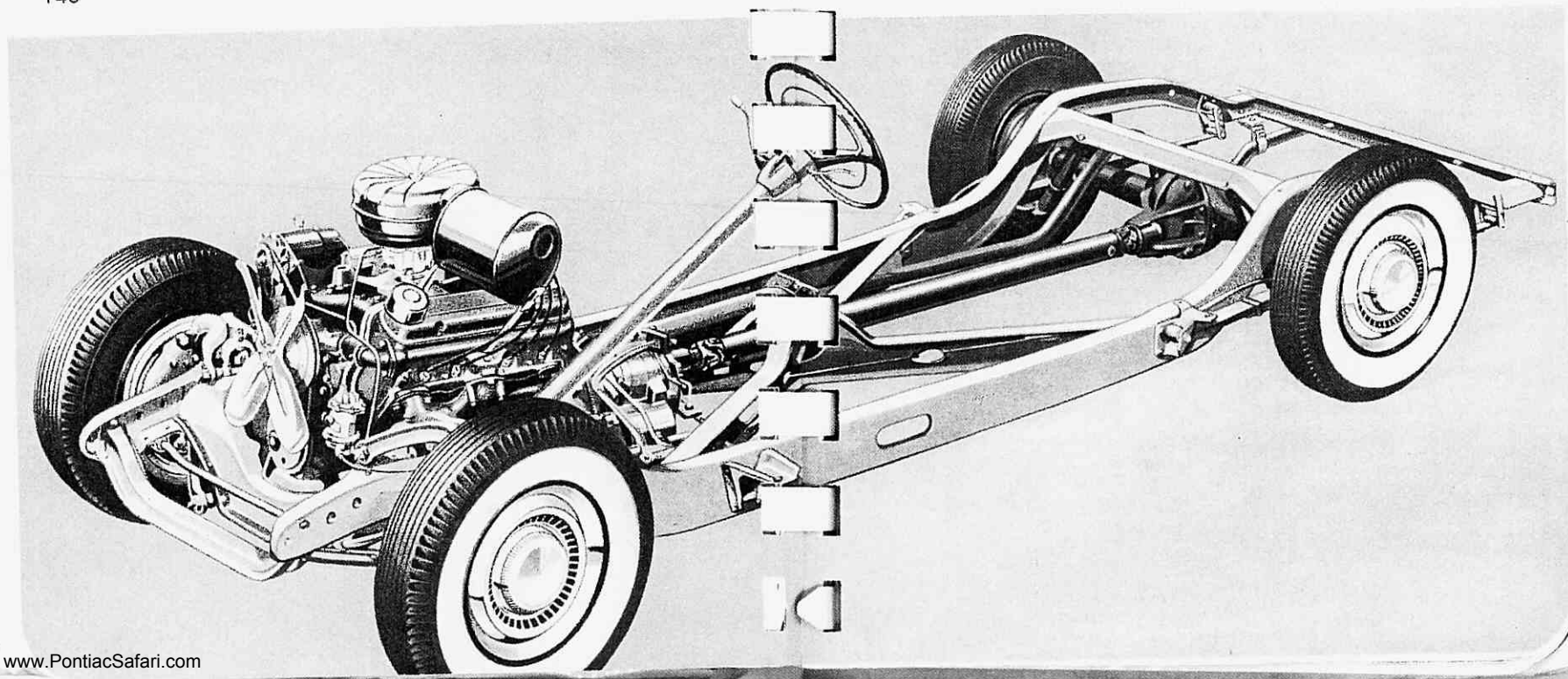
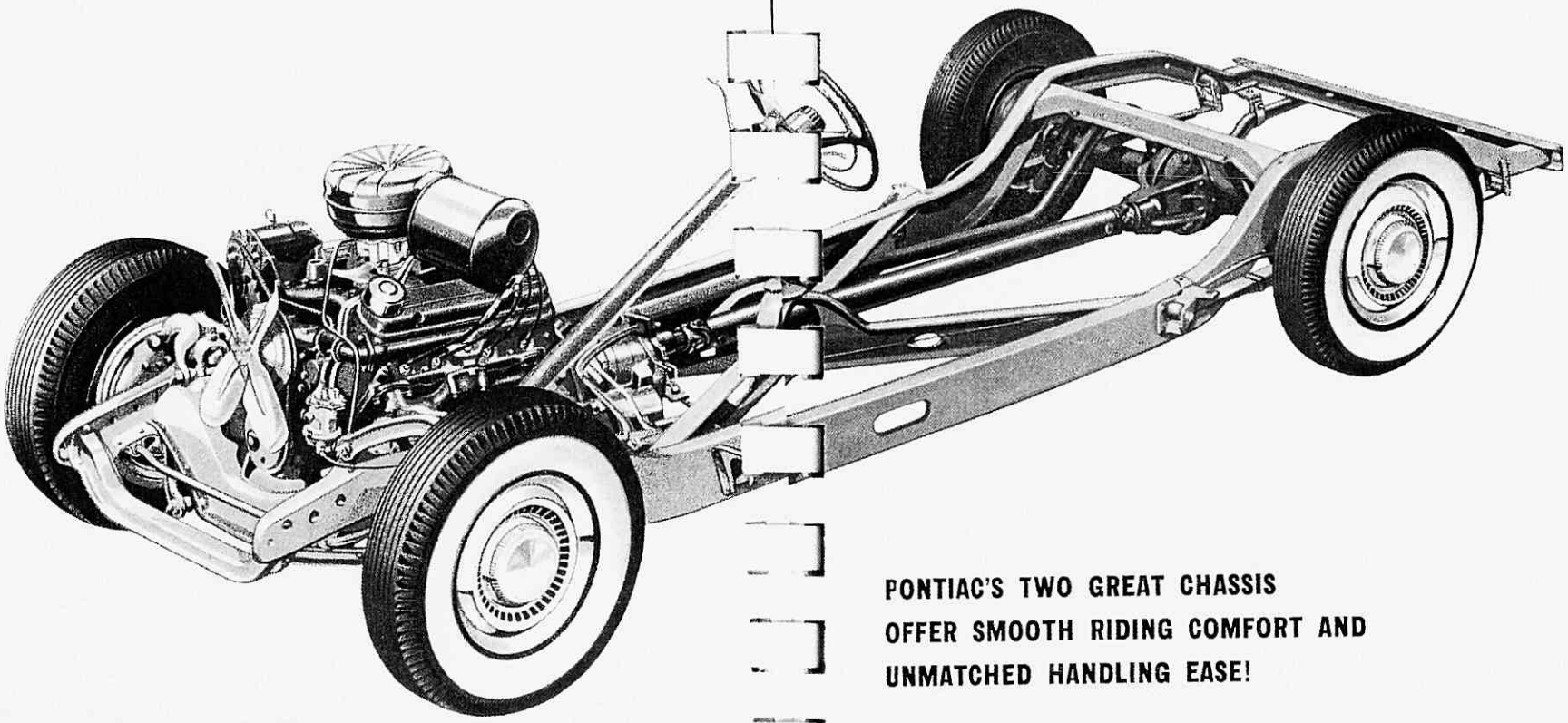
1956
CHASSIS

Smoothest ride on the road!



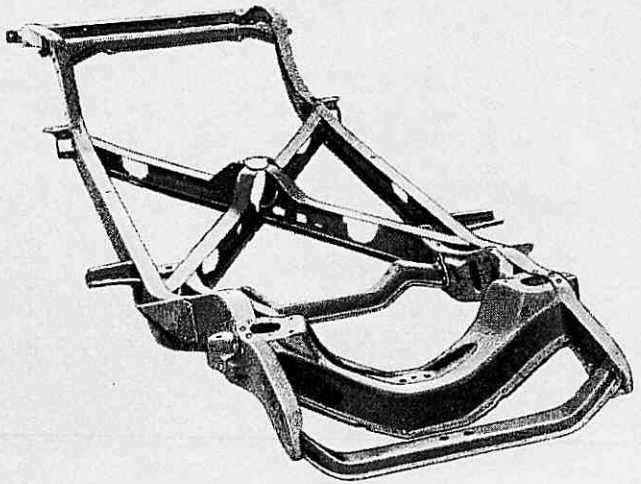


PONTIAC'S TWO GREAT CHASSIS OFFER SMOOTH RIDING COMFORT AND UNMATCHED HANDLING EASE!

For 1956, you have two wonderful chassis to choose from—the 124" wheelbase that is built for the beautiful Star Chief series (except Safari) and the rugged 122" wheelbase built for the Safari, 870 and 860 series. Both of these chassis provide a solid understructure for the sleek, modern bodies of the 1956 Pontiac. Carefully engineered and tested again and again to assure safe, easy steering and dependability, these Pontiac chassis are just another reason why Pontiac is known for quality and dependability the world over.

PONTIAC'S "X" MEMBER FRAME

Long used by Pontiac, the "X" member, bridge type frame, recognized as one of the most rigid and strongest types built, is employed in all 1956 models. The four legs of the "X" member are of massive, steel I-beams, welded top and bottom to junction plates. Each leg of the "X" is braced against deflection by the other three legs. All four extremities of the "X" member are securely riveted and welded to the heavy channel side members, thus making this section of the frame exceptionally rigid and free from deflection in the most basic part of the chassis.



Side members are of heavy channel-section steel (.19" in the Convertible, .16" in other Star Chief models (except Safari) and .14" in the 860 and 870 models and Safari) with wide top and bottom flanges, and are joined to cross members to form rigid box sections. Sturdy brackets on which the body is mounted are riveted to the channel side members.

The rugged front cross member is made of an inverted "U" section with flat, riveted steel plates closing the mouth of the "U" and forming a sturdy anchor for the front wheel suspension. A radiator support member located forward of this front cross member provides bracing and rigidity; and to its rearward edge, two additional reinforcements of heavy channel steel are riveted to the side members, forming box girder sections of bridge type proportions in an area where extra strength is needed.

Convertible owners, particularly, will appreciate the higher standard of riding performance derived from the heavy frame specified for that body style. An extra channel of steel welded to a portion of the side bars to form a boxed cross section and considerably heavier "X" member flanges increase the frame's resistance to twisting and bending. Car durability is thereby improved.

CENTER POINT RADIATOR AND FENDER MOUNTING

The independent mounting of Pontiac's radiator and fenders, in combination with independently mounted front wheels, provides a front-end construction which has a remarkable stability at high speeds. With this construction, the fenders and radiator are mounted as a single unit on a brace extending from one front fender to the other across the entire front of the car.

This sturdy, wing-like structure pivots on the frame at the center of the radiator support member. Any movement of the frame has no effect upon these parts because the frame movement rotates about the center point mounting. This method of assembly eliminates annoying front end vibrations.

RUBBER BODY MOUNTS

Pontiac used every practical means of excluding vibration and road noise from the passenger compartment, because quiet, noise-free driving is recognized as important to comfort and safety. Included among the many insulators employed for this purpose are those installed between the body and the frame.

The body insulators used on all models except Convertibles fully separate and cushion the body bolts from the frame by means of a molded rubber insulator assembly. When installed, a portion of this insulator projects through a circular hole in the frame, while its squared upper portion acts as a cushion between the frame and the body. A lower insulator fits around the upper part of the lock nut end. Metal-to-metal contact

is avoided and the possibility of road noise traveling into the body is minimized. The rubber used is of a hardness which provides ideal cushioning effect and riding comfort. A steel spacer is included in the center of the insulator assembly, providing a limiting stop against which the nut can be tightened. All mounts are, therefore, automatically compressed the same amount at installation, insuring optimum effectiveness. Taking advantage of what engineers call "nodular dampening", insulator locations have been determined which most effectively smother the natural vibration frequency of the frame assembly. The total effect of using this installation will be quickly noticed by driver and passengers alike since, as a consequence, road noise is at a minimum and a smooth, comfortable ride results. Catalina usage of these body mounts differs slightly from Sedans and Station Wagons. Convertible body mounts are similar to those used in 1955.

IMPROVED FRONT SUSPENSION

The vertical kingpins being used on the new 1956 models are the same used to improve the front suspension of the 1955 Pontiac. Adopted as companion to the other front end steering components, this makes handling easier on curves, reduces effect of road harshness felt at the steering wheel and minimizes tire scrubbing.

Previous to 1955, Pontiac kingpin inclination had been approximately 5°, that is, the pin which mounts the steering knuckle to the knuckle support was tilted 5° inwardly toward the center of the car. In combination with other front end geometry then used, this was considered to be optimum from an over-all control standpoint.

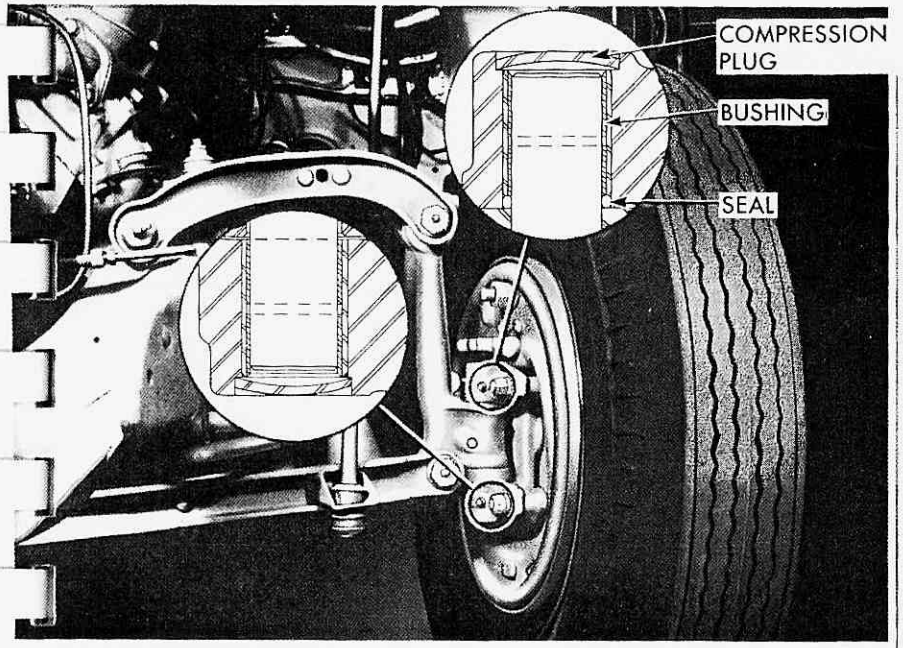
In 1955, however, clearances demanded a shorter upper control arm and the steering knuckle support was reduced in length. These revisions produced an opportunity to capitalize on the inherent features of the vertical kingpin.

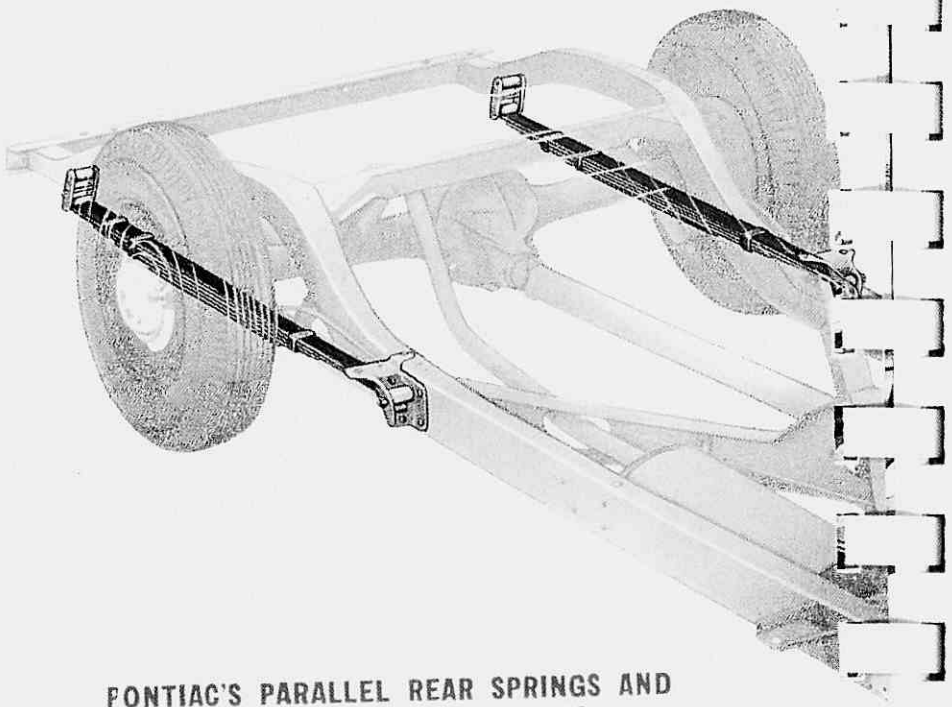
As steering occurs, when vertical kingpins are used, the steering knuckle travels in a plane almost parallel to the ground. With the inclined kingpin, however, it moves in an arc and, therefore, weight on the front wheels must be lifted a distance equal to the amount the steering knuckle deviates from its original height. Since this is not necessary with the vertical kingpin, steering ease is substantially improved in parking, on corners and curves.

Also, the vertical kingpin cooperates with the other elements in Pontiac's steering linkage and front suspension to minimize the amount of jar at the steering wheel when driving over railroad tracks or "rutty" roads, resulting in smoother, more luxurious, less fatiguing driving.

Lastly, since the distance from the center line of the kingpin to the center of the tire contact area was increased for 1955, there is less tire scrub at the periphery of the tire contact during turning, which results in less steering effort.

Among the many practical improvements on the 1956 Pontiac are the changes made on the steering knuckle and support assembly. A new press-fitted king bushing and an added grease seal result in more even lubrication, better retention of lubricant, and reduce galling and corrosion of the kingpin and related parts. Combined with Pontiac's recirculating ball nut steering gear and parallel rear springs, this composite produces driving experience unexcelled.



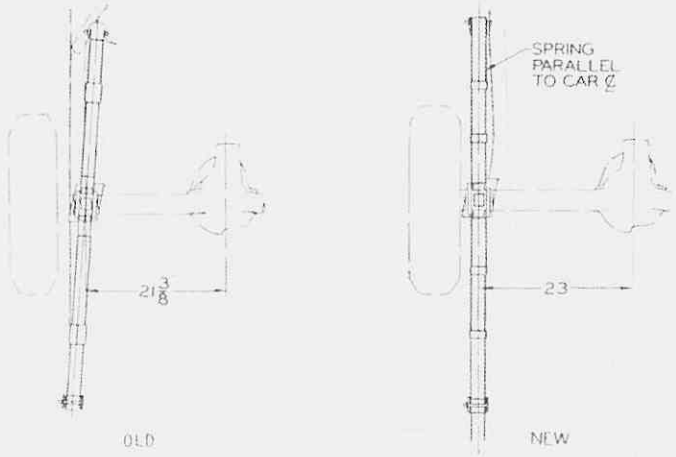


PONTIAC'S PARALLEL REAR SPRINGS AND NEW FULL-LENGTH SPRING LINERS

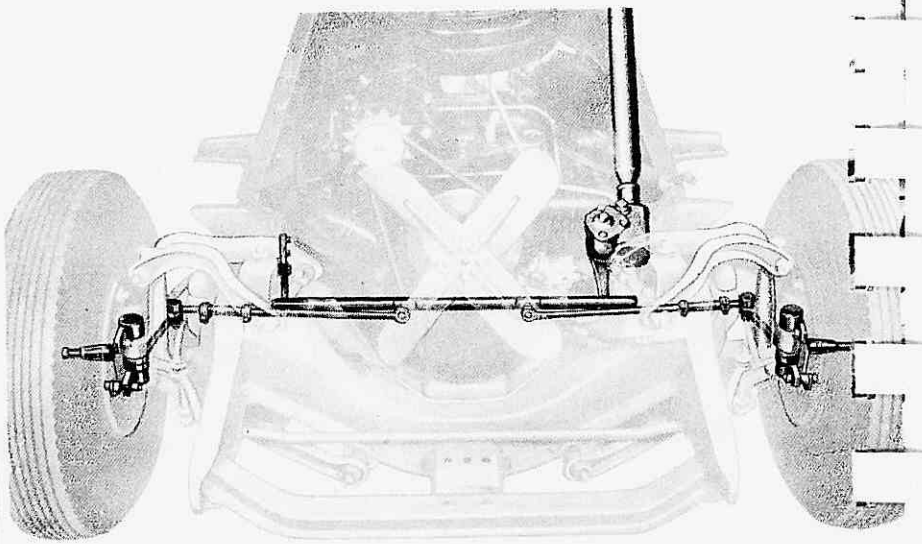
Car roll is the tendency of a car to lean away from the center of a curve on a turn, and has been experienced by every motorist. In addition to its deleterious effect on riding comfort, it also, through reaction on the wheels, increases steering effort. It is therefore important in automobile design to minimize this phenomena, although its complete elimination from a practical and safety standpoint is virtually impossible and perhaps undesirable.

Definite and noticeable improvement in roll stability evolved, however, from the new rear suspension introduced in 1955. The rear springs were mounted parallel with the center line of the car, and the distance between spring seats was made 3.25" greater. Thus, a wider base was provided for the body and frame, and with a given spring its tendency to tilt or roll when driving in a turn was reduced; that is, its stability was improved and less car roll would occur at a given speed. This followed from natural physical laws and is evident in our walking or standing experience—the wider our stance, the firmer our footing.

This greater roll stability has a cumulative effect. As indicated previously, with reduction in car roll the tendency for wheels to steer opposite to direction of turn is also reduced; therefore, with the parallel rear spring rear suspension, better handling and steering result. Also, driver and passengers alike will appreciate the feeling of security eminently noticeable.



Since the springs are mounted parallel to the center of the car, the springs travel in a more natural path. This, plus the addition of new full-length spring liners, contributes to a smoother, quieter and more comfortable ride.



TRU-ARC SAFETY STEERING

One of the important factors contributing to Pontiac's easy handling is the steering system which gives positive control of the car direction with a minimum of effort. This desirable result is due to the fact that the steering system moves both front wheels uniformly and permits less deflection in the wheel positions as they rise and fall.

In Pontiac's steering system, the two tie rods are of equal length and are connected to a bar or link which in turn is connected to the steering gear pitman on one side of the frame and to an idler arm on the opposite side. The idler arm is equal in length to the pitman arm, so that the arcs in which the ball ends of the two arms move are identical. This makes the movement of the link connecting the tie rods uniformly parallel at all times.

The inner ends of the tie rods are close to the centers of the arcs described by the front suspension steering arms as they rise and fall in consonance with the wheel action, and thus wheel fight is minimized and the action of the steering mechanism greatly improved.

Pontiac's recirculating ball type steering gear is also an important factor in making steering practically effortless.

SMALL TURNING CIRCLE

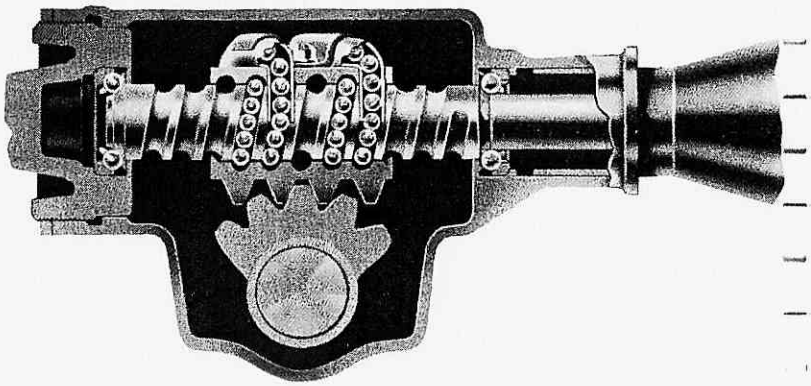
The turning circle of the Star Chief series models has, of course, a larger diameter than that of the 860 and 870 series because of its extra-long wheelbase. All three lines, however, have a small turning circle. The 860 or 870 can turn to the right, curb to curb, in a circle with a diameter of 42 feet, 5 inches. The Star Chief can do the same maneuver in 42 feet, 11 inches. This small turning circle and high over-all steering ratio of 25 to 1 enable the Pontiac owner to park easily and make U-turns in relatively narrow streets.

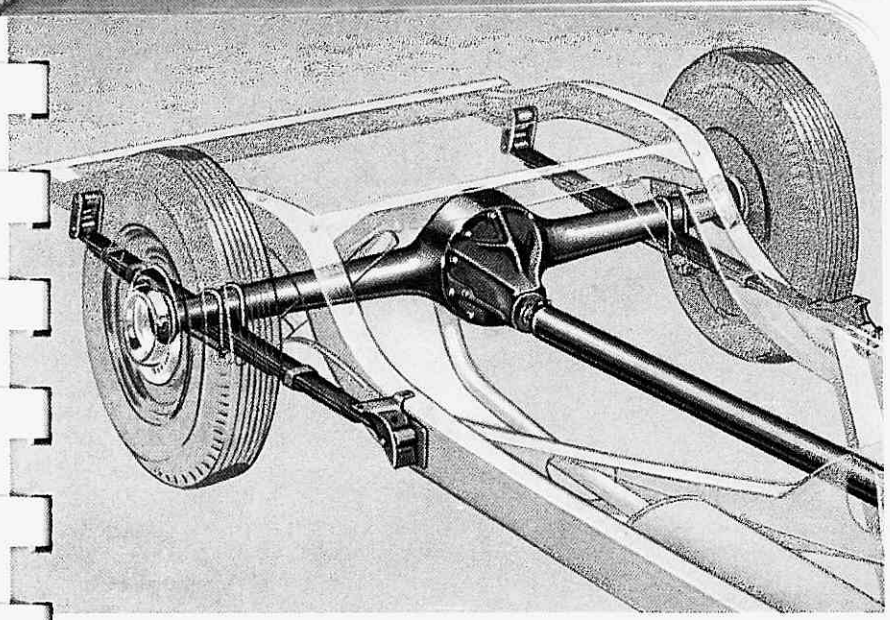
PONTIAC RECIRCULATING BALL TYPE STEERING GEAR

This recirculating ball type steering gear was introduced in 1955 and has not only proven to be more efficient, but also requires less frequent adjustment than was required with the worm and roller type which it superseded.

Steel balls between a screw and nut are used in this gear to minimize friction and distribute the steering load. Therein the screw at the lower end of the steering shaft has semicircular, ground helical grooves and a similarly shaped groove is provided in the steering nut. This mating space is filled with steel balls. Guides formed from steel tubing secured to the nut direct the ball in recirculating paths as steering occurs, leading them from each end of the nut back to a point near its center or vice versa, depending on direction of turn. Thus, a complete and enclosed ball circuit is maintained. Gear rack teeth on the nut mate with the steering sector which turns the pitman shaft.

In combination with other related components which were modified for performance improvement and clearance reasons, the added efficiency of this gear results in easier steering on corners and curves.





HOTCHKISS POWER CUSHION DRIVE

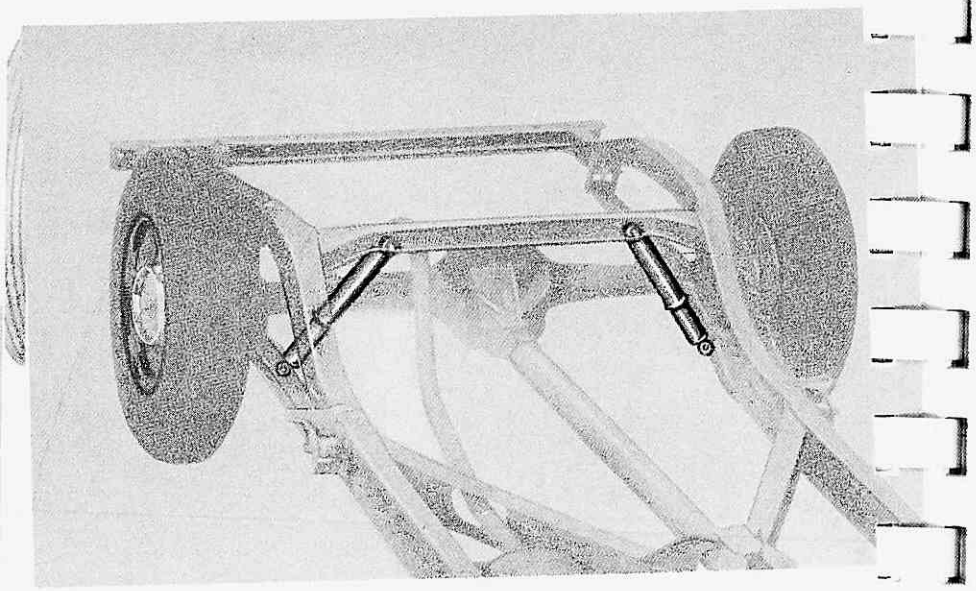
The highly efficient Hotchkiss Power Cushion Drive, in which the driving torque of quick starts is cushioned through the rear springs, is used in all Pontiac models. Smooth, even starting is obtained by the power cushion drive because, as the clutch is let in, the whole axle housing turns until the resistance built up in the rear springs equals the force necessary to start the car.

Hotchkiss Drive cushions the power to the rear wheels, thus protecting costly drive-line units—clutch, transmission, propeller shaft, universal joints, rear axle, tires—from the severe strain of sudden power application and helps to prevent rear tires from slipping when starting. It also helps to prevent stalling of the engine and reduces upsprung weight. With less upsprung weight, the action of the rear wheels on rough roads is much smoother, and the axle delivers the maximum tractive power because the wheels are free to follow the irregularities of the road.

Universal joints, yokes and companion flanges for 1956 are heavier and larger with more widespread points of attachment for increased rigidity. Universal joint bearings, now retained by a snap ring, are increased in diameter and length, thereby providing greater bearing surface. The propeller shaft has been shortened to accommodate new design requirements.

HYDRAULIC CUSHION REAR LEVELATORS—REAR SHOCK ABSORBER VALVING

Road shocks on the rear wheels are effectively absorbed in Pontiacs by hydraulic cushion levelators consisting of two direct-acting, two-way shock absorbers mounted in front of the rear axle housing, with the lower ends spread out toward the wheels and the upper ends sloped toward the center of the body. In this position, shock absorbers become levelators



with better control over wheel bounce and rear axle chatter on rutty roads and, in addition, they appreciably reduce crosswise body quiver and sway.

Each shock absorber consists of a cylinder filled with fluid in which a piston, with carefully controlled openings or valves, works up and down.

Levelator valves have been tailored to assure positive control of levelator action, provide the maximum comfort for all passengers and assure the finest possible ride. Since the levelators are located in front of the rear axle housing, maximum protection from flying stones is afforded.

RUBBER REAR SPRING BUSHINGS

Rubber rear spring bushings, used by Pontiac since 1950, have stood the acid test of commercial use. The bushing assemblies which pivot each rear spring on the frame consist of an inside steel shaft and an outside steel shell with a high-quality natural rubber insulator between the two. Properly fitted into position, three bushings of this kind completely insulate each spring from the frame.

NEW REAR WHEEL BEARINGS AND SEAL

With the adoption of a new rear axle shaft wheel bearing and seal, possibility of damage in assembly operations is greatly minimized. The new ring bearing has the oil seal directly in the bearing so that the chance of damaging the seal which could cause lubricant leakage is virtually eliminated.

LONG REAR SPRINGS

The ride of the new 1956 Pontiac models is carefully engineered to strike the proper balance between the schools of thought calling for the "too soft ride" and the "too hard ride". Pontiac feels that the proper course is a compromise with sufficient softness to absorb road shocks comfortably, with sufficient stability to maintain the performance and ease-of-handling characteristics most drivers demand. Cooperating in this aspect, 60" rear springs which have six leaves are used on Star Chief models while the 870 and 860 models employ 58" springs. These springs, coupled with the parallel rear spring arrangement, effectively carry the weight of the new body, provide neat car appearance whether the car is loaded or unloaded and maintain stability on curves. New rear spring liners also contribute to a smoother, quieter ride.

OUTSTANDING HANDLING AND IMPROVED RIDE—LOW CENTER OF GRAVITY

As indicated in preceding discussion, several of the 1955 improvements have been embodied in the 1956 model which add to an already impressive list of features comprising the reason for Pontiac's fine handling and ride reputation. These are listed below for composite consideration.

(1) Heavy, sturdy frame results in a minimum of high-frequency vibrations and smooth riding.

(2) Vertical front wheel kingpins make handling easy on curves, and together with suspension linkage design minimize jarring and tire scrubbing.

(3) An efficient ball-nut steering gear makes steering easy on curves, cushions road harshness.

(4) Parallel rear springs reduce car roll, improve handling on curves, add to feeling of riding security, full-length spring liners add to riding smoothness. Shock absorbers insure optimum control over body as well as axle movements. Shock absorber valving has been modified to provide a safer, more comfortable ride.

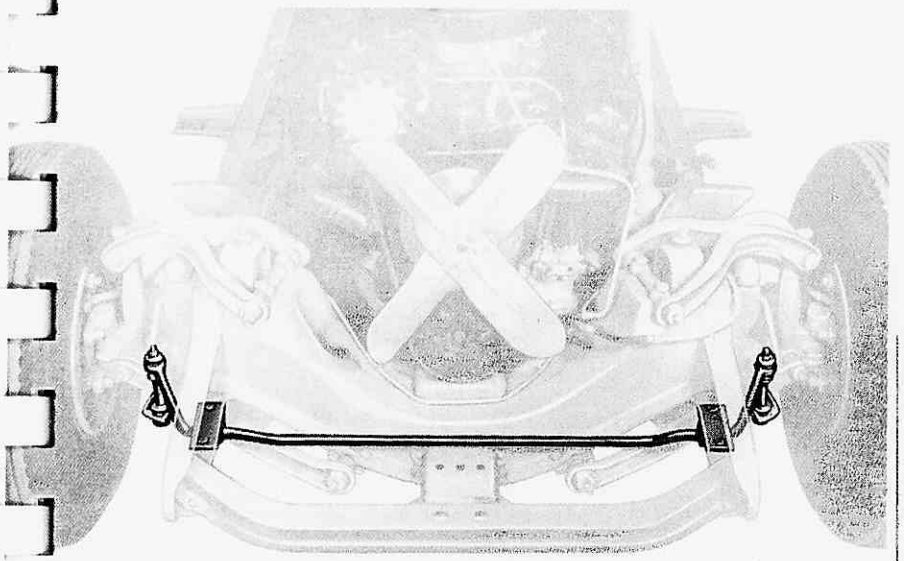
(5) Tubeless tires provide better ride since less heat is generated during high-speed driving and, therefore, air pressure rise is reduced.

In addition to the above, it should be noted that in 1956—as with the '55 model, Pontiac is built close to the ground, has a low center of gravity and, therefore, has ideal road-hugging ability. Effect of cross winds is minimized and your Pontiac will "step" into curves with thoroughgoing assurance.

1955 and 1956 improvements, combined with time-proven features such as Tru-arc steering; optimum shock absorber control; hydraulic cushion rear levelators; sturdy front stabilizer bar; composite type quiet body mounts; long, durable rear springs; generous wheelbase; rubber rear-spring bushings; and well insulated, all-steel bodies in essence provide the basis for unexcelled riding and handling.

FRONT STABILIZER BAR

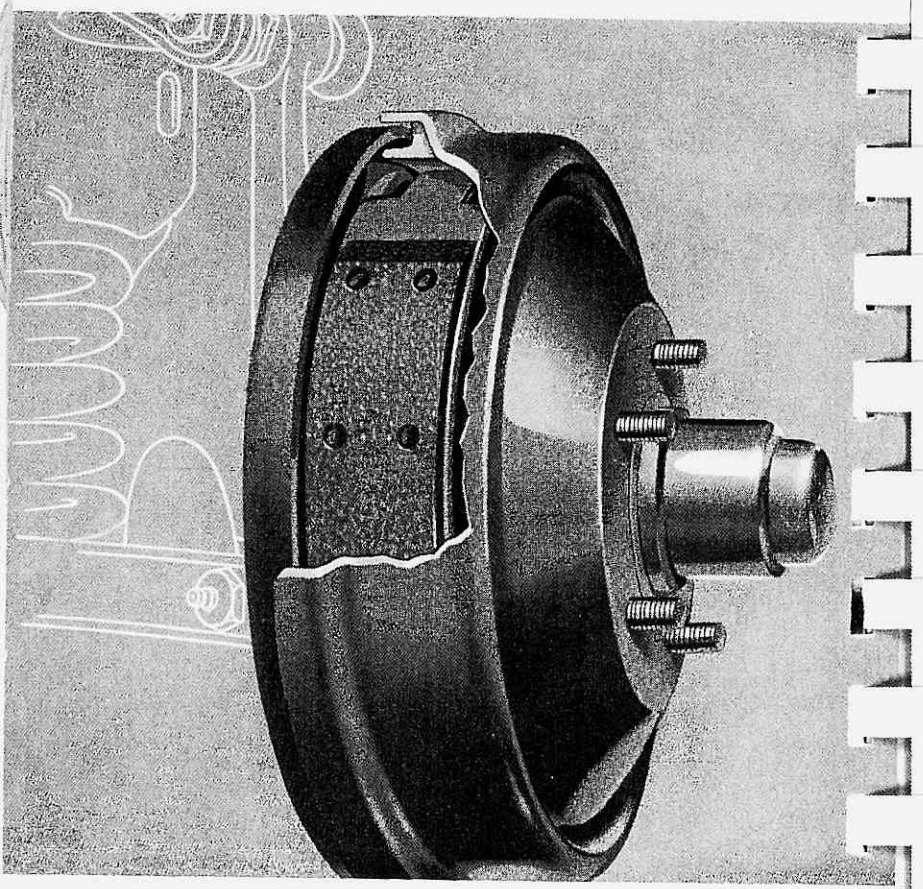
Every car tends to roll or sway on curves and to lurch on rough or rutted roads. Such movements are disagreeable to passengers and constitute a real hazard to safe car control. Pontiac's Stabilizer Bar minimizes body roll and lurching and, with the hydraulic cushion rear levelators, holds the car body more nearly level, increasing security and comfort.



The stabilizer consists of a round bar of spring steel mounted in rubber on the frame ahead of the front cross member, with connecting links securing it at either end of the two lower front coil spring seats. When any small road unevenness is encountered, each front spring will act independently; but as soon as a large bump or rut is met, the tendency of the spring on that side to collapse and send back road shock is resisted by both coil springs because of the stabilizer bar.

IMPROVED BRAKES

Revisions to wheel brake cylinder components improve the reliability and durability of these units. In the wheel brake cylinder assembly the brake cylinder piston spring, which exerts a force between the two rubber piston cups, has been replaced by a spring with expanders attached to each end. Also, new synthetic rubber cup seals especially designed to withstand higher temperatures have been added. The force set up by fluid pressure and the wheel cylinder spring is exerted against each expander and transmitted evenly through it to the lip of the cup seal, holding it tightly against the wall of the cylinder. This new positive contact minimizes the possibility of leaks due to the cups taking set or because of dirt wedging between the seals and the cylinder bore. New cup seals with less deterioration due to heat assure longer periods of satisfactory service.



Coupled with these changes, a new improved brake fluid has been developed. This heavy-duty fluid with even greater high-temperature characteristics than heretofore results in less possibility of vapor lock and less chance of fluid loss in the system by evaporation. Another of the many improvements incorporated in the 1956 Pontiac, these brake provisions make for added safety on the highway.

CENTRIFUGALLY CAST, STEEL-BACKED BRAKE DRUMS

Few competitors can beat the quality of Pontiac's brake drum—perhaps the most efficient brake drum commercially available.

Pontiac's brake drums consist of a heavy, all-steel shell around a centrifugally cast alloy iron braking surface. This combines the strength and toughness of steel with the extremely hard, anti-scoring properties of alloy iron. Centrifugal casting is a superior type of casting for this purpose.

Front brake drums are 12 inches in diameter, while rear drums are 11 inches in diameter. Front linings are 2¼ inches wide, while the rear measure 1¾ inches.

PONTIAC'S GREAT BRAKING SYSTEM

Pontiac's braking system is the safest, most durable and smoothest it is possible to build today.

Pontiac's brakes are better because (1) the hydraulic brakes are self-energizing, (2) drums are sealed against dirt and water as are the emergency brake cables, (3) they use steel-backed, centrifugally cast alloy iron brake drums, (4) they use the best, molded type linings, (5) they are designed for optimum cooling, and (6) the mechanical parking brake operates on the rear wheels, not the propeller shaft.

EASY-PULL HAND BRAKE

Pontiac's Easy-pull Hand Brake is exceptionally easy to apply. A pull on the handle of the emergency brake moves an intermediate lever by means of a wire cable running over a pulley. The action of this intermediate lever causes a cable connected to its lower end to apply the rear brakes. This linkage keeps friction in the system at a minimum, making it easy to apply the brake with one short pull.

This hand brake is associated with a dependable and efficient mechanical braking system which operates on the rear wheels by means of steel cables. Provided for emergency and parking use, the hand brake control gives the car two separate and distinct braking systems.

By having the hand brake operate on the rear wheels, the rear axle gears and shafts are relieved of the strain of transmitting the braking action to the rear wheels, as is the case with the propeller shaft type of hand brake used on some makes. In addition, Pontiac's independent braking system provides an emergency braking surface of almost ½ of its total braking area, while the driveshaft type of emergency brake usually provides less than ¼ of this area. With Pontiac's type of hand brake set, it is possible to jack up any one of the four wheels with minimum danger of the car rolling off the jack.

NEW SYNCHROMESH TRANSMISSION

Pontiac's 1956 Synchromesh transmission is larger, sturdier and much more durable. Of entirely new design, it employs many new features which assure longer and quieter, smoother operation.

For quiet operation, all helical gears are continued although they are now cut in the opposite direction and are enclosed in a new, rugged case. A more sturdy method of attachment to the clutch housing has been employed, and a new sealing gasket between clutch housing and transmission case is incorporated. These are just a few of the many new features and improvements that make the new Synchromesh transmission unit ideally suited for Pontiac's more powerful engines. Laboratory tests have proven this transmission to be rugged, dependable and twice as durable as that used heretofore, and it offers a new driving thrill to those who prefer to use the conventional shift.

PONTIAC'S CLUTCH CONTROL AND CLUTCH

In order to reduce the amount of effort required to apply the clutch, a new clutch control was designed for the 1955 model to be used with Synchromesh transmission. This clutch control continued for 1956 consists of a countershaft, a spring lever bolted to the clutch housing with attached idler lever, a push rod which connects the idler lever to the spring lever and an over-center spring attached at one end of the spring lever, and at the other to the idler lever. When the clutch pedal is depressed, the pull rod rotates the countershaft and spring lever in a clockwise direction around pivot points, transmitting a force which disengages the clutch. Arrangement of the spring and associated linkage is such that the spring performs two functions: 1. by double-assist over-center action aids clutch disengagement, and 2. together with clutch system forces, returns associated linkage to normal position when pressure on the clutch pedal is released. An anti-rattle spring is included in the assembly to absorb any slack between the disengaging rod and clutch fork. Through this unique development, driving fatigue is minimized and more pleasurable driving results.

In 1955, the capacity of the clutch was also increased through use of a stronger spring. As a consequence, when engaged, the pressure on the clutch-driven member was increased.

CONCENTRIC GEARSHIFT AND GEARSHIFT LEVER

Hidden gearshift mechanism is continued on both Synchromesh and the Hydra-Matic models for 1956. This design incorporates the use of a tube encircling practically the entire length of the steering shaft which is enclosed by the steering column jacket. Thus, there is only one handsome column holding both steering column shaft and the gearshift lever. Openings in the lower end of the column provide access for the connections which lead to the transmission.

HYPOID REAR AXLE

Pontiac continues to use a hypoid rear axle, permitting lower car floors and bodies with minimum bulge in rear compartment floors.

With hypoid gears, the tooth strength is greater in relation to ring gear diameter, avoiding tooth fracture by fatigue due to high bending stress. Bearing loads are reduced because of the lower gear spiral angle. In addition, this type of gear lends itself to a high standard of quietness.

The rear axle is of heavy, rugged construction and is encased in a non-deflecting steel housing formed in two halves, an upper and a lower, securely welded together, with brake flanges butt welded to the ends. Pontiac's great rear axle is an important factor in the car's steady, consistent economy.

CHOICE OF AXLES

Cars equipped with Synchromesh transmission have a standard low axle ratio of 3.64, and a special "hills" ratio of 3.90 is available. The low 3.08 or 3.23 axle ratio is continued on models having Hydra-Matic transmission.

REAR AXLE BUMPER

An interesting innovation for 1955 which reflected the ingenuity of Pontiac's engineers is a rear axle bumper mounted on the body by means of a steel bracket above the nose of the differential. Continued for 1956, this synthetic rubber bumper limits propeller shaft vertical travel, and floor tunnel height is therefore less than would otherwise be necessary. Interior roominess is thus conserved.

PONTIAC'S MUFFLER AND ALUMINIZED TAIL PIPE NEW MUFFLING SYSTEM

To insure ideal operation with Pontiac's increased displacement engine, the muffling system for 1956 has been re-evaluated and changed. The exhaust pipe, brand and tail pipe diameter have been increased ¼ inch for freer engine breathing. For the same reason, and in view of the change in valve timing, internal construction of the muffler is new and its tuning chambers have been tailored to provide optimum muffling performance. As in 1955, the muffler is oval-shaped, uses multiple pipes and is double-jacketed to minimize noise and heat radiation. Mounting of the system has been revised to meet installation and durability requirements. The use of the aluminized tail pipe is continued, and its outer end is now bent downward to more effectively deflect exhaust gases away from the bumper and facilitate deflector mounting. Dual exhausts are also available as a new 1956 accessory.

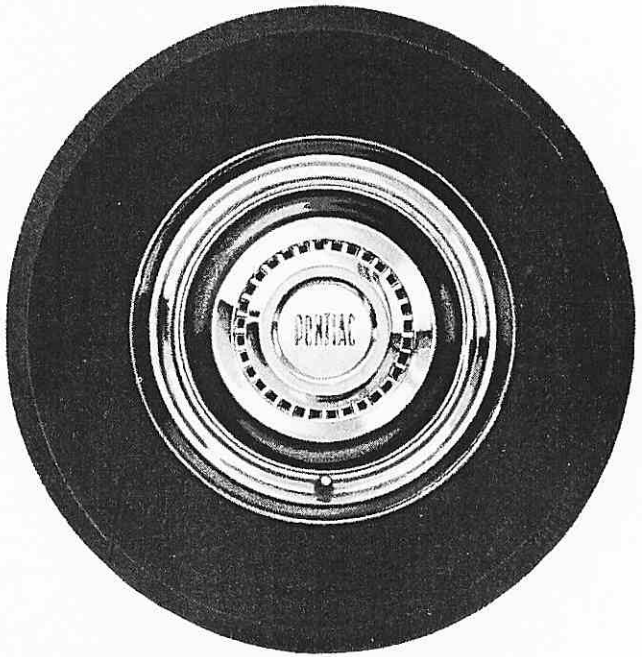
DIFFERENTIAL

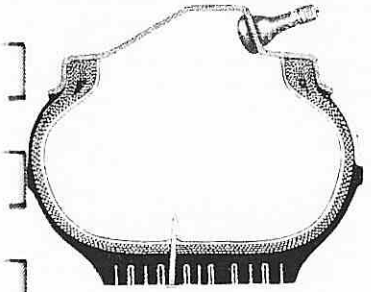
Differential gears are carefully matched in sets and thoroughly inspected when installed. Provision has been made for easy lubrication. The differential carrier is high-grade casting, adequately ribbed to insure rigidity.

Pre-loaded, self-aligning taper roller bearings support the differential carrier assembly in the axle housing, while the pinion gear turns on tapered roller bearings, front and rear. Wheel bearings are single-row ball bearings sealed against dirt and dust, and rear wheel bearings are lubricated for life —an important economy feature.

TUBELESS TIRES—ALL MODELS

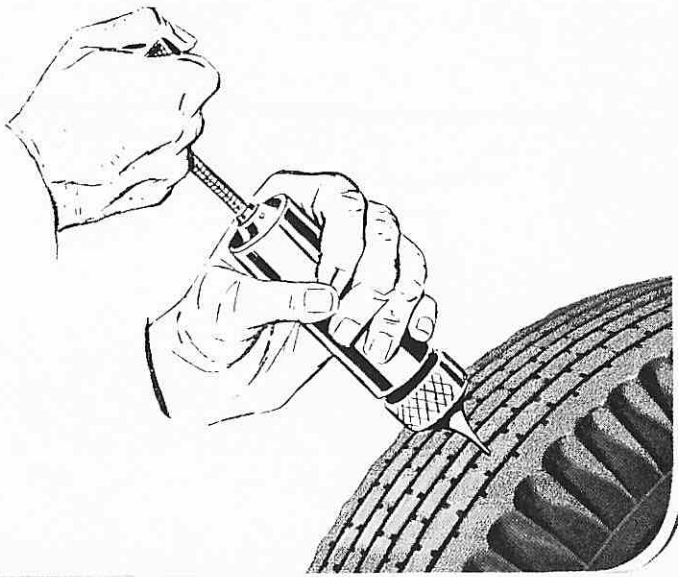
Tubeless tires, enthusiastically received by Pontiac owners in 1955, will be used on all 1956 models. In these tires, need for inner tubes has been outmoded by a design which provides an airtight seal between the tire and wheel. This sealing is accomplished by ribs on the tire bead that bear against the wheel outer flange and tight seating of the bead base on the wheel rim taper. Advantages attributable to these tires include (1) better ride as less heat is generated during high-speed driving, thus, air pressure rise is reduced; (2) greater durability due to lower operating temperatures; and (3) less susceptibility to air loss or leakage from punctures.





You will notice from the illustration at the left that when a nail enters the tubeless tire, the liner material tends to cling to the penetrating object. This action reduces the possibility of air loss due to puncture.

There are several approved methods of repairing tubeless tires. The one illustrated below is called the "gun method." With this system, holes not exceeding 3/32-inch diameter may be repaired while the tire is still on the wheel. Owners will appreciate this particular method for its extreme convenience.



CHASSIS SPECIFICATIONS

GENERAL INFORMATION	56-27	56-28
Wheelbase—Nominal	122	124
Tread—Front—At Ground	58.66	58.66
Tread—Rear—At Ground	59.05	59.05
Taxable Horsepower	49.6	49.6
Standard Rear Axle Ratio (Synchromesh Transmission)	3.64:1	3.64:1
Standard Rear Axle Ratio (Hydra-Matic Transmission)	3.08:1	3.23:1
Tire Size—4-Ply (Except Station Wagons)	7:10 x 15	
Inflation Pressure Cold—Front (exc. Air Cond.)	24 psi	24 psi
Front (Air Cond.)	26 psi	26 psi
Rear	24 psi	24 psi
Tire Size—Special Equipment—4-Ply	7.60 x 15	
Inflation Pressure Cold—Front and Rear (Sedans and Coupes)	22 psi Front 20 psi Rear	
Oil Capacity (Crankcase Refill Less Filter)	5 Qts.	5 Qts.
Quantity to Fill from "Add Oil" to "Full"	2 Qts.	2 Qts.
Water Capacity—Full (Without Heater)	22.7 Qts.	22.7 Qts.
Fuel Tank Capacity (Except Station Wagons)	20 Gals.	20 Gals.
Type of Drive	Hotchkiss	
Turning Diameter—Curb to Curb	42'5"	42'11"
Turning Diameter—Wall to Wall	44'11"	45'5"
Road Clearance—Minimum with Location	6.70 at Bottom of Side Rails	
Road Clearance—Rear Axle—With Passengers	7.68	7.68
Location Car Serial Number on Body	L.H. Front Door Pillar	
Location Car Serial Number on Engine	Front Face of R.H. Cylinder Block Bank	

CLUTCH	56-27	56-28
Make	Inland with Long-driven Member	
No. of Clutch-driven Discs	One	One
Type Pressure Plate Spring	Diaphragm	
Facing Size (O.D. x I.D. x Thickness)	10.0 x 6.75 x .13	
Facing Material	Woven Molded	
Drive-through Cushion Springs	Yes	Yes
Release Bearing	Sealed Ball Bearing	
Clutch Pedal Booster Spring	Yes	Yes
Clutch Pedal Pressure—Average	19 Lbs.	19 Lbs.

TRANSMISSION		
Synchromesh Transmission—Standard	Yes	Yes
Second and Third Speed Synchronized	Yes	Yes
Extension on Main Shaft	Yes	Yes
Steering Column Gearshift	Yes	Yes
Type Shift	Mechanical	
Shift Booster Spring	Yes	Yes
Gearshift Lever Adjustable	Yes	Yes
Number Forward Gears	3	3
Helical Gears	All Speeds	
Constant Mesh Second	Yes	Yes
Countershaft Bearings	Roller	Roller
Number Ball and Roller Bearings Used	5	5
Transmission Ratio—First	2.39:1	2.39:1
Transmission Ratio—Second	1.53:1	1.53:1
Transmission Ratio—Third	1.00:1	1.00:1
Transmission Ratio—Reverse	2.53:1	2.53:1
Lubrication Capacity	2.5 Pts.	2.5 Pts.
S.A.E. Viscosity Number Recommended Year Around	EP 80 or 90 Gear Lubricant	

UNIVERSAL JOINTS AND PROPELLER SHAFT

	56-27	56-28
Make	Saginaw	
Number and Type Universal Joints	2—Cross Type	
Type Universal Joint Bearings	Antifriction	
Recommended Lubricant (Service)	High Melting Point Wheel Bearing Lubricant	
Type Drive	Hotchkiss	
Type Propeller Shaft	Tubular	Tubular
Diameter of Propeller Shaft	3.00	3.00

REAR AXLE

Type	Semifloating	
Gear Type	Hypoid	Hypoid
Gear Ratio—Standard Synchromesh Transmission	3.64:1	3.64:1
Gear Ratio—Hills—Synchromesh Transmission	3.90:1	3.90:1
Gear Ratio—Standard—Hydra-Matic Drive (Except Station Wagon)	3.08:1	3.23:1
Gear Ratio—Standard—Hydra-Matic Drive (Station Wagon)	3.23:1	None
Lubricant Capacity	3.25 Pts.	3.25 Pts.
Type Recommended Year Around	Passenger Car Duty SAE-90 Hypoid Lubricant	

WHEELS

Type	Steel Disc	
Rim (Size and Flange Type)	15 x 5½ K	
Wheel Discs—Star Chief & 870 Models Except 870 Station Wagons	Yes	Yes

FRONT SUSPENSION

	56-27	56-28
Independent Coil Spring Type	Yes	Yes
Pivot Bearings	Threaded	
Neoprene Dust Seals	Yes	Yes
Caster Angle (Curb Weight)	1° Negative plus or minus ½°	
Camber Angle (Curb Weight)	½° Positive plus or minus ½°	
Toe-In (Outside Tread—Inches)	0 to .06"	
Type Shock Absorbers	Two-way Direct Acting—Sealed	
Shock Absorbers—Manufacturer	Delco	Delco
Kingpin Bearing—Type	Line Reamed Bronze Bushings	
Kingpin Thrust Bearings—Type	Ball Bearings	
Front Springs—Type	Coil	Coil
Front Stabilizer—Type	Link	Link

REAR SUSPENSION

Springs—Type	Leaf	Leaf
Length—Springs	58	60
Width—Springs	2	2
Full Length Spring Liners	Yes	Yes
Spring Shackles	Compression Type	
Silent Bloc Rubber Spring Bushings	Yes	Yes
Spring Bushing Lubricators Required	No	No
Auxiliary Rubber Springs	Yes	Yes
Shock Absorbers—Manufacturer	Delco	Delco
Shock Absorbers—Type	Two-way Direct Acting—Sealed	

STEERING

Steering Control Type	Link-parallelogram	
Over-all Steering Ratio—Standard	25:1	25:1

STEERING—*Continued*	56-27	56-28
Over-all Steering Ratio—Power Steering	22.5:1	22.5:1
Gear—Type	Recirculating Ball Bearing	
Ball Thrust Bearing	Yes	Yes
Adjustment for Thrust Bearings	Yes	Yes
Adjustment for High Point	Yes	Yes
Steering Wheel Diameter	18	18
Steering Column Diameter	2.38	2.38

BRAKES

Hydraulic—Internal Expanding	Yes	Yes
Diameter and Width of Shoes—Front	12 x 2.25	
Diameter and Width of Shoes—Rear	11 x 1.75	
Thickness Lining	.20	.20
Front Wheel Cylinder Bore	1.06	1.06
Rear Wheel Cylinder Bore	.94	.94
Length and Number of Primary Linings—		
Front	10.05—2	10.05—2
Rear	9.29—2	9.29—2
Length and Number of Secondary Linings—		
Front	12.92—2	12.92—2
Rear	11.93—2	11.93—2
Effective Area	178 Sq. In.	
Lining—Material	Molded	Molded
Brake Drum—Type and Material	Steel Shell with Centrifugally Cast Alloy Iron Braking Surface	
Multiple Brake Seals—Front and Rear	Yes	Yes
Per Cent Brake Effectiveness—Rear	43.7	43.7
Location Parking Brake Lever	Under Cowl—Left Side	
Parking Brake Operates On	Rear Wheels	
Area Parking Brake Linings	74 Sq. In.	
Brake Cables Sealed Against Mud, Ice	Yes	Yes

FRAME	56-27	56-28
Channel Section Side Rails and Cross Members With Straight I-Beam "X" Members	Yes	Yes
Channel Depth—Maximum	6.06	6.09
Channel Width—Maximum	2.34	2.36
Channel Thickness (Except Convertible Coupe)	.14	.16
Channel Thickness—Convertible Coupe	None	.19
Boxed Side Members—Convertible	None	Yes

BALANCE TOLERANCES OF ROTATING AND RECIPROCATING PARTS

Universal Joint and Propeller Shaft—Each End	.75 In. Oz.	.75 In. Oz.
Tires and Wheels	25 In. Oz.	25 In. Oz.
Rear Brake Drum Assembly	12 In. Oz.	12 In. Oz.
Front Wheel Hub and Brake Drum Assembly	8 In. Oz.	8 In. Oz.