

Field Inspection Manual	Part: 4-STP	Section: 24	Page: 1 of 2
Volumetric Measuring Devices	Issued: 2004-03-01	Revision Number: Original	

SPECIAL INSTRUCTIONS - MASKING AND SUPPRESSION OF VOLUMETRIC DISPLAYS

APPLICATION

This applies to dispensers and refuellers equipped with electronic registers.

PURPOSE

This section provide useful information regarding masking and suppression features present in certain electronic registers.

LEGISLATIVE REFERENCES: SVM.1-19, NoA.

MASKING AND SUPPRESSION OF VOLUMETRIC DISPLAYS

For liquid meters with long or soft walled hoses, the increased pressure causes product to advance through the meter as it fills the hose or expands it under pressure when the pump is turned on. This meter advancement shows up either as meter creep or a small quantity registered prior to any visible product flow.

For electronic registers, there are two methods commonly used to prevent the registered quantity from being displayed prior to the beginning of a delivery; masking and suppression.

MASKING

After the register is reset to zero an internal counter is activated that prevents any quantity from being registered until the preset number of pulses is exceeded. This preset number represents a volume of three or less minimum increments set out in Section 20 of SVM.1, and only serves to effectively place a zero mask over the display.

As the product is being delivered, when the volume exceeds the preset quantity, the mask is lifted and the true delivered quantity is displayed.

This operation can be observed by delivering product very slowly into the prover at the beginning of a test run. As product flows, no change in registration is observed until the preset quantity is exceeded, and then the display registers a quantity of approximately three or more minimum increments.

SUPPRESSION

After the register is reset to zero an internal counter, similar to the masking counter, is activated that suppresses any advancement of the register until its preset number of pulses is exceeded.

At this time the display begins to advance from zero. A slow delivery of product into the prover should look the same as for the masking feature, except that the first indicated volume is the first increment instead of the fourth.

Ministerial Specifications SVM-1 allows both methods of hiding hose expansion. Of the two, suppression is considered to be the fairest method to the consumer as the undelivered product required to fill or expand the hose is not part of the product delivery.

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PROCEDURE

No particular additional test is to be conducted to test this feature.

REVISION

Original document