



OPERATION AND PARTS MANUAL



MODEL CDM1H HAND-HELD CORE DRILL (ELECTRIC MOTOR)

Revision #6 (09/08/10)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

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 **WARNING** 

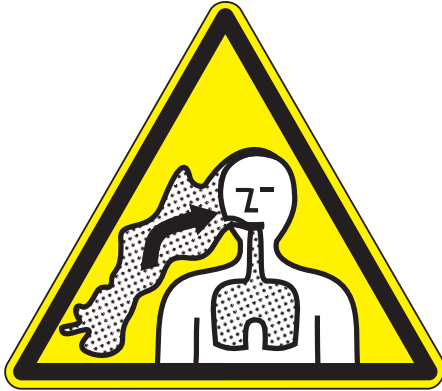
CALIFORNIA — Proposition 65 Warning

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks.
- Cement and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: **ALWAYS** work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

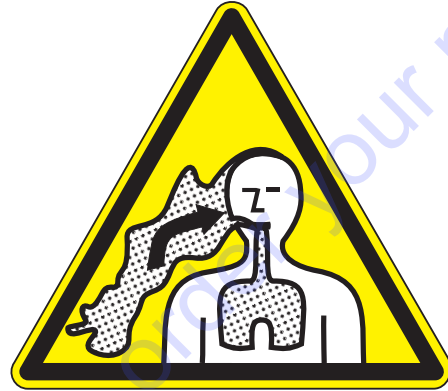
WARNING



SILICOSIS WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow the respiratory precautions mentioned above.

WARNING



RESPIRATORY HAZARDS

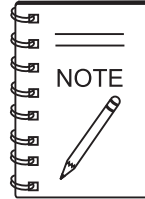
Grinding/cutting/drilling of masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. If you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity, or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufacturers or suppliers, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mists and fumes cannot be eliminated, the operator and any bystanders should always wear a respirator approved by NIOSH/MSHA for the materials being used.

CDM1H HAND-HELD CORE DRILL — TABLE OF CONTENTS

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**Specification and part number
are subject to change without
notice.**

CDM1H HAND-HELD CORE DRILL— SAFETY MESSAGE ALERT SYMBOLS

FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Operation and Parts Manual has been developed to provide complete instructions for the safe and efficient operation of the **MQ Model CDM1H Core Drill**.

Before using this core drill, ensure that the operating individual has read and understands all instructions in this manual.

SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**, **WARNING**, or **CAUTION**.

DANGER

You **WILL** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.

WARNING

You **CAN** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.

CAUTION

You **CAN** be **INJURED** if you **DO NOT** follow directions.

HAZARD SYMBOLS

Potential hazards associated with the operation of the **MQ Model CDM1H Core Drill** will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

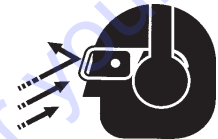
WARNING - Respiratory Hazards

ALWAYS wear approved **respiratory** protection when required.



CAUTION - Eye and Hearing Hazards

ALWAYS wear approved eye and hearing protection.



CAUTION - Accidental Starting Hazards

ALWAYS place the core-drill's **ON/OFF** switch in the **OFF** position when the drill is not in use.



CAUTION - Over Speed Conditions

NEVER tamper with the factory settings of the core drill. Personal injury and damage to the core drill can result if operating in speed ranges above maximum allowable.



CAUTION - Rotating Drill Bit

Rotating drill bit can cut and crush. Keep hands and feet clear.



CAUTION - Equipment Damage Hazards

Other important messages are provided throughout this manual to help prevent damage to your drill, other property, or the surrounding environment.

CDM1H HAND-HELD CORE DRILL — RULES FOR SAFE OPERATION

DANGER

Read this manual!

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the **MQ Model CDM1H Core Drill**.

GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots, hard hat and other protective devices required by the job.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of **drugs** or **alcohol**.



- **ALWAYS** wear proper respiratory (mask), hearing and eye protection equipment when operating the core drill.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.
- Manufacture does not assume responsibility for any accident due to equipment modifications.
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.



- **NEVER** operate the core drill in an explosive atmosphere or near combustible materials. The electric motor of this core-drill emits sparks during operation and shut-down. A explosion or fire could result causing severe **bodily harm or even death** if the sparks make contact with combustible or explosive materials.
- Maintain this equipment in a safe operating condition at all times.
- Keep bystanders, children and visitors away while operating the core drill. Distractions can cause you to lose control.
- **DO NOT** wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.
- **ALWAYS** be sure the operator is familiar with proper safety precautions and operation techniques before using core drill.
- **ALWAYS** keep work area clean and free of foreign matter and debris. Also keep work area well lit.
- Avoid accidental starting. Make sure power **ON/OFF** switch is off before applying power. Carrying the core-drill with your finger on the power switch invites accidental starting.
- **NEVER** leave the core drill unattended. When not in use always unplug the core drill from power source.
- **ALWAYS** remove any adjusting keys or wrenches before turning the core drill on. A wrench or key that is left attached to the rotating part of the core drill may result in personal injury.
- **DO NOT** overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the core drill in unexpected situations.
- Keep all **inexperienced** and **unauthorized** people away from the equipment at all times.
- Become familiar with the components of the core drill before operating.
- **ALWAYS** replace any worn or damaged warning decals.
- **NEVER** touch drill bit cutting edges during operation. Also allow drill bit a sufficient amount of time to cool before touching.



CDM1H HAND-HELD CORE DRILL — RULES FOR SAFE OPERATION

- Maintain the core drill and drill bits with care. Keep drill bits sharp. Sharp cutting edges are less likely to bind.
 - If drilling into a workpiece that is unattached, use clamps or other means to secure the workpiece so that it will not move. **NEVER** hold the workpiece by hand or against your body.
 - Use this core drill only for its intended purpose. **DO NOT** use this core drill for applications not recommended.
 - Inspect the drill after each use. Replace any damaged or worn parts immediately. **DO NOT** use a defective core-drill.
 - **NEVER** point the core drill at anyone in the area when operating.
 - **ALWAYS** hold the core drill firmly with both hands when drilling.
 - **NEVER** cover the air vents on the body of the core drill. **ALWAYS** leave these vents exposed. These vents are essential for the cooling of the electric motor. **NEVER** place tape over the vent to keep out dust.
 - If a malfunction occurs, immediately unplug the core drill from the power source and correct the problem. If the problem can not be corrected, contact Discount-equipment.
 - **DO NOT** force your core drill. Exerting excessive force while drilling will damage your machine and is hazardous.
 - **ALWAYS** make sure drill bits are installed securely so that it will slip or fall out. It is hazardous to use a core drill with a loose fitted drill bit.
 - Some materials contain chemicals which may be toxic. Take precautions to prevent dust inhalation and skin contact.
- ## ELECTRICAL SAFETY
- **ALWAYS** test the **ON/OFF** switch on the core drill before operating. The purpose of this switch is to shut down the electric motor.
 - **NEVER** use an extension cord that is frayed or damaged where the insulation has been cut.
 - **NEVER** carry the core drill by its power cord or disconnect it by yanking the cord from the power outlet.
 - **ALWAYS** make certain that the proper extension cord has been selected for the job. See Table 4.
 - **NEVER** allow power cord to *lay in water*.
 - **NEVER** *stand in water* while operating the core drill.
 - **DO NOT** walk around with a plugged in core drill. The possibility exist of your finger accidentally hitting the power **ON/OFF** switch, causing severe **bodily harm or even death**.
 - When connecting the core drill to a power receptacle, make sure the receptacle circuit is connected to either a GFCI receptacle or a receptacle protected by a 20 amp circuit breaker.
 - When plugging the core-drill into a power receptacle, check the nameplate for the correct operating voltage. Operating the core drill at the wrong voltage will damage the electric motor. **ALWAYS** read the nameplate before applying power.
 - This core drill is equipped with a 3-prong male power plug. **DO NOT** use a 2-prong adapter when plugging into a wall outlet. This will defeat the purpose of the ground circuit. If the plug does not fit into the receptacle, contact a qualified electrician to install a 3-conductor wall receptacle (outlet).
 - Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electrical shock if your body is grounded.
 - **DO NOT** expose the the core drill to rain or wet conditions. Water entering the drill wii increase the risk of electrical shock.
 - When operating the core drill outside, be sure to use the appropriate outdoor extension cord. This type of extension cord reduces the risk of electrical shock.
 - **ALWAYS** hold core drill by its insulated gripping handle when performing work. The possibility exists of the drill bit making contact with hidden wiring or its own cord. Contact with a "live" wire can cause electrical shock to the operator.
 - **ALWAYS** remove the AC power cord from the power source before performing any service or maintenance on the core drill. This preventative safety measure reduces the possibility of accidental starting.

CDM1H HAND-HELD CORE DRILL — RULES FOR SAFE OPERATION

TRANSPORTING

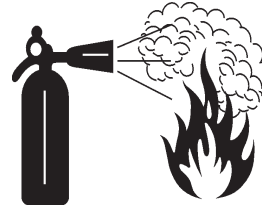
- **ALWAYS** place the core drill inside its carrying case when work has been completed.
- **ALWAYS** wrap power cord neatly to avoid damage.
- **ALWAYS** place wrenches back into carrying case when work has been completed.

MAINTENANCE

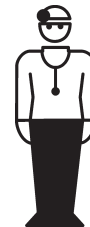
- **NEVER** lubricate components or attempt service on a running core drill.
- **ALWAYS** allow the core drill a proper amount of time to cool before servicing.
- Keep the core drill in proper running condition.
- Fix damage to the core drill immediately and always replace broken parts. Replace with only MQ recommended parts.

EMERGENCIES

- **ALWAYS** know the location of the nearest **fire extinguisher** and **first aid kit**.



- In emergencies **always** know the location of the nearest phone or **keep a phone on the job site**. Also know the phone numbers of the nearest **ambulance**, **doctor** and **fire department**. This information will be invaluable in the case of an emergency.



CDM1H HAND-HELD CORE DRILL — GENERAL INFORMATION

APPLICATION

The **MQ CDM1H Hand-Held Core Drill** is designed to be used for either dry or wet drilling applications involving concrete type materials. Up to 3-inch (76.2 mm) diameter holes can be drilled for **wet** drilling applications using **standard** MQ drill bits or 5-1/8 inch (130 mm) diameter holes for **wet or dry** applications using the **Cobra™** drill bits.

Power Plant

The MQ CDM1H is powered by a 115 VAC electric motor @ 12 amps. Maximum RPM's is 2200. The unit weighs 9.0 lbs (3.35 kg.)

Features

The CDM1H kit comes as follows:

- Hand-Held Core Bit Power Drill
- Carrying Case
- Two Core Bit Adapters
- Detachable Threaded Handle
- Water Kit
- Tools for Core Bit Connection/Removal
- Operation and Parts Manual

Cobra™ Drill Bits (Wet and Dry)

The Cobra™ drill bits are engineered to drill through reinforced concrete with or without water. These bits are available in 6 or 10 inch (15.24- 25.4 cm.) drilling **depths** and range in **diameter** from 1 to 5 inches (25 to 127 mm.).

Standard MQ Drill Bits (Wet)

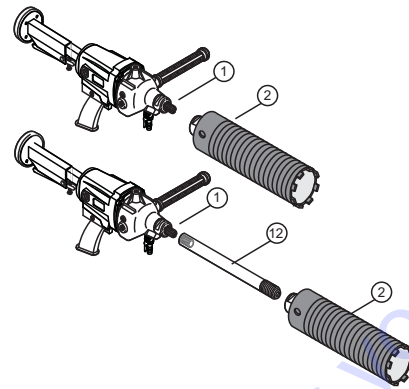
This core drill can use the following series of wet drilling bits:

- **GCB Series** – economy quality small jobs.
- **GB Series** – standard quality small to mid-size jobs.
- **PRB Series** – premium quality for fast speeds.
- **PCB Series** – super premium quality and long life.
- **PCB Series** – pro quality, high steel content and extremely hard aggregate small jobs.

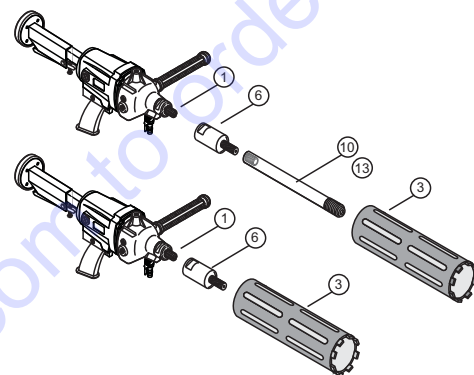
Threads/Adapters and Core Bit Combinations

Figure 1 and Table 1 depict most Adapter/Core Bit combinations and part numbers. The CDM1H is manufactured with an 18mm male drive end that directly connects to all MQ COBRA™ drill bits. For other US standard threading options, the CDM1H includes two adapters: (1) **ADM1858** – that permits connection of 5/8"-11 female threaded bits, and (2) **ADM181147** – that permits connection of 1 1/4"-7 female threaded bits. All other adapters/extensions are available as optional part items.

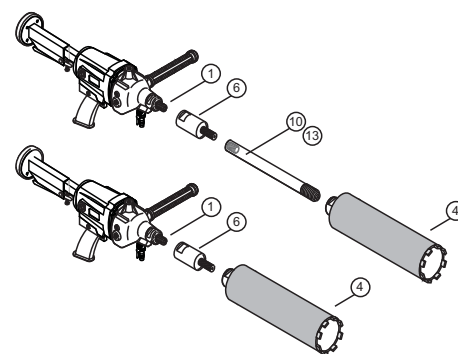
COBRA BIT (M18) SET-UPS – up to 5-in. dia.



BLOCKBUSTER (5/8-in. - 11F) SET-UPS – up to 5-in. dia.



WET BITS 5/8-in. - 11F THREAD – up to 3-in. dia.



WET BITS - 1-1/4 - 7 THREAD – up to 3-in. dia.
(Non-COBRA Bits)

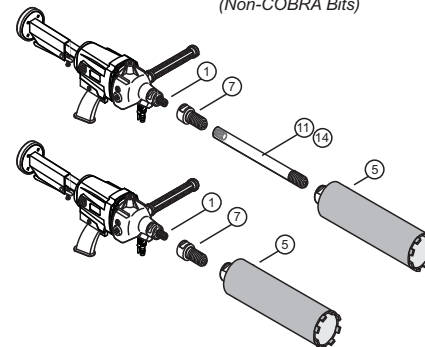


Figure 1. Threads/Adapters and Core Bit Combinations

CDM1H HAND-HELD CORE DRILL — SPECIFICATIONS/DIMENSIONS

Table 1. Threads/Adapters and Core Bit Combinations

Item	Part Number	Description
1	CDM1H	Handheld Core Drill (18 mm)
2		Drill Bits, Dry, COBRA 18 mmF Thread
3		Drill Bits, Dry, Blockbuster, 5/8"-11F Thread
4		Drill Bits, Wet, 5/8"-11F Thread
5		Drill Bits, Wet, 1 1/4"-7F Thread
6	ADM1858	Adapter, M18 Female to 5/8"-11 Male
7	ADM181147	Adapter, M18 Female to 1 1/4"-7 Male
8	AD114758	Adapter, 1 1/4"-7 Female to 5/8"-11 Male (part not shown)
9	AD581147	Adapter, 5/8"-11 Female to 1 1/4"-7 Male (part not shown)
10	EXT65811	Extension, 6" x 5/8"-11 Female/Male
11	EXT61147	Extension, 6" x 1 1/4"-7 Female/Male
12	EXT12M18	Extension, 12"xM18 Female/Male
13	EXT125811	Extension, 12", 5/8"-11 Female/Male
14	EXT121147	Extension, 12", 1 1/4"-7 Female/Male

Table 2. Specifications

Model	CDM1H
Motor	115 VAC, 60 Hz @ 2200 RPM
Current	12 amps
Watts	1,350
Applicable Drill Bit Diameter Standard Drill Bits	1 inch (25 mm)
Applicable Drill Bit Diameter Cobra™ Drill Bits	1 inch to 5 inches (25-127 mm)
Dry Net Weight	8.81 lbs. (4 Kg.)

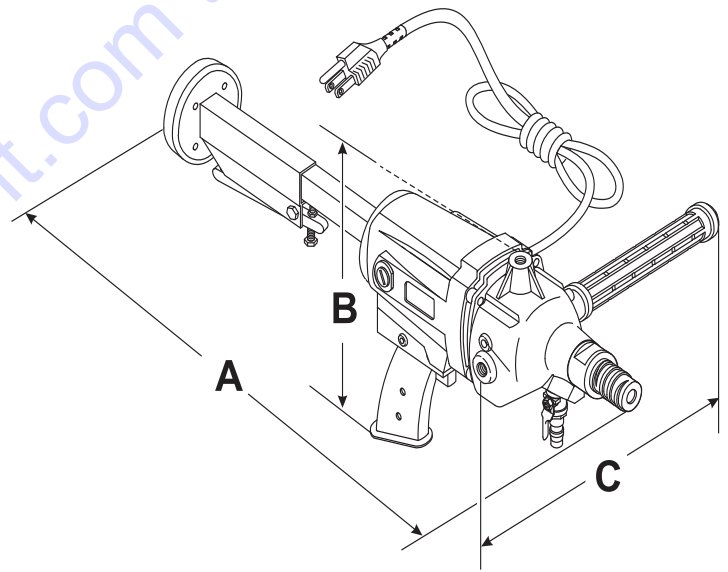


Figure 2. CDM1H Core Drill Dimensions

Table 3. Dimensions

A (Length)	22.25 in. (572 mm)
B (Height)	11.00 in. (279 mm)
C (Width)	10.5 in. (267 mm)



Contact Discount-equipment for the core drill that best fits your application.

CDM1H HAND-HELD CORE DRILL — COMPONENTS

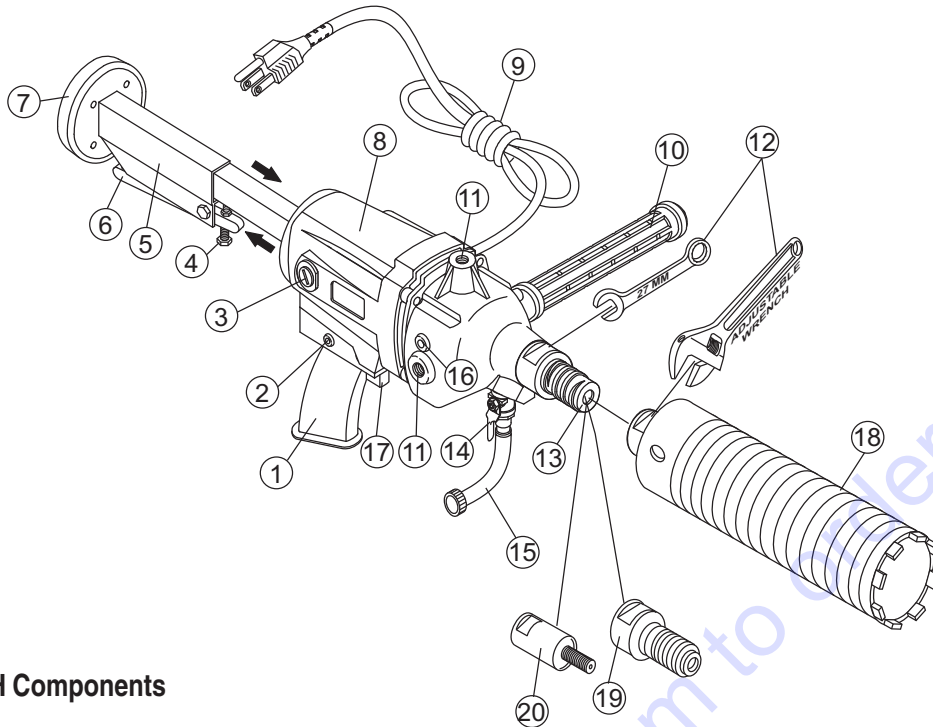


Figure 3. CDM1H Components

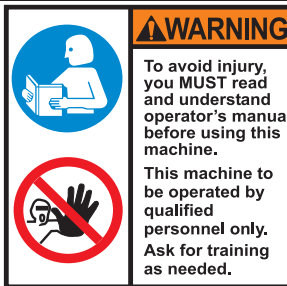
1. **Hand-Grip** – The CDM1H uses a plastic hand grip to guard against possible electric shock. When drilling, hold this grip firmly.
2. **Reset Button** – In the event of an overload press this button. Allow a sufficient amount of time for the electric motor (windings) to cool down before pressing the reset button.
3. **Electric Motor Brush Covers (2)** – Insert tip of a flat blade screwdriver into slot on brush cover, turn counter-clockwise and remove cover to gain access to brushes.
4. **Stock Release Adjustment Screw** – This screw provided tension for the trigger release spring. Adjust the screw for the desire amount of spring tension.
5. **Adjustable Stock** – This stock slides back and forth and is adjustable. It is provided for operator comfort.
6. **Stock Release Lever** – To release the stock and set in position. Squeeze trigger lever and hold, pull back and set in desired position, then release lever.
7. **Rubber Shoulder Pad** – Place this pad against your shoulder or other parts of your body when drilling. Its purpose is to reduce shock and vibration.
8. **Drill Body** –The electric motor and associated components are contain inside the drill body.
9. **AC Power Cord** – Plug this 16 ft. (4.87 meters) power cord into a 115 VAC grounded type receptacle. **NEVER** remove the ground pin from the plug. This will defeat the ground circuit and greatly increase the possibility of electrical shock.
10. **Detachable Rubber Handle** – Insert the detachable rubber handle into the desired port. Tighten securely.
11. **Handle Port** – The CDM1H has 3 handle ports.
12. **Wrenches** – These wrenches (27 mm and adjustable) are used to install and remove the core drill bits.
13. **Main Shaft** – Attach core drill bit to this shaft.
14. **Water Shut-off Valve** – Turn this valve downward to let water flow and up to stop.
15. **Water Tube/Adapter** – Connect this tube/adapter to a water source. Typically a garden hose.
16. **Grease Plug**– Using a 5 mm hex wrench, remove this plug to add lubrication grease. **DO NOT** over fill.
17. **ON/OFF Trigger**– Squeeze this trigger to start the drill, and release to stop.
18. **Core Drill Bit**– Place bit onto main shaft and tighten securely. Contact Discount-equipment for the core drill bit that best fits your application.
19. **Adapter** – 1-1/4" X 7 female to 18 mm male thread for wet drilling bits from 1-1/2 inch diameter and above.
20. **Adapter** – M18 female to 5/8"-11 male.

CDM1H HAND-HELD CORE DRILL — PRE-SETUP

Before Starting:

CAUTION - Read Manual


Before attempting to operate this core drill, and to avoid serious injury to personnel, always read and understand operation manual. Failure to read and understand operation manual could result in serious harm or even death!



WARNING
To avoid injury, you **MUST** read and understand operator's manual before using this machine.
This machine to be operated by qualified personnel only. Ask for training as needed.


Warning - Toxic Fumes

NEVER operate the core drill in a confined or enclosed area structure that does not provide ample **free flow of air**.



DANGER - Flammable/Combustible Materials

NEVER operate the core drill in or around flammable materials. The core drill emits sparks, if contact is made between the sparks and the flammable material, the possibility exists of fire or explosion causing damage to the equipment and severe bodily harm even death!



Drilling with a MQ Cobra™ Bit

The drilling of clean holes with Cobra™ core bits (1) requires an operating technique utilizing the center drill bit adapter (2). Center drill bit adapters are included with the core bit. As bits wear out, this adapter may be used with future core bits of similar depth and diameter. The adapter bit permits an anchoring point (3) so the bit can be accurately introduced into the surface (4). Once the hole is started, the center drill bit adapter (2) must be removed. See Figure 4.

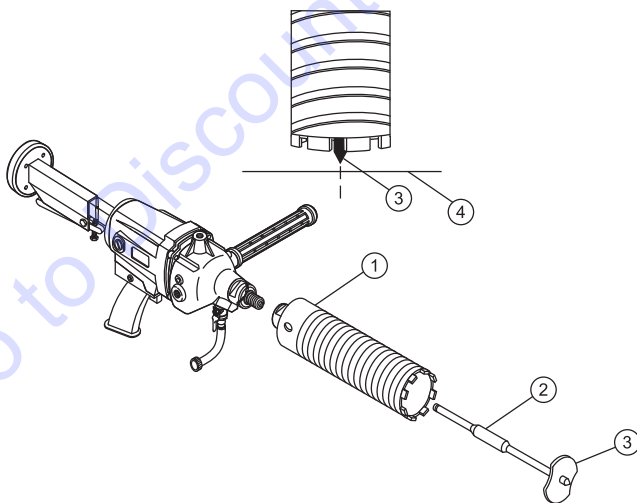


Figure 4. Drilling with a MQ Cobra™ Bit

Drilling With Standard DRY/WET Core Bits

With the proper adapter, 1" to 3" diameter dry/wet core bits can be used with the CDM1H when drilling vertical and horizontal holes. All hand-held core drills require practice and operator technique to ensure consistent clean drilled holes. When using **wet** core bits, water **MUST** be used to ensure proper cooling. "Bit chatter" around the hole can be eliminated by various techniques such as angle-entry procedures and fabricated guides. Angle-entry is one safe and simple way to start the bit onto the surface. Angle the bit (1) at 10°-15° above the surface and slowly introduce the bit until it is flush with the surface (2). See Figure 5.

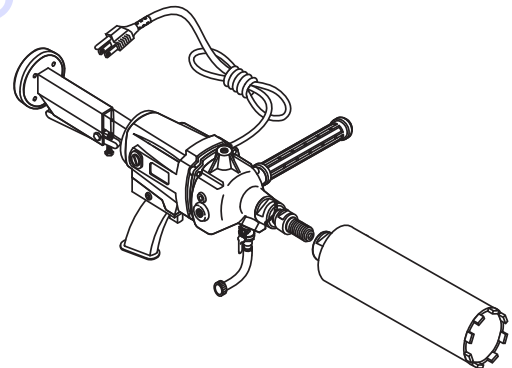


Figure 5. Drilling with a Standard DRY/WET Core Bit

CDM1H HAND-HELD CORE DRILL — PRE-SETUP

Attaching the Cobra™ Core Bit to the Core Drill

1. Place the core bit and core drill on a suitable workbench or area that is free of clutter dirt and debris.
2. Before installing the core bit make sure that the power cord of the core drill is unplugged from the AC wall receptacle. **NEVER** install the core bit on core drill that has power applied to it.
3. Screw the core bit onto the main shaft of the core drill by turning it clockwise by hand until tight (Figure 4).
4. Using the supplied wrenches (27 mm and adjustable) continue to tighten the core bit. When using the wrenches, apply pressure in the opposite direction to fully tighten.
5. Insert the detachable handle into the desired handle port.

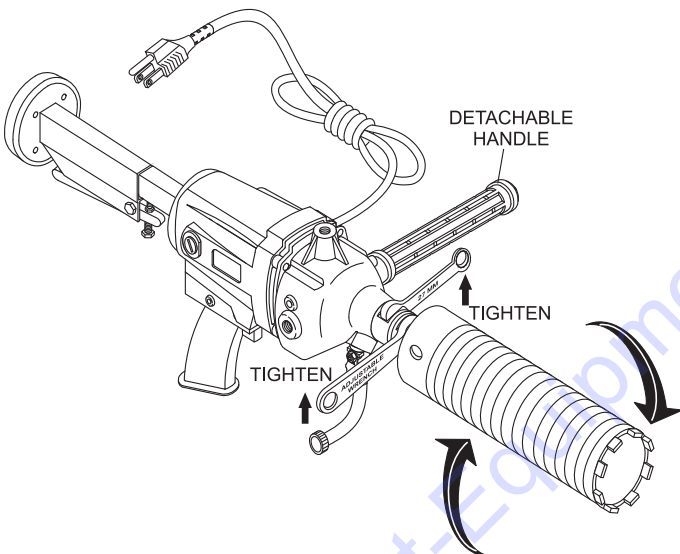
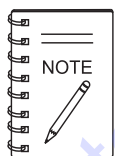


Figure 6. Attaching the Cobra™ Core Bit to the Core Drill



With the proper adapter, 1" to 3" diameter dry/wet core bits can be used with the CDM1H when drilling vertical and horizontal holes. See General Information section. Different size wrenches may be required depending on the type of the core bit lug.

Connecting Water to the Core Drill

1. Attach the supplied water hose and garden hose fitting to the core drill as shown in Figure 5. Be sure to place worm-clamps on each end of the hose to prevent leaking.

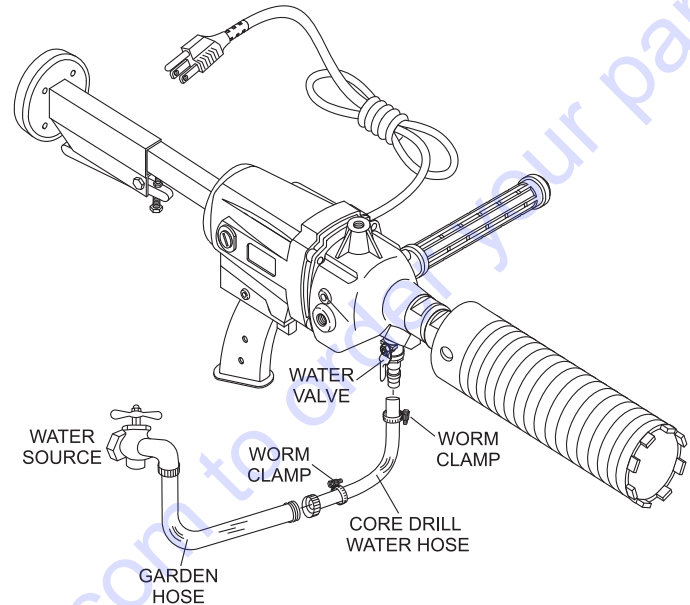


Figure 7. Connecting the Water

Adjusting the Stock (Shoulder Rest)

1. The CDM1H is supplied with an adjustable stock. This stock can be adjusted by simply squeezing the trigger and sliding the stock back and forth to the desired position (Figure 6).
2. If more spring tension is required (trigger lever), simply adjust the spring tension bolt until the desired spring tension is obtained.

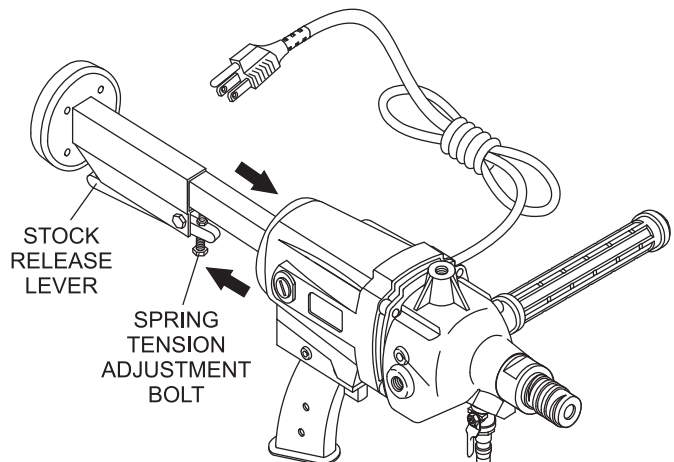


Figure 8. Adjusting the Stock

CDM1H HAND-HELD CORE DRILL — PRE-SETUP

Applying Power to the Core Drill

1. This core drill requires 115 VAC, 60 Hz power. Applying power to the drill that is not specified will cause severe damage to the core drill. Always read serial plate tag before applying power to the core drill.
2. The power plug on this core drill is a 3-prong grounded type plug. **ALWAYS** connect this plug to a 3-prong grounded receptacle. **NEVER** plug this device into a 2-prong type receptacle. This will defeat the ground circuit. The use of a 3-prong to 2-prong adapter is strictly prohibited.

Warning - Accidental Starting

To avoid accidental starting, **ALWAYS** keep fingers away from the power **OFF/ON** switch when applying power.



3. Connect the core drill's AC power cord to a 115 VAC wall receptacle (Figure 7) that is protected by a 20 amp circuit breaker. For best results connect the power cord to a GFCI receptacle.

DANGER - ELECTROCUTION HAZARDS

During operation of this core drill, there exists the possibility of **electrocution, electrical shock or burn**, which can cause **severe bodily harm** or even **DEATH!**



To avoid these hazards:

NEVER use damaged or worn cables when plugging the core drill into an AC power receptacle.

NEVER grab or touch a live power cord with wet hands.

NEVER stand in water and touch a live power cord.

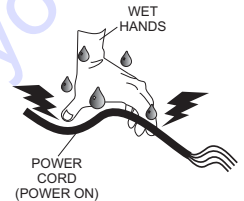


Table 4. Cable Selection (60 Hz, Single Phase Operation)

Current in Amperes	Load In Watts At 120 Volts	Maximum Allowable Cable Length			
		#10 Wire	#12 Wire	#14 Wire	#16 Wire
2.5	300	1000 ft.	600 ft.	375 ft.	250 ft.
5	600	500 ft.	300 ft.	200 ft.	125 ft.
7.5	900	350 ft.	200 ft.	125 ft.	100 ft.
10	1200	250 ft.	150 ft.	100 ft.	
15	1800	150 ft.	100 ft.	65 ft.	
20	2400	125 ft.	75 ft.	50 ft.	

CAUTION: Equipment damage can result from low voltage.

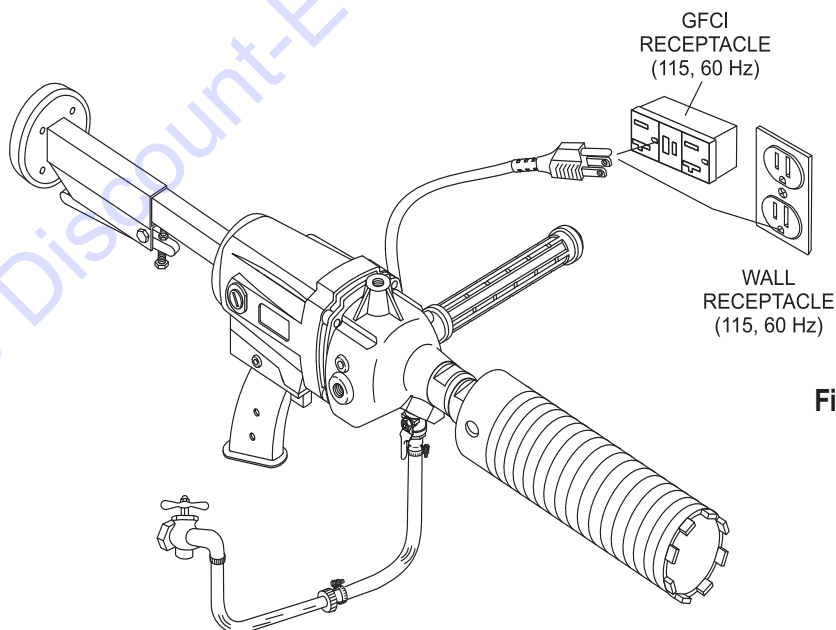


Figure 9. Connecting the Power

CDM1H HAND-HELD CORE DRILL — OPERATION

Before Operating

1. Place the valve on the water source to the **ON** position, and then turn the water valve on the core drill (Figure 8) to the **ON** position (down). Verify that water is flowing smoothly and evenly.

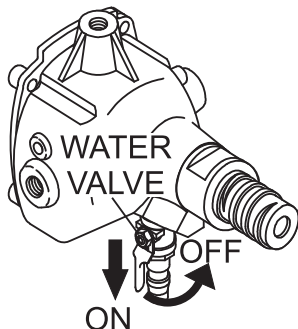


Figure 10. Water Valve (ON Position)

2. If water is not flowing, check all connections and correct the problem.
3. Place the core drill against the surface (Figures 9 and 10) to be drilled. Hold drill firmly, and squeeze the power ON/OFF switch to begin drilling.

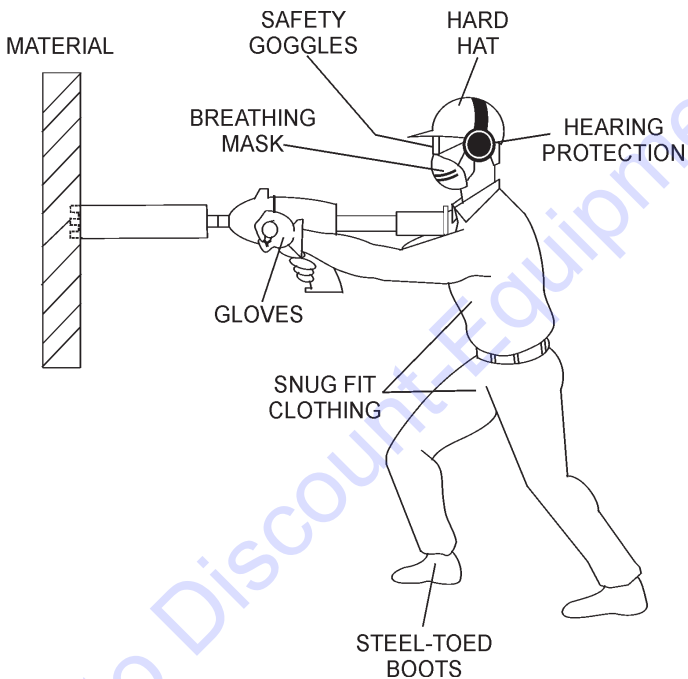
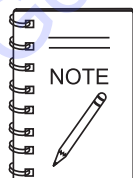


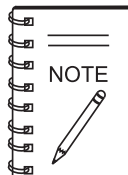
Figure 11. Wall Drilling Application



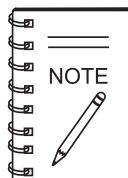
DO NOT overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the core drill in unexpected situations.

Warning - Binding of Output Shaft

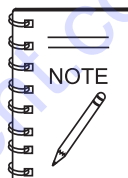
This core drill can whip violently if it comes in contact with rebar or coarse material which would cause the shaft to bind. Be extremely careful at all times when drilling. The possibility exists of the core drill severely twisting the wrist or striking the body with excessive force.



ALWAYS drill with uniform pressure and keep the bit straight. When drilling through steel rebar, reduce the pressure to avoid overloading the motor.



NEVER use the adjustable shoulder stock to pull the bit out of the ground if the bit gets stuck in the hole.



ALWAYS be on the lookout for exposed wiring or buried electrical connections when drilling.

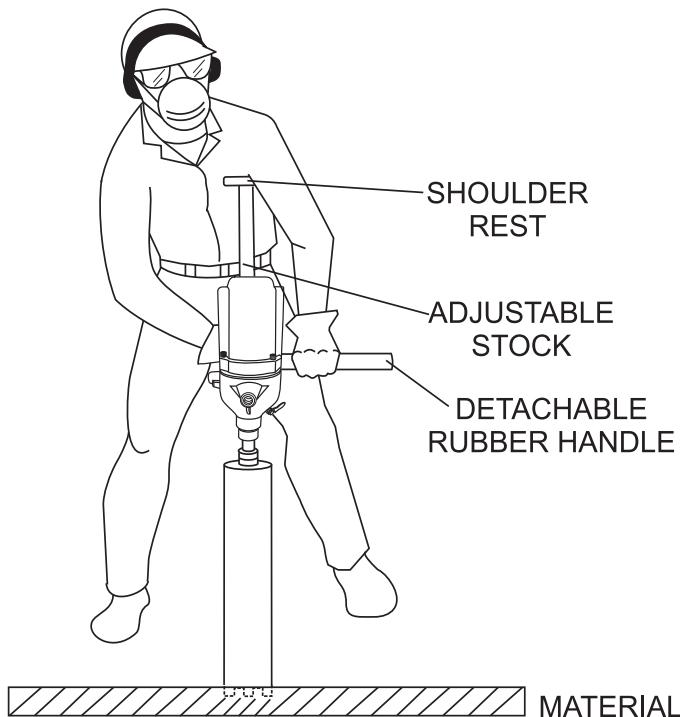


Figure 12. Floor Drilling Application

CDM1H HAND-HELD CORE DRILL — SHUTDOWN/MAINTENANCE

Shutdown

1. Remove the power cord from the wall receptacle or power source.
2. Allow a sufficient amount of time for the core drill bit to cool before attempting to remove it from the core drill.
3. Using the wrenches as illustrated in Figure 4, remove the core drill bit from the drill.
4. Clean the drill bit with a mild cleaning solution, removing dirt and foreign matter.
5. Once the core drill has been cleaned, place the core drill into its carrying case along with all associated hardware. Be sure to wrap the power cord neatly into the carrying case. This will extend the life of the cord.
6. Store the carrying case out of the reach of children, in a location that is moisture free.

Maintenance

1. The CDM1H basically is maintenance-free. The only maintenance requirement is to periodically check the main gear grease level.
2. Using the supplied 5 mm allen wrench, remove the grease plug as shown in Figure 11.
3. Visually inspect to see if grease is present. It may be necessary to insert a small blade screw driver or similar device into the filler hole to determine if the grease level is low.
4. If the grease level is low, apply 1 shot of lithium base grease, grade NO.1. **DO NOT** over fill.
5. Reinstall grease plug and tighten securely.

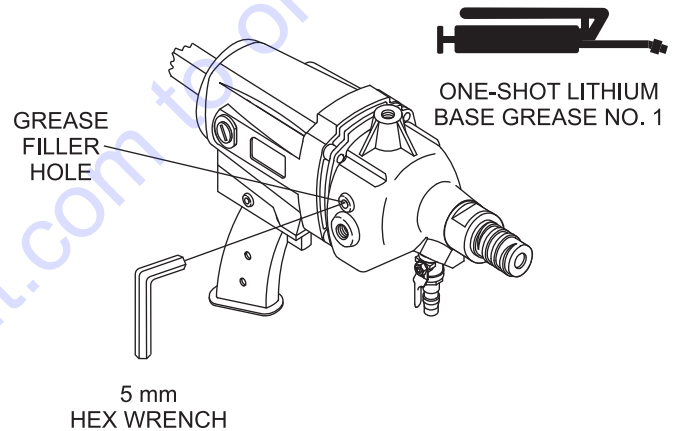


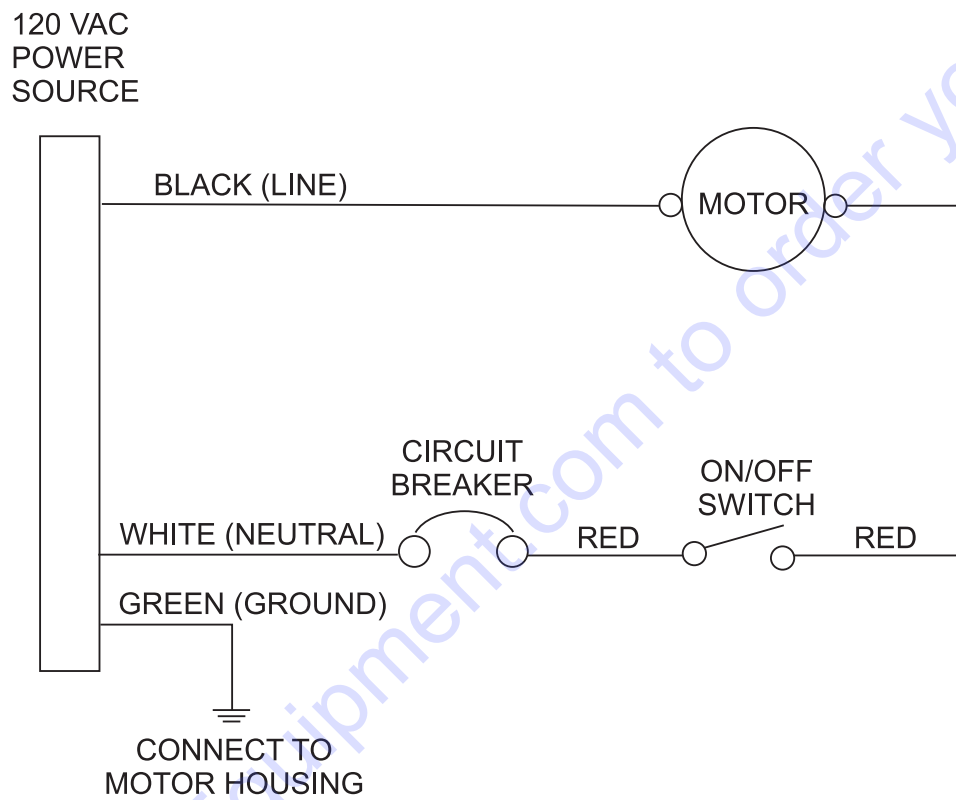
Figure 13. Main Gear Lubrication

CDM1H HAND-HELD CORE DRILL — TROUBLESHOOTING

TABLE 4. CORE DRILL TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Bit is stuck.	Steel bar or stone, etc. is caught between core and BIT.	Immediate turn SWITCH OFF.
	Excessive wear, bit tip has become flush with shank.	Try to rotate BIT in both directions using spanner to lift it out.
		Replace BIT.
Drilling is slow in normal operation.	Waste water is contaminated with steel chip, DRILL is cutting rebar.	Immediately check the waster water. Adjust the pressure on so as not to overload MOTOR.
	Bit is worn.	Immediately check BIT for abrasion. Replace BIT.
	Diamond is not exposed on TIP surface.	Immediately check BIT for abrasion. Dress BIT.
	Chips are deposited on BIT surface.	Immediately check BIT for abrasion. Increase water feed pressure. Dress or Brush BIT with a wire.
	Steel chips are scorched on BIT surface.	Immediately check BIT for abrasion. Remove steel chips.

CDM1H HAND-HELD CORE DRILL — WIRING DIAGRAM



CORE DRILL — EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT.....	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.....		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN....	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol

(@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”
 “S/N XXXX AND ABOVE”
 “S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”
 “NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

CDM1H HAND-HELD CORE DRILL — SUGGESTED SPARE PARTS

CDM1H Hand Held Core Drill

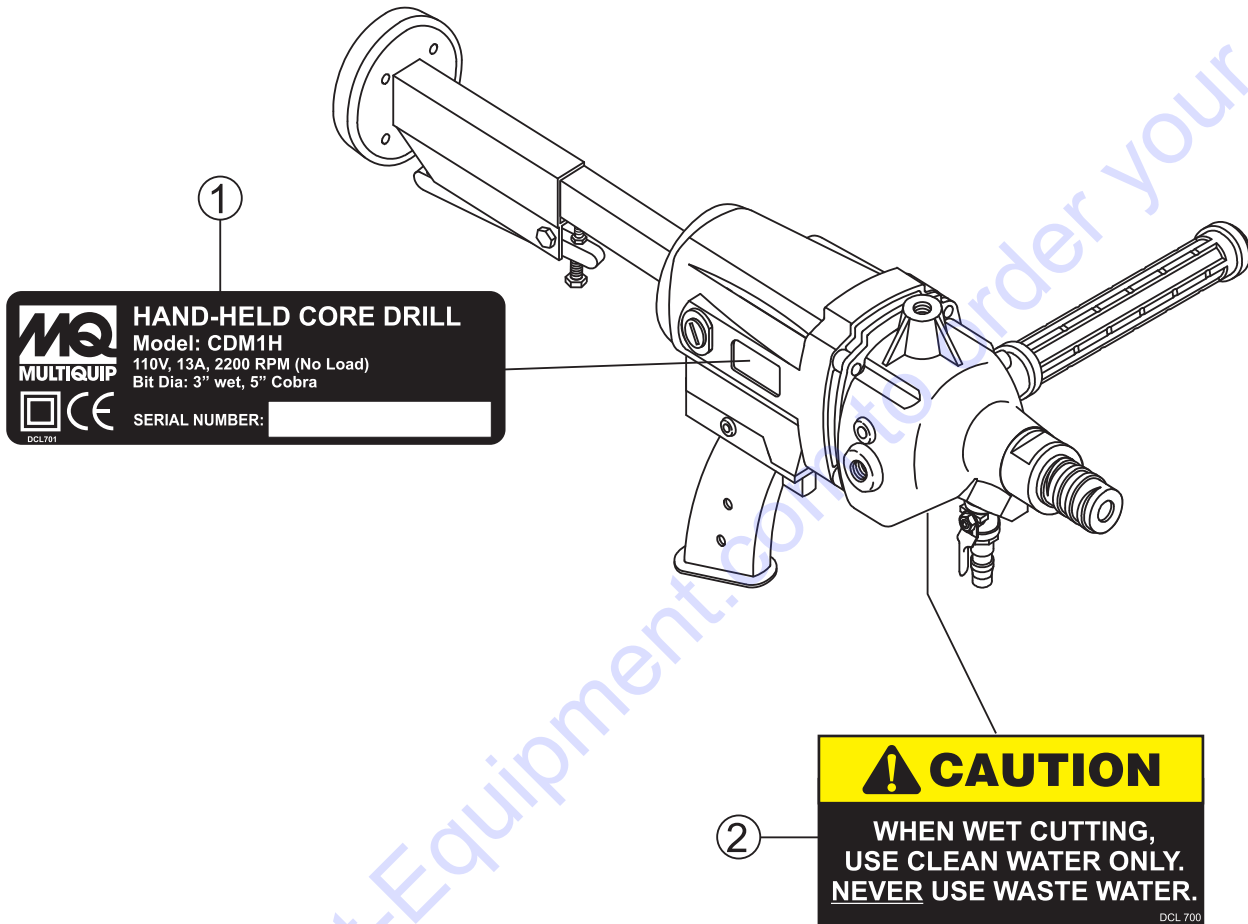
1 to 5 Units

Qty.....	P/N	Description
2	CD101534	CARBON BRUSH
2	CD101560	POWER CORD
2	CD101551	POWER SWITCH
2	CD101552	CIRCUIT BREAKER
1	AD114F58M	ADAPTER, 5/8"-11 MALE THREAD

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CDM1H HAND-HELD CORE DRILL — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS



CDM1H HAND-HELD CORE DRILL — NAMEPLATE AND DECALS

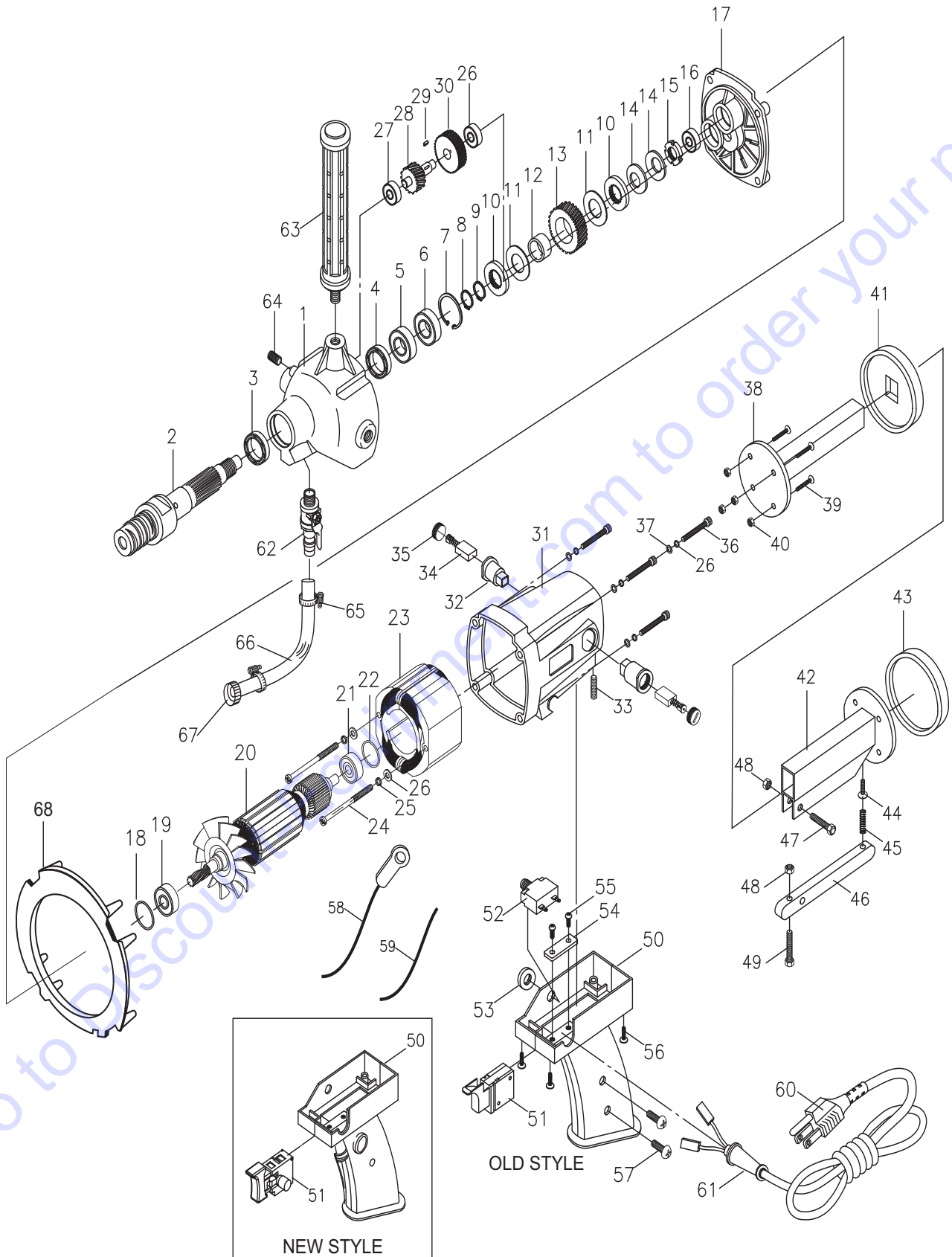
NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	DCL701	DECAL: MODEL INFORMATION	1	
2	DCL700	DECAL: CAUTION CLEAN WATER	1	

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CDM1H HAND-HELD CORE DRILL — CORE DRILL ASSY.

CORE DRILL ASSY.



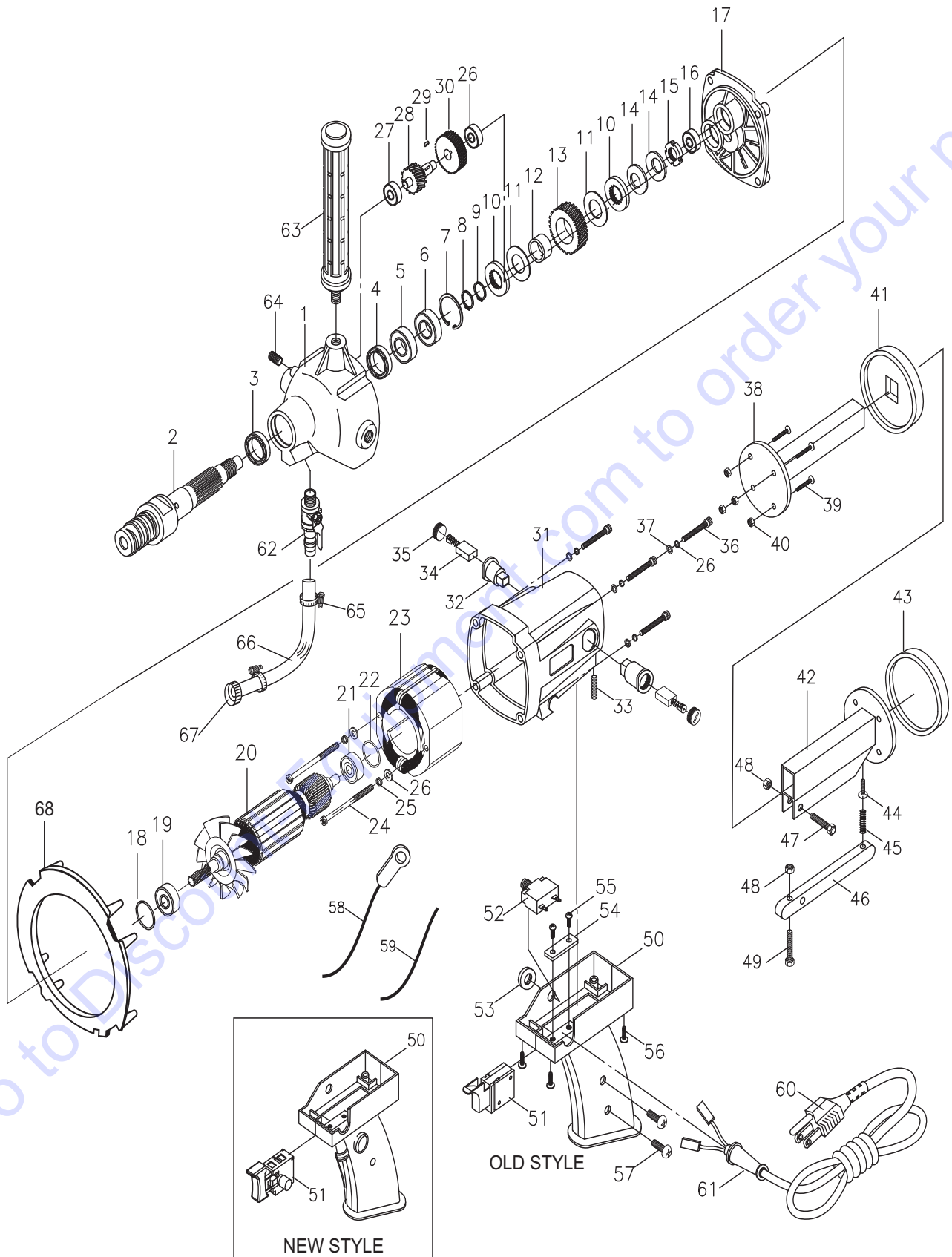
CDM1H HAND-HELD CORE DRILL — CORE DRILL ASSY.

CORE DRILL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CD101501	GEAR CASE	1	
2	CD101502	MAIN SHAFT	1	
3	CD101503	SEAL	1	
4	CD101503	SEAL	2	
5	CD101505	BEARING, 6003LLU	1	
6	CD101506	BEARING, 6003ZZ	1	
7	CD101507	SNAP RING, R35	1	
8	CD101508	SNAP RING, S17	1	
9	CD101509	SNAP RING, S9	1	
10	CD101510	PLATE	2	
11	CD101511	FRICTION PLATE	2	
12	CD101512	METAL COLLAR	1	
13	CD101513	FIRST GEAR	1	
14	CD101514	DISK SPRING	2	
15	CD101515	FINE U-NET	1	
16	CD101516	BEARING, 608ZZ	3	
17	CD101517	DIAPHRAGM	1	
18	CD101518	O-RING	1	
19	CD101519	BEARING, 609LLU	1	
20	CD101520	ARMATURE	1	
21	CD101521	BEARING, 608ZZ	1	
22	CD101522	FILLING RING	1	
23	CD101523	FIELD	1	
24	CD101524	SCREW, 3/16 X 2-1/2"	2	
25	CD101525	SPRING WASHER, M5	2	
26	CD101526	NUT, M5	2	
27	CD101527	BEARING	2	
28	CD101528	SECOND PINION	1	
29	CD101529	WOODRUFF KEY	1	
30	CD101530	SECOND GEAR	1	
31	CD101531	MOTOR HOUSE	1	
32	CD101532	BRUSH TUBE	2	
33	CD101533	SCREW, M5	2	
34	CD101534	CARBON BRUSH	2	
35	CD101535	BRUSH CAP	2	
36	CD101536	SCREW, M5	4	
37	CD101537	SPRING WASHER, M5	4	
38	CD101538	TELESCOPING TUBE	1	
39	CD101539	SCREW, 5/32 X 5/8"	4	
40	CD101540	NUT, M5	4	
41	CD101541	HOLDER	1	
42	CD101542	TELESCOPING TUBE	1	
43	CD101543	HOLDER	1	
44	CD101544	SCREW, 1/8"	1	

CDM1H HAND-HELD CORE DRILL — CORE DRILL ASSY.

CORE DRILL ASSY.



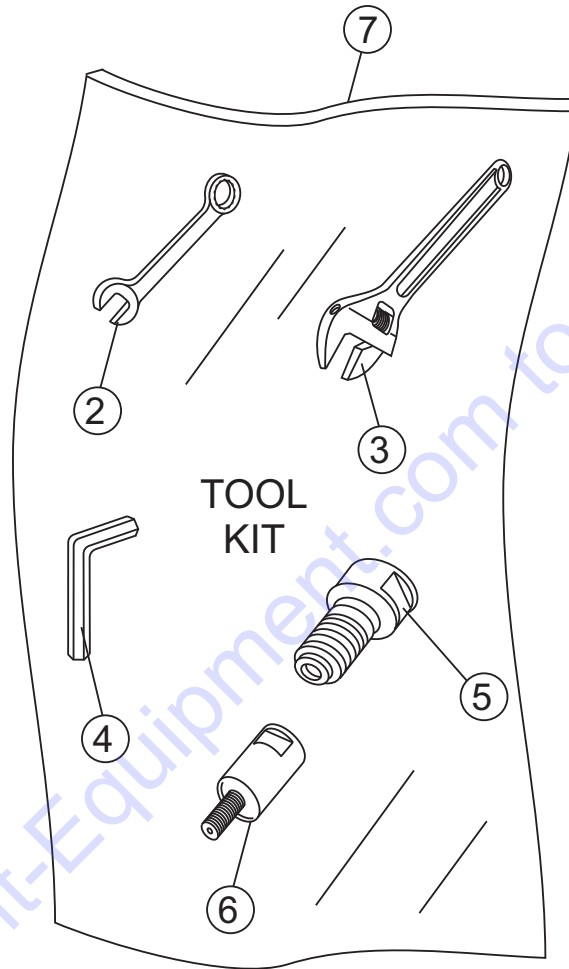
CDM1H HAND-HELD CORE DRILL — CORE DRILL ASSY.

CORE DRILL ASSY. (CONTINUED)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
45	CD101545	SPRING	1	
46	CD101546	SHIFTER	1	
47	CD101547	SCREW, M6	1	
48	CD101548	NUT, M6	2	
49	CD101549	SCREW, M6	1	
50	CD101550	SWITCH BOX	1	OLD STYLE
50	CD101576	SWITCH BOX W/ LOCK BUTTON HOLE	1	NEW STYLE
51	CD101551	POWER SWITCH	1	OLD STYLE
51	CD101577	POWER SWITCH W/ SPEED LOCK BUTTON	1	NEW STYLE
52	CD101552	CIRCUIT BREAKER	1	
53	CD101553	WASHER	1	
54	CD101554	CABLE FIX PLATE	1	
55	CD101555	SCREW, 5/32 X 1/2"	2	
56	CD101556	SCREW, 5/32 X 1-1/2"	4	
57	CD101557	SCREW, M4	2	
58	CD101558	EARTH CABLE	1	
59	CD101559	CABLE WIRE	1	
60	CD101560	POWER CORD	1	
61	CD101561	FEMALE QUICK DISCONNECT	1	
62	CD2704006	WATER COCK	1	
63	CD101563	HANDLE	1	
64	CD101564	PLUG	1	
65	CD101569	HOSE CLAMP	2	
66	CD101570	PLASTIC WATER HOSE, 4-INCH	1	
67	CD101571	FITTING, BRASS BARB 3/4 X 3/8"	1	
68	CD101608	BAFFLE	1	

CDM1H HAND-HELD CORE DRILL —CARRYING CASE /TOOLS/ADAPTER

CARRYING CASE/TOOLS ADAPTER



CDM1H HAND-HELD CORE DRILL —CARRYING CASE /TOOLS/ADAPTER

CARRYING CASE/TOOLS ADAPTER

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2*	101566	27 MM WRENCH	1	
3*	101567	ADJUSTABLE WRENCH	1	
4*	101568	5 MM ALLEN WRENCH	1	
5*	CD101572	ADAPTER, 1-1/4" X 7	1	
6*	ADM1858	ADAPTER, M18 FEMALE to 5/8"-11 MALE	1	
7	CD101575	TOOL KIT	1	INCLUDES ITEMS W/*

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