

# Wheeled Excavators

## Innovative Drivetrain Solutions

Complete Systems | Transmissions | Controls | Driveshafts | Axles



**SPICER®**

*Off-Highway Systems*



*Construction*



*Agriculture*



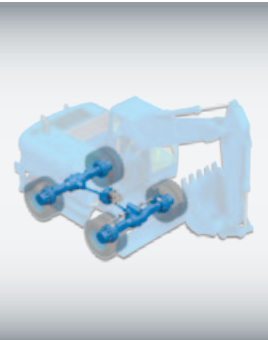
*Mining*



*Forestry*



*Material Handling*



**Drivetrain Systems** With a comprehensive line of Spicer® brand products designed specifically for construction vehicles and wheeled excavators, Dana can provide you with the most innovative and flexible drivetrain solutions in the industry. At Dana, we offer everything from a complete driveline system to individual components that work within your specified designs. Whatever your requirements are, you can rely on more than 100 years of Dana innovation to provide products that work continuously and efficiently in challenging environments where vehicle performance, efficiency, reliability, and operating costs are key considerations.

Spicer® drivetrain systems for wheeled excavators are designed with internal, fade- and maintenance-free, liquid-cooled brakes and lube-for-life driveshafts. These features, along with many other innovations, help minimize your equipment downtime and your operating and maintenance costs. And, every Spicer drivetrain component is designed, tested, and manufactured to meet your exacting standards.

#### **Spicer® Transmissions**

The Spicer transmission range provides options for excellent ratio coverage and enhanced vehicle performance. Spicer single- or two-speed transfer cases provide installation flexibility with the option of fixing directly to the axle, or remotely where a high mount is preferred. Designed for direct mounting of the hydrostatic motor, full power shifting is offered with electronically controlled modulation (ECM) to ensure smooth shifting with downshift protection.

#### **Spicer® Electronic Controls**

Spicer electronic controls provide improved shift quality and reduced acceleration jerk while supplying seamless transitions for the entire range of maneuvers. The controls for the transfer cases can be completely integrated by the OEM into the vehicle engine, hydraulic controls, and braking systems.

#### **Spicer® Axles**

Designed for construction vehicles from 3.6 to 50 tonnes (4 to 55 tons), Spicer axles deliver the required tractive effort for your specific needs. The wet disc brakes for wheeled excavators are mounted inboard for vehicles up to 8 tonnes (8.5 tons) and outboard from 10 to 22 tonnes (11 to 24 tons). The outboard brake designs eliminate jerking while the vehicle digs to ensure smooth operation. A spring-applied hydraulic-release (SAHR) parking brake is an option on the axles with inboard brakes.

#### **Spicer® Driveshafts**

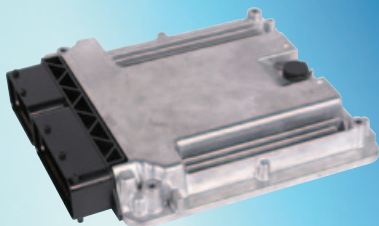
Spicer driveshafts offer design flexibility and the durability to work reliably on varied and uneven terrains found on construction sites.

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

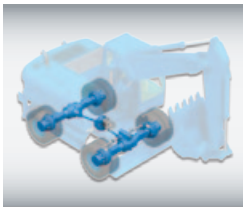
#### **Dana Global Replacement Parts and Service**

We are proud to operate global service parts distribution centers and more than 60 authorized Spicer Service Centers for our customers in more than 100 countries. This global presence ensures that you get local access to the parts and technical support that you need. We also provide a single source for Long® thermal-management and Victor Reinz® sealing system replacement parts. Precision-engineered and rigorously tested, only these genuine parts can provide the reliable performance required to minimize downtime and costs.












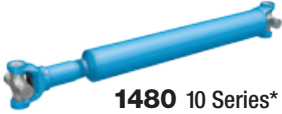






















▶  
*The Spicer® APC120 controller features state-of-the-art design, ensuring high reliability and seamless integration.*



◀  
*The RD.120 remote display is available for the APC120 and provides basic operating information and diagnostic codes.*



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CARRIER WEIGHT	HYDROSTATIC TRANSMISSIONS	AXLES	DRIVESHAFTS
<b>8 Tonnes</b> (8.5 Tons)	 315	 111  211	 1410 10 Series*
<b>10 Tonnes</b> (11 Tons)	 311  357  367	 112  212  162  262	 1480 10 Series*
<b>14 Tonnes</b> (15 Tons)	 357  367	 162HD  262HD	 1480 10 Series*
<b>16.5 Tonnes</b> (18 Tons)	 360  368	 163  263	 6C Wing Series*  7C Wing Series*
<b>19 Tonnes</b> (21 Tons)	 360  368	 163  263	 6C Wing Series*  7C Wing Series
<b>22 Tonnes</b> (24 Tons)	 360  368	 164  264	 8C Wing Series*

\*Other driveshaft series and end-fitting designs available.

## AXLES

Product	Dynamic Load (Kg)	Maximum Output Torque (Nm)	Planetary Ratio	Ratio Range	Input Speed (RPM)	Flange to Flange (mm)	BCD (mm)
111/211	5,500	20,000	4,2 or 6	From 12,8 up to 26	4,000	From 1,270 up to 1,920	205 or 275
112/212	7,000	34,000	6	From 12,8 up to 26	4,000	From 1,660 up to 1,920	275 or 335
162LD/262LD	7,000	34,000	6	From 12,8 up to 26	4,000	1,920	275 or 335
162/262 HD	8,000	34,000	6	From 12,8 up to 26	4,000	1,920	335
163/263	12,000	53,000	6	From 14 up to 22	4,000	1,850	335

## HYDROSTATIC TRANSMISSIONS

Product	Motor Displacement (cc)	Speed Number	Maximum Ratio	Shifting	Input Speed (RPM)	ECU
315	115	1	2.56	NO	5,000	NO
311	170	1	2.46	NO	5,000	NO
357	115	2	4.53	Stand Still	5,000	NO
367	115	2	4.53	Shift-On-Fly	5,000	YES
360	170	2	7.08	Stand Still	5,000	NO
368	170	2	5.00	Shift-On-Fly	5,000	YES

### SPICER® WING™ SERIES DRIVESHAFTS

Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
6C	7,200	5,310.0	150.0	5.910
7C	10,700	7,892.0	158.0	6.220
8C	15,500	11,432.0	216.0	8.500

### SPICER® 10 SERIES DRIVESHAFTS

Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
1410	3,600	2,600	125.5	4.940
1480	5,500	4,000	134.9	5.310

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

## Dana Power Technologies

In addition to our established global position in drivetrain products, we offer a line of sealing and thermal-management technologies for the engine and transmissions of construction vehicles.

### Victor Reinz® Sealing Products

We offer a comprehensive range of innovative sealing solutions for gasoline, diesel, and alternative-fuel construction vehicles.

Our product offerings include:

- Cylinder-head gaskets
- Cylinder-head cover modules
- Exhaust gaskets
- Valve stem seals
- Heat shields
- Secondary gaskets
- Cam covers

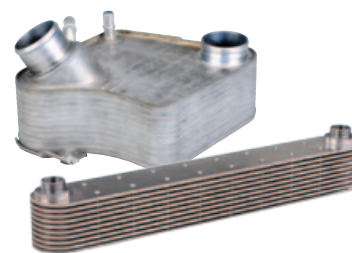


### Long® Thermal-Management Products

We provide heat-transfer solutions that are uniquely engineered for the specific needs of construction vehicles.

Our product offerings include:

- Engine oil coolers
- Transmission oil coolers
- Charge-air coolers
- Special coolers for thermal management of batteries and electronic components



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**SPICER®**

Off-Highway Systems

[www.dana.com/offhighway](http://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 Off-Highway Driveline Technologies. We reserve the right to change or modify our product specifications, configurations, or dimensions at any time without notice.

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