

Introduction

This information is intended as a guide for the proper specification and application of Dexter Axle running gear, associated components and accessories.

Dexter offers a full line of trailer axles that can be used in many different applications. When specifying any pre-engineered components such as axles, it is the responsibility of the trailer designer to insure compatibility with the vehicle and all of its sub-systems.

Information

The information presented is meant to assist trailer manufacturers in the specification of their running gear components. Dexter Axle does not warrant that the information given constitutes an approved trailer design or application. Dynamic loading, travel requirements unique to the trailer design, unusual service conditions, trailer configurations, unequal load distribution, hitch or coupler arrangements and towing vehicle suspension characteristics can significantly affect the performance of any trailer axle and/or suspension systems. It remains the responsibility of the trailer manufacturer to evaluate, specify and test their trailer/running gear combination before production and to certify it as such. While the information presented at the time of this writing is current, it is subject to change as designs and components evolve over time.

Disclaimer of Warranty and Limitation of Liability

All users of this product catalog acknowledge that the information presented is significantly affected by factors within the exclusive knowledge of the user including, among other things, service conditions, trailer configurations, load distributions, hitch and coupler arrangements and tow vehicle suspension characteristics, that the users have independently investigated these factors and have solely relied on those investigations when using this catalog, and that it is the responsibility of the user to adequately specify, evaluate and test its trailer/running gear combinations.

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Load Ratings

The maximum load carrying capacity of any assembly is limited

to the lowest load rating of any individual component selected. For instance, the load rating of a pair of wheels may be lower than other axle components selected. If this is the case, the load carrying capacity of the axle assembly is reduced accordingly. As a specific example, if a pair of wheels is rated at 1500 pounds each and is used with other components rated at 4000 pounds per axle, the maximum load capacity is limited to 3000 pounds. If two tires are rated at 1400 pounds each and are used on this assembly, the maximum load carrying capacity is limited to 2800 pounds.

Axle Orientation

When working with trailer running gear, it is important to understand the various features and descriptions of the equipment. Most trailer axles are directional by nature, that is, it is imperative that they be installed onto the trailer in the proper manner to ensure brake functioning and correct wheel alignment. The front of the axle must be oriented toward the front of the trailer. The convention used to define right and left is based on viewing the trailer from the rear and facing in the direction of forward travel.

Features to help identify the front of the axle:

- Electric brake wires exit brake backing plates toward the rear of the axle.
- 12 $\frac{1}{4}$ " hydraulic brakes have view ports through the dust shield on the back of the assembly. Where the brake lining is visible in the view port, that will indicate the rear or secondary shoe which is always oriented toward the rear of the axle.
- Slipper springs have the spring eye at the front of the axle.
- Leaf spring axles with inner wiring have the wires exit the tube toward the rear of the axle.
- Torflex® axles have the wheel center trailing behind the axle tube.
- Axles using $\frac{3}{4}$ " spherical ball seat wheel nuts will have right and left handed threads. The right handed thread must be on the right end or curb side of the axle while the left handed thread will be on the left end or road side of the axle.

Stub Axle Disclaimer

A stub axle is described as a trailer axle spindle, welded to a short length of tubing. Stub axles may be specified and purchased as plain spindle/tube weldments or they may be fully assembled wheel end units, with or without trailer brakes.

These incomplete axles are sold to manufacturers who wish to incorporate them into a variety of applications such as specialty vehicular axles, belt tensioning devices, machinery pivot points, etc.

DEXTER AXLE HAS NO CONTROL OF THE DESIGN INTENT OF THESE SPECIAL APPLICATIONS AND THEREFORE CANNOT APPLY A RATING OR CAPACITY TO THESE COMPONENTS.

The spindle/tube connection has been designed for suitable stress levels when used in a trailer axle, mounted to an approved suspension system and loaded to no more than the stated

capacity. The use of all or part of the product for applications other than its intended purpose may not be appropriate. It is the customers' responsibility to determine the efficacy and safety of their particular application.

Torflex® axles can also be purchased as stub axles. This type of axle incorporates a self-contained suspension system. They can be specified as stub assemblies that will be rated for capacity when fitted with approved mounting brackets. The stated capacity will be based on the lowest rated component in each assembly.

These stub assemblies are essentially half axles that are intended to be mounted to the trailer chassis independent of each other. The trailer manufacturer must assume responsibility for the integrity of the attachment as well as the final wheel alignment since independent mounting puts these critical aspects out of Dexter's control. If used in pairs of unequal capacity, the trailer manufacturer should assign a Gross Axle Weight Rating of not more than two times the capacity of the lower rated sub assembly.

Video Gallery

In keeping with our continual commitment to industry safety and the development of innovative products, please feel free to view our ongoing video gallery at www.dexteraxle.com/resources/videos or scan the following QR codes. We are confident these videos will help educate and promote the Dexter product line that you, as our customer, are investing in.



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