

LS Class Engine Rules

Engine:

All Australian delivery style engine. Can be purchased from the USA or Australia, but must be the following LS series only;

LS1, LS2, L77, L76, L98, LS3.

No LS7 allowed.

Crankshaft:

Standard cast crank. 3.622. +/- 002

Crank weight with reluctor wheel and 1 keyway – no spigot bearing, no crank gear.

LS1 – LS2 – L76 – 77 – 98 – LS3:

Minimum crank weight 22.5kg

Conrods:

Standard LS1, LS2, L77, L76, L98, LS3 rods only - No titanium rod or alloy. Conrod minimum weight:

LS1 Minimum weight 600 Grams.

LS2 – L76 – 77 – 98 – LS3 Minimum weight 630 Grams.

Balancing must have one rod untouched.

Pistons:

Piston to not protrude more than .009 from deck of block.

Standard piston or class Mahle-SRP piston allowed.

Max 010 thou bore upgrade from standard original block size.

Flat top only, no valve reliefs (Same as V8 utes they have a range from .002 to 010).

Min weight of piston, complete with pin, rings, oil rings & clips.

Minimum Weight LS1 620 Grams.

Minimum Weight L76 – 77 – 98 – LS2 640 Grams.

Minimum Weight LS3 660 Grams.

One piston must remain untouched when balancing.

Block:

Alloy factory block 5.7 - 6.0 - 6.2, no aftermarket blocks

Block bore Size - Bore size to match casting numbers.

LS1=3.900"-3.910"

LS2-L76-77-98=4.00"-4.010"

LS3=4.065"-4.075"

Max 010 thou bore upgrade with flat top only Mahle SRP (Same as V8 utes. They have a range from .002 to 010)

No lightening of block other than machine faces or honing process for normal engine building practises.

Engine main bearings, Rod and Cam bearings = Open.

Cam & Lifters:

Hydraulic LS GM Lifters only. No tie bar lifters allowed.

5/16 pushrod 7.350 to 7.425 only. 080 wall thickness. Standard can be used.

Cam must be one of the following:

'Crow Cam' 8711762RH

'GM Motorsport' GMM JS1 229-235-110.5

'Kelford' SS108J 226-232-110

Timing Chain:

Any standard GM or aftermarket IWIS LS Single or double row chain.

No variable cam timing.

Cloyes timing set can be used Part Number. TGK364RCL

Sump:

Sump Open.

Dry sump allowed.

The crankshaft centre line to delta measurement cannot be less than 160mm.

Vacuum pump allowed on wet sumps only.

Heads:

Following GM Head castings only.

Min head CC 64cc for LS1 (casting 241-243-853 only). These heads can only be used on 5.7-6.0L.

Min head CC 64cc for LS2 (casting 243 only). These heads can only be used on 5.7-6.0L.

Min head CC 66cc for L76, L77, L98, LS3 (casting 0821-823-5364). These heads can only be used on 6.0-6.2L.

All Heads:

Standard GM/Holden head gasket 051-053.

No welding of heads even for repairs.

Standard valves only. No aftermarket.

LS1 – LS2 Valve sizes 2.00" inlet 1.55" exhaust.

L76 – L77 – L98 – LS3 Valve sizes 2.165" inlet 1.59" exhaust.

Standard valve location. Valve Angle 15 degree +/- 0.5 degrees.

Standard or Standard replacement head bolts allowed. ARP head bolts allowed.

Head studs allowed.

Head Gasket part number GM or Victor Reinz / Mahle

54660-26192PT – 157744 or 12498544 or 12622033-12589226

.050" - .053" thickness.

Old early LS1 can use the OEM fibre style gasket .050" - .053" thickness.

No spring pocket modification.

No Porting allowed.

No changing of valve angles to deck face.

Rockers:

Standard GM LS1, LS2, L77, L76, L98, LS3 rocker gear with a bearing trunion upgrade allowed.

Must be 1.7 ratio only.

This will be checked with a tool at the race track regularly, as instructed by the Chief Scruitineer.

Valve Springs:

Standard or PSI 1511ML Beehive springs.

No Titanium.

Inlet Manifold:

Standard manifold, must remain completely standard.

No porting, no extrude honing, no machining, no drilling, no tapping. Drilling and tapping allowed only to block of factory vacuum ports that are not used.

LS1 = 12560894, 12573572

LS2 = 12589181

L76 – 77 – 98 – LS3 = 12590124, 12602477, 12603477

Throttle Body;

Can use up to 92mm, cable or electric allowed

Computer:

Open.

Injectors Open.

Exhaust:

Open, must use mufflers.

Harmonic Balancers:

Must be fully encased performance balancer or standard with inner and outer circled together. Must have retaining bolt and washer fitted.

Minimum weight 4.2kg.

Fuel:

Control Fuel must be used when directed by the WCJSC.

Ordinary pump unleaded fuel only, 98 octane max.

The use of oxygenated fuels is prohibited.

Jet Unit:

Max 8.25 inch

Seal Provision:

Each engine shall be provided with a means of fixing an engine seal.

This provision shall consist of a 3 mm hold drilled through a head bolt to timing cover bolt.

Engines can be requested for testing at any race event

Must display receipt of purchase for any camshaft. Copy of receipt to be emailed to the secretary and stapled in the scrutineering book.

WCJSC reserves the right to seal an engine on the day, and check at the end of the round.

Note:

If you intend to make a modification to your engine, and you are unsure if that modification is permitted within this class, you should always send an email to the WCJSC secretary asking for a clarification on the ruling or modification.

If it does not say you can use a part you must not be in belief that you could use an alternative part.

Standard replacement parts only if not stated.

All factory GM/Holden parts must be used unless it states open in the rule section.

If in doubt you need to ask for clarification of the rules by the WCJSC.