



Aluminium Trailer Wheels

In the past aluminum wheel suppliers to the trailer industry have simply adapted automotive wheels by matching the bolt circle of the wheel to the axle hubs. These wheels were often “flat based” designs. That is the mounting face of the wheel was machined flat. Such a design is satisfactory for automotive applications as the pilot hole is machined to fit exactly over the hub and will therefore prevent any lateral movements. With the opportunity for excessive use through overloading it became evident that a line of aluminum wheels specifically engineered to meet the demands of our industry was required. It was in response to that demand that we developed our line of aluminum trailer wheels. The following paragraphs detail the additional steps that have been engineered into our wheels in order to meet those requirements:

1. Radius – a mild radius is machined into the mounting pad of our wheels. When the lug nuts are torqued the pad is pushed towards the hub. This creates a force that pushes back against the lug nuts. This clamping effect is similar to the design used in steel wheels.
2. Steel Inserts – steel sleeves are pressed into the lug holes of all our wheels. This allows the steel surface of the lug nut to come into contact with the steel surface of the insert providing the opportunity to achieve a greater torque. It also prevents the aluminum surface yielding to the steel surface on the lug nut.
3. Recess for Cap – a recess has been machined into the pilot hole at the mounting face in order to allow room for caps to fit without getting in between the wheel and the hub. If any part of the cap comes between the wheel and the hub the friction holding the wheel on is reduced and may be dangerous.
4. Mounting Pad Unpainted – because the contact between the wheel and the hub is critical to the wheel’s ability to carry its rated loading it is recommended that as little foreign material as possible be allowed to hinder that contact. To that end we ensure that there is no paint on the mounting face of our wheels.

Notwithstanding all these steps we take this opportunity to remind you that the standard torquing and re-torquing procedures are recommended. We also wish to remind you that it remains the trailer manufacturers’ and the wheel distributors’ responsibility to ensure that the wheel, tire, cap, lug nut, axle combination is properly married in order to comply with the engineering requirements for each unique application.

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