

INSTRUCTION MANUAL

AND PARTS CATALOG

FOR



AC ALTERNATOR

UF

SERIES

MODEL

FILE MASTER
DO NOT REMOVE

10UF-53N
12UF-3N
12UF-4N

RECTIFIER EXCITATION

ONAN

1400 73RD AVENUE N. E. • MINNEAPOLIS, MINNESOTA 55432

A DIVISION OF STUDEBAKER CORPORATION

IN CANADA: ONAN GENERATORS CANADA LTD., 233 CAMPBELL ROAD, GUELPH, ONTARIO
INTERNATIONAL DISTRICT OFFICE: EMPIRE STATE BLDG., 350-5TH AVE., RM. 2204, NEW YORK 10001

TABLE OF CONTENTS

Alternator Specifications	1
General Information	
Introduction	2
Alternator Description	2
Manufacturers Warranty	2
Installation	
Location	3
Mounting the Alternator	3
Alternator Cooling	3
Wiring Connections	4
Driving Power	4
Pulley Selection	4
Operation	
Starting	7
Operating	7
Switchboards (Optional)	7
Service and Maintenance	
Periodic Service	9
Brushes	9
Slip Rings	9
Bearings	9
Major Repair	9
Grounded Armature	9
Open Armature	10
Short Circuit, Armature	10
Open Circuit, Field Windings	10
Inspecting Diodes	10
Testing Diodes	10
Diode Replacement	10
Trouble-Shooting Chart	12
Part List	13

SPECIFICATIONS

SPECIFICATIONS	10UF-53N	12UF-3N	12UF-4N
Rating (Watts)	10,000	12,000	12,000
Volts	120/240*	120/240*	120/208
Current (Amperes)	42	50	33.4
Cycles	50	60	60
Phase	1	1	3
Wire	4	4	4
Alternator Speed (RPM)	3000	3600	3600
Weight	236	236	236

* Reconnectable to deliver full output at 120V, 240V, or 120/240V.

GENERAL INFORMATION

INTRODUCTION

This instruction book contains information for the proper installation, operation and maintenance of your alternator. We suggest you keep this book handy so it can be referred to when necessary.

If you wish to contact your dealer or the factory regarding this equipment, be sure to supply the complete MODEL and SPECIFICATION NUMBER and the full SERIAL NUMBER of your equipment. This information is necessary to identify your equipment among the many units manufactured.

ALTERNATOR DESCRIPTION

Onan UF Alternators are skillfully constructed of the finest materials. They are rugged, compact and complete. The unit consists of a revolving armature, 2 pole alternator with rectifier excitation. By using rectifier excitation, no commutator or DC armature windings are needed. Shaft can rotate either clockwise or counterclockwise without need for reconnecting field leads. The alternator is dripproof in construction, but reasonable precautions should be taken against excessive exposure to moisture. The unit is complete with mounting feet, outlet box, keyed shaft and removable lifting eye.

IMPORTANT...RETURN WARRANTY CARD ATTACHED TO UNIT

MANUFACTURER'S WARRANTY

The Manufacturer warrants, to the original user, that each product of its manufacture is free from defects in material and factory workmanship if properly installed, serviced and operated under normal conditions according to the Manufacturer's instructions.

Manufacturer's obligation under this warranty is limited to correcting without charge at its factory any part or parts thereof which shall be returned to its factory or one of its Authorized Service Stations, transportation charges prepaid, within one year after being put into service by the original user, and which upon examination shall disclose to the Manufacturer's satisfaction to have been originally defective. Correction of such defects by repair to, or supplying of replacements for defective parts, shall constitute fulfillment of all obligations to original user.

This warranty shall not apply to any of the Manufacturer's products which must be replaced because of normal wear, which have been subject to misuse, negligence or accident or which shall have been repaired or altered outside of the Manufacturer's factory unless authorized by the Manufacturer.

Manufacturer shall not be liable for loss, damage or expense directly or indirectly from the use of its product or from any other cause.

The above warranty supersedes and is in lieu of all other warranties, expressed or implied, and of all other liabilities or obligations on part of Manufacturer. No person, agent or dealer is authorized to give any warranties on behalf of the Manufacturer nor to assume for the Manufacturer any other liability in connection with any of its products unless made in writing and signed by an officer of the Manufacturer.

INSTALLATION

LOCATION

Figure 1 shows dimensions of the alternator and bolthole centers for installation. Select a site for the alternator with the following points in mind.

- 1. Ventilation** - The alternator creates considerable heat when operating under load conditions. It is very important that this heat be dissipated by proper ventilation. If the alternator is installed inside a small room or compartment, provide a vent for exhausting the air heated by the alternator. Locate the hot air vent above the inlet vent. Heated air is discharged from the driveshaft end of the alternator.
- 2. Convenience to Driving Power** - (Driving power is described as an engine or prime mover of the alternator.) Both driving source (engine) and driven counterpart (alternator) must be bolted securely to a heavy mounting base to maintain pulley and shaft alignment. The direction or rotation of the alternator will be determined by the direction of rotation of the driving unit. The alternator rotation is reversible and works equally well in either direction (See Alternator Cooling). The shaft of the alternator and driving unit must be parallel and the pulleys must be lined up. Correct belt tension must be maintained. After the pulleys are in proper alignment both alternator and driving source must be bolted down to a heavy rigid mounting base.

CAUTION If a flexible coupling is used, shaft alignment of the alternator and driving unit must be accurately made and permanently maintained. Incorrect shaft alignment will cause excessive wear on both units and unnecessary loss of power from the driving unit.

- 3. Dusty or Damp Conditions** - Avoid dusty or damp conditions as much as possible. Alternator should be mounted under cover or inside a building to protect it against the weather.
- 4. Servicing Convenience** - Allow at least 24 inches of space on all sides of the alternator for convenient servicing.

MOUNTING THE ALTERNATOR

Provide a substantial mounting base of concrete, wood or steel and use large cap screws. The surface of the mounting base should be flat so that the alternator mounting brackets will not be sprung when tightening into place. It should be possible to turn the alternator shaft by hand after the alternator is tightened down.

ALTERNATOR COOLING

The alternator blower scroll is installed at the factory for a counterclockwise rotation. If clockwise rotation is

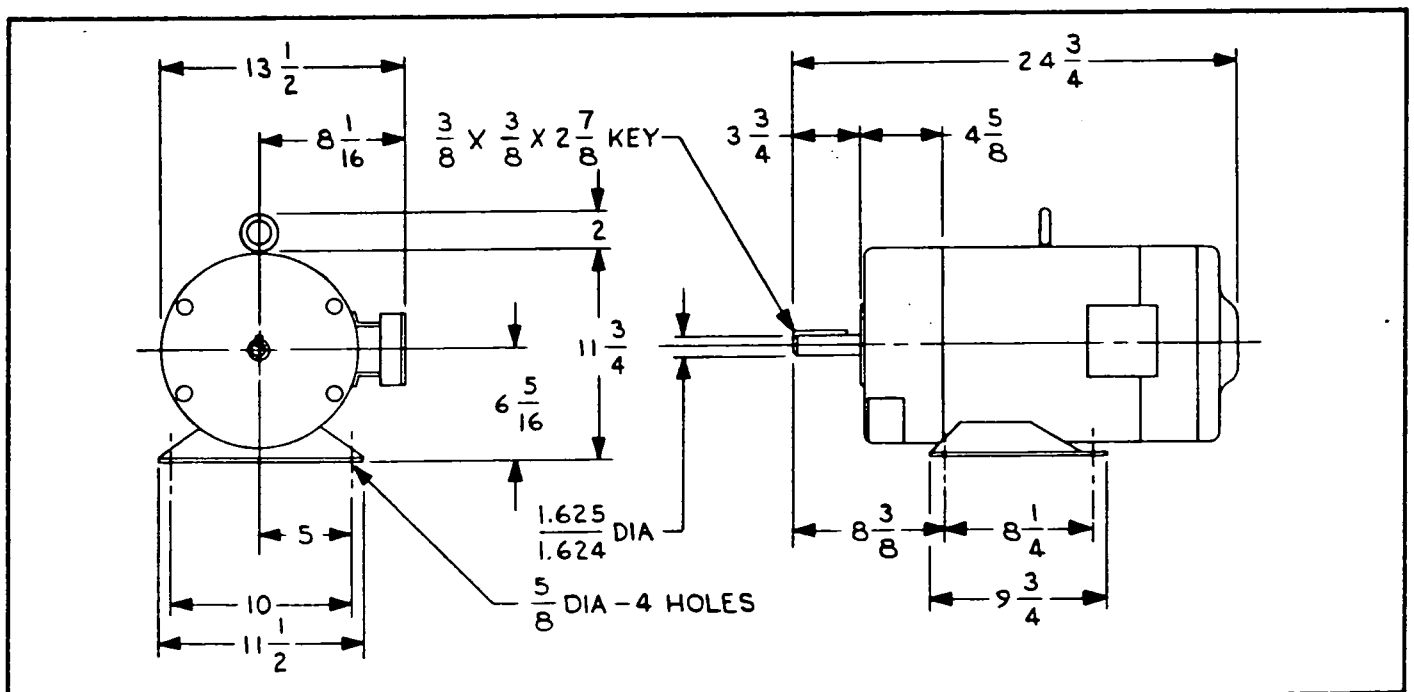


FIG. 1. INSTALLATION OUTLINE

desired, scroll position must be reversed. The arrow printed on the scroll must be pointing in the direction of rotation of the shaft.

To reverse scroll, remove only the scroll with screen attached. Turn it end for end and reinstall so scroll will be at opposite end of air outlet hole. See Fig. 2.

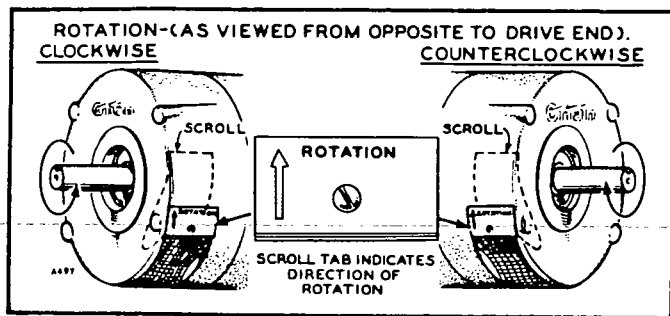


FIG. 2 REVERSING BLOWER SCROLL

WIRING CONNECTIONS

Follow specifications of local and national electrical codes for installing load connection wiring and grounding the alternator. Be sure to use wire large enough to avoid excessive drop in voltage between the alternator and the load, depending upon the distance and the amount of the load. See Fig. 3.

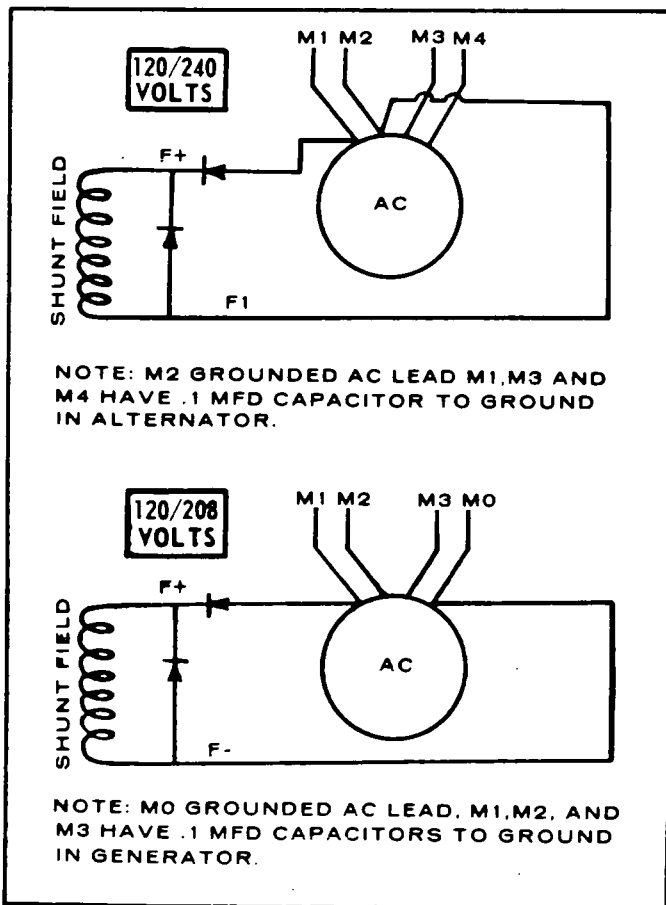


FIG. 3. WIRING CONNECTIONS

DRIVING POWER

When using a gasoline or Diesel engine as the driving source the following factors should be considered:

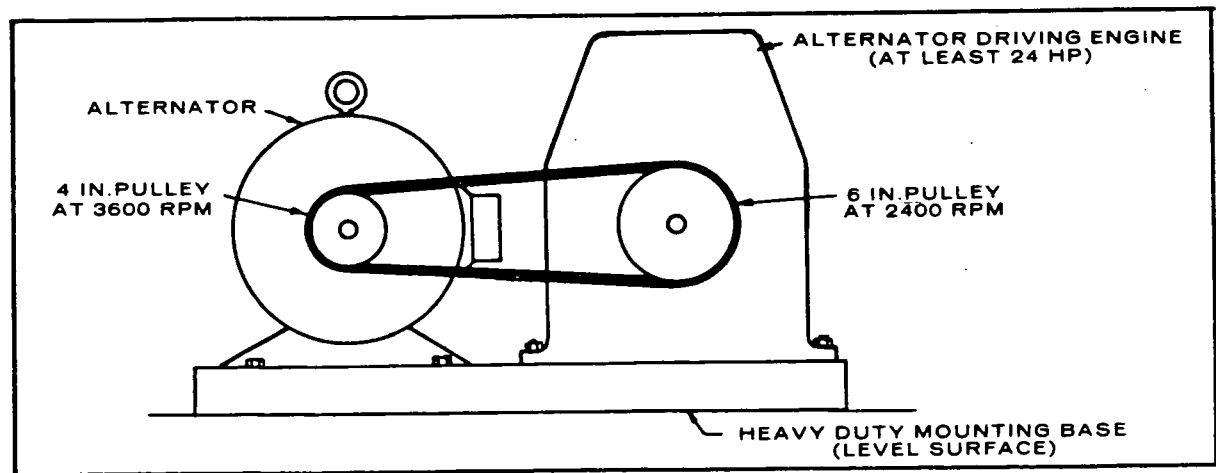
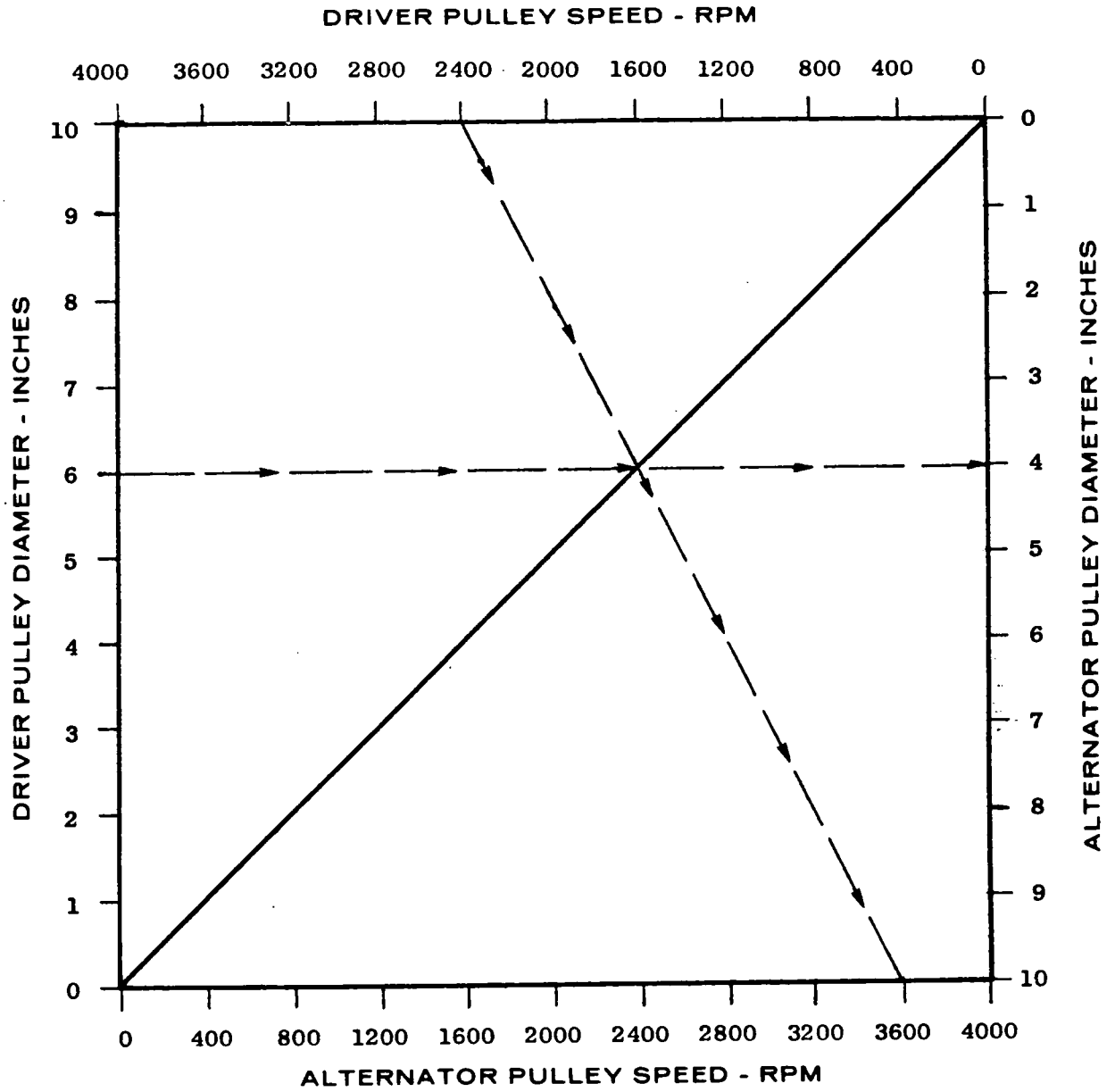
- 1. Engine Power** - The engine must have a minimum of 2 H.P. for each 1000 watts of alternator output. For example, if a 12,000 watt alternator is operated, the engine must deliver at least 24 horsepower at the drive shaft. If the engine has a considerable reserve of power the speed regulation and voltage regulation will be much better.
- 2. Engine Pulley Speed** - The engine may have a variable speed governor which regulates engine speed at about 8-1/2 to 12%. If so, governor operation is best at the maximum rated speed of the engine. When the alternator operates at or near its capacity, the engine tends to increase speed when removing the load. The engine governor does not react fast enough at low speed to prevent momentary acceleration and high voltage. This may cause serious damage to any electrical equipment left connected. The engine cannot increase its speed too much when the load is removed. If the engine has a constant speed governor, the speed regulation is 5% or less and the above effects are not present.

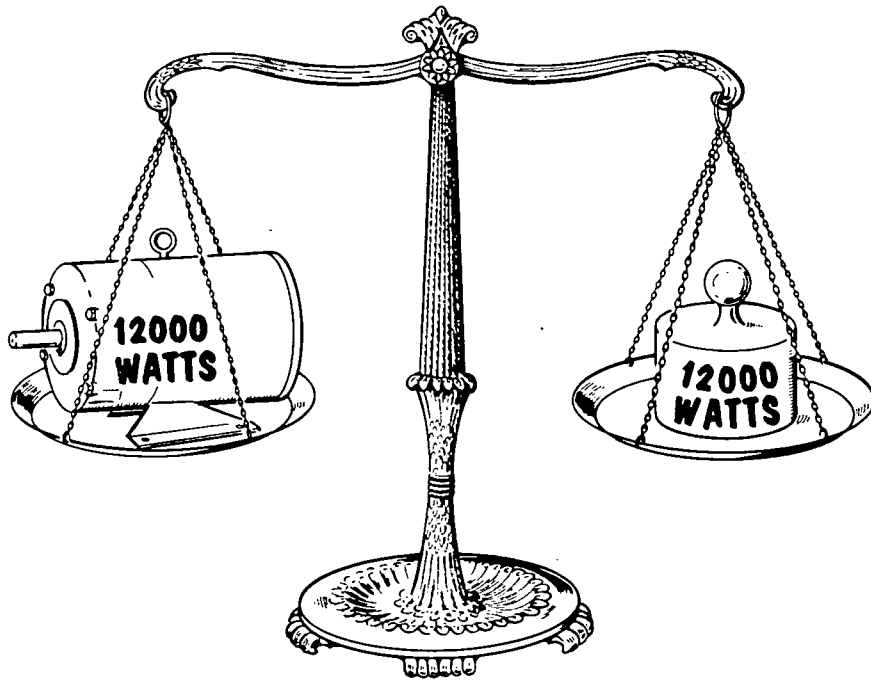
Low alternator speed causes low voltage and frequency. If, for example, a 3600rpm alternator slows to 3000rpm, the frequency is 50cycles instead of 60cycles. The combination of low voltage and frequency will almost certainly result in burned out windings in any motors connected to the alternator.

- 3. Pulley Selection** - The rated speed of the engine determines the pulley size to use on the alternator. To determine the correct alternator pulley size to use, proceed as follows:

See Figure 4. For example, if you know that the driver speed is 2400rpm, driver pulley is 6" in diameter, and the alternator must operate at 3600rpm, draw a line from 2400rpm on the driver speed to 3600rpm on the driven speed. Then draw a line from the driver pulley diameter (6") through the point where the first line crosses the diagonal and to the driven pulley scale. This 4" is the required diameter of the alternator pulley.

FIG. 4. PULLEY SELECTION CHART





DO NOT OVERLOAD ALTERNATOR

OPERATION

STARTING

Start the alternator, and while running at no load, check the voltage. Be sure the alternator is being driven at its nameplate rating (3600rpm for 60 cycle models, 3000rpm for 50 cycle models). Make any necessary adjustment to the driving power source so that the alternator speed is correct.

OPERATING

Connect electrical load after the alternator operates satisfactorily at no load. When connecting electric motors, connect one at a time, allowing each to reach running speed before connecting the next one. Motors require much more current for starting than when running at normal speed. Therefore, if several motors were connected at the same time, the alternator could be so overloaded that none of the motors would start.

If the driving engine governor does not provide good regulation, or if the engine is operating at capacity, it may be necessary to manually adjust the engine throttle control as alternator load is substantially changed.

OPTIONAL SWITCHBOARDS (FIG. 5)

Switchboards are optional equipment which can be purchased at added cost. They contain a voltmeter, ammeters, line circuit breakers and marked terminals. The switchboard is used to check alternator voltage, load current and voltage regulation with a varying load.

When ordering parts for switchboards, obtain part numbers and description of part from the wiring diagram supplied with the switchboard.

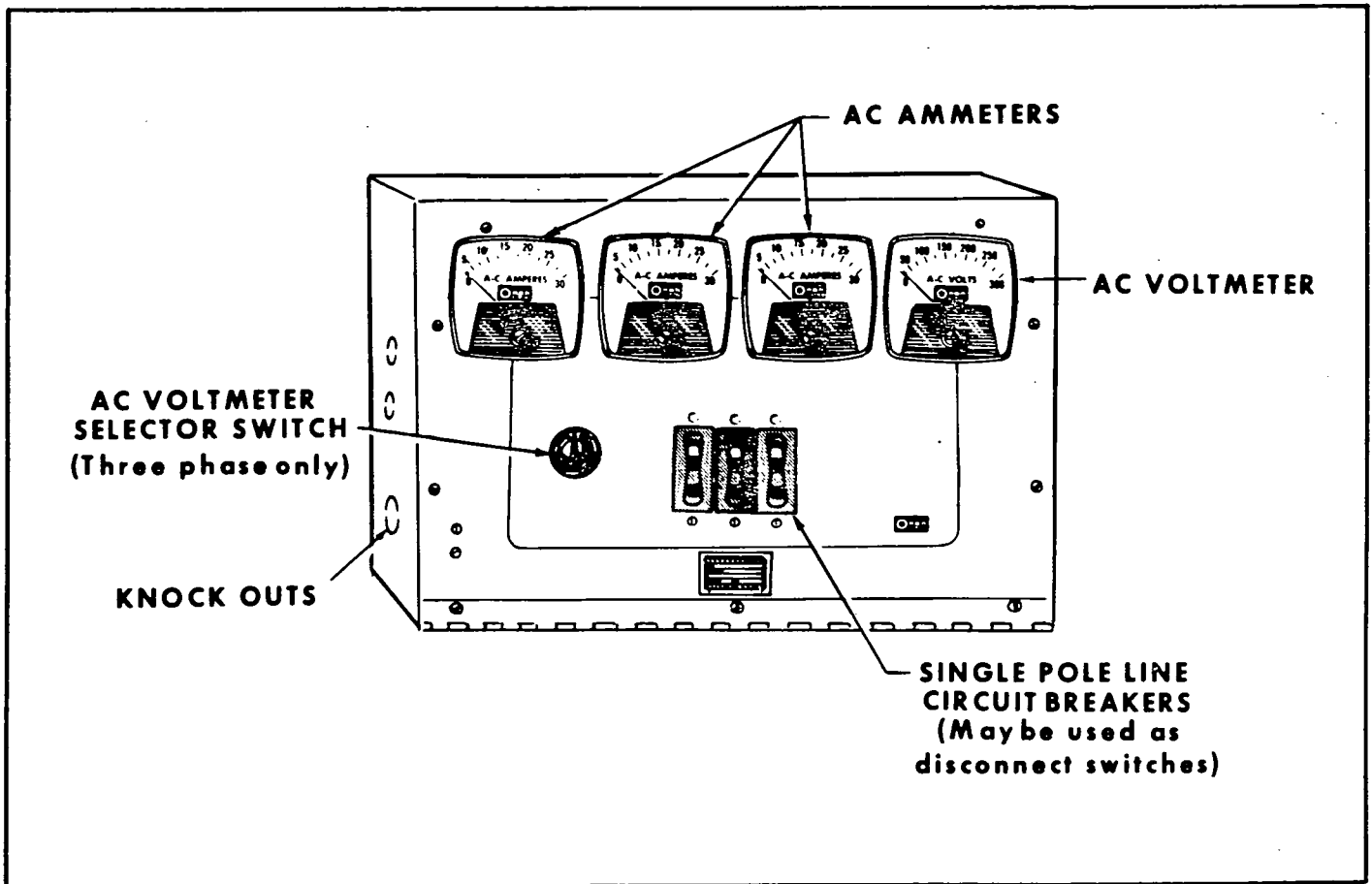


FIG. 5. WALL-MOUNTING SWITCHBOARD

PARTS!

LOOK FOR THEM ASK FOR THEM BE SURE
YOU GET GENUINE ONAN REPLACEMENT PARTS.
NEVER ACCEPT SUBSTITUTES! IF YOU WANT TO
MAKE YOUR ONAN ALTERNATOR AS GOOD AS NEW,
LOOK FOR THE GREEN AND WHITE LABEL WITH
THE IDENTIFYING WORDS: GENUINE ONAN PARTS.

SERVICE!

REMEMBER TOO, THAT ONAN AUTHORIZED SERVICE
STATIONS, WITH THEIR FACTORY TRAINED PERSON-
NEL, HAVE THE BEST OF FACILITIES FOR COMPLETE
OVERHAULING AND REBUILDING YOUR ONAN UNIT.
SEE YOUR PARTS AND SERVICE CENTER FOLDER
FORM F-115.

SERVICE AND MAINTENANCE

PERIODIC SERVICE AND INSPECTION

Follow a definite schedule of inspection and servicing. Make a good visual check before, while, and after alternator is operating; look for loose or broken leads and bad connections.

Internal alternator parts should be examined periodically. Remove end bell cover and inspect brushes, springs, bearings, etc.

BRUSHES (FIGURES 6 and 7)

Replace the brushes when they wear to about 5/8 inch in length. Order replacement brushes by part number, never by description: similar brushes may have different electrical characteristics.

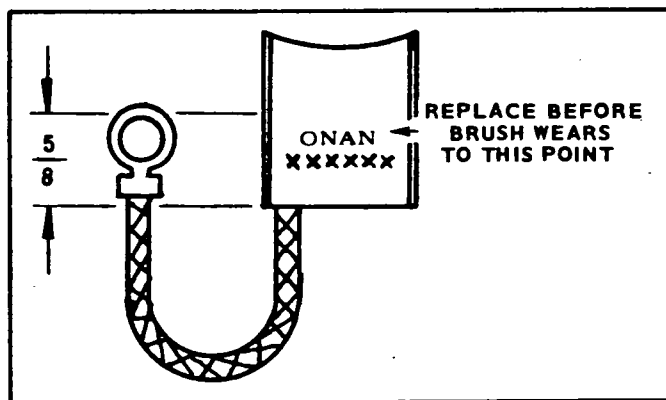


FIG. 6. BRUSH REPLACEMENT

CAUTION If brushes are not replaced by the time they wear past the stamped Onan name and number, severe damage to the slip rings will take place.

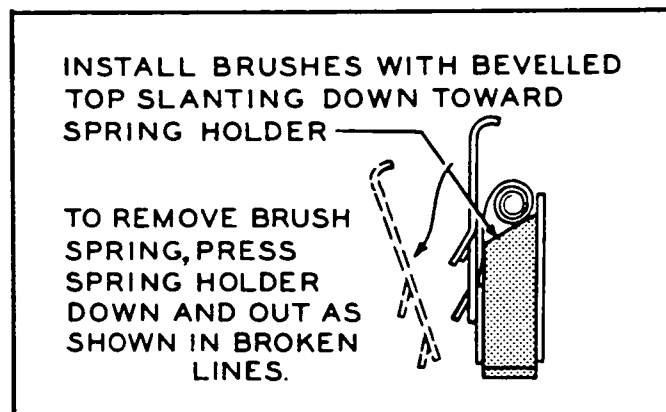


FIG. 7. BRUSH REMOVAL

SLIP RINGS

Slip rings must be clean and free of scratches and burrs (do not remove the dark brown film). If necessary to use an abrasive on the slip rings, use No. 00 sandpaper, never emery cloth or other conducting abrasives.

BEARINGS

The ball bearings are double sealed and lubricated for life.

MAJOR ALTERNATOR REPAIR

Several tests for open or grounded circuits can be made without disassembling the alternator. However, if necessary to disassemble, proceed as follows:

1. Remove the sheet metal end cover and band. Tag or otherwise mark each lead as it is disconnected, to assure correct reconnection.
2. Remove all brushes and springs from the brush holders.
3. Remove the alternator thru-stud nuts holding the end bell opposite the drive end of the frame. With a soft faced mallet, tap the armature shaft at the brush rig end until the ball bearing is free of the end support. On reassembly, align the bearing clip with the end bell notch.
4. Carefully withdraw the armature from the frame to prevent damage to the windings.

ARMATURE GROUNDED (FIGURE 8)

See that all brushes are lifted high in their holders. Use a continuity type test lamp set. Place one test prod on one of the slip rings, and one other prod on a bare clean part of the alternator frame or armature shaft. The prods must make good electrical contact. The test lamp set should not light. If it does light up, the slip ring is grounded. Test all of the slip rings in the same manner. If the armature tests grounded, replace with a new one.

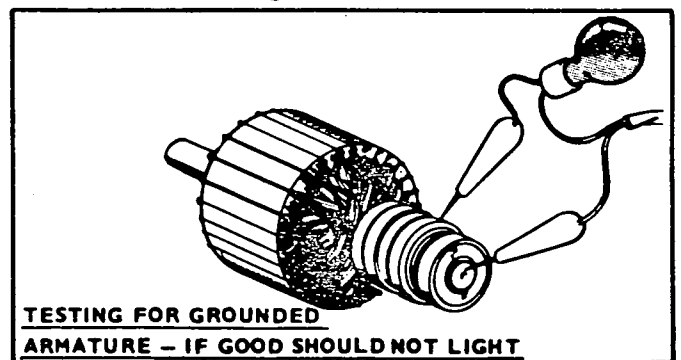


FIG. 8 ARMATURE GROUNDED

ARMATURE OPEN (FIGURE 9)

If the alternator is a single phase model, test between the two slip rings nearest the windings and repeat the test between the two rings nearest the ball bearing. In each case the test lamp should glow. If the test is made between the two center rings the test lamp should not glow. If the test lamp does glow, a short circuit between the separate windings is indicated.

If the alternator is a three phase model, the test lamp should glow between all slip rings.

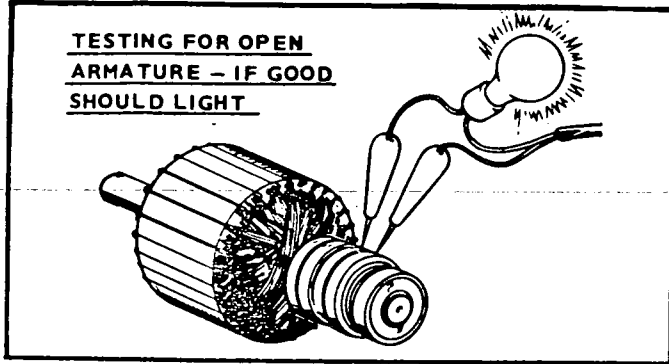


FIG. 9. OPEN ARMATURE

ARMATURE, SHORT CIRCUIT (FIGURE 10)

To test for a short circuit, use an armature growler. Place the armature in the growler which is connected to alternating current. Hold a steel knife blade (or old hacksaw blade) 1/4 inch from the armature laminations. If the steel blade is attracted to any magnetized armature laminations, either the armature windings or collector rings are short circuited. A piece of foreign material between the collector rings could be responsible. Do not test for magnetism at just one point of the armature laminations, but test all of the laminations from one side over to the other side (along the dotted line in illustration). After testing in one position revolve the armature about 1/8 turn and test for magnetism in the new position. Continue the turn and test until the armature has been tested completely around.

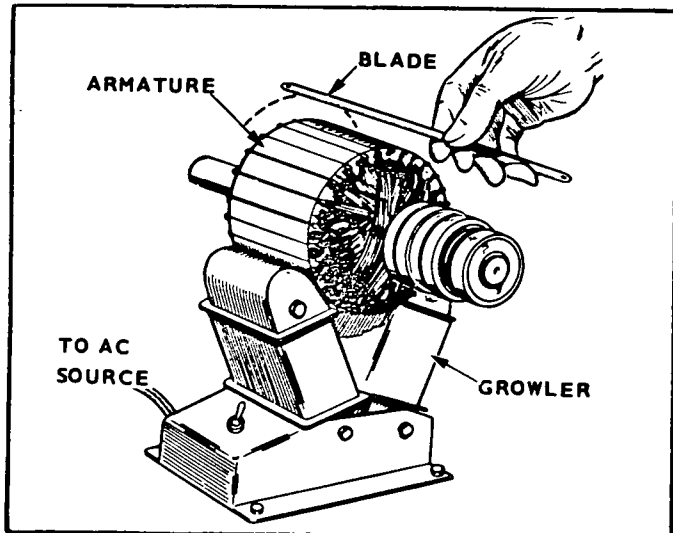


FIG. 10 SHORT CIRCUIT TEST

FIELD WINDINGS, OPEN CIRCUIT

A test lamp set can be used to test field windings for an open circuit. Place one test prod on one of the terminal ends of the field windings, and the other test prod on the other terminal end of the winding. The test lamp should light. If it does not, an open circuit is indicated. Check carefully to see that the open circuit is not at the terminal leads or a loose terminal. An open circuit due to a broken lead or loose terminal is easily repaired. An open circuit within a coil requires replacement of the set of coils.

INSPECTING AND CLEANING DIODES (RECTIFIERS)

When inspecting the diodes, make sure they are kept free of dust, dirt and grease. Excessive foreign matter on these diodes causes overheating and eventual diode failure. Blow out the diode assembly periodically. Use filtered, compressed air.

Also check to see that the diodes are securely mounted and the lead wires are tight and in good condition.

TESTING DIODES (FIGURE 11)

Faulty diodes (either shorted or open) will cause abnormal alternator operation. Check these individual diodes as follows:

1. Remove sheet metal end cover and band from end of the alternator.
2. Isolate each of the diodes before proceeding by disconnecting one end from its connection point.
3. To check, use an ohmmeter to measure the resistance in the individual diode. Reverse the ohmmeter leads and repeat resistance measurement. A good diode should have a high resistance value for one measurement and a low measurement when leads are reversed. If diode is not in good condition, replace with one known to be in good condition.

REPLACEMENT OF DIODES

When replacing defective diodes, follow these steps:

1. Unsolder lead wires from the diode terminal.
2. Use proper size wrenches to hold the body of the diode while removing nut attaching the diode to the heat sink (bracket).
3. Push the diode free of its mounting hole in the heat sink.
4. Be sure to install the new diode in the same position (or direction) as the defective diode. These parts have directional arrows marked on them for this reason.
5. Insert new diode into its mounting hole in the heat sink or bracket, making sure heat sink surface is clean. Using nut and washer provided, secure diode, being careful not to allow it to turn while tightening nut. Tighten finger-tight plus 1/4 turn or 30 in.-lb.

6. Connect lead wires to appropriate terminals.
7. Solder the lead wires removed from defective diode to terminal of the new diode.

CAUTION Excessive heat can damage a diode. Use caution when soldering lead wires.

8. Replace access cover.

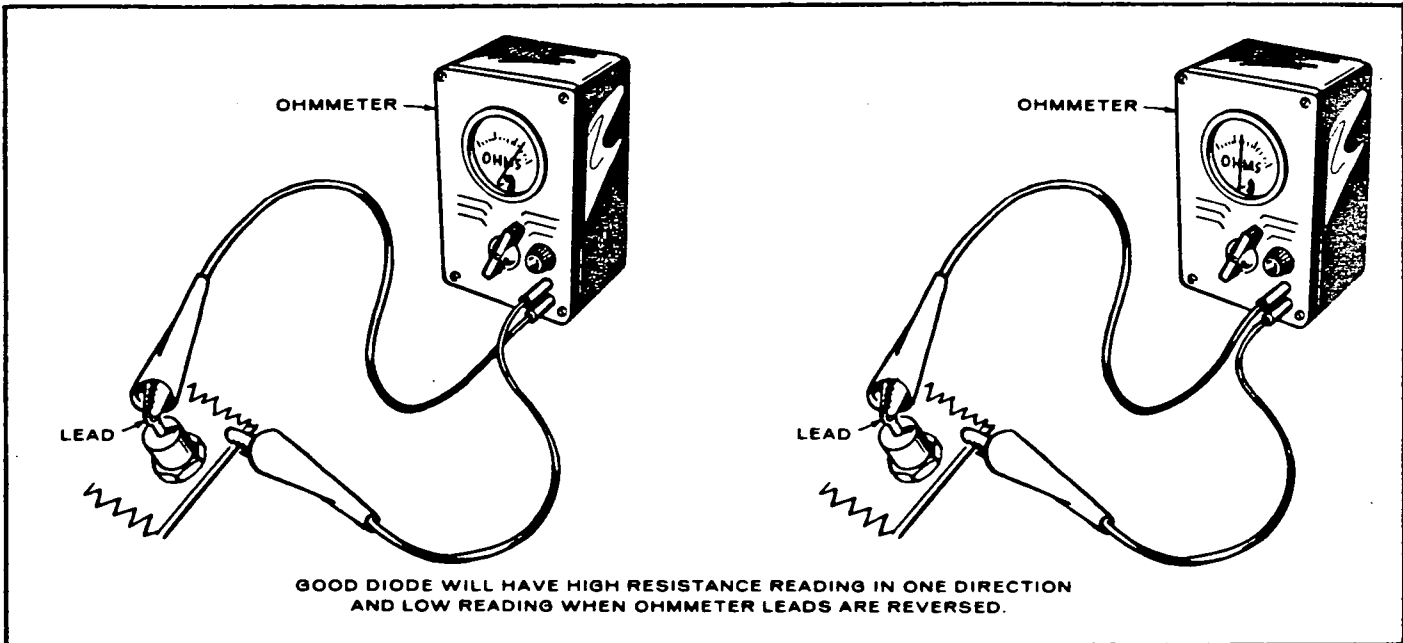


FIG. 11. TESTING DIODES

ALTERNATOR TROUBLE-SHOOTING GUIDE

We suggest that only a qualified mechanic or electrician perform any of the following tests:

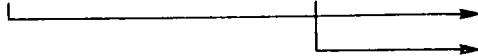
NATURE OF TROUBLE	PROBABLE CAUSE	REMEDY
Arcing or poor contact at alternator brushes	<ol style="list-style-type: none"> 1. Brushes not seated properly 2. Alternator heavily overloaded 3. Brushes binding in holder 4. Brush tension insufficient 5. Brushes worn too short 6. Brush tension unequal 7. Wrong type brush 	<ol style="list-style-type: none"> 1. Sand brush to proper contour 2. If AC amperage is more than stated on the name-plate remove part of load 3. Clean each brush and holder 4. Replace brush springs 5. Replace brushes 6. Replace weak brush springs 7. Replace with correct type brush and spring
Alternator overheats	<ol style="list-style-type: none"> 1. Windings and parts covered with dirt and oil 2. Overloaded 3. Short circuit or grounded circuit in the field winding or armature winding 4. Air intake is restricted or incoming air is too hot. 	<ol style="list-style-type: none"> 1. Clean alternator 2. Check load 3. Replace defective parts 4. Take necessary steps to allow for proper cooling
Noisy alternator	<ol style="list-style-type: none"> 1. Alternator loose on base 2. Defective bearing 3. Field pole rubbing armature 	<ol style="list-style-type: none"> 1. Tighten mounting bolts 2. Replace. Check alignment 3. Tighten field poles to frame
Alternator runs but does not produce current	<ol style="list-style-type: none"> 1. Rectifier failed 2. Open, short or grounded circuit in alternator 3. Alternator leads broken or loose 	<ol style="list-style-type: none"> 1. Replace rectifier 2. Test windings and repair or replace defective parts 3. Tighten connections and replace broken leads
Low voltage output of Alternator	<ol style="list-style-type: none"> 1. Speed low because of loose, slipping belts. 2. External short circuit on line 3. Open circuit of shunt field winding 4. Short circuit of winding in the field or armature 	<ol style="list-style-type: none"> 1. Adjust belt tension 2. Test alternator with line wires disconnected. 3. Make proper connections 4. Replace defective part
Flash over between rings	<ol style="list-style-type: none"> 1. Poor maintenance- dirt, oil cleaning solvent residues. 2. Excessive humidity or water condensation 3. Poor shielding from environment 	<ol style="list-style-type: none"> 1. Damage can't be repaired, must be replaced
Slip rings out of round	<ol style="list-style-type: none"> 1. Loose brushes or guides 	<ol style="list-style-type: none"> 1. Turn smooth on lathe or replace
Raw copper shows up on intermittent points on slip rings	<ol style="list-style-type: none"> 1. Rings out of round 2. Not enough cooling air 3. Over loaded 4. Wrong brush grade 	<ol style="list-style-type: none"> 1. Turn smooth on lathe or replace 2. Correct situation 3. Remove part of load 4. Replace with correct type brushes
Raw copper shows up continuously around slip rings	<ol style="list-style-type: none"> 1. Low humidity 2. High altitude 3. Dust and dirt 	<ol style="list-style-type: none"> 1. Turn smooth on lathe or replace

PARTS CATALOG

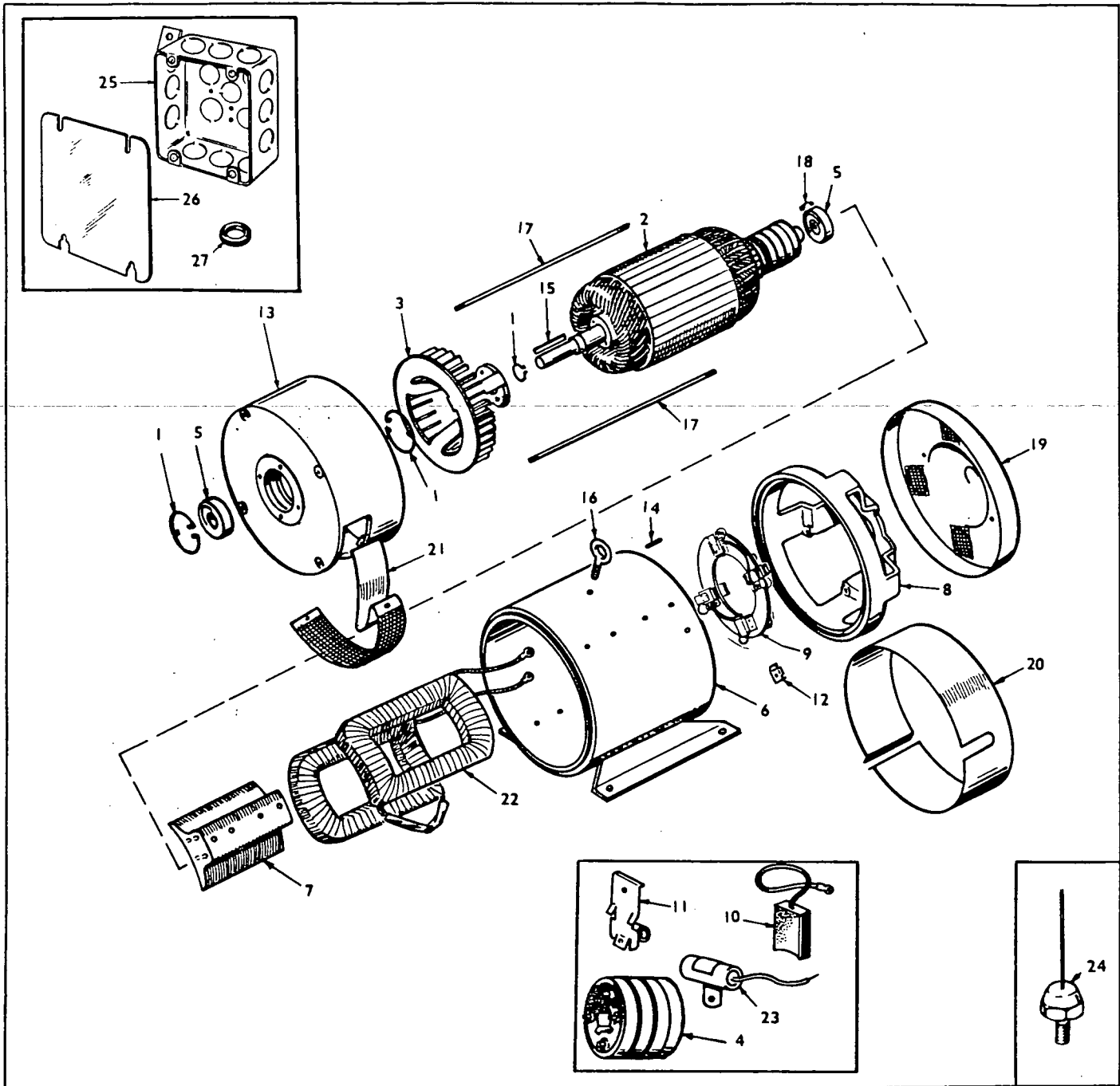
For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Parts & Service Center.

To avoid errors or delay in filling your parts order, please furnish all information requested.

Always give the MODEL & SPEC. NO. and SERIAL NO.



MODEL	[REDACTED]		
SERIAL	[REDACTED]		
ALWAYS MENTION MODEL & SERIAL No.			
AC VOLTS	[REDACTED]	KVA	[REDACTED] KW [REDACTED]
AMPS	[REDACTED]	PF	[REDACTED] CYCLES [REDACTED]
PH	[REDACTED]	RPM	[REDACTED]
EXCITER DC VOLTS	[REDACTED]	AMPS	[REDACTED]
GENERATOR ONLY OF THIS GENERATING PLANT MANUFACTURED BY ONAN			
DIVISION OF STUDEBAKER CORPORATION MINNEAPOLIS, MINNESOTA, U.S.A.			
99A413	FOR ELECTRICAL EQUIPMENT ONLY		



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTIONS
1	RING, RETAINING		
	518-122	1	Outer
	518P287	2	Inner
2	ARMATURE		
	201-1586	1	120/240 V, Single Phase, 50 Cycle
	201-1580	1	120/240 V, Single Phase, 60 Cycle
	201-1587	1	120/208, 3 Phase, 60 Cycle
3	205B81	1	Blower
4	204A92	1	Ring, Collector
5	BEARING		
	510P63	1	Drive End
	510-47	1	Brush Rig End
6	210B1956	1	Frame
7	221B154	2	Shoe, Pole
8	211D97	1	Bell, End (Br. Rig End)
9	212C339	1	Rig Assembly, Brush
10	214A56	8	Brush

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTIONS
11	212B1105	8	Spring, Brush
12	212A1214	4	Clamp, Brush Rig
13	211D176	1	Bell, End (Drive End)
14	PIN, END BELL ALIGN		
	516-103	1	Brush Rig End (Roll Pin)
	516A176	2	Drive End (Drive Pin)
15	515A108	1	Key, Armature Shaft Drive
16	403A95	1	Bolt, Eye - Lifting
17	520A498	2	Stud, Gen. Through
18	232A596	1	Clip, Bearing
19	211C114	1	Cover, End Bell
20	234C65	1	Band, End Bell
21	234A77	1	Scroll & Screen, Blower
22	222-1707	1	Coil Set, Field
23	312A58	3	Condenser, 1-Mfd.
24	358P1	2	Rectifier
25	330B52	1	Box, Outlet
26	330A12	1	Cover, Outlet Box
27	508-1	1	Grommet

**For GENUINE PARTS AND SERVICE
see your ONAN PARTS AND SERVICE
CENTER.**

**In most major cities they are listed
in the classified section of the tele-
phone directory.**

See Generators—Electric



*Write the factory for our 7115
directory listing current Onan
Authorized World Wide Parts
and Service Centers.*

Generators—Electric
American-Foreign Generators—Electric
Exchanged, Rew And Rebuilt Alternators
8075 Grand Av. Sep. 829-5700
Middletown Auto Parts 1713 Wash Av N. 523-1221
Robert Service 4738 Fremont Av S. 881-2412
Walt Electric Co. 110 E Lake 824-2806

**Generators & Alternators—
Automotive—Repairing**

A & C Motors Inc. 513 W Lake 825-2418
B & H Serv Inc. 1589 Wash Av N. 521-3990
Bert's Car Serv 3752 Hiramia Av 724-9973

BROADWAY AUTO ELEC CO
Generators—Ignition—Carburetors
Starters—Regulators—Fanblades for
Quality Workmanship over 25 Yrs
1317 W. 80th 924-1100

L'houar's Garage Inc. 5491 Lyndale Av S. 827-5431
IRGEN'S SERVICE
Service All Makes In Bloomington
4732 Fremont Av S. 881-2912
SERVICE TOOL & EQUIPT CO
805 Exc Av E. Hop. 938-8450
W & W Generator Rebuilders
3825 NE Jefferson 768-9631

Generators—Electric

ONAN ELECTRIC PLANTS

Gas, Gasoline & Diesel
Engine-Driven
Electric Generating Plants. **Onan**
500 to 400,000 Watts
A.C. Also D.C. Battery Chargers, Marine
Plants, Magnet Chargers, Separate Generators
& Parts.

"FOR INFORMATION CALL"

Geologists

Carwell Engineering Co.
7758 Lakeland Av. Omaha 425-2181
Geological Drilling Co. 4304 W. 113 St. 881-0789
Nickel, Casper & Associates
Ground-Water & Geophysical Surveys
1415 E. Wynn Blvd. Wagn. 473-4324
Raska Engineering Inc.
Natural Resource Development—Aerial
Photostations
Lakota 286-2161
Lindgren & Lehmann Inc.
125 S. Walker Wagn. 473-8277
If no answer call
Eroest K. Lehmann Res. 473-6135
Donald W. Lindgren Res. 473-6786

Gift Baskets & Parcels

BOB'S PRODUCE RANCH
Delivers To Your Door
6326 E. River Rd. 540-2740
Marty's & Christine Super Mart
WE MAKE UP FANCY FRUIT
BASKETS FOR ALL OCCASIONS
3048 Flood Av. 625-2477

WITT'S MEAT USE INC.
Gift Baskets & Boxes
Member Of TELEFOOD
Delivered Thru Out The World
705 Mead Av. 332-1544

World Food Market 23 S. 7 St. 435-0533

Guests will appreciate your
thoughtfulness in having an
extension phone in their
room.

