

## TRIUMPH SPITFIRE

Spitfire

### DESCRIPTION

Independent type front suspension consisting of upper and lower control arms, coil spring and shock assemblies and steering knuckles. Control arms pivot in mounts connected to chassis. Coil spring and shock assemblies are mounted between lower control arms and mounts integral with chassis. Steering knuckles are connected to upper control arms by means of ball joints and to lower control arms by means of trunion joints. Later models are equipped with a stabilizer bar.

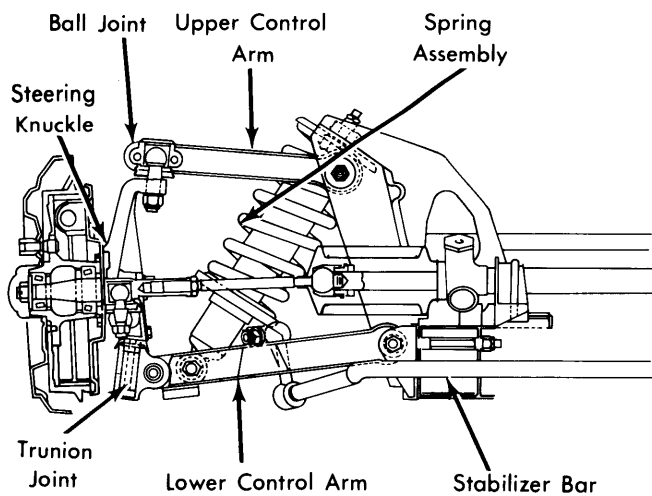


Fig. 1 Assembled View of Spitfire Front Suspension

### 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

#### COIL SPRING & SHOCK ABSORBER

**Removal** — Raise and support vehicle. Place safety stands behind front wheels and remove wheel and tire. Loosen bolts securing lower control arm to trunion joints. Remove bolts securing bottom spring assembly mount to control arm. Remove three nuts securing upper spring assembly mount to chassis and remove spring and shock absorber as an assembly.

**Disassembly** — Using a suitable spring compressor, compress coil spring until spring is not contacting upper spring seat. Remove nut securing shaft from shock absorber to mount and remove rubber mounts, mount seats and mounting flange. Release spring compressor and remove coil spring.

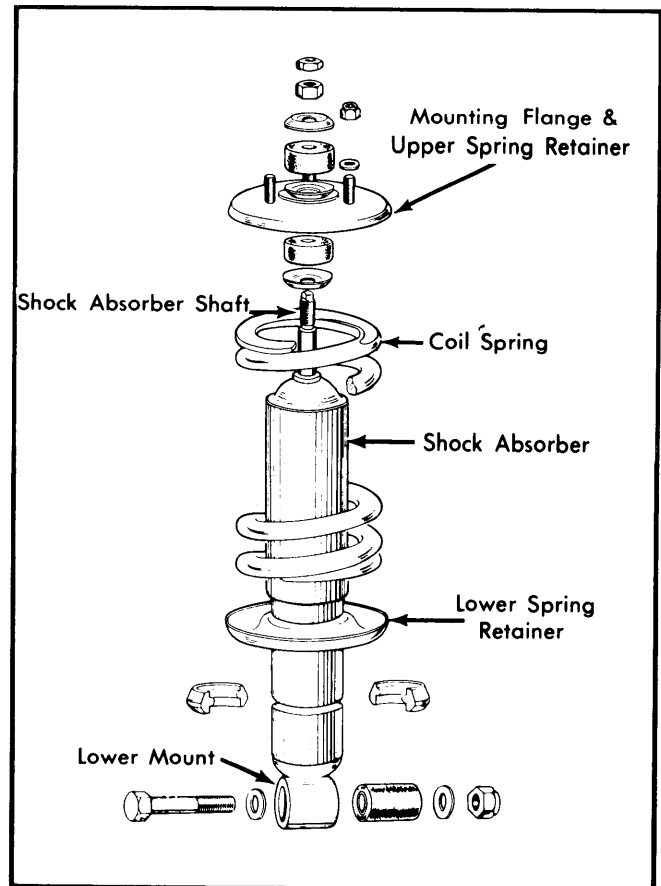


Fig. 2 Coil Spring and Shock Absorber Assembly

**Assembly** — Push shock absorber shaft in and out a few times, pressure should be constant and equal on either stroke. If little or no resistance is felt, or if shaft cannot be moved, replace shock absorber. To assemble coil spring and shock assembly, reverse disassembly procedure.

**Installation** — To install coil spring and shock absorber assembly, reverse removal procedure.

#### UPPER CONTROL ARMS

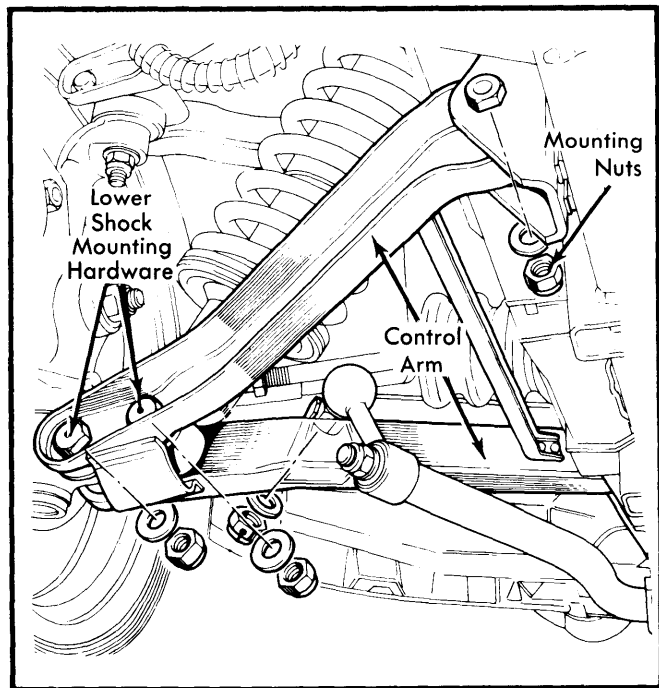
**Removal** — Raise vehicle, position safety stands behind front wheels and remove wheel and tire. Remove coil spring and shock assembly as previously outlined. Remove bolts securing upper control arms to ball joint. Remove both upper control arm pivot bolts and separate control arms from pivot mounts and ball joint.

**Installation** — To install upper control arms, reverse disassembly procedure. Do not tighten pivot bolts until weight of vehicle is on front wheels.

## TRIUMPH SPITFIRE (Cont.)

### LOWER CONTROL ARMS

**Removal** – Raise vehicle, position safety stands behind front wheels and remove wheel and tire. Disconnect stabilizer bar link from lower control arm. Disconnect bottom spring assembly mount from control arm. Remove bolt securing control arms to trunion joint. Remove inner pivot bolts and remove control arms.



**Fig. 3 Nuts and Bolts to Remove Before Taking Out Lower Control Arm**

**Installation** – To install lower control arms, reverse removal procedure. Do not tighten inner pivot bolts until weight of vehicle is on front wheels.

### UPPER BALL JOINT

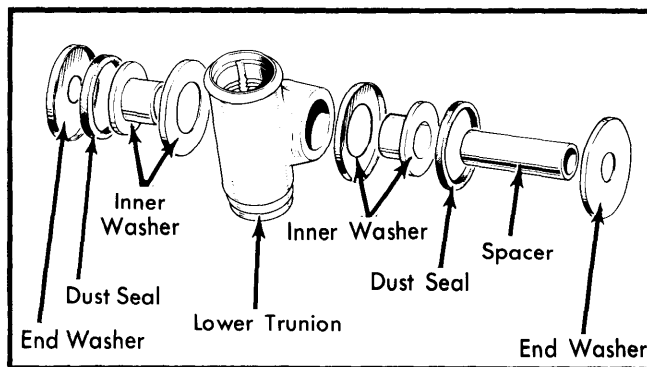
**Removal** – Raise vehicle and place on safety stands; remove tire and wheel. Remove ball joint stud nut and separate ball joint from steering knuckle. Remove bolts securing ball joint to control arm and remove ball joint.

**Installation** – To install ball joint, reverse removal procedure.

### LOWER TRUNION JOINT

**Removal** – Raise vehicle, position safety stands behind front wheels and remove wheel and tire. Remove wheel hub and dust shield. Remove bolt securing trunion joint to lower control arm. Disconnect shock absorber mount from lower control arm. Pull trunion and steering knuckle from lower control arm and unscrew trunion from steering knuckle.

**Disassembly** – Pry loose 2 end washers. Slide out both dust seals. Lightly press out single spacer piece. Force out each of the nylon bearings and remove inner washers. Check all pieces for excessive wear and replace as necessary.



**Fig. 4 Exploded View of Lower Trunion Assembly**

**Reassembly** – Reverse disassembly procedure after lightly greasing nylon bearings with suitable grease.

**Installation** – To install trunion joint, screw trunion on steering knuckle as far as possible and back off to first working position. This will allow full turning radius. Reverse removal procedure to finish installation.

### STEERING KNUCKLE

**Removal** – Raise vehicle, position safety stands behind front wheels and remove wheel and tire. Remove brake caliper, disc hub and dust shield from steering knuckle. Remove steering arm from knuckle. Remove ball joint stud nut and separate ball joint from steering knuckle. Disconnect shock absorber from lower control arm. Remove bolt securing trunion joint to control arm and remove steering knuckle. Remove trunion from steering knuckle. If necessary, remove nut securing spindle to steering knuckle and press spindle from knuckle.

**Installation** – To install steering knuckle, reverse removal procedure.

### STABILIZER BAR

**Removal** – Remove nuts securing stabilizer bar to lower control arm. Remove nuts and plain washers holding bushing brackets to chassis. Remove bushing and withdraw stabilizer bar from vehicle.

**Installation** – To install stabilizer bar, reverse removal procedure.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Stabilizer Bar Stud.....	14 (1.9)
Ball Joint-to-Upper Control Arm .....	20 (2.8)
Ball Joint Stud Nut.....	38 (5.2)
Tie Rod End Ball Joint .....	32 (4.4)
Trunion-to-Lower Control Arm.....	45 (6.2)
Lower Control Arm-to-Frame .....	25 (3.5)