# Owner's Manual CRAFTSMAN®

Bench Model 1/2 HP (Maximum Developed) 5 Speeds (540 - 3600 R.P.M.) 1/2 Inch Chuck

10-INCH DRILL PRESS Model No. 137.219100





# CAUTION:

Before using this Drill Press, read this manual and follow all its Safety Rules and Operating Instructions.

- Safety Instructions
- Installation
- Operation
- Maintenance
- Parts List
- Español

Customer Help Line 1-800-843-1682

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA Part No. 13721910001

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### WARRANTY

### FULL ONE YEAR WARRANTY

If this product fails due to a defect in material or workmanship within one year from the date of purchase, Sears will repair it free of charge.

Contact a Sears Service Center for repair.

If this product is used for commercial or rental purposes, this warranty applies only for 90 days from the date of purchase.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., Dept. 817 WA, Hoffman Estates, IL 60179

# PRODUCT SPECIFICATIONS

CHUCK SIZE1/2"	
SPEEDS	
MOTOR	PS,
HORSEPOWER 1/2 HP (Max. Deve	loped)
TABLE SIZE	
TABLE TILT	7
SPINDLE TRAVEL2-3/8"	
THROAT	
BASE SIZE	
HEIGHT	

### /NW/ABNING

To avoid electrical hazards, fire hazards, or damage to the tool, use proper circuit protection.

Your drill press is wired at the factory for 120V operation. Connect to a 120V, 15 AMP branch circuit and use a 15 AMP time delay fuse or circuit breaker. To avoid shock or fire, replace power cord immediately if it is worn, cut or damaged in any way.

### SAFETY

### **GENERAL SAFETY INSTRUCTIONS**

### **BEFORE USING THE DRILL PRESS**

Safety is a combination of common sense, staying alert and knowing how to use your drill press.

### AWARNING

PAGE

To avoid mistakes that could cause serious injury, do not plug the drill press in until you have read and understood the following:

- 1. READ and become familiar with this entire instruction manual. LEARN the tool's applications, limitations, and possible hazards.
- 2. KEEP GUARDS IN PLACE and in working order.
- 3. DON'T USE IN A DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
- 4. DO NOT use power tools in the presence of flammable liquids or gases.
- 5. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
- 6. KEEP CHILDREN AWAY. All visitors should be kept at a safe distance from the work area.
- 7. DON'T FORCE THE TOOL. It will do the job better and safer at the rate for which it was designed.
- 8. USE THE RIGHT TOOL. Don't force tool or the attachment to do a job for which it was not designed.
- 9. WEAR PROPER APPAREL. DO NOT wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
- 10. WEAR A FACE MASK OR DUST MASK. Drilling operation produces dust.
- 11. DISCONNECT TOOLS before servicing, and when changing accessories, such as blades, bits, cutters, and the like.
- 12. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure the switch is in "OFF" position before plugging in.
- 13. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for the recommended accessories. The use of improper accessories may cause risk of injury to persons.

# SAVE THESE INSTRUCTIONS

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- 14. REMOVE ADJUSTING KEYS AND WRENCHES. From the habit of checking to see that keys and adjusting wrenches are removed from the tool before turnina "ON".
- 15. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN THE POWER "OFF". Don't leave the tool until it comes to a complete stop.
- 16. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
- 17. DON'T OVERREACH. Keep proper footing and balance at all times.
- 18. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 19. CHECK FOR DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged 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, and any other conditions that may affect its operation. A guard or other part that is damaged should be property repaired or replaced,

20. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.

21. DO NOT operate the tool if you are under the influence of any drugs, alcohol or medication that could affect your ability to use the tool properly.

22. Dust generated from certain materials can be hazardous to your health. Always operate the drill press in a well-ventilated area and provide for proper dust removal. Use dust collection systems whenever possible.



23. ALWAYS WEAR EYE **PROTECTION.** Any drill press can throw foreign objects into the eves which could cause permanent eye damage. ALWAYS wear Safety Goggles (not glasses) that comply with

ANSI safety standard Z87.1. Everyday eyeglasses have only impact-resistant lenses. They ARE NOT safety glasses. Safety Goggles are available at Sears. NOTE: Glasses or goggles not in compliance with ANSI Z87.1 could seriously hurt you when they break.

### SPECIFIC SAFETY INSTRUCTIONS FOR THE DRILL PRESS

### 7. WAENING

For your own safety, do not try to use your drill press or plug it in until it is completely assembled and installed according to the instructions, and until you have read and understood this instruction manual:

- 1. YOUR DRILL PRESS MUST BE BOLTED securely to a workbench. In addition, if there is any tendency for your drill press to move during certain operations, bolt the workbench to the floor.
- 2. THIS DRILL PRESS is intended for use in dry conditions, indoor use only.
- 3. WEAR EYE PROTECTION. USE face or dust mask along with safety goggles if drilling operation is dusty. USE ear protectors, especially during extended periods of operation.
- 4. DO NOT wear gloves, neckties, or loose clothing.
- DO NOT try to drill material too small to be securely 5. held.
- 6. ALWAYS keep hands out of the path of a drill bit. Avoid awkward hand positions where a sudden slip could cause your hand to move into the drill bit.
- 7. DO NOT install or use any drill bit that exceeds 175 mm (7") in length or extends 150 mm (6") below the chuck jaws. They can suddenly bend outward or break.
- DO NOT USE wire wheels, router bits, shaper cutters, 8. circle (fly) cutters, or rotary planers on this drill press.
- 9. WHEN cutting a large piece of material make sure it is fully supported at the table height.
- 10. DO NOT perform any operation freehand. ALWAYS hold the workpiece firmly against the table so it will not rock or twist. Use clamps or a vise for unstable workpieces.
- 11. MAKE SURE there are no nails or foreign objects in the part of the workpiece to be drilled.
- 12. CLAMP WORKPIECE OR BRACE against the left side of the column to prevent rotation. If it is too short or the table is tilted, clamp solidly to the table and use the fence provided.
- 13. IF THE WORKPIECE overhangs the table such that it will fall or tip if not held, clamp it to the table or provide auxiliary support.

# SAVE THESE INSTRUCTIONS

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- 14. SECURE WORK. Use clamps or a vise to hold the work when practical. It's safer than using your hand and it frees both hands to operate tool.
- 15. WHEN using a drill press vise, always fasten to the table.
- 16. MAKE SURE all clamps and locks are firmly tightened before drilling.
- 17. SECURELY LOCK THE HEAD and table support to the column, and the table to the table support before operating the drill press.
- 18. NEVER turn your drill press on before clearing the table of all objects (tools, scraps of wood, etc.)
- 19. BEFORE STARTING the operation, jog the motor switch to make sure the drill bit does not wobble or vibrate.
- 20. LET THE SPINDLE REACH FULL SPEED before starting to drill. If your drill press makes an unfamiliar noise or if it vibrates excessively, stop immediately, turn the drill press off and unplug. Do not restart until the problem is corrected
- 21. DO NOT perform layout assembly or set up work on the table while the drill press is in operation.
- 22. USE RECOMMENDED SPEED for drill accessory and workpiece material. SEE INSTRUCTIONS that come with the accessory.
- 23. WHEN DRILLING large diameter holes, clamp the workpiece firmly to the table. Otherwise, the bit may grab and spin the workpiece at high speed. DO NOT USE fly cutters or multiple-part hole cutters, as they can come apart or become unbalanced in use.
- 24. MAKE SURE the spindle has come to a complete stop before touching the workpiece.
- 25. TO AVOID INJURY from accidental starting, always turn the switch "OFF" and unplug the drill press before installing or removing any accessory or attachment or making any adjustment.
- 26. KEEP GUARDS IN PLACE and in working order.
- 27. USE ONLY SELF-EJECTING TYPE CHUCK KEY as provided with the drill press.

### **GROUNDING INSTRUCTIONS**

IN THE EVENT OF A MALFUNCTION OR BREAKDOWN, grounding provides a path of least resistance for electric current and reduces the risk of electric shock. This tool is equipped with an electric 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 PLUG PROVIDED. If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.

**IMPROPER CONNECTION** of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without vellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, DO NOT connect the equipment grounding conductor to a live terminal.

CHECK with a qualified electrician or service personnel if you do not completely understand the arounding instructions. or if you are not sure the tool is properly grounded.

**USE ONLY 3-WIRE EXTENSION CORDS THAT HAVE 3-PRONG GROUNDING PLUGS AND 3-POLE** RECEPTACLES THAT ACCEPT THE TOOL'S PLUG. REPAIR OR REPLACE DAMAGED OR WORN CORD IMMEDIATELY.

### **GUIDELINES FOR EXTENSION CORDS**

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 overheating. The table below shows the correct size to use according to cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

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.

Use a separate electrical circuit for your tools. This circuit must not be less than #12 wire and should be protected with a 15 Amp time lag fuse. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.

This tool is intended for use on a circuit that has a receptacle like the one illustrated in FIGURE A. FIGURE A shows a 3-prong electrical plug and receptacle that has a grounding conductor. If a properly grounded receptacle is not available, an adapter (FIGURE B) can be used to temporarily connect this plug to a 2-contact ungrounded receptacle. The adapter (FIGURE B) has a rigid lug extending from it that MUST be connected to a permanent earth ground, such as a properly grounded receptacle box. The temporary adapter should be used only until a properly grounded outlet can be installed by a gualified electrician. The Canadian Electrical Code prohibits the use of adapters.

CAUTION: In all cases, make certain the receptacle in question is properly grounded. If you are not sure have a certified electrician check the receptacle.

### ZIN WATERNING

This drill press is for indoor use only. Do not expose to rain or use in damp locations.



### VAL ANNING

This tool must be grounded while in use to protect the operator from electrical shock.

MINIMUM GAUGE FOR EXTENSION CORDS (AWG) (when using 120 volts only)						
Ampere Rating Total length of cord in fe					t	
more than	not more than	25'	50'	100'	150'	
0	6	18	16	16	14	
6	10	18	16	14	12	
10	12	16	16	14	12	
12	16	14	12	Not rec	ommended	

### **ACCESSORIES AND ATTACHMENTS**

### AVAILABLE ACCESSORIES

### MAWARNING

Use only accessories recommended for this drill press. Follow instructions that accompany accessories. Use of improper accessories may cause hazards.

Visit your Sears Hardware Department or see the Sears Power and Hand Tool Catalogue for the following accessories:

- Drill bits ø
- Hold-Down and Guide ø
- Drill Press Vises
- Clamping Kit 0

### MANATEINIME

Use only accessories designed for this drill press to avoid injury from thrown broken parts or workpieces.

Sears may recommend other accessories not listed in this manual. See your nearest Sears store or Power and Hand Tool Catalogue for other accessories.

Do not use any accessory unless you have completely read the instruction or owner's manual for that accessory.

### **CARTON CONTENTS**

### UNPACKING AND CHECKING CONTENTS

### A WARNING

If any part is missing or damaged, do not plug the drill press in until the missing or damaged part is replaced, and assembly is complete.

Carefully unpack the drill press and all its parts, and compare against the illustration below.

To protect the drill press from moisture, a protective coating has been applied to the machined surfaces. Remove this coating with a soft cloth moistened with kerosene or WD-40.

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To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner or similar highly volatile solvents to clean the drill press.

### TABLE OF LOOSE PARTS

ITEM	DESCRIPTION	QUANTITY
A. B. C. D. E. F.	Head assembly Base Table Column assembly Collar Rack	
G. H. J. K. L. M. N. O. P.	Loose parts bag: Feed handles Worm gear Crank handle Lock handle Hex bolts Fence assembly Triangle knobs Wing nuts Washers Hex keys	3 1 1 4 1 2 4 2
Q. R.	Box: Chuck key Chuck	1











# KNOW YOUR DRILL PRESS



# **GLOSSARY OF TERMS**

<b>BASE</b> – Supports the drill press. For additional stability, holes are provided in the base to bolt the drill press to the floor. (See "Specific Safety Instructions for Drill Presses".)	C fi p k
<b>BACKUP MATERIAL</b> – A piece of scrap wood placed between the workpiece and table. The backup board prevents wood in the workpiece from splintering when the drill passes through the backside of the workpiece. It also prevents drilling into the table top.	
<b>BELT GUARD ASSEMBLY</b> – Covers the pulleys and belt during operation of the drill press.	r V
<b>BELT TENSION</b> – Refer to the "Assembly" Section, "Installing and Tensioning Belt."	II F
<b>BELT TENSION KNOB – Tightening the knob locks</b> the motor bracket support maintaining correct belt distance and tension.	
<b>BEVEL SCALE</b> – Shows the degree of table tilt for bevel operations. The scale is mounted on the side of the arm.	F
<b>CHUCK –</b> Holds the drill bit or other recommended accessory to perform desired operations.	0 84 4
<b>CHUCK KEY</b> – A self-ejecting chuck key which will pop out of the chuck when you let go of it. This action is designed to help prevent throwing of the chuck key from the chuck when the power is turned "ON". Do not use any other key as a substitute; order a new one if damaged or lost.	10 10 10 In
<b>COLUMN –</b> Connects the head, table, and base on a one-piece tube for easy alignment and movement.	
<b>COLUMN COLLAR</b> – Holds the rack to the column. Rack remains movable in the collar to permit table support movements.	
<b>COLUMN SUPPORT –</b> Supports the column, guides the rack and provides mounting holes for column to base.	(A) and
DEPTH SCALE - Indicates depth of hole being drilled	Ŵ
<b>DEPTH SCALE POINTER – Indicates the drilling depth</b> by pointing to the depth scale.	1
DEPTH SCALE STOP NUTS - Locks the depth scale to selected depth.	¥
DDH [ BIT The outting tool used in the drill proce to	

DRILL BIT - The cutting tool used in the drill press to make holes in a workpiece.

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DRILL ON/OFF SWITCH - Has locking feature. This feature is intended to help prevent unauthorized and possible hazardous use by children and others. Insert the key into the switch to turn the drill press on.

DRILLING SPEED - Changed by placing the belt in any of the steps (grooves) in the pulleys. See the Spindle Speed Chart inside the belt guard.

FEED HANDLE - Moves the chuck up or down. If necessary, one or two of the handles may be removed whenever the workpiece is of such unusual shape that it interferes with the handles.

FENCE - Attaches to the table to align the workpiece or for fast repetitive drilling. Removable. Remove fence when t interferes with other drill press accessories.

HEAD LOCKS - Locks the head to the column. ALWAYS lock the head in place while operating the drill press.

RACK -- Combines with gear mechanism to provide easy elevation of the table by the hand operated table crank.

REVOLUTION PER MINUTE (R.P.M.) - The number of turns completed by a spinning object in one minute.

SPINDLE SPEED - The R.P.M. of the spindle.

SPRING CAP - Adjusts guill spring tension.

TABLE - Provides working surface to support workpiece.

TABLE BEVEL LOCK - Locks the table in any position rom 0° – 45°.

TABLE CRANK HANDLE - Elevates and lowers table. Turn clockwise to elevate table. Support lock must be released before operating crank.

TABLE SUPPORT LOCK - Tightening locks the table support to the column. Always have it locked in place while operating the drill press.

TABLE SUPPORT - Rides on the column to support the table.

WORKPIECE - Material being drilled.

# ASSEMBLY AND ADJUSTMENTS

# ASSEMBLY INSTRUCTIONS

### 2 WARNING

For your own safety, never connect plug to power source outlet until all assembly and adjustment steps are completed, and you have read and understood the safety and operating instructions.

### TOOLS NEEDED



with 23 mm. socket

### TABLE TO COLUMN ASSEMBLY (FIG. B THROUGH F)

- 1. Locate the worm gear, table crank, and table support lock handle from the loose parts bag.
- 2. Insert the worm gear (1) into the table crank handle hole (2) from inside the table support (3). Make sure the worm gear (1) meshes with the inside gear.
- Insert the table support lock handle (4) into the hole З. at the rear of the table support. Tighten.

NOTE: Table removed from support in illustration for clarity.



4. Place the rack (5) in position inside the table support (3), making sure the worm gear (1) on the inside of the table support is engaged with the teeth of the rack.

Fig. C

# **AWARNING**

The Drill Press is very heavy and MUST be lifted with the help of 2 PEOPLE OR MORE, to safely assemble it.

### **COLUMN SUPPORT TO BASE (FIG. A)**

- 1. Position base (1) on floor.
- 2. Place column (2) on base, aligning holes in column support with holes in base.
- 3. Locate four long hex bolts (3) from loose parts bag.
- Place a bolt in each hole through the column 4. support and the base. Tighten with an adjustable
  - wrench.

Fig. A





- 5. Slide the table support assembly with the rack (1,3,5) together onto the column.
- 6. Engage the bottom of the rack (5) with the lip of the column support (6). Tighten the support lock handle (4) to lock the table support assembly to the column.



7. Install the collar (7) to the top end of the rack (5) on the column.

**IMPORTANT:** The bottom of the collar MUST NOT be pushed all the way down onto the top of the rack. MAKE SURE the top of the rack is under the bottom of the collar and that there is enough clearance to allow the rack to freely rotate around the column. Tighten the set screw (8).

CAUTION: To avoid column or collar damage, DO NOT OVERTIGHTEN the set screw.

Fig. E



8. Install the table crank handle (9) to the worm gear shaft (1) on the side of the table support (6). Line up the flat side of the shaft with the set screw (10) in the crank handle and tighten the screw with a hex wrench.

### Fig. F

9.



### **INSTALLING THE HEAD (FIG. G)**

### 2 WARNING

The Drill Press is very heavy and MUST be lifted with the help of 2 PEOPLE OR MORE, to safely assemble it.

- 1 Carefully lift head (1) above the column (2) and slide it onto the column. Make sure the head slides down over the column as far as possible. Align the head with the base.
- 2. Using the hex wrench, tighten the two head lock set screws (3) on the right side of the head.



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### **INSTALLING FEED HANDLES (FIG. H)**

- 1. Locate three feed handles in the loose parts bag.
- 2. Screw the feed handles (1) into the threaded holes (2) in the hub (3). Tighten.



### INSTALLING THE CHUCK (FIG. I, J and K)

- 1. Clean out the tapered hole in the chuck (1) with a clean cloth.
- 2. Clean tapered surfaces on the spindle (2).

CAUTION: Make sure there are no foreign particles sticking to the surfaces. The slightest piece of dirt on any of these surfaces will prevent the chuck from seating properly. This will cause the drill chuck and bit to wobble. If tapered hole is extremely dirty, use a cleaning solvent.

Fig. I



- 3. Lower the spindle (2) by turning the feed handles (3) counterclockwise.
- Push the chuck up onto the spindle (2). 4 Tap gently to ensure seat.
- Open the jaws of the chuck (1) by rotating the chuck 5. sleeve clockwise. To prevent damage, make sure the jaws are completely receded into the chuck.

Fig. J



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6. Using a rubber mallet, plastic-tipped hammer, or a block of wood and a hammer, firmly tap the chuck upward into position on the spindle shaft.

### Fig. K



### MOUNTING DRILL PRESS TO WORK SURFACE (FIG. L)

- 1. If mounting the drill press to a workbench, a solid wood bench is preferred over a plywood board, to reduce noise and vibration.
- 2. Holes should be pre-drilled through the supporting surface.
- 3. The hardware to mount this drill press is NOT supplied with the tool. The hardware as shown in the illustration should be used:

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### Fig. L

# 1. Drill press base 2. Bolt

- 3. Flat washer
- Rubber washer 4
- Worksurface 5.
- Flat washer 6.
- 7. Lockwasher

8.





### FENCE ASSEMBLY (FIG. M)

- 1. Determine the desired location for the fence (1).
- 2. Align the mounting holes of the fence over the table top slots.
- Place a washer (2) on the threaded end of the knob (3). 3. Insert the knob through the mounting hole of the fence and the table slot.
- Place a washer and wing nut (4) on the knob from under the table.
- 5. Repeat for the other knob and tighten.

### Fig. M



### **ADJUSTMENT INSTRUCTIONS**

CAUTION: All the adjustments for the operation of the drill press have been completed at the factory. Due to normal wear and use, some occasional readjustments may be necessary.

### **ANWARNING**

To avoid injury from an accidental start, ALWAYS make sure the switch is in the "OFF" position, the switch key is removed, and the plug is not connected to the power source outlet before making belt adjustments.

### ALIGNING THE BELT PULLEYS (FIG. N)

Open the head cover of the Drill Press. Check alignment of the pulleys with a straight edge (5) such as a framing square, a level, or a piece of wood. Lay the straight edge across the top of the pulleys. If all three pulleys are NOT aligned:

- 1. Release belt pressure by loosening the belt tension lock knobs (2) on either side of the head. counterclockwise.
- 2. Loosen the motor mount nuts (3). Lift or lower the motor (4) until the pulleys are in line,
- Tighten the motor mount nuts (3) using an adjustable З. wrench.

NOTE: To avoid rattles or other noise, the motor housing should not touch the lower belt guard housing.

4. Retighten the belt by pulling the motor (4) toward or away from the drill press head, until the belt deflects approximately 1/2 inch when pressed in the center.

NOTE: Refer to the chart inside the belt guard cover for recommended drilling speeds and belt / pulley positions.

5. Lock the belt tension lock knobs (2) by turning clockwise.

NOTE: When the belt is new, it may be difficult to move the belt. As the machine is used, the belt will gain more elasticity and will be easier to adjust.



### AWARNING

To prevent personal injury, always disconnect the plug from the power source when making any adjustments.

### SQUARING TABLE TO HEAD (FIG. O, P)

**NOTE:** The table and support has a predrilled hole with a locking pin inserted for locking the table to a predetermined 0° horizontal position. It must be loosened to change the angle of the table.

- Insert a 1/4", or larger diameter, precision ground steel rod (1), approximately 3" long, into the chuck (2). Tighten the chuck jaws.
- 2. Raise table to working height and lock.
- 3. Using the combination square (3), place one edge flat on the table, and align the other edge vertically beside the rod (1).
- 4. (Figure Q) If an adjustment is necessary, TIGHTEN the nut (4) on the locking pin clockwise to RELEASE it from the table support.
- 5. Loosen the large hex head bevel locking bolt (5).

### AWARINING

To prevent injury, be sure to hold the table & table arm assembly, so it will not swivel or tilt.

- 6. Align the square to the rod by rotating the table until the square and rod are in line.
- 7. Retighten the large hex bolt (5).

# Fig. O

### BEVEL SCALE (FIG. P)

**NOTE:** The bevel scale has been included to measure approximate bevel angles. If precision is necessary, a square or other measuring tool should be used to position the table. To use the bevel scale (6):

- 1. TIGHTEN the nut (4) on the locking pin clockwise to RELEASE it from the table support.
- Loosen the large hex head bevel locking bolt (5).
   Tilt the table, aligning the desired angle measurement
- to the zero line opposite the scale (6).
- 4. Tighten the bevel locking bolt. (5).

- To return the table to its original position, loosen the bevel locking bolt (5). Realign the bevel scale (6) to the 0° position.
- Return nut (4) on locking pin to the OUTSIDE END OF THREADS. Gently tap locking pin until it is seated in the hole. Finger tighten nut (4).
   NOTE: The table has been removed from the

illustration for clarity.



### SPINDLE/QUILL (FIG. Q)

Rotate the feed handles counterclockwise to lower spindle to its lowest position. Hand support the spindle securely and move it back and forth around its axis. If there is too much play, do the following:

Lesson look put (1)

- 1. Loosen lock nut (1).
- Turn the screw (2) clockwise to eliminate the play, but without obstructing the upward movement of the spindle. (A little play in the spindle is normal.)
- 3. Tighten the lock nut (1).





### QUILL RETURN SPRING (FIG. R)

The quill return spring may need adjustment if the tension causes the quill to return too rapidly or too slowly.

- 1. Lower the table for additional clearance.
- 2. Place a screwdriver in the lower front notch (1) of the spring cap (2). Hold it in place while loosening and removing only the outer jam nut (3).
- With the screwdriver still engaged in the notch, loosen the inner nut (4) just until the notch (5) disengages from the boss (6) on the drill press head.

CAUTION: DO NOT REMOVE THIS INNER NUT, because the spring will forcibly unwind.

- 4. Carefully turn the spring cap (2) counterclockwise with the screwdriver, engaging the next notch.
- 5. Lower the quill to the lowest position by rotating the feed handle in a counterclockwise direction while holding the spring cap (2) in position.
- If the quill moves up and down as easily as you desire, tighten the standard nut (4) with the adjustable wrench. If too loose, repeat steps 2 through 5 to tighten. If too tight, reverse steps 4 and 5.

### DO NOT OVERTIGHTEN and restrict quill movement.

7. Replace the jam nut (3) and tighten against the standard nut (4) to prevent the standard nut from reversing.



### **A WARNING**

To avoid injury from an accidental start, ALWAYS make sure the switch is in the "OFF" position, the switch key is removed, and the plug is not connected to the power source outlet before making belt adjustments.

### BELT TENSION (FIG. S)

Make sure pulleys are aligned properly as shown in Figure O on page 13.

- To unlock the belt tension, loosen the belt tension lock knobs (1) on both sides of the drill press head.
- 2. Move the motor (2) toward the front of the drill press to loosen the belt.
- 3. Position the belt on the correct pulley steps for the desired speed.
- 4. Pull the motor away from the drill press head until the belt is properly tensioned.

**NOTE:** Belt tension is correct if the belt deflects approximately 1/2 inch when pressed at the center.

5. Tighten the belt tension lock knobs (1) on both sides of the drill press head.

Fig. S



# 

Fig. U

### **BASIC DRILL PRESS OPERATIONS**

### SPEEDS AND BELT PLACEMENT (FIG. T)

This drill press has 5 speeds, as listed below:

880 RPM 1600 RPM 540 BPM 3600 RPM 2610 RPM

See inside of the belt guard for specific placement of the belts on the pulleys to change speeds.

### AWARNING

To avoid possible injury, keep guard closed, in place, and in proper working order while tool is in operation.

### Fia. T

### **Belt / Pulley Position-RPM Chart**



2610 RPM	3600 RPM
A BELT:D-4	B B B B B B B B B B B B B B B B B B B

### ON / OFF SWITCH (FIG. U)

The "ON / OFF" switch has a removable, yellow plastic key. With the key removed from the switch, unauthorized and hazardous use by children and others is minimized.

- 1. To turn the drill press "ON", insert key (1) into the slot of the switch (2), and move the switch upward to the "ON" position.
- 2. To turn the drill press "OFF", move the switch downward.
- To lock the switch in the "OFF" position, grasp the end, 3. or yellow part, of the switch toggle, and pull it out.
- With the switch key removed, the switch will not operate. 4
- If the switch key is removed while the drill press is 5. running, it can be turned "OFF" but cannot be restarted without inserting the switch key.

### A WARNING

Always lock the switch "OFF" when the drill press is not in use. Remove the key and keep it in a safe place. In the event of a power failure, blown fuse, or tripped circuit breaker, turn the switch "OFF" and remove the key, preventing an accidental startup when the power comes on.

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### **INSTALLING DRILL BIT IN CHUCK (FIG. V)**

- 1. With the switch "OFF" and the yellow switch key removed, open the chuck jaws (1) using the chuck key (2). Turn the chuck key counterclockwise to open the chuck laws.
- 2. Insert the drill bit (3) into the chuck far enough to obtain maximum gripping by the jaws, but not far enough to touch the spiral grooves (flutes) of the drill bit when the jaws are tightened,
- Make sure that the drill is centered in the chuck.
- 4. Turn the chuck key clockwise to tighten the jaws.

### AWARNING

To avoid injury or accident by the chuck key ejecting forcibly from the chuck when the power is turned "ON", use only the self-ejecting chuck key supplied with this drill press. Always recheck and remove the chuck key before turning the power "ON".



### ZAWARNING

To prevent the workpiece or backup material from being torn from your hands while drilling, you MUST position the workpiece against the LEFT side of the column. If the workpiece or the backup material is not long enough to reach the column, clamp them to the table, or use the fence provided with the drill press to brace the workpiece. Failure to secure the workpiece could result in personal injury.

### USING THE FENCE (FIG. W)

The fence provides a way of accurately and quickly setting up the workpiece for more precision or repetitive drilling operations.

- 1. Using the centerpunch or sharp nail, make an indentation in the workpiece where you want to drill.
- 2. Lower the drill bit to align with the indentation on the workpiece. See "HOLDING A DRILLING LOCATION" page 19.
- 3. Loosen the knobs (1) and slide the fence back stop (2) firmly against the long side of the workpiece. Tighten the knobs when in position.
- 4. Loosen the wing nut (3) and slide the end stop (4) along the fence until it is firmly against the left side of the workpiece. Tighten the wing nut.
- 5. Check the accuracy by drilling a scrap workpiece. Adjust if needed.
- 6. Hold with your hand or clamp the top surface of the workpiece firmly to prevent it from lifting off the table when the bit is raised.



### DRILLING TO A SPECIFIC DEPTH

Drilling a blind hole (not all the way through workpiece) to a given depth can be done two ways:

### Workpiece method (FIG, X and Y)

- 1. Mark the depth of the hole on the side of the workpiece (1).
- 2. With the switch "OFF", bring the drill bit (2) down until the tip is even with the mark.
- 3. Hold the feed handle at this position.
- Spin the lower nut (3) down to contact the depth stop Δ lug (6) on the head.
- 5. Spin the upper nut (5) down and tighten against the lower nut. (3)
- 6. The drill bit will now stop after traveling the distance marked on the workpiece.

3.









### Depth scale method (FIG. Y)

NOTE: With the chuck up, the tip of the drill bit must be just slightly above the top of the workpiece.

- 1. With the switch "OFF", turn the feed handle until the pointer (7) points to the desired depth on the depth scale (4). Hold the feed handles in that position. 2. Spin the lower nut (3) down to contact the depth stop lug (6) on the head.
  - Spin the upper stop nut (5) against the lower stop nut and tighten.
- 4. The and drill bit will now stop after traveling the distance selected on the depth scale.

### Drilling a hole

Using a center punch or a sharp nail, dent the workpiece where you want the hole. Before turning the switch on. bring the drill bit down to the workpiece, lining it up with the hole location. Turn the switch on and pull down on the feed handles with only enough effort to allow the drill

FEEDING TOO SLOWLY might cause the drill bit to turn. FEEDING TOO RAPIDLY might stop the motor, cause the belt or drill to slip, tear the workpiece loose, or break the drill bit. When drilling metal, it will be necessary to lubricate the tip of the drill bit with oil to prevent it from overheating.

### Fig. Y



### **REMOVING CHUCK (FIG. Z)**

- 1. With the switch "OFF", open the jaws of the chuck as wide as possible by turning the chuck counterclockwise.
- Tap the chuck (1) lightly with a plastic tipped hammer 2 at the top of chuck, until the chuck releases.

NOTE: Place one hand below the chuck to catch it when it falls out.



### AWAENING

To avoid injury from an accidental start, ALWAYS make sure the switch is in the "OFF" position, the switch key is removed, and the plug is not connected to the power source outlet before removing or installing the chuck.

### **BASIC OPERATION INSTRUCTIONS**

To get the best results and minimize the likelihood of personal injury, follow these instructions for operating your drill press.

### **AWARNING**

For your own safety, always observe the safety INSTRUCTIONS listed here and on pages 3, 4, and 5 of the instruction manual.

YOUR PROTECTION

### **AWARNING**

To avoid being pulled into the power tool, do not wear loose clothing, gloves, neckties, or jewelry. Always tie back long hair.

- 1. If any part of your drill press is missing, malfunctioning, damaged or broken, stop operation immediately until that part is properly repaired or replaced.
- Never place your fingers in a position where they 2. could contact the drill bit or other cutting tool. The workpiece may unexpectedly shift, or your hand could slip.
- To avoid injury from parts thrown by the spring, follow З. instructions exactly when adjusting the spring tension of the auill.
- To prevent the workpiece from being torn from your 4. hands, thrown, spun by the tool, or shattered, always properly support your workpiece as follows:
  - a. Always position BACKUP MATERIAL (used beneath workpiece) so that it contacts the left side of the column, or use the fence provided and clamp to brace a smaller workpiece.

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- b. Whenever possible, position the WORKPIECE to contact the left side of the column. If it is too short or the table is tilted, use the fence provided or clamp solidly to the table, using the table slots.
- When using a drill press vise, always fasten it to C. the table.
- d. Never do any work freehand (hand-holding the workpiece rather than supporting it on the table). except when polishing.
- Securely lock the head and table support to the e. column, and the table to the table support, before operating the drill press.
- Never move the head or the table while the tool f is running.
- Before starting an operation, jog the motor switch a. to make sure the drill or other cutting tool does not wobble or cause vibration.
- h. If a workpiece overhangs the table so it will fall or tip if not held, clamp it to the table or provide auxiliary support.
- Use the fence provided or other fixtures for i unusual operations to adequately hold, guide, and position workpiece.
- Use the SPINDLE SPEED recommended for the specific operation and workpiece material. Check the panel on the inside pulley cover or the chart below for drilling speed information. For accessories, refer to the instructions provided with each accessory.
- 5. Never climb on the drill press table, it could break or pull the entire drill press down on you.
- 6. Turn the motor switch "OFF", and put away the switch key when leaving the drill press.
- 7. To avoid injury from thrown work or tool contact, do not perform layout, assembly, or set up work on the table while the cutting tool is rotating.

DOILLING ODEED TADLE (mm)

Drill Bit	Bit Material				
Diam. (inches)	Wood	Alum.,Zinc,Brass	Iron,Stee		
1/16	3600	3600	3600		
1/8			2610		
3/16		-	1600		
1/4		2610	·		
5/16			880		
3/8		1600			
1/2	2610	880	540		

### POSITIONING THE TABLE AND WORKPIECE (FIGURE AA and BB)

- 1. Lock the table (1) to the column (2) at a position so the tip of the drill bit (3) is just above the top of the workpiece (4).
- 2. ALWAYS place a BACK-UP MATERIAL (scrap wood) on the table beneath the workpiece. This will prevent splintering or heavy burring on the underside of the workpiece. To keep the back-up material from spinning out of control, it MUST contact the LEFT side of the column.

### **A WARNING**

To prevent the workpiece or backup material from being torn from your hands while drilling, you MUST position it against the left side of the column. If the workpiece or the backup material is not long enough to reach the column use the fence provided with the drill press to brace the workpiece, or clamp it to the table. Failure to do this could result in personal injury.



3. For small pieces that cannot be clamped to the table. use a drill press vise (optional accessory).

### AWARMING

The drill press vise MUST be clamped or bolted to the table to avoid injury from a spinning workpiece, or damaged vise or bit parts.

Remove the drill press fence when it interferes with other drill press accessories.

Fig. BB



### HOLDING A DRILLING LOCATION

- 1. Using a centerpunch or sharp nail, make an
- indentation in the workpiece where you want the hole. 2. Using the feed handles, bring the drill down to align
- with the indentation before turning the drill "ON".

### TILTING THE TABLE (FIGURE CC)

NOTE: The table and support (1) has a predrilled hole with a locking pin inserted for locking the table into a predetermined 0° horizontal position.

- 1. To use the table in a bevel (tilted) position; TIGHTEN the nut (2) on the locking pin clockwise to RELEASE it from the table support.
- 2. Loosen the large hex head bevel locking bolt (3).

### / WARNING

To prevent injury, be sure to hold the table & table arm assembly, so it will not swivel or tilt.



- 3. Tilt the table, aligning the desired angle measurement to the zero line opposite the scale (4). Tighten the bevel locking bolt.
- 4. To return the table to its original position, loosen the bevel locking bolt (3). Realign the bevel scale (4) to the 0° position.
- 5. Loosen the nut (2) on the locking pin to the OUTSIDE END OF THREADS. Gently tap the locking pin until it is seated in the hole. Finger tighten the nut.

### ZINWARNING

To avoid injury from spinning work or tool breakage, always clamp workpiece and backup material securely to the table before operating the drill press with the table tilted.

### FEEDING

З.

- 1. Pull down the feed handles with only enough effort to allow the drill bit to cut.
- 2. Feeding too slowly might cause the drill bit to burn. Feeding too rapidly might stop the motor, cause the belt or drill to slip, or tear the workpiece loose and break the drill bit.
  - When drilling metal, it may be necessary to lubricate the drill bit tip with motor oil, to prevent burning the tip.

# MAINTENANCE

# MAINTAINING YOUR DRILL PRESS

## PINWAENING

For your own safety, turn the switch OFF and remove the plug from the power source outlet before maintaining or lubricating your drill press.

Frequently blow out using an air compressor or dust vacuum, any dust that accumulates inside the motor.

A coat of automotive paste wax applied to the table and column will help to keep the surfaces clean.

### MARNING

To avoid shock or fire hazard, if the power cord is worn or cut in any way, have it replaced immediately.

### LUBRICATION

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All of the drill press ball bearings are packed with grease at the factory. They require no further lubrication.

Periodically lubricate the gear and rack, table elevation mechanism of the spindle and the rack (teeth) of the quill.

# TROUBLESHOOTING

### **TROUBLESHOOTING GUIDE**

### **AWARNING**

To avoid injury from an accidental start, turn the switch OFF and always remove the plug from the power source before making any adjustments.

· Consult your local Sears Service Center if for any reason the motor will not run.

	PROBLEM	PROBABLE CAUSE
	Noisy operation.	1. Incorrect belt tension.
		<ol> <li>Dry spindle.</li> <li>Loose spindle pulley.</li> </ol>
		4. Loose motor pulley.
	Drill bit burns.	1. Incorrect speed.
		<ol> <li>Chips not coming out of ho</li> <li>Dull drill bit.</li> <li>Feeding too slowly.</li> <li>Not lubricated.</li> </ol>
	Run out of drill bit point - drilled hole not round.	<ol> <li>Hard grain in wood or lengths of cutting flutes and/or angles not equal.</li> <li>Bent drill bit.</li> </ol>
	Wood splinters on underside.	<ol> <li>No backup material under workpiece.</li> </ol>
	Workpiece torn loose from hand.	<ol> <li>Not supported or clamped properly.</li> </ol>
	Drill bit binds in workpiece.	<ol> <li>Workpiece pinching drill bit or excessive feed pressure</li> <li>Improper belt tension.</li> </ol>
a da anticidade de la compacta de la Este de la compacta d Este de la compacta d	Excessive drill bit runout or wobble.	<ol> <li>Bent drill bit.</li> <li>Worn bearings.</li> <li>Drill bit not properly installed in chuck.</li> <li>Chuck not properly installed</li> </ol>
	Quill returns too slow or too fast.	1. Spring has improper tensio
A REAL PROPERTY AND A REAL	Chuck will not stay attached to spindle. It falls off when trying to install.	<ol> <li>Dirt, grease, or oil on the tapered inside surface of chuck or on the spindle's tapered surface.</li> </ol>
Ĺ		

PROBLEM PROBABLE CAUSE		REMEDY			
Noisy operation.	<ol> <li>Incorrect belt tension.</li> <li>Dry spindle.</li> <li>Loose spindle pulley.</li> <li>Loose motor pulley.</li> </ol>	<ol> <li>Adjust tension. See Section "ASSEMBLY - TENSIONING BELT"</li> <li>Lubricate spindle. See Section "LUBRICATION".</li> <li>Check tightness of retaining nut on pulley, and tighten if necessary.</li> <li>Tighten set screw in motor pulley.</li> </ol>			
Drill bit burns.	<ol> <li>Incorrect speed.</li> <li>Chips not coming out of hole.</li> <li>Dull drill bit.</li> <li>Feeding too slowly.</li> <li>Not lubricated.</li> </ol>	<ol> <li>Change speed. See Section "BASIC DRILL PRESS OPERATION - SPINDLE SPEEDS"</li> <li>Retract drill frequently to clear chips.</li> <li>Resharpen drill bit.</li> <li>Feed fast enough - allow drill to cut.</li> <li>Lubricate drill. See Section "BASIC DRILL PRESS OPERATION - FEEDING"</li> </ol>			
Run out of drill bit point - drilled hole not round.	<ol> <li>Hard grain in wood or lengths of cutting flutes and/or angles not equal.</li> <li>Bent drill bit.</li> </ol>	<ol> <li>Resharpen drill bit correctly.</li> <li>Replace drill bit.</li> </ol>			
Wood splinters on underside.	<ol> <li>No backup material under workpiece.</li> </ol>	1. Use backup material. See Section "BASIC DRILL PRESS OPERATION".			
Workpiece torn loose from hand.	<ol> <li>Not supported or clamped properly.</li> </ol>	<ol> <li>Support workpiece or clamp it. See Section "BASIC DRILL PRESS OPERATION".</li> </ol>			
Drill bit binds in workpiece.	<ol> <li>Workpiece pinching drill bit, or excessive feed pressure.</li> <li>Improper belt tension.</li> </ol>	<ol> <li>Support workpiece or clamp it. See Section "BASIC DRILL PRESS OPERATION".</li> <li>Adjust tension. See Section "ASSEMBLY - TENSIONING BELT."</li> </ol>			
Excessive drill bit runout or wobble.	<ol> <li>Bent drill bit.</li> <li>Worn bearings.</li> <li>Drill bit not properly installed in chuck.</li> <li>Chuck not properly installed.</li> </ol>	<ol> <li>Use a straight drill bit.</li> <li>Replace bearings.</li> <li>Install drill properly. See Section "BASIC DRILL PRESS OPERATION" and "ASSEMBLY".</li> <li>Install chuck properly. See Section "ASSEMBLY -INSTALLING THE CHUCK".</li> </ol>			
Quill returns too slow or too fast.	1. Spring has improper tension.	1. Adjust spring tension. See Section "ASSEMBLY- ADJUSTMENTS - QUILL RETURN SPRING".			
Chuck will not stay attached to spindle. It falls off when trying to install.	<ol> <li>Dirt, grease, or oil on the tapered inside surface of chuck or on the spindle's tapered surface.</li> </ol>	<ol> <li>Using a household detergent, clean the tapered surface of the chuck and spindle to remove all dirt, grease and oil. See Section "ASSEMBLY - INSTALLING THE CHUCK"</li> </ol>			
I	1				

# PARTS

### **10" DRILL PRESS PARTS LIST**

MODEL NO. 137.219100

# **AWARNING**

When servicing use only CRAFTSMAN replacement parts. Use of any other parts may create a HAZARD or cause product damage.

### **AWARNING**

Any attempt to repair or replace electrical parts on this Drill Press may create a HAZARD unless repair is done by a qualified service technician. Repair service is available at your nearest Sears Service Center.

Always order by PART NUMBER, not by key number

Key No.	Part No.	Description	Size	Qty.	Key No.	Part No.	Description	Size	Qty.
1	10300105	Base		1	56	2601BBDAA9	Hey ha holt		4
2	10300202	Column holder		i	57	2501NBDN27	Flat washer	5/16x7/8-5/64	Ŕ
3	10300401	Body column		-	50	2701EBD113	Hoy nut	M9v106 T_66	4
4	2601BBDA90	Here he holt	MOVI DE DE	1	50	10307008	Motor pullou	MOX1.20, 1-0.0	1
ч 5	10300603	Tablo bracket	MOX 1.20-20	4	60	2571MMC207	Parallal kay		· •
		Table Diauxet				207 114140007	Falaller key		
6	10300701	Gear		1	61	2603BBLA37	Hex. soc. set screw,	M6x1.0-8	1
7	10300801	Gear shaft		1	62	10808301	Clamp-cord		1
8	10300901	Worm		1	63	2668BBDA24	Cr. re. pan hd. screw	M5x0.8-12	1
9	10601009A1	Crank handle ass'y		1	64	2807BB06H2	Power cable		1
10	2603BBLA38	Hex. soc. set screw	M6x1.0-10	1	65	2805U5HN16	Terminal		1
11	2601QBDS81	Hex. hd. bolt	1/2x12UNC-7/8	1	66	2898DH7G06	Rocker switch		1
12	10601401	Location pin		1	67	10308805	Switch box		1
13	2701QZD506	Hex. put	1/4x20UNC T=4.7	1	68	2668BBDA24	Cr.re. can hd screw	M5x0 8-12	2
14	10301603	Tilting scale		1	69	10309009A1	Pulley ass'v	monoro ne	1
15	2658MZDU36	Drive screw		2					
46	10602001	Toble look beedle		••••••••••	70	00440000444	Or round	104041 1010 0108	
17	10302135	Table lock nanole		1	70	2641BBUA41	Ur. re. round washer hd. screw	10#240/00-3/8*	4
18	10302210	Back		i	71	2603BBI A52	Her soc set screw	MRv1 25-8	1
19	10302301	Back ring		1	72	2501NN/VN11	Knoh	141071120-0	4
20	2603BBI 437	Hav poc sategraw	MANTOR	4	72	10008302	Clamp-cord		4
					70				
21	10302510	Head		1	74	2668BBDA23	Cr. re. pan hd. screw	M5x0.8-8	3
22	2603BBLA52	Hex. soc. set screw	M8x1.25-8	2	75	10511201	Chuck key holder		1
23	10303202	Motor rod		2	76	26418BDA39	Cr. re. round	M6x1.0-18	1
24	10604201	Shifter bolt		2			washer hd. screw		
25	10303401	Motor base		1	77	2572ARK320	V-belt		1
26	2502ABC410	Soring washer		2	78	10312704	Switch cover		1
27	2701F8D110	Her nut	M10v1 5 T-8	2	70	2661MRDE11	Cr ra trues bd	MAV16-10	, ,
28	10303701	Hub	WHOX1.0 T=0	1	10	200 100000	tapping ecrew	WHAT OF 12	2
29	10303825	Feed shaft		4	80	2136480103	Chuck kou		4
30	2536MBE611	Spring pin		1	81	2536MBE623	Sprina pin		2
	•••••••								_
31	1000 100 /	Not issue			82	16932802	Lock knob		2
32	10304301	Handle bar		3	83	2501NBDN31	Flat washer		4
33	10304411	Gripe		3	84	10838201	Parallel bracket		1
34	10304502	Scale ring		1	85	2702FBB108	Wing nut	M8x1.25	2
35	10304901	Coil spring		1	86	2672BBDA40	Cap hd. sq. neck bolt	M6x1.0-16	ter.
36	10305001	Spring cap		1	87	10838501	Plate		1
37	10305114	Shaft seat		1	88	2702FBD106	Wind nut		1
38	10305206	Spring retainer		1	89		Not issue		
39	2701QZD611	Hex. nut	1/2x20UNF T=8	2	90	2668BZDA23	Cr. re. pan hd. screw	M5x0.8-8	2
-40	10305401	Quill set screw	M8x1.25-18	1	91	2504MZC005	External tooth lock wa	sher	2 .
	2701 0001 12	Llov put	Mud OF T OF			0704000400	Ua	140	
41 40	10205602	Contract Con	M8X1.25, 1=6.5	1	92	2/01/00/004	riex. nut	W6X1.U, 1=5	1
44	10303002	Quill		1	93	10301004	Set polt		1
43	10000701	Pubber washer		1	94	10518401	NUT Deleter	M10X1.5-2B	2
44	10303607	Spinale		1	95	10201201	Pointer		1
40	2001220201	ball bearing			96	2602BBLA27	Hex. soc. nd. cap bolt	M5x0.8-16	1
46	20015Z6201	Ball bearing		1	97	10361701	Set ring		1
47	2570BBN111	C-ring		1	98	2138MBL703	Wrench hex.		1
48	2570BBN117	C-ring		1	99	2138MBL704	Wrench hex.		1
49	10306512	Driving sleeve		1	100	28605AH071	Switch key		1
50	2001ZZ6203	Ball bearing		2	101	10384901	Scale		1
51	10306701	Collar		1	102	2801ABRE04	Strain reliat		°.
52	10306901	Pilley set nut		4	*	137210100001	Ounaria monunt		4
53	10307005	Spindle nillev		1		107210100001	CALCUS HIGHLIGH		1
54	2135CNQ132	Chuck		1					
55	8204121104	Motor		1	*	Not shown			
-				· 1					



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