



# CD616/CD1824 HYDRAULIC CORE DRILL INSTRUCTIONS

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CONSTRUCTION PRODUCTS  
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# 1 SAFETY

## 1.1 INTRODUCTION

Your Reimann & Georger Corporation CD616/CD1824 hydraulic core drill has been engineered to provide larger hole boring performance, long term economics, and safety advantages that no other type can match. However, even a well-designed and well-built core drill can malfunction or become hazardous in the hands of an inexperienced and/or untrained user. Therefore, read this manual and related equipment manuals thoroughly before operating your core drill to provide maximum safety for all operating personnel, and to get the maximum benefit from your equipment.

## 1.2 SAFETY DEFINITIONS

A safety message alerts you to potential hazards that could injure you or others or cause property damage. The safety messages or signal words for product safety signs are **DANGER**, **WARNING**, and **CAUTION**. Each safety message is preceded by a safety alert symbol and is defined as follows:

**DANGER:** Indicates an imminently hazardous situation which, if not avoided, **will** cause death or serious injury. This safety message is limited to the most extreme situations.

**WARNING:** Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices that may result in property-damage-only accidents.

## 1.3 POWER SOURCE AND CORE DRILL SAFETY LABELS

These labels warn you of potential hazards that could cause injury. Read them carefully. If a label comes off or becomes illegible, contact Reimann & Georger Corporation for a free replacement.

## 1.4 SAFETY RULES

1. Only trained personnel shall operate the core drill or do repairs. A trained person is one who has read and thoroughly understands this instruction manual and related equipment manuals and, through training and experience, has shown knowledge regarding the safe operational procedures.
2. Use the core drill only in accordance with the manufacturer specifications.
3. Construction area is to be kept clear of unauthorized personnel at all times. Place barricades or secure the area in such a manner that no personnel can be injured.
4. Never use the core drill in an explosive atmosphere and/or near combustible material that could be ignited by a spark.
5. Keep work area clean, free of clutter, and well lit.
6. Do not use a core drill assembly, bit, or hydraulic hose that shows any signs of damage.
7. Always carry the core drill in its de-energized state.
8. Do not lift or carry the core drill by the hydraulic hoses.
9. Keep the feed handle dry, clean, and free of oil or fuel.
10. Do not use the core drill when you are tired or fatigued.
11. Never operate the core drill under the influence of drugs, alcohol, or medication.
12. Use all personal protective equipment as defined by the employer.

13. Do not use near energized conductors without adequately insulating operator and surroundings.
14. The drill stand must be properly secured to the work surface using either bolts or the ceiling jack.
15. Use only properly sized bits for which the core drill was designed.
16. Do not install or remove bits on a core drill that is connected to a hydraulic power source.
17. Always connect the return (tank) hose connections before the supply (pressure) connections.
18. Ensure all wrenches are removed from the core drill before turning it on.
19. Never start the core drill with the bit resting on the concrete.
20. Ensure the core drill flow control valve is in the OFF position when starting the hydraulic power source to prevent accidental startup.
21. Never exceed the flow or pressure for which the core drill is rated.
22. Keep clothing and all body parts away from moving parts of the core drill when connected to a power source or when being used.
23. When releasing carriage locking handle, keep a firm grip on the feed handle to prevent feed handle from turning due to the weight of the drill bit. If you lose your grip and the feed handle starts spinning out of control, **never** try to stop it.
24. Always control the feed handle with both hands during operation.
25. Keep proper footing and balance at all times.
26. When drilling through floors, provide for protection of all personnel and material below the drilling area. Cores generally drop from the bit at the completion of the hole.
27. Never adjust or service the core drill during operation or while connected to a hydraulic power source.
28. Always shut off the hydraulic power and cooling water sources when not using the equipment.
29. Always stop the hydraulic power source, depressurize the hydraulic system, and allow the system and hydraulic fluid to cool before connecting or disconnecting hydraulic hoses.
30. At end of operation, secure the core drill and the associated power source to prevent unauthorized use. Never assume you will find the equipment in the same condition in which you left it.
31. Only trained personnel are authorized to do repairs.

## 2 SPECIFICATIONS

### 2.1 INTRODUCTION

The Reimann & Georger Corporation CD616 / CD1824 Core Drills are designed for boring larger holes of 6 inches (15.2 cm) to 24 inches (61 cm). The standard unit includes a stand, hydraulic motor, carriage, a 42" (106.7 cm) square mast, pillow block with garden hose water intake, and hydraulic hose whips. The diamond core bits can drill through granite, masonry and steel reinforced concrete on floors, ceilings, or walls, leaving a perfectly formed hole. The stand is secured to the surface with lag bolts which allows for clean, precise hole boring while increasing operator comfort. The hydraulic power operation delivers consistent, efficient power with less noise and vibration.

The low speed, high torque hydraulic motor is equipped with a 10-position flow control valve to vary spindle RPM. The core bit and spindle are protected against damaging reverse operation by a free flow reverse check valve in the motor manifold. The system allows a maximum flow input of 15 GPM for compatibility with most open center hydraulic power supplies. Internal valving directs the proper flow of oil to the hydraulic motor.

As with most hydraulic tools, the hydraulic system requirements detailed in the following sections must be met but not exceeded to support core drill performance and longevity of equipment.

### 2.2 TECHNICAL DATA

	<b>CD616</b>	<b>CD1824</b>
Bore hole diameter	6–16" (15.2–40.6 cm)	18–24" (45.7–61 cm)
Spindle RPM range	0–330	0–200
Motor displacement	4.9 cu. in./rev.	8.0 cu. in./rev.
Flow		8–15 gpm (30–57 lpm)
Pressure range		2000–2500 psi (138–175 bar)
M2 drill stand mast		2-7/8" square 42" long
M2 drill stand weight		110 lbs.
Type of system		Open center only
Maximum allowable back pressure		1400 psi (100 bar)
Required filtration		10 micron
Couplings and nipples		HTMA flush face
Options:		
	48" (121.9 cm), 60" (152.4 cm) or 72" (182.9 cm) masts	
	Drill bits 6" (15.2 cm) to 24" (61 cm) in diameter	
	Bit extension rods 4" (10.2 cm) to 36" (91.4 cm)	
	Angle drill stand	
	Various motor sizes for larger holes	

### 2.3 RECOMMENDED HYDRAULIC OIL

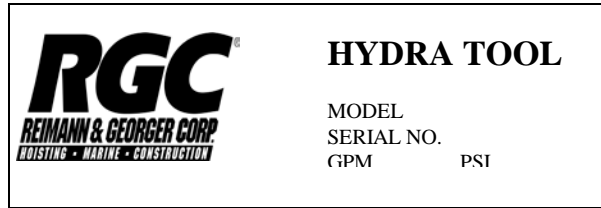
Viscosity	160-230 SUS at 100°F	(32-46 cSt at 40°C)
Viscosity index		Minimum 100

Many types of compatible hydraulic oil are available through your local dealer/distributor. As an original equipment manufacturer, RGC uses a Grade ISO VG 32 hydraulic oil.

Extreme weather conditions or operating environments may require using a different viscosity oil or fluid type than what is provided. Hydraulic oil types are too numerous to list in this manual. If you have any question concerning the type of oil suitable for core drill operation, please consult your local supplier or Reimann & Georger Corporation for details.

## 2.4 NAMEPLATE AND SERIAL NUMBER TAG

It is important to identify the core drill completely and accurately whenever ordering spare parts or requesting assistance in service. The core drill has a product nameplate that states the model and serial numbers. The label should appear as the sample nameplate shown in Figure 2-1. Record the model and serial numbers for future reference.



**Figure 2-1.**  
**Typical Core Drill Product Nameplate**

**MODEL** \_\_\_\_\_

**SERIAL NUMBER** \_\_\_\_\_

## 3 OPERATION

### 3.1 BEFORE OPERATING THE CORE DRILL

1. When initially unpacking the core drill, rotate the mast with the installed carriage 180° from its shipping position into the drilling position.
2. Check for alignment and possible binding of moving parts, mounting, and any other conditions that may affect core drill operation. Do not use the core drill if it shows any signs of damage.
3. Read and fully understand the operating manual for the hydraulic power source being used.
4. Every tool has a maximum operating flow and pressure which, if exceeded, is a potential cause of damage to the tool or hydraulic power source. Check the power supply's flow and pressure output against the core drill's requirements.



#### **CAUTION:**

**THE HYDRAULIC POWER SOURCE MUST BE COMPATIBLE WITH OPEN CENTER TOOLS.**

5. Use caution when refueling a gasoline driven hydraulic power source. Make sure the gas caps on the hydraulic power source and fuel can are properly tightened. Move the hydraulic power source at least 10 feet from the fueling point before starting the engine.
6. Before doing any drilling, check for live electrical wiring near the work site or imbedded in material being drilled.
7. Before drilling through a wall, check both sides for possible obstructions.
8. Before drilling through a floor, provide protection for all personnel and materials below the work area. Cores generally drop from the bit at the completion of the hole.
9. Ensure all personnel are using the appropriate safety equipment as defined by the employer.
10. Clear the working area of all unauthorized personnel. Place barricades or secure the area in such a manner that no personnel can be injured.

### 3.2 ANCHORING THE CORE DRILL

The core drill can be bolt anchored or ceiling jack anchored to the floor or bolt anchored to the wall. Each method is described in the following sections.



#### **WARNING:**

**USING A CORE DRILL THAT IS NOT PROPERLY SECURED TO THE WORK SURFACE CAN CAUSE SERIOUS PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.**

#### 3.2.1 Bolt Anchoring to the Floor

1. Measure the distance from the center of the anchor bolt slot in base to center of drill spindle.
2. Mark from the center of the hole on floor to be drilled to the spot where the anchor bolt hole will be drilled.
3. Drill and set 1/2-inch anchor bolt. Place core drill over anchor hole and hand tighten the bolt.
4. Adjust the 4 leveling screws to stabilize the base and plumb the mast. Secure the core drill by tightening the anchor bolt.



### 3.2.2 Bolt Anchoring to the Wall

Use the same procedure as described in Section 3.2.1 for bolt anchoring to the floor. However, to ensure safety of operator, you **must** fasten a chain to the core drill and secure the chain above the tool to prevent falling accidents.

### 3.2.3 Ceiling Jack Anchoring to the Floor

1. Cut a pipe or wood section to the required length to fit between the ceiling and the jack screw on the top of the mast.
2. Tighten the ceiling jack screw to force the base against the floor.
3. Stabilize and plumb the core drill by adjusting the 4 leveling screws on the base.

## 3.3 INSTALLING A DRILL BIT

1. When installing a bit, ensure that neither the bit or the core drill is hot.
2. ALWAYS wear protective gloves when handling, installing, and removing drill bits.
3. Remove any dirt or other contamination that may have accumulated on either the bit or drill spindle. Then thread the drill bit onto the drill spindle and tighten securely with a bit wrench.

## 3.4 CONNECTING THE HYDRAULIC POWER SOURCE

1. Always stop the hydraulic power source flow, depressurize the system, and allow the system and hydraulic fluid to cool before making any connections.
2. The return (tank) hose connection should always be made before the supply (pressure) hose connection to prevent pressure build-up inside the core drill that could cause personal injury.
3. Before making any hydraulic connections, inspect all hydraulic hoses for leaks and risks of rupture as follows:
  - a. Inspect each hose for breaks, cracks, worn spots, bulges, chemical attack, kinks or any other damage. Never stop any detected leak with your hand or fingers. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic oil.
  - b. Replace a damaged hose immediately. Never repair the hose.
4. The core drill uses flush-face quick-release couplings that are durable and very easy to clean. To prevent contamination, wipe the mating surfaces of the couplings with a clean rag before connecting. They are always fitted such that the male part gives oil and the female part receives oil.
5. Securely connect the return (tank) hose from the power source to the core drill “out” port.
6. Securely connect the supply (pressure) hose from the power source to the core drill “in” port.
7. The recommended hose diameter for the supply and return line is 1/2 inch I.D. The hose must have a minimum working pressure rating of 2500 psi (175 bar).
8. Do NOT exceed the recommended oil flow and pressure for the core drill. Refer to the technical data in Section 2.2.



### **CAUTION:**

**THE BACK PRESSURE (RETURN LINE PRESSURE) OF THE CORE DRILL SHOULD BE AS LOW AS POSSIBLE AND MUST NOT EXCEED 1400 PSI (100 BAR) MEASURED AT THE CORE DRILL. IF THIS PRESSURE IS EXCEEDED, DAMAGE WILL OCCUR.**

### 3.5 CONNECTING THE COOLING WATER SUPPLY

1. With water control valve shut off, connect the water inlet hose to core drill and water source.
2. Water can be supplied by a standard garden hose or by a pressure tank. Water is fed through the inlet hose, down inside of bit, removing slurry, and then up and outside of hole.
3. If a water collector ring and pump is used, plug the pump into a properly grounded 115V receptacle. Provide a suitable container for draining.
4. Open the water control valve to produce a sufficient flow to remove slurry from cut.

### 3.6 OPERATING THE CORE DRILL

1. Ensure the core drill is securely anchored as described in Section 3.2.
2. Check the hole alignment by lowering the bit with the feed handle until the bit is about 1/2-inch from the concrete. When starting a bit, do not use more than two 12" extensions. Ensure the bit is NOT resting on the concrete when starting the core drill.
3. Ensure the flow control valve on the core drill is in the OFF position.
4. If using an RGC HydraPak, select either 10 gpm on the 0-10 setting range, or 8 gpm on a 5/8 selection setting. A flow rate of 8 gpm will produce the required drill rpm, and any excess flow is bypassed at the core drill.
5. Start the hydraulic power source. Allow it to run idle for a few minutes to warm hydraulic reservoir fluid.
6. Start the core drill by selecting a slow speed with the 10-position flow control valve on the drill. Check the bit manufacturer's recommendation for drill speed. Keep all body parts away from all moving parts of the core drill.
7. Turn the feed handle to apply a load on the bit. Apply a light pressure on the feed handle when starting to drill to prevent the bit from wandering. Do NOT apply full load until the entire bit has penetrated the material.
8. Drill bit feeding should be uniform without excessive force. Adjust feed handle pressure and drill speed to achieve a drilling penetration of 1 to 4 inches per minute in concrete, depending on the material and the bit diameter.
9. If the cooling water turns clear, you are drilling through rebar. After cutting steel, stop the core drill and remove the core and any loose pieces of steel. Then resume the drilling operation. See Section 3.7 for details on core removal.



#### **CAUTION:**

**WHEN DRILLING STEEL EMBEDDED IN CONCRETE, DO NOT INCREASE THE SPEED. THE BITS ARE DESIGNED TO DRILL THROUGH SOLID STEEL.**

10. To stop the core drill, turn the flow control valve on the core drill to the lowest or "off" setting.

### 3.7 REMOVING CORES

#### 3.7.1 Breaking a Core

If you are not drilling completely through the material, insert a screw driver into the drilled groove and pry the core to the opposite side. This will easily break the core. Use a second screw driver to lift out the core.

### 3.7.2 Removing Broken Core Stuck in Bit



#### **WARNING:**

**BEFORE REMOVING ANY CORE STUCK IN A BIT, STOP THE HYDRAULIC POWER SOURCE, DEPRESSURIZE THE HYDRAULIC SYSTEM, AND ALLOW THE SYSTEM AND FLUID TO COOL DOWN. THEN DISCONNECT THE CORE DRILL FROM THE POWER SOURCE TO PREVENT ACCIDENTAL STARTUP.**

**NEVER SERVICE OR ADJUST THE CORE DRILL DURING OPERATION OR WHILE CONNECTED TO A HYDRAULIC POWER SOURCE.**

1. Increase water pressure and try to free core with your hands.
2. If unable to free core, remove bit from core drill.
3. Push core gently through from the top of the bit with a rod when using a capped bit.

### 3.8 INSTALLING BIT EXTENSION RODS

If you have to drill deeper than the 13 inch long bit allows, bit extension rods must be used. Drilling rate will be slower because of the extra amount of drag on the bit walls. When it is necessary to raise the drill bit above the surface being drilled, do not use more than two 12-inch bit extension rods. Do NOT install bit extension rods without first shutting down the hydraulic power source as described in Section 3.7.2.

1. Drill to full depth of bit.
2. Back out core drill and remove bit and core.
3. Put drill bit back into hole and connect a 4", 6", or 12" bit extension rod to bit. Secure with bit wrench.
4. Secure bit extension rod onto drill spindle and secure with spindle wrench.
5. Proceed with drilling.

### 3.9 PREPARING CORE DRILL FOR SHUTDOWN

1. Stop the core drill by turning the flow control valve to the off position.
2. Stop the hydraulic power source following the procedure in the respective instruction manual.
3. Always stop the hydraulic power source, depressurize the hydraulic system, and allow the system and hydraulic fluid to cool before disconnecting hydraulic hoses.



#### **WARNING:**

**NEVER DISCONNECT ANY HYDRAULICALLY OPERATED PART OF THE CORE DRILL OR REMOVE HYDRAULIC COMPONENTS, LINES, OR FITTINGS WHILE THE POWER SOURCE IS RUNNING OR WHENEVER THE HYDRAULIC FLUID IS HOT.**

**LIQUID UNDER HIGH PRESSURE CAN PIERCE THE SKIN, CAUSING DEATH OR SERIOUS INJURY. HOT LIQUID CAN CAUSE SERIOUS PERSONAL BURNS. IF AN INJURY OCCURS, GET IMMEDIATE MEDICAL ATTENTION.**

4. Remove lines, fittings, or components slowly to release any trapped pressure.

5. Always disconnect the supply (pressure) hose from the core drill before disconnecting the return (tank) hose connection.
  - a. Disconnect the supply (pressure) hose to the hydraulic power source from the core drill (“IN” port).
  - b. Disconnect the return (tank) hose to the hydraulic power source from the core drill (“OUT” port).
6. Secure the core drill and hydraulic power source to prevent unauthorized use. Never assume you will find the equipment in the same condition that you left it.
7. Store the core drill away from excessive heat or moisture. Store in a clean, dry area away from exposure to high humidity, liquids, or freezing temperatures.

## 4 INSPECTION AND MAINTENANCE

### 4.1 GENERAL MAINTENANCE RULES

Hydraulic fluid can become contaminated after extended periods of use which can cause restrictions in the system. Check to see that the fluid is clean, and change at recommended intervals to extend core drill's life. Refer to the respective manual for maintenance information on the hydraulic power source.

1. Proper maintenance of the core drill and related equipment requires timely adhering to all the guidelines given in this chapter. Proper maintenance is required to maintain the system in good condition and free of defects.
2. Review and follow all the safety rules given in Chapter 1 before attempting any maintenance.
3. Only authorized personnel should be allowed in the maintenance area. Authorized personnel are the trained people as defined below and their supervision.
4. Repairs must be made only by trained personnel. A trained person is one who has read and thoroughly understands this instruction manual and related equipment manuals and, through training and experience, has shown knowledge regarding the safe operational procedures.



#### **WARNING:**

**BEFORE STARTING ANY MAINTENANCE, STOP THE HYDRAULIC POWER SOURCE, DEPRESSURIZE THE HYDRAULIC SYSTEM, AND ALLOW THE SYSTEM AND FLUID TO COOL DOWN. THEN DISCONNECT THE CORE DRILL FROM THE POWER SOURCE TO PREVENT ACCIDENTAL STARTUP.**

**NEVER SERVICE OR ADJUST THE CORE DRILL DURING OPERATION OR WHILE CONNECTED TO A HYDRAULIC POWER SOURCE.**

### 4.2 RECOMMENDED MAINTENANCE

Proper care and maintenance will maximize the service life of the core drill. The following maintenance is recommended.



#### **WARNING:**

**FAILURE TO PERFORM REGULARLY SCHEDULED MAINTENANCE CAN LEAD TO POSSIBLE PERSONAL INJURY AND EQUIPMENT FAILURE.**



#### **CAUTION:**

**DO NOT PERFORM A COMPLETE DISASSEMBLY OF THE CORE DRILL, AS THIS WILL VOID THE WARRANTY. CONTACT REIMANN & GEORGER CORPORATION OR YOUR AUTHORIZED DEALER FOR SERVICE AND REPAIRS.**

1. The following maintenance should be performed daily:
  - a. Wipe all tool surfaces and fittings free of grease, dirt, and foreign material.
  - b. Disconnect hydraulic hoses and wipe couplings clean, especially before a connection is made. This is the single most common point of entry for foreign particles which can cause premature wear of hydraulic components in the system.
  - c. Check that all hardware on the tool is tight. Carriage head will become loose due to vibrations. Tighten shim adjusting screws to remove play.
  - d. Inspect the tool, hydraulic system and fittings for signs of leaks, cracks, wear, or damage. Repair or replace as necessary.

- e. Inspect hydraulic hoses and couplings every day. Replace a damaged hose immediately. Never repair the hose.
- 2. Keep a light coating of oil on the rack and pinion and drill spindle.
- 3. Replace bit when crown has worn to the point where it is flush with the tube.
- 4. The following maintenance should be performed annually:
  - a. Check the function and performance of the core drill.
  - b. Drain the hydraulic system fluid. Flush out the hydraulic system and fill with new, clean fluid. However, if the fluid turns dark or becomes milky colored, change it as soon as possible.

## 5 TROUBLESHOOTING

### 5.1 LOCATING THE PROBLEM AREA

If the core drill does not operate, the problem is either in the core drill, the hoses, or the hydraulic power source. Locate the problem area as follows:

1. Stop the hydraulic power source.
2. Disconnect the existing core drill from the hoses and hydraulic power source.
3. Connect a known working core drill to the hoses and hydraulic power source.
  - a. If the known working core drill operates, the problem is in the disconnected core drill. See the troubleshooting chart in Section 5.2.
  - b. If the known working core drill does not operate, the problem is probably in the hose or hydraulic power source. Proceed to Step 4.
4. Stop the hydraulic power source.
5. Disconnect the existing hoses from the known working core drill and hydraulic power source.
6. Connect a different set of hoses to the known working core drill and hydraulic power source.
  - a. If the known working core drill operates with the different set of hoses, the problem is in the disconnected hoses.
  - b. If the known working core drill does not operate, the problem is in the hydraulic power source. See the hydraulic power source operating manual for troubleshooting.

### 5.2 TROUBLESHOOTING THE CORE DRILL

The following chart is intended to assist with troubleshooting the core drill. While not all inclusive, the chart outlines the most common causes of a problem and the recommended course of action.

SYMPTOM	CAUSE	CORRECTIVE ACTION
Core drill inoperative	Core drill connected to improper hydraulic system.	See Chapter 2 for type of hydraulic system required. Verify hydraulic power system.  Check type of hydraulic power source, which must be open center
	Core drill not properly connected.	Check pressure and return connects and disconnects.
	No hydraulic fluid in system or fluid level low.	Check fluid level. Fill to full mark. Check system for leaks. Core drill will not operate if inlet pressure is below 2000 psi or flow is less than 8 gpm.
	Core drill parts loose.	Tighten component hardware.
	Dirt or contaminants in core drill parts.	Disassemble core drill and clean parts.

Core drill inoperative (continued)	Core drill parts worn or damaged.	Disassemble core drill and replace worn or damaged parts.
Core drill operates slowly.	Hydraulic fluid level low. Hydraulic fluid viscosity too heavy. Core drill parts loose. Dirt or contaminants in core drill parts. Contaminated hydraulic system. Core drill parts worn or damaged. Inappropriate hydraulic system.	Check fluid level. Fill to full mark. Check system for leaks. Use fluid viscosity recommended. See Section 2.3. Tighten component hardware. Disassemble core drill and clean parts. Remove contamination and clean hydraulic system. Disassemble core drill and replace worn or damaged parts. Check type of hydraulic power source, which must be open center. Wear, internal leakage: <ol style="list-style-type: none"> <li>1. Dismantle, check and replace defective or worn parts.</li> <li>2. Check purity of oil and oil viscosity at working temperature. Thin oil can cause increased internal leakage.</li> </ol> Insufficient flow—check flow and pressure.
Core drill operates erratically.	Leak in system. Core drill parts sticking or binding. Dirt or contaminants in core drill parts.	Tighten fittings. Inspect all hoses for leaks as described in Section 3.4. <b>REPLACE A LEAKING HOSE IMMEDIATELY. NEVER TRY TO REPAIR IT.</b> Check for dirt or gummy deposits. Clean parts. Check for worn or damaged parts and replace as required. Disassemble core drill and clean parts. Insufficient flow—check flow and pressure. Wear, internal leakage: <ol style="list-style-type: none"> <li>1. Dismantle, check and replace defective or worn parts.</li> <li>2. Check purity of oil and oil viscosity at working temperature. Thin oil can cause increased internal leakage.</li> </ol>
Core drill operates, but drill bit does not penetrate the material.	Diamonds not exposed. Wrong bit used for material being drilled.	Cut abrasive material to expose diamonds. Install bit recommended by manufacturer for material to be drilled.



Core drill cuts slowly	<p>Diamonds not exposed.</p> <p>Hydraulic flow is below 8 gpm.</p> <p>Hydraulic pressure relief is set below 2000 psi.</p>	<p>Cut abrasive material to expose diamonds.</p> <p>Adjust hydraulic power source.</p> <p>Adjust hydraulic power source.</p>
Excessive vibration and rough drilling.	<p>Diamond segments broken or missing from drill bit.</p> <p>Excess feed force when cutting rebar.</p>	<p>Replace drill bit.</p> <p>Reduce feed force.</p>
Bit is lodged in hole.	Excessive pressure exerted with feed handle.	<ol style="list-style-type: none"> <li>1. Turn water on.</li> <li>2. Turn off hydraulic unit. Using a bit wrench, try to rotate bit in both directions and lift out the bit using the feed handle.</li> <li>3. If unable to free bit, turn water off and disconnect bit from drill spindle. Use bit wrench again, rotating back and forth and rocking and lifting until free.</li> </ol>
Core drill feels hot.	<p>Inefficient cooling.</p> <p>Power source heat exchanger malfunctioning.</p> <p>Hydraulic fluid level low.</p> <p>Hydraulic fluid dirty.</p>	<p>Cooling water supply must meet the requirements described in Section 3.5.</p> <p>Refer to hydraulic power source operator's manual.</p> <p>Check fluid level. Fill to full mark. Check system for leaks.</p> <p>Drain reservoir, flush and fill with clean fluid. Change filter.</p>
Core drill leaks hydraulic fluid.	<p>Loose or damaged gaskets.</p> <p>Core drill parts worn or damaged.</p>	<p>Replace worn or damaged gaskets.</p> <p>Disassemble core drill and replace worn or damaged parts.</p>

## 6 PARTS LISTS

Each item number on the following parts lists can be matched with the item number shown on the corresponding assembly drawing as indicated in the following sections.

### 6.1 HYDRAULIC PARTS

Refer to Figure 6-1.

<b>Item Number</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
<b>1</b>	<b>6015302</b>	<b>1</b>	<b>HANDLE ASSEMBLY</b>
2	6015301	1	FLOW CONTROL
<b>3</b>	<b>5604684</b>	<b>2</b>	<b>FITTING</b>
4	6015307	1	LOGIC ELEMENT
<b>5</b>	<b>1697502</b>	<b>2</b>	<b>HOSE ASSEMBLY</b>
6	6001886	1	COUPLING FEMALE
<b>7</b>	<b>6001885</b>	<b>1</b>	<b>NIPPLE MALE</b>

**Figure 6-1.**  
**CD616/CD1824 Hydraulic Parts**

**6.2 #1704560 HYDRAULIC PILLOW BLOCK**

Refer to Figure 6-2.

<b>Item Number</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
1	1799905	1	SPINDLE SHAFT
2	<b>1700013</b>	<b>2</b>	<b>TAPERED BEARING</b>
3	1700014	2	BEARING RACE
4	<b>1799901</b>	<b>1</b>	<b>SHIM (SPECIFY WIDTH)</b>
5	4699910	1	PILLOW BLOCK
6	<b>2900119</b>	<b>2</b>	<b>1/2"-13 X 1-3/4" CAP SCREW</b>
7	2900062	1	GREASE FITTING, 1/8" NPT
8	<b>4641010</b>	<b>1</b>	<b>KEY, 1/2" SQUARE X 4" LONG</b>
	<b>4699922</b>	<b>1</b>	<b>KEY, 1/2"-3/8" X 4" LONG (FOR M1 STAND)</b>
9	7400021	2	WATER SEAL
10	<b>4699920</b>	<b>1</b>	<b>WATER HOUSING</b>
11	2900120	4	3/8"-16 X 3" CAP SCREW
12	<b>1799921</b>	<b>1</b>	<b>WATER PETCOCK WITH HOSE FITTING</b>

**Figure 6-2.**  
**CD616/CD1824 Hydraulic Pillow Block**

### 6.3 M2 DRILL STAND

Refer to Figure 6-3.

Item Number	Part Number	Quantity	Description
1	1741002	1	42" MAST ASSEMBLY includes #2 & #3
1	4641068	1	42" ANGLE MAST ASSEMBLY includes #2 & #3
<b>2</b>	<b>2400170</b>	<b>1</b>	<b>GEAR RACK (only), 32"</b>
3	4641076	1	MAST TOP With PINS
<b>4</b>	<b>2900207</b>	<b>4</b>	<b>DOWEL PIN (only)</b>
5	1741060	1	COMBO BASE includes #6-27
5	4641070	1	ANGLE COMBO BASE includes #6-21&#27-32
<b>6</b>	<b>4641025</b>	<b>1</b>	<b>COMBO BASE only</b>
<b>6</b>	<b>4641075</b>	<b>1</b>	<b>ANGLE COMBO BASE only</b>
7	1741024	1	VACUUM GASKET
<b>8</b>	<b>2900081</b>	<b>4</b>	<b>SQUARE HEAD SET SCREW 5/8X3</b>
9	4645022	1	VACUUM PLATFORM
<b>10</b>	<b>2900087</b>	<b>4</b>	<b>SOCKET HEAD CAP SCREW #10X5/8</b>
11	2900016	4	FLAT WASHER #10
<b>12</b>	<b>2900086</b>	<b>3</b>	<b>HEX HEAD CAPSCREW 1/2X1</b>
13	2900127	1	FLAT WASHER 1/2
<b>14</b>	<b>4600046</b>	<b>1</b>	<b>SLOT CAP ASSEMBLY includes #15-18</b>
15	1700004	1	SLOT CAP
<b>16</b>	<b>1715030</b>	<b>1</b>	<b>SLOT CAP GASKET</b>
17	2400130	1	SLOT CAP KNOB
<b>18</b>	<b>2400169</b>	<b>1</b>	<b>KNOB GASKET</b>
19	2900146	1	HEX HEAD CAPSCREW 5/8X4
<b>20</b>	<b>2900099</b>	<b>1</b>	<b>HEX HEAD CAPSCREW 5/8X3-1/2</b>
21	2900256	1	JAM NUT 5/8
<b>22</b>	<b>4645046</b>	<b>1</b>	<b>WHEEL ASSEMBLY includes #23-26</b>
23	2900085	4	COTTER PIN 3/32X1
<b>24</b>	<b>2900128</b>	<b>4</b>	<b>FLAT WASHER 5/8</b>
25	2400004	2	WHEEL 6"
<b>26</b>	<b>4645033</b>	<b>1</b>	<b>WHEEL MOUNT BRACKET</b>
27	2900084	2	SPLITLOCK WASHER 1/2
<b>28</b>	<b>4645078</b>	<b>1</b>	<b>ANGLE WHEEL ASSEMBLY includes #23-25,29&amp;30</b>
29	4645064	1	ANGLE WHEEL MOUNT BRACKET
<b>30</b>	<b>4645071</b>	<b>1</b>	<b>WHEEL AXLE</b>
31	2900097	1	HEX HEAD CAPSCREW 1X4-3/4
<b>32</b>	<b>2900098</b>	<b>1</b>	<b>JAM NUT 1</b>
33	4641077	1	ANGLE BRACE ASSEMBLY includes #34-38
<b>34</b>	<b>4645063</b>	<b>1</b>	<b>LOWER BRACE</b>
35	4645061	1	UPPER BRACE
<b>36</b>	<b>2900095</b>	<b>1</b>	<b>L-BOLT 5/16</b>
37	4641069	1	MAST BRACKET
<b>38</b>	<b>2900103</b>	<b>1</b>	<b>SOCKET HEAD CAP SCREW 5/16X1</b>
39	4241105	1	SMALL ANCHOR BASE ASSEMBLY includes #12,19,21-27,40,&41
39	4641071	1	SMALL ANGLE ANCHOR BASE ASSEMBLY includes #12,19,21,27-32,40,&41
<b>40</b>	<b>4641004</b>	<b>1</b>	<b>SMALL ANCHOR BASE ONLY</b>
<b>40</b>	<b>4641072</b>	<b>1</b>	<b>SMALL ANGLE ANCHOR BASE ONLY</b>
41	2900100	4	SQUARE HEAD SET SCREW 5/8X4
<b>42</b>	<b>4241063</b>	<b>1</b>	<b>LARGE ANCHOR BASE ASSEMBLY includes #13,19,25,43-46</b>
43	4641005	1	LARGE ANCHOR BASE ONLY

6.3 M2 DRILL STAND (continued)

Item Number	Part Number	Quantity	Description
44	2900105	2	HEX HEAD CAPSCREW 1/2X2-3/4
45	4641006	2	WHEEL BUSHING
46	2900104	4	SQUARE HEAD SET SCREW 5/8X6
47	1704559	1	CARRIAGE ASSEMBLY includes #48-75
48	4641017	1	CARRIAGE HOUSING
49	4641013	1	CARRIAGE PLATE
50	2900103	8	SOCKET HEAD CAP SCREW 5/16X1
51	1741015	1	SPOKE HANDLE ASSEMBLY includes #52-54
52	1741016	4	SPOKE HANDLE
53	4641019	1	HANDLE HOUSING
54	2900124	5	SOCKET HEAD CAP SCREW 3/8X1-3/4
55	1747124	1	PINION GEAR ASSEMBLY includes #56-60
56	2400006	1	BRONZE BEARING 1-1/4X7/8
57	4641022	1	PINION GEAR
58	2400005	1	BRONZE BEARING 7/8X3/4
59	2900101	5	SOCKET HEAD SET SCREW 1/4X3/8
60	2900056	1	SOCKET HEAD SET SCREW 1/4X1/4
61	2900078	1	CARRIAGE LOCK 1/2
62	4641011	1	BRASS SHIM & SCREW ASSEMBLY includes #63-68
63	1741020	2	SHIM 2-1/2X9
64	2900102	8	FLAT HEAD BRASS CAPSCREW 1/4X1/2
65	1741018	1	SHIM 2-1/2X10
66	2900074	4	FLAT HEAD BRASS CAPSCREW 1/4X5/8
67	1741012	2	SHIM 5/8X9
68	2900075	4	FLAT HEAD BRASS CAPSCREW 1/4X1
69	2900077	4	SOCKET HEAD SET SCREW 1/4X7/8
70	4641009	1	MOTOR MOUNT ASSEMBLY includes #54,71-75
71	4641042	1	MOTOR MOUNT PLATE
72	4641010	1	KEY 1/2X4
73	2900089	4	SOCKET HEAD CAP SCREW 1/4-28X1 (DEWALT MOTORS ONLY)
74	2900088	4	SOCKET HEAD CAP SCREW 1/4-20X1 (MILWAUKEE MOTORS ONLY)
75	4645006	1	KEY 3/8X4
76	4648033	1	MOTOR MOUNT ASSEMBLY (WEKA) includes #54,72,77-79
77	4648034	1	MOTOR MOUNT PLATE (WEKA)
78	2900161	4	SOCKET HEAD CAP SCREW M8X25MM
79	2900263	1	KEY 10X100MM

**Figure 6-3.**  
**M2 Drill Stand**

## **LIMITED PRODUCT WARRANTY**

**Reimann & Georger Corporation  
Hoisting and Construction Products**

### **A. LIMITED WARRANTY**

Reimann & Georger Corporation (the "Manufacturer") warrants to the original purchaser (the "Buyer") that all Reimann & Georger Hoisting and Construction products shall be free of defects in material and workmanship for a period of one (1) year from date of original purchase.

### **B. MANUFACTURER'S OBLIGATIONS**

The Manufacturer's sole obligation under this Limited Warranty is the repair or, at the Manufacturer's discretion, the replacement of parts found to be defective. Parts and equipment must have authorization from the Manufacturer prior to return to the Manufacturer or repair by an authorized service person. Costs of transportation and other expenses connected with replacing or repairing parts are not covered under this Limited Warranty.

### **C. PARTS MANUFACTURED BY OTHERS**

This Limited Warranty does not cover any parts manufactured by others. Such parts are subject to the warranty, if any, of their respective manufacturers, and are to be repaired only by a respective authorized service person for such parts. The Manufacturer shall have no obligation to undertake repairs of parts manufactured by others.

### **D. NO SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES**

**IN NO EVENT SHALL THE MANUFACTURER BE LIABLE TO THE BUYER OR ANY OTHER PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL LOSSES OR DAMAGES CONNECTED WITH THE USE OF THE PRODUCT UNDER THIS LIMITED WARRANTY. SUCH DAMAGES FOR WHICH THE MANUFACTURER SHALL NOT BE RESPONSIBLE INCLUDE, BUT ARE NOT LIMITED TO, LOST TIME AND CONVENIENCE, LOSS OF USE OF THE PRODUCT, THE COST OF A PRODUCT RENTAL, COSTS OF GASOLINE, TELEPHONE, TRAVEL, OR LODGING, THE LOSS OF PERSONAL OR COMMERCIAL PROPERTY, AND THE LOSS OF REVENUE.**

### **E. NO LIABILITY IN EXCESS OF PURCHASE PRICE**

**IN NO EVENT SHALL THE MANUFACTURER'S OBLIGATIONS UNDER THIS LIMITED WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT.**

### **F. NO EXTENSION OF STATUTE OF LIMITATIONS**

**ANY REPAIRS PERFORMED UNDER THIS WARRANTY SHALL NOT IN ANY WAY EXTEND THE STATUTES OF LIMITATIONS FOR CLAIMS UNDER THIS LIMITED WARRANTY.**

### **G. WAIVER OF OTHER WARRANTIES**

**THE EXPRESS WARRANTIES SET FORTH IN THIS LIMITED WARRANTY ARE IN LIEU OF AND EXCLUDE ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**



## **H. PROCEDURE FOR WARRANTY PERFORMANCE**

If the product fails to perform to the Manufacturer's specifications, the Buyer must provide the Manufacturer with the applicable model and serial numbers, the date of purchase, and the nature of the problem.

### **I. ADDITIONAL EXCLUSIONS FROM THIS LIMITED WARRANTY. THIS LIMITED WARRANTY DOES NOT COVER ANY OF THE FOLLOWING:**

1. Equipment which has been abused, damaged, used beyond rated capacity, or repaired by persons other than authorized service personnel.
2. Damage caused by acts of God which include, but are not limited to, hailstorms, windstorms, tornadoes, sandstorms, lightning, floods, and earthquakes.
3. Damage under conditions caused by fire or accident, by abuse or by negligence of the user or any other person other than the Manufacturer, by improper installation, by misuse, by incorrect operation, by "normal wear and tear", by improper adjustment or alteration, by alterations not completed by authorized service personnel, or by failure of product parts from such alterations.
4. Costs of repairing damage caused by poor or improper maintenance, costs of normally scheduled maintenance, or the cost of replacing any parts unless done as the result of an authorized repair covered by the one (1) year Limited Warranty.
5. Costs of modifying the product in any way once delivered to the Buyer, even if such modifications were added as a production change on other products made after the Buyer's product was built.

### **J. NO AUTHORITY TO ALTER THIS LIMITED WARRANTY**

No agent, representative, or distributor of the Manufacturer has any authority to alter the terms of this Limited Warranty in any way.