

Laverda 1000 Jarama

The Orphan From Italy Has A New American Distributor And The Credentials Of A Lamborghini

It's difficult to imagine that a motorcycle weighing in at over 550 pounds soaking wet could be as nimble as a ballerina. It's also amazing how fast the big machine accelerates, and then stops from its maximum speed of nearly 130 mph.

Laverda isn't a new name to most American motorcycle enthusiasts. The first 650cc twin-cylinder Laverdas came to America with American Eagle emblazoned across the gas tank and the rear of the seat. That was late in 1969, but the dream of Jack McCormack and Walt Fulton, now the owners of JacWal Corporation, ended in financial disaster in 1971. Not because of the Laverda/Eagles. They were dependable machines, though a little heavy and not too sporty at first. Walt Fulton even managed to convince the Italians at Laverda in Italy to build a 750cc twin for the American market, and had more than a little to do with design ideas and eventual production of the 1000cc triple.

Continental Motorcycles, Inc., began distributing Laverdas in 1974 but their distribution ceased after little more than a year. Laverdas weren't imported seriously again until John Taylor, founder of Cemoto East Importing Co. (Bultaco) and later Yankee Motor Co. (Ossa) elected to import them just a few months ago. John bought all the spares and a few machines from a sub-distributor in Georgia and is now amassing a huge

inventory of spare parts to fill warehouses on both coasts.

The 1000 is an expensive machine, but what fine thoroughbred piece of equipment built in Italy isn't? *Motorcyclist's* former Executive Editor, the late Bob Greene, tested one of the early 1000cc Laverdas imported into the U.S. in 1974. He praised the execution of the designers' plans and the brilliance of many of the ideas, some obviously borrowing from the *old* to benefit the new.

Although the Laverda 650 and 750cc engines looked very much like the Honda Hawks of the mid-to-late 1960s, both inside and out, the 1000 Jarama appears to have been strongly influenced by the BSA/Triumph 750cc triples on the outside. There are many parts inside that resemble other popular machines: Kawasaki Z-1 type valve adjustment and cam drive, a triple-row primary chain like the BSA/Triumphs, an electric starter like many modern machines and a beautifully machined crankshaft

which rides in no less than six main bearings, both ball and roller. The connecting rod big-ends also feature roller bearings.

Peculiar is the spacing between the crank throws, however. Instead of being equidistant with 120 degrees between them, the two outer pistons are at top dead center while the center piston is at bottom dead center. This arrangement gives the Jarama a distinctly peculiar exhaust note, al-



**STREET
TEST**

most like a four-cylinder machine with one spark plug wire disconnected. But the power delivery is incredibly smooth and vibration is very low, or at least the high-frequency type we are most discomforted by. What vibration does get through the footpegs and adjustable handlebars is rather soothing, like a vibro-massage chair. The Laverda engineers felt that 120-degree crank throw spacing produced more of those high-frequency vibrations than the crank layout they chose, and they're right.

Laverda's chief products are pieces of agricultural equipment, sought after throughout Europe for their quality, flexibility and dependability. The motorcycle division is

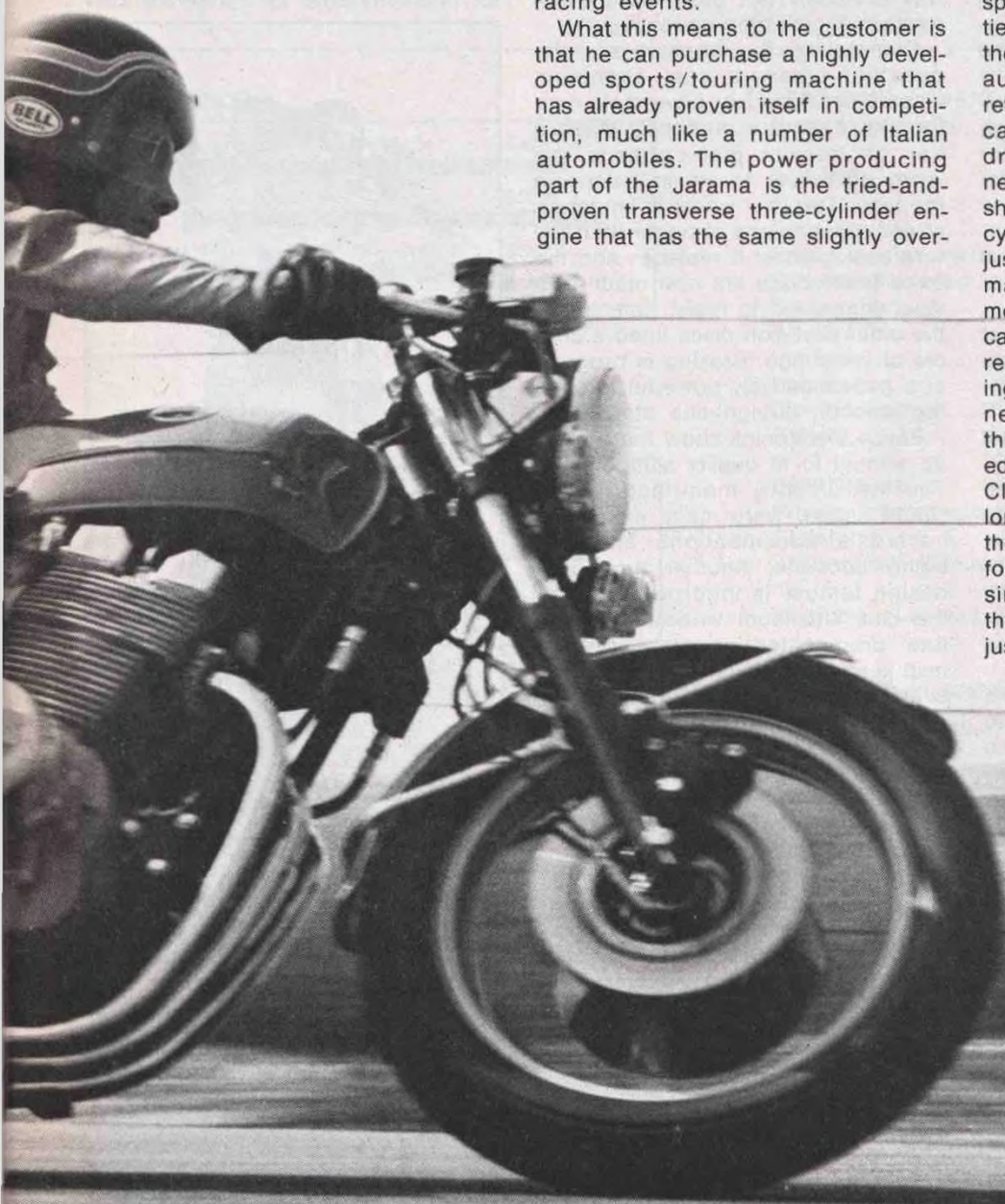
rather small by comparison but is headed by a group of enthusiasts who have continued to build fine motorcycles without financial aid from the Italian government. Chief designer of the 1000, Lucciano Zen, aided by a competent staff of engineers, has created a large capacity sports machine that was referred to as "the Lamborghini of Italian motorcycles" by the late Bob Greene. Technologically up-to-date, the Laverda 1000 was a force to be reckoned with in long-distance production racing events until just recently. Somewhat heavy in standard trim, the big machines responded well to engine tuning and weight reduction, and are still successful in local production racing events.

What this means to the customer is that he can purchase a highly developed sports/touring machine that has already proven itself in competition, much like a number of Italian automobiles. The power producing part of the Jarama is the tried-and-proven transverse three-cylinder engine that has the same slightly over-

square bore/stroke dimensions as the late BSA A-65 twins—75 x 74mm. Pistons are conventional three-ring items that provide a compression ratio of 9.0:1; not quite low enough for regular gasoline... premium fuel is required. Power from the crankshaft is transmitted to the 10-plate wet clutch via a three-row primary chain. An adjustable slipper-type chain tensioner requires adjustment only infrequently after the initial wear of the chain has occurred.

An engine with a preponderance of ball and roller bearings needs a good flow of oil, as much for cooling purposes as for lubrication. The large gear-type oil pump is driven by a gear on the inside of the engine sprocket and circulates large quantities of oil at low pressure through the engine, then directs it through an automotive-type oil cooler before it returns to the sump. Twin overhead camshafts with large sprockets are driven by a single-row chain connected to a sprocket on the crankshaft between the No. 2 and No. 3 cylinders and it also maintains its adjustment for a long time. Valve lash maintenance is accomplished by measuring the clearance between the cam lobes and cam followers, then removing the camshafts and measuring the thickness of the spacers beneath the cam followers. Different-thickness spacers are then substituted and the camshafts are reinstalled. Clearances will remain intact for a long time because the entire width of the cam lobes rubs directly on the followers. Jaguar automobiles use a similar arrangement and run many thousands of miles before valve adjustment is required.

Even though the Jarama's rpm red



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line is fairly low, beginning at 6500 rpm and continuing to a safe maximum speed of 7500 rpm, a strong and precisely controlled spark is needed to ensure optimum performance. The Bosch electronic ignition, mounted on the right-hand end of the crankshaft with the alternator, fills the bill and is of the "set-and-forget" variety; no timing adjustment is required unless the unit is removed from the engine for some reason. The 140W alternator feeds enough power into the electrical system to run the powerful quartz headlight, the taillight and the turn signals, to say nothing of what must be the most powerful set of standard equipment horns fitted on a motorcycle. The 32Ah battery stores enough current to supplement the alternator output while riding at low engine rpm and provides the punch necessary to spin the 0.5 bhp electric starter motor. This may not seem too critical until you are told that no kick starter has been fitted.

A fairly closely-spaced gearset helps keep the engine in its wide powerband and the transfer mechanism to adapt the machine to left-hand shifting is among the neatest we've seen. Thanks(?) to the U.S. Government, all machines imported into this country must shift on the left-hand side with a down-for-low pattern. A few other motorcycles produced in recent years that originally shifted on the right had crossover mechanisms that were Mickey Mouse both in design and in execution.

Three conventional shifting forks are operated by a revolving drum to select the desired gear; power from the huge diameter output (countershaft) sprocket is transmitted to the rear wheel sprocket by a Regina "Oro" $\frac{5}{8}$ x $\frac{3}{4}$ chain. The size of the sprocket reminds us of the large diameter of the countershaft sprockets on British AJS 7R, Matchless G50 and Norton Manx racing machines

which could go many races before rear chain replacement was necessary. With approximately four inches of rear wheel travel up and down, and the nearness of the countershaft centerline and swing-arm pivot, rear chain tension varies only slightly during travel of the swing arm.

Of double cradle design, the frame is manufactured from high quality chrome-moly steel with ample support at points of stress. Timken tapered roller bearings are employed at the steering head to provide smooth turning and excellent support of the Ceriani front fork assembly. The swing arm is immensely strong and rides on twin needle bearings at each side of the shaft. The Jarama was obviously not designed by motorcycle engineering neophytes.

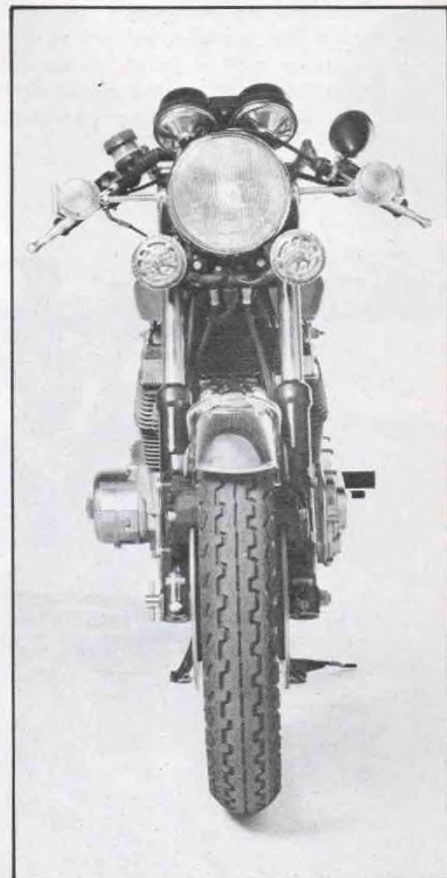
Completing the chassis are the beautiful pressure cast aluminum wheels produced in Laverda's own foundry. They are purposely made a tiny bit heavier just opposite the valve stem hole to aid in balancing the tires. The rear wheel is lighter by several pounds and stronger than the wire spoke wheel it replaces and the three brake discs are now made of a steel compound to resist rust, unlike the older cast iron discs fitted a couple of years ago. Braking is progressive and immensely powerful, providing smooth, straight-line stops.

Bosch electronics show that Laverda wanted to fit quality components. The instruments, manufactured by ND in Japan, were made exactly to Laverda's specifications and are highly accurate. Another thoughtful design feature is incorporated into the cast aluminum wheels that feature "drop center" or safety rims that help keep the tires on the rims in the event of a blowout. Dunlop K-81 TT100 tires are an excellent choice of rubber for a sports machine and do an admirable job of providing traction, both during accelerating and braking and, most importantly, through high-speed corners.

Quality is apparent throughout the motorcycle's mechanical parts, but the superb detailing of the highly polished aluminum side covers on the

engine, the beautiful paint work on the gas tank, side panels and the frame all show attention to detail that can only be given by a human being. The notable exception on our test machine was the hand striping on the gas tank which, although very good in design, appeared to have air bubbles in the black paint.

The Laverda Jarama is most correctly classified as a sports/tourer and can be adapted to either role with a minimum of fuss. The footpegs can be adjusted up or down slightly and the handlebars can be altered in several ways to provide a riding position suitable for almost anyone. Even when set in the lowest or "clip-on" position, the ride isn't at all uncomfortable for moderate dis-

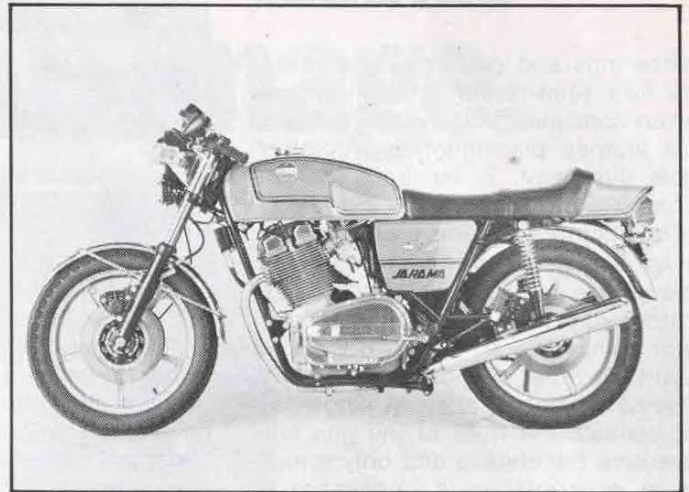
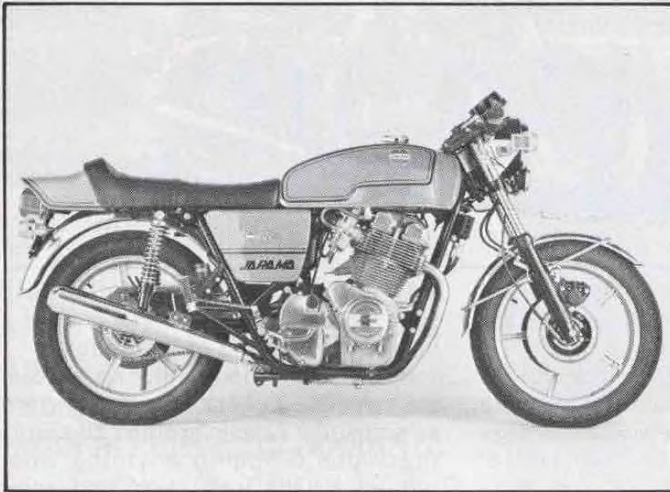


Bulge on right side of engine is Bosch electronic ignition and alternator. It's up high enough to preclude dragging in turns. Horns are loud.



Adjustable handlebars are shown in the lower (cafe racer) position. They can be rotated-up into a low sport-bar position with the allen wrenches supplied in tool kit. Tool kit is second only to BMW's in quality.

LAVERDA 1000 JARAMA



PRICE

LAVERDA 1000 JARAMA	\$3995
BMW R100/S	\$4295
MOTO GUZZI 850 LeMANS	\$3679

WEIGHT

LAVERDA 1000 JARAMA	546 lbs
BMW R100/S	514 lbs
MOTO GUZZI 850 LeMANS	510 lbs

QUARTER-MILE

LAVERDA 1000 JARAMA	12.66 @ 104.89
BMW R100/S	12.48 @ 102.32
MOTO GUZZI 850 LeMANS	13.08 @ 104.01

MILES PER GALLON

LAVERDA 1000 JARAMA	39.2 mpg
BMW R100/S	44.1 mpg
MOTO GUZZI 850 LeMANS	36.4 mpg

TEST BIKE: LAVERDA JARAMA 1000

Price, sugg. retail.....\$3995

ENGINE

Type.....DOHC transverse three
 Bore/stroke.....75 x 74mm (2.95 x 2.91 in.)
 Piston displacement.....981 cc (59.8 cu. in.)
 Compression ratio.....9.0 : 1
 Carburetion.....(3) Dell'Orto PHF 32
 Air filtration.....Dry element
 Ignition.....Bosch electronic
 Lubrication.....Wet sump, gear pump
 Electrical power.....140W alternator
 Battery.....12V 32Ah

DRIVETRAIN

Primary transmission.....Triplex chain, 2.04 : 1 ratio
 Clutch.....Multi-plate, wet
 Secondary transmission...5/8 x 3/8 in. (530) chain, 2.33 : 1 ratio
 Gear ratios, overall : 1st 13.59; 2nd 8.96; 3rd 6.54; 4th 5.58; 5th 4.76

CHASSIS & SUSPENSION

Suspension, front.....Telescopic fork
 Suspension, rear.....Swing arm
 Tire, front.....4.10 H 18 Dunlop TT100
 Tire, rear.....4.25 H 18 Dunlop TT100
 Brake, front.....Twin disc, 280 x 38mm, (11 x 1.5 in.)
 Brake, rear.....Disc, 280 x 38mm, (11 x 1.5 in.)
 Brake swept area.....682 cm./sq. (268.6 in./sq.)
 Rake/trail.....n.a.
 Wheelbase.....1455mm (57.3 in.)
 Seat height.....805mm (31.7 in.)
 Handlebar width.....Adjustable
 Ground clearance.....122mm (4.8 in.)
 Instruments.....Speedometer, trip reset; tachometer, generator, oil press., turn signal, high beam lights.
 Stands.....Center
 Tire retention device(s).....None

WEIGHTS & CAPACITIES

Fuel capacity.....20.5 lit. (5.4 U.S. gals.)
 Oil capacity.....3.0 lit. (3.17 U.S. qts.)
 Weight, wet, unladen.....247.7 kgs. (546 lbs.)

PERFORMANCE

Standing start quarter-mile.....12.66 sec., 104.89 mph
 Average fuel consumption.....39 mpg

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tance trips and gives the rider a *bona fide* semi-racing crouch which, when combined with the not too radical footpeg placement and comfortable dual seat, is far from the uncomfortable position the rider of a road-racing machine must assume.

Another desirable feature found on the engine is the set of Dell'Orto PHF carburetors that incorporate accelerator pumps like an automobile for instant throttle response when the throttle is yanked open. A single lever beneath the front of the gas tank operates the chokes and only a minimum of cranking is necessary to start the big machine, even in cold weather. Warm-up is quick and carburetion remains perfect throughout various temperatures and altitudes.

Many Laverda enthusiasts have heard of the sports version of the Jarama called the Jota, which is built to the specifications of the British Laverda distributor, Roger Slater. The Jota differs from the Jarama in that it has 10:1 pistons, slightly wilder camshaft grind and a larger collector box under the engine into which the three header pipes dump the exhaust to be routed into two mufflers, plus a few other subtle differences. The Jota mufflers allow the sound level to approach 92 db at full throttle which, of course, is too high to get U.S. Government approval. When those mufflers cannot be used the benefits derived from the higher compression

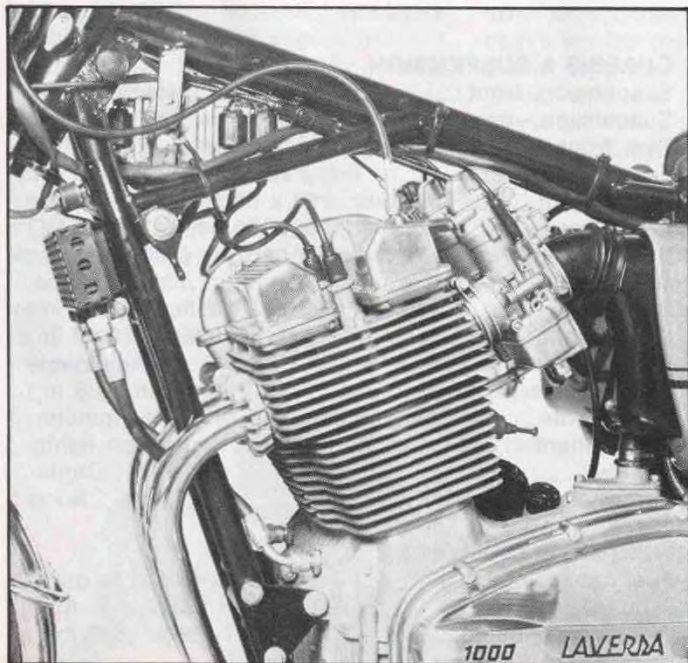
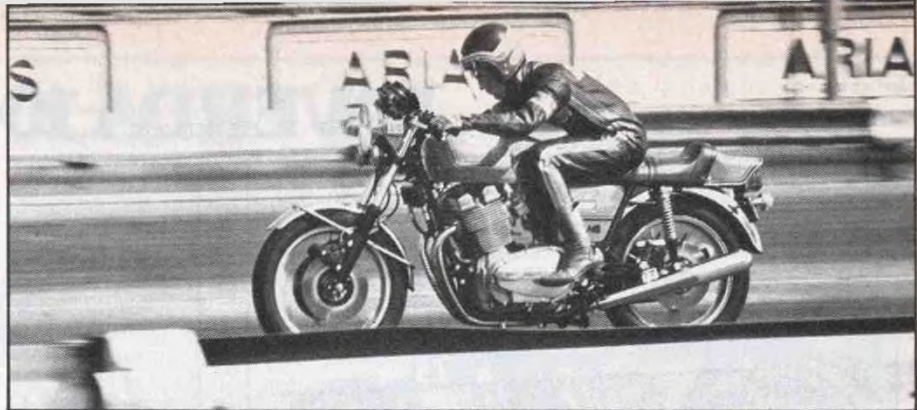
pistons and wilder camshafts are not that apparent and low-speed tractability suffers somewhat.

Riding the Jarama is a treat not to be soon forgotten. Those of us who have spent time on any of the large Japanese multis will be surprised at the precision with which the Jarama can be ridden at speed, as well as in ordinary traffic. Our only complaints stem from the overly harsh suspension at both ends. The Ceriani front forks have large 38mm-diameter tubes with double fork seals, but the spring rate is entirely too stiff for most riding conditions. The Italians are aware of this and will fit softer springs to Jaramas sent to the U.S. Springs fitted to the rear suspension units are also a bit stiff—so much so that the rebound damping qualities of the rear shocks are a little overwhelmed and a slight pogo effect occurs during spirited cornering on rough surfaces. The springs will, in time, sack out a little and lose some of their tension, but lighter ones should be fitted as standard equipment. A nice feature of the rear suspension units is that the spring pre-

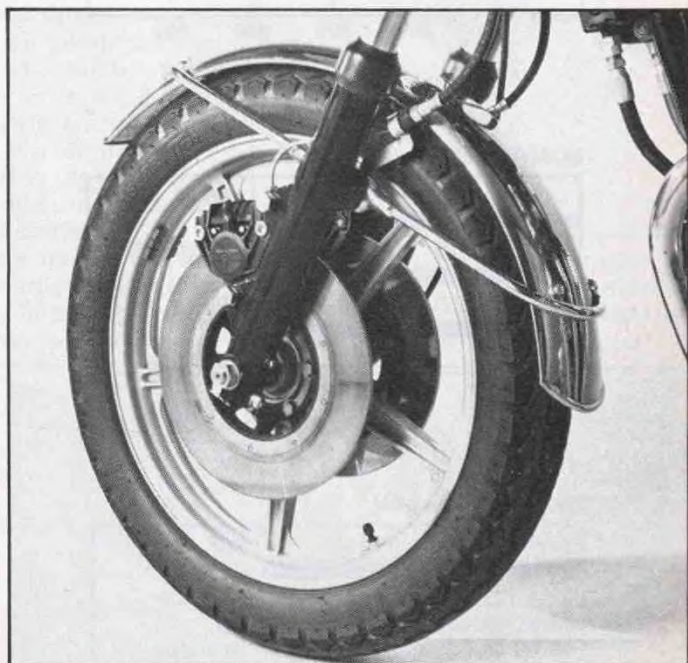
load may be set without the aid of a spanner simply by turning a built-in handle at the base of the shock.

Aside from the overly harsh suspension the Jarama is a sporting rider's delight. Ample ground clearance precludes dragging anything when turning to the right and you really have to be cranked over in left handers to drag the center stand. Also of interest is the almost perfect balance of the Jarama when it is on the center stand: It's like a BMW in that you can remove either wheel to change a flat tire and the bike will rest on the other wheel without tipping back.

Riding two-up is also surprisingly comfortable with the fairly wide and firm seat providing ample support for long trips. The weight of a passenger helps balance the too-stiff springs producing a very comfortable ride. When another person is being carried the impressive torque of the engine becomes even more apparent. From just under 3000 rpm right up to red-line speed there is no apparent change in power delivery . . . it's there and it's strong all the way, just like the entire motorcycle. **M**



DOHC engine features hemispherical combustion chambers with central spark-plug location. Coils for Bosch electronic ignition nestle under gas tank. Choke lever is just beneath them. Detailing is excellent.



Brake discs are now of stainless steel material to prevent rusting. Cast wheels feature drop-center safety rims.