



Recall Service Bulletin

RSB21-900-001



DATE: 3/10/2021

APPLIES TO: This service bulletin applies to certain 2008 through 2020 model year Smeal Aerial Fire Apparatus built between January 15, 2009 and January 14, 2021, equipped with a positional waterway and shift timer.

NHTSA/TC Id:

CONDITION: Smeal aerial positional waterway proximity switch out of adjustment

CORRECTION: Adjust proximity switch in accordance with instructions provided below.

LABOR ALLOCATION: 1 hour

CLASSIFICATION: E3

PARTS NEEDED: None

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.

Warning: The procedure listed in this work instruction must be performed by a qualified technician.

- **Read and follow safety instructions in the operator manual prior to beginning work.**
- **All steps must be completed prior to returning apparatus to service.**
- **Failure to comply with safety instructions may lead to injury or death.**

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



Recall Service Bulletin

RSB21-900-001



Positional Waterway Shift System Description.

The positional waterway monitor is mounted to a trolley that slides on the fly section of the ladder. The trolley is always locked to either the fly section (water tower mode) or the next lower section (rescue mode) using a pair of locking tabs on locking arms. The arms are moved by a motor actuator linkage mechanism. Two proximity switches set to sense the location of a Z-bracket attached to the locking arm linkage mechanism (prox 1 -water tower, and prox 2-rescue mode).

A third proximity switch (prox 3) is used to sense that the ladder is retracted. Only in the fully retracted condition is it physically possible for the mode shift to occur and the control logic allows the motor actuator to move the locking arms and locking tabs from one locking pocket to the other.

When the operator desires to shift between one mode and the other, he/she retracts the ladder, and moves the mode switch. If prox 3 senses a fully retracted ladder, then the motor actuator begins moving the locking arm linkage mechanism. Once the Z-bracket moves out of the range of prox 1 or prox 2 a timer is initiated energizing a blocking valve that keeps the ladder sections from extending. The timer lasts for 10 seconds to ensure that the actuator motor has completed the mode shift. This prevents ladder extension if the operator fails to wait for the mode indicator lights to change before moving the ladder extension joystick.

Mode Indication Examples



Model Year 2009 Applicability Verification Step **THIS STEP REQUIRED FOR 2009 MODEL YEAR ONLY.**

This adjustment procedure is only applicable if the aerial device is equipped with a positional waterway shift timer and blocking valve feature. The addition of this feature occurred in model year 2009. Later model years do not require this verification. This procedure is not applicable to Model years 2008 and earlier. The model year can be found on the FMVSS label in the cab.

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



Recall Service Bulletin

RSB21-900-001



If the device you are working on is a model year 2009

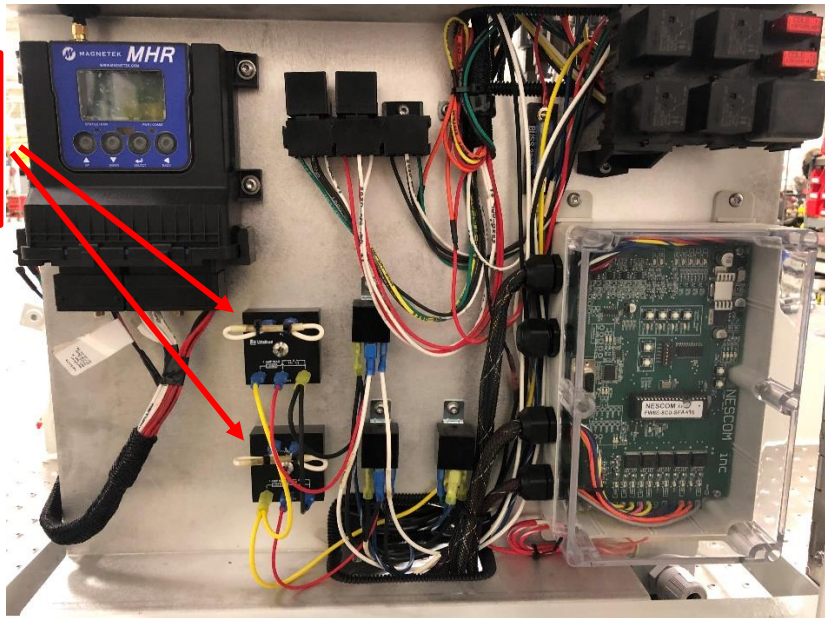
- Open the service panel on the control console at the turntable.



Control Console Access Panel
(example shown, consoles may vary)

- Look for two timer relays as shown in the figure.

Timer Relays
(example shown, relay location may vary)



- If the timer relays are present, proceed with the next step
- If the timer relays are not present, this procedure is not applicable

NOTE: A timer relay and blocking valve upgrade is available for models 2009 and earlier. See your Smeal Service Facility for details.

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



Recall Service Bulletin

RSB21-900-001



Prepare for PROX 1 Adjustment

- Park the apparatus in an area where the ladder can be raised and extended off one of the sides.
- Follow the operator manual to deploy the stabilizers
- Deploy the aerial device to side of the apparatus
- Fully retract the ladder
- Elevate the ladder to 20 degrees or higher
- Shift the positional waterway to the WATER TOWER mode.
- Wait 10 seconds and ensure the WATER TOWER indication has illuminated.
- Lower and extend the ladder to a position where the positional waterway trolley can be accessed from the ground or a from a safe working platform.
- Turn OFF the aerial PTO switch (leave the Aerial Master switch in the ON position).
- Turn the engine IGNITION switch OFF to stop the engine.
- Turn the IGNITION switch to the ON position.

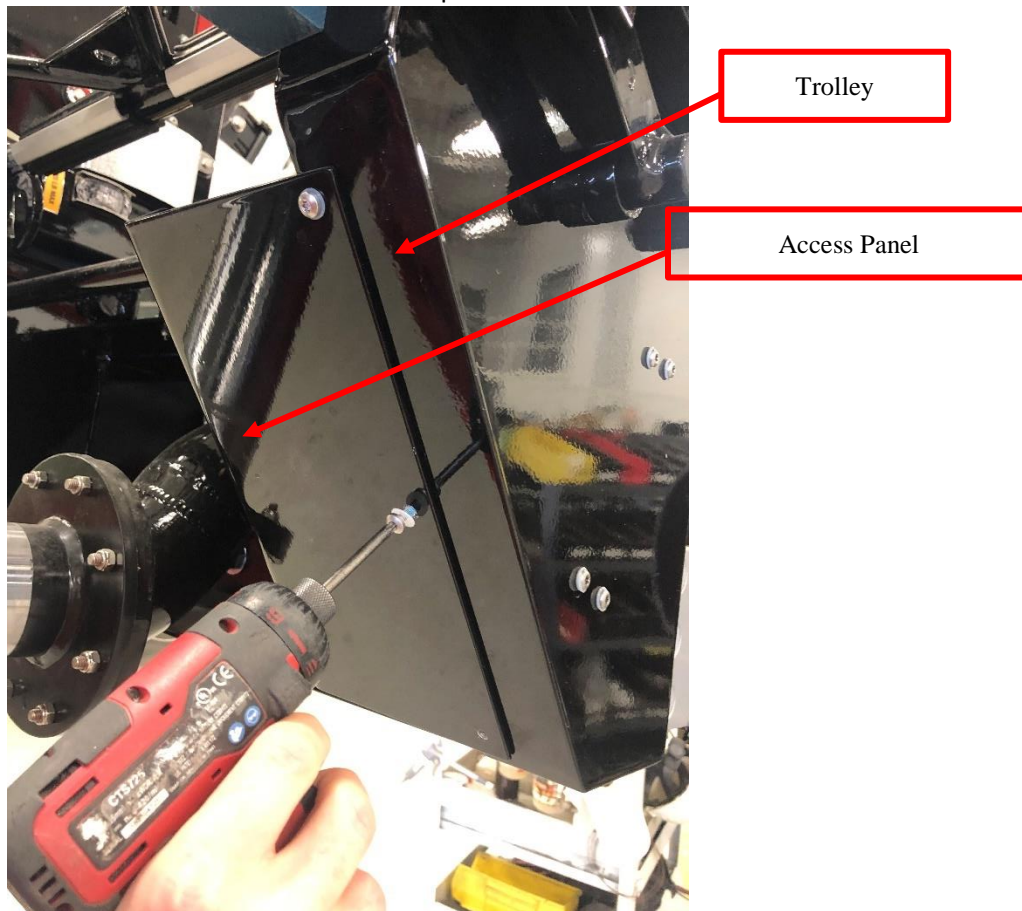


Figure 1: Removing the trolley access panel.

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



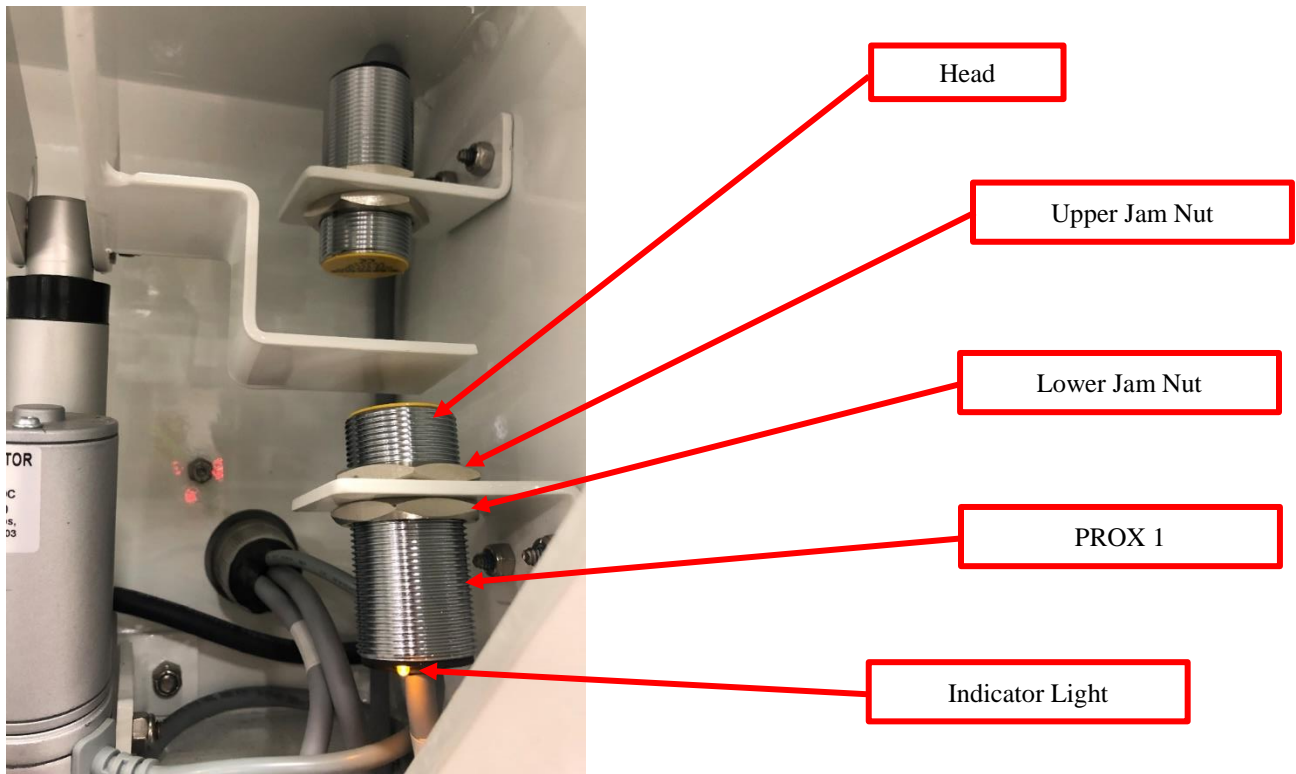
Recall Service Bulletin

RSB21-900-001



PROX 1 Adjustment

- Locate the positional waterway trolley that secures the waterway monitor to the ladder.
- Remove the three T25 Torx screws securing the positional waterway access panel to the trolley.
- Locate the WATER TOWER mode proximity switch (PROX 1)
- Loosen the PROX 1 jam nuts
- While maintaining downward pressure on the head of PROX 1, observe the indicator lamp on the tail.
- If the indicator lamp is not illuminated, maintain downward pressure on the head and rotate the upper jam nut clockwise until the light is ON.
- Maintain downward pressure and rotate the upper jam nut counterclockwise until the light goes OFF.
- Maintain downward pressure and rotate the upper jam nut clockwise until the light turns ON.
- Maintain downward pressure and rotate the upper jam nut clockwise one additional turn.
- Hold PROX 1 and the upper jam nut from rotating while you tighten the lower jam nut firmly.



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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



Recall Service Bulletin

RSB21-900-001



Confirm PROX 1 Adjustment

- Fully retract the ladder
- Elevate the ladder to 20 degrees or higher
- Shift the positional waterway to the RESCUE mode.
- Wait 10 seconds and ensure the RESCUE indication has illuminated.
- Shift the positional waterway to the WATER TOWER mode.
- Wait 10 seconds and ensure the WATER TOWER indication has illuminated.
- Shift the positional waterway to the RESCUE mode.
- Wait 10 seconds and ensure the RESCUE indication has illuminated.
- Leave the system in the RESCUE mode.

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



Recall Service Bulletin

RSB21-900-001



Prepare for PROX 2 Adjustment

- Lower and extend the ladder to a position where the positional waterway trolley can be accessed from the ground or a from a safe working platform.
- Turn OFF the aerial PTO switch (leave the Aerial Master switch in the ON position).
- Turn the engine IGNITION switch OFF to stop the engine.
- Turn the IGNITION switch to the ON position.

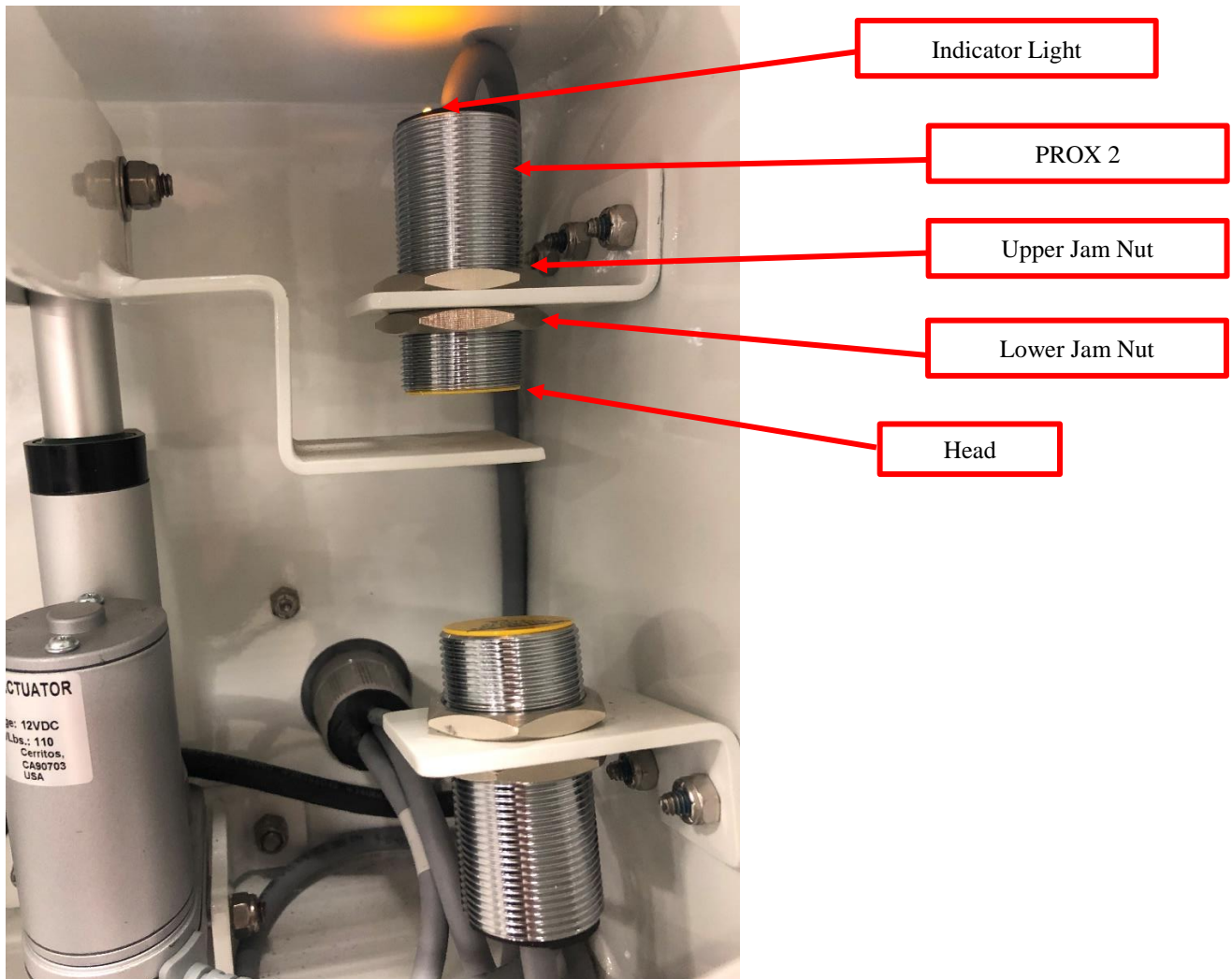


Figure 3: Properly adjusted PROX 2 RESCUE MODE Proximity Switch showing illuminated indicator light.

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



Recall Service Bulletin

RSB21-900-001



PROX 2 Adjustment

- Locate the RESCUE mode proximity switch (PROX 2)
- Loosen the PROX 2 jam nuts
- While maintaining upward pressure on the head of PROX 2, observe the indicator lamp on the tail.
- If the indicator lamp is not illuminated, maintain upward pressure on the head and rotate the lower jam nut clockwise until the light is ON.
- Maintain upward pressure and rotate the lower jam nut counterclockwise until the light goes OFF.
- Maintain upward pressure and rotate the lower jam nut clockwise until the light turns ON.
- Maintain upward pressure and rotate the lower jam nut clockwise one additional turn.
- Hold PROX 2 and the lower jam nut from rotating while you tighten the upper jam nut firmly.
- Secure the positional waterway access panel to the trolley using the three T25 Torx screws.

Confirm PROX 2 Adjustment

- Fully retract the ladder
- Elevate the ladder to 20 degrees or higher
- Shift the positional waterway to the WATER TOWER mode.
- Wait 10 seconds and ensure the WATER TOWER indication has illuminated.
- Shift the positional waterway to the RESCUE mode.
- Wait 10 seconds and ensure the RESCUE indication has illuminated.

Confirm Blocking Valve Operation

- Fully retract the ladder
- Elevate the ladder to 20 degrees or higher
- Shift the positional waterway to the WATER TOWER mode.
- Wait 10 seconds and ensure the WATER TOWER indication has illuminated.
- Shift the positional waterway to the RESCUE mode.
- Wait for the WATER TOWER indication to go OFF, then immediately move the extension joystick to extend the ladder. The ladder should NOT move during the brief time that both mode indications are OFF.
- Shortly after the RESCUE mode indication has illuminated the ladder should be able to extend.
- Repeat these steps shifting from RESCUE mode to WATER TOWER mode.

Return Apparatus to Service

- Shift the positional waterway as required to the desired default mode
- Follow the operator manual instructions to stow the device and the stabilizers.

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 are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.