

CYCLE WORLD

JUNE 1967

FIFTY CENTS

AMERICA'S LEADING MOTORCYCLE
ENTHUSIASTS' PUBLICATION

ROAD TESTS: Kawasaki 350 Avenger & Bultaco 250 Pursang

Special Track Tests of Daytona Racers: Triumph, Honda & Yamaha

COMPLETE DAYTONA REPORT



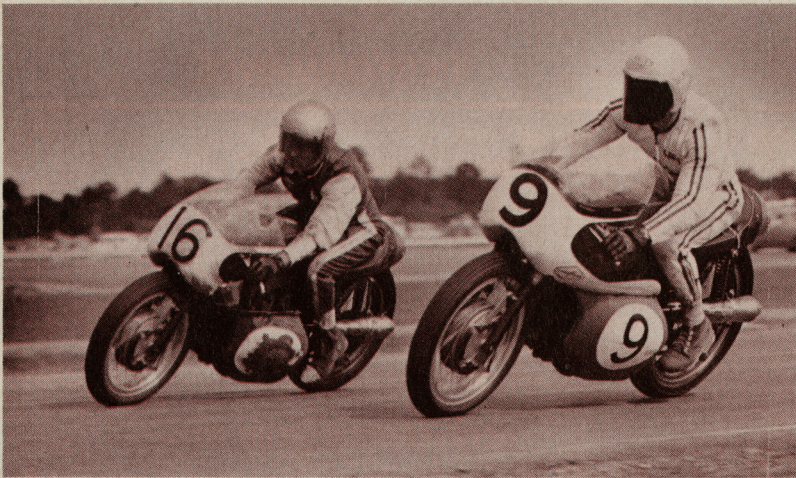
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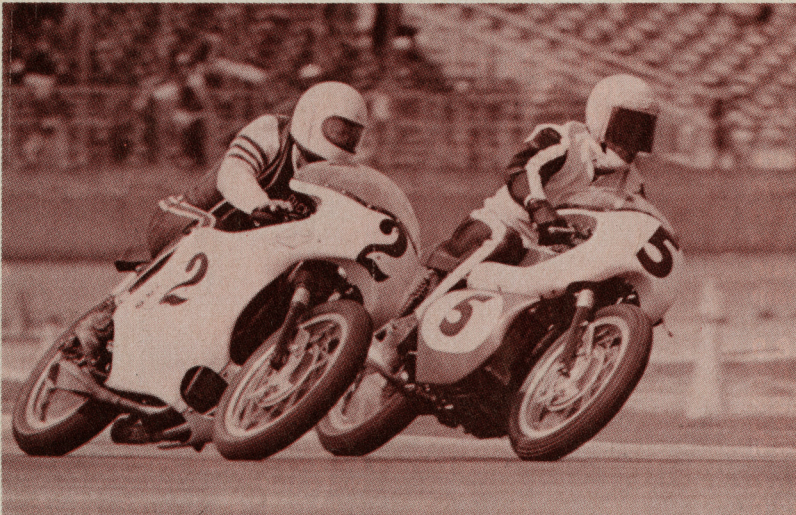
DAYTONA 1967



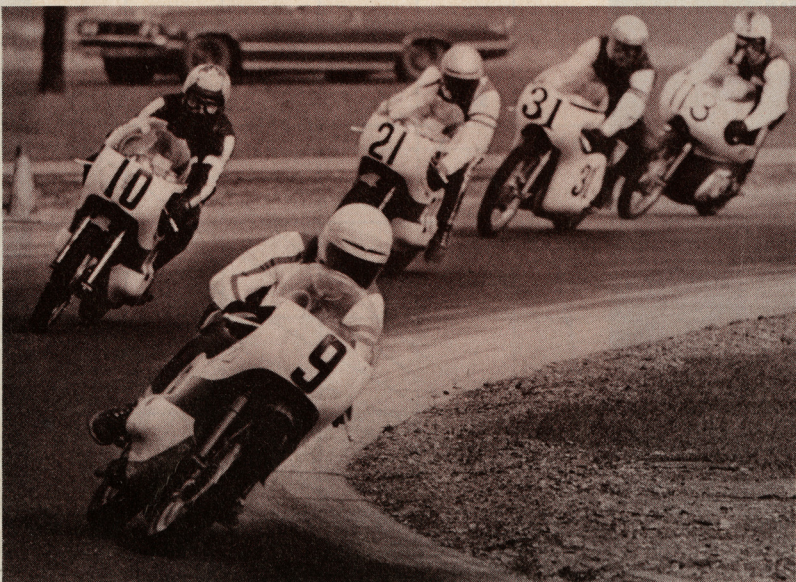
BY IVAN J. WAGAR



All the drama of the 200 miler—Hammer displays the scars of his 100 mph crash, as winner Nixon laps him. For the first 100 miles, these two fine riders were this close together.



Dick Mann, BSA, and Larry Palmgren, Triumph, in the early stages of the 200-miler.



Leading quintet on the second lap of the 250 race consisted of Nixon, Duff and Winters on factory Yamahas, Don Twigg, TD1-B, and Ron Grant, Suzuki.

WE REFER TO DAYTONA as our "classic." What is a classic, really? Is it a European Grand Prix with a hundred entries total and four or five factories represented? At this year's Daytona, the 26th running of the race, there were almost 750 entries and, just to prove that the factories are interested in America's most prestigious event, no less than nine manufacturers prepared special equipment. At the distributor level, some three or four more brands received encouragement or support.

Or does classic mean close, hard fought racing? Again Daytona would have to score on this count, for every race produced spine-tingling duels among the leaders, not to mention the usual dog eat dog battles throughout the pack.

To Gary Nixon went the first Daytona double for his two days of brilliant consistent riding. Yamaha scored seven out of ten for their third straight win. Triumph, besides taking first and second places in the 200 miler, brought all of the factory prepared twins home; five of them in the first ten places.

Harley-Davidson scored an Amateur 1, 2, 3 with super-smooth Walt Fulton Jr. scoring a win on his first ride on the Milwaukee big-twins. But, as if someone were getting even, none of the Italian built 250s finished in the first ten. In fact, none of the team bikes lasted the distance. Harley did set the fastest qualifying lap around the oval when Freddie Nix clocked an amazing 140 mph.

Kawasaki fared no better with their factory entries. Plagued by carburetion problems all week, the star-studded team of Mann, White, Elmore and Savage was never in contention. Private owners on standard A1-Rs came in 9th, 10th and 11th, which is a rather good showing for the first year. One of the most outstanding rides of the whole week was put in by young California amateur Art Baumann, who was in fourth spot until his Kawasaki lost a big end due to lean oil mix. The Kawasakis will bear some watching when the initial teething troubles are sorted out. Dick Mann said his would run like a good five-hundred, occasionally.

Team Hansen turned up with three of the most beautiful orange and white Honda 450s imaginable, one being ridden by another young amateur, Jim Odom, in his

first road race. The sound from the Honda on its 132.8 mph qualifying lap was incredible as Jim broke the existing amateur record by over five mph. As each phase of speed week activities progressed, tension mounted and the promise of record shattering racing became nearer reality.

200 MILE EXPERT

No less than six machines broke last year's qualifying record of 134.148, set by Cal Rayborn. Triumph and Harley split three each, with Hammer being the fastest of the Triumph brigade and second fastest qualifier at a speed of 135.746. Just inside the old record and considerably faster than his teammates came Dick Mann, BSA, at 133.353 to take seventh place on the grid. The next man in shocked everyone at the speedway: Mike Duff, who turned in an incredible 132.742 mph average on the oval, riding a 350 Yamaha which was being raced for the first time. Certainly a preview of things to come when the 350 limit becomes final. So

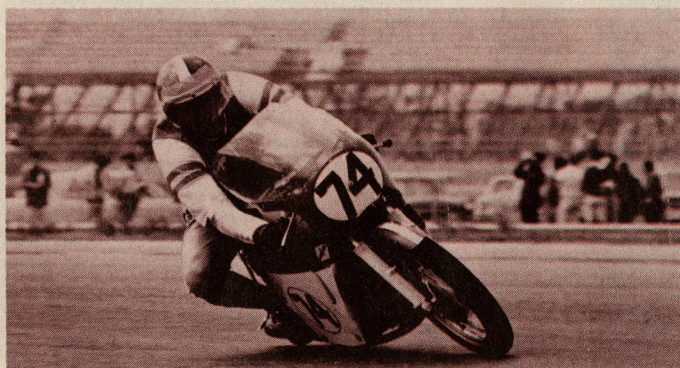
it looked like another Harley/Triumph battle with "dark horse" Duff adding a little spice.

When the flag fell, it was Hammer and Nixon as they slowly pulled from the pack on the opening lap around the oval. At the end of the first lap, Dick led across start-finish and the pair entered turn one, side by side, with a three-second lead on the pack. For the next one hundred miles these two riders put on a tremendous display of high speed skill as they slowly left everyone else behind. Except for one lap, Hammer was always in front at start-finish to pick up lap money at \$25 a time, but through the infield it was anybody's game as they lapped the slower traffic.

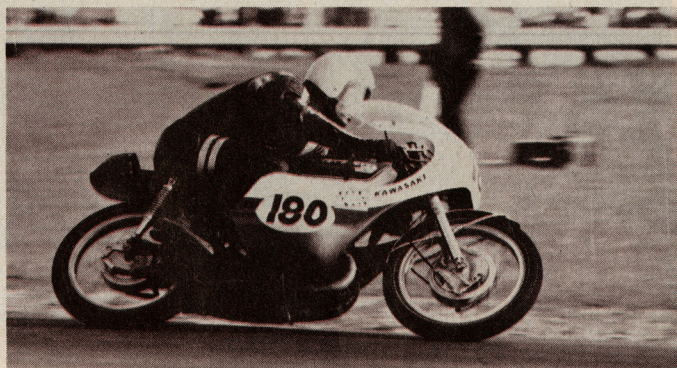
On his 26th lap, Hammer pulled into his pit for gas, letting Elmore move into second place. Dick's stop went well but, after going back out, he slowed considerably and lost even more time to Nixon. There was almost panic in the Triumph pits; the six machines had run well all

week with only very minor adjustments being necessary. But soon Dick was again chiming on both cylinders and going like the wind, with 28 seconds down on Nixon. At the end of the race we learned the reason for Dick's lagging. At the pit stop he took a rag from a mechanic to clean the inside of his visor, and sat on it as he went back onto the course. A loose end of the rag was sucked into a carburetor, choking off the one-cylinder!

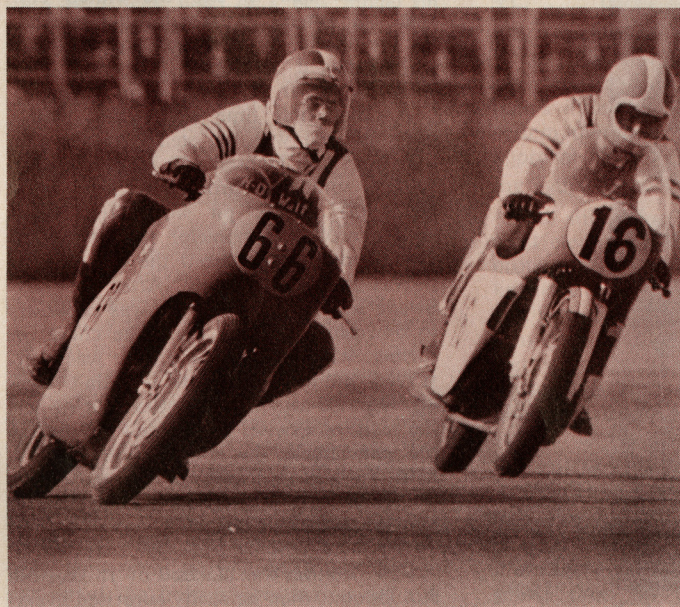
Buddy Elmore stopped for gas one lap after Hammer and, despite the problem with the rag, Dick was then in second place. Gary lost 11 seconds when he pitted on the 30th lap, leaving Hammer down only seven seconds. With the pit stops out of the way and everything back to normal, racing in the usual American way of no team orders, Hammer was riding like a man possessed. Scratching every foot of the way through the infield, his ride could only be described as meteoric. Then disaster. On the 31st lap, the front wheel



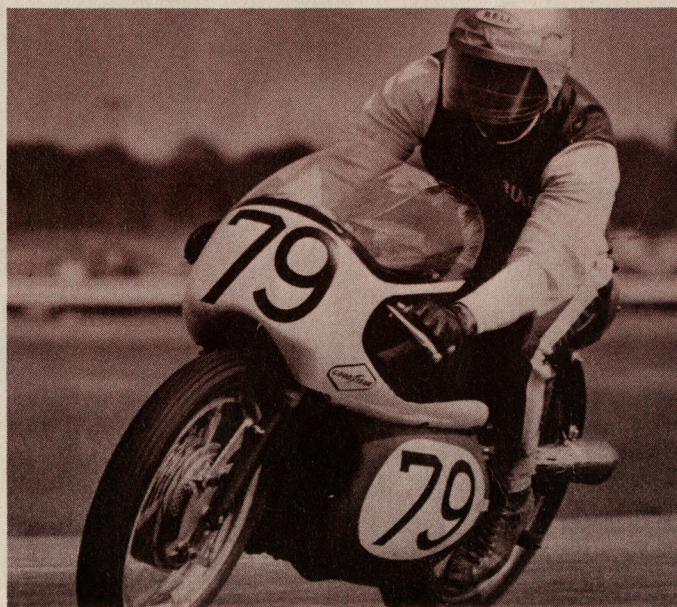
Swede Savage on his way to 10th place in the 200-miler, on a Hansen Honda.



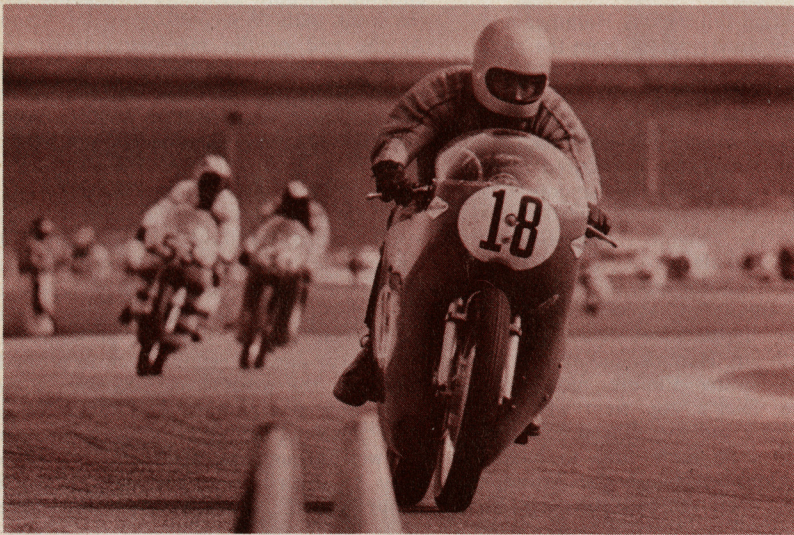
Although engine trouble put him out of both races, amateur Art Baumann outrode most of the experts.



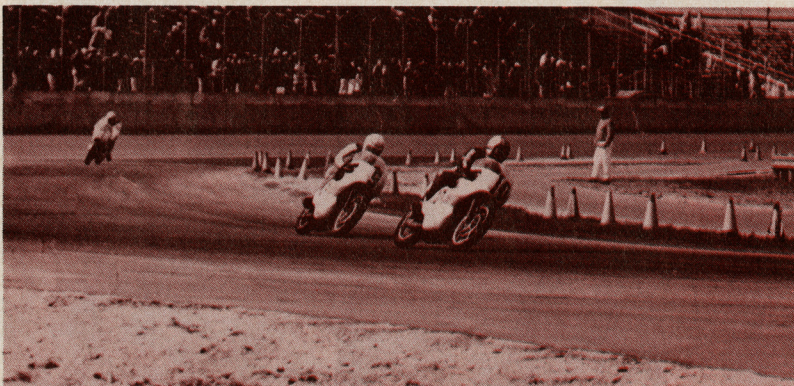
The terrific Walt Fulton, H-D, and Jim Odom, Honda, duel for Amateur honors.



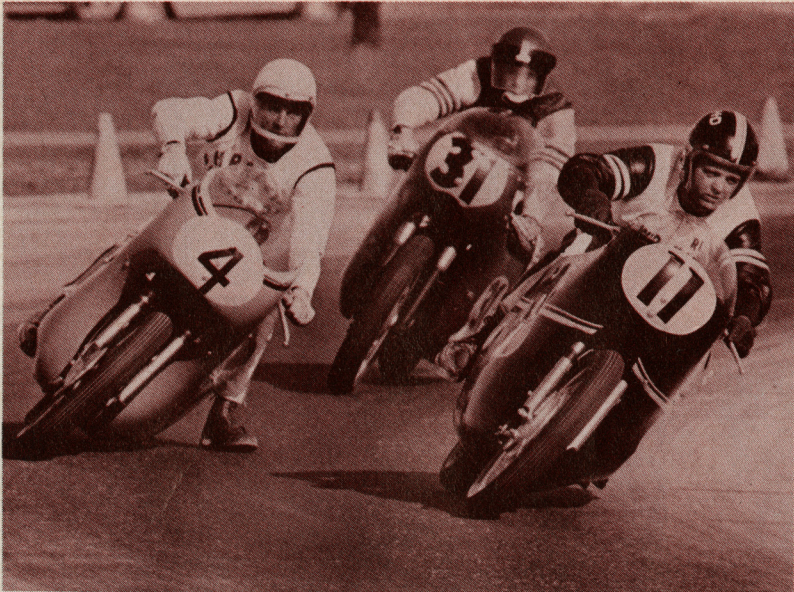
Last year's winner, Buddy Elmore, Triumph, chasing after Nixon.



Mert Lawwill, H-D, finished fourth in the 200-miler. Here, he leads best first year expert Jerry Seguin, H-D.



By the fourth lap of the 250 race, Mike Duff led Gary Nixon by a length, with teammate Winters dropping back slightly. The remainder of the field is nowhere in sight.



Ron Widman, H-D, 11, battling for second place with Dick Woods, H-D, 4, in the 100-mile Amateur race.

broke adhesion as Dick braked for turn one, only four seconds behind Nixon, and he and the machine parted company at something like 100 mph. But in 1½ minutes he was back in the race — in seventh place, where he stayed for the remainder of the race with a suspected broken collar bone.

When Elmore saw that Hammer was out of contention, and realizing Gary would ease up to play it a little safer, the previous year's winner came to within seven seconds of the leader with five laps to go. But Gary had been given the signal and pulled the gap back to twelve seconds at the finish.

During their Nixon chase both Hammer and Elmore were hand timed at two minutes 17 seconds, representing unofficial 100 mph laps. First and second place lapped the entire field at least once.

Fierce battles were being waged back in the pack, particularly in the Harley-Davidson brigade. All of the riders seemed very evenly matched in performance and the Markel, Reiman and Rayborn scrap continued until Markel went out with engine trouble. Don Vesco, BSA, and first year expert, Jerry Seguin, H-D, fought wheel to wheel until the BSA packed it in.

The two three-fifty Yamahas of Murphy and Duff suffered minor problems. Murphy lost considerable time when a plug fouled, and Duff had a split gas tank which led to much pit time while the tank was changed. The machines were further handicapped by having to remove one of the five speeds from the transmission to meet AMA class C rules. Yamaha decided to take out first to allow closer ratios in the box. This meant they were using the normal second cog for low gear, and the riders had to slip the clutch considerably out of the tight left-hander leaving the infield. Despite these problems they still managed to finish 18th and 19th, which is rather good for a first showing.

Another first time effort that cannot go unnoticed was the steady progress of the two Team Hansen 450 Hondas. Swede Savage somehow broke his rear brake pedal off at the pit stop, after riding with a broken tachometer from the early laps. Consequently, from the pit stop on, it was front brake only. After the race, Swede said that at times it was necessary to downshift early or crash; he chose the former, which meant the engine was over-revved unmercifully, but it didn't blow up. He also said it was better that he lost the tach; otherwise, he couldn't have stood the punishment the engine went through. Even with these handicaps, Savage finished tenth with teammate Larry Shaffer two places behind.

AMATEUR 100 MILER

Pole position was claimed by 18-year-old Jim Odom, when he really surprised everyone with that amazing qualifying lap on his Hansen Honda. And to show it was

THE TRIUMPH FACTORY stopped taking an active interest in racing almost 18 years ago when the Triumph Grand Prix project came to an end. But American tuners, being what they are, saw an engine that lent itself to home tuning; one that could be very competitive under AMA rules. And through the years, the 500 Triumph can boast a staggering list of successes in this country. All of this has been done with American speed accessories, from special crankshafts to racing valve springs.

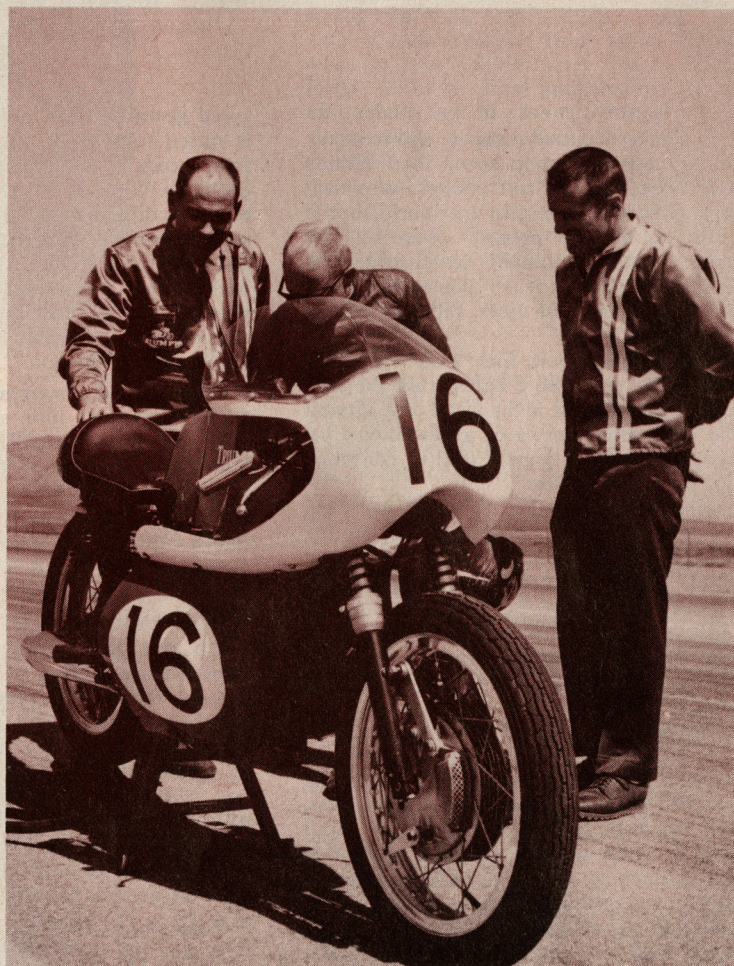
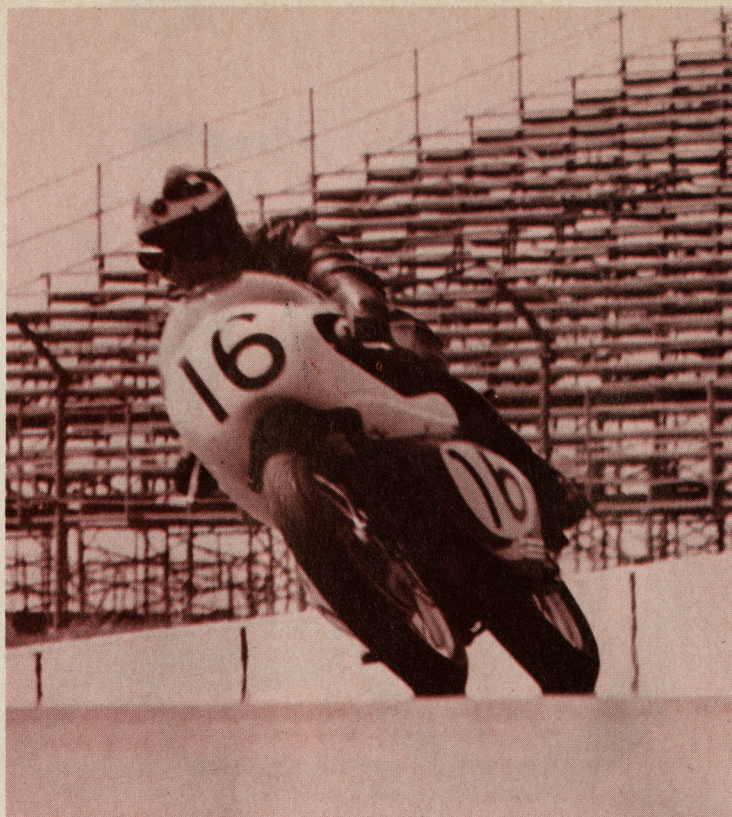
This changed somewhat when the Triumph factory obtained Doug Hele, a first class engineer who is more than a little interested in racing. One of Doug's first tasks was to develop a new fork for street Triumphs, an easy chore for someone who had worked on forks for the world's famous racing Nortons. To say the new front end helped the handling would be an understatement — it was a transformation. From that point on, the street Triumphs have become more sophisticated in almost every respect.

Frame and engine modifications were made for last year's Daytona races, and shortly afterwards, the T100 R was made available to the public. The machine incorporated almost all of the design innovations used in Buddy Elmore's motorcycle. The Triumphs this year were quicker, handled better, and were certainly much smaller than any previous Coventry five-hundred.

To get a better look at the machine, we asked to take one to Riverside. We wanted Gary Nixon's winning mount. However, it will be in Baltimore, Gary's home base. Instead, we were offered Dick Hammer's ride, which suited us just fine, for it was the fastest Triumph in qualifying. It required a new fairing and a little straightening here and there, due to Dick's 100 mph prang, but other than that, it was in remarkable condition.

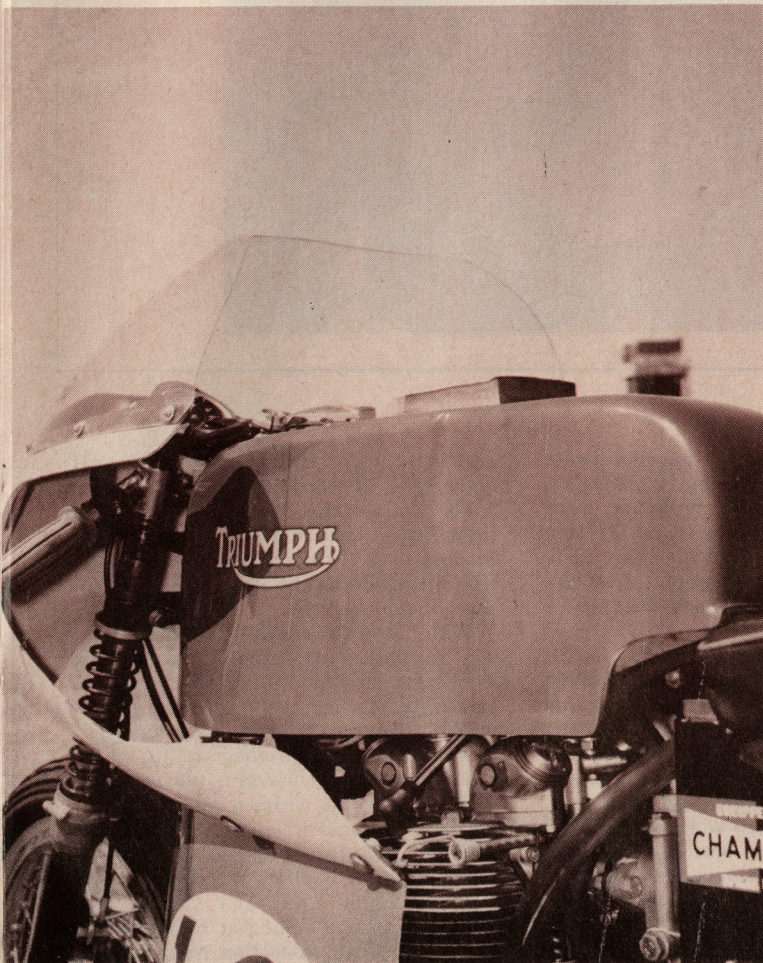
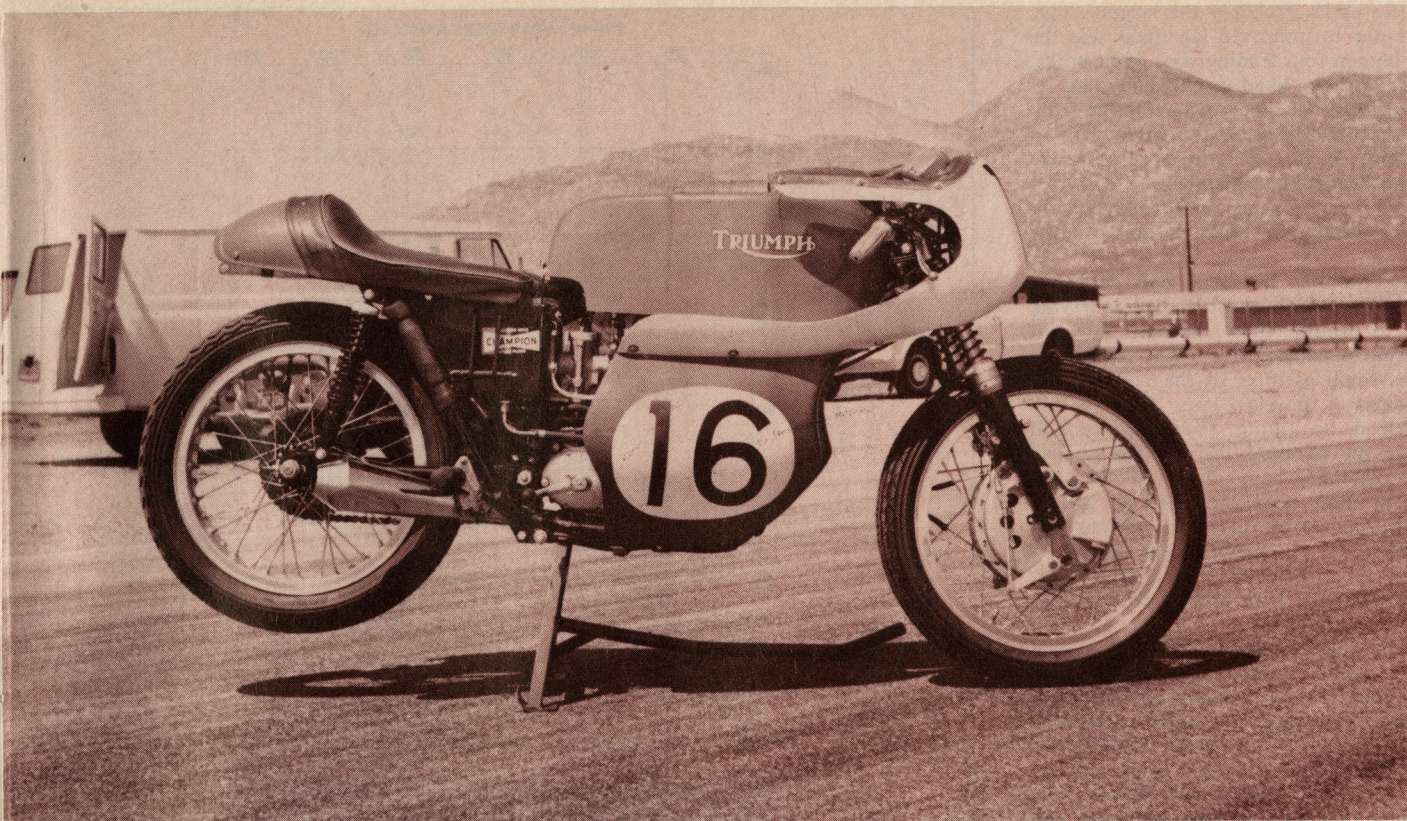
Probably the most creditable thing about the six factory prepared Triumphs, apart from the 1-2 finish, is that all six of them finished the race, and that all of them were running as well at the end as they were on the first lap. We managed a look inside one of the engines at Daytona, and found that it has a squish-type combustion chamber, quite similar to the Manx Norton arrangement. Piston to head clearance in the squish area is $.030 \pm .003$, again similar to the Manx.

Most of the changes have been made to



Jomo's service manager, Al Stucky (left) and assistant Pat Owens share a laugh with the editor.

TRIUMPH DAYTONA RACER ★



CYCLE WORLD TEST

the cycle parts. Probably the largest single contributor to improved lap times was the new Fontana four leading shoe front brake. All of the riders liked it, once they had recovered from the shock of having the front wheel stop if the brake was used without discretion. In fact, it's the sort of brake that can be operated all the way with two fingers, or very gingerly with four. A standard Triumph rear brake is used on the back.

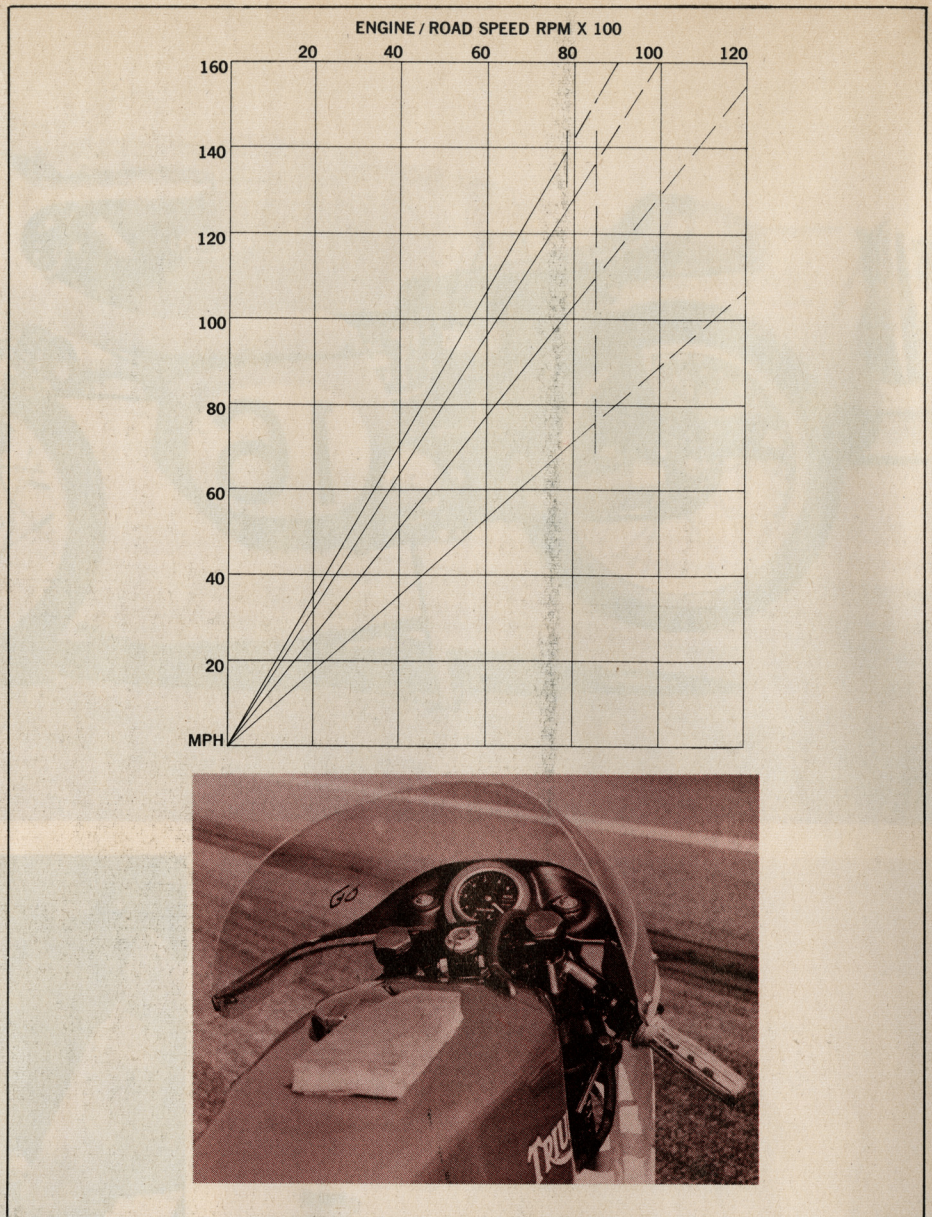
The Triumphs last year had very low frontal area, which sent everyone scurrying home to whittle their fairings. But this year, the machines were even smaller; in fact, as small as most of the 250 production racers in physical size. This was accomplished by fitting 18-inch wheels in place of the standard 19-inch that English racing machines have always used. Also, the front forks were shortened by cutting 1 inch from the top of the stanchions and sliding them up further into the fork crowns. A corresponding amount was removed from the fork springs to maintain the correct poundage.

Except for the kink in the right side member, to allow the exhaust pipe to pass inside, the frame has not been altered in any way. It is exactly the same frame used on the Daytona street model. Last year's ugly gas tank and seat have been replaced by very appealing units from Birmingham Fiberglass Mouldings. Now the rider can get down much lower, with considerably more comfort. The fairing is also much smaller than before, and all of the fiberglass components are surprisingly lightweight. The whole machine only weighs 301 pounds with a half tank of gas.

Externally, the engine does not appear to have changed greatly. The large radially finned exhaust pipe clamps have been replaced by plain, unfinned bands, to improve the airflow to the heads. All of the rear exhaust pipe mounts have rubber bushes, and are actually quite flexible. The carburetor arrangement is quite unusual, although it has been used on some of the European multis. An Amal flat-type float chamber is mounted between the two 1-3/16 Amal GPs. However, it is not hung on an adjustable rod; instead, the banjo outlet spigots are set at 180° and hook up rigidly to the carburetor inlet fitting. This means that the float chamber is fixed relative to the carburetors, and everything must be right in the beginning, as they cannot be adjusted. The advantage is that they cannot come unadjusted, either!

To prevent fuel frothing and all of the evils connected with rigid float chambers, the hoses between the carburetors and cylinderhead spigots are quite flexible. Two U-shaped brackets on the main frame downtube support the carburetor bells on rubber pads.

The oil lines have now been routed over the top of the gearbox, rather than underneath, to permit the right side exhaust pipe to tuck in close to the engine unit. More and more machines racing in the AMA are incorporating oil radiators. The main reason is that, under AMA rules, basic engine castings must be used. And, although



cylinder and head finning may be ample for any touring requirements, it may be a marginal situation under prolonged hard racing. If the oil temperature can be kept down, it will act as a coolant and carry heat away. Daytona Triumphs, like last year, are fitted with a Chevrolet Corvair oil cooler.

Even from cold, the Triumph started well, although the oil cooler did prolong the warmup time considerably. First gear is slightly higher than second on the street counterpart, and it might be expected, with a highly tuned racing engine, to require considerable clutch slip to get underway. However, an extremely wide power band makes the task an easy one. In fact, as we see it, the really good torque characteristics of the engine contributed much to the machine's phenomenal success at Daytona. The machine can be ridden at anything over 4,500 rpm, and from 6,000 rpm to

red line, things happen very quickly, particularly in first and second gears. A good habit, when racing Triumphs, is to shift from first at least 500 revs below red line, because once the engine gets near peak in first, it can climb the last 500 revs in one second, near enough.

With Daytona gearing, Riverside Raceway becomes a very small course, indeed. Turn nine to turn one is virtually an S-bend. The rear springs were set up too far, initially, causing chop over the bumps at turn one; but setting them to the softest position sorted the handling out very well.

It can be said without reservation that the new Triumph is on par or better than anything else for handling, and that includes Manxes, G50s, 7Rs, Honda 4, last year's Triumph racer and various other racing equipment ridden at Riverside.

What a great production racer it would make!