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MAINTENANCE MATTERS

Torque it over: Managing your wheel mounts

Depending on your coach model, wheel-mounting hardware and torques may very substantially, according to mounting location, whether the wheel is steel or aluminum, or wheel style (stud- vs. hub-piloted). But there's one thing they do have in common: Poor mounting procedures can cause wheel-stud failure that can damage the wheel or hub assembly, or even cause the loss of the tire.

When mounting wheels, MCI cautions against over-reliance on pneumatic tools; using torque wrenches and proper torque sequences can reduce or maybe even prevent wheel-stud failure. In addition to using proper mounting procedures, a daily inspection of tires and lug nuts before every trip may save you from a breakdown that could cost you time, money and passenger goodwill.

A wheel-stud primer

Proper tightening sequences can be found in your MCI Maintenance Manual, Section 15. But in general, when replacing wheel studs, it is good practice to replace adjacent studs as well, for they have probably been overloaded. If more than two studs have been broken, replace the entire set.

Stud-piloted wheels use chamfered wheel-stud holes to center the wheel on the hub. Hub-piloted stud wheels do not have chamfered stud holes and use the center stud hole to pilot the wheels onto the hub and studs. Due to these basic wheel differences, each of these installations use specialized mounting hardware to fasten the wheels to the axle hub and drum/disc assemblies. Steel wheels have a two- or five-hand hole pattern, while aluminum wheels have a ten-hand hole pattern and are fabricated from thicker material than steel wheels.

With stud-piloted wheels, installations require left-hand threaded studs on the left side of the coach and right-hand threaded studs on the right side of the coach. All stud-piloted drive axle studs are fitted with an inner wheel nut to make up the length required for dual-wheel installations. With this configuration, it is necessary to tighten the inner nuts fully before installing the outer wheel nuts.

Hub-piloted wheel installations use right-hand threaded studs on both sides. Stud stand-out lengths for aluminum wheels are longer on all hub-piloted installations, and on stud-piloted front and trailing axles.

Conventional ball seat wheel nuts are used to attach all stud-piloted wheel installations. One-piece flanged wheel nuts, in combination with ball seat nuts, have previously been used to attach front stud-piloted steel wheel installations. Two-piece flanged wheel nuts are used to attach all hub-piloted wheel installations. Inner wheel nuts are used to attach drive axle stud-piloted inner dual wheels on steel, steel/aluminum, and aluminum/aluminum wheel installations.

Wheel torque nut specifications

Torque all wheels to 450-500 ft. lbs. (610-678 NM). Always re-torque all wheel nuts after the first 50 to 100 miles of operation to ensure that they are still tight.

If you still have questions on proper wheel mounting, please refer to your MCI Maintenance Manual, or call MCI's Technical Support Center at 800-241-2947.

The FYI from MCI editorial staff values your feedback. Please e-mail any suggestions, comments, or ideas for future articles to fyi@mcicoach.com.

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