

# YOU CAN DO IT EASY UPGRADES

by Randy Irwin

## 1955-64 POSITRACTION CARRIER INSTALLATION



### Randy Irwin - Technical Writer

Randy has been involved in the Chevy parts business for over 25 years. He is a wizard at creating, making and modifying custom parts for Chevys.

The weakest part of the driveline on a 1955-64 is the rear end center section. It's not the housing, it's not the axles, it's not any of the bearings; it is the design of the carrier. The carrier is the part of the rear end that holds the ring and pinion gears in place. The problem with the original carrier was that there were no thrust washers used between the carrier case and side (axle) gears or spider (pinion) gears causing the rear end to fail. Once the carrier begins to gall and fail, metal particles are sent throughout the complete rear end ruining everything. This is why the stock rear ends have a bad reputation. If you want to keep your car fairly original and don't want to go to the trouble of installing a 9-inch Ford or late model GM rear, installing a new, updated, heavy duty carrier with thrust washers is the way to go to make that old rear end reliable. In addition to a more reliable and heavy duty carrier, installation of this unit will also convert your Chevy to positraction!

#21-115



#21-166



#21-116



### Parts List:

- 21-166 1955-64 Positraction Carrier
- 21-115 1955-64 Carrier Bearing (2 Req'd)
- 21-116 1955-64 Carrier Bearing Race (2 Req'd)

### Tools Needed:

- Flat Blade Screwdriver
- 1/2" Wrench
- 5/8" Socket
- 3/4" Socket
- Dial Indicator
- Torque Wrench
- Hammer
- Brass Punch

### Time Frame:

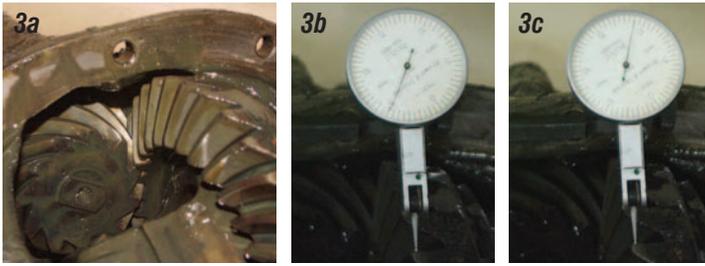
3 hours



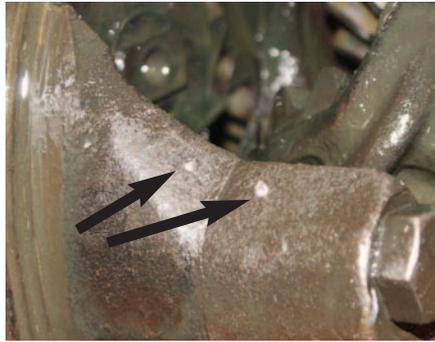
**Photo 1:** The 1955 through 1964 Chevy had a front loader type rear end with no removable rear end cover. The carrier is often referred to as the chunk, the pig, the pumpkin or the center section. This means the ring and pinion, carrier and case is removed from the front side of the rear end housing as a unit.



**Photos 2a, 2b, 2c & 2d:** To remove the center section you must first remove the axles. Remove the four backing plate bolts and the axles can be pulled out of the rear end. Next remove the ten 9/16" nuts and copper washers that hold the center section in the rear end housing. With the nuts and washers removed, a flat blade screwdriver can be used to pry the center section loose from the rear end housing.



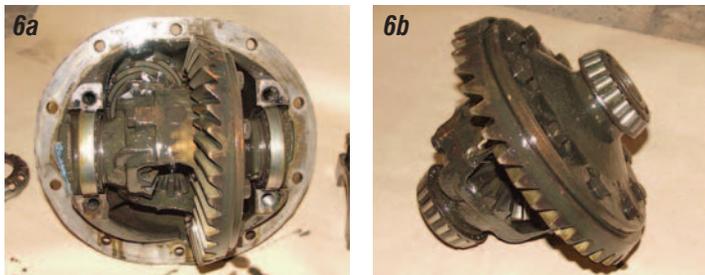
**Photos 3a, 3b & 3c:** Before removing the carrier and ring gear from the center section, the backlash between the ring and pinion gear MUST be checked. When the ring gear and new positraction carrier are installed, the ring and pinion gear must have the same backlash as it did with the single side carrier. Using a dial indicator, our ring and pinion had .017" backlash. This would be considered loose for a new ring and pinion, but is fine for our used gear.



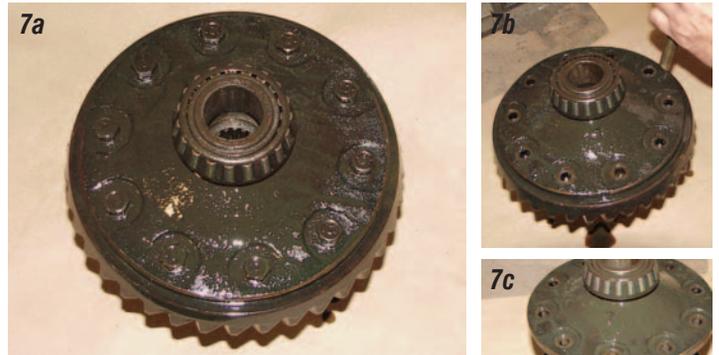
**Photo 4:** Before removing the two main caps, use a punch and hammer and mark the caps and case. Just like on an engine, the main caps must go back on the same way they came off.



**Photos 5a, 5b & 5c:** There are two retaining tabs on the main caps that hold the side carrier adjusters in place. Remove the two 1/2" X 1/2" bolts that secure the retainers. Next, remove two main cap bolts, main caps and side adjusters.



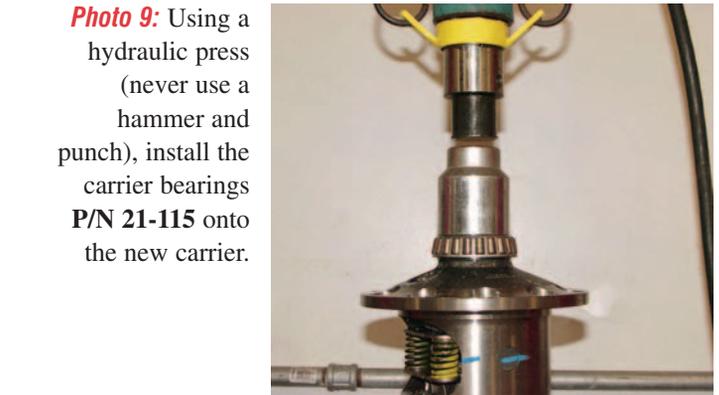
**Photos 6a & 6b:** With the main caps removed, the carrier and ring gear can be removed from the center section.



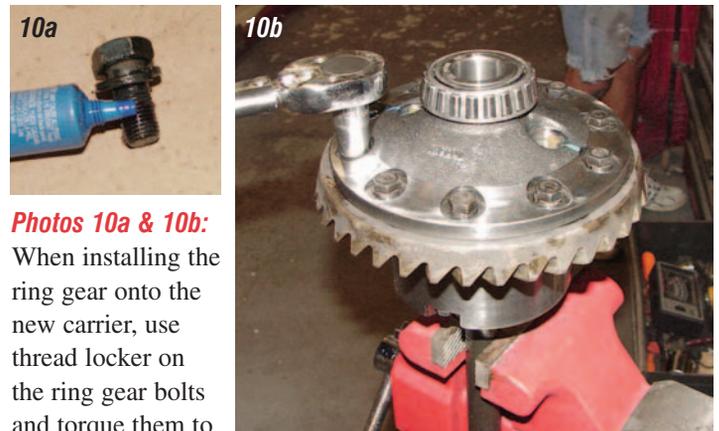
**Photos 7a, 7b & 7c:** The ring gear is held to the carrier with ten 5/8" X 1" right hand bolts. Using an air impact or pull bar, remove the bolts. Next, using a brass punch and hammer, carefully remove the ring gear from the carrier.



**Photo 8:** Shown is the weak point on the stock carrier: no thrust washer between the side gears or spider gears and the carrier is used.



**Photo 9:** Using a hydraulic press (never use a hammer and punch), install the carrier bearings P/N 21-115 onto the new carrier.



**Photos 10a & 10b:** When installing the ring gear onto the new carrier, use thread locker on the ring gear bolts and torque them to 55 ft/lbs. A slick way to hold the carrier while torquing the ring gear bolts is to mount an axle in a vise and install the carrier onto the axle splines.



**Photos 11a, 11b & 11c:** Before installing the carrier into the center section, put plenty of gear lube on the new carrier bearings. Install new bearing races **P/N 21-116** on each side of the carrier and place the carrier in the center section.



**Photo 12:** With the carrier in place, install the two main caps and side adjusters. Torque the main cap bolts to 70-75 ft/lbs.

**Photos 13a &**

**13b:** Next, using a blunt punch and a hammer or spanner wrench, turn the side adjusters to the left and right. This will move the carrier laterally allowing you to achieve the EXACT same backlash as before it was disassembled.



**Photo 14:** With the correct backlash set, install the side adjuster retaining tabs and bolts. Put a small amount of thread locker on the threads of the bolts.

With the new positraction rear end the car will no longer be a "one wheel wonder." Be sure to add rear end lubricant especially for positraction rears when filling the axle. Positraction will give you improved traction and performance for that occasional pedal-to-the-metal blast away from the stoplight. With the new super-strong carrier your chances of another rear end failure are greatly reduced!  
Good Luck! ▼

