MM–115

Installation, Operation and Maintenance Instructions

JET SHOT PUMP MARKER
1 QUART
FOR METAL DETECTORS
P/N 812433

ERIEZ MAGNETICS HEADQUARTERS: 2200 ASBURY ROAD, P.O. BOX 10608, ERIE, PA 16514–0608 U.S.A.
WORLD AUTHORITY IN ADVANCED TECHNOLOGY FOR MAGNETIC, VIBRATORY and METAL DETECTION APPLICATIONS

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ES-454 Jet Shot Marker Pump

DESCRIPTION

This versatile marking unit, upon signal fires a predetermined amount of marking fluid through a formed orifice with high pressure to produce a ribbon of marking fluid. This mark is deposited on part surfaces located approximately 1 to 6 inches (25 to 150 mm) away from tip.

A dot of color is deposited on the part between dime to half dollar size with somewhat ragged edges.

The ES-454 Jet Shot has a built-in condition that sends part of the fluid in the chamber back through the inlet tube, creating a "backsurge" in the reservoir, thereby mixing the marking fluid on each stroke.

This condition also makes this pump virtually self-priming. However, should priming be required, loosen the tube adapter on JT models and the orifice tip on JO models.

The output may be adjusted with the elastic stop nut on the rear side of the pump.

The internal seal at the rear is of the spring loaded cup seal design. It is made of graphite impregnated teflon for self-lubrication, low friction and long life.

The air cylinder is of standard make, and is "throw away" in design, long life and easy replacement being foremost in Eriez requirements.

A 110VAC Solenoid valve is standard on the ES-454 Jet Shot. However, we do offer as an option an air piloted valve for special applications.

This pump is used in many of our standard marking systems, and is a very capable unit.

CAUTION

Safety labels must be affixed to this product. Should the safety label(s) be damaged, dislodged or removed, contact Eriez for replacement.

INSTALLATION

Mount pump securely, using 5/16" (8 mm) screws and mounting holes provided in frame.

Mount reservoir a minimum of 12" (300 mm) above the pump, using bracket supplied and 1/4" (6 mm) screws.

Mount in such a position as to leave fluid line free of "loops" and as short as practical, 5 or 6 feet (1500 mm or 1800 mm) maximum to give better "mixing" action.

Due to back surge mixing action, this fluid line must be 3/8" (10 mm) dia. tubing minimum, and fittings that have large internal passages used.

We recommend straight type. No elbows.

The bottle is designed to lift off bracket for hand shaking to occasionally mix fluid.

Hook 40 to 80 PSI (2.7 to 5.4 Bar) constant, lightly lubricated air supply to "P" port on solenoid valve, or to "in" port on air piloted valve if used.

110 volt 60 cycle electrical signal to "trigger" valve must be connected, using safe plant standards for wiring and interlocks, to existing equipment.

Connect fluid line to pump.

Fill reservoir 1/3 to 1/2 full, and turn on quarter turn shut-off valve.

Pull priming clip, and fire gun 5 or 6 times to fill tube and purge air from system. Replace priming clip when fluid emerges from tip.

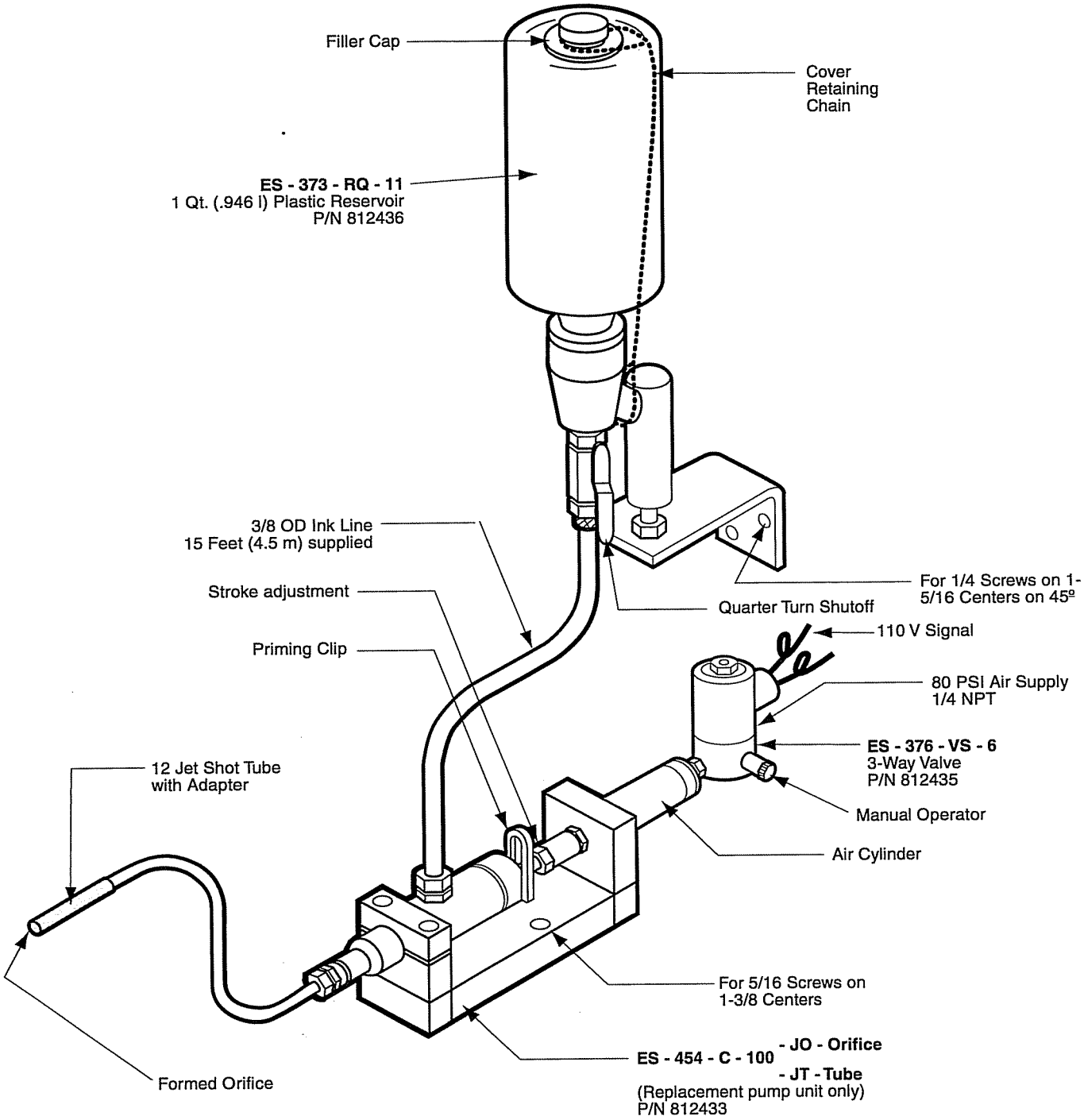
Adjust stroke to give good mark on part, leaving priming clip in place.

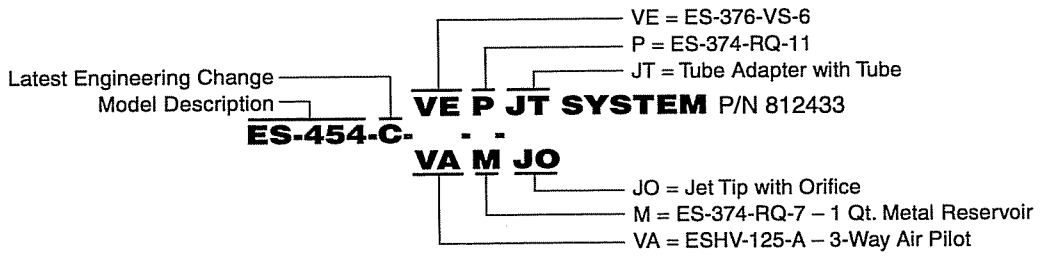
We suggest pulling priming clip about once a week, and firing manually 5 or 6 times to purge system of sediments and remove any air that may be trapped in system.

Keep reservoir between 1/3 to 2/3 full of fluid and vent hole open for best results.

Following these instructions, this pump will give good service and have a longer life.

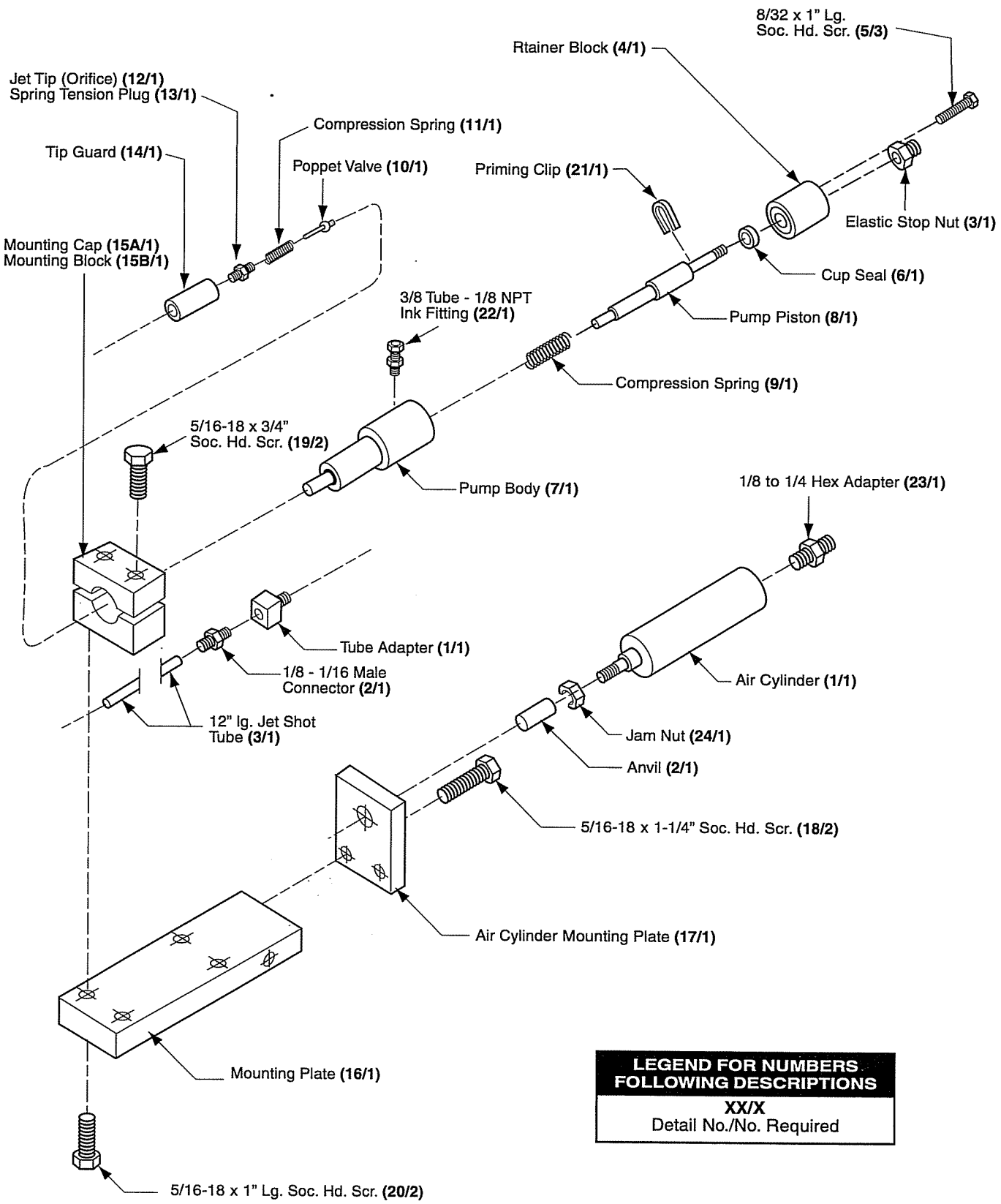
System Diagram





Drawing No. 2N-882760

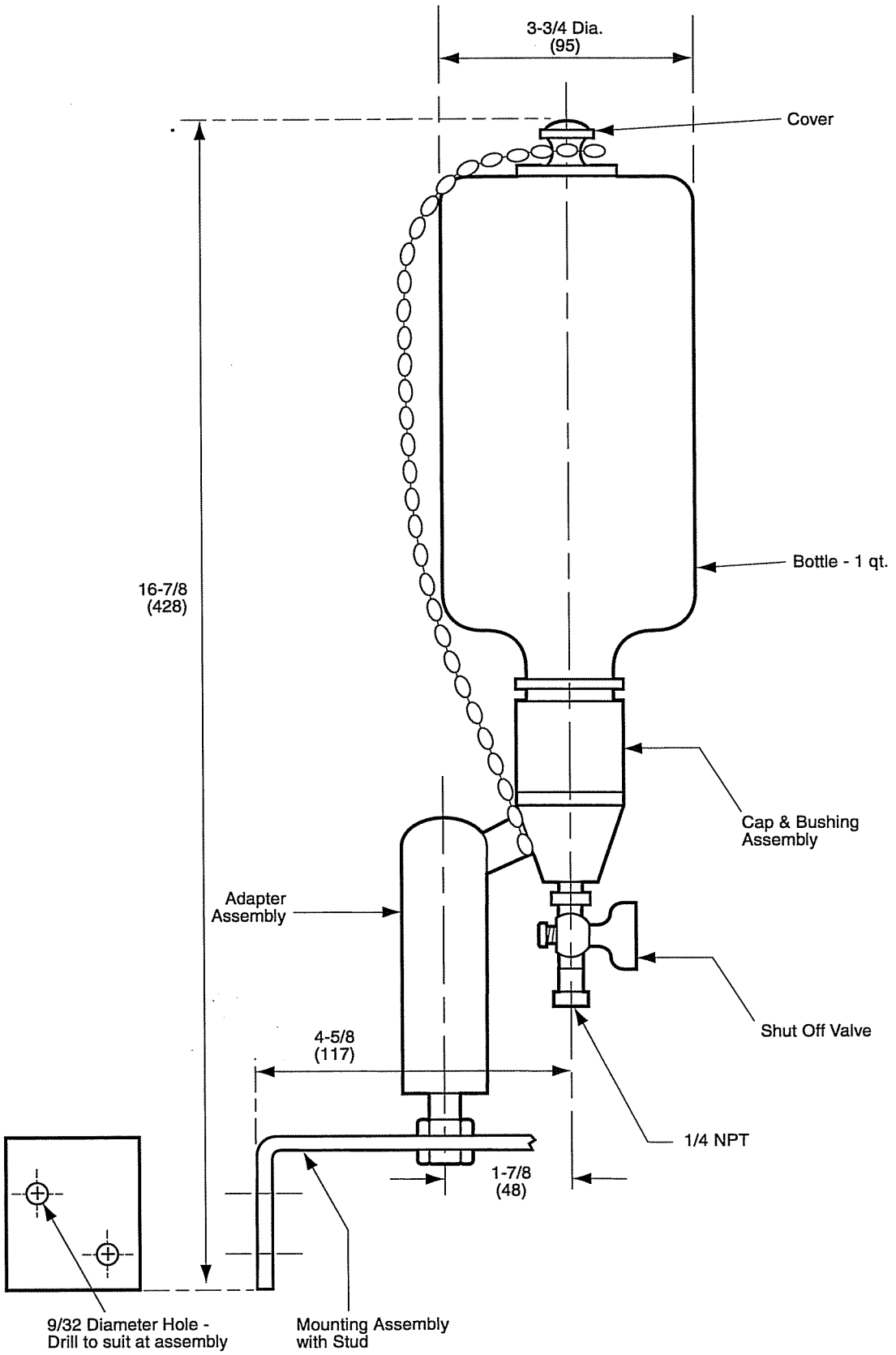
Pump Beakdown



LEGEND FOR NUMBERS FOLLOWING DESCRIPTIONS
XX/X Detail No./No. Required

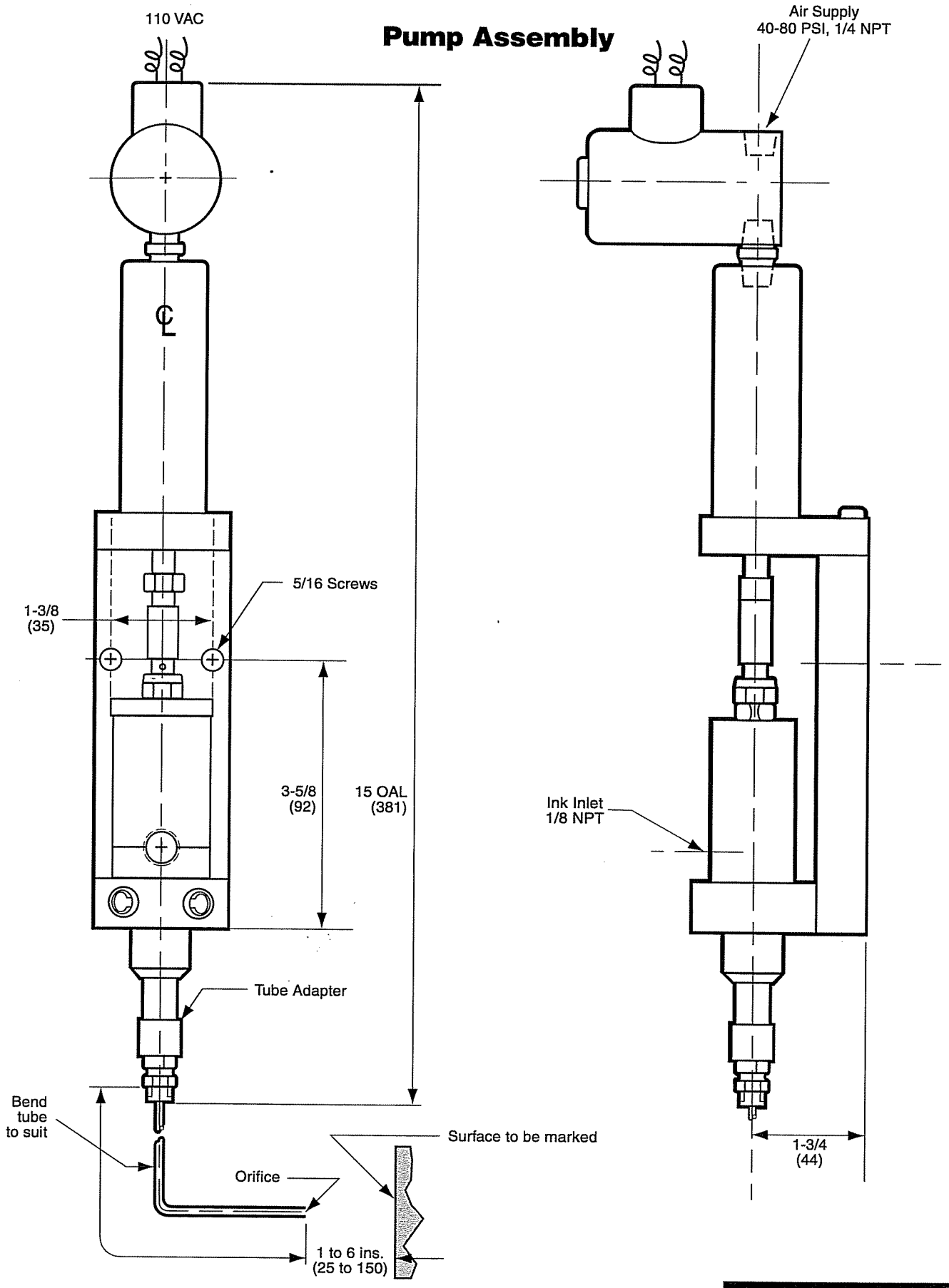
Drawing No. 2N-882761

Reservoir Assembly



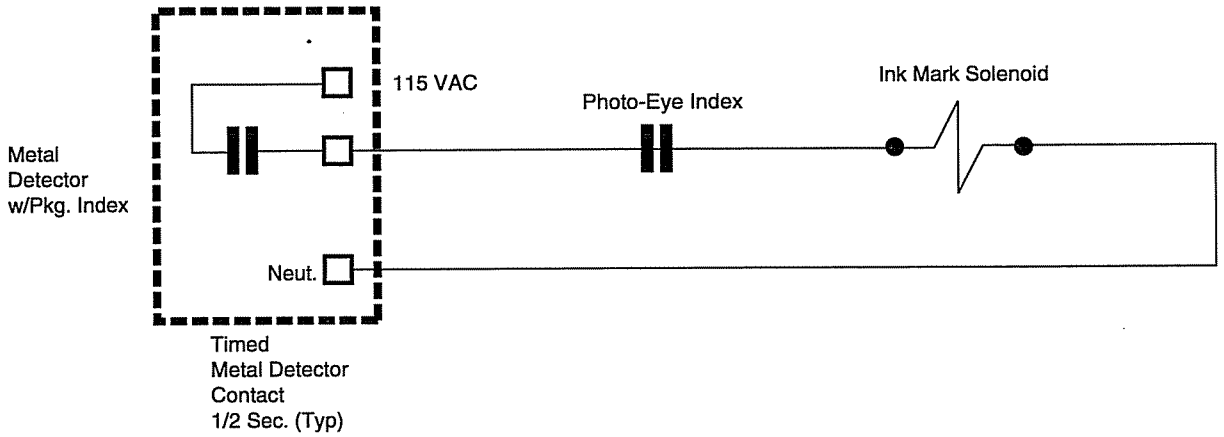
Drawing No. 2N-882762

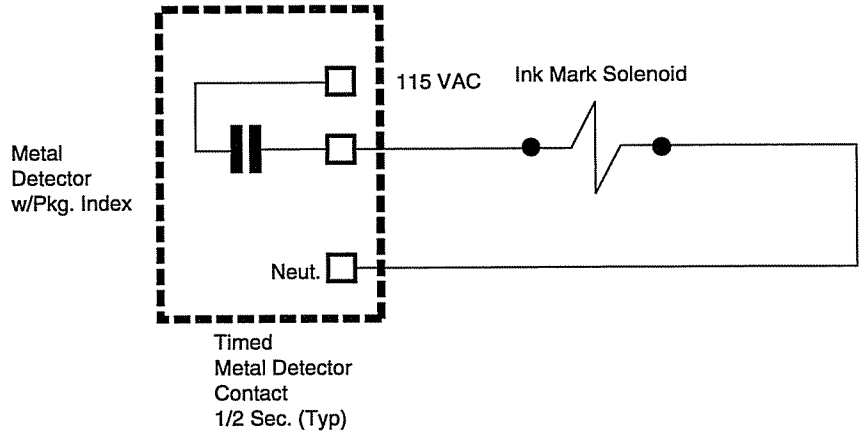
Pump Assembly



Drawing No. 2N-882762

Wiring Schematic





Note:
Refer to Metal Detector Instructions for output signal wiring & timing.
See schematic drawing supplied with conveyor for wiring details.

Drawing No. 2N-9506790

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