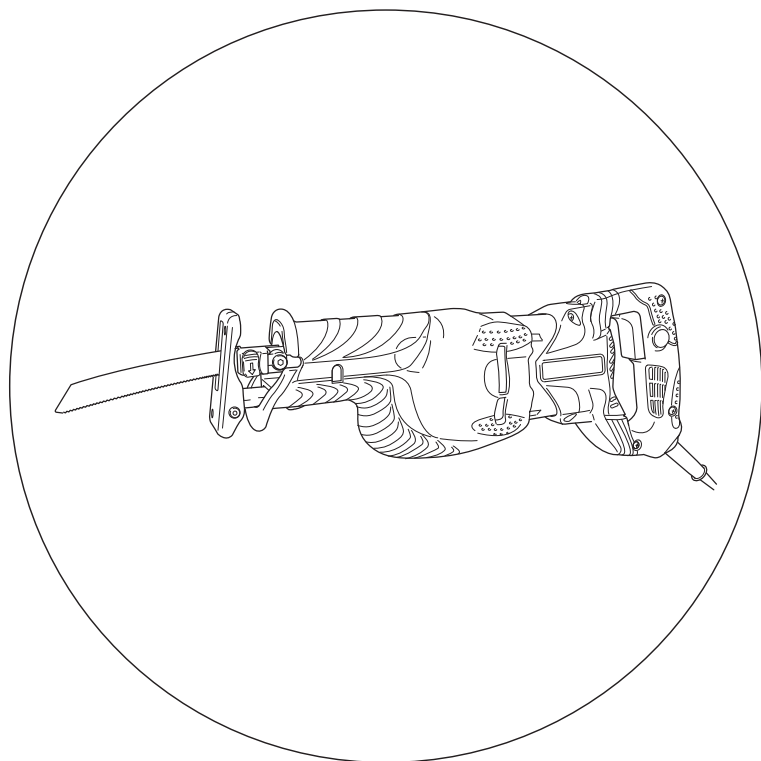


# HIKOKI

电动往复锯  
Reciprocating Saw

## CR 13V2

中文  
English



保留备用  
Keep for future reference



使用说明书  
Handling instructions



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## 电动工具通用安全警告

### ⚠ 警告！

阅读所有警告和所有说明。

不遵照以下警告和说明会导致电击、着火和 / 或严重伤害。

保存所有警告和说明书以备查阅。

在所有下列的警告中术语“电动工具”指市电驱动（有线）电动工具或电池驱动（无线）电动工具。

#### 1) 工作场地的安全

- a) 保持工作场地清洁和明亮。  
混乱和黑暗的场地会引发事故。
- b) 不要在易爆环境，如有易燃液体、气体或粉尘的环境下操作电动工具。  
电动工具产生的火花会点燃粉尘或气体。
- c) 让儿童和旁观者离开后操作电动工具。  
注意力不集中会使操作者失去对工具的控制。

#### 2) 电气安全

- a) 电动工具插头必须与插座相配。绝不能以任何方式改装插头。需接地的电动工具不能使用任何转换插头。  
未经改装的插头和相配的插座将减少电击危险。
- b) 避免人体接触接地表面，如管道、散热片和冰箱。  
如果你身体接地会增加电击危险。
- c) 不得将电动工具暴露在雨中或潮湿环境中。  
水进入电动工具将增加电击危险。
- d) 不得滥用电线。绝不能用电线搬运、拉动电动工具或拔出其插头。使电线远离热源、油、锐边或运动部件。  
受损或缠绕的软线会增加电击危险。
- e) 当在户外使用电动工具时，使用适合户外使用的外接软线。  
适合户外使用的软线将减少电击危险。

- f) 如果在潮湿环境下操作电动工具是不可避免的，应使用剩余电流动作保护器（RCD）。  
使用RCD可减小电击危险。

### 3) 人身安全

- a) 保持警觉，当操作电动工具时关注所从事的操作并保持清醒。当你感到疲倦，或在有药物、酒精或治疗反应时，不要操作电动工具。  
在操作电动工具时瞬间的疏忽会导致严重人身伤害。
- b) 使用个人防护装置。始终佩戴护目镜。  
安全装置，诸如适当条件下使用防尘面具、防滑安全鞋、安全帽、听力防护等装置能减少人身伤害。
- c) 防止意外起动。确保开关在连接电源和 / 或电池盒、拿起或搬运工具时处于关断位置。  
手指放在已接通电源的开关上或开关处于接通时插入插头可能会导致危险。
- d) 在电动工具接通之前，拿掉所有调节钥匙或扳手。  
遗留在电动工具旋转零件上的扳手或钥匙会导致人身伤害。
- e) 手不要伸展得太长。时刻注意立足点和身体平衡。  
这样在意外情况下能很好地控制电动工具。
- f) 着装适当。不要穿宽松衣服或佩戴饰品。让衣服、手套和头发远离运动部件。  
宽松衣服、佩饰或长发可能会卷入运动部件中。
- g) 如果提供了与排屑、集尘设备连接用的装置，要确保它们连接完好且使用得当。  
使用这些装置可减少尘屑引起的危险。

### 4) 电动工具使用和注意事项

- a) 不要滥用电动工具，根据用途使用适当的电动工具。  
选用适当设计的电动工具会使你工作更有效、更安全。
- b) 如果开关不能接通或关断工具电源，则不能使用该电动工具。  
不能用开关来控制的电动工具是危险的且必须进行修理。
- c) 在进行任何调节、更换附件或贮存电动工具之前，必须从电源上拔掉插头和 / 或使电池盒与工具脱开。  
这种防护性措施将减少工具意外起动的危险。
- d) 将闲置不用的电动工具贮存在儿童所及范围之外，并且不要让不熟悉电动工具或对这些说明不了解的人操作电动工具。  
电动工具在未经培训的用户手中是危险的。
- e) 保养电动工具。检查运动件是否调整到位或卡住，检查零件破损情况和影响电动工具运行的其他状况。如有损坏，电动工具应在使用前修理好。  
许多事故由维护不良的电动工具引发。

## 中文

- f) 保持切削刀具锋利和清洁。

保养良好的有锋利切削刃的刀具不易卡住而且容易控制。

- g) 按照使用说明书，考虑作业条件和进行的作业来使用电动工具、附件和工具的刀头等。

将电动工具用于那些与其用途不符的操作可能会导致危险。

### 5) 维修

- a) 将你的电动工具送交专业维修人员，使用同样的备件进行修理。

这样将确保所维修的电动工具的安全性。

## 注意！

不可让儿童和体弱人士靠近工作场所。

应将不使用的工具存放在儿童和体弱人士接触不到的地方。

## 使用电动往复锯之前的注意事项

1. 在切削附件可能触及暗线或其自身软线之处进行操作时，要通过绝缘握持面来握持工具。切削附件碰到带电导线会使工具外露的金属零件带电从而使操作者受到电击。
2. 在锯进墙壁、天花板或地板之前，请确认内部是否有电线或管道之类的东西。

## 符号

### 警告！

如下所示的符号用于本机。使用前请务必理解其含意。






为降低伤害风险，用户必须阅读使用说明书

## 规格

电压	220 V ~
输入功率	1010 W
切锯能力	软钢管： 外径 130 mm 聚氯乙烯管： 外径 130 mm 木材： 厚度 120 mm 软钢板： 厚度 19 mm
空载转速	0 – 2800 /min
行程	29 mm
重量（不含线缆）	3.3 kg

## 标准附件

除了主机（1 台）外，产品包中还包括表中所列的附件。

刀刃（341 号）		1
盒子		1
六角杆扳手		1

## 选购附件（分开销售）

- |           |              |                   |
|-----------|--------------|-------------------|
| (1) 1 号刀刃 | (8) 95 号刀刃   | (15) 106 号刀刃      |
| (2) 2 号刀刃 | (9) 96 号刀刃   | (16) 107 号刀刃      |
| (3) 3 号刀刃 | (10) 101 号刀刃 | (17) 108 号刀刃      |
| (4) 4 号刀刃 | (11) 102 号刀刃 | (18) 121 号刀刃      |
| (5) 5 号刀刃 | (12) 103 号刀刃 | (19) 131 号刀刃      |
| (6) 8 号刀刃 | (13) 104 号刀刃 | (20) 132 号刀刃      |
| (7) 9 号刀刃 | (14) 105 号刀刃 | (21) 用于切锯管子的切锯导向器 |

○ (1) - (9) : HCS 刀刃 (HCS: 高速碳钢)

○ (10) - (20) : BI-METAL 刀刃

使用刀刃时，请参照第 11-12 页的表 1，表 2，表 3 和表 4。

## 用途

- 管子和角钢的切锯。
- 各种木材的切锯。
- 软钢板、铝板及铜板的切锯。
- 苯酚树脂、聚氯乙烯等合成树脂的切锯。

详细内容，请参照第 11 页“刀刃的选择”一节的内容。

## 作业之前

### 1. 电源

确认所使用的电源与工具铭牌上标示的规格是否相符。

### 2. 电源开关

确认电源开关是否切断。若电源开关接通，则插头插入电源插座时电动工具将出其不意地立刻转动，从而招致严重事故。

# 中文

## 3. 延伸线缆

若作业场所移到离开电源的地点，应使用容量足够、铠装合适的延伸线缆，并且要尽可能地短些。

## 4. 操作时产生的灰尘

正常操作时产生的灰尘可能会影响操作员的身体健康。推荐戴上防尘面罩。

## 5. 安装锯条

该工具采用了不使用扳钳或其他工具便可装卸锯条的可装卸式装置。

- (1) 打开、关闭开关按钮数次以致手柄从前盖完全弹出。然后，松开扳机并拔出电源插头。(图 1)

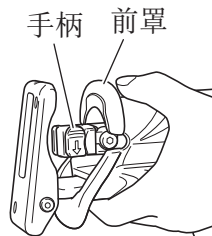


图 1

## 注意！

请务必关闭开关并拔下电源插头，以防止发生意外事故。

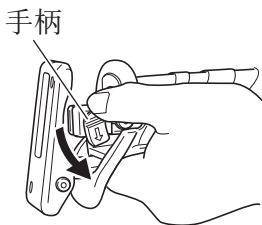


图 2

- (2) 如图 2 所示，按手柄上标示的箭头标记的方向推动手柄。(图 2)

- (3) 推压着手柄，将刀刃完全插入柱塞端部的缝隙中。可朝上或朝下安装此刀刃。(图 3，图 4)

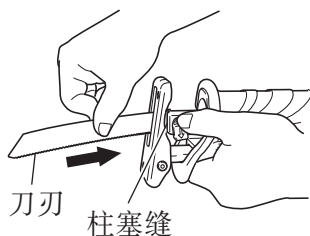
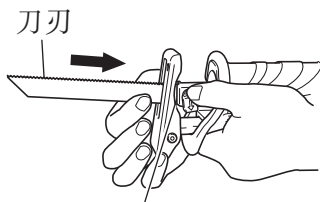


图 3

- (4) 松开手柄时，弹簧的弹力会使手柄自动返回正确的位置。(图 5)

- (5) 用手试着拉刀刃背两三次，以确认刀刃已安装牢固。拉刀刃背时，若它发出咯嗒声并手柄稍位移则说明已正确安装。(图 6)



柱塞缝

图 4

## 注意！

当拉动锯条时务必从后侧拉动，拉动锯条的其他部分将造成人身伤害。

## 6. 卸下锯条

- (1) 打开、关闭开关按钮数次以致手柄从前盖完全弹出。然后，松开扳机并拔出电源插头。(图 1)

## 注意！

请务必关闭开关并拔下电源插头，以防止发生意外事故。

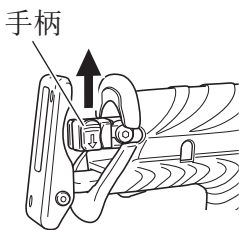


图 5

- (2) 按照图 2 中箭头所示的方向按下手柄后，将锯条转至面朝下，锯条应自然落下，若未自然落下请用手将其拔出。

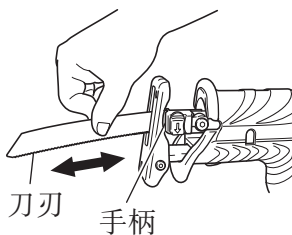


图 6

**注意！**

切勿用手触摸刚刚使用过的锯条，否则，灼热的金属极易烫伤您的皮肤。

**当锯条损坏时**

即使当刀刃破损并残留在柱塞的小缝隙内时，若按箭头标记的方向推动手柄并使刀刃朝下，它仍会自行掉下。若未自行掉下，请按下述步骤将它取出。

- (1) 损坏的锯条的某部分粘在了插条的小插槽中，拔出插条并将锯条拔出。
- (2) 若损坏的锯条藏在小插槽内部，请用锯条的尖部将其钩住并取出。(图 7)

**电锯的维护和检查**

- (1) 使用后，请用气刷或刷子清除掉锯条上的灰尘、泥土、尘沙或潮气等，以确保锯条的工作顺畅。
- (2) 如图 8 所示，定期使用切锯液等在刀刃周围涂上润滑油。

**注：**

若在不乾淨或未润滑刀刃的状态下使用工具，手柄的功能可能因积尘和碎屑而变得重滞。在这种情况下，按图 9 所示的箭头标记方向拉动安装在手柄上的橡皮盖，并将其从手柄上取下。然后，使用气刷或类似工具清洁刀刃座内部，并涂上适量的润滑油。

朝手柄用力按压橡皮盖可将其安装上。此时请确定刀刃座与橡皮盖之间没有缝隙，并确保所安装的刀刃工作正常。

**注意！**

请勿使用带有磨损刀刃孔的刀刃。否则，刀刃可能会掉下，导致人员受伤。(图 10)

**7. 调整底座**

- (1) 按图 11 所示方法抬起前罩。

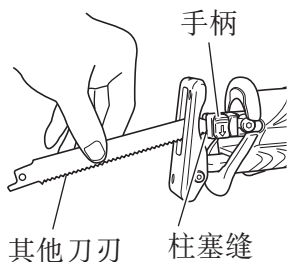


图 7

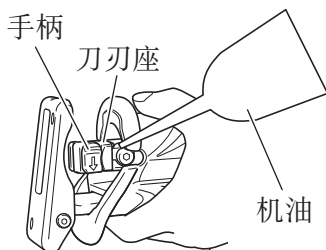


图 8

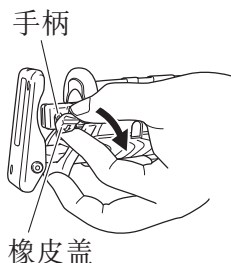


图 9

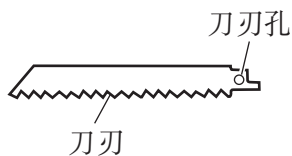


图 10

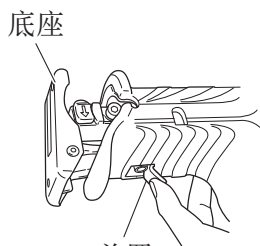


图 11

## 中文

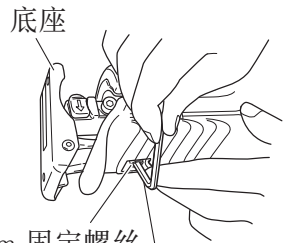
- (2) 若用附备的六角杆扳手松开底座设定螺丝，便可调整底座安装位置。(图 12, 13)
  - (3) 调整底座安装位置后，请用附备的六角杆扳手完全旋紧螺丝。
8. 调整刀刃往复速度

本往复锯带有内置的电子控制电路，可通过扣下扳机来调整刀刃的各种速度。(图 14)

若用力扣下扳机，刀刃速度提高。以低速开始切锯，可保证预定切锯位置的正确性。可在获得适当的切锯深度之后，再提高切锯速度。

### 注意！

虽然本电动往复锯采用强力马达，但长时间低速切锯将使负荷异常增加而可能导致过热。请避免在切锯作业中突然停机等错误操作，正确调整刀刃的往复速度以确保稳定、顺畅的切锯作业。



12 mm 固定螺丝  
六角杆扳手  
图 12

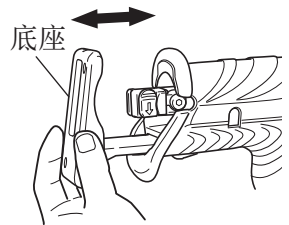


图 13

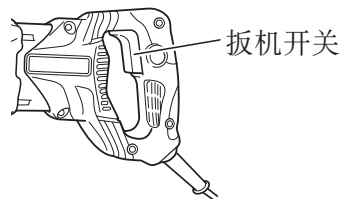


图 14

## 使用方法

### 注意！

- 请勿在未拔下电源插头及手指扣住扳机的状态下携带本电动往复锯。否则因突然起而造成人身伤害。
- 在作业中请小心勿使锯屑、灰尘、水等通过柱塞部份进入机内。若锯屑等积于柱塞部份，请务必在使用前加以清除。
- 请勿拆下前罩。(参照第 6 页的图 1)  
请务必通过前罩上部拿起机身。
- 在使用时，在切锯作业中请将底座压在材料上面。  
若未将底座紧紧压在工件上，振动会导致刀刃损坏。  
因此，有时刀刃端会接触管内壁，导致刀刃损坏。



- 请选择长度最适当的刀刃。理论上，减去行程量后从刀刃座突出的刀刃长度应大于材料。（参照图 15 和图 16）

若切锯超过刀刃切锯能力的大工件、大木块等，刀刃可能会接触到管内壁和木料等，从而发生危险。（参照图 17 和图 18）

### 1. 切锯金属材料

#### 注意！

- 将底座紧紧按在工件之上。
- 切锯时请勿给刀刃施加异常力量。否则很容易损坏刀刃。

(1) 在作业前牢牢固定工件。（图 19）

(2) 在切锯金属材料时，请使用适当的机油（涡轮油等）。未使用液体机油时，请给工件涂上润滑油。

#### 注意！

若未使用机油，刀刃的使用寿命会大幅缩短。

### 2. 切锯木料

切锯木料时，在开始操作前务必先牢牢固定工件。（图 20）

#### 注意！

切锯时请勿给刀刃施加异常力量。同时，请将底座紧紧压在木料上。

### 3. 切锯曲线

建议使用第 12 页的表 2 中的 BI-METAL 刀刃，因为这种刀刃坚韧耐用。

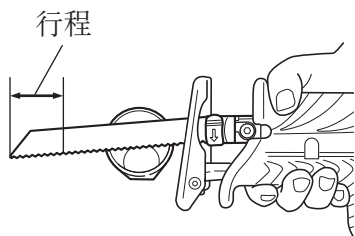


图 15

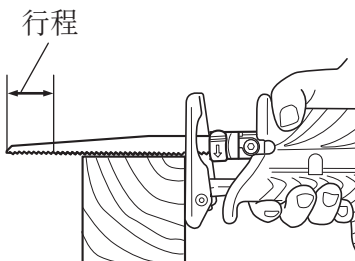


图 16

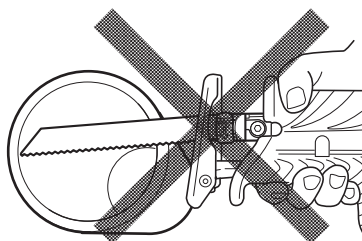


图 17

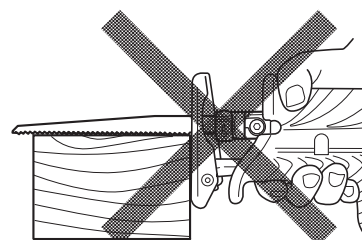


图 18

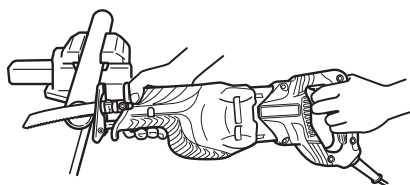


图 19

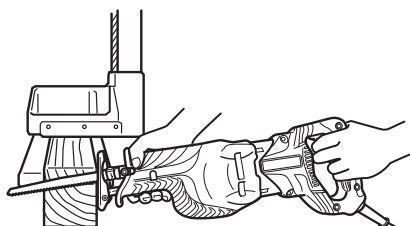


图 20

## 注意！

将材料切割成小圆弧时须降低进料速度，速度过快可能会损坏刀刃。

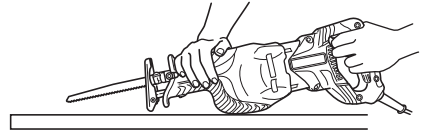


图 21

### 4. 插入切锯

使用本电动往复锯，可在木合板和薄板材料上进行插入切锯。如图 22、图 24、和图 26 所示，颠倒安装刀刃，可相当轻松地进行袋形切锯。请尽量使用短而薄的刀刃。为此，建议使用第 12 页的表 2 中列出的 BI-METAL 刀刃号码 132 号。在切锯作业中请务必小心操作并遵守以下步骤。

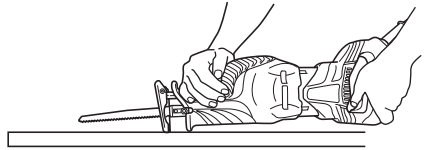


图 22

(1) 请将底座的下部（或上部）压在切锯材料上，使刀刃前端脱离切锯材料并扣扳机。（图 21，图 22）

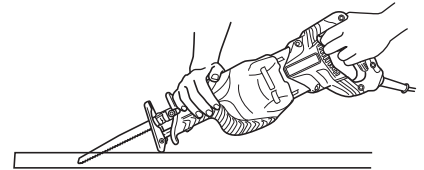


图 23

(2) 慢慢抬起把手并用刀刃一点一点地切入。（图 23，图 24）

(3) 紧紧抓住机身，直至刀刃完全切入材料。（图 25，图 26）

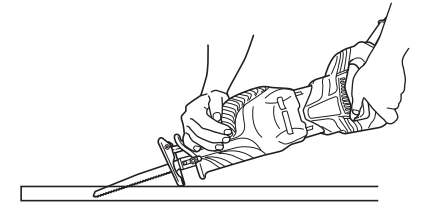


图 24

## 注意！

- 避免对金属材料进行切锯，否则很容易损坏刀刃。
- 在刀刃前端压在切锯材料上时切勿扣扳机。否则，当刀刃接触材料时很容易被损坏。
- 务必紧紧抓住机身缓慢地进行切锯。在切锯作业中若对刀刃异常用力，则很容易损坏刀刃。

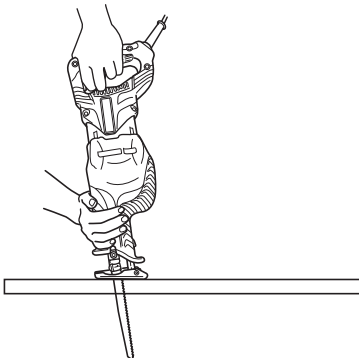


图 25

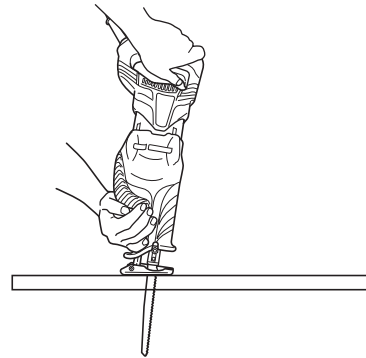


图 26

## 5. 切锯管子用的切锯导向器（选购件）

产品	切锯范围	使用刀刃	编码
切锯导向器 (L)	外径 75—165 mm	9 号 131 号	330852

注：

有关切锯导向器的详细使用方克请参照切锯导向器使用说明书。

## 刀刃的选择

为了确保最大工作效率和效果，必须选择种类和厚度最适合切锯材料的刀刃。

注：

表中所示的工件尺寸，表示将底座设置于最靠近电动往复锯安装位置时的尺寸。须注意，若将底座安装在远离电动往复锯处，则工件尺寸将变小。

## 1. HCS 刀刃的选择

表 1 中 HCS 刀刃的刀刃号码标示于各刀刃的安装位置附近。请参照下面表 1 和第 12 页的表 4 来选择适当的刀刃。

表 1：HCS 刀刃

刀刃号码	用途	厚度 (mm)
1 号	切锯直径小于 105 mm 的钢管	2.5 — 6
2 号	切锯直径小于 30 mm 的钢管	2.5 — 6
3 号	切锯直径小于 30 mm 的钢管	3.5 以下
4 号	切锯和磨毛木料	50 — 70
5 号	切锯和磨毛木料	30 以下
8 号	切锯直径小于 130 mm 的聚氯乙烯管	2.5 — 15
	切锯和磨毛木料	105 以下
9 号	在使用切锯导向器的情况下，用于切锯直径小于 130 mm 的软钢管	2.5 — 6
95 号	切锯直径小于 105 mm 的不锈钢管	2.5 以下
96 号	切锯直径小于 30 mm 的不锈钢管	2.5 以下

注：

1 号—96 号 HCS 刀刃为另售件。

# 中文

## 2. BI-METAL 刀刃的选择

表 2 中的 BI-METAL 刀刃号码表示特殊套装附件。请参照下面表 2 和表 4 选择适当的刀刃。

表 2 : BI-METAL 刀刃

刀刃号码	用途	厚度 (mm)
101 号	切锯外径小于 60 mm 的钢管和不锈钢管	2.5 - 6
102 号	切锯外径小于 130 mm 的钢管和不锈钢管	2.5 - 6
103 号	切锯外径小于 60 mm 的钢管和不锈钢管	2.5 - 6
104 号	切锯外径小于 130 mm 的钢管和不锈钢管	2.5 - 6
105 号	切锯外径小于 60 mm 的钢管和不锈钢管	2.5 - 6
106 号	切锯外径小于 130 mm 的钢管和不锈钢管	2.5 - 6
107 号	切锯外径小于 60 mm 的钢管和不锈钢管	3.5 以下
108 号	切锯外径小于 130 mm 的钢管和不锈钢管	3.5 以下
121 号	切锯和磨毛木料	120
131 号	所有目的	-
132 号	所有目的	-

注：

101 号至 132 号 BI-METAL 刀刃为另售件。

表 3 : 弧形刀刃

刀刃号码	用途	厚度 (mm)
341 号	切锯外径小于 60mm 的钢管和不锈钢管	2.5 - 6

## 3. 选择用于其他材料的刀刃

表 4

切锯材料	材料性质	厚度 (mm)	刀刃号码
铁板	软钢板	2.5 - 19	1、2、101、102、103、104、105、106、131、132 号
		3.5 以下	3、107、108 号
有色金属	铝、铜和青铜	5 - 20	1、2、101、102、103、104、105、106、131、132 号
		5 以下	3、107、108 号
合成树脂	苯酚树脂、蜜胺 甲醛树脂等	10 - 50	1、2、4、101、102、103、104、131、132 号
		5 - 30	3、5、8、105、106、107、108 号
	聚氯乙烯树脂、 丙烯酸树脂等	10 - 60	1、2、4、101、102、103、104、131、132 号
		5 - 30	3、5、8、105、106、107、108 号

## 维护和检查

### 1. 检查刀刃

如继续使用已钝了的或已损坏了的刀刃，会降低工作效率并可能会引起马达超负荷。因此，一旦注意到刀刃磨损，请立即用新刀刃更换之。

### 2. 检查安装螺丝

定期检查所有的安装螺丝并确保它们均被正常拧紧。若有某些螺丝松弛，请立即将其拧紧。否则，会导致发生重大危险。

### 3. 马达的保养

马达装置线圈是电动工具的“心脏”。

须特别注意，确保线圈不受损和（或）被油或水浸湿。

### 4. 检查炭刷（图 27）

马达使用炭刷这种消耗品。因过度磨损的炭刷会导致马达发生故障，因此，当炭刷磨损或接近“磨损极限”时，请换上新的炭刷。此外，请始终保持炭刷的清洁，并确保它能在炭刷盒里自由滑动。

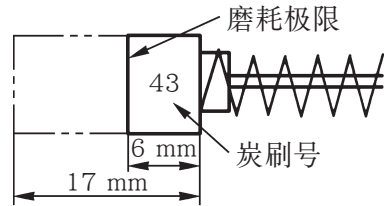


图 27

### 5. 更换炭刷

用一字形头螺丝刀拆卸刷盖、炭刷就可简单地取下。

### 6. 维修零部件一览表

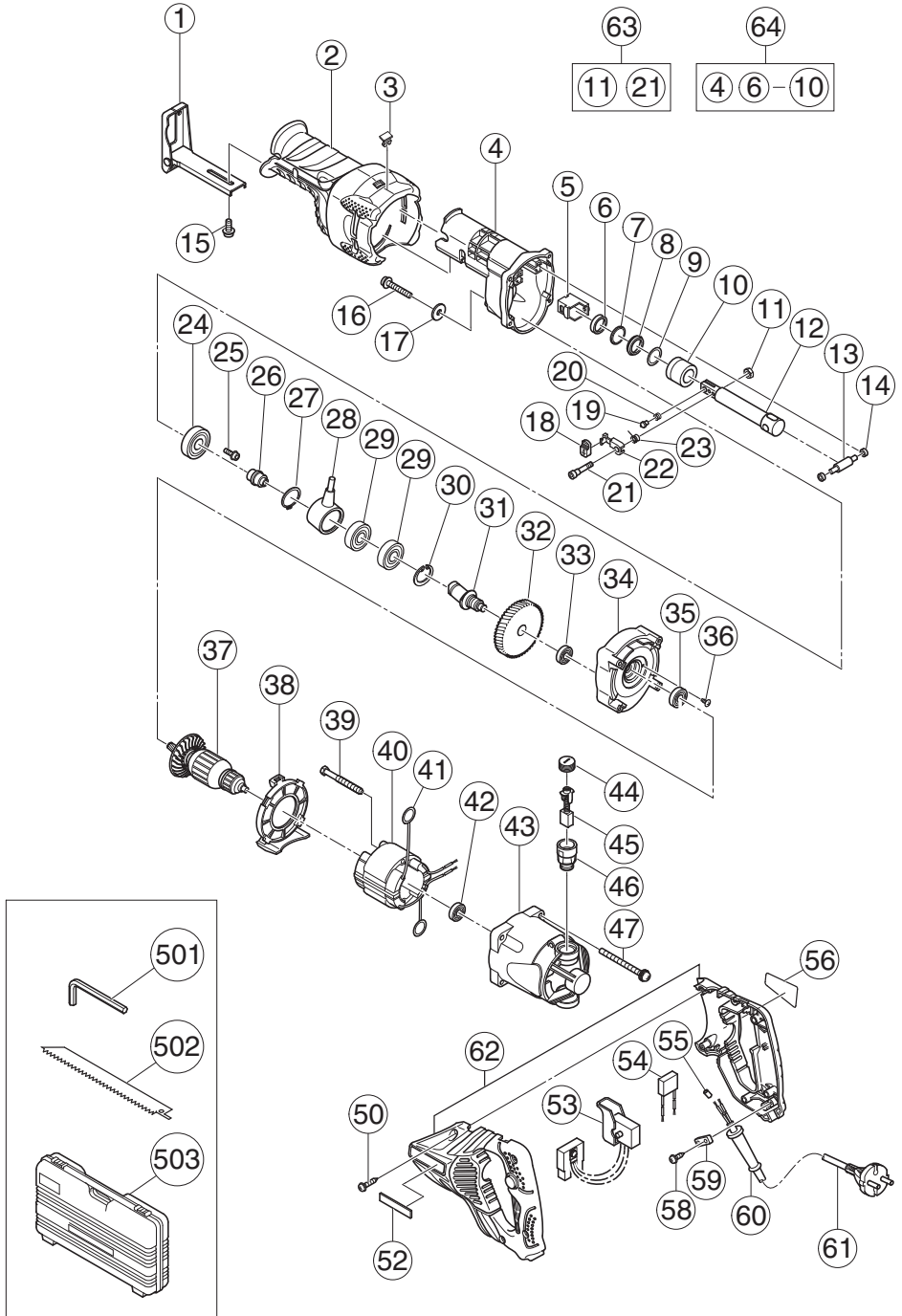
## 注意！

HiKOKI牌电动工具的维修、改造和检查须由经HiKOKI公司授权的维修中心进行。

当要求维修或其他保养服务时，若将此零部件一览表与电动工具一起呈交给经HiKOKI公司授权的维修中心，将有助于维修或保养工作。

在操作和维修电动工具时，必须遵守贵国制定的安全的有关规则和标准。

# 维修零部件一览表



项目号	零件名称	数量
1	底座 (F)	1
2	前盖 (F)	1
3	盖罩销	1
4	齿轮盖 (F)	1
5	刀刃座 (C)	1
6	毛毡垫圈	1
7	垫圈 (H)	1
8	V 型环	1
9	O 型环	1
10	金属 (B)	1
11	锁定螺母 M5	1
12	柱塞 (F)	1
13	连接器销 (F)	1
14	摆动滚子	2
15	尼龙锁紧螺栓 (附法兰) M5×12	1
16	尼龙锁紧螺栓 (附法兰) M6×35	1
17	垫圈 (G)	1
18	盖	1
19	固定器销 (B)	1
20	弹簧 (B)	1
21	专用螺栓 M5	1
22	手柄 (C)	1
23	刀刃弹簧	1
24	滚珠轴承 6002DDCMPS2L	1
25	尼龙锁紧螺栓 (附法兰) M4×12	3
26	副轴 (B)	1
27	供 D17 轴使用的扣环	1
28	往复板 (F)	1
29	滚珠轴承 6003VVCMP2L	2
30	供 D35 孔使用的扣环	1
31	第二轴 (F)	1
32	齿轮	1

项目号	零件名称	数量
33	滚珠轴承 608VVC2PS2L	1
34	内盖 (F)	1
35	滚珠轴承 6001VVCMP2L	1
36	槽头螺丝 (密封) M4×10	2
37	电枢	1
38	风扇导架 (F)	1
39	六角自攻螺丝 D5×55	2
40	定子组件	1
41	刷端	2
42	滚珠轴承 608VVC2PS2L	1
43	外罩	1
44	刷盖	2
45	炭刷 (一对)	2
46	刷架	2
47	机用螺丝 (附垫圈) M5×60	4
50	自攻螺丝 (附法兰) D4×25	5
52	品牌标签	1
53	开关	1
54	噪声抑制器	1
55	管 (D)	2
56	铭牌	1
58	自攻螺丝 (附法兰) D4×16	2
59	线夹	1
60	线保护壳	1
61	电线	1
62	把手 (G), (H) 组	1
63	专用螺栓 M5 组	1
64	齿轮盖总成	1
501	六角杆扳手 4MM	1
502	马刀锯	1
503	盒子	1

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## GENERAL POWER TOOL SAFETY WARNINGS

### WARNING

**Read all safety warnings and all instructions.**

*Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.*

**Save all warnings and instructions for future reference.**

*The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.*

- 1) **Work area safety**
  - a) **Keep work area clean and well lit.**  
*Cluttered or dark areas invite accidents.*
  - b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.**  
*Power tools create sparks which may ignite the dust or fumes.*
  - c) **Keep children and bystanders away while operating a power tool.**  
*Distractions can cause you to lose control.*
- 2) **Electrical safety**
  - a) **Power tool plugs must match the outlet.**  
**Never modify the plug in any way.**  
**Do not use any adapter plugs with earthed (grounded) power tools.**  
*Unmodified plugs and matching outlets will reduce risk of electric shock.*
  - b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.**  
*There is an increased risk of electric shock if your body is earthed or grounded.*
  - c) **Do not expose power tools to rain or wet conditions.**  
*Water entering a power tool will increase the risk of electric shock.*



- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool.**  
**Keep cord away from heat, oil, sharp edges or moving parts.**  
*Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.**  
*Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.**  
*Use of an RCD reduces the risk of electric shock.*

### 3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool.**  
**Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.**  
*A moment of inattention while operating power tools may result in serious personal injury.*
- b) **Use personal protective equipment. Always wear eye protection.**  
*Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack, picking up or carrying the tool.**  
*Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the power tool on.**  
*A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
- e) **Do not overreach. Keep proper footing and balance at all times.**  
*This enables better control of the power tool in unexpected situations.*
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.**  
*Loose clothes, jewellery or long hair can be caught in moving parts.*
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.**  
*Use of dust collection can reduce dust-related hazards.*

### 4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.**  
*The correct power tool will do the job better and safer at the rate for which it was designed.*
- b) **Do not use the power tool if the switch does not turn it on and off.**  
*Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

## English

- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.**

*Such preventive safety measures reduce the risk of starting the power tool accidentally.*

- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.**

*Power tools are dangerous in the hands of untrained users.*

- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation.**

**If damaged, have the power tool repaired before use.**

*Many accidents are caused by poorly maintained power tools.*

- f) **Keep cutting tools sharp and clean.**

*Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

- g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.**

*Use of the power tool for operations different from those intended could result in a hazardous situation.*

### 5) Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.**

*This will ensure that the safety of the power tool is maintained.*

## CAUTION

Keep children and infirm persons away.

When not in use, tools should be stored out of reach of children and infirm persons.

## PRECAUTIONS ON USING RECIPROCATING SAW

1. **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.**
2. **Prior to cutting into walls, ceilings or floors, ensure there are no electric cables or conduits inside.**

## SYMBOL

### WARNING

The following show symbols used for the machine. Be sure that you understand their meaning before use.



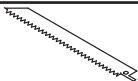
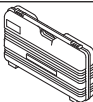

To reduce the risk of injury, user must read instruction manual.

## SPECIFICATIONS

Voltage	220 V ~
Power Input	1010 W
Capacity	Mild Steel Pipe: O.D. 130 mm Vinyl Chloride Pipe: O.D. 130 mm Wood: Depth 120 mm Mild Steel Plate: Thickness 19 mm
No-Load Speed	0 – 2800 /min
Stroke	29 mm
Weight (without cord)	3.3 kg

## STANDARD ACCESSORIES

In addition to the main unit (1 unit), the package contains the accessories listed in the below.

Blade (No. 341)		1
Case		1
Hexagonal bar wrench		1

## OPTIONAL ACCESSORIES (sold separately)

- |                 |                    |                             |
|-----------------|--------------------|-----------------------------|
| (1) No. 1 Blade | (8) No. 95 Blade   | (15) No. 106 Blade          |
| (2) No. 2 Blade | (9) No. 96 Blade   | (16) No. 107 Blade          |
| (3) No. 3 Blade | (10) No. 101 Blade | (17) No. 108 Blade          |
| (4) No. 4 Blade | (11) No. 102 Blade | (18) No. 121 Blade          |
| (5) No. 5 Blade | (12) No. 103 Blade | (19) No. 131 Blade          |
| (6) No. 8 Blade | (13) No. 104 Blade | (20) No. 132 Blade          |
| (7) No. 9 Blade | (14) No. 105 Blade | (21) Cut-off guide for pipe |

○ (1) – (9): HCS Blades (HCS: Highspeed Carbon Steel)

○ (10) – (20): BI-METAL Blades.

Refer to **Table 1, 2, 3 and 4 on page 26-28** for use of the blades.

## APPLICATIONS

- Cutting pipe and angle steel.
- Cutting various lumbers.
- Cutting mild steel plates, aluminum plates, and copper plates.
- Cutting synthetic resins, such as phenol resin and vinyl chloride.

For details refer to the section entitled “SELECTION OF BLADES” on page 26.

## PRIOR TO OPERATION

1. Power source  
Ensure that the power source to be utilized conforms to the power requirement specified on the product nameplate.
2. Power switch  
Ensure that the power switch is in the OFF position. If the plug is connected to a receptacle while the power switch is in the ON position, the power tool will start operating immediately, which could cause a serious accident.
3. Extension cord  
When the work area is removed from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as practicable.
4. Dust produced in operation  
The dust produced in normal operation may affect the operator's health. To wear a dust mask is recommended.
5. Mounting the blade  
This unit employs a detachable mechanism that enables mounting and removal of saw blades without the use of a wrench or other tools.
  - (1) Turn on and off the switching trigger several times so that the lever can jump out of the front cover completely. Thereafter, turn off the switch and unplug the power cord. (Fig. 1)

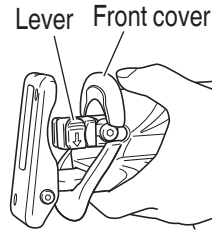


Fig. 1

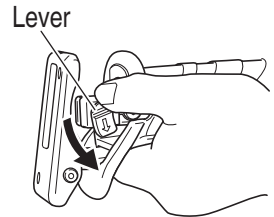


Fig. 2

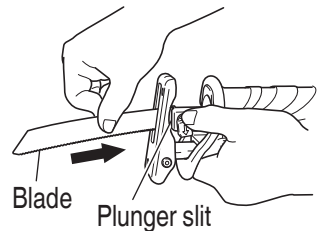


Fig. 3

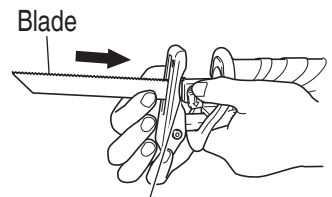


Fig. 4

## CAUTION

**Be absolutely sure to keep the switch turned off and the power cord unplugged to prevent any accident.**

- (2) Push the lever in the direction of the arrow mark shown in Fig. 2 marked on the lever. (Fig. 2)
- (3) Insert the saw blade all the way into the small slit of the plunger tip with the lever pushing. You can mount this blade either in the upward or downward direction. (Fig. 3, Fig. 4)

- (4) When you release the lever, the spring force will return the lever to the correct position automatically. (Fig. 5)
- (5) Pull the back of the saw blade two or three times by hand and check that the blade is securely mounted. When pulling the blade, you will know it is properly mounted if it clicks and the lever moves slightly. (Fig. 6)

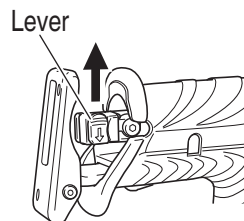


Fig. 5

## CAUTION

**When pulling the saw blade, be absolutely sure to pull it from the back. Pulling other parts of the blade will result in an injury.**

6. Dismounting the blade
  - (1) Turn on and off the switching trigger several times so that the lever can jump out of the front cover completely. Thereafter, turn off the switch and unplug the power cord. (Fig. 1)

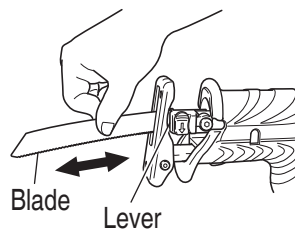


Fig. 6

## CAUTION

**Be absolutely sure to keep the switch turned off and the power cord unplugged to prevent any accident.**

- (2) After you have pushed the lever in the direction of the arrow mark shown in Fig. 2, turn the blade so it faces downward. The blade should fall out by itself. If the blade doesn't fall out, pull it out by hand.

## CAUTION

**Never touch the saw blade immediately after use. The metal is hot and can easily burn your skin.**

### WHEN THE BLADE IS BROKEN

Even when the saw blade is broken and remains inside the small slit of the plunger, it should fall out if you push the lever in the direction of the arrow mark, and face the blade downward. If it doesn't fall out itself, take it out using the procedures explained below.

- (1) If a part of the broken saw blade is sticking out of the small slit of the plunger, pull out the protruding part and take the blade out.
- (2) If the broken saw blade is hidden inside the small slit, hook the broken blade using a tip of another saw blade and take it out. (Fig. 7)

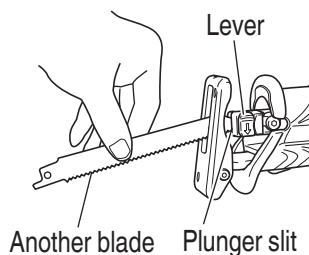


Fig. 7

# English

## MAINTENANCE AND INSPECTION OF SAW BLADE MOUNT

- (1) After use, blow away sawdust, earth, sand, moisture, etc., with air or brush them away with a brush, etc., to ensure that the blade mount can function smoothly.
- (2) As shown in **Fig. 8**, carry out lubrication around the blade holder on a periodic basis by use of cutting fluid, etc.

### NOTE

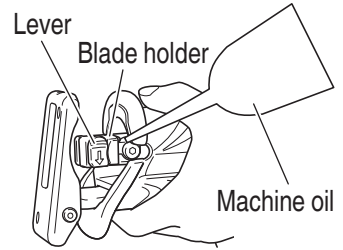
Continued use of the tool without cleaning and lubricating the area where the saw blade is installed can result in some slack movement of the lever due to accumulated sawdust and chips. Under the circumstances, pull a rubber cap provided on the lever in the direction of an arrow mark as shown in **Fig. 9** and remove the rubber cap from the lever. Then, clean up the inside of the blade holder with air and the like and carry out sufficient lubrication.

The rubber cap can be fitted on it if it is pressed firmly onto the lever. At this time, make certain that there exists no clearance between the blade holder and the rubber cap, and furthermore ensure that the saw-blade-installed area can function smoothly.

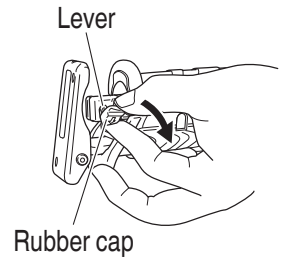
### CAUTION

**Do not use any saw blade with a worn-out blade hole. Otherwise, the saw blade can come off, resulting in personal injury. (Fig. 10)**

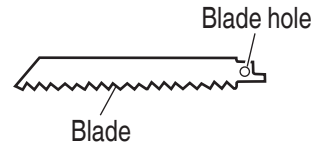
7. Adjusting the base
  - (1) Lift the front cover up as illustrated in **Fig. 11**.
  - (2) If a base setting screw is loosened with an attached hexagonal bar wrench, you can adjust a base installing position. (**Fig. 12, Fig. 13**)
  - (3) After adjusting the base installing position, tighten the base setting screw with the attached hexagonal bar wrench completely.



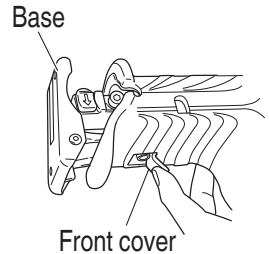
**Fig. 8**



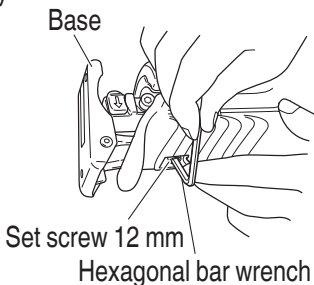
**Fig. 9**



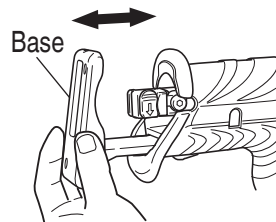
**Fig. 10**



**Fig. 11**



**Fig. 12**



**Fig. 13**

8. Adjusting the blade reciprocating speed  
This unit has a built-in electronic control circuit that makes it possible to adjust the variable speed of the saw blade by pulling a switching trigger. (Fig. 14)  
If you pull the trigger further in, the speed of the blade accelerates. Begin cutting at a low speed to ensure the accuracy of your target cut position. Once you've obtained a sufficient cutting depth, increase the cutting speed.

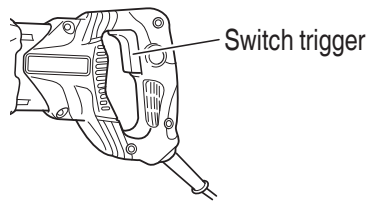


Fig. 14

## CAUTION

Although this unit employs a powerful motor, prolonged use at a low speed will increase the load unduly and may lead to overheating. Properly adjust the saw blade to allow steady, smooth cutting operation, avoiding any unreasonable use such as sudden stops during cutting operation.

## HOW TO USE

### CAUTION

- Avoid carrying it plugged to the outlet with your finger on the switch. A sudden startup can result in an unexpected injury.
  - Be careful not to let sawdust, earth, moisture, etc., enter the inside of the machine through the plunger section during operation. If sawdust and the like accumulate in the plunger section, always clean it before use.
  - Do not remove the front cover (refer to Fig. 1 on page 20). Be sure to hold the body from the top of the front cover.
  - During use, press the base against the material while cutting.
- Vibration can damage the saw blade if the base is not pressed firmly against the workpiece. Furthermore, a tip of the saw blade can sometimes contact the inner wall of the pipe, damaging the saw blade.
- Select a saw blade of the most appropriate length. Ideally, the length protruding from the base of the saw blade after subtracting the stroke quantity should be larger than the material (see Fig. 15 and Fig. 16).

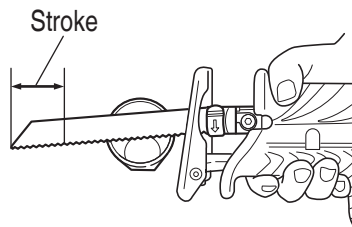


Fig. 15

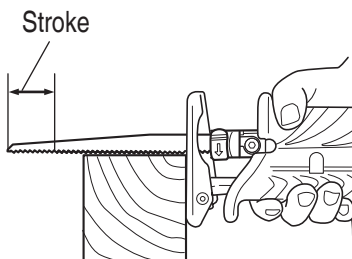


Fig. 16

# English

If you cut a large pipe, large block of wood, etc., that exceeds the cutting capacity of a blade; there is a risk that the blade may contact with the inner wall of the pipe, wood, etc., resulting in damage. (Fig. 17, Fig. 18)

1. Cutting metallic materials

## CAUTION

- Press the base firmly against the workpiece.
- Never apply any unreasonable force to the saw blade when cutting. Doing so can easily break the blade.

- (1) Fasten a workpiece firmly before operation. (Fig. 19)
- (2) When cutting metallic materials, use proper machine oil (turbine oil, etc.). When not using liquid machine oil, apply grease over the workpiece.

## CAUTION

The service life of the saw blade will be drastically shortened if you don't use machine oil.

2. Cutting lumber  
When cutting lumber, make sure that the workpiece is fastened firmly before beginning. (Fig. 20)

## CAUTION

Never apply any unreasonable force to the saw blade when cutting. Also remember to press the base against the lumber firmly.

3. Sawing curved lines  
We recommend that you use the BI-METAL blade mentioned in **Table 2 on page 27** for the saw blade since it is tough and hardly breaks.

## CAUTION

Delay the feed speed when cutting the material into small circular arcs. An unreasonably fast feed may break the blade.

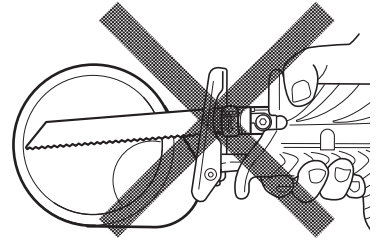


Fig. 17

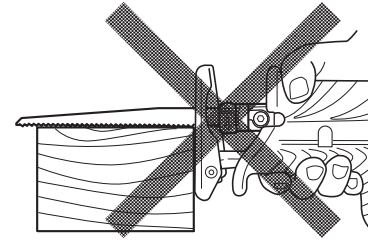


Fig. 18

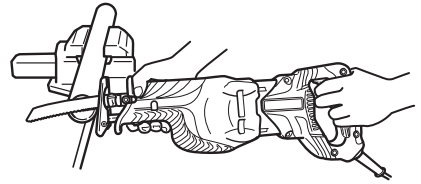


Fig. 19

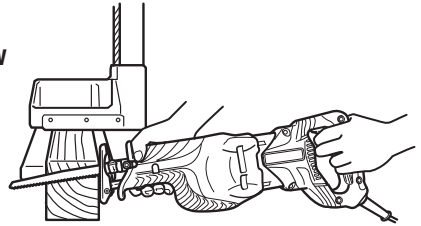


Fig. 20



## 4. Plunge cutting

With this tool, you can perform plunge cutting on plywood panels and thin board materials. You can carry out pocket cutting quite easily with the saw blade installed in reverse as illustrated in **Fig. 22**, **Fig. 24**, and **Fig. 26**. Use the saw blade that is as short and thick as possible. We recommend for this purpose that you use BI-METAL Blade No. 132 mentioned in **Table 2 on page 27**. Be sure to use caution during the cutting operation and observe the following procedures.

- (1) Press the lower part (or the upper part) of the base against the material. Pull the switch trigger while keeping the tip of the saw blade apart from the material. (**Fig. 21**, **Fig. 22**)
- (2) Raise the handle slowly and cut in with the saw blade little by little. (**Fig. 23**, **Fig. 24**)
- (3) Hold the body firmly until the saw blade completely cuts into the material. (**Fig. 25**, **Fig. 26**)

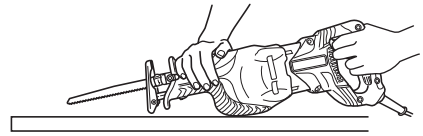


Fig. 21

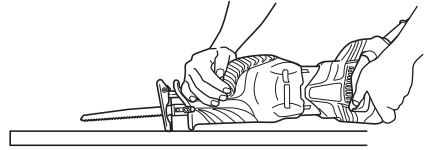


Fig. 22

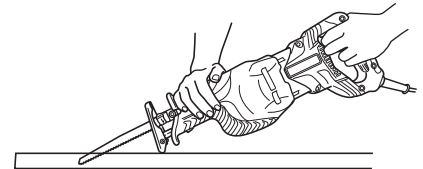


Fig. 23

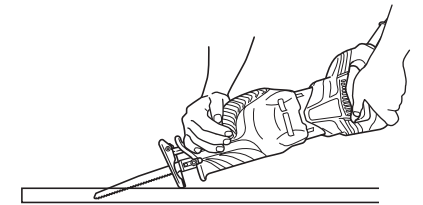


Fig. 24

**CAUTION**

- **Avoid plunge cutting for metallic materials. This can easily damage the blade.**
- **Never pull the switch trigger while the tip of the saw blade tip is pressed against the material. If you do so, the blade can easily be damaged when it collides with the material.**
- **Make absolutely sure that you cut slowly while holding the body firmly. If you apply any unreasonable force to the saw blade during the cutting operation, the blade can easily be damaged.**

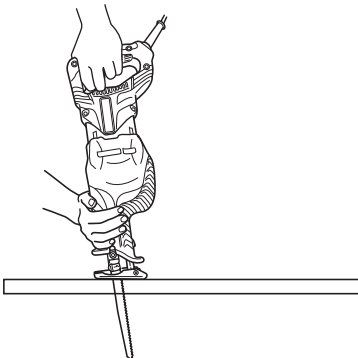


Fig. 25

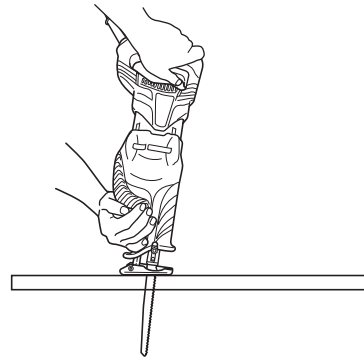


Fig. 26

## English

### 5. Cut off guide for cutting pipe (optional accessory)

Product	Cutting application	Blade used	Code No.
Cut-off guide (L)	Outer diameter 75mm – 165mm	No.9 No.131	330852

#### NOTE

Please refer to the cut off guide user's manual for details on how to use it correctly.

## SELECTION OF BLADES

To ensure maximum operating efficiency and results, it is very important to select the appropriate blade best suited to the type and thickness of the material to be cut.

#### NOTE

Dimensions of the workpiece mentioned in the table represent the dimensions when the mounting position of the base is set nearest to the body of the reciprocating saw. Caution must be exercised since dimensions of the workpiece will become smaller if the base is mounted far away from the body of the reciprocating saw.

#### 1. Selection of HCS blades

The blade number of HCS blades in **Table 1** is engraved in the vicinity of the mounting position of each blade. Select appropriate blades by referring to **Tables 1 and 4 on page 28**.

**Table 1: HCS blades**

Blade No.	Uses	Thickness (mm)
No. 1	For cutting steel pipe less than 105 mm in diameter	2.5 – 6
No. 2	For cutting steel pipe less than 30 mm in diameter	2.5 – 6
No. 3	For cutting steel pipe less than 30 mm in diameter	Below 3.5
No. 4	For cutting and roughing lumber	50 – 70
No. 5	For cutting and roughing lumber	Below 30
No. 8	For cutting vinyl chloride pipe less than 130 mm in diameter	2.5 – 15
	For cutting and roughing lumber	Below 105
No. 9	For cutting mild steel pipe less than 130 mm in diameter when used with cut off guide	2.5 – 6
No. 95	For cutting stainless steel pipe less than 105 mm in diameter	Below 2.5
No. 96	For cutting stainless steel pipe less than 30 mm in diameter	Below 2.5

#### NOTE

No. 1 – No. 96 HCS blades are sold separately as optional accessories.

## 2. Selection of BI-METAL blades

The BI-METAL blade numbers in **Table 2** are described on the packages of special accessories. Select appropriate blades by referring to **Table 2** and **4 on page 28**.

**Table 2: BI-METAL blades**

Blade No.	Uses	Thickness (mm)
No. 101	For cutting steel and stainless pipes less than 60 mm in outer diameter	2.5 – 6
No. 102	For cutting steel and stainless pipes less than 130 mm in outer diameter	2.5 – 6
No. 103	For cutting steel and stainless pipes less than 60 mm in outer diameter	2.5 – 6
No. 104	For cutting steel and stainless pipes less than 130 mm in outer diameter	2.5 – 6
No. 105	For cutting steel and stainless pipes less than 60 mm in outer diameter	2.5 – 6
No. 106	For cutting steel and stainless pipes less than 130 mm in outer diameter	2.5 – 6
No. 107	For cutting steel and stainless pipes less than 60 mm in outer diameter	Below 3.5
No. 108	For cutting steel and stainless pipes less than 130 mm in outer diameter	Below 3.5
No. 121	For cutting and roughing lumber	120
No. 131	All purposes	–
No. 132	All purposes	–

**NOTE**

Nos. 101 – No. 132 BI-METAL blades are sold separately as optional accessories.

**Table 3: Curved blade**

Blade No.	Uses	Thickness (mm)
No. 341	For cutting steel and stainless pipes less than 60 mm in outer diameter	2.5 – 6

# English

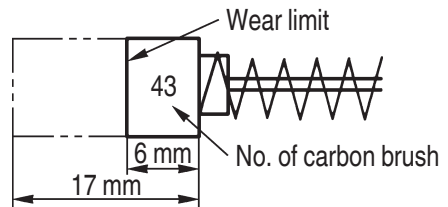
## 3. Selection of blades for other materials

**Table 4**

Material to be cut	Material quality	Thickness (mm)	Blade No.
Iron plate	Mild steel plate	2.5 – 19	No. 1, 2, 101, 102, 103, 104, 105, 106, 131, 132
		Below 3.5	No. 3, 107, 108
Nonferrous metal	Aluminium, Copper and Brass	5 – 20	No. 1, 2, 101, 102, 103, 104, 105, 106, 131, 132
		Below 5	No. 3, 107, 108
Synthetic resin	Phenol resin, Melamine resin, etc.	10 – 50	No. 1, 2, 4, 101, 102, 103, 104, 131, 132
		5 – 30	No. 3, 5, 8, 105, 106, 107, 108
	Vinyl chloride, Acrylic resin, etc.	10 – 60	No. 1, 2, 4, 101, 102, 103, 104, 131, 132
		5 – 30	No. 3, 5, 8, 105, 106, 107, 108

## MAINTENANCE AND INSPECTION

- Inspecting the blade**  
Continued use of a dull or damaged blade will result in reduced cutting efficiency and may cause overloading of the motor. Replace the blade with a new one as soon as excessive abrasion is noted.
- Inspecting the mounting screws**  
Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.
- Maintenance of the motor**  
The motor unit winding is the very “heart” of the power tool. Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.
- Inspecting the carbon brushes (Fig. 27)**  
The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush can result in motor trouble, replace the carbon brushes with new ones having the same carbon brush No. shown in the figure when it becomes worn to or near the “wear limit”. In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.



**Fig. 27**

5. Replacing carbon brushes  
Disassemble the brush caps with a slotted-head screwdriver. The carbon brushes can then be easily removed.
6. Service parts list

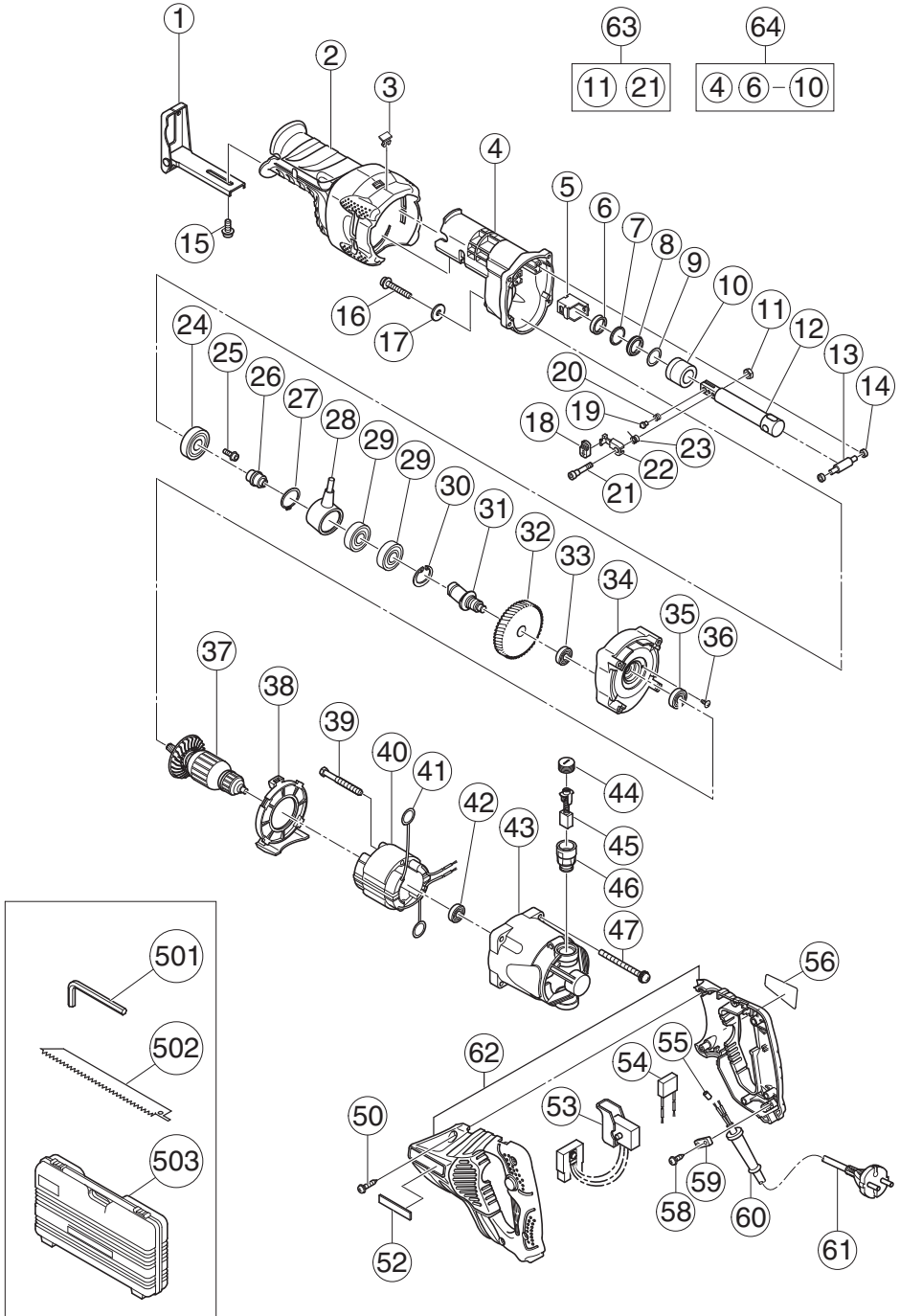
## **CAUTION**

**Repair, modification and inspection of HiKOKI Power Tools must be carried out by a HiKOKI Authorized Service Center.**

**This Parts List will be helpful if presented with the tool to the HiKOKI Authorized Service Center when requesting repair or other maintenance.**

**In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.**

# SERVICE PARTS LIST



Item No.	Part Name	Q'TY
1	BASE (F)	1
2	FRONT COVER (F)	1
3	COVER PIN	1
4	GEAR COVER (F)	1
5	BLADE HOLDER (C)	1
6	FELT WASHER	1
7	WASHER (H)	1
8	V-RING	1
9	O-RING	1
10	METAL (B)	1
11	LOCK NUT M5	1
12	PLUNGER (F)	1
13	CONNECTOR PIN (F)	1
14	SWING ROLLER	2
15	NYLOCK BOLT (W/FLANGE) M5×12	1
16	NYLOCK BOLT (W/FLANGE) M6×35	1
17	WASHER (G)	1
18	CAP	1
19	HOLDER PIN (B)	1
20	SPRING (B)	1
21	SPECIAL BOLT M5	1
22	LEVER (C)	1
23	BLADE SPRING	1
24	BALL BEARING 6002DDCMPS2L	1
25	NYLOCK BOLT (W/FLANGE) M4×12	3
26	SUB SHAFT (B)	1
27	RETAINING RING FOR D17 SHAFT	1
28	RECIPRO PLATE (F)	1
29	BALL BEARING 6003VVCMP2L	2
30	RETAINING RING FOR D35 HOLE	1
31	SECOND SHAFT (F)	1
32	GEAR	1
33	BALL BEARING 608VVC2PS2L	1

Item No.	Part Name	Q'TY
34	INNER COVER (F)	1
35	BALL BEARING 6001VVCMP2L	1
36	SLOTTED HD. SCREW (SEAL LOCK) M4×10	2
37	ARMATURE	1
38	FAN GUIDE (F)	1
39	HEX. HD. TAPPING SCREW D5×55	2
40	STATOR ASS'Y	1
41	BRUSH TERMINAL	2
42	BALL BEARING 608VVC2PS2L	1
43	HOUSING	1
44	BRUSH CAP	2
45	CARBON BRUSH (1 PAIR)	2
46	BRUSH HOLDER	2
47	MACHINE SCREW (W/WASHERS) M5×60	4
50	TAPPING SCREW (W/FLANGE) D4×25	5
52	BRAND LABEL	1
53	SWITCH	1
54	NOISE SUPPRESSOR	1
55	TUBE (D)	2
56	NAME PLATE	1
58	TAPPING SCREW (W/FLANGE) D4×16	2
59	CORD CLIP	1
60	CORD ARMOR	1
61	CORD	1
62	HANDLE (G), (H) SET	1
63	SPECIAL BOLT M5 SET	1
64	GEAR COVER ASS'Y	1
501	HEX. BAR WRENCH 4MM	1
502	SABER SAW BLADES	1
503	CASE	1

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