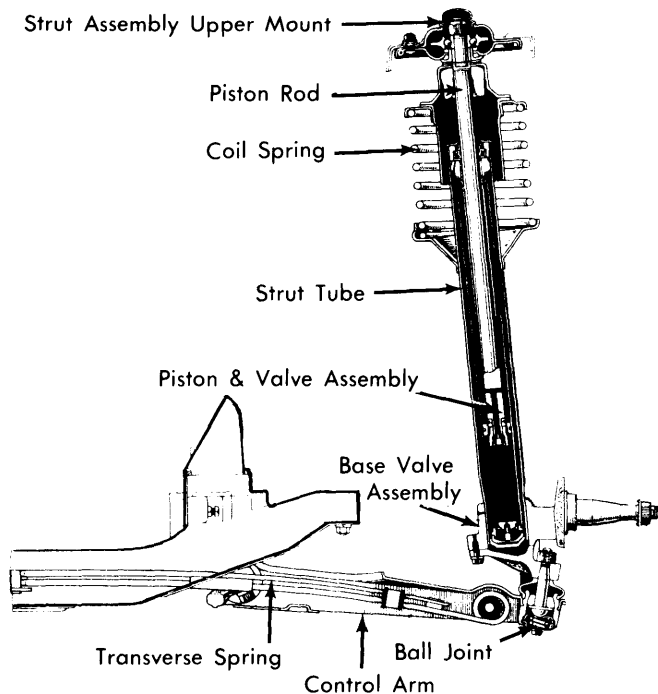


1969-70 TOYOTA COROLLA 1100 & 1200

Toyota Corolla (1969-70)

DESCRIPTION

Independent strut type suspension with coil springs and a transverse leaf spring. Individual strut assembly is mounted at bottom to steering arm which pivots on lower control arm by means of a ball joint. Top of strut assembly is mounted to inner fender panel by means of a rubber mounted thrust bearing. Strut assemblies consist of shock absorbers built inside strut outer tube; coil springs are mounted on outside of strut tubes; wheel spindles are integral with bottom of strut tubes. Lower control arms pivot on shafts mounted to suspension crossmember. Transverse leaf spring is mounted inside suspension crossmember and connected at ends to lower control arms.



2EM8048

TOYOTA COROLLA 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

STRUT ASSEMBLY

Removal — Raise vehicle and place safety stands under body. Remove wheel and tire. Place a jack under outside portion of control arm and raise slightly. Disconnect brake flex from bracket on strut outer tube. Remove three bolts securing strut assembly to steering arm. Remove three upper strut assembly mounting bolts accessible from inside engine compartment and remove mounting cover and spacers. Lower jack under control arm and remove strut assembly with brake components attached.

Disassembly — **TOOL NOTE** — All tools used in front suspension procedures have a basic number 09720-12010, individual tools are referred to by number following basic number. Using a suitable holding fixture (No. 5), mount strut assembly in a vise. Lift coil spring out of lower seat and turn spring clockwise down over spring seat to release tension against upper spring seat. Remove nut from upper shaft of shock absorber and remove support, dust seal, bumper seat, dust cover, upper spring seat, coil spring and rubber bumper. Remove front brake system components from steering knuckle. **NOTE** — See appropriate story in **BRAKE SYSTEMS** Section for removal. Remove upper cap from strut tube by driving off with a punch and bend up flattened edges of strut tube. Using a suitable wrench (No. 7), remove ring nut from inside strut tube. Remove gasket from inside tube and remove piston rod and guide by pulling up and out of strut tube. Remove cylinder from inside strut tube and drive valve out of base using a long punch. Drain fluid from strut tube. Pry base valve apart with a screwdriver. Place upper end of piston rod in a vise and remove piston valve inside piston nut using a suitable wrench (No. 9). Remove nut from piston rod and remove piston and components. Remove piston ring from piston.

Assembly — Thoroughly clean and inspect all parts for wear or distortion. Piston rod diameter should be no less than 0.784" and inside diameter of cylinder should be no more than 1.193". Piston diameter should be no less than 1.183". Inspect oil seal in ring nut, if defective, press out using a suitable driver (No. 3 and 4). Place a light coat of oil on new seal and press into ring nut using a suitable driver (No. 2). Place upper end of piston rod in a vise and install valve stopper, two valve springs, valve, piston and nut and tighten nut to specification. Stake around nut to prevent working loose. Install piston ring on piston. Screw piston valve in piston nut slowly, using a suitable wrench (No. 9), until shaft of piston valve contacts piston rod then back off valve two full turns. Stake two places in threads between piston valve and piston nut to prevent working loose. Press base valve into case and install in base of cylinder with a hammer. Install piston rod in cylinder and install cylinder in strut tube. Fill tube with 16.5 cu. in. (270cc) of Type A automatic transmission fluid. Insert piston rod guide and gasket into strut tube. Place a suitable oil seal guide (No. 8) on piston rod end and install ring nut and oil seal. Tighten to specification, bend over edge of strut tube with a punch. Install strut tube cap.

Front Suspension

1969-70 TOYOTA COROLLA 1100 & 1200 (Cont.)

Installation — Reverse removal procedure for installation and tighten all bolts and nuts to specifications. Bleed brake system. Use a new nut, attaching suspension support to piston rod.

CONTROL ARM & TRANSVERSE SPRING

Removal — Raise vehicle and place safety stands under body. If transverse spring or both control arms are being removed, remove both wheels and tires. Remove nut from tie-rod end stud and separate from steering arm using a suitable puller (09611-12010). Raise control arm with a jack and remove three bolts securing strut assembly to steering arm. Release jack while supporting end of spring. Remove transverse spring pivot bolt in control arm. Remove bolts securing control arm pivot shaft to crossmember and remove control arm from vehicle. With both control arms removed, slide spring out of crossmember. Pivot shaft bushings in control arm are replaceable. Remove bolts from both ends of pivot shaft, and using a suitable puller (09725-12010), remove bushings from control arm.

Installation — Place thrust bushing on shaft and install in control arm. *NOTE* — *Thrust bushing with washer must be installed in front side of control arm.* Press bushing into control arm using a suitable mandrel (09726-12010 No. 1 & 2). Press bushing into rear of control arm using a suitable mandrel (09726-12010 No. 1 & 3). Install bolts and washer in ends of pivot shafts and tighten to specification after control arm is installed in vehicle and weight of vehicle is on front wheels. Reverse removal procedure for installation and tighten all bolts and nuts to specifications.

BALL JOINT

Removal — Remove control arm from vehicle as previously outlined. Remove cotter pin and nut from ball joint stud and using a suitable puller (09611-12010), separate steering arm from ball joint. Remove dust cover from ball joint and using a suitable mandrel (09628-12010), press ball joint out of control arm.

Installation — Using a suitable mandrel (09628-12010), press ball joint into control arm. Install dust cover and remove plug from ball joint. Install grease fitting and refill with molybdenum disulphide lithium base grease. *NOTE* — *Do not use multipurpose or chassis grease.* Remove fitting and install plug and tighten to specification. Place steering arm on ball joint, install nut and tighten to specification. Install new cotter pin. Install in vehicle as previously outlined.

SUSPENSION CROSSMEMBER

Removal — Remove control arms and transverse spring as previously outlined. Remove nuts securing front motor mounts to crossmember. Support engine oil pan with a jack and remove bolts securing crossmember to body. Remove crossmember.

Installation — Place crossmember in position in body and install attaching nuts and tighten to specification. Lower engine and tighten motor mount bolts to specification. Install remaining front suspension components as previously outlined. Check front wheel alignment.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Piston Rod to Support.....	30-50
Support to Fender Panel.....	11-16
Strut Assembly Lower Mount.....	15-22
Ring Nut and Seal.....	75-110
Piston Rod Nut.....	36-43
Ball Joint Plug.....	3-5
Crossmember to Body Nuts.....	30-40
Motor Mount to Crossmember Bolts.....	25-40
Ball Joint Stud Nut.....	36-53
Tie-Rod End Stud Nut.....	22-32
Control Arm Pivot Shaft to Crossmember.....	50-60