

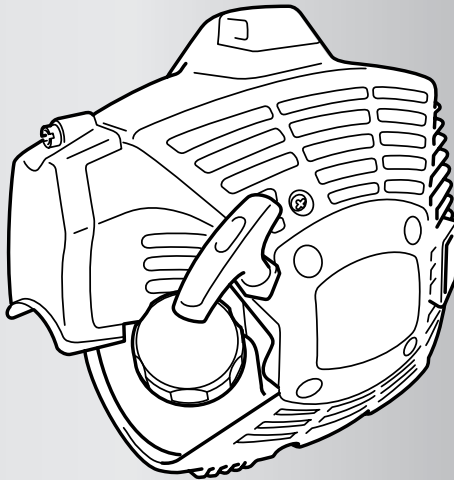
848H7F93A0(809)



G  
B

**OWNER'S MANUAL**

**ENGINE**



**GZ50N**

**▲ SAFETY FIRST**

Instructions contained in warnings within this manual marked with a ▲ symbol concern critical points which must be taken into consideration to prevent possible serious bodily injury, and for this reason you are requested to read all such instructions carefully and follow them without fail.

**WARNINGS IN THE MANUAL****▲ WARNING**

This mark indicates instructions, which must be followed in order to prevent accidents, which could lead to serious bodily injury or death.

**ⓘ IMPORTANT**

This mark indicates instructions, which must be followed, or it leads to mechanical failure, breakdown, or damage.

**📖 NOTE**

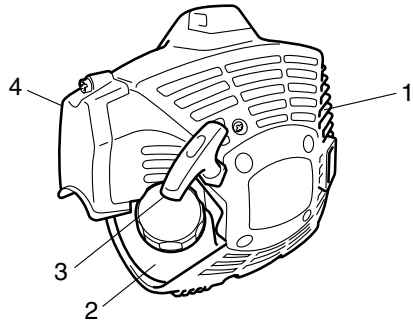
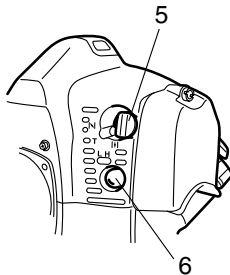
This mark indicates hints or directions useful in the use of the product.

**Contents**

1. Parts location .....	2
2. Specifications .....	3
3. Symbols on the machine .....	3
4. Fuel .....	4
5. Operation .....	5
6. Maintenance .....	6
7. Storage .....	7
8. Disposal .....	7
9. Troubleshooting guide .....	8

**1. Parts location**

1. Muffler
2. Fuel tank
3. Starter knob
4. Air cleaner cover
5. Choke lever
6. Primer pump



## 2. Specifications

Model	GZ50N
Type	Air-cooled 2-stroke engine
Displacement	50.6 cm <sup>3</sup>
Max. output	2.4 / 9000 kW/rpm
Idle speed	2800 ± 200 rpm
Fuel	Mixture (Gasoline 50 : Oil 1) (when using ZENOAH genuine oil)
Carburetor	Walbro Diaphragm type
Spark plug	NGK CMR7H
Overall size L x W x H	206 x 270 x 261 mm
Dry weight	4.5 kg
Fuel tank capacity	0.80 L

Specifications are subject to change without notice.

## 3. Symbols on the machine

For safe operation and maintenance, symbols are carved in relief on the machine. According to these indications, please be careful not to make a mistake.  
The port to refuel the "MIX GASOLINE"



**Position:** FUEL TANK CAP



The direction to close the choke  
**Position:** AIR CLEANER COVER



The direction to open the choke  
**Position:** AIR CLEANER COVER

## 4. Fuel

### ■ FUEL

#### ▲ WARNING

- Gasoline is very flammable. Avoid smoking or bringing any flame or sparks near fuel. Make sure to stop the engine and allow it cool before refueling the unit. Select outdoor bare ground for fueling and move at least 3 m (10 ft) away from the fueling point before starting the engine.



- The Zenoah engines are lubricated by oil specially formulated for air-cooled 2-cycle gasoline engine use. If Zenoah oil is not available, use an anti-oxidant added quality oil expressly labeled for air-cooled 2-cycle engine use (JASO FC GRADE OIL or ISO EGC GRADE).
- Do not use BIA or TCW (2-stroke water-cooling type) mixed oil.



### ■ RECOMMENDED MIXING RATIO GASOLINE 50 : OIL 1 (when using ZENOAH genuine oil)

- Exhaust emission are controlled by the fundamental engine parameters and components (eq., carburation, ignition timing and port timing) without addition of any major hardware or the introduction of an inert material during combustion.
- These engines are certified to operate on unleaded gasoline.
- Make sure to use gasoline with a minimum octane number of 89RON (USA/Canada: 87AL).
- If you use a gasoline of a lower octane value than prescribed, there is a danger that the engine temperature may rise and an engine problem such as piston seizing may consequently occur.
- Unleaded gasoline is recommended to reduce the contamination of the air for the sake of your health and the environment.
- Poor quality gasolines or oils may damage sealing rings, fuel lines or fuel tank of the engine.

### ■ HOW TO MIX FUEL

#### ▲ WARNING

- Pay attention to agitation.
- Measure out the quantities of gasoline and oil to be mixed.
  - Put some of the gasoline into a clean, approved fuel container.
  - Pour in all of the oil and agitate well.

- Pour in the rest of gasoline and agitate again for at least one minute. As some oils may be difficult to agitate depending on oil ingredients, sufficient agitation is necessary for the engine to last long. Be careful that, if the agitation is insufficient, there is an increased danger of early piston seizing due to abnormally lean mixture.
- Put a clear indication on the outside of the container to avoid mixing up with gasoline or other containers.
- Indicate the contents on outside of container for easy identification.

### ■ FUELING THE UNIT

- Untwist and remove the fuel cap. Rest the cap on a dustless place.
- Put fuel into the fuel tank to 80% of the full capacity.
- Fasten the fuel cap securely and wipe up any fuel spillage around the unit.

#### ▲ WARNING

- Select bare ground for fueling.
- Move at least 10 feet (3 meters) away from the fueling point before starting the engine.
- Stop the engine before refueling the unit. At that time, be sure to sufficiently agitate the mixed gasoline in the container.

### ■ FOR YOUR ENGINE LIFE, AVOID:

- FUEL WITH NO OIL (RAW GASOLINE) – It will cause severe damage to the internal engine parts very quickly.
- GASOHOL – It can cause deterioration of rubber and/or plastic parts and disruption of engine lubrication.
- OIL FOR 4-CYCLE ENGINE USE – It can cause spark plug fouling, exhaust port blocking, or piston ring sticking.
- Mixed fuels which have been left unused for a period of one month or more may clog the carburetor and result in the engine failing to operate properly.
- In the case of storing the product for a long period of time, clean the fuel tank after rendering it empty. Next, activate the engine and empty the carburetor of the composite fuel.
- In the case of scrapping the used mixed oil container, scrap it only at an authorized repository site.

#### NOTE

- As for details of quality assurance, read the description in the section Limited Warranty carefully. Moreover, normal wear and change in product with no functional influence are not covered by the warranty. Also, be careful that, if the usage in the instruction manual is not observed as to the mixed gasoline, etc. described therein, it may not be covered by the warranty.

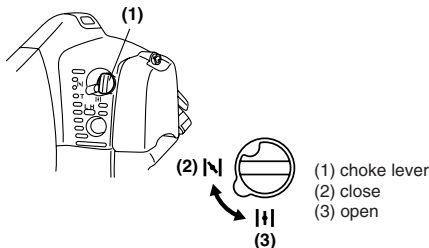
# 5. Operation

## STARTING ENGINE

1. Feed fuel into the fuel tank and tighten the cap securely.
2. Push the primer pump several times until overflow fuel flows out in the clear tube.



3. Move the choke lever to the closed position.



4. Set the ignition switch to the "RUN" position. Place the unit on a flat, firm place.
5. While holding the unit firmly, pull out the starter rope quickly until engine fires.

### IMPORTANT

- Avoid pulling the rope to its end or returning it by releasing the knob. Such actions can cause starter failures.
6. Move the choke lever downward to open the choke. And restart engine.
  7. Allow the engine to warm up for a several minutes before starting operation.

### NOTE

1. When restarting the engine immediately after stopping it, leave the choke open.
2. Overchoking can make the engine hard to start due to excess fuel. When the engine failed to start after several attempts, open the choke and repeat pulling the rope, or remove the spark plug and dry it.

## STOPPING ENGINE

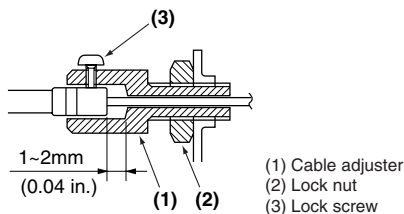
1. Release the throttle lever and run the engine for half a minute.
2. Shift the ignition switch to the STOP position.

### IMPORTANT

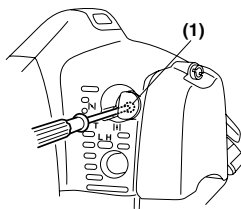
- Except for an emergency, avoid stopping the engine while pulling the throttle lever.

## ADJUSTING THROTTLE CABLE

- The normal play is 1 or 2 mm when measured at the carburetor side end. Readjust with the cable adjuster as required.



## ADJUSTING IDLING SPEED



1. When the engine tends to stop frequently at idling mode, turn the adjusting screw clockwise.
2. When the clutch keeps engaging at idling mode, turn the adjusting screw counter-clockwise.

### NOTE

- Warm up the engine before adjusting the idling speed.

## 6. Maintenance

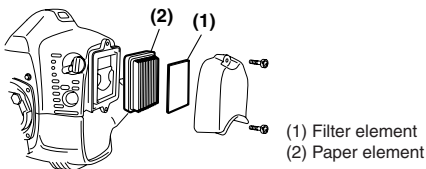
System/components	Procedur	Before use	Every 25 hours after	Every 50 hours after	Every 100 hours after	Note
fuel leaks, fuel spillage	wipe out	✓				
fuel tank, air filter, fuel filter	inspect/clean	✓	✓			replace, if necessary
idle adjusting screw	see adjusting idling speed	✓				replace carburetor if necessary
spark plug	clean and readjust plug gap			✓		GAP: .025 in (0.6 ~ 0.7 mm) replace, if necessary
cylinder fins, intake air cooling vent	clean		✓			
muffler, spark arrester, cylinder exhaust port	clean			✓		

### ⚠ WARNING

- **Make sure that the engine has stopped and is cool before performing any service to the machine. Contact with moving cutting head or hot muffler may result in a personal injury.**

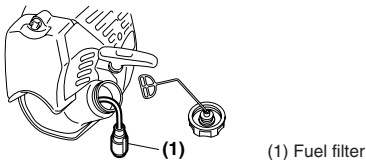
### AIR FILTER

- The air filter, if clogged, will reduce the engine performance.
- Filter element : Check and clean the filter element in warm, soapy water as required. Dry completely before installing.
- Paper element : Check and clean the paper element by air blow as required.
- If the element is broken or shrunk, replace with a new one.



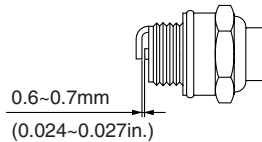
### FUEL FILTER

- When the engine runs short of fuel supply, check the fuel cap and the fuel filter for blockage.



### SPARK PLUG

- Starting failure and misfiring are often caused by a fouled spark plug. Clean the spark plug and check that the plug gap is in the correct range. For a replacement plug, use the correct type specified by ZENOAH.



- **REPLACEMENT PLUG IS A NGK CMR7H.**

### ⓘ IMPORTANT

- Note that using any spark plug other than those designated may result in the engine failing to operate properly or in the engine becoming overheated and damaged.
- To install the spark plug, first turn the plug until it is finger tight, then tighten it a quarter turn more with a socket wrench.

TIGHTENING TORQUE: 9.8 ~ 11.8 N.m.  
(87 ~ 104 in-lbs)

## 6. Maintenance

### MUFFLER

#### ▲ WARNING

- Inspect periodically, the muffler for loose fasteners, any damage or corrosion. If any sign of exhaust leakage is found, stop using the machine and have it repaired immediately.
- Note that failing to do so may result in the engine catching on fire.

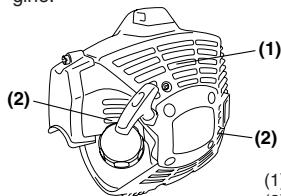
### INTAKE AIR COOLING VENT

#### ▲ WARNING

- Never touch the cylinder, muffler, or spark plugs with your bare hands immediately after stopping the engine. The engine can become very hot when in operation, and doing so could result in severe burns.
- When checking the machine to make sure that it is okay before using it, check the area around the muffler and remove any wood chips or leaves which have attached themselves to the brushcutter. Failing to do so could cause the muffler to become overheated and that in turn could cause the engine to catch on fire. Always make sure that the muffler is clean and free of wood chips, leaves, and other waste before use.
- Check the intake air cooling vent and the area around the cylinder cooling fins after every 25 hours of use for blockage, and remove any waste which has attached itself to the brushcutter. Note that it is necessary to remove the upper cover and the lower cover shown in in order to be able to view the upper part of the cylinder.

#### ⓘ IMPORTANT

- If waste gets stuck and causes blockage around the intake air cooling vent or between the cylinder fins, it may cause the engine to overheat, and that in turn may cause mechanical failure on the part of the engine.



(1) Cylinder  
(2) Intake air cooling vent

### PROCEDURES TO BE PERFORMED AFTER EVERY 100 HOURS OF USE

1. Remove the muffler, insert a screwdriver into the vent, and wipe away any carbon buildup. Wipe away any carbon buildup on the muffler exhaust vent and cylinder exhaust port at the same time.
2. Tighten all screws, bolts, and fittings.
3. Check to see if any oil or grease has worked its way in between the clutch lining and drum, and if it has, wipe it away using oil-free, lead-free gasoline.



## 7. Storage

Aged fuel is one of major causes of engine starting failure. Before storing the unit, empty the fuel tank and run the engine until it uses all the fuel left in the fuel line and the carburetor. Store the unit indoor taking necessary measures for rust prevention.

## 8. Disposal

When disposing your machine, fuel or oil for the machine, be sure to allow your local regulations.

## 9. Troubleshooting guide

### Case 1. Starting failure

CHECK	PROBABLE CAUSES	ACTION
fuel tank	→ incorrect fuel	→ drain it and use correct fuel
fuel filter	→ fuel filter is clogged	→ clean
carburetor adjustment screw	→ out of normal range	→ adjust to normal range
sparkling (no spark)	→ spark plug is fouled/wet	→ clean/dry
	→ plug gap is incorrect	→ correct (GAP: 0.6 ~ 0.7 mm)
spark plug	→ disconnected	→ retighten

### Case 2. Engine starts but does not keep running/hard re-starting

CHECK	PROBABLE CAUSES	ACTION
fuel tank	→ incorrect fuel or staled fuel	→ drain it and use correct fuel
carburetor adjustment screw	→ out of normal range	→ adjust to normal range
muffler, cylinder (exhaust port)	→ carbon is built-up	→ wipe away
air cleaner	→ clogged with dust	→ wash
cylinder fin, fan cover	→ clogged with dust	→ clean

When your unit seems to need further service, please consult with our ZENOAH service shop in your area.