



TWO WHEELS

JANUARY, 1978

\$1.00*

FULL TESTS:
YAM IT 175
DUCATI 900 SS
HONDA 750 F2



**GETTING INTO
ENDUROS**

HOW TO BUILD A BIKE TRAILER

two wheels

VOLUME 17, No. 5, JANUARY, 1978

TESTS

- 10 IN LOVE AGAIN Ducati 900SS.
18 ENDURO BIKE FOR ALL Yamaha IT175.
24 F2 BRUTUS? NO WAY! Honda 750 F2.

FEATURES

- 8 MX WEAPON FOR AUSTRALIA First look at the Aspes 125.
16 THUMPER REINCARNATE Sanglas 500 impressions.
30 FOUR MONTHS NO SWEAT Kawasaki Z650 report.
42 THE ALLPARTS COLLECTION Vintage treasures.
46 GETTING DUKES TOGETHER Two Ducati clubs.
66 THE LAVERDA STORY Part one.
74 SO YOU WANT TO RIDE ENDUROS Getting into the dirt.
79 HOW TO BUILD A TRAILER For bikes, karts, anything!
88 THE SOCKET FILE B.St.F. Whitworth Socket replies!

SPORT

- 50 ENDURANCE IN THE DIRT The News 24 Hour Enduro.

TOURING

- 58 WESTWARD TO PERTH Across the continent en masse.

HISTORY

- 34 SINGULARLY SUPERIOR The Ariel Red Hunter story.
41 OLD GOLD Pics from the past.

DEPARTMENTS

- | | | |
|----------------|---------------|------------------|
| 5 FIRST STROKE | 65 TARLETON'S | 92 VIBES |
| 6 BEHIND BARS | CORNER | 96 CLUB REGISTER |
| 6 ENCOUNTERS | 90 WRAP ON | |

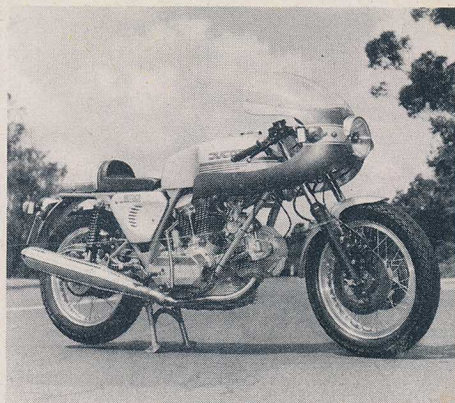
PEOPLE

JEFF BROWN / Editor

LINDSAY HANNINGTON / Artist

BRIAN WOODWARD / Technical Editor JOHN CARNEY, BOB BOWIE / Production

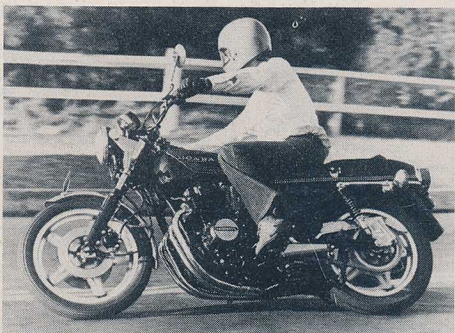
COVER: Photo by Ray Ryan.



Page 10



Page 18



Page 24

Freelance contributions are welcomed by this magazine and submissions should be addressed to The Editor, TWO WHEELS, 142 Clarence Street, Sydney, 2000. Submissions must be accompanied by a stamped, self-addressed envelope for their return. The editor accepts no responsibility for unsolicited manuscripts, photographs or transparencies.

Annual subscription rate to addresses in Australia \$17.30. Other countries \$17.90.

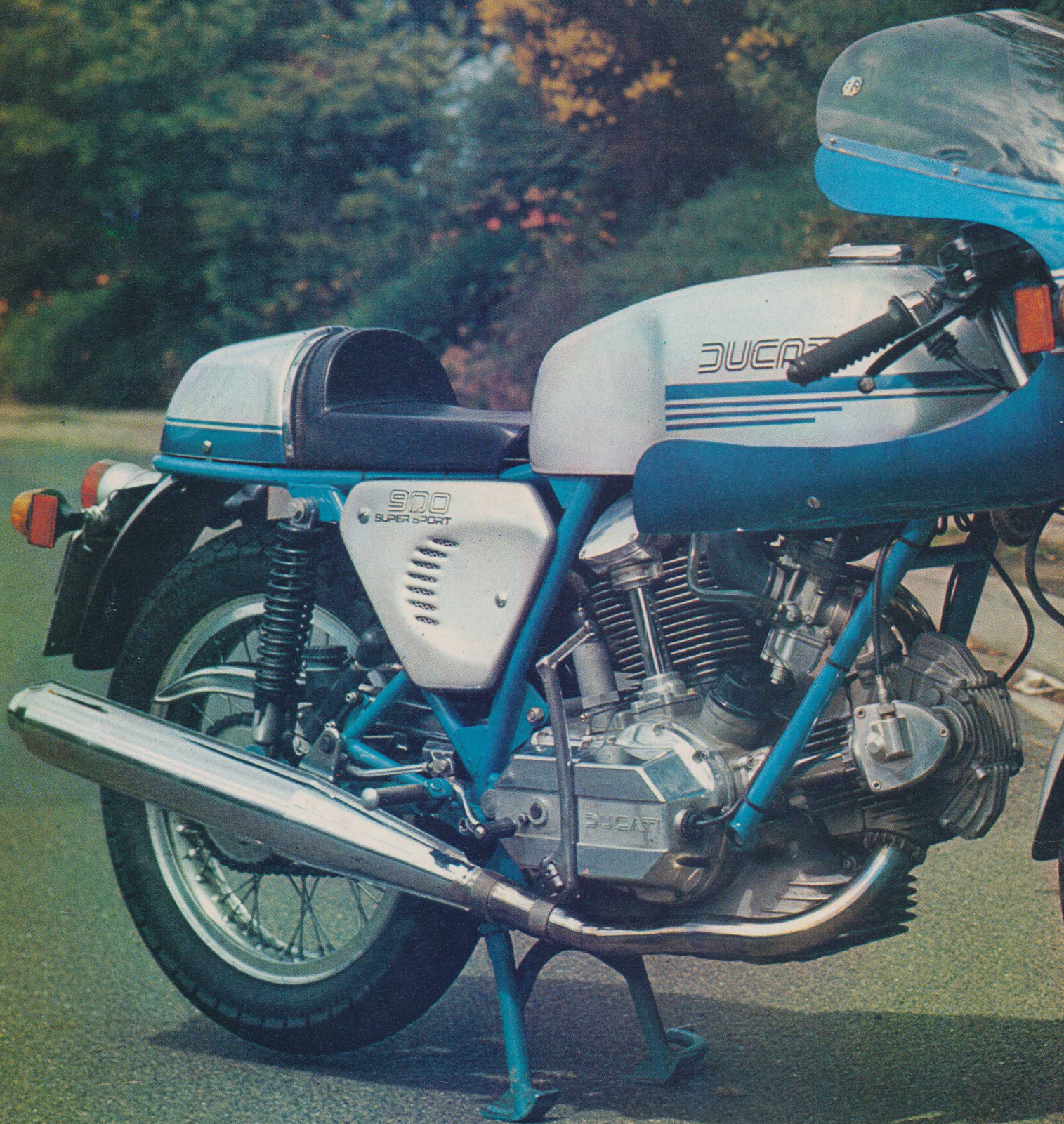
Back copies: 5th Floor, 154 Clarence St, Sydney, NSW.

ADVERTISING: General Advertising Sales Manager, Michael Wright, National Advertising Manager, Chris Ferguson, Sydney Representatives, Sharon Lightner, Frank Lee, 142 Clarence St, Sydney, 2000. 29-3761, 29-5606. **MELBOURNE:** Manager, R. W. Lachberg, Senior Representative, Ken Davies, Representatives, Anne Wray, John Redcliffe, 6th Floor, Centreway Building, 259 Collins St, Melbourne, 3000. **ADELAIDE:** Harry Hastwell Media, 399 Glen Osmond Road, Glen Osmond, 5064. **BRISBANE:** Dick Coates, 27 Atkinson St, Hamilton, 4007. **PERTH:** Cliff Thomas, ADREP Advertising Representatives, 62 Wickham St, East Perth, 6000. **LONDON:** Peter Holloway, Ludgate House, 107 Fleet St, London EC4A 2AL.

Printed by Comprint. Published by Murray Publishers Pty Ltd, 142 Clarence St, Sydney, 2000.

*Recommended Price.

DISTRIBUTORS: GORDON & GOTCH (A/SIA) LTD, MELBOURNE. MURRAY PUBLISHERS PTY LTD, SYDNEY.





A ride of the latest 900SS Ducati
and we couldn't help ourselves!

IN LOVE AGAIN!

Ducati Super Sports have always had their faults and they're a long way from being an all-round road bike but sit on the 900, blip the throttle and take off and the joy envelopes you in sheer, self-indulgent pleasure. Our latest ride of the 900SS Duke was to sample the "civilised" version, with small carbs, air cleaners and the plain jane mufflers from the 860GT. They're still available with 40 mm carbs and Conti megas, but this is the way the Super Sports are delivered after registration. And we still loved it . . .

MANY ENTHUSIASTS consider the V-twin Ducati to be something of a latter-day Vincent and they've got a point. The Italian sportster does feel and sound similar.

The Ducati is an overhead camshaft design however and it has evolved into a most desirable machine. The early Dukes were machines strictly for the enthusiast, somewhat spartan in form and function and requiring a deft hand with the spanners to keep the engine in a good state of tune.

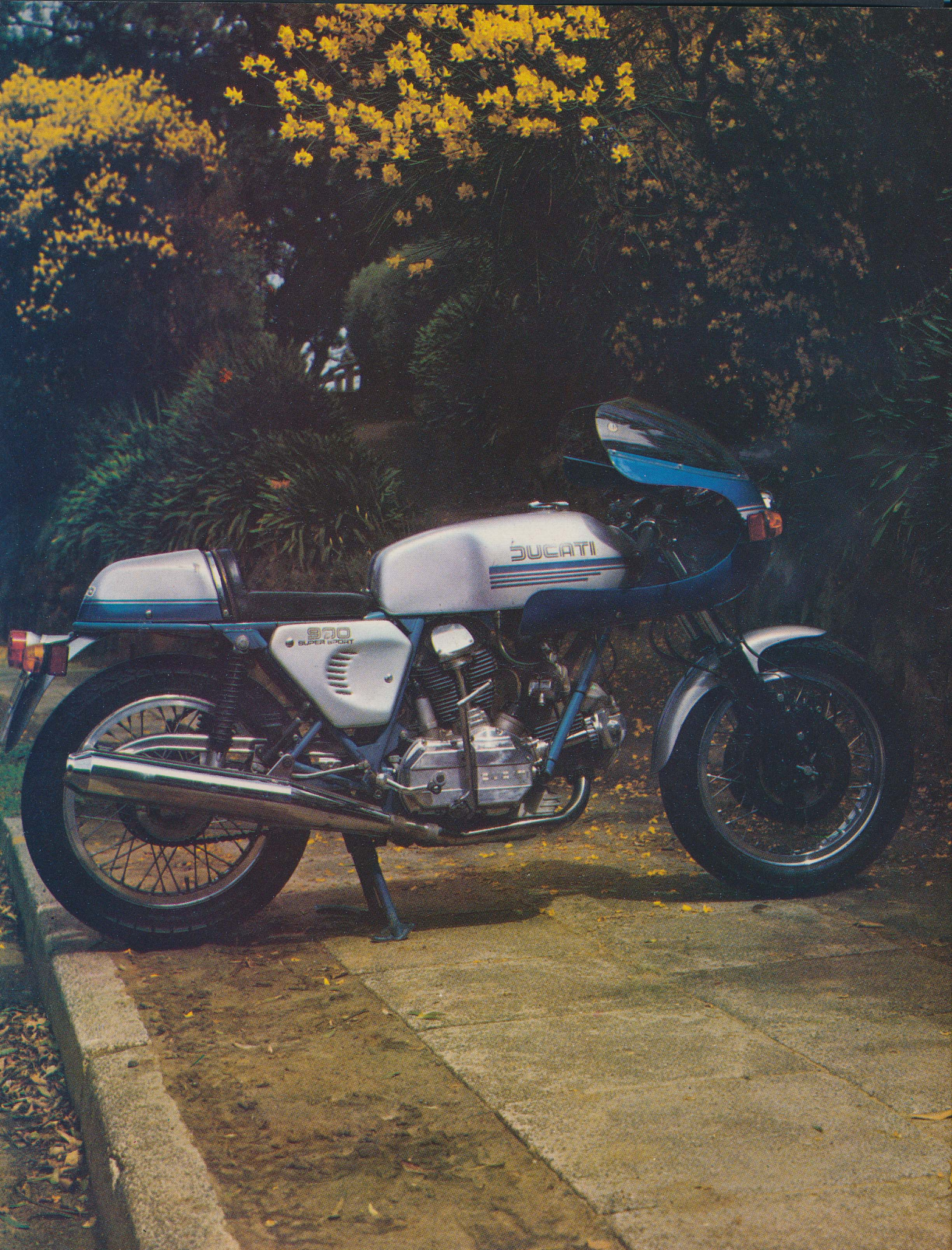
The early electrics were bad news; Aprillia and Motoplat components' constant inconsistency kept owners on the jump.

This has taken a turn for the better and the machine now enjoys a good — if less than perfect — reputation in the electrics department.

The engine has always been strong and willing, but was a bit of a pain to tune. Valve settings were altered by lifting the heads and inserting valve stem caps of varying thicknesses because screw-type valve tappets weren't fitted. Later variants are fitted with tappet adjusters, making the GT models much easier to service than they were. It helps the bike gain wider market appeal and more acceptable to riders who don't carry out their own maintenance.

But Ducati is nothing if not adventurous — avant garde may be an even better expression — for it has always used desmodromic valve control in some models in the small range, in particular the neat little single cylinder sports tourers and the undisguised production racing 750 and 900 SS machines.





The Ducati 900SS variant of the big V-twin is also fitted with huge carburettors, three disc brakes, racing tyres, rear-sets, clip-ons, single seat and a three-quarter sports fairing.

There's nothing new about desmodromic valve control — it was used nearly 60 years ago by Mercedes and has put in some brief appearances since. About 10 years ago there was even a desmodromic valve conversion kit for the Velocette Venom.

Like all high efficiency machinery it's really a very simple design. The Ducati desmo uses three cams in the head — one for the inlet valve, one for the exhaust and a third to control the closing of both valves.

The valves are fitted with two rockers, one of which is similar to the type used on other engines with single overhead camshafts, but the closing rocker is forked and engages with a special collar to pull the respective valve closed under the control of the third (closing) cam. Valve backlash adjustments are attended to by valve caps, with the clearance for the closing rockers adjusted by shim washers placed between the rocker and the collar with which it engages.

The cylinder heads must be removed to set valve clearances but the heads can be removed in a few minutes and practice can see the job done in little

more than an hour or so. Certainly it is no more time-consuming than a similar task on a machine with screw tappets, and nowhere near as long as the time taken to adjust valve clearances on one of the big double overhead camshaft multis.

Ducati's engine is basically simple — a wet sump 90-degree V-twin, with vertical shafts and bevel gears to drive the camshafts. The crankcases are massive alloy castings and the engine/gearbox unit is a stressed member of the frame, for rigidity. The duplex frame tubes are attached at the top of the crankcases at the front, at the base of the forward cylinder and there's a two-point mount above and behind the gearbox.

An interesting point is that the down tubes on SS models are straight, while the GT frames' downtubes are kinked at the horizontal cross member.

Alloy castings are very distinctive, with the outer cases more slab-sided for both narrow width and great strength. The angular cases were designed to harmonise with the angular styling note of the early GT models which is by no means popular with most riders.

It hardly matters, the Ducati super sports are not machines for most riders, they're for the hard-rider or the production racer. Or just the guy who is enthusiastic enough to insist on

something very different and totally functional.

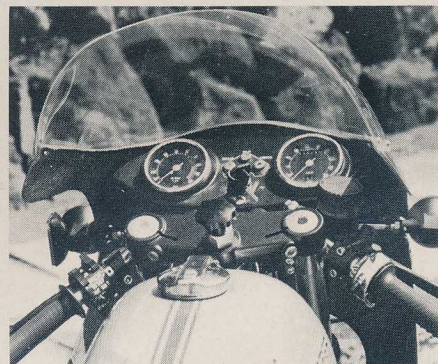
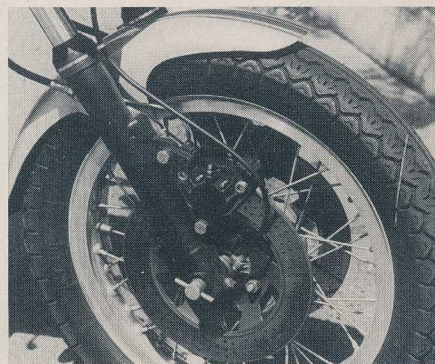
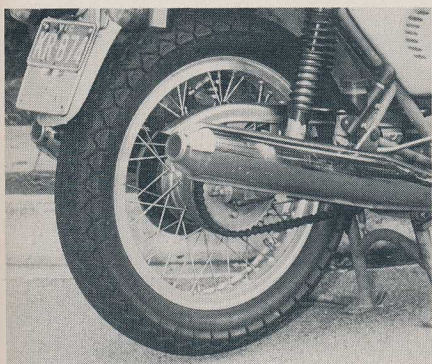
Originally, the Ducati twin was available only as a 750, but the latest models are all 860 cm³ variants, a capacity arrived at by simply over-boring the cylinder barrels.

Like all previous models, the latest 900SS is a variation on Ducati's basic theme, although many of the engine components — in particular the reciprocating parts — are exclusive to the Super Sports.

They allow high power to be developed at high engine speeds; the connecting rods are much lighter, the pistons trimmed into a semi-slipper shape, and the whole assembly very carefully balanced.

The engine is not necessarily more highly stressed, even though it has to spin a whole lot higher to produce its peak power. Naturally, it idles roughly and is a bit lumpy on the low end of the engine speed range, but it gets itself together as the throttle is turned and the engine gets on the pipe from about 5000 rpm onwards. The big V-twin is not intended to be an ultra-high revving engine, though it will buzz willingly to almost 9000 without distress, for it is intended to produce good solid, slogging power at medium revs.

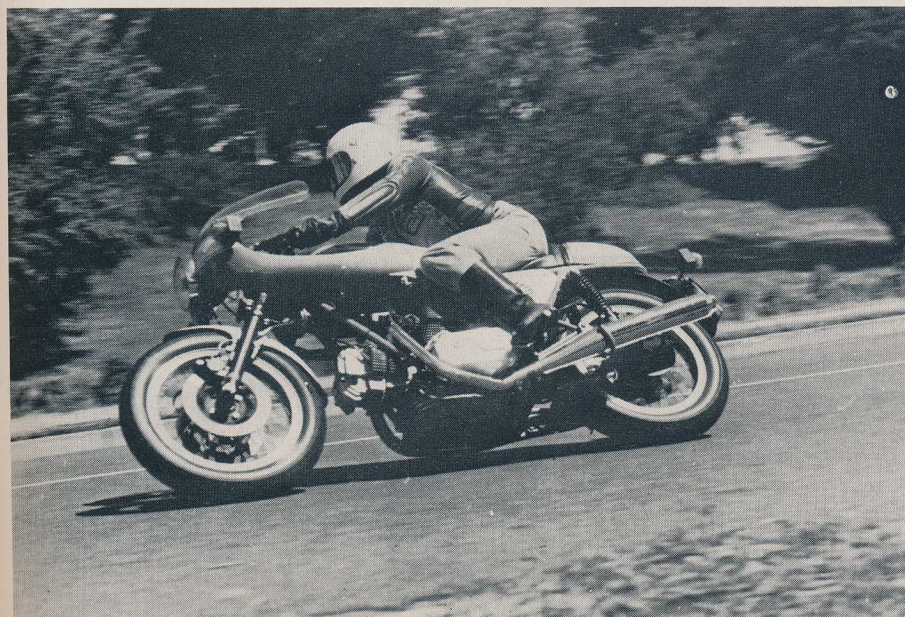
The latest 900SS comes in two distinct stages of tune, and even then



Above left: Those bloody mufflers . . .

Above centre: The front end. Firm forks contribute to excellent handling, brakes are excellent, but not the stuff for average riders, particularly in the wet. Skill and a strong heart extract instant braking.

Above: Cockpit layout is unchanged. Not good quality. Switch block is awkward, warning lights dim and instruments plain but adequate.



there are some variations to the basic power delivery. There are several cam combinations, just as there are obvious external differences.

The machine we rode had the "registration kit", for want of a better term, which uses the large, seamed mufflers from the 860 GT and GTS models. It also has smaller 32 mm Dellorto roadster "pumper" carburetors but the 40 mm Dellortos are available, with the original Conti megaphones. That's why few of the detuned Super Sports are seen on the roads.

The 32 mm carbs and large air-cleaners play their part in knocking the edge of the machine's performance. Induction roar is cut, and the bike is a lot quieter at high revs, but most people who want SS Dukes want the whole thing, race kit, noise and all.

The most recent change to the SS models, apart from the obvious go-slow bits, is the conversion of the foot

controls to left foot gearchanging, to enable the bike to be sold in the US.

Brakes are as fitted to the first 750SS models (but with a larger master cylinder) twin drilled discs on the front and a single disc on the rear. All cast-iron, of course, and therefore subject to some surface rusting, but very potent in all conditions, wet or dry.

It still isn't the easiest machine to start until you learn the drill, and it's a whole lot easier to kick over if the bike is hauled on to its centrestand.

This is only because of the strange Ducati kick-starter (only the GTs have electric starters) which strikes the ground before the engine has a chance

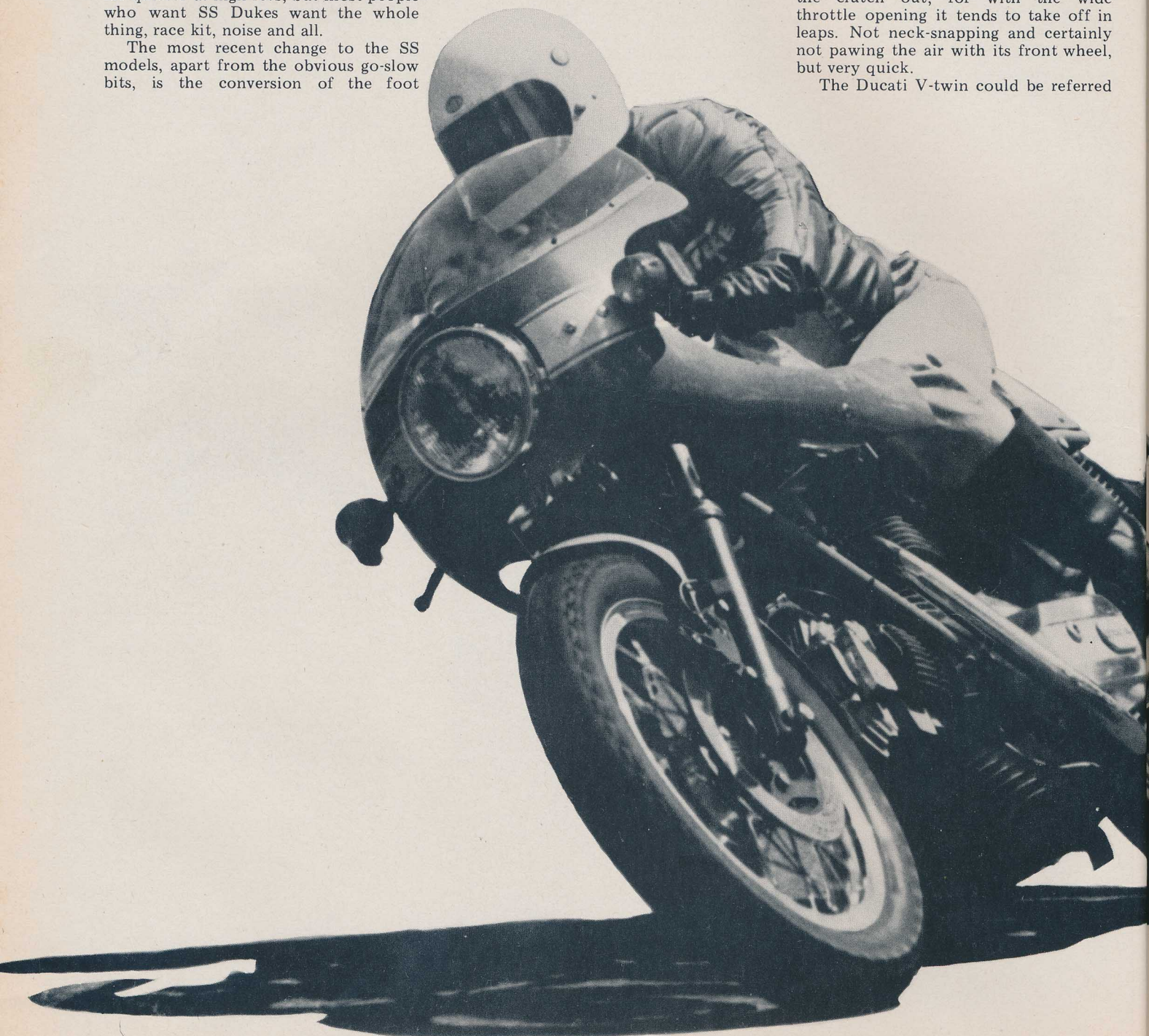
to fire up. But a quick tickle on the Dellorto carburetors and another try with the bike on the stand will inevitably result in a first-time kick.

We mentioned the lumpiness at idle, but must qualify that by saying it doesn't slurp and gulp the way it does unfiltered and with the 40 mm carbs.

But the engine is still essentially a highly tuned unit and this becomes apparent as soon as the clutch is fed in. The Ducati still demands the odd starting drill of plenty of throttle and not too much clutch for the first couple of meters. It's a difficult balance to maintain because the clutch is typically Ducati and a mite sudden in action.

It's not a bad idea to let the traffic get a step or two in front before letting the clutch out, for with the wide throttle opening it tends to take off in leaps. Not neck-snapping and certainly not pawing the air with its front wheel, but very quick.

The Ducati V-twin could be referred



to as honest and hard-working rather than cultured and refined, for it makes its racing origins well felt in the way it trundles along.

You could hardly call it complicated, particularly in a direct comparison with many other big bikes, but it is efficient, solid and reliable, and it *feels* like a real motorcycle.

Okay, so it's a tenuous thing, and not the sort of thing to start an argument about, but the V-twin Ducati has that odd Vincent-Harley-feel which is so hard to describe, but which is very trad — and very satisfying.

It vibrates a bit, which you can easily forgive, but it delivers its power smoothly enough when it's on the road and hard at work.

Though it lacks the sheer, raw power of the fully-outfitted 900 Super Sports, the stark 900SS is still a flyer. It handles very well indeed, and can be flung into corners with ease bordering on the absurd.

Its only serious disadvantage on the road lies in the limited steering lock which the clip-ons and fat fuel tank demand. And this is only a problem when negotiating narrow streets or trying to impress the plebs by turning a tight circle foot-up.

Simply, it won't do that. In fact some heavy footing is called for if you try, for it turns the stubby handlebars to the tank and glues them there, while the bike tries its best to flop into the turn.

It takes some getting used to, but after a couple of terribly cocked-up turns in narrow areas, with much wobbling and some footwork, you finally learn that it needs the turning circle of a large semi-trailer and don't

attempt tight feet-ups any more.

It sounds dangerous, particularly in heavy traffic, but it only takes a bit of getting used to.

Except for the clutch, that is, which has to be kept at the ready most of the time if the engine drops off the boil when the going gets heavy.

But the bike is no happier in traffic than a sleek racehorse would be pulling a milk wagon, for if ever there was a motorcycle which longed to be belted long and hard on the open road then this was the one.

It thrives on long-distance fast touring, and the seating position isn't as uncomfortable for this riding as it appears. Heavy wind pressure on the top of the rider's body takes most of the weight off wrists and forearms and this makes the job a whole lot easier. You do need a tank bag for any gear though.

Sometimes it's heavy going at slow speeds, but the bike is set up for fast, open-road blasting and few — if any — bikes are able to keep it in sight for long. And that's the de-tuned version!

Brakes are well on the job, the rear a little too much so for most applications, with the gearchange very precise, but still a bit notchy.

It could be due to the on/off clutch, which is almost as quick as an electric light switch but not quite so easy to operate.

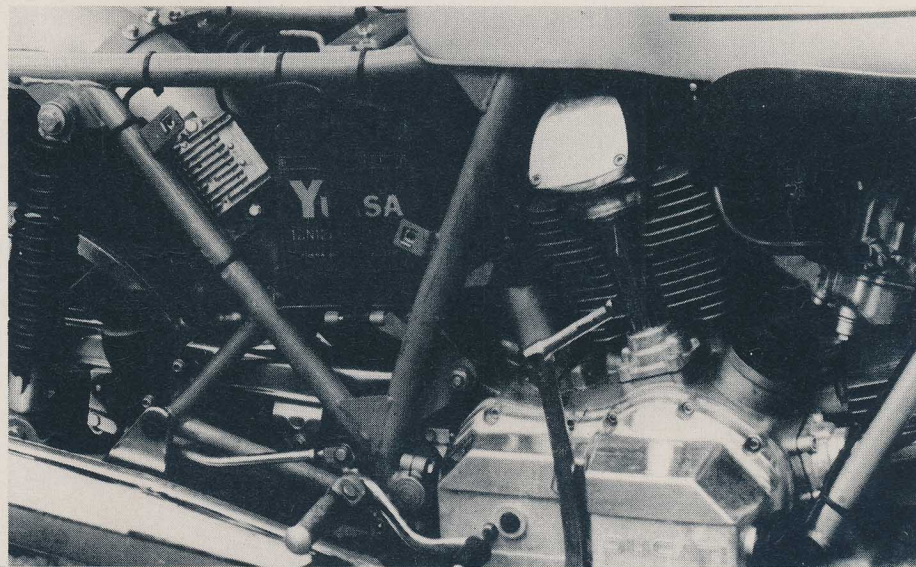
The rear brake pedal is on the "wrong" side for Ducati, but the neat little lever is well sited, with a small coupling to the tiny hydraulic master cylinder which attaches to the footrest mount alongside the shock absorber.

The headlight is adequate for sensible riding but still nowhere near the bike's potential after-dark speed. Electrics are well sorted out for the most part, because the bike runs the vastly improved Motoplat gear.

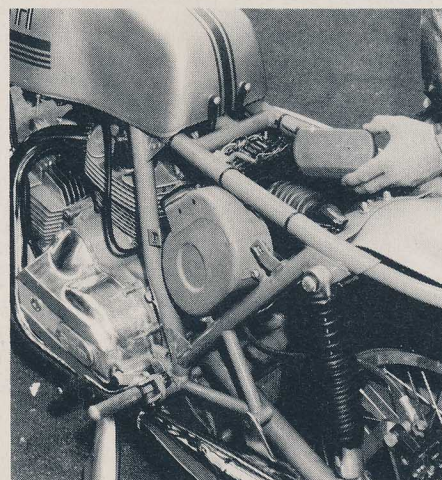
This is the standard road-going version of a machine which set the woods afire in appearance and performance, and which is all set to keep its end up in the road-burning stakes as well as on race tracks around the country.

The more mildly-tuned machine we rode is not in quite the same class as the original, and would not have been totally accepted by a motorcycling public which is more into sports machines if it wasn't for the race kit. But the Ducati tiger is still on the prow!

*



Above: Frame is beautifully designed and well made. Access behind sidecovers to battery and electrics is good.



Left: Butterfly nut undoes fuse box. Air cleaner takes a lot of space. Give us the 40 mm Dellortos with air cleaner pods any day.