



DATE: 3-1-16

APPLIES TO: This service bulletin applies to certain Star model Emergency Response Vehicles built by Spartan Motors USA, Inc. between February 1, 2015 and January 13, 2016.

CONDITION: C-channel for body structure did not meet specification.

CORRECTION: Install reinforcement plates. Due to the customized nature of the reinforcement plates, contact Customer Product & Support for the appropriate kit.

LABOR ALLOCATION: 9.0 hrs.

CLASSIFICATION: V3

TOOLS NEEDED:

- | | |
|--|-------------------------|
| Hydraulic Jack | Pliers |
| Aluminum Shims | Pry Bar |
| 1/2" Impact Wrench | Wire Cutters |
| 1/2" Ratchet | Cable Ties |
| 3/8" Impact Wrench | Chassis Surge Protector |
| 9/16" Wrench | |
| 15/16" Wrench | |
| 1 -1/4" Deep Socket | |
| 15/16" Socket | |
| 15/16" Shallow Socket | |
| 9/16" Deep Socket | |
| 1/2" Socket Swivel | |
| Adjustable Wrench | |
| Small Clamp | |
| Aluminum MIG Welder w/.035 4043 wire and Argon | |

GENERAL INSTRUCTIONS:

Thoroughly review entire service bulletin before starting work. If there are questions or concerns with steps defined in this service bulletin, contact Spartan Motors USA, Inc. Customer & Product Support Group.

All applicable industry safety standards must be followed when performing work identified in this procedure.

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



STEP-BY-STEP INSTRUCTIONS:

NOTE: Refer to drawings included in kit to determine number and location of plates to be installed.

1. Locate the body isolation mounts on one side of the truck. Refer to FIG. 3-1.



FIG. 3-1

2. Obstructions that may be in the way of body mounts, isolators and bolts that hold them to frame may need to be moved for access.
 - a. If air tanks need to be moved, purge tank using the pressure release refer to FIG. 3-2, remove the bolts from tank clamp, bend clamp open just enough to remove tank refer to FIG. 3-3, and remove air hose from tank refer FIG. 3-4, push tank out of way. Retain clamp and hardware for reuse.



FIG. 3-2



FIG. 3-3



FIG. 3-4

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



- b. For wires that need to be moved aside, cut cable ties and move out of the way. Refer to FIG. 4-1.



FIG. 4-1

3. Remove nuts, washers, and springs. Retain washers and springs for reuse. Properly dispose of nuts. Refer to FIG. 4-2.



FIG. 4-2

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



4. Jack corner of the body where plate is to be added. Jack should be placed in location shown in FIG. 5-1 and 5-2. Jack body enough to take pressure off isolation mounts.



FIG. 5-1



FIG. 5-2

5. Remove isolation mounts from frame by removing two (2) 5/8 inch bolts from each assembly. Retain rubber/steel mount assy. and spring for reuse. Properly dispose of all of the hardware. Refer to FIG. 5-3.



FIG. 5-3

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



- Place reinforcement plates into place using a tilting motion to clear bolt heads on frame. Long body bolts should extend through slots in shim. Refer to FIG. 6-1, 6-2, and 6-3.

NOTE: Actual plate size and hole configuration may differ from FIG. 6-1.

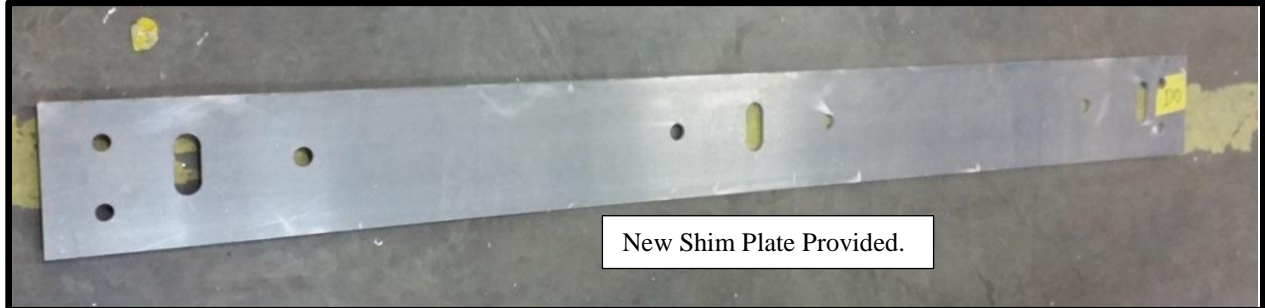


FIG. 6-1



FIG. 6-2



FIG. 6-3

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



7. Reinstall retained isolation mounts. Start with flat washer against mount, and insert bolt. On other side of frame rail place flat washer, lock washer, and then nut. Tighten nuts with impact wrench and torque to 154 ft.-lbs. Refer to FIG. 7-1 and 7-2.



FIG. 7-1



FIG. 7-2

8. Once isolation mounts are back in place, lower the jack.
9. Place retained spring, washer, and then supplied nut onto each long bolt through the isolators. Tighten nuts until there is 1/2 inch of the bolt sticking through nut. Refer to FIG. 7-3.



FIG. 7-3

10. Complete steps 1 through 9 to other side of truck and, (if indicated on print included in kit) each of the rear sides of truck.

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



11. Install surge protector at power point of truck (battery jumper studs). Refer to FIG. 8-1 and 8-2.

NOTE: If a surge protector is not available follow these welding guidelines. Welding to the cab is not permitted without specific approval from Spartan. When welding, the following standard practices shall be observed:

- ◆ **Welding to the engine, transmission, or any component mounted to them is strictly prohibited.**
- ◆ Allow only certified personnel to perform welding activities.
- ◆ Disconnect ALL positive and negative battery cables.
- ◆ Disconnect ground cable to alternator.
- ◆ Disconnect the power cables and connectors to multiplex controller(s) and nodes.
- ◆ Disconnect the connectors from all ECU (Electronic Control Unit) components. Consult the manufacturer instructions for electrical systems/components to ensure all precautions have been taken to prevent damage (e.g. electronic control units may be "burned out" if not disconnected or removed).
- ◆ Inspect electrical components such as an ECU, which has a case grounded to the frame; these must be removed. ECU's may include, but are not limited to:
 - ◆ Engine
 - ◆ Transmission
 - ◆ ABS System
 - ◆ Telma® Retarder
 - ◆ Instrumentation (gauges)
 - ◆ Any ECU installed by the Apparatus Builder
- ◆ The DPF (Diesel Particulate Filter) sensor(s) must be disconnected before welding activity.
- ◆ 'Ground' the welding apparatus as close to the welding area as possible. Never use the engine, transmission, or U-bolts as a grounding point.
- ◆ Protect the cab/chassis from weld splatter including, but not limited to, all seats, restraint systems, interior trim, dash panel, engine tunnel, floor mats, steering wheel, all air and hydraulic hoses/lines, and all electrical wiring and panels.
- ◆ **Do not** weld any portion of the apparatus to the cab.
- ◆ Thoroughly inspect all surrounding components for damage after weld area is cool.

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



FIG. 8-1

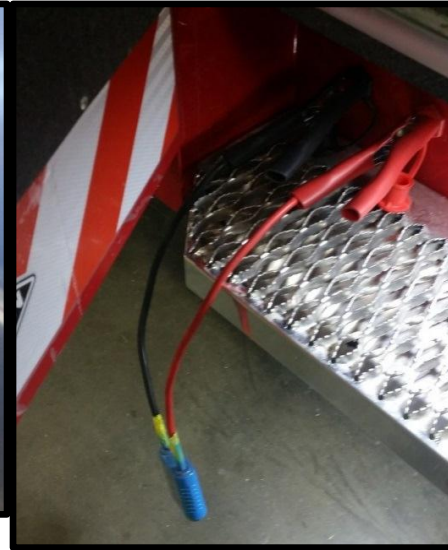


FIG. 8-2

12. Plug weld all of the remaining holes in shim plates to the body. Refer to FIG. 8-3.



Ensure all hoses and wires are protected from welding.



FIG. 8-3

13. If removed, reinstall retained air tank, air hose, and cable tie up any loose wires.

14. Remove surge protector from truck or re-connect items listed in the notes for step 11.

15. Verify all wires, hoses, tanks etc. are reconnected and perform standard check process before putting truck in service.

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.