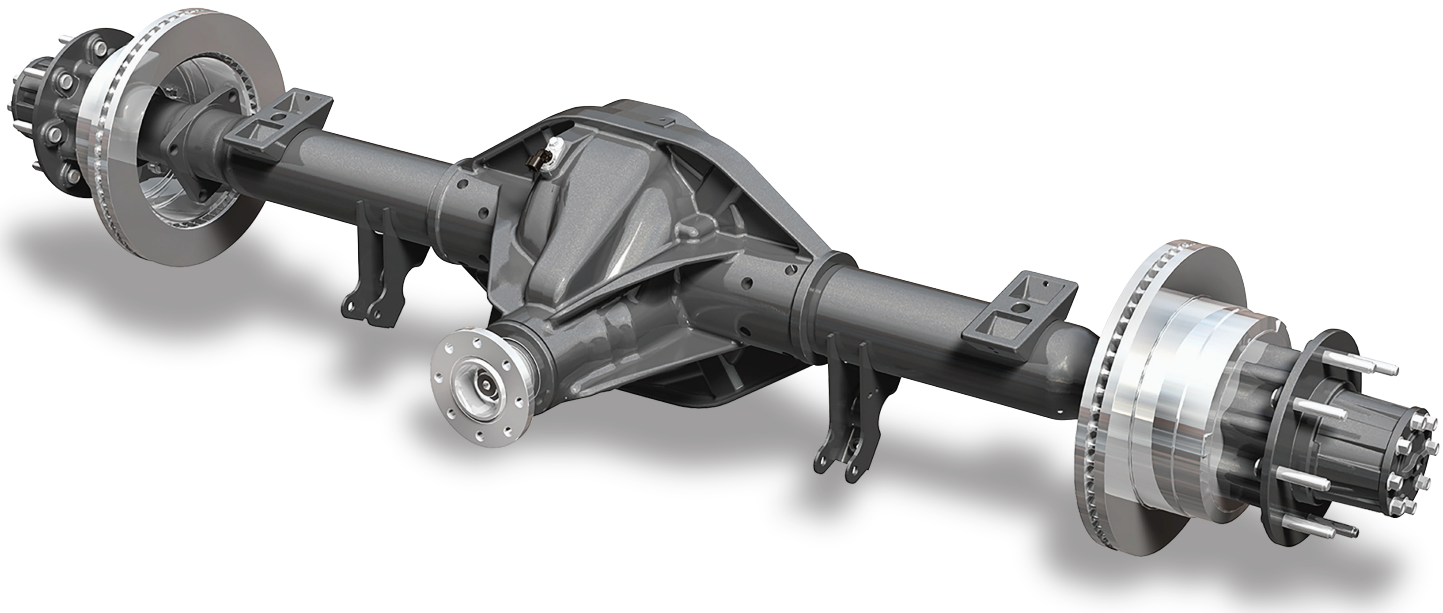
DANA SPICER®
Drivetrain Systems

Spicer® Axles Featuring **AdvanTEK® Gearing**



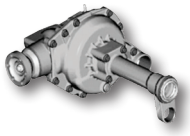
Spicer® Axles
Featuring AdvanTEK® Gearing

Dana's line of innovative Spicer® axles featuring AdvanTEK® gearing provides best-in-class noise, vibration, and harshness (NVH) performance and greater power density in a lightweight, compact package.

This full range of reliable drive axles is engineered for light- and light-commercial vehicles.

Salisbury or Banjo Beam Axle Designs

Rear Independent Suspension Split-Case Design



Front Independent Suspension Split-Case Design

Front Independent Suspension Salisbury Design

Beam-style axles are offered in Salisbury and Banjo construction, while independent axle styles include split-case and Salisbury designs.

Light-Vehicle Driveline AdvanTEK Gearing Product Range

Standard Product Features

- Offers smaller gears than traditional products due to highest power density
- 2- or 3-axis gearing, ranging from 140 mm to 300 mm
- Banjo, Salisbury, or split-case designs
- Differential gear backlash control
- Fuel-efficient tapered roller bearings

Options	Benefits
Aluminum carrier	8–20 kg mass reduction
Synthetic lubricants	Efficiency and durability improvement
Hydrodynamic shaft support in differential	Removes shaft support in carrier
Laser welding gear to differential	1.5-5.0 kg mass reduction
Angular contact ball bearing with lube restriction	95.64% average efficiency (energy loss ~253 W)
Ultra-low viscosity oil design	97.87% average efficiency (energy loss ~ 121 W)

Energy loss is calculated over New European Driving Cycle.
Baseline AdvanTEK® average efficiency is 94% with 350 W of energy loss.
Median axle size used.

Standard Manufacturing Features

- Build-to-pattern
- 3-point backlash
- Torque to rotate build on bearings
- 40 MTE (motion transmission error) audit gears

Options	Benefits
Axle dynamic backlash	Reduced backlash
Build-to-preload vs. TTR (total torque rotate)	+/- 500 N vs. +/- 1500 N (preload control)
Build-to-position vs. pattern	Objective measurement vs. subjective
Less than 25 gear MTE	25 MTE 100% check
End-of-line NVH 100% torque fluctuation testing	Objective axle NVH to vehicle correlation check
Super-finished gears	Higher friction efficiency and 20ºC lower break in temperature
Pinion and/or differential balancing	Pinion imbalance capable to 140 g/mm

Specifications

Ring Gear Size	Typical Torque Capacity	Minimum Gear Ratio	Ring Gear Size	Typical Torque Capacity	Minimum Gear Ratio
140 mm	2,100 N m	2.35:1	210 mm	6,500 N m	2.31:1
150 mm	2,700 N m	2.31:1	220 mm	7,400 N m	2.44:1
160 mm	3,300 N m	2.56:1	230 mm	8,700 N m	2.44:1
170 mm	3,700 N m	2.56.1	250 mm	11,500 N m	3.13:1
180 mm	4,300 N m	3.07:1	275 mm	13,600 N m	3.31:1
190 mm	5,000 N m	2.69:1	300 mm	19,000 N m	3.31:1
200 mm	5,700 N m	2.69:1			

Dana.com/light-vehicles

Application Policy
Capacity ratings, features, and specifications vary depending upon the model and type of service. Application approvals must be obtained from Dana; contact your representative for application approval. We reserve the right to change or modify our product specifications, configurations, or dimensions at any time without notice.

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