



Subject:

Increasing freedom of steering rack changes, to manage electric steering racks.

Proposal:

Allow steering racks to be interchanged, regardless of their type.
(Manual/Hydraulic/Electric)

Date:

1 October 2020

11 October 2020 – Update based on AMRC directions

For Endorsement by: Motorsport Australia

Purpose:

Many modern cars today are being produced with electronic assisted power steering (full electric, not just electro-hydraulic). These steering systems are often controlled by the cars electronics via CAN, LIN etc. It is difficult for many competitors to backwards engineer these controllers to get these cars to run without all of the factory electronics being left in place. The purpose of the rule proposal is to provide a simpler solution for some of those vehicles. It is acknowledged that this will need to be monitored further as more cars go to full electric racks and fewer compliant replacement options exist.

Is this rule proposed to attract new competitors:

Yes. This rule removes the significant obstacle of integrating an aftermarket ECU with an electric steering rack, as it provides an alternative parts source that does not demand integration. This combination is relevant to IPRA demographic, the most obvious example being a VF Commodore utilising a VE rack.

Background:

The current rule caters for a power steering rack assembly to be replaced with a manual steering rack, but does not offer any options for the newer style of electric racks. This proposed amendment provides consistency in the approach to steering racks, whilst retaining the production eligibility.



Due to the potential for issues with mounting a rack and the desired constraint of using the existing mounting points, replacing the subframe and associated arms are also permitted.

To restrain competitors from swapping to a superior suspension type, a limitation is included that the original suspension type of their competition vehicle must be retained.

Intent:

This rule change is intended to permit a competitor with an electric steering system to be able to swap it out for a hydraulically assisted, or manual steering system, and all of the associated parts required to make the swap. The unmodified replacement parts are limited to steering, sub-frame and suspension arms from the same family of automobiles only.

Proposed wording:

Submitted to Motorsport Australia for formulation in accordance with the documented intent.

Proposal Update – 11 November 2020

Please find below the AMRC Proposed amended rule. The AMRC have decided for a more comprehensive rule change by allowing modification to the Sub frame to fit alternate steering racks as it is likely to be an ongoing issue into the future.

9.13 STEERING

- (a) The steering rack or steering box is free provided that:
 - (i) The steering rack housing or steering box housing is an unmodified part from an eligible Automobile; and
 - (ii) The mounting points used to mount the original steering rack/steering box on the body, Crossmember and/or Sub frame are used, unmodified, to mount the replacement steering rack/steering box; and
 - (iii) The type of steering remains unchanged (eg Steering Rack or Steering box); and
 - (iv) No other modifications (e.g. steering column etc.) are made for its fitment.
 - (v) Where a steering rack has been changed to one with a different method of power assistance, not available in the original vehicle (eg Unassisted, Hydraulic, or Electric), then the Crossmember or Sub frame may be modified only to fit the replacement



steering rack. The crossmember and subframe location may not be modified, nor can any suspension pick up points be modified other than as permitted in 9.14.

(b) All other components of the power steering system are free.

Notations:

Vote by	
Executive Member Name	
Was this distributed to all members	
Date distributed (if applicable)	
Date accepted by National board	
Read out by:	
Witnessed:	

Was the proposal accepted:

Feedback:

Signed.....State.....Date.....