

# FRONT SUSPENSION

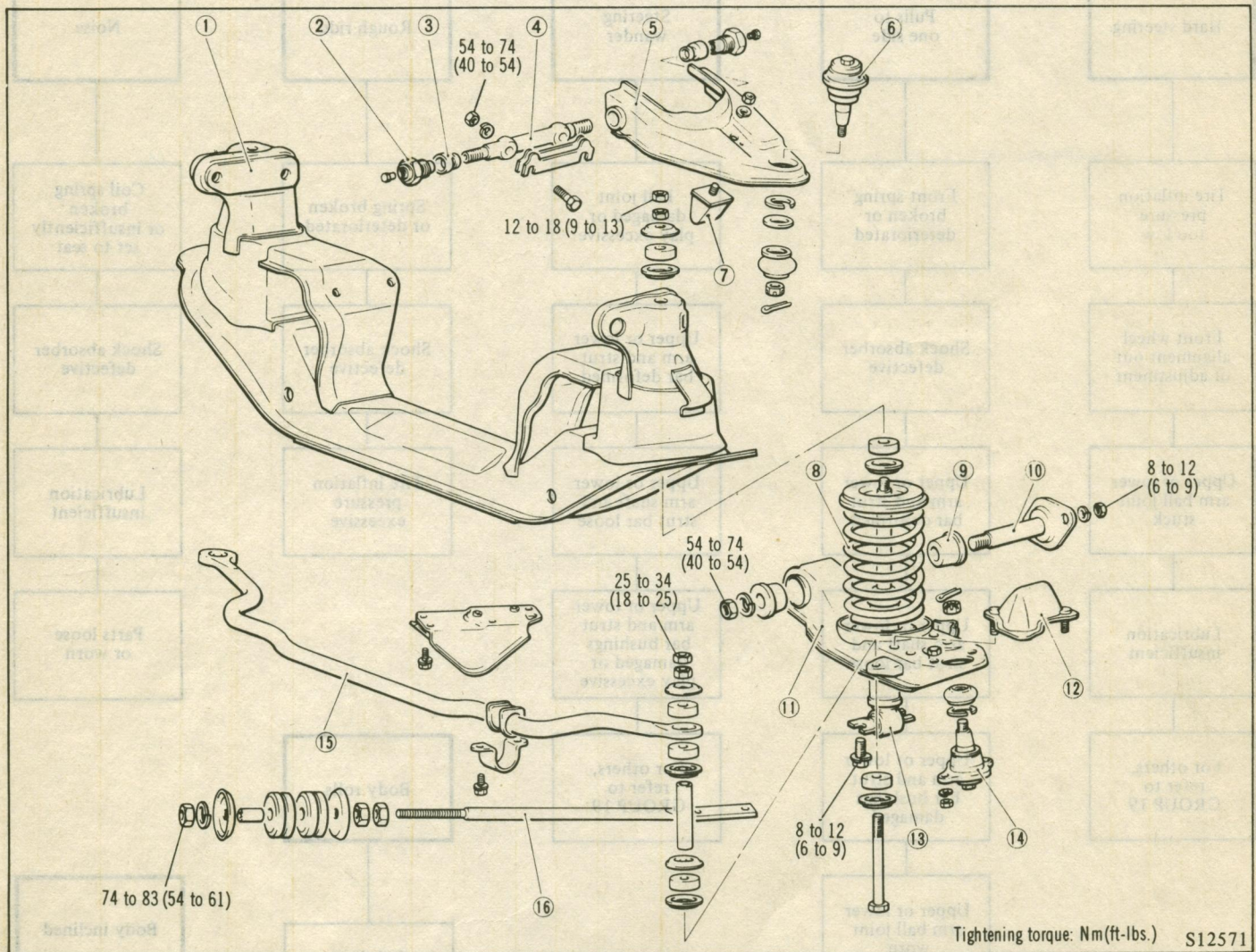
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## GENERAL INFORMATION

All 1980 models are equipped with the Wishbone type suspension.

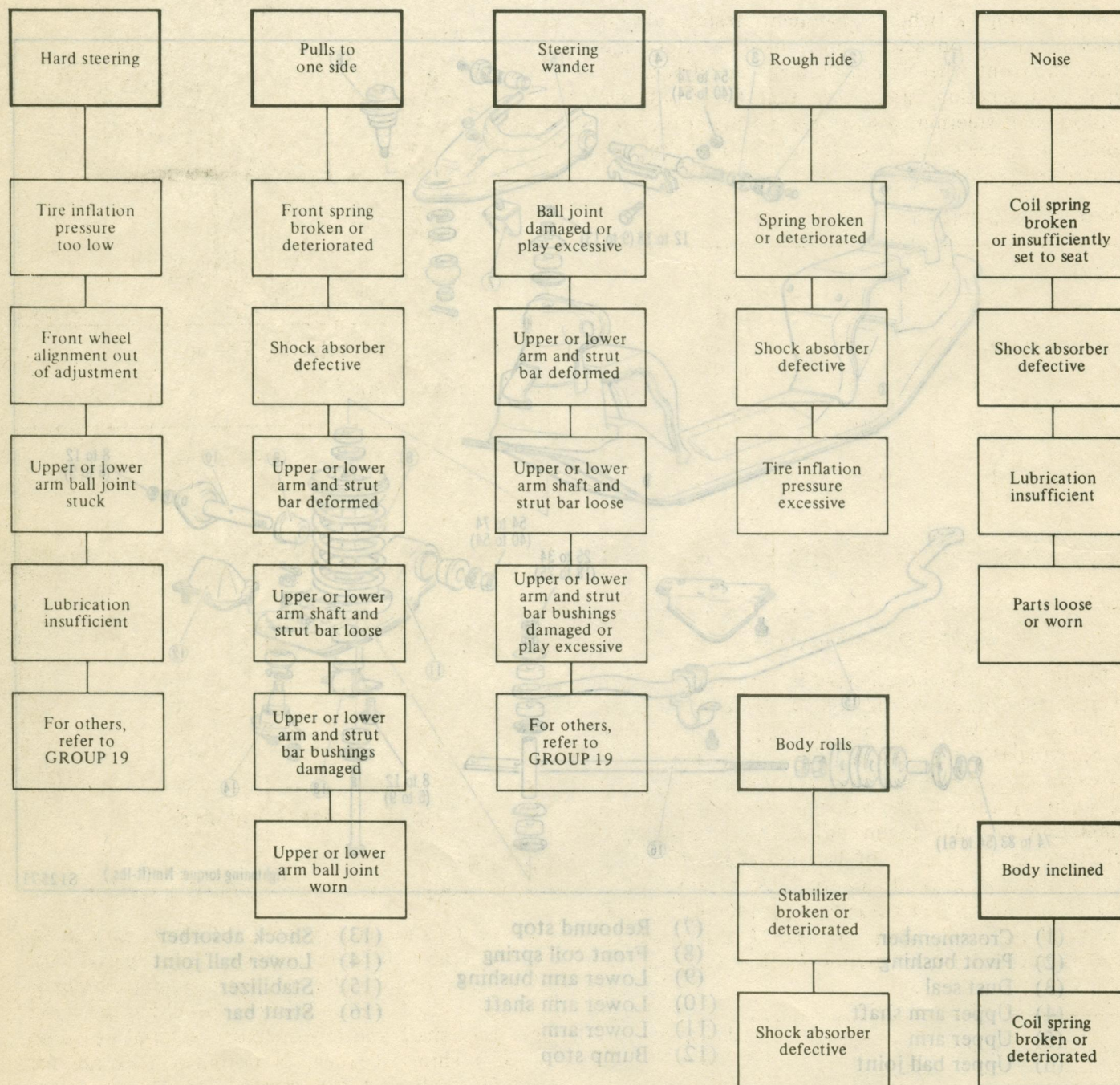


- |                      |                       |                       |
|----------------------|-----------------------|-----------------------|
| (1) Crossmember      | (7) Rebound stop      | (13) Shock absorber   |
| (2) Pivot bushing    | (8) Front coil spring | (14) Lower ball joint |
| (3) Dust seal        | (9) Lower arm bushing | (15) Stabilizer       |
| (4) Upper arm shaft  | (10) Lower arm shaft  | (16) Strut bar        |
| (5) Upper arm        | (11) Lower arm        |                       |
| (6) Upper ball joint | (12) Bump stop        |                       |

Fig. 1 Exploded View of Front Suspension



# TRUBLE SHOOTING





## WHEEL ALIGNMENT

### INSPECTION AND ADJUSTMENT

When using a wheel alignment tester, always position the car on a level portion of the floor and adjust the front wheels in the straight-ahead position. Prior to inspection make sure that the front suspension and steering system are normal operating condition, wheels are free to move, and tires are inflated to specification.

#### Toe-in (Figs. 2 and 3)

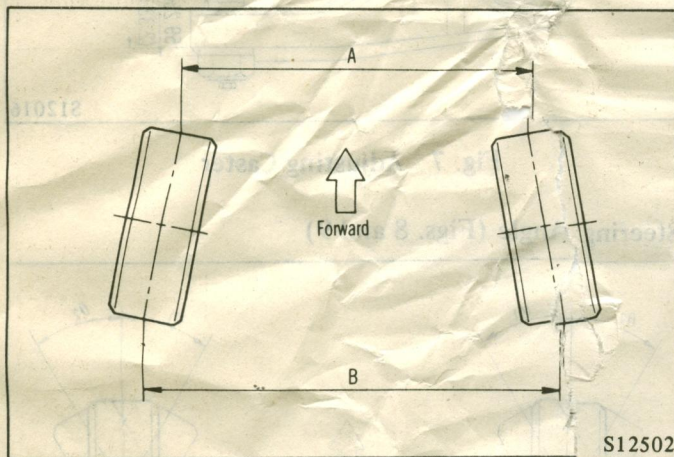


Fig. 2 Toe-in Dimension

Toe-in (B-A) can be adjusted by screwing the left tie rod turnbuckle in or out. One revolution of turnbuckle will vary in about 7.5 mm (.3 in.) of toe-in adjustment. The toe-in may be increased or decreased by turning the tie-rod turnbuckle toward the front or rear of the vehicle respectively. After completion of the toe-in adjustment, check the difference in the length of left and right tie rods. If the difference exceeds 5 mm (.2 in.), remove the right tie rod and adjust the length until the difference is reduced to 5 mm (.2 in.) or less. "L" stamped on outer surface of tie-rod stands for left-hand thread end.

Description	Standard dimension mm (in.)
Toe-in (B-A)	2 to 9 (.08 to .35)

Part to be tightened	Torque Nm (ft.-lbs.)
Tie-rod turnbuckle locking nut	49 to 54 (36 to 40)

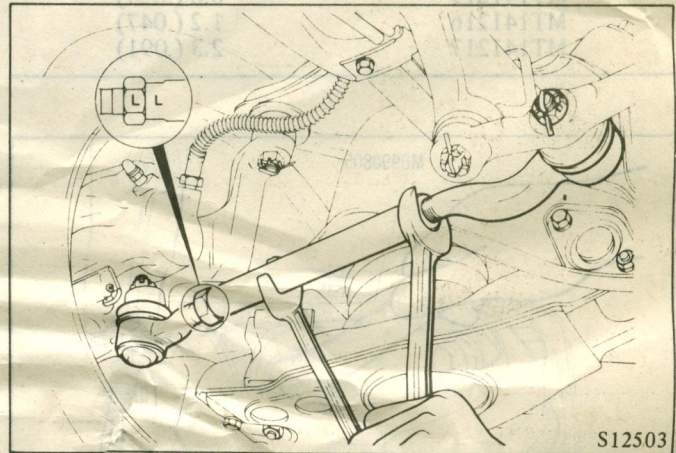


Fig. 3 Adjusting Toe-in

#### Camber (Figs. 4 and 5)

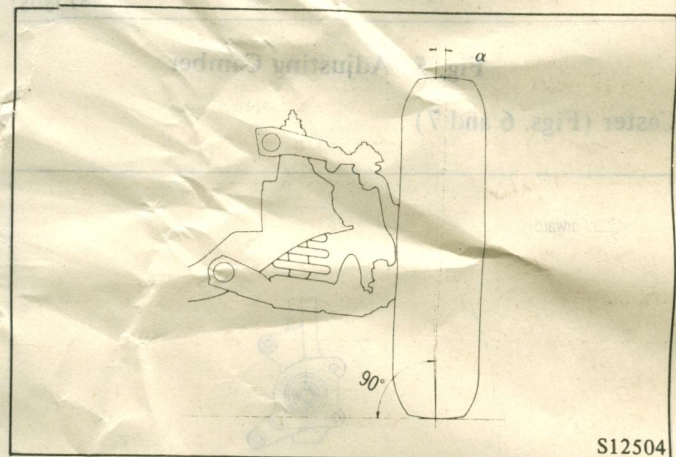


Fig. 4 Camber Dimension

#### CAUTION:

**Be sure to adjust caster before adjusting camber.**

To adjust camber ( $\alpha$ ), hold the upper arm shaft-to-crossmember bolt in position using special tool MB990805; remove the nut from engine compartment side, and adjust number of shims between upper arm shaft and crossmember. A total of 4 mm (.16 in.) shim thickness is normally required for standard camber. A 0.6 mm (.024 in.) adjustment in thickness of shims will provide about 8 minutes adjustment of camber.

Description	Standard value
Camber ( $\alpha$ )	$1^\circ \pm 30'$



## Types of Camber Adjusting Shim

Part No.	Thickness of shim mm (in.)
MT141215	0.6 (.024)
MT141216	1.2 (.047)
MT141217	2.3 (.091)

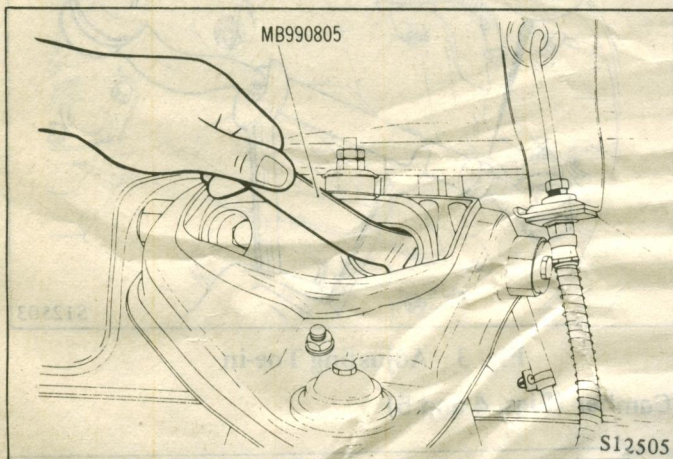


Fig. 5 Adjusting Camber

Caster (Figs. 6 and 7)

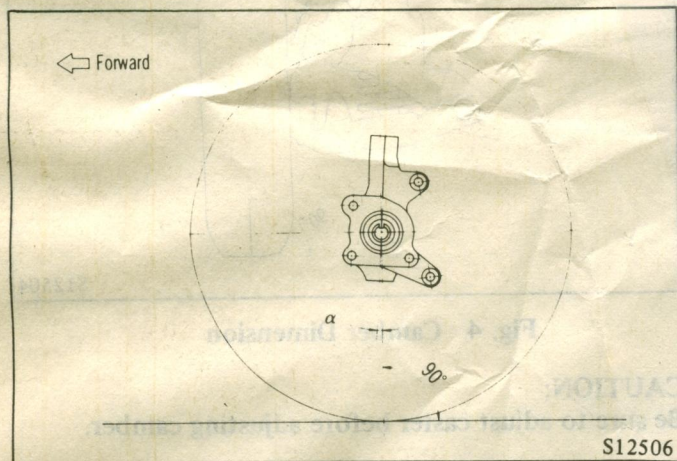


Fig. 6 Caster Dimension

To adjust caster, adjust tightening of upper arm shaft. A half turn of upper arm shaft will cause 1.25 mm (.049 in.) fore or aft movement of the upper arm shaft, resulting in about 16 minutes adjustment of caster.

## Description

## Standard value

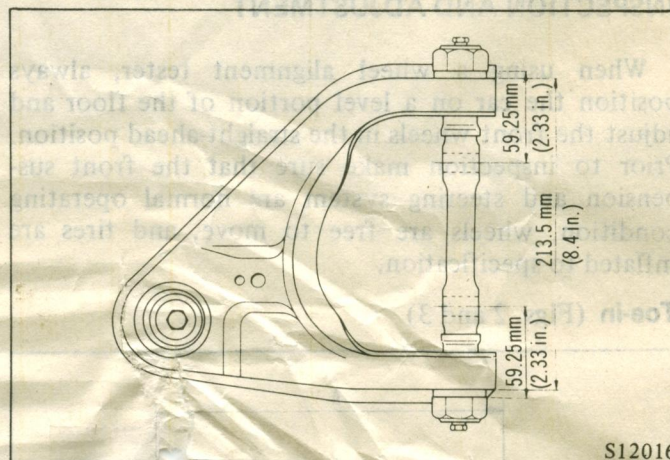
Caster ( $\alpha$ ) $2^{\circ}30' \pm 1^{\circ}$ 

Fig. 7 Adjusting Caster

Steering Angle (Figs. 8 and 9)

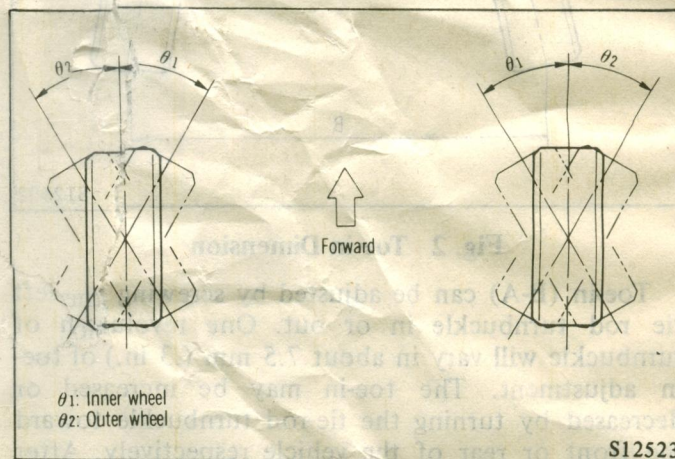


Fig. 8 Steering Angle

## CAUTION:

Adjust toe-in, before adjusting steering angle.

To adjust steering angle ( $\theta_1$ ,  $\theta_2$ ), adjust stop bolt on the knuckle arm, and secure the jam nut.

## Description

## Standard value

Steering angle

Inner wheel ( $\theta_1$ ) $37^{\circ}0'_{-3}$ Outer wheel ( $\theta_2$ ) $30.5^{\circ}0'_{-3}$



Part to be tightened	Torque Nm (ft-lbs.)
Jam nut on steering angle adjusting bolt	20 (14)

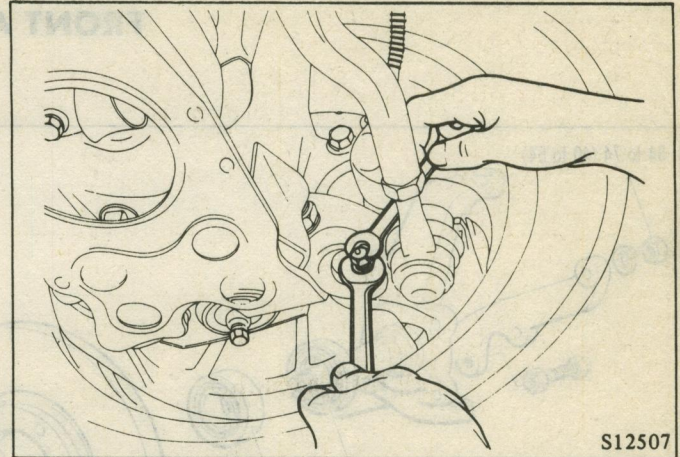


Fig. 9 Steering Angle Adjusting

## OVERALL PLAY

### INSPECTION

(1) In unladen condition, move tire to measure movement of top of tire (overall play of upper ball joint and pivot busing). (Fig. 10)

Description	Standard value mm (in.)	Service limit mm (in.)
Movement of top of tire (A)	1.5 (.059) or less	1.6 (.063)

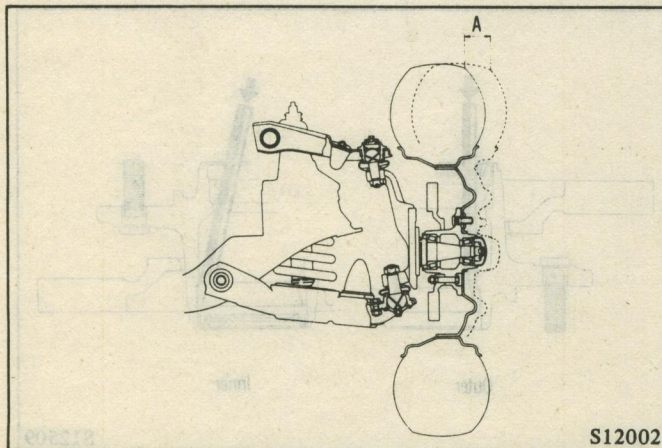


Fig. 10 Checking for Overall Play (1)

(2) Jack up the vehicle at lower arm, move bottom of tire, and measure amount of movement of tire bottom. (Fig. 11)

Description	Standard value mm (in.)	Service limit mm (in.)
Movement of bottom of tire (B)	3.5 (.138) or less	3.6 (.142)
(C)	2.0 (.079) or less	2.1 (.083)

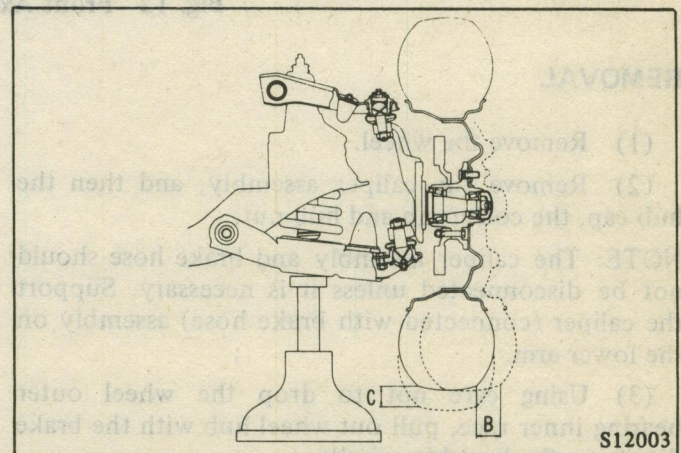
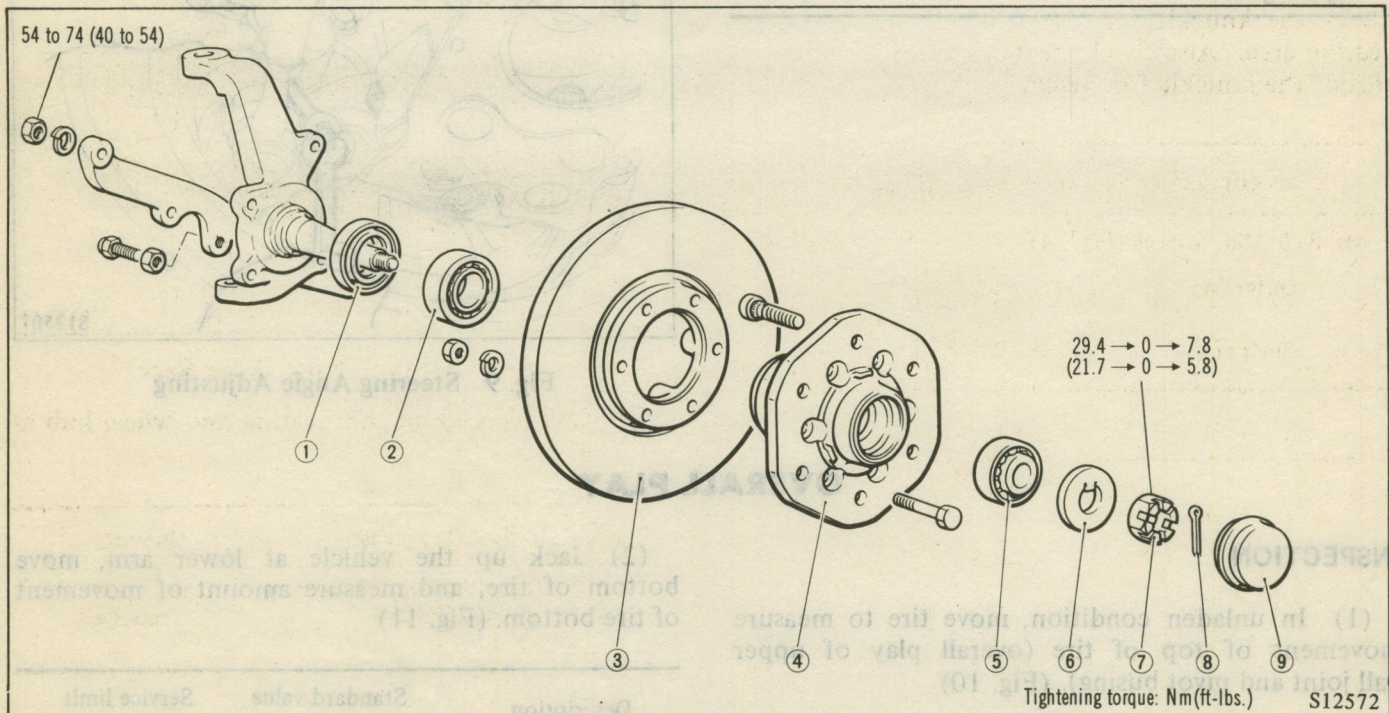


Fig. 11 Checking for Overall Play (2)



## FRONT AXLE HUB



- (1) Oil seal
- (2) Wheel bearing (Inner)
- (3) Brake disc

- (4) Wheel hub
- (5) Wheel bearing (Outer)
- (6) Washer

- (7) Hub nut
- (8) Cotter pin
- (9) Hub cap

Fig. 12 Front Axle Hub Components

## REMOVAL

(1) Remove the wheel.

(2) Remove the caliper assembly, and then the hub cap, the cotter pin and hub nut.

NOTE: The caliper assembly and brake hose should not be disconnected unless it is necessary. Support the caliper (connected with brake hose) assembly on the lower arm.

(3) Using care not to drop the wheel outer bearing inner race, pull out wheel hub with the brake disc from the knuckle spindle.

(4) After removing grease from inside the wheel hub, drive out the outer races of inner and outer bearings out of wheel hub, using a drift against the cutout at three places in the wheel hub one after another. The inner bearing outer race should be removed together with the oil seal.

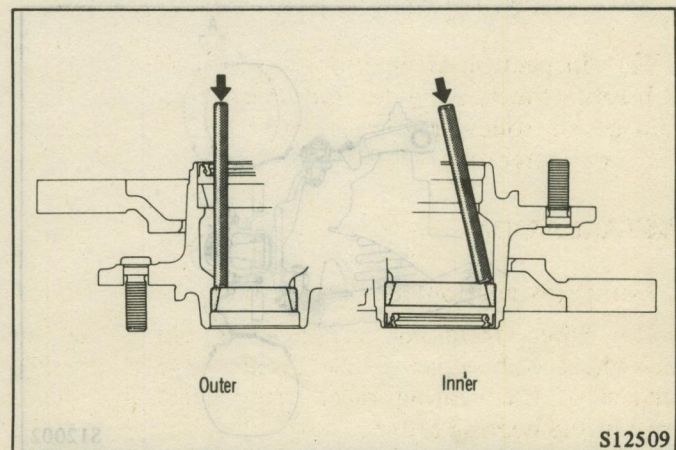


Fig. 13 Removing the Front Hub Bearing Outer Race



## INSPECTION

### (1) Inspection of Steering Knuckle

Clean off oil and grease from the steering knuckle. Check the knuckle for cracks, bend, and wear of its bearing area. Also check the shock absorber mounting area of the knuckle for cracks.

Description	Standard value mm (in.)
Spindle bearing seating (Fig. 14)	
Outer (A)	21.420 to 21.433 (.8433 to .8438)
Inner (B)	34.915 to 34.928 (1.3746 to 1.3751)

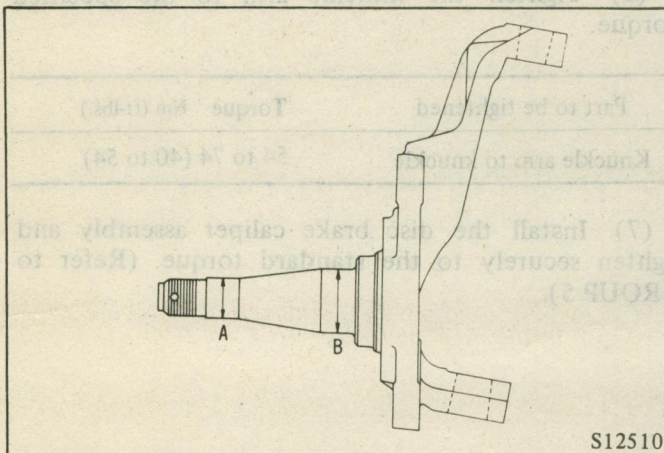


Fig. 14 Spindle Bearing Seating

### (2) Inspection of Bearing

Inspect the bearing for looseness, rough rotation, damage of rollers and race curvature. Replace the bearing if defective.

## INSTALLATION

During installation, use care as follows:

(1) When installing the bearing outer race in the wheel hub, coat grease evenly over the outer surface of the bearing race. Using a suitable drift, drive in the bearing outer race.

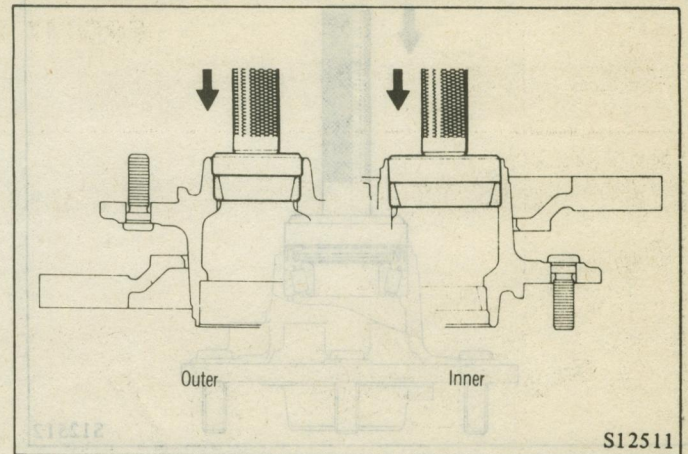


Fig. 15 Driving in the Outer Race

(2) Pack grease in the bearing and wheel hub as specified below:

Specified grease	Quantity
MOPAR Multi-Mileage Lubricant Part Number 2525035 or equivalent	As required

Description	Application
Bearing	Fill grease over rollers and through both side edges of each bearing applying pressure by fingers.
Oil seal	Apply in such an amount as grease will not swell out of the grease lip and dust lip.
Wheel hub	Coat inner wall evenly.
Wheel hub cap	Fill in the cap.

(3) Install oil seal as shown in Fig. 16. Drive the seal into position on the wheel hub, being careful not to deform the seal.



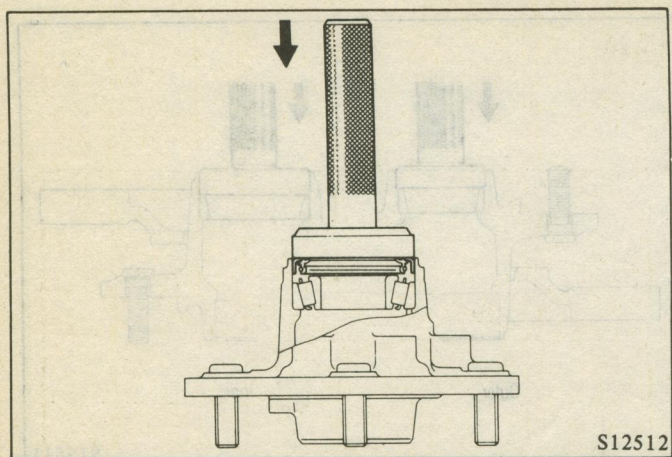


Fig. 16 Driving in the Oil Seal

(4) During installation, the brake disc and hub should be tightened evenly to the specified torque. After tightening, check to ensure that brake disc runout is within specified limits.

Part to be tightened	Torque	Nm (ft-lbs.)
Brake disc to hub	46 to 51	(34 to 38)

Description	Standard value	mm (in.)
Runout of brake disc	0.15	(.006) or less

(5) Install the wheel hub assembly on the knuckle spindle using care not to damage the oil seal. Then install the outer bearing, plain washer and the hub nut in that order and adjust the bearing preload in the following manner:

(a) Tighten the hub nut to 29.4 Nm (21.7 ft-lbs.) torque to seat all assembled parts and then loosen the nut to 0 Nm (0 ft-lbs.) torque.

(b) Again tighten hub nut to 7.8 Nm (5.8 ft-lbs.). Install cotter pin. If slit on the hub nut does not line up with the cotter pin hole, loosen nut, (30 degrees max.) to obtain proper alignment.

#### CAUTION:

Bend cotter pin definitely. Make sure front axle hub assembly rotates smoothly, without play.

(6) Tighten the knuckle arm to the specified torque.

Part to be tightened	Torque	Nm (ft-lbs.)
Knuckle arm to knuckle	54 to 74	(40 to 54)

(7) Install the disc brake caliper assembly and tighten securely to the standard torque. (Refer to GROUP 5).

## CROSSMEMBER

### INSPECTION AND ADJUSTMENT

Check the crossmember for cracks, breakage, bends, dents or other damage. Correct any defect. Also check it for misalignment. If out of alignment, correct as shown in Fig. 17.

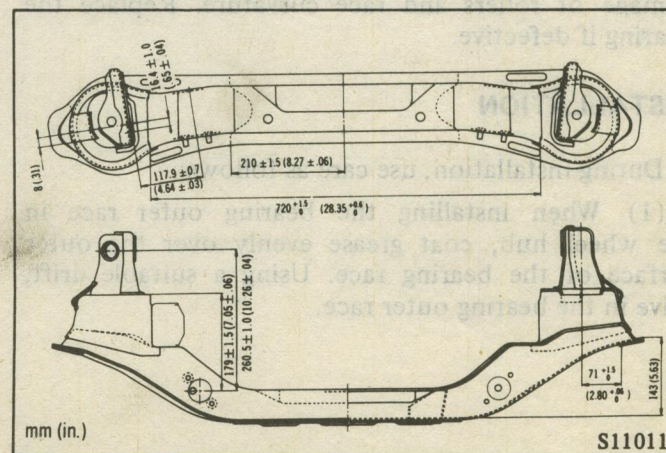
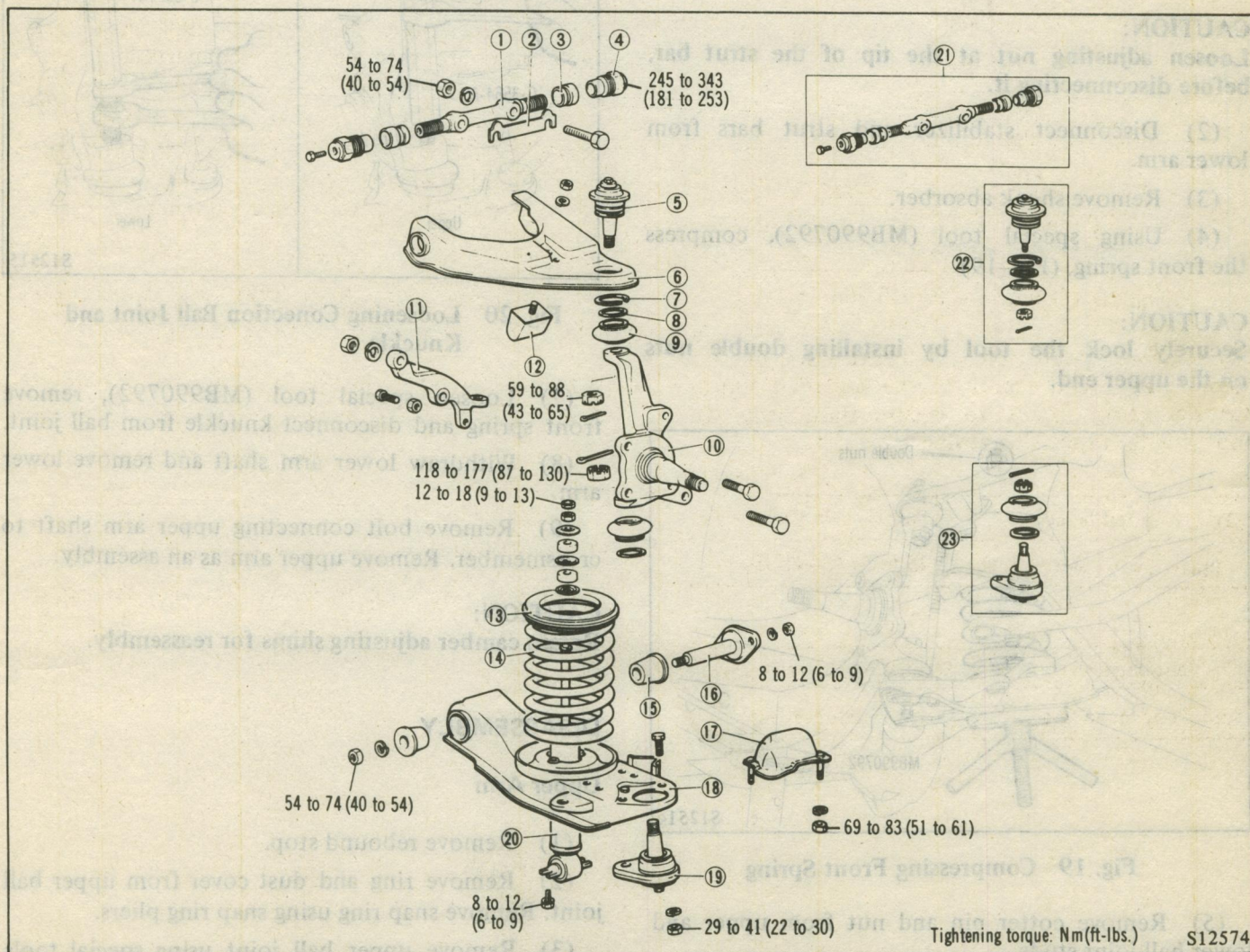


Fig. 17 Crossmember Alignment



## SUSPENSION



- |                           |                        |                                   |
|---------------------------|------------------------|-----------------------------------|
| (1) Upper arm shaft       | (9) Dust cover         | (17) Bump stop                    |
| (2) Camber adjusting shim | (10) Knuckle           | (18) Lower arm                    |
| (3) Dust seal             | (11) Knuckle arm       | (19) Lower ball joint             |
| (4) Pivot bushing         | (12) Rebound stop      | (20) Shock absorber               |
| (5) Upper ball joint      | (13) Spring seat       | (21) Upper arm bush and shaft kit |
| (6) Upper arm             | (14) Front coil spring | (22) Upper ball joint kit         |
| (7) Snap ring             | (15) Lower arm bushing | (23) Lower ball joint kit         |
| (8) Ring                  | (16) Lower arm shaft   |                                   |

Fig. 18 Exploded View of Front Suspension



## REMOVAL

(1) Remove the front wheel, the caliper assembly and the front hub assembly.

**CAUTION:**

Loosen adjusting nut at the tip of the strut bar, before disconnecting it.

(2) Disconnect stabilizer and strut bars from lower arm.

(3) Remove shock absorber.

(4) Using special tool (MB990792), compress the front spring. (Fig. 19)

**CAUTION:**

Securely lock the tool by installing double nuts on the upper end.

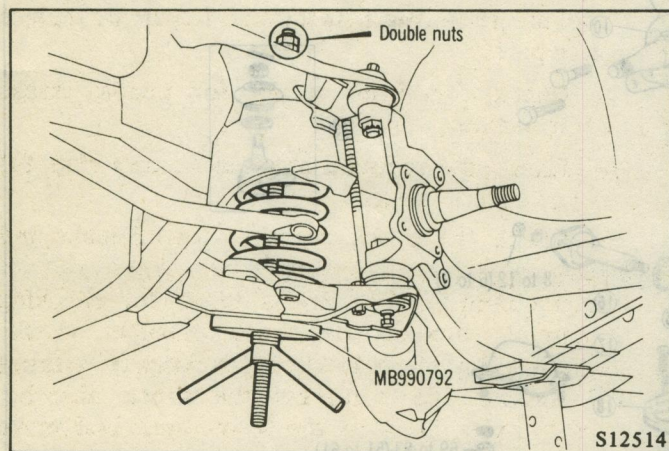


Fig. 19 Compressing Front Spring

(5) Remove cotter pin and nut from upper and lower ball joint studs.

(6) Using special tool (C-3564-A), loosen connection between ball joint and knuckle. (Fig. 20)

**CAUTION:**

While performing step (6), tap knuckle with a plastic hammer.

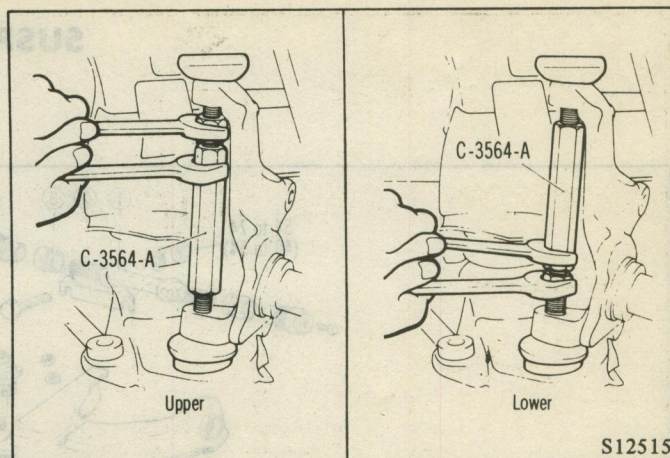


Fig. 20 Loosening Connection Ball Joint and Knuckle

(7) Loosen special tool (MB990792), remove front spring and disconnect knuckle from ball joint.

(8) Withdraw lower arm shaft and remove lower arm.

(9) Remove bolt connecting upper arm shaft to crossmember. Remove upper arm as an assembly.

**CAUTION:**

Retain camber adjusting shims for reassembly.

## DISASSEMBLY

## Upper Arm

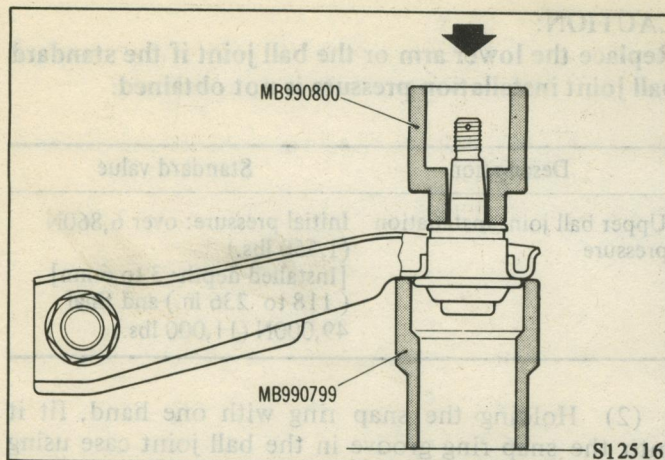
(1) Remove rebound stop.

(2) Remove ring and dust cover from upper ball joint. Remove snap ring using snap ring pliers.

(3) Remove upper ball joint using special tools (MB990799 and MB990800). (Fig. 21)

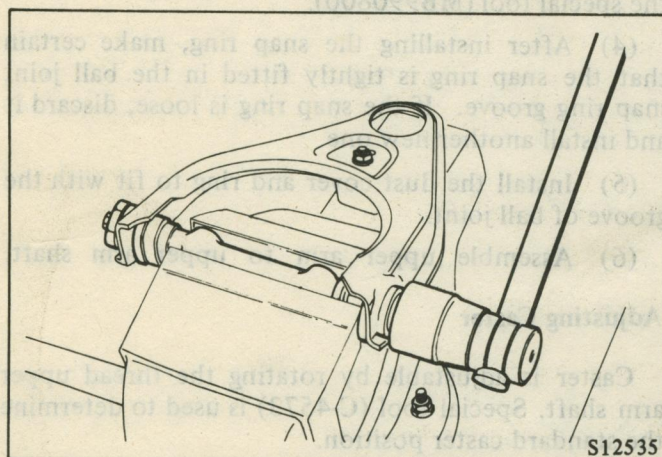
NOTE: A minimum 9800N (2200 lbs.) force will be required to remove the upper ball joint.





**Fig. 21 Removing the Upper Ball Joint**

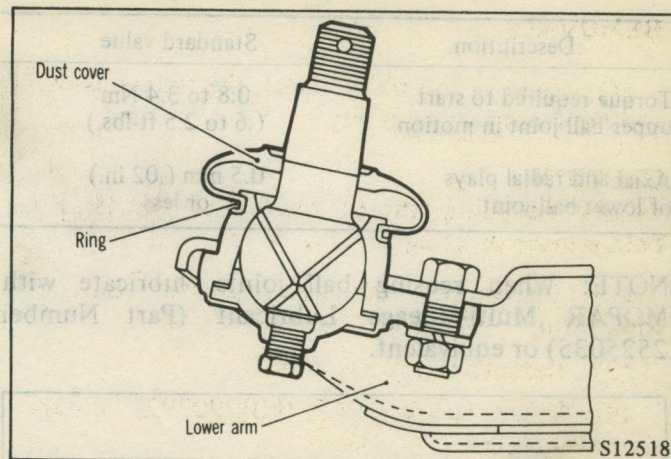
- (4) Remove pivot bushing and upper arm shaft from the upper arm. (Fig. 22)



**Fig. 22 Removing the Pivot Bushing**

**Lower Arm**

- (1) After removing the ring and dust cover from the lower ball joint, remove the lower ball joint from the lower arm. (Fig. 23)



**Fig. 23 Removing the Lower Ball Joint**

**INSPECTION**

Make the following inspections. Repair or replace defective parts.

- (1) Check the front spring for bends, cracks and deterioration.
- (2) Check the rebound stop and bump stop for cracks and deterioration.
- (3) Check the shock absorber for oil leaks and the rod for bend.

It is recommended to use a tester for checking the damping force of the shock absorber. (Refer to Specification chart.) When checking it without tester, extend and compress the shock absorber from the upper limit to the lower limit and make sure that it resists evenly.

- (4) Check the upper arm shaft-to-pivot bushing play and the pivot bushing-to-upper arm play.
- (5) Check the rubber bushing for wear and damage and the ball joint case for staking condition.
- (6) Check the shaft and arm for deformation, bend, and cracks.
- (7) Check the ball joint dust cover for cracks upper ball joint for starting torque and lower ball joint for play in axial direction.



Description	Standard value
Torque required to start upper ball joint in motion.	0.8 to 3.4 Nm (.6 to 2.5 ft-lbs.)
Axial and radial plays of lower ball joint	0.5 mm (.02 in.) or less

NOTE: When reusing ball joints, lubricate with MOPAR Multi-Mileage Lubricant (Part Number 2525035) or equivalent.

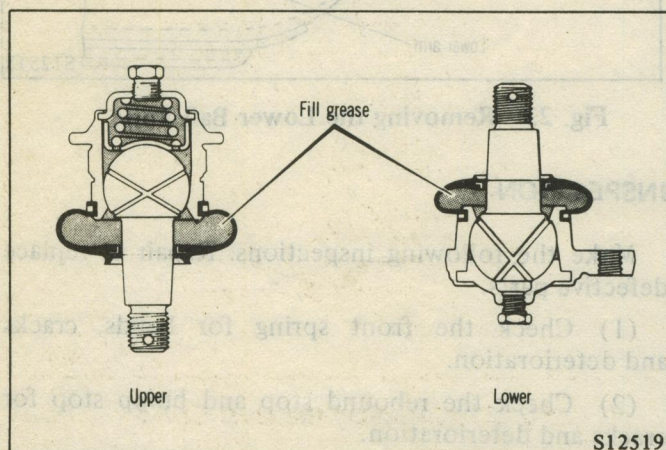


Fig. 24 Upper and Lower Ball Joint

## ASSEMBLY

### Upper Arm

(1) Line up the mating marks on upper ball joint with that on upper arm. Press upper arm into ball joint using special tools (MB990799 and MB990800).

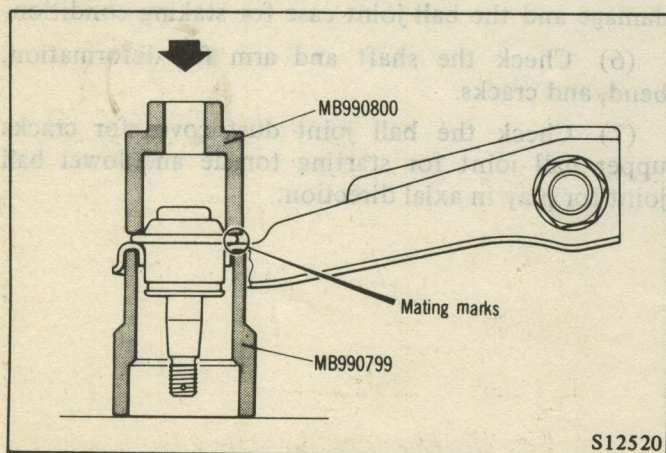


Fig. 25 Press Fitting Upper Ball Joint

## CAUTION:

Replace the lower arm or the ball joint if the standard ball joint installation pressure is not obtained.

Description	Standard value
Upper ball joint installation pressure	Initial pressure: over 6,860N (1,550 lbs.) [Installed depth: 3 to 6mm] (.118 to .236 in.) and final 49,000N (11,000 lbs.)

(2) Holding the snap ring with one hand, fit it into the snap ring groove in the ball joint case using snap ring pliers.

NOTE: Use care not to open the snap ring wider than required.

(3) Insert the snap ring into the snap ring groove in the ball joint case by lightly tapping it through the special tool (MB990800).

(4) After installing the snap ring, make certain that the snap ring is tightly fitted in the ball joint snap ring groove. If the snap ring is loose, discard it and install another new one.

(5) Install the dust cover and ring to fit with the groove of ball joint.

(6) Assemble upper arm to upper arm shaft.

### Adjusting Caster

Caster is adjustable by rotating the thread upper arm shaft. Special tool (C-4573) is used to determine the standard caster position.

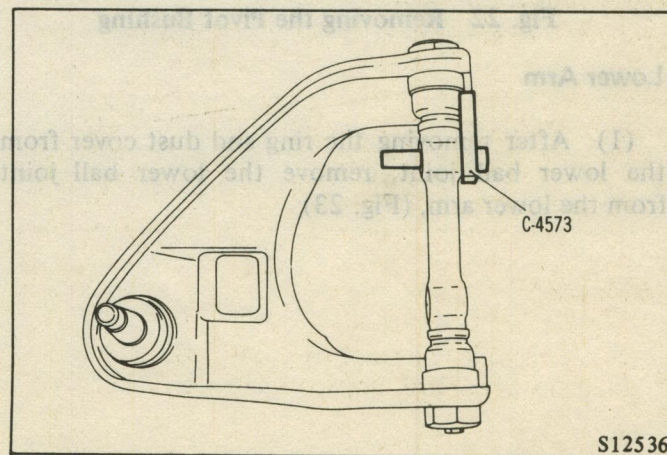


Fig. 26 Measuring and Adjusting Standard Caster



(7) To set standard caster, insert special tool (C-4573) through each hole in upper arm shaft. Rotate upper arm shaft until tool fits flush at each end of the shaft as shown in Fig. 26.

(8) Apply grease to internal thread of pivot bushing. Screw upper arm shaft into the pivot bushing.

**CAUTION:**  
Discard and use the new pivot bushing.

Part to be tightened	Torque Nm (ft-lbs.)
Final tightening of pivot bushing	245 to 343 (181 to 253)

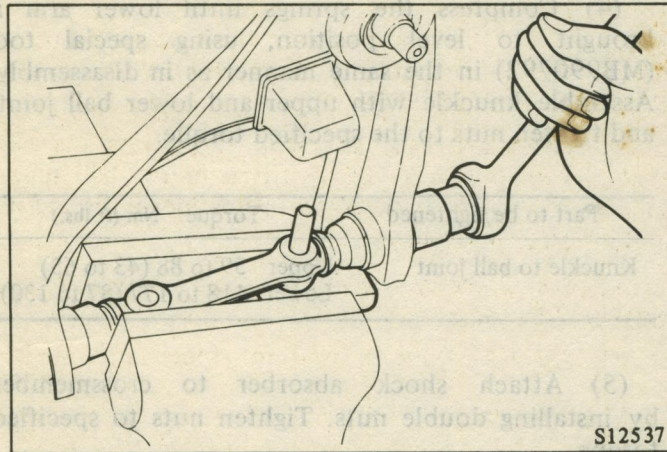


Fig. 27 Installing the Pivot Bushing

(9) Install the other pivot bushing to the other side of upper arm shaft. (Fig. 27)

(10) Make sure upper arm shaft moves smoothly.

Description	Standard value Nm (ft-lbs.)
Torque required to start upper arm shaft in motion	15 (11) or less

#### Lower Arm

(1) Assemble lower ball joint with lower arm. Tighten the lower arm bolts to the specified torque.

Part to be tightened	Torque Nm (ft-lbs.)
Lower ball joint to lower arm	29 to 41 (22 to 30)

(2) Install dust cover, positioning the embossed portion as shown. (Fig. 28) Install the ring to make with the groove of ball joint case.

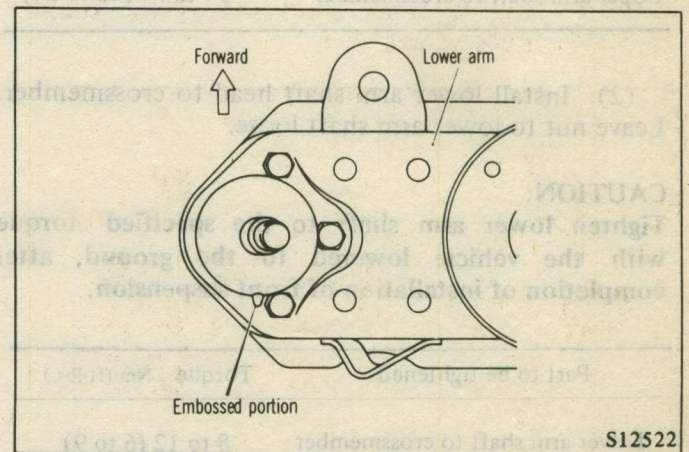


Fig. 28 Installing the Dust Cover

#### INSTALLATION

When installing, observe the following items.

(1) Reinstall camber adjusting shims between upper arm shaft and crossmember. Install bolt connecting upper arm shaft to crossmember in the direction shown. (Fig. 29) Tighten them to the specified torque.

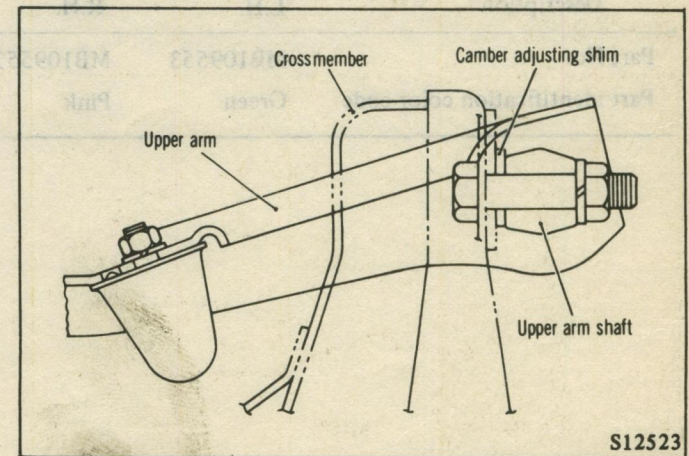


Fig. 29 Installing the Upper Arm



Description	Standard value	mm (in.)
Camber adjusting shim thickness	4.0	(.16)

Part to be tightened	Torque	Nm (ft-lbs.)
Upper arm shaft to crossmember	54 to 74	(40 to 54)

(2) Install lower arm shaft head to crossmember. Leave nut to lower arm shaft loose.

#### CAUTION:

Tighten lower arm shaft to the specified torque with the vehicle lowered to the ground, after completion of installation of front suspension.

Part to be tightened	Torque	Nm (ft-lbs.)
Lower arm shaft to crossmember	8 to 12	(6 to 9)

(3) When installing the front coil spring, insert the spring seat between the coil spring ground end and the crossmember and place the other end in the groove of the lower arm.

#### CAUTION:

Have the front coil springs paired as recommended below, noting the color codes on each spring.

Description	L.H.	R.H.
Part No.	MB109553	MB109552
Part identification color code	Green	Pink

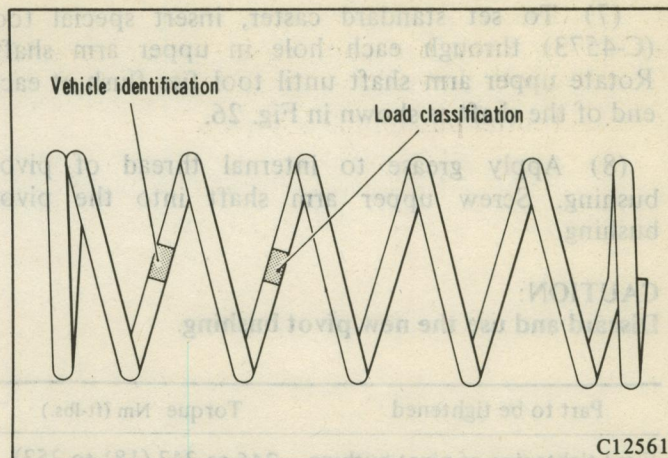


Fig. 30 Front Coil Spring Color Code

(4) Compress the springs until lower arm is brought to level position, using special tool (MB990792) in the same manner as in disassembly. Assemble knuckle with upper and lower ball joints and tighten nuts to the specified torque.

Part to be tightened	Torque	Nm (ft-lbs.)
Knuckle to ball joint	Upper	59 to 88 (43 to 65)
	Lower	118 to 177 (87 to 130)

(5) Attach shock absorber to crossmember by installing double nuts. Tighten nuts to specified torque.

Parts to be tightened	Torque	Nm (ft-lbs.)
Shock absorber to crossmember	12 to 18	(9 to 13)
Shock absorber to lower arm	8 to 12	(6 to 9)

(6) Install strut bar and stabilizer to lower arm. Tighten nuts to the specified torque.

Part to be tightened	Torque	Nm (ft-lbs.)
Strut bar to bracket	74 to 83	(54 to 61)
Strut bar to lower arm (together with bump stop)	69 to 83	(51 to 61)
Stabilizer to lower arm	25 to 34	(18 to 25)



**CAUTIONS:**

- Tighten strut bar and frame to the specified torque with the vehicle lowered to the ground.
- Install cotter pins on the ball joints.

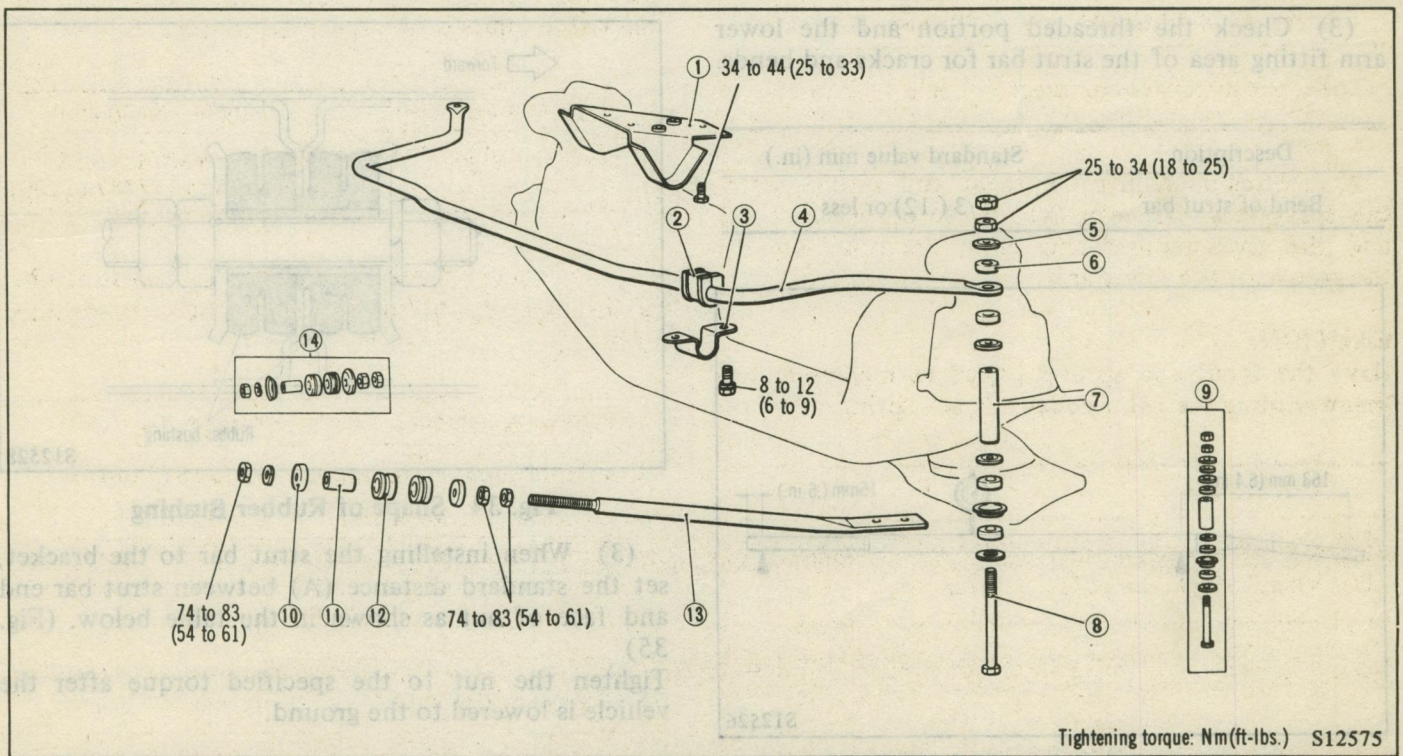
(7) Install the front hub assembly and the caliper assembly.

(8) Install the wheels.

(9) Tighten the lower arm shaft to the specified torque as shown in the table below with vehicle lowered to ground.

Part to be tightened	Torque Nm (ft-lbs.)
Lower arm shaft flange to crossmember	8 to 12 (6 to 9)
Lower arm shaft tightening nut	54 to 74 (40 to 54)

**STABILIZER AND STRUT BAR**



Tightening torque: Nm(ft-lbs.) S12575

- |                        |                         |                        |
|------------------------|-------------------------|------------------------|
| (1) Strut bar bracket  | (6) Cushion rubber      | (11) Collar            |
| (2) Stabilizer bushing | (7) Collar              | (12) Strut bar bushing |
| (3) Stabilizer bracket | (8) Bolt                | (13) Strut bar         |
| (4) Stabilizer         | (9) Stabilizer link kit | (14) Strut bar kit     |
| (5) Plate seat         | (10) Plate seat         |                        |

**Fig. 31 Exploded View of Strut Bar and Stabilizer**



## REMOVAL

- (1) Remove the strut bar from the bumper stopper of the lower arm.
- (2) Remove the strut bar bracket from the body.
- (3) Remove the stabilizer and the strut bar from the strut bar bracket.

## INSPECTION

Make the following inspections and repair or replace defective parts.

- (1) Place the stabilizer on a level surface and check it for deformation (permanent set). Replace if excessively deformed. (Fig. 32)
- (2) Check the stabilizer bushing, the strut bar bushing and the cushion rubber for cracks and damage.
- (3) Check the threaded portion and the lower arm fitting area of the strut bar for cracks and bends.

Description	Standard value mm (in.)
Bend of strut bar	3 (.12) or less

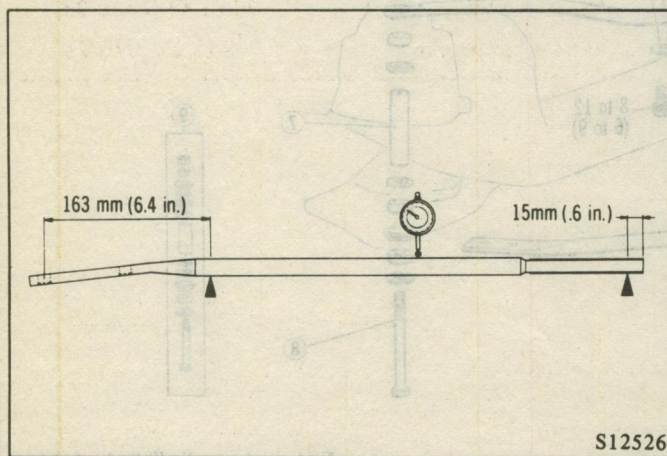


Fig. 32 Checking for Bend of Strut Bar

## INSTALLATION

When installing, observe the following items.

- (1) Note "L" on strut bar stands for LH side. (Fig. 33)

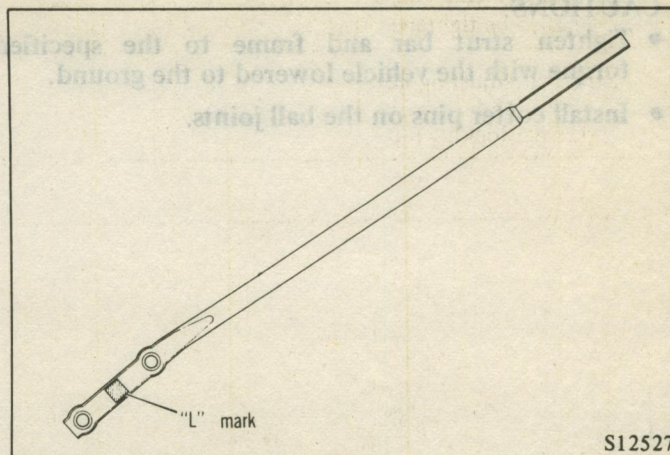


Fig. 33 Strut Bar Installing Direction

- (2) Strut bar bushing for front side and rear side have different shapes. Install the strut bar bushing that has the convex surface on the front side.

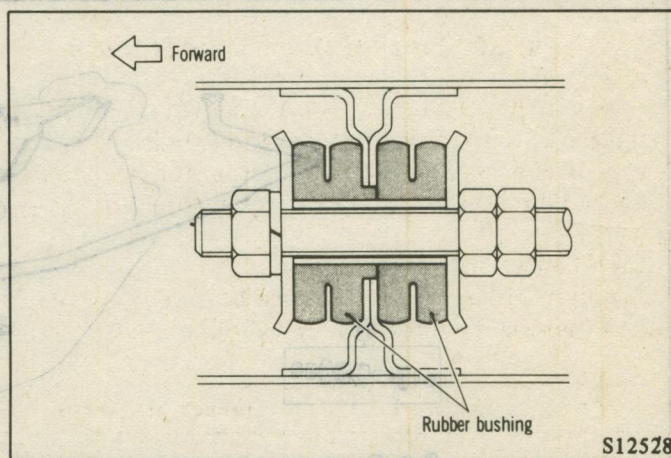


Fig. 34 Shape of Rubber Bushing

- (3) When installing the strut bar to the bracket, set the standard distance (A) between strut bar end and face of nut as shown in the table below. (Fig. 35)
- Tighten the nut to the specified torque after the vehicle is lowered to the ground.

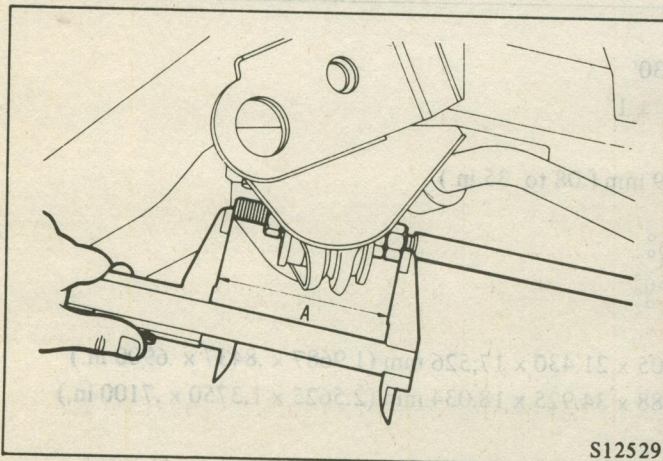
Description	Standard value mm (in.)
Distance (A)	96 (3.8)

## CAUTION:

Make sure to check the front wheel alignment after completion of strut bar installation in order to obtain the standard caster, and then readjust the distance (A) as required.



Parts to be tightened	Torque Nm (ft-lbs.)
Strut bar adjusting nut and Strut bar locking nut	74 to 83 (54 to 61)



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Fig. 35 Installed Dimension of Strut Bar

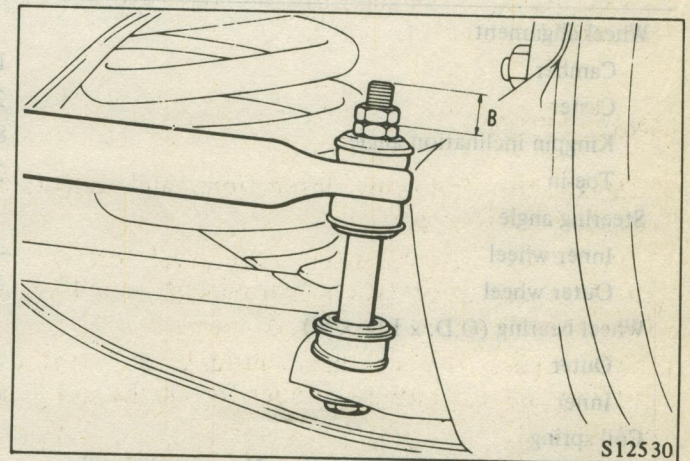
(4) When installing both ends of the stabilizer, tighten the first nut to obtain the length (B) from the top of the bolt to the face of the nut, and then the second nut to the specified torque. (Fig. 36)

**CAUTION:**

Set the right and left clearance between the stabilizer and the side member to even value.

Part to be tightened	Torque Nm (ft-lbs.)
Stabilizer to lower arm	25 to 34 (18 to 25)

Description	Standard value mm (in.)
Distance (B) [bolt length : 135 (5.30)]	22 to 24 (.87 to .94)



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Fig. 36 Installing the Stabilizer

(5) Tighten the parts to the specified torque as shown below.

Parts to be tightened	Torque Nm (ft-lbs.)
Strut bar bracket	34 to 44 (25 to 33)
Stabilizer bar bracket	8 to 12 (6 to 9)



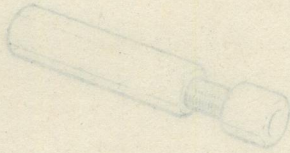

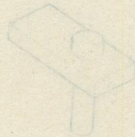


## SPECIFICATIONS

Description	Specifications
Wheel alignment	
Camber	$1^{\circ} \pm 30'$
Caster	$2^{\circ}30' \pm 1^{\circ}$
Kingpin inclination angle	$8^{\circ}$
Toe-in	2 to 9 mm (.08 to .35 in.)
Steering angle	
Inner wheel	$37^{\circ} \frac{0}{3}$
Outer wheel	$30.5^{\circ} \frac{0}{3}$
Wheel bearing (O.D. x I.D. x W)	
Outer	50.005 x 21.430 x 17.526 mm (1.9687 x .8437 x .6900 in.)
Inner	65.088 x 34.925 x 18.034 mm (2.5625 x 1.3750 x .7100 in.)
Coil spring	
Wire dia. x O.D. x free length — No. of active coils	
L.H.	15.2 x 116.4 x 301 mm — 7 (.598 x 4.583 x 11.850 in. — 7)
R.H.	15.2 x 116.4 x 291 mm — 7 (.598 x 4.583 x 11.457 in. — 7)
Spring constant	69.4 $\pm$ 4.9N/mm (396.46 $\pm$ 27.75 lbs./in.)
Shock absorber	
Type	Hydraulic, cylindrical, double-acting type
Max. length	350 mm (13.780 in.)
Min. length	240 mm (9.449 in.)
Stroke	110 mm (4.331 in.)
Damping force [at 0.3 m (.984 ft.)/sec.]	
Expansion	1,080 $\pm$ 157N (242.51 $\pm$ 35.27 lbs.)
Contraction	441 $\pm$ 88N (99.21 $\pm$ 19.84 lbs.)
Stabilizer O.D.	22 mm (.866 in.)



# SPECIAL TOOLS

Tool No.	Name of tool	Illustration	Use	Remarks
MB90803	Upper arm shaft bolt remover		For holding the upper arm shaft to crossmember mounting bolt	
MB90703	Spring compressor		For compression of spring	
C-356-A	Knuckle arm puller		For removal of knuckle arm from upper and lower ball joint	
MB90709 MB90800	Ball joint remover and installer		For removal and installation of upper ball joint	
C-4373	Pivot arm position gauge		For checking caster after removal and installation of upper arm pivot bushing	

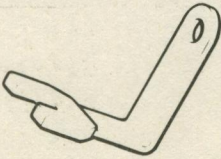
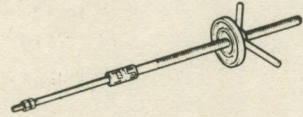
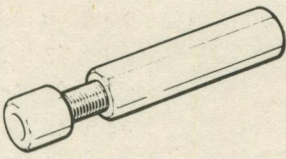


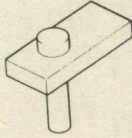


## TIGHTENING TORQUE

Description	Torque Nm (ft.-lbs.)
Brake disc and hub tightening	46 to 51 (34 to 38)
Knuckle arm tightening	54 to 74 (40 to 54)
Final tightening of pivot bushing	245 to 343 (181 to 253)
Lower ball joint to lower arm	29 to 41 (22 to 30)
Upper arm shaft to crossmember	54 to 74 (40 to 54)
Lower arm shaft flange to crossmember	8 to 12 (6 to 9)
Knuckle to upper ball joint	59 to 88 (43 to 65)
Knuckle to lower ball joint	118 to 177 (87 to 130)
Shock absorber to crossmember	12 to 18 (9 to 13)
Shock absorber to lower arm	8 to 12 (6 to 9)
Lower arm shaft tightening nut	54 to 74 (40 to 54)
Strut bar tightening (together with bump stop)	69 to 83 (51 to 61)
Strut bar to frame installation	74 to 83 (54 to 61)
Strut bar bracket installation	34 to 44 (25 to 33)
Stabilizer to lower arm	25 to 34 (18 to 25)
Stabilizer bar bracket	8 to 12 (6 to 9)
Tie-rod turnbuckle locking nut	49 to 54 (36 to 40)
Jam nut on steering angle adjusting bolt	20 (14)



**SPECIAL TOOLS**

Tool No.	Name of tool	Illustration	Use	Remarks
MB990805	Upper arm shaft bolt remover		For holding the upper arm shaft to crossmember mounting bolt	
MB990792	Spring compressor		For compression of spring	
C-3564-A	Knuckle arm puller		For removal of knuckle arm from upper and lower ball joint	
MB990799 MB990800	Ball joint remover and installer	<div>   </div>	For removal and installation of upper ball joint	
C-4573	Pivot arm position gauge		For checking caster after removal and installation of upper arm pivot bushing	