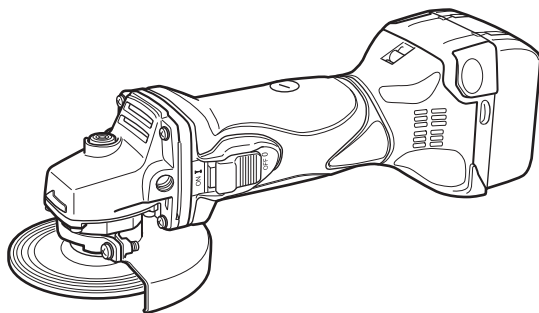


HITACHI

G 14DSL • G 18DSL • G 18DSL(S)



G14DSL



Handling instructions

Hitachi Koki

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.

- 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.

PRECAUTION

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

SAFETY WARNINGS COMMON FOR GRINDING OR ABRASIVE CUTTING-OFF OPERATIONS

- a) This power tool is intended to function as a grinder or cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool.
Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
 - b) Operations such as sanding, wire brushing or polishing are not recommended to be performed with this power tool.
Operations for which the power tool was not designed may create a hazard and cause personal injury.
 - c) Do not use accessories which are not specifically designed and recommended by the tool manufacturer.
Just because the accessory can be attached to your power tool, it does not assure safe operation.
 - d) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.
Accessories running faster than their rated speed can break and fly apart.
 - e) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.
Incorrectly sized accessories cannot be adequately guarded or controlled.
 - f) Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of accessory must fit the locating diameter of the flange.
Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- g) Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.
Damaged accessories will normally break apart during this test time.
 - h) Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.
The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
 - i) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.
Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
 - j) Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting tool may contact hidden wiring.
Contact with a "live" wire will also make exposed metal parts of the power tool "live" and could give the operator an electric shock.
 - k) Position the cord clear of the spinning accessory.
If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
 - l) Never lay the power tool down until the accessory has come to a complete stop.
The spinning accessory may grab the surface and pull the power tool out of your control.
 - m) Do not run the power tool while carrying it at your side.
Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
 - n) Regularly clean the power tool's air vents.
The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
 - o) Do not operate the power tool near flammable materials.
Sparks could ignite these materials.
 - p) Do not use accessories that require liquid coolants.
Using water or other liquid coolants may result in electrocution or shock.

KICKBACK AND RELATED WARNINGS

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.
For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump

toward or away from the operator, depending on direction of the wheel's movement at the point of pinching.

Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- a) **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.**
The operator can control torque reactions or kickback forces, if proper precautions are taken.
- b) **Never place your hand near the rotating accessory. Accessory may kickback over your hand.**
- c) **Do not position your body in the area where power tool will move if kickback occurs.**
Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- d) **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.**
Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- e) **Do not attach a saw chain woodcarving blade or toothed saw blade.**
Such blades create frequent kickback and loss of control.

SAFETY WARNINGS SPECIFIC FOR GRINDING AND ABRASIVE CUTTING-OFF OPERATIONS

- a) **Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel.**
Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- b) **The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip.**
An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
- c) **The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator.**
The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.
- d) **Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel.**
Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- e) **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel.**
Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
- f) **Do not use worn down wheels from larger power tools.**
Wheel intended for larger power tool is not suitable for the high speed of a smaller tool and may burst.

ADDITIONAL SAFETY WARNINGS SPECIFIC FOR ABRASIVE CUTTING-OFF OPERATIONS

- a) **Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.**
Overstressing the wheel increases the loading and susceptibility to twisting or blinding of the wheel in the cut and the possibility of kickback or wheel breakage.
- b) **Do not position your body in line with and behind the rotating wheel.**
When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.
- c) **When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur.**
Investigate and take corrective action to eliminate the cause of wheel binding.
- d) **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut.**
The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- e) **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback.**
Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- f) **Use extra caution when making a "pocket cut" into existing walls or other blind areas.**
The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

ADDITIONAL SAFETY WARNINGS

1. Always use eye and ear protection. Other personal protective equipment such as dust mask, gloves, helmet and apron should be worn.
2. Preparing and checking the work environment. Make sure that the work site meets all the conditions laid forth in the precautions.
3. Check that the work piece is properly supported.
4. Confirm that the depressed center wheel is mounted firmly.
5. Check that speed marked on the wheel is equal to or greater than the rated speed of the grinder.
6. Ensure that the wheel dimensions are compatible with the grinder.
7. Ensure that the wheel guard is properly fitted and fastened before commencing grinding operation.
8. Abrasive wheels shall be stored and handled with care in accordance with manufacturer's instructions.
9. Inspect the grinding wheel before use, do not use chipped, cracked or otherwise defective products.
10. Ensure that mounted wheels and points are fitted in accordance with the manufacturer's instructions.
11. Ensure that blotters are used when they are provided with the bonded abrasive product and when they are required.
12. Ensure that the abrasive product is correctly mounted and tightened before use and run the tool at no-load for 30 seconds in a safe position, stop immediately if there is considerable vibration or if other defects are detected. If this condition occurs, check the machine to determine the cause.

13. If a guard is equipped with the tool never use the tool without such a guard.
14. Do not use separate reducing bushings or adapters to adapt large hole abrasive wheels.
15. For tools intended to be fitted with threaded hole wheel, ensure that the thread in the wheel is long enough to accept the spindle length.
16. Do not use cutting off wheel for side grinding.
17. Ensure that sparks resulting from use do not create a hazard e.g. do not hit persons, or ignite flammable substances.
18. Ensure that ventilation openings are kept clear when working in dusty conditions, if it should become necessary to clear dust, first disconnect the tool from the mains supply (use non metallic objects) and avoid damaging internal parts.
19. Pay attention to the wheel that continues to rotate after the tool is switched off. After switching off the machine, do not put it down until the depressed center wheel has come to a complete stop. Apart from avoiding serious accidents, this precaution will reduce the amount of dust and swarf sucked into the machine.
20. Be sure to turn off the switch and pull out the battery to avoid a serious accident before the depressed center wheel is assembling and disassembling.
21. To prolong the life of the machine and ensure a first class finish, it is important that the machine should not be overloaded by applying too much pressure. In most applications, the weight of the machine alone is sufficient for effective grinding. Too much pressure will result in reduced rotational speed, inferior surface finish, and overloading which could reduce the life of the machine.
22. Ensure that fixing the side handle into the gear cover securely.
23. Confirm that the spindle lock button is disengaged by pushing spindle lock button two or three times before switching the power tool on. (See **Fig. 6, 7**)
24. Ensure that the depressed center wheel to be utilized is the correct type and free of cracks or surface defects. Also ensure that the depressed center wheel is properly mounted and the wheel nut is securely tightened.
25. Actuate the spindle lock button only when the tool is at a standstill.
26. Use cutting wheel (for G14DSL / G18DSL)
When using an abrasive cutting wheel, be sure to remove the standard accessory wheel guard and attach the WHEEL GUARD (FOR CUTTING) with side guard (sold separately). (**Fig. 7**)
27. Secure the workpiece. A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
28. Make sure that the battery is installed firmly. If it is at all loose it could come off and cause an accident.
29. When the machine is not use, the battery should be disconnected.
30. To prevent injuries, this product has a function that prevents unexpected motor rotation when the battery is inserted. The motor will not run if the battery is inserted while the switch is still ON. After installing the battery, turn the switch off and then back on again.
31. The G14DSL / G18DSL / G18DSL(S) models are equipped with a protection function that will shut down the tool in the event of an overload.
Should the tool shut down due to an overload, turn the power off and then turn it back on again.
32. Do not allow foreign matter to enter the hole for connecting the rechargeable battery.
33. Never disassemble the rechargeable battery and charger.
34. Never short-circuit the rechargeable battery. Shortcircuiting the battery will cause a great electric current and overheat. It results in burn or damage to the battery.
35. Do not dispose of the battery in fire. If the battery is burnt, it may explode.
36. 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.
37. 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.

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 a case, charge it up immediately.

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.

WARNING

If a conductive foreign matter enters in the terminal of lithium ion battery, the battery may be shorted, causing fire. When storing the lithium ion battery, obey surely the rules of following contents.

- Do not place conductive debris, nail and wires such as iron wire and copper wire in the storage case.
- To prevent shorting from occurring, load the battery in the tool or insert securely the battery cover for storing until the ventilator is not seen.

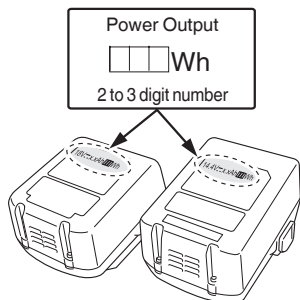
REGARDING LITHIUM-ION BATTERY TRANSPORTATION

When transporting a lithium-ion battery, please observe the following precautions.

WARNING

Notify the transporting company that a package contains a lithium-ion battery, inform the company of its power output and follow the instructions of the transportation company when arranging transport.

- Lithium-ion batteries that exceed a power output of 100Wh are considered to be in the freight classification of Dangerous Goods and will require special application procedures.
- For transportation abroad, you must comply with international law and the rules and regulations of the destination country.



USB DEVICE CONNECTION PRECAUTIONS (ONLY WITH UC18YSL3 CHARGER)

When an unexpected problem occurs, the data in a USB device connected to this product may be corrupted or lost. Always make sure to back up any data contained in the USB device prior to use with this product.

Please be aware that our company accepts absolutely no responsibility for any data stored in a USB device that is corrupted or lost, nor for any damage that may occur to a connected device.

WARNING

- Prior to use, check the connecting USB cable for any defect or damage. Using a defective or damaged USB cable can cause smoke emission or ignition.

- When the product is not being used, cover the USB port with the rubber cover. Buildup of dust etc. in the USB port can cause smoke emission or ignition.

NOTE

- There may be an occasional pause during USB recharging.
- When a USB device is not being charged, remove the USB device from the charger. Failure to do so may not only reduce the battery life of a USB device, but may also result in unexpected accidents.
- It may not be possible to charge some USB devices, depending on the type of device.

SYMBOLS

WARNING

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

	G14DSL / G18DSL / G18DSL(S): Cordless Disc Grinder
	Read all safety warnings and all instructions.
	Always wear eye protection.
V	Rated voltage
n	Rated speed
/min	Revolution or reciprocations per minute
D	Wheel outer diameter
d	Wheel hole diameter
t	Wheel thickness
	Peripheral speed
	Weight
I	Switching ON
O	Switching OFF
	Disconnect the battery
	Battery capacity
	The battery remaining power is nearly empty. Recharge the battery soonest possible
	The battery remaining power is a half.
	The battery remaining power is enough.

STANDARD ACCESSORIES

In addition to the main unit (1 unit), the package contains the accessories listed on page 10.

Standard accessories are subject to change without notice.

APPLICATIONS

- Removal of casting fin and finishing of various types of steel, bronze and aluminum materials and castings.
- Grinding of welded sections or sections cut by means of a cutting torch.
- Grinding of synthetic resins, slate, brick, marble, etc.
- Cutting of synthetic concrete, stone, brick, marble, and similar materials.

SPECIFICATIONS

The specifications of this machine are listed in the Table on page 10.

NOTE

Due to HITACHI's continuing program of research and development, the specifications herein are subject to change without prior notice.

CHARGING

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

1. **Connect the charger's power cord to the receptacle. (Fig. 2)**

<UC18YFSL>

When connecting the plug of the charger to a receptacle, the pilot lamp will blink in red (At 1-second intervals).

<UC18YSL3>

When connecting the plug of the charger to a receptacle, the charge indicator lamp will blink in red (At 1-second intervals).

CAUTION

Do not use the electrical cord if damaged. Have it repaired immediately.

2. **Insert the battery into the charger. (Fig. 2)**

Firmly insert the battery into the charger.

3. **Charging**

<UC18YFSL>

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-a**)

- Pilot lamp indication

The indications of the pilot lamp will be as shown in **Table 1-a**, according to the condition of the charger or the rechargeable battery.

<UC18YSL3>






When inserting a battery in the charger, the charge indicator lamp will blink in blue.

When the battery becomes fully recharged, the charge indicator lamp will light up in green. (See **Table 1-b**)

- Charge indicator lamp indication

The indications of the charge indicator lamp will be as shown in **Table 1-b**, according to the condition of the charger or the rechargeable battery.

Table 1-a

Indications of the pilot lamp				
Pilot lamp (red)	Before charging	Blinks	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds) 	/
	While charging	Lights	Lights continuously 	
	Charging complete	Blinks	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds) 	
	Overheat standby	Blinks	Lights for 1 second. Does not light for 0.5 seconds. (off for 0.5 seconds) 	Battery overheated. Unable to charge. (Charging will commence when battery cools)
	Charging impossible	Flickers	Lights for 0.1 seconds. Does not light for 0.1 seconds 	Malfunction in the battery or the charger

NOTE: When standby for cooling battery, UC18YFSL cools the overheated battery by cooling fan.

Table 1-b

Indications of the charge indicator lamp				
Charge indicator lamp (red / blue / green / purple)	Before charging	Blinks (red)	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds)	Plugged into power source
	While charging	Blinks (blue)	Lights for 0.5 seconds. Does not light for 1 second. (off for 1 second)	Battery capacity at less than 50%
		Blinks (blue)	Lights for 1 second. Does not light for 0.5 seconds. (off for 0.5 seconds)	Battery capacity at less than 80%
		Lights (blue)	Lights continuously	Battery capacity at more than 80%
	Charging complete	Lights (green)	Lights continuously (Continuous buzzer sound: about 6 seconds)	
	Overheat standby	Blinks (red)	Lights for 0.3 seconds. Does not light for 0.3 seconds. (off for 0.3 seconds)	Battery overheated. Unable to charge. (Charging will commence when battery cools)
	Charging impossible	Flickers (purple)	Lights for 0.1 seconds. Does not light for 0.1 seconds. (off for 0.1 seconds) (Intermittent buzzer sound: about 2 seconds)	Malfunction in the battery or the charger

NOTE: When standby for cooling battery, UC18YSL3 cools the overheated battery by cooling fan.

- Regarding the temperatures and charging time of the battery.
The temperatures and charging time will become as shown in **Table 2**.

Table 2

Battery		Charger	UC18YFSL	UC18YSL3
Charging voltage		V	14.4 – 18	
Weight		kg	0.5	0.6
Temperatures at which the battery can be recharged			0°C – 50°C	-10°C – 50°C
Charging time for battery capacity, approx. (At 20°C)				
1.3 Ah	min.		20	15
1.5 Ah	min.		22	15
2.0 Ah	min.		30	20
2.5 Ah	min.		35	25
3.0 Ah	min.		45	20
4.0 Ah	min.		60	26
5.0 Ah	min.		75	32
6.0 Ah	min.		90	38
Number of battery cells			4 – 10	

NOTE

The recharging time may vary according to the ambient temperature and power source voltage.

CAUTION

When the battery charger has been continuously used, the battery charger will be heated, thus constituting the cause of the failures. Once the charging has been completed, give 15 minutes rest until the next charging.

- 4. Disconnect the charger's power cord from the receptacle.**
- 5. Hold the charger firmly and pull out the battery.**

NOTE

Be sure to pull out the battery from the charger after use, and then keep it.

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 UC18YFSL charger lights for 1 second, does not light for 0.5 seconds (off for 0.5 seconds), or the charge indicator lamp of UC18YSL3 charger lights for 0.3 seconds, does not light for 0.3 seconds (off for 0.3 seconds). In such a case, first let the battery cool, then start charging.
- When the pilot lamp or charge indicator 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 charger 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.
- If the pilot lamp or charge indicator lamp does not blink in red (every second) even though the charger cord is connected to the power, it indicates that the protection circuit of the charger may be activated. Remove the cord from the power and then connect it again after 30 seconds or so. If this does not cause the pilot lamp or charge indicator lamp to blink in red (every second), please take the charger to the Hitachi Authorized Service Center.

NOTE

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

5. Replacing carbon brushes (Fig. 11)

Take out the carbon brush by first removing the brush cap and then hooking the protrusion of the carbon brush with a flat head screw driver, etc.

When installing the carbon brush, choose the direction so that the nail ⑥ of the carbon brush agrees with the contact portion ⑦ outside the brush tube. Then push it in with a finger. Lastly, install the brush cap.

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 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.

6. Cleaning on the outside

When the cordless disc grinder 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 cordless disc grinder in a place in which the temperature is less than 40°C, and out of reach of children.

NOTE

Storing lithium-ion batteries.

Make sure the lithium-ion batteries have been fully charged before storing them.

Prolonged storage (3 months or more) of batteries with a low charge may result in performance deterioration, significantly reducing battery usage time or rendering the batteries incapable of holding a charge.

However, significantly reduced battery usage time may be recovered by repeatedly charging and using the batteries two to five times.

If the battery usage time is extremely short despite repeated charging and use, consider the batteries dead and purchase new batteries.

CAUTION

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

MOUNTING AND OPERATION

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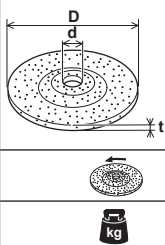
MAINTENANCE AND INSPECTION








- 1. Inspecting the depressed center wheel**
Ensure that the depressed center wheel is free of cracks and surface defects.
- 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. 11)**
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" ⑧. In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

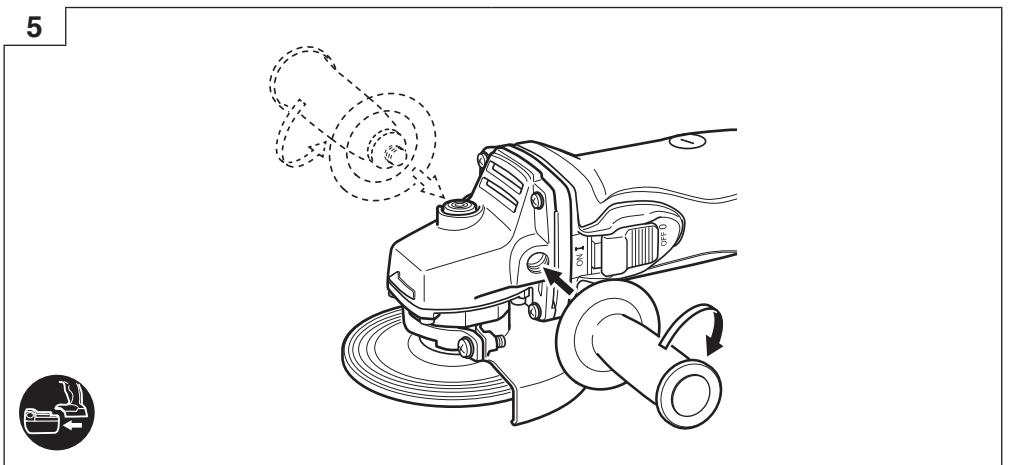
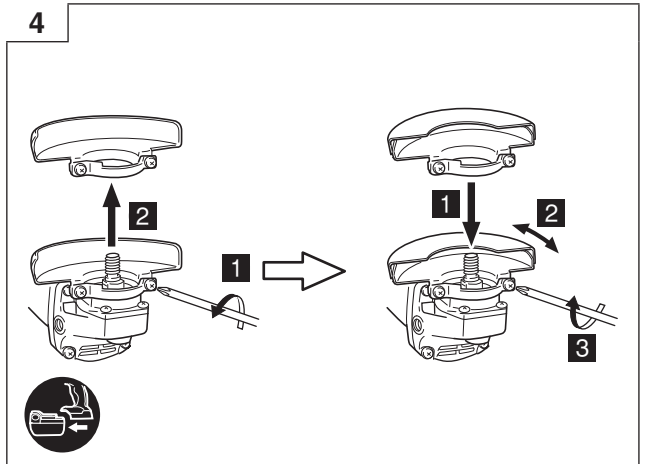
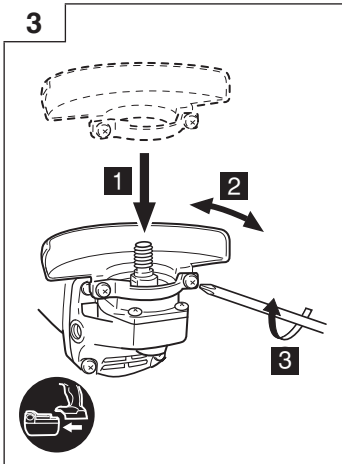
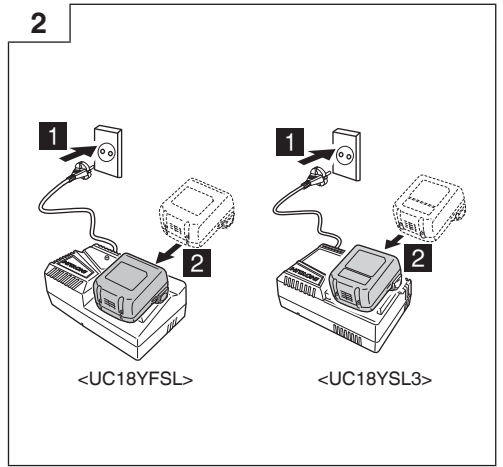
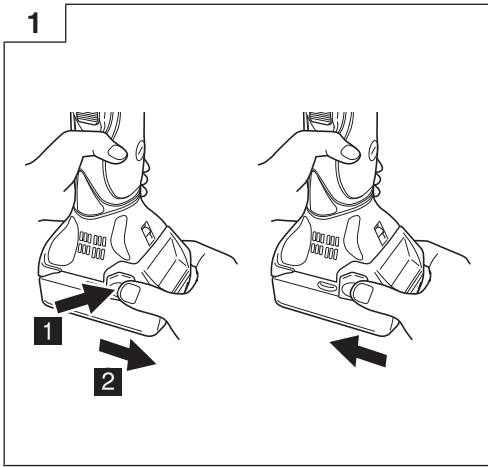
Important notice on the batteries for the Hitachi cordless power tools
Please always use one of our designated genuine batteries. We cannot guarantee the safety and performance of our cordless power tool when used with batteries other than these designated by us, or when the battery is disassembled and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

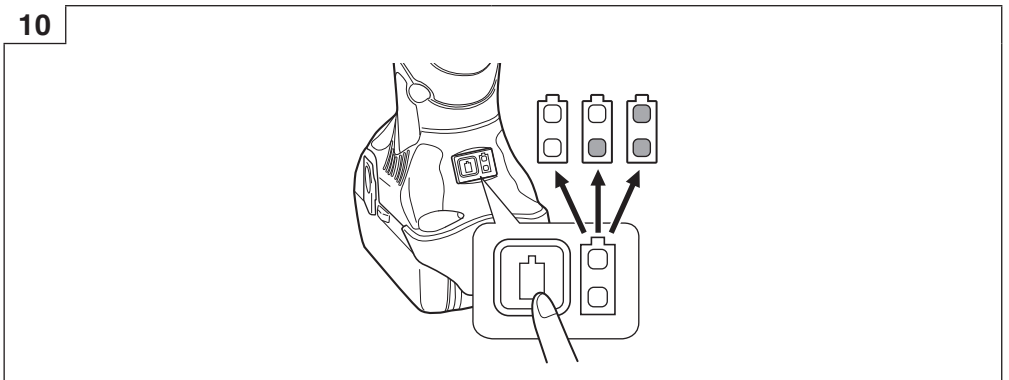
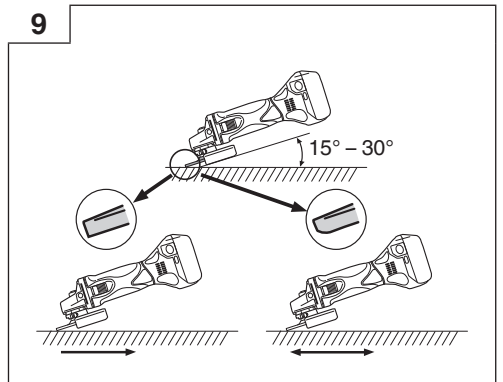
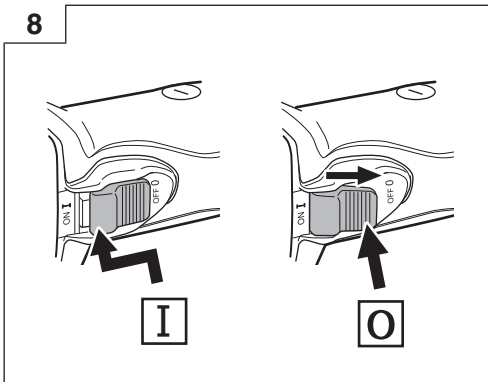
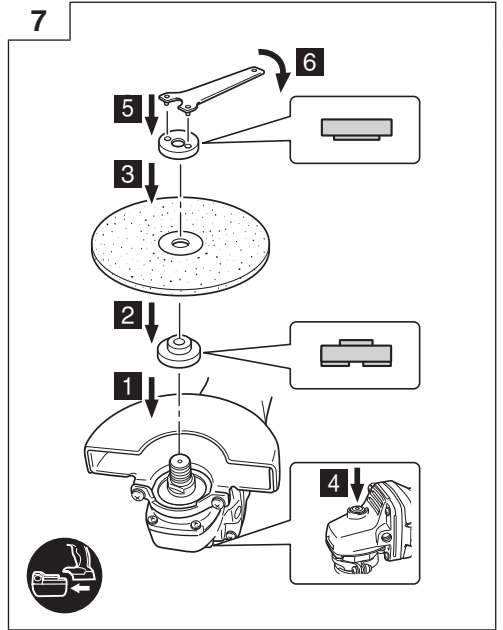
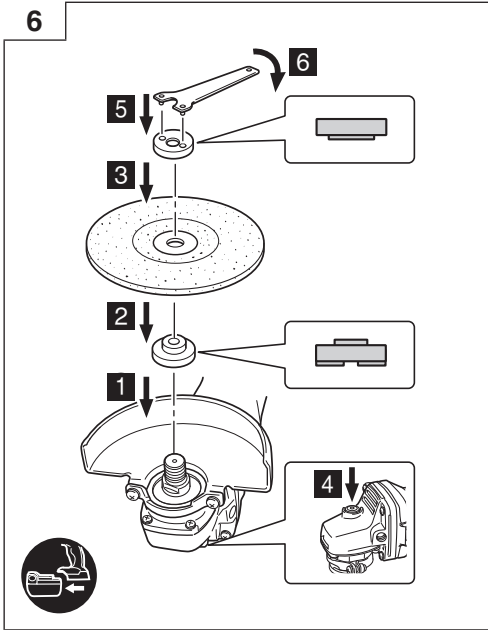
NOTE

Due to HITACHI's continuing program of research and development, the specifications herein are subject to change without prior notice.

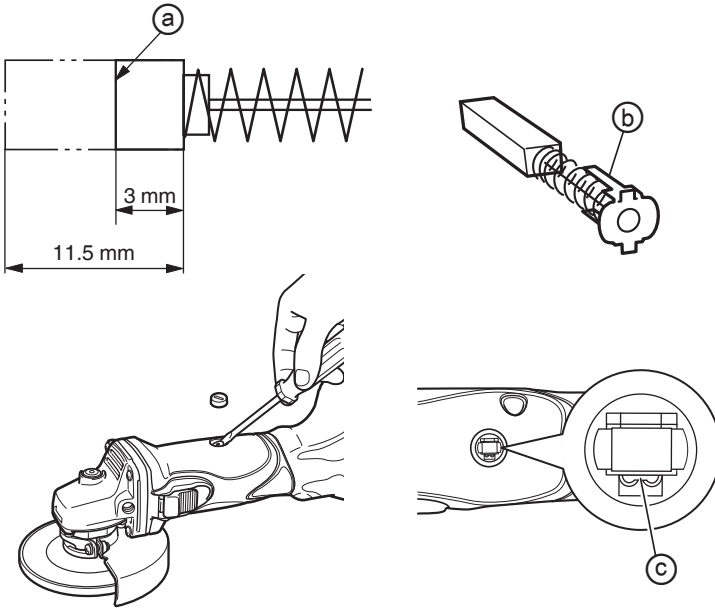
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V	14.4 V	18 V	18 V	
n	9300 /min	9100 /min	9100 /min	
	D	115 mm	125 mm	
	d	22.23 mm	22.23 mm	22.23 mm
	t	6 mm	6 mm	6 mm
	80 m/s	80 m/s	80 m/s	
	1.7 kg	1.8 kg	2.0 kg	

							
G14DSL G18DSL G18DSL(S)	1	1	1	2	1	1	1
G14DSL (NN) G18DSL (NN) G18DSL(S) (NN)	1	1	1	-	-	-	-

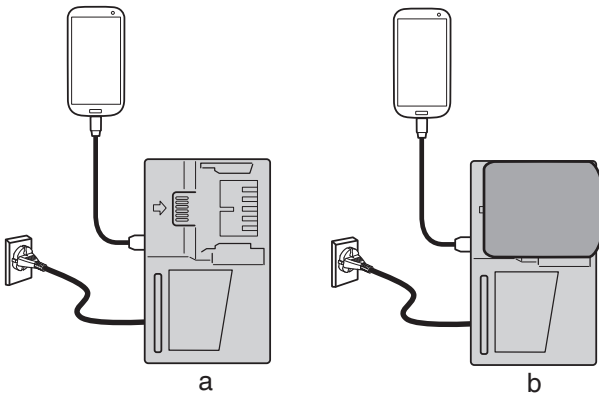




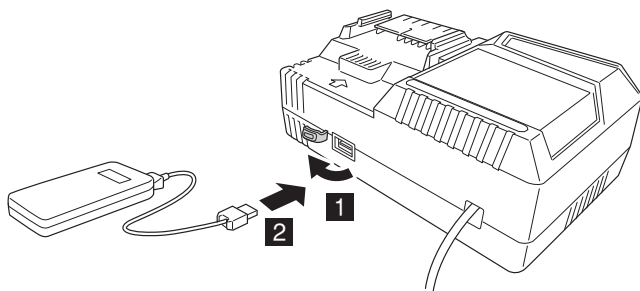
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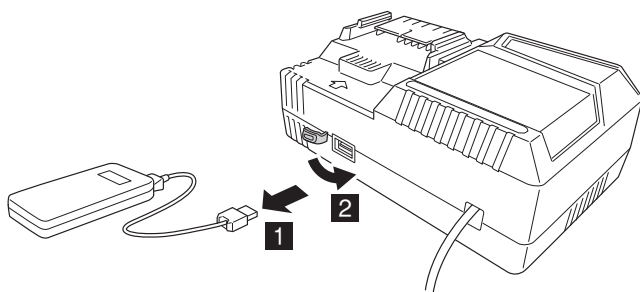
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13

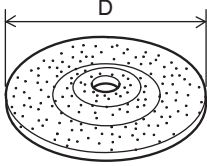


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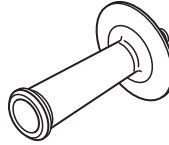




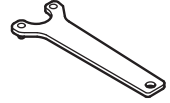
937817Z



D = 115 mm : 316821
D = 125 mm : 316822



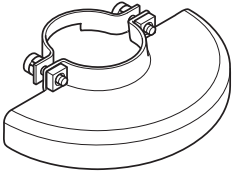
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938332Z



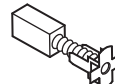
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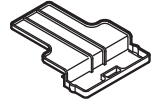
G14DSL / G18DSL : 315492
G18DSL(S) : 331766



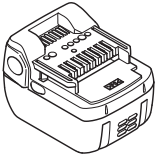
G14DSL / G18DSL : 332785



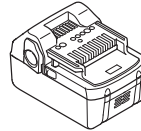
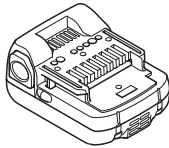
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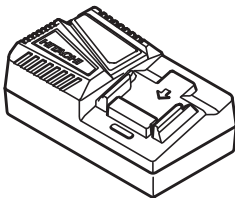
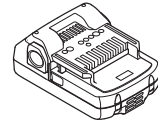
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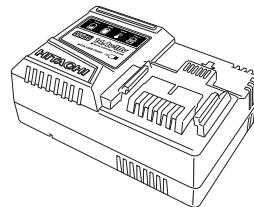
14.4 V (Li-ion)



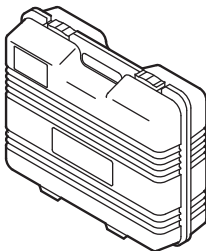
18 V (Li-ion)



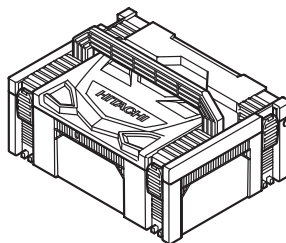
UC18YFSL (14.4 V – 18 V)



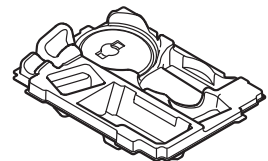
UC18YSL3 (14.4V – 18V)



328206



336471



337113

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