

BMW

2002
3.0
530i

DESCRIPTION

Strut type suspension consisting of a vertically mounted strut assembly. Strut assembly is mounted to chassis frame at top by means of thrust bearing. Lower end of strut assembly is mounted to ball joint which is bolted to lower control arm. Strut assembly connects to ball joint by means of a steering knuckle which is bolted to strut assembly and ball joint. Strut assembly consists of a shock absorber built into strut tube. A coil spring is mounted on outside of strut assembly. A stabilizer bar is mounted to front of crossmember and is connected at ends to lower control arms. A strut rod connects lower control arm to crossmember.

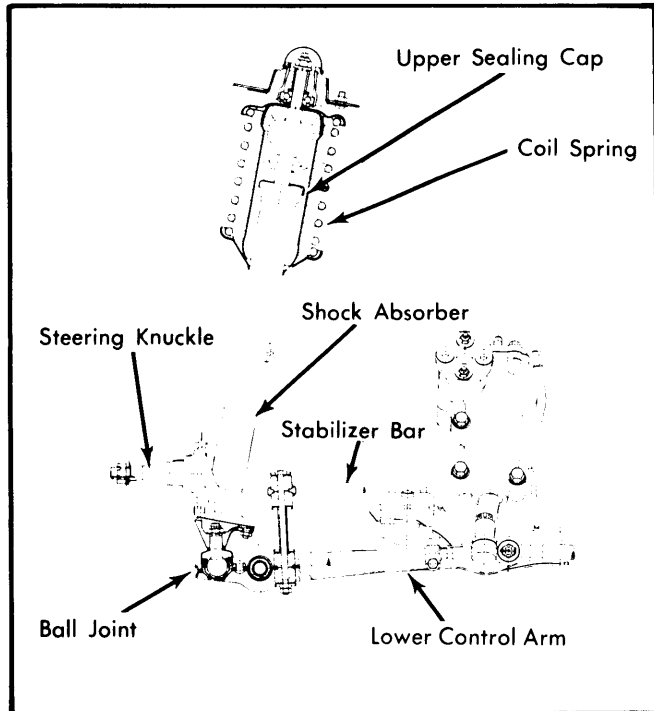


Fig. 1 BMW 2002 Front Suspension Assembly

ADJUSTMENT

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See *Wheel Alignment Specifications and Procedures* in *WHEEL ALIGNMENT* Section.

WHEEL BEARINGS

See *Wheel Bearings* in *WHEEL ALIGNMENT* Section.

BALL JOINT CHECKING

See *Ball Joint Checking* in *WHEEL ALIGNMENT* Section.

REMOVAL & INSTALLATION

FRONT SUSPENSION ASSEMBLY

Removal – Raise and suitably support vehicle. Remove bracket mounting brake lines on strut tube. Disconnect disc brake caliper and hang out of way. Disconnect steering shaft at pinch bolt and index mark shaft. Disconnect power steering hoses, if equipped, then plug openings. Remove nuts securing left and right engine mounts. Remove clamps mounting automatic transmission cooling lines, if equipped. Disconnect strut assembly at top inside fender panel. Loosen heat shield and remove, if equipped. Support engine with an overhead hoist and place a jack under suspension. Disconnect crossmember from chassis, lower and remove complete suspension assembly.

Installation – To install reverse removal procedure and note the following: Make sure shoulder of engine mount engages properly in opening. Reconnect steering shaft while front wheels are pointing straight ahead. Ensure steering shaft index marks are aligned and that mounting screw engages safety groove. Check wheel alignment and bleed power steering unit, if equipped.

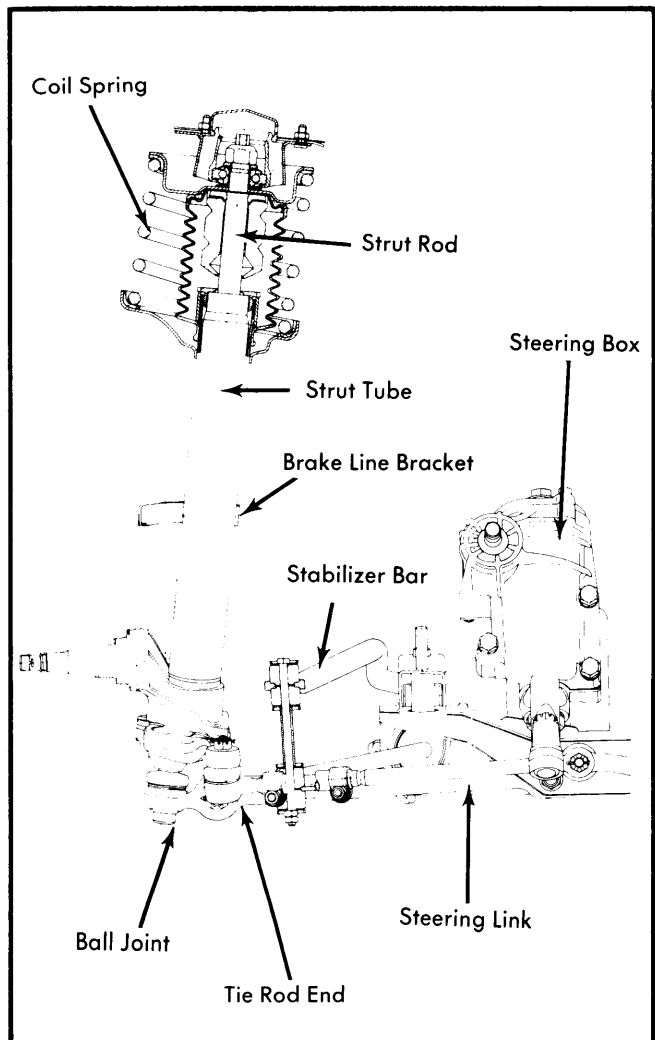


Fig. 2 BMW 3.0 & 530i Front Suspension Assembly

BMW (Cont.)

LOWER CONTROL ARM & STEERING KNUCKLE

Removal — Raise and support vehicle and remove wheel and guard plate. Disconnect stabilizer bar from lower control arm. Disconnect lower control arm from crossmember. Using suitable tool (BMW 6056) press off tie rod from steering knuckle. Disconnect side strut from lower control arm. Remove safety wire and nuts from steering knuckle and remove lower control arm and knuckle assembly.

Installation — To install, reverse removal procedure and tighten all nuts and bolts.

STRUT TUBE ASSEMBLY

Removal — Raise and support vehicle, then remove wheel and guard plate. Disconnect brake line bracket from strut tube and place out of way. Separate caliper assembly and hang out of way. Remove safety wire and lower strut tube mountings. Disengage tie rod end. Remove upper strut mounting nuts at inner fender panel, then maneuver strut assembly from vehicle.

Installation — To install, reverse removal procedure and tighten all nuts and bolts.

SHOCK ABSORBERS & COIL SPRINGS

Removal — With strut assembly removed, compress coil spring. Remove upper sealing cap and unscrew lock nut. Holding piston rod tight, remove support bearings and spring support. Remove coil spring.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Tie Rod End	
2002.....	25-29 (3.5-4.0)
530i, 3.0.....	32-43 (4.4-6.0)
Brake Caliper	58-67 (8.0-9.3)
Stabilizer Bar-to-Control Arm	16-17 (2.2-2.4)
Control Arm-to-Carrier	
2002.....	115 (15.9)
530i.....	58-65 (8.0-9.0)