

Re: Review of the NCOP (Version 2)

The following are comments on the proposed changes to the NCOP made on behalf of the ACT Street Machine Assoc. Inc

- **Section LA. Table LA1 - Removal of one weight category**

The removal of one of the vehicle weight categories has simplified things, however it has now severely discriminated against all vehicles that came out with six cylinder engines, i.e.: all your early model Holden's and Fords. The removal of vehicles weighing between 800 kg and 1100 kg has also meant that the multiplying factor has been reduced from 4 to 3 (Naturally Aspirated), therefore preventing early model Holden and Ford vehicles being fitted with an engine larger than 3300cc. The change to the multiplying factor (from 2.75 to 2.5) for forced induction engines means you cannot turbo/supercharge a 3300cc six cylinder engine in an early model Holden. This will severely discriminate against people currently building vehicles complying with Table LA1 of NCOP (Version 1). NSW have a similar Table in VSI06 (and this appears to be where this idea was taken from), however they automatically move a vehicle to the higher category if it came out with a six cylinder engine as original equipment as the vehicle would have been built stronger to cope with the larger weight engine. It is believed that NSW RTA do not intend to change their current table in VSI06.

Under the NCOP V1 a 5000cc V8 engine cannot be fitted to an LJ Torana. In NSW it is permissible to fit a 5253cc V8 engine in an LJ Torana. In fact back in 1972 GMH built several LJ Torana's fitted with 5000cc V8 engines.

This is a comparison of the effect of the intended change to Table LA1:

NCOP V1 table – FC Holden 1094 kg x 4 = 4.376 L engine (i.e.: 4.2L V8 Holden)

NCOP V2 table – FC Holden 1094 kg x 3 = 3.282 L engine (less than a 3300 – 202ci)

NSW VSI06 – FC Holden 1094 kg x 4.82 = 5.273 L engine (i.e.: 5L V8 Holden).

The intended changes to Table LA1 will also mean you can no longer fit a Holden V6 (3800cc or 3500cc) to an early model IL6 Holden e.g. FC Holden, LC/LJ Torana's. This conversion is very common these days, with hundreds of these vehicles currently on the road, and has the benefit of reduced fuel consumption and reduced gaseous emissions. This will also affect some commercial businesses that are set up to do these conversions.

It is also noted that today's engines usually have alloy blocks and heads and weigh less, therefore providing better weight distribution and better handling. For example an LJ Holden in line 3300cc six cylinder engine weighs 195 kg, and a 5700cc Chevrolet V8 (LS1) weighs 190 kg. Both NSW and the NCOP do not permit a 5700cc engine in an LJ, yet under NSW regulations you can fit a 4200cc engine which is heavier than the original six cylinder engine at 220kg. Also under the intended changes to Table LA1 you cannot fit an engine larger than 3300cc to an LJ Torana (2 door XU1 with a weight of 1100kg), which is the standard engine that was available on this vehicle.

NSW has far more modified vehicles than the other states, yet there is no evidence that the increase in engine size in NSW has had any safety effect on the subject vehicles. It is not the power of the vehicle that is the cause of accidents; it is the actions of the driver. Most of these modified vehicles are only used occasionally, and are not driven every day, and when these vehicles are modified they are actually safer to drive with much improved steering, suspension and braking, fuel economy, and gaseous emissions over the original standard vehicle. Modified vehicles are less likely to be involved in accidents, and result in less at fault insurance claims than standard vehicles.

It is also noted that the National Guidelines for the Construction and Modification of Street Rods in Australia does not have engine capacity based on weight; it allows a max engine capacity of 460 cubic inches (7600cc). Therefore it is possible to build a street rod which weighs only 900kg to have an engine capacity of 7600cc, compared to a modified production vehicle (900kg) only allowed a max capacity of 2700cc (NCOP V2 table), or 4338cc (NSW VSI06). These days most street rods are "modified replicas" of the original vehicles and use many new parts. There is also no weight/max capacity limitation for ICV's. Street Rods have far less limitations placed on them than modified production vehicles, and there is no base vehicle to compare their handling and safety with. At least with a modified production vehicle you can compare its safety and handling against the original standard vehicle.

- **Section LA3 – fitting of Turbo/Superchargers**

Currently, Table LA1 is not tied in to Section LA3. If Table LA1 is tied into Section LA3, you will discriminate against certain older vehicles fitting a Turbo/Supercharger due to not meeting the weight requirements. For example NCOP V2 table LA1 does not permit a 1973 Falcon XBGT to be fitted with a Supercharged/Turbo engine size greater than 4671cc, yet this is smaller than the original 4900cc or 5700 V8 engine that was available from the factory. Another example is a Torana XU1, you cannot even supercharge/turbocharge a standard 3300cc engine in this vehicle as table LA1 only permits a max capacity of 2750cc (based on weight of 1100kg).

- ***Section LS Suspension_and_steering***

It is also recommended that Table LS Suspension_and_steering be updated to align with the NSW RTA requirements (VSI09). NSW have a very simple table that relates weights of post and pre1973 vehicles to suitable rim sizes. It is well known that early vehicles were fitted with very narrow rims and tyres in comparison to a vehicle of similar weight nowadays. The NSW RTA acknowledged this by allowing vehicles to upgrade their rim size to a sensible level, i.e.: Pre 1973 vehicles between 1001 and 1200kg can use an 8" rim.

Code LA2, LA3, & LA4. Mandatory Upgraded Safety Equipment for Pre-ADR Vehicles.

“A flat or convex external rear vision mirror complying with the latest version of ADR 14 must be fitted to the driver’s side of the vehicle. (Note: Complying mirrors must have an ECE “E mark”).”

ADR14 exempts mirrors from having an “E mark” (refer to ADR 14/02 clause 6.1), therefore the requirement that complying mirrors must have an “E mark” cannot be enforced. This exemption is applicable to all ADR’s, and where referred to in the NCOP should be deleted.

As the ACT is surrounded by NSW, our club has members from both NSW and the ACT and it becomes very confusing where there are two sets of rules. For this to be a true NCOP all states should accept the same limitations. Where there are differences between the NCOP and state regulations, the NCOP should adopt the most lenient regulation unless there is a safety implication, which in the case of table LA1, should be aligned completely with the NSW RTA requirements, as we see no safety implications. The NCOP for light vehicle modifications is far more stringent than the National Guidelines for Street Rods, and where major modifications are carried out they are required to be inspected and signed off by a recognised engineering signatory.

The following amendments are proposed:

1. Amend table LA1 to align with NSW RTA requirements (VSI06), or amend table LA1 to read “All vehicles originally weighing more than 1100 kg, and/or with engines having more than 4 cylinders”.
2. Table LA1 should only be attached to LA2 & LA4, not to LA3, as LA3 is adding a supercharger/turbocharger to an originally engined vehicle.
3. Code LA2, LA3, & LA4. Mandatory Upgraded Safety Equipment for Pre-ADR Vehicles delete (Note: “Complying mirrors must have an ECE “E mark”), insert (Note: Mirrors must be shown to come from an ADR 14 complying vehicle, or be ECE “E marked”).
4. Delete any reference to complying items must have an “E mark”, unless it is specifically required by the relevant ADR.
5. Table LS Suspension_and_steering be updated to align with the NSW RTA rim width requirements (VSI09).