



# Dana<sup>®</sup> Spicer<sup>®</sup> Axle & Driveline

ABIB-0511R3

## Information Bulletin

Bulletin Type: Service Information

Topic: Guidelines for Dana Drive Axles with Wide Base Single Tires

**Affected Models:** Dana 40K, 44K, & 46K Tandem & 6X2 Drive Axles.

Dana 40,000 lb. tandem axles with 9.5 mm wall thickness housings (DS404, DSP40, D40-155, & D40-145 axles) are approved to full GAWR rating with outset wheels and wide base single tires only if the tire track width does not exceed 73.3 inches, as measured from center to center of the tires (see definitions and diagrams at end of bulletin).

Outset wheels (up to 2" outset) with wide base single tires that have an effective track width beyond 73.3 inches should be used only with DS405, DSP41, DSH40, D40-145H, D40-155, and D40-170 axles. This will allow full GAWR rating of the housing for track widths up to 75.1". These axle models have an 11 mm wall housing with induction hardened spindles which account for the wider track width allowance. For track widths beyond 75.1", see chart below for allowable rating. Outset wheels beyond 2.0 inches are not approved.

For Dana wide track 40,000 lb. and 44,000 lb. tandem drive axle rating with outset wheels, see charts below for allowable ratings. Outset wheels beyond 2.0 inches are not approved.

For Dana SelectTrac™ 40,000 lb tandem drive axle rating with outset wheels, see charts below for allowable ratings. Outset wheels beyond 2.0 inches are not approved.

For Dana tag axle with outset wheels intended for 6x2 tandem drive axle configurations, see charts below for allowable ratings. Outset wheels beyond 2.0 inches are not approved.

**IMPORTANT: Failure to follow these guidelines may void Dana warranty coverage.**

## Standard Track Housings

Maximum Track (in.)	Allowable GAWR (lb.) 9.5 mm Wall Thickness DS404, DSP40, D40-155 and D40-145	Allowable GAWR (lb.) 11 mm Wall Thickness DS405, DSP41, DSH40, D40- 155H, D40-145H, and D40-170	Allowable GAWR (lb.) 12.5 mm Wall Thickness DSH44
Up to 73.3	40,000	40,000	44,000
73.4 - 75.1	34,000	40,000	40,000
75.2 - 76.0	Not Approved	39,000	39,000

## Wide Track Housings

Maximum Track (in.)	Allowable GAWR (lb.) 12.5 mm Wall Thickness DS404, DSP40, DSH44, D40-155	Allowable GAWR (lb.) 16 mm Wall Thickness D40-170W
Up to 78.7	39,000	40,000
78.8 - 79.5	38,000	40,000
79.6 - 80.2	37,000	40,000
80.3 - 81.1	36,000	40,000
81.2 - 81.9	35,000	40,000

## SelecTTrac™ Housings

Maximum Track (in.)	Allowable GAWR (lb.) 9.5 mm Wall Thickness D40-145, D40-155	Allowable GAWR (lb.) 11 mm Wall Thickness D40-145H, D40-155H	Allowable GAWR (lb.) 12.5 mm Wall Thickness D46-170
Up to 76.3	40,000 *	40,000 *	44,000*
76.4 - 78.1	N/A	36,000 *	40,000*
78.2 - 80.1	N/A	34,000 *	38,000*

\* Minimum Spring Seat Center Spacing = 1016 mm (40")

## EconoTrek™ 6X2 (Standard Tag Housing \*\*)

Maximum Track (in.)	Allowable GAWR (lb.) 9.5 mm Wall Thickness S20-145B	Allowable GAWR (lb.) 11 mm Wall Thickness S21-060B	Allowable GAWR (lb.) 12.5 mm Wall Thickness S23-170B
Up to 73.3	40,000**	40,000**	44,000**
73.4 - 75.1	34,000**	40,000**	40,000**
75.2 - 76.0	Not Approved	39,000**	39,000**

\*\* Ratings assume Dana S170/S190 axle model at forward drive position and tag axle at rear-rear position.

## EconoTrek™ 6X2 (SelecTTrac™ Tag Housing\*)

Maximum Track (in.)	Allowable GAWR (lb.) 9.5 mm Wall Thickness S20-145B	Allowable GAWR (lb.) 11 mm Wall Thickness S21-060B/S20-145BH	Allowable GAWR (lb.) 12.5 mm Wall Thickness S23-170B
Up to 76.3	40,000*	40,000*	44,000*
76.4 - 78.1	N/A	36,000*	40,000*
78.2 - 80.1	N/A	34,000*	38,000*

\* Minimum Spring Seat Center Spacing = 1016 mm (40")

Ratings assume Dana S170/S190 axle model at forward drive position and tag axle at rear-rear position.

**Important:** The above guidelines refer to Dana drive axle housing specifications only. It is the responsibility of the customer and/or the OEM to qualify ratings of the tires and wheels; and also the hub and the bearing system unless specifying Dana LMS or LMSi hubs.

**Important:** Aluminum hubs are rated to a maximum of 9,500 lbs per wheel end or 38,000 lbs per tandem axle when used with 2" outset wheels.

For questions related to these guidelines for the replacement of dual tires with wide base single tires on vehicles already in service, please contact Dana Technical Service.

Please contact Dana Applications Engineering for questions regarding new truck orders or an application approval.



Use of wide based single tires and outset wheels beyond 2" and/or a track width beyond application guidelines will increase the stress level of the axle housing. Changing the approved load condition or improper wheel-end maintenance practice may result in premature wheel-end issues. It is important to follow all guidelines when converting from a dual wheel to a single wheel configuration and to maintain annual wheel-end inspection intervals.

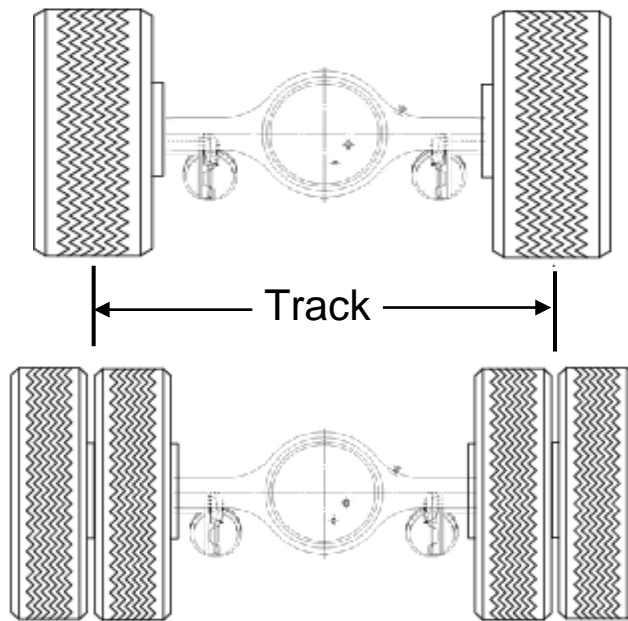
***When specifying wide based single tires and 2" outset wheels, Dana recommends the following:***

- ▶ Specify Dana axle model with 11mm or higher wall thickness with Induction hardened spindles as listed in the charts above.
- ▶ Specify Dana LMS or LMSi Hub System, which includes:
  - Premium Bearings & Seal
  - Precision Spacer
  - Dana 4 – Piece Nut System
  - Wheel-end Identification
- ▶ Perform Annual Inspections
  - Leaks
  - Excessive End-play
  - Bearing Issues Oil Contamination

### Definitions:

#### **Track**

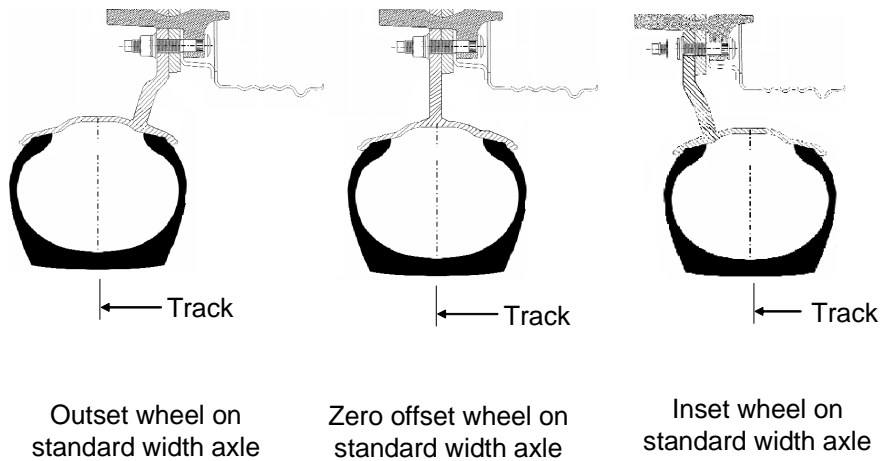
The distance between the dual tire centerline on a dual tire arrangement or the distance between the tire centerlines on a single tire arrangement.



## Wheel Off-Set

**Outset or Positive off-set** wheels means that the rim centerline is positioned outboard of the wheel mounting face.

**Inset or Negative off-set wheels** means that the rim centerline is inboard of the mounting surface.



For specifications or service assistance, call 877-777-5360  
or visit our web site at [Dana.com](http://Dana.com)

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