

# LEADING THE INDUSTRY

**QUALITY** - Whether you are in the market for axles, brakes, a driveshaft or chassis components you can rest assured that every part from Mark Williams Enterprises has been designed and manufactured to the highest standards. This includes researching the proper material and manufacturing processes (see below). MW quality is assured by performing designing, testing and manufacturing in-house, including heat treating and our high speed driveshaft balancing.

**CUSTOMER SERVICE** - Mark Williams Enterprises provides unmatched customer service. From the time you place your order, through manufacturing, to shipping, everyone at Mark Williams Enterprises is committed to completing orders on time and to making sure that everything is right the first time. There are a couple of areas that help make this happen. First, MW sends a confirmation sheet, by fax, e-mail or UPS overnight letter, on all custom axle orders to verify dimensions. Second, MW components all have part numbers on them for trace ability and easy identification (custom axles have a serial number).

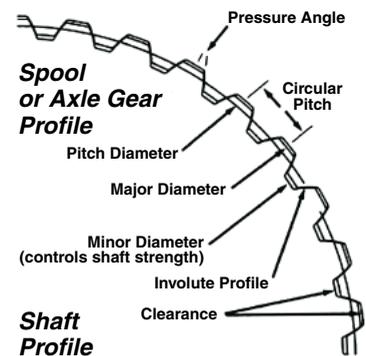
**TECHNICAL ASSISTANCE** - Mark Williams' sales staff are some of the most knowledgeable in the industry and can help with just about any question you might have. We provide ordering and tech assistance on our toll free lines (800-525-1963). You can also visit our full service website [www.markwilliams.com](http://www.markwilliams.com) any time to place an order or e-mail tech questions to [sales@markwilliams.com](mailto:sales@markwilliams.com).

**COMMITMENT** - For over Fifty Years we have strived to be a responsible company that supplies the best quality products. Our investment in testing and quality assurance equipment is unparalleled in the hi-performance industries. We are committed to a continued process improvement program in an effort to supply you with the best products on the market.

## DETAILS MAKE THE DIFFERENCE

**Axle Manufacturing** The ability to produce a quality racing axle requires more than meets the eye. We have learned from our 50+ years that the improvement process never stops. We are constantly making improvements to assure that every axle produced incorporates the latest technology. Axles are our primary product and as such we have a considerable investment in dedicated CNC and other equipment for the production of race axles. In addition, Mark Williams Enterprises is the only company in the racing axle business that has both induction and thru hardening in-house heat treating capability. This allows us total control over the most important operation in the manufacturing process. One example of the details that make MW "Hi-Torque" axles superior is the CNC grinding of the axle flange face and bearing seat/shoulder with a freshly-dressed true radius grinding wheel. The radius at the bearing shoulder is the most critical part of an axle because it's the focal point of the bending moment (where the most force is concentrated). To insure the accuracy of this radius the grinding wheel is dressed prior to grinding each axle with CNC precision. By dressing the wheel for each axle it also eliminates the chance of imbedded contaminants causing friction-induced surface cracks. MW's extra efforts in manufacturing pay huge dividends in reliability.

**AXLES SPLINES** A key factor to consider when purchasing axles is the axle spline. Naturally, if the axles you are purchasing are to be mated to existing components you will need a similar replacement spline. Accordingly, MW manufactures axles with all popular spline configurations, including Dana 60, 12-bolt Chevy, 9" Ford, etc., plus splines compatible with after-market products from other manufacturers. If you have a choice of splines, as in the case of a new axle/spool combination, it is highly recommended that you utilize MW's special 35 or 40 spline. This is especially important since locked (spool-equipped) rear ends are subject to as much as twice the torsion load of standard open-type differentials. For most applications the MW 35 spline with a 1.500" diameter and 45 degree pressure angle is adequate. In comparative shear strength, the MW 35 spline is 61% stronger than the Chevrolet 12-bolt with 30 spline, 45% stronger than a 9" Ford with 31 spline, and even 3% stronger than the Dana 35 spline which has a 30 degree pressure angle. These calculations are based on the physical dimensions of the spline itself, and do not take into consideration the extra strength benefits of MW's Nickel Chromium Molybdenum alloy forging and austempering heat treating process. For those applications requiring maximum strength axles MW offers a big 1.708" diameter 45 degree pressure angle 40-tooth spline that is 51% stronger than the 35-tooth MW spline. Get the MW Hi-Torque axle with the spline that's best suited to your needs.



**PART NUMBER TRACE ABILITY** Every Mark Williams produced part carries a visible part number. Our part numbering system uses a revision letter at the end of the part number that indicates the design change. Example: A spool with part number 53133-H indicates there have been 8 changes to this part (A thru H) since it was first introduced. Anytime a part is re-designed to the point it is would no longer be interchangeable with earlier versions, it is assigned a new part number. Parts that are produced from castings may have two revision letters. Our 9" thirdmember housing 57448 is on the U casting revision and the V machining revision, (at the time of this publication printing). This system allows trace-ability of our parts and can assist identifying the age of parts in the field. All axles and driveshafts are serialized allowing us to access the build information. Other parts have recorded production batch numbers that allow trace-ability. All raw materials used to produce MW products are certified from the mills and are traceable to the individual products.

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