



Dealer Delivery Guide



The purpose of this guide is to assist you in unpacking and preparing an Arrow kart, ready for delivery to its new owner, the all-important Arrow customer!

It is very important that every Arrow kart is fully assembled and completely ready for the final customer in the highest standard possible, especially areas involving issues of safety. You must ensure all areas have been checked and the kart complies with the '**Arrow Kart Setup Guide**' as far as starting seat position, chassis setup etc.

As the saying goes,
"There is never a second chance to make a good first impression!"

Unpacking a new Arrow

An Arrow Kart carton is designed to fit two karts. On the outside of the carton you'll find a label showing the kart model type/s packed inside, their corresponding serial numbers as well as indicating if spare parts have also been included.

Once you have opened the carton/s you will see:

1. The Kart/s
2. The Sidepod supporting bars.
3. The Nosecone/s
4. The Steering wheel/s
5. The Nassa panel/s
6. The Chainguard/s, on selected models
7. A carton on the side of the kart/s. These cartons each contain:
 - The sidepods
 - Sidepod bolt kits
 - Rear wheel hubs (Plus front wheel hubs on selected models)
 - Front and rear wheels
 - Arrow cap
 - Nosecone assembly kit/parts
 - Fuel line
 - Fuel tank overflow bottle
 - Plastic rear number plate
 - Adhesive front number plate, on selected models
 - Throttle cable
 - Arrow Kart Setup Guide
(together with suggested starting setup and seat position chart)
 - Dealer Delivery Guide
 - Assembly instructions
 - Arrow Kart sticker kit

Note: The relevant seat for each kart is packed in a separate carton (one for each order of karts) which may also contain some spare parts if an order is being shipped together with karts.

Having un-packed the karts from their carton, strapped onto the engine mount area are:

- Sidepod Bolt Kit
- Top Nassa Support Brackets
- Seat Bolt Kit
- Exhaust Support Mounting Kit, on selected models
- Steering Boss Kit, on selected models
- Wheel Spacer Kit, on selected models
- Chainguard strip, on selected models
- Rear Ride Height Spanner, on selected models
- Axle Keys, on selected models
- Gear Lever/Rod & Clutch Lever Assemblies, on selected models

The following topics MUST be adhered to prior to delivery:

Checking the Rear Axle

It is important that you do check that the axle retaining grub screws are all tight.

Please note: On certain model Arrow karts, the axle retaining grub screws are removed and taped to the axle. We do this to make the job of removing the axle easier for those karts that are being prepared for use with an engine package requiring an external pulley driven water pump or inboard drive engine. It is therefore extremely important that you do remember to tighten-up the grub screws before delivery.

Mounting the Tyres

Fitting tyres will depend upon the type of tyre the kart is being assembled with. When inflating the tyre to seat the bead, **do not over inflate. There is a very real risk of serious injury if the manufacturer's advice printed on the sidewall of all tyres is not followed.** To aid the seating of the bead, a light coating of soap applied on the tyre bead before inflation and using external steel tyre rings (P/C: T22A) around the tyre must be used. Do ensure all tyres are wiped after this process and check for any damage or defects before fitting the wheels with tyres onto the kart. Refer to the third paragraph of 'Front end alignment' on page 8 of this document.

Wheels / Wheel Hubs

To stop the wheel hubs from sliding in on the axle/hub, we recommend the use of wheel hub 'stoppers' – P/C: WHSK40-2 (40mm) & WHSK50-2 (50mm)

Front:

After fitting the tyres to the wheels:

With Bearing Type Rims, remove the stub axle nut (22mm socket needed) from the stub axle. A guide as to where you should set the front track can be found in the '**Arrow Kart Setup Guide**'. Fit the wheel and wheel spacer/s then refit and tighten the stub axle nut. Do not over tighten the stub axle nut and ensure the wheel turns freely. The wheel should turn freely with no sideways movement, and you should be able to turn the wheel spacers (with some force).

With Hub Type Rims, fit the 3 wheel nuts and use an 8mm T-bar to tighten the wheels to the front wheel hub. Follow steps from '**With Bearing Type Rims**' or, if using a front brake system, slide wheel hub on front brake disc hub to recommended width and re-tighten.

Ensure the wheel nuts are tight, as a loose wheel can be disastrous and dangerous

Rear:

Fit the wheel, then fit the 3 wheel nuts and use an 8mm T-bar to tighten the wheels to the rear wheel hub. A guide as to where you should set the rear track can be found in the '**Arrow Kart Setup Guide**' or refer to our web site at www.arrowkarts.com

Ensure the wheel nuts are tight, as a loose wheel can be disastrous and dangerous.

Setting the Rear Track

The rear track is probably the single most important variable in setting up a kart. Please refer to the '**Suggested Starting Setup Sheet**', found in the back pocket of the kart's 'Arrow Kart Setup Guide' or refer to our web site at www.arrowkarts.com for the best place to set the kart's rear track as a starting point for its new owner.

Checking and Bleeding the Brakes

The brakes are bled prior to packing a new Arrow Kart however it is important that you check the brake system over before delivering an Arrow to its new owner.

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- 1) **Always check the feel of the brake pedal making sure it feels hard and is not “spongy”.** If the pedal does feel a little spongy, bleed the system using only DOT 4 hydraulic brake fluid. ***Do not use Silicon brake fluid.*** Before attempting to bleed the brake, retract the dust boot on the master cylinder and confirm that the piston is against the circlip. If not you may have to adjust the brake rod to achieve this. To bleed the brake, you will need a bottle to catch the fluid, some clear hose with a diameter small enough to fit over the bleed nipple and also an 8mm spanner. Try to use the ring end of the spanner so that the hex on the bleed nipple is contacting the spanner as much as possible. Attach the hose to the bleed nipple and put the other end in the bottle. Give the pedal a firm pump a few times and hold the pressure on the pedal. Open the bleed nipple slightly and wait for the fluid to flow, at this stage the pedal will travel forward, if not, undo the bleed nipple a little more. Don't release the pedal until the bleed nipple is done up firmly (if you do, this will suck air into the caliper). Repeat these steps until no more air is coming out (look for air bubbles in the clear hose). Repeat for the other side of the caliper. In the case of a kart with front brakes, adjust the brake bias bar to full front brakes. Repeat the above process again for the front calipers. ***Having completed this, it is important you remember to re-adjust the brake bias bar to equal front-to-rear brake bias.***
- 2) **Ensure the master cylinder lever always has free play. If the brake rod is adjusted in such a way that no free play exists and the master cylinder lever has pressure on it, adjust either the pedal stop or the brake rod length.**
- 3) **On an Arrow Kart with front brakes, check the front-to-rear brake bias.** The best way of adjusting the brake bias is to do it when the kart is up on a kart stand. Press and hold the brake pedal firmly while getting someone else to turn the wheels. Adjust the bias until you are using the same amount of effort to turn both the rear & front wheels. This is a good starting point.
- 4) Ensure all owners know that they do need to 'bed-in' their brake pads, as well as new pads when replaced.

The brake pads 'bedding-in' process should be:

- For approximately 2 laps lightly apply brakes only, gradually increasing pressure used to approximately 40% of full braking.
- Going **slowly**, do a lap without using the brakes at all so that they may cool off totally.
- For approximately 2 laps, gradually increase pedal pressure so that braking is occurring at approximately 75% of full braking by the last half of lap 5.
- Going **slowly**, do a lap without using the brakes at all so that they may cool off totally.
- Do 2 laps at 75% full braking and then for the next 2 laps work the brakes hard. Ride the brakes then let off the pedal for 2 seconds and ride them again. Continue this until the brakes become very hot and the start to fade away and lose stopping power. From this point for the next 2 laps, **drive around very slowly** and do not use the brakes, allowing them to cool down.
- Return to the pits and allow the brakes to cool down completely before returning back onto the track.
- Repeat for front brake pads (if applicable), making sure the bias adjuster is set to 100% front.

Brake Shims

Most models of Arrow karts are supplied with extra brake shims, which should be removed prior to running the kart. ***Remove the extra pad shims but remember to refit the brake pad safety retaining pin/s.*** Don't forget to give the spare shims to your customer.

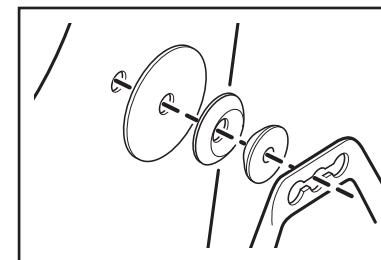
Choosing and Mounting the Seat

Choosing the correct size seat and then fitting it properly are critical to the performance of any kart. Also, as the flex characteristic of a seat plays an influencing role in a kart's performance, with all Arrow karts we strongly recommend that Kartech seats be used.

The best way to make sure the seat fits the kart's new owner well is to place the chosen seat on the floor and have the customer sit in it. Ask that they sit with their legs and arms held out, as they would be when driving their kart. The seat should hold their hips ***firmly without discomfort*** while you must be able to place your flat hand in between the seat and the new owner's rib cage without using force.

Once the correct seat has been chosen, it is very important that you use the relevant '***Seat Position diagram and chart***' that are included in the back pocket of the '***Arrow Kart Setup Guide***' or refer to our web site at www.arrowkarts.com

When fitting the seat, it is essential that the frame is not stressed or forced in order to tighten up the seat fixing bolts. There are a range of Arrow seat spacers that help in making the job of fitting the seat easier. Make sure you use a large diameter seat washer against each side of the seat, as this is very important in spreading cornering loads. The Arrow range of karts are supplied with Arrow's unique self-centering seat washer system. Fitting between the chassis seat support and the seat, these washers ensure that there are no torsional loads placed on the seat through mis-matching angles between the seat and the chassis.



The diagram at left shows how to fit the self-centering seat washers. If spacers are also required, they should be fitted between the self-centering washer system's outer conical ball washer and the chassis' seat support.

Under the front of the seat only use the plastic seat washers. These are used as packing between the seat and the welded chassis mounting tabs for obtaining the correct relevant measurements.

Pedal Adjustment

After fitting the seat, ensure the driver can activate both pedals comfortably. If not, adjust the brake rod and throttle cable as required. Remember to re-adjust the pedal stops after doing this.

Mounting the Steering Wheel

Using the three countersunk washers supplied, fit the steering wheel to the steering boss. The “Arrow” logo on the flat section of the steering wheel goes to the top. The height of the steering wheel can be adjusted by altering the position of the plastic steering shaft bush.

Front End Alignment

We do not do a front-end alignment on any of our karts prior to packing therefore it is extremely important all Arrow karts have a complete front-end alignment before they are delivered to their new owner. To maintain the kart’s maximum performance potential, remember to tell the kart’s new owner that they should do a wheel alignment check prior to each new day on the track.

Front-end alignment of a kart is critical to its on-track performance. We therefore strongly suggest that you use a ‘Sniper’ laser alignment system (**P/C: T10V2**) to do the Arrow’s pre-delivery alignment. Quite simply, the Sniper is the best system available on the market and well worth the investment for any Arrow dealer or serious racer.

The very first stage of doing a front end alignment is to make sure you have set the height of the Kart’s steering column where its new owner finds it comfortable. Once that has been done, make sure the steering spade at the bottom of the steering shaft (where the two steering tie rods are bolted on) is horizontal, at which point you are ready to start doing the alignment.

For **Camber/Castor and Toe-in/toe-out setting**, please refer to the kart’s supplied ‘**Suggested Starting Setup Sheet**’, found in the back pocket of the kart’s ‘**Arrow Kart Setup Guide**’ or refer to our web site at www.arrowkarts.com

Mounting Fuel Tank Breather Bottle



When mounting the overflow bottle to **KG Type Bodywork**, use the supplied o-ring and attach to the top R/H Nassa bracket (as shown, left).

When mounting the overflow bottle to **AX9 type bodywork**, simply mount the bottle to the centre hole that has been punched out at the top of the Nassa panel.

Mounting the Bodywork

Nassa Panel

You will need to drill three 6.5mm holes to fasten the Nassa panel to the kart, two for the upper mounts and one for the lower mounting bracket.

For Australia, ensure this complies with Rule 25.03, clearance of steering wheel.

KG Type Bodywork; Before drilling, apply the Nassa sticker and line up with the nosecone/nosecone sticker for best possible cosmetic appearance. Use the lower Nassa spacer to help achieve this. A rough estimate to where the hole should be is about 146mm from the very bottom of the Nassa measured from the inside of the Nassa, central position.

Nosecone/Front spoiler

KG Type Bodywork

the nosecone/front spoiler is supplied with a kit comprising of two metal clamps and one plastic clip;

- 1) The plastic clip connects the lower pedal bar and the chrome bumper bar but does not fix the nosecone to the kart.
To fit the plastic clip, place the two halves of the plastic bracket vertically in the centre of the two bars with the elongated slot on the pedal/lower bumper bar. The two halves are different. Make sure they are put on so that the bolt goes in from the front of the kart.
- 2) The two metal clamps hold the front bumper down, clamping the nosecone/front spoiler onto the kart. Put the nosecone/spoiler into position with the four spigots between the upper and lower bars. The plastic clip should fit between the two centre spigots of the nosecone/spoiler and the two metal clamps go in between the two outside spigots. Clamp the nosecone into place using the two metal clamps. The length/tension of these metal clamps is easily adjustable, simply by winding or unwinding the clamp.



Sidepods

For Australia, refer to Rule 25.02 before starting. This rule defines very clearly where the sidepods must be positioned. Place the Sidepod in position (in Australia ensuring they comply with all dimensions of rule 25.02).

KG Type Bodywork;

Place the side pod removable bar with the flat surface facing upwards, on top of the side pod bar. Then sit Sidepod over Sidepod bar and line up holes. Place bolts in holes, and tighten keeping in mind the gap from the wheels.

Double check the entire kart

Now go back over the entire kart and check every bolt, nut etc. This will only take a few minutes and it is much better to find a loose bolt/nut before the kart goes out the door, rather than trying to calm down an angry customer after something has fallen off his new kart because you got interrupted or distracted during the assembly.

Finishing

The job is not finished until the paperwork is done! Make sure you supply your customer with a copy of the 'Arrow Kart Setup Guide' and get them to fill in the 'Owner's Registration Card' while they are still there with you.

Mail or fax the completed 'Owners Registration Card' back to us as soon as possible to:

Post: 57-59 Nantilla Road
North Clayton VIC 3168
Australia

Fax: (03) 9545 3743 (International: +61 3 9545 3743)

Also please make sure you fill out the 'Customer Information Card' certificate for the customer.



**Congratulations and
Thank You for choosing
Arrow Racing Karts!**

Customer Information Card

*Each Arrow Kart has been constructed from the highest quality materials from all around the world.
Please ensure this certificate accompanies all future owners, to enable this valuable information
to continue to be available.*

Kart Model: _____ Serial Number: _____
Dealer: _____ Date Purchased: _____
Email: _____
Suburb: _____ Postcode: _____

www.arrowkarts.com



IMPORTANT

These instructions and guidelines are prepared with the aim of ensuring your customer's experience with karting and Arrow in particular is a safe and enjoyable one. This will help to ensure when he is looking for his next kart or if he is telling his friends about karting, he can give the best reference possible, which is word of mouth.

Karting, like any form of motorsport can be a dangerous activity, especially when equipment is not properly assembled, serviced and/or maintained. These assembly guidelines are provided to act as a guide only to the assembly of an Arrow kart. There are many different models of Arrow karts and hundreds of various kart engines used in Australia and around the world. We have not attempted and do not claim to have provided instructions that cover the assembly of every part of every type of kart and/or kart engine.

Because of this, even if you follow these guidelines, your safety or that of your customers is not guaranteed. You must ensure that only suitably qualified and experienced staff are involved in kart assembly. At all times you must use your own knowledge, common sense and experience to determine what is required to assemble a kart safely.

If you are not sure about any part of the assembly guidelines, you should seek further information from the Arrow Kart Setup Guide, the Australian Karting Association Manual, as amended from time to time, or the relevant rulebook for your country.

Please note that these guidelines are current at the date of publication and are subject to change without notice.

If you require further assistance, please contact us at:

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