

# Teleboom Handlers

## 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 material-handling vehicles, 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 material-handling vehicles and teleboom handlers are equipped with the power to handle any load. At Dana, our drivetrain system engineers continue to develop technologies for teleboom handlers with a lift capacity of 4 to 12K (1.8 to 5.4 tonnes). And, every Spicer drivetrain component is designed, tested, and manufactured to meet your exacting standards.

#### Spicer® Transmissions

Spicer transmissions deliver smooth shift characteristics, driver comfort, and enhanced vehicle performance. With integrated gear sets, Spicer transmissions offer a compact solution to the teleboom handler market with a unique design that is available with modulation and inching features. Spicer also offers a transmission solution for every weight range variation to suit your need, whether it be conventional or VDT lateral offset. The Spicer transmission features Powershift with both central and side mounting, Powershuttle, or Interchangeable Powershift/Powershuttle.

#### Spicer® Electronic Controls

Spicer electronic controls provide electronically controlled modulation (ECM), electronically controlled inching (ECI), and safety inhibit protection to engage, lift, and transport heavy loads. They have been developed to provide safe, finite control of the vehicle while your operator is in the basket or on an aerial platform. This is accomplished through complete integration of the vehicle engine, brakes, transmission, and hydraulic controls.

#### Spicer® Axles

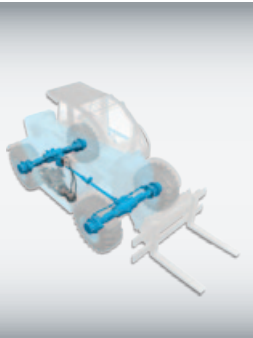
Spicer axles for teleboom handler vehicles deliver the high turning angle required for precise placement of the handler and deep planetary reduction ratios. The wet disc braking system utilizes a fully enclosed design to eliminate contaminants such as water and dirt that are present at work sites. The wet brakes also help your equipment and operators work at peak efficiency for extended periods of time by reducing brake wear and noise.

#### Spicer® Driveshafts

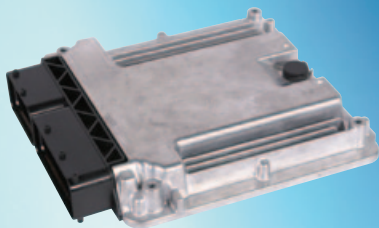
Spicer driveshafts offer design flexibility and the durability to work reliably on varied and uneven terrains in countless environments. More than a century of quality and innovation is reflected in every Spicer driveshaft, ranging from 400 to 15,000,000 Nm. At Dana, we continuously develop new designs, 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.

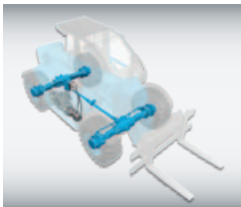


▶  
The Spicer® APC120 controller features state-of-the-art design, ensuring high reliability and seamless integration.





























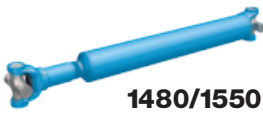









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The RD.120 remote display is available for the APC120 and provides basic operating information and diagnostic codes.





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LIFT CAPACITY	TRANSMISSIONS		AXLES	DRIVESHAFTS
	POWERSHIFT	HYDROSTATIC		
<b>4–5K</b> (1.8–2.3 Tonnes)	 <b>T12000</b>	 <b>311</b>	 <b>211</b>	 <b>4C/5C/6C</b> Wing Series*  <b>1410/1480/1550</b> 10 Series*
<b>6–7K</b> (2.7–3.1 Tonnes)	 <b>T/VDT12000</b>	 <b>311</b>  <b>318</b>  <b>357</b>  <b>367</b>	 <b>212</b>	 <b>4C/5C/6C</b> Wing Series*  <b>1410/1480/1550</b> 10 Series*
<b>7–8K</b> (3.1–3.6 Tonnes)	 <b>T/VDT12000</b>	 <b>311</b>  <b>318</b>  <b>357</b>  <b>367</b>	 <b>212</b>	 <b>4C/5C/6C</b> Wing Series*  <b>1410/1480/1550</b> 10 Series*
<b>9–10K</b> (4.0–4.5 Tonnes)	 <b>T/VDT13000</b>  <b>T20000</b>	 <b>311</b>  <b>318</b>  <b>367</b>	 <b>223</b>	 <b>5C/6C</b> Wing Series*  <b>1480/1550</b> 10 Series*
<b>11–12K</b> (4.9–5.4 Tonnes)	 <b>T/VDT13000</b>  <b>T20000</b>	 <b>319</b>  <b>360</b>	 <b>213</b>	 <b>5C/6C</b> Wing Series*  <b>1480/1550</b> 10 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)
211	5,500	20,000	4,2 or 6	From 10 up to 26	4,000	From 1,270 up to 1,920	205 or 275
212	7,000	38,000	4,2 or 6	From 10 up to 26	4,000	From 1,660 up to 2,180	275 or 335
223	12,000	58,000	6	From 14 up to 22	4,000	From 2,050 up to 2,180	335
213	15,000	65,000	6	From 15 up to 22	4,000	From 2,050 up to 2,310	335

POWERSHIFT TRANSMISSIONS								
Product	Power Range	Speed Number	Vertical Drop	Lateral Drop	Input Speed	Disconnect	Parking Brake	ECU
T12000	Up to 75 Kw	3 or 4 or 6	SD-ID-LD	—	3,000	YES	YES	OPTIONAL
VDT12000	Up to 75 Kw	3 or 4 or 6	VDT	YES	3,000	NO	YES	OPTIONAL
T13000	Up to 105 Kw	3 or 4 or 6	ID	—	3,000	YES	YES	OPTIONAL
VDT13000	Up to 105 Kw	3 or 4 or 6	VDT	YES	3,000	NO	YES	OPTIONAL
T20000	Up to 100 Kw	2 or 3 or 6	IL-ID-LD	—	3,000	YES	YES	OPTIONAL

HYDROSTATIC TRANSMISSIONS							
Product	Motor Displacement (cc)	Speed Number	Maximum Ratio	Shifting	Input Speed (RPM)	ECU	
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	
318	115	CVT	3.56	CVT	5,000	OPTIONAL	
319	170	CVT	3.84	CVT	5,000	OPTIONAL	

SPICER® WING™ SERIES DRIVESHAFTS				
Driveshaft	Functional Torque Limit		Swing Diameter	
	Nm	ft-lb	mm	in
4C	3,300	2,434.1	116.0	4.570
5C	5,600	4,180.3	123.0	4.840
6C	7,200	5,310.0	150.0	5.910

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
1550	7,000	5,100	152.4	6.000

## 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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