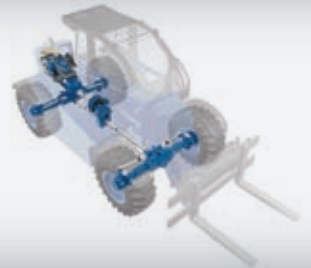
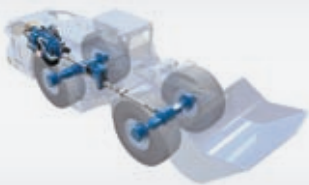


Off-Highway Driveshafts



SPICER®
Off-Highway Systems





More than 100 years ago, Clarence Spicer developed the first practical application of the cardan universal joint. Since then, Dana has continuously developed new designs, materials, and processes for Spicer® driveshafts that provide more power, greater efficiency, and better overall performance.

A century of quality and innovation is reflected in every Spicer product, ranging from 400 Nm driveshafts for leisure/utility vehicles up to 15,000,000 Nm driveshafts used in industrial applications.

Today, Dana can meet any need through the Spicer Ayra-Cardan™, Spicer 10™ Series, Spicer Wing™ Series, Spicer Life Series®, Spicer Compact™ Series, and Spicer® Centered Double Joint lines of driveshafts. Dana also offers multiple end-fittings, including wing-style end yokes and full round or Quick Disconnect™ options for round-style bearings. SAE, DIN, and cross-serrated flanges are also available.

Dana provides a competitive advantage to original equipment manufacturers (OEMs) with a truly global footprint that supplies Spicer driveshaft products and support all over the world, wherever customers are located. With offices and facilities in 26 countries, Dana offers its OEM customers supply-time flexibility and local support that delivers custom-made driveshafts and fittings when they need them.



◀ Since every vehicle is different, Dana works closely with OEMs to deliver custom-made driveshafts that live up to the Spicer® reputation for performance.



◀ Dana driveshafts are inspected throughout the manufacturing process to meet customer expectations for quality and durability.



Customers can rely on consistently superior solutions everywhere Spicer driveshafts are manufactured because Dana is committed to producing reliable, high-quality components everywhere they are made.

In addition, Dana offers a range of warranties, service, and parts, as well as options such as low-maintenance and lube-for-life products.

▲
Dana testing facilities feature on- and off-road test tracks that subject drivetrain systems to extreme operating conditions.



▶
With facilities strategically located around the globe, Dana can accommodate a wide range of production and delivery demands.



Driveshafts

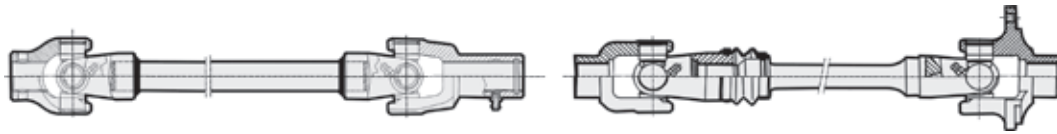
Spicer Ayra-Cardan™

Spicer Ayra-Cardan driveshafts are ideal for smaller applications such as all-terrain vehicles (ATVs) and leisure/utility vehicles.

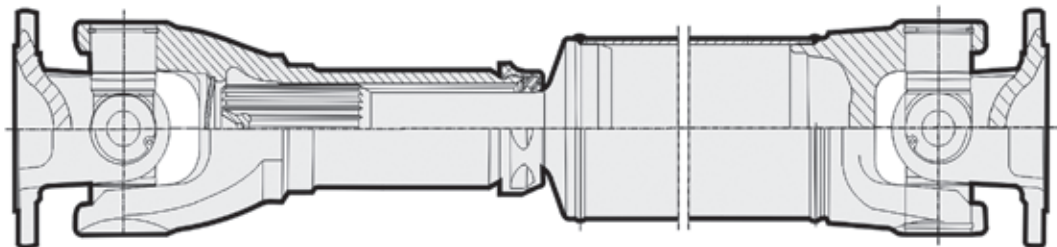
With torque capacities ranging from 1,000 to 2,400 Nm, Dana has the right driveshaft to fit your smallest application.

Design Features

- Reduced Weight
- Maintenance Free
- Smaller Swing Diameter
- Improved Retention: Circlip and Staked



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
S.103	1,000	65.0



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
S.1125	1,800	84.0
S.1300	2,400	90.0

Available on Request

- Paint
- Special Types
- DIN Flanges
- SAE Flanges
- Permanent Lubrication for High and Low Temperatures

Definition of Functional Torque Limit: The torque to which the driveshaft can be loaded without yielding or creating plastic deformation of any of the parts that adversely affect the driveshaft kinematics or durability.

Driveshafts

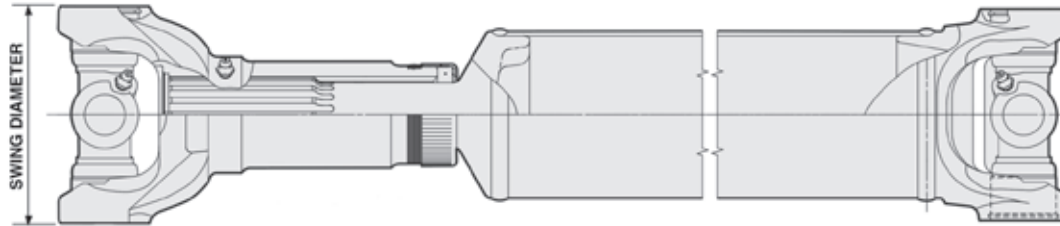
Spicer 10™ Series

Spicer 10 Series driveshafts have been an industry standard for more than 50 years and are ideal for the rigorous demands of most mobile off-highway applications. The Spicer 10 Series offers driveshafts with torque capacities

up to 15,700 Nm. Larger capacities previously available in this series are now offered by Spicer Life Series® driveshafts. This ensures Dana has the right driveshaft to fit all your off-highway needs.

Design Features

- Extended Spline Life
- Reduced Thrust Load under Pressure
- Lower Friction under Load
- Superior Needle Bearing Retention
- Easy to Service Universal Joints



Driveshaft Series	Functional Torque Limit		Swing Diameter	
	Ft.-Lb.	Nm	Inches	mm
1310	1,500	2,000	4.000	101.6
1350	2,500	3,400	4.560	115.8
1410	2,600	3,600	4.940	125.5
1480	4,000	5,500	5.310	134.9
1550	5,100	7,000	6.000	152.4
1610	Use Spicer Life Series (SPL 100)			
1710	11,500	15,700	7.880	200.2
1760	Use Spicer Life Series (SPL 170)			
1810	Use Spicer Life Series (SPL 250)			
1810HD	Use Spicer Life Series (SPL 250 or SPL 250HD)			
1880	Use Spicer Wing Bearing (9C and above)			
	Use Spicer Compact 2000 (2060 or SPL 2065)			

For additional configurations, contact Dana for specific application information.

Available on Request

- Paint
- Special Types
- DIN Flanges
- SAE Flanges
- Extended Lubrication
- Permanent Lubrication

Definition of Functional Torque Limit: The torque to which the driveshaft can be loaded without yielding or creating plastic deformation of any of the parts that adversely affect the driveshaft kinematics or durability.

Driveshafts

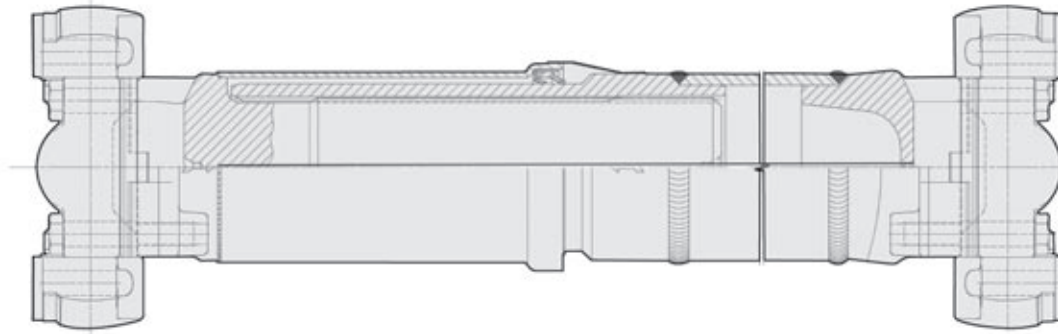
Spicer Wing™ Series

Spicer wing-bearing style driveshafts are designed for longer life, minimal maintenance, and lower operating cost. Dana is capable of offering the most comprehensive range of wing-style driveshafts today. With torque

capacities ranging from 1,500 to more than 120,000 Nm and lubrication packages from extended to permanently lubricated, Dana has the right driveshaft to fit all your off-highway needs.

Design Features

- Sealed Slip Spline System
- Triple-Lip Seal, Thrust Washer, and Seal Guard Package
- Reduced Maintenance
- Increased Torque Capacity



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
2C	1,500	87.0
4C	3,300	116.0
5C	5,600	123.0
6C	7,200	150.0
7C	10,700	158.0
8C	15,500	216.0
8.5C	20,300	175.0
9C	27,400	223.0
10C	39,700	225.0
11C	41,600	235.0
12C	62,200	301.0
12.5C	63,000	295.0
14.5C	108,000	326.0
15C	75,400	273.0
14C	120,600	360.0

For additional configurations, contact Dana for specific application information.

Available on Request

- Paint
- Special Types
- Permanent Lubrication for High and Low Temperatures

Definition of Functional Torque Limit: The torque to which the driveshaft can be loaded without yielding or creating plastic deformation of any of the parts that adversely affect the driveshaft kinematics or durability.

Driveshafts

Spicer Life Series®

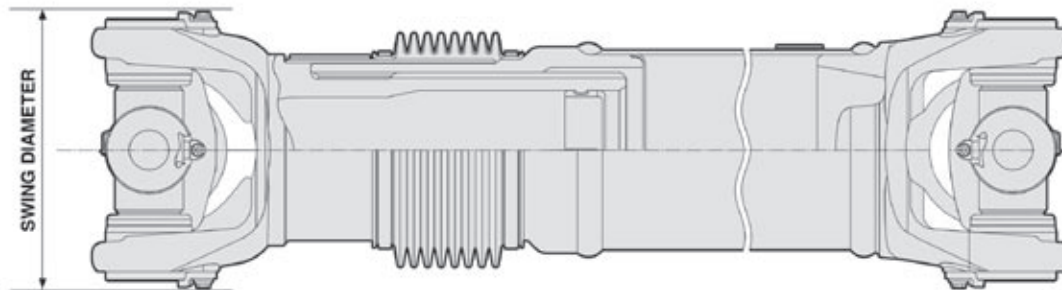
As with the Spicer 10™ Series, Spicer Life Series driveshafts offer features such as longer life, reduced maintenance, and Quick Disconnect™ end yokes that can provide operating benefits to our customers.

With torque capacities ranging from 5,500 to more than 25,000 Nm, Dana has the right driveshaft to fit all your on- and off-highway needs.

Design Features

- Larger Diameter Slip Member with Longer Splines
- Two Boot Options: Thermoplastic Hytrel® or Seal Can Style
- Smaller Swing Diameter
- Centrally Located Grease Fitting
- Permanently Lubricated Slip Spline
- Increased Torque Capacity

Hytrel is a registered trademark of DuPont.



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
SPL55	5,500	134.9
SPL70	7,000	152.4
SPL100	10,000	154.0
SPL140	12,000	194.0
SPL140 HD	14,000	194.0
SPL170	17,000	193.0
SPL250	22,000	193.0
SPL250 HD	25,500	193.0

For additional configurations, contact Dana for specific application information.

Available on Request

- Paint
- Special Types
- DIN Flanges
- SAE Flanges
- Extended Lubrication
- Permanent Lubrication

Definition of Functional Torque Limit: The torque to which the driveshaft can be loaded without yielding or creating plastic deformation of any of the parts that adversely affect the driveshaft kinematics or durability.

Driveshafts

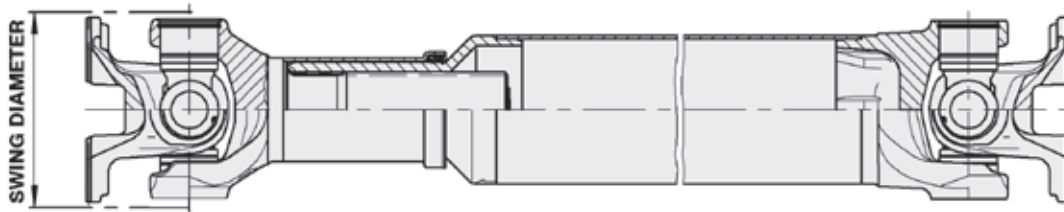
Spicer Compact™ Series

From the industry standard in Europe to the commercial vehicle market, the Spicer Compact Series offers a wide variety of end-fittings, from SAE to DIN and cross-serrated, allowing Spicer driveshafts

to attach to nearly any axle or transmission. With torque capacities ranging from 2,400 to 35,000 Nm, Dana has the right driveshaft to fit all your on- or off-highway needs.

Design Features

- Smaller Swing Diameters
- Bearing Package with Reduced Maintenance or Maintenance-Free Options
- Increased Torque Capacity



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
2015	2,400	90.0
2020	3,500	98.0
2025	5,000	113.0
2030	6,500	127.0
2035	10,000	144.0
2040	14,000	160.0
2045	17,000	174.0
2047	19,000	174.0
2055	25,000	178.0
2060	30,000	196.0
2065	35,000	206.0

For additional configurations, contact Dana for specific application information.

Available on Request

- Paint
- Special Types
- DIN Flanges
- SAE Flanges
- Permanent Lubrication for High and Low Temperatures

Definition of Functional Torque Limit: The torque to which the driveshaft can be loaded without yielding or creating plastic deformation of any of the parts that adversely affect the driveshaft kinematics or durability.

Driveshafts

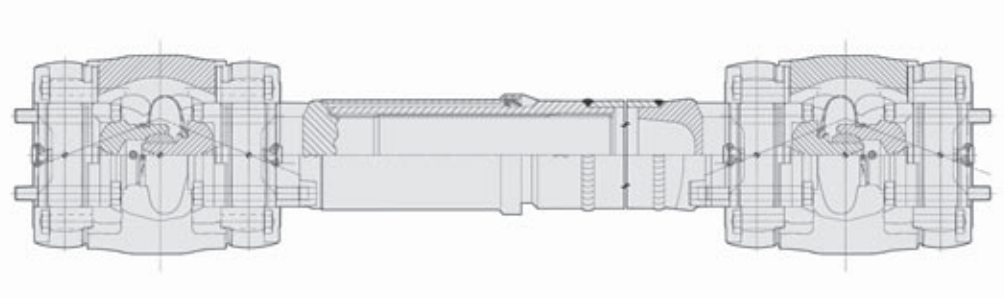
Spicer® Centered Double Joints

Spicer Centered Double Joints are suitable for many applications, including main or wheel drive applications. Available either as a single

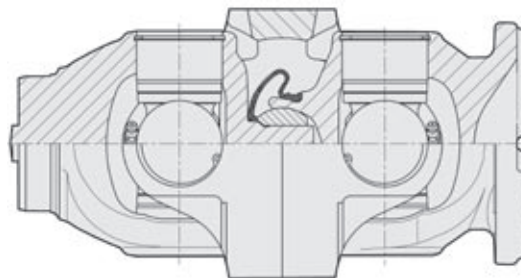
double joint or double/double jointed shafts, ranging from 2,000 to 17,000 Nm, Dana has the right driveshaft to fit your needs.

Design Features

- Permanently Lubricated
- Equalized Angles for Constant Velocity
- Fully Centered
- Round and Wing-Bearing Styles Available



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
6C	7,200	155.0
7C	10,700	163.0
8.5C	20,300	190.0



Driveshaft Series	Functional Torque Limit	Swing Diameter
	Nm	mm
1310	2,000	105.4
1330	2,200	109.0
1350	3,400	118.0
2015	2,400	104.0
2030	6,500	140.0
587.20	8,300	150.0
587.35	17,000	180.0

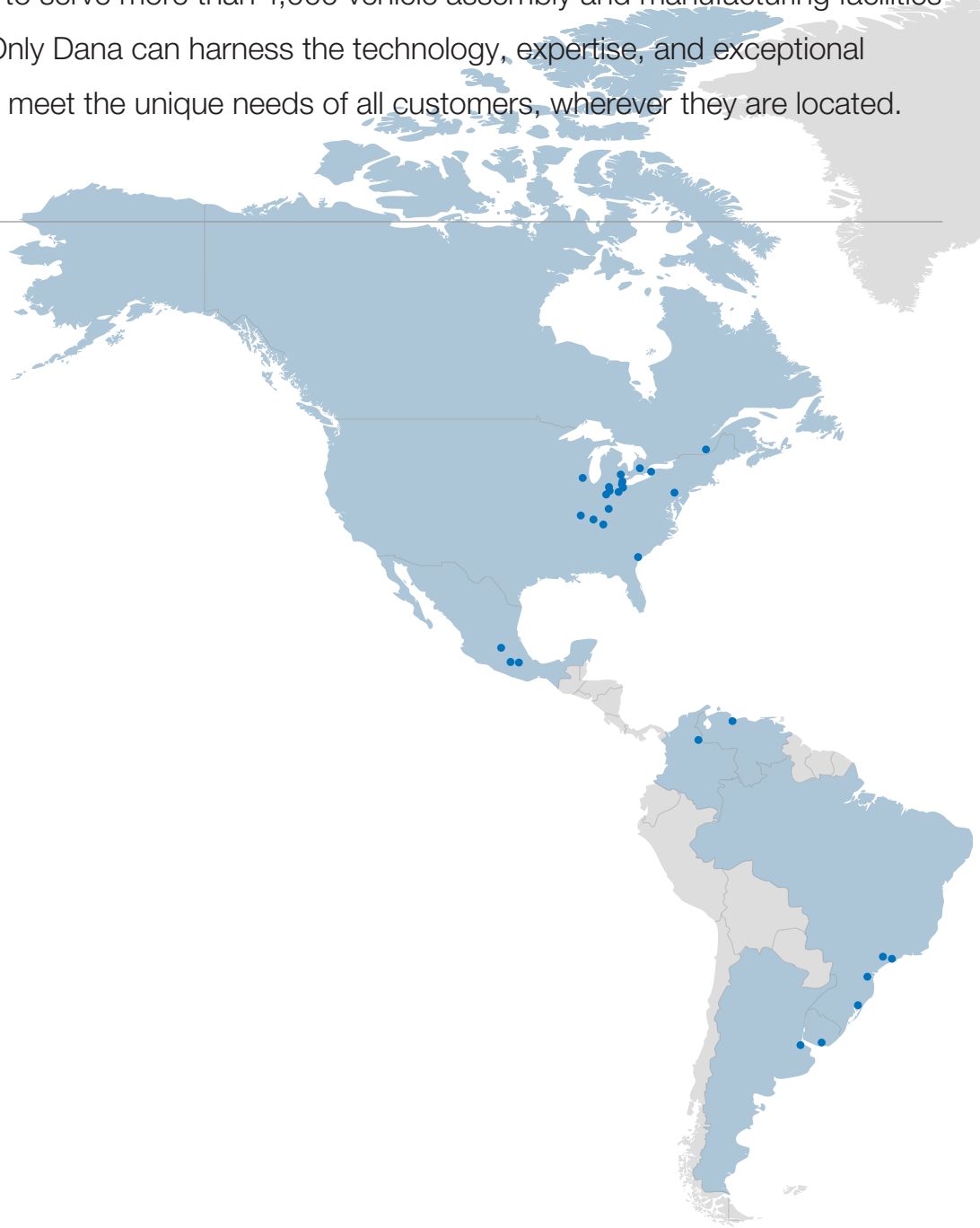
Available on Request

- Paint
- Permanent Lubrication for High and Low Temperatures
- Special Types

Definition of Functional Torque Limit: The torque to which the driveshaft can be loaded without yielding or creating plastic deformation of any of the parts that adversely affect the driveshaft kinematics or durability.



Global Footprint Dana Holding Corporation supports operations strategically located on five continents to serve more than 1,000 vehicle assembly and manufacturing facilities in 30 countries. Only Dana can harness the technology, expertise, and exceptional service needed to meet the unique needs of all customers, wherever they are located.



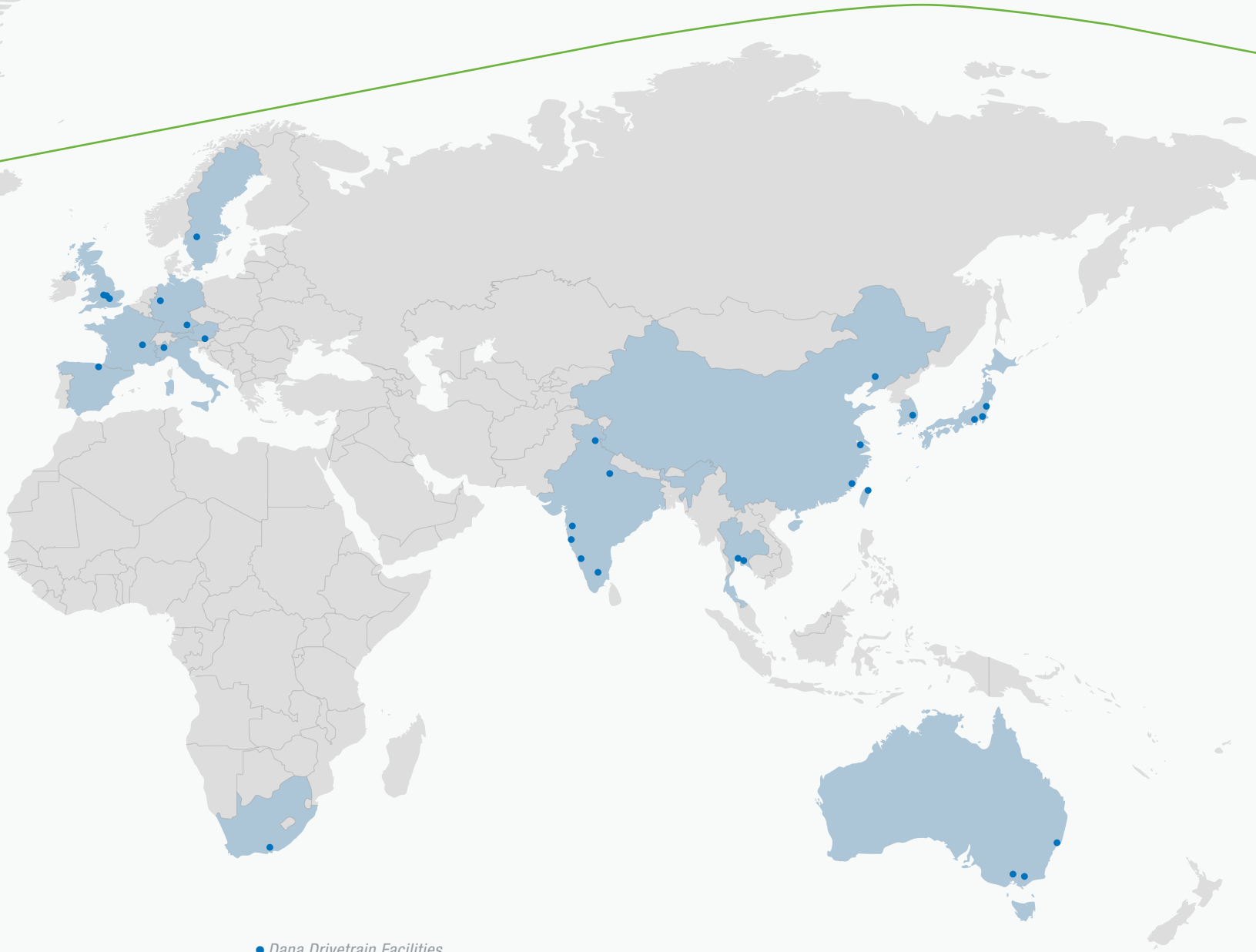
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▶
*Engineering resource centers around
the world provide computer-integrated
manufacturing, rapid prototyping,
metallurgical service, advanced technical
training, and virtual engineering.*



About Dana Holding Corporation

Dana is a world leader in the supply of axles; driveshafts; and structural, sealing, and thermal-management products; as well as genuine service parts. The company's customer base includes virtually every major vehicle manufacturer in the global automotive, commercial vehicle, and off-highway markets. Founded in 1904 and based in Toledo, Ohio, USA, the company employs approximately 29,000 people in 26 countries. In 2008, Dana reported sales of \$8.1 billion.

About the Dana Off-Highway Products Group

The Dana Off-Highway Products Group includes research and development, manufacturing, and assembly operations in Belgium, Brazil, China, Hungary, India, Italy, Mexico, the United Kingdom, and the United States. It designs, manufactures, assembles, and markets Spicer® axles and transaxles, driveshafts and end-fittings, transmissions, torque converters, electronic controls, and brakes. The group also provides genuine replacement parts and service.

The Dana Off-Highway Products Group serves more than 1,000 vehicle assembly and manufacturing facilities in 30 countries. It also has two global distribution centers and more than 50 authorized service centers supporting customers in more than 100 countries. Construction, agriculture, forestry, underground mining, material handling, outdoor power, leisure/utility vehicles, and industrial equipment are just some of the markets that demand the quality found in Spicer products and genuine service parts.



Construction



Agriculture



Mining



Forestry



Material Handling



Outdoor Power Equipment and Leisure/Utility Vehicles



www.dana.com/offhighway_systems/driveshafts.shtm



SPICER®

Drivetrain Products

PARISH®

Structural Products

VICTOR REINZ®

Sealing Products

LONG®

Thermal Products

APPLICATION POLICY

Capacity ratings, features, and specifications vary depending upon the model and type of service. Application approvals must be obtained from the Dana Off-Highway Products Group. We reserve the right to change or modify our product specifications, configurations, or dimensions at any time without notice.