



DIFFERENTIAL CARE AND BREAK-IN INFORMATION

OIL LEVEL

Before final assembly, ensure that all manufacturing debris have been removed and the rear-end housing has been properly cleaned.

Only use high quality gear oils...Non-synthetic 85-140 mineral based oils (Friction modifiers are only needed for clutch type differentials and should not be used with any other type of limited slip). We do not recommend full synthetic oils for any limited slip posi or lockers however you may use them with open or spooled carriers (Keep in mind that synthetic oils do not dissipate heat as well as mineral based oils and will require a frequent service schedule). Dutchman round back or heavy duty Ford 9" housings will need about 3 quarts of gear lube whereas a fabricated 9" housing will need about 4 quarts. Dutchman's IRS housing only needs about 1.5 quarts.

NEW GEAR BREAK-IN

All new gear sets require a break-in period to prevent damage from overheating. Not following proper break-in procedures will lead to overloading and overheating of the ring and pinion.

INITIAL GEAR "RUN IN"

The initial break-in procedure is to perform a "run-in", prior to driving, with the rear wheels jacked up and operating at idle speed in high gear, for a minimum of 15 minutes, then let cool. All gear sets require a "run-in". DMI does not recommend drag towing before the initial "run in" period (It's best to use a flatbed). If drag towing is unavoidable, it is required to keep speed low and distances very short (less than 15 miles) between 30 minute cooling cycles for the first 45 miles. The break-in for drag racing only will be done after the initial "run in". Drag racers, plan on changing the gear oil after about seven race events. For circle track, off-road and street driving applications proceed to the next steps.

- A) For circle track only; avoid heavy accelerations during this break-in process. After initial "run in", drive 6 – 8 laps at slow speed, then cool for 30 minutes, then 2 – 3 laps at full speed and let cool for 30 minutes. The gear brake-in for circle track is done after this. Plan on changing the gear oil after about seven race events
- B) For street and off-road applications; avoid towing and heavy accelerations as well as varying speeds while on highways during this brake-in process. After initial "run in", drive at normal street driving speeds for the first 15 to 20 miles, then stop and let the differential cool for 30 minutes. This procedure should be repeated 3 or 4 times. After this step, driving should be conservative and should not be more than 50 miles at a time without allowing a cooling cycle during the first 500 miles. Plan on changing the gear oil after the first 500 miles.

ANY OVERLOADING OR OVERHEATING WILL CAUSE THE GEAR OIL TO BREAK DOWN AND THE RING & PINION WILL FAIL.

These steps may seem unnecessary, but it's very easy to damage the gear set by overloading or overheating it before the gear set is completely broken in. The greatest damage results when a ring & pinion has not completed the initial "run in". Any heavy use or overloading at this time will cause irreparable damage to the gear set that can be determined by inspection and will **not** be warrantied.



WARRANTY INFORMATION

WARRANTY EXCLUSIONS

1. Any damage due to abuse, overloading, improper break-in, lubrication failure (e.g. oil deterioration, water contamination, low oil level) or improper installation (e.g. Wrong axle length; axles aren't fully engaged; axle shafts cannot contact the center pin or plate)
2. Any vehicles used off high-way or for competition.
3. Normal operating gear noise

The following vehicles will not be warrantied due to the overloading caused by tall tires.

- Mini and mid-sized vehicles with tires over 31" tall.
- Full size $\frac{1}{2}$ ton vehicles with tires over 33" tall.
- Full size $\frac{3}{4}$ or 1 ton vehicles with tires over 35" tall.

ALL COMPONENTS THAT ARE NOT MANUFACTURED BY US ARE WARRANTIED BY THEIR RESPECTIVE MANUFACTURERS, AND WILL BE SUBJECT TO OUTSIDE VENDOR WARRANTY APPROVAL AND POLICIES WITHOUT EXCEPTION.

3rd members are warrantied for 6 months against defects in materials and workmanship, but not against abuse, overloading, improper break-in, lubrication failure or improper installation. All parts must be returned to our shop freight prepaid for our inspection and determination. We do not authorize and will not pay for outside repairs.

ANY UNAUTHORIZED OUTSIDE REPAIRS OR MODIFICATIONS VOID THIS WARRANTY.

We will not pay for labor, inconvenience, loss of time or revenue, telephone calls, commercial losses, or loss of perishable goods. This is our only warranty expressed or implied; no other verbal or written agreements may override this warranty regardless of situation. All warranty returns must be accompanied by a copy of the original invoice and RMA number provided by a DMI representative.

CLUTCH TYPE "POSITRACTIONS" (Trac Loc, Eaton)

Positraction chatter is normal for all clutch type positraction differentials. Both rear tires must measure the same circumference in order for the differential to function properly without premature wear. Limited slip additive or friction modifier for limited slip differentials must be used with the oil.

LOCKERS

Mechanical Locking differentials will bang and clunk during normal operation. Both rear tires must measure the same circumference in order for a locking differential to function properly.

GEAR NOISE

Aftermarket (non OEM) gears are designed primarily for strength and may be noisy. This noise is especially inherent in vans and quiet passenger cars. Even with perfect set up gears may make noise. We do not guarantee against gear noise.

We hope this information prevents you from running into trouble. We sincerely appreciate your business. In the future, if we can be of service to you, or any of your friends, please give us a call or stop by. Thank you.

SEE BACK FOR DIFF CARE AND BREAK-IN INFORMATION