

# Installation Instructions for 514060 Big Block Chevy 290cc Cylinder Heads

**Special Note:** Two of the head bolt holes may show inside the intake ports on these heads. This may look odd, but is a common issue on big block Chevy heads since the head bolts are very close to the intake ports. This situation doesn't cause any problems with the engine. We recommend a small amount of RTV be added to the head bolt & washer to avoid any oil leakage into the ports through these holes.

## Materials

Casting A356-A Virgin Grade, Heat Treated to T-6  
Valve Guides Manganese Bronze  
Valve Seats Alloy, For use with Unleaded Gasoline

## Intake

Port Volume 290cc  
Valve Diameter 2.250" Stainless Steel  
Valve Length 5.340"  
Valve Stem Diameter 11/32"  
Valve Stem Seal Diameter 0.530", Teflon  
Port Dimension 2.325" Tall x 1.625" Wide  
Flow Rate @ 28" H2O 378 CFM @ 0.700" Lift  
Gasket JEGS 555-210100 or equivalent

## Exhaust

Port Volume 140cc  
Valve Diameter 1.880" Stainless Steel  
Valve Length 5.350"  
Valve Stem Diameter 11/32"  
Valve Stem Seal Diameter 0.530", Teflon  
Port Dimension 1.780" Tall x 1.950" Wide  
Flow Rate @ 28" H2O 265 CFM @ 0.700" Lift  
Gasket 555-210151 or equivalent

## Valve Train

Stud Size 7/16"-24 (555-20582)  
Guide Plates 3/8" (555-202010)  
Pushrods 3/8" Hardened, **Must Check Length** - Use 555-80670 Pushrod Length Checker  
Retainers Chrome Moly Steel 7 Degree  
Valve Locks 7 Degree  
Spring Locator I.D. Locator - 1.570" x .060"  
Springs 1.550" OD Single Spring - 0.650" Max Lift  
Spring Pressure 1.550" Spring - 130# @ 1.880" / 350# @ 1.280" - Coil Bind - 1.150"

## Accessories

Head Bolts ARP 070-135-3603 or equivalent  
Head Studs ARP 070-235-4103 or equivalent

Requires 4 longer bolts or studs over each exhaust port which are included in the recommended kits. The longer bolts and studs can also be purchased separately.

Spark Plug 14mm x 3/4" Reach - Gasket Seat - 5/8" Hex  
Stud Girdle JEGS 555-20518 or equivalent  
Rocker Arms Standard BB-Chevy For 7/16"-24 Studs  
Head Gasket 555-210142 or equivalent  
Accessory Bolt Locations Stock Placement  
Pistons Most Aftermarket Pistons. Heads have 24° Intake Valve and 15° Exhaust Valve  
Intake Manifolds Cylinder heads do not utilize the upper intake manifold bolt hole between the intake ports. It is up to the installer to insure the manifold properly covers the port and seals.

## Torque Specifications

Rocker Studs 45 ft/lbs.  
Manifold Bolts 35 ft/lbs.  
Head Bolts or Studs Per Specifications of the Fastener Manufacturer

**Adjusting the Guide Plates:** The guide plates have some extra clearance around the holes to allow adjustment for optimum alignment (loosen the rocker studs and adjust the guide plates for best fit when assembling the valve-train on your engine). Make sure the pushrods don't rub on the heads and that rocker tip has adequate contact on the top of the valve stem. Re-torque the rocker studs to 45 ft/lbs.

**NOTE: Piston to valve clearance should always be checked!**



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