

Champions of the Future America

Engine Rules & Technical Regulations Addendum

Effective Date: January 15, 2026

1. Purpose, Scope, and Governing Authority

This Addendum defines the engine technical standards, inspection procedures, measurement methods, and enforcement authority for all **Champions of the Future America (COTFA)** sanctioned events.

This document is an **original regulatory instrument of COTFA**. While it adopts established industry specifications, procedures, and measurements for consistency and parity, all authority, interpretation, and enforcement rest solely with **Champions of the Future America**.

In the event of any conflict between this Addendum and the manufacturer of documentation, homologation paperwork, or external technical publications, **this Addendum shall prevail for COTFA competition**.

2. Technical Inspection Authority

- COTFA Technical Officials may use **any recognized inspection method** to determine compliance, including but not limited to dimensional measurement, comparison to known stock components, and functional testing.
- Inspections may rely on factory fiches, homologation records, supplemental bulletins, and class-specific technical documents.
- All inspections shall be conducted at **ambient temperature** unless explicitly stated otherwise.
- **Any confirmed technical non-compliance shall result in disqualification (DQ)** unless a lesser penalty is expressly defined.
- Failure or refusal to submit to inspection, testing, impound, or component exchange when directed shall result in **immediate disqualification** and forfeiture of all points earned for the affected session or day.

3. Component Condition and Carbon Accumulation

- Any engine component whose **shape, volume, or profile cannot be verified** due to contamination or carbon accumulation may be deemed non-compliant.

- Carbon buildup that reduces exhaust port area by **25% or more**, obstructs factory measurement tools, or interferes with approved profile gauges constitutes grounds for disqualification.
- Competitors bear full responsibility for presenting equipment **clean, accessible, and inspection ready**.

4. Controlled and Non-Conforming Equipment

- Many engine-related components used in COTFA competition are **specification-controlled** and must always conform, including but not limited to: - Ignition systems and modules - Carburetors and intake components - Exhaust systems, restrictors, and headers - Internal engine components
- If any controlled component is found to be non-conforming: - The competitor shall be disqualified from the affected session. - Additional penalties may be imposed. - The component may be **confiscated and retained** by COTFA. - Sanctions may also be applied to the associated engine builder.
- If a non-conforming component is discovered beneath an official seal or applied paint mark, **all prior competition sessions during the event shall be invalidated**.

5. External Appearance, Coatings, and Graphics

- No modification, coating, wrap, paint, or covering may alter or enhance **cooling, airflow, or heat retention**.
- Additional shields, airflow devices, or thermal barriers are prohibited.
- Advertising decals are permitted provided they do not affect compliance or inspection of access.
- Final determination of legality rests exclusively with the **COTFA Head Technical Official**.

6. Spark Plugs

- Spark plugs must be **commercially available, unmodified, and class approved**.
- Maximum installed length, including washer or temperature lead: **18.5 mm**.
- A stock or indexing washer is required.
- Verification may be conducted using an approved spark plug gauge torqued to **no more than 180 in-lb**.
- Mini & Mini U10: NGK BR_EG / B_EG or DENSO W_ESZU / IW31 or Autolite AR50 / AR51 / AR52 / AR53 402.11.2 402.11.3 402.11.4 402.11.5 402.12
- KA100: NGK B10EG / BR10EG / 6061-10 / R6061-10 / R6252E-105 / R6252K-105 / R6254E-105 / R6254K-105

- X30: NGK 6061-10 / R6061-10 / R6252E-105 / R6252K-105 / R6254E-105 / R6254K-105 In the event of a rain race, NGK B10EG or BR10EG may be used.

7. Fuel Regulations and Testing

- **Only COTFA-designated Sunoco Supreme 112**
- Only fuel purchased at the track may be used during all events.
- Spec Oil Motul 2T Mixed to 1 L Oil to 5-Gal Fuel | 6.76 oz per gal
- **Elf or Motul** engine oil can be used in **X30 Pro only**
- Fuel additives, chemical enhancers, or alterations of any kind are prohibited.
- Fuel testing may occur **at any time before, during, or after competition**.
- Competitors must provide a **minimum of 500 ml** of fuel upon request.
- COTFA may take a fuel sample from a driver's kart tank or fuel storage at any time during the weekend event. Failure to provide adequate sample results in disqualification.

Fuel Non-Compliance Categories

- **Minor:** Failure of Digatron or specific gravity testing consistent with pump fuel use, oil mismatch, or contamination.
- **Major:** Significant deviation or failure of NHRA/Germaine testing indicating the presence of performance-enhancing or hazardous chemical additives.
- The Technical Official retains discretion in determining severity and penalty. The test results are final. Use of carcinogenic substances may be reported to the appropriate regulatory authorities.

8. Engine Repair, Replacement, and Component Changes

- Engine repair or replacement requires **prior approval** from the COTFA Technical Director and must be done in the technical area.

A maximum of two (2) engines may be used. The primary engine shall be recorded and sealed before qualifying. The second engine may be submitted later. It shall be recorded and sealed by the Tech Director prior to any on-track use. Once the engine changes are official, you may not change engines again that day.

A) Damaged engine change: No penalty, competitor keeps earned spot.

B) Undamaged engine change – No penalty, competitor keeps earned spot.

C) Engine & Carburetor Changes in Technical Inspection Area Only –

D) Both engines and all changeable components are required to pass all technical inspections throughout the event. In the case of a top 5, two engines will be disassembled in post-technical inspection. If the the engine fails inspection, the Driver will receive a DQ for the last on track session.

E) One carburetor change per engine is permitted per day if documented with the technical director.

- **F)** Unauthorized engine numbers or seal numbers not matching the passport will result in additional penalties or disqualification.

9. Inspection, Sealing, and Impound

- COTFA reserves the right to inspect **any engine or component at any time**.
- Engines shall be resealed following inspection.
- Engines, parts, or equipment may be **impounded** for further inspection, testing, or evaluation.
- Non-compliant items may be retained by COTFA, and penalties up to and including suspension may be imposed.

10. Measurement Standards and Procedures

- All measurements, tools, tolerances, and verification procedures for: - Combustion Chamber Volume (CCV) - Deck height and squish - Port timing and duration - Bore and stroke limits shall be performed exactly as defined in the **current, class-specific engine specification documents adopted by COTFA**. All numerical values, dimensions, and limits remain unchanged.

A) **Ignition Timing:** (Mini & U10): Open I KA100: 0.106" .120 BTBC Max I X30

B) **Clutch:** (Mini & U10): engagement speed not to exceed 5000 RPM maximum. Ø

(All, KA100): engagement speed not exceeding 6000 RPM maximum. Clutch parts and drivers must be OEM-manufactured only.

C) **Air Box Inlet Tube:** Screen on the factory inlet tube can be removed

D) **Affixed externals:** OE IAME Air box for engine package installed with one 150-175 lb Tie Wrap

E) **Battery Boxes:** Must be secured with an extra 150-175 lb Tie Wrap

- F) **Maximum Kart Width:** Mini & U10 max rear 44" | All Other classes 55 1/8" (1400mm)
- G) **Mini, U10 Wheels:** Mini front wheels can be up to **120mm** max width, and rear wheels up to **150mm** max width. Aluminum or Magnesium
- H) **Ballast Weights:** Must be painted white with kart number displayed on each weight. Must be secured with 2 locking nuts
- I) **Plastics:** No holes or patches will be permitted on, or under the plastic front fairings. Holes or grind marks on the side and rear plastics may not exceed the size of a 1cm square
- I) **Sound Restrictions:** Engine noise rules for K1 Circuit. Max 95 dB at 35' and 4' off the surface. **(Mandatory for all 2 Cycle engines to run an Air Box)**

11. Approved Engine Classes

The following engine platforms are approved for COTFA competition and must comply with all applicable specifications: - IAME Swift (U10, Mini), - IAME KA100 - (Junior, Senior, Heritage), IAME X30 All engines must be **USA-model engines originally sold within the United States. COTFA Recognizes the IAME Engine Technical Documents for 2026. These PDF engine drawings for Mini Swift #353/M, KA100 356/P, X30 #358/Q can be found in the technical section for reference.**

12. Exhaust, Intake, Ignition, and Cooling Systems

- Exhaust systems, headers, silencers, restrictors, carburetors, airboxes, reeds, ignition systems, radiators, clutches, and starting systems must remain **OEM and unmodified**, except where expressly permitted.
- Any method intended to bypass or defeat exhaust restriction is strictly prohibited.
- Ignition timing limits, spark plug eligibility, radiator allowances, clutch engagement limits, and starter requirements remain exactly as specified for each engine class.
- Only OEM fiberglass reeds will be allowed with a minimum thickness of 0.012". Reeds must be IAME factory reeds, sanding is allowed **ONLY** on the side opposite the IAME identification marking, cutting the reeds is illegal

13. Service Components and Adjustments

- Bearings, seals, O-rings, and gaskets may be replaced with **equivalent aftermarket components**.

- Ceramic or exotic materials are prohibited.
- Cylinder base gaskets and head shims may be adjusted **solely for port timing or squish adjustment**, not for performance enhancement.

14. Final Interpretation and Enforcement

All technical interpretations, compliance determinations, penalties, and enforcement actions are made at the sole discretion of **Champions of the Future America Technical Officials**. All decisions are final and binding.

This Addendum is issued to ensure competitive parity, technical integrity, and safety while preserving the manufacturer-supplied configuration of all engines competing in Champions of the Future America events.