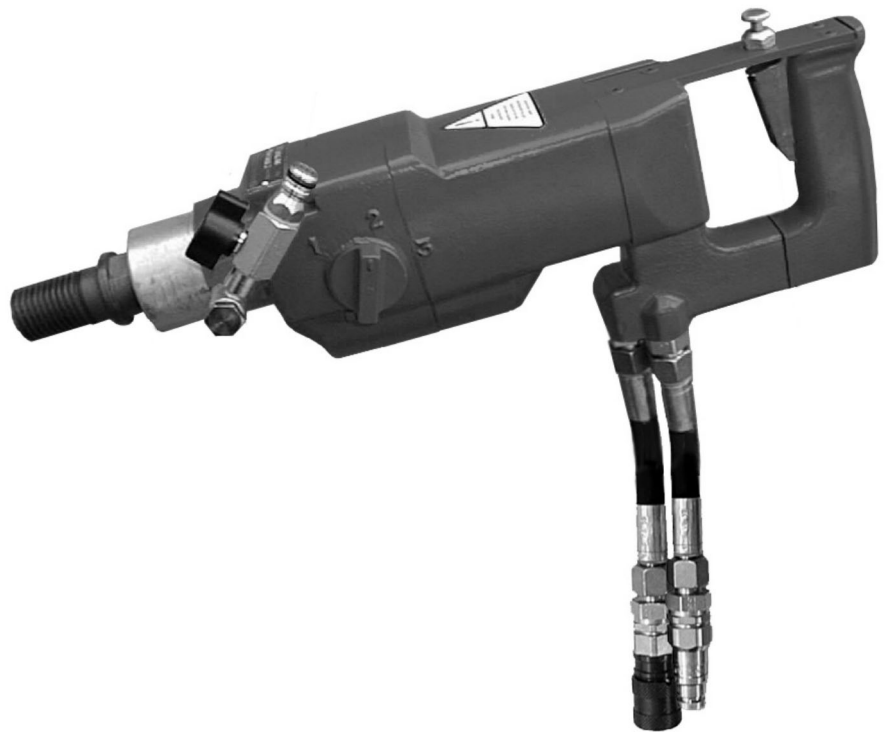


# STANLEY®

## User's Manual

# HYDRAULIC CORE DRILL CD10



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OPS USA & CE Version  
58858 9/2002 Ver. 1 Stanley

### **DANGER**

**SERIOUS INJURY OR DEATH COULD RESULT FROM THE IMPROPER REPAIR OR SERVICE OF THIS TOOL.**

**REPAIRS AND/OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.**

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# Table of Contents

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## CD 10 CORE DRILL

### ***SERVICING THE CD10 CORE DRILL :***

This manual contains Safety, Operation, and Troubleshooting information. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the DANGER warning on the cover and the

Specifications	3
General Safety Instructions	4
Tools Decals and Tags	5
Hydraulic Hose Requirements	6
HTMA Requirements	7
Operating Instructions	8
Troubleshooting	11
Maintenance	14
Parts Illustration	15
Parts List	16
Accessories	19
Warranty	20

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## **SAFETY FIRST**

***It is the responsibility of the operator and service technician to read rules and instructions for safe and proper operation and maintenance.***

***A cautious worker using common sense is the greatest safety device.***

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# Specifications

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Pressure\_\_\_\_\_2000 psi / 140 bar

Water Pressure\_\_\_\_\_max. 60 psi / 4 bar

Maximum Back Pressure\_\_\_\_\_250 psi/ 17 bar

Weight\_\_\_\_\_18.7 lbs. / 8.5 kg

Overall Length\_\_\_\_\_19.3 in. / 490 mm

Max. Fluid Temp.\_\_\_\_\_140° F / 60° C

Capacity\_\_\_\_\_3.6 hp / 2.8 kW

Flow Range\_\_\_\_\_5-13 gpm / 20-50 lpm

Maximum Flow\_\_\_\_\_13 gpm / 49 lpm

Porting\_\_\_\_\_ -8 SAE O-ring

Water Connection\_\_\_\_\_Gardena System

Free Speed\_\_\_\_\_1st Gear - 380 rpm  
2nd Gear - 900 rpm  
3rd Gear - 1800 rpm

Drill Bit Connection\_\_\_\_\_1 - 1/4 in. UNC male / R  
1/2 in. Female

Hydraulic Connection\_\_Quick Couplers 1/2 in. FF

Hose Diameter\_\_\_\_\_ .500 in. / 12 mm

HTMA Class I\_\_\_\_\_4-6 gpm @ 2000 psi



EHTMA Category\_\_\_\_\_20 lpm @138 bar

HTMA Class II\_\_\_\_\_7-9 gpm @ 2000 psi



EHTMA Category\_\_\_\_\_30 lpm @ 138 bar

Sound Pressure \_\_\_\_\_80 dBA @ 1m.

Vibration Level\_\_\_\_\_0.82 m / s<sup>2</sup>

# General Safety Instructions

*Always observe safety symbols. They are included for your safety and the protection of the tool.*

## **DANGER**

*This safety symbol may appear on the tool. It is used to alert the operator of an action that could place him/her or others in a life threatening situation.*




















## **WARNING**

*This safety symbol appears in these instructions to identify an action that could cause bodily injury to the operator or other personnel.*

## **CAUTION**

*This safety symbol appears in these instructions to identify an action or condition that could result in damage to the tool or other equipment.*

This tool will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.

-  Operator must start in a work area without bystanders. The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
-  Establish a training program for all operators to ensure safe operations.
-  Do not operate the tool unless thoroughly trained or under the supervision of an instructor.
-  Always wear safety equipment such as goggles, head protection, and safety shoes at all times when operating the tool.
-  Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
-  Do not operate this tool without first reading the Operating Instructions.
-  Do not install or remove this tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
-  Never operate the tool if you cannot be sure that underground utilities are not present. Underground electrical utilities present an electrocution hazard. Underground gas utilities present an explosion hazard. Other underground utilities may present other hazards.
-  Do not wear loose fitting clothing when operating the tool. Loose fitting clothing can get entangled with the tool and cause serious injury.
-  Supply hoses must have a minimum working pressure rating of 2500 psi/175 bar.
-  Be sure all hose connections are tight.
-  The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling the tool. Wipe all couplers clean before connecting. Failure to do so may result in damage to the quick couplers and cause overheating. Use only lint-free cloths.
-  Do not operate the tool at oil temperatures above 140° F/60° C. Operation at higher oil temperatures can cause operator discomfort and may cause damage to the tool.
-  Do not operate a damaged, improperly adjusted, or incompletely assembled tool.
-  To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.
-  Do not exceed the rated limits of the tool or use the tool for applications beyond its design capacity.
-  Always keep critical tool markings, such as labels and warning stickers legible.
-  Always replace parts with replacement parts recommended by Stanley Hydraulic Tools.
-  Check fastener tightness often and before each use daily.

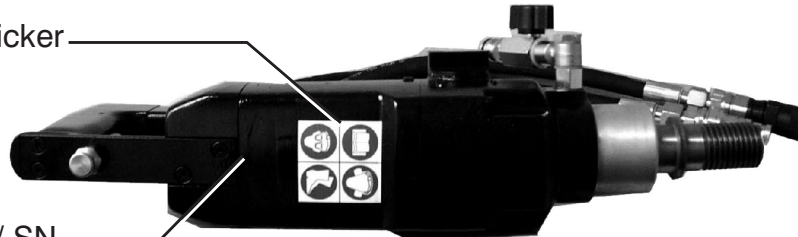


# Tool Decals & Tags

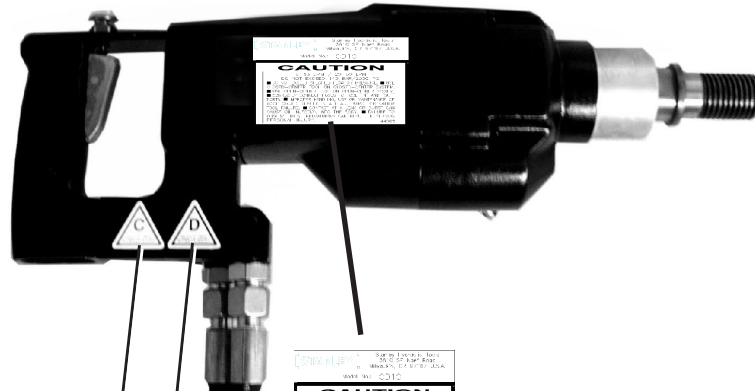
A Name Tag Sticker is attached to the tool. Never exceed the flow and pressure levels specified on this sticker. The information listed on the name tag sticker must be legible at all times. Replace this sticker if it becomes worn or damaged. A replacement is available from your local Stanley distributor.



28409  
Composite Sticker



Location Model # / SN



11206  
Circuit Type "C" Decal



11207  
Circuit Type "D" Decal



CD10 Name Tag & GPM Sticker  
44968

**⚠ DANGER ⚠**

1. FAILURE TO USE HYDRAULIC HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE WHEN USING HYDRAULIC TOOLS ON OR NEAR ELECTRICAL LINES MAY RESULT IN DEATH OR SERIOUS INJURY.

BEFORE USING HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE ON OR NEAR ELECTRICAL LINES, BE SURE THE HOSE IS MAINTAINED AS NON-CONDUCTIVE. THE HOSE SHOULD BE REGULARLY TESTED FOR ELECTRIC CURRENT LEAKAGE IN ACCORDANCE WITH YOUR SAFETY DEPARTMENT INSTRUCTIONS.

2. A HYDRAULIC LEAK OR BURST MAY CAUSE OIL INJECTION INTO THE BODY OR CAUSE OTHER SEVERE PERSONAL INJURY.

A. DO NOT EXCEED SPECIFIED FLOW AND PRESSURE FOR THIS TOOL. EXCESS FLOW OR PRESSURE MAY CAUSE A LEAK OR BURST.

B. DO NOT EXCEED RATED WORKING PRESSURE OF HYDRAULIC HOSE USED WITH THIS TOOL. EXCESS PRESSURE MAY CAUSE A LEAK OR BURST.

C. CHECK TOOL, HOSE, COUPLERS & CONNECTORS DAILY FOR LEAKS. DO NOT FEEL FOR LEAKS WITH YOUR HANDS. CONTACT WITH A LEAK MAY RESULT IN SEVERE PERSONAL INJURY.

**IMPORTANT**

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

(517)
SEE OTHER SIDE
15875

**⚠ DANGER ⚠**

D. DO NOT LIFT OR CARRY TOOL BY THE HOSES. DO NOT ABUSE HOSE. DO NOT USE KINKED, TORN OR DAMAGED HOSES.

3. MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONNECTED TO THE TOOL BEFORE PRESSURIZING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL IN PORT. SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED AT TOOL "OUT" PORT. REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN CAUSE SEVERE PERSONAL INJURY.

4. DO NOT CONNECT CLOSED-CENTER TOOLS TO OPEN-CENTER HYDRAULIC SYSTEMS. THIS MAY CAUSE EXTREME SYSTEM HEAT AND/OR SEVERE PERSONAL INJURY.

DO NOT CONNECT OPEN-CENTER TOOLS TO CLOSED-CENTER HYDRAULIC SYSTEMS. THIS MAY RESULT IN LOSS OF OTHER HYDRAULIC FUNCTIONS POWERED BY THE SAME SYSTEM AND/OR SEVERE PERSONAL INJURY.

5. BYSTANDERS MAY BE INJURED IN YOUR WORK AREA. KEEP BYSTANDERS CLEAR OF YOUR WORK AREA.

6. WEAR HEARING, EYE, FOOT, HAND AND HEAD PROTECTION.

7. TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR, MAINTENANCE AND SERVICE MUST BE PERFORMED BY AUTHORIZED AND TRAINED PERSONNEL.

**IMPORTANT**

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

(517)
SEE OTHER SIDE
15875

The SAFETY TAG, P/N 15875, shown at right, smaller than actual size, is attached to the tool when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the tool when not in use.

# Hydraulic Hose Requirements

## HOSE TYPES

Hydraulic hose types authorized for use with Stanley Hydraulic Tools are as follows:

- ① Certified non-conductive
- ② Wire-braided (conductive)
- ③ Fabric-braided (not certified or labeled non-conductive)

Hose ① listed above is the only hose authorized for use near electrical conductors.

Hoses ② and ③ listed above are **conductive** and **must never** be near electrical conductors.

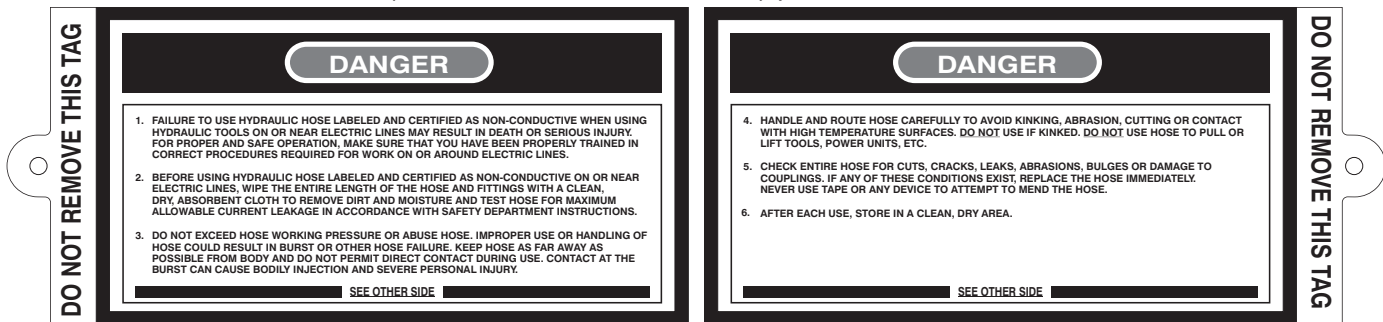
## HOSE SAFETY TAGS

To help ensure your safety, the following DANGER tags are attached to all hoses purchased from Stanley Hydraulic Tools. **DO NOT REMOVE THESE TAGS.**

If the information in a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained at no charge from your Stanley Distributor.

### This Tag attached to “Certified Non-Conductive” hose.

(shown smaller than actual size) p/n 27987

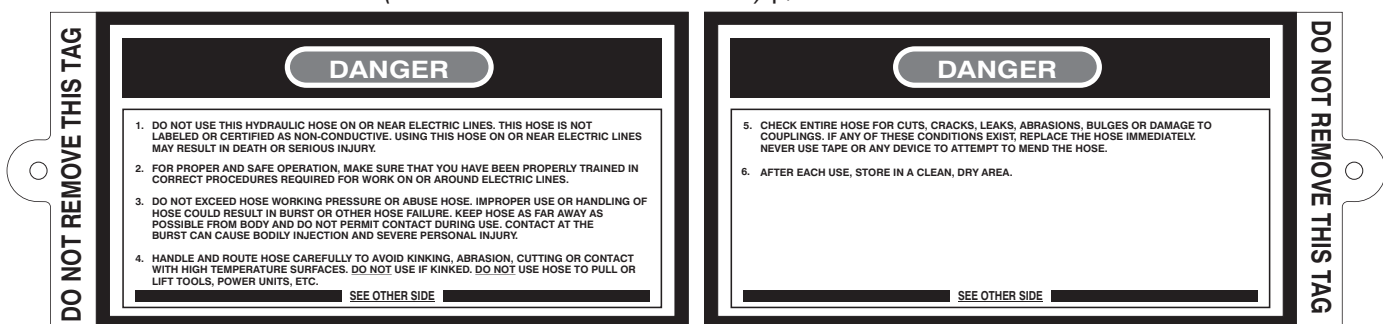


Side 1

Side 2

### This Tag attached to “Conductive” hose.

(shown smaller than actual size) p/n 29144



Side 1

Side 2

## HOSE PRESSURE RATING

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system.

# HTMA Requirements

Hydraulic System Requirements	Tool Category:		
	Type I	Type II	Type III
<b>Flow rate</b> Tool Operating Pressure <i>(at the power supply outlet)</i>	4-6 GPM (15-23 lpm) 2000 psi (138 bar)	7-9 GPM (26-34 lpm) 2000 psi (138 bar)	11-13 GPM (42-49 lpm) 2000 psi (138 bar)
<b>System relief valve setting</b> <i>(at the power supply outlet)</i>	2100-2250 (145-155 bar)	2100-2250 (145-155 bar)	2100-2250 (145-155 bar)
<b>Maximum back pressure</b> <i>(at tool end of the return hose)</i>  Measured at a max. fluid viscosity of: <i>(at min. operating temperature)</i>	250 psi (17 bar)  400 SSU (82 centistokes)	250 psi (17 bar)  400 SSU (82 centistokes)	250 psi (17 bar)  400 SSU (82 centistokes)
<b>Temperature</b> Sufficient heat rejection capacity to limit max. fluid temperature to: <i>(at max. expected ambient temperature)</i>  Min. cooling capacity at a temperature difference of between ambient and fluid temps	140° F (60° C)  3 hp (2.24 kW) 40° F (22° C)	140° F (60° C)  5 hp (3.73 kW) 40° F (22° C)	140° F (60° C)  7 hp (5.22 kW) 40° F (22° C)
<b>NOTE:</b> Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.			
<b>Filter</b> Min. full-flow filtration sized for flow of at least: <i>(For cold temp. startup and max. dirt-holding capacity)</i>	25 microns 30 GPM (114 lpm)	25 microns 30 GPM (114 lpm)	25 microns 30 GPM (114 lpm)
<b>Hydraulic fluid</b> Petroleum based <i>(premium grade, anti-wear, non-conductive)</i> Viscosity <i>(at min. and max. operating temps)</i>	100-400 SSU* (20-82 centistokes)	100-400 SSU* (20-82 centistokes)	100-400 SSU* (20-82 centistokes)
<b>NOTE:</b> When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.			

\*SSU = Saybolt Seconds Universal

**NOTE:** These are general hydraulic system requirements. See tool Specification page for tool specific requirements.

# Operating Instructions

## General Operation

The tool comes with a set of accessories which may be customized by each purchaser, so as to facilitate performance of all work occurring within the scope of his specific application. Tools included are for mounting and dismounting.

- single-head wrench SW24
- single-head wrench SW32
- single-head wrench SW 41
- hex wrench SW 5

Basically, you differentiate between **freehand drilling** and **stand-aided drilling**. The operating procedures to be adhered to for the two different operating modes are described below.

## Drill Bit Installation

### WARNING

*Before you start changing the drill bit, make sure that the tool is disconnected from the power source in order to avoid unintentional operation of the tool and injury. Disconnect only unpressurized hoses.*

Use a single-head wrench SW 24 (small drill bit) or SW 41 (large drill bits) and a single-head wrench SW 32 to manually unscrew the drill bit to be removed and to screw on the new one. There is no need to use any additional tools.

## Dimension of the Drill Bit

Drill head thread: male 1 - 1/4 in. UNC and female R 1/2 in.

Which drill bit at which speed?

	gear #1	gear #2	gear #3
speed [1/min]	380	900	1800
drill bit diameter [mm]	100 - 162	40 - 100	20 - 40
cutting speed [m/s]	2 - 3,5	2 - 4,5	2 - 4

## Check the Power Source

1. Using a calibrated flowmeter and pressure gauge, check that the hydraulic power source develops a flow of 5.8-13.2 gpm / 22-50 lpm at 950-2000 psi / 66-140 bar.
2. Make certain that the hydraulic power source is equipped with a relief valve set to open at 2100-2250 psi / 145-155 bar.
3. Check that the hydraulic circuit matches the tool for open-center (OC) operation.

## Check the Tool

1. Make certain all tool accessories are correctly installed. Failure to install tool accessories properly can result in damage to the tool or personal injury.
2. There should be no signs of leaks.
3. The tool should be clean and dry with all fittings and fasteners tight.

## Connect Hoses

1. Wipe all hose couplers with a clean lint-free cloth before making connections.
2. Connect the hoses from the hydraulic power source to the tool fittings or quick disconnects. Connect the return hose first and disconnect it last to eliminate or reduce trapped pressure for easier quick-connect fitting attachment.

**NOTE: If uncoupled hoses are left in the sun, pressure increase within the hoses can make them difficult to connect. When ever possible, connect the free ends of hoses together.**

3. Observe the flow indicators stamped on the hose couplers to ensure that the flow is in the proper direction. The female coupler on the tool's **IN** port is the inlet coupler.

# Operating Instructions

4. Squeeze the drill trigger momentarily. If the drill does not operate, the hoses might be reversed. Verify correct connection of the hoses before continuing.

## Freehand Drilling

1. Observe all safety precautions.
2. Mount the spot-drilling aid onto the centering collar to ensure precise positioning.
3. Screw on the desired drill bit (up to max. Ø 80 mm approx. 3 inches). Refer to the **DRILL BIT INSTALLATION** for details. Manual tightening is sufficient because the drill bit will automatically fasten further during drilling.
4. Connect the tool to water supply. For this purpose the device comes with a 10 liter pump barrel, which has to be pressurized first. You may alternatively connect the device to a water tap, using the "Gardena" hose couplings. Maximum water pressure is 60 psi / 4 bar.
5. Finally connect the tool to the power source.
6. Move the hydraulic circuit control valve to the **ON** position.
7. Regulate the water valve to adjust the water supply flow as desired.
8. With the so prepared drill, you may now proceed to carry out your work.

### **CAUTION**

*Never switch into gear #1 in freehand drilling operation. This delivers the highest torque.*

9. Put the drill in drilling position and squeeze the trigger to activate the drill.
10. Release the trigger to stop the drill.

### **WARNING**

*To avoid injury, do not use the valve trigger lock in freehand drilling operation! Use valve trigger lock in stand-aided drilling operation only!*

11. The handle and the spot-drilling aid enable controlled manual operation of the drill.

### **CAUTION**

*Monitor continuously the water supply to ensure that sufficient water is supplied to the cut surface to avoid unnecessary wear of drilling equipment.*

12. To change drill bits, proceed as described above. Adhere to safety instructions!
13. For dismounting the drill upon completion of drilling work, follow the mounting instructions in reverse order.

## Stand-aided Drilling

First, fix the stand at the point where you wish to drill the opening or hole. To do so, drill a hole matching the size of the corresponding screw anchor screw the stand onto the surface. Align the stand such that the drill bit will make contact with the surface precisely at the point where you want to drill the opening or hole.

1. Insert the drill from above into the corresponding seat and fasten the core drill by means of the hex head socket wrench SW 5.
2. Now, manually screw the corresponding drill bit from below onto the drill bit adapter. Manual tightening is sufficient because the drill bit will automatically fasten further during drilling operation.
3. If necessary to attain an angled drill hole, adjust the stand position by swiveling the arm of the stand.
4. Connect the tool to water supply. For this purpose the device comes with a 10 liter pump

# Operating Instructions

barrel, which has to be pressurized first. You may alternatively connect the device to a water tap, using the "Gardena" hose couplings. Maximum water pressure is 60 psi / 4 bar.

5. Finally connect the tool to the power source.
6. Move the hydraulic circuit control valve to the **ON** position.
7. To operate the drill, regulate check valve to adjust the water supply flow as desired.
8. With the so prepared drill, you may now proceed to carry out your work.
9. Squeeze the trigger to activate the drill and press valve trigger fixing key to ensure comfortable working.

## **⚠ CAUTION**

*Monitor continuously the water supply to ensure that sufficient water is supplied to the cut surface to avoid unnecessary wear of drilling equipment.*

10. You may continuously control the advance motion of the drill by adjusting the star knob at the side of the drilling stand.
11. To switch off the machine, unlock the valve trigger fixing key. Then, shut off the water supply.
12. To change drill bits, proceed as described above. Adhere to safety instructions!
13. For dismantling the drill upon completion of drilling work, follow the mounting instructions in reverse order.

## **⚠ CAUTION**

*When drilling into a structure that might contain electrical wiring, be sure to know the location of the wiring and avoid drilling into it. The housing can carry electrical current from live electrical wires into which the drill is accidentally drilled resulting in injury or death.*

## **Cold Weather Operation**

If the drill is to be used during cold weather, preheat the hydraulic fluid at low engine speed. When using the normally recommended fluids, fluid temperature should be at or above 50 °F/10 °C (400 ssu/ 82 centistokes) before use. Damage to the hydraulic system or drill can result from use with fluid that is too viscous or too thick.

# Troubleshooting

This section describes how to find and resolve problems users may experience. If a situation occurs that is not covered, call your Stanley Customer Service representative for assistance.

## **WARNING**

*Inspecting the tool or installing parts with the hydraulic hoses connected can result in severe personal injury or equipment damage.  
To prevent accidental startup, disconnect the hydraulic power before beginning any inspection or installation task.*

If symptoms of poor performance develop, the following chart can be used as a guide to correct the problem.

When diagnosing faults in operation of the tool, always check that the hydraulic power source is supplying the correct hydraulic flow and pressure to the tool as listed in the table. Use a flowmeter known to be accurate. Check the flow with the hydraulic oil temperature at least 80° F/27° C.

Symptom	Possible Cause	Solution
Tool will not start.	Power not being supplied.	Check to make certain that both hoses are connected. Turn hydraulic circuit control valve <b>ON</b> .
	Defective quick disconnect	Check each disconnect separately. Replace as necessary.
	Jammed motor.	See your authorized dealer for service.
	Flow reversed through hoses.	Correct the power source control valve position. Prevent reverse flow by using only one port from the valve for pressure, the return tool hose to the cooler and the filter line. Correct the quick-disconnect male/female routing per instructions and the arrows on the fittings.
Low drilling torque.	Incorrect hydraulic flow.	Check that the hydraulic power source is producing 5.8-13-2 gpm / 22-50 lpm at 950-2000 psi / 66-140 bar.
	Defective quick disconnect.	Check each disconnect separately.
	Hydraulic circuit relief set too low, hoses too restrictive or the hydraulic fluid is too thick.	Set relief valve at 2100 psi / 145 bar.
	Fluid Restriction in hose or valve. Excess back pressure.	Locate and remove restrictions. Use correct fluid.

*continued*



# Troubleshooting

Symptom	Possible Cause	Solution
Low drilling torque. <i>continued</i>	Fluid Restriction in hose or valve. Excess back pressure. <i>continued</i>	Fluid not warmed-up. Preheat system.
		Hoses too long for hose I.D. Use shorter hose.
	Priority flow control valve is malfunctioning.	See your authorized service dealer for replacement.
	Flow reversed through hoses.	Correct the power source control valve position. Prevent reverse flow by using only one port from the valve for pressure, the return tool hose to the cooler and the filter line. Correct the quick-disconnect male/female routing per instructions and the arrows on the fittings.
	Too low slip clutch torque.	Inspect and replace slip clutch washers if necessary. Set torque to $20 \pm 1,5$ Nm, $15 \pm 1$ lbf.ft. See your authorized service dealer for repair. Do not overload drill to avoid wear of slip clutch.
Tool runs too fast.	Incorrect hydraulic flow.	Check that hydraulic power source is not producing over 13.2 / 50 lpm at 950-2000 psi / 66-149 bar.
	Hydraulic flow reversed.	Correct the tool hoses, <b>IN</b> and <b>OUT</b> per instructions and if the power supply valve is reversible, reconnect the tool return hose to the oil cooler or to the filter directly.
	Priority valve faulty.	Do not separate modules. Remove inspect and replace priority valve if necessary. See your authorized service dealer for replacement.
Trigger operation erratic. Control difficult.	Trigger mechanism blocked.	Do not separate modules. Clean trigger area. Adjust trigger.
Fluid leak at air gap between motor and valve housing.	Motor capscrews loose.	Tighten to recommended torque (10 Nm = 7, 5 lbf.ft).

*continued*



# Troubleshooting

Symptom	Possible Cause	Solution
Fluid leak at air gap between motor and valve housing. <i>continued</i>	Motor O-rings worn.	See your authorized dealer for repair.
	Motor cap / main housing damaged.	See your authorized dealer for repair.
Fluid leaks at flow control valve.	Damaged O-rings.	See your authorized dealer for repair.
	Wrong hydraulic fluid. Circuit too hot.	See OPERATING INSTRUCTIONS for correct fluid / circuit specifications.
	Hydraulic pressure and return hoses reversed.	Correct hose connections.
Fluid gets too hot. Power unit working hard.	Open center tool on a closed center circuit or vice versa.	Use tools to match circuit.
	Circuit relief set too low.	Adjust relief valve to 2100-22500 psi / 145-155 bar.
	Too much fluid going through tool.	Adjust flow for 13.2 gpm / 50 lpm maximum.
	Circuit is generating high heat with flow controls.	Use pump size and rpm for producing needed flow only. Eliminate circuit heating causes.
	Circuit has contaminants that have caused wear and high heat generation.	Replace worn pump and valves. Install a large clean filter and keep the fluid clean.
Gearshift knob turns hard.	Oil leak at motor shaft seal into gearbox causes high pressure in gearbox.	See your authorized dealer for repair.
No gearshift function.	Shifter pin worn or broken.	See your authorized dealer for repair.
Water leaking out of shaft seal or side hole.	Output shaft seals worn.	See your authorized dealer for repair.
	Water pressure too high. Seal damaged.	Maximum water pressure 60 psi / 4 bar.

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# Maintenance

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Good maintenance practice keeps the core drill on the job and increases its service life.

The most important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated fluid causes rapid wear and/or failure of internal parts.

Follow the procedure contained in the **HYDRAULIC SYSTEM REQUIREMENTS** section of this manual to ensure peak performance from the tool.

Do not disassemble the tool until you know whether the problem is in the hydraulic power supply, the gearbox module, or the power and control (rear) module. Then only disassemble the tool as necessary to repair as required. **KEEP CONTAMINANTS SUCH AS DIRT AND GRIT AWAY FROM INTERNAL PARTS AT ALL TIMES**

Always determine and correct the cause of the problem prior to reassembly. Further wear and tool failure can result if the original cause is not corrected.



# SERVICE INSTRUCTIONS

Good maintenance practice keeps the core drill on the job and increases its service life.

The most important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated fluid causes rapid wear and/or failure of internal parts.

Follow the procedure contained in the "HYDRAULIC SYSTEM REQUIREMENTS" section of this manual to ensure peak performance from the tool.

Do not disassemble the tool until you know whether the problem is in the hydraulic power supply, the gearbox module, or the power and control (rear) module. Then only disassemble the tool as necessary to repair as required. **KEEP CONTAMINANTS SUCH AS DIRT AND GRIT AWAY FROM INTERNAL PARTS AT ALL TIMES**

Always determine and correct the cause of the problem prior to reassemble. Further wear and tool failure can result if the original cause is not corrected.

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## TOOL MODULE ASSEMBLIES

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The Core Drill consists of three modules, 1st a gearbox module with three-speed gearbox, slip-clutch, side handle and water supply, 2nd a motor module and 3rd a valve/handle module with flow control valve, trigger and trigger fixing key.

Isolate the service problem to the circuit or one of the modules before separating the referring modules. The TROUBLE-SHOOTING section contains information to help isolate the problem.

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## PRIOR TO DISASSEMBLY

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Clean the exterior of the tool.

Make sure to have all new seals so they can be replaced during reassembly. Note the orientation of seals before removal. Install new seals in the same position as the original seals.

**Note:** For orientation of the parts identified in the following procedures, refer to the

sectional drawing and parts list located at the end of this manual.

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## Disassembly

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Disassemble into main components Handle with valve, Motor and gearbox. Remove complete handle/valve housing after loosening screws item 327. Remove screws item 429 and separate gearbox from motor. Continue to disassemble.

### 1. Handle

Remove screws item 432 and item 325 and separate handle item 601 from valve housing item 301. Knock out the double-notched pin item 603 and take out valve lever item 602. Unscrew complete valve lever locking assembly items 40-43.

### 2. Valve

Remove ring item 324 and unscrew guide item 315. Pull out valve assembly. Remove snapping item 307 to get gland item 306. After loosening screw item 308 control piston item 310, compression spring item 317 and spring seat item 311 can be removed. Load the compression spring item 316 to remove snapping item 313. Now you can push out the pin item 312 with all the seals.

### 3. Motor

First remove snapping item 120 and pull out countershaft assembly, then remove the second snapping item 120. Take out motor parts items 108-114. Then push off snapping item 105. Now you can push out the motor shaft item 102 with thrust washer item 106 and thrust bearing item 107. Press out shaft seal item 104 and remove spur gear item 103.

### 4. Gearbox

Unscrew complete water connection items 211-217. After removing snapping item 433 draw off gearshift lever item 431. Take off snaprings item 427 and pull out spur gear item 406, notched wheel item 405, feather key item 426, ball item 418 and compression spring item 419. After removing snaprings item 425 and 421 the output shaft item 402 with bearing item 420 can be pressed out of



housing item 401. Take out washer item 422 and press out radial shaft seals items 435 and 436 after removing snapping item 424.

To disassemble countershaft assembly items 403-433 unscrew hexagonal nut item 410. After that remove shims item 414, belleville springs item 409, washers item 408 and 411 and spur gear item 407. After removing snapping item 413 press off roller bearing item 412.

## Reassembly

Before starting reassembly check all parts for wear and replace them if necessary. Wear parts are in particular O-rings, radial shaft seals, bearings and the slip clutch washers.

### 1. Handle

Reassembly is performed essentially the same as disassembly, but in reverse order. Adjust the trigger position by turning screw item 604.

### 2. Valve

Reassembly is done essentially in reverse order. Grease all O-rings before assembly. Make sure that the O-rings do not get damaged when the valve parts are inserted. To assemble snap ring item 312 load the compression spring item 316.

### 3. Motor

Reassembly is done essentially in reverse order. Grease all seals before assembly. Observe the position of Geroler rotor item 112 and the square head of spool drive item 109 as shown at the drawing to get the right direction of rotation.

## 4. Gearbox

After installing new radial shaft seals into housing item 401, washer item 422 and output shaft item 402 (pre-assembled with bearing) have to be pushed-in and made complete. If countershaft assembly items 403-433 was disassembled, use shims item 414 to get a slip torque of  $20 \pm 1,5$  Nm. After tightening hexagonal nut item 410 fix the countershaft assembly in a vice at the spur gear item 407 and check the slip torque with a torque wrench by turning at the hexagonal nut item 410. If the torque is not  $20 \pm 1,5$  Nm add ore remove shims item 414.

### CAUTION!

**Never use the tool with the slip clutch torque set higher than 22 Nm!**

At installing the gearshift lever item 431 take care that positioning is correct.

After inserting the countershaft assembly in the motor housing item 104 pour in approx. 0.2 liter grease lubricating oil and bolt the gearbox housing and motor housing.

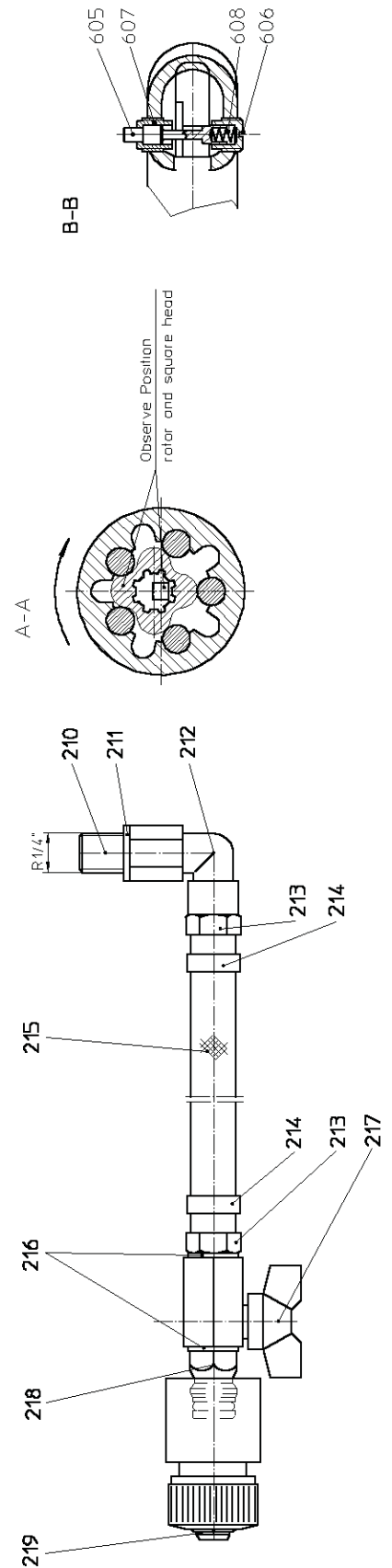
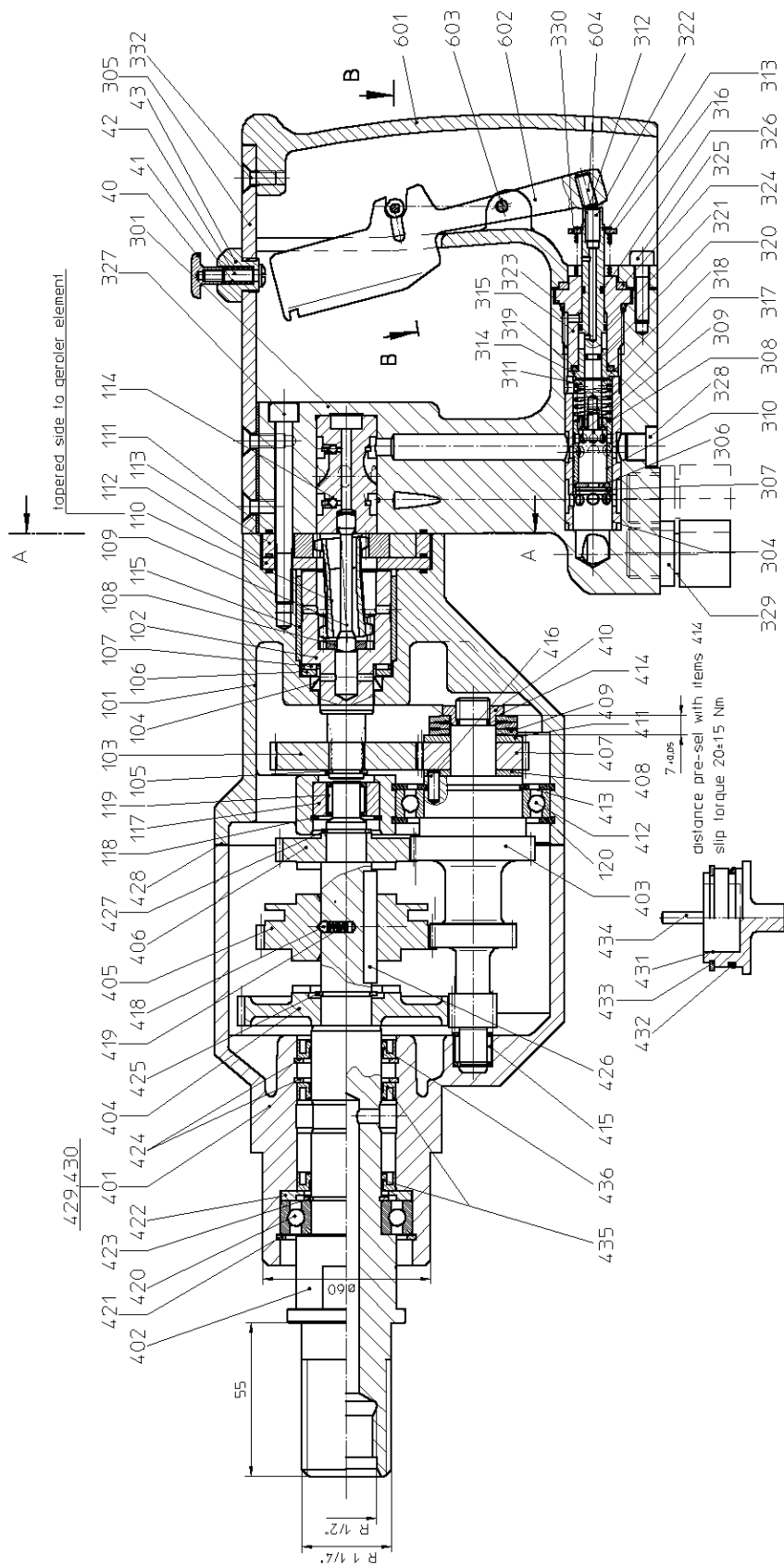
Subsequently the assembly of the main components can be done.

Use only ORIGINAL **SPITZAS** SPARE PARTS for repairs.

Use sodium saponified semi-fluid grease GP 000 M - 30, DIN 51502, approx. 100 g, (e.g. "REMOLIT SO-D 8024" from Fuchs)



# CD10 Parts Illustration



# CD10 Parts List

**NOTE:**

Use **Part Number** and **Description** when ordering.

Item	Part No.	Description	QTY
	28409	Composite Safety Decal (Not Shown)	1
	40507	Hose Set With Quick Couplers (Not Shown)	1
	58858	Manual, Oper & Safety	1
	41378	Connecting Nipple (Not Shown)	1
	44968	Sticker, CD10 Name Tag	1

Item	Part No.	Description	QTY
	<b>41249</b>	<b>Motor Assy.</b>	<b>1</b>
101	41253	Motor Housing	1
102	41254	Output Shaft	1
103	41255	Spur Gear	1
104	41256	Shaft Sealing	1
105	41257	Snap Ring	1
106	41258	Washer, Thrust	1
107	41259	Bearing, Thrust	1
108	41260	Spacer, Shaft	1
109	41261	Spool Drive	1
110	41262	Drive	1
111	41263	O-ring	3
112	41264	Plate, Spacer	1
113	41265	Geroler Assy.	1
114	41266	Spool	1
115	41267	Bearing	1
117	41624	Bearing Ring	1
118	41268	Snap Ring	1
119	41269	Needle Bearing	1
120	41270	Snap Ring	1

Item	Part No.	Description	QTY
	<b>41252</b>	<b>Centering Aid Handle Assy.</b>	<b>1</b>
	<b>41608</b>	<b>Centering Aid</b>	<b>1</b>
259	41609	Spring, Gas Pressure w/ Buffer	1
260	41611	Rod, Extension	1
261		Buffer	1
	<b>41612</b>	<b>Clamp Clip Assy.</b>	<b>1</b>
250	41613	Clamp Clip	1
251	41614	Screw, Locking	1
252	41616	Nut, Square	3
254	41621	Washer	2
255	41622	Distance Ring	4
256	41623	Handle	1

# CD10 Parts List

**NOTE:**

Use **Part Number** and **Description** when ordering.

Item	Part No.	Description	QTY
	<b>41250</b>	<b>Three Speed Gearbox Assy</b>	<b>1</b>
401	41271	Bearing Housing	1
402	41272	Output Shaft	1
404	41273	Spur Gear	1
405	41274	Notched Wheel	1
406	41275	Spur Gear	1
415	41276	Needle Bearing	1
418	41277	Ball	1
419	41278	Compression Spring	1
420	41279	Grooved Ball Bearing	1
421	41280	Snap Ring	1
422	41281	Washer	1
423	41284	Snap Ring	1
424	41286	Snap Ring	1
425	41287	Snap Ring	1
426	41298	Feather Key	1
427	41348	Snap Ring	1
	<b>41349</b>	<b>Gearshift Lever Assy.</b>	<b>1</b>
431	41361	Gearshift Lever	1
432	41362	O-ring	1
433	41373	Snap Ring	1
434	41375	Dowel Pin	1
435	41376	Radial Shaft Sealing	2
436	41377	Radial Shaft Sealing	1
438	41378	Connecting Nipple	1
	<b>41379</b>	<b>Countershaft Assy.</b>	<b>1</b>
403	41380	Gear Shaft	1
407	41381	Spur Gear	1
408	41382	Washer	1
409	41383	Spring, Belleville	3
410	41384	Nut	1
411	41385	Washer	1
412	41386	Ball Bearing, Grooved	1
413	41387	Snap Ring	1
414	41388	Shim	1
	41389	Shim	1
416	41390	Dowel Pin	1
428	41391	Seal	1
429	41392	Screw, Fillister - Head	4
430	52661	Dowel Pin	2
	<b>41394</b>	<b>Screwing Assy., Swiveling</b>	<b>1</b>
210	41587	Connecting Piece	1
211	52662	Gasket	1
212		Elbow	1
213		Hose Connector	1
214		Clamp	2
215		Hose	1
216	41398	Gasket	2
217		Stopcock	1
218	41586	Connecting Piece	1
219	41588	Water Stop Gardena 1/2 in.	1

# CD10 Parts List

## NOTE:

Use **Part Number** and **Description** when ordering.

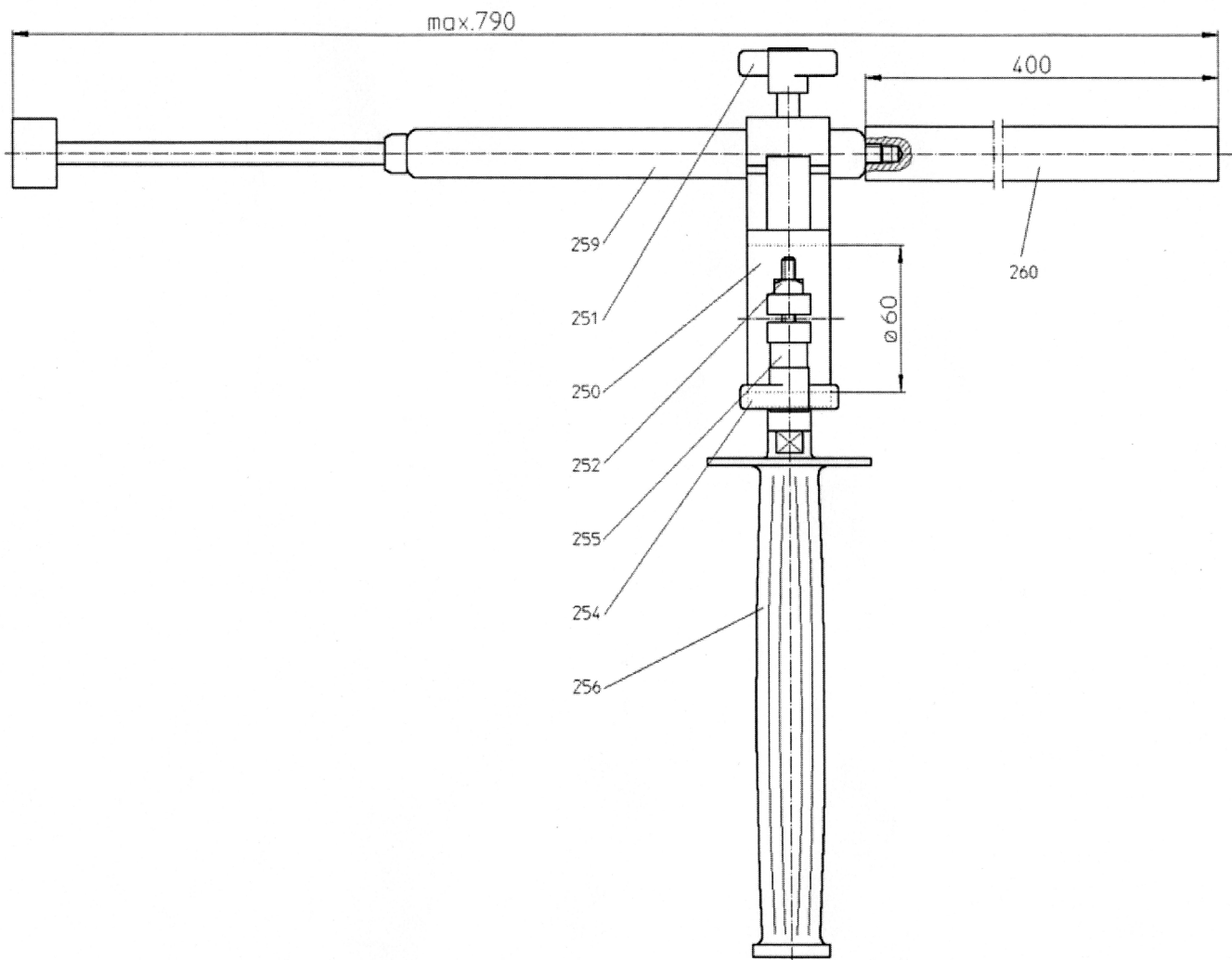
	Service Parts	
44969	Filter Element	
44970	Gasket	
44971	Muffler Element	
44972	Stand Gasket	
45111	Seal Kit Instruction	
45110	Seal Kit	

Item	Part No.	Description	QTY
	<b>41251</b>	<b>Handle Assy.</b>	<b>1</b>
301	41590	Valve Housing Assy	1
305	41591	Bar	1
306	41593	Gland	1
313	41062	Snap Ring	1
316	41065	Compression Spring	1
324	41594	Ring - Segment, Swivel	1
325	40957	Screw, Fillister - Head	1
327	41595	Screw, Fillister - Head	5
328	41075	Plug	3
329	41078	Thread Joint	2
332	41596	Screw	4
601	41597	Handle	1
602	41598	Valve Lever	1
603	41599	Double - Notched Pin	1
604	41600	Screw	1
605	52663	Lock Bolt	1
606	52664	Bushing	1
607	52665	Bushing	1
608	52666	Compression Spring	1
	<b>41601</b>	<b>Valve Assy.</b>	<b>1</b>
307	41056	Snap Ring	1
308	41057	Screw, Fillister - Head	1
309	41058	Washer	1
310	41059	Control Piston	1
311	41060	Spring Seat	1
312	41061	Pin	1
314	41063	Bushing	1
315	41064	Guide	1
317	41066	Spring, Compression	1
318	41067	Spring, Snap	1
319	41068	O-ring	1
320	41069	O-ring	1
321	41070	O-ring	1
322	41071	Screw	1
323	41602	O-ring	1
326	41073	O-ring	1
330	52660	Washer	1
	<b>41603</b>	<b>Valve Lever Locking Assy.</b>	<b>1</b>
40	41604	Housing	1
41	41605	Latch Pin	1
42	41606	Spring, Compression	1
43	41607	Push Button	1



**NOTE:**  
Use **Part Number** and  
**Description** when ordering.

Part	Description
41238	Anchor Stand
41239	Motor Mount
41241	7/8 in. Core Bit w / Crown
41242	1 in. Core Bit w / Crown
41243	1 - 1/4 in. Core Bit w / Crown
41244	2 in. Core Bit Segmented
41245	3 in. Core Bit Segmented
41246	4 in. Core Bit Segmented
41247	6 in. Core Bit Segmented
41778	Carrying Case
41781	Pipe Clamp
41240	Water Tank
44957	Vacuum Pump Accessory
44958	Vacuum Pump Instruction



**Handle Assy.**

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# Warranty

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Stanley Hydraulic Tools (hereinafter called "Stanley"), subject to the exceptions contained below, warrants new hydraulic tools for a period of one year from the date of sale to the first retail purchaser, or for a period of 2 years from the shipping date from Stanley, whichever period expires first, to be free of defects in material and/or workmanship at the time of delivery, and will, at its option, repair or replace any tool or part of a tool, or new part, which is found upon examination by a Stanley authorized service outlet or by Stanley's factory in Milwaukie, Oregon to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP.

## EXCEPTIONS FROM WARRANTY

**NEW PARTS:** New parts which are obtained individually are warranted, subject to the exceptions herein, to be free of defects in material and/or workmanship at the time of delivery and for a period of 6 months after the date of first usage. Seals and diaphragms are warranted to be free of defects in material and/or workmanship at the time of delivery and for a period of 6 months after the date of first usage or 2 years after the date of delivery, whichever period expires first. Warranty for new parts is limited to replacement of defective parts only. Labor is not covered.

**FREIGHT COSTS:** Freight costs to return parts to Stanley, if requested by Stanley for the purpose of evaluating a warranty claim for warranty credit, are covered under this policy if the claimed part or parts are approved for warranty credit. Freight costs for any part or parts which are not approved for warranty credit will be the responsibility of the individual.

**SEALS & DIAPHRAGMS:** Seals and diaphragms installed in new tools are warranted to be free of defects in material and/or workmanship for a period of 6 months after the date of first usage, or for a period of 2 years from the shipping date from Stanley, whichever period expires first.

**CUTTING ACCESSORIES:** Cutting accessories such as breaker tool bits are warranted to be free of defects in material and or workmanship at the time of delivery only.

**ITEMS PRODUCED BY OTHER MANUFACTURERS:** Components which are not manufactured by Stanley and are warranted by their respective manufacturers.

- a. Costs incurred to remove a Stanley manufactured component in order to service an item manufactured by other manufacturers.

**ALTERATIONS & MODIFICATIONS:** Alterations or modifications to any tool or part. All obligations under this warranty shall be terminated if the new tool or part is altered or modified in any way.

**NORMAL WEAR:** Any failure or performance deficiency attributable to normal wear and tear such as tool bushings, retaining pins, wear plates, bumpers, retaining rings and plugs, rubber bushings, recoil springs, etc.

**INCIDENTAL/CONSEQUENTIAL DAMAGES:** To the fullest extent permitted by applicable law, in no event will STANLEY be liable for any incidental, consequential or special damages and/or expenses.

**FREIGHT DAMAGE:** Damage caused by improper storage or freight handling.

**LOSS TIME:** Loss of operating time to the user while the tool(s) is out of service.

**IMPROPER OPERATION:** Any failure or performance deficiency attributable to a failure to follow the guidelines and/or procedures as outlined in the tool's operation and maintenance manual.

**MAINTENANCE:** Any failure or performance deficiency attributable to not maintaining the tool(s) in good operating condition as outlined in the Operation and Maintenance Manual.

**HYDRAULIC PRESSURE & FLOW, HEAT, TYPE OF FLUID:** Any failure or performance deficiency attributable to excess hydraulic pressure, excess hydraulic back-pressure, excess hydraulic flow, excessive heat, or incorrect hydraulic fluid.

**REPAIRS OR ALTERATIONS:** Any failure or performance deficiency attributable to repairs by anyone which in Stanley's sole judgement caused or contributed to the failure or deficiency.

**MIS-APPLICATION:** Any failure or performance deficiency attributable to mis-application. "Mis-application" is defined as usage of products for which they were not originally intended or usage of products in such a manner which exposes them to abuse or accident, without first obtaining the written consent of Stanley. PERMISSION TO APPLY ANY PRODUCT FOR WHICH IT WAS NOT ORIGINALLY INTENDED CAN ONLY BE OBTAINED FROM STANLEY ENGINEERING.

**WARRANTY REGISTRATION:** STANLEY ASSUMES NO LIABILITY FOR WARRANTY CLAIMS SUBMITTED FOR WHICH NO TOOL REGISTRATION IS ON RECORD. In the event a warranty claim is submitted and no tool registration is on record, no warranty credit will be issued without first receiving documentation which proves the sale of the tool or the tools' first date of usage. The term "DOCUMENTATION" as used in this paragraph is defined as a bill of sale, or letter of intent from the first retail customer. A WARRANTY REGISTRATION FORM THAT IS NOT ALSO ON RECORD WITH STANLEY WILL NOT BE ACCEPTED AS "DOCUMENTATION".

## NO ADDITIONAL WARRANTIES OR REPRESENTATIONS

This limited warranty and the obligation of Stanley thereunder is in lieu of all other warranties, expressed or implied including merchantability or

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