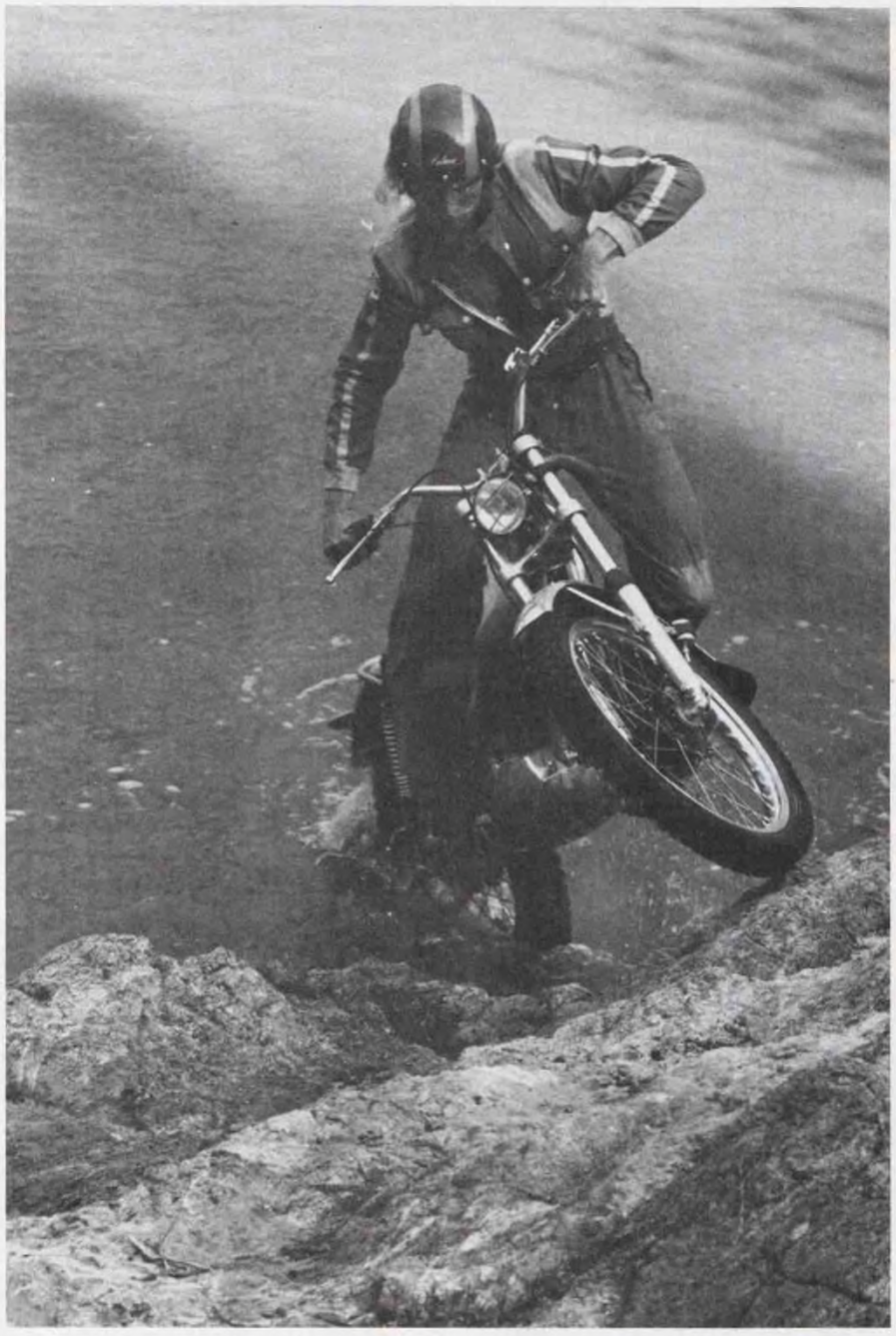
Ossa does it differently, and without Mick.

OSSA 350 MAR

Polaroid is down to 35¼. The Baz has his cast off. Barney von Oosterhoots won the Odiebolt 500 24-hour tractor race. All this info to spare you the usual opening blurb that would be telling you how Mick Andrews won the European (world) observed trials championship on a 250 Ossa in 1971 and 1972, and that MAR means Mick Andrews Replica, even though Andrews moved to Yamaha in 1973. And how, even though it's called a 350, it's really not even a 305 — the most flagrant exaggeration yet. Bultaco puffs their 350 by 24cc, Montesa enhances their new 348 by 38cc. That's enough intro. Did you know Chet may go to Florida to do a story on hunting alligators?

by the Staff of Dirt Bike



Lane Leavitt came south for a State Championship round, stayed for some testing. Keep those letters coming for his question and answer column, folks.

THREE YEARS LATER

The 350 MAR is the first new Ossa trialer imported in three years. That's a long time to go with no new product. Why, three years ago the TL125 had just arrived as the first trialer from Japan. Today Japan has seven models and the U.S. trials championship. Compare a '73 Sherpa to the current product, or the new 348 Cota to the 247 of a few years back. A lot of refinement there over a three-year period. Meanwhile, here's what the Clover Leaf People have been up to.

Displacement was upped from 244cc to 302cc by increasing both the bore and stroke by five millimeters, to 77 x 65.

The 27 IRZ carb was replaced with a 27 Spanish Amal.

Gearing was changed slightly, the result of taking four teeth off the

Rear sprocket, aluminum, is still dished rather than straight cut, has lost four teeth to reduce chances of hitting a rock and derailing the chain. Straight cut sprockets are considered stronger. There are no numbered or slotted line-up marks on the cam-type chain adjusters.

Alloy shift lever cannot be rotated upward because of clearance problem with the kickstarter. As a result, it gets bent in rocks. Shifting is very stiff. Even so, a rock once shifted the bike from first to second gear. Surprise! Screw-in exhaust nut that secures chromed header pipe should be safety wired — it has a tendency to loosen up otherwise. Left-side kickstarter can be operated while sitting astride bike, is guided into kicking position without having to use the clutch. Starting stroke is short, easily clears the footpeg. The bike was a willing starter. Fiberglass particles from the gas tank clogged the petcock, but gas would flow in reserve position. A can of Pro-Tech Tank Sealant is a good idea for any glass tank.

Kill button was not hooked up, and wiring attempts failed to produce a functioning kill system. Hand grips are hard, particularly for the bare-hand riding some prefer. There's a fork lock up front on the right side. Note that the bars are clamped ahead of the steering stem on the Ossa, unlike the Sherpa arrangement (behind the stem). Throttle cable routing on our bike found exhaust trying to melt the cable.

rear sprocket. Now it's 11/42, 3.82. It used to be 12/46, 3.83.

Second gear's transmission ratio was lowered from 3.24 to 3.46.

The bottom shock mount was moved forward slightly. Additional travel in the new Betor shocks ups the rear wheel travel from 3.7 to five inches.

The new Betor forks offer six inches of travel, an inch increase. The fork legs come from the Phantom motocrosser, but are turned down to save weight.

Brake shoes are bigger, 122mm x 30mm, with the motocross brake used up front.

An aluminum skid plate replaces the fiberglass protector.

The swingarm has been lengthened by ¾-inch. Average wheelbase measurement is 52.5 inches. The old bike was 51 inches.

The left side panel has a tool kit compartment, reached by removing one circular plastic nut.

Paint styling is now green and red striping on white.

Gas tank capacity was increased to 6.25 liters (1.6 gallons).

Tires are still Pirelli, but are now the much-praised MT13s.

Rims are still Akront, but the shoulders are gone.

ALUMINUM ANYONE?

Ossa claims a dry weight of 87 kilos or 191 pounds. Perhaps they weighed theirs without oil, lights, horn and speedo. We came up with 211.8 pounds with a full tank. That figures out to 201 pounds with an empty tank. That makes the lighted Ossa the same weight as the 350 Sherpa, which has a chrome moly frame and swingarm. Ossa uses heavier steel, but still comes up with a bike that's lighter in lightless competition trim by using a lot of aluminum.

BIASED OPINIONS

What do some of the top riders in the nation think of the new Ossa? Here are some comments and impressions from factory support-type riders like Lane Leavitt, Steve Darrow, Bob Nickelsen, Bernie Schreiber, Mike Griffitts and Debbie Evans.

"The suspension is pretty good. (By the way, did you know that the new Yamaha shocks are really excellent?) The Ossa front end feels too rigid. The steering stop has to be reduced for Experts, it won't turn as sharp as a Sherpa. It steers well, better than the old bike, particularly on the back wheel. The front wheel doesn't crab under like on the old bike. The chassis felt fairly good, it's not as rigid as a Sherpa because it doesn't have the bottom frame tubes. They went to wide motor mounts, which is good if you're going without the frame tubes. Lengthening the swingarm definitely helps it to hop onto stuff — I noticed the improvement climbing steps. The brakes are better, really

Bernie Schreiber tried the MAR on one of his favorite drop-offs. It's a long way down.

predictable. They'd fade after hitting the water, but they'd come back to maybe 85-percent efficiency pretty quickly. Comfort is excellent in the seated position. The aluminum skid plate is a big improvement. It's stronger and it's curved, rather than straight, so the aluminum can slide across rocks more easily. The rear fender could be wider. I didn't care for the foot controls. It revs really well, better than the Sherpa, but it doesn't have the inertia effect of the Sherpa's heavier flywheel. It has excellent traction characteristics. In the rocks we could notice that it was wider and lower than the Sherpa. We'd scrape on rocks that we didn't touch on the Bul. They've changed the offset with the triple clamps. The steering head sticks up too high, you have to run low bars. It's a pretty decent bike, really."

"This one is better than I thought it would be. The engine pulls nicely. I like the high pegs. It doesn't turn as sharp as a Bul. The shocks have good

Fenders are aluminum. Forks are Betor. There's a speedo/odometer rubber-mounted off the left stanchion tube. Front fender has mud flap. Note that the Ossa forks are not offset, but rather run straight down to the front axle. Pinch bolts are new.

down damping; I don't care for the return damping or the forks."

"The shocks felt stiff for sections, were better than the Bul Betors for loop riding. I liked the forks. It doesn't turn sharp enough, the fork stops should be filed down — for Experts anyway. The motor was pretty good, good power. The brakes surprised me, they worked. It's got good Pirelli tires. The shifting is dumb."

"I really love that engine, the

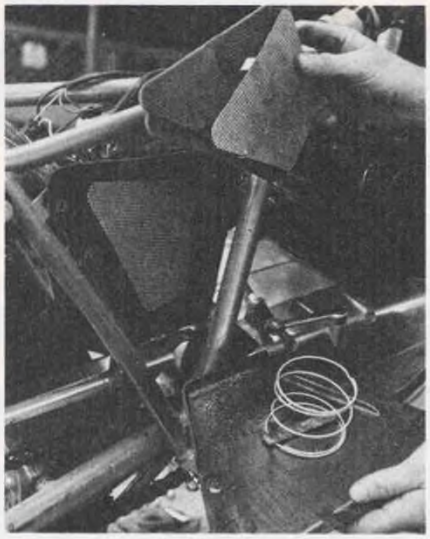
Steve Darrow is aboard a Bul this year (Miller's of San Luis Obispo), after Yamaha dropped their factory team for '76. He wouldn't explain why his boots weren't buckled.

power's always there when you need it. It just keeps on running at low rpm and then when you turn it on, it goes. It's really neat to go up hills and gullies."

"The old bike had a problem with ground clearance and this one seems even worse, just banging and clanging along. I liked the suspension, but I liked the handling on the old bike better."

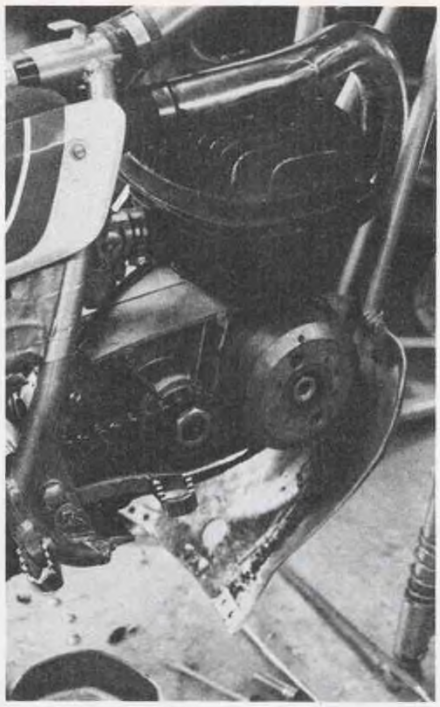
"I like the frame. It's strong, light and simple, and it has the best skid plate design in the industry. Their CDI ignition is superior to anything else from Spain. That kickstarter in the way of the shift lever is really dumb. The bike is a little too wide. I'm not real happy with the front end geometry. I think there's too much rake in the forks. And offset axles and the bars either over or slightly behind the steering stem seem to be the way everybody's going. Except Ossa. The stock carburetion is still maybe a little rich in some of the circuits. If there's a good dealer in the area it can be a very competitive bike."

"It doesn't seem like it's a new bike. It has much more the feel of the old bike, with an engine job and lengthened swingarm. Put either of

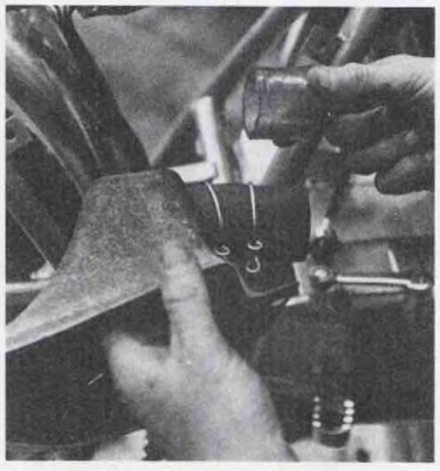


Two very thin foam filters fit between two perforated metal holders. Those perforations are quite small, but engine breathes OK. Two side panels, a pretty abbreviated white item which fits over a full-sized nondescript dark one, are held on by four slotted bolts, one of which also secures the fiberglass air box. Lining up the upper right bolt through two side panels, the air box slot and the frame tab takes some practice. The front air box mount had to be slipped inside the frame tab to get it to line up so that the inadequate (too short) tube running from the box to the carb could be slipped into position.

One spring secures silencer, which is noisy by trials standards. It can be switched around for an even noisier mounting. No approved spark arrestor. Taillight was taped after rubber slipped off one of the mounting bolts. The rear fender was raised some to provide clearance. Shocks are 41-767 three-way adjustable Betors, measuring 13¼ inches. They're held on by 10mm bolts. The seat is plush by trials standards, yet light, just 2.5 pounds due to the aluminum seat base. "Ossa" is embossed in the seat fabric. High, rear-mounted pegs give a "jockey" feel to the sitting position. Note the rubber stop on the bottom of the swingarm for the kickstand.



Loosen two bolts up front and remove four at the rear and the bash plate can be swung downward. That's a Motoplat solid-state CDI magneto with direct AC lighting coil. Footpegs are folding, but not spring-loaded, could be beefed up some.



The first time we tried to clean the filter the air box fell out of the frame onto the floor. The inadequate clear hose had worked its way off the lip of the carb. The stock tube should be replaced with a longer piece, so that the air box may be properly mounted. That'll also prevent the carb from sucking unfiltered air. An alternative is siliconing the tubing to the carb so it can't work loose.

the top two riders on it and they could still win."

MORE MORTAL OPINIONS

"It revs faster than a Bul. That's neat getting up something, but when you come back down you don't have as much engine braking. In real tight turns you don't have to be as concerned about overturning it to the stop and having it crab under."

"I don't care what the scale says, it feels heavier than a Bul."

"I think it's a better trailbike, because it accelerates faster, the lower gears are taller, and the shocks are a bit stiffer. You can hit things a little harder before you bottom out."

"The engine felt mushy at low rpm. It was smooth and it pulled, but it just felt strange."

HOME COURT ADVANTAGE

How about asking some Ossa riders what they think of the new bike? It's not the easiest thing to do. There are only a few left in So. Cal. trials, mostly in the Novice class. Not a single Expert. Three years with no new bike doesn't make for too big a following. We've already talked to Debbie Evans, who rode a 250 MAR before Yamaha put her on a TY175. How about Sherry Gregoire? She has a win in Novice competition, is closing in on the Amateur class competing on a 250 MAR. She rode the 350 in one of our local events. "There's a lot more power. You have to get used to it compared to the 250. The brakes are better. The handling and suspension are good. I'd like to get one if I could afford it."

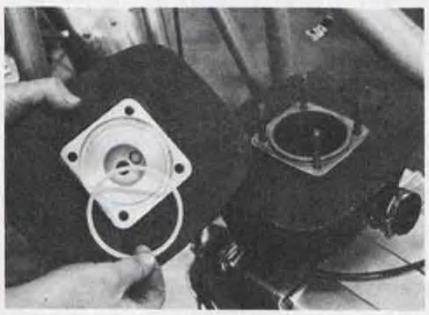
SPANISH NUMBERS

Here are some geometry measurements for the 350 MAR with the corresponding figures for the 350 Sherpa included in parens for comparison:

Wheelbase	52½	(51-3/4)
Front axle to swingarm pivot	36-3/8	(35½)
Front axle to bottom shock mount	50	(48)
Swingarm length	16¼	(16¼)
Front axle to footpeg	39	(36½)
Footpeg height	14-5/8	(14¼)
Footpeg width	17	(17¼)
Frame width at pegs	10-3/8	(10)
Front axle to crank center	26¼	(24-3/4)
Measured fork angle	29	(27)
Ground clearance, front	11¼	(11 Miura plate)
Ground clearance, rear	10½	(11¼ Miura plate)

The Ossa has the widest transmission ratio spread of the three Spanish bikes, 4.31 to 1.00. Buls range from 3.79 to 1.00, the 247 Cota from 2.60 to 0.71. The Ossa has the tallest primary gearing (2.26) and drive gearing (3.82). Overall gearing (primary x drive x transmission) ratios, with the Bul and then the Montesa shown in parens:

1st: 37.2 (37.7, 33.1)
2nd: 29.9 (29.0, 26.5)
3rd: 20.7 (22.5, 20.9)
4th: 14.0 (13.7, 15.0)
5th: 8.6 (10.0, 9.0)



Same four-hole porting as the old 250, with a 5mm increase in both bore and stroke. Note the aluminum head gasket.

Disassembled carb. We had to remove the carb's top adjustment nut to get enough slack in the cable to make a no-idle adjustment. The Ossa Amal doesn't have a spillage slot cut to allow faster fuel flow to the float bowl. It also appears to have a four-stroke rather than a two-stroke spray bar. Stock jetting is 140 main, 25 pilot, 106 needle, clip in the middle position of a U needle. This was satisfactory for us, although not quite "spot-on." Two other publications had test bikes that required jetting changes to correct an overrich problem: a longer X needle and a smaller 130 main jet. Checking with the distributor, we learned that those two bikes were not set up by the trials technician.

Two bolts hold on gas tank. Two bolts and front tab secure the seat. Notice the rear brake shaft just under the swingarm bolt. Notice also the experimental translucent plastic carb first seen on the Ossa Phantom. It reduces engine and exhaust noise considerably.

SUMMAR-OSSATION

It's a better bike than the old 250 that won the European (world) championship in '71 and '72. More power, more torque, decent brakes. The steering has been slowed down to make it more manageable, especially for Novice/Amateur class riders. There's more suspension travel, more stability. Old Ossa owners, or young owners of old Ossas, all loved the engine. Couldn't say enough nice things about it. It's definitely a competitive machine.

The MAR is an expensive motorcycle. Using suggested retail, it lists for more than a Sherpa, about as much as the new Cota. The bike offers an alternative for those who just don't take to the Sherpa or Cota, and yet want a Spanish competition bred bike. But it seems more an update than a brand-new motorcycle. That means it has to buck the overall newness appeal of the 348 Cota and the what-when-and-if mystique of the 300 Honda among those wanting something other than the sales leader Sherpa. Still, for those hooked on the Ossa approach, there is now a better bike to climb aboard.

OSSA 350 MAR

Price . . . . . (retail, approx.) $1595
Engine Type:
Two-stroke, single-cylinder
Displacement 302cc
Bore & Stroke . . . . . 77mm x 65mm
Compression Ratio . . . . . N/A
Carburetion . . . . . 27mm Amal
Jetting:
140 main, 25 pilot, 106 needle, clip middle position — U needle
Spark Plug:
Champion N-9Y or N-4G, NGK BP-7E
Clutch . . . . . Wet, multi-plate
Primary Drive 2.26:1
Transmission Ratios:
1) 4.31:1 (37.2 overall)
2) 3.46:1 (29.9 overall)
3) 2.40:1 (20.7 overall)
4) 1.62:1 (14.0 overall)
5) 1.00:1 (8.6 overall)
Final Drive:
520 chain, 3.82 ratio
11-tooth countershaft
42-tooth rear sprocket
Air Filtration:
Oiled foam — 2 elements, 2 screens
Electrical System . . . Motoplat electronic
Lubrication . . . . . Pre-mix
Recommended Fuel . . . . . Premium
Recommended Oil . . . . . Full Bore 32:1
Fuel Capacity . . . . 6.25 liters (1.6 gallons)
Frame:
Steel, double downtube, engine integral part of frame
Suspension:
15.9cm travel (6¼ inches) Betor forks
12.7cm wheel travel (5 inches) Betor shocks (41-720)
Wheels & Spokes:
Akront shoulderless aluminum (1 front rimlock, 2 rear)
Tires:
Front: 2.75x21 Pirelli MT13 Mototrial
Rear: 4.00x18 Pirelli MT13 Mototrial
Dimensions:
Wheelbase . . . . . 133.4cm (52½ inches)
Swingarm length . . 41.0cm (16¼ inches)
Ground Clearance: 26.6cm (10½ inches)
Bars, width . . . . . 81.3cm (32 inches)
Bars, height . . . . . 113.7cm (44¾ inches)
Pegs, width . . . . . 43.1cm (17 inches)
Pegs, height . . . . 37.1cm (14-5/8 inches)
Seat height . . . . . 77.5cm (30½ inches)
Weight:
87 kg (191 pounds) claimed dry; 96.3 kg (211.8 pounds) actual with full tank of gas; 45.8% on front wheel, 54.2% on rear wheel
Brakes:
Front: Cable-operated 122x30mm
Rear: Cable-operated 122x30mm
Instruments . . . . . Speedo/odometer
Lights . . . . . Yes
Silencer . . . . . Yes, noisy
Spark Arrestor . . . . . No
Primary Kick . . . . . No
Warranty:
Motoplat and coil — one year; rod (breakage) and cases — three months; frame — two months; gas tank and countershaft — one month
Parts Prices:
Piston assembly:
$29.48 (includes rings, circlip, wristpin)
Rings $10.60
Clutch cable $3.20
Cylinder $120.64
Cylinder liner $31.72
Shift lever $7.31
Brake pedal $13.62
Clutch lever $7.25
Bash plate $27.20