

Buyers Guide & Check List & Judson F.A.Qs.

BUYING A USED JUDSON.

Looking for a bargain ?.....Aren't we all.

A few years ago it seemed you could still find reasonably priced used Judson Superchargers. That was then, now everybody seems to be dusting off the tired old supercharger that has sat in a corner of the workshop for the past 40 years. Time to make a killing at **your** expense!

You only have to watch EBay for a couple of weeks to realise people are only too ready to pay a lot of money on the strength of a poor quality picture. Those that don't sell seem to be the top quality ones with a high reserve price, I find that surprising.

To prepare the ground before even thinking about buying you have to do some research. Do you know what components go to make up a complete kit for your particular model?.... If not you can find a check list following this item.

So what should you pay for a used Judson Supercharger? I don't think it's any secret that a properly restored complete kit, from one of our recommended restorers will be \$2500-3000 (prices for a VW kit). Not cheap but what you do get for your money is a near perfect supercharger, both mechanically and cosmetically. All the component parts are included. So faced with a poor quality picture of a shabby Judson Supercharger and an asking price of \$1500 you might just be tempted but if you're buying over the internet there are a lot of questions to be asked.

Q1. Could you itemise all the components to be included in the sale? It's important to know how much of the full kit is missing. 3 or 4 missing parts can add considerably to your bill.

Q2. Could you send me good quality pictures of all the components? If you're not sure you are getting the genuine Judson parts ask us. That's what we're here for. They sometimes tell you it has an aircleaner with the kit but if it isn't the genuine alloy cleaner it will cost you another \$225 to replace it.

Q3. Have you opened the supercharger to check the condition of the internal components?

Nine times out of ten they will say no but it turns freely. This tells you absolutely nothing about the condition of the vanes (\$120 to replace) or the rotor (\$675 to replace). The profile of the four slots, (that house the vanes in the rotor) is all important. They should be parallel when viewed from the ends with a minimum of flaring due to wear.

If you have all the information you've asked for from the seller you can now total the cost of all the missing pieces, plus the cost of honing the chamber, replacing the vanes, bearings and seals (recommended for most used units) and add it to the asking price of the supercharger. Then you can work out how much you are saving by not buying from George or Alejandro. The difference will help you decide to do it yourself or to contact our restorer friends.

I know this sounds like an advert for our two established restorers, it's not, it's a realistic statement of the options that face you. Whatever your decision I have a feeling you'll be using their services to provide some of the missing parts.

The basic lesson in buying a used Judson Supercharger; Know your subject

VW Model Check List

Print out and take when viewing

<u>COMPONENT</u>	Type 1	Type 2	Type 24	Check
1. Supercharger body	Yes	Yes	Yes	
2. Crankshaft pulley	Double	Single	Single	
3. Air cleaner assembly (alloy)	Yes	Yes	Yes	
4. Generator flange	Yes	Yes	Yes	
5. Supercharger support	Yes	Yes	Yes	

6. Drive belt(s)	2	1	1	
7. Oiler inc. support brackets (2), screws (4) and oil line	Yes	Yes	Yes	
8. Main gaskets (blower to inlet manifold)	3	3	1	
9. Throttle rod	Yes	Yes	Yes	
10. Carburettor control arm	Yes	No	No	
11. Carburettor studs	2	2	2	
12. Supercharger studs	2	2	2	
13. Carburettor jets (may not be numbered)	140*	135**	135**	
14. Fuel pump spring	Yes	No	No	
15. Choke wire (manual choke carbs only)	Yes	No	No	
16. Carburettor spacer (alloy)	No	Yes	Yes	
17. Windshield decal	Yes	Yes	Yes	
18. Instruction leaflets	Yes	Yes	Yes	

* Air correction jet. ** Main jet.



If you find as complete a Type 2 Judson kit as this you'll be very lucky (photo: Rinie Roodbeen)

Frequently Asked Questions

These are the questions most often asked by newcomers. Most of the answers can be found elsewhere on this website but to save you time searching for them, your accommodating friends here at the VW Judson Register have laid out a few of them in this convenient section.

Q. I have a Type I Judson (twin belts), can I fit it to my '63 34/40hp Beetle?

A. No. I'm afraid the two types of Judson supercharger are not interchangeable. The reason is that the 30/36hp engine block is smaller than the 34/40hp unit. To accommodate the difference in size Judson moved the supercharger outlet port, (that sits on the VW inlet manifold) back on the Type II so that the compressor sits further forward, thus aligning with the crankshaft pulley. If you sit the wrong supercharger on the wrong engine you'll find there's no way the pulleys will line up. A solution? Advertise a swap in The Samba Classifieds.

Q. My Judson kit arrived without the required carburettor jet. What size do I need?

A. If you're running a Solex 28 PCI on a pre Aug '60 30/36hp you'll need a 140 air correction jet, (located in the centre of the choke tube underneath the choke butterfly). You should check that the main jet (the

large brass nut located under the carburettor bowl) is a Solex 120 or 122.5. If you have a 34/40hp engine with the Type II supercharger you'll have to change the main jet to a Solex 135.

Q. I need a drive belt for my Type II Judson. What size should I ask for?

A. Both the Type I and II (without the idler wheel) use the same sized belts, Gates No. 6267. For the twin belted Type I buy your belts in matched pairs. It's a false economy to buy a single belt if one has broken as the remaining belt will have stretched during its lifetime and will not match the new one.

If you have trouble finding the Gates belt the same belt is used on the Mercedes 380se coolant pump from 75-86, (merc part no A0099975292) the size is 10x988.

Q. Can I fit a Judson Supercharger to my 1500/1600cc VW engine?

A. The Judson was originally designed to be used with the 36 and 40hp VW motors but will also fit the later 1300 unit. Will it fit a 1500/1600? Yes the Judson Type2 (single belt) will fit the 1500/1600 as the engine casing is the same as the 1300. It will give extra performance but the unit has to be "overdriven" (i.e. turned faster by using a smaller blower pulley) to produce this required performance. On the 1600 engine the stock 34pict carb will not fit the Judson so the 30pict (standard on the 1500) has to be used in its place. You will also need to replace the 1600dp manifold with one from a 1300dp. You will also have to fit a larger main carburettor jet.

Having said that you should realise there is a downside to "overdriving" the unit and that is extra heat is generated.

Bearing this in mind we can't recommend fitting a VW Judson model to the 1600dp engine as it requires to be "overdriven" just that bit more. In a warm climate you will very soon be overheating your engine.

Q. I have just bought an incomplete Judson supercharger, is there anywhere I can find the missing components?

A. Yes, you have two options open to you. You can advertise for the missing parts here in The Samba Classifieds or you can contact one of the specialist restorers. George Folchi (gbfolchi@yahoo.com) Alejandro Martin (almar9@hotmail.com) or Ricardo Deisernia (<http://www.splitpartsunlimited.com/index.php>)

Q. I have a kit with a few missing parts and I think I can make them. Is there anywhere I can find engineers drawings with the exact measurements?

A. I'm afraid we have no official blueprints of the original components. We do have restorers who can supply you with missing parts but it would be unrealistic to ask them to supply specifications of specific parts. Your best bet is to find somebody who has a full kit and ask to take measurements from that.

Q. Is there an alternative to Marvel Mystery Oil as it is hard to find in this part of the world?

A. Yes, in fact you'll find on Judson's own fitting instructions they don't actually name Marvel Oil as the recommended lubricant. Marvel Oil is an upper cylinder lubricant that has been chlorinated...meaning that the oil has "creep and penetration". If you use a replacement for Marvel you must ensure it has the "creep and penetration" characteristics specific to an upper cylinder lubricant. This is necessary to lubricate the end bearings in the supercharger, the vanes, cylinder walls and valve stems.. You'll find that some single grade 10W motor oil will fit the bill. If you live in the U.K. Morris Oils make a 10W that is said to be identical to Marvel Oil in all but colour, ask for "Morris ring-free XHD 10W". Many also use Stihl "HP two-stroke engine oil" (www.stihl.com) this has the added advantage of being red in colour like Marvel oil. If in doubt stick to Marvel, it's worth paying the extra to protect your Judson and your flat four engine. For those in Europe you'll find BBT in Belgium can usually supply Marvel Oil and it is available virtually everywhere in the U.S.

Q. I'm told that supercharging a 30/36hp Beetle will quickly ruin the crankshaft and main bearings, is this true?

A. No. Although the 30/36hp crankshaft has a reputation of being comparatively fragile the extra stresses placed on it are minimal. If you keep within the recommended rev limits and change up at the normal points the 30hp will take it in it's stride. If you do hang on to 2nd and 3rd a bit longer it will do no

damage. If you keep the engine singing rather than howling you'll find reliability unimpaired and a good deal more fun to drive.