



RING & PINIONS

OVERVIEW OF A RING & PINION

A ring & pinion set transfers power from the driveshaft to the axles. The pinion gear is mated to the driveshaft via a yoke and universal joint and drives the ring gear. The ring gear is mounted on a carrier assembly which in turn drives the axles and wheels. Different gear ratios are desirable for different applications and usage. Gear ratio is calculated by dividing the number of teeth on the ring gear by the number of teeth on the pinion gear. The higher the number, the lower the ratio: a 5.29 gear has a lower ratio than a 4.10 gear. With a lower gear ratio the drive shaft (and thus the engine) turns more for each revolution of the wheel, delivering more power and torque to the wheel for any given speed. Lower ratios are generally desirable when going off-road. Higher ratios are better for freeway driving since they run at lower RPM's and offer better fuel economy.

PRODUCT ADD-ON OPPORTUNITIES

When a ring and pinion is sold, it is beneficial to sell a Differential Installation Kit since you will have everything opened up.

This is a great opportunity to replace all of your bearings, seals, bolts, crush sleeve, shims and other small parts to insure longevity and optimal performance.

DIFFERENTIAL INSTALLATION KIT



ANATOMY OF A RING & PINION

The ratio of a ring & pinion set can be determined by dividing the number of ring gear teeth by the number of pinion teeth.

For example:

41 ring gear teeth / 11 pinion gear teeth
= a gear ratio of 3.73.

RING GEAR TEETH:

Rotates the carrier assembly & axles.



PINION SPLINES:

The pinion splines mate to the pinion yoke, which attach to the drive shaft. Counting the number of splines can help determine the type of differential.

PINION BEARING JOURNALS:

Where the pinion bearings attach to the pinion.

PINION GEAR TEETH:

Transfers power from drive shaft to ring gear.

RING & PINIONS

YUKON GEAR & AXLE



OEM-Style Replacement

Yukon manufactures a full line of high-quality OEM replacement ratios to accommodate most SUVs, light trucks and rear-wheel-drive passenger cars. Yukon duplicates, and often exceeds, the OEM specifications. This is the case with the GM 8.5" (below) and Chrysler 9.25" gears. These gears are engineered to last longer and run cooler and quieter than other aftermarket gears. When properly set up Yukon gears are extremely quiet.

Heavy Duty Towing

In many cases the factory ratios are not low enough to give you the pulling power you're looking for from your tow rig. Yukon has the answer to all your trailer-pulling needs. We offer a full line of gear ratios from 2.73 thru 7.17 for most 2 and 4WD trucks and SUVs. So if you're looking for more power or you're correcting for larger tires, Yukon has you covered.

Racing and Performance

Yukon is always working hard to maintain its position on the cutting edge of the racing world as well as the differential industry. We offer a large variety of ratios for the Ford 9", GM 12-bolt passenger car and many more. These gears are built to withstand high horsepower and to survive under extreme conditions. For the weight-conscious racer, Yukon offers Ford 9" lightweight gears in ratios from 4.22 to 7.33. These gears lower the rotating mass, which translates into more power to the ground.






USA STANDARD

High Performance USA Standard Gear Sets

Trust USA Standard to deliver on the latest designs and manufacturing technologies. Our goal is to provide our customers quality gears that provide maximum strength with easy set-up. All USA Standard Ring & Pinion sets come standard with a one-year warranty.

RING & PINION COMPARISON PARTS

RING & PINION SETS

| | Quiet Running | Offroad | Racing | Towing | Strength | Ease of Set-up | Fit & Finish | Value |
|--|---------------|---------|--------|--------|----------|----------------|--------------|-------|
|  Yukon | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
|  USA Standard | ●●●●○ | ●●●●○ | ●●●●○ | ●●●●○ | ●●●●○ | ●●●●○ | ●●●●○ | ●●●●● |
|  Richmond Gear | ●○○○○ | ●●●●● | ●●●●● | ●●○○○ | ●●●●● | ●●●○○ | ●●●○○ | ●●●○○ |
|  US Gear | ●●●●○ | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●○ | ●●●●○ | ●●●○○ |
|  OEM | ●●●●● | ●●●●○ | ●●●●○ | ●●●●● | ●●●○○ | ●●●●● | ●●●●● | ●●○○○ |