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Spicer Driveshaft...

Dedicated to Total Quality
and Continuous Improvement.



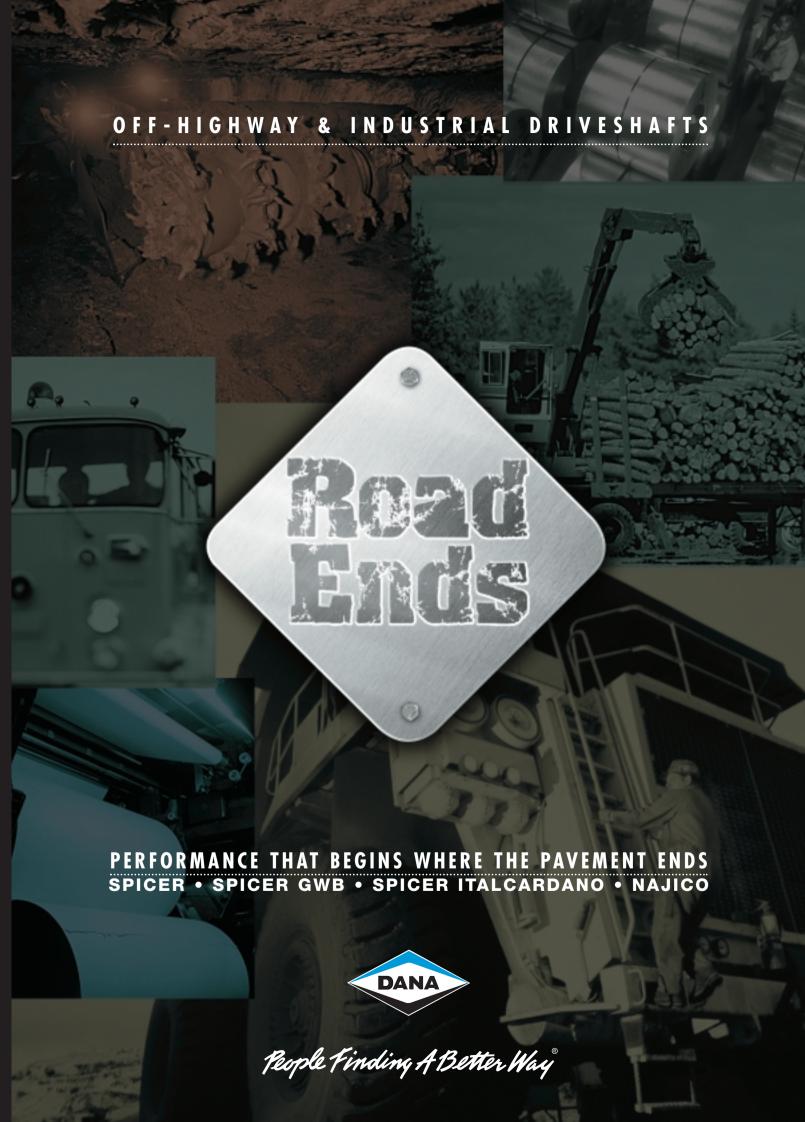
SPICER GWB™

SPICER ITALCARDANO



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Spicer[®] is one of the largest manufacturers of drivelines in the world, both on and off the highway. You'll find us anywhere vehicles are moving; anywhere machines are working. From vertical mast lift trucks to wheeled excavators to mine haulers, our products are found at the highest heights and deepest depths of the earth, and everywhere in between.

SPICER • SPICER GWB • SPICER ITALCARDANO • NAJICO

Leading the Pack in Off-Highway Performance

Because the World is 97% Unpaved

Nobody covers more ground than Spicer. For construction mining, forestry, specialty chassis, irrigation, pulp and paper, metal working, and more — the Spicer Driveshaft Group is strategically located to provide the driveline solutions you need, no matter where you happen to be. We have 20 operations in 10 countries, manufacturing and assembling driveshaft products for the off-highway industry. And with our coordinated global engineering force, seven research centers and innovative manufacturing processes, you'll receive the same premium performance, cutting-edge technology and unsurpassed service the world expects from Dana.

We Know the Terrain

We understand the need for consistent performance and support in off-highway. That's why Spicer engineers are committed to finding better ways to meet the needs of our off-highway and industrial customers. With an unfaltering dedication to technology and innovation, Spicer Driveshaft offers the most advanced, broadest range of driveline components available.

Solutions off the Beaten Path

Spicer Driveshaft brings together the world's most powerful driveshaft-related innovations and the most extensive product offering, including Spicer 10 Series™, Spicer Life Series™, Spicer Compact 2000™, Spicer Italcardano's complete line of wing bearing designed driveshafts and end fittings, as well as heavy-duty driveshafts and fittings from Spicer GWB™ and Najico.





Spicer Wing Bearings

Designed for longer life, minimal maintenance and low operating costs, Spicer and Spicer Italcardano wing bearing U-joints employ a cold-forged cross and an induction hardening process for unparalleled strength. A sealed slip spline system, plus triple-lip seal, thrust washer and seal guard protect against U-joint contamination and reduce the need for frequent re-greasing.

The wing bearing design of Spicer and Spicer Italcardano's driveshafts allows the transfer of torque to occur through mechanical allowance. This makes the driveshafts ideal for a wide variety of applications; particularly applications characterized by continuous load variations, and those subject to shock loads or space constraints.



Through these and other innovative design features, the wing bearing designs of both Spicer and Spicer Italcardano bring long life, minimal maintenance and low operating costs to more applications than ever before.

Spicer 10 Series Driveshafts

Glidecote® splines reduce thrust loads under pressure, lower friction under load, and extend spline life. All 10 Series driveshafts feature patented, double-lip runner spline seal, plus an economical, easy-to-service U-joint kit that has become

> an industry standard. Conical end rollers offer superior needle bearing retention, two zerk fittings offer easy maintenance.

Spicer Life Series Driveshafts

Get maximum performance with the lowest life cycle cost of any driveshaft available. A smaller swing diameter means less rotating mass. Larger bearings allow for increased torque capacity, and an improved sealing package allows for

extended maintenance intervals. A permanently lubricated slip member offers maintenance-free service and has a new integral tube sleeve and yoke shaft design, featuring a larger diameter and longer involute splines. This results in greater strength and torsional stiffness with less weight, while providing improved balance,

less slip effort, and reduced noise and vibration for the entire driveline system.

Spicer Compact 2000 Driveshaft

PAPER PRODUCTION

ETAL WORKING

European-based Spicer GWB produces the Compact 2000 series driveshaft for a wide variety of vehicles. Its major features include high resistance to dynamic load variations, large angle capability, uniform load distribution, reduced swing diameter and weight, and multiple flange connectivity. Together, these features provide an ideal base for both standardized drivetrain and new power transmission concepts.

German-made Spicer GWB heavy-duty driveshafts are among the most advanced and cost-effective products in the industry. They are the preferred choice for the power transmission needs of blooming, billet, wire, sheet and strip mills, continuous cast processors, as well as conveyor roller tables.

The Power of Teamwork

The power of Spicer Driveshaft is a result of the coordinated efforts of the toughest team of driveshaft-related innovators in the world.

Based in Japan, Nakamura Jico manufactures some of the world's largest driveshafts. A joint venture between Dana and Nakamura Jico allows Spicer to focus on products specifically designed for the large-scale steel and metal working industries. The heavy and super heavy-duty Najico universal joints are ideal for applications requiring high torque with small swing diameters, such as main roll hot strip and plate mills, and for heavy-duty machines with large impact torque.

Digging in to Prove Our Commitment

At Spicer, we offer the engineering expertise, depth and breadth of product line, technical assistance capability, technological innovation, and custom application the off-highway industry demands. We're committed to meeting the unique needs of the off-highway and industrial markets. We're continuing to improve the technologies

available, listening to our customers' needs and concerns, and forming partnerships dedicated to advancing the future of off-highway driveline solutions.



Put Spicer Driveshaft to work for you.

To learn more about Spicer off-highway & industrial products, visit us at www.spicerdriveshaft.com