

## PRESS INFORMATION

### MICHELIN® Smart Jumper Cables™ Frequently Asked Questions

**1) How are MICHELIN Smart Jumper Cables different from conventional jumper cable designs?**

*MICHELIN Smart Jumper Cables automatically adjust polarity which means you can connect the clamps to either positive or negative connections. Conventional jumper cables require that the clamps are specifically connected to the positive and negative battery terminals. Failure to properly attach conventional jumper cables can result in sparking, shorting, exploding batteries, engine fires, and expensive electrical system damage.*

**2) When and where can I purchase MICHELIN Smart cables and what is the MSRP?**

*Retail availability begins in the fall at around \$40 (U.S.). Smart Jumper Cables make an excellent gift and are available for purchase at a number of major retailers in North America and via the Internet. The list of retailers that will sell the cables includes Wal-Mart, Advance Auto Parts, Pep Boys, Rite Aid, Strauss and Fred Meyer and Zellers in Canada. Visit [www.michelinsmartcables.com](http://www.michelinsmartcables.com) for store locations as well as instructions for making an online purchase.*

**3) How do I know if the MICHELIN Smart Jumper Cables can be used to jump my vehicle's battery?**

*Prior to using MICHELIN Smart Jumper Cables, check your vehicle owner's manual for any special precautions or considerations specific to your particular vehicle. Like traditional jumper cables, MICHELIN Smart Jumper Cables are designed for use on passenger vehicles and light trucks, most of which utilize a 12-volt battery.*

**4) What are the recommended steps for jump start using MICHELIN Smart cables?**

**Four (4) vehicle preparation steps:**

- 1. Position vehicles so they are not touching but close enough for cable use.*
- 2. Set an auto transmission vehicle in "Park" position; Set a manual transmission vehicle in "Neutral."*
- 3. Turn the ignition "Off" of both vehicles and set both parking brakes.*
- 4. Raise and secure both hoods.*

**Four (4) easy boosting steps:**

- 1. To the vehicle supplying assistance: connect one clamp to the positive (red) and the other clamp to the negative (black) battery terminal.*
- 2. To the disabled vehicle: connect one clamp to the positive (red) terminal and the other clamp to exposed metal on the engine block or vehicle frame.*
- 3. Verify both green LED's are lit on the jumper's center module. If not, adjust the clamps until they do light up.*
- 4. Start the vehicle supplying assistance and let it idle normally for about 30 seconds. Then start the disabled vehicle. Once the disabled vehicle is running, disconnect the clamp attached to the engine block/vehicle frame first, and then disconnect the remaining clamps in any order.*

**5) What safety precautions are recommended during the boosting procedure?**

1. **Do** wear eye protection.
2. **Do** provide adequate ventilation when working with a battery in an enclosed space.
3. **Do** inspect battery caps on both vehicles are tight and level.
3. **Do not** lean over either battery.
4. **Do not** smoke.

**6) Do I have to connect the clamps to the battery terminals in a certain order?**

No. MICHELIN Smart Jumper Cables do all of the thinking for you. Connect one set of clamps to the boosting vehicle's battery terminals and the other set of clamps to the disabled vehicle – one clamp on the positive battery terminal and the second clamp to metal on the vehicle engine block or frame.

**7) Why attach one cable to metal on the engine block or body frame of the disabled vehicle?**

Hydrogen and oxygen gases are produced during normal battery operation. The recommendation is an added safety precaution in the event gases are present during the jump starting procedure.

**8) After connecting both sets of clamps to the battery terminals, the green LED's on the center module are not illuminated. What does this mean?**

If the green LED's on the center module are not lit, it probably means that the clamps are not securely fastened. Adjust the clamps until the green LED's illuminate. If the green LED's still do not light after you have firmly connected the clamps, then your battery is damaged, completely drained (no residual voltage), or has less than the 6 residual volts required for boosting. The average residual voltage in batteries that require jumping is about 9 volts.

**9) Tell me more about the surge protection feature.**

The technology within the circuitry is designed to absorb or dissipate voltage spikes to prevent them from traveling down the line and causing damage to the vehicle's electronics. One of the key components responsible for absorbing/dissipating voltage spikes is a varistor.

**10) Tell me more about the automatic polarity adjustment feature.**

The circuitry takes the residual power of the battery and identifies its polarity. Once the polarity is determined, the circuitry adjusts the polarity and switches the cables (if needed) and correctly routes the power.

The auto polarity adjustment is performed by five circuits – two voltage polarity recognition circuits (one for the battery to be rescued; the other for the battery providing the power supply) a logic recognition circuit, a driving circuit and a relay switching circuit.

- The voltage polarity recognition circuits recognize polarity then send a signal to the logic recognition circuit.
- The logic recognition circuit receives the polarity information then sends a control signal to the driving circuit.
- The driving circuit receives the logic recognition signal and in turn drives the relay switching circuit.
- The relay switching circuit enables the two batteries to be accurately coupled. In the event the system detects a connection problem, this circuit switches off the current conductors for safety.

**11) I have successfully jump started my vehicle. How do I disconnect the MICHELIN Smart Jumper Cables?**

*Disconnect the clamp from the engine block/frame first then disconnect the remaining clamps in any order.*

**12) I have tried several times to start my vehicle with the MICHELIN Smart Jumper Cables attached, but my vehicle will not start. What does this mean?**

*If after several attempts you are unable to start your vehicle, then it is likely that your battery is damaged, completely drained (no residual voltage), or has less than the 6 residual volts required for boosting. The average residual voltage in batteries that require jumping is about 9 volts.*

Dedicated to the improvement of sustainable mobility, Michelin designs, manufactures and sells tires for every type of vehicle, including airplanes, automobiles, bicycles, earthmovers, farm equipment, heavy-duty trucks, motorcycles and the space shuttle. The company also publishes travel guides, hotel and restaurant guides, maps and road atlases. Headquartered in Greenville, S.C., Michelin North America ([www.michelin.com](http://www.michelin.com)) employs 22,600 and operates 19 major manufacturing plants in 17 locations.

For nearly 40 years, Pylon Manufacturing Corporation ([www.pylonhq.com](http://www.pylonhq.com)) has been a leading automotive aftermarket supplier specializing in the design, engineering and marketing of wiper blades. Located in Deerfield Beach, Fla., Pylon is an ISO 9001-certified division of the Qualitor, Inc. family of automotive companies. Pylon is the exclusive licensee responsible for the distribution and marketing of the Michelin® Smart Jumper Cables™ and premium wiper blades throughout North America.

###