

In depth Engine – Carburettors

This is a guide to carburettors as used on Lambretta motor scooters, it is not a guide to how a carburettor works or what jets go where nor is it a guide to trouble shooting problems associated with carburettor problems. This information and how to fit a cylinder, set it up and jet in a carb and set up an engine is now free and available to read here.....

Setting up, Running and Jetting – in procedures for Tuned Cylinder kits and Tuned Engines using large bore carburetors

INTRODUCTION TO STANDARD CARBURETORS FOR ORIGINAL ENGINES

The original carburettors used on the Lambretta engine from the factory have always been Dellorto. Depending on the engine used there have been 6 carb sizes. We will ignore the early MA and MB carbs as they were quite inferior compared to the later SH type fitted to the series 3 Lambrettas.

The SH1 carbs were available in 18 and 20mm sizes.

The 18mm version was fitted to the Li 125, Li 150 and the Li 150 Special.

The 20mm version was fitted to the GP 125, SX 150, TV 175, TV 200, SX 200 and Jet 200.

The SH2 carbs were only available in one size 22mm.

They were only fitted to the GP 150 and GP 200 engines.

Standard carbs still in use in most cases are very old and worn usually making them temperamental. You can find they work very well, or more like they cause the engine to work one day and not the other. It is difficult to find genuine Dellorto replacements. There are some Indian copies of the original carbs made by either Spaco or Jetex. These are only available for the GP range in 22mm. Although new, these carbs seem to vary in quality and again can work well or tend to be temperamental. There are cases of totally the wrong jets being fitted and with some carbs the fuel supply holes weren't big enough and fuel starvation could take place. Today Scootopia have remade good copies of the standard carbs.

Not a lot can be done to improve or tune up the carbs, there were some old conversions but these didn't really improve the engines speed.

Very few jets are available to help set up your engine. Usually most people just changed the main jet. MB only keep standard main jets for these carbs.

The most common conversion and is still used today was to bore out the SH2 22mm to 26mm. We find from many customers that this conversion tends not to work and the engine becomes erratic. When the carb body is bored out the area where the slide sits down now becomes open – dragging in air making running them run erratic. If a bored out body is used then the inlet manifold needs opening to suit, the original manifold is not really big enough to do this correctly and gets very thin.

Standard carbs will always limit the power and speed of a Lambretta engine, although saying this I have known some reasonably quick engines using 20 or 22mm carbs. As a comparison a GP 200 could vary in speed from engine to engine. Innocenti stated the GP 200 had a top speed of 68 – 70 mph, this was with the rider laid down, now most of you don't ride like that so expect a true speed sat up to be a little slower! The Indian GP 200s were slightly tuned compared to the Innocenti item, they had larger cylinder ports and used a big bore exhaust. To compensate a larger main jet was fitted. We have known these engines to vary in speed from doing 60 – 65mph to some doing well over 70mph. I have personally had a cut down using a 20mm carb be clocked at 80mph! This proves that some speed can still be gained using the standard carbs, but power is limited by them!

Standard Dellorto carbs are very primitive by today's standard, let's face it the design came from the 50's. MB recommend you upgrade to a more modern carb!

As another comparison we did an engine for a customer who was adamant that he wanted to use his 20mm carb on a stage 3 Honda 205 using a Clubman exhaust. He was warned that the carb would let down the engine's full potential. After running the engine he realised that it didn't perform very well and suspected it was a jetting fault. The scooter was dynoed only to find it had 8 horsepower! A change of carb to a 28mm pushed the horsepower to 15, showing what difference a carb makes.

There have over the years been a number of carbs used with Lambretta tuning. The list is endless; Amal, Dellorto, Wal Philips, Keihin, Lectron, Mikuni, Bing and many more, some are good some are bad some are better than others.

Basically any carb between 16 – 40mm could be used and set up to work with Lambretta engines.

AMAL CARBURETTORS

Amal have been used because they were made in England (they are now made in Spain but some are still made to order in the UK) they were easy to get, cheap and easy to set up!

In the sixties Amal offered the MK1 carb, this was solid mounted and quite crude by today's standards. The sizes used were usually 26, 28 and 30mm, this carb required a special manifold offered by the sixties tuning shops. Basically the carb worked OK but wore out. This carb is now available today but has been upgraded and is now a rubber mounted type, it is called the MK1 $\frac{1}{2}$, there is no great advantage in using this carb.

In the Seventies Amal offered the MK2 rubber mounted carb and is still used to day but considered old hat compared to the more modern carbs. Again a special inlet manifold is required and is available from most tuning shops.

The MK2 offered three sizes of carb bodies.

- The 2600 series, small body carb used sizes of 22, 24 and 26mm
- The 2900 mid body carb used sizes of 28, 30, 32 and 34mm

- The 3000 large body used 36, 38 and 40mm

In the 2600 series the 26mm was the most popular and worked very well on stage 3 and 4 tunes. I ran a 26mm on a stage 3 Suzuki 190, which gave 16 HP. This carb wasn't available with chrome slides, but this wasn't a problem like it was with the larger models. They were physically quite small and very easy to work with and set up. This carb could quite easily work on engines up to stage 5 200 motors. Although filters are available for this carb they weren't used as they fouled the panel. This was a nice carb and suited Lambretta engines, today we hardly ever see them.

In the larger bodied 2900 series the 30 and 34mm carb was the most popular. Throughout the eighties they were very commonly used for stage 4 to 6 tunes. The 28 and 32mm sizes were used but were not that popular. Again these sized carbs worked very well. The main problem with these carbs were the standard zinc slides they used to stick in damp conditions! But once changed to the chrome option usually there were no problems. The main fault was the locating pin holding the slide, these used to wear and fall out. As with all rubber mounted carbs if the rubber was over tightened it would split.

The rest of the carb was very reliable if set up correctly but tended to be a bit crude and spit back a lot of petrol. This sized body carb was available in a standard form or power jetted form. Both types worked as well as each other, most preferred the power-jetted option on the 34mm carb body. The power-jetted carb wasn't actually a power jet as it states, as it gave no extra power! Having a power jet fitted allowed the main jet to be reduced in size this then cleaned up low down running. To compensate on fuel mixture high up the power jet came in to richen up the main jet.

The 3000 series wasn't very popular and was mainly used in racing circles. A newer version of the large body is available called a smooth bore but this was no great advantage.

With the introduction of the TS1 cylinder kits Amal carbs were recommended as the inlet manifold was designed for them. The physical size of the carb meant that the carb touched on the side panels, machining or removing the bell mouth was needed but still the banjo touched. The only cure on most types of panels was to cut out a large hole. These, although they worked fine, required a fast flow fuel tap (as do ALL Lambretta engines). The design of the carbs internals and angle of the carb required the power jet blanking off, at high speeds the engine would suck in air not fuel.

Because of their crude design the Amal carb should be considered the easiest to set up! MB used to use Amal carbs but moved onto the more modern Dellorto, Mikuni and PWK carbs.

DELLORTO CARBURETTORS

Dellorto have been used because they were made in Italy and were also cheap to bring in through the scooter importers. Dellortos had the reputation as not being as good as Amal carbs but were in fact better than Amals. Amals are crude and don't flow air as quickly as other carbs. Dellorto offer a large

amount of needles and spares compared to Amals, making Dellortos harder to set up!

Dellorto have had over the years a number of different styles of carburettors.

In the seventies a solidly mounted square slide carb was used, this again was quite crude and was actually a four stroke carb but could be set up and worked fine by the standards set then. The eighties saw a mass influx of 30mm PHBH four stroke carbs, these had a round slide and were again solidly mounted, it was probably this batch of carbs that gave Dellorto a bad name at the time. Because the carb was jetted for a four-stroke engine, two-stroke scooter engines ran weak, seized and regularly melted pistons. It was possible to set the carbs up, I used one for years, but most dealers didn't know how to set them up and scooter tuning gained its bad name.

The mid eighties saw more 30mm solid mounted Dellortos arrive, these were two-stroke types and used a total different set of jets and again scooter dealers couldn't set them up! Hence more problems! These carbs, when fitted with correct jets worked OK to a point. Lambrettas vibrate, it's a fact of life. Engines that vibrate then cause a problem as the fuel inside the carbs float bowl turns to froth, this then supplies air into the engine causing the jetting to alter, running weak one minute then rich the next! This problem only really came about in the mid eighties as people changed from low revving engines using Clubman exhaust systems to racing expansion chambers. The extra revs with the expansions caused these problems. Solidly mounted carbs used to wear out slides, needles and needle jets. MB don't recommend them but other dealers do.

The 30mm rubber mounted version PHBH Dellorto carb eventually came into the UK, this cured the unreliable fuel frothing problem, but took a long time for customers to get back onto them as these were better made carbs compared to the Amal design. This carb is used regularly to day and is one of our preferred carbs for all touring tunes.

Throughout the 1990's the Flat slide or Oval Bore VHSA and VHSB carburettors became popular. The VHSA came in two body sizes, the 28mm was the smallest and used a smaller carb mounting rubber the same as the 30mm PHBH types. The VHSA 30 and 32mm had a larger sized body and used the same carb mount as the Amal 2900 series. The VHSB type carbs were again physically larger still! These came in sizes of 34, 36, 37, 38 and 39mm these used two types of carb mounting one with one groove and one with two grooves. The flat slide type of carbs came around as mentioned in the early Nineties. They could be considered the top of Dellorto's range. As all previous Dellorto carbs were round slide types these vary because now the slide is a strange flat shape hence the name flat slide carb. The carbs venturi is now an oval shape to improve airflow! So some times these carbs are called oval bore carbs. These carbs seem to work better than their Amal 34mm rival.

These carbs have a much larger air intake bell mouth which leads into the venturi where the slide sits, as it exits the carb the venturi expands to 34mm for the 32mm carb therefore supposedly breathing better! This works for all

the VHSA and VHSB type carbs though out their range so you could say a 32mm is actually a 34mm carb.

With the introduction of the Dellorto VHSA and VSHB flat slide carbs in the nineties the carbs would now fit under the panel on a TS1 engine (With a minor modification to an over flow pipe on the float bowl)

Amal carbs became a bit primitive in their use, added with the fact they touch the panel MB were one of the first to introduce the Dellorto VHSA and VHSB flat slide carbs, mainly because they fit under the panel work.

We found that the 34 – 36mm carbs were physically large but still fitted under the panel. MB noticed with all engines fitted with 34, 36 or 38mm VHSB carbs that a Lambretta engine couldn't flow enough air giving a lot of spit back in the process at full throttle. This was noticed on our race team engines, these engines were doing between 25 and 34 horsepower but still couldn't cope with the amount of air and fuel available! As time went on we phased out the larger carbs on road scooters for the 30 – 32mm smaller version with no power loss but much improved the engines all-round performance and the engines ran cleaner.

MB found out that flat slide Dellortos have a fault from the factory, which results in fuel starvation especially when used on a Lambretta where there is not a big head of tank above the carb, all flat slide carbs need blue printing to prevent this the carb needs stripping and a hole drilling out.

MB DELLORTO CARBURETTOR RECOMMENDATIONS FOR TUNED CYLINDER KITS

Carburettor sizes vary from engine to engine depending on what the engine is going to be used for. MB recommend three Dellorto carburetor complete set-ups.

25MM 150 / 200 PHBL CARB KITS

MB designed this kit in 1986 for Mark's own series one, but the kit was only introduced in the early nineties. The reason for this was, people were still using big tunes with big open bell mouthed carbs because that was the norm and all that was available. Mark realised that a lot of people were going away from tuned engines and restorations were becoming popular. But the problem with restorations is the scooters tend to be slow, as the only carb choice was the standard carbs already mentioned. There seemed to be a market for mild tuned engines with a slightly larger carbs but still using the original air box. The only carb anything like a standard size was the PHBL carb bodies. The secret to these carbs fitting was to make a special manifold. There was very little room to fit the carb between the cowl, filter box, engine mount and panel. But a new inlet manifold allowed the carb to fit in place to the original item. This then left scope within the engine to tune accordingly.

MB recommend this carb set up if you want to use your air filter box. It will work on standard, mild tunes and has been known to work on stage 6 motors. Although the main carb body size used is the 25mm they are also available in

22, 24, and 26mm sizes and all fit on the same rubber mounted inlet manifold. The 26mm are an oddball as they come with 4-stroke jets, these can be modified but MB recommends the 25mm size.

Our inlet manifolds and carb kits only use the rubber-mounted version as solidly mounted carbs are available but we don't use this carb for reasons already explained.

Various inlet manifolds are available

- Small Block rubber mounted 125, 150, 175, 186, 190, 195 and 200cc
- Large Block flange mounted 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250cc

MB offer this kit to suit mild tuned motors such as a stage 2, 3 or 4, 125 – 200 conversions and stage 3, 4 and 5 200 – 250 conversions including the Race – Tour kits. Or they can be a direct replacement to modernise a standard engine. Although these carbs are 3mm larger in bore size don't expect masses of power!

The conversion has its good points over the standard SH1/SH2 carbs

- They are modern carb
- Fully adjustable
- Most dealers keep spares

The MB 25mm 150 or 200 complete carb kit for use with standard air filter box, consists of:

- Carburettor
- Carb taken apart, jets checked and changed, spare weaker needle and main jets supplied
- Cable choke assembly fitted
- Inlet manifold to suit your motor, mounting rubber, clips, long inlet bolt, washers and gasket
- GP 125 air hose, clips and high flow air filter

Throttle cables are separate depending on colour, black or grey.

- 25mm 125, 150, 175, 186, 190, 195, 200cc carb kits MBD25K6
- 25mm 200, 205, 210, 215, 220, 225, 230, 240, 245, 250cc MBD25K7

THINGS TO LOOK OUT FOR

Over the years when using the air filter box in a tuned motor we found that not enough air gets into the engine. There have been different air boxes over the years but all types gave problems especially when using the PHBL set up! An old conversion was to cut out the bridge in the air scoop as per GP air scoops. We found that this made no difference at all. The next step was to cut out the elbow in the top of the air filter box, again we found this made no difference! This then told us jetting faults came down to the hole size feeding the air box through the frame, which was not large enough! There is a new modified box available from bgm that addresses the problem by

fitting a larger neck – but then the air scoop restricts it. Removing the air bellows cured troubled engines, again showing a problem when using air boxes! We advise drilling the sides of the air box or the bottom if you don't want to see the holes, how many really makes no difference because any hole will allow more air into the box than none at all. If you drill say 5 x 20mm holes or a similar area you will see a total improvement. If using a PHBL carb kit with no holes in the air box the main jet would need to come down to around 80 – 82, when the air box is drilled a main jet of 92 – 100 would be normal showing the difference air can make in the system.

We have also found over the years a well-set up 25mm carb kit doesn't seem to perform as you would expect! This comes down to possibly the length and change in direction that the air has to take to get into the engine. But also PHBL carbs tested on down draft manifolds don't perform as well as the Amal MK2 26mm offered years ago. But the PHBL set up is, for the moment the best set up to use the air filter box and looks original which people still want. Today the PWK and Mikuni TM24mm can also be used with the air box.

If used for some time the Malossi carb mount gets weak, especially if the mounting is over tightened. This could also be due to petrol softening the rubber. This forces the carb towards the panel and the air bellows will touch it, some times the carb will come off the manifold. We now make a better Viton carb mounting rubber. We have found if you move the air hose higher than its original position this lifts the carb up and supports the carb better! If fitted correctly in the first place you should have trouble free miles ahead of you. There are some differences between models of scooters, some fit and clear the panel some just touch. This comes down to brackets welded to the frame and engine mount differences we can do nothing about it!

28/30MM 150 / 200 PHBH CARB KITS

MB have used this set up for many years in various specs. The solid mounted carb was very common and were usually fine on tuned engines if used with a Clubman style exhaust. These exhausts only actually revved to a maximum of around 7000 – 8000 rpm and gave a smooth wide spread power output. At these revs internal vibrations were usually not high enough to froth the fuel, although fuel did use to come out of the over flow pipes. When using expansion chambers vibrations came in at different rev ranges. The introduction of the rubber-mounted body made this carb set up ideal for most tuned Lambrettas. The carb sizes of 28 – 30mm are a perfect size for stage 4 and 5 tuned kits. If used with smaller tunes the inlet port size is not large enough and the carb can not breathe correctly. We still see these large carbs fitted to standard or mild tunes, they would ideally be better fitted with the 25mm kit as suggested. MB recommend a 28mm on 175 – 195cc engines and a 30mm on 200 – 225cc engines. Jetting tends to be very similar from engine to engine. The smaller carb would tend to use a slightly smaller main jet and a weaker needle positioning.

As time went on Scooterists have matured, people didn't want open bell mouth carbs with petrol spitting back either down the panel, engine or passengers foot! MB realised the need to make cleaner running tuned scooters. The 25mm had filled in this gap but power output didn't go up as expected. The 30mm

carb size put power output up by at least 5hp over a 25mm version. If the engine and cylinder ports were done correctly then a good engine wouldn't have too much spit back! All engines do have some spit back whether it is low down setting off or at high speeds. A lot of spit back is usually caused by over jetting. Converting to Reed can help with spit back IF the tuning work is done correctly.

MB have over the last few years introduced air filters to clean up carburation. One such invention is our remote air filter, this used the GP 200 air hose with a bonded air filter, this design fits onto 30mm PHBH carbs and fits where the air box used to be. Fitting a 30mm carb and using the original air box is impossible! The remote filter just takes the place of the airbox we also offer a bolt on air filter. Today our idea has been copied by lots of Dealers! We went one step further and designed our Tea Strainer filter. This is a mesh filter and rubber that fits onto the plastic bellmouth of the carb. If using this filter you will need to jet in the carb with slightly weaker jets.

MB have for many years understood the need for filtered carbs. Yes, we have tuned thousands of Lambretta engines using open bell mouth carbs and they can be very reliable, but as time has moved on MB have been committed to helping customers keeping reliable engines.

The 28 / 30mm carb kit is an excellent carb kit for touring style engines as well as engines used every day including TS1 motors. The carb can allow engines to get well over 20hp but give good fuel economy with acceleration and speed. These kits are excellent trouble free kits, just keep a spare mounting rubber as these can fail especially if it has been over tightened in the first place.

The MB 28/30mm 150 or 200 complete carb kits, consists of:

- Carburettor
- Carb overhauled
- Jets checked and changed, pack of spare jets
- Cable choke assembly fitted
- Inlet manifold to suit your motor, mounting rubber, clips, long inlet bolt, washers and gasket
- Universal throttle cable are separate in black or grey or braided
- Tea strainer filter

28mm Carb kits for 175, 186, 190, 195, 200, 205, 210, 215, 220, 225, 230, 240, 245, 250cc With Tea strainer filter

- 28mm 186, 190, 200, 225cc for Reed engines
- 28mm 175, 186, 190, 195, 200cc
- 28mm 200, 205, 210, 215, 220, 225, 230, 240, 245, 250cc

30mm Carb kits for 175, 186, 190, 195, 200, 205, 210, 215, 220, 225, 230, 240, 245, 250cc With Tea strainer filter

- 30mm 186, 190, 200, 225cc for Reed engines

- 30mm 175, 186, 190, 195, 200cc
- 30mm 200, 205, 210, 215, 220, 225, 230, 240, 245, 250cc

30 / 32 VHSA 200 FLATSLIDE CARB KITS.

The VHSA 30 and 32mm carbs were recommended for use on either oval port or round ported cylinders in large block or small block. The 30 and 32mm VHSA use the same inlet manifold and mounting rubber as the Amal. Unfortunately Dellorto stopped production and these excellent carbs are hard to find. These carbs would fit to either an existing Amal inlet or a new inlet manifold and MB offer manifolds for both small block and large block engines. These carbs were slightly smaller compared to the Amal and larger Dellorto carbs, making it more suitable with more room within the close space between the inlet manifold and side panel. Providing these carbs were blue printed and rejetted they were excellent carbs. Dellorto also offered a 28mm version which was rarer but again was very good, these used a smaller mounting rubber the same as a PHBH 30mm.

CARBURETTOR UPDATES

Over the years technology has got better and we at MB like to stay at the forefront of this technology. I know we are working on old engines this doesn't mean we are stuck in the Sixties. We move on and want to offer the best products and conversions going, that's been Marks principle since the start of MB. MB helped introduce the flat slide Dellorto as the top of the range carb in the 90's and we used them for a number of years. But we found when using them on vibrating Lambrettas that the slide wears and can effect jetting. We personally ended up not liking the 34 – 39mm carb because of the variety of needles and needle jets available causing us a great big headache on the phone. One dealer may suggest a different combination of Main, needle and needle jets to another dealer, both may work but get a combination wrong and the carbs did not work well, usually way over jetted with spit back. When you consider the cross-sectional area of the oval bore VHSB carbs a 34mm is more like a 37 or 38mm carb and a 39mm is more like a 43mm carb, for this reason we find them over kill for road engines and their physical size was a waste of time. For this reason and a need for a better quality carb we moved onto the Mikuni TMX 35mm carb and again we helped to introduce them in the UK and we have invested a great deal of time and money into the 35mm TMX carb.

MIKUNI TMX 35MM CARBS

The Mikuni TMX 35mm carb was nothing new, it has been used on Japanese motor cross style engines for years, they were designed to give instant throttle response at all throttle openings. They are physically smaller than the VHSA 34mm yet still easy to fit, they use the same carb rubber as all Amal 28 – 34mm and the Dellorto VHSA 30 – 32mm carbs which means there is no need to change your inlet manifold or carb rubber. This carb doesn't use an adjustable needle jet (atomiser) all they have is five needles to set up the mid range making them VERY simple to set up! The TMX can be fitted to a fast stage 5 oval port cylinder 200 tune or any round cylinder tune. Because of the way they respond to throttle opening and more importantly flow air and fuel in flat out circumstances we believe this carb to be the best available

at this time. It does have it's faults; the fixed needle jet tends to wear on vibrating Lambrettas, meaning you will run rich on the mid range and you have to down size the needle settings. To cure this problem MB made a weaker than normal needle. Mikuni offer other carb sizes which have also been used on Lambretta engines the most common is the smaller 24mm TM which has been used to good effect. Others have used 27, 28, 30 and 32mm but these vary in carb mounting sizes and use different needles and atomisers, for the non standardisation we do not use the these carbs.

- Mikuni TMX Carb only
- Mikuni TMX full carb kit

We offer packs of 10 Mains, needles and idles jets.

KEIHIN PWK TYPE CARBS

Keihin carbs really are an excellent carb and the main competitor to the Mikuni in the modern motorcycle world. The PWK carb has been copied more than any other carb and there are carbs which are all very similar with interchangeable parts. These carbs are tiny comparing them to the Dellorto PHBL and PHBH range which lets us fit them into the tight spaces which the Lambretta offers us. You may also see the carbs branded as OKO, Koso or stage 6. These carbs are usually much cheaper and we believe they are incorrectly considered as an inferior carb, we disagree, they are simple and offer many parts which are very cheap to buy and these carbs are easy to set up. Some come as power jetted carbs, we do not use these, we blank them off and use them as a normal carb.

The PWK has a few down sides. No choke jet adjustment and no float needle valve adjustment, slides would wear and parts would break! These carbs fit onto existing Dellorto manifolds and can use the same carb rubber. These carbs are machined wrong inside where the fuel comes from the tank into the needle valve, the only cure is a blue print conversion and a strip and rebuild. Occasionally the float needs bending a little to let more fuel through, the symptom for this is like going on reserve under load when you know the tank is full.

BGM offer packs of 10 needles, main jets and idle jets to make life easier to set up these carbs.

CARBURETTOR SIZES TO SUIT LEVELS OF TUNING

Carb sizes vary for different applications. MB usually set up a tuned cylinder to suit a carb size and exhaust being used, basically the larger the carb the quicker your top end power, at the expense of losing some low down power!

- Oval port Stage 2 tune will require from 18mm – 25mm carbs
- Oval port Stage 3 tune will require from 22mm – 26mm carbs
- Oval port Stage 4 tune will require from 26mm – 30mm carbs
- Oval port Stage 5 tune will require from 30mm – 34mm carbs
- Oval port Stage 6 tune will require from 34mm – 38mm carbs

- Round port Stage 1 – 4 tune will require from 28mm – 38mm carbs

IDENTIFYING A TWO STROKE CARBURETTOR

All information previously given was presuming the carb was a two-stroke type carb.

If you have already an existing carb kit and is not new then you must identify that carb to make sure it is OK for your engines application. To identify a two-stroke carb look down the main carb hole. Where the needle comes out as the slide is raised, a brass spray tube should stick up protruding into the main carb hole, if the brass spray tube is flat to the carb casting then the carb is a four stroke type of carb. Stay clear of this type of carb, it is possible to jet them in but would require a total different set of jets. Dellorto have introduced a VHST 26 and 28mm carb, these are excellent carbs and have been used to good effect on one of our Auto racers, these don't have a stick up spray tube but are still 2-stroke carbs so it is not always a hardened fast rule. Sometimes these spray tubes can vary in height from around 4 – 8mm.

A word of warning ! MB only recommend rubber mounted carbs solid types can cause varying jetting changes due from fuel frothing in the float bowl at various rev ranges.

A word of warning ! Chrome plated carbs cause jetting problems MB do not recommend their use.

MOUNTING RUBBERS

Presuming that all carbs used are going to be rubber mounted then some care should be taken to use the correct rubber.

- 22 – 25mm PHBL Dellortos have two types of mountings, both being the short type, the early type has one internal locating rib our MB 200 inlet manifolds were manufactured to use this type, the rib goes onto the carb, we now manufacture this carb mounting rubber. The plan section goes on to the manifold. The later mount has two internal ribs, if using this type on our 200 manifold then a groove needs filing into the manifold (only on the 200cc type) our MB 150 inlet manifold type has the groove. Don't worry that our inlet rubbers don't have the locating groove it works no problem
- 22 – 26mm MK2 Amals have their own rubber mount. This is the same as a 28mm VHSA Dellorto
- 26 – 30mm PHBH Dellorto have their own rubber mount, this also fits the PWK range, we manufacture this carb mounting rubber
- 28 – 34mm MK2 Amals and 30 – 32mm VSHA Dellortos use the same mount, we manufacture this carb mounting rubber
- 34 – 39mm VSHB have two types of mounts, one has a single internal rib both sides, the other has two internal ribs, try to fit the correct type but the single rib type fits both model carbs.
- 34 – 38mm VSHB flat slide carbs have step down mounting rubbers available that fit the carb and is stepped down to fit an Amal 34mm type

mount

Fit the mount to a clean dry carb and inlet manifold ends, use the wide type jubilee clips, don't over tighten it will split the rubber! Mounts tend to split anyway so keep a spare. A split or worn mount will allow air to be sucked in causing high revs at tick over and possibly worse a damaged piston. Internal locating ribs and internal holes can be trimmed with a sharp knife if need be to make a rubber fit, like the Dellorto 2 groove mount.

The full article on Carb Mounting rubbers can be read [here](#)

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