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# FCAI Response to the Regulatory Impact Statement for the Control of Vehicle Stability

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## INTRODUCTION

The Federal Chamber of Automotive Industries (FCAI) is the peak industry organisation representing manufacturers and importers of passenger vehicles, light commercial vehicles and motor cycles in Australia. The FCAI welcomes the opportunity to provide this response to the draft Regulatory Impact Statement (RIS) for the Control of Vehicle Stability.

## OVERVIEW OF THE AUTOMOTIVE INDUSTRY

The automotive sector is a globally integrated industry with many product lines sharing platforms and major components to achieve productivity gains from economies of scale. While more than one million new vehicles were sold in Australia in 2008, this still represents less than 1.5% of the global market. With growth expected to continue in the emerging economic markets of India, China, Russia and Brazil, Australia's share of the world market will decline. With the expected fall in Australian new vehicle sales of up to 12% in 2009, Australia's share of the world market could decline even further.

Australia is one of the most open and competitive automotive markets in the world with more than 50 brands, 350 models and 20 source countries. Less than 17% of new passenger vehicles sold in 2008 were manufactured locally with the remaining 83% of new vehicles imported from various countries and regions of the world including Asia, Europe and Africa.

The motor vehicle is increasingly a global product and one of the most comprehensively regulated products. In considering regulations, the government's role is to balance social and economic benefits with safety and environmental performance.

The FCAI considers that government should base regulations on sound science and economics and that regulation is justified only when there is demonstrated need for government intervention because the market or vehicle manufacturers are not responding to a demonstrated need or new technology. Additionally, vehicle regulations in Australia should be both nationally consistent and harmonised with international regulatory standards.

As economies of scale are critical in the automotive industry all manufacturers have tended to limit the number of locations any one model is produced and that model is then cross-shipped to markets where there is demand. This approach benefits initially the manufacturer through reducing costs and ultimately the consumer by improving affordability and increasing product choice.

The introduction of individual or unique national standards and regulatory requirements can seriously affect this approach through increasing production cost, which must be passed along to the consumer, without necessarily improving safety or environmental performance.

## RECOMMENDATIONS FROM THE RIS

The Regulatory Impact Statement (RIS) recommends the adoption of an Australian Design Rule (ADR);

- Based on Global Technical Regulation No. 8 (gtr 8), Electronic Stability Control Systems, which is an international standard established by the United Nations Economic Commission for Europe (UNECE).
- Applicable to all vehicles up to 4.5 tonnes GVM including the following ADR vehicle categories;
  - MA (passenger cars);
  - MB (passenger vans);
  - MC (off-road vehicles);
  - MD1, MD2 and MD3 (light buses);
  - NA (light goods vehicles) and
  - NB1 (medium goods vehicles).
- Effective from 2012 for new models and 2014 for existing models.

## FITTING OF ESC TO MA, MB AND MC CATEGORY VEHICLES

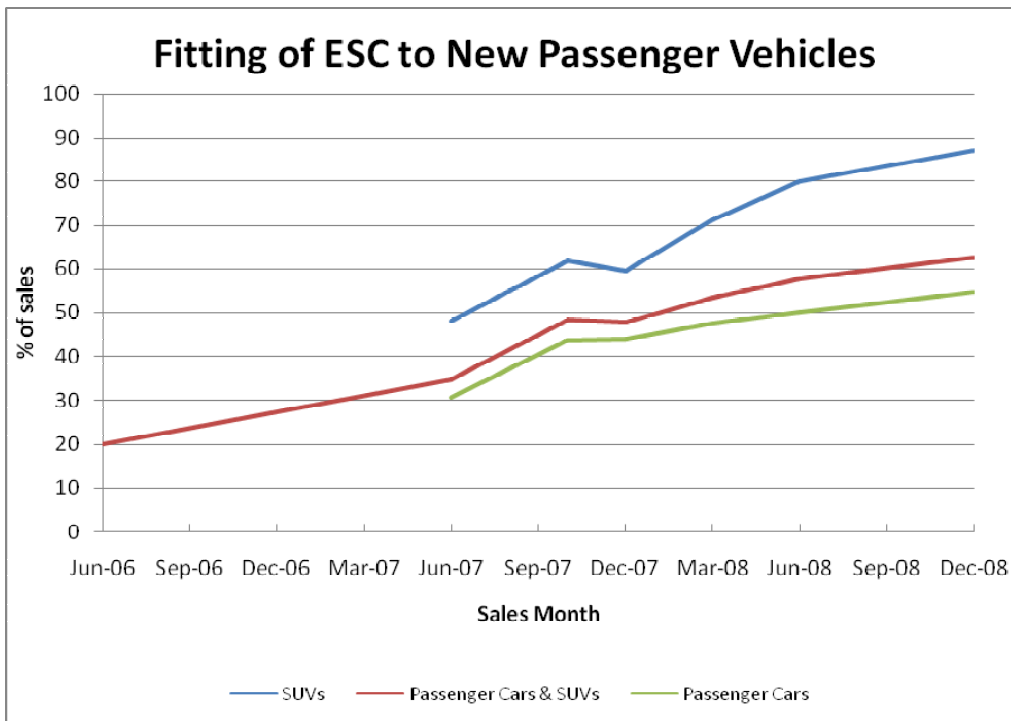
The FCAI supports the introduction of an Australian Design Rule for the fitting of electronic stability control (ESC) to MA, MB and MC category vehicles that is;

- Harmonised with the global technical regulation No. 8 (gtr 8).
- Effective no earlier than 29/10/2012 [new models] and 29/10/2014 [all new vehicles]. This timing will align with the expected timing for mandatory ESC fitting to M1 vehicles in the European "General Safety Regulation"
- Aligned with ECE 13H Supp 7 Clause 5.2.24.1 by having an alternative standard for vehicles with a mass in running order greater than 1735 kg. This alternative standard would allow vehicles with a "vehicle stability function" [directional control (ESC) and roll-over control] which comply with ECE-13.11 Annex 21.
- Accepts or recognises FMVSS 126 as an alternative standard.

The FCAI member companies recognise the importance of ESC to improve safety and have taken a pro-active approach to fitting ESC. As demonstrated in the graph below, the fitting rate of ESC for new passenger cars and SUVs has continued to increase since mid 2006. In December 2008 more than 60% of new passenger vehicles, and more than 80% of SUVs, were fitted with ESC.

The graph shows that the industry has responded to evidence showing the positive safety benefits of fitting ESC to passenger vehicles. As demonstrated in various studies and recognised in the RIS, ESC has a greater impact on high centre of gravity vehicles (e.g. SUVs) than sedan-type

passenger cars. The industry has responded with fitting ESC to more than 80% of SUVs sold in 2008.



Current plans indicate that this increase in fitting of ESC to new MA, MB and MC category vehicles will continue. FCAI members expect to have ESC available (standard fit or as an option) on more than 95% of new MA, MB and MC category vehicles by 2012.

As the market and industry are clearly responding to fitting ESC the FCAI questions whether an ADR for fitting ESC to MA, MB and MC category vehicles is justified.

Due to the global nature of the vehicle industry and Australia's small share of the world market the introduction of ESC into an ADR must recognise the scheduled introduction timing of overseas markets. Australia's introduction of mandatory ESC cannot be in advance of the introduction of similar regulation in major overseas markets.

It is our understanding that mandatory ESC on M1 category vehicles will be introduced in the EU, as part of a "General Safety Regulation" from 29/10/2012 for new models and 29/10/2014 for all new vehicles. Advice from the Japan Automotive Manufacturers Association (JAMA) is that Japan has introduced ECE R13H and is also considering introducing mandatory ESC for M1 category vehicles (except micro-mini) in the same timeframe as the EU as the introduction expected in the EU "General Safety Regulation".

It is necessary to ensure the availability of components for vehicles to be sold in Australia. As the major automotive markets of Europe, the US and Japan will also be increasing the fitting of ESC to vehicles as their own regulations are implemented the component suppliers will also need to tool up and increase production of the ESC components.

The FCAI does not support mandatory fitting of ESC to light goods vehicles (i.e. NA category vehicles) in the timeframe proposed in the draft RIS. While many of the light goods vehicles on the market in Australia already have ESC fitted there are significant numbers of light goods vehicles (both light trucks and vans) that do not currently have ESC and there are no current plans to undertake the development work for fitting ESC to many of these models.

It needs to be recognised that goods vehicles have a longer product cycle (i.e. time between new models) and subsequent technical development cycle than passenger vehicles. For example, the product cycle for a light commercial vehicle could typically be up to ten years in Australia while passenger cars will have a much shorter product cycle of four to five years. Lower annual sales volumes and a higher number of variants for light commercial vehicles require longer product cycles to provide the necessary return on investment on the initial investment in the product development.

NA category vehicles that have not been designed for ESC cannot be easily adapted due to the vehicles design characteristics. Many NA category vehicles are available with a range of gross vehicle mass (GVM) that may be available with relatively minor specification levels, e.g. essentially the same vehicle body/chassis with wheel/tyre combination and/or suspension and/or engine/transmission option. Each combination would need ESC calibration resulting in high development costs.

A significant issue with developing ESC for NA category vehicles is that the vehicle's final configuration (and consequently the centre of mass or centre of gravity) is not predictable by the OEM. For example, how does the OEM calibrate the ESC for a cab chassis vehicle?

- The OEM specifies GVM, but not where the final customer's configuration places its centre of mass or COG with implications for how the ESC control algorithm deals with the yaw that it measures and/or infers.
- For a cab chassis vehicle the onus could then be on the second stage manufacturer (SSM) to certify the ESC system. If the SSM can't certify the ESC (and it would very unlikely for any SSM to certify the ESC) the onus would then be on the OEM to supply "technical information" to the SSM to enable compliance with the ESC ADR (in a similar way to the current system of supplying information on lighting, mudflaps, external mirrors etc.). This would place the OEM (or consultants) in a position of having to evaluate a vast range of SSM vehicles which would be a very expensive exercise (even if the necessary test facilities and expertise were available) and/or OEMs may be reluctant to provide confidential technical data to a third party.
- Any increase in cost of certification would then need to be passed along to the vehicle purchaser.

Many NA category vehicles sold into Australia are designed cab-chassis work vehicles and are principally designed for the Asian market rather than the EU or US. Advice from JAMA is that the Japanese government has not yet decided to mandate fitting ESC to N1 category vehicles.

The Australian market is too small in terms of total sales to justify ESC development on Australian specification models resulting in these models being withdrawn from the Australian market. Models that are not also sold into Europe or the US would not have ESC development already conducted or in any forward model development plan.

As information on vehicles that may be withdrawn from the Australian market is confidential, as is all information on forward model plans, the data will not be provided in the body of this submission and will be provided separately to the Department. This will allow the FCAI submission to be made public without commercially sensitive information.

If the outcome of the RIS is still to include NA category vehicles in the new ADR the industry would ask for additional introduction timing beyond what would be expected for MA, MB and MC category vehicles. The introduction timing for NA vehicles, if they are to be included in the scope of any ADR requiring mandatory fitting of ESC, should be aligned with the expected timing for fitting ESC to vehicles over 3.5 tonnes GVM as already identified in the NTC Heavy Vehicle Braking Strategy.

## FITTING OF ESC TO MD1 AND MD2 CATEGORY VEHICLES

The FCAI does not support mandatory fitting of ESC to MD1 and MD2 category vehicles in the timeframe outlined in the draft RIS. There are only a small number of MD1 and MD2 Category vehicles sold in Australia and these models use the same base vehicle as NA Category variants sold in Australia. Consequently, design and development work to fit ESC to these models encounter the same limitations and difficulties as for the NA Category variants.

The inclusion of MD1 and MD2 category vehicles in an ADR may result in some models no longer being available in Australia. As this information is confidential, as is all information on forward model plans, the data will not be provided in the body of the submission and will be provided separately to the Department. This will allow the FCAI submission to be made public without commercially sensitive information.

If the outcome of the RIS is still to include MD1 and MD2 category vehicles in the new ADR the industry would ask for additional introduction timing beyond what would be expected for MA, MB and MC category vehicles. If MD1 & MD2 category vehicles are to be included in the scope of any ADR requiring mandatory fitting of ESC the introduction timing should be aligned with the expected timeframe for fitting ESC to vehicles over 3.5 tonnes GVM as already identified in the NTC Heavy Vehicle Braking Strategy.

## FITTING OF ESC TO VEHICLES OVER 3.5 TONNE GVM

The FCAI does not support the recommendation in the RIS to require all vehicles over 3.5 tonnes and up to 4.5 tonnes GVM to have ESC meeting the technical requirements of gtr 8 as;

- In Europe, gtr 8 (through ECE R13 Supp 7) is applicable only to vehicles up to 3.5 tonne GVM (i.e. UN-ECE M1 and N1 categories).
- In Japan, mandatory ESC is only being considered for vehicles up to 3.5 tonnes GVM (i.e. UN-ECE M1 and N1 categories).
- Fitting of ESC to vehicles over 3.5 tonne GVM is covered by UN-ECE Regulation 13.11 which has different requirements to gtr 8.
- The NTC Heavy Vehicle Braking Strategy already identifies a timeframe for review and consideration of adopting UN-ECE R13.11 for fitting of ESC to vehicles over 3.5 tonnes GVM.

In the RIS, the proposed date of application of ESC requirements to vehicles between 3.5 and 4.5 tonnes GVM (i.e. ADR categories MD3 and NB1) is 2012-2014, i.e. the same as the proposed introduction timing for all MA,MB, MC, NA, MD1 and MD2 categories (GVM 3.5t or less).

ECE R13H (which has been amended by Supp 7 to include gtr 8) is applicable to M1/N1 (GVM 3.5t or less) but not to N2 (GVM 3.5t -12t). The ESC requirement applicable to N2 is specified in ECE 13.11, whose contents are different to the ESC requirement of gtr 8.

The ESC requirements of ECE R13.11 will be applied to N2 vehicles with hydraulic brakes in 2013-2015. Consequently, the proposed application dates of ESC to MD3 and NB1 category vehicles under this RIS (i.e. 2012 and 2014) becomes earlier than the effective date (2013-2015) of the ESC requirement applicable to N2 category of ECE R13.11. This is inconsistent with the previous government practice that, if the requirements adopted in the ECE Regulation is newly introduced to ADR, then the effective date of ADR is set later than the effective date of ECE.

While there are no FCAI members with vehicles over 3.5 tonnes GVM that do not have an ESC system, the inclusion of MD3 and NB1 category vehicles in an ADR requiring the mandatory fitting of ESC to the technical requirements of gtr 8, rather than the technical requirements of R13.11 may require additional costs to the manufacturer (and ultimately the end consumer) through additional testing and certification without any safety benefit.

Additionally, the FCAI is aware of a number of light trucks that do not have an ESC system and the current proposal has the potential to eliminate these vehicles from the Australian market. The FCAI recommends that the Department consult with the Truck Industry Council to determine the implications for these vehicles.



## CONCLUSION

In summary, the FCAI supports the introduction of an Australian Design Rule for the fitting of electronic stability control (ESC) that is;

- Harmonised with the global technical regulation No. 8 (gtr 8).
- Applicable to MA, MB and MC category vehicles.
- Effective no earlier than 29/10/2012 [new models] and 29/10/2014 [all new vehicles]. This timing will align with the expected timing for mandatory ESC fitting to M1 vehicles in the European "General Safety Regulation" and also expected timing for mandatory ESC fitting to M1 category vehicles in Japan.
- Aligned with ECE 13H Supp 7 Clause 5.2.24.1 by having an alternative standard for vehicles with a mass in running order greater than 1735 kg. This alternative standard would allow vehicles with a "vehicle stability function" [directional control (ESC) and roll-over control] which comply with ECE-13.11 Annex 21.
- Accepts or recognises FMVSS 126 as an alternative standard.

The FCAI does not support the recommendation in the RIS to mandate;

- ESC to be fitted to all light goods vehicles, (i.e. ADR vehicle category NA) in the proposed timeframe.
- ESC to be fitted to all light buses up to 3.5 tonne GVM (i.e. ADR vehicle categories MD1 and MD2) in the proposed timeframe.

Additionally, the FCAI does not support the recommendation in the RIS to require all vehicles up to 4.5 tonnes GVM to have ESC meeting the technical requirements of gtr 8 as;

- In Europe, gtr 8 (through ECE 13H Supp 7) is applicable only to vehicles up to 3.5 tonne GVM (i.e. M1 and N1 categories).
- Japan is only considering mandatory ESC for vehicles up to 3.5 tonnes GVM.
- Fitting of ESC to vehicles over 3.5 tonne GVM in Europe is covered by UN-ECE Regulation 13.11 which has different requirements to gtr 8.
- The NTC Heavy Vehicle Braking Strategy already identifies a timeframe for review and consideration of adopting UN-ECE R13.11 for fitting of ESC to vehicles over 3.5 tonnes GVM.

## ATTACHMENT

1. Vehicles that may be withdrawn from the Australian market (confidential document not for public release)