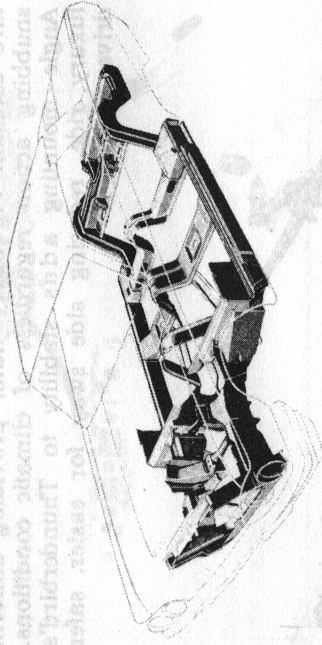


# THUNDERBIRD CHASSIS

## UNDERBODY

The underbody is a typical example of the advanced engineering principles and rugged durability built into every Thunderbird car. The unexcelled strength and rigidity of the underbody make Thunderbird more resistant to squeaks and rattles; and special underbody features provide an extremely low level of road noise transfer, providing a quieter interior. The underbody structure is a prime factor in providing owners with many thousands of miles of comfortable, more noise-free motoring pleasure.

The basic underbody structure consists of box section side, front, and rear frame rails, plus four connecting torque boxes. Seven full-width and two partial-width crossmembers are used, and are of either box-section, hat-section, tubular or channel construction. The underbody frame rails, torque boxes and the majority of crossmembers are fabricated from Zinclad steel for maximum protection against rust and corrosion. All other underbody framing is made of extra-heavy steel.



## THUNDERBIRD UNDERBODY STRUCTURE

In addition to being rigid and strong, Thunderbird's underbody has limited flexibility to help prevent transfer of noise to the passenger compartment. This is accomplished through the torque boxes connecting the underbody framing. The front torque boxes connect the side and front frame rails, and as the front wheels encounter a bump, the force is absorbed primarily by the front suspension coil springs. The reaction to this force tends to lift the front frame rails. Since the rails are attached to the torque boxes, the tendency is for the torque box, or boxes, to twist slightly and transmit the remaining force back through the frame side rails, outboard of the passenger compartment.

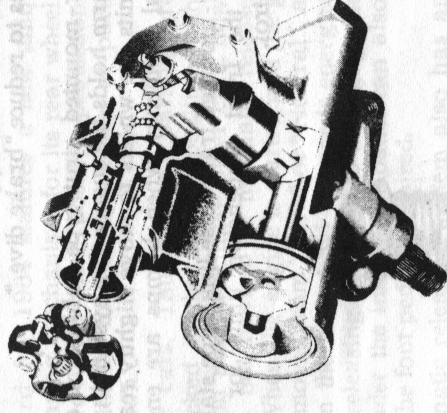
Rear torque boxes connect the side and rear frame rails and perform the same function as the front torque boxes. While the primary forces from rear wheel movement are absorbed within the suspension itself, the main reaction forces are applied to the torque boxes through the rear spring front mountings.

## POWER STEERING

Thunderbird Power Steering — exclusive standard equipment for Thunderbird in the Ford line — features a torsion-bar-type power unit integral with the recirculating ball-and-nut Magic-Circle steering gear. The unit transmits the driver's commands for power-assisted steering and also provides positive wheel return to the straight-ahead position. Thunderbird's

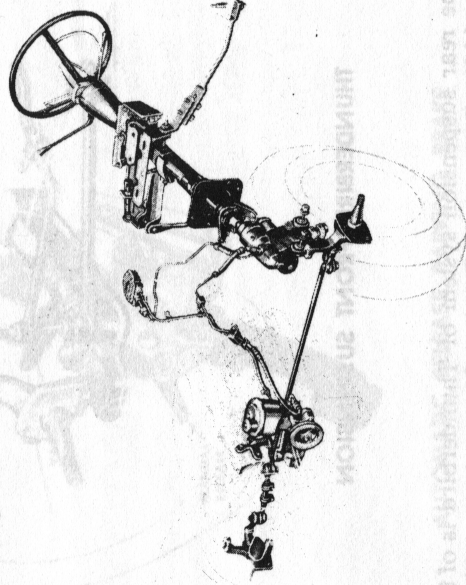
lower overall steering ratio of 20.3 to 1 makes turning faster for precision-like maneuverability. Also, the total steering wheel revolutions from stop to stop are only 3.6 turns, and the curb turning diameter is a tight 40.2 feet. A flexible coupling in the steering shaft dampens road harshness and vibration before they can reach the steering wheel.

The Thunderbird power steering pump is belt-driven from the front of the engine and features an integral fluid reservoir for convenient fluid level checking. The pump operates at a greater capacity than system requirements for reserve power, and the excess fluid is recirculated through the pump by an internal bypass valve. Thunderbird's powerful hydraulic windshield wiper motor is driven by fluid from the power steering system.



## THUNDERBIRD POWER STEERING

The friction points of Thunderbird's parallelogram-type steering linkage are serviced with special lubricant at the factory and, in combination with new lubricant seals, Thunderbird steering linkage is permanently lubricated.



## THUNDERBIRD STEERING LINKAGE

Thunderbird's standard equipment Swing-Away steering wheel provides luxurious ease of entry and exit. As a safety feature, Thunderbird's Cruise-O-Matic selector lever must be in Park position before the wheel can be moved. When the wheel is returned to normal driving position and the Cruise-O-Matic selector is moved out of Park position, the wheel is locked securely in place.