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Vol. 19 No. 6

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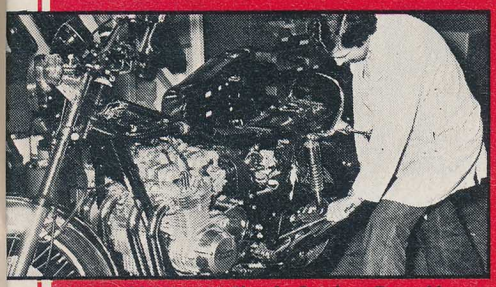
MARCH



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EMAP National Publications Ltd., Editorial and Advertising office, Aqua House, London Road Peterborough PE2 8AQ. Telephone: 0733 63100. Northern Advertising office: 44 Station Road, Cheadle Hulme, Cheshire. Telephone: 061-486 0541. Circulation: Park House, Park Road, Peterborough PE1 2TS. Telephone: 0733 63100. Promotions: 21 Church Walk, Peterborough PE1 2TS. Telephone: 0733 63100. Annual Subscription rate: £5.80 (or the equivalent in local currency in the case of overseas subscriptions). Remittances should be made payable to Motor Cycle Mechanics and should be sent to MCM Subscription Department, Park House, 117 Park Road, Peterborough PE1 2TS.

ABC CERTIFIED SALE, JULY-DECEMBER 1976, 111,692.

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

BULLET-PROOF

FRANK MELLING RIDES A WORKS ISDT JAWA

IF EVER a bike offered an absolute guarantee of success, it is the ISDT Jawa. Having an unbroken domination of the ISDT until 1975, when Zundapp and some very bad luck put paid to their chances, the Czechs have proved beyond doubt that they have a total understanding of what it takes to make a successful ISDT machine.

Normally, if a company has been singularly successful in some form of motorcycle sport, it is only too anxious to exploit its success commercially and one would expect the entry list for every enduro to be completely dominated by Jawa machines. As any competition rider knows, this isn't the case. And the reason is perfectly simple, ISDT Jawas are hand-built one at a time in the Jawa competition shop.

In Britain we are fortunate because there are a number of Jawas being raced since it has been Skoda's policy to sell off the machines which were used in the British Trophy and Vase teams after the ISDT. This has meant that Jawa's publicity has been helped by all the "old" bikes regularly winning events here, in addition to anything that they might achieve in the ISDT.

The bike we tested came to be released this way and, for a mere £600, Cheshire enthusiast Mel Cranmer came into possession of an almost unused ex-works Jawa.

All the British team bikes for the 1975 ISDT were built in the Spring of that year and are identical to the 1974 machines used by the Czech National teams but slightly inferior to the very latest six-speed bikes brought into action for the first time last year and reserved exclusively for the home country.

Mel Cranmer's bike was to have been ridden by Ted Thompson in the Vase Team but owing to the sudden illness of one of the Trophy Team members, Thompson was promoted to the number one team and the bike was used for the rest of the week by Ken Heanes, the 1975 British team manager. Since Heanes was interested only in reconnaissance jaunts — although very fast ones no doubt, knowing his riding ability — the bike was virtually as new, by ISDT standards.

While Mel is a very competent enduro rider, he doesn't claim to be an ISDT-type athlete so when I came to ride it, it was in perfect condition and gave a good idea of what a real factory Jawa could do. The bike's previous history also explains why, as I will relate, the front brake drum was oval. Apparently, one of the British team members became jittery about loose spokes just before the final weigh-in. In a bout of mechanical fervour, he over-tightened the spokes on the front wheel, causing the drum to become oval. When the Czechs heard about the trouble, they offered to skim the hub but since the bike was only going to be used for running about, Ken Heanes declined the offer. Consequently, when Mel purchased the bike, the brake was still oval.

Without beating around the bush the fairest description of the Jawa is perfect and there is little point in trying to hide the fact that this is one of the very few motorcycles which is flawless. It is quick, easy to ride, very reliable, starts easily and steers like a dream. In fact, it is years ahead of anything else I have ridden in the Enduro world, except Suzuki's new PE 250.

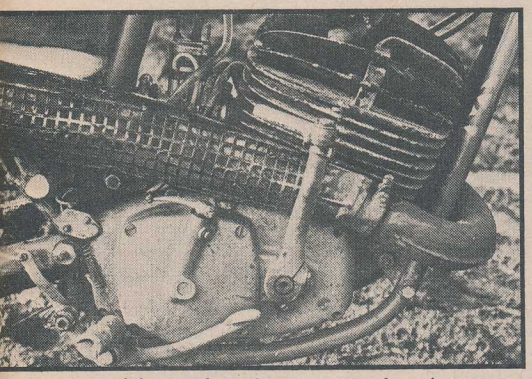
The strange thing about the Jawa is that it does not feel inherently right. On the contrary, the riding position, whilst not positively wrong, is not very reassuring. However, Jawa are not in business to make bikes which

look or feel right, rather the Czech engineers are concerned with winning and in the most convincing way.

The kick-start is mounted on the right and has a forward action, apparently all wrong, until it is used. Then the soundness of the design becomes apparent. Most riders are biased to their right (i.e. they are right-handed and kick naturally with their right leg). Similarly, the forward kick, when one analyses it, is both a natural and a strong one. Hence, the bike starts easily and with the minimum of effort.

Our bike was the 250cc model and a racing engine of this size is not easy to silence, particularly if it is to give maximum performance. The Czechs, then, have done a good job in keeping the decibels down to a tolerable level and it is as noisy, or quiet, depending on your point of view, as a KTM or Bultaco Frontera. The silencer is large and high-mounted and in addition to being sufficiently strong to permit the bike to be dragged about, it is also neatly tucked in and does not interfere with riding, either stood up or sat down. While it is not the prettiest piece of sheet metal work it is highly effective and totally bullet-proof — a microcosm of the bike itself.

As I have already mentioned, my initial reaction to the Jawa was not ecstatic. Riding position is quite unlike that of any other bike and this means that even for someone like



Powerful enough to give over 100mph performance, the Jawa 246cc engine produces a claimed 26bhp at 6,500rpm.

me, who rides dozens of different machines each year, there is a sense of unfamiliarity. This sensation is accentuated by the feel of the bike. For example, the clutch feels as if it is disconnected, so light is its action. To say that it could be operated by two fingers is an exaggeration, it could be released by the strength of the average rider's little finger alone. The action is fierce and with a short throw — in other words, a racing clutch — but it could be used all day long without fatigue. With an ISDT rider at the helm, there will never be any need to resort to clutchless gear changes.

If you think that Jawa have taken all this trouble with the clutch in order to compensate for a weak gear box, then you would be wrong. The gear box on the bike is simply the best on any motorcycle I have ever encountered. The change was very light — just a nudge from the boot would engage the next higher or lower pinion — and yet the indexing was sufficiently positive to ensure that the chosen ratio was never lost, even under hard acceleration in the lower gears.

The clutch itself is a seven plate all-steel unit which lives in its own dust and dirt-free compartment completely independent of the rest of the primary transmission. If the unthinkable happened, and the clutch breaks it would be fast and easy to work on it at the side of the road.

Apart from road testing for Motor Cycle Mechanics, I have been involved in development work for a number of manufacturers and can say from bitter experience that things like choosing gear ratios, suspension units and the like, are sometimes impossible. Not for the Czechs, though, they have managed to pick five ratios which are so uncannily accurate as to be almost unbelievable. First gear is low enough for crawling over fallen riders in a narrow gulley or footslogging through a boulder strewn ravine, while top gear permits 100mph on the flat. With a slight downhill run, our bike was timed at 105mph in the Isle of Man which is a respectable performance when one considers that the best production road racing 250s are only doing 112mph in the same place. Equally impressive, is that the spread of ratios is perfectly chosen to carry just the maximum spread without losing acceleration.

The Jawa is deceptively fast with an effortless loping gait which is the blueprint for any successful ISDT bike. One is not fully aware how fast the Jawa is travelling until the time comes to decelerate, for not only is the power innocuous, so too is the handling. On one set of ripples, dotted with rocks, and always a problem since it is approached blind and a tree has to be negotiated half way through, I was having a mental debate as to whether the Jawa handled badly, or just felt awkward. I dropped down a gear, to third, without thinking and quite unconsciously flicked the Jawa over the ripples and around the tree. It didn't waver or wag its head but tracked straight and true. Some 200 yards later, the importance of what had happened finally hit me. Not only had I just gone through the section faster than on any other bike I had previously ridden but the manoeuvre had been executed with far less conscious effort.

FASTER

It's very easy to get lyrical about the Jawa since there is nothing it doesn't do superbly well. Next day, I tried it round a moto cross track and also on some trials sections. Out on the test circuit, it was a second a lap faster than the 250GP CZ I tested in the December 1975 MCM—a time which is all the more impressive if one takes into account that the CZ had the benefit of a dry summer track. Ten minutes later, I had the Jawa on some trials sections and 5mph plonking in first gear, just like a Bultaco Sherpa. If there was a weakness in the Jawa's defences, I don't know what it was, for everything I tried was dealt with successfully, if not brilliantly.

Ken Heanes, lamentably the now deposed British team manager, says that the 250 lacks the immediate surge of the bigger bikes in the lower rev. ranges and I suppose this is true, since it is far more lively when revved. However, the bike only has a swept volume of 246cc and when the fact that the engine peaks at 7,500 rpm is taken into account, it can be seen that the Jawa is not a screamer, by any stretch of the imagination.

How have the Czechs achieved this near miracle of a motorcycle?

Two things are immediately apparent. First, the Jawa is an exceptionally clever motorcycle, despite the fact that it is a simple piston-port two-stroke with petroil lubrication. Second, the Czechs have gone to great lengths to ensure that it is totally reliable.

The frame is a good example of these two characteristics. The main construction is duplex, being formed from 1¼in OD tubes. However, a unique feature (one that is the subject of a Jawa patent) is the steering head tube which fits into slots milled inside the frame tubes. This means that a far greater area of metal supports the steering head than would otherwise be the case so the design is flex free.

The motor shows the same sort of care. Both outer cases are cast in electron, to keep weight down to a minimum, while the one-piece crankcase is made of aluminium. Obviously, any crankcase seal is vulnerable on a two-stroke, particularly in an endurance event like the ISDT and to eliminate this problem the Czechs simply make the crankcase in one piece — making it much stronger in the process — and facilitated the fitting of the crankshaft by a large tapered access plate on the left-hand side of the engine. This has a much smaller periphery to seal, and yet offers a larger contact area than a conventional design.

SPECIFICATION

Engine: Single cylinder two-stroke, piston port induction. Magnesium engine cases. One-piece crankcase
Lubrication: 4 per cent oil in petrol
Bore and Stroke: 70mm × 64mm
Swept volume: 246cc
Carburettor: 34mm Bing. Paper air filter element
Compression ratio: 11:1
BHP: 26 at 6,500rpm. Max torque at 6,000rpm
Max. speed: 100mph, plus
Overall length: 84in
Maximum width: 33¼in
Ground clearance: 8½in
Wheel base: 56in
Ready to race weight: Approx. 270lb
Tyres: 300 × 21 front; 4.20 × 18 Barum ISDT rear
Brake size: front and rear: 7¼ in by 1in
Chain size: ⅝in × ¼in. Fully enclosed with magnesium rear sprocket fairing
Tank size: 2.5 gallons
Frame: all duplex construction with patented Jawa headstock

Both barrel and head are cast in alloy and the barrel carries an iron liner in which runs a two-ring piston, the rings being wire-drawn. For optimum performance, one ring would be sufficient, but to finish an ISDT, the extra security a second ring gives is vital. Firing the motor is one of two spark plugs fired from two independent contact breakers, each having its own coil and condenser. The motor runs equally well on either plug and the spare one can be switched in at a moment's notice.

It is interesting to see that contact breakers are still used since this reflects Jawa's belief that this system is inherently superior for engine revs of less than 8,000 since the spark delivery at very low revs is superior to a magnetic breaker. Although this belief is confirmed by other companies, such as Bultaco, I cannot agree with it. My Crooks Suzuki, with its PEI electronic ignition gives a superb spark at almost zero revs and never suffers from poor ignition.

The cylinder head also carries a decompressor for use on steep, slippery descents where the Jawa's 10:1 c.r. might prove too much for the rear wheel.