Moto Guzzi V-twins

On the face of the speedo, the big Guzzi twins would clock 130 mph. Not true. John Nutting's tests exposed an instrument that was 25 percent optimistic. Despite the 'pork pies' though, the Le Mans was a genuine performer.

The 850 Le Mans Mk II of 1978. In 1976 the Mk I clocked a genuine mean two-way speed of 123 mph. Ignore the speedo reading!

NOW that leading Italian manufacturer Aprilia has demonstrated its intentions after taking over Moto Guzzi - with the launch of a new version of the Le Mans vee-twin - it is timely to recall when the factory at Mandello del Lario first launched the model in 1978.

Aprilia is reported to be investing heavily in the Moto Guzzi brand to exploit its potential as a respected producer of long-legged classic sportsters. The new Le Mans is based on the developments carried out in recent years on a meagre budget enhanced by using Aprilia's manufacturing and build-quality standards, complemented with premium suspension and other components.

As such, there is a strong link with the period in the sixties when Moto Guzzi launched its V7 tourer at the 1965 Milan Show. Its engine, arranged with the crankshaft in line with the wheels and driving through a shaft and bevels, originated from a design penned a decade earlier by Guilio Carcano who, in the fifties, built the famous world championship winning singles and the 500cc vee-eight that powered a three wheeled military vehicle.

With its cylinders in a 90-degree vee, the engine was ideally suited for a motorcycle because cooling was good and cornering clearance unimpaired. But its sporting potential wasn't exploited until Carcano left the ailing company and Lino Tonti took over.

He wanted to raise the profile of the marque with a return to racing and, as a prelude, built a special that in 1970 took a fistful of endurance speed records at Monza.

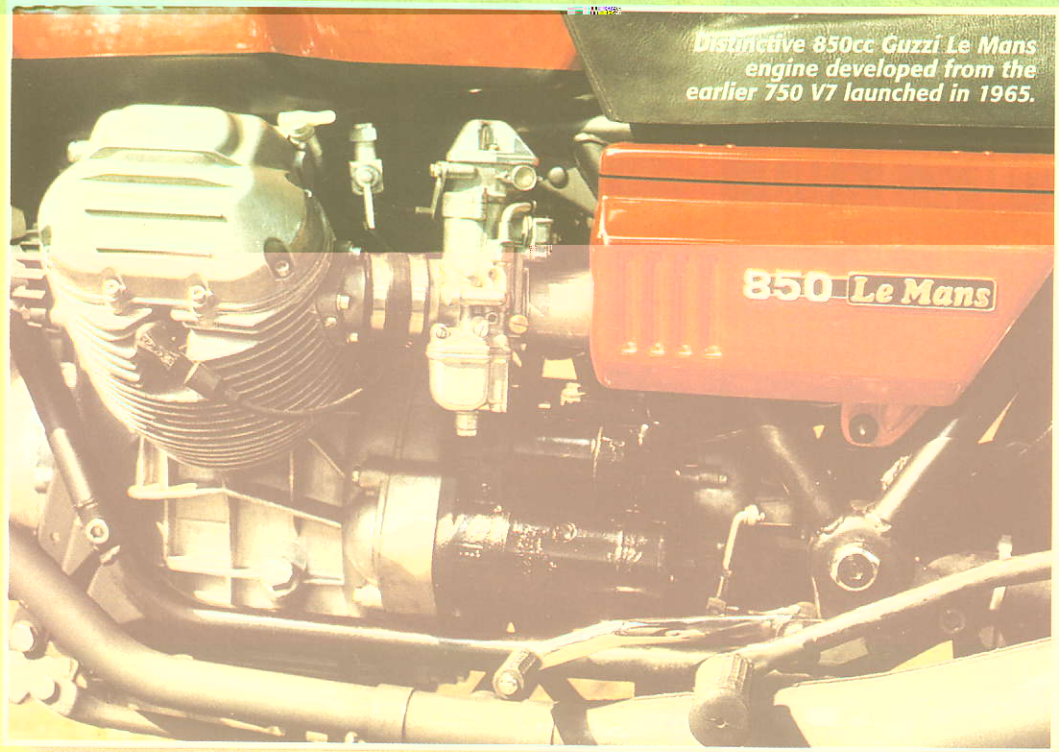
While the V7 tourer continued to sell modestly, Tonti exploited the publicity of the records by designing a new machine with a lower frame and lightened engine that became the V7 Sport, launched at the Monza 500km race in 1971 where it came third.

Despite its brilliant styling the V7 Sport was fiercesomely expensive - in 1973 it was priced at £1350 (when a CB750 was £850) selling fewer than 4000 before the factory came under the control of Argentine entrepreneur Allessandro de Tomaso.

Desperately needed money was invested in the company and an updated range of machines appeared for the 1975 season, imported into the UK by a new distributor.

Most notable new feature, apart from the styling, was triple disc Brembo brakes with the front left disc linked to the rear through a load compensator.

The V7 Sport was replaced by the 750-S3 but my first contact with the range came with the 850-T3 tourer which came with a bigger tank and more softly tuned engine.



Distinctive 850cc Guzzi Le Mans engine developed from the earlier 750 V7 launched in 1965.

For long distance work, few machines of the era could match it. The tall, long-legged gearing and modest fuel consumption provided a easy range of almost 250 miles. It was also solid and comfortable with a riding position that enabled 90mph cruising, a speed made easier by a power

band that provided a perceptible jump in throttle response at 5200rpm.

I TOOK the bike up to Lancashire and across country to catch a ferry to Holland, to Assen for the Dutch TT.

It was always memorable leaving the Assen circuit; the exit roads for up to 50 miles were all one-way and residents each side of the road would set up canopies to cheer on the fans as we rode en masse. The miles rolled so easily under the Guzzi's wheels that 500-mile days were achieved with the minimum of fatigue.

Earlier, the week after the Isle of Man TT, I'd taken the bike to MIRA for performance testing and it excelled, beating a Norton Commando 850 on top speed and matching it for acceleration over the quarter mile.

By any reckoning a mean top speed of 116.9 mph and a best one way of just over 119 mph was pretty good. And, for a tourer, 14.3 seconds over the quarter mile was more than adequate for most needs.

I expected the more sporty looking 750-S3, tested the following December in cold conditions, to be more potent but we were disappointed, particularly because of talk that a top speed in the region of 130 mph or more was possible.

As a rule, the first job at MIRA's 1000-yard test strip was to check the test bike's speedo. We'd run through the timing lights at 30, 50,

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70 and 90 mph on the speedo and find out what the real speeds were. Most bikes had speedos that were optimistic by about no more than ten percent. But the Guzzi was so far out that we double checked. At an indicated 70 mph the bike was doing just 56 mph - 25 percent optimistic. So that 130 mph might be just 108 mph in reality.

The flat out speed checks weren't that bad though. Tucked into the 750-S3's sporty riding position - helped by adjustable swan-neck handlebars and a low seat - the bike clocked a mean top speed of 114.2 mph (still showing more than 130 mph on the clock). The tall gearing and difficulty of achieving a smooth take-off with the dry single-plate clutch, also hit acceleration, clocking 14.7 seconds with a terminal speed of 93 mph. News was out that the 850cc Le Mans Mark I was on the way however, and this was expected to be a real sports bike that could show a clean pair of wheels to the best from Japan.

The basis of the bike was not much different from the 750-S3, using a similar frame and cycle parts. But the 18-inch wheels were in light alloy, the exhausts were tucked up, the seat more stylish and the headlamp adorned by a slinky little fairing.

The engine was similar to the 850-T3's with a bore and stroke of 83x78 mm giving 844cc but with much better breathing capacity. Huge 36mm-choke Dell'Orto carburettors drew air through intake trumpets under the side panels and fed bigger valves in combustion chambers with a heady 10.2 to 1 compression ratio. All this added up to a claimed peak power figure of 80 bhp at 7400 rpm and the promise of real performance.

On the road, the experience of the Guzzi was largely unchanged. You'd fire up with the car-style electric starter and the engine would settle down to the lumpy vee-twin beat. Throttle action was lighter than expected but the clutch was heavy.

A low centre of gravity encouraged relaxed bend swinging but the bike felt supremely taut at speed. And with the power concentrated at the top end of the rev spectrum you were encouraged to use its potential.

But with the engine booming beneath you on the motorway there was still the strange sensation that other drivers were speeding away as you cruised

S3 750cc model of 1975 was to evolve into the 850-T3 tourer.

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above the speed limit.

We tested the Le Mans in July on one of those long, hot days in the summer of 1976. And like its predecessors, its speedo proved just as much a teller of porkie pies. But this time, the bike was a flyer with a mean top speed of 123.39 mph and a best one-way figure of 125.89 mph. Other magazines had clocked more than 130mph but these had been in one direction with a tail wind.

The figures recorded by us at MIRA for *Motor Cycle* were confirmed by calculations showing that the bike was revving at 7600 rpm, slightly more than peak power revs of 7400 rpm, suggesting that it was correctly geared for performance.

As a design, the Le Mans peaked at this point. Subsequent models like the Mark II of 1978 came with a bigger handlebar fairing and lowers that, while matching the style of the 950cc Spada tourer launched the same year, did nothing for the bike's looks or performance.

The Le Mans' nadir was in 1983 when a version called the Mark IV acquired the square finned engine and a 16-inch front wheel that ruined the cornering composure.

But real Moto Guzzi fans took little notice and continued to use the traditional components established by the factory in 1974 and used in long-distance and production bike racing. A whole range of tuning parts were available to those who had the right contacts, including camshafts, conrods, valves, valve gear, primary drives, exhaust systems, final drives and close ratio gearboxes.

IN 1977 I helped set up the Roadrunner production machine series in the UK backed by Avon Tyres, who had developed a range of sporting tyres and wanted to promote them through the sport.

Steve Wynne who the following year would be famed for supporting Mike Hailwood with his TT winning Ducati had set up a Sports Motor Cycles team with Castrol backing. Machines were a 900SS Ducati, a Laverda Jota, a Suzuki GS750 and a Moto Guzzi Le Mans, ridden respectively by Wynn, Roger Bowler, Bill Pilling and John Sear.

[illegible]

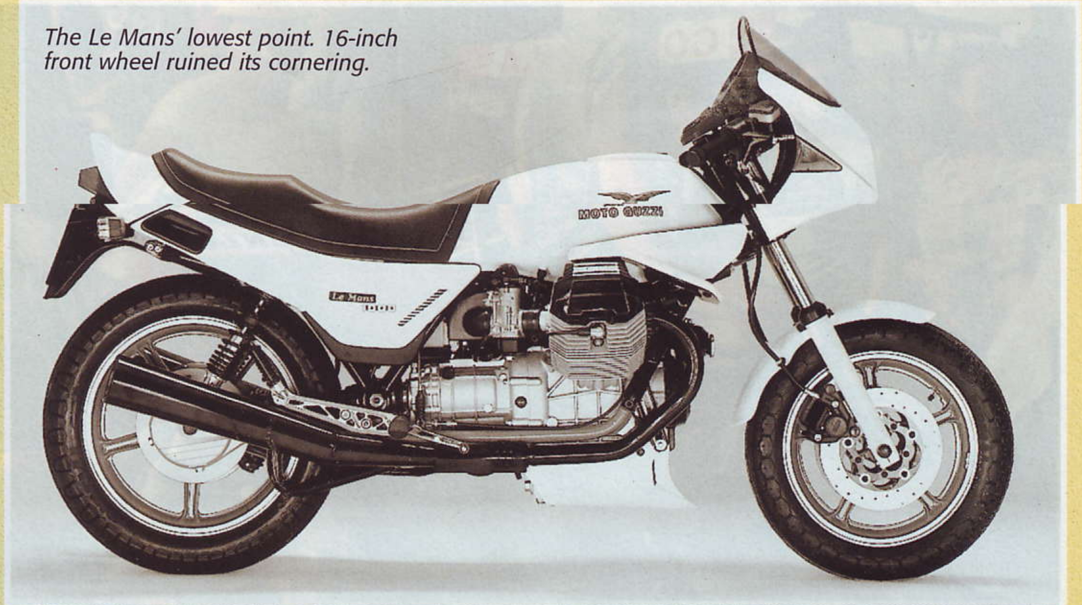
the final round at Snetterton. But he fluffed the start in the rain, fell off and the race and series was won by Pete (PK) Davies on the Slater Brothers Laverda Jota.

The rules allowed a number of tuning mods to be made to the bikes, encouraging chassis improvements and engine tuning so long as the parts were freely available. Sear's bike had higher 10.5 to 1 compression pistons and a factory camshaft, one of a number of parts that would enable revs as high as 9500 or more with reliability.

After the final round, Wynn suggested that I test the team bikes at the MIRA test strip to settle rumours about the bikes and satisfy his own curiosity.

The test session was memorable for me. Just after flying through the timing lights on Wynn's own 900SS Ducati at just under 130 mph the front tyre deflated!

It felt like the steering had been



The Le Mans' lowest point. 16-inch front wheel ruined its cornering.

Buyers could improve later models by fitting early Seventies parts.

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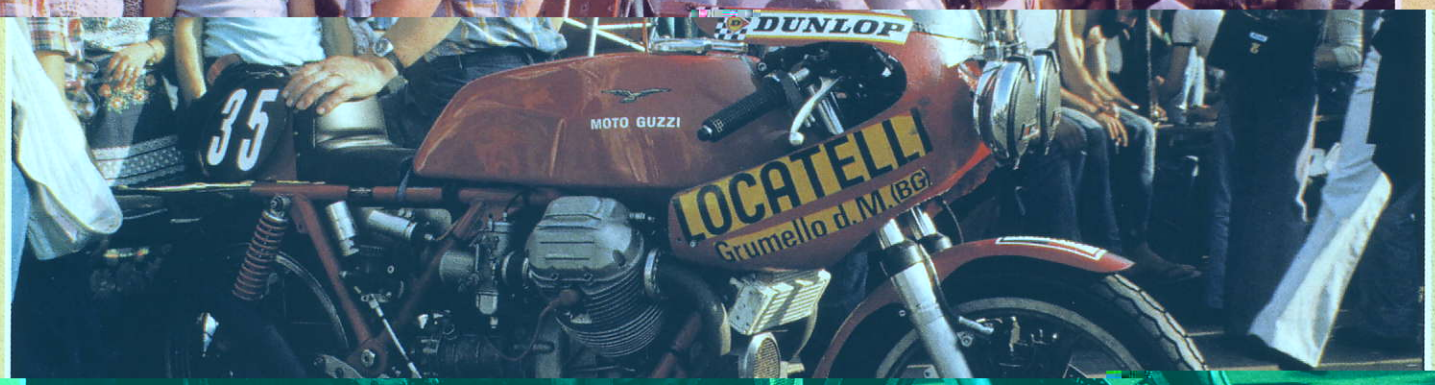

Le Mans in Barcelona 24-hour trim for the 1977 race.

Moto Guzzi vee-twin

All figures compiled at Motor Industry Research Association's proving ground, Nuneaton, Warwickshire.

MODEL:	850 T3	750 S3	850 Le Mans	V1000	Sports/MC 850
DATE OF TEST:	June 16 1975	Dec 3 1975	July 6 1976	Sept 8 1978	Oct 1977
REG NO:	[illegible]	[illegible]784P	NUR 50P	na	na
CONDITIONS:	Sunny, fine	Fine, cold	Fine, hot	Sunny, breezy	na
MEAN TOP SPEED (MPH)	116.90	114.21	123.39	96.76	132.07
BEST ONE-WAY (MPH)	119.20	115.84	125.89	107.39	132.64
MEAN NORMALLY SEATED (MPH)	na	100.97	115.02	93.8	
STANDING QUARTER-MILE: (MEAN, SECS/MPH)	14.3/95.12	14.7/93.10	14.05/99.09	16.07/85.98	11.8/112.22
ACCELERATION (SECS/MPH)					
110YARDS	5.30/58.7	[illegible]	[illegible]	[illegible]	
220YARDS	8.75/77.1	9.2/68.61	8.55/78.83	10.5/68.38	
330YARDS	11.7/88.0	12.3/83.3	11.5/90.95	13.7/78.89	
CONST SPEED MPG@MPH:					
30	68.8	62.4	75.2	na	
50	60.0	54.4	52.8	na	
70	48.8	52.8	48.0	na	
BRAKING DISTANCE (FEET) (FROM 30MPH)	27ft 6in	24ft 9in	30ft 3in	24ft 0in	
TURNING CIRCLE (FT)	16ft 6in	17ft 0in	15ft 3in	17ft	
SPEEDO ACCURACY: ACTUAL MPH AT INDICATED:					
30	25.9	23.8	21.6	27.7	
50	42.3	39.5	39.2	48.7	
70	57.9	56.2	56.4	69.5	
90	78.2	74.0	76.6	na	
TEST WEIGHT (1 GAL FUEL):	na	504lb	485lb	na	
OVERALL TEST MPG	46.0	na	39.6	na	

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locked. It was impossible to use the front brakes so I had to cautiously apply the rear disc but failed to stop before I reached the sand trap.

Fortunately the bike was doing less than 15 mph at the time and it ploughed upright into the sand, both of us unscathed.

The Guzzi meanwhile was a rocket. I had struggled a year earlier to get the standard Le Mans off the standing quarter line and failed to break 14 seconds (although the terminal speed was a respectable 95 mph). The Mirra Guzzi jumped off the line though and flew through the 440-yards in 11.8 seconds with a terminal speed of 112.22 mph.

Top speed was no less stunning and, revving to just over 8500 rpm, the bike clocked a mean two-way average of 132.07 mph, making it the fastest of all the machines in the team.

This was no less impressive because the bike's low gearing was for the tight Cadwell circuit in Yorkshire. So with the normal gearing it was likely that much more was achievable.

So a Le Mans Mk 1 is very easily a 135 mph plus machine. And one of the best looking of the seventies era - if not the late 20th century - even if the original build quality was poor.

It's a real classic.

NEXT MONTH:

Honda 400/4s

November issue on sale October 17th.

Huge 36 mm-c[illegible] Dell'Ortos intro[illegible] on the 1976 M[illegible]

MOTO GUZZI LE MANS 850 SPECIFICATION

MODEL:	Moto Guzzi Le Mans 850
ENGINE:	Air-cooled 90-deg vee-twin
CAPACITY:	844cc (83 x 78mm)
VALVE OPERATION:	Pushrod ohv
COMPRESSION RATIO:	10.2 to 1
LUBRICATION:	Wet sump
IGNITION:	Coils and contact breakers
CARBURATION:	Two 36mm Dell'Orto PHF
PRIMARY DRIVE:	Gear
PRIMARY RATIO:	17/21 (1.235:1)
CLUTCH:	Dry single-plate
GEARBOX:	Five-speed
INTERNAL RATIOS:	[illegible]
FINAL DRIVE:	Shaft and bevel gears
FINAL DRIVE RATIO:	[illegible]
OVERALL RATIOS:	[illegible]
PEAK POWER:	[illegible]
PEAK TORQUE:	[illegible]
FRAME:	Duplex tubular steel frame
FRONT SUSPENSION:	Telescopic fork
REAR SUSPENSION:	[illegible]
FRONT WHEEL:	[illegible]
REAR WHEEL:	[illegible]
FRONT TYRE:	[illegible]
REAR TYRE:	Metzeler 4.10V 18 tubeless
FRONT BRAKE:	11.75in-diameter Brembo cast-iron dual discs
REAR BRAKE:	9.5in-diamerer Brembo disc linked to front, with load limiter
ELECTRICAL SYSTEM:	28 watt alternator, electric start, 45/40-watt headlamp
BATTERY:	12V, 32Ah
FUEL TANK:	24 litres
WHEELBASE:	59.0in (1,500mm)
SEAT HEIGHT:	29.5in (750mm)
CASTOR ANGLE:	61 deg
TRAIL:	3.8in (96.5mm)
CLAIMED DRY WEIGHT:	485 lb with 1 gal of fuel

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