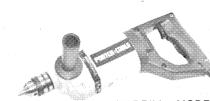
# Instruction manual



**Double Insulated** 

1/4" DRILLS MODELS 7500; 7501 7503; 7504 3/8" DRILLS MODELS 7510; 7511 1/2" DRILL MODEL 7514



1/4" DRILL - MODEL 7551 3/8" DRILL - MODEL 7552 1/2" DRILLS - MODELS 632; 7554

1/2" DRILLS MODELS 635; 7563; 7564; 7566

> 1/2" RIGHT ANGLE DRILL MODEL 7556

# 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.

Type \_\_\_\_\_

Serial No. \_\_\_\_\_

PORTER+CABLE
PROFESSIONAL POWER TOOLS

Part No. 692498-487

# 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 Porter-Cable and we have advised you.

Manager of Product Engineering Porter-Cable Corporation Youngs Crossing at Highway 45 P.O. Box 2468 Jackson, Tn 38302-2468

- 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 the 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. 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.

- 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.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
- 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.

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 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. Large bits may 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.

# **MOTOR**

Most 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 motor damage. A table of recommended extension cord sizes will be found below. 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.	500 Ft.
	230V	50 Ft.	100 Ft.	200 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	800 Ft.	1000 Ft.
Nameplate Ampere Rating	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 of Dril		Type of Bit	Max. Diag. Hole	Material	
וווע וט		Twist Drill	1/4"	Steel	
619		Spade Bit	1/2"	Wood	
019		Self Feed Bit	1/4"	Wood	
620		Twist Drill	3/8"	Steel	
020		Spade Bit	3/4"	Wood	
621		Self Feed Bit	3/8"	Wood	
7500		Twist Drill	1/4"	Steel	
7500		Spade Bit	1"	Wood	
/501		Self Feed Bit	1/2"	Wood	
7503		Twist Drill	1/4"	Steel	
7503		Spade Bit	3/4"	Wood	
7504		Twist Drill	1/4"	Steel	
7504		Spade Bit	1/2"	Wood	
7510		Twist Drill	3/8"	Steel	
7510		Spade Bit	1-1/4"	Wood	
		Self Feed Bit	3/4"	Wood	
		Twist Drill	1/2"	Steel	
7514		Spade Bit	1-1/2"	Wood	
/314		Self Feed Bit	1-1/4"	Wood	
7551		Twist Drill	1/4"	Steel	
,,,,,		Auger Bit	5/8"	Wood	
7552		Twist Drill	3/8"	Steel	
7552		Auger Bit	1-1/2"	Wood	
7556		Twist Drill	1/2"	Steel	
632.63	35	Auger Bit	1-1/2"	Wood	
7554.		Twist Drill	1/2"	Steel	
7564		Auger Bit	1-3/4"	Wood	
	Low	Twist Drill	1/2"	Steel	
		Auger Bit	1-3/4"	Wood	
7556	Speed	Self Feed Bit	4-5/8"	Wood	
	High	Twist Drill	1/2"	Steel	
	J .	Auger Bit	1-1/2"	Wood	
	Speed	Self Feed Bit	2-9/16"	Wood	

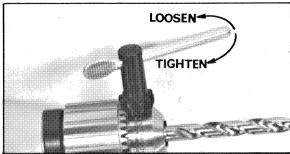


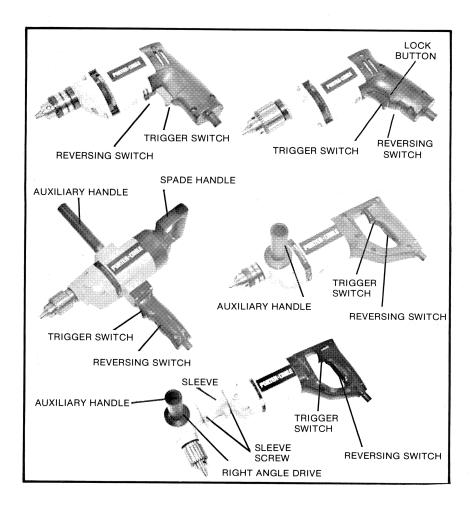
Fig. 1

# **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.



# TO INSTALL SPADE HANDLE

A spade handle 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 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 (Fig. 2) to start motor. Release trigger to stop motor. On VARIABLE SPEED Models, as the TRIGGER SWITCH is squeezed, the drill speed increases.
- 3. Lock Button A lock button (Fig. 2) is provided on some models to keep motor running without holding the trigger switch ON.

To lock the trigger switch ON, squeeze the trigger as far as it will go, push in lock button and release trigger.

To unlock lock button, squeeze trigger and release, leaving lock button free to spring out.

4. REVERSING SWITCH - Some models are provided with a reversing switch located as indicated in 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 in the direction marked "reverse", or in the opposite direction for clockwise rotation.

**NOTE:** Never attempt to change direction or rotation while switch is "ON". To do so, may damage interlock feature built into switch. Be sure switch is "OFF" and motor has completely stopped before changing direction of rotation.

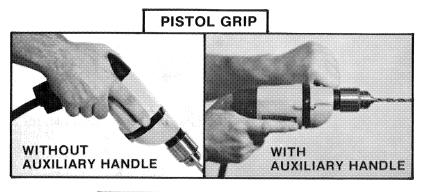
# **RIGHT ANGLE DRILL**

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. Open chuck jaws as wide as possible to gain access to chuck retaining screws.
- 3. Turn screw counterclockwise with 3/16" Allen wrench and remove screw and chuck from spindle.
- 4. Loosen outer sleeve screw, Fig. 2, and remove right angle drive from sleeve. The coupling within sleeve may fall out. If so, replace coupling within sleeve, making sure the slot engages the flats on the drill spindle.
- 5. Mount chuck to end of right angle drive marked "HIGH" and tighten chuck retaining screw securely.
- 6. Replace right angle drive to sleeve, making sure the flats on the drive shaft engage slot in coupling.
- 7. Tighten sleeve screws securely.

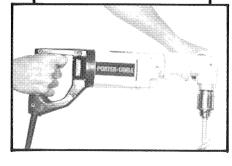
Right Angle Drills may be converted to a conventional straight drive drill by loosening the back sleeve screw and removing the sleeve and right angle drive from drill. Remove the chuck from the right angle drive and assemble to drill spindle.

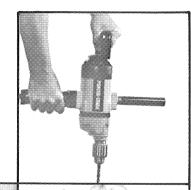


D-HANDLE

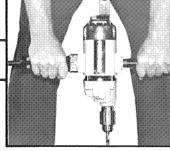














# HOW TO HOLD THE DRILL

**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.** 

# HOW TO USE THE DRILL

### **GENERAL DRILLING**

- 1. Be sure drill bit is scurely 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.
- 6. 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 over heat resulting in bodily injury or damaged drill bits.

**CAUTION -** Be ALERT and brace yourself against the twisting action of the drill.

- 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**

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 instruction listed under GENERAL DRILLING, the following also apply:

- 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, 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 compressed air. Remove build up of grime resulting from working 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.

# **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 can not 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 as outlined on page 5. For safest operation, it is recommended that only these accessories be used.

For accessories, consult your Industrial Distributor.

# **ADDITIONAL ACCESSORIES AVAILABLE**

Model 5079 Right Angle Drill Attachment For use with the Models 632, and 7554 I/2" Drills. When used with Model 7554 Drill, order 861699 Coupling.

**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 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 as listed under "TOOLS-ELECTRIC" in the Yellow Pages of your telephone directory. 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.

To obtain information on warranty performance please write to: PORTER-CABLE CORPORATION, Youngs Crossing At Highway 45, P.O. BOX 2468, Jackson, Tennessee 3830l; 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 on 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.

# PORTER-CABLE SERVICE CENTERS

# Parts and Repair Service for Porter-Cable Power Tools are Available at These Locations

#### **ALABAMA**

Birmingham 35209 131 West Oxmoor Road Suite 105 Phone: (205) 942-6325

#### CALIFORNIA

Los Angeles 90007 2400 South Grand Avenue Phone: (213) 749-0386

Orange 92668 385 North Anaheim Blvd. Phone: (714) 634-4111

San Leandro 94577 3039 Teagarden Street Phone: (415) 357-9762

# COLORADO

Denver 80207 4900 East 39th Avenue Phone: (303) 388-5803

#### CONNECTICUT

Manchester 06040 (Hartford) 57 Tolland Turnpike Phone: (203) 646-1078

#### **FLORIDA**

Hialeah 33014 16373-75 NW 57th Ave. Phone: (305) 624-2523

Jacksonville 32205 517 Cassat Avenue Phone: (904) 387-4455

Tampa 33609 4538 W. Kennedy Boulevard Phone: (813) 877-9585

Orlando 32803 1807½ Winter Park Road Phone: (305) 644-8100

#### GEORGIA

Forest Park 30050 (Atlanta) 4017 Jonesboro Road Phone: (404) 363-8000

# ILLINOIS

Addison 60161 311 Laura Drive Phone: (312) 628-6100

#### INDIANA

Indianapolis 46268 5317 West 86th Street Park 100—Building 6 Phone: (317) 875-9078

#### LOUISIANA

Kenner 70062 (New Orleans) 2440-0 Veterans Memorial Blvd. Phone: (504) 469-7363

#### MARYLAND

Baltimore 21205 4714 Erdman Avenue Phone: (301) 483-3100

Hyattsville 20781 4811 Kenilworth Avenue Phone: (301) 779-8080

#### **MASSACHUSETTS**

Allston 02134 (Boston) 414 Cambridge Street Phone: (617) 782-1700

#### MICHIGAN

Grand Rapids 49506 Indian Village Mall 2750 Birchcrest Drive S.E. Phone: (616) 949-9040

Southfield 48075 (Detroit) 18650 W. Eight Mile Road Phone: (313) 569-4333

#### MINNESOTA

Minneapolis 55429 4315 68th Avenue North Phone: (612) 561-9080

#### MISSOURI

North Kansas City 64116 1141 Swift Avenue P.O. Box 12393 Phone: (816) 221-2070

St. Louis 63139 2348 Hampton Avenue Phone: (314) 644-3166

#### **NEW JERSEY**

Union 07083 945 Ball Avenue Phone: (201) 964-1730

#### **NEW YORK**

New York 10013 (Manhattan) 132 Lafayette Street Phone: (212) 966-2726

Flushing 11365 175-25 Horace Harding Expwy. Phone: (212) 225-2040

Syracuse 13224 2740 Erie Blvd. East Phone: (315) 445-1922

# NORTH CAROLINA

Charlotte 28209 4612 South Boulevard Phone: (704) 525-4410

#### оню

Columbus 43214 4560 Indianola Avenue Phone: (614) 263-0929

#### **OKLAHOMA**

Oklahoma City 73107 3631 Northwest 23rd Street Phone: (405) 946-5437

#### OREGON

Portland 97212 51 N.E. Hancock Phone: (503) 288-6888

#### **PENNSYLVANIA**

Bensalem 19020 (Philadelphia) I-95 Industrial Center 3599 Meadow Lane Phone: (215) 638-4114

#### RHODE ISLAND

East Providence 02914 1009 Waterman Avenue Phone: (401) 434-3620

#### **TENNESSEE**

Memphis 38116 1004 East Brooks Road Phone: (901) 332-1353

#### TEYAS

Dallas 75247 3160 Commonwealth Drive Suite 180, Commonwealth Plaza Phone: (214) 631-7855

Houston 77092 5201 Mitchelldale B-9 Phone: (713) 682-0334

San Antonio 78218 Suite 107 2800 N.E. Loop 410 Phone: (512) 654-1061

#### UTAH

Salt Lake City 84115 2990 Southwest Temple Phone: (801) 487-4953

#### VIRGINIA

Richmond 23230 1705 Dabney Road Phone: (804) 257-7348

#### WASHINGTON

Renton 98055 (Seattle) 268 Southwest 43rd Street Phone: (206) 251-6680

#### WISCONSIN

Milwaukee 53222 10700 W. Burleigh Street Phone: (414) 774-3650

Authorized Porter-Cable Service Stations are located in all large cities. For the one nearest you, see the classified section in your phone book (under "Tools - Electric").

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