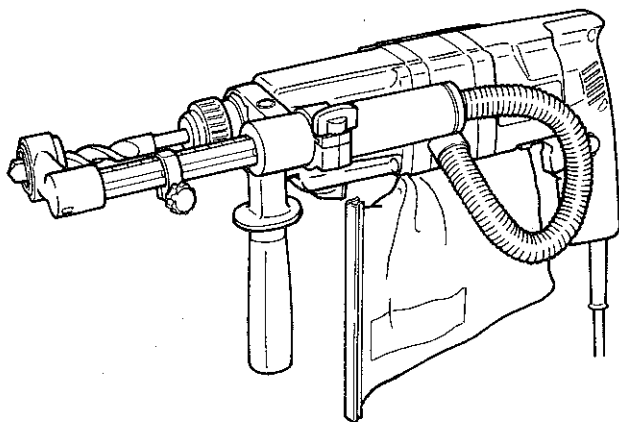


# HITACHI

## INSTRUCTION MANUAL AND SAFETY INSTRUCTIONS FOR ROTARY HAMMER

MODEL DH 24VD



**⚠ WARNING:**

Improper and unsafe use of this power tool can result in death or serious bodily injury!

This manual contains important information about product safety. Please read and understand this manual before operating the power tool. Please keep this manual available for others before they use the power tool.



**DOUBLE INSULATION**

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## **IMPORTANT INFORMATION**

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Read and understand all of the operating instructions, safety precautions and warnings in the Instruction Manual before operating or maintaining this power tool.

Most accidents that result from power tool operation and maintenance are caused by the failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing a potentially hazardous situation before it occurs, and by observing appropriate safety procedures.

Basic safety precautions are outlined in the "SAFETY" section of this Instruction Manual and in the sections which contain the operation and maintenance instructions.

Hazards that must be avoided to prevent bodily injury or machine damage are identified by WARNINGS on the power tool and in this Instruction Manual.

Never use this power tool in a manner that has not been specifically recommended by HITACHI, unless you first confirm that the planned use will be safe for you and others.

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## **MEANINGS OF SIGNAL WORDS**

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**WARNING** indicates a potentially hazardous situations which, if ignored, could result in serious personal injury.

**CAUTION** indicates a hazardous situations which, if ignored, could result in moderate personal injury, or could cause machine damage.

**NOTE** emphasizes essential information.

# SAFETY

## **IMPORTANT SAFETY INSTRUCTIONS FOR USING ALL POWER TOOLS**

**⚠ WARNING:** Death or serious bodily injury could result from improper or unsafe use of power tools. To avoid these risks, follow these basic safety instructions:

### **READ ALL INSTRUCTIONS**

#### **1. NEVER TOUCH MOVING PARTS.**

Never place your hands, fingers or other body parts near the tool's moving parts.

#### **2. NEVER OPERATE WITHOUT ALL GUARDS IN PLACE.**

Never operate this tool without all guards or safety features in place and in proper working order. If maintenance or servicing requires the removal of a guard or safety feature, be sure to replace the guard or safety feature before resuming operation of the tool.

#### **3. ALWAYS WEAR EYE AND EAR PROTECTION.**

Protect yourself from flying or expelled wood chips, metal particles or other debris by using safety goggles or equivalent eye protection. Wear ear protection to protect yourself from excessive noise.

#### **4. PROTECT YOURSELF AGAINST ELECTRIC SHOCK.**

Prevent body contact with grounded surfaces such as pipes, radiators, ranges and refrigeration enclosures. Never operate the tool in damp or wet locations.

#### **5. DISCONNECT TOOLS.**

Never leave the tool connected to a power source. Always disconnect the tool from its power source before servicing, inspecting, maintaining, cleaning and before changing or checking any parts.

#### **6. AVOID UNINTENTIONAL STARTING.**

Don't carry the tool while it is connected to its power source. Don't carry the tool with your finger near the power switch. Be sure the power switch is in the "off" position before connecting the tool to its power source.

#### **7. STORE TOOL PROPERLY.**

When not in use, the tool should be stored in a dry place. Keep out of reach of children. Lock-out the storage area.

#### **8. KEEP WORK AREA CLEAN.**

Cluttered areas and benches invite injuries. Clear all work areas and work benches of unnecessary tools, debris, furniture, etc.

**9. CONSIDER WORK AREA ENVIRONMENT.**

Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit and well ventilated.

Don't use tool in presence of flammable liquids or gases.

Power tools produce sparks during operation. They also spark when switching ON/OFF. Never use power tools in sites containing lacquer, paint, benzine, thinner, gasoline, gases, adhesive agents, and other materials which are combustible or explosive.

**10. KEEP CHILDREN AWAY.**

Do not let visitors contact tool or extension cord.

All visitors should be kept safely away from work area.

**11. DON'T FORCE TOOL.**

It will do the job better and safer at the rate for which it was intended.

**12. USE RIGHT TOOL.**

Don't force small tool or attachment to do the job of a heavy – duty tool.

Don't use tool for purpose not intended – for example — don't use circular saw for cutting tree limbs or logs.

**13. DRESS PROPERLY.**

Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors.

Wear protective hair covering to contain long hair.

**14. USE FACE, DUST MASK OR RESPIRATOR IF OPERATION IS DUSTY.**

All persons in the area where power tools are being operated should also wear face, dust masks or respirator.

**15. DON'T ABUSE CORD.**

Never carry tool by cord or yank it to disconnect from receptacle.

Keep cord from heat, oil and sharp edges.

**16. SECURE WORK.**

Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.

**17. DON'T OVERREACH.**

Keep proper footing and balance at all times.

**18. MAINTAIN TOOLS WITH CARE.**

Keep tools sharp and clean for better and safer performance.

Follow instructions for lubricating and changing accessories.

Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged.

Keep handles dry, clean, and free from oil and grease.

**19. REMOVE ADJUSTING KEYS AND WRENCHES.**

Keys and adjusting wrenches remove from tool before turning it on.

**20. OUTDOOR USE EXTENSION CORDS.**

When tool is used outdoors, use only extension cords intended for use outdoors and so marked.

**21. STAY ALERT.**

Watch what you are doing. Use common sense. Do not operate tool when you are tired.

Tools should never be used by you if you are under the influence of alcohol, drugs or medication that makes you drowsy.

**22. CHECK DAMAGED PARTS.**

Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation.

A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this Instruction Manual.

Have defective switches replaced by authorized service center.

Do not use tool if switch does not turn it on and off.

**23. NEVER USE A POWER TOOL FOR APPLICATIONS OTHER THAN THOSE SPECIFIED.**

Never use a power tool for applications other than those specified in the Instruction Manual.

**24. HANDLE TOOL CORRECTLY.**

Operate the tool according to the instructions provided herein. Do not drop or throw the tool. Never allow the tool to be operated by children, individuals unfamiliar with its operation or unauthorized personnel.

**25. CHECK FOR LIVE WIRES.**

Avoid the risk of severe electrical shock by checking for live electrical wires that may be hidden by walls, floors or ceilings. The wires should be de-energized before work begins.

**26. KEEP ALL SCREWS, BOLTS AND COVERS TIGHTLY IN PLACE.**

Keep all screws, bolts, and plates tightly mounted. Check their condition periodically.

**27. DO NOT USE POWER TOOLS IF THE PLASTIC HOUSING OR HANDLE ARE CRACKED.**

Cracks in the tool's housing or handle can lead to electric shock. Such tools should not be used until repaired.

**28. BLADES AND ACCESSORIES MUST BE SECURELY MOUNTED TO THE TOOL.**

Prevent potential injuries to yourself or others. Blades, cutting implements and accessories which have been mounted to the tool should be secure and tight.

**29. KEEP MOTOR AIR VENT CLEAN.**

The tool's motor air vent must be kept clean so that air can freely flow at all times. Check for dust build - up frequently.

**30. OPERATE POWER TOOLS AT THE RATED VOLTAGE.**

Operate the power tool at voltages specified on their nameplates.

If using the power tool at a higher voltage than the rated voltage, it will result in abnormally fast motor revolution and may damage the unit and burn up the motor.

**31. NEVER USE A TOOL WHICH IS DEFECTIVE OR OPERATING ABNORMALLY**

If the tool appears to be operating unusually, making strange noises, or otherwise appears defective, stop using it immediately and arrange for repairs by a Hitachi authorized service center.

**32. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.**

Don't leave tool until it comes to a complete stop.

**33. CAREFULLY HANDLE POWER TOOLS.**

Should a power tool be dropped or struck against hard materials inadvertently it may be deformed, cracked, or damaged.

**34. DO NOT WIPE PLASTIC PARTS WITH SOLVENT.**

Solvents such as gasoline, thinner, benzene, carbon tetrachloride, and alcohol may damage and crack plastic parts. Do not wipe them with such solvents. Wipe plastic parts with a soft cloth lightly dampened with soapy water and dry thoroughly.

**35. USE ONLY AUTHENTIC HITACHI REPLACEMENT PARTS.**

Replacement parts not manufactured by Hitachi may void your warranty and can lead to malfunction and resulting injuries. Authentic Hitachi parts are available from your dealer.

## **IMPORTANT SAFETY INSTRUCTIONS FOR USE OF THE ROTARY HAMMER**

**⚠ WARNING:** Death or serious bodily injury could result from improper or unsafe use of the rotary hammer. To avoid these risks, follow these basic safety instructions:

1. **NEVER** touch the tool bit with bare hands after operation.
2. **NEVER** wear gloves made of stuff liable to roll up such as cotton, wool, cloth or string, etc.
3. **Always** attach the side handle and securely grip the Rotary Hammer.
4. **Always** wear ear protectors when using for extended periods.
5. **Always** be careful with buried object such as an underground wiring. Touching these active wiring or electric cable with this tool, you may receive an electric shock.  
Comfirm if there are any buried object such as electric cable within the wall, floor or ceiling where you are going to operate here after.

**SAVE THESE INSTRUCTIONS  
AND  
MAKE THEM AVAILABLE TO  
OTHER USERS OF THIS TOOL!**



## REPLACEMENT PARTS

When servicing use only identical replacement parts.

Repairs should be conducted only by a Hitachi authorized service center.

## POLARIZED PLUGS

To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other).

This plug will fit in a polarized outlet only one way.

If the plug does not fit fully in the outlet, reverse the plug.

If it still does not fit, contact a qualified electrician to install the proper outlet.

Do not change the plug in any way.

## USE OF EXTENSION CORD

Replace or repair damaged cord.

Use proper size extension cord as shown in table below. An undersize cord will cause a drop in line voltage resulting in loss of power and overheating.

Make sure the extension cord is in good condition before using.

Ampere rating (on Nameplate)	0 – 2.00	2.10 – 3.4	3.5 – 5.00	5.10 – 7.0	7.10 – 12.0	12.1 – 16.0
Ext. Cabel Length	Wire Size (AWG)					
25 Ft. (7.5 m)	18	18	18	18	16	14
50 Ft. (15 m)	18	18	18	16	14	12
75 Ft. (22.5 m)	18	18	16	14	12	10
100 Ft. (30 m)	18	16	14	12	10	
150 Ft. (45 m)	16	14	12	12		
200 Ft. (60 m)	16	14	12	10		

If extension cord is intended to be used outdoors, be sure it is marked with the suffix W-A following the cord type designation, for example — SJTW-A, to indicate it is acceptable for outdoor use.

**⚠ WARNING:** Avoid electrical shock hazard. Never use this tool with a damaged or frayed electrical cord or extension cord. Inspect all electrical cords regularly. Never use in or near water or in any environment where electric shock is possible.

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## **DOUBLE INSULATION FOR SAFER OPERATION**

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To ensure safer operation of this power tool, HITACHI has adopted a double insulation design. "Double insulation" means that two physically separated insulation systems have been used to insulate the electrically conductive materials connected to the power supply from the outer frame handled by the operator. Therefore, either the symbol "□" or the words and "Double insulation" appear on the power tool or on the nameplate.

Although this system has no external grounding, you must still follow the normal electrical safety precautions given in this Instruction Manual, including not using the power tool in wet environments.

To keep the double insulation system effective, follow these precautions:

- Only HITACHI AUTHORIZED SERVICE CENTER should disassemble or assemble this power tool, and only genuine HITACHI replacement parts should be installed.
- Clean the exterior of the power tool only with a soft cloth moistened with soapy water, and dry thoroughly.  
Never use solvents, gasoline or thinners on plastic components; otherwise the plastic may dissolve.

# OPERATION AND MAINTENANCE

## NOTE:

The information contained in this Instruction Manual is designed to assist you in the safe operation and maintenance of the power tool.

Some illustrations in this Instruction Manual may show details or attachments that differ from those on your own power tool.

## NAME OF PARTS

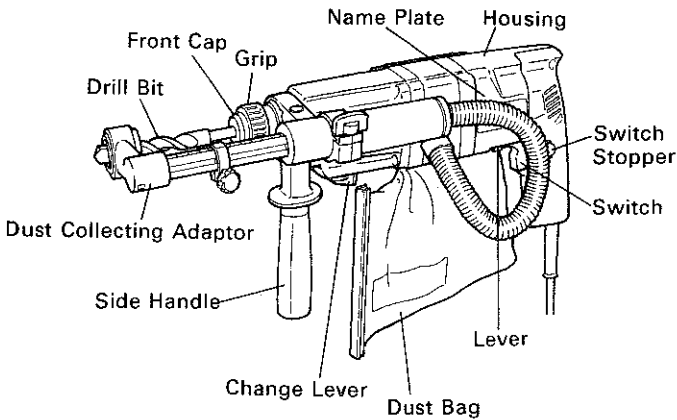


Fig. 1

## SPECIFICATION

Motor	Single-Phase, Series Commutator Motor.
Power Source	Single-Phase, 115V AC 60Hz
Current	4.6A
Capacity	Concrete: 1/8" ~ 15/16" (3.4mm ~ 24mm) Steel: 1/2" (13mm) Wood: 1-1/4" (32mm)
No-Load Speed	0 - 1000/min.
Full-load Impact Rate	4200/min.
Weight	5.7 lbs (2.6 kg)
Dust collecting adaptor Max. hole-drilling depth:	4" (100 mm) (adjustment possible between 0 and 4" (100 mm))
Diameter of drill:	1/8" ~ 15/16" (3.4 mm ~ 24 mm)
Length of drill (total length):	10-5/8" (270 mm)
Dust bag capacity:	0.11 gallon (0.4 liters)

## ACCESSORIES

**⚠ WARNING:** Accessories for this power tool are mentioned in this Instruction Manual.

The use of any other attachment or accessory can be dangerous and could cause injury or mechanical damage.

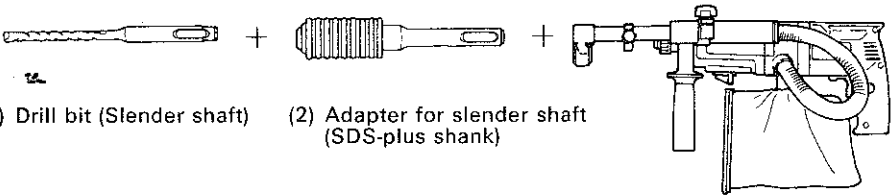
### STANDARD ACCESSORIES

- (1) Case (Modeled plastic) (Code No. 302211)..... 1
- (2) Side Handle (Code No. 303659) ..... 1
- (3) Dust-collecting Adaptor (Code No. 302074) ..... 1
- (4) Dust Bag (Code No. 302048) ..... 1  
[Number (3) and (4) refer to use on concrete]
- (5) Cap (Code No. 302374)..... 1

### OPTIONAL ACCESSORIES ..... sold separately

1. Drilling anchor holes (Rotation + Striking)

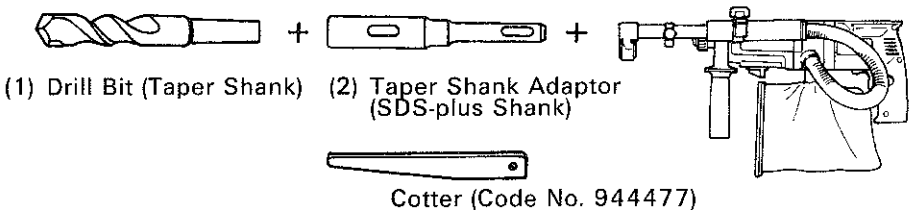
● Drill Bit (Slender shaft)



(1) Drill bit (Slender shaft)      (2) Adaptor for slender shaft (SDS-plus shank)

(1) Drill Bit (Slender Shaft)				(2) Adaptor for Slender Shaft
Outer diameter	Effective Length	Overall Length	Code No.	Code No.
1/8" (3.4mm)	1-25/32" (45mm)	3-35/64" (90mm)	306369	306370
9/64" (3.5mm)	1-25/32" (45mm)	3-35/64" (90mm)	306368	

○ Drill Bit (Taper shank) and taper shank adaptor



(1) Drill Bit (Taper Shank)      (2) Taper Shank Adaptor (SDS-plus Shank)

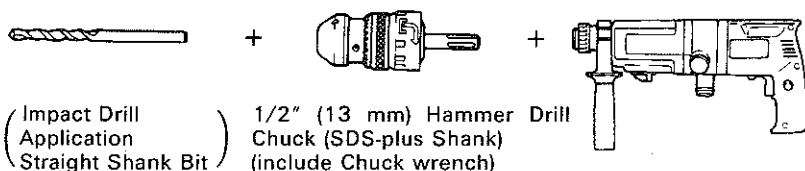
Cotter (Code No. 944477)

External dia.	Code No.
7/16" (11 mm)	944460
31/64" (12.3 mm)	944461
1/2" (12.7 mm)	993038
9/16" (14.3 mm)	944462
73/128" (14.5 mm)	944500
11/16" (17.5 mm)	944463
27/32" (21.5 mm)	944464

Taper mode	Code No.	Applicable drill bit	
Morse taper (No. 1)	303617	Drill bit (Taper shank)	7/16" (11 mm)
			31/64" (12.3 mm)
			1/2" (12.7 mm)
			9/16" (14.3 mm)
			73/128" (14.5 mm)
			11/16" (17.5 mm)
Morse taper (No. 2)	303618	Drill bit (Taper shank)	27/32" (21.5 mm)
A-taper	303619	Taper shank adaptor formed A-taper or B-taper is provided as an optional accessory, but drill bit for it is not provided.	
B-taper	303620		

○ 1/2" 13 mm Hammer Drill chuck and Chuck wrench

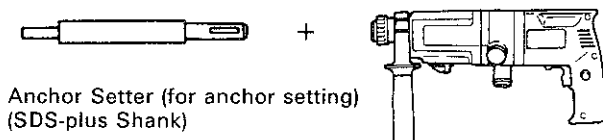
For drilling operations when using a straight shank bit for impact drilling with a hammer drill



Name	Code No.
1/2" (13 mm) Hammer Drill Chuck	303332
Chuck wrench	303334
Rubber Cap	303335

Chuck wrench

2. Knock-in anchor (Rotation + Striking)

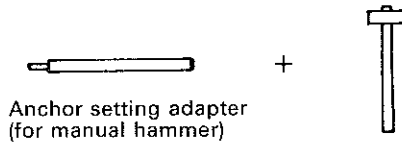


<Outer wedge type with the female screw>

Anchor size	W 1/4" (6.3 mm)	W 5/16" (8 mm)	W 3/8" (9.5 mm)	
Overall Length	10-15/64" (260 mm)	10-15/64" (260 mm)	6-19/64" (160 mm)	10-15/64" (260 mm)
Code No.	302976	302975	303621	302974

<Inner wedge type with the headless screw>

Anchor size	W 1/4" (6.3 mm)	W 5/16" (8 mm)	W 3/8" (9.5 mm)	
Overall Length	10-15/64" (260 mm)	10-15/64" (260 mm)	6-19/64" (160 mm)	10-15/64" (260 mm)
Code No.	302979	302978	303622	302977



<Outer wedge type with the female screw>

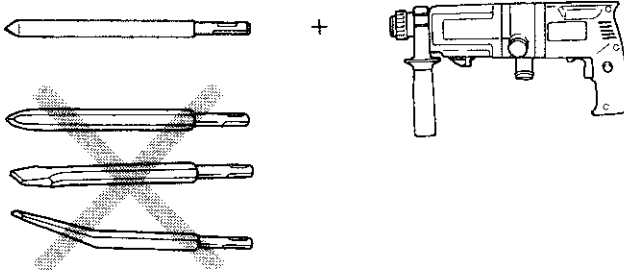
Anchor size	Code No.
W1/4" (6.3 mm)	971794
W5/16" (8 mm)	971795
W3/8" (9.5 mm)	971796
W1/2" (12.7 mm)	971797
W5/8" (15.9 mm)	971798

<Inner wedge type with the headless screw>

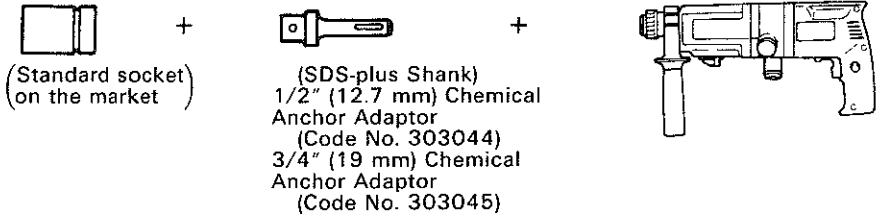
Anchor size	Code No.
W1/4" (6.3 mm)	971799
W5/16" (8 mm)	971800
W3/8" (9.5 mm)	971801
W1/2" (12.7 mm)	971802
W5/8" (15.9 mm)	971803

3. Breaking operation (rotation + striking)

Bull point (Round type only)  
(SDS-plus Shank)  
Code No. 303046

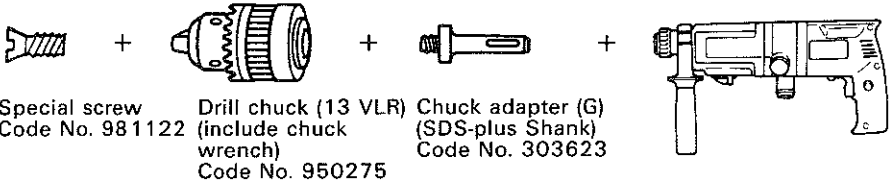


4. Bolt placing operation with Chemical Anchor. (rotation + striking)



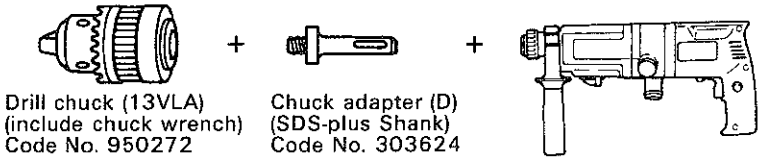
5. Drilling holes and driving screws (rotation only)

○ Drill chuck, chuck adapter and chuck wrench



Chuck wrench

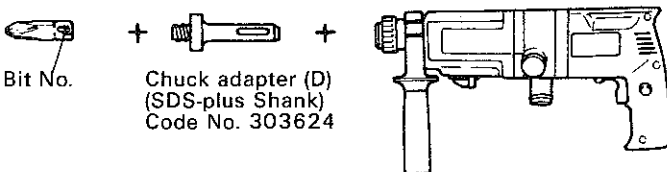
6. Drilling holes (rotation only)



Chuck wrench

○ 1/2" (13 mm) drill chuck ass'y (include chuck wrench ass'y) and chuck (for drilling in steel or wood).

7. Driving screws (rotation only)



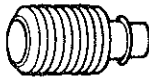
## Plus Driver Bit

Bit No.	Screw Size	Length	Code No.
No. 2	1/8"~3/16" (3 - 5 mm)	31/32" (25 mm)	971511Z
No. 3	1/4"~5/16" (6 - 8 mm)	31/32" (25 mm)	971512Z

## 8. Dust cup, Dust collector (B)

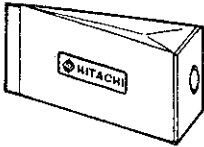


Dust cup  
Code No. 971787



Dust collector (B)  
Code No. 306885

## 9. Paper dust bag Code No. 302741



## 10. Hammer grease A

- 1.1 lbs (500 g) (in a can) Code No. 980927
- 0.15 lbs (70 g) (in a green tube) Code No. 308471
- 0.07 lbs (30 g) (in a green tube) Code No. 981840

## NOTE:

Accessories are subject to change without any obligation on the part of the HITACHI.

## APPLICATIONS

### Rotation and striking function

- Drilling anchor holes
- Drilling holes in concrete
- Drilling holes in tile

### Rotation only function

- Drilling in steel or wood  
(with optional accessories)
- Tightening machine screws, wood screws.



## PRIOR TO OPERATION

### 1. Power source

Ensure that the power source to be utilized conforms to the power source requirements specified on the product nameplate.

### 2. Power switch

Ensure that the switch is in the OFF position. If the plug is connected to a receptacle while the switch is in the ON position, the power tool will start operating immediately and can cause serious injury.

### 3. Extension cord

When the work area is far away from the power source, use an extension cord of sufficient thickness and rated capacity (refer to page 8). The extension cord should be kept as short as practicable.

**⚠ WARNING: Damaged cord must be replaced or repaired.**

### 4. Confirming condition of the environment:

Confirm that the work site is placed under appropriate conditions conforming to prescribed precautions.

### 5. Mounting the drill bit (Fig. 2)

(1) To attach a drill bit (SDS-plus shank), fully pull the grip in the direction of the arrow as shown in Fig. 2 and insert the drill bit as far as it will go while rotating.

(2) By releasing the grip, the drill bit will be secured.

(3) To remove the drill bit, fully pull the grip in the direction of the arrow and pull out the drill bit.

### 6 Installation of dust cup or dust collector (B) ass'y (Optional accessories) (Fig. 3, Fig. 4)

When using a rotary hammer for upward drilling operations attach a dust cup or a dust collector (B) ass'y to collect dust or particles for easy operation.

#### ○ Installing the dust cup

Use the dust cup by attaching to the drill bit as shown in Fig. 3.

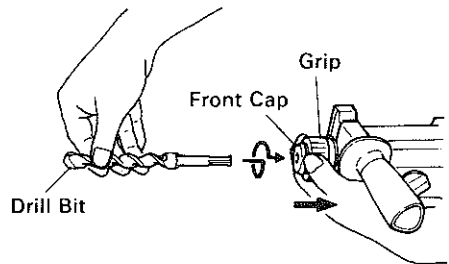


Fig. 2

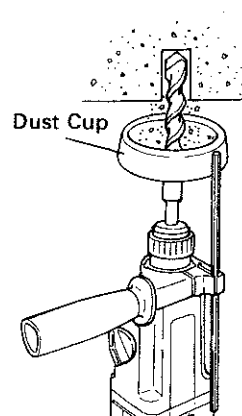


Fig. 3

When using a bit which has big diameter, enlarge the center hole of the dust cup with this rotary hammer.

- Installing the dust collector (B)  
When using the dust collector (B), insert the dust collector (B) from the tip of the bit by aligning it to the groove on the grip. (Fig. 4)

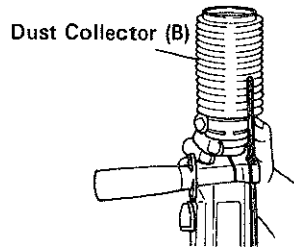


Fig. 4

### ⚠ CAUTIONS:

- The dust cup and the dust collector (B) are for exclusive use of concrete drilling work. Do not use them for wood or metal drilling work.
- Insert the dust collector (B) completely into the chuck part of the main unit.
- When turning the rotary hammer on while the dust collector (B) is detached from a concrete surface, the dust collector (B) will rotate together with the drill bit. Make sure to turn on the switch after pressing the dust cup on the concrete surface. (When using the dust collector (B) attached to a drill bit that has more than 7-15/32" (190 mm) of overall length, the dust collector (B) cannot touch the concrete surface and will rotate. Therefore please use the dust collector (B) by attaching to drill bits which have 6-17/32" (166 mm), 6-19/64" (160 mm) and 4-21/64" (110 mm) overall length.
- Dump particles after every two or three holes when drilling.
- Please replace the drill bit after removing the dust collector (B).

### 7. Selecting the driver bit

Screw heads or bits will be damaged unless a bit appropriate for the screw diameter is employed to drive in the screws.

### 8. Confirm the direction of bit rotation (Fig. 5)

The bit rotates clockwise (viewed from the rear side) by pushing the R-side of the reversing switch lever. The L-side of the lever is pushed to turn the bit counterclockwise.

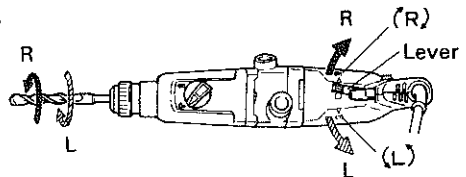


Fig. 5

## HOW TO USE

### 1. Switch operation

The rotational speed of the drill bit 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 switch is pulled more. Continuous operation may be attained by pulling the trigger switch and depressing the stopper. To turn the switch OFF, pull the trigger switch again to disengage the stopper, and release the trigger switch to its original position.

### 2. Rotation + Striking

This rotary hammer can be set to rotation and striking mode by rotating the change lever fully counterclockwise to **T** mark. (Fig. 6)

- (1) Mount the drill bit.
- (2) Pull the trigger switch after applying the drill bit tip to the drilling position. (Fig. 7).
- (3) Pushing the rotary hammer forcibly is not necessary at all. Pushing slightly so that drill dust comes out gradually is just sufficient.

#### **⚠ CAUTION:**

- When the drill bit touches construction iron bar, the bit will stop immediately and the rotary hammer will react to revolve. Therefore please grip the side handle and handle tightly as shown in Fig. 7.

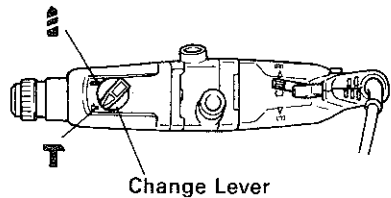


Fig. 6

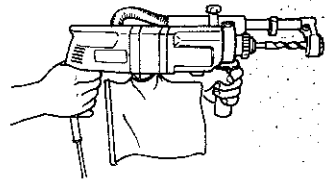


Fig. 7

### 3. Using the dust-collecting adaptor and dust bag.

Using this unit with the dust-collecting adaptor and dust bag attached creates a more hygienic working environment free of flying dust. Attach as shown in Fig. 1. The unit can be used as an ordinary rotary hammer when the dust-collecting adaptor and dust bag is not attached.

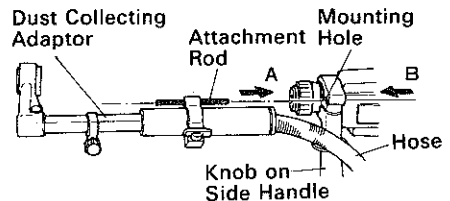


Fig. 8

(1) Attaching the dust-collecting adaptor and the dust bag.

a) Attaching the dust-collecting adaptor.

Loosen the knob on the side handle and insert the attachment rod on the dust-collecting adaptor in the mounting hole.

The adaptor can be inserted from either direction A or B (see Fig. 8). Insert and push in the hose in the hose attachment hole of the main unit until it reaches the inner surface (depth 5/8" (15 mm)) and confirm that it is firmly fixed. (see Fig. 9)

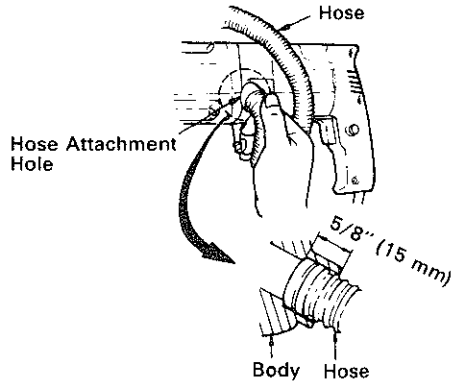


Fig. 9

b) Attaching the dust bag.

Inset the dust bag firmly in the dust bag attachment hole on the main unit and fasten securely (see Fig. 10).

**⚠ CAUTION:**

- The dust-collecting adaptor and dust bag is made for use when drilling concrete. Do not use for drilling holes in metal or wood.

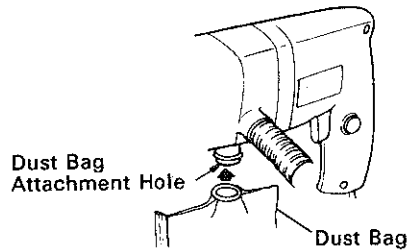


Fig. 10

(2) Adjusting the dust-collecting adaptor.

a) Adjusting the position of the dust-collecting adaptor.

After firmly insert the drill bit, loosen the wing bolt and drill bit tip and the end of the dust-collecting adaptor in contact with each other (see Fig. 11).

b) Setting the hole-drilling depth.

Move the stopper to determine the stroke. The stroke is the hole-drilling depth. (see Fig. 11).

- The maximum hole-drilling depth when using the dust-collecting adaptor is 4" (100 mm).

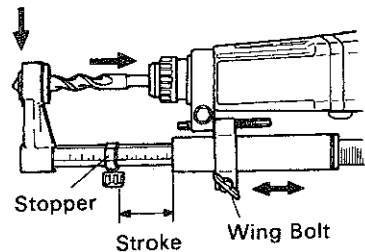


Fig. 11

- It is possible when using the dust-collecting adaptor to use HITACHI drill bits up to a overall length of 8-1/2" (216 mm). A hole-drilling depth of 1-3/4" (45 mm) will allow dust-collecting when the overall length of the drill bit is 4-9/16" (116 mm).

**(3) Drilling holes**

When drilling holes, secure the main unit so that the end of the dust-collecting adaptor contacts with the concrete surface perfectly during drilling. Dust-collecting effectiveness is reduced if the adaptor is not in contact with the surface (see Fig. 12).

**(4) Removing dust**

Excessive dust in the dust bag will reduce dust-collecting effectiveness. Remove dust from the dust bag regularly.

Remove the dust bag from the main unit, pull out the rail and throw away the dust and clean. (see Fig. 13).

**4. When not using the dust-collecting adaptor**

When removing the dust-collecting adaptor and the dust bag to use as a normal rotary hammer, insert the provided cap in the hose attachment hole. (see Fig. 14) After removing the dust bag, the air blowing out from the attachment hole is reduced and no air will blow onto your face.

**5. Rotation only**

Remove the dust-collecting adaptor as it cannot be used. Insert the provided cap in the hose attachment hole.

The rotary hammer can be set to rotation only mode by rotating the change lever fully clockwise to  $\frac{1}{2}$  mark. (Fig. 15)

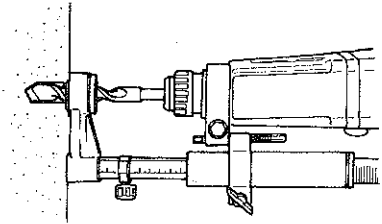


Fig. 12

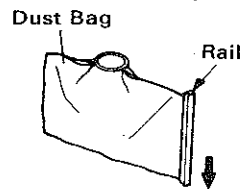


Fig. 13

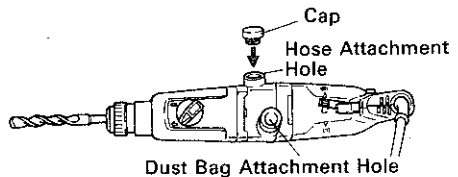


Fig. 14

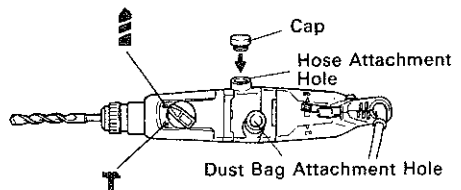


Fig. 15

To drill a wood or metal material using the supplied drill chuck and chuck adaptor, proceed as follows. Installing drill chuck and chuck adaptor (Fig. 16):

- (1) Attach the drill chuck to the chuck adaptor.
- (2) The part of the SDS-plus shank is the same as the drill bit. Therefore, refer to the item of "Mounting the drill bit" for attaching it.

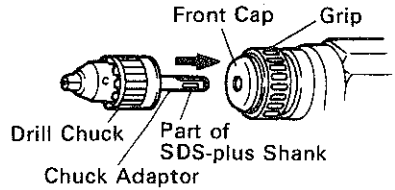


Fig. 16

**⚠ CAUTION:**

- Application of force more than necessary will not only expedite work at all, but will deteriorate the tip edge of the drill bit and reduce the service life of the rotary hammer in addition.
- Drill bit may snap off while withdrawing the rotary hammer from the drilled hole. For withdrawing, it is important to use a pushing motion.
- Do not attempt to drill anchor holes or holes in concrete with the machine set in the rotation only function.
- Do not attempt to use the rotary hammer in the rotation and striking function with the drill chuck and chuck adaptor attached. This would seriously shorten the service life of every component of the machine.

**6. When driving machine screws (Fig. 17)**

First, insert the bit into the socket in the end of the chuck adaptor (D). Next, mount the chuck adaptor (D) on the main unit using procedures described in 5 (1), (2), (3), put the tip of the bit in the slots in the head of the screw, grasp the main unit and tighten the screw.

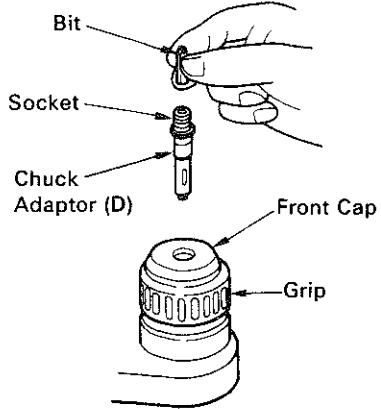


Fig. 17

**⚠ CAUTIONS:**

- Exercise care not to excessively prolong driving time, other wise, the screws may be damaged by excessively force.
- Apply the rotary hammer perpendicularly to the screw head when driving a screw; otherwise, the screw head or bit will be damaged, or driving force will not be fully transferred to the screw.
- Do not attempt to use the rotary hammer in the rotation and striking fucion with the chuck adaptor (D) and bit attached.

**7. When driving wood screws (Fig. 17)**

**(1) Selecting a suitable driver bit**

Employ plus-head screws, if possible, since the driver bit easily slips off the heads of minus-head screws.

**(2) Driving in wood screws**

- Prior to driving in wood screws, make pilot holes suitable for them in the wooden board. Apply the bit to the screw head grooves and gently drive the screws into the holes.
- After rotation the rotary hammer at low speed for a while until a wood screw in partly driven into the wood, squeeze the trigger more strongly to obtain the optimum driving force.

**⚠ CAUTION:**

- Exercise care in preparing a pilot hole suitable for the wood screw taking the hardness of the wood into consideration. Should the hole the excessively small or shallow, requiring much power to drive the screw into it, the thread of the wood screw may sometimes be damaged.

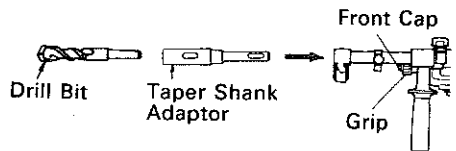


Fig.18

**8. How to use the drill bit (taper shank) and the taper shank adaptor.**

- (1) Mount the taper shank adaptor to the rotary hammer. (Fig. 18)
- (2) Mount the drill bit (taper shank) to the taper shank adaptor. (Fig. 18)
- (3) Turn the switch ON, and drill a hole in prescribed depth.
- (4) To remove the drill bit (taper shank), insert the cotter into the slot of the taper shank adaptor and strike the head of the cotter with a hammer supporting on the rest. (Fig. 19)

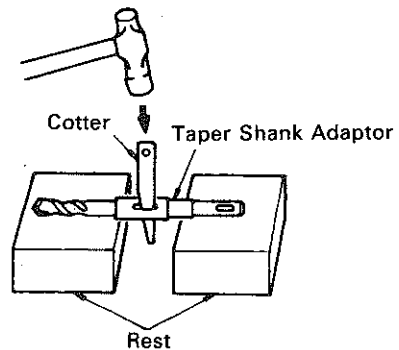


Fig.19

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## LUBRICATION

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Low viscosity grease is applied to this rotary hammer so that it can be used for a long period without replacing the grease. Please contact the nearest service agent for grease replacement when any grease is leaking from loosened screw. Further use of the rotary hammer despite the grease shortage causes seizure to reduce the service life.

**⚠ CAUTION:** A specific grease is used with this machine, therefore, the normal performance of the machine may be badly affected by use of other grease. Please be sure to let one of our service agents undertake replacement of the grease.

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## MAINTENANCE AND INSPECTION

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**⚠ WARNING:** Be sure to switch power OFF and disconnect the plug during maintenance and inspection.

### 1. Inspecting the drill bits

Since use of a dull tool will cause motor malfunctioning and degraded efficiency, replace the drill bits with a new one or resharpening without delay when abrasion is noted.

### 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.

**⚠ WARNING:** Using this rotary hammer with loosen screws is extremely dangerous.

### 3. Inspecting the carbon brushes

For your continued safety and electrical protection, carbon brush inspection and replacement on this tool should ONLY be performed by a HITACHI AUTHORIZED SERVICE CENTER.

### 4. Maintenance of the motor

The motor unit winding is the very "hear" of the pwer tool. Exercise due care to ensure the winding does not become damaged and/or wet oil or water.



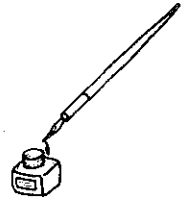
## **SERVICE AND REPAIRS**

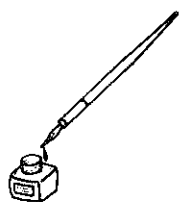
All quality power tools will eventually require servicing or replacement of parts because of wear from normal use. To assure that only authorized replacement parts will be used, all service and repairs must be performed by a HITACHI AUTHORIZED SERVICE CENTER, ONLY.

In regard to SERVICE CENTER, refer to the enclosed Service Center List.

### **NOTE:**

Specifications are subject to change without any obligation on the part of the HITACHI.





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