

PHILLIPS

Qwik Tech Tips

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FEATURED PRODUCT

3-IN-1 Air & Electrical Assembly

- Spiral wrapped for a clean organized look
- Outstanding kink and abrasion resistance
- Includes hanging clamp and clip for easy installation



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PAST ISSUES

Combatting De-icing Chemicals

Ordinary salt (sodium chloride) was used to de-ice wintery roads until the 1990's when new forms of chemical de-icers - magnesium chloride and calcium chloride - were introduced. The molecular size of calcium and magnesium chloride are about half the size of ordinary salt (sodium chloride) and are highly soluble in water, creating a finer mist of spray that coats the vehicle, and fits into tighter spaces and cracks. These chemicals are also known as 'hygroscopic'. This means they can absorb moisture from any source, including the air in low humidity conditions. Once dried, ordinary road salt on a vehicle generally will not start corroding until it becomes wet. However, because hygroscopic chemicals can pull moisture out of the air, they keep doing damage even after the winter months have passed.

If proper precautions are not taken, an overabundance of wet weather combined with hygroscopic de-icing chemicals will have devastating effects year round.

Here are a few tips to protect a vehicle from corrosion:

- Wash trucks frequently and thoroughly, especially the underside of the chassis and where places that dirt and water can accumulate. If left unclean, 'hygroscopic' chemicals will remain on the vehicle and continue to cause corrosion even during dry weather.
- Do not power wash as water can be forced into areas it cannot escape from, leading to corrosion.
- Be cautious of soaps containing degreasers. Degreasers that come in contact with electrical connections increase the corrosion reaction.
- Consider stainless steel parts where affordable, and minimize specs combining dis-similar metals, which can cause corrosion when they touch, even without the help of damaging de-icers.
- Keep mud flaps in good repair to minimize salt spray.
- Look for components with corrosion-resistant material.
- Clean electrical connectors, on both the tractor and trailer ends, every six months or more if needed, using a plug and socket brush with water (NOT SOAP).
- After every cleaning re-apply dielectric grease on plug and socket pins.
- Use heat shrink tubing or heat shrink connectors on all electrical connections.
- Always make sure the ground leads directly to the negative battery post. Grounding to the chassis or engine will lead to corrosion, poor contacts and faulty electrical operations.
- Replace or repair damaged cables and wires.
- Never pierce wire jacketing as holes can create paths for contaminants to "wick" their way into the wiring system, corroding wires from the inside out.



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- The molecular size of calcium and magnesium chloride are about half the size of ordinary salt (sodium chloride) and are highly soluble in water, creating a finer mist of spray that coats the vehicle, and fits into tighter spaces and cracks.
- Hygroscopic chemicals can absorb moisture from any source, including the air in low humidity conditions.
- Once dried, ordinary road salt on a vehicle generally will not start corroding until it becomes wet. However, hygroscopic chemicals pull moisture out of the air, and continue to do damage even after winter months have passed.

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