

## ES-1752

### General Operating Information

The Carco Automated Spring Contact Markers are simple in their design and are meant to mark parts with a specialty marking fluid (ink) or dye.

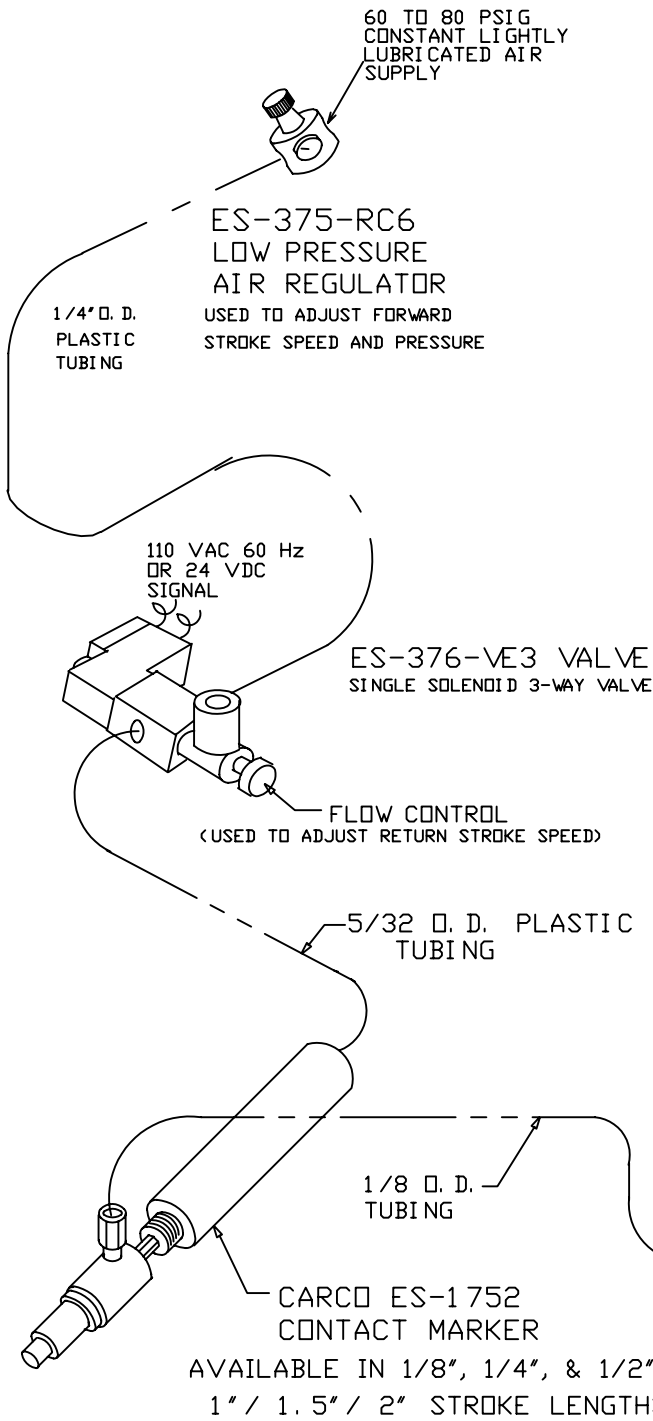
**Carco produces several hundred different series of marking-fluids. Please contact Carco for assistance in determining the correct marking fluid for a particular application.**

A basic feature of the Carco Spring Contact Markers is the neatness in which parts are marked. The ink dot placed on a part uses a small amount of material, allowing only 2 ounces of marking fluid to mark between 20,000 and 40,000 parts, depending on the specific application. This is an important point to understand because **material use in these systems is minimal**. To prevent settling or solidifying of the marking fluid in the reservoir, an automatic back surge feature continually mixes the marking fluid whenever the pump is cycled.

There are two basic components to the marking systems, the spring marker and the ink pump unit. Although the two components work together to mark parts, their operation is separate. The spring marker is responsible for marking parts. The pump ensures that a sufficient amount of marking fluid is available to the spring marker. During operation, a solenoid valve assembly actuates the spring marker air cylinder whenever an electrical signal is sent to the valve. Every part going past the spring marker will be marked on command of the solenoid. The manufacturing center's programmable logic control (PLC) will control both the spring marker and the pump with separate signals. One signal will be sent to the marker for each mark required. A second signal to the pump, after a predetermined number of marks, will replenish the marker head. .

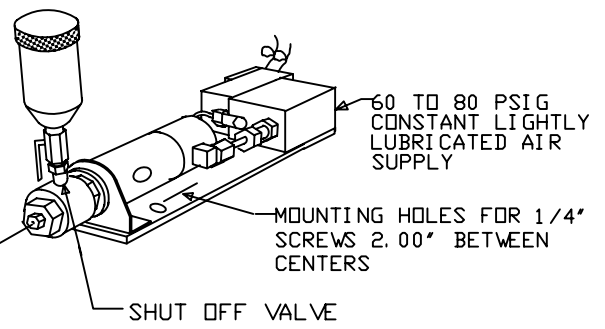
It is very important to understand that the number of cycles between pump activations varies according to the application and will have to be determined by the end user. Carco can provide recommendations based on the experience of other manufacturers in similar applications. Typical pump actuation is in a range from 10 to 20 parts marked.

**Cycling the pump with each actuation of the spring marker will result in excessive material usage and sloppy operation.**



ES-1157-C-VE-R27-JT  
INK PUMP SYSTEM

ES-374-R27  
2 . OZ RESERVOIR

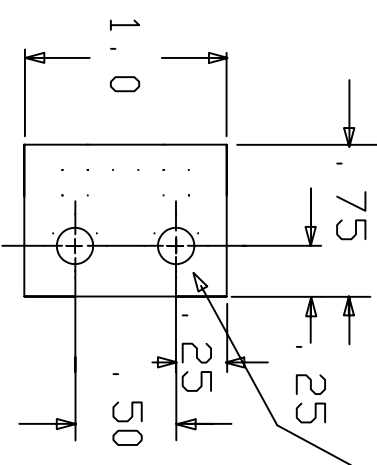
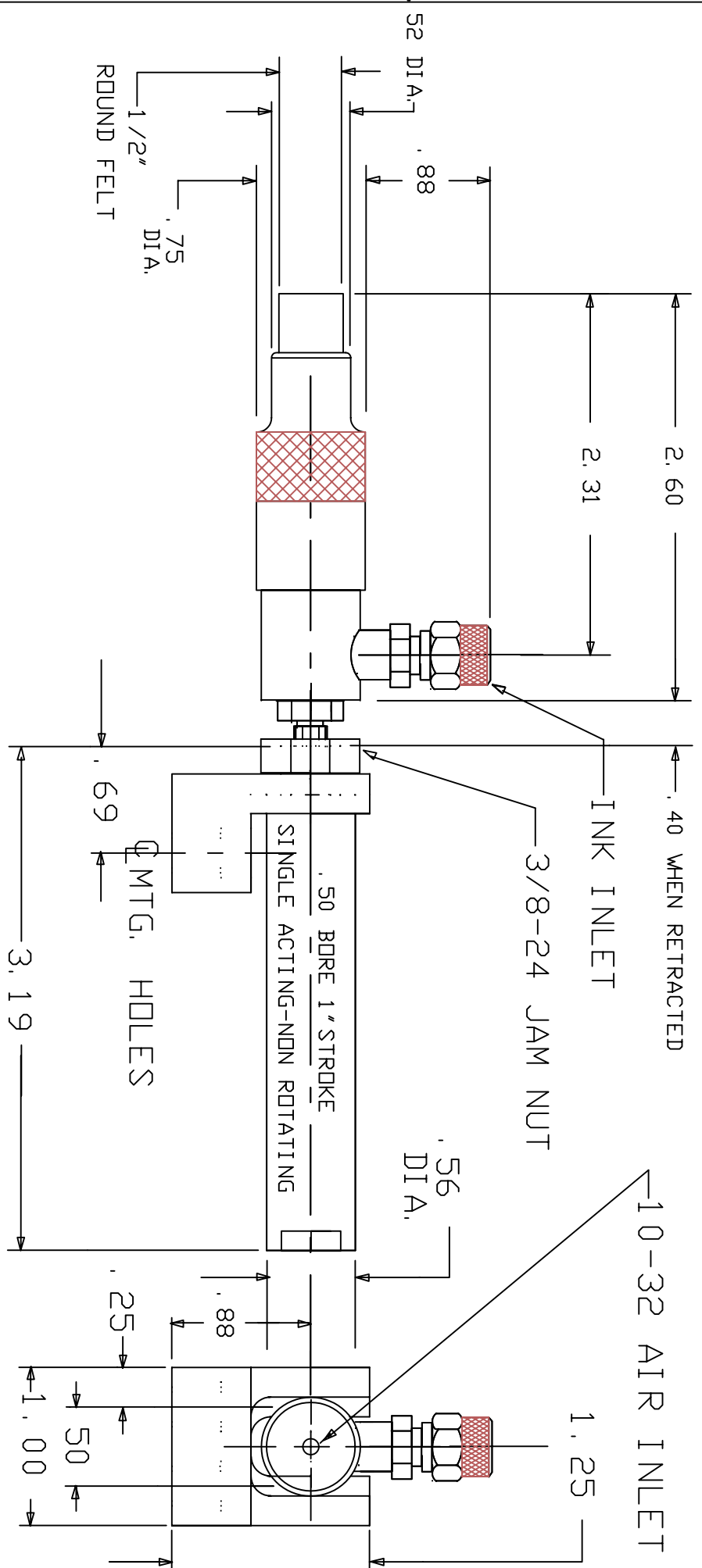


CARCO MINI  
SPRING MARKER

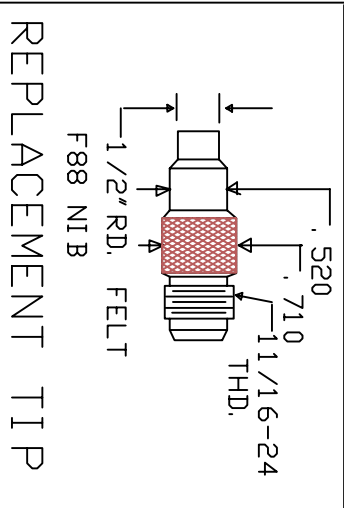
CARCO INC  
10333 SHOEMAKER  
DETROIT MICH. 48213  
313-925-9000

SYSTEM SHEET

DATE	ES-1752
6-23-05	



BOTTOM OF MTG. BKT.



THRU HOLES FOR #10 SDC. HD. SCR,  
2-PLCS FROM OTHER SIDE  
ALSO  
1/4-20 TAPPED HOLES

313-925-9000

**CARCO INC.**  
10333 SHOEMAKER  
DETROIT MICH. 48213

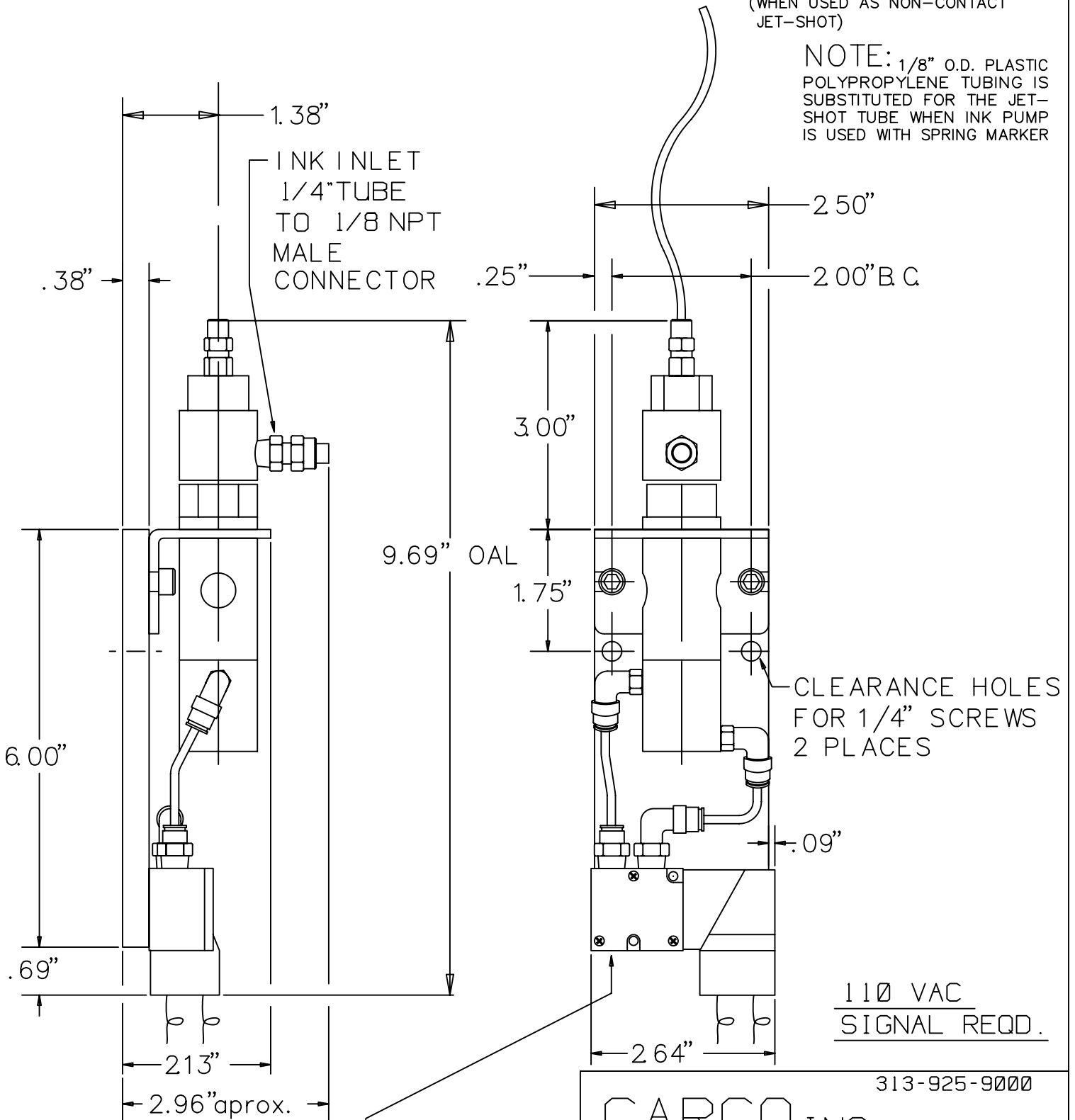
MARKING DEVICES and SPECIAL INKS

MINI-MARKER

DRAWN BY M.E.	DATE 6-23-05	SCALE FULL
HK'D		
ES-1 752-F88		

TUBE MAY BE BENT  
TO DIRECT LOCATION  
OF MARK  
(WHEN USED AS NON-CONTACT  
JET-SHOT)

NOTE: 1/8" O.D. PLASTIC  
POLYPROPYLENE TUBING IS  
SUBSTITUTED FOR THE JET-  
SHOT TUBE WHEN INK PUMP  
IS USED WITH SPRING MARKER



60-80 PSI  
AIR SUPPLY  
1/8 NPT

TRACING TEMPLATE

313-925-9000

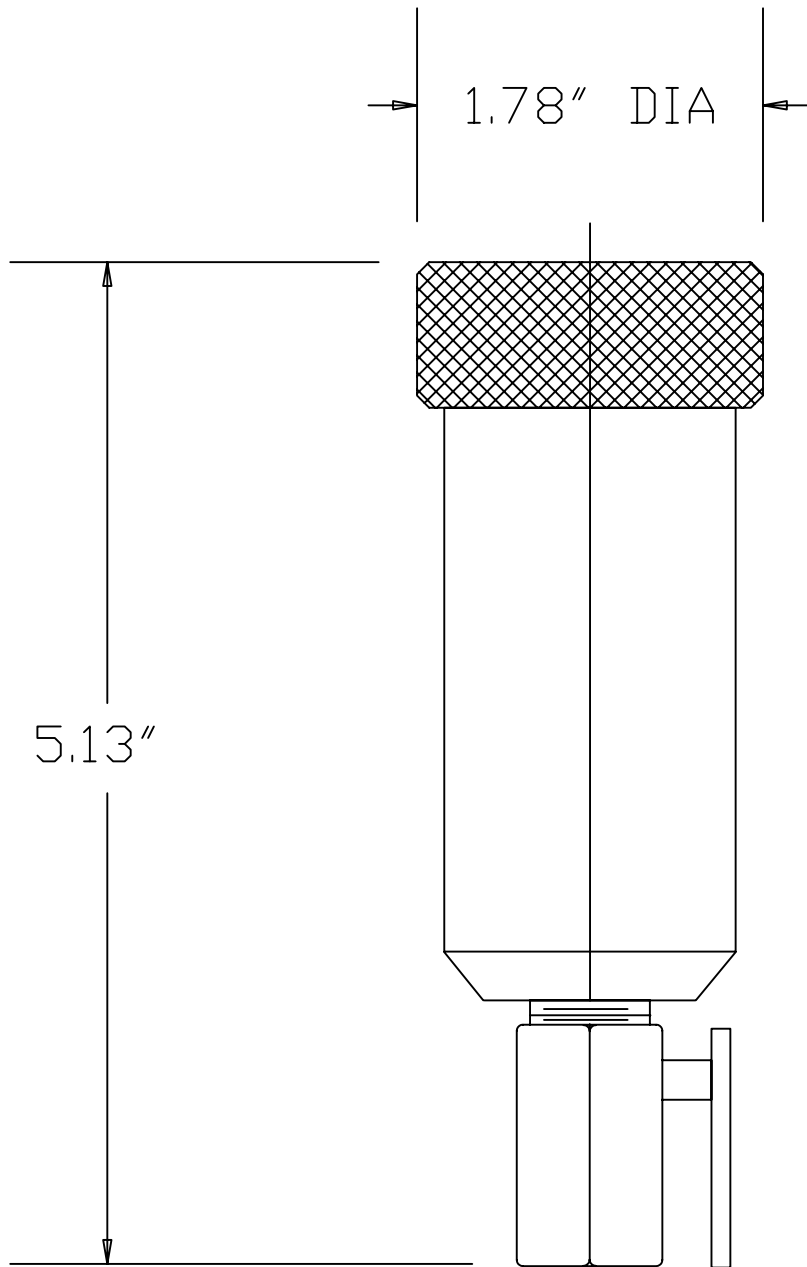
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DETROIT MICH 48213

MARKING DEVICES and SPECIAL INKS

DRAWN BY M. E.	DATE 4-2-03
CHK'D	SCALE HALF

ES-1157



1.78" DIA

5.13"

MATERIAL  
 NYLON

CAPACITY  
 2oz. FLUID

TRACING  
TEMPLATE

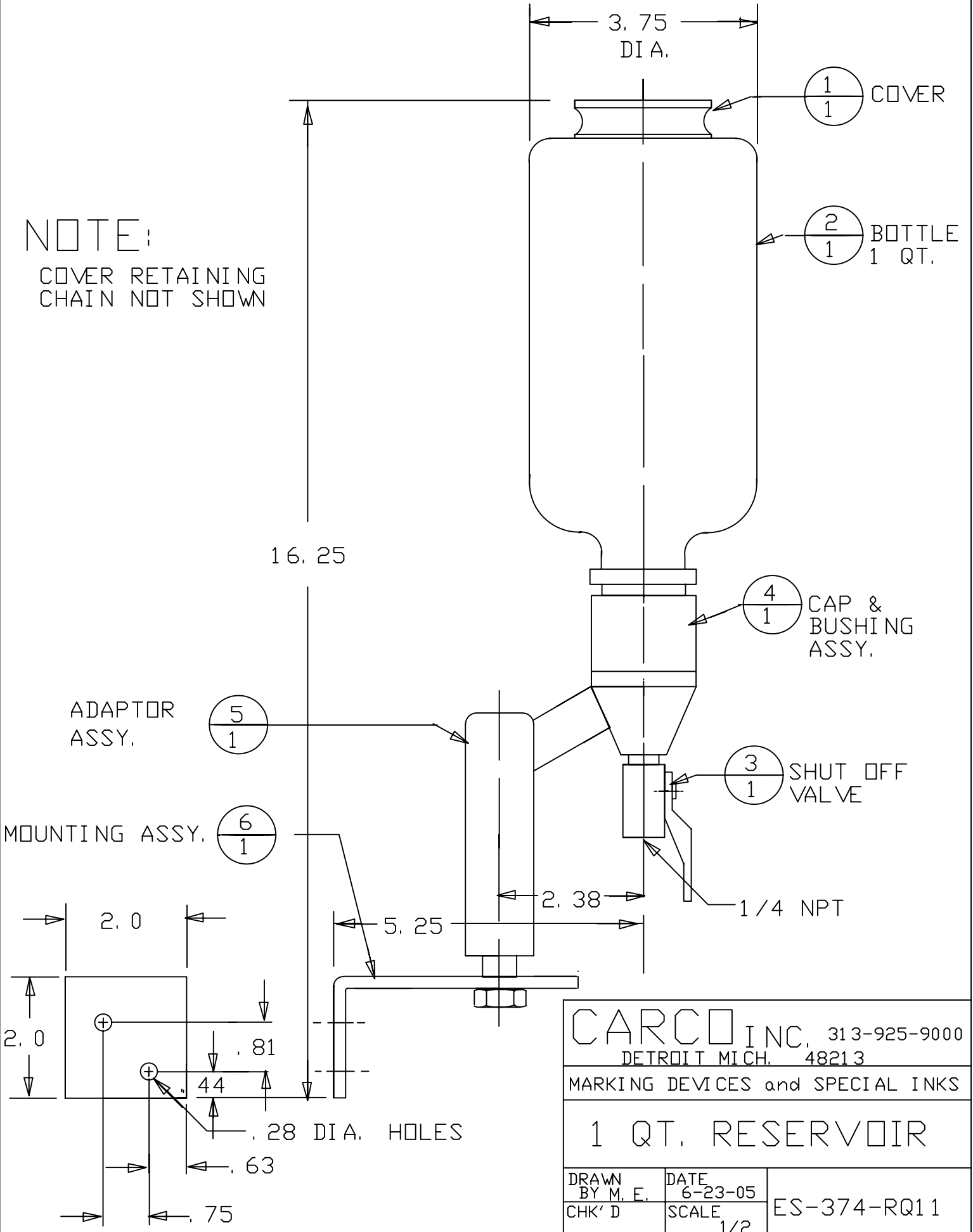
1/4" NPT  
 SHUTOFF VALVE

		313-925-9000
CARCO INC.		
10333 SHOEMAKER DETROIT MICH. 48213		
MARKING DEVICES and SPECIAL INKS		
2oz. RESERVOIR W/SHUTOFF VALVE		
DRAWN BY AD	DATE 12/02/05	ES-374-R27
CHK'D	SCALE FULL	

# ES-374-RQ1 1

## NOTE:

COVER RETAINING  
CHAIN NOT SHOWN



CARCO INC, 313-925-9000  
DETROIT MICH. 48213

MARKING DEVICES and SPECIAL INKS

1 QT. RESERVOIR

DRAWN BY M. E.	DATE 6-23-05	ES-374-RQ1 1
CHK'D	SCALE 1/2	

# **PIPING INSTRUCTIONS FOR:**

## **ES-1752**

### **PIPING AIR**

1: SUPPLY MAIN AIR (60 TO 80 PSI) TO INK PUMP INLET PORT ON VALVE (ES-1157-C-VE-R27-SM) AND INLET PORT OF LOW PRESSURE REGULATOR (ES-375-RC-6) USING ¼" O.D TUBING

**NOTE: LOW PRESSURE REGULATOR IS USED ONLY FOR ES-1752 MARKER  
(NOT TO BE USED FOR INK PUMP)**

- 2: RUN ¼" O.D PLASTIC TUBING FROM OUTLET SIDE OF LOW PRESSURE REGULATOR (ES-375-RC-6) TO INLET SIDE OF MARKER VALVE (ES-376-VE-4)
- 3: USE 5/32" O.D. (BLACK) PLASTIC TUBING FROM OUTLET SIDE OF LOW CONTROLS ON MARKER VALVE TO ES-1752 AIR CYLINDER INLET PORTS.
- 4: ADJUST LOW PRESSURE REGULATOR BETWEEN 15 & 30 PSI. (ENOUGH PRESSURE TO GET FULL MARK BUT NOT ENOUGH TO CRUSH FELT)
- 5: ADJUST FLOW CONTROLS ON EXHAUST PORT (ES-376-VE-3) VALVE TO CONTROL RETURN SPEED OF MARKER

### **PIPING INK LINE**

1: USING 1/8" O.D. (WHITE) PLASTIC TUBING FROM OUTLET OF INK PUMP TO INLET OF MARKER HEAD. USE POLYPROPYLENE TUBING ONLY.