PHILLIPS

Qwik Tech Tips

Volume 2 Issue 11 November 2012

Winterizing Your Electrical Harness

Wire harnesses today far surpass those of the past in quality. However, even if you have a first class harness system in place, it's practically useless unless it's protected at the front end. Without a sealed front end, corrosion and contamination will wick their way through the front of the harness, "clogging the arteries", rending the sealed harness virtually useless.

Sealed Front Ends

It is essential to use a socket that is made to withstand the effects of moisture and corrosion. Today, fleets have more than one option available to them. Metal sockets are one option. They are cost effective and get the job done. However, the anti-corrosive property zinc will only succeed at helping to maintain the integrity of the actual socket housing itself, rather than the electricals within. This is because all metal sockets leak. Due to their construction, they are not a completely sealed component. So what does a fleet need to do? Start by converting metal sockets to glass filled nylon and make sure they are insert molded. Insert molding seals the pins to the housing which will prevent contamination from entering the harness system. This is your best bet at sealing out corrosion where it is most likely to begin.

When Sealed Front Ends are Not an Option

So what is a fleet to do when a sealed front end is not an available option, and maintenance on the electrical system is due before winter hits it's hardest? Here are some tips to follow:

- Start by disconnecting all pigtails and inserting new corrosion protective dielectric grease.
- Cable tie or secure all lose pigtails as close to the lamp as possible. You don't want to give road ice a place to buildup, which can inadvertently disconnect pigtails from the lamps.
- To protect wires from sharp edges, small grommets can be used where wire entry holes are utilized in the trailers frame. Make one cut from the outer edge to the center. Insert the wire so that it runs through the center, and attach the grommet to the frame. Another "trick of the trade" is to use a gladhand seal with a dust flap on all entry holes going to the stop tail directional lamps.
- Check for any damage to the electrical harness insulation and repair using solder and seal or heat shrink terminals to make a new connection. Consider using clear heat shrink terminals to visibly ensure a perfect connection. Where heat shrink terminals are not available, heat shrink tape is another option. Simply cut a short strip and wrap it around the defective wire. This tape cures in the air after a short time and will give a great seal.
- Properly clean all 7 way sockets and plugs using a plug and socket brush. Then apply a healthy amount of dielectric grease on all contacts

These tips will help fight corrosion during the winter season, and when combined with a sealed front end, you are almost guaranteed a weather-proof harness system.

TIPS

- Convert all metal sockets to glass filled nylon sealed sockets.
- Secure all pigtails as close to the lamps as possible to avoid road ice buildup.
- Apply dielectric grease to pigtails and clean 7 way socket and plug connections.
- Look for and repair any damage to the harness insulation using solder and seal or heat shrink terminals.

FEATURED PRODUCT

STA-DRY® QCS2®

- Inner cavity sealed to prevent contaminants from passing to the wire harness
- Non-corrosive housing – resistant to magnesium chloride, salt, oil, grease and fuels
- Molded housing includes integrated flange to seal out moisture and corrosion
- Significantly reduces socket replacement time, lowering maintenance

VISIT US ON THE WEB AT

www.phillipsqwiktechtips.com

TO BE ADDED TO OUR MAILING LIST AND FOR ALL PAST ISSUES