



Getting it straight

The well ordered premises of Maidstone Motoliner contain an armoury of equipment to sort out the motorcycling misfortunes of bent frames and wheels. Report: Alan Turner

Ray Palmer has been straightening crash-damaged motorcycles for more years than he can remember. With son Tommy joining the business some 20 years ago, they trade as Maidstone Motoliner on the outskirts of Kent's county town. "What we need from the dealer or owner is a rolling chassis with an engine," explains Tommy. The steering stem is checked with an inclinometer, which gives some idea of the problems. The reading can be checked against the specified

figures for the bike. Damage can be confined purely to the fork assembly and, if this is repairable, it will be done in house. With the forks removed, the bike is installed in a Motoliner jig. This picks up various datum points, such as the rear wheel spindle slots and the swinging arm pivot. How well the bike fits into the jig is a further check on the damage. Once the problems are defined, it is then time to consider the solutions. Samefa, a Swedish manufacturer, makes the Motoliner jigs from some hefty box-section steel. This supports

the frame ready for the subtle application of pressure using a Porta Power tool, which can exert up to four tons of corrective force. This is the part of the procedure where the experience comes in – to decide exactly how much pressure should be used, and where it should be applied. Sometimes, a little subtle heat may be necessary. "We call it taking the chill off," Ray explains. Anything flammable needs to be removed before this process. When the remedial work is completed, the frame, sub-frame and

swinging arm will be back to where the designer intended, which is not always achieved by the factory. Recently, three brand new, unused frames from a major manufacturer were checked and one required straightening! From the check, it is also possible to advise the customer on the accuracy of the spindle alignment marks on the swinging arm. While there are some dramatic rescues, the Palmers cannot achieve the impossible. "We don't touch cracked wheels," says Tommy. ➔



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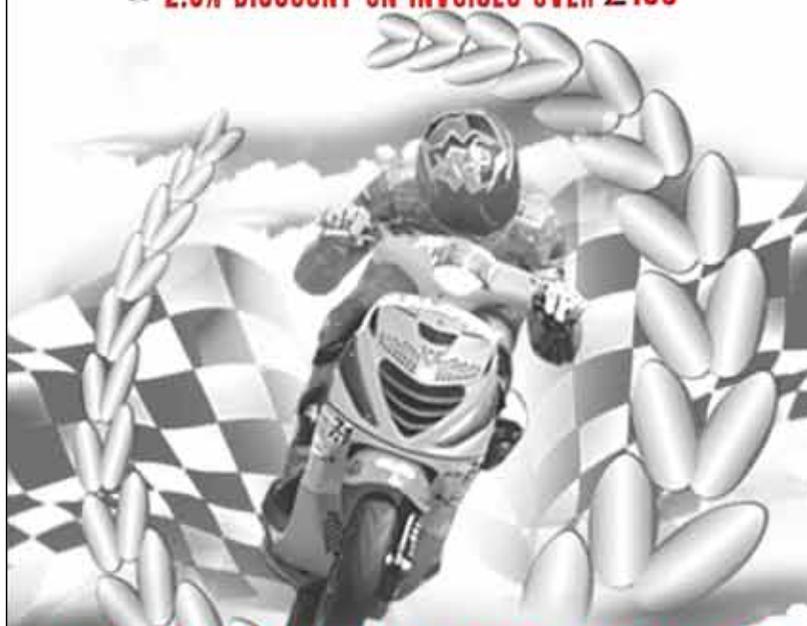
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Top: Ray (left) and son Tommy Palmer with a recently restored 50cc Itom Mk8. **Above:** Tommy clamping a frame in one of the jigs prior to straightening. **Left:** An Inclinometer gives a preliminary indication of the extent of damage to the frame

"Same with frames – unless the crack is on a weld."

Methods have had to be evolved over the years. When the business started, it was dealing with British and Japanese frames constructed almost exclusively of steel tubing. Next, came the first generation of extruded aluminium frames, and now more bikes are based on castings.

While the latest developments are more difficult to repair, the trade-off is that they are more difficult to bend in the first place. Over the same period wheel repair methods have also become more refined.

At the time of *BDN's* visit, one of the Motoliner jigs contained a graphic example of the strength of modern frames. A race-track incident involving a Honda CBR600 had ended with an impact bad enough to snap a pair of upside-down forks – yet the frame remained perfectly true.

An earlier incarnation of the business started off with a home-made jig, but this was not regarded as acceptable by the insurance companies, so a commitment was made by purchasing one of the first Motoliner jigs in the country. As bike design has changed, the jig has been adapted to cater for later models. Some years ago, a second jig was purchased. This is used for the increasing business generated by the classic market.

"We get busier every year," Tommy says. "More people want bikes

repaired and there are fewer people doing it. We get wheels, forks and bikes from all over the country. The private customers we deal with are usually building bikes for racers. The rest of our business comes from the trade."

If you'll forgive the pun, the Palmers are straight people with whom you can do business.

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TIMELINE

- 1975** Ray Palmer sets up Molray in partnership with 50cc racer Maurice Thomas, who attends to repair and building of spoked wheels.
- 1977** Molray installs its first Motoliner – insisted on by insurance companies. Develops methods for repairing cast wheels which are now being fitted as OE to many models.
- 1987** Partnership with Thomas dissolves. Palmer sets up Maidstone Motoliner next door in Dover Street, Maidstone.
- 1990** Moves to current premises in Aylesford.
- 1991** Palmer joined by son Tommy.
- 2000** Acquires second Motoliner jig to cater for classic bikes.