

SPECIAL ENGINE ISSUE!

MOTOR TREND

'67 POWER OPTIONS • SPECS • PRICES
BEST ENGINE-TRANSMISSION TEAMS
TEST OF STICK GTO VS. AUTOMATIC
& "FULL-HOUSE" VS. "LOADED" COUGAR

JANUARY 1967 • 50c



UK 3'6

Sweden KR. 3.90 Inkl. oms



PONTIAC
Underground
Certified Products

**THE DEADLY
LOOPHOLES
IN DRIVER
LICENSING**

THE ELECTRIC CAR MYTH

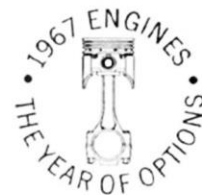
ROAD TEST: FWD ELDORADO

**RACING:
BRABHAM'S
SWINGING OLDS**

NATIONAL 500



TESTING 2 TIGERS



3-speed automatic is formidable foe for 4-speed but multi-shift gearbox still holds the lead and popularity vote

BY STEVEN KELLY

PONTIAC FIRST PUT high performance into a medium-size package when they introduced the GTO in mid-1964, and they're not finished yet. Internally the '67 GTO is as much changed from the '66 as a Tempest is different from a Bonneville. There's a new 400-cubic-inch engine under the hood, Wide-Oval tires on each wheel, and disc brakes up front if ordered. Outside, changes are restricted to a slightly restyled rear end and an optional tachometer on the hood.

Automatic transmission GTOs up until now haven't been known as "stormers" but this is the year to change that. The secret is Turbo Hydra-Matic 3-speed that can be optionally fitted with Hurst's new dual-pattern shift quadrant. In its conventional pattern, each gear can be held as long as desired and then the stick can be moved forward or backward without anything happening until the governor says OK. This is the way it's always been on many cars, but the Hurst version has a second slot with built-in detents that allow the shifter to move only one gear at a time. Slight pressure on the stick while moving it forward locks it into the next higher gear. There's no chance of skipping a gear or going all the way into neutral at full rpm — which can be a costly mistake. The new GTO with Turbo Hydra-Matic throws down an exciting challenge to its 4-speed brother, as we found when we tested both.

First we took our two identical GTOs —with the exception of transmissions— to Ace Wilson's Royal Pontiac in Royal Oak, Mich., to be personally prepared by Milt Shornack, Royal's Performance Center director. Milt is the driver of one of Royal's "GeeTO Tiger Cars" and has won more than a fair share of drags and titles. Royal Pontiac has gained recognition through its "Bobcat" kit as the headquarters for "hot" GTOs, and has shipped prepared "Tigers" all over the country. In addition, we used a third, unmodified GTO for transportation around the Detroit area.

We liked the '66 GTO but we're sold on the '67. The car is church-quiet inside, mostly as a result of better weatherstripping around the curved, frameless side windows. Our "town" car had optional heavy-duty suspension which didn't shake or jar us in the least and



White test car had modified engine, hood-mounted tachometer, front disc brakes and Hurst wheels. Dark car retained stock engine with Rally I wheels, drum brakes.

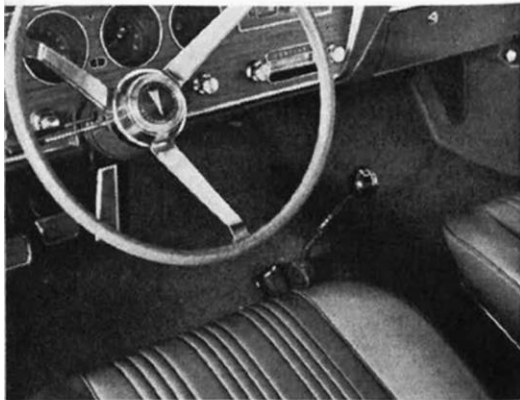


Rear-end area has received brunt of '67 styling changes. "Hidden" lights are no more.

PONTIAC Underground

TESTING 2 TIGERS

continued



4-speed shifter seems more businesslike without console. Wood wheel adds class.



Hurst Hydro-shifter is available only with console and offers firm, positive shifts.



Storage area in console is easily reached from either of the comfortable buckets.

gave firm, precise control at all times. Standard equipment Wide-Oval tires plant themselves firmly to the road, doing their bit for good handling.

This car stopped like it had front-disc brakes but a quick look underneath uncovered drums. Recalling the sad drum brakes on last year's car, we couldn't get over how straight and quick the new ones worked in wet weather and dry. It is one of the few cars we'd buy and not insist on disc brakes.

The two cars scheduled for performance testing and the unmodified GTO were all equipped with 360-hp, 400-cubic-inch V-8s with Ram-Air kits. We purposely left them outside and underneath trees during rainy spells, to find out how much garbage we'd collect through the functional air scoops in the hood. Nothing — not even a twig — managed to find its way through the rather small hood openings. A paper element air filter would have stopped junk from getting into the engine, but would clog in the process. The Ram-Air kit includes the functional air scoops, a pan which fits around the carb opening and is sealed to the hood with a foam rubber lip, and a cam with longer duration intake and exhaust lifts. The valve springs on Ram-Air engines are much stronger than on the regular 360-hp engine.

Triple carburetion is no longer available for GTO's but the single Quadrajet-carbureted engine of 360 hp, while maybe not as strong a status symbol, is the equivalent or better in performance. Ram-Air is available only with this largest-of-all powerplants.

You'll be glad to know that parts from the new 400-cubic-inch engine will bolt onto the old 389-cubic-inch engines, so '67 heads will probably find themselves on many 389 blocks. They have larger valves, relocated valve positioning, improved combustion chambers and larger ports. The new free-flowing intake manifold will fit earlier engines, but more likely, there'll be a lot of last year's 3-2 manifolds going on '67 engines. Cast-iron exhaust manifolds with individual runners are a feature of the '67 engine and will adequately serve those who do not wish to install custom tubular steel headers.

Almost as soon as GTO buyers leave any dealership, they start improving their cars. A surprising number of street driven "Tigers" have been modified to make them competitive at weekend drag events as well as suitable for daily transportation. We felt if we tested a pair of "fresh" cars, performance would probably be below this abnormal average. This reasoning prompted our requesting Milt Shornack to outfit the test cars to this dual-purpose standard.

One of his first steps was to install Royal's own "Bobcat Kit." The kit is basically a tune-up package and in-

cludes thinner head gaskets to raise compression closer to the allowed (and advertised) 10.75:1 ratio. Also included are heat-riser blocked intake-manifold gaskets, lock nuts for the rocker arms which allow the hydraulic lifters to be adjusted full height, .050-inch larger primary jets for the carburetor, and instructions on how to get the vacuum-controlled secondaries to open quicker. Rounding out the kit is a complete ignition set which contains lighter springs and weights — with positive stop to guard against too much advance — and a full set of tailored spark plugs. This kit is easily installed and sells for about \$70. It's available for all GTOs and can shorten quarter-mile times by as much as a half-second. Technically, the installation voids the drive train warranty, but then, so does Sunday drag racing. Pontiac, however, tends to be rather liberal in its policies because it knows what sells GTOs.

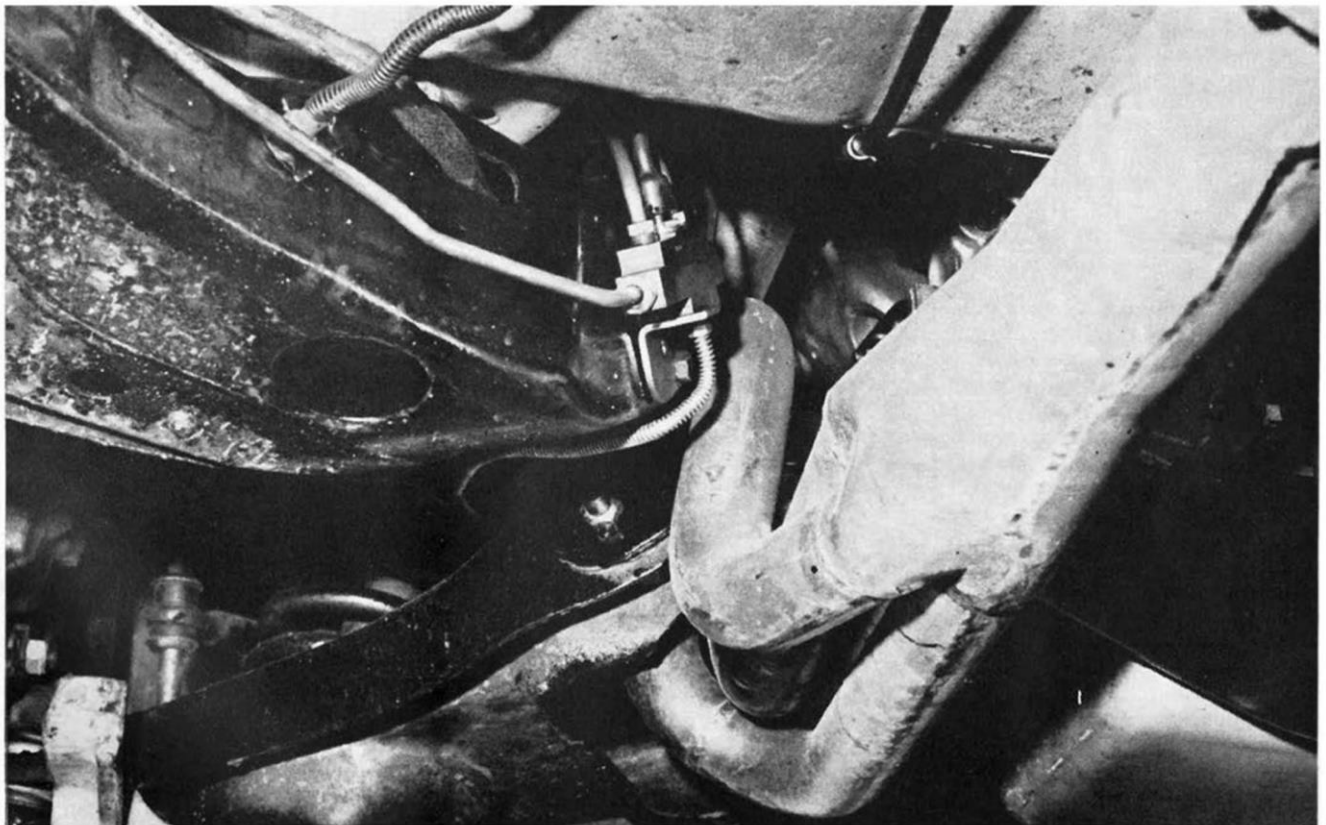
Both cars were also fitted with Hurst, individual-port, equal-length, exhaust headers. These were the first two sets produced by Hurst and they worked beautifully. Hurst is just now entering the header business and will offer them to fit all popular performance cars. Suspensions were not touched in any way, and the highly-tuned engines were quite docile at all highway speeds, convincing us that alterations such as these don't affect work-a-day utility of a prepped car. The running gear, except for the transmission, was identical with 3.90:1 limited-slip differentials housed in the heavy-duty, extra-cost, rear-end assembly. Each car had front disc brakes, and hood-mounted tachometers.

Using Motor City Dragway we made a few passes with the exhaust system closed up and street tires on the rear. The good elapsed times and high speeds were an indication of better things to come, but before we did any changing around for quarter-mile running, we ran our brake tests.

We first ran the cars with front-disc brakes and were fairly happy with the results. But when we brought the drum-braked car to a halt from 60 mph, we weren't quite sure what happened. It stopped like a glue-papered fly, some 15 feet faster than the disc-brake versions. This had never happened to us before and needed explaining. Finally we remembered that while installing the headers, the brake-pressure equalizer had to be moved rearward on the frame to clear the new plumbing. Apparently, we didn't bleed all the air out afterward, or else during relocation we may have disturbed the balance in the equalizer system. The front discs locked up much sooner than normal. There was no time to check the system out, nor was there another car with disc brakes available for testing, but we do feel that the stock disc set-up will stop in at least

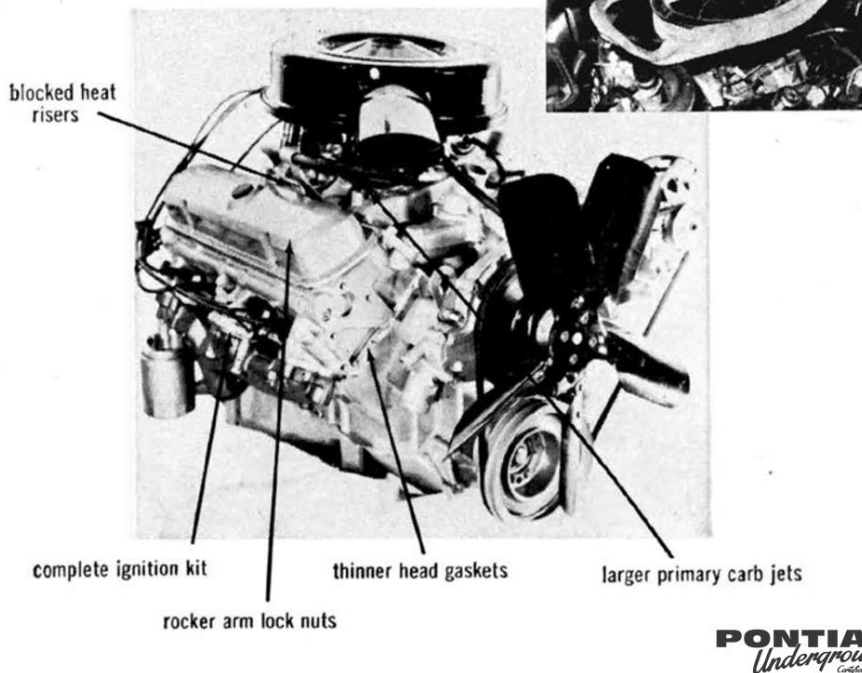


EVEN WITHOUT M&H DRAG TIRES, "PREPARED" 4-SPEED MANAGED TO SHUT DOWN 4-SPEED "STREET" CAR WITH FRUSTRATING EASE — EVERY TIME.



DISC-BRAKE EQUALIZER VALVE HAD TO BE RELOCATED TO CLEAR HEADERS. MOVING IT TOOK SOME ENGINEERING AND CAUSED US TROUBLE LATER.

'67 400-CU-IN V-8 BOBCAT COMPONENTS



400-cubic-inch '67 engine (here in 2-barrel form) also comes with Quadrajets 4-barrel and Ram-Air (inset). Royal's Bobcat package is easily installed, keeps car drag-legal.

TESTING 2 TIGERS

continued

the same distance as the drum brake car and resist fading as well.

When we finally opened the headers and mounted 8.50 x 14 M&H Super Stock tires on the rear of each car, the results were just a little short of startling. Without faltering, the Turbo Hydra-Matic car ran the quarter consistently in the 13.40-second region and recorded speeds averaging 105 mph. It once ran a 13.36-second e.t., and a speed of 106 mph flat. We had hoped it would jump the 4-speed off the line, but only with a little luck could this be accomplished. We had to hold engine rpm down to 1200 at the line because above that there is no provision for stall. With the 4-speed car we could raise rpm to 5200, wait for the green light, dump the clutch and be on our way.

Hurst linkage was on both cars, being standard on the 4-speed transmission

and optional with Turbo Hydra-Matic. The 4-speed linkage is firm, has a close gate, and appeared strong enough to survive manipulation by Paul Bunyan. The 4-speed car ran consistently in the 13.10 to 13.20-second area with speeds usually around 106 mph. This car recorded one of the fastest 0-60 mph times we've ever seen—4.9 seconds—but with the M&H tires on the back, it's really not a fair comparison with our other road tests.

After a dozen or more runs, we had trouble with both cars plain quitting toward the end of the quarter. We finally traced this to low fuel tanks, with the cure being simply to run with over a quarter-tank of gas at all times.

This test of the '67 GTO was one of the most comprehensive we've ever done. We had the opportunity to drive several different varieties, and in many different conditions. We ran quite a few mileage checks and averaged 13.5 mpg on the open highway with a 3.90:1 rear axle ratio, and 11.5 around town. The fit and finish on all the cars was the best we've seen on any Pontiac GTO, and we'd rate the driveability as excellent for enthusiasts as well as commuters. They're housebroken Tigers, but they can revert to the jungle whenever you give the word.

/MT

gto at a glance . . .

Front disc brakes are available to further enhance good braking system . . . 3-speed Turbo Hydra-Matic is quick and smooth . . . 400-cubic-inch V-8 performance equals—or beats—last year's 389 and offers more power potential . . . '67 is quieter inside, displays better quality.

how the car performed . . .

ACCELERATION (2 aboard)		4-speed	3-speed
			Hydro
0-30 mph	2.0 secs.	2.0	
0-45 mph	4.0 secs.	4.1	
0-60 mph	4.9 secs.	5.2	
0-75 mph	6.6 secs.	6.8	
TIME AND DISTANCE TO ATTAIN PASSING SPEEDS:			
40-50 mph	2.1 secs., 153.7 ft.	2.0 secs., 146 ft.	
50-70 mph	2.0 secs., 176 ft.	2.0 secs., 176 ft.	
STANDING START QUARTER-MILE:			
(M&H drag tires)			
	13.09 secs., 106.5 mph	13.36 secs., 105 mph	
(Std. tires)			
	14.21 secs., 102.97 mph	14.09 secs., 101 mph	
SPEEDS IN GEARS @ SHIFT POINTS:			
	4-spd rpm	3-speed rpm	Hydro rpm
1st	49 mph @ 5500	43 mph @ 5500	5500
2nd	60 mph @ 5500	43 mph @ 5500	5500
3rd	89 mph @ 5500	107 mph @ 5500	5500
4th	107 mph @ 5500		
MPH PER 1000 RPM: 19.4 mph—both cars			
SPEEDOMETER ERROR:			
Electric Speedometer	30	45	50
Car Speedometer	30	45	50
(4-spd)	30	45	50
(auto.)	31	46	52
STOPPING DISTANCES:			
(Front discs)			
from 30 mph	34 ft.	from 60 mph	186 ft.
(Drum brakes)			
from 30 mph	35 ft.	from 60 mph	169 ft.

specifications . . .

ENGINE: Ohv V-8 (both cars)
Bore and stroke (ins.): 4.12 x 3.75
Displacement (cu. ins.): 400
Horsepower: 360 @ 5400 rpm
Max. torque (lbs.-ft.): 438 @ 3800
Compression ratio: 10.75:1
Carburetion: 1 4-bbl. Quadrajets; force-fed air from hood scoops
TRANSMISSION: (stick) Manual 4-speed, close-ratio 2.20:1—low gear; aluminum case; floor-mounted Hurst shifter. (Auto.) 3-speed torque converter Turbo Hydra-Matic; low-gear ratio 2.48:1, with total torque multiplication of 5.70:1 at start. Steering-column-mounted lever standard, floor-console-mounted shifter optional.
FINAL DRIVE RATIO: 3.90:1 (both cars)
SUSPENSION: (both cars) Front—Independent with upper and lower control arms and coil springs. Tubular shock absorbers. Heavy-duty standard. Rear—heavy-duty 1-piece rear axle assembly with coil springs and 4-link pivoted control arm location. Super-lift (air-filled) tubular shock absorbers.
STEERING: Recirculating ball bearing; coaxial power assist. Gear ratio 17.5:1, overall ratio 22.0:1. Turning diameter: 40.9 ft., curb-to-curb. Turns lock-to-lock: 4.2.
WHEELS: (std. type) Disc-steel, 5-lug, 14 x 6 ins.
TIRES: F70 x 14 Wide-Oval, 4-ply rated, synthetic fiber construction.
BRAKES: Dual-system hydraulic, internal expanding drum-type standard; power-assisted front discs optional. Front disc—11.12 ins. dia. Front drum: 9.5-in.-dia. x 2.5-in.-wide. Rear drum: 9.5-in.-dia. x 2.0-in.-wide. Effective lining area (drum brakes), 149.4 sq. ins.; (discs), 101.9 sq. ins.
FUEL CAPACITY: 21.5 gals.
BODY & FRAME: Perimeter-type frame with swept hips. Separate construction body.
DIMENSIONS: Wheelbase: 115 ins. Track: front, 58 ins.; rear, 59 ins. Overall length 206.6 ins. width 74.7 ins., height, 53.7 ins. Trunk 21.1 cu. ft.
CURB WEIGHT: Stick, 3445 lbs.; Automatic, 3490 lbs.

prices and accessories . . .

MANUFACTURER'S SUGGESTED RETAIL: (excludes state and local taxes, license, options, accessories, and transportation, but includes Federal excise tax and PCV device) Sport coupe \$2935; Convertible \$3165. (335-hp V-8, 3-spd trans.,—std.)	
OPTIONS AND ACCESSORIES:	
360-hp engine	\$ 76.89
Ram-Air package (avail. only on 360 engine)	263.30
Capacitor discharge ignition	104.26
Turbo Hydra-Matic	225.44
Floor console with Hurst shifter	68.46
4-speed transmission	184.31
Limited-slip differential/H-D rear end	63.19
Hood-mounted tach with Rally Cluster	84.26
Power front Disc Brakes	104.79
Superlift shock absorbers (air-filled)	39.50
Heavy-duty battery	3.48
Rally I and Rally II wheels (set)	56.86
Pushbutton AM radio	61.09
Wood-grain steering wheel	30.02