



Smeal Fire Apparatus

Technical Service Bulletin

TSB23-990-001

DATE: 8/4/2023

APPLIES TO: This service bulletin applies to certain 1998 through 2019 model year Smeal Mid-mount Aerial Fire Apparatus built between February 1999 and January 2020.

CONDITION: A potential exists for the parent material on the rearward pump transmission mounts to crack or break along with the fasteners for the mounts. Damage could occur to the front pump transmission mounts as a result of failed rear transmission mounts/fasteners.

CORRECTION: Install improved pump transmission mounting plates and gussets.

LABOR ALLOCATION: 36 hours

CLASSIFICATION: E2

PARTS NEEDED:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S5150-51-Repair-01	Forward Mount Plate
4	S5150-51-Repair-02	Gusset
2	S5150-51-Repair-03	Gusset
1	S5150-51-Repair-04	Rearward Mount Plate
4	S5150-51-Repair-05	Gusset
2	S5150-51-Repair-06	Spacer

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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 Fire, LLC. Customer & Product Support Group.

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

Attention!

If cracks are discovered in the pump transmission mounts, contact customer service (1-800-967-6478) before proceeding with the repairs noted below. The customer service representative will review the specific truck build with engineering to determine if any additional parts and actions beyond the steps listed below will be necessary. Please have the full VIN and the body number available when you call.

Step By Step Instructions

1. Apply paint only to the mounting surfaces of the mount plates that will mate against the transfer case. Avoid painting the rest of the area since it will be welded.
2. Remove the drive shaft forward of the pump transfer case and detach the u-joint to the rear.
3. Use the inside front of the tower as a reference point to measure and record the current front-to-back location of the transfer case. This will ensure that the transfer case can be put back in the same position later.
4. Remove the pump transfer case.
5. Remove current pump mounts.

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6. Grind or gouge any existing weld material down to the sound parent material. Be careful not to create sharp features or irregularities that may become stress concentrations. To ensure sufficient weld penetration, grind any cracks propagating into the parent material to produce a "v-groove". The groove opening should not exceed 90 degrees.
7. Prepare the weld areas by removing any paint or foreign material a minimum of 2 times the material thickness in both directions.
8. Install the forward pump transfer case mount in its rough position and bolt the pump transfer case to it. Be sure to use blue thread-locking compound and torque fasteners to the correct torques listed below. *Also see Figure 4.1*

*5/8"-18 grade 8 zinc plated bolts for the four lower points = 216 ft-lb

*1/2"- 20 grade 8 zinc plated bolts for the upper 9 bolts = 108 ft-lbs.

9. Using a digital inclinometer and zeroing it to the frame rail, set the drive line angle to 3 degrees and place the transfer case in the previously recorded front-to-back position. Support the transfer case to hold it in this position.
10. Weld the forward pump mounts and the four forward-facing gussets in place. Tack all components in place and finish the weld in accordance with *Figure 5.1*

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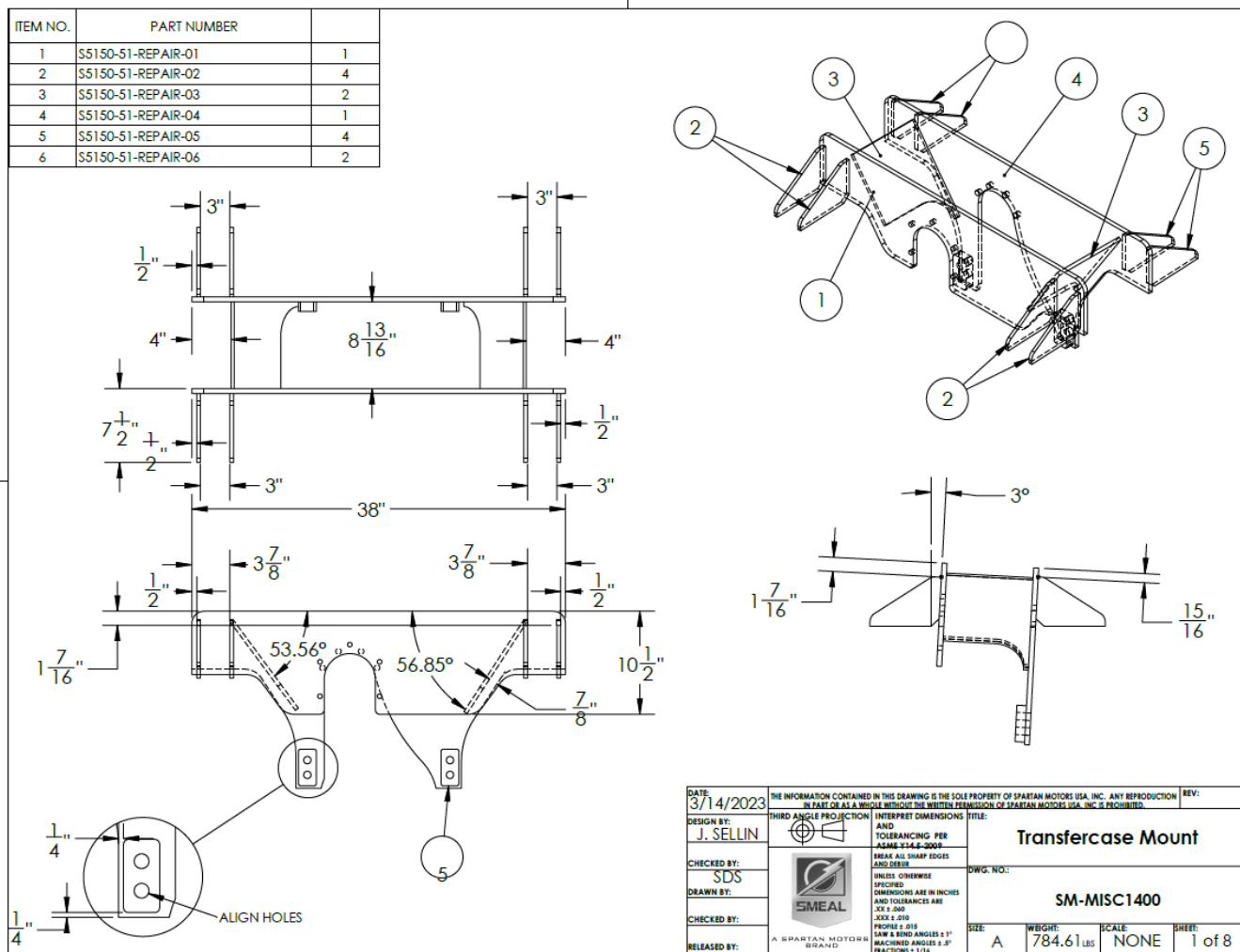


Figure 4.1

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Notes:

1. Place repair parts as shown in pictures. Weld all around every part as shown in pictures. Surfaces may have to be prepped to clear existing weld.
2. Prepare weld areas before adding new parts by removing any paint or foreign material a minimum of 2 times the material thickness in both directions.

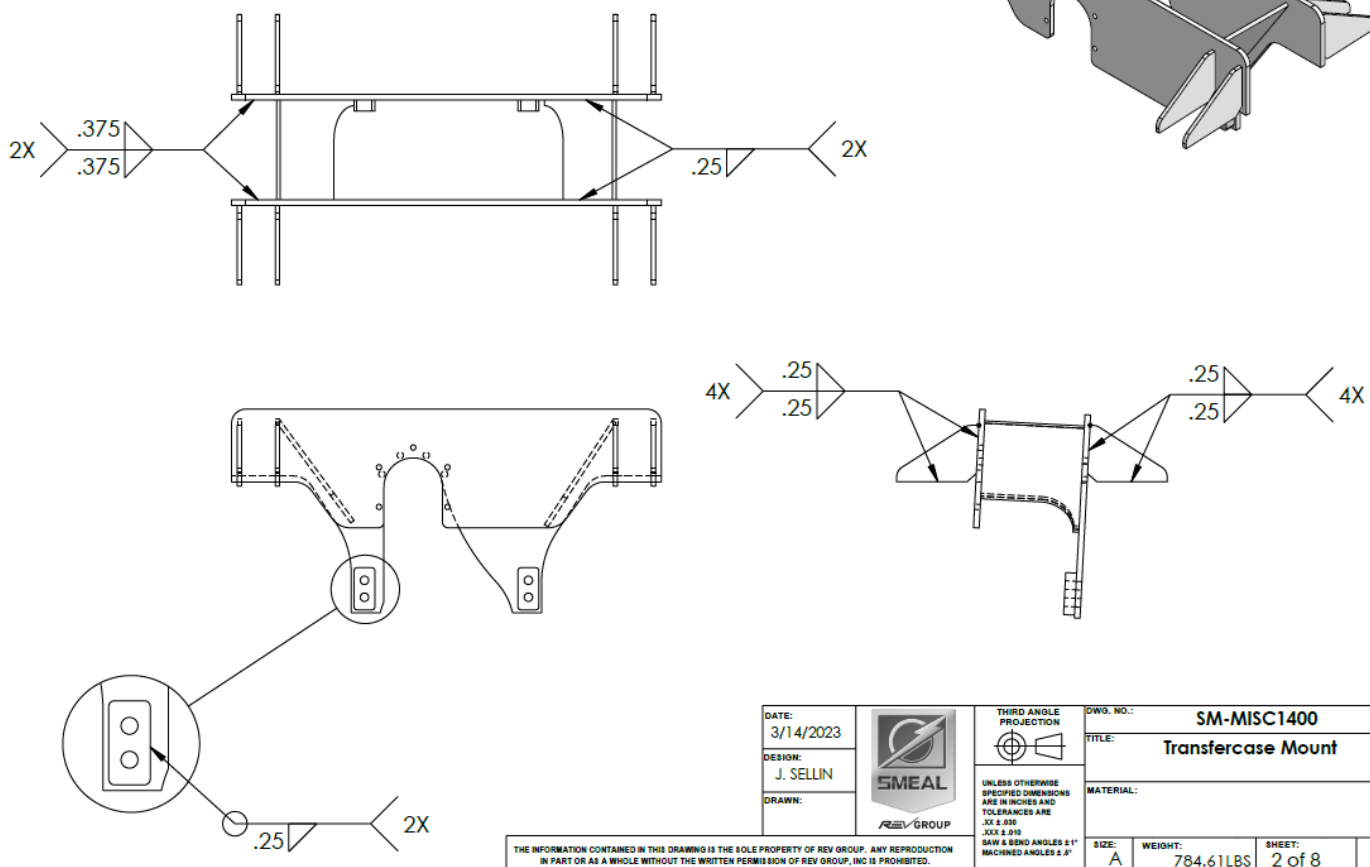


Figure 5.1

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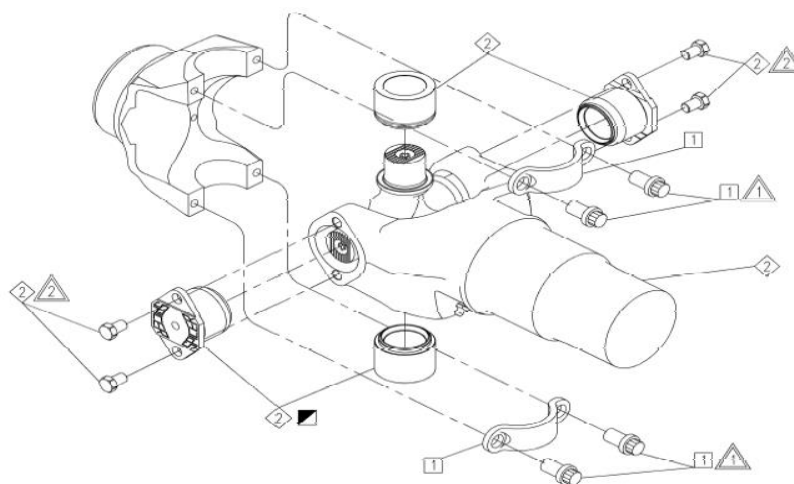


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11. Install the rear transfer case mount and bolt it to the transfer case. Be sure to use blue thread locking compound and torque fasteners to the correct torque. Tack all components in place and finish the weld according to the attached weld document.
12. After welding is complete and meets and AWS D1.1, paint all new welded parts, areas where components were removed, and welded areas to the extent possible to prevent corrosion and match finish.
13. Reinstall any components that were removed in reverse order.
14. Torque driveshaft u-joint fasteners according to *Figure 6.1*



- 1 TORQUE 115-135 LB FT
2 TORQUE 38-48 LB FT

Figure 6.1

15. Reroute any wire harnesses and secure with clips / ties that were moved to facilitate repairs.

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