## **Bubble Leak Test**

Car Mark and Car Number: TILX 191300	Date: <u>10/</u>	17/2019	
DOT Stenciled Specification: 111A100W1	Acceptance 0	Criteria: No Leaks	
Examiner: KYLE HANDSHOE	NDT Level: Level II	Test ■ Accepted Lesults:	Rejected
<u>Leak Detector</u> <u>Solution</u>			
☐ Sherlock CG 40 F - 125 F	☐ Sherlock "Low Ter	np" - 40 F - 125 F	Snoop
Other SHERLOCK "LOW 10°F - 160°F	/ TEMP" -		
<u>Test Conditions</u>			
Gas Type: Shop Air	Test Pressure: 30 psi	Hold Time: 10	_
Temperature of the Part being tested:	65.2 Farenheit		
<u>Test Areas</u>			
Pressure Plate or manway cover		Multihousing Asser	mbly
Bottom Outlet Valve And Cap		■ Vacuum Relief Val	ve
Air Inlet Valve		☐ Sample Valves	
Pressure Relief Device (flanged of	connections)	Loading / unloading	g Valves
☐ Thermowell fitting (threaded conr	nection)	Other	
☐ Gauging Devices		Comments: All Gas Sealing	skets, Valves, Fittings & surfaces
Test Procedure & Rev.: QI-T-1029 REV A	_LocationSERVICES	NE N	oT ethod: Bubble Leak
Equipment Type: Pressure Gage  Id Number	er: <u>E365565</u>	_ Cal. Due Date:	02/29/2020
Equipment Type: Temp. Gage Id Numbe	er: 41622524WS	Cal. Due Date:	11/17/2019
Equipment Type: Other Id Number	er: NA	Cal. Due Date:	NA

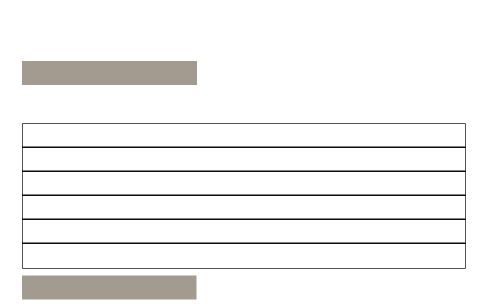
EXB - 007 Revised Date: Approved John Embree Issue Date: 12/15/06

Rev 0

Car Details				
Car Mark :	TILX	Car Number :	194769	
Constructed Tank Specification	111A100W1	Inspection Date :	08/07/2017	
Stenciled Tank Specification :	111A100W1	Inspected By :	Hannah Luce	
Last Reported Contents :	4909152 (ETHYL-ALC- ANHYD)	SI Reference #:	370385	
Inspection Site:	TRINITY RAIL MAINTENANCE SERVICES - SAGINAW 25	Station Stencil:	TXXV	
Structural Integrity Inspection	- <u>Internal Visual Inspection</u>			
Record visual inspection results (if repairs are made, list repair m		e requirements of FQ-TK-G-018		
a) Abrasion :	None or within accepted limits	Comment :		
b) Corrosion :	None or within accepted limits	Comment :		
c) Cracks :	None	Comment :		
d) Dents :	None or within accepted limits	Comment :		
e) Distortion :	None or within accepted limits	Comment :		
f) Weld Defects:	None	Comment :		

### Structural Integrity Inspection - External <u>Visual Inspection</u>

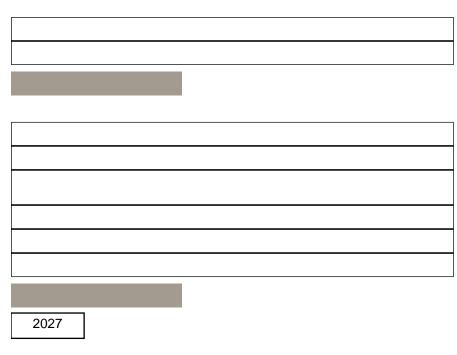
Record visual inspection results for tank shell and heads, per the requirements of FQ-TK-G-018 (if repairs are made, list repair method)



a) Abrasion :	None or within accepted limits		Comment :	
b) Corrosion :	None or within accepted limits		Comment :	
c) Cracks :	Repaired as outlined		Comment :	
d) Dents :	None or within accepted limits		Comment :	
e) Distortion :	None or within accepted limits		Comment :	
f) Weld Defects:	None		Comment :	
Record inspection results for the	inboard body bolster web to draft sill	attachment	welds, per FQ-TK-G-018 & FQ-TK-0	G-019
Inspection Method :	[VT] Direct Visual	A - End :	Accepted	Comment:
'		B - End :	Accepted	Comment:
Record inspection results for the	inboard draft sill to rear sill pad attac	hment weld	s, per FQ-TK-G-018 & FQ-TK-G-019	)
Inspection Method :	[VT] Direct Visual	A - End :	Accepted	Comment:
		B - End :	Accepted	Comment :
Ultrasonic Girth Weld Inspection	on			
Record inspection results for tan NOTE: Girth weld seam #1 is the	k shell butt welds within 2' of bottom lessend head to tank shell ring	ongitudinal	centerline, per the requirements of Fo	QTKG020;
a) Girth Seam # 1 (B - End) :	Accepted		Comment :	
b) Girth Seam # 2:	Accepted		Comment :	
c) Girth Seam # 3:	Accepted		Comment :	
d) Girth Seam # 4 :	Accepted		Comment :	
e) Girth Seam # 5 :	Accepted		Comment :	
f) Girth Seam # 6 :	Accepted		Comment :	

4; GUAGE AND REWELD	

g) Girth Seam # 7 : Ac	g) Girth Seam # 7 : Accepted					
h) Girth Seam # 8 (A - End) :	A	Comment :				
Safety System Inspection						
Verify and inspect the integrity of th	e applicable Safety Systen	n components				
a) Thermal protection system :	NA		Comment :			
b) Tank head puncture resistance :	NA		Comment :			
c) Coupler vertical restraint system	Accepted		Comment :			
d) Skid protection system :	Accepted		Comment :			
e) Protective housing :	Accepted		Comment :			
f) Insulation :	NA		Comment :			
Shipped Qualification Stencil						
Tank Qualification stencil as ship	oped : Station : TRINITY SAGINAV		CE SERVICES -	Qualified : 07/1	1/2017 Due :	
Verify legible markings of	on the tank car : Acceptab	le				
Acceptable results of inspection a	and tests					
This tank car conforms to the requirestructural defect that may initiate crinspection and test were performed manual.	acks or propagate cracks a	and cause failure of	the tank before th	ne next inspection	and test interval. All	
Visual Inspector Name :	ANDRES GONZALEZ	Level :	2	Date :	07/11/2017	
Testing Technician Name :	JOEL REYES	Level :	2	Date :	07/11/2017	



Recorded By:	Hannah Luce	Comments :
. tooo. aca by .		

Tank Car Qualification Report -	Tank Qualification

Car Mark and Car Number:	TILX 192469				Date:	03/24/20	)16	
Constructed Tank Specification					_			•
Stenciled Tank Specification:	111A100W1		Inspector's Sign	ature:	TRO	OY STEWA	RT	
Type of Lining: (AS Received)	NA		☐ Jacketed			lacketed		
Lining Station: (AS Received)	N/A							
	N/A							
Lining Date: (AS Received)								
Last Reports Contents: Location of inspection site:	4909152(ETHYL-ALC-							
(include address and zip code)	TRAI	NSCO RAILWAY PR	ODUCTS INC, (	DELW	EIN/TRAO,	A, USA		—
	Visual i	nspection per DOT	180.509(d)					
Visually inspect tank shell ar Except in areas where insula	nd heads both internall	y and externally for t						
	Interior				Exterior			]
a) abrasion	Accepted Repai	red	Accepted	F	Repaired	N/A		┨
b) corrosion								1
c) cracks d) dents			<u> </u>					┨
e) distortions								1
f) defects in welds								J
2. Visually inspect piping, valve	es, fittings and gaskets	for corrosion:	Accepted		Repaired	*	N/A	
3. Visually inspect for missing of	or loose bolts, nuts uns	safe elements:	Accepted		Repaired	*	N/A	
4. Inspect all closures for prope	er securement in a tool	tight condition:	Accepted		Repaired	*	N/A	
5. Inspect the protective housing	ng for proper secureme	ent:	Accepted		Repaired	*	N/A	
6. Inspect excess flow valves w	vith threaded seats for	tightness:	Accepted		Repaired	*	N/A	
7. Verify legible marking on the	tank car:		Accepted		Repaired	*	N/A	
7.1 Tank qualifi	cation decal informat	tion shall be record	ed below					
111A100W1	Station	Qualified	Due					
Tank Qualification	TRAO	2016	2026					
Thickness Test	TRAO	2016	2026					
Service Equipment	TRAO	2016	2026					
Value / Vent 75 PSI	TRAO	2016	2026					
Int. Heater Coils(opt)	NA	NA	NA					
Coating / Lining	NA	NA	NA					
Туре	NA							
Date Applied			_					
88-B-2	TRAO	2016	2026					
Stub Sill	TRAO	2016	2026					

\*Note: location and description of defects found and methods used to repair must be reported on form DOT 180

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Car Mark and Car Number:TILX 192469	Date:_	03/24	/2016	
Structural Integrity Inspection per DOT 180.509(e) by Inspection Method listed				
<ul> <li>8. Inspect the tank for structural integrity:</li> <li>8.1 Listed are the approved methods to determine that the welds are in proper condition. (1) (2) radiography (3) magnetic particle (4) ultrasonic test (5) visual inspection (e.g. direct visiber scopes, bore scopes, &amp; magnifiers, fiber scopes, bore scopes, &amp; machine vision technique.</li> </ul>	visual, magn			
8.2 Inspect all high stressed transverse fillet welds greater than (0.25 inch) within 4 feet each centerline (8 feet total); high stressed areas include Dead Lever Bracket Pad, Brake Cylin Bottom Outlet Saddle, Internal Eduction Pipe guide, Front Sill Pad, Rear sill Pad, and BOV	der Support			
Method # #5 VT Accepted ■ F Comments: NO DEFECTS FOUND AT TIME OF INSPECTION	Repaired	<b>_</b> *	N/A	
8.3 Inspect the terminations of high stressed longitudinal fillet welds greater than (0.25 inch) 4 f the of the bottom centerline (8 feet total):  Method #	feet each sic	le of		
#5 VT Accepted  Comments: NO DEFECTS FOUND AT TIME OF INSPECTION	Repaired	*	N/A	
Inspectors Signature: TROY STEW/  Note: location and description of defects found and methods used to repair must be reported on		80		

Form # TCQ-1TRS Iss Approved-John Embree

Car Mark an	d Car Number: <sub>.</sub>	TILX 192469	_				С	ate:	03/24/201	6
		Structural In by Ins	tegrity Insp spection M			509(e)				
8.4 Inspect a	all tank shell butt	welds within (2	feet) of the bo	ttom longitud	linal centerline	e(4 feet to	otal)			
				Nauta du						
			Grith #1	Method # #4 UT	Accepted		Repaired		* N/A	
Tank Shell E (Girth Seam		B end	Grith #2	#4 UT	Accepted		Repaired		* N/A	
(Girtii Seairi	5).	2 00	Grith #3	#4 UT	Accepted	_	Repaired		* N/A	
			Grith #4	#4 UT	Accepted	<del></del>	Repaired		* N/A	
			Grith #5	#4 UT	Accepted	_ <b>_</b> F	Repaired		* N/A	
			Grith #6	#4 UT	Accepted	■ F	Repaired		* N/A	
			Grith #7	#4 UT	Accepted	<b>■</b> F	Repaired		* N/A	
		A end	Grith #8	#4 UT	Accepted	□ F	Repaired		* N/A	
	AAR M-100	Λ A								
End Location	Description	2 Appendix i	O, Paragrap	oh 3.1.1.2.	- Inboard o	of Bolsto			mments/ surements	
	Description	s attaching the								
Location	Description Inspect Weldsill		bolster to th	draft		Repair	red			
Location A	Description  Inspect Weldsill  Inspect Weldsill	s attaching the	bolster to th	draft draft		Repair	r <b>ed</b>			
A B	Inspect Weldsill Inspect Weldsill Inspect Weldsill	s attaching the s attaching the	bolster to th bolster to th Draft sill to th	draft draft he sill		Repair	red NA			
A B	Description  Inspect Weldsill  Inspect Weldsill  Inspect Weldspad  Inspect Weldspad	s attaching the s attaching the s attaching the	bolster to th bolster to th Draft sill to th	draft draft he sill	Accept	Repair	NA NA NA			

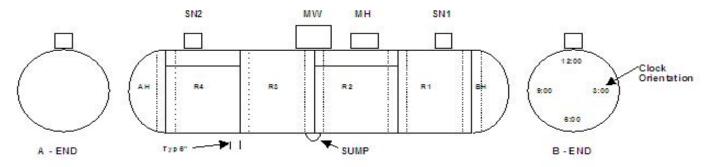
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Car Mark and Car Number:	TILX 192469	Date:_	03/24/2016
			*

#### Thickness Test per DOT 180.509(f)

9 Measure the thickness of the following and verify compliance with minimum thickness. If corrosion is visible, then take additional readings in a grid pattern to determine the minimum thickness in suspect areas and record the readings on a corrosion report

**Record Original Shell Thickness:** 0.4375



Location	Thickness								
R1B12:00	0.446	R2B12:00	0.452	R3B12:00	0.455	R4B12:00	0.455	R5B12:00	0.457
R1B3:00	0.443	R2B3:00	0.460	R3B3:00	0.459	R4B3:00	0.460	R5B3:00	0.458
R1B6:00	0.450	R2B6:00	0.463	R3B6:00	0.466	R4B6:00	0.462	R5B6:00	0.464
R1B9:00	0.448	R2B9:00	0.460	R3B9:00	0.462	R4B9:00	0.452	R5B9:00	0.465
R1A12:00	0.450	R2A12:00	0.452	R3A12:00	0.460	R4A12:00	0.453	R5A12:00	0.455
R1A3:00	0.461	R2A3:00	0.459	R3A3:00	0.471	R4A3:00	0.457	R5A3:00	0.457
R1A6:00	0.451	R2A6:00	0.465	R3A6:00	0.470	R4A6:00	0.457	R5A6:00	0.462
R1A9:00	0.454	R2A9:00	0.462	R3A9:00	0.466	R4A9:00	0.452	R5A9:00	0.461

Location	Thickness	Location	Thickness	Location	Thickness
R6B12:00	0.455	BH	0.523	AH	0.520
R6B3:00	0.455	BH12:00	0.531	AH12:00	0.530
R6B6:00	0.461	BH3:00	0.530	AH3:00	0.533
R6B9:00	0.455	BH6:00	0.533	AH6:00	0.566
R6A12:00	0.458	BH9:00	0.530	AH9:00	0.533
R6A3:00	0.466	MW B	0.722	MH B	0.557
R6A6:00	0.433	MW A	0.724	MH A	0.555
R6A9:00	0.455	SN1 B	0.383	SN2 B	NA
SUMP	0.451	SN1 A	0.385	SN2 A	NA

#### Service Life Shell Thickness Allowance DOT 180.509(g)

10. A tank car found with a shell thickness below the required minimum after forming (for its specification) may continue in service if any reduction in the required minimum thickness is not more than that specified

in the tables provided in the work instructions (identical with DOT specifications).

Accepted	Repaired	□ *	N/A 🔲
Inspectors Signature:	TROY	STEWAF	RT

\*Note:location and description of defects found and methods used to repair must be reported on form DOT 180

Car Mark and Car Number:TILX 192469	Date: 03/24/2016
Safety System Inspection per DOT 180.50	509(h)
11. Must verify and inspect the integrity of the following:	
<ul> <li>a) Thermal protection system</li> <li>b) Tank head puncture resistance</li> <li>c) Coupler Vertical restraint system</li> <li>d) Skid protection system</li> <li>e) Protective housing</li> <li>f) Insulation</li> </ul>	Accepted Repaired * N/A Accepted
<ul><li>12. Inspection of reclosing safety relief device:</li><li>12.1 . Record safety valve tag retest location, o-ring type &amp; date</li></ul>	Accepted ■ N/A □
tested:	Pressure Relief Device Information  MMCSI  VITION A  04/01/2016
D-3 Test Certificates also required	
13. Insepection of pressure relieve device (vent disc).:	Accepted N/A
Inspectors Signat	
* Note:location and description of defects found and methods used to	to repair must be reported on form DOT180

Form # TCQ-1TRS Approved-John Embree Issue Date: 12/15/06 Rev. 1 Rev. Date 06/01/2007 Page 5 of 7

Car Mark and Car Number:	TII X 192469	Date:	03/24/2016
our mark and our marrison.	112/102-100	Date.	00/27/2010

#### Lining and Coating Inspection and Test per DOT 180.509(i)

#### All TILC / TRMI linings will be inspected at the time of a shopping event and the car has been cleaned.

14. Inspect the lining or coating when applied to protect the tank shell from the lading.

The owner of the lining or coating shall provide the periodic inspection interval, test technique, and acceptance criteria for the lining or coating to the person responsible for qualifying the lining and coating.

#### As Received:

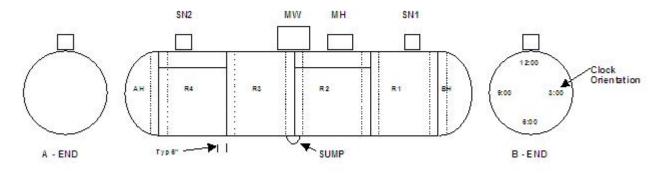
	Lining or		
	Accepted	Rejected *	N/A
a) Surface cleanliness			
b) Coating thickness			
c) Visual Inspection			

Comments: NA

#### As Received:

Location	Thickness	Location	Thickness
R1 6:00	N/A	R5 6:00	N/A
R1 10:00	N/A	R5 10:00	N/A
R2 6:00	N/A	R6 6:00	N/A
R2 10:00	N/A	R6 10:00	N/A
R3 6:00	N/A	R7 6:00	NA
R3 10:00	N/A	R7 10:00	NA
R4 6:00	N/A	MW	N/A
R4 10:00	N/A	SUMP	N/A

#### Measure and record the coating thickness at the locations listed above:



#### Leakage Pressure Test per DOT 180.509(j)

15. Perform a leak pressure	test on the tank per M-1002:	Acce
-----------------------------	------------------------------	------

Accepted ■ Repaired □\*

Leakage Test on the tank or service equipment to detect leakage from the following:

Leakage Pressure Test	Accepted	Repaired	N/A
a) manway covers			
b) cover plates			
c) service equipment			
d) top fittings & closures			
e) bottom fittings & closures			

16.	Perform interior heater system hydrostatic
	test at 200 psig minimum (no leaks allowed)

Accepted ■ Repaired □\* N/A □

Inspectors Signature: TROY STEWART

\* Note: location and description of defects found and methods used to repair must be reported on form DOT180

Form # TCQ-1TRS Approved-John Embree Issue Date: 12/15/06 Rev. 1 Rev. Date 06/01/2007 Page 6 of 7

	FO	RM DOT 180		
Car Mark and Car Number:TIL	Date:	03/24/2016		
Constructed Tank Specification:	111A100W1			
Stenciled Tank Specification:	111A100W1	Inspector's Signature:	TRO	/ STEWART
Location of inspection site: (include address and zip code)		WAY PRODUCTS INC		
(morade address and zip code)		/EIN/TRAO		
		A,USA		
17. The location and description of defect shall be listed below (r		ne method used to repair the line number from the inspection form):		
extent of the inspection a	and repairs performed.	ay be required depending on the nired when such work is performed		

Car Details				
Con Made	TILV	Car Number :	193946	
Car Mark :	TILX	_		
Constructed Tank Specification		Inspection Date :	05/03/2017	
:	111A100W1	mopeonion Bate . [	00/00/2017	
Stenciled Tank Specification :	111A100W1	Inspected By :	ANDRES GONZALEZ	
Last Reported Contents :	4909152 (ETHYL-ALC- ANHYD)	SI Reference #:	365139	
	ANHTD)	L	303139	
Inspection Site :		Station Stencil :	TXXV	
	MAINTENANCE SERVICES -			
Structural Integrity Inspection -	· Internal Visual Inspection			
Record visual inspection results f (if repairs are made, list repair me	or tank shell and heads, per the requiethod)	irements of FQ-TK-G-018		
a) Abrasion :	None or within accepted limits	Comment :		
b) Corrosion :	None or within accepted limits	Comment :		
c) Cracks :	None	Comment :		
d) Dents :	None or within accepted limits	Comment :		
e) Distortion :	None or within accepted limits	Comment :		
f) Weld Defects:	None	Comment :		
Structural Integrity Inspection	- External <u>Visual Inspection</u>			
(if repairs are made, list repair me		irements of FQ-TK-G-018		
a) Abrasion :	None or within accepted limits	Comment :		
b) Corrosion :	None or within accepted limits	Comment :		
c) Cracks :	None	Comment :		
d) Dents :	None or within accepted limits	Comment :		
e) Distortion :	None or within accepted limits	Comment :		

f) Weld Defects: No	one		Comment :	I			
Record inspection results for the inl	board body bolster	web to draft sill attachment	welds, per FQ-TK-0	-018 & FQ-TK-0	G-019		
Inspection Method : [V	T] Direct Visual	A - End	: Accepted		Comment :		
		B - End	: Accepted		Comment :		
Record inspection results for the inle	board draft sill to rea	ar sill pad attachment welds	s, per FQ-TK-G-018	& FQ-TK-G-019	9		
Inspection Method : [V	T] Direct Visual	A - End	: Accepted		Comment :		
_		B - End	: Accepted		Comment :		
Ultrasonic Girth Weld Inspection					_		
Record inspection results for tank s NOTE: Girth weld seam #1 is the B	shell butt welds with e-end head to tank s	in 2' of bottom longitudinal hell ring	centerline, per the re	equirements of F	QTKG020;		
a) Girth Seam # 1 (B - End) : A	ccepted		Comment :				
b) Girth Seam # 2 : A	ccepted		Comment :				
c) Girth Seam # 3 : A	ccepted		Comment :				
d) Girth Seam # 4 : A	ccepted		Comment :				
e) Girth Seam # 5 : A	ccepted		Comment :				
f) Girth Seam # 6 : A	ccepted		Comment :				
g) Girth Seam # 7 : Ad	ccepted		Comment :				
h) Girth Seam # 8 (A - End) : N	A		Comment :				
Safety System Inspection							
Verify and inspect the integrity of th	e applicable Safety	System components					
a) Thermal protection system	: Accepted		Comment :				
b) Tank head puncture resistance	: Accepted		Comment :				
c) Coupler vertical restraint system	Accepted		Comment :				
d) Skid protection system	Accepted		Comment :				
e) Protective housing	: Accepted		Comment :				
f) Insulation	: Accepted		Comment :				
Shipped Qualification Stencil							
Tank Qualification stencil as shi	··	RINITY RAIL MAINTENAN AGINAW 25	ICE SERVICES -	Qualified : 05/	/03/2017 I	2027 Due :	

#### **Tank Car Qualification Report - Tank Qualification** Verify legible markings on the tank car: Acceptable Acceptable results of inspection and tests This tank car conforms to the requirements set forth and has successfully passed the structural integrity inspection and test and shows no structural defect that may initiate cracks or propagate cracks and cause failure of the tank before the next inspection and test interval. All inspection and test were performed in accordance with the requirements of 49 CFR 180, Subpart F and the Trinity tank car qualification manual. ANDRES GONZALEZ Date: 05/03/2017 Level Visual Inspector Name: JOEL GONZALEZ Level: Date: 05/03/2017 Testing Technician Name: Comments Sabrina Luevano Recorded By: