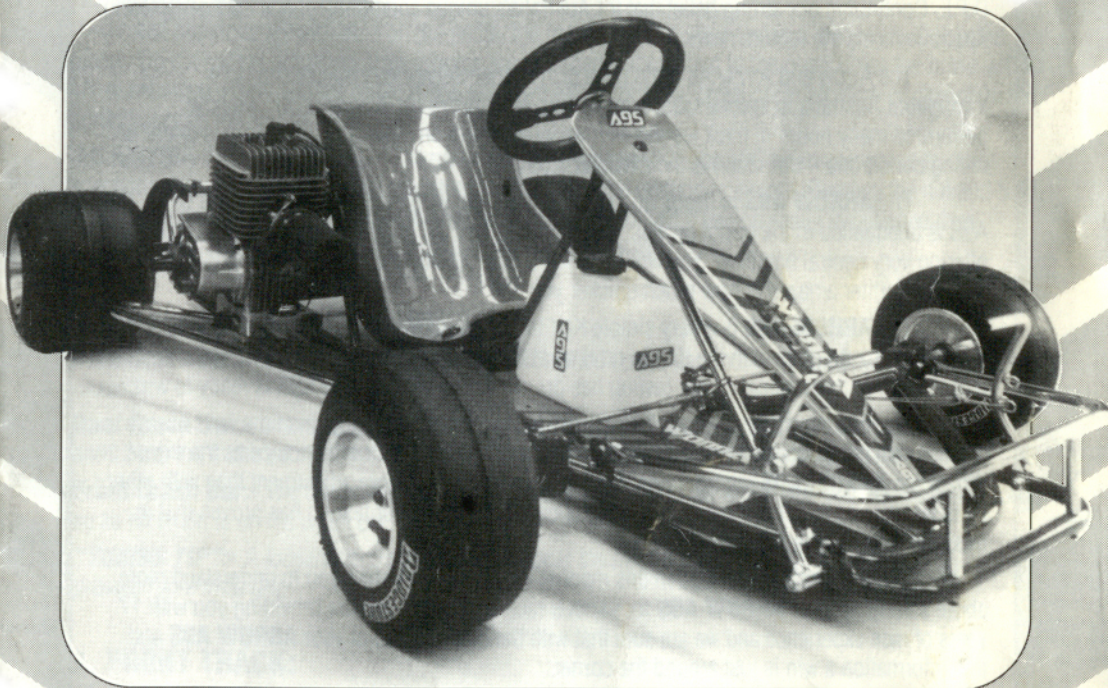
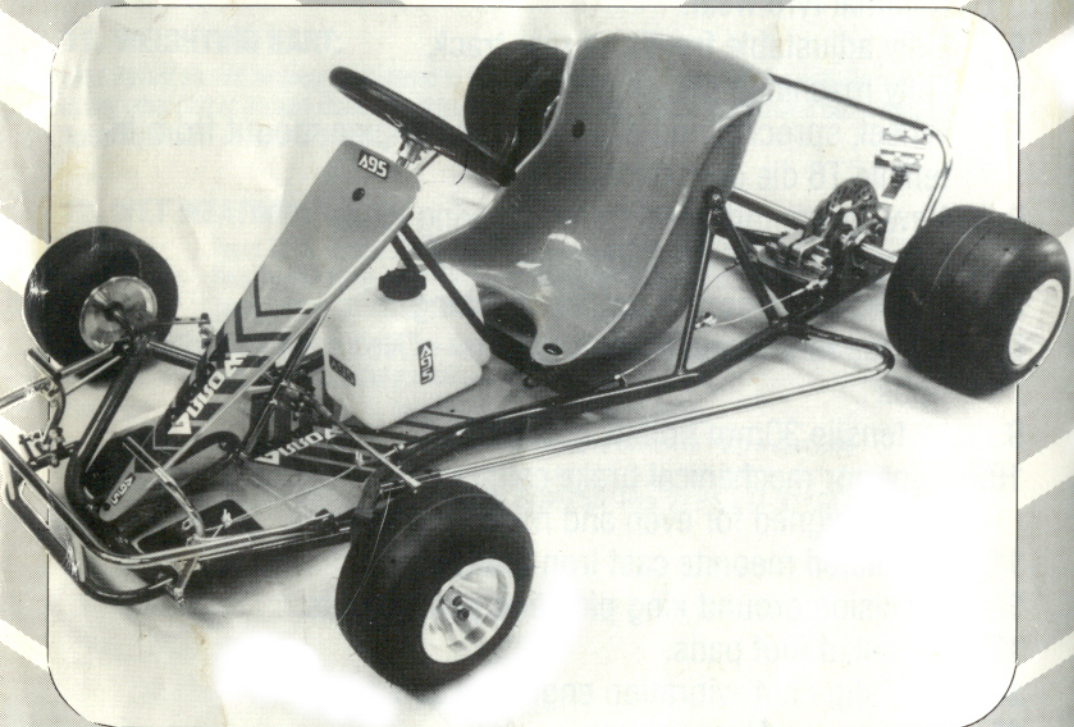


# ARROW VUBO A95

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**WINNING DESIGN  
PERFORMANCE & QUALITY**



**MANUFACTURED BY DREW PRICE ENGINEERING PTY. LTD. (03) 543 7218**

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Photography by Tim Wodetzki Art by Mark Chettle

#### 4. FRONT KING PIN ADJUSTMENT

This innovative form of adjustment is not designed to confuse you so don't get worried. Our testing has indicated the A9S is most versatile in the narrower setting as your Kart has been supplied.

Widening the King Pin setting has the effect of promoting some understeer which for the experienced or expert driver can result in faster lap times. Understeer can be difficult to drive with however, so we again emphasise the importance of testing your A9S in the normal setting and recommend you look into this adjustment after you and your A9S are familiar with each other.

For the wider King Pin setting the front end will need re-alignment

#### 5. FRONT END ALIGNMENT:

Set front end "straight ahead" to 2mm toe out. Additional toe out will tend to promote oversteer.

When checking front end alignment be sure that the steering shaft drop arm is positioned centrally under the steering shaft. It is a good idea to lock the steering shaft in this position by tightening a pair of vice jaw pliers around the top nylon steering bush thus preventing the shaft turning while you are adjusting the tie rods. Adjust the tie rods to desired setting making sure that both front wheels are pointing straight ahead. (ie. Avoid having toe in on one wheel and toe out on the other). This is easily checked with front end aligning plates, however, if you do not have these simply sight up the front wheels compared to the rear wheels or rear axle.

#### 6. GENERAL MAINTENANCE:

Components to check regularly to ensure they are securely tightened.

- Rear wheel hubs,
- Sprocket hub,
- Disc hub,
- Axle bearing lock screws,
- King pins. **Note:-** the A9S has precision ground king pins which should not be over tightened.
- Fuel Tank Outlet. **Note:-** occasionally check that the fuel tank pick up hose inside the tank has not come adrift as this can cause fuel starvation problems.
- Tie Rod End Wear. **Note:-** When the front end has any wear in excess of 1mm it is time to replace the tie rod ends.
- Front Wheel Bearings. **Note:-** Approx. every six months remove wheel bearings, wash out with clean petrol and lubricate with a small amount of engine oil. If the bearings still feel or sound rough replace them.
- Engine Mount Rail Material. **Note:-** It is very important to regularly check and if necessary replace this material. When in good condition the mount material assists in absorbing harsh engine vibration which is the common cause for chassis fatigue.

#### 7. REAR TRACK

Rear Track. Measurement of HUB from end of axle.

1 mt long axle     Dunlop/Bridgestone - zero     Cheng Shin - 25mm  
 1.05 mt long axle     Dunlop/Bridgestone - 25mm     Cheng Shin - 50mm

**"TUNING TIP":-** Widening the rear track will,

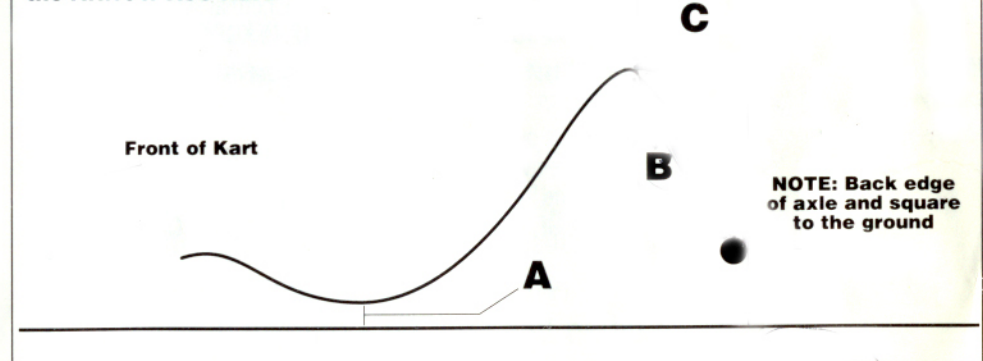
- A. Reduce bounce in the rear.
- B. Provide a smoother ride, especially on bumpy tracks,
- C. Prevent the tendency for the kart to lift up onto two wheels when cornering.

Narrowing the rear track will make the rear bite into the track harder and sometimes provide more rear grip. However avoid continually narrowing the rear track to obtain more grip as you will find that only so much grip can be obtained and you will then be upsetting the balance of the kart making it much more unstable and difficult to drive.

**IMPORTANT:** Rear Track is probably the most important single variable in a kart chassis. Different driving styles and different tracks will require different settings. The A9S standard setting is the best starting point and we suggest you vary the rear track by no more than 10mm each side per change.

#### 8. SEAT POSITION

**Recommended Seat position for the ARROW A9S Kart.**



**A** = Height of seat to ground in mm's.

**B** = is measured from top of axle to lip of seat in mm's.

**C** = is measured from rear of axle forward to lip of seat in mm's.

Tyre type.	Driver Size.	A.	B.	C.
SL	Junior	40-50	295-300	85-95
SL	Adult 60-75 Kg	30-35	285	85
SL	Adult 80 Kg up	20	270	70

Note: All measurements are to be taken with the kart on a flat surface and tyres must be at correct pressures.

# ARROW A9S OWNERS MANUAL.

## 9. TYRE PRESSURES:

Bridgestone/Dunlop	Front	14-16 P.S.I.	1.0-1.1 KGF/SGR CM.
	Rear	17-19 P.S.I.	1.2-1.3 KGF/SGR CM.
Cheng Shin	Front	18-20 P.S.I.	1.3-1.4 KGF/SGR CM.
	Rear	25-28 P.S.I.	1.7-1.9 KGF/SGR CM.

## 10. TYRE PREPARATION:

For SL Tyres or Open Tyres better results will be achieved if new tyres are bedded in for a short 8-12 lap period at 3/4 race pace and then left for a minimum of one day. (Preferably one week) before being used for racing.

## 11. WEIGHTING KART:

Lead Ballast should be securely fastened to the sides, rear or underneath of the seat. Do not add ballast to any other part of the kart chassis. A driver with a light body weight may achieve better handling by fastening ballast as high as possible on the seat.

## 12. WET WEATHER:

SL Tyres:- Front Track - move front wheels out as far as possible.  
Rear Track - move both rear hubs inward 20-30mm from the normal setting.  
Tyres - Front 25 P.S.I. (1.70 KG/SQR CM). Rear 35 P.S.I. (2.40 KGF/SQR CM).

**IMPORTANT:-** Just enjoy yourself in the wet as no matter what adjustments are made – a kart with slick tyres and a wet track are a bad combination.

Wet Tyres:- Front Track - move front wheels out as far as possible.  
Rear Track - 1 metre axle, move hubs to 30mm in from end of axle.  
1.05 metre axle, move hubs to 55 mm in from end of axle.  
Tyres - Front 18 P.S.I. (1.20 KGF/SQR CM). Rear 22 P.S.I. (1.50 KGF/SQR CM).

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## “TAKE NOTE:”

*Before making any adjustments be sure to test the Arrow A9S in its recommended standard set up. It is essential to make only one adjustment at a time.*

### 1. BRAKE ADJUSTMENT:

Two cable positions are available on the pedal, the lower position will provide a more sensitive brake pedal. On the caliper actuating arms 2 holes are provided. When fitted to the outer holes the brake will be more sensitive. If you feel the brake is too sensitive either raise the pedal cable location or change to the inner holes on the caliper arms.

**ADJUSTING FOR PAD WEAR** – The pad wear is very minimal in the A9S when compared to other mechanical brake systems. When adjustment is required the method is simple. Remove the nut and bolt from the piston push rod. On removing the push rod you will find it can be easily lengthened thus adjusting the caliper piston and brake pad to allow for pad wear.

### 2. CRASH BAR ADJUSTMENT:

**Side Crash Bars:-** Always leave these loosely tightened so bar can move up and down in the side bar mounts.

**Rear Crash Bar:-** It is not recommended to loosen the rear bar as this can result in the bar coming adrift from the frame completely. Check occasionally to ensure bolts are fastened securely.

**Front Crash Bar:-** The top bolts securing the front bar with a rubber spacer are best left relatively loose so as no strain is on the crash bar.

**“TUNING TIP”:-** A loosely fitted front bar will enable the front of the chassis to flex more easily and provide more front grip.

### 3. FRONT TRACK:

Fit one 20mm spacer on the inside of the wheel on each side.

**“TUNING TIP”:-** Widening the front track will make the steering more direct and assist in eliminating understeer. Narrowing the front track will make the steering less direct. If you find the front is too sensitive or twitchy narrowing the front track will assist.

