ISSUE DATE:	9/14/2021
SERVICE BULLETIN SUBJECT:	ROCON 6:1 SSR ADA Ramp Support and Drainage Retrofit
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-21-128
LABOR OPERATION CODE:	AR42Z

NOTICE! It is expected that this process will require 8 hours per bus. Please schedule appropriately to minimize vehicle downtime.

RICON 6:1 ADA RAMP SUPPORT BRACKET

Description

This procedure updates the support brackets for the ADA ramp to a more robust version.

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Tools/Parts Required

Tools and Supplies Required:

- Forward ADA Ramp Fixture (141-2564)
- Aft ADA Ramp Fixture (141-0890)
- Ratchet
- 15mm Socket
- 13mm Socket
- Lifting Device for Ramp
- 1/8-Inch Allen Socket
- Calibrated Torque Wrench
- Orange Torque Stripe Paint
- Slip Joint Pliers
- Heat Gun
- Putty Knife
- Power Drill
- 1/4-Inch Drill Bit
- 1-7/8 Inch Hole Saw
- 36-Grit Sanding Disk
- Isopropyl Alcohol
- Shop Towels
- Plexus Gun
- MA 530 Mixing Tip
- Tongue Depressor
- Gorilla Tape
- 4mm Drill Bit
- Heavy-Duty Jack
- Heavy-Duty Jack Stand
- 7/8-Inch Hole Saw
- Drill Stop
- Vacuum Cleaner
- Tongue Depressor
- Flat Blade Screwdriver

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Kit Parts Required:

- 058864 RETROFIT KIT, ADA RAMP BRACKETS, RICON 6:1, 40' (Consisting of)
  - 139-5202 BRACKET, ADA RAMP 1 EA
  - 137-5567 BRACKET, CROSSMEMBER SUPPORT 2 EA
  - 137-5563 BRACKET, RAMP CTR CROSSMEMBER 1 EA
  - 139-5070 BRACKET, ADA RAMP 1 EA
  - 137-5568 BRACKET, ADA RAMP 1 EA
  - 139-5073 BRACKET, ADA RAMP 1 EA
  - 139-2147 PLATE, RAMP BRACKET, INBOARD 3 EA
  - 020856-001 BOLT, DIN 6921, FLG, SST A2, M10-1.50X16X16 10 EA
  - 023938-015 BOLT, DIN 6921, FLG, SST A2, M8-1.25X55X22 11 EA
  - 020891 WASHER, DIN 9021, SST, M8 11 EA
  - 020856-003 BOLT, DIN 6921, FLG, SST A2, M10-1.50X25X25 2 EA
  - 023938-004 BOLT, HEX, M8-1.25X25X25 2 EA
  - 141-1918 STUD, SST, M10-1.5X50X12 3 EA
  - 122-0104 TUBE, GAROLITE, G10, 1/2 ID 24 IN

Parts Required but not Included in the Kit:

- 020990 PRIMER,COND.,0-RMD,PLE QT.IP120 PC 120 1 EA
- 001912 CABLE TIE, 11.5 BLACK 292MM" 5 EA
- 009479 RESIN, EPOXY, WEST SYSTEMS 1 EA
- 027017 FILLER, HIGH DENSITY, WEST SYSTEMS 1 EA
- 009499 HARDENER, EPOXY, FAST, WEST SYSTEMS 1 EA
- 043223 EQUIPMENT, SERVICE, WEST SYSTEM MINI PUMP 1 EA
- 018362 PLEXUS, MA-530 1 EA

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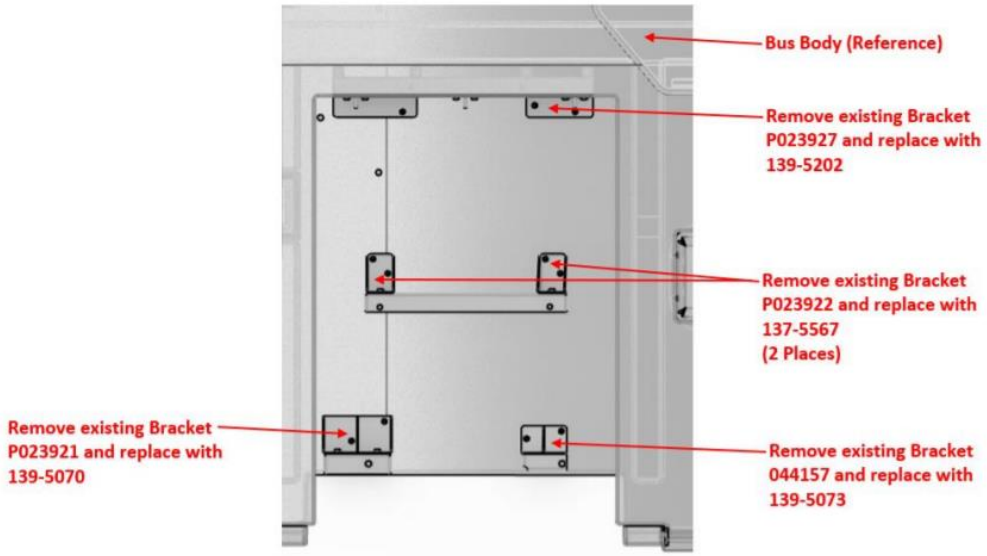
Procedure:

1. Complete the Proterra approved Lockout/Tagout procedure to make the bus safe for work.

2. Download the Maintenance and Repair Manual at the following location before beginning this procedure. The ADA Ramp removal and replacement begins on page 18-279. Use this procedure to remove the ADA Ramp.
   \\bus.local\files\Engineering\Service Bulletins\Service Bulletin Files for SC-21-128

3. Using Pliers and a Heat Gun, remove the existing ADA Brackets shown in the following illustration.



4. Apply heat to each bracket shown until the Adhesive begins to soften.

5. Continue applying heat until each bracket can be removed with Pliers. Do this carefully so as not to damage the body.

6. When all the brackets have been removed, use the Heat Gun and a Putty Knife to remove any remaining Adhesive from the bus body.

7. Using Isopropyl Alcohol and Shop Towels, clean the scuffed areas on the new Brackets.

8. Using Shop Towels, apply Plexus Primer (020990) to the bonding surfaces of the new Brackets.

9. Place the Forward (141-2564) and Aft (141-0890) ADA Fixtures as shown in the following photograph.

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10. Using a Permanent Marker, mark the locations for mounting the new Brackets onto the bus body.

11. Remove the Forward (141-2564) and Aft (141-0890) ADA Fixtures.

12. Using a Plexus Gun with a MA 530 Mixing Tip, apply Plexus to the bonding surface of a Bracket.

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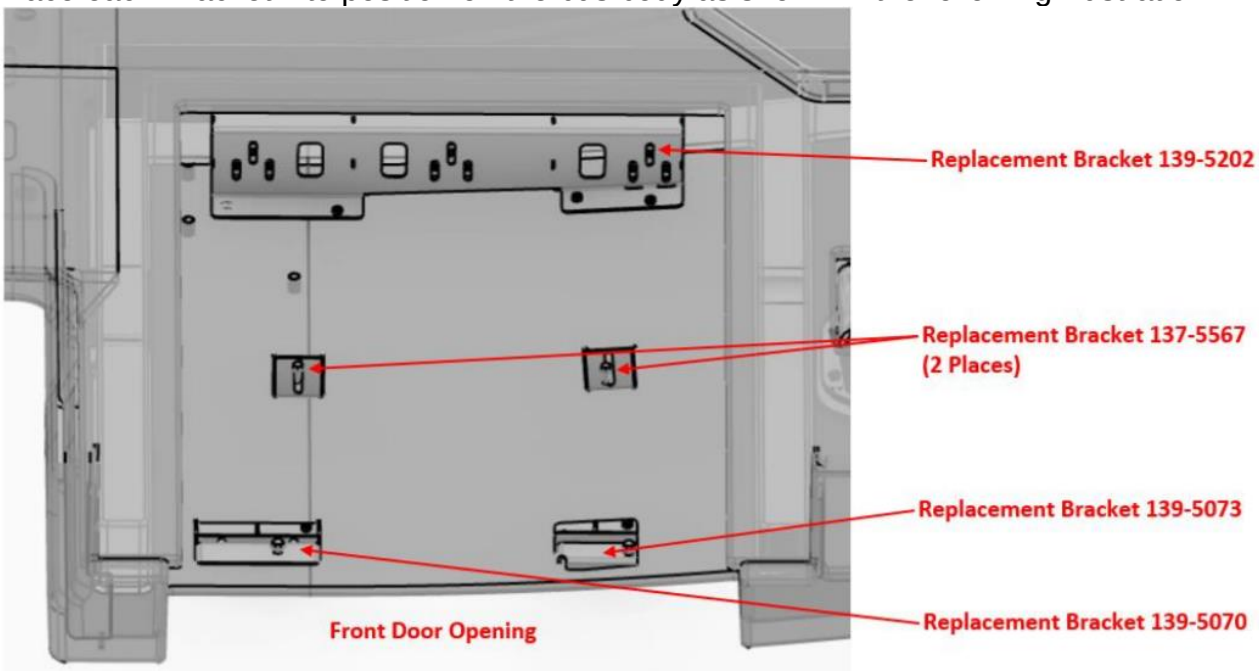
13. Place each Bracket into position on the bus body as shown in the following illustration.



14. Using a Tongue Depressor, remove any excess Plexus.

15. Secure each Bracket into position with Gorilla Tape.

16. Repeat the process until all the Brackets are attached to the body with Plexus.

17. Once all the Brackets are attached to the body, allow 160 minutes for the adhesive to cure. Ambient temperatures below 65 degrees Fahrenheit may require additional time to cure.

18. Using a Power Drill with a 4mm Drill Bit, drill a hole through the body in the center of each Bracket Weld Nut. This will be a total of 11 pilot holes.

19. Using a Heavy-Duty Jack and a Heavy-Duty Jack Stand, support the bus so that the underside of the ADA Ramp area can be accessed.

20. Working from underneath the bus and using a Power Drill with 7/8-Inch Hole Saw, enlarge each of the 11 holes to its final size. Carefully drill upward until the bottom of each Bracket is contacted. Do not damage the Brackets.

21. Using a Vacuum Cleaner, clean up any debris from the drilling operations.

22. Working underneath the bus, cut a length of Garolite Tube (122-0104) to fit each of the 11 drilled holes. Each piece should be cut so that it protrudes 2 mm from the bus body. Each of the 11 locations will require a different length of Garolite Tube, so mark each Tube and its corresponding location on the bus body.

23. Mix West Systems 105 Epoxy Resin with West Systems 205 Hardener to get the amount required to seal the balsa core of the body that was exposed by the drilling operations.

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24. Mix in West Systems 404 High Density Filler until the mixture has the consistency of mayonnaise.

25. Using a Cotton Swab, apply the Epoxy Mixture to all the holes to seal them.

26. Allow 30 minutes for the Epoxy to cure before proceeding.

27. Using a Power Drill with a 36-Grit Sanding Disk, lightly scuff each cut Garolite Tube (122-0104) to prepare them for bonding.

28. Using Isopropyl Alcohol and Shop Towels, remove any sanding dust from the Garolite Tubes (122-0104).

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29. Using a Plexus Gun, apply Plexus to one of the Garolite Tubes (122-0104).

30. Using a Tongue Depressor, smooth the Plexus around the Garolite Tube (122-0104).

31. Using two people, carefully insert the Garolite Tube (122-0104) into its corresponding hole in the bus body.

32. The second person should be inside the bus should block the hole in the Bracket to ensure that no Plexus is pushed up inside the Bracket.

33. Once the Garolite Tube (122-0104) is installed, insert a M8 Bolt (023938-015) through the Garolite Tube and hand tighten it into the Bracket.

34. Repeat the process to install the 10 remaining Garolite Tubes (122-0104) and M8 Bolt (023938-015) into the bus body and Brackets.

35. Allow 160 minutes for the Plexus to cure.

36. Using a Calibrated Torque Wrench with a 13mm Socket, **torque the bolts to 29.5 foot pounds.**

37. The through-bolted Brackets are shown in the following photograph.

ADA Ramp brackets through-bolted from underside of body.

38. Safely lower the bus to begin the process of reinstalling the ADA Ramp.

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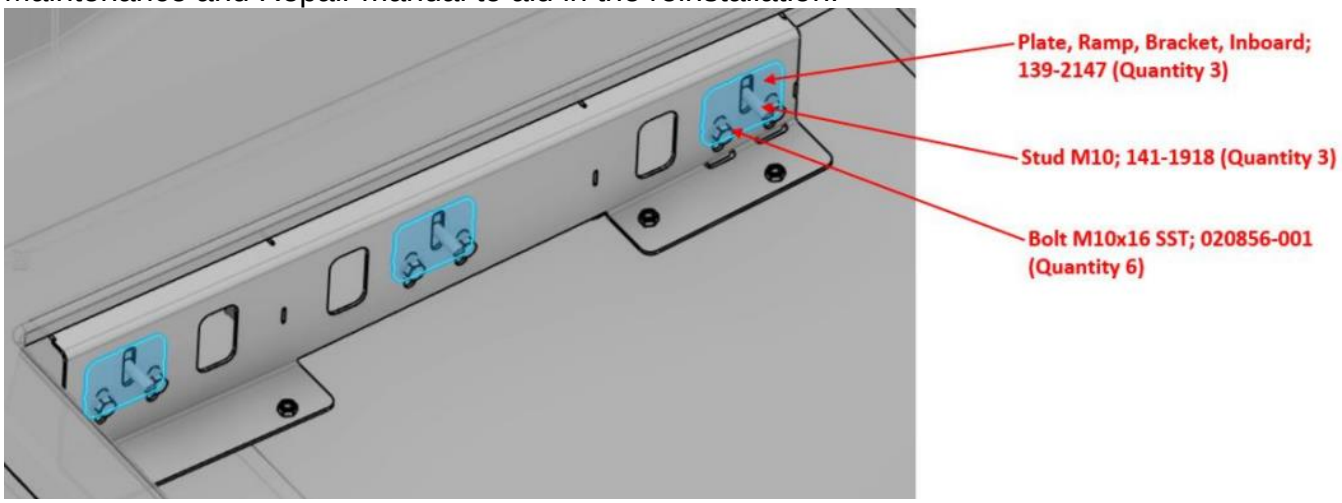
39. The following photograph shows the completed installation of the Brackets.

40. Using the following illustration as a guide, begin reinstalling the ADA Ramp. Refer to the Maintenance and Repair manual to aid in the reinstallation.



41. Install the Ramp Bracket Plates (139-2147) inboard behind the ADA Ramp Bracket (139-5205) as shown in the previous illustration.

42. Using a Flat Blade Screwdriver, install the M10 Studs (141-1918) as shown in the previous illustration.

43. Using a Calibrated Torque Wrench with a Flat Blade Socket, t**orque the Studs to 15 foot pounds.**

44. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

45. Using a 17mm Ratchet/Socket, install the 6 M10 Bolts (020856-001) as shown in the previous illustration.

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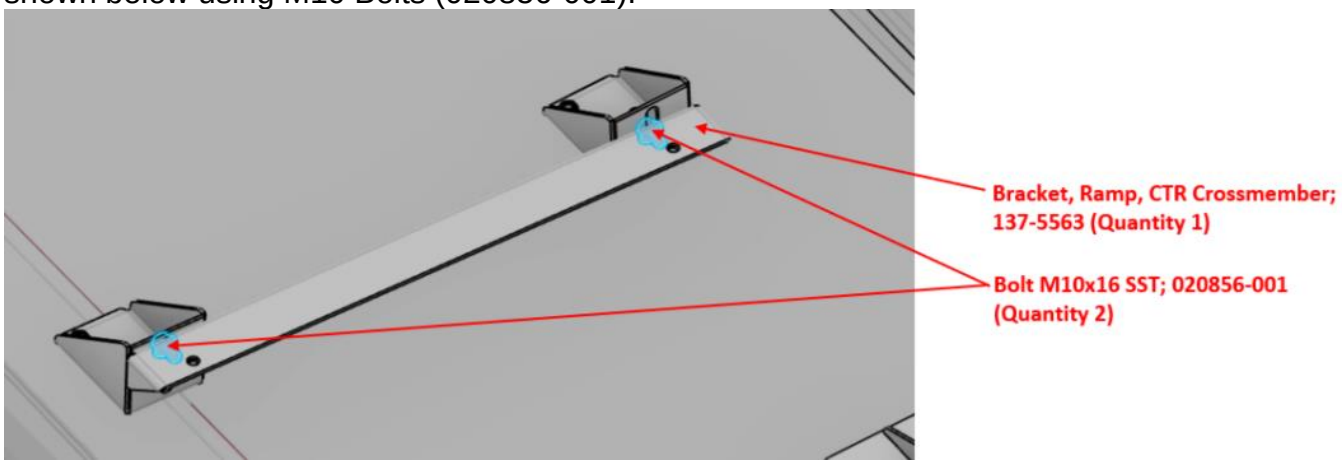
46. Using a Calibrated Torque Wrench with a 17mm Socket, t**orque the Bolts to 32 foot pounds.**

47. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

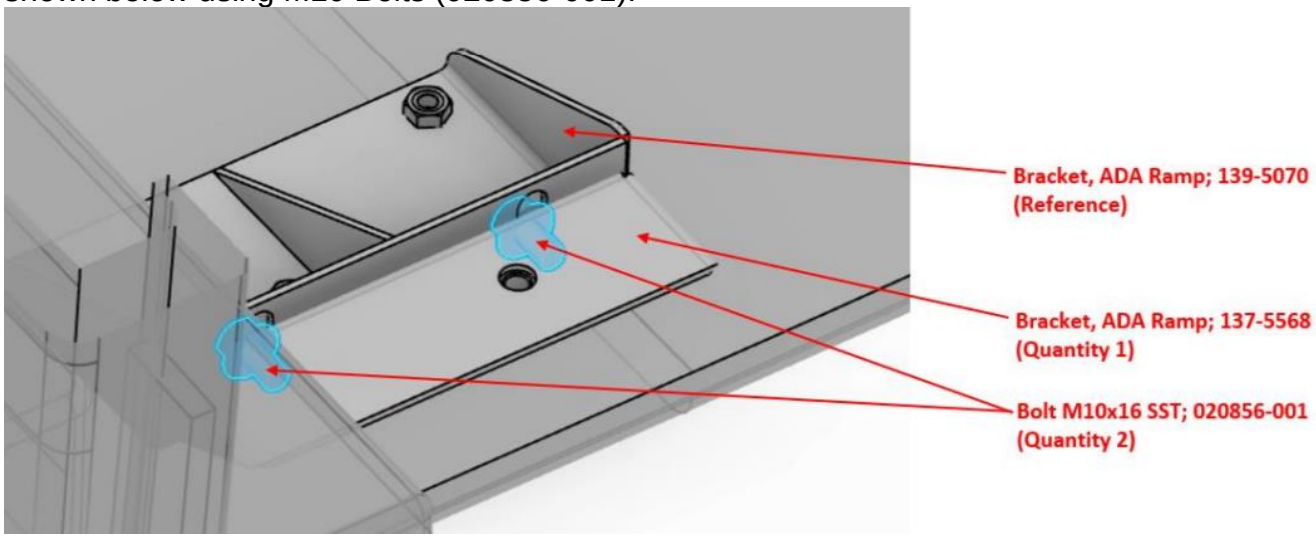
48. Using a 17mm Ratchet/Socket, install the Crossmember (137-5563) onto the Bracket as shown below using M10 Bolts (020856-001).



49. Using a Calibrated Torque Wrench with a 17mm Socket, t**orque the Bolts to 32 foot pounds.**

50. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

51. Using a 17mm Ratchet/Socket, install the Bracket (137-5568) onto the ADA Ramp Bracket as shown below using M10 Bolts (020856-001).



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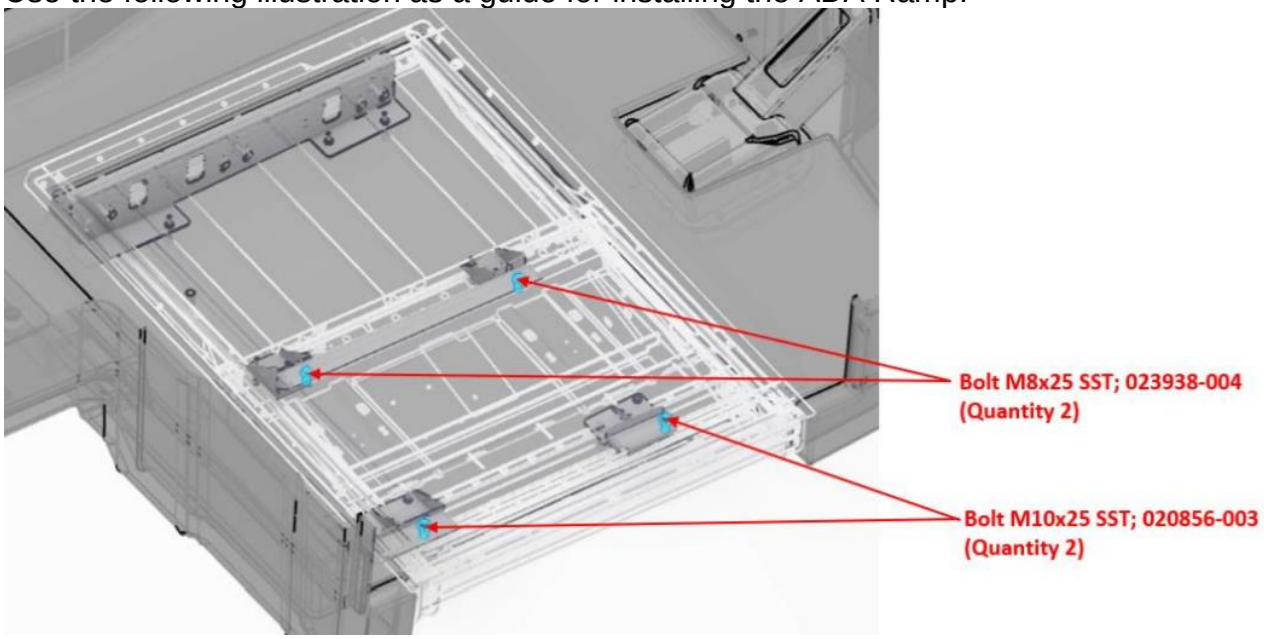
52. Use the following illustration as a guide for installing the ADA Ramp.



53. Place the ADA Ramp onto the installed Brackets.

54. Connect the wiring harness.

55. Using a 13mm Ratchet/Socket, install the M8 Bolts (023938-004) as shown in the previous illustration.

56. Using a 17mm Ratchet, install the M10 Bolts (020856-003) as shown in the previous illustration.

57. Using a Calibrated Torque Wrench with a 17mm Socket, t**orque the M10 Bolts to 32 foot pounds.**

58. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

59. Using a Calibrated Torque Wrench with a 13mm Socket, t**orque the M8 Bolts to 32 foot pounds.**

60. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

61. The installed ADA Ramp is shown in the following photograph.

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62. Remove the Lockout/Tagout devices and power the bus on.

63. Test the ADA Ramp for proper functionality before returning the bus to service.

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