

KLUTCH

13" Benchtop Drill Press

Owner's Manual



⚠ WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #5793521

READ & SAVE THESE INSTRUCTIONS

Thank you very much for choosing a Klutch product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This Benchtop Drill Press is designed for certain applications only. Northern Tool & Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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Intended Use

This machine has been designed for drilling large or small holes in metal, wood, plastic etc.

Packaging Contents

- Base (1)
- Handle (3)
- Bolt (4)
- Column (1)
- Thickness Break Iron (1)
- Manual (1)
- Rack (1)
- Chuck (1)
- Spring Washer (4)
- Main Housing (1)
- Chuck Key (1)
- Working Table (1)
- Crank (1)
- Collar Rack (1)
- Hex Key (3)
- Locking Screw (1)

Technical Specifications

Property	Specification
Swing	13in.
Max. Chuck Capacity	5/8in.
Spindle Speeds	16 Speeds / 220-3300RPM
Table Tilt L&R	-45°~0°~+45°
Motor Power	110V 60Hz 3/4HP
Base Size	16-1/2in. x 10in.
Spindle Taper	MT2
Spindle Travel	3-1/8in.
Cast Iron Table Size	11-1/2in.

Important Safety Information

⚠️WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be a safer experience and do the job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

⚠️WARNING

- This product may contain chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.
- 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, or other reproductive harm. Some examples of these chemicals are:
 - - lead from lead-based paints,
 - - crystalline silica from bricks and cement and other masonry products, and
 - - 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: 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.
- Handling power cords on corded products may expose you to lead, a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

⚠️WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- Do not use the product where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠️WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.

⚠CAUTION

PRODUCT USE AND CARE

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.

Specific Operation Warnings

⚠WARNING

- ALWAYS ensure that air can circulate around the machine and that the air vents are unobstructed.
- ALWAYS keep work area clean & tidy. Cluttered work areas and benches invite accidents.
- NEVER over-reach. Keep proper footing and balance at all times.
- NEVER store equipment in a wet/damp environment or expose to rain.
- KEEP other persons away. Do not let persons, especially children, not involved in the work, touch the tool or extension cable and keep them away from the work area.
- NEVER operate a machine when under the influence of alcohol, drugs or medication
- ALWAYS ensure the workplace is well lit. Ensure that lighting is placed so that you will not be working in your own shadow.
- Do not use tools in the presence of flammable liquids or gasses.
- Stay alert, watch what you are doing, use common sense and do not operate the tool when you are tired.
- ALWAYS keep guards in place and in working order. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center, unless otherwise indicated in this instruction manual.

- Remove any adjusting keys or wrenches before starting. Form the habit of checking to ensure that keys, wrenches and tools are removed from the machine.
- Don't force the machine and use the correct tool. It will do the job better and safer, at the rate for which it was intended.
- ALWAYS disconnect the machine from the power supply before carrying out any servicing or changing of accessories.
- Before further use of the tool, it should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting or other condition that may affect its operation.
- Have defective switches repaired by an authorized service center. Do not use a tool if the switch does not turn it on and off.
- ALWAYS check for any damage or any condition that could affect the operation of the machine. Damaged parts should be properly repaired.
- NEVER remove the cover panel unless the machine is disconnected from the power supply, and never use the machine with cover panels removed.
- Have your tool repaired by a qualified person. This tool complies with the relevant safety rules. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.
- NEVER use this product for any other purpose than that described in this booklet.
- NEVER abuse the power cable by yanking the cable to disconnect it from the socket. Keep the cable away from heat, oil or sharp edges.
- Guard against electric shock. Avoid body contact with earthed or grounded surfaces.
- If the tool should be used outdoors, use only extension cables intended for outdoor use and marked accordingly.
- Avoid accidental starting by making sure the power switch is off before plugging in the power cable.

Grounding

⚠WARNING

- This machine must be grounded while in use to protect the operator from electrical shock. This unit is equipped with an electrical cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.
- **DO NOT MODIFY THE PROVIDED PLUG.** If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.
- Check with a qualified electrician or service person if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

Grounded Tools: Tools with 3-Prong Plugs

Tools marked with **Grounding Required** have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See Figure A.)

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically live terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration.

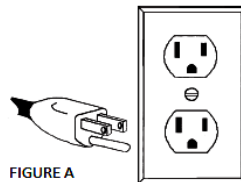


FIGURE A

Double Insulated Tools: Tools with Two-Prong Plugs

Tools marked **Double Insulated** do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. (See Figure B.)

Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration.

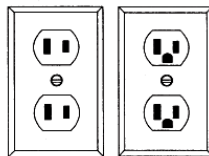


FIGURE B

Extension Cords

⚠WARNING

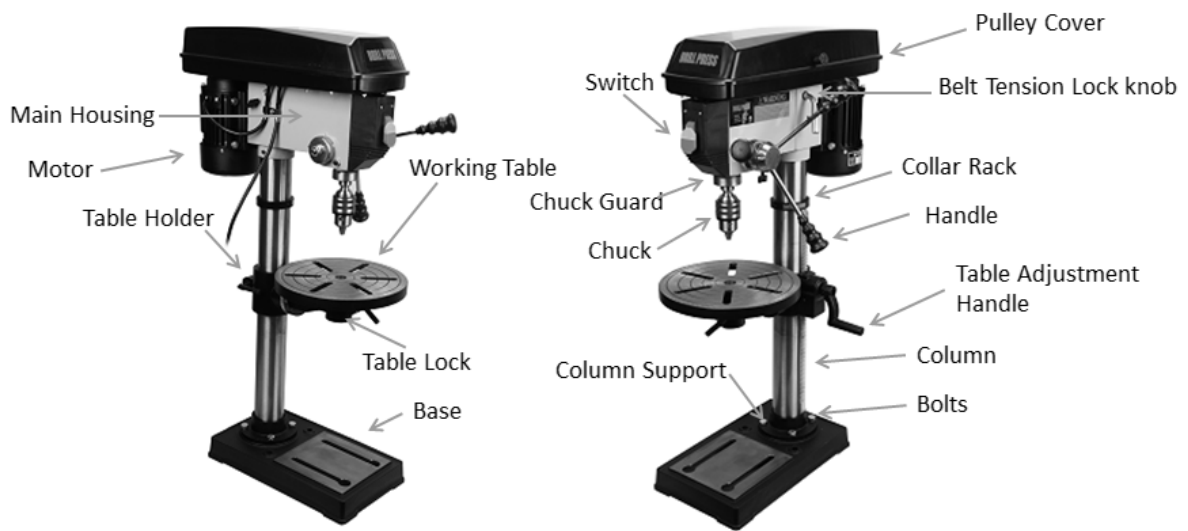
- **USE A PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and cause overheating.
- Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.
- Grounded tools require a 3-wire extension cord. Double Insulated tools can use either a 2- or 3-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.
- The smaller the wire's gauge number, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. Minimum extension cord wire size is shown in the following table:

Minimum Wire Size Of Extension Cords				
Nameplate AMPS	Cord Length			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	NOT RECOMMENDED	

- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outdoors, make sure it is marked with the suffix **W-A** (**W** in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Main Parts of Product

Subassembly	
Base	Motor
Belt Tension Lock knob	Pulley Cover
Bolts	Rack Collar
Chuck	Switch
Chuck guard	Table
Column	Table Adjustment Handle
Column Support	Table Holder
Feed Handle	Table Lock
Main Housing	



Assembly Instructions

⚠WARNING

- To protect the machine parts from moisture, a protective coating of light machine oil will have been applied to the outside surfaces. Remove any excess with a paper towel.
- Take care when lifting the head assembly, considering its weight.
- Before use, the machine must be mounted, and securely bolted, to a strong, heavy workbench, of sufficient height that you will be standing upright when working.
- Ensure the work place is adequately lit, and that you will not be working in your own shadow.
- During assembly ensure the drill press is disconnected from the power supply.
- Carefully remove contents from the packing box.
- Select a firm, level surface on which to assemble the drill press.

BASE & COLUMN

1. Select the base (Fig. 1) and align the column support over the large hole (Fig. 2).



Fig.1



Fig.2

2. Align the holes in the column support with those in the base and secure in place using the bolts and washers. Using a spanner securely tighten all bolts (Fig. 3).



Fig.3

3. We recommend mounting the base to a stable surface for proper support.
4. Slide the column into the column support (Fig.4).
5. Secure in place with 2 grub screws using the hex key (Fig. 5).



Fig.4

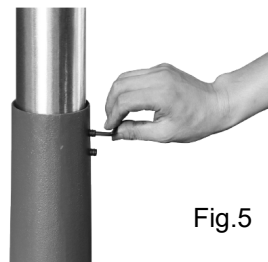


Fig.5

RACK & TABLE

1. Install the rack into the table support as shown (Fig. 6).
2. Assemble the support and rack onto the column, ensuring the rack is positioned on the right side of the column (when viewing the product from the front) (Fig.7).

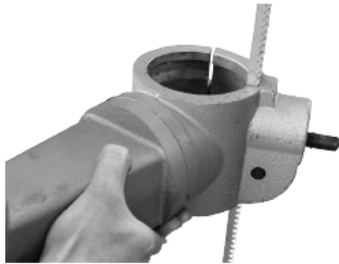


Fig.6

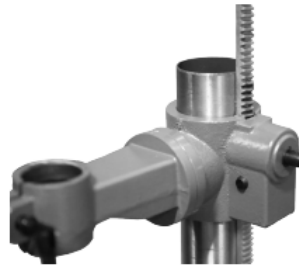


Fig.7

3. Slide the rack all the way down until it locates into the lower column support (Fig. 8). Slide the collar, tapered side facing down, over the column until it locates the rack. Tighten the grub screw on upper collar (Fig.9).



Fig.8



Fig.9

4. Fix table adjustment handle on the support (Fig. 10).
5. Assemble table onto table support, tighten in place with table lock (Fig. 11).

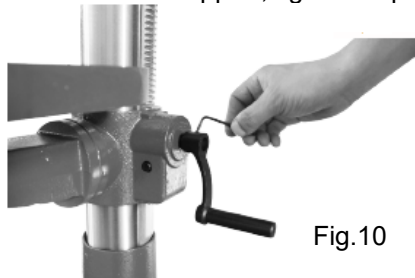


Fig.10



Fig.11

MAIN HOUSING

1. Lift the main housing and slide it down onto the column as far as it will go (Fig. 12). Before securing the housing, ensure the spindle aligns with the table and base.
2. To secure in position tighten the grub screws on the left and right hand sides of the housing (Fig. 13).

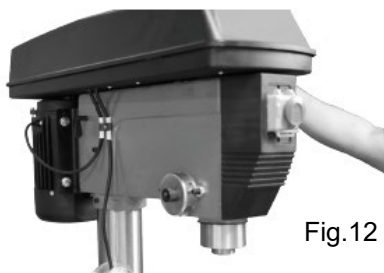


Fig.12



Fig.13

3. To fit the feed wheel handles, screw them into feed wheel hub (Fig. 14).



4. For some cast iron feed handle, tighten the 3 grub screws to wheel hub (Fig.15) then fix the plastic case on cast iron feed handle as shown Fig. 16.



CHUCK & ARBOR

1. Before any assembly, ensure the chuck jaws are wound all the way up (inside the chuck) to prevent them from damage (Fig. 17).
2. Tighten Philip's head screws of the chuck guard to quill shaft (Fig. 18).



Fig.17



Fig.18

3. Fit the tapered arbor end into the chuck by hand, using reasonable force (Fig. 19).
4. The arbor can then be inserted into the quill, twisting the arbor as you insert, aligning the tang into the slot. It should fit in with little resistance (Fig. 20).



Fig.19

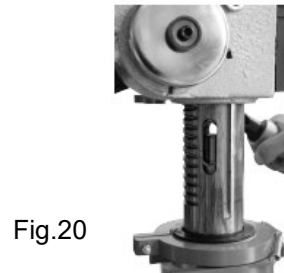


Fig.20

5. Once it is located a firm tap on the underside of the chuck with a soft hammer is required to secure it. The chuck & arbor are installed correctly if they cannot be pulley out with hand force (Fig. 21).



Fig.21

Before Each Use

⚠WARNING

- When the table is angled/tilted, ensure the workpiece is clamped to the table..

TABLE HEIGHT ADJUSTMENT

1. Loosen the table support lock (Fig. 22).
2. Rotate the table adjustment handle to set the desired table height and tighten the table rock to secure the table in position (Fig. 23).



Fig.22



Fig.23

TABEL BEVEL ADJUSTMENT

1. The bevel angel is adjusted by loosening the bolt that is located underneath table support with a spanner (Fig. 24).
2. After tilting the working table (Fig. 25) to appropriate position, re-tighten the bolt to secure its position.



Fig.24



Fig.25

INSTALLING STRAIGHT SHANK DRILL BITS

1. Using the chuck key, loosen the jaws of the chuck by rotating in an anti-clockwise direction (Fig. 26).
2. Insert the drill bit into the chuck (Fig.27).
3. Whilst holding the drill bit in one hand rotate the top collar of the chuck in a clockwise direction. Insert the chuck key into 1 of the 3 rotating holes and tighten until drill bit is secure (Fig. 28).



Fig.26



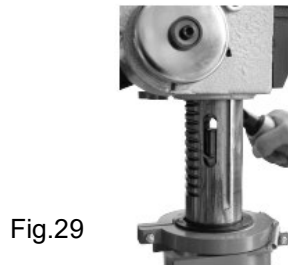
Fig.27



Fig.28

MORSE TAPER DRILL BITS

1. Turn arbor until the tang aligns with the slot in the quill (Fig. 29).
2. Insert the drift key into the slot and tap firmly with a metal hammer until it releases. (Ensure the chuck jaws are wound all the way up to prevent damage (Fig. 30).
3. Place taper bit into the spindle hole, twisting and pushing upward until bit is snug (Fig. 31).



4. Place block of wood on the table and raise up table until the tapered bit is firmly into the spindle.

PRE-SETTING THE DRILLING DEPTH

To set the depth of the hole, adjust the depth stop as follows:

1. Lower the chuck with the power OFF, until the drill bit touches the surface of the workpiece, and hold in that position.
2. Spin down the adjuster nut so that the gap between its underside and top of bracket is the depth of the hole required. Screw down the lock nut and lock it against the adjuster nut.



CHANGING THE SPEED

Before changing the speeds, ensure the machine is switched OFF, and disconnected from the power supply.

1. Open the pulley cover.
2. Slacken off the belt tension locking knob, to relieve any tension on the drive belt.
3. Consult the chart inside the pulley cover, and position the belt on the pulley's according to the spindle speed required.






Fig.33


4. When the belt has been correctly positioned, re-tension by levering the motor away from the head. Lever the motor, with its bracket, away from the head, so that tension is applied to the belt. Tension is correct when the belt deflects by approx. 1/2" at its center, when using reasonable thumb pressure. Lock the motor in this position using the locking knob.(Fig. 33)

Belt Speed Settings

<p>① RPM 50 ∞ 180 60 ∞ 220</p> <p>BELT:A - 1.5 - 4</p>	<p>② RPM 50 ∞ 310 60 ∞ 370</p> <p>BELT:B - 2.5 - 4</p>	<p>③ RPM 50 ∞ 270 60 ∞ 320</p> <p>BELT:A - 1.4 - 3</p>
<p>④ RPM 50 ∞ 430 60 ∞ 520</p> <p>BELT:C - 3.5 - 4</p>	<p>⑤ RPM 50 ∞ 420 60 ∞ 500</p> <p>BELT:A - 1.3 - 2</p>	<p>⑥ RPM 50 ∞ 470 60 ∞ 560</p> <p>BELT:B - 2.4 - 3</p>
<p>⑦ RPM 50 ∞ 580 60 ∞ 700</p> <p>BELT:D - 4.5 - 4</p>	<p>⑧ RPM 50 ∞ 650 60 ∞ 780</p> <p>BELT:C - 3.4 - 3</p>	<p>⑨ RPM 50 ∞ 720 60 ∞ 860</p> <p>BELT:B - 2.3 - 2</p>
<p>⑩ RPM 50 ∞ 630 60 ∞ 760</p> <p>BELT:A - 1.2 - 1</p>	<p>⑪ RPM 50 ∞ 1230 60 ∞ 1480</p> <p>BELT:E - 5.4 - 3</p>	<p>⑫ RPM 50 ∞ 1320 60 ∞ 1580</p> <p>BELT:D - 4.3 - 2</p>

<p>⑬ RPM 50 ∞ 1460 60 ∞ 1750</p>  <p>BELT:C - 3.2 - 1</p>	<p>⑭ RPM 50 ∞ 1880 60 ∞ 2260</p>  <p>BELT:E - 5.3 - 2</p>	<p>⑮ RPM 50 ∞ 1950 60 ∞ 2340</p>  <p>BELT:D - 4.2 - 1</p>
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⑯ RPM 50 ∞ 2770
60 ∞ 3300



BELT:E - 5.2 - 1

Operating Instructions

⚠WARNING

- The pulley cover must be closed to operate the drill press.

TURNING ON AND OFF

1. Switch the drill press On by pull below the switch. (Fig. 34)
2. Switch the drill press Off by push back the switch (Fig. 34)
3. Secure your workpiece to the table if possible, use a vice or clamps.



DRILLING

1. Ensure the drill press is switched off and disconnected from the power supply.
2. Loosen the jaws of the chuck with the chuck key by turning in an anti-clockwise direction and insert the selected drill bit into the as far as it will go.
3. Insert the chuck key into 1 of the 3 locating holes and tighten until drill bit is secure.
4. Select your drilling depth and secure the depth stop lock knob in position.
5. Adjust the table to your desired position.
6. Slowly rotate the feed wheel handles to bring the drill bit down towards the table and into your workpiece. After drilling a hole, release the feed wheel handles slowly to return the chuck to its original position.
7. Continue the operation until the task is completed. When completed, switch the drill press Off by pressing the red (O) button on the switch.

After Each Use

1. Remove all swarf from the machine and thoroughly clean all surfaces.
2. Components should be kept dry, with machined surfaces lightly oiled.
3. Always remove drill bits, and store in a safe place

Maintenance

⚠️WARNING

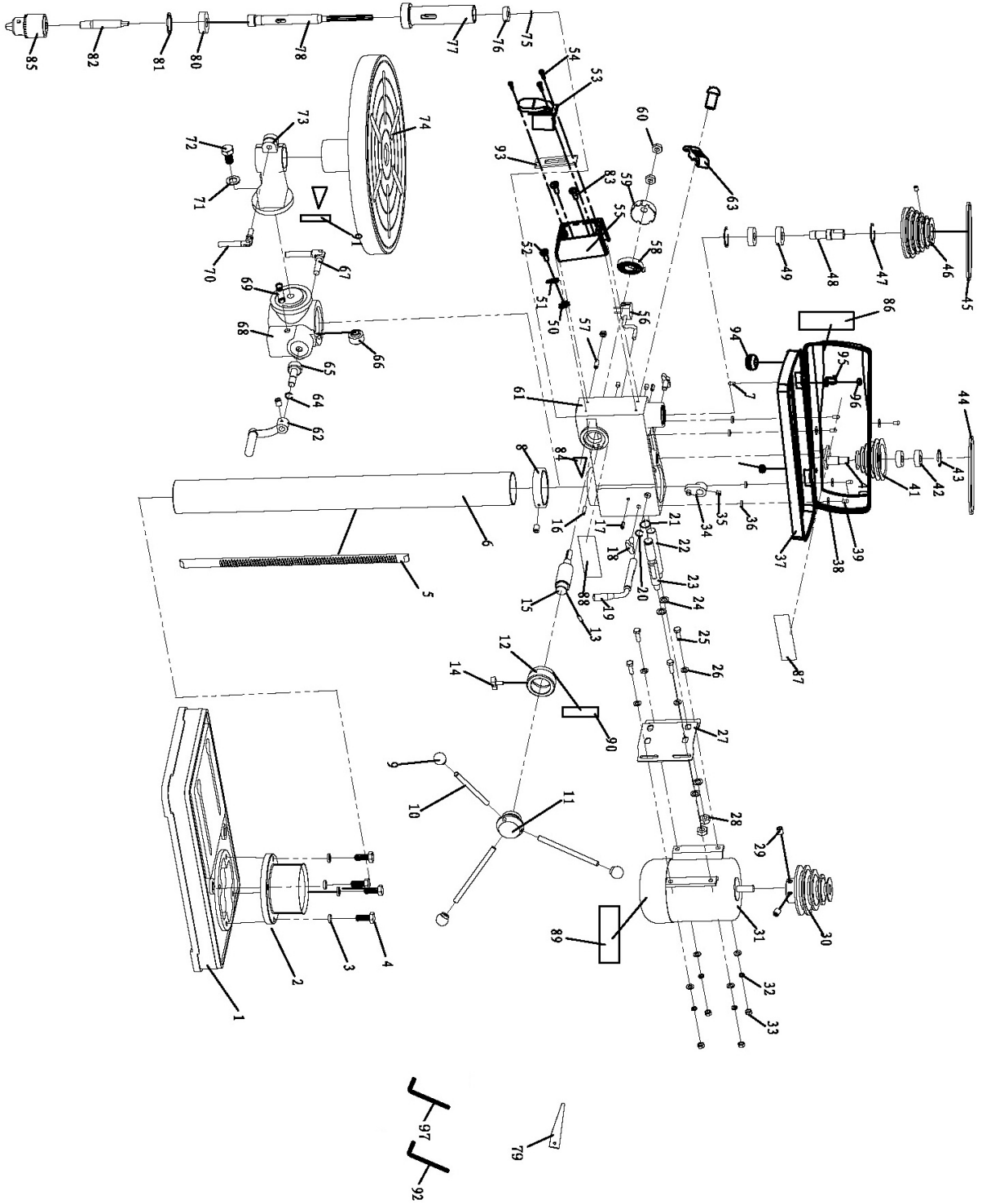
- Always remove the plug from the power supply before carrying out any adjustment, servicing or maintenance..

Maintenance Interval	Maintenance Point
MONTHLY	<ol style="list-style-type: none"> 1. Check tightness of mounting bolts, and head and column securing set screws. 2. Check the drive belt for wear, and replace if frayed or damaged. 3. Blow out with compressed air, or vacuum clean out, any dust that may have accumulated in the motor fan vents. 4. Apply a thin coat of wax paste or light oil to the table and column, for lubrication, and to help prevent corrosion. If the mains lead is damaged in any way, it should be replaced immediately
LUBRICATION	<ol style="list-style-type: none"> 1. All bearings are packed with grease at the factory and require no further lubrication. 2. Occasionally, lubricate the quill shaft assembly and rack with light oil if required.

Troubleshooting

Failure	Possible Cause	Corrective Action
Noisy operation (under load).	<ol style="list-style-type: none"> 1. Incorrect belt tension. 2. Dry spindle. 3. Loose pulley. 4. Loose belt. 5. Worn bearing. 	<ol style="list-style-type: none"> 1. Adjust tension. 2. Remove spindle and quill assembly and lubricate. 3. Tighten pulley. 4. Adjust belt tension. 5. Replace bearing.
Excessive drill wobble.	<ol style="list-style-type: none"> 1. Loose chuck. 2. Worn spindle or bearing. 3. Worn chuck. 4. Bent drill bit. 	<ol style="list-style-type: none"> 1. Tighten by pressing chuck down on to a block of wood against the table. 2. Replace spindle shaft or bearing. 3. Replace chuck. 4. Renew drill bit.
Motor won't start.	<ol style="list-style-type: none"> 1. Power supply. 2. Motor connection. 3. Switch connection faulty. 4. Faulty switch. 5. Motor windings burned. 6. Pulley cover not closed. 7. Micro switch on cover not operating. 	<ol style="list-style-type: none"> 1. Check power cord/fuse. 2. Check motor connections. 3. Check switch connections. 4. Replace switch. 5. Replace motor. 6. Close pulley cover. 7. Check operation of micro switch, and renew/adjust as necessary.
Drill binds in workpiece.	<ol style="list-style-type: none"> 1. Excessive feed pressure. 2. Loose belt. 3. Loose drill. 4. Incorrect bit speed. 5. Drill angles incorrect for type of material. 	<ol style="list-style-type: none"> 1. Apply less pressure. 2. Check belt tension. 3. Tighten drill with key. 4. Adjust the drill speed reasonably. 5. Consult a technical manual dealing with materials, drills and cutting angles, and sharpen drill accordingly.
Drill bit burns or smokes.	<ol style="list-style-type: none"> 1. Incorrect speed. 2. Swarf is not discharging. 3. Dull drill or not proper. Clearance for material. 4. Needs coolant. 5. Excessive feed pressure 	<ol style="list-style-type: none"> 1. Adjust drill speed accordingly. 2. Clean drill. 3. Check sharpness & taper. 4. Use coolant whilst drilling. 5. Apply less pressure.
Table difficult to raise.	<ol style="list-style-type: none"> 1. Needs lubrication. 2. Table lock tightened. 	<ol style="list-style-type: none"> 1. Lubricate with light oil. 2. Loosen clamp.

Parts Diagram



Parts List

Reference	Part Number	Part Description	Quantity
1	1	BASE	1
2	2	COLUMN FLANGE	1
3	3	SPRING WASHER	4
4	4	OUTSIDE HEX. BOLT	4
5	5	RACK	1
7	7	COLUMN	1
8	8	CROSS RECESS PAN HD SCREW	3
9	9	COLLAR RACK	1
10	10	HANDLE TIP	3
11	11	HANDLE	3
12	12	HANDLE SEAT	1
13	13	DIAL SCALE	1
14	14	ROLL PIN	1
15	15	WING KNOB	1
16	16	GEAR SHAFT	1
17	17	THREAD PIN WITH SLOT	1
18	18	ROLL PIN	2
19	19	HANDLE KNOB	2
20	20	HANDLE BELT TENSION	1
21	21	CIRCLIP FOR BEARING	1
22	22	CIRCLIP FOR BEARING	1
23	23	SLIP SHAFT	1
24	24	ADJUSTING SHAFT	1
25	25	FLAT WASHER	4
26	26	OUTSIDE HEX. BOLT	4
27	27	FLAT WASHER	8
28	28	MOTOR CONNECTION PLATE	1
29	29	NUT	2
30	30	HEX. SOC SET SCREW	4
31	31	MOTOR PULLEY	1
32	32	MOTOR	1
33	33	SPRING WASHER	4
34	34	NUT	5
35	35	CAM ASSEMBLY	1
36	36	OUTSIDE HEX BOLT	1
37	37	DAMPING WASHER	4
38	38	PULLEY COVER	1
39	39	FLAT WASHER	5
40	40	CROSS RECESSED PAN HEAD SCREW	6
41	41	ECCENTRIC SHAFT	1
42	42	MIDDLE PULLEY	1
43	43	BEARING	2
44	44	CIRCLIP FOR HOLE	1
45	45	BELT	1
46	46	BELT	1
47	47	SPINDLE PULLEY	1
48	48	CIRCLIP FOR HOLE	2
49	49	KEYWAY SPINDLE	1
50	50	BEARING	2
51	51	TOOTH LOCK WASHER	1
52	52	GROUND PARTS	1
53	53	CROSS RECESS HEAD SCREW	1

Reference	Part Number	Part Description	Quantity
54	54	CROSS RECESS HEAD TAPPING SCREW	1
55	55	SWITCH BOX	2
56	56	PLUG WITH CABLE	1
57	57	A WORD HEAD SCREW	1
58	58	SPRING	1
59	59	SPRING COVER	1
60	60	THIN NUT	2
61	61	HOUSING	2
62	62	CRANK	1
63	63	CORD CLAMP	1
64	64	CIRCLIP FOR BEARING	1
65	65	WORM	1
66	66	WORM GEAR	1
67	67	LOCKING HANDLE	1
68	68	TABLE SUPPORT	1
69	69	WORM PIN	1
70	70	LOCKING HANDLE	1
71	71	SPRING WASHER	1
72	72	OUTSIDE HEX BOLT	1
73	73	TABLE ARM	1
74	74	WORKING TABLE	1
75	75	CIRCLIP FOR BEARING	1
76	76	BEARING	1
77	77	SPINDLE SOCKET	1
78	78	MAIN SPINDLE	1
79	79	THICK BRAKE IRON	1
80	80	BEARING	1
81	81	WASHER	1
82	82	TAPER SPINDLE	1
83	83	CROSS RECESSED PAN HEAD SCREW	5
84	84	INDICATOR	1
85	85	CHUCK	1
86	86	PULLEY COVER LABEL	1
87	87	SPEED LABEL	1
88	88	WARNING LABEL	1
89	89	MOTOR LABEL	
90	90	CALIBRATION LABEL	1
91	91	ANGLE LABEL	1
92	92	HEXAGON BAR WRENCH	1
93	93	SWITCH PANEL	1
94	94	PROTECTOR RING	1
95	95	CORD CLAMP	1
96	96	NUT	1
97	97	HEXAGON BAR WRENCH	1

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Klutch product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

KLUTCH

Distributed by:

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Burnsville, Minnesota 55306

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