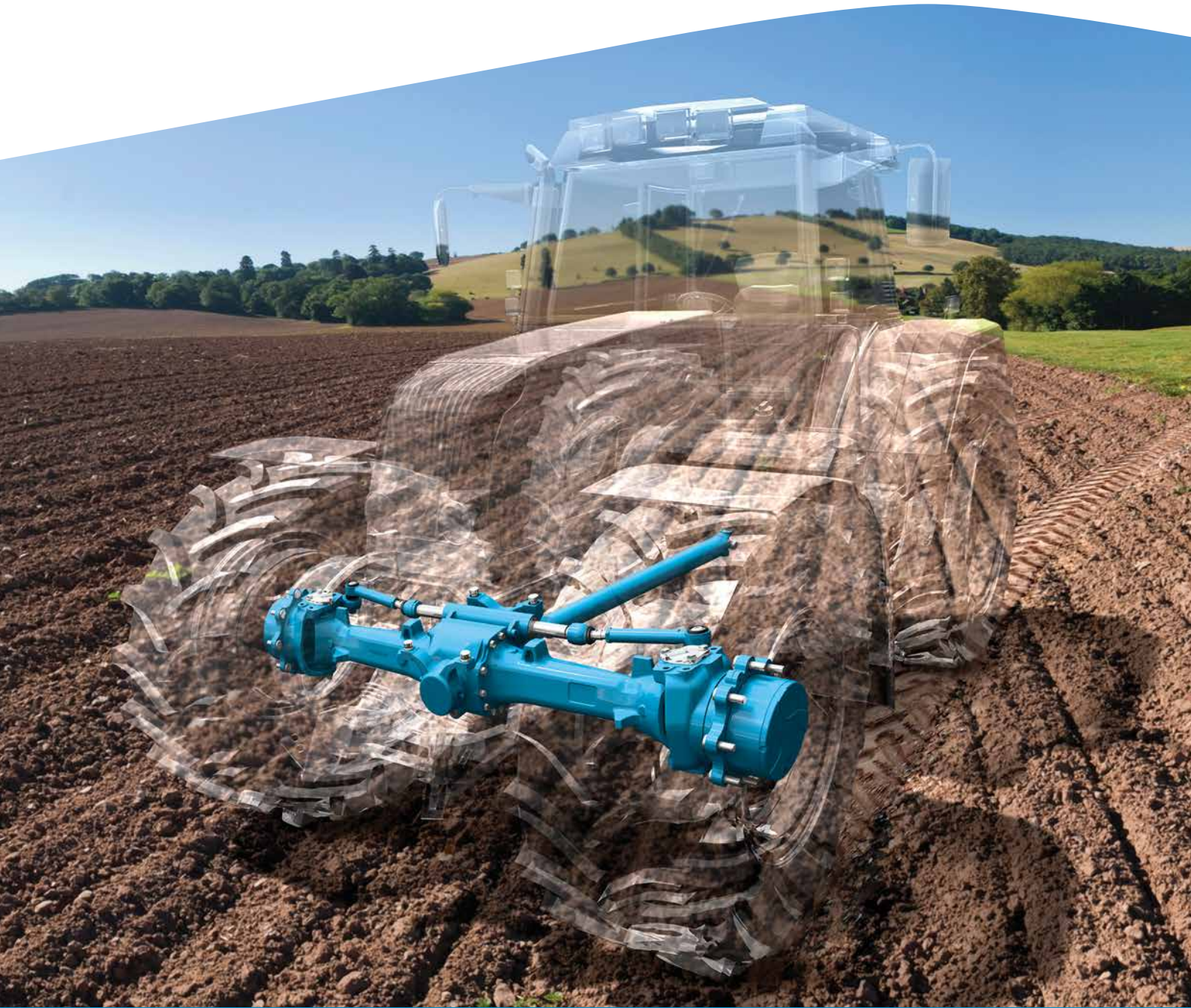


Agricultural Systems

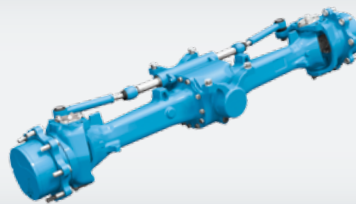
Advanced Drivetrain Solutions



SPICER[®]
Off-Highway Systems



With more than a century of knowledge in the agricultural market, Dana offers proven products and capabilities that stand the test of time.



Drivetrain Systems With a full line of Spicer® brand products designed specifically for agricultural vehicles, customers turn to Dana for innovation and design flexibility. Dana focuses on developing technologies to increase crop yields, improve harvesting efficiency, and comply with evolving emissions standards while reducing overall operating costs and enhancing operator safety and comfort.

Dana serves as a global supplier of Spicer drivetrains designed for the unique demands of agricultural vehicles, such as articulated and non-articulated tractors, vineyard tractors, compact tractors, open field tractors, loaders, harvesting equipment, and combines. Every Spicer drivetrain component is designed, tested, and manufactured to meet customers' exacting standards.

Spicer® Axles

Designed for agricultural vehicles with engine horsepower from 45 to 410, Spicer front drive axles are engineered with optional wet service brakes to enable high-speed transport.

Product offerings include:

- Planetary axles
- Planetary suspended axles

Spicer® Driveshafts

Spicer driveshafts are durable enough to work reliably on uneven ground under constant heavy

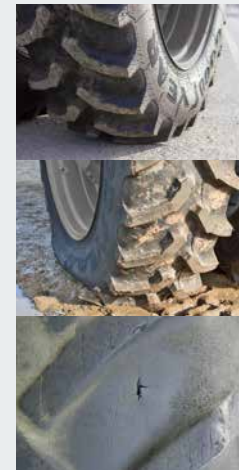
loading conditions. More than a century of quality and innovation is reflected in every Spicer driveshaft, ranging from 400 to 15,000,000 Nm. Dana continuously develops new designs, materials, and processes for Spicer driveshafts, providing more power, greater efficiency, and better overall performance.

Product offerings include:

- Spicer Life Series® driveshafts
- Spicer® Compact Series™ driveshafts
- Spicer® Wing™ Series driveshafts
- Spicer 10 Series driveshafts

Spicer® Central Tire Inflation System (CTIS)

Spicer CTIS allows farmers to adjust tire pressure to suit prevailing conditions when traveling either on- or off-road. This allows for an optimized tire pressure setting depending on terrain type, and provides enhanced tire preservation, better tractive performance, reduced soil compaction, improved fuel consumption, and reduced



Spicer® CTIS maximizes vehicle mobility by adjusting tire pressure to provide the optimum footprint on any terrain.

overall operating cost. Additionally, the system reduces downtimes associated with tire malfunctions, such as minor punctures, leaks, or immobilization in muddy terrain.

Benefits include:

- Increased traction
- Longer tire life
- Reduced fuel consumption
- Protection against soil compaction
- Increased driving stability
- Enhanced productivity for field work
- Improved pulling performance

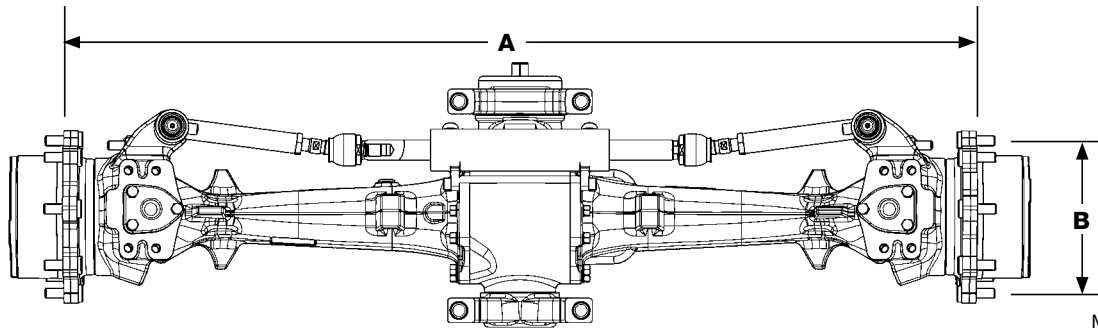
Spicer® axles are engineered to deliver maximum performance along with low-cost service and maintenance.



Spicer® driveshafts help agricultural equipment work faster and maximize productivity.

Spicer® Agricultural Modular Axles

33 to 301 kW (45 to 410 hp)



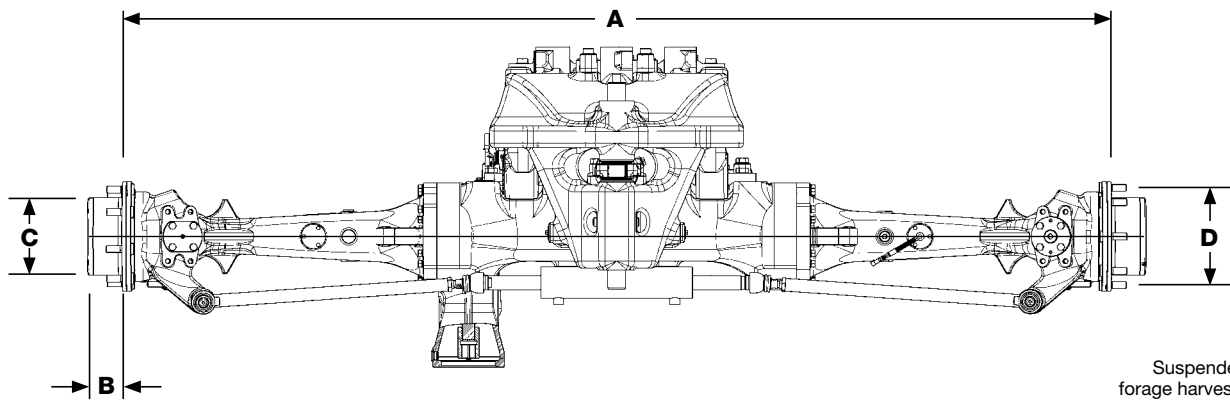
Model 25 shown

AGRICULTURAL MODULAR AXLES

Product Model	Generic Designation	Engine HP	Max Output		Available Planetary Ratio	Ratio Range (Overall)	Steer Angle	Flange to Flange A		BCD B	Brakes	Multidisc Differential Lock
			Nm	ft-lb				mm	inch			
10	M10	45 – 65	9,200	6780	1:4.235	11.55 to 14.585	55°	1580	62	205	No	No
20	M20	65 – 90	13,000	9580	1:6	11.571 to 17	55°	1640	64	275	Yes	Yes
25	M25	90 – 105	16,000	11,800	1:6	11.571 to 17	55°	1640	64	275	Yes	Yes
30	M30	105 – 125	21,000	15,480	1:6	14.571 to 17	55°	1640	64	275	Yes	Yes
40	M40	125 – 140	27,000	19,910	1:6	13.827 to 17.538	55°	1640 to 1800	64 to 70	275	Yes	Yes
50	M50	140 – 220	42,000	30,970	1:6.353	13.827 to 17.104	55°	1780 to 1900	70 to 74	335	Yes	Yes
60	M60	220 – 280	55,000	40,560	1:6.353	13.82 to 18.15	55°	1780 to 1900	70 to 74	335	Yes	Yes
70	M70	300 – 410	80,000	59,000	1:7.07	16.97	55°	1900	74	425	Yes	Yes

Spicer® Combine and Forage Harvester Axle

Up to 97.5 kW (130 hp)



Suspended axle for forage harvester shown

DESIGN FEATURES

Axle Mounting	High pivot
Input Flange Options	8/16" SAE
Double Reduction Planetary Wheel End	Single-stage planetary reduction
Service Brakes	No
Differential Options	Limited slip
Maximum Steering Angle	48°

INSTALLATION DIMENSIONS (mm)

A – Flange to Flange	2802
B – Planetary Hub Length	99
C – Wheel Pilot Diameter	220.6
D – Wheel Bolt Circle Diameter	275 (8 studs, M20 x 1.5)

TECHNICAL DATA

Planetary Reduction Ratio	1:6.00
Bevel Set Ratios	36/8
Maximum Output Torque (daNm)	2592
Load Capacity (daN); Static	8350
Load Capacity (daN); Dynamic	8350

Driveshafts for Agricultural Applications

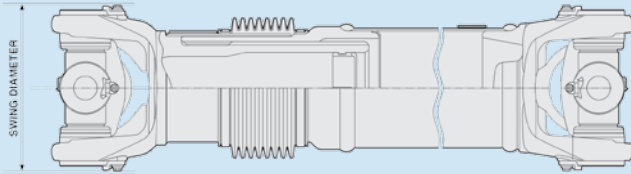
Spicer Life Series®

Design Features

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

Available on Request

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



Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
SPL® 55	5,500	4,057	134.9	5.300
SPL® 70	7,000	5,163	152.4	6.000
SPL® 100	10,000	7,376	154.0	6.630
SPL® 140	12,000	8,851	194.0	7.640
SPL® 140HD	14,000	10,326	194.0	7.640
SPL® 170	17,000	12,537	193.0	7.600
SPL® 250	22,000	16,226	193.0	7.600
SPL® 250HD	25,500	18,808	193.0	7.600

*Hytrel is a registered trademark of DuPont.

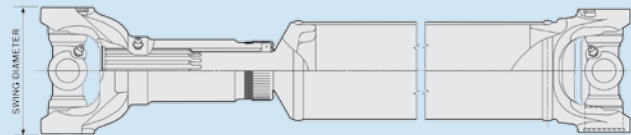
Spicer® 10 Series

Design Features

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

Available on Request

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



Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
1310	2,000	1,500	101.6	4.000
1350	3,400	2,500	115.8	4.560
1410	3,600	2,600	125.5	4.940
1480	5,500	4,000	134.9	5.310
1550	7,000	5,100	152.4	6.000
1610	Use Spicer Life Series® (SPL® 100)			
1710	15,700	11,500	200.2	7.880
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™ Series (9C and above) Use Spicer® Compact™ 2000 (2060 or SPL® 2065)			

For additional configurations, contact Spicer Driveshaft Engineering for specific application information.

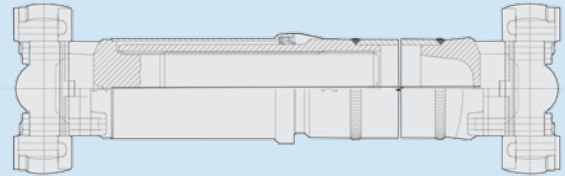
Spicer® Wing™ Series

Design Features

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

Available on Request

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



Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
2C	1,490	1,099.0	87.0	3.430
4C	2,496	1,840.0	116.0	4.570
5C	4,357	3,213.0	123.0	4.840
6C	6,580	4,852.0	150.0	5.910
7C	10,700	7,892.0	158.0	6.220
8C	15,500	11,432.0	216.0	8.500
8.5C	20,300	14,972.0	175.0	6.890
9C	27,400	20,206.0	223.0	8.730
10C	39,700	29,284.0	225.0	8.860
11C	41,600	30,668.0	235.0	8.860
12C	62,200	45,876.0	301.0	11.850
12.5C	63,000	46,466.0	295.0	11.620
14.5C	108,000	79,657.0	326.0	12.840
15C	75,400	55,612.0	273.0	10.750
14C	120,600	88,950.0	360.0	14.170

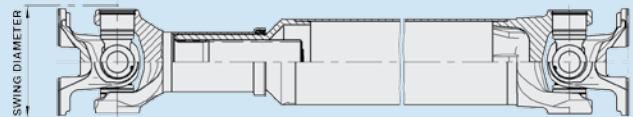
Spicer® Compact Series™

Design Features

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

Available on Request

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



Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
2015	2,400	1,770	90.0	3.540
2020	3,500	2,580	98.0	3.860
2025	5,000	3,690	113.0	4.440
2030	6,500	4,800	127.0	5.000
2035	10,000	7,380	144.0	5.670
2040	14,000	10,330	160.0	6.300
2045	17,000	12,540	174.0	6.850
2047	19,000	14,010	174.0	6.850
2055	25,000	18,440	178.0	7.010
2060	30,000	22,130	196.0	7.720
2065	35,000	25,810	206.0	8.110

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SPICER®

Off-Highway Systems

www.dana.com/offhighway

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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