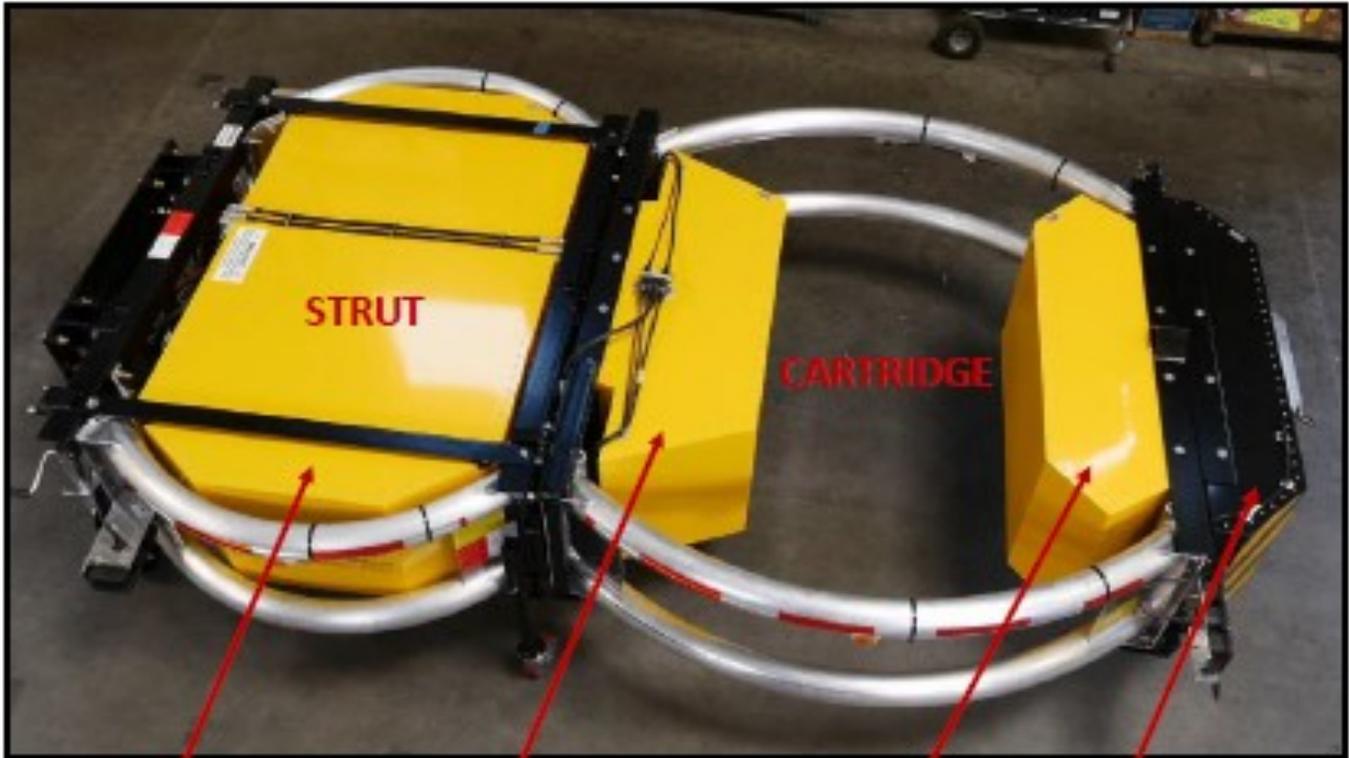


Scorpion® Truck Mounted Attenuator

Service and Repair Manual



Module D

Module C

Module B

Module A



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Maintenance Intervals:

Important: Performance of the Scorpion can be compromised if it is not maintained properly, as a result it is highly recommended that you work with a Traffix Certified Scorpion Service and Repair Center to service it. Due to the advanced training received by our Certified Attenuator Program participants, it is recommended that you take your Scorpion to one of these Centers for an Annual Inspection and Re-Certification. Traffix maintains a list of these facilities and will be happy to assist you in finding one near you. As noted below, if the Scorpion is being used in a severe duty environment, we recommend more frequent inspection. Standard use maintenance and inspection intervals are as follows:

Weekly

1. Verify the energy absorbing modules are secure, with all bolts and nuts in place and in good condition. Tighten any loose fasteners.
2. Check that all pins and safety snaps are in place and in good condition.
3. Inspect the steel structure for damage, looking for warping, cracks, breaks, or other damage.
4. Inspect all lights for proper operation (including arrow/message board if applicable).
5. Cycle the unit from stowed to deployed and back to stowed position (see Operating Instructions), ensuring proper sequence and function (including arrow/message board lift system if attached) pay close attention to whether the TMA motion is smooth and fluid during operation and that the alarm is functioning properly.
6. Check height of TMA in deployed mode, to ensure it is in specification (12 inches \pm 1 inch).
7. Ensure that retroreflective sheeting is in place and meets requirements for job.
8. When cycling the TMA up and down, check the lockout arm (between the cartridge and strut) for proper motion and alignment. When in the stowed position, the two pivoting sections of the lockout arm should form a straight line.
9. Check visually for hydraulic leaks.
10. Before moving the attenuator, ensure that the Drop Jacks are fully retracted and secured and that the Swivel Jacks are retracted and locked in the up position.
11. Inspect energy absorbing modules for large dents, punctures and broken rivets.
12. Inspect condition of energy absorbing tubes, looking for gouges, deep scratches, warping, cracking or other damage.
13. Correct any deficiencies before use.

Monthly (in addition to above)

1. Inspect the steel structure for damage, looking for warping, cracks, breaks, or other damage, including the attachment to the truck frame.
2. Inspect Hydraulic system closely for any indication of leaks.
3. Check hydraulic fluid level and top off if needed.
4. Check and apply grease, as needed, to all grease fittings.
5. Ensure that all electrical connections are corrosion free, all lights are securely attached and functioning correctly, and that covers for rear ICC Light Bar and Rear Tail Lights are securely attached and function smoothly.
6. Cycle unit from fully stored to fully deployed position, and back. Check that the unit moves freely/ properly, without binding, straining, or abnormal noise and that the alarm is functioning properly.
7. Verify that the unit stores properly, supported by the center or side supports.
8. Inspect wear plates on Cartridge Tubes and replace if needed (TL-3 Scorpion C Units Equipped with Side Support Post Only).
9. Wash off dirt and road salt.
10. Inspect for corrosion on powder coated and painted surfaces, prep surface, sand, and re-apply paint as required.
11. **Galvanized sections should not be sanded** if corroded or scratched, but should be touched up with cold galvanizing compound. **Please note:** if exposed to harsh environments on a regular basis, galvanized finish will hold up better than painted finish and should be considered as an option.
12. Correct any deficiencies.

Annually (in addition to above)

1. Drain the Hydraulic Reservoir and re-fill with new fluid (see install manual for capacity/type).
2. Check the hydraulic system for leaks including connectors and cylinders.
3. Inspect all hinges, pins and pivot points for wear and correct as needed.
4. Remove and clean hydraulic power unit (pump) electrical connections, including solenoid connections, electrical coils and electrical contacts on unit. **When replacing be sure not to over-torque fasteners** (coil bolts should be torqued to 80 inch-pounds).
5. Disconnect, clean or replace (as required), and re-connect all other electrical contact points.
6. Correct any deficiencies.
7. **Consider taking your Scorpion® to a Scorpion Certified Attenuator Service and Repair Center for Maintenance Inspection and Re-Certification. This Facility will also repair any deficiencies, if needed, and will certify on behalf of Traffix Devices, Inc., that your Scorpion is in an “As Manufactured Condition”.**

Maintenance Intervals Severe Duty Note: The above intervals should be modified if the Scorpion is being used in severe service applications. Severe applications include, but are not limited to, applications which include long periods of usage on rough roads and/or rumble strips; longer daily service hours; extremes in weather; higher speed (above 30mph) usage while deployed/being deployed; or exposure to corrosive materials (i.e. salt spreading). Please consult your Traffix Devices, Inc. representative for the proper procedures in this service, or if you have any questions on your particular usage.

Repair and Damage Assessment

There are three different kinds of damage that can compromise the performance of your Scorpion. The first is due to “wear and tear” caused by normal use of the TMA and occurs gradually over time. The standard Maintenance Intervals outlined earlier are designed to catch and correct these issues. The second kind of damage occurs due to improper use or maintenance which can compromise the system more rapidly. This kind of damage can have a number of causes ranging from failure to properly maintain the Scorpion to improper operation and/or adjustment with resultant damage. The third type of damage occurs due to impacts while in use and can range from relatively minor “nuisance” hits to highly energetic impacts due to involvement of higher speeds and/or heavier vehicles. While repairs are made the same way for each kind of damage, the assessment of damage (including the determination of whether the system should be repaired) varies by type of damage. **Repairs should be made by Traffix Certified Service and Repair Centers using only genuine Scorpion parts. For a list of Scorpion Certified Service and Repair Centers contact your Traffix Devices representative.**