

1963-73 VOLVO P-1800, 122, 140 SERIES & 164

P 1800 (1963)
P 1800 S (1964-69)
P 1800 E (1970-72)
122 (1963-68)
140 Series (1968-73)
164 (1970-73)

DESCRIPTION

All models use an independent front suspension with coil springs. Wheel is supported by steering knuckle mounted between upper and lower control arms by means of ball joints. Both upper and lower control arms pivot on shafts connected to frame. Coil springs fit in pockets built into frame at top and in pockets built into lower control arms at bottom. Hydraulic shock absorbers mount between lower control arm and frame and are located inside coil spring. A stabilizer bar (if equipped) is mounted to frame and connected at ends to lower control arms.

ADJUSTMENT

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

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

WHEEL BEARING ADJUSTMENT

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

BALL JOINT CHECKING

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

REMOVAL & INSTALLATION

SHOCK ABSORBERS

Removal — Remove upper nut, washer and rubber bushing of shock absorber. On all except 140 and 160 models, remove the lower attaching nut, washers and rubber bushing, and then

release bolts for lower attachment plate; pull out plate and shock absorber. On 140 and 160 models, remove two lower attaching screws on underside of lower control arm and pull down shock absorber.

Installation — To install shock absorber, reverse removal procedure.

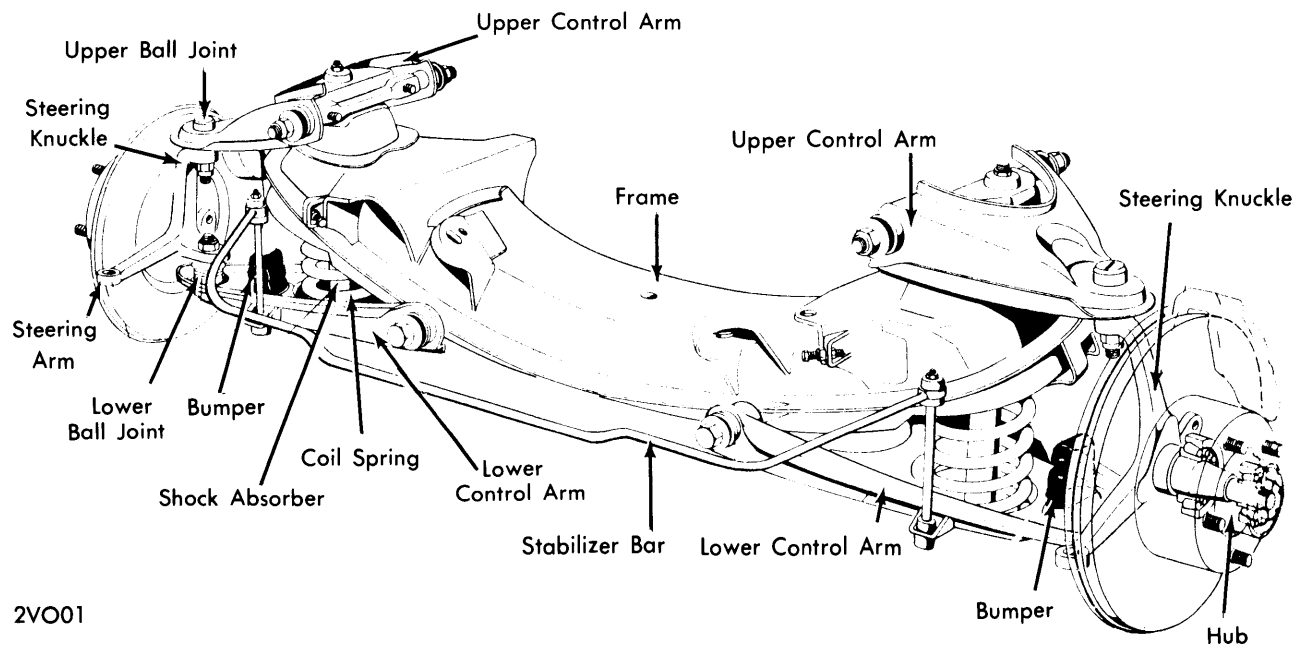
UPPER CONTROL ARM & BALL JOINT

Removal — Raise vehicle and place on safety stands. Remove wheel and tire. Place support under lower control arm. Loosen upper ball joint attaching nuts and turn ball joint a quarter of a turn and lift off upper control arm on all except 140 and 160 models. On 140 and 160 models, loosen nut securing ball joint to upper control arm and tap steering knuckle with a hammer until ball joint pin loosens from knuckle. Remove ball joint attaching nut and lift upper control arm from knuckle. Remove screws securing upper control arm to control arm shaft and remove control arm. On all models, except 140 and 160 models, to remove ball joint from steering knuckle, remove clamp bolt and nut from steering knuckle and lift out ball joint. To remove ball joint on 140 and 160 models, press out ball joint from control arm using suitable press (SVO 2699) and sleeve (SVO 2701).

Installation — To install, reverse removal procedure, tightening all bolts and nuts to specifications. On 140 and 160 models, press in ball joint using same tools as for removal. Also, ensure that ball joint recess comes in line with longitudinal shaft of control arm within $\pm 8^\circ$.

LOWER CONTROL ARM, COIL SPRING & BALL JOINT

Removal — Raise vehicle and place on safety stands. Remove wheel and tire. Remove shock absorber. On 140 and 160 models, disconnect tie rod and loosen clamp for brake hoses. Disconnect stabilizer bar. Place a jack under lower control arm and raise. On all except 140 and 160 models, remove four bolts securing lower ball joint to control arm and remove ball joint from control arm. On 140 and 160 models, loosen bolts



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VOLVO FRONT SUSPENSION COMPONENTS (TYPICAL)

Front Suspension

1963-73 VOLVO P-1800, 122, 140 SERIES & 164 (Cont.)

securing ball joints and tap steering knuckle with hammer until ball joint loosens from knuckle. Remove steering knuckle and hang out of way. On all models, slowly lower jack supporting control arm and remove spring. Remove nuts and clamps from control arm shaft and remove control arm. To remove ball joint from steering knuckle on all except 140 and 160 models, remove cotter pin and nut securing ball joint to knuckle and pull out ball joint using suitable puller (SVO 2281). To remove ball joint from control arm, press out of control arm using suitable press tool (SVO 2699) and sleeve (SVO 2700).

Installation – To install, reverse removal procedure. On 140 and 160 models, press in ball joint using suitable tools (SVO 2699, 2701 & 2703).

STEERING KNUCKLE

Removal – To remove steering knuckle, first disconnect knuckle from ball joints following procedures as previously outlined. Remove brake system components from steering knuckle.

NOTE – See appropriate story in BRAKE Section for removal procedures.

Installation – To install steering knuckle, reverse removal procedure and tighten all nuts and bolts to specifications.

TIGHTENING SPECIFICATIONS

| Application | Ft. Lbs. (mkg) |
|--|----------------|
| Upper Control Arm Shaft-to-Frame | 43 (6) |
| Lower Control Arm Shaft-to-Frame | 115 (16) |
| Upper Ball Joint Nut | 65 (9) |
| Lower Ball Joint Nut | 83 (11.5) |
| Tie-Rod Lock Nut | 58 (8) |