



THE FIVE GRAND ENDURATHON

A continuing investigation of the Triumph Trident.

Recently we put the Triumph Trident to the six hour test (CG, May, 1972). In our continuing efforts to keep our readers fully informed we kept on riding the big triple. Also because it is a groove. Five thousand miles later this report focuses on the experiences and observations of the month's extensive riding.

In logging those many miles we could have free wheeled east to Las Vegas, on through to the Grand Canyon, the Painted Desert and the Petrified Forest, through Albuquerque and up to Taos. The journey could have continued north to Denver, across the Rockies, past Dinosaur National Monument and into Salt Lake City, then north to the Craters of the Moon National Monument, down through Twin Falls to Elko, Nevada, across to Reno, then Lake Tahoe and down the Sierra Nevadas past Yosemite and on into Los Angeles. We could have done that and saved over a thousand miles in gas money. But we didn't. Sigh.

Instead the big 45-incher stayed home in California and roamed up the sometimes rolling, sometimes sheer Pacific coastline, bombed into Berkeley (figuratively speaking), needled its way through the macadam maze of the L. A. freeway system, ventured the byways of the Mojave Desert, quested the scenic vistas of Southern California and even putted down to the neighborhood picture show for a fresh box of Jujubes. All types of California weather were encountered, either sunny, or warm, or warm and sunny.

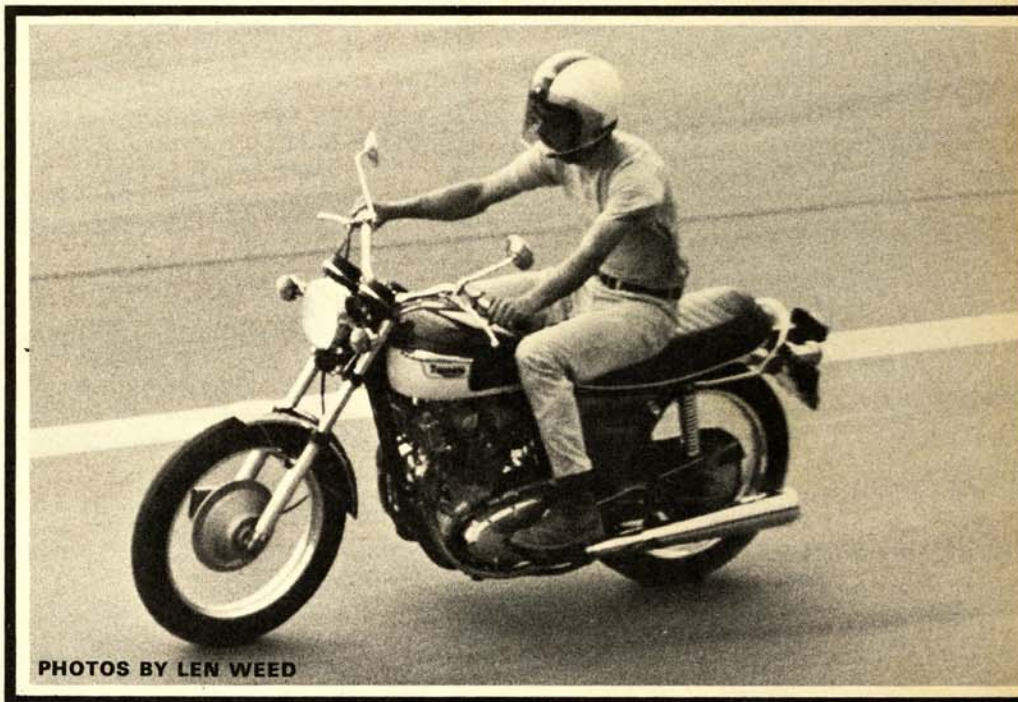
Why a 5,000-mile test on top of the three hundred sixty minute, four hundred twelve mile capacity challenger? Because the Trident impressed us as being the kind of machine with which one could happily spend that much time. And because propelling four hundred sixty pounds of ingeniously assembled English steel

about the countryside beats almost anything else going.

We first became acquainted with Triumph's triple during the final stages of testing the T-150 Trident. At that time (1968) we were impressed with the overall machine. It leaked a little oil like all Triumphs, but so what? The triple was extremely fast, handled well, had good brakes and sounded like no other motorcycle

Spring rate and damping are good. Under hard braking, however, the front end tends to nose dive. The strength and rigidity of the fork tubes themselves aid the handling.

There can be no question that the megaphone type mufflers are visually satisfying. What an improvement over the "fishtail" type, but an improvement in looks only. According to Triumph the new mufflers are culprits



PHOTOS BY LEN WEED

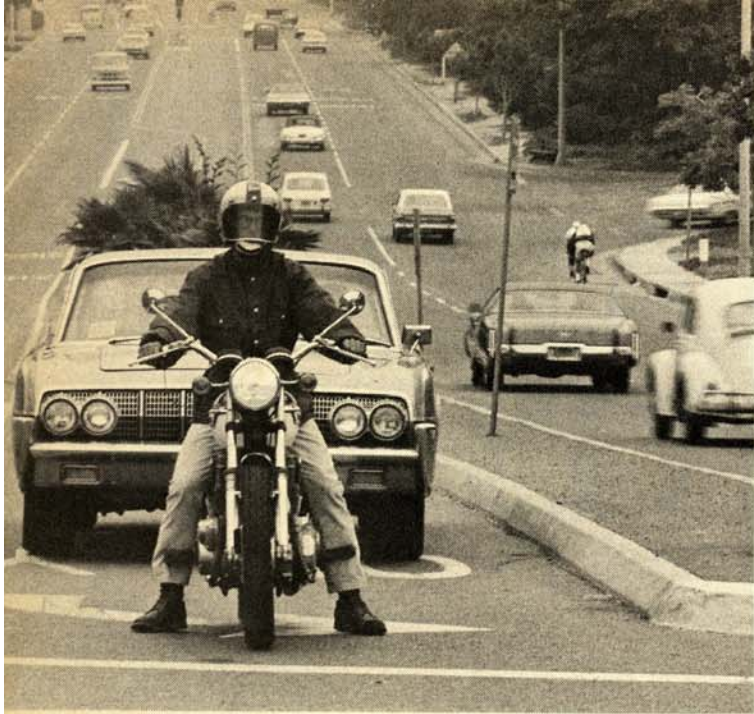
on the road. Very impressive. Twenty six million feet later we still feel the same.

Five years have passed since its introduction and not much has changed. A quick glance initially revealed only different forks and mufflers. Instead of external springs and bogus rubber gatters, the new forks are the "Ceriani type" with the springs inside and small rubber dust covers on the outside to protect the oil seals. These work quite well.

who suck away horsepower. Makes you wonder where it's at—horsepower or appearance?

A lot of people would criticize or shy away from the Triumph and other motorcycles because of little oil leaks. It looks as though the message has finally reached the powers in charge regarding correction of this sometimes serious problem. There was no oil leakage at all during the entire test.

Without a doubt the Trident looks like a well thought out piece of equip-



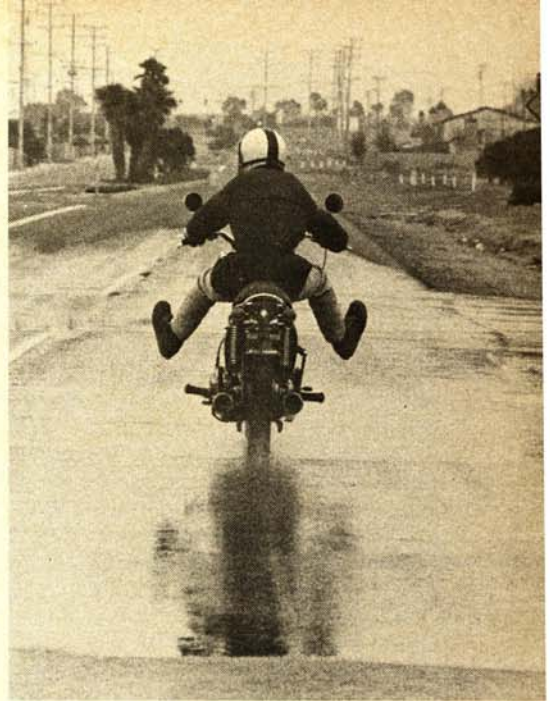
ment from front to rear. Everything is in place until we come to the hand controls. All that can be said here is that someone had a nightmare. There are no less than six buttons and switches, one of which is just there to fake you out. Even if you can remember what they're all for (turn, engine stop, high beam, high beam flashes and horn), it's near impossible to reach them without taking your hand off one grip or the other. Triumph could take a lesson from other makers here.

Another point to look into is the brake and clutch levers. They aren't too bad with heavy gloves or for short jaunts around the block. The flat surface of the lever just doesn't fit the curved surface of your fingers. This is uncomfortable after several miles.

The three cylinder OHV engine sits vertically in a single loop cradle frame. Rake is twenty-eight degrees. Handling is quick and very stable at low or high speeds. In heavy traffic and at very low speeds the front end feels "heavy" and tends to fall from one side to the other. This is probably caused by the large front tire (4.10 x 19). Another debit on the handling ledger is the wide turning radius.

During our six hour test of the Trident at Orange County International Raceway both test riders agreed that the rear suspension did its job well. Now that we have had a chance to evaluate the big three on the road we have varying opinions. One staffer felt that the ride on the highways and byways was a bit too stiff even with the shocks in the soft position. The



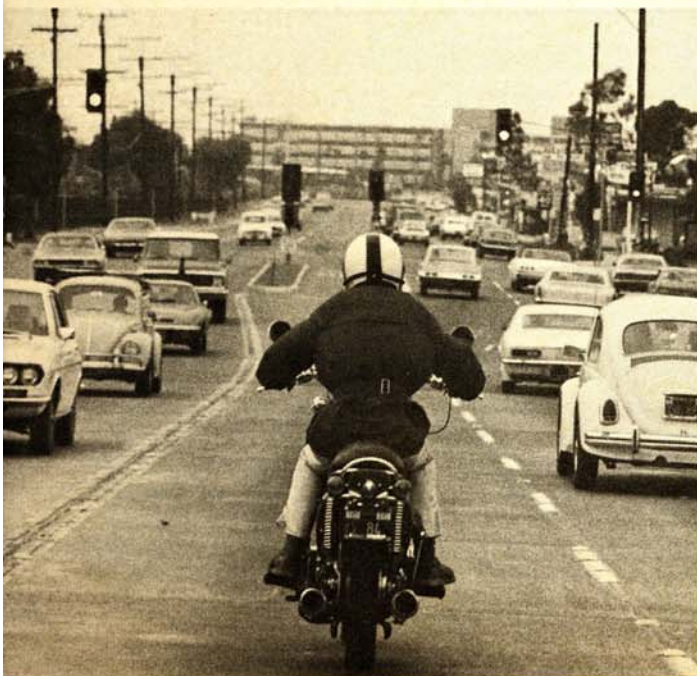


other felt that the suspension works just fine, any time, anywhere. What this boils down to is a personal rider preference. It is a simple matter to select any spring rate which fits your particular posterior. With rear suspension set on the hard position both riders noticed some front end oscillation when cornering. Guess which test rider indicated he wanted to acquire a Trident? That's right, the one who wasn't fully satisfied.

As with any street bike, hard cornering results in something dragging. The Trident is no exception. This is the same machine used in the six hour test and, as reported at that time, both center stand and side stand were ground off. This would have happened on the street also. It takes very little to get down to the peg rubbers.

The double leading shoe eight inch front brake is the next best thing to a disc. Aided by the front tire traction the brake brought 640 pounds (bike and rider) to a controlled stop within a minimum distance. A fair amount of pressure is required to activate the brake. Also the combination of the large tire and insensitive brake make it possible to feel exactly what is happening up front at all times.

After such a good front brake, performance of the rear stopper was a big letdown, particularly after its impressive showing during the six hour test. Not only did it require excessive pressure but nothing much happened. There were two possible explanations for this: glazed shoes or shoe crystallization from heat. After the glaze was cleaned the problem still per-



sisted. It becomes apparent that the rigors of the recent six hour test did cause the brake shoe material to overheat with resultant crystallization.

The three cylinder engine is a contemporary antique. In this day of two strokes and single and double OHC engines, Triumph prefers to retain the old but reliable over head valve design that has worked well for them for so many years. One cylinder is fired every 120 degrees of crankshaft rotation. The engine is virtually vibration free except at sustained high speeds.

The loud clatter heard from the top end of the triple, and every other Triumph, can be traced to the camshaft. In order to get performance the valves need to be opened and closed quickly. Therefore, the opening and closing ramps on the cams are quite steep and tend to shove the valves open and drop them closed against the seat. Thus the clatter. That's one price you pay.

One thing can be said about performance—breathtaking. This year the Trident is fitted with one less tooth on the countershaft. Now the triple not only gets from one light to the next post haste, but still runs 120 mph.

Taking all types of riding into account, average fuel consumption was 34 miles-per-gallon. Range on a tankful is about one hundred twenty-five miles, which is plenty.

Around town the three runs relatively rough in the three thousand thirty-five hundred rpm range. The engine wasn't happy until seventy to seventy five mph was reached and then it roared down the highway like a kitten—a loud kitten. In order to alleviate this low end roughness a 1973 manifold was fitted. The earlier ones were balanced, the new ones are not. Guess what? No difference.

After approximately one thousand miles the engine would not idle down at a stop. The point plate was removed to clean and lubricate the assembly, the theory being that the lubrication was gone in the auto advance unit. On inspection it was obvious the advance unit had not stuck, but the return springs had stretched and would not retard the timing at idle speed. After a quick trip to Triumph we learned that not only had the springs stretched but they were the wrong springs. This was easily repaired and no further trouble was encountered. Perhaps the most important thing to remember here is that the ignition does not go into full advance until the engine is running thirty-five to thirty-eight hundred rpm. If the return springs are not working the timing could go to full advance before this speed and cause excessive heat built up, detonation and even

holes in the tops of the pistons.

Everyone will admit how bad "old Joe Lucas" was in the past. It looks like he has turned over the proverbial new leaf. The only electrical problem was a bad taillight bulb which quit working because of vibration rather than an electrical surge. After replacement with a GE bulb everything was perfect again. A perfect example of men working to serve man.

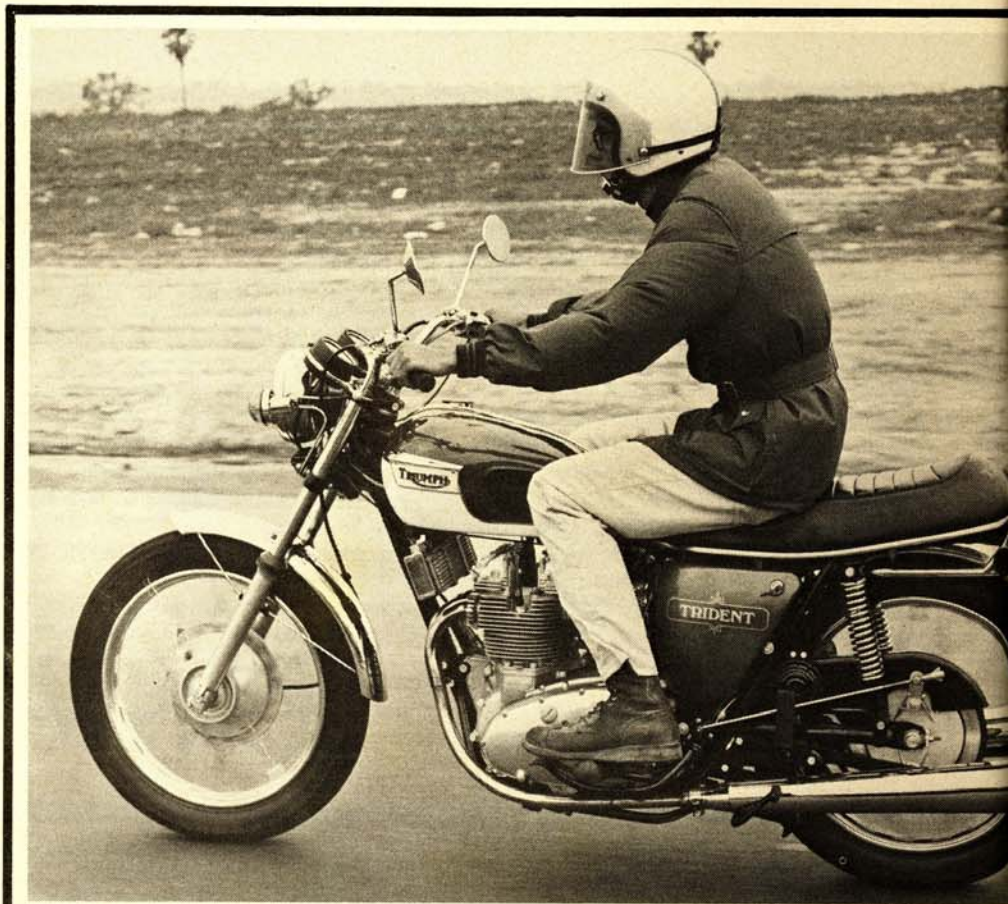
Another minor problem was the tach and tach cable. Twenty four hundred miles into the test found the triple with its first broken cable. After that was replaced the tach went crazy, registering various readings at one engine speed. This was possibly due

stick comes off inside the tank. But where does one find a long skinny magnet?

Triumph recommends adjusting the valves every three thousand miles. From information gathered in this test it would be more reasonable to adjust the valves every thousand miles for the first three thousand miles. This gives all moving parts a chance to wear and take a set. Thereafter the recommended maintenance will be adequate.

The ignition timing and the primary were perfect during the entire test. Neither had to be adjusted.

Engine oil was changed once with the recommended Castrol 40 weight.



Our Trident ran smooth and clean (no oil leaks whatsoever) until the valve trouble developed.

to excessive tightening of the cable in the instrument, putting a bind on the bushing. Whatever the reason, the tach finally resigned and the cable ceased turning. The tach was replaced with a rebuilt one. The cable was also replaced. No more trouble.

While checking the oil one night the dip stick came off. Standing there in the dark, broken dip stick in hand, we investigated. It had broken at the bend, a victim of metal fatigue. Because filters are used in the feed lines the engine is protected even if the

Oil consumption was quite surprising. A quart was required every twelve to thirteen hundred miles.

At thirty-five hundred miles the air filter was replaced because the element was full of oil. Under ordinary conditions the filter can be washed in gasoline, then blown dry by compressed air. The filter is oiled from the primary chain case breather. At sustained high speeds more oil than normal is passed through the breather to the filter. The primary case is filled with oil from the oil tank. As long as

there is oil in the tank the primary level is correct.

Chain oilers on the Tridents work in one of two ways. They are either off or wide open. There is no in between. That means no oil to the chain, or a rear wheel full of it. After one thousand miles the standard Reynolds chain was replaced with a new chain called Denslube. This is a pinned roller chain with lubrication impregnated in the metal. No outside lubrication is necessary. The Denslube chain stretched in three thousand miles as much as the standard chain stretched in one thousand. With a bike as big and developing as much horsepower as the Triumph, it is no surprise the

machine (valves, chain, nuts and bolts, etc.) it is necessary to have a good tool kit. The Trident doesn't. There aren't enough tools and the ones selected for inclusion in the kit are next to useless for heavy jobs such as loosening the rear axle. Work is fairly simple on the Trident with the right tools.

The ignition key, positioned at the rear of the left side cover, is very much in the way. Every time the three was put on the center stand the key was bent by the right leg while pushing it up. The most satisfactory location for the key would be on the fork crown where the fork lock is positioned.

Generally speaking the paint on the

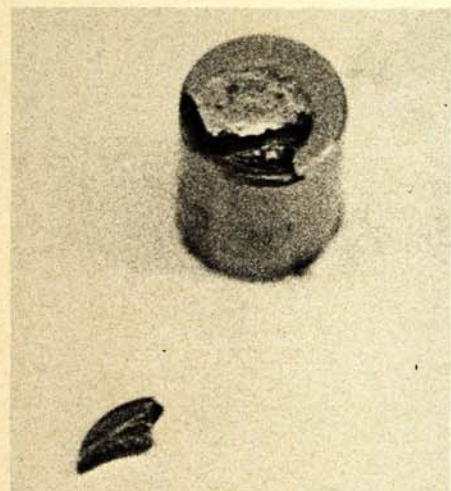
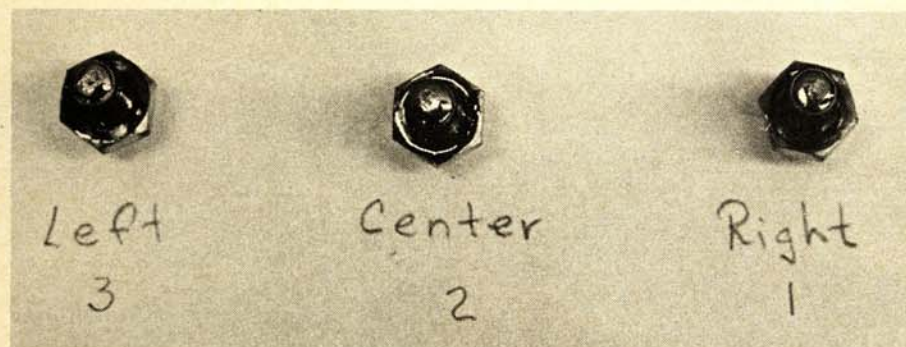
to the cover. It seems Triumph could do something better with something so simple.

Starting was always very easy. From the cold foggy mornings along the coast to the torrid days in the desert, one kick, two at the most, and the engine was running. The choke was never needed even on the coldest mornings. Starting procedure consisted of sufficiently priming the two outside carburetors and giving the starter lever one swift kick—very easy.

At approximately forty four hundred miles the Trident began to use oil excessively, two quarts for every four hundred miles. Then at low speeds in heavy traffic it finally fouled a plug. Conditions remained the same during the remainder of the test.

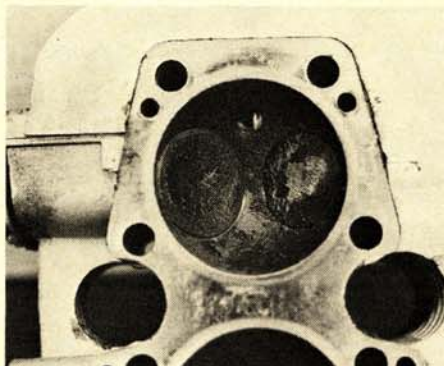
After completion of our 5,000 mile test we returned the Trident to the Triumph Corporation to find out why the machine was drinking so much oil. When the rocker towers were removed the culprit was easily spotted. The stellite coating on the right intake valve had shattered allowing the ball end of the rocker to ride directly on the soft material of the valve stem. Stellite is a very hard and brittle material used on cams, tappets and valve stems to reduce friction and wear. It is conceivable that the quality control was a little slack on this batch of valves. The shock of excessive valve clearance between the valve adjuster and stem could have caused the fracture of the stellite. The valve no longer opened and closed in a straight line, but rather with a rocking motion stemming from the increased friction between the valve and the rocker adjuster. With the valve rocking back and forth it was a good bet that the valve guide had also picked up this motion. Upon inspecting the guide our suspicions were confirmed. This was where all the oil was going, down the guide into the combustion chamber and out the exhaust. The guide was so loose it could be removed from the head by hand. The remaining two intake valves showed excessive signs of wear. It appeared that the stellite on them might also break off with not too much more usage. All three valve adjusters had also gone bad. On the other hand the exhaust valves showed no signs of wear. The valve adjusters had begun to pit slightly which is normal.

Aside from the aforementioned oil consumption problem, everything else that went bad was routine or minor. However it is these minor things that really gripe any rider. In retrospect we continue to feel that the Trident is a very good road machine in a class of its own. It is a big motorcycle built to suit the experienced rider. *Walt Fulton Jr.*



Shown is a piece of stellite that parted company from one of the intake valves.

The rocker adjusting screws (intake) show abnormal wear, while the exhaust side was normal.



As the valve guide loosened up (see text), the right cylinder got oily in a hurry.

chain is a weak point.

Both front and rear tires are K81 Dunlops, 4.10 x 19. These tires were designed specifically for the Trident. Any other tire on the rear would last only a few thousand miles before it was bald. These are the same tires employed for the six hour test. After five thousand miles there is still ample tread, suggesting a tire life of at least ten thousand miles. Traction with the K81's is excellent, only a racing tire could surpass it.

For a rider to routinely maintain his

Trident is good. When filling the gas tank to the brim there was always some gas that escaped through the breather hole in the cap. This would run down the right side of the tank. The dark color was not affected but the white on the lower half of the tank was stained with a brownish hue. A little better paint or a better cap is in order here.

The decals on the side covers are really cheap looking. Right from the factory they have air bubbles in them and all the edges aren't properly stuck