

# Front Suspension

## 1965-73 PORSCHE 911 & 912

911 (1965-73)  
912 (1965-69)

### DESCRIPTION

Independent strut type suspension with torsion bars. Strut assemblies are mounted between inner fender panels at top and control arms at bottom. Steering arm is removable on 1965-68 models and integral with strut on 1969-73 models. Shock absorbers and steering knuckles are integral with strut assemblies on all models. Control arms pivot in mounts connected to body at front and in mounts connected to suspension crossmember at rear. Torsion bars anchor in crossmember at rear and in control arm at front. Suspension crossmember serves as mount for steering gear and is removable. A stabilizer bar (if equipped) is mounted to upper body panels and connected at ends to control arms. A hydropneumatic self-leveling strut assembly was used on all 911E models and an option on all other 911 models from 1969. Torsion bars are not used when this system is employed.

### ADJUSTMENT

#### WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

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

#### WHEEL BEARING ADJUSTMENT

See *Wheel Bearing Adjustment* in *WHEEL ALIGNMENT* Section.

### BALL JOINT CHECKING

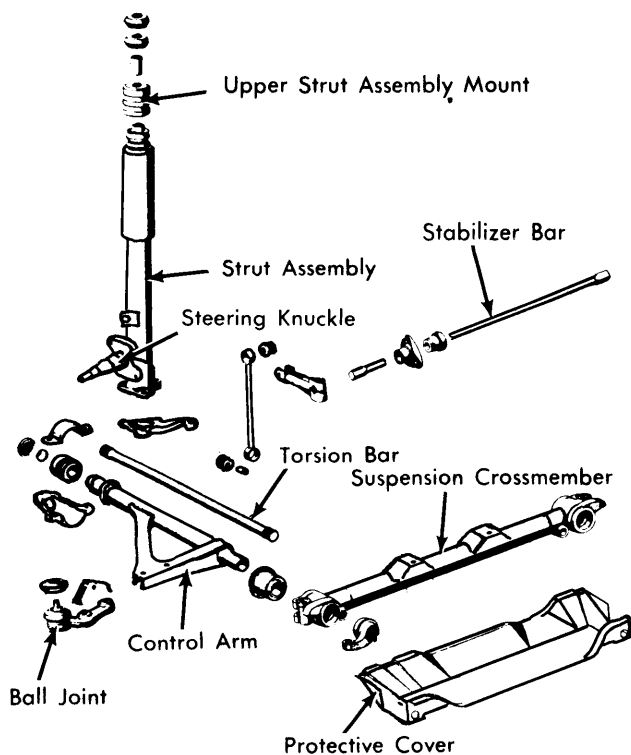
See *Ball Joint Checking* in *WHEEL ALIGNMENT* Section.

### REMOVAL & INSTALLATION

#### STRUT ASSEMBLY

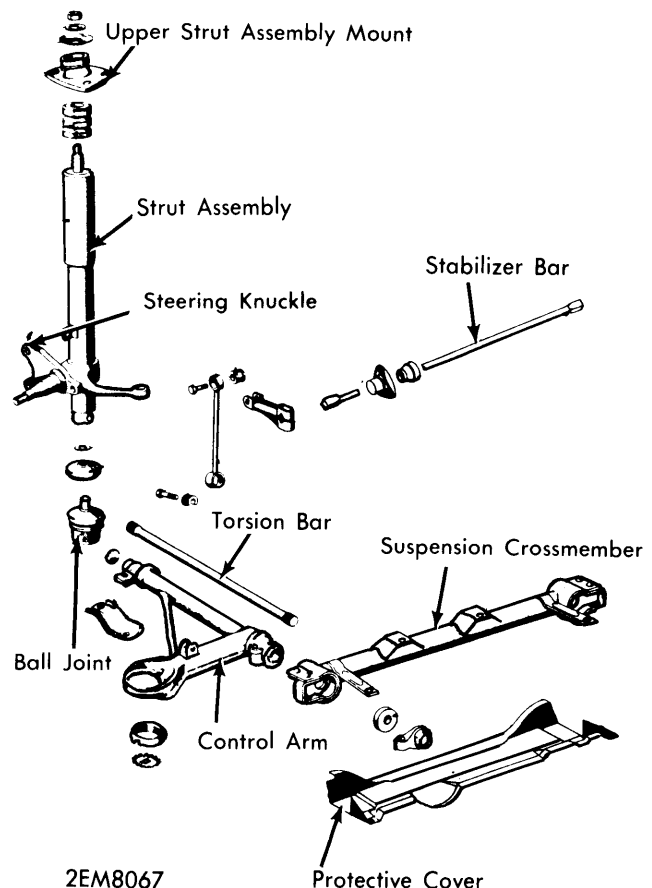
**Removal** — Raise vehicle and place safety stands under body. Remove wheel and tire. Disconnect brake flex line from bracket on strut tube. Remove brake system components from steering knuckle. **NOTE** — See *appropriate story* in *BRAKE SYSTEMS* Section for removal. Remove nut from tie-rod end stud and separate tie-rod from steering arm using a suitable puller (VW266H). Back off adjusting screw in torsion bar adjusting arm. On 1965-68 models remove nuts and slide out bolts securing ball joint in control arm. On 1969-73 models remove bolt from clamp on bottom of strut assembly and pull down on control arm to separate. On all models remove nut from center of upper mount and remove strut assembly from vehicle.

**Disassembly** — From chassis number 301 800 and on, shock absorber in strut assembly was replaceable. **NOTE** — *This does not include models with hydropneumatic self-leveling strut assemblies, these strut assemblies are not repairable.* Mount strut assembly in a vise and remove cover tube and rubber buffer. Remove shock absorber insert retaining nut and remove insert. Drain oil from strut tube. Remove spacer ring from steering knuckle if equipped.



2EM8066

PORSCHE 911 & 912 FRONT SUSPENSION  
(1965-68)



2EM8067

PORSCHE 911 & 912 FRONT SUSPENSION  
(1969-73)

## 1965-73 PORSCHE 911 & 912 (Cont.)

**Assembly** – Inspect strut tube and components for wear or distortion. Insert shock absorber unit and tighten nut to specification depending on shock absorber type. On 1965-68 models fill rubber boot for ball joint with .2 Oz. of multipurpose grease and install on ball joint. Wipe grease from ball joint stud and install in steering arm. Tighten nut to specification and install new cotter pin. Install steering arm on strut assembly and tighten bolts to specifications. Install spacer on steering knuckle by heating to approximately 300°F.

**Installation** – Reverse removal procedure for installation. Tighten all bolts and nuts to specifications. Check wheel alignment and riding height.

### CONTROL ARM & TORSION BAR

**Removal (1965-68 Models)** – Raise vehicle and place safety stands under body. Remove wheel and tire. Remove protective shield from under front suspension. Back off torsion bar adjusting screw and disconnect ball joint from control arm as previously outlined. Remove nuts securing bracket on front pivot mount. Remove dust caps and lock ring from front portion of control arm and drive torsion bar out front of control arm. Loosen rear bushing clamp and slide control arm down and forward to remove. Drive torsion bar adjusting lever out of crossmember with a punch. Rear bushing cannot be removed from control arm, if found defective, control arm must be replaced.

**Installation** – Install control arm in vehicle and drop outside end of control arm down to a 10° angle in relation with center line of crossmember. Tighten rear clamp to specification. Coat torsion bar with lithium grease and slide into control arm. *NOTE* – If both left and right side torsion bars have been removed, make sure they are installed in correct sides. Torsion bars are marked "L" and "R". Coat front bushing with glycerine paste and install in position. Tighten bolts to specifications. Place ball joint in control arm and tighten nuts to specifications. Pull control arm and strut assembly down to stop and install torsion bar adjusting lever with adjusting screw backed completely off. With adjusting lever in place, slightly tighten adjusting screw. Install snap-ring and dust cover in control arm. Install protective shield and tighten retaining bolts to specifications. Install wheel and tire and lower vehicle. Check wheel alignment and riding height.

### CONTROL ARM & TORSION BAR

**Removal (1969-73 Models Exc. Self-Leveling Strut Assemblies)** – Raise vehicle and place safety stands under body. Remove wheel and tire. Disconnect strut assembly from control arm as previously outlined. Remove torsion bar adjusting lever. Remove front bushing protective cover and bracket. Remove rear mounting bolt and pull down and forward to remove control arm. Remove cover from ball joint and remove slotted nut securing ball joint to control arm. Bushings are not removable, if found defective, control arm must be replaced.

**Installation** – Reverse removal procedure for installation. Tighten all bolts and nuts to specifications. Check wheel alignment and riding height.

### CONTROL ARM

**Removal (1969-73 Models with Self-Leveling Struts)** – Raise vehicle and place safety stands under body. Remove wheel and tire. Remove bolt from clamp on bottom of strut tube and separate ball joint from strut assembly. Remove protective cover and bracket from front pivot mount. Remove rear pivot bushing retaining bolt and remove control arm by

pulling down and forward. Remove cover from ball joint and remove slotted nut. Remove ball joint from control arm. Bushings cannot be replaced, if found defective, control arm must be replaced.

**Installation** – Reverse removal procedure for installation. Tighten all bolts and nuts to specifications. Check wheel alignment and riding height.

### SUSPENSION CROSSMEMBER

**Removal** – Remove control arms from both sides of vehicle as previously outlined. Remove bolts securing steering to crossmember. Remove bolts securing crossmember braces to body. Loosen bolts securing crossmember to body, knock crossmember off aligning studs and remove bolts and crossmember.

**Installation** – Inspect crossmember for wear or distortion. Make sure crossmember aligns on studs. Tighten crossmember mounting bolts to specifications. Reverse removal procedure to install remaining components. Tighten all bolts and nuts to specifications. Check wheel alignment and riding height.

### UPPER STRUT ASSEMBLY MOUNT

**Removal** – Disconnect strut assembly from upper mount as previously outlined. Mark position of pressure plates holding mount in fender panel. Remove Allen head bolts, pressure plates and mount.

**Installation** – Install mount in fender panel and place pressure plates in marked position and tighten Allen head bolts to specifications. Install strut assembly in mount and tighten nut to specification. Install wheel and tire and lower vehicle. Check wheel alignment and riding height.

### STABILIZER BAR

**Removal** – Loosen bolts in lever and pull lever from stabilizer bar. Remove three bolts retaining bearing cap to body and pry off of body over stabilizer bar. Remove bearing cap from opposite side and pull stabilizer from vehicle. Disconnect link bolt from control arm and remove with lever attached.

**Installation** – Reverse removal procedure for installation. Tighten all nuts and bolts to specifications.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (Mkg)
Ball Joint Stud Nut (1965-68) .....	33 (4.6)
Ball Joint Mounting Bolts (1965-68) .....	54 (7.5)
Upper Strut Assembly Mounting Nut .....	58 (8)
Ball Joint Clamp Bolt (1969-73) .....	47 (6.5)
Ball Joint Slotted Nut (1969-73) .....	108 (15)
Shock Absorber Insert Nut	
Boge .....	87 (12)
Koni .....	144 (20)
Rear Pivot Bushing Clamp Bolt	
(1965-68) .....	34 (4.7)
Front Pivot Bushing Bolts .....	34 (4.7)
Rear Pivot Bushing Bolt (1969-73) .....	34 (4.7)
Crossmember-to-Body Bolts .....	65 (9)
Crossmember Braces-to-Body .....	34 (4.7)
Steering Arm-to-Strut Assembly .....	34 (4.7)
Stabilizer Bar Arm Bolt .....	18 (2.5)
Stabilizer Bar Bearing Cap .....	18 (2.5)