

QUESTIONS & ANSWERS

1. ARE ALL AXLES WITH SIMILAR SPLINE COUNTS INTERCHANGEABLE?

No! For example, an OEM 35-spline Dana axle and a special MW 35 spline axle are not interchangeable because the MW spline features a 45-degree pressure angle, which differs from stock Dana 30-degree configuration. Mark Williams does, however, offer Hi-Torque forged steel axles with OEM type splines. Please read additional spline text on page 3.

2. WHY DO MW HI-TORQUE AXLES HAVE A REDUCED DIAMETER AFTER THE SPLINE?

In order for a splined shaft to carry its maximum torsional load it is necessary to have a working shaft diameter smaller than the major spline diameter. The reduced section after the spline works in the same manner as a torsion bar allowing the rotational wind up to occur over a longer area. This prevents the axle from experiencing permanent set. Axles that are not undercut will twist at the end of the spline engagement and eventually fail at this point.

3. WHAT TYPE OF AXLE RETENTION IS REQUIRED?

Most race-sanctioning organizations require some type of positive retention. The OEM C-clip does not meet these requirements. Accordingly, MW offers a special C-clip eliminator kit to provide the necessary retention. However, it is advisable to change to weld-on housing ends if your plans call for narrowing the axle housing. MW can supply weld-on ends, with oversize bearings and retainers for most popular brake applications.

4. WHY IS THE SPLINE AREA ON MW AXLES SHORTER THAN OTHERS?

Most manufacturers do not make custom axles for each order. Instead, they gang-run axles in certain lengths and make them with very long splines. When an order comes in, they simply cut off the excess spline. MW axles are manufactured to the correct length to insure 100% engagement in the spool spline. Excessive unused spline length reduces the torsional capability of an axle.

5. SHOULD I GET 35 OR 40-SPLINE AXLE-SPOOL COMBINATION?

For many applications the 1.500" diameter 35-tooth special MW spline axles are more than adequate. For "bulletproof" reliability there's no question the 40-spline setup is preferred. We've found

these big 1.708" diameter axles to also prolong housing life and wheel alignment because of their ability to handle increased torsion as well as bending (toe in) loads. If your rear end will accept a 40 spline spool we recommend using it.

6. WHY ARE MW AXLES SHORTER THAN MY "OLD" ONES?

This question is often asked by customers who replace an OEM axle/differential or another brand axle/spool combination with a MW setup. The reason is that the spline location in most MW spools is positioned further outboard to allow a larger spline. As a result, the axles can be shorter and as an added bonus are slightly lighter.

7. IS A 3-1/4" BORE 9" FORD CASE NEEDED TO RUN 35 SPLINE AXLES?

Not with MW axles. Unlike our competitors, we manufacture a 35 spline spool that fits in the stock 9" Ford cases (2.893" or 3.062" bore). MW spools have been designed to position the splines at the outboard end of the spool on both sides. This is an exclusive MW feature that has been used for over 30 years. This same feature applies to 10 and 12-bolt G.M. spools which are also limited to stock carrier bearing sizes.

8. WHY DO I SEE AXLES ADVERTISED AS "ALLOY AXLES" SO CHEAP?

These axles are actually produced by an OEM axle forging company whose main business is making axles for the truck and construction industry. The material used is a carbon steel, common to OEM axles. It is not usually regarded as an alloy steel as advertised. The manufacturer produces the axle blank and the advertiser cuts the axle to length and splines it. These axles are made from the same material as stock axles and receive the same heat treatment. The only difference is that they are available in shorter lengths and with different splines.

9. WHICH HOUSING END SHOULD I USE?

We recommend choosing the ends to match the brakes you want to use. If you are going to use disc brakes we recommend the symmetrical housing ends. This will allow the best designed Disc Brake kit and eliminates confusion about wheel stand outs. We do not recommend using the small Ford housing ends. The wheel bearing is too small and delicate.

WARRANTY & SERVICES

AXLE CONFIRMATION

MarkWilliams Exclusive!

MW has created a special form to verify all custom axle orders. Within two days of placing your order you will receive via UPS overnight letter, e-mail or fax a confirmation form that shows exactly what is being manufactured. If there are any questions or discrepancies, please contact the MW sales department immediately.

PRIORITY-*Service*

For those racers who need axles in a big hurry, Mark Williams Enterprises offers priority service for a nominal extra charge. Axles purchased under these terms are guaranteed to ship within 5 WORKING DAYS for an additional charge of \$100.00

MARK WILLIAMS ENTERPRISES, INC. warrants against breakage of our special 35 or 40-spline spool combination axles for a period of five years. **UNDER NO CIRCUMSTANCES WILL MARK WILLIAMS ENTERPRISES, INC. BE HELD RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OR IN CONNECTION WITH, THE INSTALLATION OR USE OF ANY M-W PRODUCT.** This warranty shall not apply to any product which has been improperly installed, or repaired in any manner which affects the strength of the axle or any axle that has been involved in an upset or collision, including welding lock rings on axles, Warranty applies for drag racing applications only. Any other application not covered.

MARK WILLIAMS Enterprises®