

## **Before You Start**

### **The Hardest Part of the Whole Job!**

Building your own motorcycle is a tall order. One of the toughest parts of the job is the planning and decision making that come before you buy any parts or turn any wrenches. In some ways it's easier to buy your ride from a dealer. At least that way you only get so many choices. A limited number of chassis are available, all equipped with the same basic engine (with fuel injection available on some models). Sure there are options in terms of paint and accessories, but the total number of decisions you have to make is limited. A bike built from scratch on the other hand is kind of overwhelming, simply because there are so many possibilities. You are no longer limited by the catalogue from Milwaukee. While chassis selection usually falls into two categories, the twin shock or softail® style, the number of each type available is large and growing. And many manufacturers allow you to modify the rake and stretch, and a wide frame for that fat tyre in the back. Right side drive is now possible with the correct combination of frame/wheel/ transmission. Once you decide on the frame style and dimensions the next big choice is the engine. How many cubes do you want, fed by which carburettor, breathing into which set of heads? What's the best way to ensure that the carb you choose will work correctly with the camshaft, heads and exhaust? More decisions and each one as important as the one before.

### **Designing the New Bike**

You aren't just building a machine, you're designing a complete motorcycle. Start with a budget figure. Be realistic about what it will cost and how much you have to spend. Avoid the trap of over-optimism because it leads to bikes that don't get finished or don't get finished on time. Next determine how the bike will be used. Big stroker motors sound great and make gobs of torque but don't have the smoothness and longevity of a mildly souped up 80 cubic inch V-Twin.

Last but not least, determine the style for the new bike. Which frame, equipped with which fenders and tank will provide the look you're after. What colour will the new bike be and who will do the final paintwork. There is a tendency to skimp on the paint job and spending that 'extra' money on hardware. Before you decide to be penny wise and pound foolish consider that the paint is the one thing that people immediately see when they view your bike. It's the biggest, most visible part of your new design. They might not notice the button head bolts or the billet engine cases, but everyone will notice the paint job.

### **A Matter of Style**

After you've been brutally honest with yourself about how you're going to use the bike and how much money you can spend, you need to consider style. What exactly do you want this machine to look like? Is nostalgia your goal or something more new-wave? Professional bike builders send potential customers home with a stack of magazines and orders to, "mark all the bikes you really like." You may also have your own photo-file of favourite bikes. You might even want to build a bike very close to one of the new models from Milwaukee. Whatever the case, you need a picture or detailed sketch of what the new bike will look like. Unless you've built bikes before, it's dangerous to just "let it happen." The plans and sketches should be detailed - you don't need a fifteen thousand pound/twenty five thousand dollar unplanned/unaffordable/unexpected surprise. Finally, although I have been talking about building a custom bike, many of the general principles also apply to customising a stock bike.

### **SVA – TUV – MOT**

SVA or Single Vehicle Approval is a newly introduced test for built up motorcycles (custom bikes) in the UK. This test has certain requirements which you should be aware of prior to commencing with your custom bike build. Please email me for a comprehensive guide to these regulations. Make sure you complete your bike within these regulations. If you don't, you run the risk of having a very costly and useless motorcycle as a garage ornament. See at the end of this section how to obtain this free guide to these regulations.

**TUV** This German inspired testing system is now being used throughout Europe as a means of ensuring environmental regulations are followed in respect of engine and exhaust systems and that major components such as frames/swingarms are strong enough for the job they were designed to do. This is a safety aspect which is very helpful to custom bike builders and owners who are rightly concerned their new custom bike won't fall apart as they corner a bend in excess of 100mph and send them on their way to heaven or permanent disability. All of these frames and swingarm kits in this catalogue have the TUV certification.

**MOT** This is an annual test in the UK which motorcycles have to undergo as an annual 'health check' of their motorcycle. If you are unsure how these test requirements affect you, contact your nearest test centre. Many countries have a similar testing system, ensuring bikes are roadworthy and safe over the lifetime of the motorcycle.

### **Other Tests**

Most countries have some form of regulations which help provide a basis for ensuring any custom bike build results in a safe and legal motorcycle. Please find out what these are before you start your build. This will help you build a safer motorcycle and prevent financial loss if your custom build is prevented from being used on the road.

### **Custom Bike Parts Checklist**

When you want to build a custom, you want to be sure you have an accurate cost for creating the bike of your dreams. You will need to budget for this cost. You don't want to achieve only a part build and then have to sell the parts under cost in order for you to get some of your money back. We have such a list which comes with useful hints supplied on a Microsoft Excel spreadsheet and has columns to put the cost in and formulae included to allow automatic adding up and totalling of cost. If when using this checklist you have suggestions to improve it, please email them to us and we will add it to the original for the ultimate benefit of our biking colleagues. Example opposite is a small section of Parts checklist.