

BREAK-IN INFORMATION

NEW GEAR BREAK-IN

All new gear sets require a break-in period to prevent damage from overheating. After driving the first 15 to 20 miles it is best to stop and let the differential cool before proceeding. RRP'S warranty requires at least 500 miles before towing. RRP also requires towing for very short distances (less than 15 miles) and letting the differential cool before continuing during the first 45 towing miles. This may seem unnecessary but it is very easy to damage the differential by loading it before the gear set is completely broken in. RRP recommends changing the oil after the first 500 miles. This will remove any metal particles or phosphorus coating that has come from the new gear set.

The greatest damage results when a new ring & pinion has been run for several miles during the first 500 miles and the oil is very hot. Any heavy use or overloading at this time will cause irreparable damage to the gear set that can be determined by inspection of the gear set and will **not** be warranted by RRP.

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

OIL LEVEL

Many differentials are easy to fill with gear oil. However, the 9" Ford design can be difficult to fill completely. The location of the fill plug on the 9" Ford can cause oil to run back out before it is completely full. Most 9" housings hold at least 3 quarts of oil and sometimes as much as 5 quarts. It is important to take your time and be sure that the oil has settled into all of the crevices and recheck the oil level to be certain that it is completely full before driving the vehicle.

SIGNS OF LUBRICATION FAILURE

When a gear runs low on oil, damage is sure to result. The cause of damage is not always obvious. When a differential runs low on oil, the oil volume may not be sufficient to keep the gear cool. Once the oil breaks down from contact with the hot gear, wear occurs very rapidly. Material will wear off of the drive side of both the ring & pinion teeth and leave a feather like pattern on both surfaces. A gear that wears from friction due to lack of lubrication and excessive heat seldom experiences a color change from heat because any discoloration is worn off of the teeth during each contact.

Ring gears and pinion gears are heat treated separately so that the pinion, whose teeth make contact more often than the ring gear, is designed to be harder. To accomplish this the two gears are heat treated separately and a soft gear will not cause both the ring & pinion to wear.

WARRANTY INFORMATION

WARRANTY EXCLUSIONS

Any damage due to abuse, overloading, or lubrication failure (e.g. oil deterioration, water contamination, low oil level). Any vehicles used off road or for completion. The following vehicles will not be warranted due to the overloading caused by tall tires. Mini and mid-sized vehicles with tires over 31" tall. Full size ½ ton vehicles with tires over 33" tall. Full size ¾ or 1 ton vehicles with tires over 35" tall.

ALL ITEMS ARE WARRANTED BY THEIR RESPECTIVE MANUFACTURERS, BUT NOT BY RRP.

All rebuilt items are warranted for 3 months against defects in materials and workmanship, not against abuse, overloading, or improper lubrication. 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 VOID THIS WARRANTY.** We will not pay for; inconvenience, loss of time or revenue, telephone calls, commercial losses, or loss of perishable goods. This is our only warranty expressed or implied. All returned goods must be accompanied by this bill within 30 days and will be charged a 10% service charge for handling.

POSITRACTIONS

Positraction chatter is normal for limited slip and positraction differentials. Both rear tires must measure the same height from the ground to the top of the wheel 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 to reduce positraction chatter in the event that the oil is changed.

LOCKERS

Mechanical Locking differentials will bang and clunk during normal operation. Both rear tires must measure the same height from the ground to the top of the wheel in order for a locking differential to function properly.

GEAR NOISE

Richmond Gear and other aftermarket (non OEM) gears are designed primarily for strength and may be noisy. This noise is especially inherent in vans and quiet passenger cars.

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.