

ZENOAH AIR-COOLED 2-STROKE GASOLINE ENGINE

ZENOAH 风冷式汽油发动机

G23LH-D

OPERATION AND MAINTENANCE GUIDE

使用说明书

This guide explains about the safety precautions, starting procedures, and regular maintenance on the Zenoah Engine. To make the most use of it, please read through this guide before use.

本说明书述及有关使用ZENOAH发动机的注意事项、操作步骤、日常维修保养的要点。在使用之前务请仔细阅读本说明书，并妥为保存。

Husqvarna Zenoah Co., Ltd.

1-9 Minamidai, Kawagoe, Saitama, 350-1165 Japan



1. The fuel is flammable. Handle with care at all times. When refueling, stop the engine and let it cool down before pouring fuel. Keep open flames and sparks away from fuel.
2. When fuel is spilled, wipe off immediately and completely.
3. The exhaust gases contain harmful carbon monoxide. Never run the engine in a closed room or in anyplace where ventilation is poor.
4. The engine metal parts can burn your skin. Never touch the cylinder and muffler during operation or right after stopping the engine.
5. To prevent electrification, never touch the ignition plug or the plug wire during operation.
6. Before inspecting or servicing the engine, make sure to stop the engine and wait until it cools down.
7. When fuel has leaked out of the carburetor, the muffler, the fuel tank or other part, stop use of the engine and have it repaired.

1. 燃油易燃，在使用时请充分注意。在加注燃油时，务必在停止发动机，冷却之后再注油。必须使火焰、火花远离燃油。
2. 在燃油溢出时，应迅速擦拭干净。
3. 因为废气可能会引起中毒，切勿在室内、隧道等通风不良的地方运转发动机。
4. 因为可能会发生烫伤，在运转中或刚停止后，切勿触摸发动机本体或消声器。
5. 在运转时切勿触摸火花塞、火花塞电线，否则会引起触电。
6. 在进行维修保养时，务必在停止发动机、等待其冷却后再进行。
7. 在化油器、消声器、燃油箱漏油时，应停止使用，迅速进行修理。

FUEL INTO THE TANK

! DANGER

- Select a flat ground outdoors for fueling the engine. Keep open flame away. Do not smoke.
- When refilling the fuel tank on the way of operation, stop the engine before removing the tank cap.
- Keep 20% of the full tank capacity vacant. Should the tank be filled up fully, fuel may leak out of the cap during operation.
- Wipe off spilt fuel completely before starting the engine.

加 油

! 危 险

- 向燃料罐加注燃油时，请选择室外平坦之处，远离烟火，切勿吸烟。
- 在作业中途需要加注燃油时，务必先停止发动机。
- 向燃料罐加注燃油时，请加注至八成满左右。燃油过多，有造成运行中燃油从燃料罐盖处外溢的可能。
- 加注燃油时的溢出部分，应在发动机起动之前擦拭干净。

STARTING ENGINE

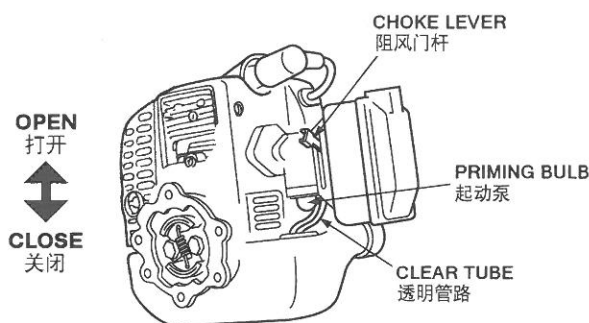
! WARNING

- This engine is equipped with a centrifugal clutch. Never start the engine without the equipment attached in place, or the clutch parts may be broken and serious injury may result due to flying debris. When starting the engine, keep your body and surroundings away from the movements of the equipment.

发动机的起动方法

! 警 告

- 本发动机内装自动离心式离合器，机体未安装到位时，切勿启动发动机，否则离合器零件可能断裂，飞溅出的碎片可能造成严重伤害。启动发动机时，切勿让身体及物品靠近机体的运转部分。



1. Shift switch of the equipment or engine to the RUN or ON position.
2. Push the priming bulb until fuel appears in the clear tube.
3. Close the choke. **[When restarting the engine right after stopping, leave the choke open.]**
4. While holding the equipment firmly, pull out the starter rope swiftly. To avoid damage to the starter, return the rope before it is fully pulled out as keeping hold of the starter knob.
5. When the engine has started, slowly open the choke and allow the engine to warm up before putting it into service.

1. 将机体或发动机开关拨到运转或开启位置。
2. 请用手指按压起动泵几次，直至燃油从透明管路流出为止。
3. 请关闭阻风门。
【在发动机停止后立即再起动时，则不必关闭阻风门】。
4. 请牢固地固定机体，敏捷地拉出起动器拉索，为了防止损坏起动器，在握住起动器捏手的同时，在将拉索完全拉出之前使其复原。
5. 在发动机起动后，请慢慢地打开阻风门，进行短时间预热运转。

STOPPING ENGINE

! CAUTION

IN CASE OF EMERGENCY, IMMEDIATELY STOP THE ENGINE.

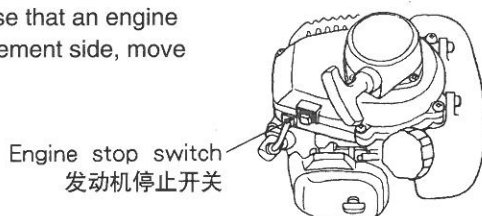
1. Return the throttle and cool down the engine.
2. Press on the engine stop switch at the engine side until the engine stops completely. In case that an engine stop switch is provided on the implement side, move the switch to stop the engine.

发动机的停止方法

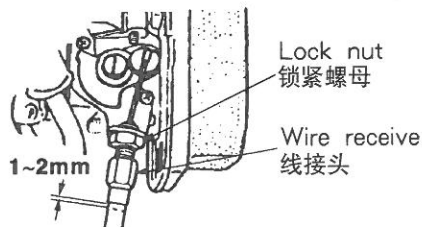
! 注 意

在紧急状态下，必须立即停止发动机操作。

1. 请使节气门复原，再进行短时间低速运转。
2. 请按住发动机侧面的停止开关，直至发动机完全停止。在机体侧装有停止开关的情况下，请用该开关进行停止操作。



ADJUSTMENTS



Lock nut
锁紧螺母

Wire receive
线接头

1~2mm

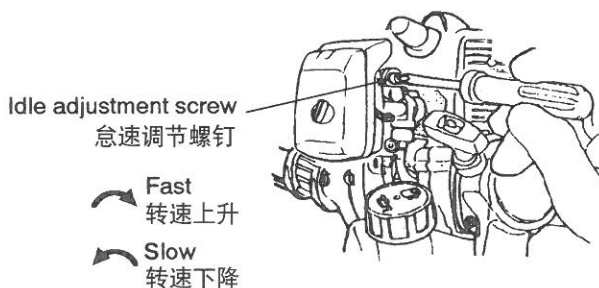
■ THROTTLE WIRE

The normal play of the throttle wire is 1 or 2 mm. When the play is so large or too small, loosen the lock nut and reposition the wire receive on the carburetor side.

■ IDLING SPEED

When the engine idling speed is too fast or too slow, correct it by the idle adjustment screw provided on the carburetor.

调节



Idle adjustment screw
怠速调节螺钉

Fast
转速上升

Slow
转速下降

■ 节流阀

节流阀的游隙在1_2mm之间较合适。游隙过大或过小时，请松动锁紧螺母调整化油器侧线接头的位置。

■ 怠速转速

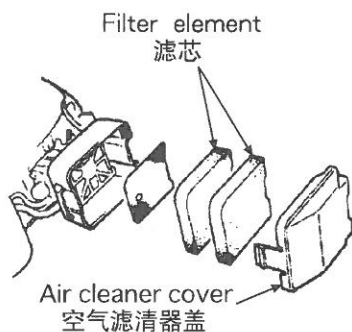
当发动机的怠速转速过高或过低时，请使用化油器的怠速调节螺钉进行修正。

MAINTENANCE



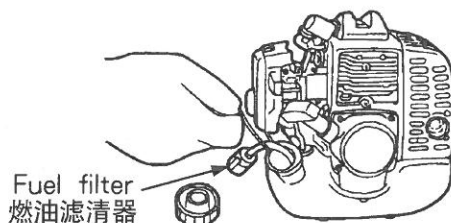
CAUTION

STOP THE ENGINE BEFORE
INSPECTING AND REPAIRING IT.

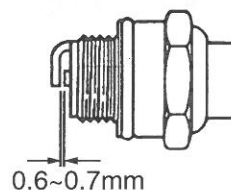


Filter element
滤芯

Air cleaner cover
空气滤清器盖



Fuel filter
燃油滤清器



0.6~0.7mm

CHAMPION RCJ-6Y
NGK BPM7A

■ AIR FILTER

A clogged air filter will reduce the engine performance. Check periodically and clean the air filter element in warm, soapy water as required. Dry completely before installing. When the element is broken or shrunk, replace with a new one.

Operation with a deformed or broken air filter will give severe damage to the engine inner parts.

■ FUEL TANK CAP & FUEL FILTER

When the engine seems to run short of fuel supply, check the air vent hole of the fuel tank cap and the fuel filter for blockage.

■ SPARK PLUG

Starting failure and mis-firing are often caused by a fouled spark plug. Periodically clean the spark plug and check that the spark gap is within the correct range. For a replacement plug, use the specified type or the equivalents.

■ STORAGE

Old fuel left in the carburetor may cause starting failure. Before storing the unit, empty the fuel tank and drain the carburetor.

维修保养



注意

维修保养，务必在停止发动机后进行。

■ 空气滤清器

如空气滤清器阻塞，则会降低发动机性能。请定期进行检查，如有必要，用放入洗涤剂的温水进行清洗滤芯，使其完全干透再进行安装。如滤芯破损或收缩时，请用新品进行更换。当空气滤清器处于变形破损状态而持续运行时，会使发动机内部造成异常磨损。

■ 燃料盖、燃油滤清器

在发动机运行中，当出现燃油耗尽现象（回转发生变化、发动机失速）时，请检查燃料盖的通气孔或燃油滤清器是否阻塞。

■ 火花塞

如火花塞有污垢而劣化时，则发动机难于启动，会发生误点火或不点火。请定期检查火花塞，检查电极之间的间隙是否适当。在交换火花塞时，请使用指定品牌或与之相当的火花塞。

■ 长期保管时

在化油器剩余燃油的状态下，如进行长期放置则会引起发动机启动不良。在保管之前请排空燃油箱，排空化油器中的燃油。

SPECIFICATIONS

规格

Model	型号	ZENOAH G23LH-D	
Cylinder layout	汽缸配置	Horizontal	水平
Bore x Stroke	汽缸内径 × 行程: mm	32 x 28	
Displacement	排量: cc	22.5	
Direction of crankshaft rotation	曲轴旋转方向	Counter-clockwise (PTO view) 按反时针方向旋转 (从输出轴观察时)	
Fuel	使用燃油	2-stroke oil pre-mixed gasoline	两冲程混合汽油
Fuel tank capacity	燃油箱内容: Liter	0.60	
Carburetor type	化油器型式	Diaphragm type	膜片式
Ignition system	点火方式	Transistor control	晶体管控制式
Spark plug	火花塞	CHAMPION RCJ-6Y / NGK BPM7A	
Starting	起动装置	Recoil starter	反冲起动机
Stopping	停止方式	Primary wire short-circuit	初级电路短路
Air cleaner	空气滤清器	Dry type	干式
Clutch type	离合器型式	Centrifugal type	离心式
Overall size (L x W x H)	外形尺寸: mm (全长x全宽x全高)	159 x 208 x 212	
Dry weight	净重: kg	2.3	

The specifications and technical data are based on the standard models. 该规格基于标准型号的发动机。

FUEL

⚠ DANGER

- The fuel used on this engine is highly flammable. When mixing gasoline and oil, keep open flame away. Do not smoke.
- Fuel mixing should be performed outdoors.
- Wipe off spilt fuel completely before starting the engine.
- Stop the engine before refueling.
- Keep the fuel container away from a fire or a stove.

⚠ CAUTION

Do not use oil for the 4-stroke engine use, alcohol contained gasoline, fuel contaminated by water or other foreign materials, or fuel exposed in sunbeam for a long time. Those can cause engine troubles.

This engine is lubricated by oil specially formulated for the 2-stroke air-cooled gasoline engine use. Prepare correct oil and alcohol-free regular gasoline(unleaded), and mix in the following ratio.

- 2-stroke oil (JASO : FD grade or ISO : LEGD grade)
Gasoline 50 : OIL 1
- 2-stroke oil (JASO : FC grade or ISO : LEGC grade)
Gasoline 40 : OIL 1

燃 油

⚠ 危 险

- 燃油非常易燃，如使用时出错则可能会引起火灾事故。在混合燃油、加注燃油时，务必远离烟火，切勿吸烟。
- 请务必在室外进行燃料混合作业。
- 在发动机起动的之前，应将加注燃油时溢出的燃油擦拭干净。
- 在作业时若需要补充燃油的情况下，请务必先停止发动机后再加注燃油。
- 切勿将注入燃油的容器放置在炉火、燃烧器的近处。

⚠ 注 意

切勿使用4冲程汽油发动机机油、含有酒精的汽油、以及侵入水等异物、长期承受阳光照射的燃油。否则，会引起发动机起动不良的故障。

本发动机由风冷2冲程汽油发动机专用机油进行润滑。请使用正确的机油和不含有酒精的汽车用无铅汽油，并且按下列的比例进行混合。

- 使用2冲程机油 (JASO FD级或者ISO LEGD级) 时
汽油50 : 机油1
- 使用2冲程机油 (JASO FC级或者ISO LEGC级) 时
汽油40 : 机油1

