

# PHILLIPS

## Qwik Tech Tips

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### FEATURED PRODUCT

#### CLEAR-VU™ BATTERY JUMPER CABLES

- CLEAR-VU™ translucent cable that allows you to see corrosion
- CLEAR-VU™ heavy wall shrink tubing stops water and contaminants from entering the charging system
- Replaces standard OEM red and black cables
- Rope style stranding for flexibility
- Prevents premature battery, alternator and starter replacement
- Operating temperature range -40°F to 150°F (-40°C to 66°C)



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PAST ISSUES

### Maintaining the “Arteries” of the Battery Charging System

Did you know that up to half of all discarded batteries still have life in them? This means that power failure problems are not always due to a bad battery. Many times it can be due to corrosion build up within the battery cables.

In a test conducted by Phillips where battery cable was placed in a typical corrosive environment (\*5% magnesium/calcium chloride solution) it was found that after 350\* hours, voltage capacity had decreased approximately 12%. And after 750\* hours, voltage capacity had decreased by approximately 26%. That's a quarter of the maximum capacity!

When corrosion creeps through the electrical system undetected, it can cause premature charging system failure and unnecessary replacement of batteries, starters and alternators. This is why maintaining the battery cables are so important, since time and money are often invested in making unnecessary repairs. While there is always the possibility for failures to occur with other components in the charging system, it is always wise to begin with maintaining the battery cables and their connections first, since they are the “major arteries” in the charging system. If they're clogged with corrosion, the system will not function at full capacity.



The following are some tips on how to maintain and keep battery cables as corrosion free as possible:

- Perform routine maintenance on the vehicle's battery and be sure to spray posts/terminals with anti-corrosive protective spray, or use dielectric grease. Corrosion build up on the posts, can lead to corrosion on the jumper cable lugs/terminals, which can pass through to the copper wiring in the cable. (Corrosion has most likely already entered the cable if it is stiff when bent near the terminal. Jumper cables should be replaced.)
- Never pierce the jacketing and always inspect the jacketing for signs of damage. An opening in the jacketing is merely a back door for moisture and contaminants to enter the charging system.
- Use battery cable with see through jacketing which allows for visual inspection of corrosion before it becomes a problem.
- Wear gloves when handling battery cable with exposed copper wiring. Even the oils on your hands can start the corrosion process once contact has been made with the wiring.
- When building custom battery cables, be sure to use heat shrink tubing for additional protection after crimping the lug/terminal to the cable.
- Bulk battery cable, and even battery jumpers, should be stored in a dry environment that is moisture free.



Battery Corrosion



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- Maintaining battery cables can save time and money invested in making unnecessary repairs.
- Perform routine maintenance on the vehicle's battery to stop corrosion from battery acid build up that has the potential to make its way into the charging system.
- Store cable in moisture free, dry environments, and use gloves when handling exposed copper wiring.
- Never pierce the battery cable jacketing and always use heat shrink tubing to protect the crimp connections between the lug and the cable.

\*Phillips Industries, to the best of our knowledge, has compiled the information contained herein from what it believes are authoritative sources. This information is not to be taken as representation for which Phillips Industries assumes legal responsibility.