

## Frequently Asked Questions

### What type of oil should I use in my Winters Rear End?

Use a good quality lube, such as Winters 80-90-140 semi synthetic with moly or Mobil 1 Hypoid 70-90 (GL5) synthetic.

### What oil level should I maintain in my Winters Rear End?

*Do Not over-fill!!! Too much lube causes excessive heat! (see illustration below)*

#### Full Size Rears 10"

Always maintain oil level at 2" below axle center line. Make sure the rear is level when checking oil.

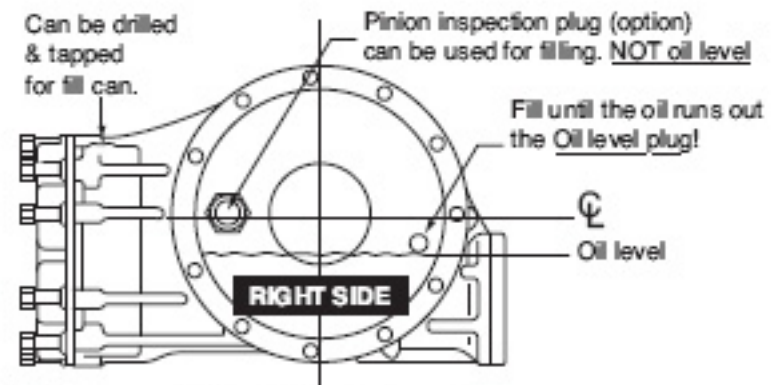
#### Mini / V8 8 3/8", 7"

Always maintain oil level at 1 3/4" below axle center line. Make sure the rear is level when checking oil.

### How do I fill my Winters Rear End with oil?

The fill plug is located on the left side bell. Optional pinion inspection plug, right bell, may be used to fill, however, **DO NOT USE** to determine fluid level. To determine fluid level, fill until the oil runs out the oil level plug in the front of the right side bell.

*(see illustration at right )*



Make sure rear is level when checking oil.

### Ring gear bolt torque specifications.

Threaded Ring Gear Bolts-60 Ft. Lbs. using red thread lock.  
Non-Threaded Ring Gear Bolt and Locknut-35 Ft. Lbs.

### Side bell stud torque specifications.

Full size rears, 10" (7/16" studs) 35 Ft Lbs.  
Mini / V8 8 3/8", 7" (3/8" studs) 30 Ft Lbs.

### What is the correct way to install quick change gears?

The machined lip faces out

### Can I use Helical Gears in my Winters Rear End?

Not in extreme applications. Helical gears create excessive and destructive thrust loads on all shafts and bearings. Helical gears have their advantages, but not in this application.

### Can I use Wide Gears in my Winters Rear End?

No. It's a fact – wide quick change gears will cause over-heating in long races.

### How do I remove my pinion?

Make sure that the center is clean and free of chemicals or flammable materials. Use an oven to heat your center to 270°- 300°F. Magnesium can be ignited - Exercise **CAUTION!** Torching your center will damage the casting and ring & pinion life will be adversely affected.

### Can I use Quick Change side bells on my Non-Quick Change?

Yes. However, the side bells are rotated 180° forward.

This will affect mounting brackets, etc., that are welded to the tubes.

### Can I determine R&P ratio without opening up the rear?

Yes. Elevate the car (engine off). Remove quick change gears. Chalk mark the tire at the 12 o'clock position. Chalk mark the pinion at the 12 o'clock position. Rotate the tire by hand 1 complete revolution. Count pinion rotation as tire is rotated. Just past 4 revolutions = 4.11/4.12, 4 1/2 revolutions = 4.57, almost 5 revolutions = 4.86.

**Fact:** Titanium is 60% the weight of steel

**Fact:** Aluminum is approx. 33% the weight of steel

**Fact:** Magnesium is 66% the weight of aluminum

**See Machinery Handbook for strengths of metals, published by Industrial Press Inc., New York**