

Onan

**Service
Manual**
UV
Generator

**UV Generator
with Torque Match-2™ Regulator**

943-0018
10-86
Printed in U.S.A.

Redistribution or publication of this document,
by any means, is strictly prohibited.

Safety Precautions

The following symbols in this manual highlight conditions potentially dangerous to service personnel, or equipment. Read this manual carefully. Know when these conditions can exist. Then take necessary steps to protect personnel as well as equipment.

▲ DANGER *This symbol warns of immediate hazards which will result in severe personal injury or death.*

▲ WARNING *This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.*

▲ CAUTION *This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.*

PROTECT AGAINST MOVING PARTS

Avoid moving parts of the unit. Avoid use of loose jackets, shirts or sleeves due to danger of becoming caught in moving parts.

Make sure all nuts and bolts are secure. Keep power shields and guards in position.

If you must make adjustments while the unit is running, use extreme caution around hot manifolds, moving parts, etc.

Do not work on this equipment when mentally or physically fatigued.

GUARD AGAINST ELECTRIC SHOCK

Disconnect electric power before removing protective shields or touching electrical equipment. Use rubber insulative mats placed on dry wood platforms over floors that are metal or concrete when around electrical equipment. Do not wear damp clothing (particularly wet shoes) or allow skin surfaces to be damp when handling electrical equipment.

Disconnect batteries to prevent accidental engine start. Jewelry is a good conductor of electricity and should be removed before working on electrical equipment.

Use extreme caution when working on electrical components. High voltages cause injury or death.

Follow all state and local codes. To avoid possible personal injury or equipment damage, a qualified electrician or an authorized service representative must perform installation and all service.

▲ WARNING

EXHAUST GAS IS DEADLY!

Exhaust gases contain carbon monoxide, an odorless and colorless gas formed during the combustion of hydrocarbon fuels. Carbon monoxide is poisonous and can cause unconsciousness and death. Symptoms of carbon monoxide poisoning are the following:

- Inability to Think Coherently
- Vomiting
- Muscular Twitching
- Throbbing in Temples
- Dizziness
- Headache
- Weakness and Sleepiness

If you or anyone else experience any of these symptoms, shut down the unit and get out into fresh air immediately. If symptoms persist, seek medical attention. DO NOT OPERATE THE UNIT UNTIL IT HAS BEEN INSPECTED AND REPAIRED.

The best protection against carbon monoxide inhalation is proper installation and regular, frequent visual and audible inspections of the complete exhaust system.

Table of Contents

| SECTION | TITLE | PAGE |
|----------|--|------|
| | SAFETY PRECAUTIONS | ii |
| 1 | INTRODUCTION | 1-1 |
| | About This Manual | 1-1 |
| | Test Equipment | 1-1 |
| | How to Obtain Service | 1-1 |
| 2 | GENERATOR AND VOLTAGE REGULATOR | 2-1 |
| | Generator Description | 2-1 |
| | Generator Operation | 2-5 |
| | Voltage Regulator Description | 2-6 |
| | Voltage Regulator Adjustments | 2-6 |
| 3 | GENERATOR/REGULATOR TROUBLESHOOTING | 3-1 |
| | Control Locations | 3-1 |
| | Preparation | 3-1 |
| | Troubleshooting Procedures | 3-1 |
| | Flow Chart A. No AC Output Voltage at Rated Engine Speed | 3-2 |
| | Flow Chart B. Unstable Voltage, Engine Speed Stable at Rated Speed | 3-3 |
| | Flow Chart C. Output Voltage Too High or Too Low | 3-3 |
| | Flow Chart D. Exciter Field Breaker Trips | 3-4 |
| | Flow Chart E. Unbalanced Generator Output Voltage | 3-5 |
| | Flow Chart F. No AC Output Through Set Mounted Circuit Breaker | 3-6 |
| 4 | GENERATOR/REGULATOR TESTS/ADJUSTMENTS | 4-1 |
| | (A) Testing AC Residual Voltage | 4-1 |
| | (B) Flashing the Field | 4-1 |
| | (C) Voltage Regulator VRAS-2 Replacement | 4-2 |
| | (D) Testing Rotating Rectifiers (Diodes) | 4-2 |
| | (E) Testing Exciter Stator | 4-3 |
| | (F) Testing Exciter Rotor | 4-3 |
| | (G) Testing Generator Stator | 4-4 |
| | (H) Testing Generator Rotor | 4-5 |
| | (J) Wiring Harness Check | 4-5 |
| | (K) Voltage Regulator VRAS-2 Adjustment | 4-5 |
| | (L) Reconnection | 4-6 |
| | (M) Generator Voltage Adjust (R21) | 4-6 |
| | (N) Testing Circuit Breaker | 4-7 |
| 5 | GENERATOR DISASSEMBLY/ASSEMBLY | 5-1 |
| | Generator Disassembly | 5-1 |
| | Generator Assembly | 5-3 |
| 6 | WIRING DIAGRAMS | 6-1 |

BUY NOW

**Then Instant Download
the Complete Manual
Thank you very much!**