

**Instruction
manual**

**Double Insulated
Portable Electric Drills**



1/4" Drill – MODEL 7551
1/2" Drill – MODEL 632



1/2" Drill
MODEL 7554



1/2" Right Angle Drill
MODEL 7556



1/2" Drill
MODELS 635,
7563, 7564

To learn more about Porter-Cable
visit our website at:
<http://www.porter-cable.com>

PORTER+CABLE
PROFESSIONAL POWER TOOLS

IMPORTANT

Please make certain that the person who is to use this equipment carefully reads and understands these instructions before starting operations.

The Model and Serial No. plate is located on the main housing of the tool. Record these numbers in the spaces below and retain for future reference.

Model No. _____

Type _____

Serial No. _____

Part No. 885356-8911

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

READ AND FOLLOW ALL INSTRUCTIONS.

There are certain applications for which this tool was designed. Porter-Cable strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written PorterCable and we have advised you.

Technical Service Manager
Porter-Cable Corporation
4825 Highway 45 North
P.O. Box 2468
Jackson, TN 38302-2468

POLARIZED PLUGS: To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

- 1. KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
- 2. AVOID DANGEROUS ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep area well lit. Avoid chemical or corrosive environment. Do not use tool in presence of flammable liquids or gases.
- 3. GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
- 4. KEEP CHILDREN AWAY.** Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
- 5. STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place – out of reach of children.
- 6. DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
- 7. USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended – for example – do not use a circular saw for cutting tree limbs or logs.
- 8. DRESS PROPERLY.** Do not wear loose clothing or jewelry. Loose clothing, draw strings and jewelry can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- 9. USE SAFETY GLASSES.** Wear safety glasses or goggles while operating power tools. Also face or dust mask if operation creates dust. All persons in the area where power tools are being operated should also wear safety glasses and face or dust mask.
- 10. DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges. Have damaged or worn power cord and strain reliever replaced immediately. **DO NOT ATTEMPT TO REPAIR POWER CORD.**

11. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Have all worn, broken or lost parts replaced immediately. Keep handles dry, clean and free from oil and grease.
14. **DISCONNECT TOOLS** when not in use, before servicing, and when changing accessories such as blades, bits, cutters, etc.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Do not carry a plugged-in tool with finger on switch. Be sure switch is off when plugging in. Keep hands, body and clothing clear of blades, bits, cutters, etc. when plugging in the tool.
17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords marked "Suitable for use with outdoor appliances – store indoors when not in use."
18. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired or while under the influence of medication, alcohol or drugs.
19. **CHECK 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 properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
20. **WEAR EAR PROTECTION** to safeguard against possible hearing loss.

SAVE THESE INSTRUCTIONS

REPLACEMENT PARTS

When servicing use only identical replacement parts.

ADDITIONAL SAFETY RULES FOR PORTABLE DRILLS

1. **ALWAYS** hold drill by the handle(s) **ONLY** to prevent accidental electrical shock resulting from cutting a live wire when drilling into a wall or other blind areas.
2. **DO NOT** use bits larger than those recommended on page 5. They increase the chance of jamming. Large bits may also overload the drill and damage the motor and gears.
3. **USE ONLY** the proper chuck key to tighten or loosen the chuck. Do not use chuck if jaws or other parts are cracked or worn.

4. **VERIFY** the drill's rotation before starting the drill so it is correct for the operation being performed.
5. **NEVER** change direction of rotation of reversing model until motor has completely stopped.
6. **NEVER** hold work in your hand, lap, or against other parts of your body when drilling.
7. **DO NOT** use drill as a router or try to elongate or enlarge holes by twisting the drill. Drill bits may break and cause injury.
8. **SOME WOOD CONTAINS PRESERVATIVES WHICH CAN BE TOXIC.** Take extra care to prevent inhalation and skin contact when working with these materials. Request, and follow, any safety information available from your material supplier.

MOTOR

Many Porter-Cable tools will operate on either D.C., or single phase 25 to 60 cycle A.C. current and voltage within plus or minus 5 percent of that shown on the specification plate on the tool. Several models, however, are designed for A.C. current only. Refer to the specification plate on your tool for proper voltage and current rating.

CAUTION: Do not operate your tool on a current on which the voltage is not within correct limits. Do not operate tools rated A.C. only on D.C. current. To do so may seriously damage the tool.

EXTENSION CORD SELECTION

If an extension cord is used, make sure the conductor size is large enough to prevent excessive voltage drop which will cause loss of power and possible motordamage. A table of recommended extension cord sizes will be found in this section. This table is based on limiting line voltage drop to 5 volts (10 volts for 230 volts) at 150% of rated amperes.

If an extension cord is to be used outdoors it must be marked with the suffix W-A following the cord type designation. For example - SJTW-A to indicate it is acceptable for outdoor use.

RECOMMENDED EXTENSION CORD SIZES FOR USE WITH PORTABLE ELECTRIC TOOLS

		Length of Cord in Feet								
		115V	25 Ft.	50 Ft.	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	400 Ft.
Nameplate Ampere Rating	230V	50 Ft.	100 Ft.	200 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	800 Ft.	1000 Ft.
	0-2	18	18	18	16	16	14	14	12	12
	2-3	18	18	16	14	14	12	12	10	10
	3-4	18	18	16	14	12	12	10	10	8
	4-5	18	18	14	12	12	10	10	8	8
	5-6	18	16	14	12	10	10	8	8	6
	6-8	18	16	12	10	10	8	6	6	6
	8-10	18	14	12	10	8	8	6	6	4
	10-12	16	14	10	8	8	6	6	4	4
	12-14	16	12	10	8	6	6	6	4	2
	14-16	16	12	10	8	6	6	4	4	2
	16-18	14	12	8	8	6	4	4	2	2
	18-20	14	12	8	6	6	4	4	2	2

OPERATING INSTRUCTIONS

FOREWORD

Porter-Cable drills are designed to drill holes of various sizes in wood and metal as indicated in the following chart:

Model No. of Drill	Type of Bit	Max. Dia. Hole	Material	
7551	Twist Drill	1/4"	Steel	
	Auger Bit	5/8"	Wood	
632, 635	Twist Drill	1/2"	Steel	
	Auger Bit	1 1/2"	Wood	
7554, 7563, 7564	Twist Drill	1/2"	Steel	
	Auger Bit	1 3/4"	Wood	
7556	Low	Twist Drill	1/2"	Steel
		Auger Bit	1 3/4"	Wood
	Speed	Self Feed Bit	4 5/8"	Wood
	High	Twist Drill	1/2"	Steel
		Auger Bit	1 1/2"	Wood
	Speed	Self Feed Bit	2 9/16"	Wood

INSTALLING AND REMOVING DRILL BIT

1. **CAUTION:** DISCONNECT DRILL FROM POWER SOURCE.
2. The three-jaw chuck is designed for self-centering of the drill bit. Open jaws large enough by turning outer sleeve counterclockwise, when viewing the chuck from the bit end so that bit shank can be inserted.
3. Clean and insert smooth end of drill bit as far as it will go into the chuck, or up to the flutes for small bits.
4. While holding the bit with one hand, turn outer sleeve clockwise until bit is gripped in the chuck.
5. Tighten chuck – insert chuck key into each of 3 keyholes in chuck body (Fig. 1) in succession and tighten securely by turning key clockwise.

CAUTION: Be sure chuck key is removed before starting tool.

6. To remove bit, reverse foregoing procedure.

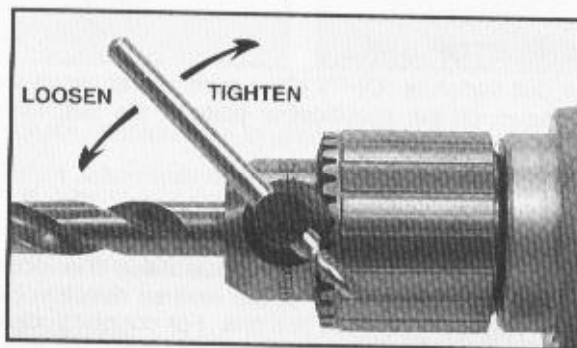


Fig. 1

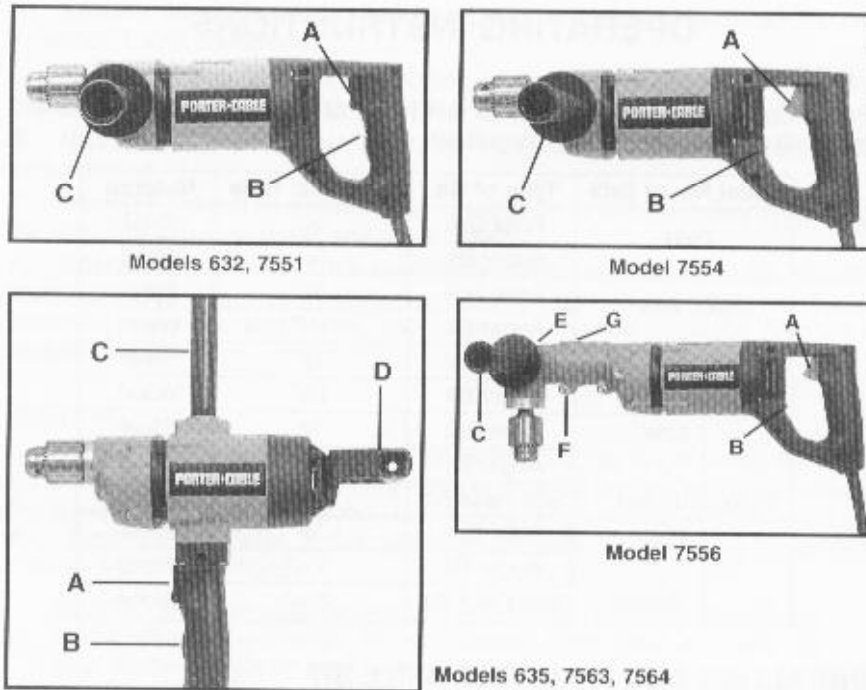


Fig. 2

TO INSTALL SPADE HANDLE

A spade handle (D) Fig. 2, is furnished with some models. This handle may be assembled in any one of four positions on the back of the drill. Simply place the washer on the screw, insert screw through hole in spade handle, locate handle as desired, and tighten screw securely.

TO INSTALL AUXILIARY HANDLE

An auxiliary handle (C) Fig. 2, is supplied with some models. This handle screws directly into the drill housing providing complete control of the drill.

It is strongly recommended that the auxiliary handle be used and tool held as illustrated on page 8 during all drilling operations.

TO START AND STOP DRILL

1. Make sure drill switch is "OFF". Make sure power circuit voltage is the same as that shown on the specification plate of the drill. Connect drill to power circuit.
2. Squeeze TRIGGER SWITCH (A) Fig. 2, to start motor. Release trigger to stop motor.
3. REVERSING SWITCH - Some models are provided with a reversing switch (B) Fig. 2. These models will operate in either the forward direction (clockwise rotation) for drilling holes, or the reverse direction (counterclockwise rotation) for releasing jammed drill bits. For counterclockwise rotation, stop the motor by releasing the trigger switch and move the reversing switch to the position labeled "R", or in the opposite direction for clockwise rotation.

NOTE: Never attempt to change direction of rotation while switch is "ON". To do so, may damage the drill. Be sure switch is "OFF" and motor has completely stopped before changing direction of rotation.

4. On VARIABLE SPEED models, as the trigger switch is squeezed, the drill speed increases.

RIGHT ANGLE DRILL

The Right Angle Drills are operated in the same manner as the conventional straight drive drills. All right angle drills are factory assembled with the chuck on drive end marked "LOW" and will run at the lower RPM shown on the specification plate.

To change to the higher RPM marked on the nameplate proceed as follows:

1. **CAUTION:** DISCONNECT DRILL FROM POWER SOURCE.
2. Loosen the outer sleeve screw (F) Fig. 2, and remove the right angle drive (E) Fig. 2, from the sleeve (G) Fig. 2.
3. Open chuck jaws as wide as possible to gain access to chuck retaining screw.
4. Place spindle wrench (furnished with drill) on flats of spindle shaft and hold. With a $\frac{3}{16}$ " hex wrench, turn the retaining screw clockwise (left hand threads) and remove from chuck.
5. While supporting chuck on a solid surface, place wrench on flats of spindle and allow the opposite end of wrench to rest on the workbench to your left as shown in Fig. 3. Place chuck pin wrench into chuck key hole so that pin wrench extends to your left as shown in Fig. 3. Strike the pin wrench a sharp blow with a hammer to loosen chuck.

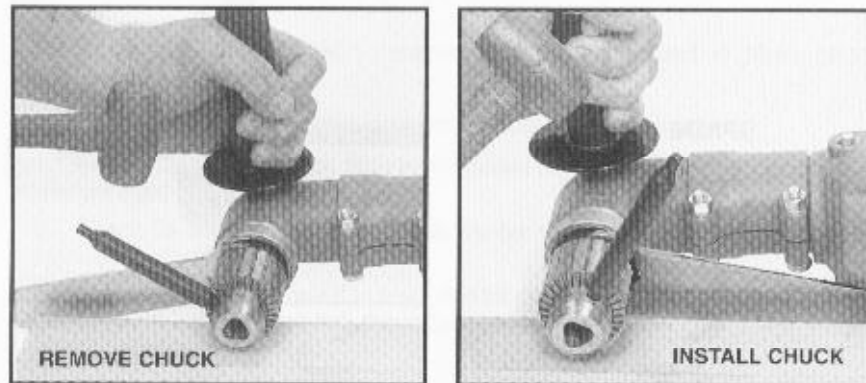


Fig. 3

6. Turn chuck counterclockwise to unscrew. Remove chuck and two washers from spindle.
7. Place steel washer and then brass washer (washers removed in Step 6) onto spindle at end of right angle drive marked "high".

NOTE: Failure to use these washers may cause chuck to seize on spindle.

8. Thread chuck onto spindle ("HIGH" end of drive) and seat firmly by reversing procedure in Step 5.

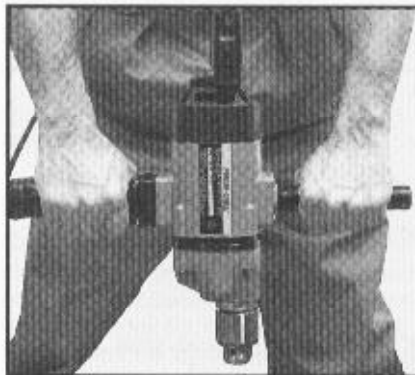
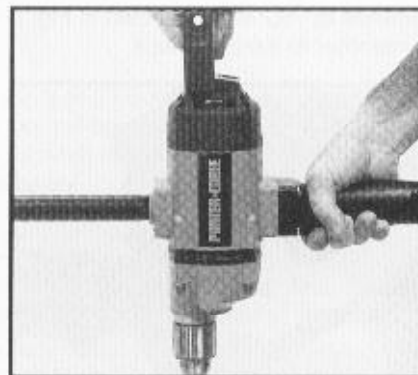
D-HANDLE
Models 632, 7551 and 7554



RIGHT ANGLE DRILL Model 7556



SPADE HANDLE
Models 635,
7563 and 7564



9. Tighten chuck retaining screw securely.
10. Replace right angle drive to sleeve, making sure the flats on the driveshaft engage slot in coupling.
11. Tighten sleeve screws securely.

Right Angle Drills may be converted to a conventional straight drive drill by loosening the back sleeve screw and removing the sleeve and right angle drive from the drill. Remove the coupling retaining screw (hold spindle with spindle wrench, turn screw clockwise with a $\frac{5}{16}$ " hex wrench) and coupling. Remove the chuck and washers from the right angle drive and assemble to drill spindle.

NOTE: Chuck must be firmly seated on spindle before installing chuck retaining screw.

HOW TO HOLD THE DRILL

WARNING: The front end of drill may be made live if the tool drills into live wiring in a wall. **TO PREVENT ACCIDENTAL ELECTRICAL SHOCK, DRILL MUST BE HELD AS SHOWN ON PAGE 8.**

An auxiliary handle (C) Fig. 2, is supplied with each drill.

HOW TO USE THE DRILL

GENERAL DRILLING

1. Be sure drill bit is securely gripped in chuck. (See INSTALLING AND REMOVING DRILL BIT).
2. On reversing models only, set REVERSING SWITCH for clockwise rotation.
3. Make sure work is held securely in vise or clamped in place prior to starting drilling operation.

CAUTION: Loose work may spin and cause bodily injury.

4. Locate exact center for hole to be drilled and using a center punch, make a small dent in work.
5. Place tip of drill bit in dent made by center punch, hold drill square with work, and start the motor.

Apply steady, even pressure to keep drill bit cutting. Too little pressure will keep the bit from cutting and dull the edges due to excessive friction created by sliding over the surface.

CAUTION: Too much pressure may cause the bit to break or overheat resulting in bodily injury or damaged drill bits.

CAUTION: BE ALERT and brace yourself against the twisting action of the drill, should bit jam in the work.

7. If drill stalls or becomes jammed in the hole, release trigger immediately, removing drill bit from work and determine cause of stalling or jamming. **DO NOT SQUEEZE TRIGGER ON AND OFF IN AN ATTEMPT TO FREE A STALLED OR JAMMED DRILL – THIS WILL DAMAGE THE MOTOR.** On reversing models only, the direction of rotation may be reversed to help free a jammed bit. Be sure direction of rotation is RESET before attempting to continue drilling.

8. Reduce the pressure on the drill just before the bit cuts through the work to avoid splintering wood or stalling in metal.
9. When bit has completely penetrated work and is spinning freely, withdraw it from the work while the motor is still running, then turn off drill.

DRILLING WOOD

WARNING: SOME WOOD CONTAINS PRESERVATIVES WHICH CAN BE TOXIC. Take extra care to prevent inhalation and skin contact when working with these materials. Request, and follow, any safety information available from your material supplier.

In addition to the instructions listed under GENERAL DRILLING, the following also apply:

1. When using twist drills in wood, they should be withdrawn from the hole frequently to clear chips built up in flutes to avoid overheating and burning work.
2. If a backing block is used to keep back of work from splintering, it should be clamped securely in place. If a backing block is not used with spade bits or auger bits, ease up pressure as soon as bit point breaks through work, and complete the hole from the opposite side.

DRILLING METAL

In addition to the instructions listed under GENERAL DRILLING, the following also apply:

CAUTION: When drilling metal, jamming of bit is more likely than when drilling other materials.

1. Use only good quality sharp high speed steel twist bits when drilling metal.
2. With variable speed drills, start drilling with slow speed and gradually increase speed as drill cuts. The harder the material, the slower the speed required. The softer the material, the faster the speed.
3. When drilling a large hole, it is easier to first drill a smaller hole and then enlarge it to the required size.
4. The use of a lubricant, such as oil, on the drill point helps keep the bit cool, increases drilling action and prolongs drill bit life.

MAINTENANCE

KEEP TOOL CLEAN

Periodically blow out all air passages with dry compressed air. Remove buildup of grime resulting from working with green or sappy wood. All plastic parts should be cleaned with soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

CAUTION: Wear safety glasses while using compressed air.

FAILURE TO START

Should your tool fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

CHUCK REPLACEMENT

MODEL 7556 RIGHT ANGLE DRILL – see page 7. ALL OTHER MODELS – PROCEED AS FOLLOWS:

1. **CAUTION: DISCONNECT DRILL FROM POWER SOURCE.**
2. Open chuck jaws as wide as possible to gain access to the chuck retaining screw.
3. Remove chuck retaining screw (use flat screwdriver or $\frac{3}{16}$ " hex wrench, depending on model). Turn screw counterclockwise (right hand threads) on Models 7563 and 7564, turn screw clockwise (left hand threads) on all other Models.
4. Remove chuck:

Models 7563 and 7564 – Tap side of chuck body (A) Fig. 4, with a brass hammer to loosen chuck from spindle. Slide chuck off spindle.

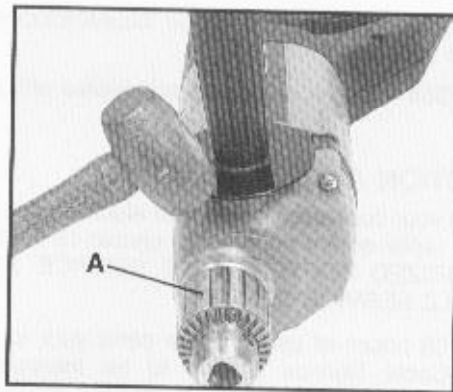


Fig. 4

All Models except 7563 and 7564 – Place the short end of a large hex wrench ($\frac{1}{4}$ " or larger) into the chuck. Align wrench flats with chuck jaws and tighten chuck securely using chuck key. While supporting chuck on a solid surface, position hex wrench to left (see Fig. 5) and strike wrench a sharp blow with a hammer to loosen chuck. Turn chuck counterclockwise to remove.

NOTE: Some Models have one or two washers behind the chuck. The washer(s) should remain on the spindle for use with the replacement chuck.

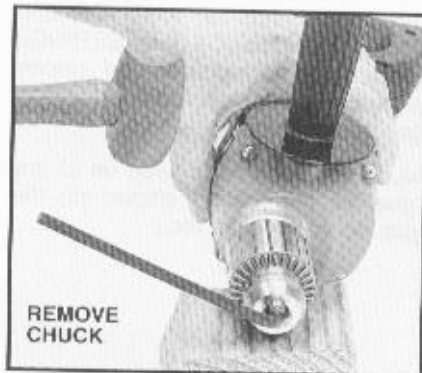


Fig. 5



Fig. 6

5. **INSTALL CHUCK:** Open jaws of replacement chuck as wide as possible.

Models 7563 and 7564 – Position chuck to drill spindle with slot in chuck body aligned with the flats on the spindle. Push chuck onto spindle and seat by tapping front of chuck body with a soft-faced hammer.

All Models except 7563 and 7564 – Thread chuck by turning chuck clockwise. Hand tighten. Install hex wrench in chuck (see Step 4). While supporting chuck on a solid surface, position hex wrench to the right (see Fig. 6) and strike a sharp blow with a hammer to seat chuck onto spindle.

6. Remove hex wrench from chuck.

7. **INSTALL CHUCK RETAINING SCREW:**

Models 7563 and 7564 – Turn screw clockwise with a “flat” screwdriver. Tighten securely.

Models 632, 635 and 7551 – Turn screw counterclockwise with a “flat” screwdriver. Tighten securely.

Models 7554 and 7556 – Turn screw counterclockwise with a $\frac{3}{16}$ ” hex wrench. Tighten securely.

BRUSH INSPECTION AND LUBRICATION

CAUTION: For your continued safety and electrical protection, brush inspection and replacement on this tool should **ONLY** be performed by an **AUTHORIZED PORTER-CABLE SERVICE STATION** or a **PORTER-CABLE SERVICE CENTER**.

At approximately 100 hours of use, take or send your tool to your nearest Authorized Porter-Cable Service Station to be thoroughly cleaned and inspected; worn parts replaced, when necessary; relubricated with fresh lubricant, if required; reassembled with new brushes; and performance tested.

Any loss of power before the above maintenance check may indicate the need for immediate servicing of your tool. **DO NOT CONTINUE TO OPERATE TOOL UNDER THIS CONDITION.** If proper operating voltage is present, return your tool to the Service Station for immediate service.

SERVICE AND REPAIRS

All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations, including brush inspection and replacement, should **ONLY** be performed by either an **AUTHORIZED PORTER-CABLE SERVICE STATION** or a **PORTER-CABLE SERVICE CENTER**. All repairs made by these agencies are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by anyone other than these agencies.

Should you have any questions about your tool, feel free to write us at any time. In any communications, please give all information shown on the nameplate of your tool (model number, type, serial number, etc.).

GENERAL ACCESSORIES

The testing of these tools has been accomplished with accessories outlined on page 5. For safest operation, it is recommended that only these accessories be used.

For accessories, consult your Industrial Distributor.

WARNING: Since bits of larger sizes and accessories of other manufacturers have not been tested with these products, use of such accessories could be hazardous.

PORTER-CABLE LIMITED ONE YEAR WARRANTY

Porter-Cable warrants its Professional Power Tools for a period of one year from the date of original purchase. We will repair or replace, at our option, any part or parts of the product and accessories covered under this warranty which, after examination, proves to be defective in workmanship or material during the warranty period. For repair or replacement, return the complete tool or accessory, transportation prepaid, to your nearest Porter-Cable Service Center or Authorized Service Station. Proof of purchase may be required. This warranty does not apply to repair or replacement required due to misuse, abuse, normal wear and tear or repairs attempted or made by other than our Service Centers or Authorized Service Stations.

ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL LAST ONLY FOR ONE (1) YEAR FROM THE DATE OF PURCHASE.

To obtain information on warranty performance please write to: PORTER-CABLE CORPORATION, 4825 Highway 45 North, P.O. Box 2468, Jackson, Tennessee 38302-2468; Attention: Product Service. THE FOREGOING OBLIGATION IS PORTER-CABLE'S SOLE LIABILITY UNDER THIS OR ANY IMPLIED WARRANTY AND UNDER NO CIRCUMSTANCES SHALL PORTER-CABLE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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