

**E**ACH BRAND of British machine always has had a definitive model that seems to represent and identify the sum total of a company's production through the years.

Norton is epitomized in its cammer—the Manx. Vincent achieved its zenith with its famous V-twin. The mention of BSA will evoke images, not of its Twins, but of the Gold Star—that venerable 500-cc pushrod Single.

Then there's Triumph's definitive number, the vertical Twin. It's still going strong. The identification, established in racing, came first for Triumph's 500-cc Twin. In 1950, however, the 500 gave way to the 650-cc Thunderbird, a bearish vertical Twin that, while heavy and even more capricious than the 500, overcame the deficiencies of torque delivered by 30 cu. in.

A year before the 650s emerged, in 1949, Triumph had instituted a no racing policy. To introduce the new "Thunderbird" to the public, however, the company elected to perform one nicely concerted bit of racing puffery. The stunt was to take three 650s to Montlhery, the road racing course outside

Paris, France, and to run them for one hour, at an average speed just over 100 mph. All three machines were successful.

The 650 Triumph needed nothing else. Overnight, the Thunderbird became the darling of the Ton-Up set. It was big, but neither too big, nor too costly. Its rather curious displacement, hardly oriented to racing class limits, gave it as much, or more, power than a racing Single. Furthermore, the machine was served up with excellent reliability.

Now, almost 20 years later, nothing seems to have changed much. Triumph's 650 still is on the motorcycle market, a little bit better each year, handling sweetened by a robust swinging arm frame and an excellent fork, engine a bit more modern with unit construction, alloy cylinder and head, and, saints be praised, a set of genuine brakes that at last perform the required task. The name Thunderbird has disappeared from Triumph catalogs, to be replaced by Bonneville, Tiger and Trophy.

Both Bonneville and Tiger have a pleasing tautness that separates them from other pushrod Twins. The subject of this report, the Tiger, is an easier bike to get along with, compared

## TRIUMPH TIGER 650

To 100 mph, With Love



with the cranky, fidgety-fast Bonneville. The stereotype Bonneville rider is a short-haul sort of guy who slicks his hair back and "gases it" incessantly; he's not out to really enjoy motorcycling, he's out to flog himself and his machine. The rider of the single-carburetor TR6R seems more the person who wants to enjoy his motorcycling, hour after hour, day after day, on a machine that allows itself to be forgotten, yet always remains—in its troublefree brutishness—a memorable bike to ride.

Just for fun, compare the TR6R with the Bonneville. Both are basically the same engine, 649 cc, with bore and stroke of 71 by 82 mm, 9:1 compression ratio, and four-speed, unit construction transmission. The Bonny costs about \$90 additional. For that extra moolah, the buyer gets one more carburetor and a hairier cam grind. The Bonny is one of the few production machines capable of producing 100 mph in the standing-start quarter, not to mention a 115-mph-plus speed. But its gas tank holds a full gallon less than the TR6R's tank, which will be irritating to the long distance Bonny rider who will have to stop about every 110 miles. The second carburetor also will be irritating to the rider who likes his idling smooth, and his starting easy.

The Tiger 650 owner cruises 175 to 200 miles on a tank of fuel. His single carburetor nearly always allows the engine to idle properly and start quickly. When he needs to go fast, 100 mph or so is fast enough, and so is a quarter-mile in the 14s and 90s. In short, it takes a real speed freak to shell out cash

for those extra numbers.

So what has Triumph done this year to make the Tiger even more attractive to the buyer than it has been? Lots of little things. Like that funny evergreen car from Germany, it looks almost exactly the same as last year's model—but this year it's a bit faster, a bit more reliable, and even a bit quieter.

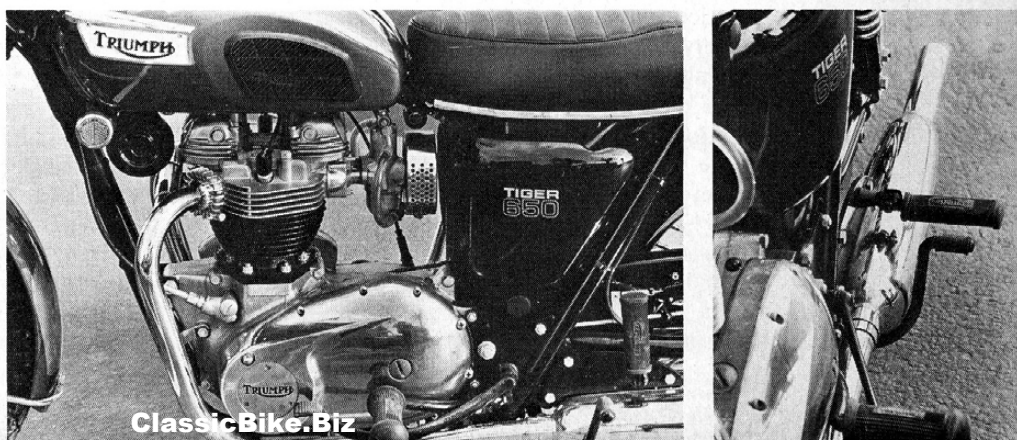
Inside, the most important thing to happen is the change in piston shape. The piston top, which was wedge shaped, now has a dome configuration with squish area. The result is that the piston is more evenly loaded as the charge fires in the combustion chamber, giving better durability, and possibly less high frequency vibration. Compression, 9:1, is the same. New hardened camshafts and tappets also will prove more durable.

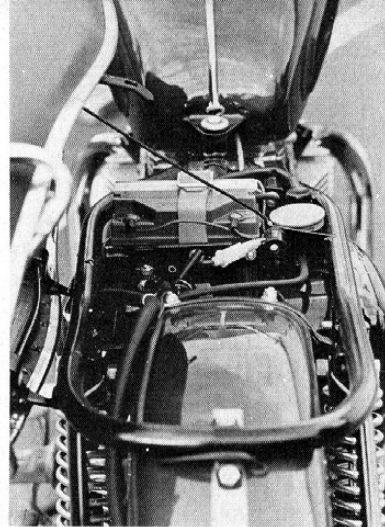
The exhaust tappets, incidentally, receive full-pressure, timed lubrication, a change that was instituted in the 1968 models. O-ring seals in the pushrod covers provide a better seal than the flat rubber washers which they replace.

Externally, two important changes improve the Tiger's smoothness throughout the rpm range and make it phenomenally quiet. The first is the balance tube that links the left and right exhaust headers just after they leave the ports.

Any hot rodder who has been around a raucous straight Six knows why balanced exhaust is used. It works on the vertical Twin because the cylinders fire alternately. With the balance tube, each exhaust phase is absorbed by two mufflers rather than just one, because the exhaust headers are connected. So, the bike runs much quieter. An added bonus from the balance

## CYCLE WORLD ROAD TEST





tube is that low and middle rpm operation is improved, each exhaust benefiting from the extractor action created in the other pipe.

The other change has to do with several improvements to the Amal Concentric carburetor, which was introduced in 1966 and suffered from some minor teething problems. These changes are worth mentioning, not only for the TR6, as they will benefit other machines that use this instrument. An air bleed in the needle valve corrects a tendency for the fuel mixture to go rich just before coming on the main jet. A flat spot that occurred just after going off the idle jet has been corrected by tapering a section of the needle that was parallel in the original Concentric. Fuel pickup position is lower, which will eliminate starvation problems that set in during steep ascents with trials or enduro machines. The new jet holder is longer and places the main jet deeper into the float chamber, with a similar idea in mind. Unfortunately for those who own the old Concentric, these improvements are not interchangeable; an entirely new unit must be bought.

The man to whom the price of a bike comes hard will look askance, should he compare the above improvements, which have evident virtue, with the new oil pressure indicator light and the new front brake light actuation switch, which do not. The oil pressure light, which blesses Triumph's road models, is a "gadget," in the worst sense of the word. At first it seems a good idea. But Triumph Twins already had an oil pressure indicator—a little button which extended itself a half-inch from the right-hand casing when things were okay. The rider could look at it when starting off, or when he came to a stoplight, and most of the time he didn't care much anyway, because oil pressure failure on the Triumph is so rare as to make its continued contemplation, in the form of an idiot light, absurd. Incidentally, the idiot light is actuated by an external pressure-sensitive diaphragm housing that projects from a crankcase outlet near the original button indicator. Nothing has changed really. It just blinks (between 7 and 11 psi) and costs more.

The taillight actuation switch for the front brake is another bit of Mickey Mousery for which Triumph cannot be held responsible. The change was made to conform with U.S. law—the same sort of regulation that so radically affects the auto industry. Operation of the taillight by the front brake as well as the rear brake is redundant; in the majority of riding situations, the rider actuates the rear brake at the same time as the front. How sad it is that the road rider has to pay an extra five bucks for some legislator's undue caution.

To be fair to Triumph, it should be noted the company has made most of the bike's nuts and bolts in American sizes for 1969, which is above and beyond the call of duty. Another

happy change is that the mounting screw in the tachometer drive gearbox is now left-hand, so that cam rotation tends to keep it tight, rather than loosen it. The new front-mounted horn is one of the loudest on any motorcycle. Third gear is slightly lower and closer to second, which improves acceleration from 60 to 90 mph.

It is hard to fault the handling of the big bore Triumph roadsters, as the classic single-loop swinging-arm frame has been refined and strengthened over the years. The Girling rear shocks are—well—they are Girlings, and they work. They appear different only because they have been denuded and ringed with chromed coil springs. The compression/rebound damping fork also is effective, and has sufficient travel to work effectively in the dirt as well as on the road. The only time this generous travel is disconcerting is under hard braking, particularly with the powerful new double leading shoe front brake.

TR6 handling has been an amusing subject of controversy in the British press recently. The defenders are typically loyal owners throughout England who may have owned their Twins for several years. The critics all seem to have one thing in common. They are motorcycle police who must ride the poor TR loaded down with radio and heavy gadget packs at the rear. There are very few bikes made that don't reveal their wobbly worst when subjected to such rear end loading. Such handling problems may be eliminated by reducing the load, or moving it forward to the tank.

The new front brake certainly takes a lot of the squeeze out of stopping. Unfortunately, the drum on the test TR6R seemed a bit out of round, thus a pronounced judder occurred under heavy application. Moreover, the brake had a spongy feel, which made it hard to guess how much braking force was to be obtained from a given amount of hand squeeze. Surprisingly, the new brake does not have a great surplus of stopping power; it is difficult, if not impossible, to make the front tire squeal on high traction pavement. Nonetheless, braking hard at the end of repeated top speed runs was swiftly done, with a feeling of security. The rear brake was beyond criticism.

So there it is—the Tiger that is a little less ferocious to handle, and more pleasing every year, yet still as strong as its name implies. It's a heavy gauge tourer for the rider who wants not brief infatuation, but true love. It will boil sweetly all day at 70 or 80 mph. Its power band is mild and will never require buzzing beyond 7000 rpm. Weighing more than 400 lb., it gives that "secure" feeling, yet it may be thrown around in tight quarters in a graceful sort of way. It is one of the most likely engine sizes to consider for extensive two-up riding, or for hauling a sidecar. It will do the "ton" honestly, yet start first kick every morning. It's an exemplary British bike. ☐

# TRIUMPH TIGER 650

## SPECIFICATIONS

|                                     |                                  |
|-------------------------------------|----------------------------------|
| List price                          | (f.o.b., p.o.e.) \$1299          |
| Suspension, front                   | telescopic fork                  |
| Suspension, rear                    | swinging arm                     |
| Tire, front                         | 3.25-19                          |
| Tire, rear                          | 4.00-18                          |
| Brake, front, diameter x width, in. | 8 x 1.63                         |
| Brake, rear, diameter x width, in.  | 7 x 1.13                         |
| Total brake swept area, sq. in.     | 65.7                             |
| Brake loading, lb./sq. in.          | 8.87                             |
| Engine, type                        | ohv vertical Twin                |
| Bore x stroke, in., mm              | 2.795 x 3.230, 71 x 82           |
| Piston displacement, cu. in., cc    | 40, 649                          |
| Compression ratio                   | 9.0:1                            |
| Carburetion                         | 23-mm Amal concentric 930        |
| Ignition                            | battery and coil                 |
| Claimed bhp @ rpm                   | 45 @ 6500                        |
| Oil system                          | gear pump, dry sump              |
| Oil capacity, pt.                   | 6                                |
| Fuel capacity, U.S. gal.            | 4                                |
| Recommended fuel                    | premium                          |
| Starting system                     | kick, folding crank              |
| Lighting system                     | 12-V alternator, diode rectifier |
| Air filtration                      | washable element                 |
| Clutch                              | multi-disc, wet plate            |
| Primary drive                       | (2.04) duplex chain              |
| Final drive                         | (2.42:1) single-row chain        |
| Gear ratios, overall:1              |                                  |
| 5th                                 | none                             |
| 4th                                 | 4.84                             |
| 3rd                                 | 6.04                             |
| 2nd                                 | 8.17                             |
| 1st                                 | 11.81                            |
| Wheelbase, in.                      | 55.8                             |
| Seat height, in.                    | 31.4                             |
| Seat width, in.                     | 9.1                              |
| Handlebar width, in.                | 32.7                             |
| Footpeg height, in.                 | 10.1                             |
| Ground clearance, in.               | 5.5                              |
| Curb weight (w/half-tank fuel), lb. | 420                              |
| Weight bias, front/rear, percent    | 46.6/53.4                        |
| Test weight (fuel and rider), lb.   | 575                              |

## TEST CONDITIONS

|                                    |       |
|------------------------------------|-------|
| Air temperature, degrees F         | 52    |
| Humidity, percent                  | 51    |
| Barometric pressure, in. Hg.       | 30.21 |
| Altitude above mean sea level, ft. | 1632  |
| Wind velocity, mph                 | 5-7   |
| Strip alignment, relative wind:    |       |



## PERFORMANCE

|                                            |        |
|--------------------------------------------|--------|
| Top speed (actual @ 6390 rpm), mph         | 101.35 |
| Computed top speed in gears(@7000rpm),mph: |        |
| 5th                                        | none   |
| 4th                                        | 112.2  |
| 3rd                                        | 90.0   |
| 2nd                                        | 66.5   |
| 1st                                        | 45.9   |
| Mph/1000 rpm, top gear                     | 16.02  |
| Engine revolutions/mile, top gear          | 3750   |
| Piston speed (@ 7000 rpm), ft./min.        | 3770   |
| Fuel consumption, mpg                      | 54.21  |
| Speedometer error:                         |        |
| 50 mph indicated, actually                 | 49.07  |
| 60 mph indicated, actually                 | 60.04  |
| 70 mph indicated, actually                 | 71.31  |
| Braking distance:                          |        |
| from 30 mph, ft.                           | 38.92  |
| from 60 mph, ft.                           | 147.83 |
| Acceleration, zero to:                     |        |
| 30 mph, sec.                               | 3.2    |
| 40 mph, sec.                               | 4.2    |
| 50 mph, sec.                               | 5.7    |
| 60 mph, sec.                               | 7.1    |
| 70 mph, sec.                               | 9.3    |
| 80 mph, sec.                               | 11.6   |
| 90 mph, sec.                               | 15.5   |
| 100 mph, sec.                              | 24.8   |
| Standing one-eighth mile, sec.             | 10.13  |
| terminal speed, mph                        | 74.68  |
| Standing one-quarter mile, sec.            | 14.85  |
| terminal speed, mph                        | 89.28  |

