

# Explanation of Rules to Pass the Technical Inspection for Formula SAE Japan

## No.01 Preface : How to understand the Rules 初めに : ルールの読み方

Based on

Formula SAE Rules 2025 v.1.0

Local Rules 2025 v.1.0

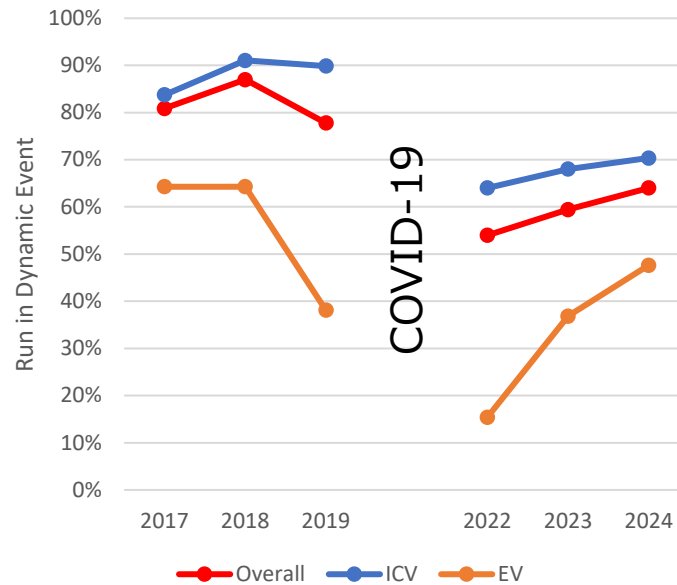
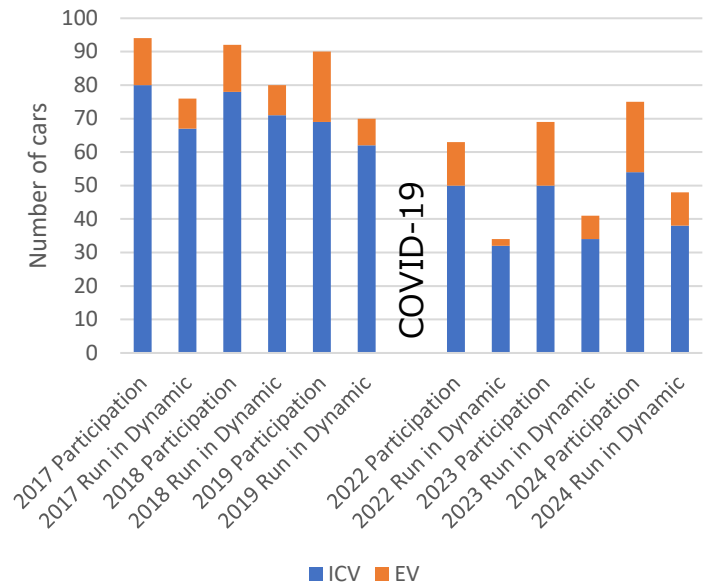
SES Tube v.1.1 / Mono v.1.1

- The Purpose of this Explanation / ルール解説の目的
- The Purpose of the Technical Inspection in FSAE Japan /大会技術車検の目的
- How to understanding the Rules / ルールの読み方
- Scope / 解説範囲

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- Why we explain the Rules?

- We desperately want to increase the number of vehicles that can run in dynamic events.  
技術車検としては動的競技に参加できる車両を増やしたい(切実に)



Criteria have not changed  
審査基準は変わっていない

Vehicle performance has not recovered to pre-COVID-19 levels  
車両の出来がコロナ以前の水準に達していない

There is a large gap in understanding of the rules between students and organizers.  
学生と運営(車検)間のルール理解のズレが大きい



The purpose of rule explanation is to reduce the gap in rule understanding.  
本ルール解説はルール理解のズレを減らすことを目的とする

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- 3 purpose of the Technical Inspection /大会技術車検の3つの目的
  - **Ensuring Safety / 安全の確保**
    - Vehicle Safety / 車両自身の安全性
    - Equipment Safety / 装備の安全性
  - **Fairness and Impartiality / 公平・公正**
    - Fair Judging / 公平な審査
    - Cheat Prevention / 不正行為防止
  - **Maintaining the Competition Site / 競技環境の保全**
    - No damage to the Competition Site (Track) / 会場(路面)に損害を与えない
    - Smooth operation of Dynamic Events / 動的競技の円滑な進行

The Technical Inspection is carried out from the above three perspectives.  
上記3つの視点で技術車検審査を行っている

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- FSAE Rules is NOT only the Regulation / FSAE Rulesは単なるレギュレーションではない
  - Because it's not stated in the rules doesn't mean you can do anything.  
ルールに記載がないからと言って、何でもやって良いわけではない

## GR.1.5 Good Engineering Practices

Vehicles entered into Formula SAE competitions should be designed and fabricated in accordance with good engineering practices.

Vehicle development that follows common sense in the automotive and engineering industries is required  
自動車業界的・工学的な常識に基づいた車両づくりが求められている

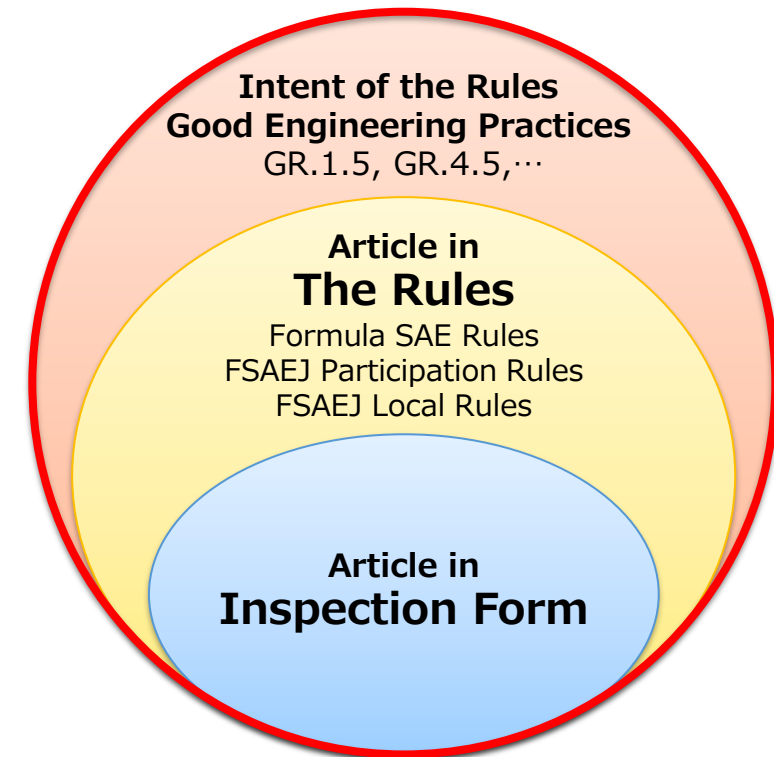
If it deviates too much from that, it may be judged "Not OK".  
あまりにも非常識な場合、“Not OK”と判断せざるを得ない

## GR.4.5 Violations on Intent

The violation of the intent of a rule will be considered a violation of the rule itself.

ルールの意図に反する違反はルールそのものの違反とみなす

## Inspection Scope





- What are Rules? / 何をルールと呼んでいるのか

- The following are considered Rules. (but are not limited to these:)  
以下はルールとみなす (これらに限らない)

- **FSAE Rules**
- **FSAEJ Participation Rules**
- **FSAEJ Local Rules**
- **SES (including Guidance)**
- **Technical Inspection Form**

GR.4.3.2 Official designated communications from the Formula SAE Rules Committee, SAE International or the other organizing bodies are to be considered part of, and have the same validity as, these rules

### FSAEJ Participation Rules

2024 Formula SAE Japan (FSAEJ) is hosted by the Society of Automotive Engineers of Japan (JSAE) in accordance with the rules described below, the Formula SAE® Rules 2024, the 2024 FSAEJ Participation Rules, and the 2024 FSAEJ Local Rules. Items described in the Participation Rules and the Local Rules take priority over the Formula SAE® Rules 2024.

GR.4.2.2 Rules appendices or supplements may be posted on the website and incorporated into the rules by reference.

- Additional Guidance

- The following are additional guidance or references.  
They may include the criteria for the Technical Inspection.  
以下は補足資料だが、技術車検の判定基準が含まれる場合がある

- FSAEJ Technical Inspection Guidance
- FSAEJ SES Guidance
- Answers from FSAEJ Official Q&A  
…etc.

GR.4.2.3 Additional guidance or reference documents may be posted on the website.

### GR.7.3 Question Publication

Any submitted question and the official answer may be reproduced and freely distributed, in complete and edited versions.

- Structure of FSAE Rules / FSAEルールの構成
  - FSAE Rules has 12 Parts
  - Each Part has some Sections
  - Each Section may have some Sub-sections, or have some Articles
  - Each Sub-section may have some articles

Part. Section. Sub-section. Articles

Part. Section. Articles

GR : General Regulations  
AD : Administrative Regulations  
DR : Document Requirements  
V : Vehicle Requirements  
F : Chassis and Structural (Frame)  
T : Technical Aspects  
VE : Vehicle and Driver Equipment  
IC : Internal Combustion Engine Vehicles  
EV : Electric Vehicles  
IN : Technical Inspection  
S : Static Events  
D : Dynamic Events

For example F.3.2.1

F : "Chassis and Structural" Part

F.3 : "Tubing and Material" Section

F.3.2 : "Tubing Requirements" Sub-section

F.3.2.1 : individual Article

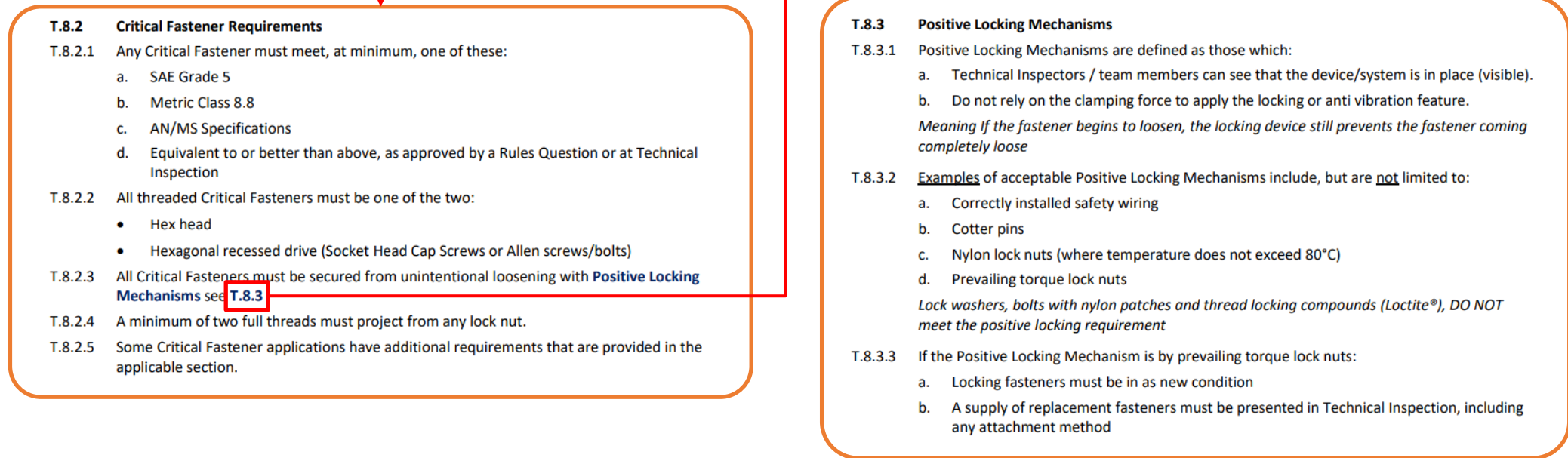
For searching a rules  
ルール検索時の参考まで

- Interpretation of “Reference in the Rules” / “ルール内の参照”の取扱い
  - If the reference is to an intermediate level, all rules under that level must be applied.  
参照先が中間階層までで指示される場合、その下階層すべての条文が適用される

For example “Reference to T.8.2”

V.3.1.4 Fasteners in the Suspension system are **Critical Fasteners**, see **T.8.2**

All rules(T.8.2.\*, T.8.3.\*) must be applied



If the reference further references another rule, that rule will also be applied.  
参照先が参照しているルールも当然ながら適用される

# How to understanding the Rules / ルールの読み方

- Rules Format and Use
  - Understand GR.6 / GR.6を理解すること

## GR.6 RULES FORMAT AND USE

### GR.6.1 Definition of Terms

- Must** - designates a requirement
- Must NOT** - designates a prohibition or restriction
- Should** - gives an expectation
- May** - gives permission, not a requirement and not a recommendation

### GR.6.2 Capitalized Terms

Items or areas which have specific definitions or have specific rules are capitalized.

For example, "Rules Questions" or "Primary Structure"

### GR.6.3 Headings

The article, section and paragraph headings in these rules are provided only to facilitate reading: they do not affect the paragraph contents.

### GR.6.4 Applicability

GR.6.4.1 Unless otherwise specified, all rules apply to all vehicles at all times

GR.6.4.2 Rules specific to vehicles based on their powertrain will be specified as such in the rule text:

- Internal Combustion "IC" or "IC Only"
- Electric Vehicle "EV" or "EV Only"

### GR.6.5 Figures and Illustrations

Figures and illustrations give clarification or guidance, but are Rules only when referred to in the text of a rule

### GR.6.6 Change Identification

Any summary of changed rules and/or changed portions marked in the rules themselves are provided for courtesy, and may or may not include all changes.

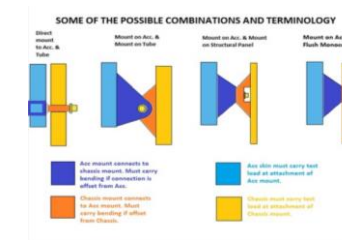
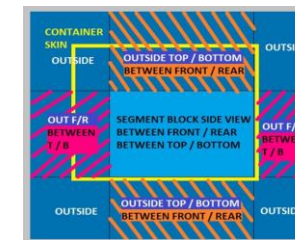
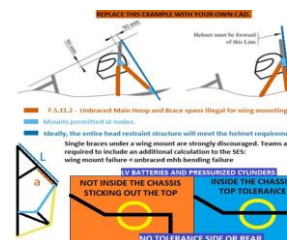
[Guide To 2025 FSAE Frame Rule Changes — DesignJudges.com](https://www.designjudges.com/guide-to-2025-fsae-frame-rule-changes/)

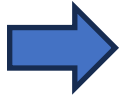
"Should": Make a good faith effort, we'll make a good faith judgment.

Unofficial but rules committee member's comment  
It may be intent of the "should" in the rules  
非公式だが、ルール設定者のコメント  
Shouldのルール意図なのでは？

The scope of application may be not limited to Headings  
ルール適用範囲は見出しに限られない

Headings, Figures, and Illustrations may be written as the intent of the rule.  
見出しや図・イラストがルールの意図を表している場合がある



- For non-native English speakers / 英語を母国語としないみなさんへ
    - It is strongly recommended NOT to make a translation of the Rules.  
ルールの翻訳書を作成しないことを強く推奨する
    - Mistranslation  
誤訳
    - Lack of nuance  
ニュアンスの欠落
    - Mistranslation or confusion of specified words  
定義された文言(固有名詞)の誤訳や混同
    - High maintenance / update costs  
高いメンテナンス/更新コスト
- 
- Big Disadvantages  
デメリットが大きい
- A rare but fatal misunderstanding in Japanese students / 致命的な誤解
    - Some Japanese students misunderstands “any” as “arbitrary” because of meaning “任意の”.  
一部学生が“any”(任意の)を選択肢と捉えているケースがある
    - “any” stands for same as “ $\forall$ ”, in other words “all”, “every”, especially in directive sentences.  
特にRulesのような指示文では“any”は“いかなる～であろうと”であり、“all”や“every”と同義である

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- Overview of Safety in FSAE Rules / FSAEルールにおける安全性の概要
- Explanation of Formula SAE Rules (with FSAEJ Local Rules) / FSAEルール解説
  - GR : General Regulations (Partially / this explanation)
  - AD : Administrative Regulations
  - DR : Document Requirements
  - V : Vehicle Requirements
  - F : Chassis and Structural
  - T : Technical Aspects
  - VE : Vehicle and Driver Equipment
  - IC : Internal Combustion Engine Vehicles
  - EV : Electric Vehicles
  - IN : Technical Inspection (Excluding Electric part)
  - S : Static Events
  - D : Dynamic Events

- No.01 Preface : How to understand the Rules
- No.02 The Safety Overview in FSAE Rules
- No.03 Explanation of V. Part
- No.04 Explanation of F.1, F.2, F.3
- No.05 Explanation of F.4
- No.06 Explanation of F.5
- No.07 Explanation of F.6
- No.08 Explanation of F.7
- No.09 Explanation of F.8
- No.10 Explanation of F.10, F.11
- No.11 Explanation of T.1
- No.12 Explanation of T.2
- No.13 Explanation of T.3, T.5, T.6
- No.14 Explanation of T.7
- No.15 Explanation of T.8, T.9
- No.16 Explanation of VE Part
- No.17 Explanation of F.9, IC.1-3
- No.18 Explanation of IC.5, IC.6
- No.19 Explanation of IC.7-9
- No.20 Explanation of T.4, IC.4
- No.21 Explanation of IN.1-3, IN.5-8, IN.10(Partially)
- No.22 Explanation of IN.9, IN.10, IN.12
- No.23 Explanation of IN.13-15