ACTIVE SUPPLEMENT
4.8.26

10.3.8: Competition Age
A driver's competition age is determined by the age that they will be on December 31 of that year. Exception: All drivers must have attained the actual age of 5 to participate on track in any NKA sanctioned event. To move out of the kid kart category, a driver must have attained the actual age of 7. A participant must be able to verify their age via a physical government-issued document.

No driver may participate in any adult category (defined as a class which designates a minimum age and no maximum) until their competition age is 14 or higher.

10.3.10: Advancing an Age Group (Sprint Only)
When eligible by age, drivers may choose to move up to the next class. Once they have completed one full event at the next level, they must decide whether to remain at that level or revert back to the previous level. They can make this decision only one time in a given season. Drivers may not compete in multiple age groups in the same event (excluding senior and masters categories).

10.3.10.1: Advancing an Age Group (Speedway Only)
Drivers are permitted to compete in any category they are age eligible for, as long as they adhere to the standards outlined in rulebook sections 10.3.8 and 10.3.9.

10.8.14: Red Flag Procedures

10.8.14.2: If a red flag is displayed before all karts running have fully completed the second lap, that will trigger a complete restart, using the original lineup. Avoidable contact and incident responsibility penalties received prior to the red flag may still apply to session results.

10.8.14.3: If all karts running and on the lead lap have fully completed the second lap at the time the red flag is displayed, the last fully completed lap scored shall be the lineup for the restart. The lineup order shall be determined by the official scorer, with the karts involved placed at the rear of the field in order of the previous lap. Once established, drivers will be given the order to restart, at which time they will have 90 seconds to fire their engines and prepare for the restart.

ARTICLE 30: 2-CYCLE ENGINE STANDARDS (CONTINUED)

The following technical regulations govern the IAME Swift 60cc and IAME KA100 engines for use in NKA-sanctioned sprint competition. These regulations are written in the spirit and intent of Section 10.1.1.1 of the NKA Sporting Regulations. The basic intent of these engine classes is to compete with engines as supplied by the manufacturer without modification or substitution of components. All factory-supplied equipment must be fully functional unless otherwise specified in this document.

All engines used in NKA competition must be USA-market models originally sold in the United States. The IAME factory homologation fiche, as published on the IAME USA EAST website, shall be considered the primary reference for dimensions and specifications not explicitly addressed in this document.

No external modifications of any type are permitted, including air scoops, heat retention additions, or any device not explicitly authorized below.

SECTION 30.8: IAME SWIFT 60cc ENGINE

30.8.1: General

The IAME Swift 60cc engine shall be run as supplied by the manufacturer. All measurements are in inches unless otherwise stated. The IAME homologation document published on the IAME USA EAST website shall be used as the primary reference for any specification not explicitly listed below. Must be a USA-registered engine.

30.8.2: Carburetor

Tillotson HW-31A. The carburetor shall be OEM as manufactured. The throttle shaft, butterfly, and butterfly screw must remain stock. The surface finish of the venturi and bore must remain as manufactured. No additional machining is permitted. Aftermarket top and cap screws may be used provided factory sizing is maintained. An auxiliary return spring is required. Bypassing fuel or air to the engine in any manner other than as manufactured is prohibited.

30.8.2.1: Carburetor Venturi & Bore

Maximum Venturi (No-Go): 17.15mm (0.675"). Maximum Throttle Bore (No-Go): 22.10mm (0.870"). The stock/OEM butterfly screw shall be in place.

30.8.2.2: Carburetor and Manifold Gaskets

Each of the carburetor and manifold mounting gaskets must be greater than 0.010" in thickness (0.010" No-Go).

30.8.2.3: Carburetor Gaskets and Diaphragms

The color of the gasket or diaphragm is a non-tech item. Must be OEM and within OEM specifications. Carburetor may be run with the pumper stack on top or bottom.

30.8.3: Fuel System

No additional fuel system components or external fuel pumps are permitted. Any fuel filter, if utilized, must be placed between the fuel tank and carburetor.

30.8.4: Air Box and Filter

Blue OEM air box shall be as manufactured with one (1) 23mm tube (No-Go). One (1) 0.200" drain hole is allowed. The OEM filter (IAME #10751-1) must be used. Any external forms of air ducts forcing air inside the air box are prohibited. Rain covers are permitted only when the competitor is utilizing wet compound tires, provided they do not act as a ram-air device. Large or full-cover wraps, graphics, or coatings are not permitted. The air filter is not required when used with a rain cover.

30.8.5: Spark Plug

Must be as manufactured. Either the OEM spark plug washer, head temperature sensor, or indexing washer shall be used. Maximum spark plug length of 18.5mm as raced (with washer or temperature sensor). The following spark plugs are approved:

- Autolite AR50, AR51, AR52, or AR53
- Denso W#ESZU or IW31
- NGK B##EG or BR##EG

30.8.5.1: Spark Plug Boot

Approved boots: OEM PVL/Selettra (IAME part #10544), NGK (part #TB05EMA), or K&S (part #10-3121MA). The addition of an hour meter and/or additional insulation on the H.T. lead (plug wire) is allowed.

30.8.6: Cylinder Head

The cylinder head must conform to the IAME factory profile shape gauge. The gauge must be able to enter the head area completely to verify configuration and shape. It is the responsibility of the competitor to ensure components are free of excess carbon buildup. In post-race inspection, the competitor will be given the opportunity to clean the head with a rag (one minute; no abrasives, chemical cleaners, or scrapers allowed).

30.8.6.1: Head Gasket

Head gasket is NOT required but may be used to meet the minimum squish requirement of 0.025" using 0.0625" (1/16") solder.

30.8.7: Cylinder

Ports must remain as manufactured. A known stock part may be used as a comparison. No grinding, polishing, beveling, radiusing, chamfering, rounding, or any deviation from the factory presentation is permitted. Noncompliance with stock or “not as manufactured” includes any visible or measurable

deviation, including excessive wear that may be suspect of performance enhancement. Any internal modification such as adding, removing, or grinding material is prohibited.

30.8.7.1: Cylinder Base Gasket

Gasket required. Changing base gaskets is allowed to obtain the correct exhaust port height. Thickness of the gasket is a non-tech item.

30.8.7.2: Cylinder Damage

Cylinders with internal damage may not be acceptable for NKA competition. Small nicks in ports from debris such as broken circlips or ring segments are acceptable on any edge of the port. Larger damage on the top of the port may not be acceptable if the damage is above the height of the top of the exhaust port. Wrist pin damage resulting in grooving of the cylinder above the top of the exhaust port is not acceptable. Any questionable cylinder should be approved in advance at the discretion of the Technical Director.

30.8.8: Bearings, Seals, O-Rings, and Gaskets

May be replaced with aftermarket equivalents unless specified OEM. No ceramic or exotic material bearings are permitted. Changing cylinder base gasket thickness to adjust port duration is allowed. Changing head shim to adjust squish is allowed.

30.8.9: Piston and Ring

Piston and ring shall be OEM as supplied by the manufacturer. Must conform to dimensions in the homologation fiche. No modifications are allowed. Circlips are non-tech.

30.8.10: Exhaust System

All exhaust components, including header, shall be OEM as manufactured and must remain intact from the start of the session through technical inspection. “Intact” is defined as complete as manufactured with no cracks, modifications, or missing components. Altering internal dimensions or modifications to pipe or silencer end cap is prohibited. One hole for exhaust temperature sensor is allowed; if the sensor is not used, the hole shall be completely plugged. Excessive leakage in any part of the exhaust system is prohibited and may result in disqualification. No spacers are allowed between the header and the cylinder. Single factory OEM gasket only, minimum thickness 1.3mm.

30.8.10.1: Mini Swift Exhaust Header

IAME OEM as supplied. One (1) factory OEM gasket. No spacer or spacers allowed between cylinder and header. No leakage at the base of the header.

30.8.10.2: Micro Swift Exhaust Header (Restricted)

IAME OEM as supplied, 16mm (0.630") maximum (No-Go), IAME Part #A85365. One (1) factory OEM gasket. Shall have a hole drilled completely through both of the header mounting nuts that will allow the engine seal wire to pass through them. No spacer or spacers allowed between cylinder and header. No leakage at the base of the header. Any means to bypass an exhaust restrictor is grounds for disqualification.

30.8.11: Clutch

OEM as per the engine manufacturer fiche. As factory supplied. Maximum drum ID 3.354" (85.2mm). Clutch engagement must not exceed 5,000 RPM. Slip must not be adjustable. Clutch components may not contain significant amounts of oil or grease. Saturated friction surfaces are grounds for exclusion. Drive sprocket and drum to be OEM factory supplied; no aftermarket items allowed. Only OEM drums without holes are permitted per the factory fiche.

30.8.11.1: Clutch Test Procedure

1) Place kart on a secure stand in a safe location with axle free to turn with no obstructions. 2) Verify the axle spins freely. 3) Start the engine, apply throttle a few times to clear out the engine. 4) Apply full throttle and full brake at the same time without allowing any tire rotation (this may take a couple of attempts). 5) Read either the competitor's gauge or have a clip-on tech gauge to read RPM at the highest reading. RPMs exceeding 5,000 are non-compliant.

30.8.12: Ignition Timing

Ignition timing is open on the Swift engine.

30.8.13: Engine Sealing

Engine seals and/or decals are to be placed on the engine by the competitor prior to the start of qualifying. Tampering with engine seals will result in immediate disqualification for the competition day. Recommended minimum 5/64" hole in all fasteners. Hole and cable must go completely through the head of the bolt.

30.8.14: IAME Swift 60cc Specifications

Specification	Value
Minimum Squish (0.0625" solder)	0.025"
Minimum Exhaust Port Height (LAD Tool)	1.230"
Minimum Exhaust Port Height (Light Check)	1.095"
Inlet Port Height (LAD Tool)	0.585"
Maximum Bore (No-Go)	1.663"
Maximum Stroke (43.15mm)	1.699"
Minimum Piston Weight w/ Ring	60g
Minimum Piston Pin Weight	15.5g
Piston Pin Length (±0.2mm)	35mm
Piston Pin ID (±0.25mm)	8mm
Piston Pin OD (±0.1mm)	12mm
Complete Crankshaft Minimum Weight	1,190g
Minimum Clutch Diameter (83mm)	3.267"
Minimum Clutch Drum (No Driver)	182g
Minimum Clutch Weight Type 1	460g
Minimum Clutch Weight Type 2 (10/20)	465g
Micro Swift Header (No-Go)	16mm / 0.630"

30.8.15: IAME Swift Tillotson HW-31A Carburetor Specifications

Specification	Value
Maximum Venturi (17.15mm No-Go)	0.675"
Maximum Bore (22.10mm No-Go)	0.870"

Carb & Manifold Gaskets (No-Go)	0.010"
Metering Diaphragm Gasket	0.016" – 0.024"
Metering Diaphragm	0.002" – 0.008"
Fuel Pump Gasket	0.028" – 0.035"
Fuel Pump	0.0015" – 0.006"
Minimum Shutter Thickness	0.030"

Stock/OEM butterfly screw shall be in place.

SECTION 30.9: IAME KA100 ENGINE

30.9.1: General

The IAME KA100 engine shall be run as supplied by the manufacturer. All measurements are in inches unless otherwise stated. The IAME homologation document published on the IAME USA EAST website shall be used as the primary reference for any specification not explicitly listed below. Must be a USA-registered engine.

30.9.2: Carburetor

Tillotson HW-33A shall be OEM as manufactured. The carburetor, including the finish of the venturi and bore, the arm, throttle shaft, butterfly, slide assembly for jetting, and manifold shall be OEM and not modified. OEM needle jets are required. The engine and carburetor shall match the specifications, and the carburetor shall be mounted as specified by the manufacturer. Aftermarket top and cap screws may be used provided factory sizing is maintained. An auxiliary return spring is required. The carburetor may be run with the pumper stack on top or bottom. The addition of a tie wrap on the tuning needles to reduce movement is permitted. Bypassing fuel or air to the engine in any manner other than as manufactured is prohibited.

30.9.2.1: **Carburetor Gaskets and Diaphragms**

The color of the gasket or diaphragm is a non-tech item. Must be OEM and within OEM specifications.

30.9.3: Fuel System

No additional fuel system components are permitted. No external fuel pumps. Any fuel filter, if utilized, must be placed between the fuel tank and carburetor.

30.9.4: Air Box and Filter

OEM air box shall be as manufactured with two (2) 23mm tubes (No-Go). One (1) 0.200" drain hole is allowed. The OEM filter (IAME #10751-1) must be used. Any external forms of air ducts forcing air inside the air box are prohibited. Rain covers are permitted only when the competitor is utilizing wet

compound tires, provided they do not act as a ram-air device. Large or full-cover wraps, graphics, or coatings are not permitted. The air filter is not required when used with a rain cover.

30.9.5: Reeds and Reed Cage

Only OEM fiberglass reeds are allowed with a minimum thickness of 0.012". Sanding is permitted only on the side opposite the IAME identification marking; the IAME marking must not be altered and must be visible. Cutting the reeds is prohibited. Manifold shape and design shall remain as manufactured. Grinding, polishing, trimming, or reshaping the reed cage or manifold is prohibited. Resurfacing the flat rubber contact surface to reeds and gasket surface, deburring, and minor grinding at reed attachment screw holes are allowed. Reed mounting plates shall remain as manufactured and not be altered in any way. Reed screws are non-tech.

30.9.5.1: Reed Measuring Procedure

Reed petals shall be measured across the entire petal surface using a vernier caliper. The caliper shall be zeroed using a 0.012" feeler gauge blade. The IAME factory marking must be visible. Any measurement under zero will be non-compliant. The reed bar shall have a maximum thickness of 0.070". Loose hold-down screws are non-compliant. No thread-locking sealant may be used on the screws. Holes are 0.130" No-Go.

30.9.6: Spark Plug

Must be as manufactured. Either the OEM spark plug washer, head temperature sensor, or indexing washer shall be used. Maximum spark plug length of 18.5mm as raced (with washer or temperature sensor). The following spark plugs are approved:

- NGK B10EG, BR10EG, R6252K-105, R6254E-105
- NGK 6061-10, R6061-10, R6252E-105, R6254K-105

30.9.6.1: Spark Plug Boot

Approved boots: OEM PVL/Selettra (IAME part #10544), NGK (part #TB05EMA), or K&S (part #10-3121MA). The addition of an hour meter and/or additional insulation on the H.T. lead (plug wire) is allowed.

30.9.7: Cylinder Head

Cylinder head shall be OEM as manufactured and must conform to the IAME factory profile shape gauge. The gauge must be able to enter the head area completely to verify configuration and shape. Only modification allowed is spark plug thread repair. It is the responsibility of the competitor to ensure components are free of excess carbon buildup. In post-race inspection, the competitor will be given the opportunity to clean the head with a rag (one minute; no abrasives, chemical cleaners, or scrapers allowed).

30.9.7.1: Cylinder Head O-Ring or Gasket

The O-ring or head gasket is NOT required but may be used to meet the minimum squish requirement of 0.041" using 0.0625" (1/16") solder.

30.9.8: Cylinder

Ports must remain as manufactured. A known stock part may be used as a comparison. No grinding, polishing, beveling, radiusing, chamfering, rounding, or any deviation from the factory presentation is permitted. Bore and stroke shall be per manufacturer specification and will be taken as raced. Any internal modification such as adding, removing, or grinding material is prohibited.

30.9.8.1: Cylinder Base Gaskets

Gasket required. Changing base gaskets is allowed to obtain the correct exhaust port height. Thickness of the gasket is a non-tech item.

30.9.8.2: Cylinder Damage

Cylinders with internal damage may not be acceptable for NKA competition. Small nicks in ports from debris such as broken circlips or ring segments are acceptable on any edge of the port. Larger damage on the top of the port may not be acceptable if the damage is above the height of the top of the exhaust port. Wrist pin damage resulting in grooving of the cylinder above the top of the exhaust port is not acceptable. Any questionable cylinder should be approved in advance at the discretion of the Technical Director.

30.9.9: Crankcase

Crankcase shall be as manufactured. Metal removal or polishing is not allowed except for deburring and/or repair from rod failure. Main bearing pocket repair is allowed provided the pockets are not relocated during the process and the crankshaft centerline is not altered. All other dimensions must remain as published in the specifications. Bearings and seals must be OEM as manufactured. Replacement bearings shall be a standard bearing with steel or plastic retainers with same width and diameter as stock. Dual-row, ceramic, or angular contact bearings are prohibited. Seals shall be as manufactured and shall not have the spring removed, trimmed, or installed backwards. Any internal modification such as adding, removing, or grinding material is prohibited unless it is for minor repairs as stated above.

30.9.10: Crankshaft and Rod

The crankshaft shall be OEM as supplied by the manufacturer; the crank shall be the same manufacturer as the engine. Plastic or aluminum crankshaft stuffing supplied by the manufacturer is required. Removing metal, shot peening, polishing, or counterweight plugging is prohibited. Weights must match the supplied specifications. The connecting rod must be OEM as manufactured; removing metal or modifying the rod is prohibited. Any rod bearing is permitted.

30.9.11: Piston and Ring

Piston and ring shall be OEM as supplied by the manufacturer. Must conform to dimensions in the homologation fiche. No modifications are allowed. Circlips are non-tech.

30.9.12: Bearings, Seals, O-Rings, and Gaskets

May be replaced with aftermarket equivalents unless specified OEM. No ceramic or exotic material bearings are permitted. Changing cylinder base gasket thickness to adjust port duration is allowed. Changing head shim to adjust squish is allowed.

30.9.13: Ignition

Ignition shall be OEM as manufactured. Flywheel key must be in place and not modified. A secondary ground strap is allowed from one of the ignition bolts to the case.

30.9.13.1: Ignition Timing

Maximum timing: 0.120" BTDC. Timing window per inspection procedure: 0.080" – 0.120" BTDC.

30.9.13.2: Timing Inspection Procedure

1) Insert dial indicator in spark plug hole. 2) Zero at TDC. 3) Roll piston back 0.200" before TDC. 4) Roll piston forward to align timing marks. 5) Dial indicator must read between 0.080" and 0.106" before TDC. At this point the thin scribed line on the aluminum flywheel must strike somewhere within the wider molded line on the stator, or anywhere after the line (with the running rotation).

30.9.14: Exhaust System

All exhaust components shall be OEM as manufactured. Intentional header and pipe modifications are prohibited. Interchanging, plating, or ceramic-coating is prohibited. The system shall be intact at the start and finish of every session as the manufacturer intended. One hole for EGT probe is allowed in the pipe; if the probe is not in place, the hole must be plugged. Must use OEM gasket; only one is permitted (1.3mm minimum thickness). No spacers are allowed between the cylinder and header. Excessive leakage in any part of the exhaust system is prohibited and may result in disqualification. Any means to bypass an exhaust restrictor is grounds for disqualification, including but not limited to leaking exhaust manifolds, gaskets, or connection joints.

30.9.14.1: Junior Exhaust Header (Restricted)

Junior header shall be 22mm (No-Go), IAME Part #IAH-02011. Engine seal must go through both of the header nuts.

30.9.15: Starter and Battery

Competitor is allowed to remove the starter and battery if they choose. The starter ring gear must remain in place. Starter batteries must be of a sealed or dry cell design and of sufficient capacity to start the engine.

30.9.16: Clutch

Clutch shall be OEM as manufactured and within factory specifications. Clutch engagement must not exceed 6,000 RPM. Slip must not be adjustable. Oiling the clutch is prohibited. Clutch components may not contain significant amounts of oil or grease. Saturated friction surfaces are grounds for exclusion. Drive sprocket and drum to be OEM factory supplied; no aftermarket items allowed. Only OEM drums without holes are permitted per the factory fiche. Both long (D-75598) and short (B-55598) roller cage bearings are permitted. Short model requires an O-ring (A-60565).

30.9.16.1: Clutch Test Procedure

1) Place kart on a secure stand in a safe location with axle free to turn with no obstructions. 2) Verify the axle spins freely. 3) Start the engine, apply throttle a few times to clear out the engine. 4) Apply full throttle and full brake at the same time without allowing any tire rotation (this may take a couple of attempts). 5) Read either the competitor’s gauge or have a clip-on tech gauge to read RPM at the highest reading. RPMs exceeding 6,000 are non-compliant. A specified carburetor setting may be required.

30.9.17: Painting and Anodizing

Painting or anodizing of external components is allowed as long as it does not enhance performance (e.g., painting the head to promote an engine builder, or anodizing aluminum starter braces, is permitted). No internal coatings are allowed.

30.9.18: Engine Sealing

Engine seals and/or decals will be placed on the engine by NKA or series officials as required by supplemental rules. Tampering with engine seals will result in immediate disqualification for the competition day. Recommended minimum 5/64" hole in all fasteners. Hole and cable must go completely through the head of the bolt.

30.9.18.1: KA100 Junior Sealing

First Seal: Two (2) head nuts and two (2) header nuts. Second Seal: Carburetor.

30.9.18.2: KA100 Senior and Masters Sealing

First Seal: Two (2) head nuts and two (2) header nuts. Second Seal: Carburetor.

30.9.19: IAME KA100 Specifications

Specification	Value
Minimum Squish (0.0625" solder)	0.041"
Minimum OEM Reed Thickness	0.012"
Minimum Port Height (LAD Tool)	1.420"
Minimum Port Height (Light Check)	1.295"
Rod Length	102mm
Maximum Stroke	54.05mm
Maximum Bore (No-Go)	1.918"
Timing (Min – Max)	0.080" – 0.106" BTDC
Minimum Piston Weight w/ Ring	95g
Minimum Piston Pin Weight	19g
Piston Pin Length (±0.2mm)	39mm
Piston Pin ID (±0.30mm)	10mm
Piston Pin OD (±0.1mm)	14mm
Minimum Complete Crankshaft Weight	1,820g
Minimum Clutch Diameter (83mm)	3.267"
Minimum Clutch Weight	375g
Minimum Clutch Drum	225g
Minimum Clutch Drum w/ Gear	300g
KA100 Junior Header (No-Go)	22mm

30.9.20: IAME KA100 Tillotson HW-33A Carburetor Specifications

Specification	Value
Venturi (24.10mm No-Go)	0.948"
Bore (28.10mm No-Go)	1.106"
Metering Diaphragm Gasket	0.016" – 0.024"
Metering Diaphragm	0.002" – 0.008"
Fuel Pump Gasket	0.028" – 0.035"
Fuel Pump	0.0015" – 0.006"
Minimum Shutter Thickness	0.030"

SECTION 30.10: ENGINE CLAIMING

30.10.1: IAME Engine Claiming

NKA, the series, IAME, or the Importer (or their representative) may claim an engine if deemed necessary. Such a claim will supply the owner of the engine with a complete, new engine package with all components, including: engine, clutch, carburetor, air box, exhaust system, and electrical system. In addition, a payment of $500 in certified funds or cash will be made to the engine owner. The cooling system (if applicable) is excluded from the claim package.