

RECORDER PEN, TYPE "L"

General

1. The pen used with the recorder to produce a permanent record of test results is an assembly consisting of a pen body containing an ink reservoir, a flow tube, and a filler cap. All of the pen parts are of stainless steel to avoid possible corrosion by ink.

2. The arrangement of the various components of the pen assembly is shown on the attached sketch on which the parts are identified. The pen is designed to fit in the pen holder of the recorder. A shoulder on the pen body helps to locate the pen in the pen holder in correct position to maintain proper contact angle between the pen and the chart paper. The flow valve is designed to control the flow of ink and to prevent ink from clogging the pen. The filler cap prevents accidental spillage and evaporation, with consequent thickening of the ink in the pen. The rod-like section of the filler cap, extending down within the ink reservoir, does not interfere with the operation of the flow valve, but it retains the flow valve in such a position that even if the pen were tipped upside down or shaken, the wire-like end of the flow valve would not come completely out of the ink tube.

Operation

3. Before placing the pen in its operating position the pen should be filled. When filling the pen, it should be held in an upright position, the filler cap removed, and a few drops of ink placed in the ink reservoir by means of a dropper or quill. About 6 drops should be sufficient for a day's recording operations. Shaeffer's jet-black Scrip ink is recommended. After filling, the filler cap should be replaced and the pen shaken gently a few times to make sure that the flow valve moves freely and to help ink start flowing through the ink tube. The pen may then be inserted in the pen holder of the recorder, care being taken to make sure that it is fully seated in the pen holder. When the pen holder and pen are moved downward to bring the pen into contact with the chart paper, the end of the flow valve, extending beyond the pen tip, contacts the paper first and moves the flow valve upward to allow ink to flow from the ink reservoir to the tip of the pen. As the chart drum turns, the ink continues to flow through the pen to produce a permanent record. When the recording is at an end, the pen and pen holder may be moved upward away from contact with the chart paper. As the pen is lifted, the flow valve is free to move downward and it drops to shut off the flow of ink through the ink tube.



## Maintenance

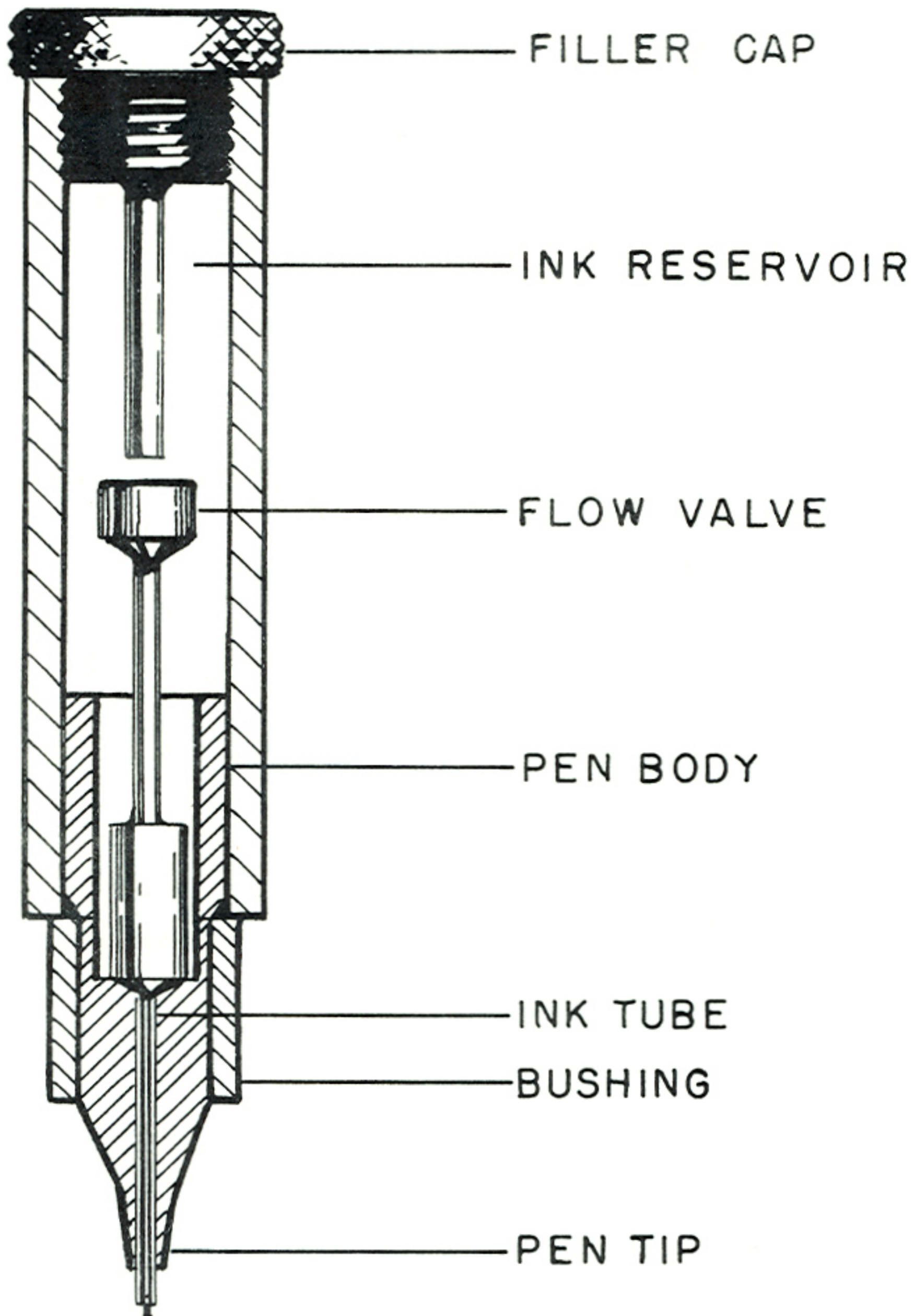
5. The pen should be cleaned from time to time to avoid clogging by dried ink. Cleaning should remedy any difficulty in the pen's inking action. The following is the suggested procedure for cleaning the pen.

- a. Remove the filler cap.
- b. Empty out any ink that may be in the pen. Do not allow the flow valve to drop out of the pen while this is being done.
- c. Carefully slide the flow valve out of the pen body. Whenever the flow valve is handled, take care to avoid bending the wire-like end of the valve.
- d. Wash the various components of the pen assembly in clear, warm water to remove dried ink.
- e. Dry all parts thoroughly. Make sure that the ink tube is clean and free of obstructions.
- f. Carefully slide the flow valve back into place. Make sure that the wire-like end is inserted first and that it extends out of the ink tube at the tip of the pen.
- g. Fill the pen with ink.
- h. Replace the filler cap.

6. If the pen tip should become rough, it may be smoothed by the use of the finest grade of crocus cloth.

7. Any difficulties not covered in these instructions should be referred to the Baldwin-Lima-Hamilton Corporation, Electronics and Instrumentation Division, Waltham 54, Massachusetts.

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PEN (Full Size)