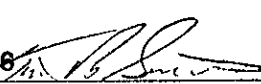




# Data Chart for Tank System Tightness Test

PLEASE PRINT

<b>1. OWNER</b> Property <input type="checkbox"/> Tank(s) <input type="checkbox"/>	WILKINSON FORK LIFT Name: 1245 EASTSHORE HWY, ALBANY Address: _____ Representative: _____ Telephone: _____ Name: _____ Address: _____ Representative: _____ Telephone: _____					
<b>2. OPERATOR</b>	Name: _____ Address: _____ Telephone: _____					
<b>3. REASON FOR TEST</b> (Explain Fully)	Annual compliance with state underground storage tank res-					
<b>4. WHO REQUESTED TEST AND WHEN</b>	Name: _____ Title: _____ Company or Affiliation: _____ Date: _____ Address: _____ Telephone: _____					
<b>5. TANK INVOLVED</b>  Use additional lines for manifolded tanks	Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel/Fiberglass
	WEST	11000	ULC			
<b>6. INSTALLATION DATA</b>	Location	Cover	Fills	Vents	Siphones	Pumps
	WEST OF BLDG  North inside driveway, Rear of station, etc.	concrete  Concrete, Black Top, Earth, etc.	ULC  Size, Titfill make, Drop tubes, Remote Fills	7"  Size, Manifolded		Suction  Suction, Remote, Make if known
<b>7. UNDERGROUND WATER</b>	Depth to the Water table _____ Is the water over the tank? <input type="checkbox"/> Yes <input type="checkbox"/> No					
<b>8. FILL-UP ARRANGEMENTS</b>	Tanks to be filled _____ hr. _____ Date _____ Arranged by _____ Name _____ Telephone _____ Extra product to "top off" and run tank tester How and who to provide? Consider NO Lead. Terminal or other contact for notice or inquiry _____ Company _____ Name _____ Telephone _____					
<b>9. CONTRACTOR, MECHANICS, any other contractor involved</b>	Unloaded					
<b>10. OTHER INFORMATION OR REMARKS</b>	4000 gal Additional information on any items at _____ progress or completed Visitors or observers present during test, etc					
<b>11. TEST RESULTS</b>	Tests were made on the above tank systems in accordance with test procedures prescribed for as detailed on attached test charts with results as follows:					
	Tank Identification	Tight	Leakage Indicated	Date Tested		
	WEST	YES	0.036	4-17-99		
<b>12. SENSOR CERTIFICATION</b>	10/87 Date # 2017 Serial No. of Thermal Sensor					
	<b>13. This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.</b> Technicians 1. Tim B. Soucie Certification # 4114813405 2. _____ Certification # _____ Bay Area Tank Testing 2051 N. Main St., Walnut Creek, CA 94596 Testing Contractor or Company By:  Address: _____ Phone: 510-932-4393					

15. TANK TO TEST

SOUTH  
Identity by position  
UIC  
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 4000 Gallons  
By most accurate capacity chart available 3759 Gallons

- From
- Station Chart
  - Tank Manufacturer's Chart
  - Company Engineering Data
  - Charts supplied with
  - Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 in  
to 0 Gallons  
Tank Diameter 74 in.

Inventory 3759 Gallons  
10 Gallons  
3769 Gallons

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

- Water in tank  Line(s) being tested with LVLLT  
 High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27)

Use maximum allowable test pressure for all tests  
Four pound rule does not apply to doublewalled tanks

Complete section below

1. Is four pound rule required? Yes  No
2. Height to 12" mark from bottom of tank 146 in
3. Pressure at bottom of tank 2.9 P.S.I.
4. Pressure at top of tank 6.9 P.S.I.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade\* 118 in  
Add 30" for "T" probe assay 30 in  
Total tubing to assemble — approximate 148 in

20. EXTENSION HOSE SETTING

Tank top to grade\* 214 in  
Extend hose on suction tube 6" or more below tank top X in

\*If fill pipe extends above grade, use top of fill

22. Thermal-Sensor reading after circulation 13464 digits  
63.64 °F  
Between 1524 digits

23. Digits per °F in range of expected change 1524 digits

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity  
Observed A.P.I. Gravity \_\_\_\_\_  
Hydrometer employed \_\_\_\_\_ H  
Observed Sample Temperature \_\_\_\_\_ °F  
Corrected A.P.I. Gravity @ 60°F. From Table A \_\_\_\_\_  
Coefficient of Expansion for Involved Product From Table B \_\_\_\_\_  
Transfer COE to Line 25b.

21. VAPOR RECOVERY SYSTEM  Stage I  Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product GAS  
Hydrometer Employed 6 H  
Temperature in Tank After Circulation 63.2 °F  
Temperature of Sample 69 °F  
Difference (+/-) 46 °F  
Observed A.P.I. Gravity 56.8  
Reciprocal 1510 Page # 60

3769 1510 = 2.4960264  
Total quantity in full tank (16 or 17) Reciprocal Volume change in this tank per °F  
Transfer to Line 26a

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C \_\_\_\_\_ °F

Coefficient of Water Table D \_\_\_\_\_

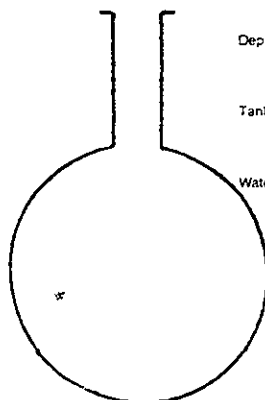
Added Surfactant?  Yes  No Transfer COE to Line 25b

25. (a) \_\_\_\_\_ × (b) \_\_\_\_\_ = (c) \_\_\_\_\_ gallons

Total quantity in full tank (16 or 17) Coefficient of expansion for involved product Volume change in this tank per °F

26. (a) 2.4960264 × (b) 324 = (c) 0.0077037

Volume change per °F (25 or 24b) Digits per °F in test Range (23) Volume change per digit Compute to 4 decimal places This is test factor for 0.037



NOTES

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to NFPA 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures

18:20	14				7,070	560	23	7,071	7,011	+0.089
18:25	22				7,070	560	23	7,073	-0.003	+0.086
18:30	21				7,075	NIL	NIL	NIL	7,075	+0.111
18:35	27				7,070	570	24	7,031	-0.111	+1.00
18:40	23				7,070	575	25	7,034	-0.019	+0.081
18:45	24				7,070	NIL	NIL	NIL	7,070	+1.101
					7,075	582	27	7,034	-0.029	+0.072
								7,072	2 =	+0.030

**P-T Tank Test Data Chart  
Additional Info**

1 Net Volume Change at Conclusion of Precision Test \_\_\_\_\_ gph  
 Signature of Tester \_\_\_\_\_  
 Date \_\_\_\_\_

2 Statement:  
 Tank and product handling system has been tested tight according to the Precision Test Criteria as established by N.F.P.A. publication 329. This is not intended to indicate permission of a leak.  
 OR  
 Tank and product handling system has failed the tank tightness test according to the Precision Test Criteria as established by N.F.P.A. publication 329.

It is the responsibility of the owner and/or operator of this system to immediately advise state and local authorities of any implied hazard and the possibility of any reportable pollution to the environment as a result of the indicated failure of this system. Heath Consultants Incorporated does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner/Operator \_\_\_\_\_  
 Date \_\_\_\_\_

# Data Chart for Tank System Tightness Test

PLEASE PRINT

<b>1. OWNER</b> Property <input type="checkbox"/> Tank(s) <input type="checkbox"/>	Name: <u>WILKINSON FORKLIFT</u> Address: _____ Representative: _____ Telephone: _____ Name: <u>1025 EASTSHORE HWY, ALBANY</u> Address: _____ Representative: _____ Telephone: _____ Name: _____ Address: _____ Representative: _____ Telephone: _____					
<b>2. OPERATOR</b>	Name: _____ Address: _____ Telephone: _____					
<b>3. REASON FOR TEST</b> (Explain Fully)	<u>Annual compliance with state underground storage tank law.</u>					
<b>4. WHO REQUESTED TEST AND WHEN</b>	Name: _____ Title: _____ Company or Affiliation: _____ Date: _____ Address: _____ Telephone: _____					
<b>5. TANK INVOLVED</b>  Use additional lines for manifolded tanks	Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel/Fiberglass
	<u>EAST</u>	<u>8000</u>	<u>DIESEL</u>			
<b>6. INSTALLATION DATA</b>	Location	Cover	Fills	Vents	Siphones	Pumps
	<u>WEST of BLDG</u>	<u>concrete</u>	<u>2 1/2"</u>	<u>2"</u>		<u>Suction</u>
	North Inside driveway, Rear of station, etc.	Concrete, Black Top, Earth, etc	Size, Titefill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known
<b>7. UNDERGROUND WATER</b>	Depth to the Water table _____ " <span style="float: right;">Is the water over the tank? <input type="checkbox"/> Yes <input type="checkbox"/> No</span>					
<b>8. FILL-UP ARRANGEMENTS</b>	Tanks to be filled _____ hr. _____ Date <u>7</u> Arranged by _____ Name: _____ Telephone: _____ Extra product to "top off" and run tank tester. How and who to provide? Consider NO Lead. Terminal or other contact for notice or inquiry _____ Company: _____ Name: _____ Telephone: _____					
<b>9. CONTRACTOR, MECHANICS, any other contractor involved</b>	<u>Diesel</u>					
<b>10. OTHER INFORMATION OR REMARKS</b>	<u>8000 GAL</u>					
<b>11. TEST RESULTS</b>	Tests were made on the above tank systems in accordance with test procedures prescribed for as detailed on attached test charts with results as follows:					
	Tank Identification	Tight	Leakage Indicated	Date Tested		
	<u>EAST</u>	<u>YES</u>	<u>4.04%</u>	<u>11-12-89</u>		
<b>12. SENSOR CERTIFICATION</b>	13. This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329. Technicians: <u>Bay Area Tank Testing</u> 1. <u>Tim B Soucie</u> 2051 St. Main St., Walnut Creek CA 94596 Certification # <u>41148134105</u> Testing Contractor or Company By: <u>[Signature]</u> Address: _____ Certification # _____					

15. TANK TO TEST

EAST #1  
Identity by position

DIESEL  
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 8000  
Gallons

By most accurate capacity chart available 7855  
Gallons

- From
- Station Chart
  - Tank Manufacturer's Chart
  - Company Engineering Data
  - Charts supplied with
  - Other \_\_\_\_\_

566

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 in. to 0 in. Gallons

Tank Diameter 94 in.

Inventory TOPOFF Gallons 7855

10 Total Gallons ea. Reading

7865

Transfer total to line 25a

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

- Water in tank
- Line(s) being tested with LVLLT
- High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27)

Use maximum allowable test pressure for all tests  
Four pound rule does not apply to doublewalled tanks

Complete section below

- 1 Is four pound rule required? Yes  No
- 2 Height to 12" mark from bottom of tank 154 in.
- 3 Pressure at bottom of tank 3.6 P.S.I.
- 4 Pressure at top of tank 7.6 P.S.I.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade\* 138 in.

Add 30" for "T" probe assy. 30 in.

Total tubing to assemble - approximate 168 in.

20. EXTENSION HOSE SETTING

Tank top to grade\* 44 in.

Extend hose on suction tube 6" or more below tank top \_\_\_\_\_ in.

\*If fill pipe extends above grade, use top of fill

22. Thermal-Sensor reading after circulation 17520 digits

60-61 °F Between

23. Digits per °F in range of expected change 321 digits

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity

Observed A.P.I. Gravity \_\_\_\_\_

Hydrometer employed \_\_\_\_\_ H

Observed Sample Temperature \_\_\_\_\_ °F

Corrected A.P.I. Gravity @ 60°F. From Table A \_\_\_\_\_

Coefficient of Expansion for Involved Product From Table B \_\_\_\_\_

Transfer COE to Line 25b.

21. VAPOR RECOVERY SYSTEM  Stage I  Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product DIESEL

Hydrometer Employed 4 H

Temperature in Tank After Circulation 60.7 °F

Temperature of Sample 64 °F

Difference (+/-) 3.1 °F

Observed A.P.I. Gravity 37.1

Reciprocal 2219 Page # 36

7865 2219 = 35443893

Total quantity in full tank (16 or 17) \_\_\_\_\_ Reciprocal \_\_\_\_\_ Volume change in this tank per °F \_\_\_\_\_

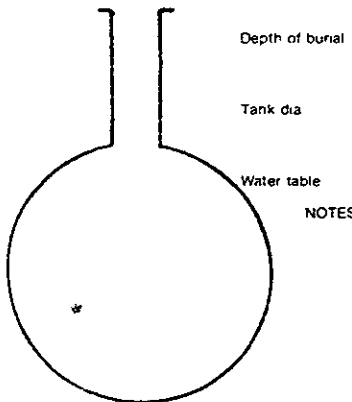
Transfer to Line 26a.

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C \_\_\_\_\_ °F

Coefficient of Water Table D \_\_\_\_\_

Added Surfactant?  Yes  No Transfer COE to Line 25b.



NOTES

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-32.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

25. (a) \_\_\_\_\_ × (b) \_\_\_\_\_ = (c) \_\_\_\_\_ gallons

Total quantity in full tank (16 or 17) \_\_\_\_\_ Coefficient of expansion for involved product \_\_\_\_\_ Volume change in this tank per °F \_\_\_\_\_

26. (a) 35443893 ÷ (b) 321 = (c) 0.0110417

Volume change per °F (25 or 24b) \_\_\_\_\_ Digits per °F in test Range (23) \_\_\_\_\_ Volume change per digit Compute to 4 decimal places \_\_\_\_\_

This is test factor (e.g. 0.110)

LOG OF TEST PROCEDURES			PRESSURE CONTROL		VOLUME MEASUREMENTS (V) RECORD TO .001 GAL			TEMPERATURE COMPENSATION USE FACTOR (a)			CHANGING EACH READING	ACCUMULATED CHANGE
28. -DATE  TIME (24 hr)	Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No	Standpipe Level in Inches		32. Product in Graduate		33. Product Replaced (-)	35. Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Computation (c) x (a) = Expansion - Contraction -	Temperature Adjustment Volume Minus Expansion (+) or Contraction (-) #33(V) - #37(T)	At Low Level compute Change per Hour (NFPA criteria)
			Beginning of Reading	Level to which Restored	Before Reading	After Reading	Product Recovered (+)					
07:30	ARRIVED JOB SITE											
	SET UP TEST EQUIPMENT											
08:45	START RECIRCULATION							12				
11:00		1		412				570		.0110		
11:15		2	43.1	412	.565	.635	1.070	532	+12	+1.132	-.062	
11:30		3	42.9	412	.155	.205	1.050	532	N/C	N/C	+0.50	
11:45		4	42.6	412	.205	.245	1.040	538	+6	+1.066	-.026	
12:00		5	42.3	412	.245	.270	1.025	549	+11	+1.121	-.096	
12:15		6	42.5	412	.270	.305	1.035	554	+5	+1.055	-.020	
12:30		7	42.4	412	.305	.335	1.030	561	+7	+1.077	-.047	
12:45		8	42.6	412	.335	.375	1.040	566	+5	+1.055	-.015	
				12								
12:50		1	230	12	.875	.830	1.455	N/C	N/C	N/C	+1.455	
12:55		2	16.1	12	.115	.295	1.180	572	+6	+1.066	+1.141	
13:00		3	13.8	12	.295	.365	1.070	N/C	N/C	N/C	+1.070	+1.070
13:05		4	13.0	12	.365	.400	1.035	577	+5	+1.055	-.020	+1.050
13:10		5	12.8	12	.400	.425	1.025	N/C	N/C	N/C	+1.025	1.075
13:15		6	12.8	12	.425	.450	1.025	582	+5	+1.055	-.030	+1.045
13:20		7	12.4	12	.450	.465	1.015	N/C	N/C	N/C	+1.015	+1.060
13:25		8	12.4	12	.465	.485	1.070	585	+3	+1.033	-.013	+1.047
13:30		9	12.4	12	.485	.505	1.070	N/C	N/C	N/C	+1.070	1.057
13:45		10	12.4	12	.505	.520	1.015	N/C	N/C	N/C	+1.015	+1.082
13:50		11	12.4	12	.520	.535	1.015	592	+7	+1.077	-.062	+1.020
13:55		12	12.5	12	.535	.550	1.015	N/C	N/C	N/C	+1.015	1.035
14:00		13	12.4	12	.550	.565	1.015	594	+2	+1.022	-.007	+1.028
14:05		14	12.4	12	.565	.585	1.020	N/C	N/C	N/C	+1.020	+1.048
14:10		15	12.4	12	.585	.605	1.020	N/C	N/C	N/C	+1.020	+1.068
14:15		16	12.4	12	.605	.670	1.015	600	+6	+1.066	-.051	+1.017





# Data Chart for Tank System Tightness Test

PLEASE PRINT

<p>1. OWNER <input type="checkbox"/> Property <input type="checkbox"/> Tank(s)</p>	<p>WILKINSON FORKLIFT</p> <p>Name: 1025 EASTSHORE HWY, ALBANY Address: _____ Representative: _____ Telephone: _____</p> <p>Name: _____ Address: _____ Representative: _____ Telephone: _____</p>																									
<p>2. OPERATOR</p>	<p>Name: _____ Address: _____ Telephone: _____</p>																									
<p>3. REASON FOR TEST (Explain Fully)</p>	<p>Annual compliance with state underground storage tank law</p>																									
<p>4. WHO REQUESTED TEST AND WHEN</p>	<p>Name: _____ Title: _____ Company or Affiliation: _____ Date: _____</p> <p>Address: _____ Telephone: _____</p>																									
<p>5. TANK INVOLVED</p> <p>Use additional lines for manifolded tanks</p>	Identify by Direction <i>LPT</i>	Capacity	Brand/Supplier <i>8000</i>	Grade <i>REG</i>	Approx Age	Steel/Fiberglass																				
<p>6. INSTALLATION DATA</p>	Location <i>WEST OF BLDG</i>	Cover <i>CONCRETE</i>	Fills <i>4"</i>	Vents <i>2"</i>	Siphones <i>-</i>	Pumps <i>SUCTION</i>																				
<p>7. UNDERGROUND WATER</p>	<p>Depth to the Water table _____"</p> <p style="text-align: right;">Is the water over the tank? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>																									
<p>8. FILL-UP ARRANGEMENTS</p>	<p>Tanks to be filled _____ hr. _____ Date Arranged by _____ Name _____ Telephone _____</p> <p>Extra product to "top off" and run tank tester. How and who to provide? Consider NO Lead.</p> <p>Terminal or other contact for notice or inquiry _____ Company _____ Name _____ Telephone _____</p>																									
<p>9. CONTRACTOR, MECHANICS, any other contractor involved</p>	<p><i>Regular</i></p>																									
<p>10. OTHER INFORMATION OR REMARKS</p>	<p><i>8000 gal</i></p>																									
<p>11. TEST RESULTS</p>	<p>Tests were made on _____ tank systems in accordance with test procedures prescribed for as detailed on attached test charts with results as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Tank Identification</th> <th style="width: 15%;">Tight</th> <th style="width: 15%;">Leakage Indicated</th> <th style="width: 15%;">Date Tested</th> </tr> </thead> <tbody> <tr> <td><i>LPT</i></td> <td><i>YES</i></td> <td><i>0.012</i></td> <td><i>4-12-89</i></td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Tank Identification	Tight	Leakage Indicated	Date Tested	<i>LPT</i>	<i>YES</i>	<i>0.012</i>	<i>4-12-89</i>												
Tank Identification	Tight	Leakage Indicated	Date Tested																							
<i>LPT</i>	<i>YES</i>	<i>0.012</i>	<i>4-12-89</i>																							
<p>12. SENSOR CERTIFICATION <i>10/89</i></p> <p>Date <i>#2017</i></p> <p>Serial No. of Thermal Sensor _____</p>	<p>13. This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.</p> <p style="text-align: center;">Technicians</p> <p>1. <i>Tim B. Soucie</i> Bay Area Tank Testing 2051 N. Main St., Walnut Creek, CA 94596</p> <p>Certification # <i>41148134105</i></p> <p>2. _____ Address _____</p> <p>Certification # _____</p>																									

15. TANK TO TEST

EAST  
Identity by position

REG  
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 8000  
Gallons

By most accurate capacity chart available 7855  
Gallons

- From
- Station Chart
  - Tank Manufacturer's Chart
  - Company Engineering Data
  - Charts supplied with
  - Other \_\_\_\_\_

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 in

0 Gallons

941 in. Tank Diameter

Gallons	Total Gallons ea. Reading
Inventory	<u>7855</u>
<u>TOPOFF</u>	<u>5</u>
Transfer total to line 25a	<u>7860</u>

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

- Water in tank
- Line(s) being tested with LVLLT
- High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27).

Use maximum allowable test pressure for all tests  
Four pound rule does not apply to doublewalled tanks

Complete section below

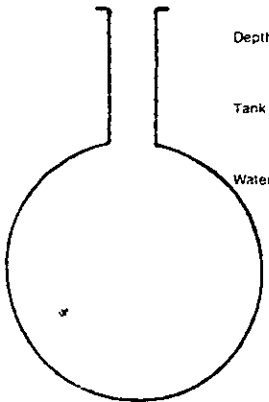
1. Is four pound rule required? Yes  No
2. Height to 12" mark from bottom of tank 154 in
3. Pressure at bottom of tank 3.6 P.S.I.
4. Pressure at top of tank 7.6 P.S.I.

Depth of burial 44 in

Tank dia 95 in

Water table 36 in

NOTES



The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade\* 134 in

Add 30" for "T" probe Assy 30 in

Total tubing to assemble - approximate 168 in.

20. EXTENSION HOSE SETTING

Tank top to grade\* 111 in

Extend hose on suction tube 6" or more below tank top \_\_\_\_\_ in

\*If Fill pipe extends above grade, use top of fill

22. Thermal-Sensor reading after circulation 121.82 digits

67.42 °F

23. Digits per °F in range of expected change 32.41 digits

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity

Observed A.P.I. Gravity \_\_\_\_\_

Hydrometer employed \_\_\_\_\_ H

Observed Sample Temperature \_\_\_\_\_ °F

Corrected A.P.I. Gravity @ 60°F, From Table A \_\_\_\_\_

Coefficient of Expansion for Involved Product From Table B \_\_\_\_\_

Transfer COE to Line 25b.

21. VAPOR RECOVERY SYSTEM  Stage I  Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product GAS

Hydrometer Employed 6 H

Temperature in Tank After Circulation 62.2 °F

Temperature of Sample 63 °F

Difference (+/-) +1 °F

Observed A.P.I. Gravity ~9.6

Reciprocal 1469 Page # 63

7860 . 1469 . 5.3505786

Total quantity in full tank (16 or 17) Reciprocal Volume change in this tank per °F

Transfer to Line 26a

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C \_\_\_\_\_ °F

Coefficient of Water Table D \_\_\_\_\_

Added Surfactant?  Yes  No Transfer COE to Line 25b.

25. (a) 7860 × (b) 5.3505786 = (c) \_\_\_\_\_ gallons

Total quantity in full tank (16 or 17) Coefficient of expansion for involved product Volume change in this tank per °F

26. (a) 5.3505786 + (b) 32.41 = (c) 0.0165141

Volume change per °F (25 or 24b) Digits per °F in test Range (23) Volume change per digit Compute to 4 decimal places This is test factor 0.0165

Sensor Calibration _____ / _____		HYDROSTATIC PRESSURE CONTROL		VOLUME MEASUREMENTS (V) RECORD TO .001 GAL.			TEMPERATURE COMPENSATION USE FACTOR (a)			NET VOLUME CHANGING EACH READING		ACCUMULATED CHANGE	
LOG OF TEST PROCEDURES		29. Reading No	Standpipe Level in Inches		32. Product in Graduate		33. Product Replaced (-)	35. Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Computation (c) x (a) = Expansion - Contraction -	Temperature Adjustment		At Low Level compute Change per Hour (NFPA criteria)
28. DATE	Record details of setting up and running test. (Use full length of line if needed.)		Beginning of Reading	Level to which Restored	Before Reading	After Reading	Product Recovered (+)				Volume Minus Expansion (+) or Contraction (-) #33(V) - #37(T)		
TIME (24 hr)													
7:30	ARRIVED JOB SITE												
	SET UP TEST EQUIPMENT.												
09:00	START RECIRCULATION							13					
10:30	START HIGH LEVEL TEST		117					182		.065			
10:45	HIGH LEVEL	-	44.0	47	.615	.695	+0.080	184	+2	+0.033	+0.017		
11:00		-	42.9	47	.695	.770	+0.075	111	111	111	+0.075		
11:15		:	43.7	47	.770	.835	+0.065	193	+9	+1.149	-1.081		
11:30		5	44.2	47	.075	.105	+0.080	202	+9	+1.149	-0.69		
11:45		6	44.7	47	.105	.190	+0.085	204	+2	+0.033	+0.052		
12:00		7	44.2	47	.190	.270	+0.080	209	+5	+0.083	-0.052		
12:15		8	44.3	47	.270	.365	+0.095	217	+8	+1.132	-0.037		
	START LOW LEVEL TEST			12									
12:20	LOW LEVEL	1	20.0	12	.365	.770	+1.425	219	+2	+0.033	+1.392		
12:25		2	14.0	12	.070	.100	+0.080	221	+2	+0.033	+0.017		
12:30		3	13.1	12	.100	.150	+0.050	229	+8	+1.132	-0.082	-0.082	
12:35		4	13.2	12	.150	.195	+0.045	111	111	111	+0.015	+0.015	
12:40		5	13.1	12	.195	.240	+0.045	236	+7	+1.116	-0.071	-0.104	
12:45		6	13.0	12	.240	.280	+0.040	111	111	111	+0.040	-0.068	
12:50		7	13.1	12	.280	.315	+0.035	111	111	111	+0.035	-0.033	
12:55		8	13.4	12	.315	.375	+0.060	239	+3	+0.050	+0.015	-0.018	
13:00		9	13.1	12	.375	.420	+0.045	243	+4	+0.066	-0.021	-0.039	
13:05		10	12.9	12	.420	.455	+0.035	111	111	111	+0.035	-0.001	
13:10		11	12.9	12	.455	.495	+0.040	249	+6	+0.099	+0.059	-0.063	
13:15		12	13.1	12	.495	.535	+0.040	111	111	111	+0.040	-0.073	
13:20		13	12.8	12	.535	.565	+0.030	111	111	111	+0.030	+0.007	
13:25		14	12.8	12	.565	.605	+0.040	255	+6	+0.099	-0.059	-0.053	
13:30		15	12.9	12	.605	.640	+0.035	111	111	111	+0.035	+0.017	
13:35		16	12.4	12	.640	.670	+0.030	261	+5	+1.116	-0.116	-0.126	



TEST REPORT

HORNER 'EZY CHEK' LEAK DETECTOR

COMPANY WILKINSON, FORK LIFT      DATE 4/12/89      INVOICE 2453      TANK # 4  
 PRODUCT 10 W OIL      CAPACITY 550      MEASURED API 30      TEMPERATURE 62.4  
 ADJUSTED API 29.8      COEF OF EXPANSION .00044343      TEMP SHIFT FACTOR .24387  
 CALIBRATING ROD .05      DIVIDED BY # LINES 32      = CHART CALIB FACTOR .00156  
 OTHER 7.5 GALLONS ADDED AT 12:00 TO OVERFILL TANK FOR TEST

TIME	TEST HEIGHT	CHART # 'S	GAIN LOSS	CHART FACTR	LEVEL RESLT	TEMP STRT	TEMP END	GAIN LOSS	TEMP FACTR	TEMP RESULT	6 MIN RESULT IN GAL	HOURLY RESULT GAL/HR
12:48	+30"	X		.00156		.410	.409	-.004	.24387	-.0002		
12:54		X				.409	.414	+.005		-.0012		
13:00		X				.414	.413	-.001		-.0002		
13:06		X				.413	.406	-.007		-.0017		
13:12		X				.406	.397	-.009		-.0030		
13:18		X				.397	.389	-.008		-.0020		
13:24		94 97 +3				.389	.380	-.009		-.0030		
13:30		X				.380	.371	-.009		-.0030		
13:36		X				.371	.364	-.007		-.0017		
13:42		X				.364	.358	-.006		-.0015		
13:48		X				.358	.357	-.001		-.0002		
13:54		X				.357	.356	-.001		-.0002		
14:00		45 50 +5			+.0078	.356	.353	-.003		-.0007	+0.0085	
14:06		50 53 +3			+.0047	.353	.350	-.003		-.0007	+0.0054	
14:12		53 54 +1			+.0016	.350	.347	-.003		-.0007	+0.0023	
14:18		54 53 -1			-.0016	.347	.343	-.004		-.0010	-.0006	
14:24		53 52 -1			-.0016	.343	.340	-.003		-.0007	-.0009	
14:30		52 53 +1			+.0016	.340	.337	-.003		-.0007	+0.0023	
14:36		53 54 +1			+.0016	.337	.335	-.002		-.0005	+0.0021	
14:42		54 54 0			0	.335	.332	-.003		-.0007	+0.0007	
14:48		54 55 +1			+.0016	.332	.331	-.001		-.0002	+0.0018	
14:54		55 55 0			0	.331	.330	-.001		-.0002	+0.0002	+0.0218
15:00		55 54 -1			-.0016	.330	.330	0		0	-.0016	+0.0117
15:06		54 51 -3			-.0047	.330	.329	-.001		-.0002	-.0045	-.0005
15:12		51 47 -4			-.0062	.329	.328	-.001		-.0002	-.0060	-.0065

RESULTS      CERTIFIED TIGHT YES AT TEST HEIGHT OF +30"      LOSS RATE (GPH) -.0065 (+/-)

TESTED BY     *Dave Dupont*      
 DAVE DUPONT

THE DATA FOR THIS TEST MEETS NFPA 329 STANDARDS. THE EQUIPMENT USED TO GENERATE THIS DATA IS ABLE TO DETECT A PRODUCT LOSS AT THE RATE OF 0.05 GALLONS PER HOUR. THIS IS NOT TO BE CONSTRUED AS AN ALLOWABLE LEAK RATE, BUT RATHER AS AN ACCURACY TOLERANCE OF THE TESTING EQUIPMENT WHICH ALLOWS FOR THE MANY VARIABLES INVOLVED. TAT GUARANTEES ONLY THAT THE DATA FOR THIS REPORT MEETS NFPA CRITERIA ON THE DATA OF THIS TEST, TAT MAKES NO WARRANTY OF TANK AND/OR LINE FITNESS NOR DO WE ASSUME RESPONSIBILITY FOR ANY LEAKAGE WHICH MAY HAVE OCCURRED AS A RESULT OF THIS TEST.

TESTING AND TECHNOLOGY

TEST REPORT

HORNER 'EZY CHEK' LEAK DETECTOR

COMPANY WILKINSON\* FORK LIFT

DATE 4/12/89

INVOICE 2453

TANK # 5

PRODUCT 30 W OIL

CAPACITY 550

MEASURED API 29.5

TEMPERATURE 62.8

ADJUSTED API 29.8

COEF OF EXPANSION .0004434

TEMP SHIFT FACTOR .24387

CALIBRATING ROD .05

DIVIDED BY # LINES 25.3

= CHART CALIB FACTOR .0020

OTHER 7.5 GALLONS ADDED AT 12:00 TO OVERFILL TANK FOR TEST

TIME	TEST HEIGHT	CHART # 'S	GAIN LOSS	CHART FACTR	LEVEL RESLT	TEMP STRT	TEMP END	GAIN LOSS	TEMP FACTR	TEMP RESULT	6 MIN		HOURLY
											RESULT	IN GAL	RESULT GAL/HR
12:48	+30"	85		.0020		.797	.796	-.001	.24387	-.0002			
12:54		34 X				.796	.794	-.002		-.0005			
13:00		34 33	-1		-.0020	.794	.793	-.001		-.0002		-.0018	
13:06		33 30	-3		-.0060	.793	.792	-.001		-.0002		-.0058	
13:12		30 28	-2		-.0040	.792	.790	-.002		-.0005		-.0035	
13:18		28 28	0		0	.790	.789	-.001		-.0002		+0.0002	
13:24		28 27	-1		-.0020	.789	.788	-.001		-.0002		-.0018	
13:30		27 26	-1		-.0020	.788	.786	-.002		-.0005		-.0015	
13:36		94 93	-1		-.0020	.786	.786	0		0		-.0020	
13:42		93 92	-1		-.0020	.786	.785	-.001		-.0002		-.0018	
13:48		92 90	-2		-.0040	.785	.788	-.002		-.0005		-.0035	
13:54		90 89	-1		-.0020	.783	.782	-.001		-.0002		-.0018	
14:00		89 88	-1		-.0020	.782	.781	-.001		-.0002		-.0018	
14:06		88 87	-1		-.0020	.781	.780	-.001		-.0002		-.0018	
14:12		87 86	-1		-.0020	.780	.779	-.001		-.0002		-.0018	
14:18		86 85	-1		-.0020	.779	.778	-.001		-.0002		-.0018	
14:24		85 85	0		0	.778	.777	-.001		-.0002		+0.0002	
14:30		61 59	-2		-.0040	.777	.775	-.002		-.0005		-.0035	
14:36		59 58	-1		-.0020	.775	.774	-.001		-.0002		-.0018	-.0194
14:42		58 57	-1		-.0020	.774	.772	-.002		-.0005		-.0015	-.0191
14:48		57 56	-1		-.0020	.772	.771	-.001		-.0002		-.0018	-.0174

**RESULTS** CERTIFIED TIGHT YES AT TEST HEIGHT OF +30" LOSS RATE (GPH) -.0174 (+/-)

TESTED BY Dave Dupont  
DAVE DUPONT

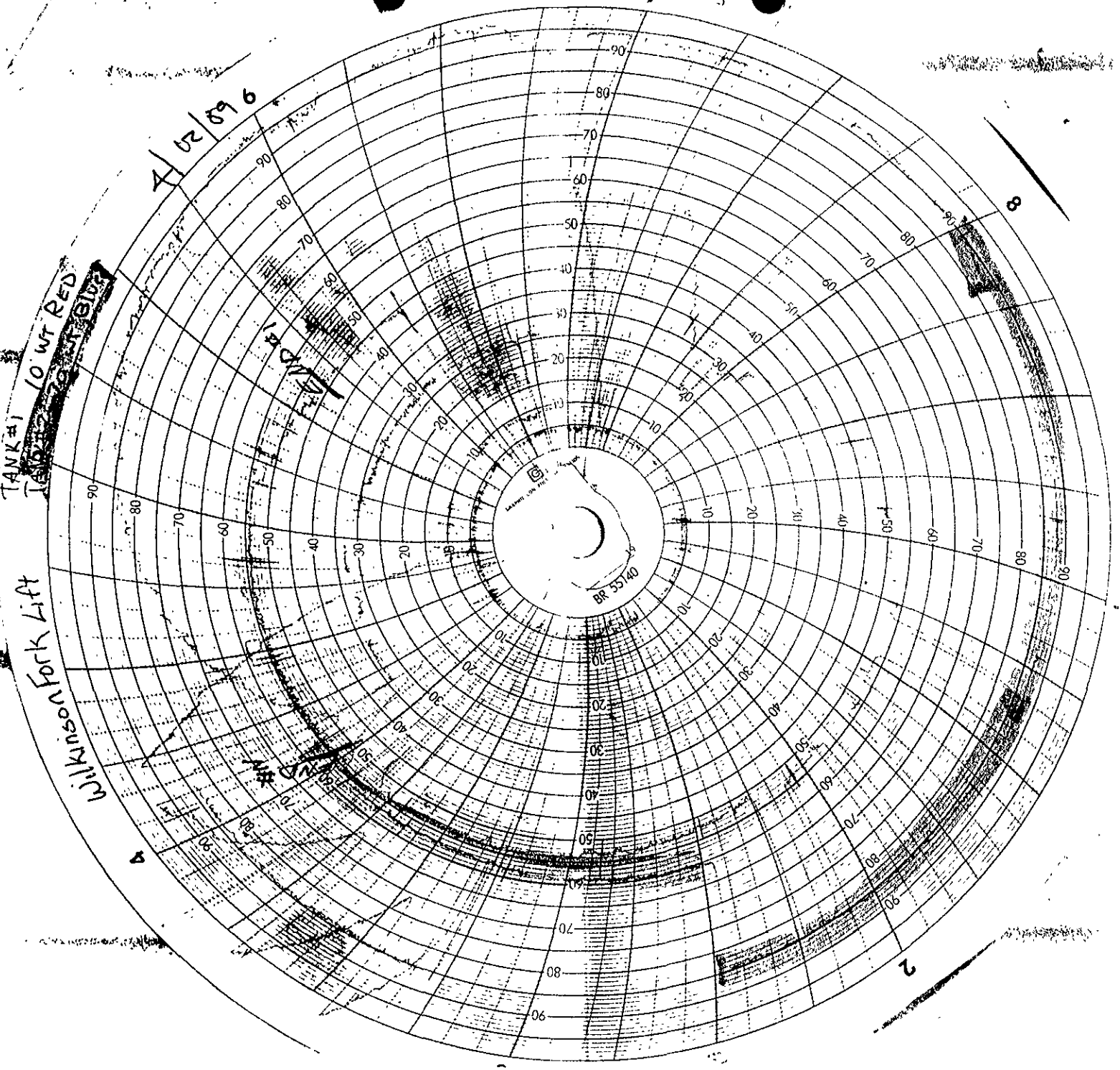
**COMMENTS**

THE DATA FOR THIS TEST MEETS NFPA 329 STANDARDS. THE EQUIPMENT USED TO GENERATE THIS DATA IS ABLE TO DETECT A PRODUCT LOSS AT THE RATE OF 0.05 GALLONS PER HOUR. THIS IS NOT TO BE CONSTRUED AS AN ALLOWABLE LEAK RATE, BUT RATHER AS AN ACCURACY TOLERANCE OF THE TESTING EQUIPMENT WHICH ALLOWS FOR THE MANY VARIABLES INVOLVED. TAT GUARANTEES ONLY THAT THE DATA FOR THIS REPORT MEETS NFPA CRITERIA ON THE DAY OF THIS TEST, TAT MAKES NO WARRANTY OF TANK AND/OR LINE FITNESS NOR DO WE ASSUME RESPONSIBILITY FOR ANY LEAKAGE WHICH MAY HAVE OCCURRED AS A RESULT OF THIS TEST.

4/02/09 6

TANK #1 10 WT RED

Wilkinson Fork Lift



TEST REPORT      HORNER 'EZY CHEK' LEAK DETECTOR

COMPANY WILKINSON FORK LIFT      DATE 4/12/89      INVOICE 2453      TANK # 6  
 PRODUCT WASTE OIL      CAPACITY 1,000      MEASURED API 28      TEMPERATURE 65.9  
 ADJUSTED API 27.6      COEF OF EXPANSION .00043556      TEMP SHIFT FACTOR .43550  
 CALIBRATING ROD .05      DIVIDED BY # LINES 22.8      = CHART CALIB FACTOR .00219  
 OTHER 7.5 GALLONS ADDED AT 17:00 TO OVERFILL TANK FOR TEST

TIME	TEST HEIGHT	CHART # 'S	GAIN LOSS	CHART FACTR	LEVEL RESLT	TEMP STRT	TEMP END	GAIN LOSS	TEMP FACTR	TEMP RESULT	6 MIN RESULT IN GAL	HOURL RESUL GAL/H
17:18	+61"	71 70	-1	.00219	-.0022	.851	.825	-.026	.4355	-.0113	+0.0111	
17:24		70 68	-2		-.0044	.825	.805	-.020		-.0087	+0.0043	
17:30		68 67	-1		-.0022	.705	.783	-.022		-.0096	+0.0074	
17:36		67 66	-1		-.0022	.783	.763	-.020		-.0087	+0.0065	
17:42		66 65	-1		-.0022	.763	.745	-.018		-.0078	+0.0056	
17:48		65 62	-3		-.0066	.745	.729	-.016		-.0070	+0.0004	
17:54		62 61	-1		-.0022	.729	.715	-.014		-.0061	+0.0039	
18:00		61 60	-1		-.0022	.715	.702	-.013		-.0057	+0.0035	
18:06		60 59	-1		-.0022	.702	.691	-.001		-.0048	+0.0026	
18:12		59 59	0		0	.691	.680	-.011		-.0048	+0.0048	
18:18		47 46	-1		-.0022	.680	.668	-.012		-.0052	+0.0030	
18:24		46 45	-1		-.0022	.668	.658	-.010		-.0044	+0.0022	
18:30		45 44	-1		-.0022	.658	.648	-.010		-.0044	+0.0022	
18:36		44 43	-1		-.0022	.648	.638	-.010		-.0044	+0.0022	
18:42		43 41	-2		-.0044	.638	.629	-.009		-.0039	-.0005	
18:48		41 41	0		0	.629	.619	-.010		-.0044	+0.0044	
18:54		41 41	0		0	.619	.610	-.009		-.0039	+0.0039	
19:00		41 39	-2		-.0044	.610	.601	-.009		-.0039	-.0005	
19:06		39 37	-2		-.0044	.601	.592	-.009		-.0039	-.0005	+0.021
19:12		37 35	-2		-.0044	.592	.587	-.008		-.0035	-.0009	+0.015
19:18		35 34	-1		-.0022	.584	.577	-.007		-.0030	+0.0008	+0.013

RESULTS      CERTIFIED TIGHT YES      AT TEST HEIGHT OF +61"      LOSS RATE (GPH) +.0133 (+/-)

TESTED BY DAVE DUFONT  
 DAVE DUFONT

COMMENTS

THE DATA FOR THIS TEST MEETS NFPA 329 STANDARDS. THE EQUIPMENT USED TO GENERATE THIS DATA IS ABLE TO DETECT A PRODUCT LOSS AT THE RATE OF 0.05 GALLONS PER HOUR THIS IS NOT TO BE CONSTRUED AS AN ALLOWABLE LEAK RATE, BUT RATHER AS AN ACCURAC TOLERANCE OF THE TESTING EQUIPMENT WHICH ALLOWS FOR THE MANY VARIABLES INVOLVED TAT GUARANTEES ONLY THAT THE DATA FOR THIS REPORT MEETS NFPA CRITERIA ON THE DA OF THIS TEST, TAT MAKES NO WARRANTY OF TANK AND/OR LINE FITNESS NOR DO WE ASSUM RESPONSIBILITY FOR ANY LEAKAGE WHICH MAY HAVE OCCURRED AS A RESULT OF THIS TEST



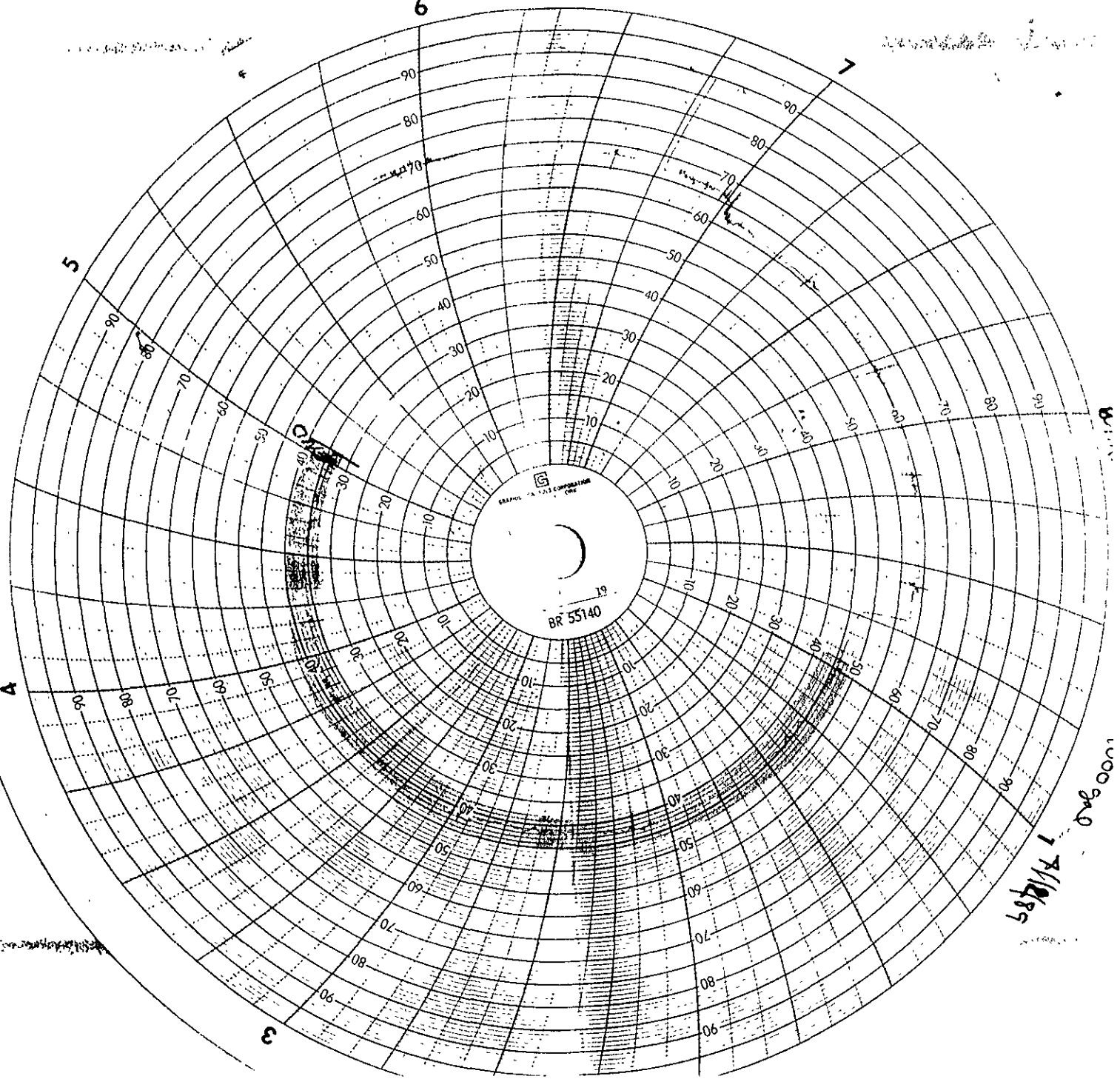
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