

**ZENOAH**  
**KOMATSU**

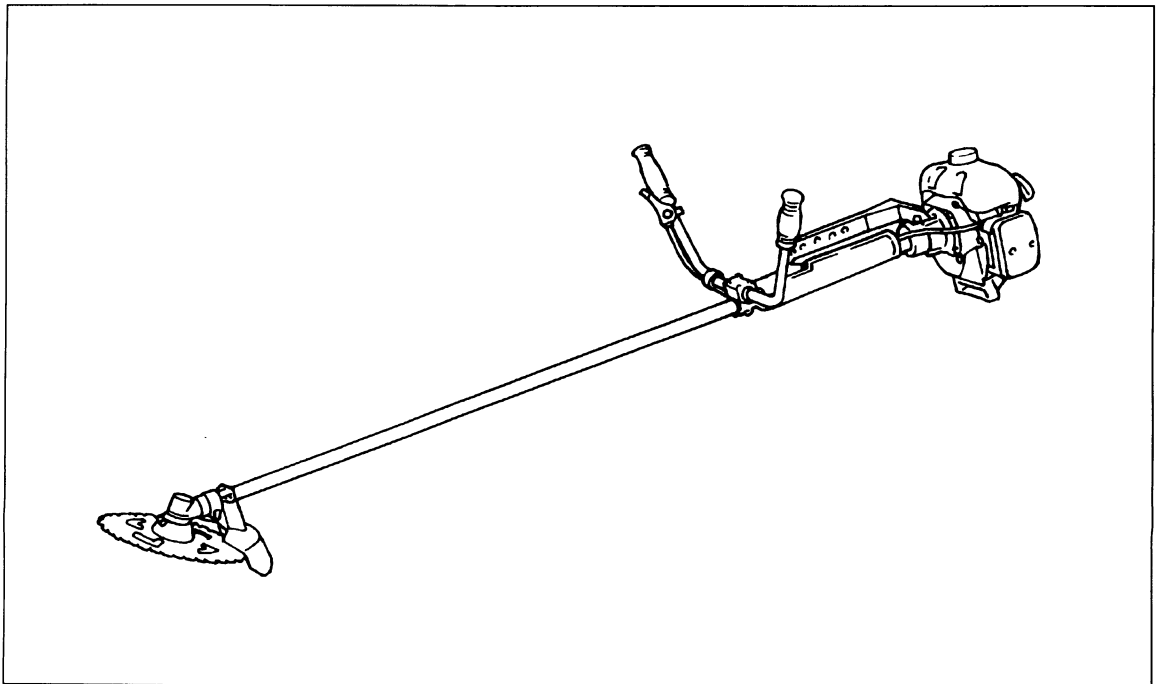
**使用说明书**  
**OWNER'S MANUAL**

**小松牌割草机**

**BRUSHCUTTERS**

**BC3401FW**

**BC4301FW**



**⚠ Caution**

- Before using our brushcutter, please read this manual carefully to understand the proper use of your unit.
- Keep this manual handy.

**⚠ 注意**

- 使用本品之前请务必先阅读本使用说明书。
- 使用说明书请妥善保管。

## ⚠ 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.

### ■ NOTES ON TYPES OF 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.

## ⚠ 安全第一

本说明书上记载的注意事项以及机器上贴着的带有**⚠**的警告标签，是表示有发生人身事故危险的重要项目，务请认真阅读并严格遵守。

### ■关于警告标志

#### ⚠ 警告

表示如不遵守注意事项，便可能导致重伤或死亡。

#### 重 要

表示如不遵守注意事项，有可能致使机器损伤或发生故障。

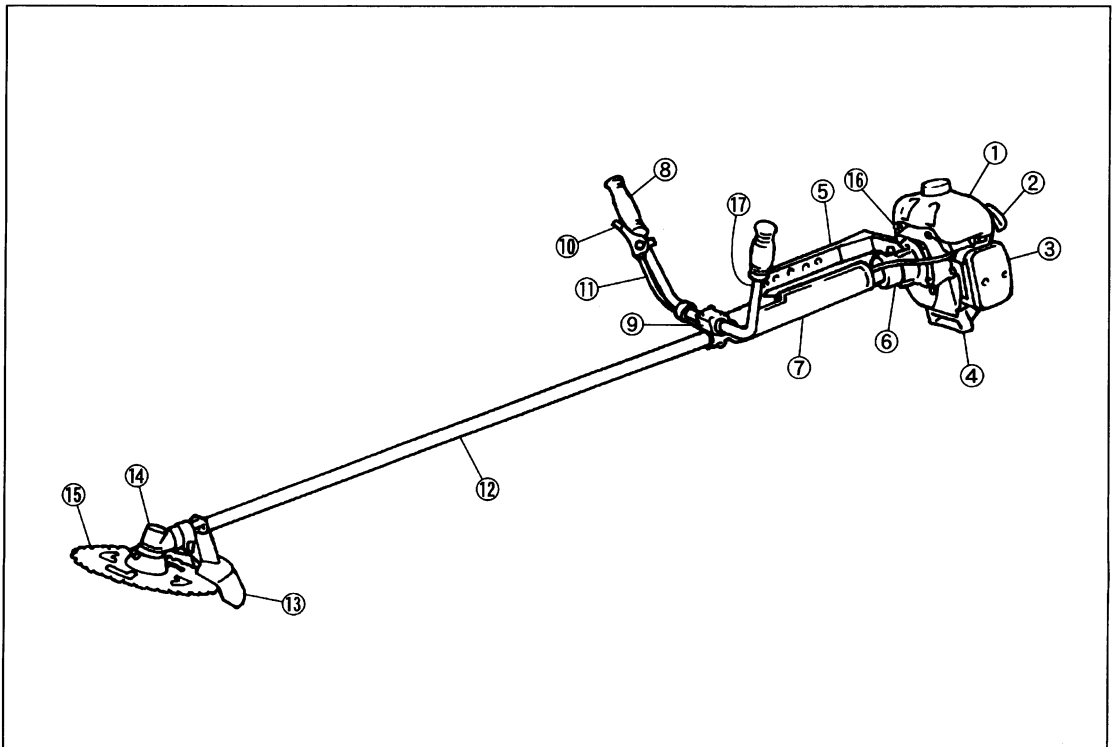
#### 补 充

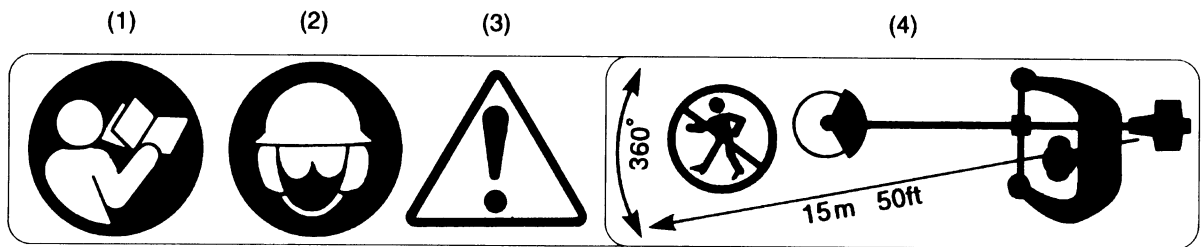
表示其他使用上必要的补充说明。

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- |                          |        |
|--------------------------|--------|
| 1. Fuel tank             | ①燃料箱   |
| 2. Starter               | ②起动机   |
| 3. Air cleaner           | ③空气滤清器 |
| 4. Stand                 | ④脚架    |
| 5. Hanger                | ⑤吊钩    |
| 6. Housing               | ⑥罩     |
| 7. Protector             | ⑦护套    |
| 8. Handle                | ⑧手柄    |
| 9. Handle bracket        | ⑨手柄托架  |
| 10. Throttle lever       | ⑩加油柄   |
| 11. Throttle cable       | ⑪加油钢丝  |
| 12. Outerpipe            | ⑫外管    |
| 13. Safety guard         | ⑬安全挡板  |
| 14. Gearcase             | ⑭齿轮箱   |
| 15. Blade                | ⑮刀片    |
| 16. Engine switch button | ⑯引擎开关键 |
| 17. Wing nut             | ⑰蝶形螺母  |





- (1) Read owner's manual before operating this machine.  
 (2) Wear head, eye and ear protection.  
 (3) Warning/Attention  
 (4) Keep all children, bystanders and helpers 15 meters away from the brushcutter

- (1) 阅读使用说明书  
 (2) 戴头盔、防尘眼镜和耳塞  
 (3) 警告/注意  
 (4) 15米以内不得有人

**IMPORTANT**

If warning seals peel off or become soiled and impossible to read, you should contact the dealer from which you purchased the product to order new seals and affix the new seal(s) in the required location(s).

**⚠ WARNING**

**Never remodel your brushcutter. We won't warrant the machine, if you use the remodeled brushcutter or you don't observe the proper usage written in the manual.**

**重 要**

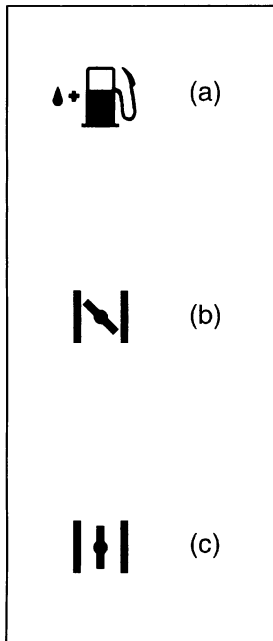
警告标签污损或剥落时, 请到购买本品的商店重新订购, 及时更换。

**⚠ 警 告**

改造机器非常危险, 切勿改造。擅自改造或用于使用说明书所记载的正确的使用目的以外的用途时, 将不能享受厂家所提供的各种保障, 故请提起注意。

For safe operation and maintenance, symbols are carved in relief on the machine. According to these indications, please be careful not to take a mistake.

为便于使用操作和保养管理, 操作装置用标志符号来表示。请按这些标志符号进行操作, 注意避免发生失误。



(a).The port to refuel the "MIX GASOLINE"

**Position:** FUEL TANK CAP

(a)表示使用燃料的种类为“混合汽油”  
标志符号表示部位：燃料缸盖

(b).The direction to close the choke

**Position:** AIR CLEANER COVER

(b)表示向该符号的方向操作控制杆时, 进气门便会关闭。

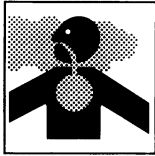
标志符号表示部位：空气滤清器的盖子

(c).The direction to open the choke

**Position:** AIR CLEANER COVER

(c)表示向该符号的方向操作控制杆时, 进气门便会开通。

标志符号表示部位：空气滤清器的盖子



#### ■ BEFORE USING THE MACHINE

- a. Read this owner's manual carefully to understand how to operate this unit properly.
- b. This product has been designed for use in cutting grass, and it should never be used for any other purpose.
- c. You should never use this brushcutter when under the influence of alcohol, when suffering from exhaustion or lack of sleep, when suffering from drowsiness as a result of having taken cold medicine, or at any other time when a possibility exists that your judgment might be impaired or that you might not be able to operate the brushcutter properly and in a safe manner.
- d. Avoid running the engine indoors. The exhaust gases contain harmful carbon monoxide.
- e. Never use your brushcutter under circumstances like those described below:
  1. When the ground is slippery or when other conditions exist which might make it not possible to maintain a steady posture while using the brushcutter.
  2. At night, at times of heavy fog, or at any other times when your field of vision might be limited and it would be difficult to gain a clear view of the area.
  3. During rain storms, during lightning storms, at times of strong or gale-force winds, or at any other times when weather conditions might make it unsafe to use this product.
- f. When using this product for the first time, before beginning actual work, learn to handling the brushcutter from skilled worker.

#### ■ 在使用本品之前

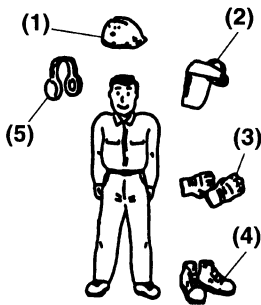
- a. 使用前请务必先认真阅读本使用说明书, 将产品的性能及使用上的注意事项理解清楚。
- b. 本产品是以割除地表的杂草为目的而设计的, 请勿用于其他目的(如剪裁树枝、修剪矮树墙、栽截木料等等)
- c. 本产品装有高速旋转的刀片, 如操作失误将非常危险。故因疲劳等原因身体感到不适时, 或由于服用了感冒药或饮酒后致使判断能力降低, 难以准确进行操作时, 请勿使用本产品。
- d. 引擎排出的气体里含有对人体有害的一氧化碳。请不要在室内、温室或隧道内等通风不好的地方使用本产品。
- e. 以下各种场合, 请勿使用。
  1. 脚下较滑, 难以保持稳定的作业姿势时。
  2. 因浓雾或夜间, 对作业现场周围的安全难以确认时。
  3. 天气不好时(下雨、刮大风、打雷等)
- f. 初次使用时, 务必请先有经验者对本产品的用法进行指导后, 方可开始实际作业。

- g. Lack of sleep, tiredness, or physical exhaustion results in lower attention spans, and this in turn leads to accidents and injury. Limit the amount of time over which the brushcutter is to be used continuously to somewhere around 30~40 minutes per session, and take 10~20 minutes of rest between work sessions. Also try to keep the total amount of work performed in a single day under 2 hours or less.
- h. Be sure to keep this manual handy so that you may refer to it later whenever any questions arise.
- i. Always be sure to include this manual when selling, lending, or otherwise transferring the ownership of this product.
- j. Never allow children or anyone unable to fully understand the directions given in this manual to use this brushcutter.



#### ■ WORKING GEAR AND CLOTHING

- a. When using your brushcutter, you should wear proper clothing and protective equipment as follows.



- (1) Helmet
- (2) Protection goggles or face protector
- (3) Thick work gloves
- (4) Non-slip-sole work boots
- (5) Ear protectors

- b. And you should carry with you things as follows.
1. Attached tools and files
  2. Properly reserved fuel
  3. Spare blade
  4. Things to notify your working area (Rope, warning signs)
  5. Whistle (for collaboration or emergency)
  6. Hatchet or saw (for removal of obstacles)
- c. Never use your brushcutter when wearing pants with loose cuffs, when wearing sandals, or when barefoot.



- g. 过渡疲劳会使注意力降低, 从而成为发生事故的原因。不要使作业计划过于紧张, 每次连续作业时间不能超过 30~40 分钟, 然后要有 10~20 分钟的休息时间。一天的作业时间应限制在两个小时以内。
- h. 本使用说明书请妥善保管, 有不懂的地方, 请随时查阅。
- i. 将本产品转让或借给他人时, 请将本使用说明书也一同交给对方。
- j. 另外, 请勿让不能理解本说明书的人或儿童使用本产品。

#### ■ 使用时的服装·装备

- a. 使用本产品时, 要穿好适于室外作业的服装, 并穿戴好以下装备。

- (1) 作业帽 (在坡地作业时要戴头盔)
- (2) 防尘眼睛或面部防护罩
- (3) 结实的手套
- (4) 不易滑、结实的鞋
- (5) 耳塞 (特别是长时间作业时)

- b. 另外, 请务必携带以下用品。

1. 产品附属工具及钢锯
2. 装在适当容器里的燃料
3. 替换用刀片
4. 标示作业区域的用具 (绳索、木牌)
5. 哨子 (共同作业或遇紧急情况时使用)
6. 砍刀、手锯 (铲除障碍物时用)

- c. 请不要穿裤脚宽大的裤子或赤脚、穿凉鞋、草鞋等作业。



#### ■ WARNING CONSIDERING HANDLING OF FUEL

- a. The engine of this product is designed to run on a mixed fuel which contains highly flammable gasoline. You should never store cans of fuel or refill the fuel tank in any place where there is a boiler, stove, wood fire, electrical sparks, welding sparks, or any other source of heat or fire which might ignite the fuel.
- b. Smoking while operating the brushcutter or refilling its fuel tank is extremely dangerous. Always be sure to keep lit cigarettes away from the brushcutter at all times.
- c. When refilling the tank always turn off the engine first and take a careful look around to make sure that there are no sparks or open flames anywhere nearby before refueling.
- d. If any fuel spillage occurs during refueling, use a dry rag to wipe up spills before turning the engine back on again.
- e. After refueling, screw the fuel cap back tightly onto the fuel tank and then carry the brushcutter to a spot 3m or more away from where it was refueled before turning on the engine.

#### ■ THINGS TO CHECK BEFORE USING YOUR BRUSHCUTTER

- a. Before beginning work, look around carefully to get a feel for the shape of the land, or grass to be trimmed, and whether or not there are any obstacles which might get in the way while working, and remove any obstacles which can be cleared away.
- b. The area within a perimeter of 15m of the person using the brushcutter should be considered a hazardous area into which no one should enter while the brushcutter is in use, and when necessary yellow warning rope, warning signs should be placed around the work area. When work is to be performed simultaneously by two or more persons, always check the presence and locations

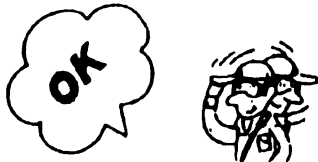
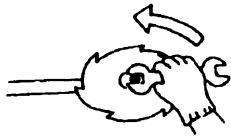
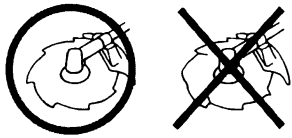
#### ■ 有关燃料的注意事项

- a. 本产品的引擎所使用的燃料是“混合汽油”，属易燃品。请不要在焚烧炉、喷烧器、篝火、炉灶、电火花、焊接火花等有可能引火的地方加油或存放燃料容器。
- b. 叼着香烟作业或加油非常危险，绝对不要那样做。
- c. 使用过程中加油时，一定要先把引擎停下来，确认周围没有烟火后再加油。
- d. 加油时如燃料碰洒了时，一定要将机体上附着的燃料擦干净之后，方可启动引擎。
- e. 加油后将燃料容器密封，然后要在离开燃料容器 3 米以上的地方启动引擎。

#### ■ 使用前的注意事项

- a. 在开始作业前，要先弄清现场的状况（地形、草的性质、障碍物的位置、周围的危险度等），清除可以移动的障碍物。
- b. 以作业者为中心，半径 15 米以内为危险区域，为防止他人进入该区域，要用绳索围起来或立起木牌以示警告。另外，几个人同时作业时，要不时地相互打招呼，并保持安全间隔。





of others so as to maintain a distance each person sufficient to ensure safety.

- c. Make sure that there are no loose screws or bolts, fuel leaks, ruptures, dents, or any other problems which might interfere with safe operation. Be especially careful to check that there is nothing wrong with the blades or with the joints by which the blades are attached to the brushcutter.
- d. Never use blades that are bent, warped, cracked, broken or damaged in any way.
- e. Keep the blade always sharp.
- f. Filing the cutting edges, keep the end corner sharp and round the root of the edge.
- g. Check the bolt to fasten the blade and be sure the blade turns smoothly without abnormal noise.

#### ■ NOTES ON STARTING THE ENGINE

1. Take a careful look around to make sure that no obstacles exist within a perimeter of 15m or less around brushcutter.
2. Place the body of the brushcutter onto the ground in a flat clear area and hold it firmly in place so as to ensure that neither the blades nor the throttle come into contact with any obstacles when the engine starts up.
3. Place the throttle into the idling position when starting the engine.
4. After starting up the engine, if the blades continue to rotate even after the throttle has been moved fully back, turn off the engine and check the throttle wire and other parts.

- c. 开始作业之前，要认真检查机体各部，在确认没有螺丝的松动、漏油、损伤或变形等异常情况后方可开始作业。特别是刀片以及刀片连接部位更要仔细检查。
- d. 确认刀片没有崩刃、裂口、弯曲之后方可使用。绝对不可以使用已出现异常的刀片。
- e. 刀片请使用研磨好了的锋利的。
- f. 研磨刀片时，为防止刀刃崩裂，一定要把齿根部锉成弧形。
- g. 在拧紧螺丝上好刀片后，要先用手转动刀片检查一下有无上下摆动或异常声响。如有上下摆动，则可能引起异常振动或刀片固定部位的松动，十分危险。

#### ■ 启动引擎时的注意事项

1. 启动引擎时要仔细确认周围(半径15米以内)的安全。
2. 启动引擎时，机体要放在地上按住，勿使加油柄碰到地面或周围的障碍物。
3. 将加油柄设定在「启动速度」位置上后启动引擎。
4. 引擎启动后，如刀片旋转不停的话，要马上将引擎停下来，对油门以及其他部位进行检修。

#### ■ KICKBACK SAFETY PRECAUTIONS

- A dangerous reaction may occur when the spinning blade contacts a solid object in the critical area. It is called Kick back. As a result, the operator can lose control of the unit which can cause serious or fatal injury.

Avoid kickback, observe the safety precautions below strictly.

1. Before beginning work, clear your working area and remove grasses around the obstacles.
2. When using your brushcutter, do not grip other parts except the handles.
3. When using your brushcutter, never take your eyes off. If you need to, place the throttle into the idling position.
4. When using your brushcutter, do not let the unit get closer to your feet nor raise the unit above your waist.

#### ■ NOTES ON TRANSPORTATION

- a. Make sure the appropriate blade cover is in place.
- b. When transporting by car, fix the unit firmly using a rope. Do not transport by bicycle or motorbike because it is dangerous.
- c. Never transport the brushcutter over rough roads over long distances without first removing all fuel from the fuel tank, as doing so might cause fuel to leak from the tank.

#### ■ OPERATION SAFETY PRECAUTIONS

- a. Grip the handles of the brushcutter firmly with both hands. If you suspend the work, place the throttle into the idling position.
- b. Always be sure to maintain a steady, even posture while working.
- c. Maintain the speed of the engine at the level required to perform cutting work, and never raise the speed of the engine above the level necessary.

#### ■ 机体反弹的注意事项

- 机体反弹是指高速旋转的刀片在碰到石块、树木、水泥、木桩、支柱等坚硬的固定物体时，由于反作用力，机体在一瞬间剧烈抖动的现象。发生反弹时，机体会突然出现意想不到的振动，有可能致使作业者无法正常操作。为防止发生反弹，请务必遵守以下事项。

1. 作业前要先确认好有可能致使发生反弹的障碍物的位置，并拔除其周围的杂草使其显露出来。
2. 作业时，一定要紧握把手，不要握其他部位。
3. 作业时，眼睛一定要盯住刀片。需要将眼睛离开刀片时，要先将加油柄扳回到「启动速度」位置。
4. 操作时不要使刀片靠近自己的脚或将其抬高至腰部以上位置。

#### ■ 搬运时的注意事项

- a. 使用金属制刀片时，请务必在刀片上安装上附带的刀片护罩或其他适当的防护罩具。
- b. 用汽车搬运时，须用绳索将机体牢固地固定在车槽内。因为危险，切勿用自行车或摩托车搬运。
- c. 切勿将燃料装在燃料箱中走难行之路或长时间搬运，以免燃料外漏。

#### ■ 作业时的注意事项

- a. 作业时紧握机体握把部分。中断作业时，请将加油柄扳回到「启动速度」位置后再松开手。
- b. 割草作业时要保持稳定的姿势。
- c. 引擎的转速请保持在作业需要的范围之内，不要随意提高。



- d. If the grass gets caught in the blade during operation, or if you need to check the unit or refuel the tank, always be sure to turn off the engine.
- e. If the blade touches a hard object like a stone, immediately stop the engine and check if something is wrong with the blade. If so, replace the blade by new one.
- f. If someone calls out while working ,always be sure to turn off the engine before turning around.
- g. Never touch the spark plug or plug cord while the engine is in operation. Doing so may result in being subjected to an electrical shock.
- h. Never touch the muffler, spark plug, or other metallic parts of the engine while the engine is in operation or immediately after shutting down the engine. Doing so may result in serious burns.
- i. When you finish cutting in one location and wish to continue work in another spot, turn off the engine and turn the unit as the blade faces away from your body.

#### ■ MAINTENANCE SAFETY PRECAUTION

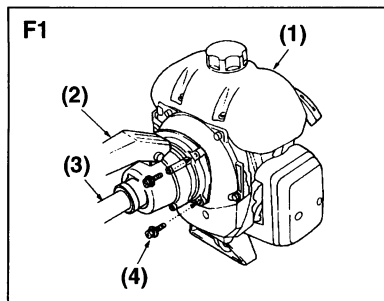
- a. Perform the maintenance and checking operations described in this manual at regular intervals. If any parts must be replaced or any maintenance or repair work not described in this manual must be performed, please contact a representative from the store nearest KOMATSU ZENOAH authorized servicing dealer for assistance.
- b. Under no circumstances should you ever take apart the brushcutter or alter it in any way. Doing so might result in the brushcutter becoming damaged during operation or the brushcutter becoming unable to operate properly.
- c. Always be sure to turn off the engine before performing any maintenance or checking procedures.

- d. 需要去除缠绕在刀片上的草，或对刀片、机体进行检查或加油时，要先将引擎关闭，让刀片完全停止转动后再进行上述作业。
- e. 当刀片碰到石块等坚硬的东西时，要立即将引擎关闭，检查刀片是否受损，发现有异常时，要中止作业，换上正常的刀片。
- f. 作业中如听到后边有人打招呼时，一定要先关掉引擎后方可回头。
- g. 引擎运转时，切勿用手触摸火星塞或插头线，以免触电。
- h. 引擎停止后，千万不可马上用手触摸消声器或火星塞，以免因高温烫伤。
- i. 中断作业移动时，要先将引擎关掉，走路时要让刀片朝前。

#### ■ 检修上的注意事项

- a. 本说明书上记载有为维持产品的性能所必要的检修方法。如需要进行本说明书上没有的检修时，可向购买本品的商店或附近代销 ZENOAH 产品的代销店询问。
- b. 请不要对产品进行改造和分解。否则，操作中有可能使机体受损，或无法正常操作。
- c. 检修时，请务必将引擎关掉。

- d. When sharpening, removing, or reattaching the blade, be sure to wear thick, sturdy gloves and use only proper tools and equipment to prevent injury.
  - e. When replacing blade or any other parts or when replacing the oil or any lubricants, always be sure to use only KOMATSU ZENOAH products or products which have been certified by KOMATSU ZENOAH for use with the brushcutter.
- d. 安装、卸下或研磨刀片时, 为防止受伤, 一定要戴结实的手套。
  - e. 刀片等替换用配件以及补充用油类, 请一定使用ZENOAH纯正产品或ZENOAH所指定的品牌产品。



### ENGINE and MAIN PIPE

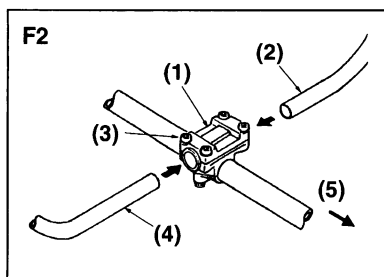
Align the hanger and the fuel tank, using attached 4 socket screws, secure the connection firmly with equal force. (F1)

- (1) Fuel tank
- (2) Hanger
- (3) Main pipe
- (4) Bolt

### 引擎和主管道

顺着吊钩和燃料箱，使用附属4螺钉以同等力量固定连接处。(F1)

- (1) 燃料箱
- (2) 吊钩
- (3) 主管道
- (4) 栓钉



### HANDLE

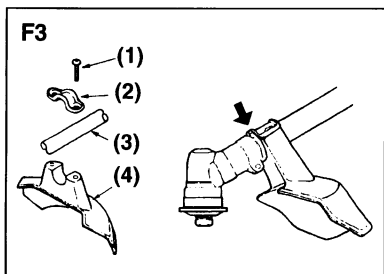
1. Loosen the 4 bolts on the handle bracket. (F2)
2. Insert the right handle ( throttle lever is attached ) and the left handle assembly into the bracket and retighten the bolts securely. (F2)

- (1) Handle bracket
- (2) Right handle
- (3) Bolt
- (4) Left handle
- (5) Engine side

### 手柄

1. 松开手柄托架上的栓4。(F2)
2. 插入右手柄(附带加油柄)，左手柄插入托架，然后拧紧螺钉。(F2)

- (1) 手柄托架
- (2) 右手柄
- (3) 螺钉
- (4) 左手柄
- (5) 引擎挡板



### SAFETY GUARD

Attach the safety guard to the gear case and fix it with the clamp and 2 bolts ( M5x25) securely. (F3)

- (1) Bolt
- (2) Clamp
- (3) Main pipe
- (4) Safety guard

### 安全挡板

把安全挡板放在齿轮罩上，用夹板和2个螺钉(M5×25)固定。(F3)

- (1) 螺钉
- (2) 夹板
- (3) 主管道
- (4) 安全挡板

### THROTTLE WIRE

#### ⚠ WARNING

After fitting up the wire, make sure that the throttle cable is put in the throttle lever. if not, it is very dangerous because the engine rotate after releasing the throttle lever.

1. Hook the cable end into the hole of the throttle lever. And set the cable in the lever as shown in the picture. (F4)
2. Wrap the band so as the throttle wire is fixed with the handle.

- (1) Hole
- (2) Throttle cable

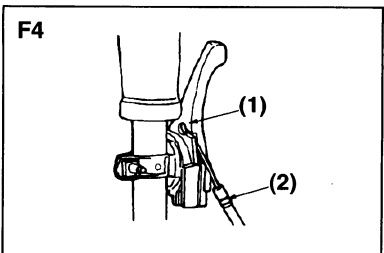
### 加油钢丝

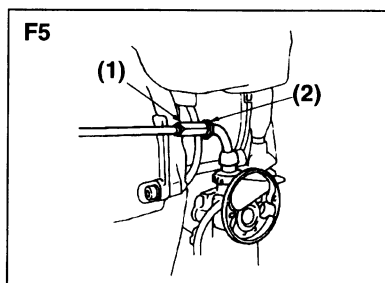
#### ⚠ 警告

在装好钢丝后，请确认加油电缆确实装在加油柄内。如果没有装好的话，加油柄脱扣情况下引擎旋转，非常危险。

1. 将钢缆一端穿入加油柄中。如图所示将钢缆装好。(F4)
2. 把加油钢丝缠绕固定在手柄上。

- (1) 孔
- (2) 加油钢丝





### ■ ADJUSTING THE THROTTLE CABLE

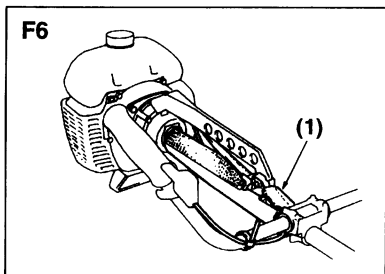
1. After releasing the throttle lever, pull the throttle wire. The normal play is 1 or 2mm when measured at the carburetor side end.
2. If the play is short or long, take off the air cleaner cover, loosen the lock nut and adjust the play. (F5)

- (1) Adjust nut  
(2) Lock nut

### ■ 调整油门线

1. 卸下加油柄，拉出加油钢丝。从化油器一端丈量的话，一般为1~2米长。
2. 如果线过短或过长，请打开空气清洁盖，松缓固定螺母进行调节。(F5)

- (1) 调节螺母  
(2) 固定螺母



### ■ PROTECTOR

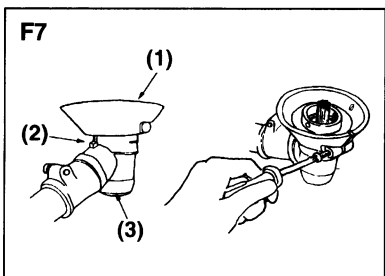
Wrap the waist pad around the shaft tube. (F6)

- (1) Protector

### ■ 保护套

在曲轴管上缠绕保护套。(F6)

- (1) 保护套



### ■ INSTALLING THE ANTI-CAUGHT UP COVER (F7)

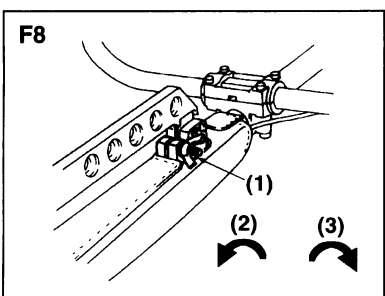
1. Match the inside ditch of the anti-caught up cover to the outside projection of the gear case and push it in until it touches the stopper..
2. Tighten the screw on the cover front.

- (1) Anti-Caught Up Cover  
(2) Stopper  
(3) Gear case

### ■ 安装防止卷缠罩

1. 把防止卷缠罩内侧的沟槽对准齿轮箱外侧的凸起部分，按入直至碰到挡块为止。
2. 请拧紧罩前部的螺丝。

- (1) 防止杂草卷入盖  
(2) 挡块  
(3) 齿轮箱



### ■ SWIVEL LOCK

This brushcutter is equipped with the swivel lock to fix the hanger and the main pipe at the optional position. (F8)

- In the ordinary operation, use it with the wing nut of the hanger front loose (unlocked).
- In transportation, please tighten the wing nut when it is necessary to fix the main pipe.

- (1) Wing nut  
(2) Loose (unlock)  
(3) Lock

### ■ 转动锁

本锄草机备有可以使吊钩和主管道固定在任意位置上的转动锁机构。(F8)

- 通常作业时，请将吊钩前部的蝶形螺母呈松动(解除锁)状态使用。
- 搬运时等，需要固定主管道时，再拧紧蝶形螺母。

- (1) 蝶形螺母  
(2) 松动(解除)  
(3) 固定

### ■ INSTALLING THE METAL BLADE (F9)

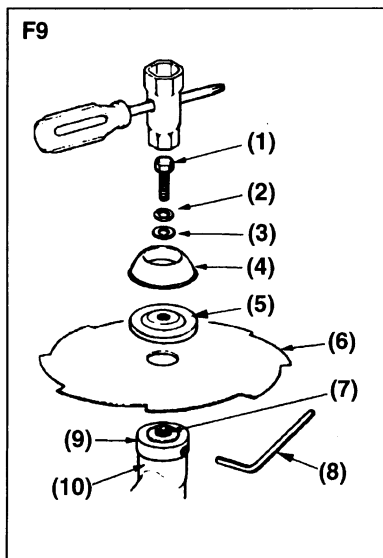
1. Set the inner holder to the gear shaft, and turn to fix with the attached L-shaped bar.
2. Put the blade on the inner holder with the face with letters to the gear case, and match correctly the hole of the blade to the projection of the inner holder.
3. Set the outer holder to the gear shaft with the hollowed face to the blade.
4. Put the attached bolt cover on the outer holder and secure it with the bolt (left screw) together with the spring washer and the washer.

- (1) Bolt  
 (2) Spring Washer  
 (3) Washer  
 (4) Bolt cover  
 (5) Outer holder  
 (6) Blade  
 (7) Gear shaft  
 (8) Bar  
 (9) Inner holder  
 (10) Gear case

### ■ 金属刀片的安装方法 (F9)

1. 请把刀片托夹具套在齿轮轴上, 使用附属L型圆棒旋转固定。
2. 请把割草刀片有文字的一面放在齿轮箱侧的刀片托上, 把刀片孔穴正确地装在刀片托夹具的凸部上。
3. 刀片固定夹具凹面向割草刀侧, 装在齿轮轴上。
4. 把附属螺栓罩放在刀片固定夹具上, 请在割草刀片安装螺栓 (左螺丝) 上放上弹簧垫和平垫圈, 确实拧紧。

- (1) 螺栓  
 (2) 弹簧垫圈  
 (3) 垫圈  
 (4) 螺栓罩  
 (5) 外托  
 (6) 刀片  
 (7) 齿轴  
 (8) L型工具  
 (9) 内托  
 (10) 齿轮箱



### ■ INSTALLING THE NYLON CUTTER (OPTION) (F10)

1. Set correctly the inner holder and the outer holder to the gear shaft.
2. Screw the attached bold (M8 Left) into the gear shaft and secure it with the spanner.
3. Screw the nylon cutter into the bolt by fixing the inner holder with the L-shaped bar and tighten it manually.

#### NOTE

Keep bolts and washers to install the blade carefully so as not to lose them.

- (1) Inner holder  
 (2) Outer holder  
 (3) Bolt  
 (4) Nylon cutter  
 (5) Nylon cord

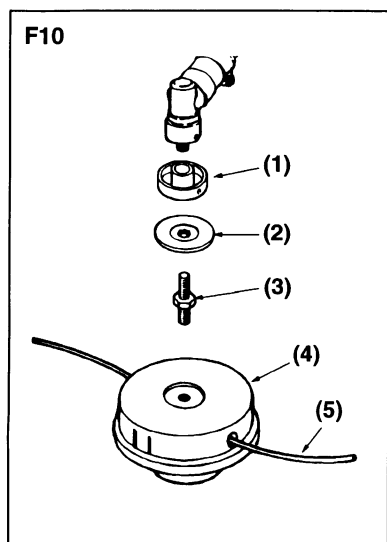
### ■ 尼龙割刀 (另外销售) 的安装方法 (F10)

1. 请将刀片托夹具和刀片压夹具正确地安装在齿轮轴上。
2. 请把同一部件包装内安装螺栓 (M8左) 拧入齿轮轴内, 使用扳手确实拧紧。
3. 请把刀片托夹具用L型圆棒固定, 并且将尼龙割刀主体拧在螺栓上, 用手拧紧。

#### 补充说明

请注意保管, 不要将金属刀片安装用螺栓·垫圈类丢失。

- (1) 内托  
 (2) 外托  
 (3) 螺栓  
 (4) 尼龙头刀  
 (5) 尼龙线



**⚠ WARNING**

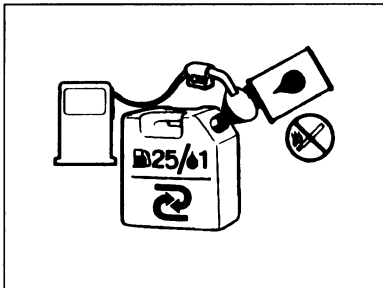
- Gasoline is very flammable. Avoid smoking or bringing any flame or sparks near fuel.
- Wipe up all spills before starting the engine.
- Make sure to stop the engine and allow it cool before refueling the unit.
- Keep open flames away from the area where fuel is handled or stored.

**IMPORTANT**

- Never use oil for 4 cycle engine use or water cooled 2-cycle engine. 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 or result in the engine failing to operate properly. Put remained fuel into an air-tight container and keep it in the dark and cool room.

Mix a regular grade gasoline (leaded or unleaded, alcohol-free) and a quality-proven motor oil for air cooled 2 cycle engines.

**RECOMMENDED MIXING RATIO**  
Gasoline 25 : Oil 1

**⚠ 警告**

- 汽油为易燃物品。不得在燃料附近吸烟或玩弄带有火焰和火星物。
- 在启动引擎之前整理好周围的散乱物品。
- 在加油之前必须确认引擎停止并冷却。
- 在加油和储油地区必须严禁烟火。

**重 要**

- 不能使用 4 冲程引擎，或水冷 2 冲程引擎机油。否则会造成火花塞堵塞，排气口不畅通，或者活塞环障碍。
- 一个月以上没有使用过的混合燃料有可能妨碍化油器工作，或者引起引擎工作不良。请把剩下的燃料装在密闭容器内，并放置在阴暗凉爽处。

把普通级汽油(含铅或无铅，无酒精)和高质发动机油混合在一起，供气冷 2 冲程引擎使用。

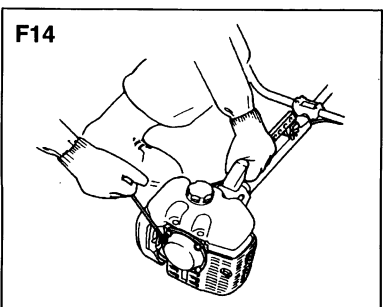
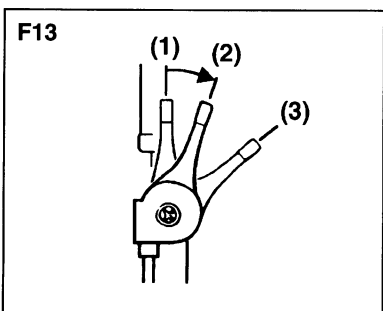
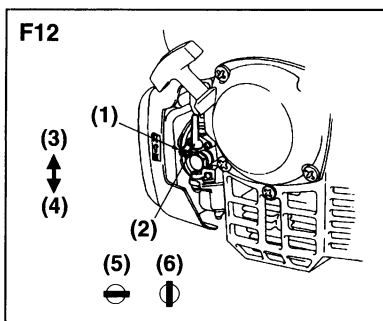
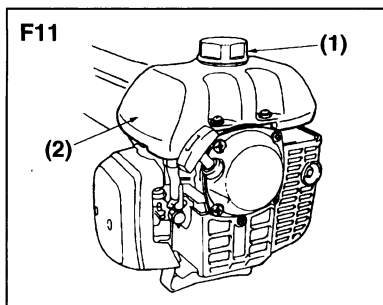
建议混合比例为：  
汽油 25:油 1



### STARTING THE ENGINE

#### WARNING

- Before starting the engine, inspect the entire unit for loose fittings or fuel leaks, and the cutting attachment is properly installed and securely fastened.
- Place the unit on a flat, firm place. Keep the cutting head clear of everything around it.



1. Turn the cap to the fuel tank to make sure that it is fixed on tightly. (F11)

- (1) Cap
- (2) Fuel tank

2. Open the fuel tank cock. (F12)
3. Move the choke lever to the closed position. (F12)

- (1) Choke lever
- (2) Fuel cock
- (3) Close
- (4) Open
- (5) Close
- (6) Open

#### NOTE

When restarting immediately after stopping the engine, move the choke lever to the open position.

4. Set the throttle lever to the starting position. (F13)

- (1) Idling
- (2) Starting (1/3-1/2 open)
- (3) Full throttle

#### NOTE

When restarting immediately after stopping the engine, move the throttle lever to the idling position.

5. While holding the unit firmly, pull out the starter rope quickly. (F14)
6. After the engine has started, open the choke gradually.
7. Allow the engine to run for 2 to 3 minutes to warm up.

### 启动引擎

#### 警告

- 在启动引擎之前，检查所有机组是否有松动或漏油现象。确认割草刀片等安装适当并安全扣紧。

- 把机组放置在平坦坚实的地方。保证割刀头周围没有任何物品。

1. 转动燃料箱的盖子，确认确实拧紧。(F11)

- (1) 盖子
- (2) 燃料箱

2. 打开燃料箱开关。(F12)

3. 把风门开关移动到关闭位置 (F12)。

- (1) 风门开关
- (2) 燃料开关
- (3) 关闭
- (4) 打开
- (5) 关闭
- (6) 打开

#### 补充

在引擎停止后马上重新启动时，请把风门开关移动到打开位置上。

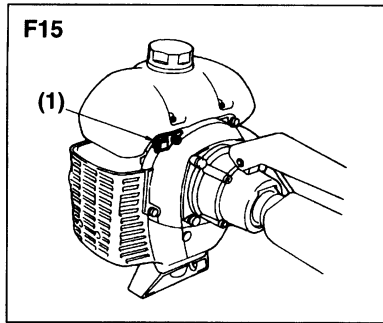
4. 设定加油柄至启动位置。(F13)

- (1) 无效
- (2) 启动 (1/3 ~ 1/2 打开)
- (3) 加油杆全开

#### 补充

如果在引擎停止后立即重开，请把加油柄移动到无效位置上。

5. 牢牢握住机组，快速拉出启动器拉绳。(F14)
6. 在引擎启动后，渐渐打开风门。
7. 让引擎转动 2 ~ 3 分钟预热。



### ■ STOPPING THE ENGINE

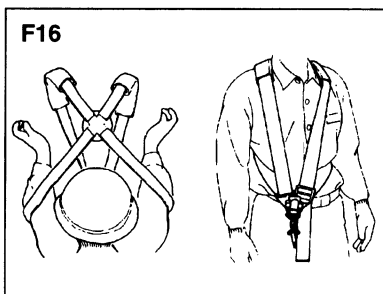
1. Return the throttle lever to the idling position.
2. Push the engine switch button. (F15)

#### (1) Engine switch button

### ■ 停止引擎

1. 转动加油柄到无效位置上。
2. 按下引擎开关键。(F15)

#### (1) 引擎开关键

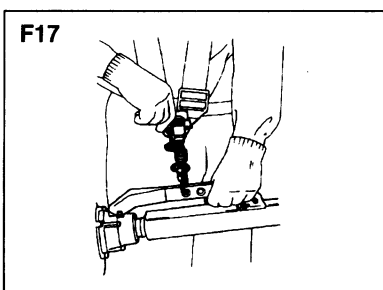


### ■ EQUIPPING THE SHAWL BAND (F16)

1. Equip the attached shawl band. (F16)
2. Turn on the engine, return the throttle lever to the lowest speed position, and put the shawl band hook to the hanging part of the machine.
3. Adjust the length of the shawl band so that the blade may be parallel to the ground in the working position. In order to prevent slack during operation, turn up the extra part of the band from the buckle.

### ■ 佩带肩背带 (F16)

1. 请如左图所示佩带附属肩背带。
2. 打开引擎, 把加油柄退回到最低速度位置, 然后, 把肩背带的挂钩扣在机体的吊环上。
3. 开始作业姿势时, 请调节肩背带的长度, 使割刀与地面平行。为了防止作业中松缓, 请将带子的多余部分折回到扣环处。



### ■ HOW TO OPERATE EMERGENCY UNBUCKLING KNOB

In case of getting the body away from the machine immediately in emergency, pull up the red knob on the top of the hanging part. You can be separated from the machine with the shawl band equipped. (F17)

### ■ 紧急脱离用钮的操作方法

紧急情况下, 要将机械立即脱离身体时, 请拉起吊环上部的红色钮。可使肩背带带在身上而机械脱离。(F17)

### ■ CUTTING OPERATION

#### METAL BLADE USAGE

- Always cut by guiding the head from your right to left.
- A metal blade cut best up to the point 1/3 from the edge. Use that area for cutting shrubs, tough and thick weeds. For cutting young grass, you can use up to 2/3 from the tip of blade.
- Adjust the engine speed according to the cutting objects. Cut the young grass at middle speed, and cut shrubs or tough and thick weeds at high speed.

- (1) For branches and trees
- (2) For grass and weeds
- (3) Direction of cutting
- (4) Direction of rotation

#### IMPORTANT

Operating at low speed makes it easier for grass, weeds, or twigs to become caught up in the blades, and also it makes the shaft and clutch wear down more quickly.

#### NYLON CUTTER USAGE

- Nylon cord consumes large power. Please note that the engine rotation speed in operation should be 50% as large as when using metal blade.
- Nylon cutter cut grass with the power of cord rotation. If you try to cut grass for the length of cord at one time, rotation speed becomes lower due to resistance and you cannot cut grass well. In case of large resistance, get the nylon cutter away from grass once, make the rotation speed higher, and cut a small amount of grass at one time.
- If you try to cut grass by swinging the brushcutter in the reverse way (from left to right), scraps fly in the direction away from the body. You can avoid getting your clothes dirty.

### ■ 割草作业

#### 使用金属刀片时

- 割草时的动作是从右向左摇晃着机体来进行的。
- 每次刀片吃进深度一般杂草为刀片直径的 1/2，但狗尾草等茎较硬的草以刀片直径的 1/3 为妥。
- 引擎的转速请根据草的阻力大小随时调节。一般田间的软草在中速位置就完全可以，但如是密生的艾蒿或带蔓的草等，则需适当地提高引擎的转速。

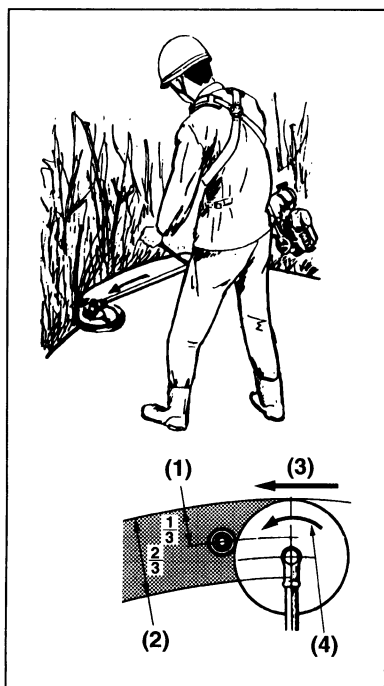
- (1) 对树枝和树木
- (2) 对草和杂草
- (3) 割草方向
- (4) 旋转方向

#### 重 要

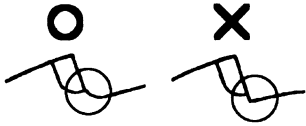
引擎转速过低不但容易使草缠卷，还会导致离合器的早期消耗。

#### 使用尼龙割刀时

- 由于尼龙线的动力消耗大，作业时引擎的转速应该比使用金属刀时加大 50%。
- 尼龙割刀是通过线的旋转速度来割草的。如果把搅进的草一下子割掉的话，转速会降低，草也难以一下子割断。这时，要使割刀暂离开一下草，等提高转速以后再每次吃进的深度调浅一些。
- 操作割草机时的动作如与通常相反，即由左向右晃动着割的话，割下的草会飞向远离身体的方向，那样可以避免弄脏衣服。



F18



### ■ BLADE

- Sharpen each cutting edge and make sure the bottom corner is rounded. (F18)
- Do not cool the blade with water in case of using grinder. It may cause cracks on blade.

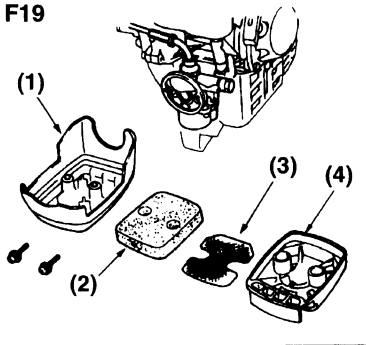
### ■ 刀片

- 重新研磨刀刃时，一定要把齿根部磨成弧形，以防刀刃崩裂。(F18)
- 用研磨机研磨时，刀刃会产生高温，此时如用水冷却，有可能发生崩裂，所以应该在空气中等待其自然冷却。

### AFTER 25 HOURS OF USE

### 每使用 25 小时后

F19



### ■ AIR CLEANER

Check and clean the filter element in warm, soapy water as required. Dry completely before installing. If the element is broken or shrunk, replace with a new one. (F19)

- (1) Cover
- (2) Element
- (3) Screen
- (4) Body

### ■ 空气滤清器

请将空气滤清器的外壳卸下来，清除内部的尘土。海绵过脏的时候，请用温水加中性洗涤剂清洗干净，待其完全干燥后重新安上再用。如海绵变形或破损了的话，请予换新。(F19)

- (1) 盖子
- (2) 海绵滤芯
- (3) 幕片
- (4) 本体

### IMPORTANT

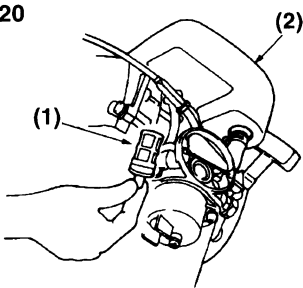
A clogged air filter may increase fuel consumption while cutting down the engine power.

And operate the brushcutter without the air filter or with a deformed filter element will quickly ruin the engine.

### 重 要

如果空气滤清器的滤气海绵沾污过多而继续使用时，会使引擎的机能降低。相反，如果不加垫海绵或者使用变了形或破损了的海绵的话，会导致引擎内部异常消磨损。

F20



### ■ FUEL FILTER

Take the filter out of the fueling port using a small wire hook. Disconnect the filter assembly from the fuel pipe and unhook the retainer to disassemble it. Clean the components with gasoline. (F20)

- (1) Strainer
- (2) Fuel tank

### ■ 燃料过滤器

便要燃料箱的给油口对燃料过滤器进行检查，如油污过多时，请将燃料箱的油全部倒出后，将燃料过滤器卸下，再用刷子刷洗干净。实在刷不干净或网膜已破损时，请及时换新。(F20)

- (1) 滤网
- (2) 燃料容器

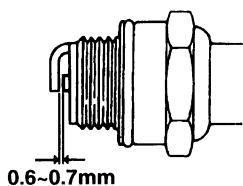
### IMPORTANT

A clogged fuel filter may cause poor acceleration of the engine.

### 重 要

燃料过滤器因附污过多而不畅通时，会导致引擎转速难以上升或转速不稳定。

F21



### ■ SPARK PLUG

Remove and inspect the spark plug and clean the electrodes as necessary with brush.

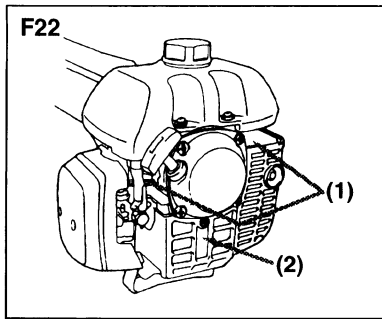
The spark gap should be adjusted to 0.6 ~ 0.7mm. (F21)

When replacing spark plug, use only products which have been designated by KOMATSU ZENOAH.

### ■ 火星塞

要将火星塞卸下，然后用钢丝刷清除电极上附着的污垢。

电极的间隙以 0.6 ~ 0.7mm 为妥。更换火星塞时请使用指定产品。



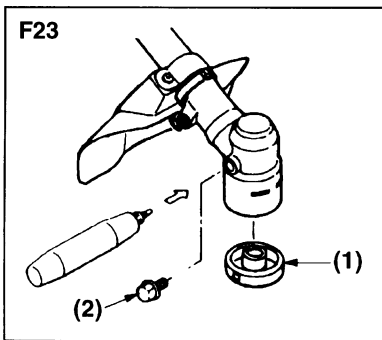
### ■ INTAKE AIR COOLING VENT

- Check the intake air cooling vent and the area around the cylinder cooling fins, and remove any waste which has attached itself to the brushcutter. (F22)

- (1) Intake air cooling vent (back)  
(2) Cylinder fin

### IMPORTANT

- Note that failing to do so could cause the muffler to become overheated, and that this in turn could cause the brushcutter to catch on fire.



### ■ GEAR CASE

Supply multi-purpose grease at every 25 hours of use.

Remove the cutter holders to arrange for old grease to exit. (F23)

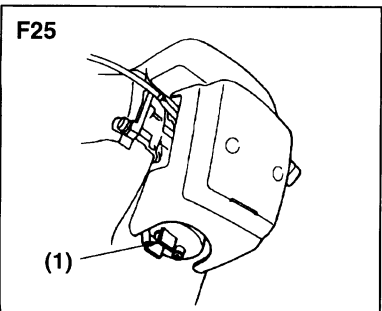
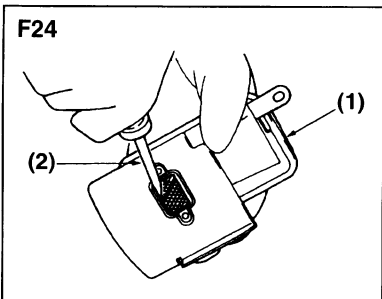
- (1) Inner holder  
(2) Plug

### AFTER 100 HOURS OF USE

### ■ MUFFLER

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 at the same time. (F24)

- (1) Muffler  
(2) Screw driver



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.

4. Remove the float cabin of the carburetor and clean the inside. (F25)

- (1) Float cabin

### ■ 冷却用空气通道

- 要检查冷却用空气进气口和气缸散热片周围，清除附在上面的污垢。顶罩按图所示，先将固定螺钉取下，然后向着箭头方向滑动着向上拿起。(F22)

- (1) 冷却用空气通道(背面)  
(2) 气缸片

### 重 要

- 冷却用空气进气口和气缸散热片中间积尘过多会导致引擎过热，成为故障的原因。

### ■ 齿轮箱

每使用约25小时后，要补充齿轮箱内部的润滑油。

补充时，按左图所示将刀片、刀承金属槽以及齿轮箱旁边的插件卸下，然后从插件孔向里注入黄油。(F23)

- (1) 内托  
(2) 插头

### 每使用 100 小时后的检修

### ■ 消音器

1. 将消音器拆下，再用螺丝刀将附着在排气口的碳捅掉。同时，也请将消音器出口处的碳一起去除。(F24)

- (1) 消音器  
(2) 螺丝刀

2. 加紧各紧固部位。

3. 检查离合器的衬里和滚筒之间有没有沾上油污，如沾上了的话，请用未混有油的无铅汽油擦拭干净。

4. 请卸下化油气的浮子室，清扫内部。(F25)

- (1) 浮子室

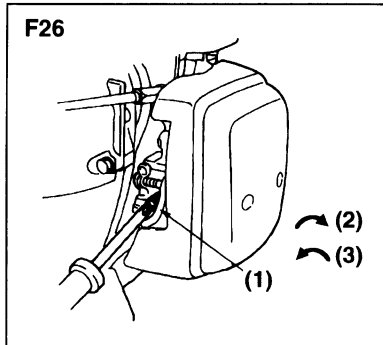
### ■ ADJUSTING CARBURETOR

#### IMPORTANT

A wrong adjustment may cause damage to your unit. If the engine does not run well after adjusting the carburetor, please contact the shop where you purchased the product.

### ■ IDLE ADJUSTMENT SCREW (F26)

This is the screw to adjust the engine rotation when the throttle lever is set to the lowest speed position. If you turn right (clockwise), rotation increases, and left (counterclockwise) decreases. In case the blade continues to rotate or engine stops when you return the throttle lever completely to the original position, make readjustment.



- (1) Idle adjustment screw  
(2) High  
(3) Low

### ■ MAINTENACE BEFORE STORAGE

1. Brushing off dirt form the machine, check damage or slack of each part. If you find out abnormalities, repair them for the next use.
2. Extract fuel from the tank, and loose the drain screw of the float cabin to extract fuel, turn on the engine, and leave it running until it stops naturally.
3. Remove the spark plug and put in 1~2 cc of 2-cycle oil in the engine. Draw the starter rope 2~3 times, set the plug back, and stop it at the contraction position.
4. Apply anti-rust oil to the metal parts such as the throttle wire, put the cover on the blade, and keep it indoor avoiding dampness.

### ■引擎的调整

#### 重 要

化油器的调整失误会成为燃料消耗过快、加速失灵、引擎过热等问题的原因。尽管频繁地进行日常检修，但引擎的运转状态仍然不正常时，请到购买本品的销售店询问。

### ■怠速调整螺钉(F26)

这是用来调整将加油柄扳至「启动速度」位置时引擎转数的螺钉(螺杆)。向右(顺时针方向)拧时转速便会上升，向左(逆时针方向)拧转速便会下降。如将加油柄扳至「启动速度」位置时，刀片转动不停或引擎停止转动时，可再次调整。

- (1)怠速调整螺钉  
(2)高  
(3)低

### ■长期存放之前的检修

1. 清洁机体的脏污，同时检查各部位有无损伤或松动等。发现有异常处所时，应该彻底维修调整以备下次使用。
2. 将燃料箱里的燃料全部倒出，并放松化油器的浮子室的排出螺钉而倒出燃料后，要开动引擎，直到其自然灭火为止。
3. 将火星塞取下后，向引擎内注入1~2cc的二冲程机油。将发动机的拉绳抽拉两三次后，再将火星塞重新安上，使其固定于压缩位置上。
4. 对加油线等金属部分涂抹防锈油，最后安上刀片护罩后，存放于室内无湿气处。

## 9. SPECIFICATIONS

English

Name/Type		ZENOAH Brushcutter	
		BC3401FW	BC4301FW
Handle Type		Both Hands	
Machine Weight (*1)	kg	7.1	7.4
Outward Size (*2)	Total Length	mm 1800	
	Total Width	mm 610	
	Total Height	mm 420	
Applied Blade		4-teeth blade, 8-teeth blade, bamboo blade, round saw blade, chip saw, more unit, nylon cutter	
Power Transmission Method		Automatic centrifugal clutch, spiral gear	
Reduction Rate		1.235 (17 : 21)	
Blade Rotating Direction		Counterclockwise (from operator' s view)	
Engine	Type	Single cylinder air cooling 2-cycle gasoline engine	
	Displacement Volume	cc 33.6	41.5
	Fuel Tank Capacity	ℓ 0.8	
	Fuel Used	Lubricating oil mixed gasoline [mixing rate 40:1 (when using ZENOAH' s special oil) or 25:1 (when using market oil)]	
	Lubricating Oil Used	2-cycle engine oil	
	Carburetor	float, piston valve	
	Sparking Method	IC-controlled fly wheel magnet	
	Spark Plug	Champion CJ-6Y	
	Starting Method	Recoil starter	
Stopping Method		Sparking Circuit Primary Short (push button)	

(\*1) excluding blade, shawl band and fuel (\*2) when 255mm 8 teeth blade equipped

Please note that due to improvement, detailed specifications of the product may differ from the information herein.

中文

## 9. 产品规格

名称·型号		小松割草机	
		BC3401FW	BC4301FW
手把型号		双把	
机体重量(*1)	kg	7.1	7.4
外形尺寸(*2)	长	mm 1800	
	宽	mm 610	
	高	mm 420	
使用刀片		四片刃、八片刃、割竹刀片、圆锯刀片、切片锯、组合刀片、尼龙刀片 (详细请参照本文八页)	
动力传输方式		自动离心离合器、螺旋锥齿轮	
减速比		1.235 (17:21)	
刀片旋转方向		逆时针方向 (从作业者看来)	
引擎	型号	二冲程气冷式单缸汽油引擎	
	排气量	cc 33.6	41.5
	燃料箱容量	ℓ 0.8	
	使用燃料	润滑油混合汽油 [混合比 40:1 (使用 ZENOAH 正牌油) 或 25:1 (使用市面上销售的油)]	
	使用润滑油	二冲程引擎专用油	
	化油器	浮子活瓣式	
	点火方式	IC 控制飞轮永磁发电机式	
	火星塞	冠军 CJ-6Y	
	启动方式	反冲启动式	
停止方式		点火电路初级侧短路式 (按钮)	

(※1) 刀刃、背带、燃料除外 (※2) 装有 255mm 八片刃时  
商品的某些规格因改良与本说明书的记载略有出入时请予谅解。



*Working for a better tomorrow*

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