



valve permitting subsequent lubrication in the normal manner.

Shock absorber valving varies with body style, as do spring loads and rates. At the rear, the live axle is sprung on coils and located by means of a 4-link control arm layout, joined to the frame and axle with soft rubber bushings. The frame-mounted differential and i.r.s. have been retired. Compression bumpers are mounted forward of the axle centerline on the lower arms, resulting in a "wind-down" movement under jounce. This minimizes propeller shaft travel, allowing minimum tunnel height, while increasing unrestricted wheel and axle travel in both jounce and rebound. A driveshaft of more conventional design, rather than the "sagging rope" torsion bar, is now used. Axle shaft housings are pressed into and welded to the differential carrier assembly in Salisbury design fashion.

Brakes are larger, with cast drums of 9.5-in. diameter, backing plates ribbed for greater strength, longer and wider linings, and the full hydraulic system hermetically sealed. Front drums are centrifugally cast, with a thermal reduction flange around the

THE PONTIAC Tempest, which started life as a fairly unconventional car (by U.S. standards), has returned to the strictly conventional mold for 1964. With the new GM-A body shell, it has grown slightly in the process and is, more than any other GM make, the showcase of corporate interchangeability.

Quite angular, in keeping with the present GM school of styling, the new body has curved side windows to add to the interior space of its not-quite-compact dimensions. Overall length has been increased to 203 in. (from 194.3) and overall width is fractionally greater. The body is mounted to a welded perimeter-type frame, incorporating built-in torque boxes for greater strength at each corner, with seven rubber bushed mounting bolts on each side.

The new front suspension has a slightly wider track at 58 in. (it was 57.3 in.) and is designed to reduce the overall camber changes that were evident on rough surfaces. It uses the common short and long arm setup with coil springs, but has the longer Pontiac lower-control arm.

Concurrent with the new suspension, redesigned ball joints have been fitted. A steel, full ball stud in a phenolic teflon-lined housing is used on top, with sintered iron half bearings in metal-to-metal housings below. Joints are pre-lubricated for 12,000 miles, but the fixed seal has a one-way relief

Pontiac Enlarges the Tempest



Pontiac

edge; rear drums are finned for better cooling. With 2.5-in. shoes, total swept area is 269.8 sq. in.

Basic engine for the new Tempest is a 215-cu. in. overhead valve 6-cyl. developing 140 bhp at 4200 rpm. It is a 7-main bearing powerplant based, in fact, on the Chevrolet Six. Valves are in line and set at an angle of 9° to the vertical for a modified wedge shape in the combustion chamber. Valve actuation, similar to regular Pontiac V-8 practice, is via stamped rocker arm, which is ball-mounted on an individual stud. Hydraulic lifters are used and a single barrel carburetor with automatic choke is standard. The 326-cu. in. V-8 is also available, developing 260 bhp with 1 x 2 carburetion and 8.6:1 compression ratio or 280 bhp with 1 x 4 and 10.5:1.

Transmissions are now attached to the engine and include a new 3-speed synchromesh manual (for 6-cyl. models—ratios, 2.94, 1.68 and direct); the carry-over 3-speed for V-8s with ratios of 2.58, 1.48 and 1.00:1; the new GM 2-speed automatic with torque converter, or the new 4-speed synchromesh manual developed by Chevrolet. Gear ratios in the latter are 2.56, 1.91, 1.48 and 1.00:1, while the automatic uses a 1.76:1 and 1.00:1 with a torque multiplication at stall of 2.8:1 for the 6-cyl. and 2.4:1 with the V-8s. Standard rear axle ratio is 3.08:1 with manual transmission, 2.78:1 with automatic.

Heavy-duty brake and suspension components will be available in a "rally kit" for the Tempest, and Pontiac engineers are working on quicker steering gearing for the serious driver. All



VACUUM GAUGE now mounts high on console in Grand Prix with automatic transmission.

of the usual comfort options—air conditioning, power steering and brakes, tilting wheel, etc., etc.—are available.

The Grand Prix influence is evident throughout the Pontiac line-up this year as ornamentation has been subdued on all but the flashiest models. Four-door sedans in the Tempest line have a concave rear window treatment which smooths the top line into the rear fenders, but the short-coupled coupes have kept the normal roofline in the interest of head room. More

evident is the Coke-bottle, or venturi, styling effect, where the side panels widen out as they stretch to the rear. Grilles, bumpers and some exterior sheet metal are new, although the changes are strictly evolutionary and the Pontiac image is unique and unmistakable.

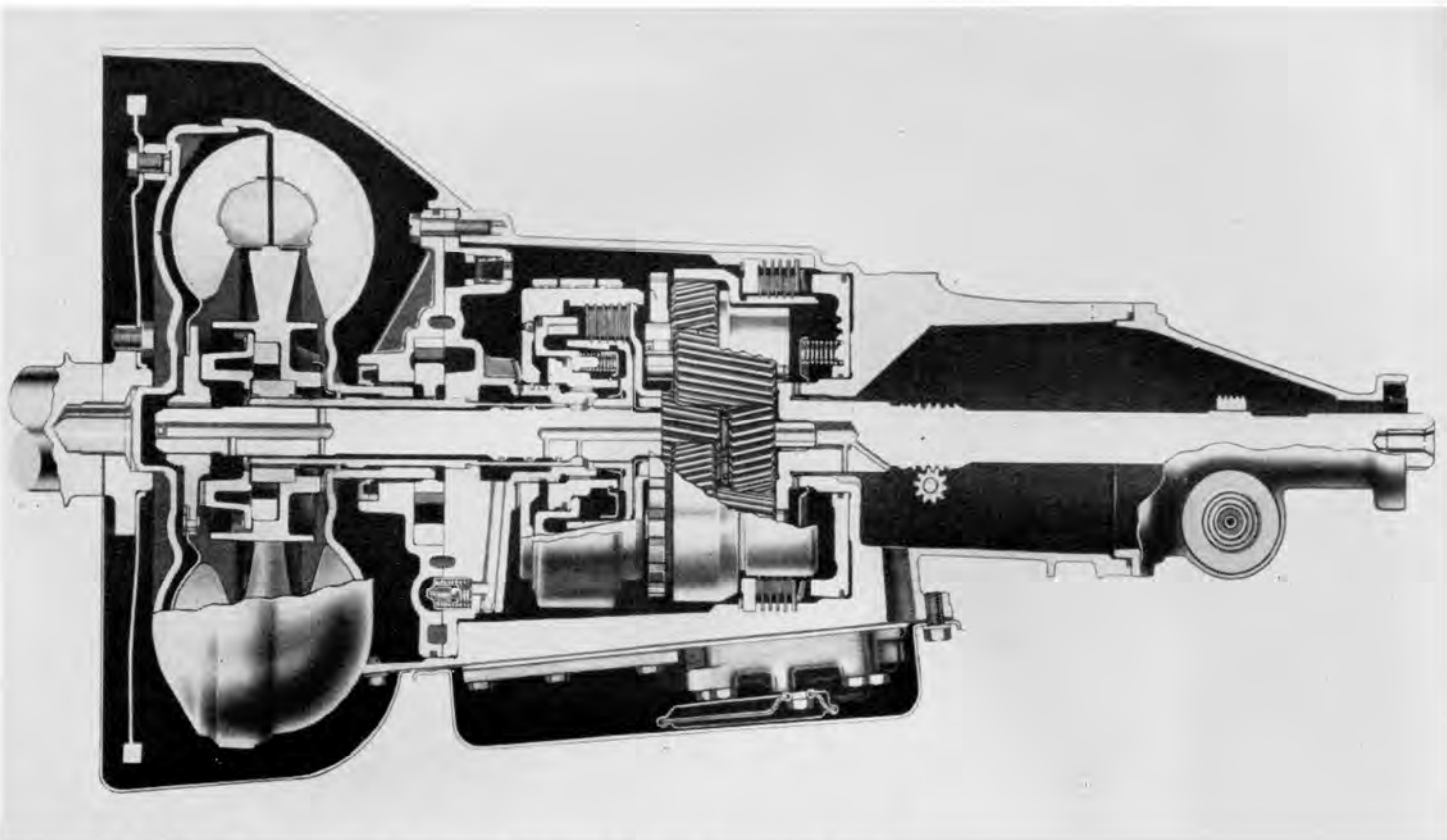
Much attention has been devoted by Pontiac engineers to noise isolation and elimination. Rubber bushed body mountings and applications of sound deadening material have been utilized

TEMPEST WAGON shows crisp lines, curved windows of A body structure.



SOFT-TOP contour in Tempest is changed.





NEW 2-SPEED automatic with torque converter is offered as Tempest transmission option.

to upgrade the luxury and quietness of the Pontiac ride.

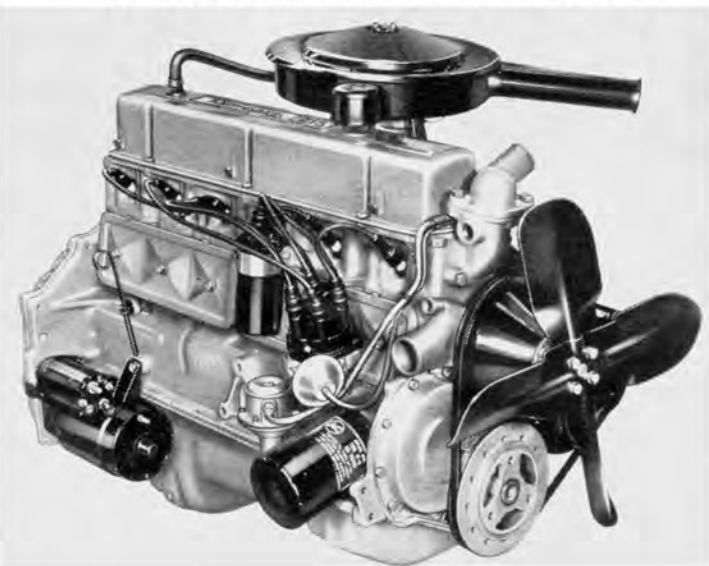
The larger Pontiacs continue with wheelbases of 120 in. (Catalina and Grand Prix) and 123 in. (Star Chief and Bonneville), and are one inch longer overall. Taillights are inset into deep housings at the rear of each back fender on all except the Grand Prix, which has the backup light housed there and continues its hide-away taillights. Grand Prix parking and turn signal lights are now rectangular.

Engines for the larger Pontiacs continue as before, with both the 389-cu. in. and the 421-cu. in. V-8s available in several stages of tune—from 215 through 405 bhp. Four-barrel carburetors have been redesigned to direct all bowl vents internally and toward the air cleaner for improved starting and better fuel mix. Hydra-Matic transmission continues as the automatic option for these engines.

Most mechanical changes come under the heading of detail improvements

and one such is the use of composite universal joints. Tapered needle bearings in this U-joint are held into axial alignment by an injection-molded plastic lock ring, designed to retain the bearing cap to hold all parts in plane. In the front suspension, tie rod ends are forged with a smoother, more spherical seal surface and use an improved seal with longer skirt length for greater protection. Finned, cast brake drums are standard except on the price-leader Catalina. ■

TEMPEST 6-cyl. engine has 7 main bearings, overhead valves.



TRANSMISSIONS are now attached to Tempest engines.

