

ES-612-A 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.

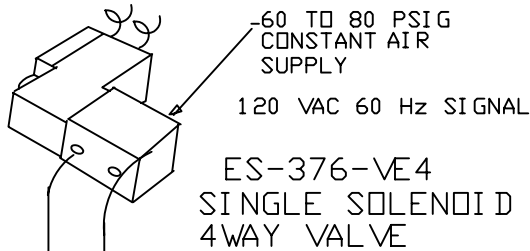
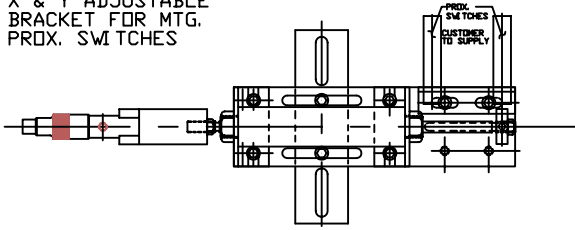
There are two basic components to the marking systems, the spring marker and the ink pump unit. Although the two components work together to mark parts, their operation is separate. The spring marker is responsible for marking parts. The pump ensures that a sufficient amount of marking fluid is available 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.

OPTIONAL

ES-1552
X & Y ADJUSTABLE
BRACKET FOR MTG.
PROX. SWITCHES



-60 TO 80 PSIG
CONSTANT AIR
SUPPLY
120 VAC 60 Hz SIGNAL

ES-376-VE4
SINGLE SOLENOID
4WAY VALVE

ES-641-NR NON ROTATING
AIR CYLINDER W/FLOW
CONTROLS
CYLINDER IN ASSORTED
LENGTHS

F-108.5 1.5" TIP

F-108 1.0" TIP

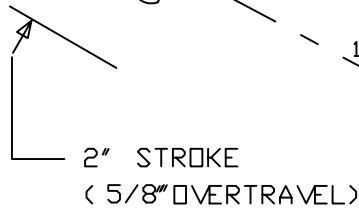
F-100 3/4" TIP

F-88 1/2" TIP

F-44 1/4" TIP

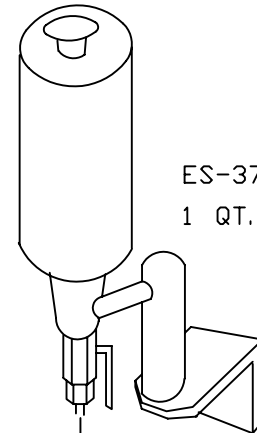
FG-44 1/8" TIP

ES-641 -
SPRING MARKER



2" STROKE
(5/8" OVERTRAVEL)

1/8" D.D.
PLASTIC
TUBING

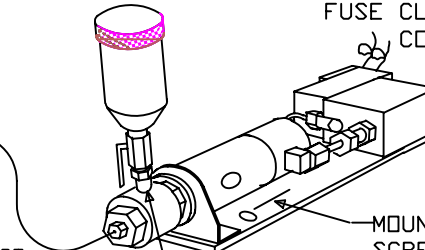


ES-374-RQ11
1 QT. RESERVOIR

1/4" D.D. PLASTIC TUBING
OPTIONAL RESERVOIR

ES-374-R27
2 . OZ RESERVOIR

WIRE TO TERMINAL 101 AND
FUSE CLIP FU2 IN COUNTER
CONTROL BOX



60 TO 80 PSIG
CONSTANT AIR
SUPPLY

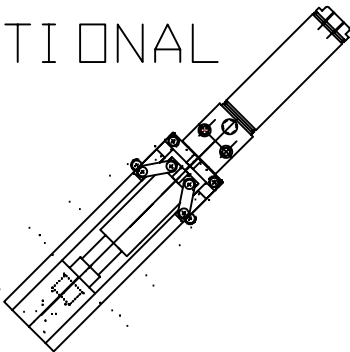
MOUNTING HOLES FOR 1/4"
SCREWS 2.00" BETWEEN
CENTERS

1/4" NPT TO 1/8" NPT
REDUCING NIPPLE
OR

1/4" D.D. TUBE TO
1/8" NPT MALE CONNECTOR
WHEN USING OPTIONAL ES-374-RQ11
1 qt. RESERVOIR

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

OPTIONAL



ES-712-A
AUTOMATED COVER ASSY.

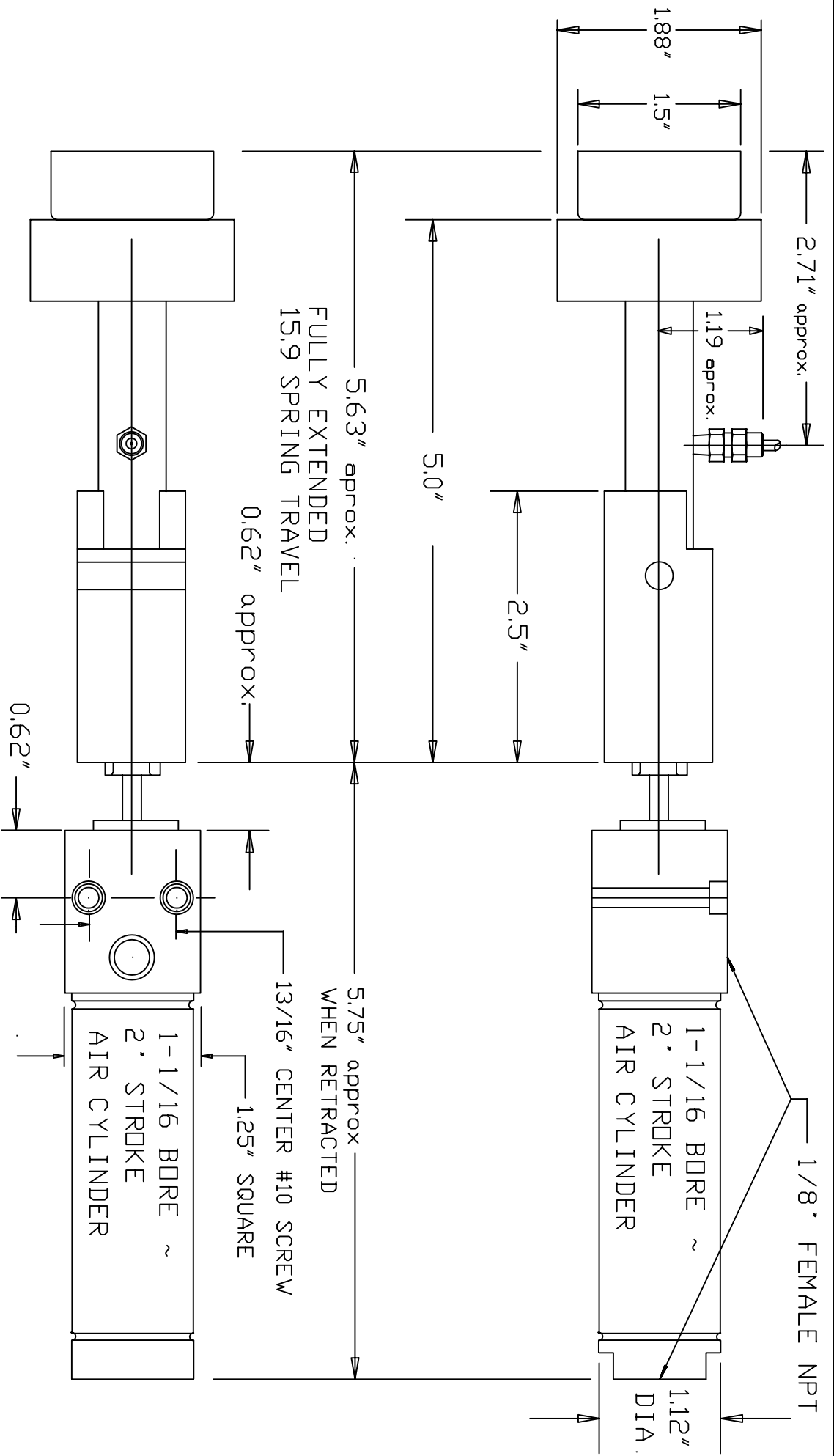
CARCO INC
10333 SHOEMAKER
DETROIT MICH. 48213
313-925-9000

SYSTEM SHEET

DATE

6-6-07

ES-612-A



TRACING TEMPLATE

CARCO INC. (313) 925-9000

10333 SHOEMAKER
DETROIT MICH. 48213

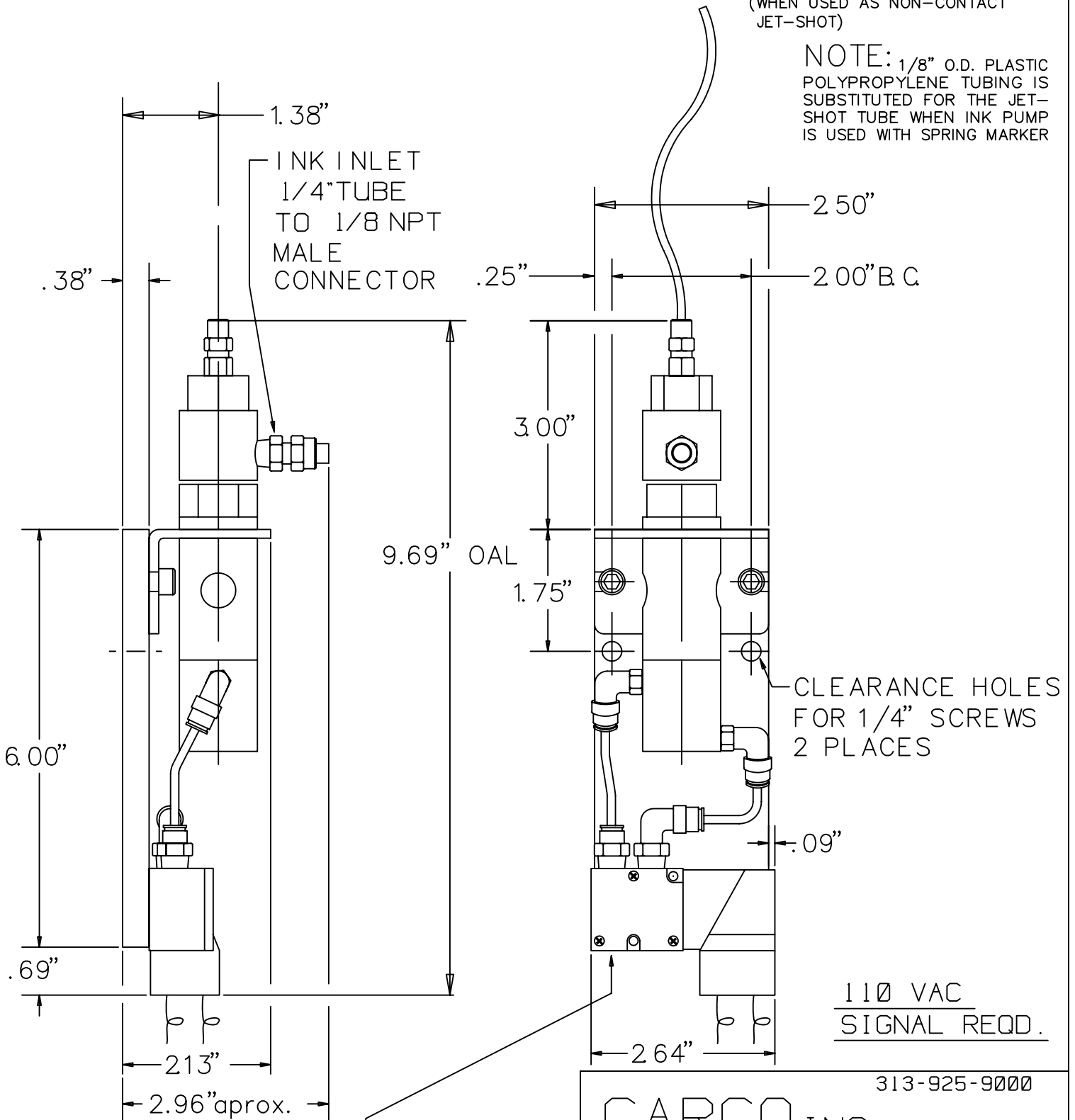
MARKING DEVICES and SPECIAL INKS

1-1/2" DIA FELT
SPRING MARKER W/ AIR CYLINDER

DATE: 5-30-95
SCALE: 3/4
ES-641-F108.5

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

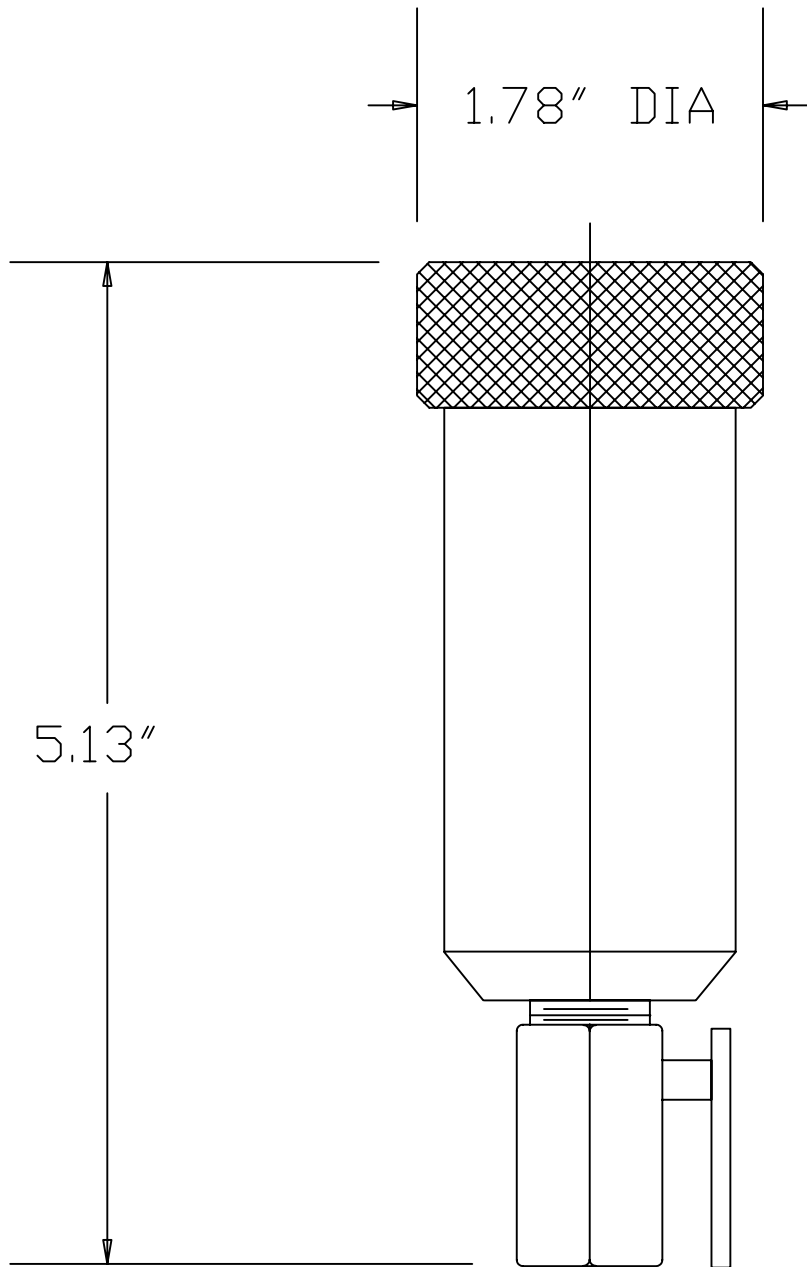
CARCO INC

10333 SHOEMAKER
DETROIT MICH 48213

MARKING DEVICES and SPECIAL INKS

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

ES-1157



MATERIAL
 NYLON

CAPACITY
 2oz. FLUID

TRACING
TEMPLATE

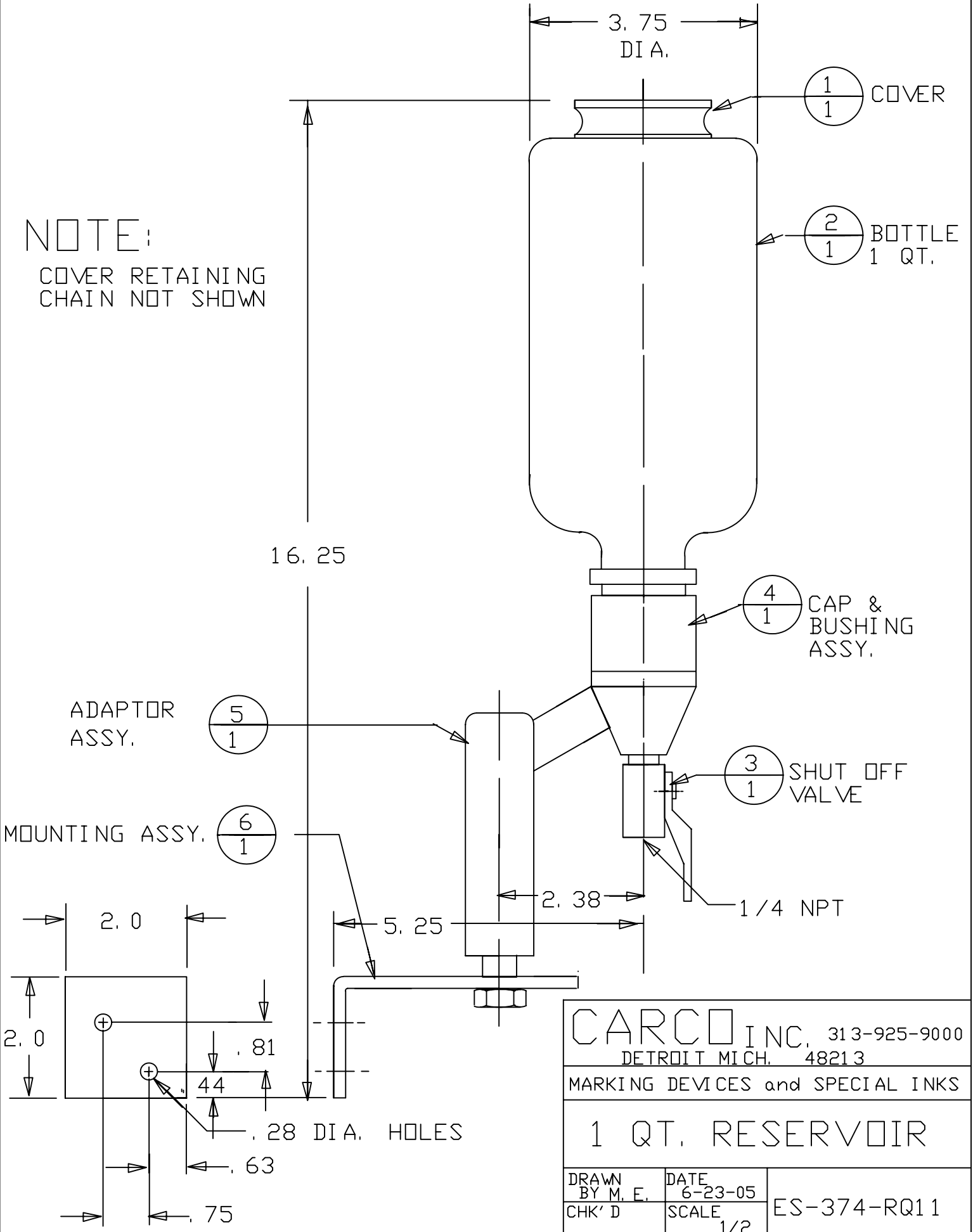
1/4" NPT
 SHUTOFF VALVE

		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-612-A

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 ON MARKER VALVE (ES-376-VE-4).
- 2: RUN ¼" O.D PLASTIC TUBING FROM OUTLET PORTS OF MARKER VALVE (ES-376-VE-4) TO INLET PORTS OF FLOW CONTROLS ON MARKER AIR CYLINDER (ES-641-NR)
- 3: ADJUST FLOW CONTROLS ON AIR CYLINDER TO CONTROL EXTEND & RETRACT SPEED.

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.