

SCRUTINEER

N E W S

MAY 2018

Contents

- 1 FIA Advances Helmet Standards
- 3 Safer Cages for 2018
- 5 Maintaining Readability in the Latest Log Books
- 5 Inspection Procedure for Fuel Cells



FIA Advances Helmet Standards

The FIA has published new standards for advanced helmets from 2018 onwards - recognised within Schedule D of the CAMS Manual.

The FIA standard 8860-2018 and the 8860-2018-ABP (Advanced Ballistic Protection) are now the benchmark motor sport helmet standard, and present the following improvements:

1. Advanced Ballistic Protection:

A reinforcement of the shell at the forehead area. Developed using military specified ballistic, the ABP protects against projectiles weighing up to 225 grams and travelling at 250 km/h

2. Energy absorption increase of 12%

22% for larger helmets

3. Introduction of double and triple impact tests

4. Extended area of protection:

A new test in lower helmet zones has been introduced to improve compatibility with modern cars which provide head support

5. New design requirement for the chin strap to aid extrication

6. New low velocity test to prevent excessive optimisation at higher impact velocities

In accordance with Standard 8860-2018, all FIA recognised helmets are now Frontal Head Restraint compliant.

The 8860-2018 labels, affixed to the inside liner of the helmet, show the, manufacturer, model, size, homologation number, manufacture date and the serial number of the helmet.

Helmets with ABP will have the acronym following the standard and homologation number.

8860-2018 helmets (with and without ABP) are required to be equipped and certified with helmet-tether-M6 female-terminal's only.

This specification does not apply to "modular" or 'flip-up' helmets.

Click here to view [Schedule D of the CAMS Manual](#).

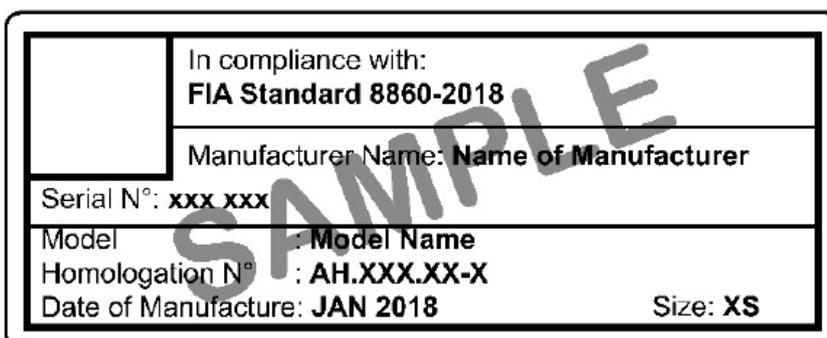
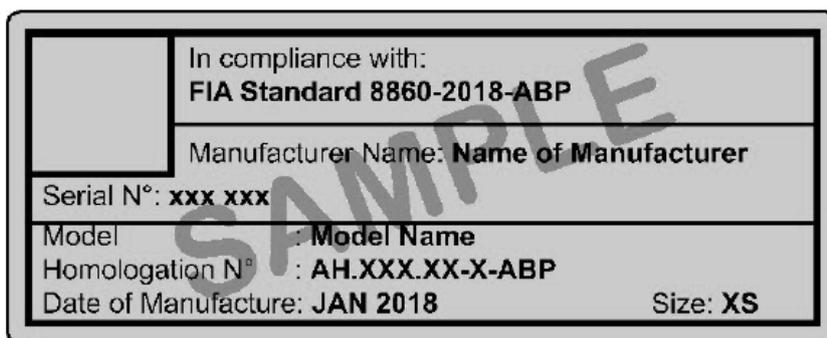


Figure 1.
Examples of 8860-2018 labels, with (top) and without ABP (bottom)

Safer Cages for 2018

New regulations in Schedule J 'Safety Cages' were added at the start of this year, to further improve safety aspects of competing vehicles in motor sport events, particularly for the rally discipline.

Following the findings of a recent report from the Australian Institute of Motor Sport Safety (AIMSS), a range of advances have been identified for CAMS safety cage structures. Schedule J regulations have been updated to reflect these advancements.

These regulations will be implemented over the course of the year and into 2019.

The current list of updates to safety cage structure requirements are as follows:

1. The intersection of any diagonal members must be reinforced by at least two gussets in accordance with Article 2.15 (Figure 2). This is mandatory for a safety cage structure registered/certified on or after 1 July 2018.
2. In the case of door bars in the form of an 'X' (Drawing J-11) it is recommended that this joint be reinforced by two gussets in accordance with Article 2.15 (Drawing J-59). It is recommended that the 'X' be formed by two continuous bars which are joined in the centre (Figure 3). This is mandatory for a safety cage structure registered/certified on or after 1 July 2018.
3. A minimum of two gussets complying with Article 2.15 for safety cages registered on or after 1 July 2018 shall be fitted onto the following junctions between the: (i) diagonal members of the main roll bar or rear backstay (Drawing J-7, J-8, J-9) (ii) roof reinforcements (Drawing J-14) (iii) door bars (Drawing J-11) (iv) door bars and the windscreen pillar reinforcement (Drawing J-17) (v) main roll bar and lateral roll bar reinforcement (Drawing J-43)
4. For state rally championships and above, it is recommended that two or more door bars shall be fitted at each side of the vehicle in accordance with Drawings J-11, J-12 or J-13. This is mandatory for a safety cage structure registered/certified on or after 1 January 2019.
5. Updates to vehicle roof reinforcement. This is mandatory for each rally vehicle at state level competition or higher, subject to a logbook issued on or after 1 January 2019.
6. Updates to vehicle windscreen pillar reinforcements. This is mandatory for each rally vehicle at state level competition, subject to a logbook issued on or after 1 January 2019.
7. For all rally events (competitions with more than one occupant) will be mandatory for a safety cage structure registered/certified on or after 1 July 2018 be configured with two diagonal members within the main hoop in accordance with Drawing J-7 (Figure 4).

The precise application date of each regulation change can be found at the top of Schedule J within the online CAMS Manual with any future changes automatically updated and listed.

Click here to view [Schedule J from the CAMS Manual](#).



Figure 2. Diagonal members reinforced by gussets

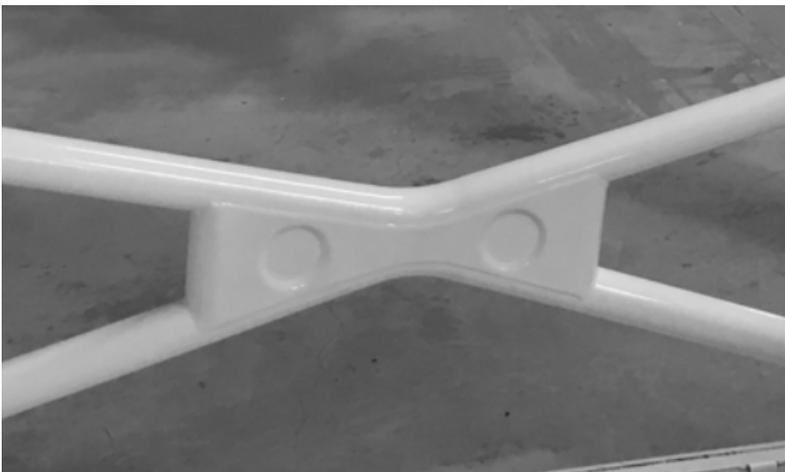
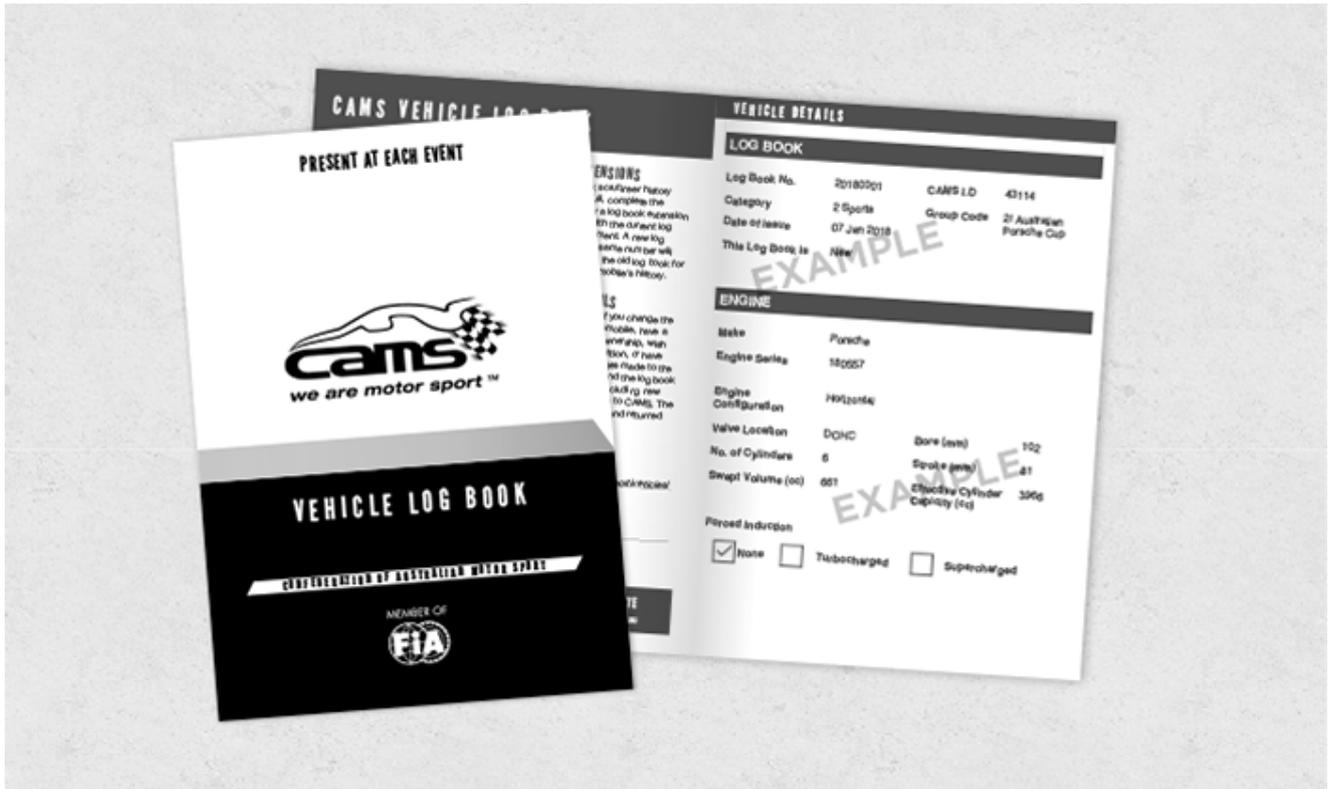


Figure 3. Two continuous bars forming an 'X' structure



Drawing J-7

Figure 4. Drawing J-7



Maintaining Readability in the Latest Log Books

Feedback about the 2018 generation CAMS vehicle log book has revealed the following advice to aid those completing log book entries:

- The tamper-proof paper used in the vehicle log books does not readily absorb high volumes of ink.
- When filling in a log book refrain from using ink stamps, felt-tip markers, or gel ink pens.
- Ballpoint pens are recommended

Any questions regarding the filling out of CAMS Vehicle Log Books can be directed to logbooks@cams.com.au

Inspection Procedure for Fuel Cells

Testing procedures for FIA fuels cells were introduced in January 2017 to monitor and maximise fuel cell life. Inspections from a CAMS approved test facility can help ensure FIA FT3, FT3.5 and FT5 fuels cells can be safely used for up to 15 years.

The following excerpt from CAMS Manual, Schedule N, Article 5, provides clear advice on dealing with FIA fuel cell compliance.

5. FUEL CELL INSPECTION

- (a) Each automobile in an international competition shall comply with the FIA

regulations.

- (b) The following regulations of this article (5(b)) shall apply from 1 January 2018 and only to an automobile competing in an event permitted by CAMS. A FIA safety fuel cell FT3, FT3.5 and FT5 shall be inspected in compliance with the following requirements:
- (i) inspection of a fuel cell shall become due on the FIA expiry date of 5 years after manufacture;
 - (ii) inspection of a fuel cell shall be carried out by a CAMS approved test facility every two years, refer Article 6;
 - (iii) maximum life of a fuel cell shall be 15 years from the date of manufacture;
 - (iv) a damaged fuel cell shall not be repaired;
 - (v) proof of inspection must be supplied to a scrutineer on request; and
 - (vi) test details are to be recorded by CAMS in the log book change of details section.

APPROVED FUEL CELL TEST FACILITIES

<p>Australian fuel cells 14/4 Transport place Molendinar qld 4214 (07) 5597 1533</p>	<p>Racer industries 75 Norwell road Norwell qld 4208 1300 738 553</p>	<p>Bond roll bars 3/6 Precision place Park road industrial estate Mcgrath's hill nsw 2756 (02) 4587 9672</p>
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Note: Test facilities may be added to this list on application to CAMS.

Figure 5. CAMS approved fuel cell test facilities

Note: category, class or event regulations may apply a higher standard for a fuel cell.

Scrutineers need to inspect labels on fuel cells to:

1. Confirm the cell is still within FIA expiry date. If not;
2. Confirm the cell has been inspected by sighting the inspection invoice. Notation in the "Details of Vehicle Modification" section of the logbook may be made by the Chief Scrutineer stating the serial number of the fuel cell, the date of inspection and expiry date.

Any queries on fuel cells, testing and compliance can be directed to technical@cams.com.au