

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot AAR APPLICATION NO. F-783187
 Applicant's No. 80 10304
 Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION Date 11/17/78

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other)
 Reporting Marks and Car Numbers GATX 12456 thru 12460, incl. Number of Cars Five (5)

1. Tank Specification <u>DOT 111A100W1</u>	SAFETY RELIEF DEVICES:
2. Stenciled Specification <u>DOT 111A100W1</u>	12. Type <u>Valve</u>
3. Commodity <u>DOT Part 173 *</u>	Start to Discharge, PSI. <u>75</u>
4. Initial Commodity Wt. per Gal., Lbs. <u>6.6</u>	Number <u>Two (2)</u> <u>17,830 ea.</u> **
TANK SHELL:	13. Flow Capacity, CFM (Air) Actual <u>21,397</u>
5. Full Water Capacity, Gal. <u>30,018</u>	14. Flow Capacity, CFM (Air) Required <u>1,840</u>
6. Dome Capacity or Outage, Gal. <u>600 Gal. @ 2%</u>	15. Tank Surface Area, Sq. Ft. <u>1,840</u>
7. Material & Thickness <u>ASTM A-515 Gr. 70</u>	CAR STRUCTURE:
<u>444" Thk. Shell & 9/16" Heads</u>	16. Bolster Slabbing Area, Sq. Ft. <u>N/A</u>
8. Lining <u>None</u> Inside Dia., in. <u>112</u>	17. Estimated Light Wt., Lbs. <u>70,300</u>
9. Head Radii: Main, in. <u>2:1 Ellips.</u> Knuckle, in. <u>N/A</u>	18. Center of Gravity Loaded, in. <u>87.37</u> ***
10. Test Pressure, PSI <u>100</u>	19. Rail Load Limit, Lbs. <u>263,000</u>
11. Insulation, in. <u>None</u> Kind <u>N/A</u>	20. Truck Capacity, Tons <u>100</u>
Thermal Conductivity, BTU/Hr/Sq Ft/°F/in. <u>N/A</u>	21. AAR Clearance Diagram, Pl. <u>C</u>

NOTES:

- * Methanol and products authorized by DOT Part 173 for which there are no special commodity requirements and other nonregulated commodities compatible with car design.
- ** 35,600 CFM Total
- *** Cars are equipped with 3-11/16" spring travel (D-5) trucks.

THE FOLLOWING DRAWINGS APPLY	PRECEDENT		
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NUMBER
22. General Arrangement	1058-2216	1058-2111	A-773190
23. Arrangement, tank	1147-215-10	1147-215-9	A-773190
24. Reinforced Openings, including calculations	1147-215-10	1147-215-9	A-773190
25. Anchorage, including calculations <u>U/F & Draft Still</u>	0-1210-339	--	A-743338-A
26. Fittings Arrangement	1147-215-10	1147-215-9	A-773190
27. Manway Assembly/Cover	1078-458-A	--	A-783053
28. Protective Housing	1136-806-C	1136-806-A	A-773123-B
29. Venting, Loading and Discharge Valves	1136-806-C	1136-806-A	A-773123-B
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085	--	L-770091
31. Heater Systems	None	--	--
32. Gauging Devices <u>(Outage Scale)</u>	1078-458-A	--	A-783053
33. Bottom Outlet Valve	1048-122-B	--	A-743323
34. Work <u>Bottom Outlet Nozzle Arrangement</u>	1072-634-A	--	A-783103
35. Stuffing Box	1073-113	--	A-783153
36. Skid Plate Arrangement	1305-15-B	1305-6	A-773215

REVISIONS:

APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards
 SIGNATURE A. E. Price / R. B. J.
 TITLE CHIEF ENGINEER

APPROVAL AAR Tank Car Committee Date Approved DEC 30 1978 DC Miller for RC REBER
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:

GATX 12456 thru 12460, incl.

Date 1/12/79
 BY A. E. Price / R. B. J.
 TITLE CHIEF ENGINEER

SUMMARY OF DEVIATIONS

<u>LINE NO.</u>	<u>DESCRIPTION</u>
22	A. Removed lease boards, filler plates and mudguards. B. Removed 2-1/2" vac. valve from top unloading. C. Changed clearance diagram to plate "C". D. Changed couplers to SE-60-CHTE and revised curve negotiability to suit. E. Added skid F. Changed cap on bottom outlet to 6" x 2-1/2" with 2-1/2" plug.
23,24,26	A. Removed mudguards and filler step. B. Changed stuffing box to screwed gland type.
28,29	A. Added gasket to table. B. Changed weld on cover hinge pin.
36	A. Reduced overall dimensions of skid, but still held 3:1 ratio. B. Removed jacket flashings. C. Removed coil cutouts in bottom cover plate.

NOTE: This order was placed prior to July 1, 1978.

DEC 30 1978

RC Weber for
RC Weber

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot AAR APPLICATION NO. F-793114
 Applicant's No. 80 10418
 Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION Date 5/4/79

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other)
 Reporting Marks and Car Numbers GATX 18581 thru 18600, incl. Number of Cars Twenty (20)

1. Tank Specification <u>DOT 111A100W1</u>	SAFETY RELIEF DEVICES:
2. Stenciled Specification <u>DOT 111A100W1</u>	12. Type <u>Valve</u>
3. Commodity <u>DOT Part 173 *</u>	Number <u>Two (2)</u> Start to Discharge, PSI <u>75</u>
4. Initial Commodity Wt. per Gal., Lbs. <u>6.6</u>	13. Flow Capacity, CFM (Air) Actual <u>17,830 ea. **</u>
TANK SHELL:	14. Flow Capacity, CFM (Air) Required <u>21,397</u>
5. Full Water Capacity, Gal. <u>30,018</u>	15. Tank Surface Area, Sq. Ft. <u>1,840</u>
6. Done Capacity or Outage, Gal. <u>600 Gal. @ 2%</u>	CAR STRUCTURE:
7. Material & Thickness <u>ASTM A-515 Gr. 70</u>	18. Bolster Slabbing Area, Sq. Ft. <u>N/A</u>
<u>.444" Thk. Shell; 9/16" Heads</u>	17. Estimated Light Wt., Lbs. <u>71,300</u>
8. Lining <u>None</u> Inside Dia., In. <u>112</u>	18. Center of Gravity Loaded, In. <u>87.37 ***</u>
9. Head Radial: Main, In. <u>2:1 Ellips.</u> Knuckle, In. <u>N/A</u>	19. Rail Load Limit, Lbs. <u>263,000</u>
10. Test Pressure, PSI <u>100</u>	20. Truck Capacity, Tons <u>100</u>
11. Insulation, In. <u>None</u> Kind <u>N/A</u>	21. AAR Clearance Diagram, Pl. <u>C</u>
Thermal Conductivity, BTU/Hr/Sq Ft/°F/In. <u>N/A</u>	

NOTES: * Methanol and products authorized by DOT Part 173 for which there are no special commodity requirements and other nonregulated commodities compatible with car design.
 ** 35,660 CFM Total
 *** Cars are equipped with 3-11/16" spring travel (D-5) trucks.

THE FOLLOWING DRAWINGS APPLY	PRECEDENT		
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NUMBER
22. General Arrangement	1058-2261	1058-2111	A-773190
23. Arrangement, tank	1147-215-12	1147-215-9	A-773190
24. Reinforced Openings, including calculations	1147-215-12	1147-215-9	A-773190
25. Anchorage, including calculations <u>U/F & Draft Sill</u>	0-1210-339	--	A-743338-A
26. Fittings Arrangement	1147-215-12	1147-215-9	A-773190
27. Manway Assembly/Cover	1078-458-A	--	A-783053
28. Protective Housing	1136-806-C	1136-806-A	A-773123-B
29. Venting, Loading and Discharge Valves	1136-806-C	1136-806-A	A-773123-B
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085	--	L-770091
31. Heater Systems	None	--	A-783053
32. Gauging Devices <u>(Outage Scale)</u>	1078-458-A	--	A-783153
33. Bottom Outlet Valve	1048-144-A	1048-144	A-783153
34. <u>XXXXX Bottom Outlet Nozzle Arrangement</u>	1072-651-B	1072-651	A-783153
35. Stuffing Box	1073-113	--	A-783153

36. REVISIONS: APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards
 SIGNATURE A.E. Price / D.B.M.
 TITLE CHIEF ENGINEER

APPROVAL AAR Tank Car Committee Date Approved JUN 04 1979 B.J. Hodges for R.C. GEBER
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:
GATX 18581 thru 18600, incl. Date 6/8/79
 BY A.E. Price / D.B.M.
 TITLE CHIEF ENGINEER

SUMMARY OF DEVIATIONS

<u>LINE NO.</u>	<u>DESCRIPTION</u>
22	A. Removed lease boards, filler plates and mudguards. B. Removed 2-1/2" vac. valve from top unloading. C. Changed clearance diagram to plate "C". D. Changed couplers to SE-60-CHTE, yokes to Y-40-AHTE and revised curve negotiability to suit. E. Changed 6" positive bottom outlet to 6" internal valve with 4" extension and cap with 2-1/2" plug. F. Changed estimated lightweight to 71,300#.
23,24,26	A. Removed mudguards and filler step. B. Changed stuffing box to screwed gland type. C. Changed bottom outlet cutout and reinforcement area calculations to cover change from 6" plain positive outlet to 6" positive bottom outlet - internal valve. D. Revised existing center reinforcement bars and added new bar between bottom outlet nozzle and sump due to change in bottom outlet.
28,29	A. Added gasket to table. B. Changed weld on cover hinge pin.
33	A. Revised to show post for post flange assembly in phantom to indicate prior assembly of post to outlet flange.
34	A. Tank cutout revised to latest GATX standard. B. Revised to show posts for post flange assembly assembled to outlet nozzle flange prior to assembly of flange to car. C. Added gasket to table.

NOTE: Order for these cars placed after July 1, 1978.

JUN 04 1979

B. J. Hodges for R. C. Carter

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot AAR APPLICATION NO. A-833012
 Applicant's No. 80 10921
 Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION Date 5/18/83

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other)
 Reporting Marks and Car Numbers GATX 21223 to 21247, Incl. Number of Cars Twenty-Five (25)

1. Tank Specification <u>DOT 111A100W-1</u>	SAFETY RELIEF DEVICES:
2. Stenciled Specification <u>DOT 111A100W-1</u>	12. Type <u>Valve</u>
3. Commodity <u>DOT Part 173*</u>	Start to
4. Initial Commodity Wt. per Gal., Lbs., <u>6.678</u>	Number <u>Two (2)</u> Discharge, PSI <u>75</u>
TANK SHELL:	13. Flow Capacity, CFM (Air) Actual <u>17830 Ea. **</u>
5. Full Water Capacity, Gal. <u>29,947</u>	14. Flow Capacity, CFM (Air) Required <u>21607</u>
6. Dome Capacity or Outage, Gal. <u>599 Gals. @ 2%</u>	15. Tank Surface Area, Sq. Ft. <u>1862</u>
7. Material & Thickness <u>ASTM A-515, Gr. 70</u>	CAR STRUCTURE:
<u>7/16" Thk. Shell and Heads</u>	16. Bolster Slabbing Area, Sq. Ft. <u>N/A</u>
8. Lining <u>None</u> Inside Dia., In. <u>110-1/4"</u>	17. Estimated Light Wt., Lbs. <u>67000</u>
9. Head Radii: Main, In. <u>2:1 Ellips Knuckle, In. N/A</u>	18. Center of Gravity Loaded, In. <u>86.26***</u>
10. Test Pressure, PSI <u>100</u>	19. Rail Load Limit, Lbs. <u>263000</u>
11. Insulation, In. <u>None</u> Kind <u>N/A</u>	20. Truck Capacity, Tons <u>100</u>
Thermal Conductivity, BTU/Hr/Sq Ft/F/In. <u>N/A</u>	21. AAR Clearance Diagram, Pl. <u>B</u>

NOTES:
 *Ethanol and products authorized by DOT Part 173 for which there are no special commodity requirements and other non-regulated commodities compatible with car design.
 **35,660 CFM total
 ***Cars are equipped with 3-11/16" Spring Travel (D-5) Trucks

THE FOLLOWING DRAWINGS APPLY	PRECEDENT		
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NO.
22. General Arrangement	1058-2495		
23. Arrangement, tank	1147-379-2		
24. Reinforced Openings, including calculations	1147-379-2		
25. U/F & Draft Sill	1274-5		
26. Fittings Arrangement	1147-379-2		
27. Manway Assembly/Cover	1078-596		
28. Protective Housing	None		
29. Venting, Loading and Discharge Valves	None		
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085		L-770091
31. Heater Systems	None		
32. Gauging Devices <u>(Outage Scale)</u>	1078-596		
33. Bottom Outlet <u>Nozzle Arrangement</u>	1072-688-A		
34. <u>Stuffing Box</u>	1073-113-C		
35. <u>Bottom Outlet Valve Arrangement</u>	1048-144-A		A-793025-B
36.			

REVISIONS:

APPLICATION BY T. S. Lapikas
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards.

SIGNATURE T. S. Lapikas
 TITLE T. S. Lapikas, Manager, Tank Car Engineering

APPROVAL AAR Tank Car Committee Date Approved 7/18/83 R. C. Reher for R. C. Reher Secy.
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:
GATX 21223 thru 21247, Incl.

Date 10/17/83
 BY T. S. Lapikas
 TITLE Manager, Tank Car Engineering

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Bailot AAR APPLICATION NO. F-793254
 Applicant's No. BO 10539
 Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION Date 8/30/79

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other)
 Reporting Marks GATX 23151 thru 23160, incl. Number of Cars Ten (10)

1. Tank Specification DOT 111A100W1 SAFETY RELIEF DEVICES:
 2. Stenciled Specification DOT 111A100W1 12. Type Valve
 3. Commodity DOT Part 173 * Start to Discharge, PSI 75
 4. Initial Commodity Wt. per Gal., Lbs. 6.8 Number Two (2) 13. Flow Capacity, CFM (Air) Actual 17,830 Ea. **
 TANK SHELL: 14. Flow Capacity, CFM (Air) Required 21,397
 5. Full Water Capacity, Gal. 30,018 15. Tank Surface Area, Sq. Ft. 1,840
 6. Dome Capacity or Outage, Gal. 600 Gal. @ 2% CAR STRUCTURE:
 7. Material & Thickness ASTM A-515 Gr. 70 16. Bolster Slabbing Area, Sq. Ft. N/A
.404" Thk. Shell; 9/16" Heads 17. Estimated Light Wt., Lbs. 71,300
 8. Lining None Inside Dia., In. 112 18. Center of Gravity Loaded, In. 87.37 ***
 9. Head Radii: Main, In. 2:1 Ellips. Knuckle, In. N/A 19. Rail Load Limit, Lbs. 263,000
 10. Test Pressure, PSI 100 20. Truck Capacity, Tons 100
 11. Insulation, In. None Kind N/A 21. AAR Clearance Diagram, Pl. B
 Thermal Conductivity, BTU/Hr/Sq Ft./°F/In. N/A

NOTES: * Alcohol and products authorized by DOT Part 173 for which there are no special commodity requirements and other nonregulated commodities compatible with car design.
 ** 35,660 CFM Total
 *** Cars are equipped with 3-11/16" spring travel (D-5) trucks.

THE FOLLOWING DRAWINGS APPLY	PRECEDENT		
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NUMBER
22. General Arrangement	1058-2278	1058-2111	A-773190
23. Arrangement, tank	1147-215-12	1147-215-9	A-773190
24. Reinforced Openings, including calculations	1147-215-12	1147-215-9	A-773190
25. Anchorage, including calculations <u>U/F & Draft Sill</u>	0-1210-339	--	A-743338-A
26. Fittings Arrangement	1147-215-12	1147-215-9	A-773190
27. Manway Assembly/Cover	1078-458-A	--	A-783053
28. Protective Housing	1136-806-C	1136-806-A	A-773123-B
29. Venting, Loading and Discharge Valves	1136-806-C	1136-806-A	A-773123-B
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085	--	L-770091
31. Heater Systems	None	--	--
32. Gauging Devices <u>(Outage Scale)</u>	1078-458-A	--	A-783053
33. Bottom Outlet Valve	1048-144-A	--	A-793025-B
34. XXXX Bottom Outlet Nozzle Arrangement	1072-651-B	1072-651	A-783153
35. Stuffing Box	1073-113	--	A-783153

REVISIONS:

APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards
 SIGNATURE A. E. Price D.B.M.
 TITLE CHIEF ENGINEER

APPROVAL AAR Tank Car Committee Date Approved SEP 25 1979 B.F. Hodges for R.C. Reber
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:
GATX 23151 thru 23160, incl.

Date 8/27/79
 BY A. E. Price D.B.M.
 TITLE CHIEF ENGINEER

SUMMARY OF DEVIATIONS

<u>LINE NO.</u>	<u>DESCRIPTION</u>
22	A. Removed lease boards, filler plates and mudguards. B. Removed 2-1/2" vac. valve from top unloading. C. Changed couplers to SE-60-CHTE, yokes to Y-40-AHTE and revised curve negotiability to suit. D. Changed 6" positive bottom outlet to 6" internal valve with 4" extension and cap with 2-1/2" plug. E. Changed estimated lightweight to 71,300#. F. Changed platform handrail height from 30" to 29". G. Overall height reduced from 15'-0-15/16" to 14'-11-15/16".
23,24,26	A. Removed mudguards and filler step. B. Changed stuffing Box to screwed gland type. C. Changed bottom outlet cutout and reinforcement area calculations to cover change from 6" plain positive outlet to 6" positive bottom outlet - internal valve. D. Revised existing center reinforcement bars and added new bar between bottom outlet nozzle and sump due to change in bottom outlet.
28,29	A. Added gasket to table. B. Changed weld on cover hinge pin.
34	A. Tank cutout revised to latest GATX standard. B. Revised to show posts for post flange assembly assembled to outlet nozzle flange prior to assembly of flange to car. C. Added gasket to table.

NOTE: Order for these cars placed before July 1, 1979.

SEP 25 1979

B. F. Hodges for R. C. REBER

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

Rev. "A"

AAR APPLICATION NO. F-743160

APPROVAL REQUESTED OF: SECRETARY, MECH. DIV. AAR AAR COMMITTEE ON TANK CARS

APPLICANT'S NO. BO 9711
DATE 3-29-74

GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICANT: _____

APPLICATION FOR APPROVAL OF: CONSTRUCTION CONVERSION ALTERATIONS WELDED REPAIRS OTHER

REPORTING MARKS AND CAR NUMBERS: GATX 25005 & 25006 NUMBER OF CARS: Two (2)

1. TANK SPECIFICATION	<u>DOT 111A100W1</u>	12. TYPE	<u>Safety Valves</u>
2. STENCILED SPECIFICATION	<u>DOT 111A100W1</u>	13. NUMBER	<u>Two (2)</u>
3. COMMODITY	<u>ALCOHOL ***</u>	14. START TO DISCHARGE, PSI	<u>75#</u>
4. INITIAL COMMODITY WT. PER GAL., LBS.	<u>6.56</u>	15. FLOW CAPACITY, GPM (AIR) ACTUAL	<u>17,830 ea. *</u>
5. TANK SHELL: FULL WATER CAPACITY, GAL.	<u>30,003</u>	16. FLOW CAPACITY, GPM (AIR) REQUIRED	<u>21,942</u>
6. XXXXXXXXXX OUTAGE, GAL.	<u>600</u>	17. TANK SURFACE AREA, SQ. FT.	<u>1,840</u>
7. MATERIAL & THICKNESS	<u>ASTM A-515 Gr. 70</u>	18. BOLSTER SLABBING AREA, SQ. FT.	<u>N/A</u>
	<u>.444" Thk. Shell & 9/16" Thk. Hds.</u>	19. ESTIMATED LIGHT WT., LBS.	<u>69,200</u>
8. LINING	<u>None</u>	20. CENTER OF GRAVITY LOADED, IN.	<u>86.6 **</u>
	<u>INSIDE DIAMETER, IN. 112"</u>	21. RAIL LOAD LIMIT, LBS.	<u>263,000</u>
9. HEAD RADIUS: MAIN, IN.	<u>2:1 Ellips.</u>	22. TRUCK CAPACITY, TONS	<u>100</u>
	<u>SKUCKLE, IN. N/A</u>	23. MAX. ALLOWABLE LBS./GAL. XXXXXXXXXX	<u>6.6</u>
10. TEST PRESSURE, PSI	<u>100</u>	24. AAR CLEARANCE DIAGRAM PL.	<u>B</u>
11. INSULATION, IN.	<u>None</u>		
	<u>KIND N/A</u>		
	<u>THEMAL CONDUCTIVITY, BTU/HR/SQ. FT./°F/IN. N/A</u>		

NOTES: * 35,660 CFM Total

** 52'-7-1/2" Truck Centers

*** Alcohol and products authorized by DOT Part 173 for which there are no special commodity requirements and non-regulated commodities compatible with car design.

THE FOLLOWING DRAWINGS APPLY	DRAWING NUMBER	PRECEDENT	
		DRAWING NUMBER	APPLICATION NUMBER
23. GENERAL ARRANGEMENT	1058-1779	--	A-733108-A
24. ARRANGEMENT, TANK	1147-215-8	1147-215-4-B	A-733108-A
25. REINFORCED OPENINGS, INCLUDING CALCULATIONS	1147-215-8	1147-215-4-B	A-733108-A
26. ANCHORAGE, INCLUDING CALCULATIONS	None		
27. FITTINGS ARRANGEMENT	1147-215-8	1147-215-4-B	A-733108-A
28. MANWAY ASSEMBLY XXXX	1078-247-E	1078-247-D	A-733049
29. PROTECTIVE HOUSING	None		
30. VENTING, LOADING AND DISCHARGE VALVES	<u>Future Top Unloading</u>	1136-596	A-733049
31. SAFETY RELIEF DEVICES	1165-25-J	--	24555
32. HEATER SYSTEMS	None		
33. GAGING DEVICES	<u>Outage Scale</u>	1078-247-E	A-733049
34. BOTTOM OUTLET VALVE	1048-122-A	--	25897
35. XXXX	<u>Bottom Outlet Nozzle</u>	1072-436-D	25950
36.			
37.			

REVISIONS: Rev. "A" - 6/5/74

APPLICATION BY: J. M. P. You A. E. Price TITLE: CHIEF ENGINEER, TRANSPORTATION DIVISION

APPROVAL: _____

AAR APPROVAL BY: SECRETARY, MECH. DIV. TANK CAR COMMITTEE DATE APPROVED: JUL 15 1974 B. C. Reber (SIGNATURE)

CERTIFICATION: THE CARS ENUMERATED BELOW CONFORM TO THE ABOVE APPROVED DESCRIPTION AND TO ALL APPLICABLE DOT AND AAR REQUIREMENTS, INCLUDING SPECIFICATIONS, REGULATIONS, RULES OF INTERCHANGE AND THE DOT RAILROAD SAFETY APPLIANCE STANDARDS.

INITIALS AND CAR NUMBERS: GATX 25005 & 25006

DATE: July 18, 1974

BY: J. M. P. You A. E. Price

TITLE: C Chief Engineer

FORM AAR 4-2 REVISED 1-1-72 PAGE 1 OF 2

BO 9711

SUMMARY OF DEVIATIONS

APPLICATION NO. F-743160
BD 9711
Page 2 of 2

LINE NO.

DESCRIPTION

24,25,27

1. Relocated Trainline Brackets
2. Revised Draft Sill Slabbing to new standard.

28,33

1. Revised Hinge Pin on Manway Cover

34

1. Changed Post Flange of Valve to fabricated rather than cast.

JUL 15 1974
2-OF-2

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

AAR APPLICATION NO. F-743159
 APPLICANT'S NO. BO 9710
 DATE 3-29-74

APPROVAL REQUESTED OF: SECRETARY, MECH. DIV., AAR AAR COMMITTEE ON TANK CARS

APPLICANT: GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICATION FOR APPROVAL OF: CONSTRUCTION CONVERSION ALTERATIONS WELDED REPAIRS (OTHER)

REPORTING MARKS AND CAR NUMBERS: GATX 26091 thru 26100, incl. NUMBER OF CARS: Ten (10)

1. TANK SPECIFICATION: <u>DOT 111A100W1</u> 2. STENCILED SPECIFICATION: <u>DOT 111A100W1</u> 3. COMMODITY: <u>METHANOL</u> 4. INITIAL COMMODITY WT. PER GAL., LBS.: <u>6.6</u> TANK SHELL: 5. FULL WATER CAPACITY, GAL.: <u>30,003</u> 6. DOME CAPACITY OR OUTAGE, GAL.: <u>600</u> 7. MATERIAL & THICKNESS: <u>ASTM A-515 Gr. 70</u> <u>.444" Thk. Shell & 9/16" Thk. Hds.</u> 8. LINING: <u>None</u> <small>INSIDE</small> DIAMETER, IN.: <u>112"</u> 9. HEAD RADII: MAIN, IN.: <u>2:1 Ellips.</u> KNUCKLE, IN.: <u>N/A</u> 10. TEST PRESSURE, PSI: <u>100</u> 11. INSULATION, IN.: <u>None</u> KIND: <u>N/A</u> THERMAL CONDUCTIVITY, BTU/HR/SQ. FT./IN.: <u>N/A</u>	SAFETY RELIEF DEVICES: <u>Safety Valves</u> 12. TYPE: <u>Two (2)</u> START TO DISCHARGE, PSI: <u>75#</u> NUMBER: <u>Two (2)</u> 13. FLOW CAPACITY, CFM (AIR) ACTUAL: <u>17,830 ea. *</u> <u>21,942</u> 14. FLOW CAPACITY, CFM (AIR) REQUIRED: <u>1,840</u> 15. TANK SURFACE AREA, SQ. FT.: <u>N/A</u> CAR STRUCTURE: 16. BOLSTER SLABBING AREA, SQ. FT.: <u>N/A</u> 17. ESTIMATED LIGHT WT., LBS.: <u>69,200</u> 18. CENTER OF GRAVITY LOADED, IN.: <u>86.6 **</u> 19. RAIL LOAD LIMIT, LBS.: <u>263,000</u> 20. TRUCK CAPACITY, TONS: <u>100</u> 21. MAX. ALLOWABLE LBS./GAL.: <u>6.6</u> 22. AAR CLEARANCE DIAGRAM PL.: <u>B</u>
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NOTES: * 35,660 CFM Total
 ** 52'-7-1/2" Truck Centers

THE FOLLOWING DRAWINGS APPLY	DRAWING NUMBER	PRECEDENT	
		DRAWING NUMBER	APPLICATION NUMBER
23. GENERAL ARRANGEMENT	1058-1867	1058-1779	A-733108-A
24. ARRANGEMENT, TANK	1147-215-8	1147-215-4-B	A-733108-A
25. REINFORCED OPENINGS, INCLUDING CALCULATIONS	1147-215-8	1147-215-4-B	A-733108-A
26. ARCHORAGE, INCLUDING CALCULATIONS	None		
27. FITTINGS ARRANGEMENT	1147-215-8	1147-215-4-B	A-733108-A
28. MANWAY ASSEMBLY XXXX	1078-247-E	1078-247-D	A-733049
29. PROTECTIVE HOUSING	375-24-A	--	24563-A
30. VENTING, LOADING AND DISCHARGE VALVES: <u>Top Unloading</u>	1136-533-B	1136-533	25897
31. SAFETY RELIEF DEVICES	1155-25-J	--	24555
32. HEATER SYSTEMS	None		
33. GAGING DEVICES: <u>Outage Scale</u>	1078-247-E	1078-247-D	A-733049
34. BOTTOM OUTLET VALVE	1048-122-A	--	25897
35. XXXX <u>Bottom Outlet Nozzle</u>	1072-436-D	--	25950
36.			
37.			

REVISIONS:

APPLICATION BY: J. M. P. Yu & E. Price TITLE: CHIEF ENGINEER, TRANSPORTATION DIVISION
 APPROVAL: _____ DATE APPROVED: JUL 15 1974
 AAR APPROVAL BY: SECRETARY, MECH. DIV. TANK CAR COMMITTEE R. C. Reber (SIGNATURE)

CERTIFICATION: THE CARS ENUMERATED BELOW CONFORM TO THE ABOVE APPROVED DESCRIPTION AND TO ALL APPLICABLE DOT AND AAR REQUIREMENTS, INCLUDING SPECIFICATIONS, REGULATIONS, RULES OF INTERCHANGE AND THE DOT RAILROAD SAFETY APPLIANCE STANDARDS.

INITIALS AND CAR NUMBERS: GATX 26091 thru 26100, incl.
 DATE: July 18, 1974
 BY: J. M. P. Yu & E. Price
 TITLE: Chief Engineer

SUMMARY OF DEVIATIONS

APPLICATION NO. F-743159
BO 9710
Page 2 of 2

<u>LINE NO.</u>	<u>DESCRIPTION</u>
23	1. Added Top Unloading Valves with Protective Housing
24,25,27	1. Relocated Trainline Brackets 2. Revised Draft Sill Slabbing to new standard.
28,33	1. Revised Hinge Pin on Manway Cover
34	1. Changed Post Flange of Valve to fabricated rather than cast.
30	1. Added Weld Pads at Pipe Guide Location 2. Revised Pipe Guide to latest standard 3. Changed Studs retaining Ball Valve and 1 in. Pipe Plug to latest standards

JUL 15 1974
2-OF-2

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot AAR APPLICATION NO. A-823035
 Applicant's No. BO 10799
 Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION Date 5-28-82

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other) _____
 Reporting Marks _____
 and Car Numbers GATX 36036 thru GATX 36045, Incl. Number of Cars Ten (10)

1. Tank Specification <u>DOT 111A100W1</u>	SAFETY RELIEF DEVICES:
2. Stenciled Specification <u>DOT 111A100W1</u>	12. Type <u>Valve</u>
3. Commodity <u>DOT Part 173 *</u>	Number <u>Two (2)</u> Start to Discharge, PSI <u>75</u>
4. Initial Commodity Wt. per Gal., Lbs. <u>7.99</u>	13. Flow Capacity, CFM (Air) Actual <u>17,830 Ea **</u>
TANK SHELL:	14. Flow Capacity, CFM (Air) Required <u>21,712</u>
5. Full Water Capacity, Gal. <u>30,776</u>	15. Tank Surface Area, Sq. Ft. <u>1,873</u>
6. Dome Capacity or Outage, Gal. <u>616 Gals. @ 2%</u>	CAR STRUCTURE:
7. Material & Thickness <u>ASTM A-515, Gr. 70</u>	16. Bolster Slabbing Area, Sq. Ft. <u>N/A</u>
<u>444 Thk. Shell: 7/16" Thk. Heads</u>	17. Estimated Light Wt., Lbs. <u>70,700</u>
8. Lining <u>None</u> Inside Dia., In. <u>112</u>	18. Center of Gravity Loaded, In. <u>86.94 ***</u>
9. Head Radii: Main, In. <u>2:1 Ellips Knuckle, In. N/A</u>	19. Rail Load Limit, Lbs. <u>263,000</u>
10. Test Pressure, PSI <u>100</u>	20. Truck Capacity, Tons <u>100</u>
11. Insulation, In. <u>None</u> Kind <u>N/A</u>	21. AAR Clearance Diagram, Pl. <u>B</u>
Thermal Conductivity, BTU/Hr/Sq Ft ² /In. <u>N/A</u>	

NOTES: * Naphtha and other products authorized by DOT Part 173 for which there are no special commodity requirements and other non-regulated commodities compatible with car design.
 ** 35,660 CFM total.
 *** Cars are equipped with 3-11/16" Spring Travel (D-5) Trucks.

THE FOLLOWING DRAWINGS APPLY	PRECEDENT	
	DRAWING NUMBER	APPLICATION NO.
22. General Arrangement	1058-2467	
23. Arrangement, tank	1147-369-1	
24. Reinforced Openings, including calculations	1147-369-1	
25. Anchorage, including calculations U/F and Draft Sill	0-1210-339-A	A-793003-A
26. Fittings Arrangement	1147-369-1	
27. Manway Assembly/Cover	1078-458-D	A-813465
28. Protective Housing	1136-806-F	A-813340
29. Venting, Loading and Discharge Valves	1136-806-F	A-813340
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085	L-770091
31. Heater Systems	None	
32. Gauging Devices <u>Outage Scale</u>	1078-458-D	A-813465
33. Bottom Outlet Valve	1048-144-A	A-793025-B
34. Repairs <u>Bottom Outlet Nozzle Arrangement</u>	1072-651-D	A-803074
35. <u>Stuffing Box</u>	1073-113-A	A-803165

REVISIONS: _____
 APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards.
 SIGNATURE E. R. G. [Signature]
 TITLE General Manager - Operational Engineering
 APPROVAL AAR Tank Car Committee Date Approved 8/19/82 [Signature] for R.C. Reber Secy.
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:
GATX 36036 thru 36045 incl.
 Date Oct. 15, 1982
 BY C. L. [Signature]
 TITLE GEN. MGR, OPERATIONAL ENGINEERING
 Page 1 of 1

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot AAR APPLICATION NO. F-783140
 Applicant's No. BO 10271
 Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION Date 11/10/78

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other)
 Reporting Marks GATX 36061 thru 36080, incl. Number of Cars Twenty (20)

1. Tank Specification DOT 111A100W1 SAFETY RELIEF DEVICES:
 2. Stenciled Specification DOT 111A100W1 12. Type Valve
 3. Commodity DOT Part 173 * Number Two (2) Start to Discharge, PSI 75
 4. Initial Commodity Wt. per Gal., Lbs. 6.6 13. Flow Capacity, CFM (Air) Actual 17,830 ea. **
 TANK SHELL: 14. Flow Capacity, CFM (Air) Required 21,397
 5. Full Water Capacity, Gal. 30,018 15. Tank Surface Area, Sq. Ft. 1,840
 6. Dome Capacity or Outage, Gal. 600 Gal. @ 2% CAR STRUCTURE:
 7. Material & Thickness ASTM A-515 Gr. 70 16. Bolster Slabbing Area, Sq. Ft. N/A
 8. Lining None Inside Dia., In. 112 17. Estimated Light Wt., Lbs. 70,300
 9. Head Radii: Main, In. 2:1 Ellips. Knuckle, In. N/A 18. Center of Gravity Loaded, In. 87.15 ***
 10. Test Pressure, PSI 100 19. Rail Load Limit, Lbs. 263,000
 11. Insulation, In. None Kind N/A 20. Truck Capacity, Tons 100
 Thermal Conductivity, BTU/Hr/Sq Ft./°F/In. N/A 21. AAR Clearance Diagram, Pl. C

NOTES: * Methanol and products authorized by DOT Part 173 for which there are no special commodity requirements and other nonregulated commodities compatible with car design.
 ** 35,660 CFM Total
 *** Cars are equipped with 3-11/16" spring travel (D-5) trucks.

THE FOLLOWING DRAWINGS APPLY	PRECEDENT		
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NUMBER
22. General Arrangement	1058-2196	1058-2111	A-773190
23. Arrangement, tank	1147-215-10	1147-215-9	A-773190
24. Reinforced Openings, including calculations	1147-215-10	1147-215-9	A-773190
25. Anchorage, including calculations <u>U/E & Drafts:jl</u>	0-1210-339	--	A-743338-A
26. Fittings Arrangement	1147-215-10	1147-215-9	A-773190
27. Manway Assembly/Cover	1078-458-A	--	A-783053
28. Protective Mousing	1136-806-C	1136-806-A	A-773123-B
29. Venting, Loading and Discharge Valves	1136-806-C	1136-806-A	A-773123-B
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085	--	L-770091
31. Heater Systems	None	--	--
32. Gauging Devices <u>(Outage Scale)</u>	1078-458-A	--	A-783053
33. Bottom Outlet Valve	1048-122-D	--	A-743323
34. xxxx Bottom Outlet Nozzle Arrangement	1072-634-A	--	A-783103 Pend.
35. Stuffing Box	1073-113	--	A-783153 Pend.
36. Skid Plate Arrangement	1305-15-B	1305-6	A-773215

REVISIONS:
 APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards
 SIGNATURE A.E. PULL / R.G. Z.
 TITLE CHIEF ENGINEER

APPROVAL AAR Tank Car Committee Date Approved DEC 30 1978 RC Tucker for RC REED
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:
GATX 36061 thru 36080, incl.
 Date 1/12/79
 BY A.E. Pull / R.G. Z.
 TITLE CHIEF ENGINEER

SUMMARY OF DEVIATIONS

<u>LINE NO.</u>	<u>DESCRIPTION</u>
22	A. Removed lease boards, filler plates and mudguards. B. Removed 2-1/2" vac. valve from top unloading. C. Changed clearance diagram to plate "C". D. Changed couplers to SE-60-CHTE and revised curve negotiability to suit. E. Added skid and safety chains. F. Changed cap on bottom outlet to 6" x 2-1/2" w/2-1/2" plug.
23,24,26	A. Removed mudguards and filler step. B. Changed stuffing box to screwed gland type.
28,29	A. Added gasket to table. B. Changed weld on cover hinge pin.
36	A. Reduced overall dimensions of skid, but still held 3:1 ratio. B. Removed jacket flashings. C. Removed coil cutouts in bottom cover plate.

NOTE: This order was placed prior to July 1, 1978.

DEC 30 1978
DC Mucko for
RC REBEL

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

AAR APPLICATION NO. F-743205
 APPLICANT'S NO. BO 9747
 DATE 5-23-74

APPROVAL REQUESTED OF: SECRETARY, MECH. DIV., AAR AAR COMMITTEE ON TANK CARS

APPLICANT: GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICATION FOR APPROVAL OF: CONSTRUCTION CONVERSION ALTERATIONS WELDED REPAIRS (OTHER)

REPORTING MARKS AND CAR NUMBERS: GATX 46149 thru 46200, incl. NUMBER OF CARS: Fifty-two (52)

1. TANK SPECIFICATION: <u>DOT 111A100W1</u>	12. TYPE: <u>Safety Valves</u>
2. STENCILED SPECIFICATION: <u>DOT 111A100W1</u>	13. FLOW CAPACITY, CFM (AIR) ACTUAL: <u>17,830 ea. *</u>
3. COMMODITY: <u>METHANOL</u>	14. FLOW CAPACITY, CFM (AIR) REQUIRED: <u>21,942</u>
4. INITIAL COMMODITY WT. PER GAL., LBS.: <u>6.6</u>	15. TANK SURFACE AREA, SQ. FT.: <u>1,840</u>
5. FULL WATER CAPACITY, GAL.: <u>30,018</u>	16. BOLSTER SLABBING AREA, SQ. FT.: <u>N/A</u>
6. MAXIMUM OUTAGE, GAL.: <u>600</u>	17. ESTIMATED LIGHT WT., LBS.: <u>69,200</u>
7. MATERIAL & THICKNESS: <u>ASTM A-515 Gr. 70</u>	18. CENTER OF GRAVITY LOADED, IN.: <u>86.6 **</u>
8. LINING: <u>None</u> INSIDE DIAMETER, IN.: <u>112"</u>	19. RAIL LOAD LIMIT, LBS.: <u>263,000</u>
9. HEAD RADII: MAIN, IN.: <u>2:1 Ellips.</u> KNUCKLE, IN.: <u>N/A</u>	20. TRUCK CAPACITY, TONS: <u>100</u>
10. TEST PRESSURE, PSI: <u>100</u>	21. MAX. ALLOWABLE LBS./GAL. XXX XXXXX XXXXX XXX : <u>6.6</u>
11. INSULATION, IN.: <u>None</u> KIND: <u>N/A</u>	22. AAR CLEARANCE DIAGRAM PL.: <u>B</u>
THERMAL CONDUCTIVITY, BTU/HR/SQ. FT./"F/IN.: <u>N/A</u>	

NOTES:

* 35,660 CFM Total

** 52'-7-1/2" Truck Centers

THE FOLLOWING DRAWINGS APPLY	DRAWING NUMBER	PRECEDENCY	
		DRAWING NUMBER	APPLICATION NUMBER
23. GENERAL ARRANGEMENT	1058-1867	1058-1779	A-733108-A
24. ARRANGEMENT, TANK	1147-215-8	1147-215-4-B	A-733108-A
25. REINFORCED OPENINGS, INCLUDING CALCULATIONS	1147-215-8	1147-215-4-B	A-733108-A
26. ANCHORAGE, INCLUDING CALCULATIONS	None		
27. FITTINGS ARRANGEMENT	1147-215-8	1147-215-4-B	A-733108-A
28. MANWAY ASSEMBLY	1078-247-E	1078-247-D	A-733049
29. PROTECTIVE HOUSING	375-24-A	--	24563-A
30. VENTING, LOADING AND DISCHARGE VALVES: <u>Top Unloading</u>	1136-533-B	1136-533	25897
31. SAFETY RELIEF DEVICES	1155-25-J	--	24555
32. HEATER SYSTEMS	None		
33. GAGING DEVICES: <u>Outage Scale</u>	1078-247-E	1078-247-D	A-733049
34. BOTTOM OUTLET VALVE	1048-122-C	1048-122-A	25897
35. XXXXX : <u>Bottom Outlet Nozzle</u>	1072-436-D	--	25950
36.			
37.			

REVISIONS:

APPLICATION BY: F. M. P. for A. E. Price TITLE: CHIEF ENGINEER, TRANSPORTATION DIVISION

APPROVAL: SECRETARY, MECH. DIV. TANK CAR COMMITTEE

AAR APPROVAL BY: JUL 18 1974 DATE APPROVED: P. C. Weber (SIGNATURE)

CERTIFICATION: THE CARS ENUMERATED BELOW CONFORM TO THE ABOVE APPROVED DESCRIPTION AND TO ALL APPLICABLE DOT AND AAR REQUIREMENTS, INCLUDING SPECIFICATIONS, REGULATIONS, RULES OF INTERCHANGE AND THE DOT RAILROAD SAFETY APPLIANCE STANDARDS.

INITIALS AND CAR NUMBERS:
 Rev. A - 22 cars: GATX 46149 to 46170, incl.
 Balance cancelled.

DATE: July 22, 1974
 BY: F. M. P. for A. E. Price
 TITLE: Chief Engineer

SUMMARY OF DEVIATIONS

APPLICATION NO. F-743205
BO 9747
Page 2 of 2

<u>LINE NO.</u>	<u>DESCRIPTION</u>
23	1. Added Top Unloading Valves with protective Housing
24,25,27	1. Relocated Trainline Brackets 2. Revised Draft Sill Slabbing to new standard
28,33	1. Revised Hinge Pin on Manway Cover
34	1. Changed Cotter & Nut Material to SST.
30	1. Added Weld Pads at Pipe Guide Location 2. Revised Pipe Guide to latest standard 3. Changed Studs retaining Ball Valve and 1 in. Pipe Plug to latest standards

JUL 18 1974
2-OF-2

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

AAR APPLICATION NO. F-753079

APPROVAL REQUESTED OF: SECRETARY, MECH. DIV., AAR AAR COMMITTEE ON TANK CARS

APPLICANT'S NO. BO 9902
DATE 3-14-75

APPLICANT: GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICATION FOR APPROVAL OF: <input checked="" type="checkbox"/> CONSTRUCTION <input type="checkbox"/> CONVERSION <input type="checkbox"/> ALTERATIONS <input type="checkbox"/> WELDED REPAIRS <input type="checkbox"/> OTHER		NUMBER OF CARS <u>Ten (10)</u>
REPORTING MARKS AND CAR NUMBERS: <u>GATX 46441 thru 46450, incl.</u>		
1. TANK SPECIFICATION: <u>DOT 111A100W1</u>	12. SAFETY RELIEF DEVICES: <u>Safety Valves</u>	
2. STENCILED SPECIFICATION: <u>DOT 111A100W1</u>	12. TYPE: <u>Two (2)</u>	START TO DISCHARGE, PSI: <u>75#</u>
3. COMMODITY: <u>* 5.67</u>	13. FLOW CAPACITY, CFM (AIR) ACTUAL: <u>21,942</u>	14. FLOW CAPACITY, CFM (AIR) REQUIRED: <u>17,830 ea. **</u>
4. INITIAL COMMODITY WT. PER GAL., LBS.: <u>30.003</u>	15. TANK SURFACE AREA, SQ. FT.: <u>1,840</u>	16. BOLSTER SLABBING AREA, SQ. FT.: <u>N/A</u>
5. FUEL WATER CAPACITY, GAL.: <u>600</u>	CAR STRUCTURE:	
6. XXXXXXXXXX OUTGAGE, GAL.: <u>ASTM A-515 Grade 70</u>	17. ESTIMATED LIGHT WT., LBS.: <u>69,200</u>	18. CENTER OF GRAVITY LOADED, IN.: <u>86.6 ***</u>
7. MATERIAL & THICKNESS: <u>.444" Thk. Shell & 9/16" Thk. Hds</u>	19. RAIL LOAD LIMIT, LBS.: <u>100</u>	20. TRUCK CAPACITY, TONS: <u>6.6</u>
8. LINING: <u>None</u>	21. MAX. ALLOWABLE LBS./GAL. (XXXXXXXXXX) : <u>B</u>	22. AAR CLEARANCE DIAGRAM PL.: <u>B</u>
9. HEAD RADII: MAIN, IN.: <u>2:1 Ellips.</u> KNUCKLE, IN.: <u>N/A</u>	THERMAL CONDUCTIVITY, BTU/HR/SQ. FT./°F/IN.: <u>N/A</u>	
10. TEST PRESSURE, PSI: <u>100</u>		
11. INSULATION, IN.: <u>None</u> KIND: <u>N/A</u>		

NOTES: * Isoprene @ 5.67#/Gal. Initial Lading and products authorized by DOT Part 173 for which there are no special commodity requirements.

** 35,660 CFM Total

*** 52'-7-1/2" Truck Centers

THE FOLLOWING DRAWINGS APPLY	DRAWING NUMBER	PRECEDENT	
		DRAWING NUMBER	APPLICATION NUMBER
23. GENERAL ARRANGEMENT	1058-1952	1058-1779	A-733108-A
24. ARRANGEMENT, TANK	1147-215-8	1147-215-4-B	A-733108-A
25. REINFORCED OPENINGS, INCLUDING CALCULATIONS	1147-215-8	1147-215-4-B	A-733108-A
26. ANCHORAGE, INCLUDING CALCULATIONS	0-1210-339	--	A-743338-A
27. FITTINGS ARRANGEMENT	1147-215-8	1147-215-4-B	A-733108-A
28. HANWAY ASSEMBLY XXXX	1078-247-E	1078-247-D	A-733049
29. PROTECTIVE HOUSING	375-24-A	--	24563-A
30. VENTING, LOADING AND DISCHARGE VALVES: <u>Top Unloading</u>	1136-601	1136-601-1	26178
31. SAFETY RELIEF DEVICES	1155-25-J	--	24555
32. HEATER SYSTEMS	None		
33. GAGING DEVICES: <u>Outgauge Scale</u>	1078-247-E	1078-247-D	A-733049
34. BOTTOM OUTLET VALVE	1048-122-C	1048-122-A	25897
35. XXXXXX : <u>Bottom Outlet Nozzle</u>	1072-436-D	--	25950
36.			
37.			

REVISIONS:

APPLICATION BY: F.M. Plev for A.C. Price TITLE: CHIEF ENGINEER, TRANSPORTATION DIVISION

APPROVAL: AAR APPROVAL BY: SECRETARY, MECH. DIV. TANK CAR COMMITTEE DATE APPROVED: APR 15 1975 SIGNATURE: R.C. Reber

CERTIFICATION: THE CARS ENUMERATED BELOW CONFORM TO THE ABOVE APPROVED DESCRIPTION AND TO ALL APPLICABLE DOT AND AAR REQUIREMENTS, INCLUDING SPECIFICATIONS, REGULATIONS, RULES OF INTERCHANGE AND THE DOT RAILROAD SAFETY APPLIANCE STANDARDS.

INITIALS AND CAR NUMBERS: GATX 46441 to 46450 DATE: April 15, 1975 BY: F.M.P. for A.C. Price TITLE: Chief Engineer

SUMMARY OF DEVIATIONS

<u>LINE NO.</u>	<u>DESCRIPTION</u>
23	1. Added Top Unloading Valves & Protective Housing to Drawing
24,25,27	1. Relocated Trainline Brackets 2. Revised Draft Sill Slabbing to new standard
28,33	1. Revised Hinge Pin on Manway Cover
30	1. Removed Flashings for Application to non-insulated tank.
34	1. Changed Cotter & Nut Material to SST.

APR 15 1975

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

Rev. "A"

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot

AAR APPLICATION NO. F-793341

Applicant's No. BO 10606

Applicant: GENERAL AMERICAN TRANSPORTATION CORPORATION

Date 12/7/79

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other) _____
 Reporting Marke _____
 and Car Numbers GATX 49195 to 49200, incl. Number of Cars Six (6)

1. Tank Specification DOT 111A100W1	SAFETY RELIEF DEVICES:
2. Stenciled Specification DOT 111A100W1	12. Type Valve
3. Commodity DOT Part 173 *	
4. Initial Commodity Wt. per Gal., Lbs. 6.6	Number Two (2) Start to Discharge, PSI 75
TANK SHELL:	13. Flow Capacity, CFM (Air) Actual 17,830 Ea. **
5. Full Water Capacity, Gal. 30,018	14. Flow Capacity, CFM (Air) Required 21,397
6. Dome Capacity or Outage, Gal. 600 Gal. @ 2%	15. Tank Surface Area, Sq. Ft. 1,840
7. Material & Thickness ASTM A-515 Gr. 70	CAR STRUCTURE:
444" Thk. Shell; 9/16" Hds.	18. Bolster Stabbing Area, Sq. Ft. N/A
8. Lining None Inside Dia., in. 112	17. Estimated Light Wt., Lbs. 71,300
9. Head Redil:Wain, in. 2:1 Ellips Knuckle, in. N/A	19. Center of Gravity Loaded, in. 87.37 ***
10. Test Pressure, PSI 100	19. Rail Load Limit, Lbs. 263,000
11. Insulation, in. None Kind N/A	20. Truck Capacity, Tons 100
Thermal Conductivity, BTU/Hr/Sq Ft/°F/in. N/A	21. AAR Clearance Diagram, Pl. B

NOTES: * Methanol and products authorized by DOT Part 173 for which there are no special commodity requirements and other nonregulated commodities compatible with car design.
 ** 35,660 CFM total
 *** Cars are equipped with 3-11/16" spring travel (D-5) trucks.

THE FOLLOWING DRAWINGS APPLY	PRECEDENT		
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NUMBER
22. General Arrangement	1058-2300-A	1058-2111	A-773190
23. Arrangement, tank	1147-215-12-A	1147-215-9	A-773190
24. Reinforced Openings, including calculations	1147-215-12-A	1147-215-9	A-773190
25. Anchorage, including calculations U/E and Draft Sill	0-1210-339-A	--	A-793003 Pend.
26. Fittings Arrangement	1147-215-12-A	1147-215-9	A-773190
27. Manway Assembly/Cover	1078-458-B	--	A-793129 Pend.
28. Protective Housing	None	--	--
29. Venting, Loading and Discharge Valves Future	1136-802	--	A-783032
30. Safety Relief Devices Midland Mfg. Co.	A-2085	--	L-770091
31. Heater Systems	None	--	--
32. Gauging Devices Outage Scale	1078-458-B	--	A-793129 Pend.
33. Bottom Outlet Valve	1048-144-A	--	A-793025-B
34. Bottom Outlet Nozzle Arrangement	1072-651-D	1072-651	A-783153
35. Stuffing Box	1073-113	--	A-783153

REVISIONS: Rev. "A" - 1/11/80 - Revised Line 22

APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards.
 SIGNATURE: A.E. Price / D.B.M.
 TITLE: CHIEF ENGINEER

APPROVAL AAR Tank Car Committee Date Approved FEB 26 1980 B.F. Hodges for R.C. Leber (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by DOT Part 173.5 before these cars are placed in service.

Initials and Car Numbers:

GATX 49195 to 49200, incl.

WASHINGTON, D. C. JAN 12 1980

Date 5-2-80
 BY: A.E. Price / D.B.M.
 TITLE: CHIEF ENGINEER

SUMMARY OF DEVIATIONS

<u>LINE NO.</u>	<u>DESCRIPTION</u>
22	A. Removed lease boards, filler plates and mudguards. B. Changed top unloading consisting of 2" discharge pipe and 1" air connection with 1" and 2" screwed ball valves and 2-1/2" vacuum valve to future application. C. Changed couplers to SE-60-CHTE, yokes to Y-40-AHTE and revised curve negotiability to suit. D. Changed 6" positive bottom outlet to 6" internal valve with 4" extension and cap with 2-1/2" plug. E. Changed estimated lightweight to .71,300#. F. Changed platform handrail height from 30" to 29". G. Overall height reduced from 15'-0-15/16" to 14'-11-15/16". H. Added lifting lugs to underframe.
23,24,26	A. Removed mudguards and filler step. B. Changed stuffing box to screwed gland type. C. Changed bottom outlet cutout and reinforcement area calculations to cover change from 6" plain positive outlet to 6" positive bottom outlet - internal valve. D. Revised existing center reinforcement bars and added new bar between bottom outlet nozzle and sump due to change in bottom outlet.
34	A. Tank cutout revised to latest GATX standard. B. Revised to show posts for post flange assembly assembled to outlet nozzle flange prior to assembly of flange to car. C. Added gasket to table.

NOTE: Order for these cars placed after July 1, 1979.

FEB 26 1980

B. F. Hodges for R. C. REBER

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: Precedent AAR Tank Car Committee Ballot AAR APPLICATION NO. A-813465
 Applicant's No. BO 10779
 Date 12/11/81

Applicant GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICATION FOR APPROVAL OF: Construction Conversion Alterations Welded Repairs (Other)
 Reporting Marks _____
 and Car Numbers GATX 52931 to 52933, incl. Number of Cars Three (3)

1. Tank Specification <u>DOT 111A100W1</u>	SAFETY RELIEF DEVICES:
2. Stenciled Specification <u>DOT 111A100W1</u>	12. Type <u>Valve</u>
3. Commodity <u>DOT Part 173 *</u>	Start to
4. Initial Commodity Wt. per Gal., Lbs., <u>6.52 Max.</u>	Number <u>Two (2)</u> Discharge, PSI <u>75</u>
TANK SHELL:	13. Flow Capacity, CFM (Air) Actual <u>17,830</u> Ea. ***
5. Full Water Capacity, Gal. <u>30,018</u>	14. Flow Capacity, CFM (Air) Required <u>21,397</u>
6. Dome Capacity or Outage, Gal. <u>600 Gal. @ 2%</u>	15. Tank Surface Area, Sq. Ft. <u>1,840</u>
7. Material & Thickness <u>ASTM A-515, Gr. 70</u>	CAR STRUCTURE:
<u>.444 Thk. Shell; 9/16" Thk. Heads</u>	16. Bolster Slabbing Area, Sq. Ft. <u>N/A</u>
8. Lining <u>None</u> Inside Dia., In. <u>112</u>	17. Estimated Light Wt., Lbs. <u>71,200</u>
9. Head Radli: Main, In. <u>2:1 Ellip. Knuckle, In. N/A</u>	18. Center of Gravity Loaded, In. <u>87.37</u> ***
10. Test Pressure, PSI <u>100</u>	19. Rail Load Limit, Lbs. <u>263,000</u>
11. Insulation, In. <u>None</u> Kind <u>N/A</u>	20. Truck Capacity, Tons <u>100</u>
Thermal Conductivity, BTU/Hr/Sq Ft/°F/In. <u>N/A</u>	21. AAR Clearance Diagram, Pl. <u>B</u>

NOTES: * Methanol and products authorized by DOT Part 173 for which there are no special commodity requirements and other non-regulated commodities compatible with car design.
 ** 35,660 CFM total.
 *** Cars are equipped with 3-11/16" Spring Travel (D-5) Trucks.

THE FOLLOWING DRAWINGS APPLY		PRECEDENT	
	DRAWING NUMBER	DRAWING NUMBER	APPLICATION NO.
22. General Arrangement	1058-2455		
23. Arrangement, tank	1147-215-15		
24. Reinforced Openings, including calculations	1147-215-15		
25. Anchorage, including calculations... U/F and Draft Sill	0-1210-339-A		A-793003-A
26. Fittings Arrangement	1147-215-15		
27. Manway Assembly/Cover	1078-458-D		
28. Protective Housing	1136-806-F		A-813340
29. Venting, Loading and Discharge Valves	1136-806-F		A-813340
30. Safety Relief Devices <u>Midland Mfg. Co.</u>	A-2085		L-770091
31. Heater Systems	None		
32. Gauging Devices <u>Outage Scale</u>	1078-458-D		
33. Bottom Outlet Valve	1048-144-A		A-793025-B
34. Repairs <u>Bottom Outlet Nozzle Arrangement</u>	1072-651-D		A-803074
35. <u>Stuffing Box</u>	1073-113-A		A-803165
36. <u>Gauging Device</u>	1207-73		

REVISIONS: _____
 APPLICATION BY GENERAL AMERICAN TRANSPORTATION CORP.
 I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards.
 SIGNATURE R.L. Manser / R.G.Z.
 TITLE GENERAL MANAGER - OPERATIONAL ENGINEERING

APPROVAL AAR Tank Car Committee Date Approved FEB 11 1982 Edna M. Smith for R.C. Weber
 (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others, required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers:
GATX 52931 to 52933, incl.
 Date 3-1-82
 BY R.L. Manser / R.G.Z.
 TITLE GENERAL MANAGER - OPERATIONAL ENGINEERING