

HiKOKI

充电式冲击起子机
Cordless Impact Driver

WH 10DL (X)



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。

中文

许多事故由维护不良的电动工具引发。

- 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) 电池式工具使用和注意事项

- a) 只用制造商规定的充电器充电。
将适用于某种电池盒的充电器用到其他电池盒时会发生着火危险。
- b) 只使用配有特制电池盒的电动工具。
使用其他电池盒会发生损坏和着火危险。
- c) 当电池盒不用时，将它远离其他金属物体，例如回形针、硬币、钥匙、钉子、螺钉或其他小金属物体，以防一端与另一端连接。
电池端部短路会引起燃烧或火灾。
- d) 在滥用条件下，液体会从电池中溅出；避免接触。如果无意间碰到了，用水冲洗。如果液体碰到了眼睛，还要寻求医疗帮助。
从电池中溅出的液体会发生腐蚀或燃烧。

6) 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。

充电式冲击起子机使用上的注意事项

1. 本工具为手提式工具，用于旋紧和旋松螺丝。请不要用于其它作业。
2. 如长时间进行作业，请使用耳塞。
3. 单手操作非常危险。操作时请用双手握紧电动工具。
4. 安装好起子机的钻头以后，请轻轻地将钻头往外拉确认钻头是否松弛。如钻头安装得不妥当，在使用时钻头可能会松弛而引起危险。
5. 请使用与螺丝相配的钻头。
6. 用本冲击起子机旋紧螺丝时，如冲击起子机与螺丝之间的位置不成直线，则会损坏螺丝头，同时起子机的旋转力也不能被妥善地传给螺丝。所以，旋紧螺丝时，请使起子机与螺丝成一直线。
7. 务请在 0°C ~ 40°C 的温度下进行充电。在 0°C ~ 40°C 以外的温度进行充电，可能会导致不正确的充电并缩短电池的寿命。
最适合于充电的温度是 20 ~ 25°C。
8. 充电结束时，在下节电池充电之前，请先将充电器放置大约 15 分钟。

9. 勿让杂质进入电池连结口内。
10. 切勿拆卸电池与充电器。
11. 切勿使电池短路。使电池短路将会造成很大的电流和过热，从而烧坏电池。
12. 请勿将电池丢入火中。
电池受热将会爆炸。
13. 在墙壁、地板或天花板上钻孔时，应检查是否有埋设的电源线等。
14. 充电后电池寿命太短不够使用时，请尽快将电池送往经销店。请勿将用过的电池乱丢。
15. 请勿使用耗竭了的电池，否则会损坏充电器。
16. 请勿将异物插入充电器的通风口。
若将金属异物或易燃物插入通风口的话，将会引起触电事故或使充电器受损。

锂离子电池使用注意事项

为延长使用期限，锂离子电池备配停止输出的保护功能。

若是在使用本产品时发生下列 1 至 3 的情况，即使按下开关，马达也可能停止。这并非故障，而是启动保护功能的结果。

1. 在残留的电池电力即将耗尽时，马达会停止。
在这种情况下，请立即予以充电。
 2. 若工具超过负荷，马达亦可能停止。在这种情况下，请松开工具的开关，试着消除超过负荷的原因。之后您就可以再度使用。
 3. 若电池在过载工作情况下过热，电池电力可能会中止。
在这种情况下，请停止使用电池，让电池冷却。之后您就可以再度使用。
- 此外，请留心下列的警告及注意事项。

警告！

为防止发生电池漏电、发热、冒烟、爆炸及提前点燃，请确保留意下列事项。

1. 确保电池上没有堆积削屑及灰尘。
 - 在工作时确定削屑及灰尘没有掉落在电池上。
 - 确定所有工作时掉落在电动工具上的削屑和灰尘没有堆积在电池上。
 - 请勿将未使用的电池存放在曝露于削屑和灰尘的位置。
 - 在存放电池之前，请清除任何可能附着在上面的削屑和灰尘，并请切勿将它与金属零件（螺丝、钉子等）存放在一起。
2. 请勿以钉子等利器刺穿电池、以铁锤敲打、踩踏、丢掷电池，或将其剧烈撞击。
3. 切勿使用明显损坏或变形的电池。
4. 使用电池时请勿颠倒电极。
5. 请勿直接连接电源插座或汽车点烟器孔座。
6. 请依规定方式使用电池，切勿移作他用。
7. 如果已过了再充电时间，电池仍无法完成充电，请立即停止继续再充电。
8. 请勿将电池放置于高温或高压处，例如微波炉、烘干机或高压容器内。
9. 在发觉有渗漏或异味时，请勿接近远离火源。

中文

10. 请勿在会产生强烈静电的地方使用。
11. 如有电池渗漏、异味、发热、褪色或变形，或在使用、充电或存放时出现任何异常，请立即将它从装备或电池充电器拆下，并停止使用。

注意！

1. 若电池渗漏出的液体进入您的眼睛，请勿搓揉眼睛，并以自来水等干净清水充分冲洗，立刻送医。
若不加以处理，液体可能会导致眼睛不适。
2. 若液体渗漏至您的皮肤或衣物，请立即以自来水等清水冲洗。
上述情况可能会使皮肤受到刺激。
3. 若初次使用电池时发现生锈、异味、过热、褪色、变形及 / 或其它异常情况时，请勿使用并将该电池退还给供货商或厂商。

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。



阅读所有安全警告和所有指示。

规格

电动工具

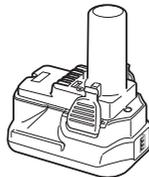
无负荷速度	0 – 2300 /min
能力（普通螺栓）	M5 – M12
旋紧扭矩（最大）	110 N·m
电池	BCL1030A：锂离子 直流 10.8 V（3.0 Ah 6 节）
重量	1.2 kg

充电器

型式	UC10SFL
充电电压	10.8 V
重量	0.35 kg

选购附件（分开销售）

1. 电池 (BCL1030A)



用途

旋紧和拆除机用螺丝、木螺丝、自攻螺丝等。

电池的拆卸 / 安装法

1. 电池的拆卸法

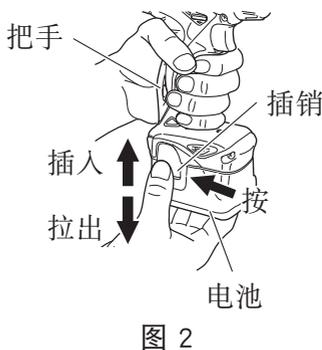
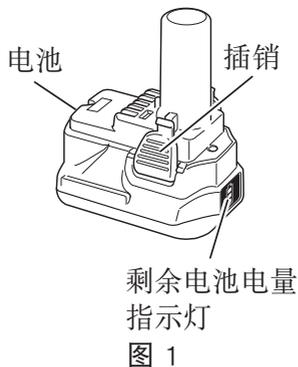
请先紧抓住把手、然后再推压电池插销以拆下电池（参照图 1 和 图 2）。

注意！

切勿使电池短路。

2. 电池的安装法

插入电池时请注意极性（参照图 2）



充电

注：

充电器是单独销售的选购附件。

使用电动工具之前，按下述方法将电池进行充电。

1. 将充电器的电源线连接到插座。

将充电器插头连接到插座时，指示灯闪烁红色（间隔为 1 秒）。

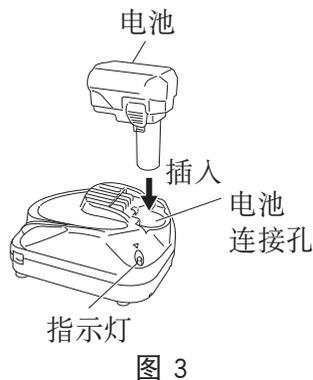
2. 将电池插入充电器。

如图 3 所示，将电池稳稳地插入充电器直至其接触到充电器的底部。

3. 充电

将电池插入充电器后，充电器上的指示灯将持续点亮呈红色。

电池完全充电后，指示灯将闪烁呈红色（以 1 秒的间隔）（参照第 8 页的表 1）。



关于新电池等的放电

因新的和长期未使用的电池内部的化学物质无活性，故第一次和第二次使用时其放电能力可能较低。这是暂时现象，这种电池充电 2 - 3 次后即可恢复其充电所需的正常时间。

较长时间保持电池性能的方法

(1) 在电池电力完全耗尽之前进行充电。

感到电动工具的能力变弱时，请停止使用并给电池充电。若您继续使用电动工具并耗尽电力，电池可能会损坏或其使用寿命缩短。

(2) 避免在高温环境中充电。

使用后电池的温度将迅速升高。若使用后立即对这种电池进行充电，其内部化学物质会劣化，电池使用寿命将缩短。请稍等片刻，待电池冷却后再进行充电。

注意！

○ 如果电池长时间放置在阳光直接照射的地方或者刚刚使用完毕时，电池会变热。如果此时对电池充电，充电器上的指示灯会点亮 1 秒钟，不点亮 0.5 秒钟（熄灭 0.5 秒钟）。

在此情况下，先让电池冷却下来，然后再充电。

○ 指示灯闪动时（以 0.2 秒钟的间隔），请检查并取出充电器电池接口处的任何异物。若无异物，则可能电池或充电器发生故障。请带去经授权的维修中心检查。

○ 因内置的微机需要约 3 秒钟才能确认正用 UC10SFL 进行充电的电池已被取出，因此请待 3 秒钟后再重新插入电池继续充电。如果在不到 3 秒内就插入电池，则电池可能充电不正常。

作业之前

1. 工作环境的准备和检查

请按下列注意事项检查工作环境是否适当。

使用方法

1. 安装钻头

注：

钻头是单独销售的选购附件。

请务必按照下列步骤安装击入式钻头（图 4）。

(1) 向前拉导套。

(2) 将钻头插入套筒的六角孔。

(3) 松开导套，导套随后返回到原始位置。

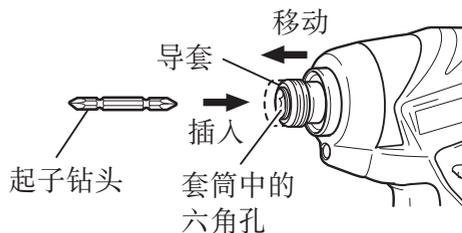


图 4

注意！

如果导套没有返回到原始位置，则说明没有正确安装钻头。

2. 拆卸钻头

请按照钻头安装方法相反的要点进行拆卸。

3. 确认电池安装正确

4. 检查旋转方向

按选择按钮的 R（右）侧，钻头便会顺时针（从后方看时）旋转；按选择按钮的 L（左）侧则使钻头逆时针旋转。（请参照图 5）。（机身上标有（L）和（R）标记。）

5. 开关操作

○ 压下扳机开关，则本机旋转；松开扳机，则本机停止。

○ 钻机的转速可通过改变扳机开关的扣动幅度来控制：幅度小则速度低，幅度大则速度高。

注：

当马达即将起转时，可能会产生一种嗡嗡声。这只不过是一种噪音，而非机器故障。

6. 使用灯光

扳动扳机开关使灯点亮。扳机开关处于扳动状态时，灯一直点亮。松开扳机开关后，灯熄灭。（图 6）

注意！

请勿直接注视灯，否则可能伤害眼睛。

7. 拧紧和拧松螺丝

安装适合螺丝的转头，使转头对准螺丝头的凹槽，然后拧紧螺丝。

推动冲击起子机，使转头恰好与螺丝头吻合。

注意！

长时间将冲击起子机应用于螺丝会造成螺丝拧得过紧，且容易使螺丝折断。用冲击起子机拧紧螺丝时，如果起子机与螺丝有一定角度，则可能损坏螺丝头，正确的作用力无法传送到螺丝。

拧紧时，使冲击起子机正好对准螺丝。

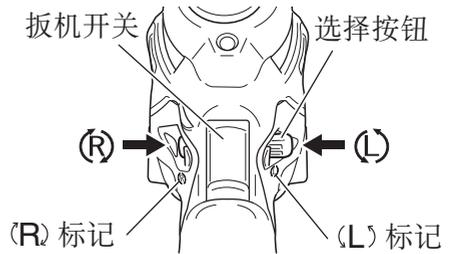


图 5

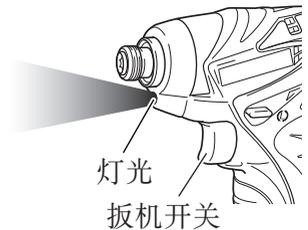
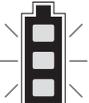


图 6

8. 剩余电池电量指示

[指示含义]

指示灯  : 灯熄灭  : 绿色点亮或闪烁

状态	输出停止		输出可能		
	0% - 10%	10% - 30%	30% - 50%	50% - 75%	75% - 100%
剩余电池电量程度					
剩余电池电量指示					

- 充电中： 闪烁的指示灯数量增加，以指明电池电量程度。
- 暂停： 指示灯连续闪烁，以指明电池的剩余电量。
- 电动工具使用中： 电动工具使用中：当充电式电动工具的开关开启时，指示灯点亮，以指明电池的剩余电量。
开关松开约 3 秒后，指示灯开始闪烁（暂停状态）。
- 自动停止已激活： 仅顶部指示灯快速闪烁（每 0.5 秒），并停止输出。

自动停止功能

为防止在电量不足的情况下使用电动工具，此电池提供自动停止功能，当电池剩余电量降至 30% 或以下时，电池停止输出。

当自动停止功能激活时，仅顶部指示灯快速闪烁。请立即对电池充电。

异常指示

当电池的剩余电量指示灯快速闪烁（每 0.5 秒）时，电池可能发生了故障。请将其返回您的经销商或HiKOKI公司授权的维修中心进行检修。

注：

如果电池长时间未使用，由于自放电原因，其充电时间可能增加。

在低温环境中使用（低于 0°C）

在低温环境中使用 BCL1030A 时，即使剩余电池电量充足，马达也可能停止。这只是一时暂时现象。温度升高后，电池仍可正常使用。

操作上的注意事项

1. 连续作业后须让电动工具休息片刻

在连续进行螺栓紧固作业后以及在更换电池后，请让电动工具暂停作业 15 分钟。如果在更换电池后立刻开始作业，马达和开关等的温度将会升高，结果导致烧毁。

注：

请勿触摸金属部件，它们在连续工作后可能高温。

2. 关于转速控制开关的注意事项

此开关带有可无级改变转速的内置电路。因此，当轻拉启动开关（低速转动）并在连续旋紧螺丝中停止马达转动时，电路部分的元件可能会因过热而损坏。

3. 使用适宜於螺丝的旋紧时间

根据螺丝的材料和尺寸以及所旋紧的材料等，其适宜的转矩有所不同，因此请使用适宜于该螺丝的旋紧时间。尤其是，如果对小于 M8 的螺丝使用过长的旋紧时间，则螺丝有损坏的危险。因此，请事先确认旋紧时间和旋紧转矩。

4. 以适于受冲击螺栓的旋紧扭矩进行操作

螺栓和螺母最适宜的旋紧扭矩因螺栓或螺母的材料和尺寸而有所不同。对小螺栓使用过大的旋紧扭矩会扭曲或损坏螺栓。旋紧扭矩的增加与操作时间成正比。请使用正确的螺栓操作时间。

5. 确定旋紧扭矩

下列因素会造成旋紧扭矩的下降。因此请在工作前用手工扭矩扳手来确定上紧螺栓所需的实际旋紧扭矩。影响旋紧扭矩的因素如下。

(1) 电压

达到放电极限时，电压降低，旋紧扭矩也减少。

(2) 操作时间

操作时间增加时旋紧扭矩也增加。但是，即使工具驱动很长的一段时间，旋紧扭矩也不会增大到超过某个特定值。

(3) 螺栓的直径

旋紧扭矩根据螺栓的直径变化。一般来说较大直径的螺栓需要较大的旋紧扭矩。

(4) 旋紧的状态

即使使用相同尺寸螺纹的螺栓，旋紧扭矩根据螺栓的扭矩比率、等级和长度也各不相同。旋紧扭矩还因螺栓所要上紧的加工件的表面状况而有所不同。螺栓和螺母一起转动时，扭矩会大大减少。

维护和检查

1. 检查工具

继续使用已破损的钻头或钻头尖已磨损的钻头是非常危险的，因为钻头会滑脱。因此，请更换已破损的钻头或钻头尖已磨损的钻头。

2. 检查安装螺钉

要经常检查安装螺钉是否紧固妥善。若发现螺钉松了，应立即重新扭紧，否则会导致严重的事故。

3. 电动机的维护

电动机绕线是电动工具的“心脏部”应仔细检查有无损伤，是否被油液或水沾湿。

4. 检查炭刷（图 7）

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。

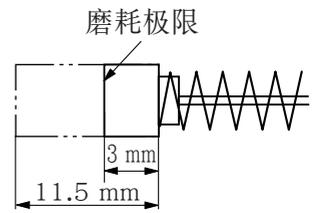


图 7

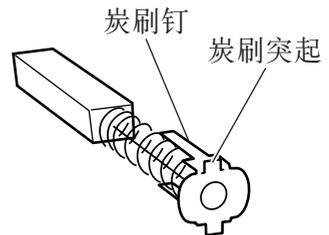


图 8

注：

换上新的炭刷时，请一定使用HiKOKI牌炭刷（代码号：999054）。

5. 更换炭刷

如图 9 所示，先取下刷帽，然后用平头螺丝刀等钩住炭刷的突起部分，取出炭刷。

安装炭刷时，选择方向，使炭刷钉对准炭刷管外面的连接部分。如图 10 所示，用手指将其推入。最后安装刷帽。

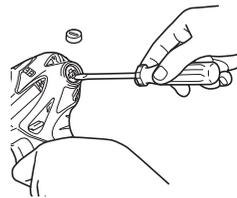
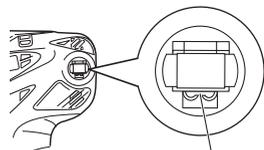


图 9

注意！

务请将炭刷钉插入炭刷管外面的连接部分。（可插入附带的两个炭刷钉中的任何一个）。

须特别注意，因为操作的任何差错均会导致炭刷钉变形，并且可能在很早的阶段就导致马达发生故障。



炭刷管外侧
连接部分

图 10

6. 清理外部

冲击起子机沾污时，用干软布或沾肥皂水的布擦拭。切勿使用氯溶液、汽油或稀释剂，以免塑胶部分溶化。

7. 收藏

冲击起子机应收藏于温度低于 40℃和小孩拿不到的地方。

注：

在电池长期存放（3 个月或更长）后务必给电池完全充电。如果长期存放后使用，容量小的电池可能无法充电。

8. 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。

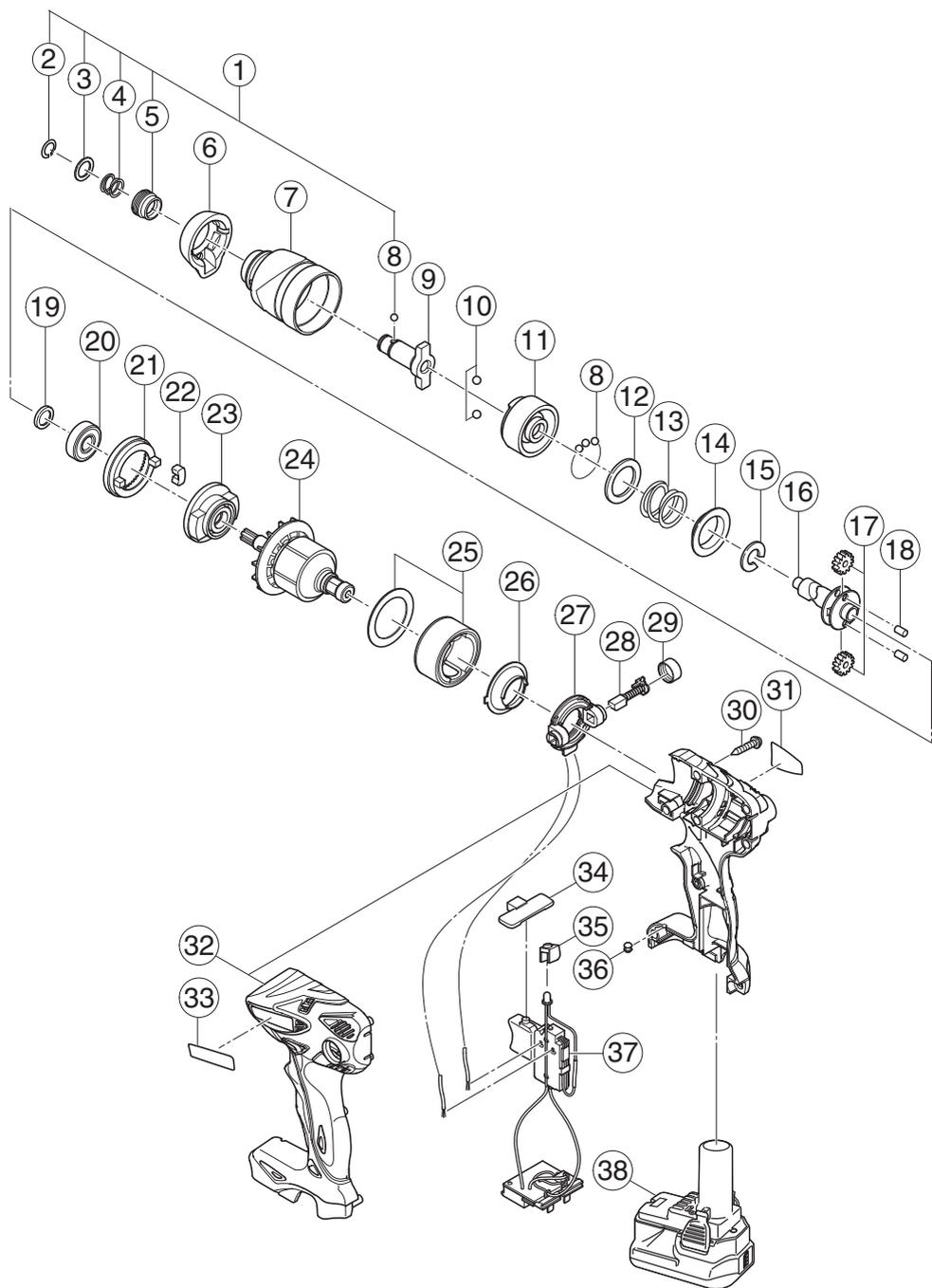
当要求维修或其他保养服务时，若将此零部件一览表与电动工具一起呈交给经 HiKOKI 公司授权的维修中心，将有助于维修或保养工作。

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。

关于HiKOKI牌无线电动工具的重要通知：

请确保始终使用我们指定的正版电池。如果使用我们指定以外的电池，或对电池进行拆卸和改动（例如拆卸和更换电池组件或其他内部部件），那么我们无法保证我们无线电动工具的安全性和使用性能。

维修零部件一览表



项目号	代码号	使用数	备注	项目号	代码号	使用数	备注
1	329538	1	"2-5, 8"	35	329552	1	
2	995933	1		36	—————	1	
3	322739	1		37	330963	1	
4	322737	1		38	334305	2	BCL1030A
5	329537	1					
6	329535	1					
7	331861	1					
8	959148	29	D3.175				
9	329554	1					
10	959154	2	D5.556				
11	334122	1					
12	315978	1					
13	334123	1					
14	316172	1					
15	322740	1					
16	329541	1					
17	318444	2					
18	324234	2					
19	319911	1					
20	6901VV	1	6901VVCMP2L				
21	331858	1					
22	329517	2					
23	329545	1					
24	360842	1					
25	329588	1					
26	329546	1					
27	329547	1					
28	999054	2					
29	319918	2					
30	313687	9	D3×16				
31	—————	1					
32	329587	1					
33	—————	1					
34	329548	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) **Battery tool use and care**

- a) **Recharge only with the charger specified by the manufacturer.**

A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

- b) **Use power tools only with specifically designated battery packs.**

Use of any other battery packs may create a risk of injury and fire.

- c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.**

Shorting the battery terminals together may cause burns or a fire.

- d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.**

Liquid ejected from the battery may cause irritation or burns.

6) **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 FOR CORDLESS IMPACT DRIVER

1. This is portable tool for tightening and loosening screws. Use it only for these operation.
2. Use the earplugs if using for a long time.
3. One-hand operation is extremely dangerous; hold the unit firmly with both hands when operating.
4. After installing the driver bit, pull lightly out the bit to make sure that it does not come loose. If the bit is not installed properly, it can come loose during use, which can be dangerous.
5. Use the bit that matches the screw.
6. Tightening a screw with the impact driver at an angle to that screw can damage the head of the screw and the proper force will not be transmitted to the screw. Tighten with this impact driver lined up straight with the screw.
7. Always charge the battery at a temperature of 0 – 40°C. Charging the battery at temperatures outside the range of 0 – 40°C may prevent proper charging and reduce battery life.
The most suitable temperature for charging is that of 20 – 25°C.
8. When one charging is completed, leave the charger for about 15 minutes before the next charging of battery.
9. Do not allow foreign matter to enter the hole for connecting the battery.
10. Never disassemble the battery and charger.
11. Never short-circuit the battery. Short-circuiting the battery will cause a great electric current and overheat. It results in burn or damage to the battery.
12. Do not dispose of the battery in fire.
If the battery is burnt, it may explode.
13. When drilling in wall, floor or ceiling, check for buried electric power cord, etc.
14. Bring the battery to the shop from which it was purchased as soon as the post-charging battery life becomes too short for practical use. Do not dispose of the exhausted battery.
15. Using an exhausted battery will damage the charger.
16. Do not insert object into the air ventilation slots of the charger.
Inserting metal objects or inflammables into the charger air ventilation slots will result in electrical shock hazard or damaged charger.

CAUTION ON LITHIUM-ION BATTERY

To extend the lifetime, the lithium-ion battery equips with the protection function to stop the output.

In the cases of 1 to 3 described below, when using this product, even if you are pulling the switch, the motor may stop. This is not the trouble but the result of protection function.

1. When the battery power remaining runs out, the motor stops.
In such case, charge it up immediately.

English

2. If the tool is overloaded, the motor may stop. In this case, release the switch of tool and eliminate causes of overloading. After that, you can use it again.
3. If the battery is overheated under overload work, the battery power may stop. In this case, stop using the battery and let the battery cool. After that, you can use it again.

Furthermore, please heed the following warning and caution.

WARNING

In order to prevent any battery leakage, heat generation, smoke emission, explosion and ignition beforehand, please be sure to heed the following precautions.

1. Make sure that swarf and dust do not collect on the battery.
 - During work make sure that swarf and dust do not fall on the battery.
 - Make sure that any swarf and dust falling on the power tool during work do not collect on the battery.
 - Do not store an unused battery in a location exposed to swarf and dust.
 - Before storing a battery, remove any swarf and dust that may adhere to it and do not store it together with metal parts (screws, nails, etc.).
2. Do not pierce battery with a sharp object such as a nail, strike with a hammer, step on, throw or subject the battery to severe physical shock.
3. Do not use an apparently damaged or deformed battery.
4. Do not use the battery in reverse polarity.
5. Do not connect directly to an electrical outlets or car cigarette lighter sockets.
6. Do not use the battery for a purpose other than those specified.
7. If the battery charging fails to complete even when a specified recharging time has elapsed, immediately stop further recharging.
8. Do not put or subject the battery to high temperatures or high pressure such as into a microwave oven, dryer, or high pressure container.
9. Keep away from fire immediately when leakage or foul odor are detected.
10. Do not use in a location where strong static electricity generates.
11. If there is battery leakage, foul odor, heat generated, discolored or deformed, or in any way appears abnormal during use, recharging or storage, immediately remove it from the equipment or battery charger, and stop use.

CAUTION

1. If liquid leaking from the battery gets into your eyes, do not rub your eyes and wash them well with fresh clean water such as tap water and contact a doctor immediately.
If left untreated, the liquid may cause eye-problems.
2. If liquid leaks onto your skin or clothes, wash well with clean water such as tap water immediately.
There is a possibility that this can cause skin irritation.
3. If you find rust, foul odor, overheating, discolor, deformation, and/or other irregularities when using the battery for the first time, do not use and return it to your supplier or vendor.

SYMBOL

WARNING

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



Read all safety warnings and all instructions.

SPECIFICATIONS

POWER TOOL

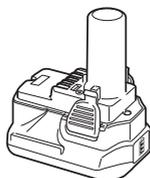
No-load speed	0 – 2300 / min
Capacity (Ordinary bolt)	M5 – M12
Tightening torque (Maximum)	110 N·m
Battery	BCL1030A: Li-ion DC 10.8 V (3.0 Ah 6 cells)
Weight	1.2 kg

CHARGER

Model	UC10SFL
Charging voltage	10.8 V
Weight	0.35 kg

OPTIONAL ACCESSORIES (sold separately)

1. Battery (BCL1030A)



APPLICATIONS

Driving and removing of machine screws, wood screws, tapping screws, etc.

BATTERY REMOVAL/INSTALLATION

1. Battery removal
Hold the handle tightly and push the battery latch to remove the battery (see **Figs. 1 and 2**).

CAUTION

Never short-circuit the battery.

2. Battery installation
Insert the battery while observing its polarities (see **Fig. 2**).

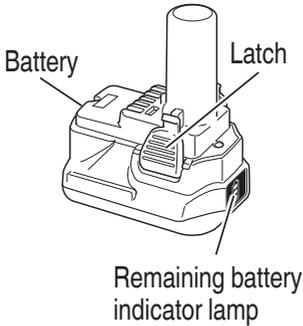


Fig. 1

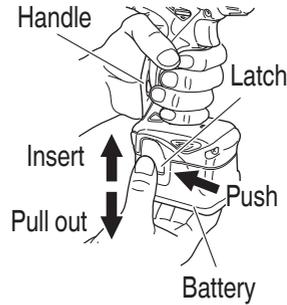


Fig. 2

CHARGING

NOTE

The charger is an optional accessory that is sold separately.

Before using the power tool, charge the battery as follows.

1. Connect the charger power cord to the receptacle
When connecting the plug of the charger to a receptacle, the pilot lamp will blink in red (At 1-second intervals).
2. Insert the battery into the charger
Firmly insert the battery into the charger till it contacts the bottom of the charger as shown in **Fig. 3**.
3. Charging
When inserting a battery in the charger, the pilot lamp will light up continuously in red.
When the battery becomes fully recharged, the pilot lamp will blink in red (At 1-second intervals). (See **Table 1**)

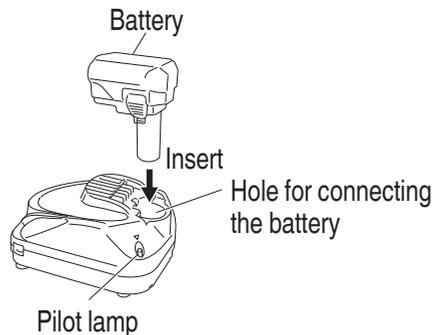


Fig. 3

English

Regarding electric discharge in case of new batteries, etc.

As the internal chemical substance of new batteries and batteries that have not been used for an extended period is not activated, the electric discharge might be low when using them the first and second time. This is a temporary phenomenon, and normal time required for recharging will be restored by recharging the batteries 2 – 3 times.

How to make the batteries perform longer

- (1) Recharge the batteries before they become completely exhausted.
When you feel that the power of the tool becomes weaker, stop using the tool and recharge its battery. If you continue to use the tool and exhaust the electric current, the battery may be damaged and its life will become shorter.
- (2) Avoid recharging at high temperatures.
A battery will be hot immediately after use. If such a battery is recharged immediately after use, its internal chemical substance will deteriorate, and the battery life will be shortened. Leave the battery and recharge it after it has cooled for a while.

CAUTION

- If the battery is charged while it is heated because it has been left for a long time in a location subject to direct sunlight or because the battery has just been used, the pilot lamp of the charger lights for 1 second, does not light for 0.5 seconds (off for 0.5 seconds).
In such a case, first let the battery cool, then start charging.
- When the pilot lamp flickers (at 0.2-second intervals), check for and take out any foreign objects in the charger's battery connector. If there are no foreign objects, it is probable that the battery or charger is malfunctioning. Take it to your authorized Service Center.
- Since the built-in micro computer takes about 3 seconds to confirm that the battery being charged with UC10SFL is taken out, wait for a minimum of 3 seconds before reinserting it to continue charging. If the battery is reinserted within 3 seconds, the battery may not be properly charged.

PRIOR TO OPERATION

1. Setting up and checking the work environment
Check if the work environment is suitable by the above precautions.

HOW TO USE

1. Installing the bit

NOTE

The bit is an optional accessory that is sold separately.

Always follow the following procedure to install driver bit. (Fig. 4)

- (1) Pull the guide sleeve forward.

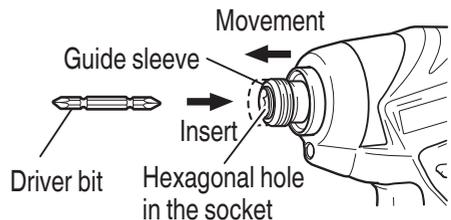


Fig. 4

- (2) Insert the bit into the hexagonal hole in the socket.
- (3) Release the guide sleeve and it returns to its original position.

CAUTION

If the guide sleeve does not return to its original position, then the bit is not installed properly.

2. Removing the bit
Please do the opposite point on the method of installing bit.
3. Confirm that the battery is mounted correctly
4. Check the rotational direction
The bit rotates clockwise (viewed from the rear side) by pushing the R-side of the selector button.
The L-side of the selector button is pushed to turn the bit counterclockwise (See Fig. 5) (The «L» and «R» marks are provided on the body).

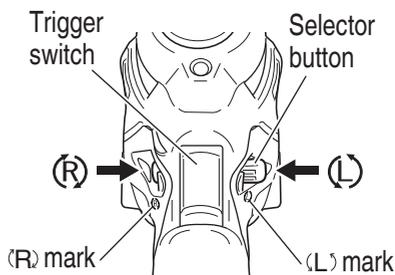


Fig. 5

5. Switch operation
 - When the trigger switch is depressed, the tool rotates. When the trigger is released, the tool stops.
 - The rotational speed of the drill can be controlled by varying the amount that the trigger switch is pulled. Speed is low when the trigger switch is pulled slightly and increases as the trigger switch is pulled more.

NOTE

A buzzing noise is produced when the motor is about to rotate. This is only a noise, not a machine failure.

6. Using the light
Pull the trigger switch to light up the light. The light keeps on lighting while the trigger switch is being pulled. The light goes out after releasing the trigger switch. (Fig. 6)

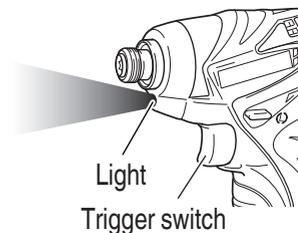


Fig. 6

CAUTION

Do not look directly into the light. Such actions could result in eye injury.

7. Tightening and loosening screws
Install the bit that matches the screw, line up the bit in the grooves of the head of the screw, then tighten it.
Push the impact driver just enough to keep the bit fitting the head of the screw.

English

CAUTION

Applying the impact driver for too long tightens the screw too much and can break it.

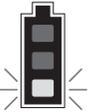
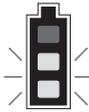
Tightening a screw with the impact driver at an angle to that screw can damage the head of the screw and the proper force will not be transmitted to the screw.

Tighten with this impact driver lined up straight with the screw.

8. Remaining battery indication

[Meaning of indication]

Indicator lamp  : Light OFF  : Lights or blinks in green

Status	Output stop		Output possible		
	0% – 10%	10% – 30%	30% – 50%	50% – 75%	75% – 100%
Remaining battery level					
Remaining battery indication					

- In charging: The number of blinking indicator lamps increases to indicate the charge level of the battery.
- Pause: The indicator lamps blink continuously to indicate the remaining charge of the battery.
- Power tool in use: When the switch of the cordless power tool is turned on, the indicator lamps light to indicate the remaining charge of the battery. About 3 seconds after the switch is released, the indicator lamps begin to blink (status in pause).
- Auto-stop activated: Only the top indicator lamp blinks rapidly (every 0.5 second) and stops output.

Auto-stop function

To prevent operation with a weakened power tool, this battery has an auto-stop function to stop output when the remaining battery level becomes 30% or less.

When the auto-stop function is activated, only the top indicator lamp blinks rapidly. Then please charge the battery immediately.

Indication of abnormality

When the remaining battery indicator lamps of the battery blink rapidly (every 0.5 second), the battery may have a fault. Please bring it back to your dealer or the HiKOKI Authorized Service Center.

NOTE

If the battery has not been used for a long time, it may take longer to charge it because of self-discharge.

Operation in a low temperature environment (less than 0°C)

When BCL1030A is used in a low temperature environment, the motor may stop even if the remaining battery level is high enough. This is just a temporary phenomenon. The battery can be used as usual when warmed up.

OPERATIONAL CAUTIONS

1. Resting the unit after continuous work
After use for continuous bolt-tightening work, rest the unit for 15 minutes or so when replacing the battery. The temperature of the motor, switch, etc., will rise if the work is started again immediately after battery replacement, eventually resulting in burnout.

NOTE

- Do not touch the metal parts, as it gets very hot during continuous work.
2. Cautions on use of the speed control switch
This switch has a built-in, electronic circuit which steplessly varies the rotation speed. Consequently, when the switch trigger is pulled only slightly (low speed rotation) and the motor is stopped while continuously driving in screws, the components of the electronic circuit parts may overheat and be damaged.
 3. Use a tightening time suitable for the screw
The appropriate torque for a screw differs according to the material and size of the screw, and the material being screwed etc., so please use a tightening time suitable for the screw. In particular, if a long tightening time is used in the case of screws smaller than M8, there is a danger of the screw breaking, so please confirm the tightening time and the tightening torque beforehand.
 4. Work at a tightening torque suitable for the bolt under impact
The optimum tightening torque for nuts or bolts differs with material and size of the nuts or bolts. An excessively large tightening torque for a small bolt may stretch or break the bolt. The tightening torque increases in proportion to the operation time. Use the correct operating time for the bolt.
 5. Confirm the tightening torque
The following factors contribute to a reduction of the tightening torque. So confirm the actual tightening torque needed by screwing up some bolts before the job with a hand torque wrench. Factors affecting the tightening torque are as follows.
 - (1) Voltage
When the discharge margin is reached, voltage decreases and tightening torque is lowered.
 - (2) Operating time
The tightening torque increases when the operating time increases. But the tightening torque does not increase above a certain value even if the tool is driven for a long time.
 - (3) Diameter of bolt
The tightening torque differs with the diameter of the bolt. Generally a larger diameter bolt requires larger tightening torque.
 - (4) Tightening conditions
The tightening torque differs according to the torque ratio; class, and length of bolts even when bolts with the same size threads are used. The tightening torque also differs according to the condition of the surface of workpiece through which the bolts are to be tightened. When the bolt and nut turn together, torque is greatly reduced.

MAINTENANCE AND INSPECTION

1. Inspecting the driver bit
Using a broken bit or one with a worn out tip is dangerous because the bit can slip. Replace it.
2. 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.
3. 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.
4. Inspecting the carbon brushes (**Fig. 7**)
The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush can result in motor trouble, replace the carbon brush with new ones 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.

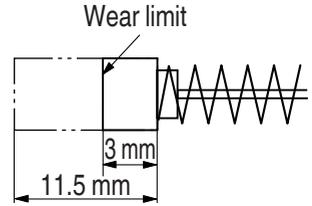


Fig. 7

NOTE

When replacing the carbon brush with a new one, be sure to use the HIKOKI Carbon Brush Code No. 999054.

5. Replacing carbon brushes
Take out the carbon brush by first removing the brush cap and then hooking the protrusion of the carbon brush with a slotted head screw driver, etc., as shown in **Fig. 9**.

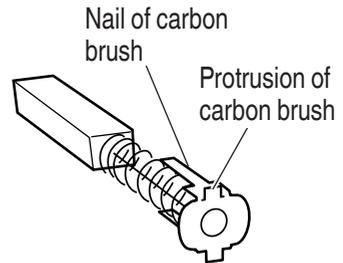


Fig. 8

When installing the carbon brush, choose the direction so that the nail of the carbon brush agrees with the contact portion outside the brush tube. Then push it in with a finger as illustrated in **Fig. 10**. Lastly, install the brush cap.

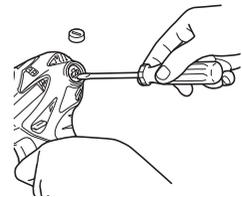
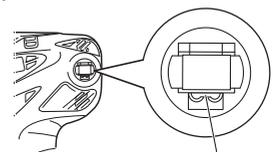


Fig. 9

CAUTION

Be absolutely sure to insert the nail of the carbon brush into the contact portion outside the brush tube. (You can insert whichever one of the two nails is provided.) Caution must be exercised since any error in this operation can result in the deformed nail of the carbon brush and may cause motor trouble at an early stage.



Contact portion outside brush tube

Fig. 10

6. Cleaning of the outside
When the impact driver is stained, wipe with a soft dry cloth or a cloth moistened with soapy water. Do not use chloric solvents, gasoline or paint thinner, for they melt plastics.
7. Storage
Store the impact driver in a place in which the temperature is less than 40°C and out of reach of children.

NOTE

Make sure that the battery is fully charged when stored for a long period (3 months or more). The battery with smaller capacity may not be able to be charged when used, if stored for a long period.

8. Service parts list

CAUTION

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

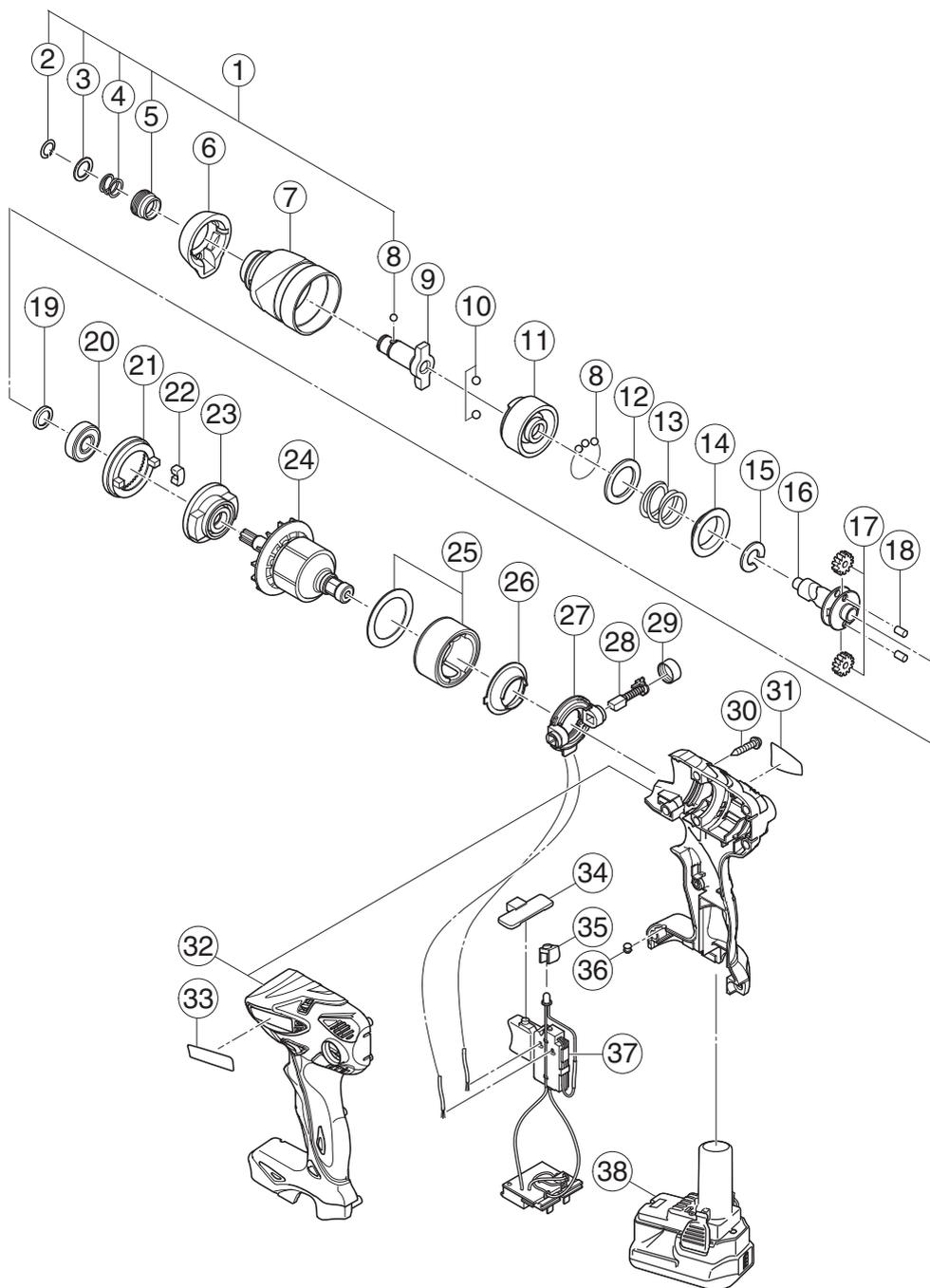
This Parts List will be helpful if presented with the tool to the HiKOKI Authorized Service Center when requesting repair or other maintenance.

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

Important notice on the batteries for the HiKOKI cordless power tools

Please always use one of our designated genuine batteries. We cannot guarantee the safety and performance of our cordless power tool when used with batteries other than these designated by us, or when the battery is disassembled and modified (such as disassembly and replacement of cells or other internal parts).

SERVICE PARTS LIST



Item No.	Code No.	No. Used	Remarks	Item No.	Code No.	No. Used	Remarks
1	329538	1	"2-5, 8"	34	329548	1	
2	995933	1		35	329552	1	
3	322739	1		36	————	1	
4	322737	1		37	330963	1	
5	329537	1		38	334305	2	BCL1030A
6	329535	1					
7	331861	1					
8	959148	29	D3.175				
9	329554	1					
10	959154	2	D5.556				
11	334122	1					
12	315978	1					
13	334123	1					
14	316172	1					
15	322740	1					
16	329541	1					
17	318444	2					
18	324234	2					
19	319911	1					
20	6901VV	1	6901VVCMP2L				
21	331858	1					
22	329517	2					
23	329545	1					
24	360842	1					
25	329588	1					
26	329546	1					
27	329547	1					
28	999054	2					
29	319918	2					
30	313687	9	D3x16				
31	————	1					
32	329587	1					
33	————	1					

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制造商
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