

Front Suspension

PORSCHE 928

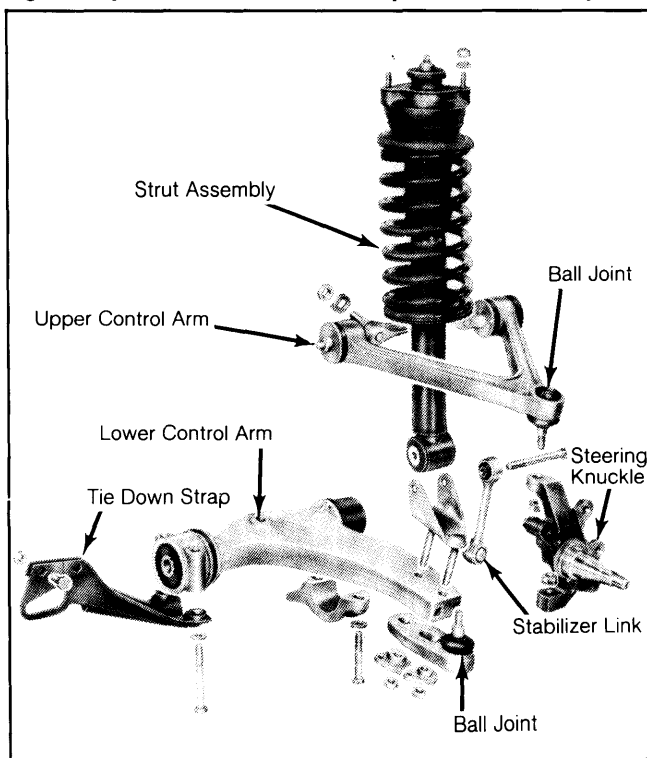
DESCRIPTION

Front suspension used is an independent MacPherson strut type suspension. It consists of a strut assembly, surrounded by a coil spring. This assembly is connected at top to inner fender panel and at bottom to lower control arm.

Lower control arm connects at outer end to steering knuckle through a ball joint. At inner end of the "T" shaped control arm, bushings connect arm to frame member.

An upper control arm is attached by ball joint to steering knuckle and by pivot shaft to frame member. A stabilizer bar is connected by a link to lower mounting of strut assembly.

Fig. 1: Exploded View of Front Suspension Assembly



ADJUSTMENTS

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

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

WHEEL BEARING

1) Tighten hub nut while rotating wheel to seat bearing. Back off nut until thrust washer can be moved sideways with light pressure from a screwdriver.

2) Bearing adjustment should be tight enough to prevent any wheel hub axial play. Tighten pinch bolt, making sure that hub nut does not change position.

BALL JOINT CHECKING

Check ball joint and seal for signs of abnormal or excessive wear, damage or play, (replace if necessary).

REMOVAL & INSTALLATION

WHEEL BEARING

Removal

1) Raise vehicle and support with safety stands. Remove wheel assembly. Remove grease cap, loosen pinch bolt and remove hub nut. Remove thrust washer and outer wheel bearing.

2) Remove brake caliper and support out of the way. Remove hub and rotor assembly. Pry out inner grease seal and remove inner bearing.

3) Remove hub-to-rotor retaining bolts and separate hub from rotor. Heat wheel hub to 250-300°F (120-150°C) and press out inner and outer bearing races.

Installation

To install, reverse removal procedures. Wheel hub must be heated as in removal before installing bearing races. Always replace wheel bearings and races in matched sets. Adjust wheel bearings.

BALL JOINT

Removal (Upper)

1) Raise vehicle and support with safety stands. Remove wheel assembly. Remove caliper and support out of the way.

2) Remove castle nut from ball joint. Using removal tool (VW 267), press ball joint from steering knuckle and remove from control arm.

Installation

1) Install new ball joint into control arm and place stud into steering knuckle. Load ball joint by prying down on upper control arm to keep ball studs from turning and to facilitate installation of flange nut.

2) While prying down, install castle nut and tighten to specifications. To complete installation, reverse removal procedures.

Removal (Lower)

1) Raise vehicle and support with safety stands. Remove wheel assembly. Remove caliper and support out of the way.

2) Remove castle from ball joint. Using removal tool (VW 267), press ball joint from steering knuckle. Remove bolts retaining ball joint to lower control arm. Remove ball joint.

Installation

To install, reverse removal procedures.

STRUT ASSEMBLY & UPPER CONTROL ARM

Removal

1) Remove retaining nuts from strut assembly to inner fender panel (located in engine compartment). Raise vehicle and support with safety stands. Remove wheel assembly.

2) Unscrew castle nut and use removal tool (VW 267), separate upper control arm ball joint from steering knuckle. Remove nuts holding upper control arm pivot shaft to body.

3) Remove strut lower retaining bolt and remove strut assembly and upper control arm from vehicle.

Disassembly

1) Place strut assembly in vise and attach coil spring compressor. Apply enough tension to coil spring to allow removal of top nut, washer and mounting plate.

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2) Release spring compressor. Remove upper spring retainer, coil spring and components from piston rod. Mark position of lower spring retainer to shock absorber for proper reassembly reference.

Reassembly

1) Reassemble strut assembly components in reverse order of disassembly. If replacing coil spring, be sure proper weight class springs are used.

2) If replacing lower spring retainer, coil spring or shock absorber, position of spring retainer to shock absorber must be determined.

3) Install assembly in vehicle by attaching upper retainers. Position upper end of spring against upper retainer stop. Position lower retainer and turn until against stop. Mark position. Remove strut assembly back to vise and complete reassembly.

Installation

To install, reverse removal procedure.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Upper Control Arm-to-Body	101 (137)
Lower Control Arm-to-Body	
Front	61 (83)
Rear	87 (118)
Stabilizer Bar-to-Body	33 (45)
Stabilizer Link Nut	61 (83)
Ball Joints-to-Steering Knuckle	61 (83)