

## VOLVO

140 Series  
164

### DESCRIPTION

Independent type 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 into pockets built into lower control arms. Hydraulic shock absorbers are mounted between lower control arms and frame and are located inside coil springs. A stabilizer bar (if equipped), is mounted to frame and connect at ends to lower control arms.

### ADJUSTMENT

#### WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See *Wheel Alignment Specifications & 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. Remove two attaching screws from underside of lower control arm and remove shock absorber.

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

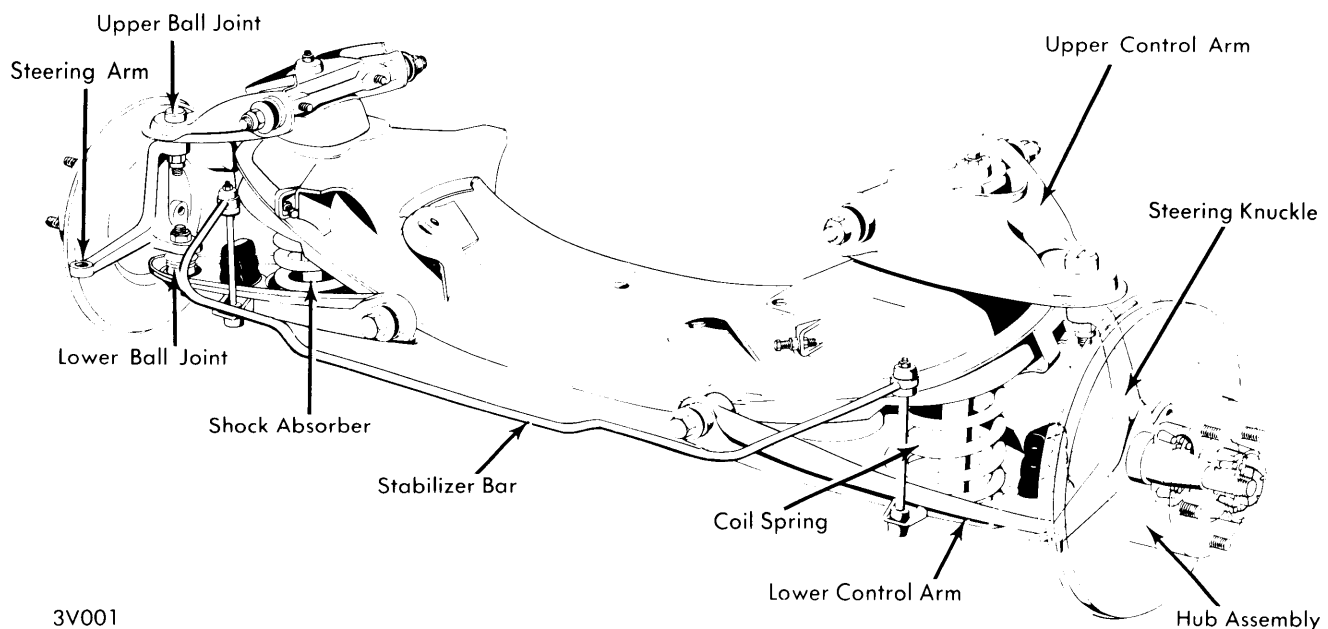
#### UPPER CONTROL ARM & BALL JOINT

**Removal** — Raise and support vehicle then remove wheel and tire. Place support under lower control arm. Loosen upper ball joint attaching nut and tap steering knuckle until ball joint pin loosens from knuckle. Remove ball joint attaching nut and separate ball joint from steering knuckle. Remove screws securing upper control arm pivot shaft and remove control arm. Press out ball joint from control arm using suitable press (SVO 2699) and sleeve (SVO 2701). Remove control arm pivot shaft with upper control arm suitably supported. If pivot shaft bushings are excessively worn, press out and install new ones.

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

#### LOWER CONTROL ARM, COIL SPRING & BALL JOINT

**Removal** — Raise and support vehicle then remove wheel and tire. Remove shock absorbers and disconnect tie rod. Loosen clamp on brake hoses then disconnect stabilizer bar.



### VOLVO 140 SERIES & 164 FRONT SUSPENSION ASSEMBLY

## VOLVO (Cont.)

Place jack under lower control arm and raise control arm. Loosen nut securing ball joint and tap steering knuckle until ball joint pin loosens from steering knuckle. Remove nut from ball joint and disconnect ball joint from steering knuckle. Slowly lower jack under control arm and remove coil spring. Remove nuts securing lower control arm pivot shaft and remove control arm. Remove ball joint from control arm using a suitable press (SVO 2699) and sleeve (SVO 2700).

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

### STEERING KNUCKLE

**Removal** — Raise and support vehicle then remove wheel and tire. Disconnect upper and lower control arm ball joints from steering knuckle. Disconnect tie rod from knuckle. Disconnect and remove brake system components. See *BRAKE Section for removal procedure.*

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

TIGHTENING SPECIFICATIONS	
Application	Ft. Lbs. (mkg)
Upper Control Arm Pivot Shaft-to- Frame Nut .....	43 (6.0)
Lower Control Arm Pivot Shaft-to- Frame Nut .....	115 (15.9)
Upper Ball Joint Nut .....	65 (9.0)
Lower Ball Joint Nut .....	83 (11.5)
Tie Rod Lock Nut .....	58 (8.0)