**Chapter 46 – Required changes for 2013 as approved by the Committee of TEKA, August 2012**

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**46.01 Officials and Duties For Endurance Karting:**

Extra Essential Officials:

(a) At each meeting there shall be at least one Pit Marshal appointed by the Clerk of Course.

(b) At each meeting, there shall be at least one Refueling Marshal appointed by the Clerk of Course.

(c) At each meeting Flag Marshals will be appointed by the Clerk of Course.

**46.02 Parc Ferme/Paddock**

For endurance karting, designated pit crews are permitted in the pit area during racing.

**46.03 Formulae**

a) “Sprint racing as per Class Specifications” with “endurance karting”.

b) Numbers not applicable to endurance karting (refer section 46.13.6 hereunder)

**46.04 Time For Practice**

The Promoters (Club) must provide time for practice for all competitors on the day of competition

or the day immediately prior to the event.

**46.05 Change of Motors**

Not applicable to endurance karting.

**46.06 Introduction**

An endurance karting event is a speed event conducted on a circuit with a sealed surface usually

with a duration of not less than one hour.

**46.07 Endurance Racing Competition Regulations**

1. Team Registration

All drivers/teams in an event are required to submit a completed Race Entry form for the team

prior to the nominated entry closing time as specified in the Supplementary Regulations for the

event. Teams may nominate a Team Name which may be a company, business or other name. This

name must not be offensive to the public or other competitors.

2. Licences

Seniors and Juniors are not to mix as per the AKA Manual

’P’ Plate drivers are to start at the rear of the grid in their own qualifying order.

3. Required Number of Drivers The minimum number of drivers that can be nominated for an

event is as follows: 2 hours – Minimum 2 drivers 4 hours – Minimum 2 drivers

5 hours – Minimum 2 drivers 6 hours – Minimum 3 drivers

8 hours – Minimum 3 drivers 12 hours – Minimum 4 drivers

24 hours – Minimum 4 drivers

Once a race has commenced, there can be no change to the drivers nominated for that event.

Cross entering of drivers between teams is not permitted.

CHAPTER 46

**ENDURANCE KARTING**

4. Driving Limit

No driver is permitted to drive for more than 60 minutes without a driver change. A minimum

break of at least 20 minutes must be taken in between driving stints. Minimum penalty for

infringement: Computer lap penalty of 5 laps.

5. Compulsory Pit Stops

The number and format of compulsory pits stops required will be specified in the Supplementary

Regulations for each event. As a minimum, each event is required to have the following minimum

number of compulsory pits stops:

2 hour events – 4 pit stops (including the stop at the end of the event)

4 hour events – 8 pit stops (including the stop at the end of the event)

6 hour events – 10 pit stops (including the stop at the end of the event)

8 hour events – 12 pit stops (including the stop at the end of the event)

12 hour events – 15 pit stops (including the stop at the end of the event)

24 hour events – no minimum requirement

It is the responsibility of each team to monitor the number of pit stops. The electronic pit stop

record is not available to teams. Stop/go penalties do not count as compulsory pit stops.

6. Timing and Lap Scoring

All timing and lap scoring will be computerised using the TEKA electronic transponder and timing system. Any driver,

team member or pit crew attempting to interfere or tamper with this equipment, will along with

the entire team, be excluded from the event and all entry fees will be forfeited. Apart from the

designated official(s) no person is to touch the race computer.

It is the responsibility of the team to securely attach the transponder to the kart. If the

transponder is dislocated or dislodged during the race, it is the team’s responsibility to replace it.

At the discretion of the Clerk of Course, and taking into account the circumstances, time lost may

be adjusted on the electronic timing system.

Transponders must be mounted on the inside of the left hand side pod with the leading edge of

the transponder 250mm to the rear of the centre line of the front left hand stub axle measured

when the front wheels are pointing straight ahead.

Should the timing system fail at any time for any reason whatsoever, the race will be red flagged

and the race order for the restart or results will be as shown on the most relevant printout or

computer record to be determined by the Officials.

Should a team’s transponder fail, they will be credited with laps equivalent to time from the point

at which the transponder ceased to function to the time they rejoin the race with a replacement

transponder. The method for determining the number of laps to be credited will be to take

an average lap time based on the team’s performance immediately prior to the failure of the

transponder. Pit or fuel stops will be taken into consideration when making such calculations.

Laps will only be credited where the Clerk of Course determine that there has been a genuine

transponder failure. Note: If a battery was not sufficiently charged prior to the event by the

competitor, this is not considered a genuine transponder failure and consequently any loss of laps

and/or position as a result will remain.

A team will not score any points if the kart does not cross the start/finish line at the completion of

the event under its own power within two minutes of the chequered flag being waved to signal

the completion of the event. This result will be recorded as a DNF (Did Not Finish).

If a kart does not cross the finish line within 2 minutes of the chequered flag being first displayed to signal the completion of the race, this will result in being recorded as a ‘DNF’ (Did Not Finish) but points will be awarded as stipulated by the Supplementary Regulations for that Race Meeting.

A kart may NOT exit pit lane and return to the track after the chequered flag being waved to

signal the completion of the event. This result will be recorded as a DNF (Did Not Finish).

7. Qualifying

Qualifying procedures will be specified for each race in the Supplementary Regulations for that Race Meeting.

During qualifying, drivers should be particularly aware of other karts on the circuit. The Clerk of

Course may black flag drivers who are impeding the qualifying laps of other drivers.

Weaving to warm tyres during qualifying is NOT permitted.

Tyres used during qualifying must be used to commence the race unless the Clerk of Course

indicates that there has been a change in race conditions.

**46.09 Pit Area**

The pit area is the area designated by the Clerk of Course for driver changes.

Driver changes are not permitted in the refuelling or weighing area unless specifically permitted

by the Clerk of Course for a particular activity or event.

The Clerk of Course may appoint a Pit Marshal(s) to control the pit area.

Competitors are required to obey the directions of the Pit Marshal(s) at all times.

Karts must be driven at a safe speed within the pit area as specified by the Clerk of Course for that Race.

Pit speed limits are applied for safety reasons and will be strictly policed and enforced by the

Clerk of Course or Pit Marshal(s). A minimum time period may be specified for a kart to travel

from the pit entry to the pit exit.

No mechanical repairs or tools are permitted in the driver change area. The only work permitted on a kart in

this area is chain lubrication, tyre pressure adjustment using a hand pump or air bottle and tyre

pressure gauge or lead/ballast changes. Only tools required for minor repairs are permitted

in this area and all items must be removed to a safe location immediately after use. Chain oiling and minor mechanical or damage repairs only are permitted in this area. Any breach of

this rule may incur a penalty of up to 5 laps for a first offence.

For repairs requiring more than 2 minutes, the kart must be removed to the paddock area. Any kart removed

to the paddock area may be inspected by a Scrutineer(s) or the Clerk of Course prior to being permitted to restart.

Extreme care and caution should be exercised when rejoining the circuit from the pit lane. You

should only rejoin the circuit when it is safe to do so or when instructed to do so by the Pit Marshal.

Pit Area infringements may result in any of the following penalties: stop/go penalty, computer lap

penalty or exclusion from the event.

During an event (including practice, qualifying and race) only the driver getting out of the kart,

the driver getting into the kart and one pit crew are permitted in the pit area. Once a pit stop has

been completed they are to leave the pit area immediately. One member of the team is permitted

in the pit area to monitor the race and to signal the driver.

**46.10 Minimum Weight and Weighing Procedures**

1. Minimum Weight

The minimum weight of the kart, inclusive of driver, engines and engine oil shall not be less than

185 kilograms using the scales nominated by the Clerk of Course at the event. Karts may be

weighed at any time during qualifying, the race or at post race scrutineering at the discretion of

the Clerk of Course. Penalty for Infringement: 5 laps deducted for every kilogram or part thereof

under the weight limit. If a kart is underweight it will be required to be re-weighed. In this case

the team requiring reweighing may have to wait for any other teams waiting to use the scales.

191 Australian Karting Association Inc

2. Fixing of Ballast to the Kart

Ballast may be added to the kart but must be firmly attached with secure mechanical fixings. Any

ballast carried in the seat or seat insert must be restrained by a method deemed acceptable by the

scrutineer. It is the team’s responsibility to supply ballast if required. A team may be disqualified

from the event if any ballast becomes dislodged during practice, qualifying or the race.

No divers belts or other methods of ballast are to be carried by drivers. It is a serious offence to

have any ballast in a driver’s clothing or on a driver’s person.

3. Weighing Procedure

The standard weighing procedure will be as follows:

• The driver will bring the kart to the weighing area at a safe speed (no faster than walking pace).

• The driver will only proceed onto the scales when instructed to do so by the Weighing Marshal(s).

• Once the kart and driver have been weighed, the Weighing Marshal(s) will instruct them to

move off the scales.

• The driver may not leave the weighing area until directed to do so by the Weighing Marshal(s).

• No contact is permitted between the driver and any other team member, pit crew or spectators.

4. Timing of Weighing

During the race, all weighing stops will be timed by the Weighing Marshal(s). The time period for

weighing is to be stipulated by the Clerk of Course dependent on the circuit configuration and will

be applied equally to all competitors.

5. Infringements

Weighing Area infringements, other than underweight, may result in any of the following

penalties: stop/go penalty, computer lap penalty or exclusion from the activity or event.

**46.11 Fuel and Refueling Procedures**

1. Fuel

Permitted fuel for practice, qualifying and endurance races will be premium unleaded petrol or

unleaded petrol which is readily available to the general public. Competitors are to supply fuel for

qualifying and racing sourced from approved suppliers. Fuel is to be provided to the designated

official(s) at scrutineering in TEKA approved containers, clearly marked with team details for

return. Competitor supplied fuel is for use in the common pool fuel supply used for qualifying

and racing. Competitors must provide proof of approved fuel supply source with their race

documentation.

2. Refueling Area

Refueling during qualifying and races must only take place in the designated refueling area.

Smoking is forbidden in this area and admission is prohibited to all persons other than the

Refueling Marshal(s) and competitors refueling their karts.

3. Access to Refueling Area

The refueling area will be opened approximately 30 minutes after the commencement of the race

and will remain open for the duration of the race EXCEPT during safety vehicle periods when the

refueling area will be closed. Should a team wish to refuel during a safety vehicle period, they will

be required to wait until racing resumes.

4. Refueling Marshal(s)

Competitors are required to obey the directions of the Refueling Marshal(s) at all times.

5. Refueling Procedure

The standard refueling method will be as follows:

• The driver will bring the kart to the refueling area at a safe speed (no faster than walking pace).

192 Australian Karting Association Inc

• The driver will be responsible for switching off the engines before getting out of the kart.

• It is the drivers responsibility to activate the Electronic Fuel Timing System.

• The driver must then move away from the kart to the designated driver area or to an area as

directed by the Refueling Marshal(s), with ready access to the fire extinguishers.

• The driver will at all times during the refueling process remain in the designated driver area.

• The driver may be required to hold and be prepared to use one of the refueling area fire

extinguishers.

• The driver may only return to the kart when directed to do so by the Refueling Marshal(s).

• The Refueling Marshal(s) will replace the fuel cap(s) and restart the motors.

• The driver may not leave the refueling area until the Electronic Fuel Timing System light turns

to Green or until directed to do so by the Refueling Marshal(s).

• No driver changes, mechanical or damage repairs, oiling of chains, etc may be carried out on

the kart at any time whilst it is in the confines of the designated refueling area.

• No queue jumping is permitted in the refueling area unless directed by an official.

• Fuel Marshall and Refueling Marshall must be present.

• The minimum number of refueling stops will be specified in the particular event

Supplementary Regulations.

6. Timing of Refueling

During the race, all refueling stops will be timed by the Refueling Marshal(s) or by an Electronic

Fuel Timing System. The time period for refueling is one minute.

7. Fuel Cap(s)

Drivers are advised to check the tightness and security of fuel cap(s) prior to leaving the

refueling area.

8. Safety

Refueling has the potential to be dangerous. Any driver, team member or pit crew which

recklessly endangers themselves or anyone else during the refueling process may be excluded

from the event.

**46.12 Race Regulations**

1. Starting Grid

All karts must be taken to the marshalling / dummy grid at least five minutes prior to the

commencement of the race. The pit lane will close five minutes before the commencement of the

race and any karts not on the grid will start from the pit lane or from the rear of the field at the discretion of the Clerk of Course. Note: Starting from the pit lane may mean that the “out”

lap is not electronically recorded as a race lap. In this case, there will be no computer adjustment.

2. Race Start

Karts will do the number of warm-up laps as directed by the Clerk of Course (normally two) and

will then be directed to their grid positions on the completion of the final warm-up lap. The first

warm-up lap is ‘free’, that is, weaving is permitted; the second warm-up lap is under starter’s

orders and no weaving is permitted. During the warm up laps, karts are to maintain grid position.

The start officials will direct karts to grid positions. Unless grid positions are marked on the track, the pole position kart may elect as to which side of the track they will start; the Clerk of Course will then direct the starting position of all other karts.

When all karts are in their grid positions the race start will be

signaled.

3. Access to the Track

Unless authorised by the Clerk of Course, apart from the driver, no team member, pit crew,

spectator or other person is to access the track area during an activity or race.

193 Australian Karting Association Inc

4. Breakdown or Stoppage on the Circuit

Should a kart break down on the circuit the driver is permitted to carry out minor repairs to allow

the kart to rejoin the race or to expedite the return of the kart to the pit area. Any repairs may

only be effected by hand and no tools are permitted to be carried by the driver, on the kart or to

be taken onto the circuit. No other team member may assist in any such repairs.

Repairs are only permitted once the kart and driver have been moved to a position of safety.

Whilst in the confines of the track the driver must leave all protective clothing on including

helmet, driving suit, boots and gloves.

If a kart continues on the circuit with some mechanical or structural issue, if in the opinion of the Officials this constitutes a danger, then they may be given a black or black/orange flag as per Rules 15.15 or 15.6. Karts may not re-enter the circuit on one engine.

Repaired karts may rejoin the race as per Rule 46.09.

5. Safety Vehicle

A safety vehicle may be used from time to time to control the race under certain circumstances.

Should the need to use the safety vehicle arise the following protocol should be observed.

A white board with the initials SK in black will be used to indicate a Full Course Caution. At the same time, the entire course will be signaled as a Full Course Caution. This

indicates that a safety vehicle or slow vehicle is on the circuit or likely to enter the circuit.

Competitors must slow down and maintain position. No overtaking is permitted.

In the event of a full course caution, where possible or safe, the safety vehicle will enter the circuit

in front of the lead kart. If unable to enter the circuit in front of the lead kart, drivers will be

waved past by the safety vehicle driver, Clerk of Course or nominated official until the lead kart is

behind the safety vehicle. Unless specifically instructed by the safety vehicle driver, Clerk of Course

or nominated official, under no circumstances do you overtake the safety vehicle. All karts must

proceed in single file behind the safety vehicle.

Under a safety vehicle, karts should attempt to close up on the line of karts behind the safety kart

and should not unfairly impede the progress of the kart behind. In these circumstances, the Clerk

of Course or nominated official may wave the kart behind through and may impose a stop/go

penalty on the impeding kart.

As soon as a full course caution is instated, the Pit entry shall be closed to all karts. No pits stops

are permitted until the field is stabilised behind the lead kart and the Pit entry is opened by the

Clerk of Course.

When the situation has been stabilized behind the safety vehicle, the Clerk of Course may open

the pits for compulsory pit stops (excluding refueling), driver changes and / or repairs. Pit stops

are then permitted whilst the safety vehicle is on the circuit however, you must rejoin the circuit

at the end of the single file line behind the safety vehicle. Refueling is not permitted under a full

course caution or safety vehicle period.

One lap prior to the safety vehicle leaving the circuit, the safety vehicle driver, Clerk of Course

or nominated official will indicate that there is one lap to go. Once the safety vehicle leaves the

circuit, all karts must remain in single file and may only resume racing once their kart has crossed

the start line. Minimum penalty for Infringement: Stop/go penalty.

6. Race Stoppage and Restart

In the event of a restart, the starting grid order will be as specified at Rule 46.07(6).

Restarts will be single file rolling start and

competitors will be given one warm up lap in single file grid order. Overtaking on the warm up lap

is forbidden.

194 Australian Karting Association Inc

Once the lead kart has crossed the start line on the warm up lap, the race will be considered as

restarted and any karts requiring entry to the pit area will be permitted to do so. Karts wanting to

rejoin at this point can only do so once the last kart in the single file has gone past the pit lane

exit on the warm up lap or once the last kart has gone past the pit lane exit on the first racing lap

of the restart. (ie. you must rejoin at the rear of the field not the front).

During a race stoppage, karts may not be removed to the paddock area for mechanical or damage

repairs. All karts shall remain in Parc Ferme area under the control of the officials. No work or

re-fueling is permitted during this time.

**7. Radio Equipment**

Radio equipment that is able to access the race official’s radio channels is not permitted in the pit

/ paddock area, the “out” grid or the “in” grid at any time during an event.

A separate two-way radio communication system between the driver and their pit crew will be permitted as approved by the Scutineers.

**46.13 Offences and Penalties**

1. Types of Penalties

The Clerk of Course may impose any one or combination of the following penalties: reprimand;

stop/go penalty (10 seconds to 5 minutes); computer lap penalty; place penalty; points penalty

(event or championship); revision of grid position; exclusion of driver, team member or pit crew;

exclusion from activity, event or championship; fine or suspension.

2. Stop/Go Penalty

In Endurance karting, a special flag (a green and red diagonal flag which may be unique for

Endurance Karting) should be displayed together with a panel upon which the competitors’ kart

number is shown. This flag is used to signify that a stop/go penalty has been imposed on that

competitor or team. When a competitor receives the special flag they are to immediately return to

the pits next time he/she reaches it without impeding other competitors. The driver must complete

the stop/go penalty together with any time penalty and can then rejoin the race. No driver change,

refuelling, mechanical repairs, tyre pressuring or chain lubing etc is permitted during a stop/go

penalty. At the completion of the driving stint, the driver must report to the Clerk of Course or

Steward immediately after returning to the Pit Area. Penalty for Infringement: An additional stop/

go penalty.

3. Computer Lap Penalty

The Clerk of Course may impose a computer lap penalty in lieu of, or in addition to, a stop/go or

other penalty. The computer lap penalty may be one or more laps.

4. Forfeiture of Entry Fees

In the event that a team is excluded from an event or from the championship, entry fees are

forfeited.

5. Abuse, Threats or Assault - As per the AKA Manual

It shall be regarded as a serious offence for any driver, team member or pit crew to abuse,

threaten or assault any official, member, competitor, other team member or other pit crew.

6. Responsibility of Driver, Team Member or Others

The driver and/or team shall be responsible for all acts or omissions on the part of a driver, team

member, pit crew or any third party attached or associated with a driver or team, but each of

these shall also be responsible for any infraction of these Rules and Regulations, Supplementary

Regulations or instructions given by the Clerk of Course or nominated officials.

**46.14 Kart Specifications and Regulations**

1. Tyres and Hubs

Permitted tyres are as follows:

195 Australian Karting Association Inc

Dry – Dunlop SL1A (Front: 10 x 4.50 x 5 – Rear: 11 x 7.10 x 5)

Wet – Dunlop KT6-SLW1 (Front: 10 x 4.00 x 5 – Rear: 11 x 6.50 x 5)

Tyres must be marked by the Scrutineer(s) prior to qualifying.

The number of sets of prescribed dry tyre and prescribed wet weather tyres allowable in an event

will be specified in the supplementary regulations.

Rear hubs must not exceed 140mm in length. Metal collars intended to prevent the axle moving

laterally may be fitted to the rear axle, however these can be no more than 35mm wide each and

there can be no more than 4 fitted to the axle and cannot be fitted adjacent to each other.

2. Axle

The rear axle must be one piece, 30mm nominal diameter, solid magnetic material. Maximum

overall length is 1100mm and maximum rear measurement outside to outside rim and tyre is

1400mm. Where axle keys are not the same length as the keyway, or there is a risk that the key

may become dislodged, a hose clamp or other positive method of key retention is required.

Metal collars intended to prevent the axle moving laterally may be fitted to the rear axle adjacent

to and inside the outside rear bearings, however these can be no more than 35mm wide and

there can be no more than four fitted to the axle.

PVC or plastic sleeves fitted over the axle and intended to prevent the hub moving on the axle are

permitted.

3. Sprockets

Final drive sprockets are fixed at 66 teeth (Honda Class only). Only one sprocket may be fitted to the rear axle

for each engine. (For karts competing in the B & S ‘Animal’ class, see Clause 46.17, final drive

sprocket to be 71 teeth,).

4. Clutches

All karts must be fitted with dry air cooled Noram GE20-219 centrifugal clutches. Clutches will

be used to transmit the drive with a maximum engagement speed of not more than 2,500 rpm

engines speed. The Noram GE20-219 clutch sprocket has 20 teeth.

5. Rear Bumper Bars

An extended rear bumper is mandatory and must be securely attached in at least two separate

mounting points across the chassis. The bumper can be made from metal or high impact plastic

and must be of such a construction to withstand a substantial impact. In side view the bumper

must be in vertical plane. The overall width of the bumper must not exceed the rear width of the

kart at any time, however must at all times cover at least 50% of the width of the rear tyre.

6. Kart Numbers and Number Plates

The kart numbers must be clearly visible, of non-reflective material and at least 130mm high and

20mm wide; generally as per to Clause 25.13 of this AKA Manual, except as specified herein.

Number plates shall be coloured as follows:

Honda Class Yellow background with Black number(s)

Briggs & Stratton A Grade Red background with White number(s)

Briggs & Stratton B Grade White background with Red number(s)

Numbers are required to be mounted on the side of the kart, together with the front NASA panel

and on the rear.

The kart numbers must be clearly visible, of non-reflective material and at least 130mm high and

20mm wide.

Provisional Licence Holders must display a regulation red “P” on a white background on the rear

of their helmet.

196 Australian Karting Association Inc

7. Steering

For endurance karting solid plastic/nylon tie rods with a minimum outside diameter of 20mm and

fitted with metal rose joint connectors are permitted.

**46.15 Engine Specifications and Regulations – Honda Class**

1. Engines

The only permitted twin power plants are standard 6.5hp Honda GX200 series QXU engines in as

supplied condition from Honda MPE Australia or it’s appointed agents. Note: Honda MPE Australia

will admit no warranty claims on engines used in practice or racing.

Engines will be mounted on each side of the kart at the rear and drive the kart through chains.

2. Modifications

Modifications to engines are strictly limited to the following:

• Removal of the governor mechanism and oil switch. If the whole mechanism is removed, the

holes in the crankcase must be sealed to prevent oil leakage.

• Fitting of alternative exhaust valves (Honda Part No. 14721-ZH8-810)

• Fitting of alternative valve springs (Honda Part No. 14751-ZH8-940 or 14751-ZE1-000)

• Fitting of alternative carburettor jets

Size 68 (Honda Part No. 99101-ZF5–0680)

Size 70 (Honda Part No. 99101-ZF5–0700)

Size 72 (Honda Part No. 99101-ZF5–0720)

Size 75 (Honda Part No. 99101-ZF5–0750)

• Substitution or complete removal of the air filter is permitted, however the outer air filter

casing must remain as standard and in place. No modification to the outer air filter housing

is permitted.

• The linkage connecting the throttle cables to the standard carburettor throttle arm is free and

it is permitted to fit throttle return springs to each carburettor.

• Spark plugs and caps are free; however no spark enhancers or boosters are permitted.

Apart from the modifications above, no engine parts other than genuine Honda parts, as specified

for this engine type, may be used. Furthermore, it should be noted that the terms “standard” and

“genuine” refer not only to the components used but also to the number used and the manner

in which engines are assembled. Apart from the modifications specifically mentioned in these

regulations, the engines should be completely standard and all components should remain in

place unless it specifically states that you are allowed to remove them.

Reboring of the engine or regrinding of the crankshaft is not permitted. No sleeving or surface

material change to the bore is permitted. No other metal removal from any component is

permitted.

No polishing of the cylinder head, combustion area, inlet tract or exhaust port tract is permitted.

Chemical agents must achieve carbon removal only. It would not be expected to see casting

marks or imperfections removed.

Remote engine kill switches are permitted however the standard start/stop switch must be

retained and must function independently of any remote engine kill switch.

3. Fuel System

The only permissible fuel tank shall be a central fuel tank with a maximum capacity of 9 litres. A

fuel tank with a capacity greater than 7 litres must have a line clearly and permanently marked on

the fuel tank by a scrutineer to indicate a 7 litre fuel level. Refer Rule 22.04.

When refuelling, it is not permitted to fill the fuel tank past the 7 litre mark.

Pulse Pumps can be fitted using either the original hole used by the governors once they have

been removed or by utilizing the inlet manifold. If via the inlet manifold, the fitting used must be

a commercial off-the shelf product with no modifications and installed flush to no greater than 0.5mm protrusion into the inlet manifold tract or cylinder inlet tract.. If the port is modified in any other way the

engine will not pass scrutineering.

4. Non Tech Items

1. Fuel Filter, Clamps, Pulse Line, Switches, Ancillary Mounts, Fasteners, Circlips, Washer,

Bearings, Springs, Exhaust Support Brackets, Chain Guards, Chain Guard Brackets.

2. No alteration from the original manufacturer’s specification is permitted to fit a non-tech

item.

3. Addition fasteners or securing devices are non-tech items and may be fitted/added, to the

Scrutineer(s) satisfaction.

**46.16 Engine Scrutineering**

Engine Scrutineers will be approved and appointed from time to time. Only approved Engine

Scrutineers may inspect and seal engines. Engine Scrutineers may charge a fee for this service.

A list of currently approved Engine Scrutineers is available on request and is included in at Rule 46.17.4.

The Engine Scrutineer will pay particular attention to the finish of all components to ensure

that they match the standard unit. The Engine Scrutineer may check and compare any suspect

component with a standard part as supplied by Honda MPE Australia. Checks and measurements

may be carried out to ensure that tolerances are within those specified by Honda.

Engines will be sealed by the Engine Sealer using lock wire and lead or plastic seals.

The Engine Sealer shall keep a record of the engine numbers of engines sealed for endurance

karting events.

Engine seals will be inspected by the Scrutineer(s) prior to each event. It is the teams responsibility to

ensure that engine seals are intact and in place. If a seal is broken the engine must be represented to

the Engine Scrutineer for inspection and sealing. No engine inspections or sealing will be available at

events unless specifically requested or approved by the organiser or the Engine Sealer.

At the conclusion of an event, the organizers reserve the right to inspect any kart in any way to

satisfy compliance with these specifications.

At the conclusion of an event, the organiser reserves the right to take away any engine or engines

for inspection and/or dynamometer testing if they wish. If any infringement is found to exist the

team will be liable for any inspection fee.

**46.17 Engine Specifications and Regulations – Briggs & Stratton Class**

The only eligible engine in this class is the Briggs and Stratton Animal, Model 124332.8003.01.

For use in events conducted by TEKA, every engine must have the Official TEKA seal on the

crankcase and also on the cylinder head. Each engine will be delivered from TEKA with its own

engine IDENTITY Log Book and TEKA serial number

Only Authorised TEKA engine sealers and Authorized Service Centres for Briggs and Stratton

motorsport products are allowed to seal engines after carefully checking the engine according

to the Technical Specification for the Briggs and Stratton Animal engine type. Special TEKA seals

must be used. A record of any and all repairs / rebuilds to all motors is to be entered into the log

book, signed, dated and stamped by the TEKA engine sealer.

At race scrutineering, the driver is to present the engine with an undamaged seal and the engine

with log book, showing the matching engine serial number, seal number, stamp and signature

of the authorised TEKA engine sealer, who sealed the engine. This procedure helps to reduce

scrutineering times at races, nevertheless in the case of a protest, it is possible for the scrutineers

to open and check the engines before or after the race. Any post race scrutineering will be in

accordance with this clause 46.16.

After checking the engines step by step to ensure it is in accordance with the Technical

Specifications hereunder, the AKA Technical team and in conjunction with the

TEKA engine sealer will reseal the engine.

Only genuine Briggs and Stratton components that are specifically designed and supplied for

the Animal engine are permitted, unless otherwise specified. Neither the engine nor any of its

ancillaries may be modified in any way. ‘Modified’ is defined as any change in form, content or

function that represents a condition of difference from that originally designed. This is to include

the addition and/or omission of parts and/or material from the complete engine assembly unless

specifically allowed within these rules.

Internal additions: no additional material may be added except in the case of engine repairs and

shall only restore the engine or components to original specifications.

• The use of thermal barrier coatings/ceramic coatings on or in the engine and on or in the

exhaust system is prohibited.

• The use of anti-friction coatings in or on the engine/engine components is prohibited.

Permitted additions: Chain guard, engine mount, and tachometer/hour meter, inline fuel filter,

catch can mounting brackets and mounting brackets, within the limits specified in this document.

Non-tech items: non-original fasteners, circlips, washers, throttle cable and housing,

Fuel and pulse line (type and size) are allowed unless otherwise specified.

Shrouds: Flywheel shrouds must not be altered in any way to alter the airflow or change

appearance.

Switch: The ignition kill switch may NOT be removed and must function. Remote engine kill

switches are permitted however the standard kill switch must be retained and must function

independently of any remote engine kill switch.

Cooling Fan: The only fan that is allowed is as stock and unaltered.

Valve Springs: Valve springs may not be heated and or stretched. Shimming is not permitted. The

springs must be a Briggs and Stratton part No.26820

Bearings: Main bearings must remain as a press fit in the block after the engine has attained

ambient atmospheric temperature. Loctite type compounds, pocket dimpling/knurling or any other

form of retaining devices are NOT permitted. Main bearings must be standard, unaltered, genuine

Briggs and Stratton parts manufactured and listed for the Animal engine.

Block: Block must be an original Briggs and Stratton Animal part No 555687. Block must be in

original cast condition. Welding to repair cracks or breakage is allowed only in areas where the

affected portion does not require re-machining and not in an area where the welding may be

construed as a performance gain.

Cylinder Head: No alteration, modification is permitted to the head or head gasket surface. Valve

seats may not be re-seated shallower in the head. The entire inlet and exhaust tract surfaces must

remain STOCK. Thread saving devices in the spark plug hole are permitted but must be installed

so that the combustion chamber volume test will be the same as with the original thread.

No alteration is permitted except for the fitting of a pulse port fitting to the cylinder head inlet tract, refer to Fuel Systems for fitment.

Head Gasket: Head gasket may not be altered in any way.

Valve Cover Gasket: Stock valve cover gasket must be OEM as supplied by Briggs & Stratton.

Valves: Valves must not be altered, polished, lightened, welded, grazed, or machined in any way.

The original valve set angle must be maintained. The valve guides may be replaced as a means of

repair but must be retained to standard dimensions. Lapping of valves / seats is permitted subject

to the above limitations.

Piston and Rings: Re-sizing, knurling, or lightening of pistons is not permitted. The use of piston

button or buttons is not permitted.

Coating of pistons is not permitted. Anodizing of a piston is not permitted. All three piston rings

must be used, installed correctly, with the identification marks toward the head. Ring tension may

not be changed by heating or other means. Ring gaps are not subject to technical inspection. The

ends of each piston ring may only be altered in a way that appears to be the same as a known,

stock, unaltered, ring for the engine. The piston oil control ring (third ring) may only be OEM rings,

appropriate for the engine.

Camshaft: No alteration, additions, removal of material, modifications or machining of any kind

is permitted.

Crankshaft Gear: The crankshaft gear can not be rotated to change the camshaft timing on this

engine.

Flywheel: Must be stock and unaltered.

Shrouds: The cooling shrouds must be present and unmodified.

Ignition: Only OEM parts are permitted. Ignition timing can not be altered from stock. Coil mounts

are not to be modified in any way so as to change ignition timing.

Spark Plugs: Spark plugs, leads and caps are free; however the plug reach is to be 19mm with

19.2mm being a maximum, measured from the upper gasket surface of the spark plug to the

parallel lower squared edge of the threaded portion of the plug. No spark enhancers or boosters

are permitted.

Carburettor: No alteration, modification, or machining of ANY kind is permitted of ANY part

of the carburettor, unless specifically stated in this document. The choke assembly and all

components must remain completely intact and stock.

The air filter is free. The air filter must be attached directly to the original air intake of the bell of standard Briggs & Stratton carburetor or alternatively it is permitted to securely fit an intermediate one or two piece extension tube made of fire resistant material with an internal diameter no greater than the air intake bell with a maximum bend angle of 90 degrees and minimal length. Welding and bracing of the inlet manifold is permitted provided that the overall dimensions and location must be as per original.

Fuel Systems: Pulse Pumps port fittings may be fitted to one of the following:

* The inlet manifold
* Cylinder head inlet tract, or
* Utilizing the oil filler cap.

If via the inlet manifold or cylinder head, the fitting used must be a commercial off-the-shelf product with no modifications and must be installed flush to 0.5mm maximum protrusion into the inlet manifold tract or cylinder inlet tract. If the inlet manifold tract or cylinder head inlet port is modified in any other way the engine will not pass scutineering.

Electric fuel pumps are not permitted.

Spark Plug Gasket: A gasket and or a temperature gauge sensor must be installed under the

upper surface of the plug. The height or thickness of the gasket or sensor must be greater than

0.1mm.

Clutches: All karts must be fitted with dry air cooled Noram GE20-219 centrifugal clutches.

Clutches will be used to transmit the drive with a maximum engagement speed of not more than

2,500 rpm engines speed. The Noram GE20-219 clutch sprocket has 20 teeth.

The final drive sprocket for use in the ‘Animal’ class is fixed at 71 teeth.

**46.17.1 ENGINE TECHNICAL SPECIFICATIONS**

Bore: Maximum bore is 68.3mm

Stroke: Maximum stroke 27.9mm

Valves: Intake & exhaust valve length = 85.65mm ± .25mm; Single angle cut Intake Valve: Head

diameter = 26.8mm ‘no-go’, 27.05mm ‘must-go ’

200 Australian Karting Association Inc

Valve dish: 2.51mm to 3.01mm.

Height from angle of valve face to top of valve = 1.45mm 45 degree cut

Exhaust Valve: Head diameter = 23.75mm ‘no-go’ to 24mm ‘must-go’

Valve dish = 2.15mm to 2.65mm

Height from angle of valve face to top of valve = 1.5mm

Valve Springs: Intake and exhaust valve spring maximum length = 23.65mm‘no-go’, Wire

diameter (measured in 3 places) 2.6mm – 2.7mm

I.D. of spring 15.65mm minimum to 16.1mm maximum

Valve Seats: Intake seat I.D. = 24.55mm must-go to 24.7mm no-go

Exhaust seat I.D. = 21.45mm must-go to 21.6mm no-go

Seat angles: 45 degrees, single angle cut.

Valve Lifters: Head = 20.8mm no-go to 21.85mm must-go

Length = 38.5mm no-go to 38.75mm must-go.

Push Rod: 4.7mm – 4.8mm diameter; 143.2mm – 143.6mm length

Connecting Rod: Length between axes = 83.5mm

Length from bottom of wrist pin to top of crankshaft journal = 61.45mm minimum to 61.7mm

maximum

Crankshaft: Main journal diameter: 27.8mm to 27.95mm

Cylinder Head: Depth of head at shallow part of head = 0.3mm minimum. The measurement on

the shallow side of the combustion chamber is taken with a depth gauge on the push rod side

of an imaginary line drawn from dowel pin to dowel pin on the valve side of the dowel. It is also

taken over the spark plug area.

Depth at floor of head = 8.1mm minimum.

Depth to top of valve seat = 9.15mm maximum to 8.5mm minimum

Head thickness measured from head gasket surface to head plate gasket surface = 61.5mm

(measured in four places through valve guides and push rod holes).

Width of combustion chamber at the widest part across the valve seat area 67.05mm no-go at a

depth of 5.1mm in the combustion chamber. Cylinder head combustion chamber volume is 28.5cc

Piston Rings: 2 compression and one oil ring used

Compression ring minimum width = 2.4mm

Compression ring thickness = 1.5mm – 1.65mm

Oil ring minimum width = 1.65mm

Oil ring thickness = 2.5mm to 2.6mm; Oil ring expander must be installed.

Piston: Minimum piston length = 44.9mm

Measurement from top of piston to wrist pin bore (on circlip side of piston) = 16.7mm

Camshaft: Camshaft must be unaltered Briggs & Stratton and to the standard specifications as

provided by Briggs & Stratton.

**46.17.2 EXHAUST SYSTEM**

Complete exhaust manifold and muffler assembly must be as homologated and as supplied by

TEKA with all motors. All mufflers shall be tagged, stamped or engraved with TEKA permanent

identification by TEKA. Muffler mountings and bolts are ‘free’.

**46.17.3 SCRUTINEERING PROCESS**

**(a) Pre-Race Scrutineering**

TEKA Engine Log Books, one for each engine, must be presented at Pre-Race Scrutineering and

when requested by AKA Scrutineers.

201 Australian Karting Association Inc

**(b) Rebuilding & Resealing**

B&S Animal engines can be taken to an engine builder and rebuilt to standard specifications. Full

AKA homologated B&S Animal specifications are available on the TEKA website.

Engine Builders are required to fill out the service part of the Engine Log Book, including the type of service performed and

any parts required. Engine Builder contact details must also be added to Log Books as part of its

service. It is the competitor’s responsibility to insure that Engine Log Books are filled out correctly.

Only a TEKA sanctioned Engine Sealer may seal an Animal

engine. To ensure fairness for all competitors and engine sealer may NEVER drive or compete in

a kart that has been sealed by them..

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**(c) Post-Race Inspection**

As per AKA rule 46.15, TEKA reserves the right to take away and inspect any Animal engines at

the completion of an event.

Engines impounded by the scrutineers will be

placed into sealed bags until ready for off-site inspection in accordance with

AKA processes. The corresponding Engine Log Book must be accompany each engine as part of

the technical inspection process. Competitors will receive a receipt for each engine taken and

advised of a time and place to attend the technical engine inspection.

After an engine passes inspection – unless otherwise agreed with the competitor – engines will

be returned re-sealed at no cost to the competitor. Inspection details and new seal numbers are

recorded into the Engine Log Book.

Note: Mandatory TEKA technical inspections and subsequent re-sealing does not reset an

engine’s consecutive engine sealing count.

**(d) Anomalies**

In the event that an engine is deemed to be illegal the competitor will be disqualified from the

event. The AKA Technical Scrutineers decision is final. If an engine is deemed by the scrutineers

to be illegal, all costs incurred in the inspection are to the account of the competitor. The so

deemed illegal motor will be returned to the competitor unassembled and may be returned for

re-scrutineering and certification after any illegalities have been corrected.

**46.17.4 APPROVED COMPANIES / PERSONS FOR TEKA SEALING**

The following are authorised to carry out sealing of motors in

accordance with this chapter:

WAR Motorsport

Unit 16, 176 Sunnyholt Rd,

Blacktown NSW 2148

Tel: 02 9671 4212

(Troy or Peter Worsley)

Darrel Mitchell

Email: tech@teka.com.au

Tel: 0431 471 860

Tim Pierce

Email: tech @teka.com.au

Tel: 0433 002 124