

## Small Block Chevy LS Cylinder Heads by Casting Number

**10215339** – LS Small Block V8 1997 346, LS1, aluminum, 68cc chambers

**12480005** – LS Small Block V8 2000 LS1, GTZ, aluminum, 38cc chambers, 2.125/1.625 valves, angle plugs

**12556743** – LS Small Block V8 1999 325, 5.3L, aluminum, truck, van

**12558806** – LS Small Block V8 1997-1998 346, LS1, aluminum, 68cc chambers

**12559853** – LS Small Block V8 1999 346, LS1, aluminum, 68cc chambers

**12559862** – LS Small Block V8 1999-2000 aluminum, LS, 4.8 or 5.3L

**12559895** – LS Small Block V8 2000 325 (5.3L) aluminum

**12561706** – LS Small Block V8 2001-2004 325 (5.3L) aluminum

**12561873** – LS Small Block V8 1999-2001 364, 6.0L, LS, 71cc chambers, cast iron

**12562317** – LS Small Block V8 2001-2004 364, 6.0L, LS, 71cc chambers, aluminum

**12564241** – LS Small Block V8 2000 346, LS1, aluminum, 68cc chambers

**12564243** – LS Small Block V8 2001 346 (5.7L LS6) or 364 (6.0L LS2), aluminum

**12572035** – LS Small Block V8 2001-2004 364, 6.0L, LS, aluminum, 71cc chambers

**12550592** – LS Small Block V8 1997-up 346, LS1

**12559846** – LS Small Block V8 1998-up 346, LS1

**12560621** – LS Small Block V8 1998-up 346, LS1

**12562174** – LS Small Block V8 1998-up 346, LS1

10106178 – LT Small Block V8 1990 350, LT5, Corvette ZR1, DOHC 32-valve, aluminum, passenger side head

10106179 – LT Small Block V8 1990 350, LT5, Corvette ZR1, DOHC 32-valve, aluminum, drivers side head

10125320 – LT Small Block V8 1994-1996 350, LT1, cast iron, Caprice 9C1 Police, Impala SS, Cadillac Fleetwood, Buick Roadmaster, reverse flow cooling

10128374 – LT Small Block V8 1992 350, LT1, 53cc chambers, angle plugs, aluminum, reverse flow cooling, 175cc intake ports, 68cc exhaust ports

10174389 – LT Small Block V8 1991-1995 350, LT5, Corvette ZR1, DOHC 32-valve, driver side, aluminum

10174390 – LT Small Block V8 1991-1995 350, LT5, Corvette ZR1, DOHC 32-valve, passenger side, aluminum

10205245 – LT Small Block V8 1993 350, LT1, aluminum, reverse flow cooling, 175cc intake ports, 68cc exhaust ports

10207643 – LT Small Block V8 1994-1996 350, LT1, aluminum, reverse flow cooling, 175cc intake ports, 68cc exhaust ports

10208890 – LT Small Block V8 1994-1996 265, Baby LT1, L99, cast iron, reverse flow cooling

10225121 – LT Small Block V8 1994-1995 350, LT5, Corvette ZR1, DOHC 32-valve, drivers side, aluminum

10225122 – LT Small Block V8 1995 350, LT5, Corvette ZR1, DOHC 32-valve, passenger side, aluminum

10239902 – LT Small Block V8 1996 350, LT4, aluminum, reverse flow cooling, 195cc intake ports, 54cc chamber, angle plugs

12529742 – LT Small Block V8 1995-1996 265, Baby LT1, L99, cast iron

12551561 – LT Small Block V8 1996 350, LT1, aluminum, reverse flow cooling

12554290 – LT Small Block V8 1994-1996 350, LT1, Caprice 9C1 Police, Impala SS, Cadillac Fleetwood, Buick Roadmaster, reverse flow cooling

12554291 – LT Small Block V8 1995-1996 265, Baby LT1, L99, cast iron

12555690 – LT Small Block V8 1996 350, LT4, aluminum, reverse flow cooling

14088526 – LT Small Block V8 350, LT1, aluminum

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**Here's more reading than you ever cared to do on LS heads:**

933 97 aluminum perimeter bolt 5.7  
806 97-98 aluminum perimeter bolt 5.7  
853 99-00 aluminum center bolt 5.7  
241 01-03 aluminum center bolt 5.7 (some late MY00 cars got 241 castings)  
243 04 up LS6 aluminum center bolt 5.7 \*\*\*These castings were also used around 05 in truck applications\*\*\*  
862 99 and up 4.8-5.3 Truck heads  
706 99 and up 4.8-5.3 Truck heads  
799 05 and up 4.8-5.3 Truck heads \*\*\*reportedly came on a few corvette's too\*\*\*  
These are basically 243 Heads  
873 99-00 LQ4 6.0 Iron center bolt heads  
317 01 and up LQ4 and LQ9 6.0 aluminum center bolt heads  
035 01 - 04 LQ9 6.0 aluminum center bolt heads

Even more detailed info:

Casting Numbers 241, 806, 853  
Head: 1997+ LS1 5.7 Liter Passenger Car  
Material: Aluminium  
Part Number:

12559806 (1997-98) Chambers = 69cc  
12559853 (1999-00)  
12564241 (2000-03)

Combustion Chamber Volume: 66.67cc  
Compression Ratio: 10.1:1  
Intake Port Volume: 200cc  
Exhaust Port Volume: 70cc  
Intake Valve Diameter: 2.00 inches  
Exhaust Valve Diameter: 1.55 inches

Stock Head Flow Numbers

Chamber 66.67 cc	-----	0.100	--	0.200	---	0.300	---	0.400	---	0.500	---	0.550	--	0.600
Intake 200 cc	-----	67	----	122	-----	178	-----	215	-----	219	-----	223	----	227 <sup>TM</sup>
Exhaust 70 cc	-----	52	-----	97	-----	133	-----	156	-----	170	-----	76	----	180

**MI** What you need to know: - **'87 CHEVELLE and EL CAMINO CLUB<sup>TM</sup>**

The standard issue LS1 heads is best all-around head for the street / strip engines .  
A thorough porting and milling job plus a valve upgrade on these will really wake up your engine. The heads have undergone only minor revisions since their introduction in 1997 , most notably a switch from perimeter to center valvcover bolt configuration for the 1999 model year. Each style has its own dedicated valvecovers and coilpacks mounting apparatus.

Casting Number 243  
Head: 2001 LS6 5.7 Liter Passenger Car  
Material: Aluminium  
Part Number:  
12564243  
Combustion Chamber Volume: 64.45cc  
Compression Ratio: 10.5:1  
Intake Port Volume: 210cc  
Exhaust Port Volume: 75cc  
Intake Valve Diameter: 2.00 inches  
Exhaust Valve Diameter: 1.55 inches

#### Stock Head Flow Numbers

Chamber 64.45 cc	-----0.100	---0.200	--0.300	--0.400	---0.500	---0.550	---0.600
Intake 210 cc	-----62	-----126	----184	----224	----251	----256	----257
Exhaust 75 cc	-----57	-----108	----143	----163	----176	----180	----183

#### What you need to know:

The LS6 cylinder heads is essentially a tuned-up version of the LS1 head. At 65cc, the combustion chamber is slightly smaller and more efficient than the LS1. The more efficient design shortens burn times and ultimately means less ignition timing advance is required to produce the same power. And because less timing allows more efficient combustion, the Ls6 heads allow the engine to produce more torque. The exhaust port is a unique D-shape that improves flow. LS6 heads are the best choice only when all-out power is needed. Be prepared for a big price tag at the dealer or steep core charge from your head porter.



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Casting Number 706 and 862  
Head: 1999+ 4.8L / 5.3 Liter Truck  
Material: Aluminum  
Part Number:  
12559862  
12561706  
Combustion Chamber Volume: 61.15cc  
Compression Ratio: 9.5: 1  
Intake Port Volume: 200cc  
Exhaust Port Volume: 70cc  
Intake Valve Diameter: 1.89 inches  
Exhaust Valve Diameter: 1.55 inches

Stock Head Flow Numbers

Chamber 61.15 cc----0.100--0.200--0.300-- 0.400--0.500---0.550---0.600  
Intake 200 cc-----63 ---128----179-----210----218----221-----226  
Exhaust 70 cc-----54 -- 93 ----121----145-----163----168----174

What you need to know:

These small combustion chamber truck heads offer no advantage over an LS1 head except the smaller combustion chamber. This along with milling of the deck surface will allow a slightly higher compression ratio to be achieved. Because of the smaller intake valve installed in these heads a valve upgrade is practically mandatory.



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Casting Number 873  
Head: 1999-2000 LQ4 6.0 Liter Truck  
Material: \*\*\*Cast Iron\*\*\*  
Part Number:  
12561873  
Combustion Chamber Volume: 71.06cc  
Compression Ratio: 9.5:1  
Intake Port Volume: 210cc  
Exhaust Port Volume: 75cc  
Intake Valve Diameter: 2.00 inches  
Exhaust Valve Diameter: 1.55 inches

Casting Number 317, 035  
Head: 2001+ LQ4 and LQ9 6.0 Liter Truck  
Material: Aluminum  
Part Number:  
12562317 -LQ4  
12572317 -LQ9  
12572035 -LQ9  
Combustion Chamber Volume: 71.06cc  
Compression Ratio: 10:1 LQ9 Flat top pistons  
Compression Ratio: 9.6:1 LQ4 Dish piston  
Intake Port Volume: 210cc  
Exhaust Port Volume: 75cc  
Intake Valve Diameter: 2.00 inches  
Exhaust Valve Diameter: 1.55 inches

#### Stock Head Flow Numbers

Chamber	71.06cc	----	0.100	---	0.200	--	0.300	--	0.400	--	0.500	--	0.550	--	0.600
Intake	210cc	-----	66	----	142	-----	196	----	228	-----	236	----	238	-----	240
Exhaust	75cc	-----	59	-----	104	-----	137	---	155	----	167	---	173	-----	177

#### What you need to know:

The LQ4 head received aluminum heads starting in models year 2001. All other features are the same as previous years iron heads. This is the workhorse head for street / strip turbo and blower cars. They offer a large combustion chamber that lowers compression ratio making them perfect for a forced induction application. Swapping on the LQ4 head drops the compression ratio of a typical LS1 engine to 9:5.1

The Cast-iron casting are heavy!

So you want to figure out how much to mill:

It takes about .005" milling of the block deck to remove 1cc of volume. It takes .007" milling to remove 1cc from an LS1 head

Simple Milling Math:

You have a stock 66cc chamber and you want to get down to 63cc

66-63 = 3. You have to remove 3cc's

.007 x 3 = .021. So to get your 66cc chambers down to 63cc you'd have to mill ~.021.

You can also do the reverse, say you want to mill a head .030 to figure out how many CC's that removes you take .030 / .007 = ~ 4.28. Milling a stock 5.7 head .030 puts your chamber at ~ 62.

241 cast heads were Die Cast which is a process that smooths up the ports a bit compared to the Sand Cast procedure that was done on the 806 and 853 heads. Once ported any "advantage" the 241 cast had is moot.

Same Info applies to the:

4.8L/5.3L Truck 862 and 706 Head castings

While the 706 Heads are a SPM = Semi Permanent-mold And considered to be a more consistent head casting than the 862 which are Sand cast, Once ported There is no difference.

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799 Vs. 243 Info Copied From pillboxesghost Post's in this thread <http://www.ls1tech.com/forums/conver...l#post10241473>

This appears to be one of the common misconceptions about heads having the 243 casting no. -- they are not necessarily LS6 head assemblies. The LS2 heads (243 or 799 casting) have the "heavy" standard LS1 valves. However, they do have the LS6 springs.

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Only the true LS6 engine heads have stainless steel (not titanium) hollow stem valves (the exhaust stems are sodium filled). These valves are slightly longer than LS1 valves too.

- The LS7 heads do have titanium valves.
- New LS2 heads are about half the price of new LS6 heads (check sdparts.com).
- GM is "really proud" of those hollow stem valves!
- Oh, if you have the 799 castings -- the only thing "Corvette" about them is the valve springs/retainers! Still a desirable set of LS1 heads though!

Supposedly, the 243 mold was done at GM Research, the 799 mold furnished to other vendors. The same vendor may have the 243 and 799 mold.

Both heads have identical sized intake and exhaust valves