

PROJECT TITAN

Part 2: Bringing up the rear with a Dana 60 from Dynatrac

By Robin Stover

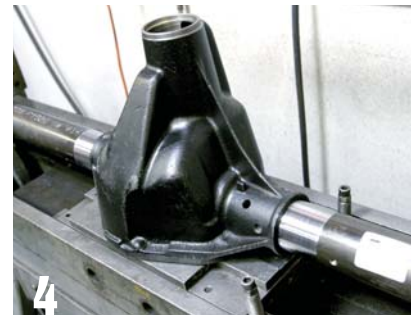
Photography: Robin Stover

The last time we visited our project Titan, it had just been lifted with a silky-smooth 6-inch coilover kit from Pro Comp Suspension. We're happy to say the suspension system is still living up to our expectations, and we're still amazed with the improved ride quality and overall stability the system added to the vehicle. We do wish, however, that we could say the same about the stock Dana 44 axle assembly under the rear of the truck. Like an Achilles tendon, these lightweight axles plague Nissan's first attempt to capture America's healthy ½-ton truck market. We have already destroyed two of them on our watch. Luckily, Nissan was cool about the first unit we roached while towing another project vehicle to Moab last year. See our long-term update (Jan. '05, page 86). However, figuring our replacement-axle credit with Nissan was close to tapped out, we decided to look elsewhere for a solution. The answer required a trip to Huntington Beach, California, so the expert axle builders at Dynatrac could get some critical measurements and order some parts to resolve our Titan's rearend problem once and for all.



1 Ahh, the culprit. Our lightweight Dana 44 with only 20,606 miles on it failed because of a simple roll pin that sheared off. This allowed the center pin to walk around within the carrier, creating a noisy racket.

2 This is where the high quality of a Dynatrac axle begins. The part on the right is the axletube. The part on the left is where the axle bearings are housed. The arrow points to the taper on both pieces. This interference fit allows oil to flow through the tubes without obstructions, such as butt-welded seams. Even OE axles don't offer this unique feature. This helps to prolong bearing life.



3 Here, the bearing housings are welded to the axletubes. This machine rotates the housing slowly while the technician welds each seam. This ensures smooth consistent welds.

4 This is our Titan's new axle right before the tubes were pressed into the centersection. Notice that the press is horizontally positioned; this ensures the tubes are aligned correctly with the centersection. The press operates at nearly 2,000 psi on a 100-ton press.



5 Once the axletubes are pressed into the centersection, the housing is rechecked for tolerances. Next, the tubes are plug-welded to the centersection. Plug-welding is the correct way to attach the tubes because virgin material surrounds the entire weld. This prevents the material around the weld from becoming fatigued by the weld's heat.

6 Next, the axlehousing is given a thorough cleaning. This ensures tiny microscopic metal shavings are removed from inner surfaces.

7 A set of 4.56 ring-and-pinion gears from Precision Gear was installed next.

8 We picked a Detroit Locker as a traction aid. Simple and strong, this differential is hard to beat.

9 Thirty-five-spline alloy shafts were used in our Dana 60 buildup.

10 With all the parts of the axle assembled, the housing was serialized in two places. This number is recorded on a build-sheet record, which remains on file at Dynatrac. This way, anyone can track down what parts were used in the axle. This helps prevent fraudulent activity as well. Then the axle was installed in our project Titan. It almost looks like it came with the truck, except for the trick Dynatrac diff cover.

SOURCES

Detroit Locker
800/328-3850, www.detroitlocker.com

Dynatrac
714/596-4461, www.dynatrac.com

Precision Gear
734/946-0524, www.precisiongear.com

