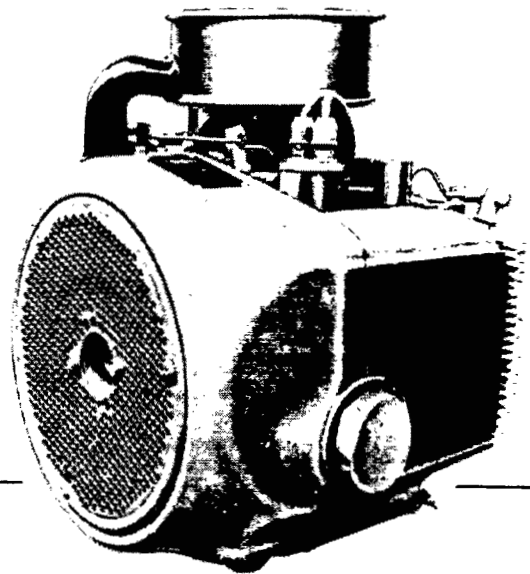


# Onan

## Service and Parts Manual

BG  
Engine



# Safety Precautions

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It is recommended that you read your engine manual and become thoroughly acquainted with your equipment before you start the engine.

**⚠ WARNING** *This symbol is used throughout this manual to warn of possible serious personal injury.*

**⚠ CAUTION** *This symbol refers to possible equipment damage.*

Fuels, electrical equipment, batteries, exhaust gases and moving parts present potential hazards that could result in serious, personal injury. Take care in following these recommended procedures.

## Safety Codes

- All local, state and federal codes should be consulted and complied with.
- This engine is not designed or intended for use in aircraft. Any such use is at the owner's sole risk.

## General

- Provide appropriate fire extinguishers and install them in convenient locations. Use an extinguisher rated ABC by NFPA.
- Make sure that all fasteners on the engine are secure and accurately torqued. Keep guards in position over fans, driving belts, etc.
- If it is necessary to make adjustments while the engine is running, use extreme caution when close to hot exhausts, moving parts, etc.

## Protect Against Moving Parts

- Do not wear loose clothing in the vicinity of moving parts, such as PTO shafts, flywheels, blowers, couplings, fans, belts, etc.
- Keep your hands away from moving parts.

## Batteries

- Before starting work on the engine, disconnect batteries to prevent inadvertent starting of the engine.
- **DO NOT SMOKE** while servicing batteries. Lead acid batteries give off a highly explosive hydrogen gas which can be ignited by flame, electrical arcing or by smoking.
- Verify battery polarity before connecting battery cables. Connect negative cable last.

## Fuel System

- **DO NOT** fill fuel tanks while engine is running.

- **DO NOT** smoke or use an open flame in the vicinity of the engine or fuel tank. Internal combustion engine fuels are highly flammable.
- Fuel lines must be of steel piping, adequately secured, and free from leaks. Piping at the engine should be approved flexible line. Do not use copper piping for flexible lines as copper will work harden and become brittle enough to break.
- Be sure all fuel supplies have a positive shutoff valve.

## Exhaust System

- Exhaust products of any internal combustion engine are toxic and can cause injury, or death if inhaled. All engine applications, especially those within a confined area, should be equipped with an exhaust system to discharge gases to the outside atmosphere.
- **DO NOT** use exhaust gases to heat a compartment.
- Make sure that your exhaust system is free of leaks. Ensure that exhaust manifolds are secure and are not warped by bolts unevenly torqued.

## Exhaust Gas Is Deadly!

Exhaust gases contain carbon monoxide, a poisonous gas that might cause unconsciousness and death. It is an odorless and colorless gas formed during combustion of hydrocarbon fuels. Symptoms of carbon monoxide poisoning are:

- Dizziness
- Headache
- Weakness and Sleepiness
- Vomiting
- Muscular Twitching
- Throbbing in Temples

If you experience any of these symptoms, get out into fresh air immediately, shut down the unit and do not use until it has been inspected.

The best protection against carbon monoxide inhalation is proper installation and regular, frequent inspections of the complete exhaust system. If you notice a change in the sound or appearance of exhaust system, shut the unit down immediately and have it inspected and repaired at once by a competent mechanic.

## Cooling System

- Coolants under pressure have a higher boiling point than water. **DO NOT** open a radiator pressure cap when coolant temperature is above 212 degrees F (100 degrees C) or while engine is running.

## Keep The Unit And Surrounding Area Clean

- Make sure that oily rags are not left on or near the engine.
- Remove all unnecessary grease and oil from the unit. Accumulated grease and oil can cause overheating and subsequent engine damage and present a potential fire hazard.

# TABLE OF CONTENTS

<b>TITLE</b>	<b>PAGE</b>
<b>General Information</b> .....	<b>2</b>
<b>Specifications</b> .....	<b>3</b>
<b>Dimensions and Clearances</b> .....	<b>4</b>
<b>Assembly Torques and Special Tools</b> .....	<b>4</b>
<b>Engine Troubleshooting</b> .....	<b>5</b>
<b>Oil System</b> .....	<b>6</b>
<b>Fuel System</b> .....	<b>8</b>
<b>Ignition and Battery Charging</b> .....	<b>12</b>
<b>Starting System</b> .....	<b>17</b>
<b>Engine Disassembly</b> .....	<b>19</b>
<b>Engine Wiring Diagram</b> .....	<b>31</b>

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