1	250 V 30 A Twist-Lok Plug (Not Shown)
27	45-12-0285	1	Panel Shroud				