

Parts Manual
823170
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Quackenbush®

381273
230QGDA Tool Maintenance Kit & Pressure Test Instructions



For additional product information visit our website at www.apextoolgroup.com

TOOL MAINTENANCE & PRESSURE TEST EQUIPMENT KIT 381273

230 QGDA-RAB-SU-MS

230 OGDA-RAC-SU-MS Posltive Feed

230 QGDAV-RAB-SU-MS Right Angle & Inline

230 QGDAV-RAC-SU-MS Drills

230 QGDB-SU-MS

230 QGDBV-SU-MS

This kit and instructions are for use in conjunction with the Operating Instructions and Service Manual provided with the above drills.

CONTENTS OF TOOL MAINTENANCE & PRESSURE TEST EQUIPMENT KIT 381273

382370 Tool Box

823170 Contents list, diagram, and instructions

381272 Guage and fitting assembly

382360 Hex wrench bar

382361 Offset hex wrench

382362 3/16 inch pin wrench

382363 Bevel pinion socket

844767 Dowel Pin

382364 Cage Holder

382365 Throttle Cylinder Wrench

622466 Spindle Wrench

The hex wrench bar is to assist tightening cap screws, to straighten stack of 5 belleville springs (if required), and to install cylinder plug 382552. The cage holder holds spider 612050 or 613277.

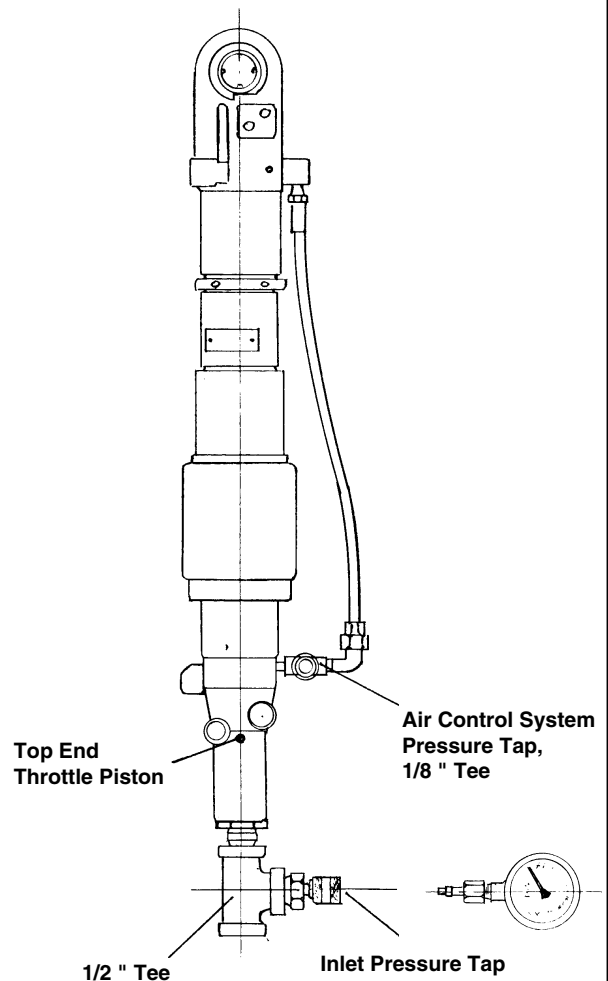
Performing Pressure Tests

This is a governed air motor, and air flow usually increases as the load increases. A variable speed drill motor will use more air at higher speed settings. For all tests on the following pages, screw the 1/2 inch pipe nipple and tee directly into the inlet bushing of the air tool. Do not use a quick disconnect fitting between the tee and the inlet bushing (see diagram). The 1/8 inch tee need not be installed at this time.

Adequate Air Supply

This includes valves, hoses, couplings, supply pressure, etc. Normally this test would be performed at the drilling site with the length of hoses and couplings in use. Attach the air hose or the large quick disconnect coupling to the 1/2 inch tee. Plug the air guage into the fitting on the tee. Rapid advance the tool and read the guage pressure before and during rapid advance.

All 230 Drills	
Maximum Allowable Pressure	
Drop At Tool	
Inlet (RAP/ADV Flow Test):	
psig	psig
Before	During
90	82
100	90
110	98
115	102



See Appendix I for unusual conditions.

The following tests should be done in the tool crib or repair-maintenance area. **NOTE:** Remove the tool nose and spindle.

Air control system (A.C.S.) pressure checks. The 1/8 inch tee should also be installed at this time (see diagram).

Feed piston pressure—plug air guage into the A.C.S. Start motor with the drill button. The tool automatically goes into feed with the motor running. The A.C.S. pressure must be over 60 psig.

If the pressure is 0-60 psig it would indicate a very substantial leak in the air control system; a damaged side air hose or fitting, a damaged stop button assembly, check valve, or a leaking feed piston. On "B" model tools this could indicate a badly leaking signal valve. Also a severely clogged A.C.S. filter might be the problem or a clogged metering seat (382491).

Excess Leakage (A.C.S.)

Turn on the air supply and press the "drill" button. Press the rapid advance lever and return the lever fully. This places the tool into the "air-lock mode" with the throttle open, the motor stalled, and the air control system (A.C.S.) pressurized.

Plug the air gauge alternately into each small quick disconnect fitting. The difference in pressure should be no more than 7 psi. A difference of more than 7 psi means excessive leakage in the A.C.S. See Appendix II. Lift the retract lever. The retract valve will move with an audible snap. Again, the difference in pressure should be no more than 7 psi when plugging the air gauge alternately into each quick disconnect fitting.

Press the stop button. Exhaust deflector and retract lever reset.

Throttle Closing Test

The throttle unlatches and closes as the air control system pressure drops. With the air gauge plugged into the A.C.S., place the tool back into the "air-lock mode". Now, very gradually press the stop button. The throttle should close when the A.C.S. pressure drops to between 42-50 psi. If the throttle doesn't close, the throttle piston may be sticking, or the latch piston 382490 is not functioning properly.

Signal Valve Venting

Use the highest air supply pressure available (110 psig maximum). With the air gauge plugged into the air control system, place the tool back into the "air-lock mode". Lift the retract lever. (The retract valve will move with an audible snap). Depress the plunger of the venting signal valve (assembly 381117). The A.C.S. pressure will drop and the throttle should close. If the A.C.S. pressure does not drop below 38 psig, the A.C.S. system is receiving an oversupply of air or does not vent properly.

An oversupply of air to the A.C.S. system may be caused by leakage around the O.D. of the metering seat (382491), or leakage past the lower "O"ring (869712) on the drill button shaft.

APPENDIX I

Unusual Drilling Conditions: If the air supply conditions (valves, hoses, fittings, etc.) can not be improved to meet the tool inlet pressure operating conditions in the chart, or if the supply pressure (static) must be below 90 psig, the tool may operate adequately at the work site if the pressure at the inlet tee while drilling and cutting chips does not drop below 70 psi. This would require monitoring the particular tool at the job site while in use to ensure the pressure at the inlet tee does not drop below 70 psig.

APPENDIX II

Locating Excessive Leakage In The A.C.S.

Most air leaks create a hissing noise that is easily heard if background noise is not too loud.

With the air supply on, place a small punch against the bottom end of the throttle piston (place the punch through the throttle cylinder slot or the throttle cylinder end cap). This will prevent the throttle from opening if you push firmly. Now push the drill button a small amount until the A.C.S. is holding pressure. Remove the punch. You will now be able to locate leaking air audibly. Some leakage at the retract valve is normal. By lifting the retract lever you can detect excess leakage at the signal valve, or in the retract piston air circuit.

Missing "O"-rings or a damaged signal valve are the most common sources of excessive leakage.

Sales & Service Centers

Note: All locations may not service all products. Please contact the nearest Sales & Service Center for the appropriate facility to handle your service requirements.

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