

# EPO No. 23

## NIST Examination Procedure Outline (EPO) for

### Vehicle-Tank Meters (VTMs) Power-Operated

Disclaimer: NIST EPOs are not copyrighted and are free for duplication, reference, or distribution.

It is recommended that this outline be followed for all power-operated vehicle-tank meters – analog or digital. Nonretroactive requirements are followed by the applicable date in parentheses. Do not use this outline for testing vehicle-tank metering systems used to measure milk or gravity-discharge vehicle tank meters.

#### SAFETY NOTES

*When excerpting this Examination Procedure Outline for duplication, the EPO Safety Annex (Safety Considerations and Glossary of Safety Key Phrases) should be duplicated and included with this outline.*

Prior to beginning any inspection, the inspector should read and be familiar with the EPO Safety Annex - "Safety Considerations and Glossary of Safety Key Phrases." The terms and key phrases in each safety reminder of this outline are found in the glossary of the EPO Safety Annex. The inspector should read and be familiar with the introductory section on safety found at the beginning of this publication. As a minimum, the following safety precautions should be noted and followed during the inspection. Definitions of each reminder are found in the "Glossary of Safety Key Phrases" at the back of this publication.

*Safety policies and regulations vary among jurisdictions. It is essential that inspectors or servicepersons be aware of all safety regulations and policies in place at the inspection site and to practice their employer's safety policies. The safety reminders included in this EPO contain general guidelines useful in alerting inspectors and servicepersons to the importance of taking adequate precautions to avoid personal injury. These guidelines can only be effective in improving safety when coupled with training in hazard recognition and control.*

**Clothing**

**Electrical Hazards**

**Emergency Procedures**

**Fire Extinguisher**

**First Aid Kit**

**Grounding**

**Ignition Sources**

**Lifting**

**Location**

**Material Safety Data Sheets (MSDS)**

**Nature of Product**

**Personal Protection Equipment**

e.g.,

**Safety Shoes, Safety Aprons, Gloves,  
Eye Protection**

**Hard Hat, etc. if deemed necessary**

**Safety Cones/Warning Signs**

**Static Discharge**

**Switch Loading**

**Traffic**

**Transportation of Equipment**

also: **Wet/Slick Conditions, Chemicals, Hazardous Materials, Petroleum Products, and Obstructions**

**SAFETY REMINDER**

- Check the inspection site carefully for safety hazards and take appropriate precautions.
- Check to be certain that the ground surface of the inspection site is sufficiently strong and rigid to support the prover when it is filled with product - don't forget to chock the wheels of the prover.
- Learn the nature of hazardous products used at or near the inspection site – obtain and read copies of MSDS's.
- Know emergency procedures and location and operation of fire extinguisher and emergency shut-offs.
- Post safety cones/warning signs and be aware of vehicular and pedestrian traffic patterns.
- Use caution in moving in wet, slippery areas and climbing on prover, storage tanks, and vehicles.
- Use personal protection equipment and clothing appropriate for the inspection site.
- If leaks, spills, or exposed wiring cause hazardous testing conditions it is recommended that the testing be discontinued until the unsafe conditions are corrected.
- Be sure that a first aid kit is available and that it is appropriate for the type of inspection activity.

**H-44 General Code  
and VTM Code  
References**

**Inspection:**

1. General considerations

Selection .....	G-S.3., G-UR.1.1., G-UR.1.2., G-UR.1.3.
Installation .....	G-S.2., G-UR.2.1., G-UR.2.2., UR.1.1.
Position of equipment .....	G-UR.3.3.
Accessibility .....	G-UR.2.3.
Assistance.....	G-UR.4.4., G-UR.4.6
Use and maintenance .....	G-UR.3.1., G-UR.4.1., G-UR.4.2., UR.2.3., UR1.4.
Use of Automatic Temperature Compensator (ATC).....	UR.2.5.
Invoices based on device readings with ATC .....	UR.2.5.3.
Period of use (ATC) .....	UR.2.5.2.

2. Indicating and recording elements.

Design.....	S.1.1.1., S.2.4.
Units.....	S.1.1.2.(a), S.1.1.3.(b) and (c)
Readability.....	G-S.5., G-S.6. (1/1/77), G-S.7., S.1.2., S.1.3.
Values of Intervals.....	G-S.5.3.
Computing-type Devices.	
Display of unit price .....	S.1.4.1, UR.1.2.
Printed ticket .....	S.1.4.2., UR.2.2.
Exceptions for the sale of aviation fuel.....	UR.2.2.1.,
Money value computations .....	S.1.4.3.

**Inspection (cont.)**

Gross and net indications with ATC.....	S.2.5.3.
Advancements and return to zero.....	S.1.1.4., S.1.1.5., UR.2.1.
Provisions for sealing.....	G-S.8. (1/1/09), G-S.8.1. (1/1/10) G-UR.4.5. S.2.2., Table S.2.2.
Provisions for sealing ATC.....	S.2.5.4.
3. Markings.....	G-S.1., G-UR.2.1.1., S.5.1, S.5.2. <sup>1</sup> , S.5.7.
Marking requirements for device equipped with ATC.....	S.5.6.
Devices or main elements remanufactured after January 1, 2002.....	G-S.1.2.
4. Measuring elements.	
Vapor elimination.....	S.2.1.
Security seal on adjusting mechanism.....	G-UR.4.5., S.2.2.
Devices equipped with ATC.....	S.2.5.1., S.2.5.2., S.2.5.3., S.2.5.5., UR.2.5.
Provisions for thermometer well.....	S.2.6. (1/1/11)
5. Piping.	
Directional flow valves and discharge line and valves.....	S.2.3., S.3.
Antidrain valve.....	S.3.6.
Leaks.....	G-UR.4.1.
Facilitation of fraud.....	G-S.2.
6. Devices Equipped with ATC.....	S.2.5., S.2.5.1.
Provisions for deactivating.....	S.2.5.2.
Gross and net indications.....	S.2.5.3.
Provision for sealing ATC.....	S.2.5.4.
Temperature determination.....	S.2.5.5.

**Pretest Determinations:**

1. Determine that the test fluid in the tank compartment is similar in character to the fluid to be measured.....	N.1
2. Test drafts: determine if the prover size is adequate.....	N.3.
3. Tolerances.	
Applicable requirements.....	G-T., T.1.
Tolerance values.....	T.2., Table 1, Table 2
Repeatability.....	T.3.
Product Depletion.....	T.4., Table T.4.
Devices equipped with ATC.....	T.2.1. (a) and (b)
4. Note totalizer reading	

<sup>1</sup> Example of discharge rate marking in HB 44 Sec. 3.30, Paragraph S.4.4.1: With a marked maximum discharge rate of 230 L/min (60 gpm), the marked minimum discharge rate shall be 45 L/min (12 gpm) or less (e.g., 40 L/min (10 gpm) is acceptable). A marked minimum discharge rate greater than 45 L/min (12 gpm) (e.g., 60 L/min (15 gpm)) is not acceptable.

**Test Notes:**

**SAFTEY REMINDER!!!**

- Wear appropriate personal protection equipment such as petroleum-resistant, nonskid safety shoes (to prevent possible injury from spills or slipping on slick surfaces), protective clothing, eye protection (to prevent injury from splashed product), and a hard hat (to prevent injury from overhangs and projections).
- Use proper grounding procedures. Be sure that the prover is equipped with an explosion proof motor.
- Carefully inspect electrical supply lines to test equipment for wear and damage; correct potentially hazardous conditions before use.
- Device operator should be present at all times during test – the operator (not the inspector) should operate the device under test.
- Never leave equipment unattended while it is in operation.

1. Wet prover. Allow a 30-second drain period each time the prover is emptied.
2. Evaporation and volume change: exercise care so the product temperature is the same in the prover as at the meter..... N.2.
3. Record totalizer(s) indication before and after each draft to determine proper operation.
4. After each test draft:
  - a. Print a ticket (if so equipped) ..... G-S.5.6.
  - b. If computing type, check price computation on indicator and on recorded representations..... G-S.5.6., S.1.4.2., S.1.4.3., S.1.4.4.
  - c. Check for agreement between indicators ..... G-S.5.2.2.

**Test:**

**SAFTEY REMINDER!!!**

- Avoid switch loading! Test devices dispensing low-vapor pressure products (e.g., diesel fuel, kerosene) before testing devices dispensing high-vapor pressure products (e.g., gasoline).
- If supply or return lines are not coupled at their discharge ends, they must be held in place continuously while product flows through the line.
- Use proper lifting techniques to lift and move equipment.
- Be aware of and attempt to eliminate potential ignition sources in or near the inspection site.
- Be aware of vehicular and pedestrian traffic in the area.

**H-44 General Code  
and VTM Code  
References**

**Test (cont.):**

**Nontemperature-compensated meters**

Temperature corrections are to be made for accuracy tests to account for any difference between the temperature of the liquid passing through the meter and the liquid in the prover. .... N.5.

1. Normal test - full flow, basic tolerance ..... N.4.1., T.2.
2. Special test - slow flow, special tolerance ..... N.4.2, T.2.
3. Product Depletion Test ..... S.2.1., N.4.5, T.4 and Table T.4.
  - a. If the result of any test is close to or outside the applicable tolerance, repeat the test.
  - b. Start test (normal flow rate) from a compartment containing less test fluid than one half the capacity of the prover and with pump in operation and pressure to the discharge nozzle.
  - c. Permit test to continue until lack of fluid supply causes meter register to stop completely for at least 10 seconds.
  - d. If the meter indication fails to stop completely for at least 10 seconds, continue to operate the system for 3 minutes.
  - e. With pump in operation, shut manifold valve (or disconnect whip-hose connection) from now empty compartment.
  - f. Finish the test by switching to another compartment with sufficient product to complete the test on a multi-compartment vehicle or by adding sufficient product to complete the test to a single compartment vehicle. When adding product to a single compartment vehicle, allow approximate time for any entrapped vapor to disperse before continuing the test.

Test drafts are to be of the same size and run at approximately the same flow rate.

**Temperature-compensated meters**

1. Normal test - full flow, basic tolerance ..... N.4.1., N.4.1.3. T.2.1.
2. Deactivate temperature compensator and repeat normal test . Compare the compensated volume indicated or recorded to the actual delivered volume corrected to 15 °C (60 °F) ... N.4.2., N.4.1.3. T.2.1.
3. Special test - slow flow, special tolerance ..... N.4.2., T.2.
4. Product Depletion Test ..... S.2.1., N.4.5, T.4 and Table T.4.
  - a. Start test (normal flow rate) from a compartment containing less test fluid than one-half the capacity of the prover and with pump in operation and pressure to the discharge nozzle.
  - b. Permit test to continue until lack of fluid supply causes meter register to stop completely for at least 10 seconds.

**H-44 General Code and VTM Code References**

**Test (cont.):**

- c. If the meter indication fails to stop completely for at least 10 seconds, continue to operate the system for 3 minutes.
- d. With pump in operation, shut manifold valve (or disconnect whip-hose connection) from now empty compartment.
- e. Finish the test by switching to another compartment with sufficient product to complete the test on a multi-compartment vehicle or by adding sufficient product to complete the test to a single compartment vehicle. When adding product to a single compartment vehicle, allow approximate time for any entrapped vapor to disperse before continuing the test.
- f. Test drafts are to be of the same size and run at approximately the same flow rate.

If the result of any test is close to or outside the applicable tolerance, repeat the test.

Repeatability Test ..... N.4.1.2., T.3.

If necessary, conduct a repeatability test. Test must include at least three consecutive test drafts. Test drafts must be conducted under approximately the same conditions (e.g., flow rate and temperature) and be of approximately the same draft size.

RFI/EMI test (electronic equipment only) ..... G-N.2., G-UR.1.2., G-UR.3.2., G-UR.4.2.

Radio Frequency Interference (RFI)  
Electromagnetic Interference (EMI)

Check automatic stop mechanism ..... G-UR.4.1.  
The device should stop the flow within one-half the minimum interval indicated

Check effectiveness of antidrain valve (with pump pressure off line) ..... S.3.6., N.4.3.

**Post-Test Task:**

- 1. Security seal ..... G-S.8, G-UR.4.5.
- 2. Record the number of gallons of product dispensed during test on the official report .....

<p><b>SAFTEY REMINDER!!!</b></p> <ul style="list-style-type: none"> <li>- <b>Avoid switch loading! Test devices dispensing low-vapor pressure products (e.g., diesel fuel, kerosene) before testing devices dispensing high-vapor pressure products (e.g., gasoline).</b></li> <li>- <b>Take precautions to isolate equipment when transporting it to avoid exposure to hazardous fumes.</b></li> </ul>
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- 3. After all equipment at a location has been tested, review results to determine compliance with equipment maintenance and use of adjustments ..... G-UR.4.1., G-UR.4.3.

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Sample Test Report**

DATE	DEPARTMENT HEADING <input type="checkbox"/> VEHICLE-TANK METER / <input type="checkbox"/> LOAD-RACK METER TEST REPORT	TEST NO.	TRUCK ID		
BUSINESS NAME:		INSPECTOR:			
ADDRESS:		OWNER:			
CITY/STATE: ZIP:		REGISTER MODEL:			
MAKE OF METER: MODEL:		SERIAL NUMBER:			
SERIAL NUMBER: NTEP CC NUMBER:		NTEP CC NUMBER:			
METER SIZE (INCHES)	TOTALIZER FINISH:	PRODUCT:			
FLOW RATE: MIN GPM MAX GPM	TOTALIZER START:	SPECIFIC GRAVITY:	PROVER/STANDARD: MILD STEEL <input type="checkbox"/> STAINLESS STEEL <input type="checkbox"/> OTHER _____		
THERMOMETER WELL <input type="checkbox"/> PRINTER <input type="checkbox"/> TEMPERATURE COMPENSATOR: <input type="checkbox"/> ELECTRIC <input type="checkbox"/> MECHANICAL	TOTAL PRODUCT STORAGE RETURNED TO	AIRCRAFT REFUELING ONLY <input type="checkbox"/>			
SECURITY SEALS INTACT AS FOUND? YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> AUDIT TRAIL SECURITY? YES <input type="checkbox"/> NO <input type="checkbox"/> IF YES RECORD ENTRIES:	MARK THE APPLICABLE TOLERANCES: VTM TOLERANCES APPLIED: ACCEPTANCE <input type="checkbox"/> 0.15%; MAINTENANCE <input type="checkbox"/> 0.30%; SPECIAL <input type="checkbox"/> 0.45% ATC: MECHANICAL <input type="checkbox"/> 0.2%; ELECTRONIC <input type="checkbox"/> 0.1% PRODUCT DEPLETION - FOR VTM ONLY: SMALLER THAN 50MM (2 IN <sup>3</sup> ) <input type="checkbox"/> 1.70 L (104 IN <sup>3</sup> ); 50MM (2 IN <sup>3</sup> )(INCL.) TO 75MM (3 IN <sup>3</sup> ) <input type="checkbox"/> 2.25 L (137 IN <sup>3</sup> ); 75MM (3 IN <sup>3</sup> ) AND LARGER <input type="checkbox"/> 3.75 L (229 IN <sup>3</sup> ) LRM TOLERANCES APPLIED: ACCEPTANCE <input type="checkbox"/> 0.20%; MAINTENANCE <input type="checkbox"/> 0.30%; SPECIAL <input type="checkbox"/> 0.50% ATC: MECHANICAL <input type="checkbox"/> 0.2%; ELECTRONIC <input type="checkbox"/> 0.1%				
<b>Test Data</b>	<b>1st Run (TOL ± %)</b>	<b>2nd Run (TOL ± %)</b>	<b>3rd Run (TOL ± %)</b>	<b>4th Run (TOL ± %)</b>	
1. TYPE OF TEST RUN ATC - TEMPERATURE COMPENSATED PROD. DEPL. - PRODUCT DEPLETION	<input type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (For VTM ONLY)	<input type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (For VTM ONLY)	<input type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (For VTM ONLY)	<input type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (For VTM ONLY)	
2. FLOW RATE	GAL/MIN	GAL/MIN	GAL/MIN	GAL/MIN	
3A. METER TEMPERATURE @ 1/3 PROVER CAPACITY	° F	° F	° F	° F	
3B. METER TEMPERATURE @ 2/3 PROVER CAPACITY	° F	° F	° F	° F	
PROVER DATA	4. AVG TEMPERATURE OF PRODUCT IN PROVER	° F	° F	° F	
	5. PROVER READING	GAL	GAL	GAL	
	6. C <sub>1s</sub> : CORRECTION FACTOR FOR PROVER EXPANSION/CONTRACTION C <sub>1s</sub> = 1.0 + [(T - 60 °F) x 0.0000265] (Stainless Steel) C <sub>1s</sub> = 1.0 + [(T - 60 °F) x 0.0000186] (Mild Steel) (OR USE TABLE A-1 OR TABLE A-2 VALUES)				
	7. C <sub>1t</sub> : PRODUCT VOLUME CORRECTION FACTOR FOR PROVER (BASED ON LINE 4. AND TABLE 6B)				
8. PROVER READING CORRECTED TO 60 ° F (5 X 6 X 7)	GAL	GAL	GAL	GAL	
9A. METER READING (GROSS OR UNCOMPENSATED)	GAL	GAL	GAL	GAL	
9B. METER READING (NET OR COMPENSATED)	GAL	GAL	GAL	GAL	
USE FOR UNCOMPENSATED RUN OR SYSTEMS THAT REGISTER IN GROSS & NET					
9A <sub>1</sub> . AVG TEMPERATURE @ METER [(3A + 3B)/2]	° F	° F	° F	° F	
9A <sub>2</sub> . C <sub>1t</sub> : PRODUCT VOLUME CORRECTION FACTOR FOR METER (BASED ON LINE 9A <sub>1</sub> . AND TABLE 6B)					
9A <sub>3</sub> . METER READING CORRECTED TO 60 ° F (9A X 9A <sub>2</sub> )	GAL	GAL	GAL	GAL	
10. % NET DELIVERY ERROR [(8 - 9B)/9B] x 100]	%	%	%	%	
11. % GROSS DELIVERY ERROR [(8 - 9A <sub>3</sub> )/9A <sub>3</sub> ] x 100]	%	%	%	%	
12. ATC SYSTEM ONLY-DIFFERENCE BETWEEN % ERROR ATC AND % ERROR NON-ATC TEST RUN(S): (10 - 11)			%	ATC TOL: ____%	
13. [(8 - 9A <sub>3</sub> ) x 231 in <sup>3</sup> /gal] <sub>NORMAL TEST</sub> - [(8 - 9A <sub>3</sub> ) x 231 in <sup>3</sup> /gal] <sub>PRODUCT DEPLETION TEST</sub>			IN <sup>3</sup>	PRODUCT DEPLETION TOLERANCE: ____ IN <sup>3</sup>	
ACTION TAKEN: <input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED <input type="checkbox"/> CONDEMNED					
REMARKS:					

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DATE <b>APRIL 25, 2013</b>	DEPARTMENT HEADING <input checked="" type="checkbox"/> VEHICLE-TANK METER / <input type="checkbox"/> LOAD-RACK METER TEST REPORT	TEST NO. <b>1284</b>	TRUCK ID <b>49</b>		
BUSINESS NAME: <b>ABC OIL</b> [COMPLETED EXAMPLE: VEHICLE-TANK METER]		INSPECTOR: <b>543</b>			
ADDRESS: <b>123 RIVER ROAD</b> CITY/STATE: <b>ANYTOWN, USA</b> ZIP: <b>45678</b>		OWNER: <b>MAIN STREET OPS</b>			
MAKE OF METER: <b>METER CO</b> SERIAL NUMBER: <b>HIJ000099</b>		MODEL: <b>XYZ123</b> NTEP CC NUMBER: <b>02-999</b>			
REGISTER MODEL: <b>D-678</b> SERIAL NUMBER: <b>9012345</b> NTEP CC NUMBER: <b>01-888</b>					
METER SIZE (INCHES) <b>2</b>	TOTALIZER FINISH: <b>1834.8</b>				
FLOW RATE: MIN 20 GPM MAX 100 GPM	TOTALIZER START: <b>1034.0</b>	PRODUCT: <b>HEATING OIL</b>	PROVER/STANDARD: MILD STEEL <input checked="" type="checkbox"/> STAINLESS STEEL <input type="checkbox"/> OTHER _____		
THERMOMETER WELL <input checked="" type="checkbox"/> PRINTER <input checked="" type="checkbox"/> TEMPERATURE COMPENSATOR: <input type="checkbox"/> ELECTRIC <input checked="" type="checkbox"/> MECHANICAL	TOTAL PRODUCT: RETURNED TO STORAGE <b>800.8</b>	SPECIFIC GRAVITY: <b>API 35.0</b>	AIRCRAFT REFUELING ONLY <input type="checkbox"/>		
SECURITY SEALS INTACT AS FOUND? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> AUDIT TRAIL SECURITY? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> IF YES RECORD ENTRIES:	MARK THE APPLICABLE TOLERANCES: VTM TOLERANCES APPLIED: ACCEPTANCE <input type="checkbox"/> 0.15%; MAINTENANCE <input checked="" type="checkbox"/> 0.30%; SPECIAL <input checked="" type="checkbox"/> 0.45% ATC: MECHANICAL <input checked="" type="checkbox"/> 0.2%; ELECTRONIC <input type="checkbox"/> 0.1% PRODUCT DEPLETION - FOR VTM ONLY: SMALLER THAN 50MM (2 IN <sup>3</sup> ) <input type="checkbox"/> 1.70 L (104 IN <sup>3</sup> ); 50MM (2 IN <sup>3</sup> )(INCL.) TO 75MM (3 IN <sup>3</sup> ) <input checked="" type="checkbox"/> 2.25 L (137 IN <sup>3</sup> ); 75MM (3 IN <sup>3</sup> ) AND LARGER <input type="checkbox"/> 3.75 L (229 IN <sup>3</sup> ) LRM TOLERANCES APPLIED: ACCEPTANCE <input type="checkbox"/> 0.20%; MAINTENANCE <input type="checkbox"/> 0.30%; SPECIAL <input type="checkbox"/> 0.50% ATC: MECHANICAL <input type="checkbox"/> 0.2%; ELECTRONIC <input type="checkbox"/> 0.1%				
<b>Test Data</b>	<b>1st Run</b> (Tol ± 0.30 %)	<b>2nd Run</b> (Tol ± 0.30 %)	<b>3rd Run</b> (Tol ± 0.50 %)	<b>4th Run</b>	
<b>1. TYPE OF TEST RUN</b> ATC - TEMPERATURE COMPENSATED PROD. DEPL. - PRODUCT DEPLETION	<input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input checked="" type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (FOR VTM ONLY)	<input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (FOR VTM ONLY)	<input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input type="checkbox"/> PROD. DEPL. (FOR VTM ONLY)	<input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> SPECIAL <input type="checkbox"/> ATC <input checked="" type="checkbox"/> PROD. DEPL. (FOR VTM ONLY)	
<b>2. FLOW RATE</b>	<b>75 GAL/MIN</b>	<b>75 GAL/MIN</b>	<b>25 GAL/MIN</b>	<b>75 GAL/MIN</b>	
<b>3A. METER TEMPERATURE @ 1/3 PROVER CAPACITY</b>	<b>CHECK FOR ANY LARGE VARIATION</b>	<b>65.0 ° F</b>	<b>64.5 ° F</b>	<b>64.5 ° F</b>	
<b>3B. METER TEMPERATURE @ 2/3 PROVER CAPACITY</b>	<b>BETWEEN METER &amp; PROVER (AVG 81 ° F)</b>	<b>65.0 ° F</b>	<b>64.5 ° F</b>	<b>64.5 ° F</b>	
<b>PROVER DATA</b>	<b>4. AVG TEMPERATURE OF PRODUCT IN PROVER</b>	<b>65.0 ° F</b>	<b>64.5 ° F</b>	<b>64.5 ° F</b>	<b>65.0 ° F</b>
	<b>5. PROVER READING</b>	<b>200.2 GAL</b>	<b>200.1 GAL</b>	<b>200.7 GAL</b>	<b>200.0 GAL</b>
	<b>6. C<sub>ts</sub>: CORRECTION FACTOR FOR PROVER EXPANSION/CONTRACTION</b> C <sub>ts</sub> = 1.0 + [(T - 60 °F) x 0.0000265](Stainless Steel) C <sub>ts</sub> = 1.0 + [(T - 60 °F) x 0.0000186] (Mild Steel) (OR USE TABLE A-1 OR TABLE A-2 VALUES)	<b>1.0001</b>	<b>1.0001</b>	<b>1.0001</b>	<b>1.0001</b>
	<b>7. C<sub>tl</sub>: PRODUCT VOLUME CORRECTION FACTOR FOR PROVER (BASED ON LINE 4. AND TABLE 6B)</b>	<b>0.9977</b>	<b>0.9979</b>	<b>0.9979</b>	<b>0.9977</b>
<b>8. PROVER READING CORRECTED TO 60 ° F (5 X 6 X 7)</b>	<b>199.76 GAL</b>	<b>199.70 GAL</b>	<b>200.30 GAL</b>	<b>199.56 GAL</b>	
<b>9A. METER READING (GROSS OR UNCOMPENSATED)</b>	<b>_____ GAL</b>	<b>200.0 GAL</b>	<b>200.1 GAL</b>	<b>200.7 GAL</b>	
<b>9B. METER READING (NET OR COMPENSATED)</b>	<b>200.0 GAL</b>	<b>_____ GAL</b>	<b>_____ GAL</b>	<b>_____ GAL</b>	
<b>USE FOR UNCOMPENSATED RUN OR SYSTEMS THAT REGISTER IN GROSS &amp; NET</b>					
<b>9A<sub>1</sub>. AVG TEMPERATURE @ METER [(3A + 3B)/2]</b>	<b>_____ ° F</b>	<b>65.0 ° F</b>	<b>64.5 ° F</b>	<b>64.5 ° F</b>	
<b>9A<sub>2</sub>. C<sub>tl</sub>: PRODUCT VOLUME CORRECTION FACTOR FOR METER (BASED ON LINE 9A<sub>1</sub> AND TABLE 6B)</b>	This correction is performed automatically by the meter for this run. (i.e. ATC is activated)	<b>0.9977</b>	<b>0.9979</b>	<b>0.9979</b>	
<b>9A<sub>3</sub>. METER READING CORRECTED TO 60 ° F (9A X 9A<sub>2</sub>)</b>	<b>_____ GAL</b>	<b>199.54 GAL</b>	<b>199.68 GAL</b>	<b>200.28 GAL</b>	
<b>10. % NET DELIVERY ERROR [(8 - 9B)/9B] X 100]</b>	<b>- 0.12 %</b>	<b>_____ %</b>	<b>_____ %</b>	<b>_____ %</b>	
<b>11. % GROSS DELIVERY ERROR [(8 - 9A<sub>3</sub>)/9A<sub>3</sub>] X 100]</b>	<b>_____ %</b>	<b>+0.08 %</b>	<b>+0.31 %</b>	<b>-0.36 %</b>	
<b>12. ATC SYSTEM ONLY-DIFFERENCE BETWEEN % ERROR ATC AND % ERROR NON-ATC TEST RUN(S): (10 - 11)</b>			<b>0.2 %</b>	<b>ATC TOL: 0.2 %</b>	
<b>13. [(8 - 9A<sub>3</sub>) x 231 in<sup>3</sup>/gal]<sub>NORMAL TEST</sub> - [(8 - 9A<sub>3</sub>) x 231 in<sup>3</sup>/gal]<sub>PRODUCT DEPLETION TEST</sub></b>			<b>203.3 in<sup>3</sup></b>	<b>PRODUCT DEPLETION TOLERANCE: 137 in<sup>3</sup></b>	
ACTION TAKEN: <input type="checkbox"/> APPROVED <input checked="" type="checkbox"/> REJECTED <input type="checkbox"/> CONDEMNED					
REMARKS: FOR RUN 4, ALTHOUGH IT IS PERMISSIBLE FOR THE PRODUCT DEPLETION TEST RESULT TO FALL OUTSIDE OF THE APPLICABLE MAINTENANCE TOLERANCE FOR A NORMAL TEST, THE DEVICE FAILS TO MEET THE TOLERANCE FOR THE PRODUCT DEPLETION TEST. THE PRODUCT DEPLETION TEST RESULT FOLLOWING EQUATION IN NO. 13 ABOVE IS 203.3 IN <sup>3</sup> WHICH EXCEEDS THE 1.4 TOLERANCE OF 137 IN <sup>3</sup> FOR THIS TEST.					