Component Procedures: Suspension

Table of Contents

Component Procedures: Suspension

Front Suspension (Article 298220)

Non Standards
- Coil Spring Type (298230)

Rear Suspension (Article 298221)

Non Standards
- Coil Spring Type (298231)

Parts and Labor (itype_189)

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Lubricate	Chassis, Lubricate	C	0.7	0.0

Front Suspension (Article 2078350)

The front
suspension
is a link/coil design comprised of:
-
Shock absorber
s
Coil spring
- Upper and
lower suspension arm
Stabilizer bar
Track bar
Link/Coil Suspension:
The link/coil suspension allows each
wheel
to adapt to different road surfaces without greatly affecting the opposite wheel.
Wheels
are attached to a
hub
/bearings which bolts to the knuckles. The hub/bearing is not serviceable and is replaced as a unit.
Steering knuckle
s pivot on replaceable
ball joint
s attached to the axle tube yokes.
Shock Absorbers:
The shock absorbers dampen jounce and rebound motion of the vehicle over various road conditions. The top of the shock absorbers are bolted to a frame bracket. The bottom of the shocks are bolted to a axle bracket.
Coil Springs:
The coil springs control ride quality and maintain proper ride height. The coil springs mount up in the wheelhouse. A rubber doughnut isolator is located between the top of the
spring
and the frame. The bottom of the spring seats on a axle pad.
Upper And Lower Suspension:
The
suspension arm
s use bushings to isolate road noise. The suspension arms are bolted to the frame and axle through the rubber bushings. The lower suspension arms can be uses to adjust caster and pinion angle by install a cam bolt service package. The suspension arm travel is limited through the use of jounce bumpers in compression and shocks absorbers in rebound.
Stabilizer
Bar:
The stabilizer bar is used to control vehicle body roll during turns. The spring steel bar helps to control the vehicle body in relationship to the suspension. The bar extends across the top of the chassis frame rails.

Stabilizer bar mounts are isolated by rubber bushings. Links are connected from the bar to the axle brackets.
Track Bar:
The track bar is used to control front axle lateral movement. The bar is attached to a frame rail bracket with
a
ball stud
and isolated with a bushing at the axle bracket.
CAUTION:
Components attached with a nut and cotter pin must be torqued to specification. Then if the slot in the nut does not line up with the cotter pin hole, tighten nut until it is aligned. Never loosen the nut to align the cotter pin hole.
Suspension components with rubber/urethane bushings (except stabilizer bar) should be tightened with the vehicle at normal ride height. It is important to have the springs supporting the weight of the vehicle when the fasteners are torqued. If springs are not at their normal ride position, vehicle ride comfort could be affected and premature bushing wear may occur.

Rear Suspension (Article 2078351)

The rear
suspension
is link/coil design comprised of:
- Dual-action
shock absorber
s
-
Coil spring
- Upper and
lower suspension arm
Stabilizer bar
Track bar
Shock Absorbers:
The shock absorbers dampen jounce and rebound of the vehicle over various road conditions. The top of the shock absorbers are bolted to the frame. The bottom of the shocks are bolted to axle brackets.
Coil Springs:
The coil springs control ride quality and maintain proper ride height. The springs mount between the bottom of the frame rail and the rear axle. A rubber isolator is located between the top of the
spring
and the frame. A plastic isolator is located between the bottom of the spring and the axle.
Upper And Lower Suspension:
The
suspension arm
s use bushings to isolate road noise. The suspension arms are bolted to the frame and axle through the rubber bushings. The suspension arm travel is limited through the of use jounce bumpers in compression and shock absorbers in rebound.
Stabilizer
Bar:
The stabilizer bar is used to control vehicle body roll during turns. The spring steel bar helps to equalize the vehicle body in relationship to the suspension. The bar extends across the underside of the chassis and mounts to the rear axle. Links are connected from the bar to frame brackets. The bar is isolated by rubber bushings.
Track Bar:
The track bar is used to control rear axle lateral movement. The track bar is attached to a frame rail bracket and an axle bracket. It is isolated with bushings at both ends.
CAUTION:
Suspension components with rubber/urethane bushings (except stabilizer bar) should be tightened with the vehicle at normal ride height. It is important to have the springs supporting the weight of the vehicle when the fasteners are torqued. This will maintain vehicle ride comfort and prevent premature bushing wear.

Vehicle Damage Warnings (itype_16)

Periodic lubrication of the
suspension

system is required. Refer to Maintenance for the recommended maintenance schedule.
The following component must be lubricated:
-
Track bar

All Technical Service Bulletins (itype_100)

Tsbs
- Suspension - Strut/Shock Replacement Guidelines (02-001-15, 2015/01/10)
- Front End Alignment - Adjustable/Offset Ball Joints (02-12-99, 1999/08/20)
- Steering/Suspension - Wheel Hub/Bearing Inspection COLL. (31-001-12, 2012/01/11)
- Steering/Suspension - Vibration/Shimmy Above 50 MPH (19-002-12, 2012/07/12)

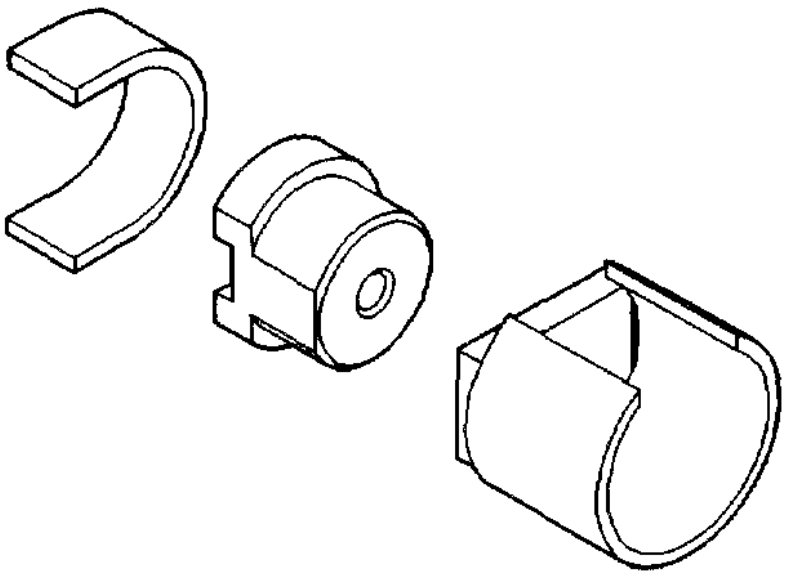
Customer Interest Bulletins (itype_109)

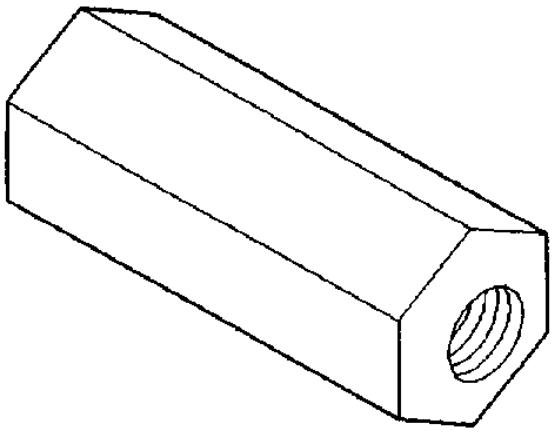
Tsbs
- Steering/Suspension - Vibration/Shimmy Above 50 MPH (19-002-12, 2012/07/12)

Repair Tips (itype_110)

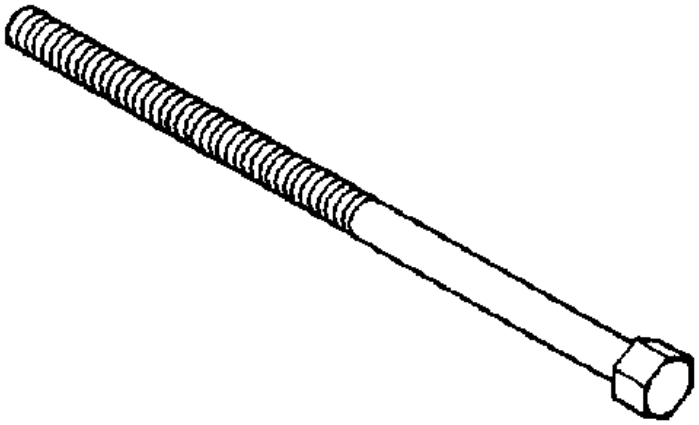
Tsbs
- Suspension - Strut/Shock Replacement Guidelines (02-001-15, 2015/01/10)
- Steering/Suspension - Wheel Hub/Bearing Inspection COLL. (31-001-12, 2012/01/11)

Front Suspension (Article 2078415)

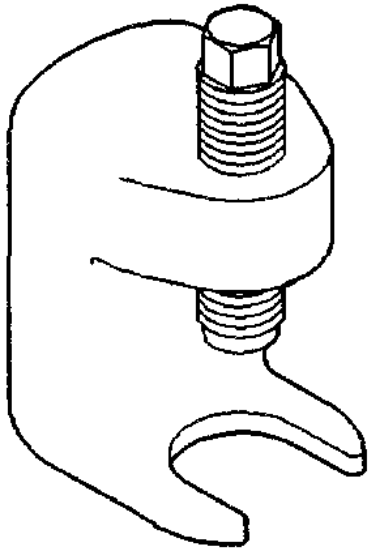




Nut, Long 7603



Bolt, Special 7604



Bouncing (itype_124)

Tsbs

- Steering/Suspension - Vibration/Shimmy Above 50 MPH (19-002-12, 2012/07/12)

Vibration (itype_176)

Tsbs

- Steering/Suspension - Vibration/Shimmy Above 50 MPH (19-002-12, 2012/07/12)

New / Updated Parts (itype_117)

Tsbs

- Front End Alignment - Adjustable/Offset Ball Joints (02-12-99, 1999/08/20)