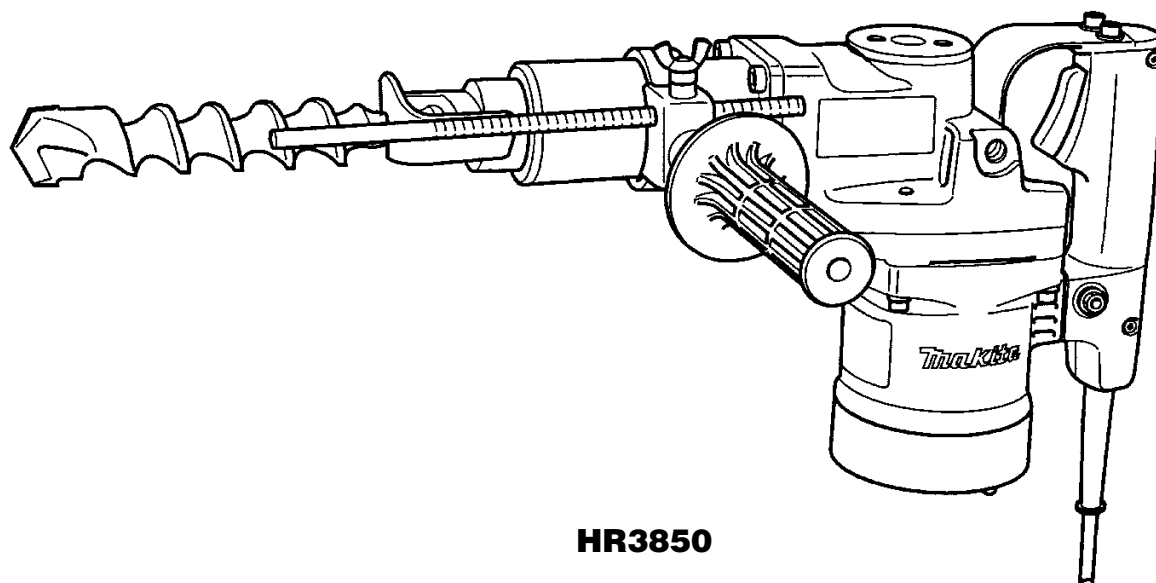


Makita[®]

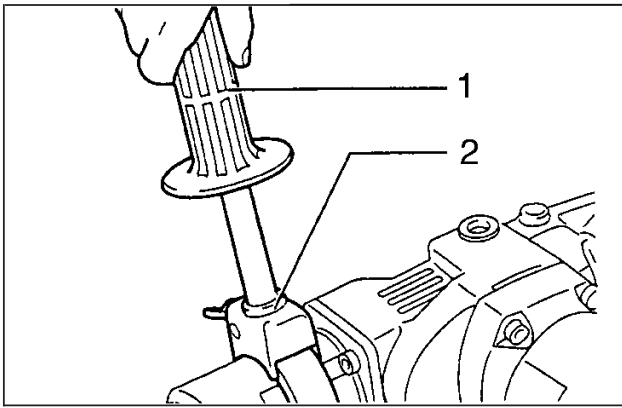
GB	Rotary Hammer	Instruction Manual
F	Perforateur	Manuel d'instructions
D	Bohrhammer	Betriebsanleitung
I	Martello rotativo	Istruzioni per l'uso
NL	Boor-en breekhamer	Gebruiksaanwijzing
E	Martillo rotativo	Manual de instrucciones
P	Martelo misto	Manual de instruções
DK	Borehammer	Brugsanvisning
S	Borrhammare	Bruksanvisning
N	Borhammer	Bruksanvisning
SF	Poravasara	Käyttöohje
GR	Περιστροφικό σφυρί	Οδηγίες χρήσεως

35 mm HR3520
38 mm HR3850

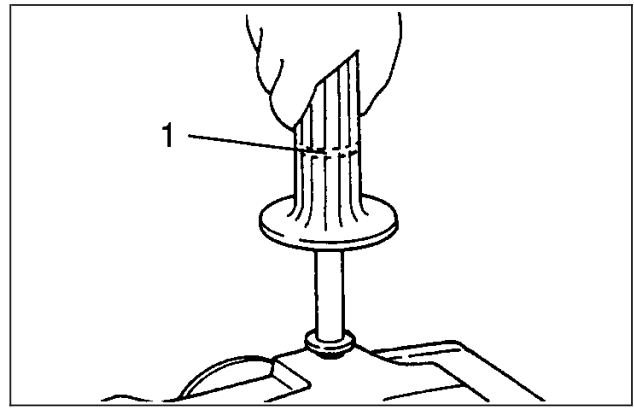


HR3850

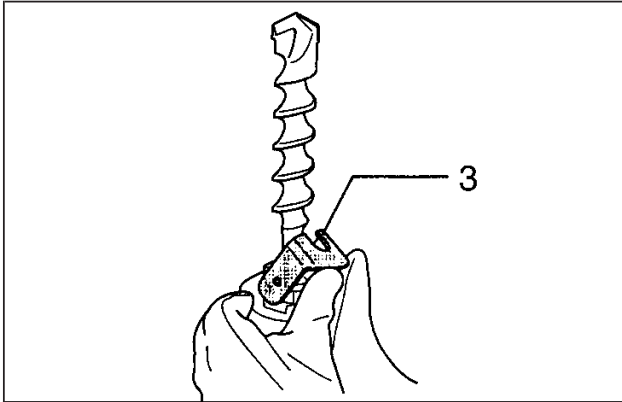




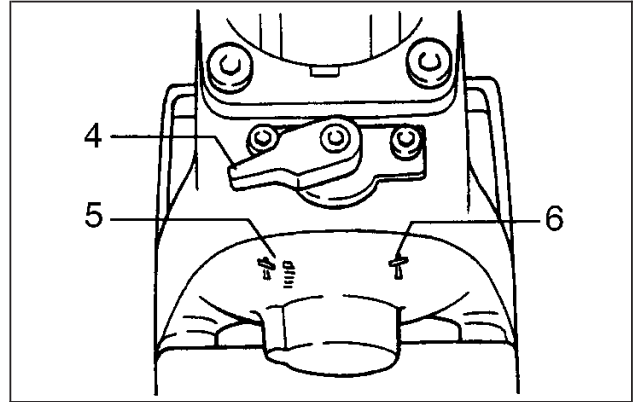
1



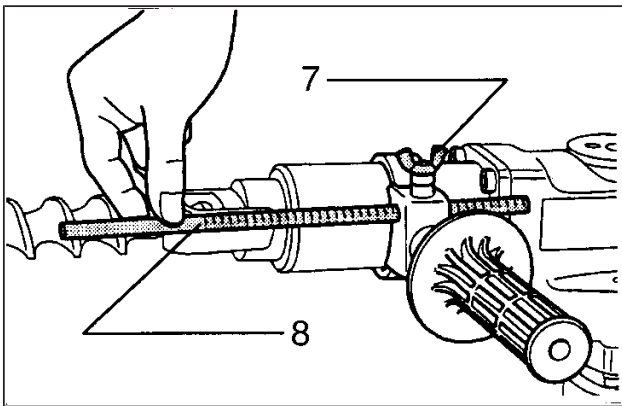
2



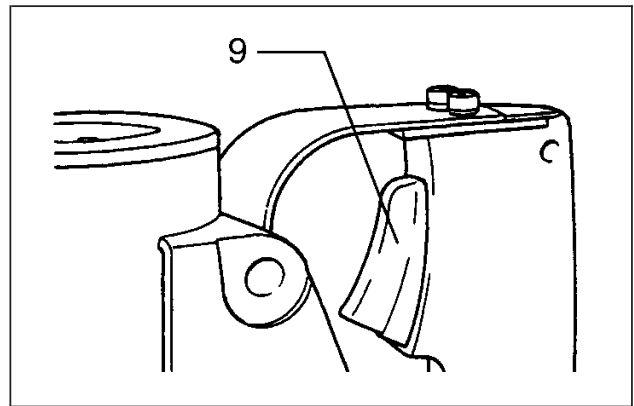
3



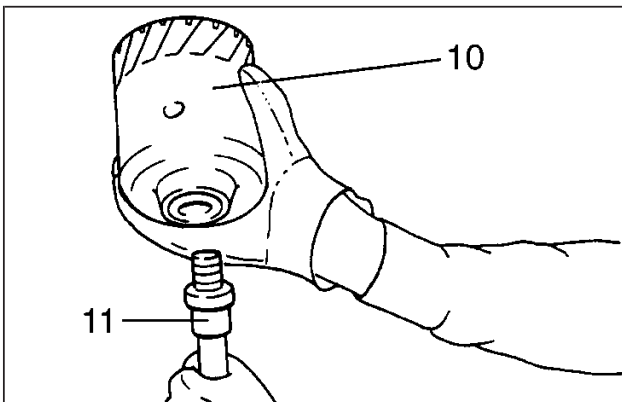
4



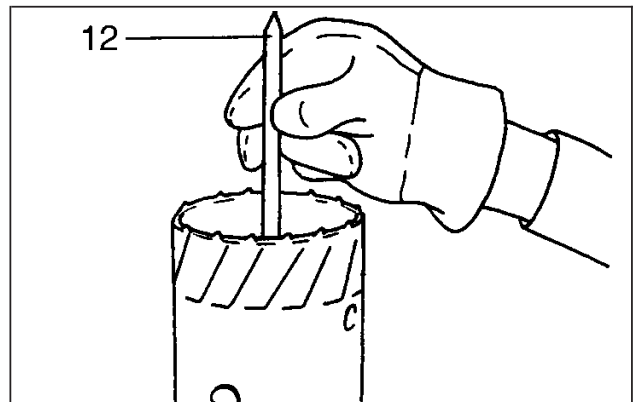
5



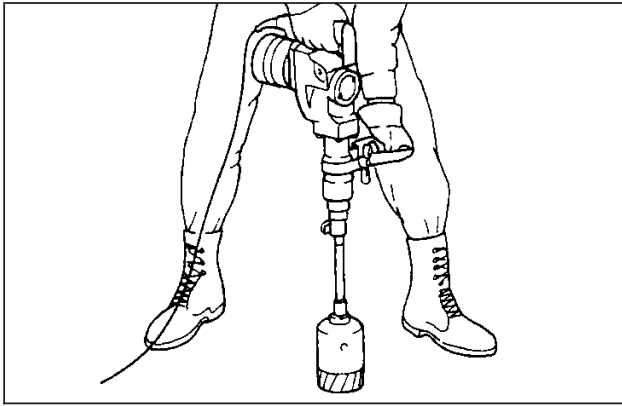
6



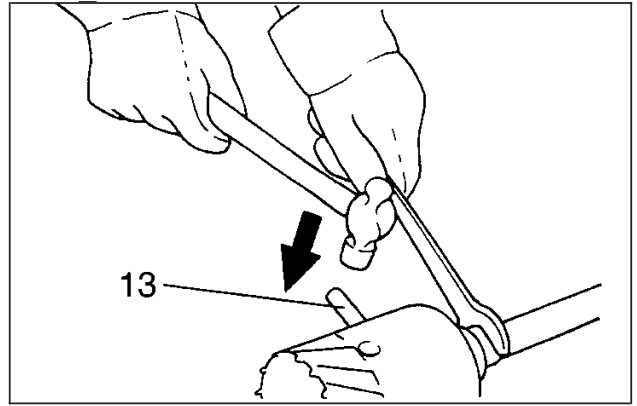
7



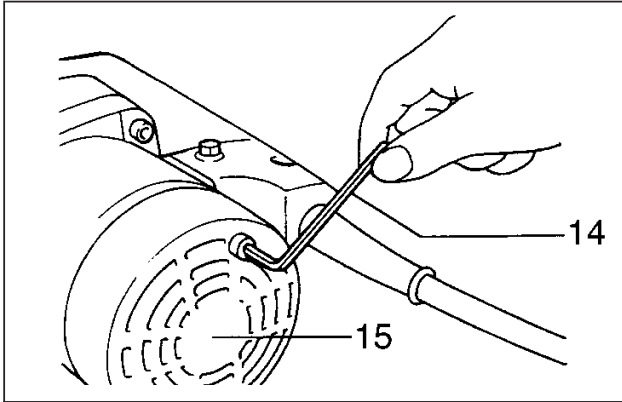
8



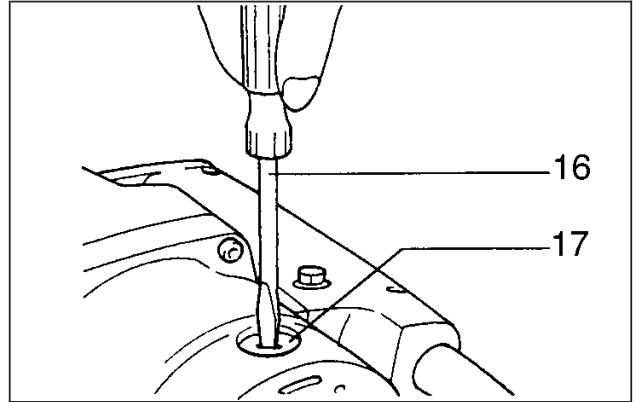
9



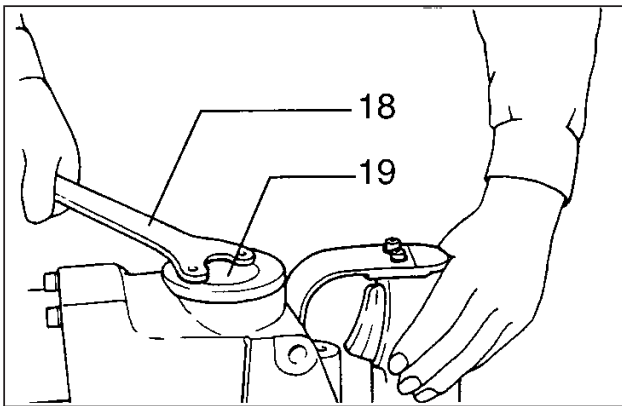
10



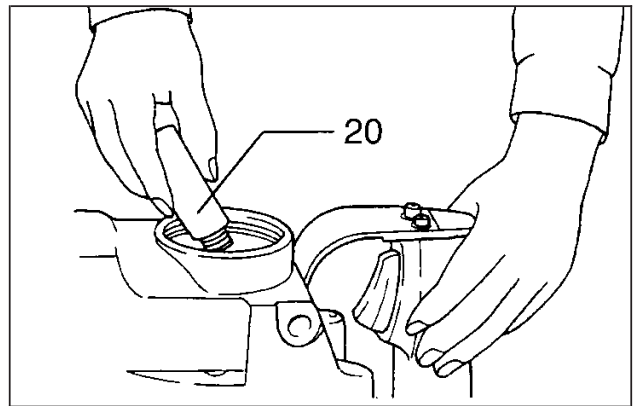
11



12



13



14

Symbols

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

Symboles

Nous donnons ci-dessous les symboles utilisés pour l'outil. Assurez-vous que vous en avez bien compris la signification avant d'utiliser l'outil.

Simbole

Die folgenden Symbole werden für die Maschine verwendet. Machen Sie sich vor der Benutzung unbedingt mit ihrer Bedeutung vertraut.

Simboli

Per questo utensile vengono usati i simboli seguenti. Bisogna capire il loro significato prima di usare l'utensile.

Symbolen

Voor dit gereedschap worden de volgende symbolen gebruikt. Zorg ervoor dat u de betekenis van deze symbolen begrijpt alvorens het gereedschap te gebruiken.

Símbolos

A continuación se muestran los símbolos utilizados con esta herramienta. Asegúrese de que entienda su significado antes de usarla.

Símbolos

O seguinte mostra os símbolos utilizados para a ferramenta. Certifique-se de que compreende o seu significado antes da utilização.

Symboler

Nedenstående symboler er anvendt i forbindelse med denne maskine. Vær sikker på, at De har forstået symbolernes betydning, før maskinen anvendes.

Symboler

Det följande visar de symboler som används för den här maskinen. Se noga till att du förstår deras innebörd innan maskinen används.

Symbolene

Følgende viser de symbolene som brukes for maskinen. Det er viktig å forstå betydningen av disse før maskinen tas i bruk.

Symbolit

Alla on esitetty koneessa käytetty symbolit. Opettele näiden merkitys, ennen kuin käytät konetta.

Σύμβολα

Τα ακόλουθα δείχνουν τα σύμβολα που χρησιμοποιούνται για το μηχάνημα. Βεβαιωθείτε ότι καταλαβαίνετε τη σημασία τους πριν από τη χρήση.



- Read instruction manual.
- Lire le mode d'emploi.
- Bitte Bedienungsanleitung lesen.
- Leggete il manuale di istruzioni.
- Lees de gebruiksaanwijzing.
- Lea el manual de instrucciones.

- Leia o manual de instruções.
- Læs brugsanvisningen.
- Läs bruksanvisningen.
- Les bruksanvisningen.
- Katso käyttöohjeita.
- Διαβάστε τις οδηγίες χρήσης.



- DOUBLE INSULATION
- DOUBLE ISOLATION
- DOPPELT SCHUTZISOLIERT
- DOPPIO ISOLAMENTO
- DUBBELE ISOLATIE
- DOBLE AISLAMIENTO

- DUPLO ISOLAMENTO
- DOBBELT ISOLERET
- DUBBEL ISOLERING
- DOBBEL ISOLERING
- KAKSINKERTAINEN ERISTYS
- ΔΙΠΛΗ ΜΟΝΩΣΗ

ENGLISH

Explanation of general view

1 Side grip	8 Depth gauge	15 Rear cover
2 Grip base	9 Switch trigger	16 Screwdriver
3 Tool retainer	10 Core bit	17 Brush holder cap
4 Change lever	11 Adapter	18 Lock nut wrench
5 For rotation with hammering	12 Center bit	19 Crank cap
6 For hammering only	13 Rod	20 Hammer grease
7 Wing bolt	14 Hex wrench	

SPECIFICATIONS

Model	HR3520	HR3850
Capacities		
Tungsten-carbide bit	35 mm	38 mm
Core bit	79 mm	118 mm
No load speed (min ⁻¹)	440	240
Blows per min.	3,300	2,900
Overall length	386 mm	430 mm
Net weight	6.4 kg	7.5 kg

- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Note: Specifications may differ from country to country.

Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can be operated on single-phase AC/DC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.

Safety hints

For your own safety, please refer to the enclosed Safety instructions.

ADDITIONAL SAFETY RULES

1. **Wear a hard hat (safety helmet), safety glasses and/or face shield. It is also highly recommended that you wear a dust mask, ear protectors and thickly padded gloves.**
2. **Be sure the bit is secured in place before operation.**
3. **Under normal operation, the tool is designed to produce vibration. The screws can come loose easily, causing a breakdown or accident. Check tightness of screws carefully before operation.**
4. **In cold weather or when the tool has not been used for a long time, let the tool warm up for several minutes by operating it under no load. This will loosen up the lubrication. Without proper warm-up, hammering operation is difficult.**

5. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
6. **Hold the tool firmly with both hands.**
7. **Keep hands away from moving parts.**
8. **Do not leave the tool running. Operate the tool only when hand-held.**
9. **Do not point the tool at any one in the area when operating. The bit could fly out and injure someone seriously.**
10. **When drilling or chipping into walls, floors or wherever "live" electrical wires may be encountered, DO NOT TOUCH ANY METAL PARTS OF THE TOOL!**
Hold the tool by the insulated grasping surfaces to prevent electric shock if you drill or chip into a "live" wire.
11. **Do not touch the bit or parts close to the bit immediately after operation; they may be extremely hot and could burn your skin.**

SAVE THESE INSTRUCTIONS.

OPERATING INSTRUCTIONS

Side grip (auxiliary handle) (Fig. 1 & 2)

For maximum control and safer operation, always use the side grip with this tool. The side grip swings around to either side, allowing easy handling of the tool in any position. Loosen the side grip by turning it counterclockwise, swing it to the desired position and then tighten it by turning clockwise. (Fig. 1)

The side grip can also be installed in the position shown in Fig. 2. Remove the side grip from the grip base by turning the side grip counterclockwise. Screw the side grip on either side of the tool, whichever is convenient.

Installing or removing drill bit or other bits (bull point, etc.) (Fig. 3)

Important:


Always be sure that the tool is switched off and unplugged before installing or removing the bit.

Pivot the tool retainer to the side. (If it is difficult to move the tool retainer with your thumbs, tap it with a hammer.) Insert the bit into the tool barrel as far as it will go. Return the tool retainer to its original position to secure the bit.

To remove the bit, follow the installation procedure in reverse.

Selecting action mode (Fig. 4) (Not available for HR3520)

Rotation with hammering:

For drilling in concrete, masonry, etc., rotate the change lever to the  position.

Hammering only:

For chipping, scaling or demolition operations, rotate the change lever to the  position.

CAUTION:

- Do not rotate the change lever when the tool is running under load. The tool will be damaged.
- To avoid rapid wear on the mode change mechanism, be sure that the change lever is always positively located in one of the two action mode positions.

Adjusting depth of drilling (Fig. 5)

Loosen the wing bolt and adjust the depth gauge to the desired depth. After adjusting, tighten the wing bolt.

Switch action (Fig. 6)

CAUTION:

- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.
- Do not tape, tie or otherwise secure the trigger in the "ON" position.

To start the tool, simply pull the trigger. Release the trigger to stop.

Hammer drilling operation

Position the bit at the location for the hole, then pull the trigger.

Do not force the tool. Light pressure gives best results. Keep the tool in position and prevent it from slipping away from the hole.

Do not apply more pressure when the hole becomes clogged with chips or particles. Instead, run the tool at an idle, then remove from the hole. By repeating this several times, the hole will be cleaned out.

CAUTION:

When the bit begins to break through concrete or if the bit strikes reinforcing rods embedded in concrete, the tool may react dangerously. Maintain good balance and safe footing while holding the tool firmly with both hands to prevent dangerous reaction.

Chipping / Scaling / Demolition

Hold the tool firmly with both hands. Turn the tool on and apply slight pressure on the tool so that the tool will not bounce around, uncontrolled. Pressing very hard on the tool will not increase the efficiency.

Core bit (optional accessory)


When using the center bit

Screw the core bit on the adapter. Install the adapter with the core bit in the tool in the same manner as a drill bit. (Fig. 7)

Install the center bit. (Fig. 8)



Rest the core bit on the concrete and turn the tool on. Once the core bit has cut a shallow groove into the concrete, remove the center bit. Then resume drilling.

To remove the core bit, follow the procedures (1) or (2).

- (1) Rotate the change lever to the  position. Then rest the core bit on the concrete and turn the tool on. The core bit will come loose from the hammering action. (Fig. 9)
- (2) Hold the adapter with the wrench, insert the rod (optional accessory) into the hole in the core bit and tap with a hammer to unscrew. (Fig. 10)

When not using the center bit

Screw the core bit on the adapter. Install the adapter with the core bit in the tool in the same manner as a drill bit. (Fig. 7)

Rotate the change lever to the  position. Rest the core bit on the concrete and turn the tool on. Once the core bit has cut a shallow groove into the concrete, rotate the change lever to the  position and resume drilling.

NOTE:

No problem is caused even if the core bit unscrews slightly during brief use since the core bit rotates in the tightening direction.

To remove the core bit, follow the same removal procedures covered in **When using the center bit**.

MAINTENANCE

CAUTION:

Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Replacement of carbon brushes (Fig. 11 & 12)

Whenever carbon brushes must be replaced, they cut out the tool automatically. When this occurs, replace both carbon brushes at the same time. Use only identical carbon brushes.

Lubrication (Fig. 13 & 14)

This tool requires no hourly or daily lubrication because it has a grease-packed lubrication system. Lubricate the tool every time the carbon brushes are replaced.

Run the tool for several minutes to warm it up. Switch off and unplug the tool. Remove the crank cap using a Makita lock nut wrench 35 (optional accessory). Rest the tool on the table with the bit end pointing upwards. This will allow the old grease to collect inside the crank housing. Wipe out the old grease inside and replace with a fresh grease (60 g). Use only Makita genuine grease (optional accessory). Filling with more than the specified amount of grease (approx. 60 g) can cause faulty hammering action or tool failure. Fill only with the specified amount of grease. Reinstall the crank cap and tighten with the lock nut wrench. Do not tighten the crank cap excessively. It is made of resin and is subject to breakage.

To maintain product safety and reliability, repairs, maintenance or adjustment should be carried out by a Makita Authorized Service Center.