

SUSPENSION

GROUP 14 (3000 & 5000)

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SUSPENSION, REAR	14-32-1		

SECTION 14-01 Suspension—Service

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VEHICLE APPLICATION

Capri.

DIAGNOSIS AND TESTING

The suspension system, independently sprung front and rear, is designed for minimum maintenance. Other than incorrect front toe, front camber and rear toe, suspension misalignment can only result from wear or damage to suspension components, or distortion of body structure due to collision damage. Symptoms of suspension trouble include ride and handling problems such as wander or pull to one side, erratic or hard steering, braking pull, dog tracking and excessive or uneven tire wear. Most of these symptoms can also be caused by factors outside the suspension such as steering gear problems, brake drag, worn wheel bearings, mismatched tires, or abnormal vehicle load distribution. It is important to learn as much as possible about a complaint. For example, when the condition was first noticed, whether it appeared suddenly or gradually, and if any impacts with curbs, potholes, etc. can be associated with it.

DIAGNOSIS AND TESTING (Continued)

CONDITION	POSSIBLE SOURCE	ACTION
<ul style="list-style-type: none"> Wander/Pull 	<ul style="list-style-type: none"> Excessive side-to-side difference in caster or camber. Vehicle attitude incorrect (front or rear, high or low). Steering gear or linkage worn or damaged. 	<ul style="list-style-type: none"> Check alignment and if incorrect, adjust camber if needed. Inspect related components for wear or damage. Check for abnormal loading, spring sag, or non-standard springs. Check steering system. Refer to Section 13-01.
<ul style="list-style-type: none"> Hard Steering 	<ul style="list-style-type: none"> Excessive positive caster. Vehicle attitude incorrect (front high or rear low). Steering gear or linkage worn, damaged or improperly adjusted. 	<ul style="list-style-type: none"> Check caster and if incorrect, inspect related components for wear or damage. Check for abnormal loading, spring sag, or non-standard springs. Check steering system. Refer to Section 13-01.
<ul style="list-style-type: none"> Brake Pull 	<ul style="list-style-type: none"> Excessive negative caster. Unequal tire pressure. Brake drag. 	<ul style="list-style-type: none"> Check caster and if incorrect, inspect related components for wear or damage. Adjust camber if needed. Inflate tires to correct and uniform pressure. Refer to Section 11-01. Check brakes. Refer to Section 12-01.
<ul style="list-style-type: none"> Shimmy 	<ul style="list-style-type: none"> Excessive positive caster or side-to-side caster difference. Wheel/tire imbalance or runout. Driveline vibration. 	<ul style="list-style-type: none"> Check caster and if incorrect, inspect related components for wear or damage. Check wheels and tires. Refer to Section 11-01. Check driveline for imbalance or misalignment. Refer to Section 18-01. Check for worn rack mounting bushings and worn rack mounting brackets.
<ul style="list-style-type: none"> Dog-Tracking 	<ul style="list-style-type: none"> Excessive side-to-side caster difference. Rear suspension damage. 	<ul style="list-style-type: none"> Check caster and if incorrect, inspect related components for wear or damage. If caster is uniform, check and compare wheelbase at right and left sides. If different, inspect suspension components and rear crossmember for wear or damage.
<ul style="list-style-type: none"> Bump Steer 	<ul style="list-style-type: none"> Worn steering gear mounting bushings. Bent steering gear mounting brackets. Steering gear not level. 	<ul style="list-style-type: none"> Replace steering gear mounting bushings. Replace steering gear mounting brackets. Adjust steering gear mounting.
<ul style="list-style-type: none"> Uneven Tire Wear: Outer or Inner Shoulder 	<ul style="list-style-type: none"> Excessive positive or negative camber. Excessive toe on radial tires. 	<ul style="list-style-type: none"> Check camber and if incorrect, inspect related components for wear or damage. Adjust camber if needed. Check toe and adjust if needed.
<ul style="list-style-type: none"> Sawtooth Pattern or Excessive Tire Wear 	<ul style="list-style-type: none"> Excessive toe-in (high edges inboard) or toe-out (high edges outboard). 	<ul style="list-style-type: none"> Check and adjust toe-in to specification.
<ul style="list-style-type: none"> Cupping or Dishing or Excessive Tire Wear 	<ul style="list-style-type: none"> Wheel/tire imbalance or runout. Suspension struts. Rear toe. Lack of proper tire rotation. 	<ul style="list-style-type: none"> Check wheels and tires. Refer to Section 11-01. Replace suspension struts if needed. Adjust rear toe. Rotate tires every 7,500 miles. Refer to Section 11-01.

DIAGNOSIS AND TESTING (Continued)**Inspection**

Diagnosis of possible suspension problems must start with a thorough inspection of the vehicle, including all suspension components and mounting points to identify any that are worn, damaged, or not securely installed.

Suspension Height

Examine the vehicle for indications of abnormal attitude, such as front or rear end higher or lower than normal, or not level side-to-side. Check for extra heavy items in luggage or passenger compartments such as tool boxes, sample cases, etc. If present, they should be removed before checking wheel alignment.

If vehicle attitude is not normal and no unusual load is present, check for signs of spring sag or damage, or non-standard replacement springs.

Suspension Struts

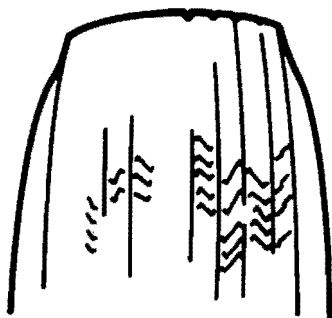
Bounce the vehicle at all four corners to check shock absorber function of the struts. Damping action should be pronounced and uniform. Inspect the struts for signs of leakage. A thin, oily film is normal, but if a strut tube is conspicuously wet, or if oil is evident, the unit should be replaced. Also, check for looseness in the strut mounting bushings in the underbody or lower control arms. If any play is apparent, the bushings involved should be replaced.

Tires

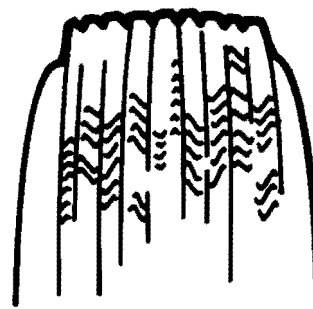
Verify that tires are matched from side-to-side, equally inflated and uniformly worn. Also, look for abnormal tread wear patterns indicative of wheel/tire imbalance or suspension misalignment. If cupping or flat spots are present, wheels and tires should be checked for runout and balance. Refer to Section 11-01.

If tread wear is not uniform across the face of the tire, but greater toward the inboard or outboard edges, improper camber is indicated, which will be verified by an alignment check.

Tread wear in a sawtooth pattern, which can be felt even if not visible, results from improper toe adjustment. If the high edges of the tread ribs are toward the vehicle center, excessive toe-in is indicated. If away from the vehicle center, toe-out is excessive.



**ABNORMAL WEAR DUE TO
EXCESSIVE POSITIVE CAMBER**



**SAWTOOTH WEAR PATTERN
DUE TO EXCESSIVE TOE-IN**

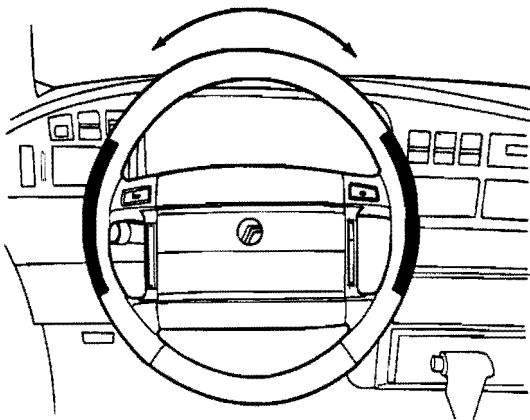
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DIAGNOSIS AND TESTING (Continued)**Steering Wheel Play**

With steering in the straight-ahead position, check for freeplay at the steering wheel rim. If in excess of 30mm (1.18 inches) look for the cause in the steering system. Refer to Section 13-01.

Also check for looseness or play in the steering wheel. Move the column in all directions to check for:

- Column bearing wear.
- Steering shaft U-joint play.
- Steering wheel looseness.
- Column looseness.



F7007-A

Ball Joints

Lift the vehicle on a suitable hoist until the front wheel is clear of the floor, and try to rock the wheel in a vertical plane. If any play is felt, have an assistant rock the wheel while observing the ball joint in the lower control arm at the bottom of the steering knuckle. If any movement is detectable between steering knuckle and control arm, the ball joint assembly should be replaced. If not, any play in the wheel is indicative of wheel bearing wear. Refer to Section 11-10 for wheel bearing service procedures.

Tie Rods

With one front wheel raised, try to rock it in the horizontal plane with the opposite wheel grounded or blocked. If any play is felt, check the tie rod end ball joint for relative motion. If any is present, replace the tie rod end. Hold the opposite wheel tie rod while rocking the wheel horizontally, to detect any endplay present in the steering rack ball joints. Refer to Section 13-46 for steering gear service.

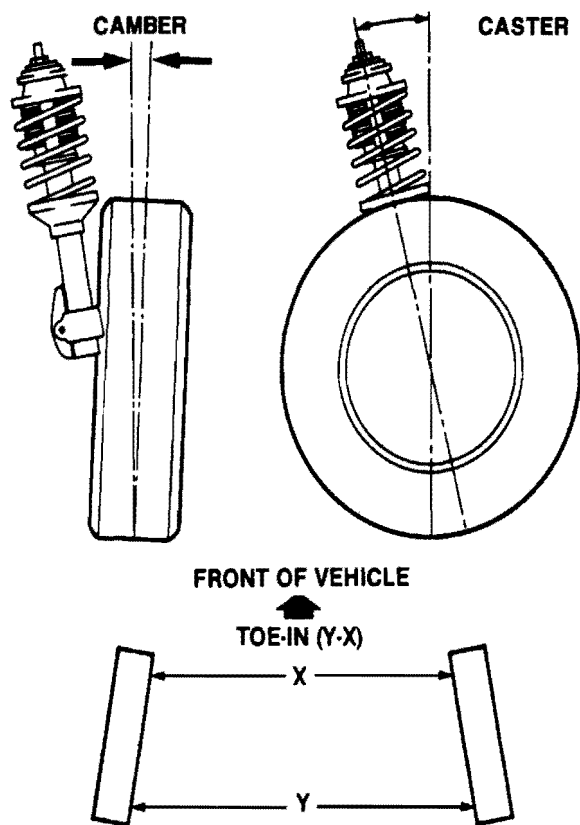
Control Arms and Stabilizers

Inspect control arms of both front and rear suspensions for signs of damage due to curb impacts, improper hoist positioning etc. If present, check for bending by carefully measuring and comparing critical dimensions of right and left arms.

Test all rubber-bushed suspension mounting and connecting points for freeplay in the unloaded condition. Use a jack or similar lifting device to raise the vehicle or suspension component to unload the bushing for shake testing. Some restrained relative motion is permissible as the bushing is stressed in testing, but if freeplay is evident at any point, the bushing should be replaced.

DIAGNOSIS AND TESTING (Continued)**Wheel Alignment****Caster**

While caster is preset at the factory and not adjustable, it should be checked as a possible cause of suspension complaints. Be sure the tires are correctly and uniformly inflated, and any abnormal loads are removed from the vehicle. If caster is not within limits (refer to Specifications), and control arms, stabilizers and bushings are in good condition, check the vehicle body for distortion at suspension mounting points due to collision damage, curb or pothole impacts, improper hoisting etc. Generally, front wheel drive vehicles are not sensitive to caster differences from side-to-side that are under one degree.



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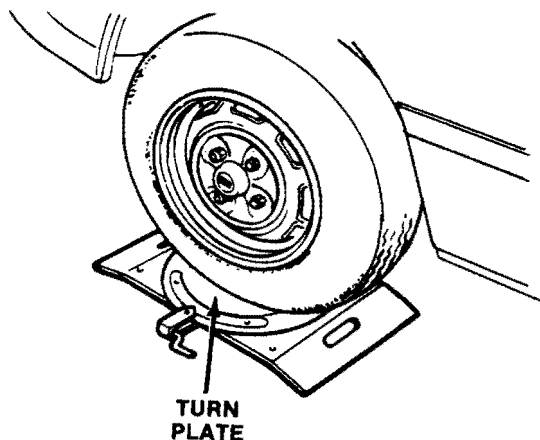
Camber

Camber is always set before all other adjustments. Camber can cause both pull and tire wear if it is set incorrectly.

Wheel Alignment Procedure

To be able to measure and set front wheel alignment, the front wheels must be resting on turn plates.

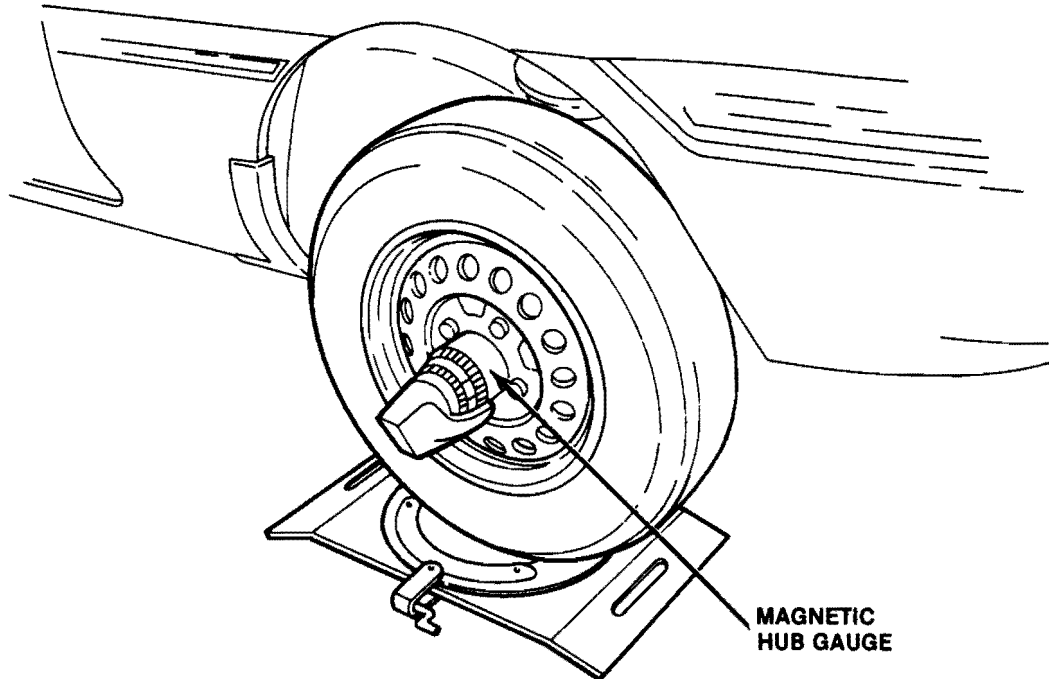
To be able to set rear toe, the back wheels must be resting on slider plates or turn plates. Before setting any alignment angle, the vehicle must be jounced three times at each end. This establishes the actual standing curb height (trim height).



F5281-A

Special adapters are available so that a magnetic hub gauge can be used at the rear wheels. Depending on the equipment being used this may not be necessary. After the hub cap and bearing cap are removed, the hub gauge will snap in place on to the brake rotor. Magnetic mounting toe gauges may also be installed in the same manner.

DIAGNOSIS AND TESTING (Continued)



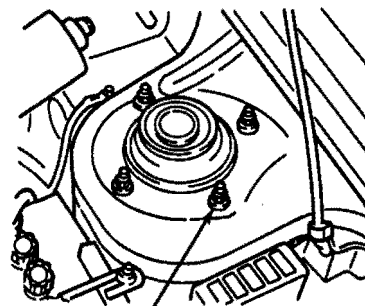
F5292-A

Wheel alignment should always be done on a perfectly level alignment rack. Before doing an alignment, always check the following:

- Worn suspension parts.
- Standing curb height (trim height).
- Heavy weights in the luggage compartment, such as golf clubs or heavy tool boxes.
- Tire pressure.
- Wheel bearings.
- Full tank of gas.
- The seat should be in the full rear position.
- Rear toe adjustment.

Always road test vehicle after an alignment. If the vehicle still pulls, try switching the front tires. This will usually cure any pull problem. If the vehicle still pulls in the same direction, double check the alignment and rear tracking. If the vehicle pulls in the opposite direction, rotate the tires and road test again. For proper rotation procedure, refer to Section 11-01.

1. Raise the vehicle by the body so that the front suspension is unloaded.
2. Remove the wheel.
3. Loosen and remove four top strut attaching nuts from the mounting studs.



STRUT ATTACHING
NUT
9994 00802
4 REQ'D

F5877-A

4. Lower the strut, and rotate the strut bearing 180 degrees.
5. Reinstall the strut in the strut tower.
6. Install and tighten four attaching nuts.
7. Double check that camber is set correctly.

ADJUSTMENTS

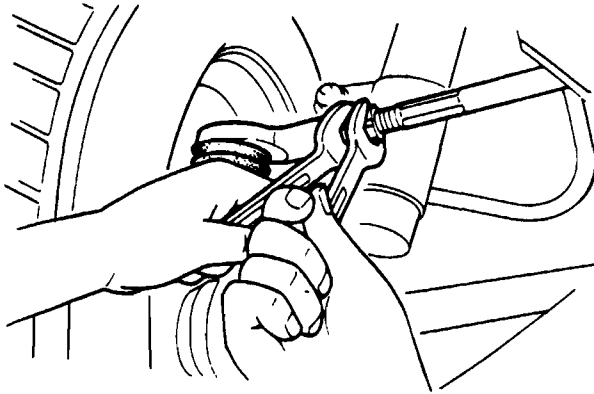
Camber

The top mounting studs on the front struts are offset. Camber is adjusted by rotating the strut bearing one half turn. This will change camber 28 minutes. To set camber:

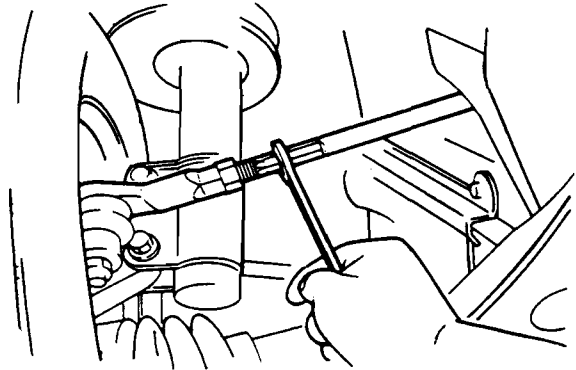
ADJUSTMENTS (Continued)**Toe-In, Front**

Check toe-in against specifications. If necessary, adjust toe-in as follows:

1. Loosen the locknuts at the tie rod ends, and release the clips at the small ends of the steering gear boots. Be sure the boots are free on the tie rods so that they will not be twisted when tie rods are turned.

**F5287 A**

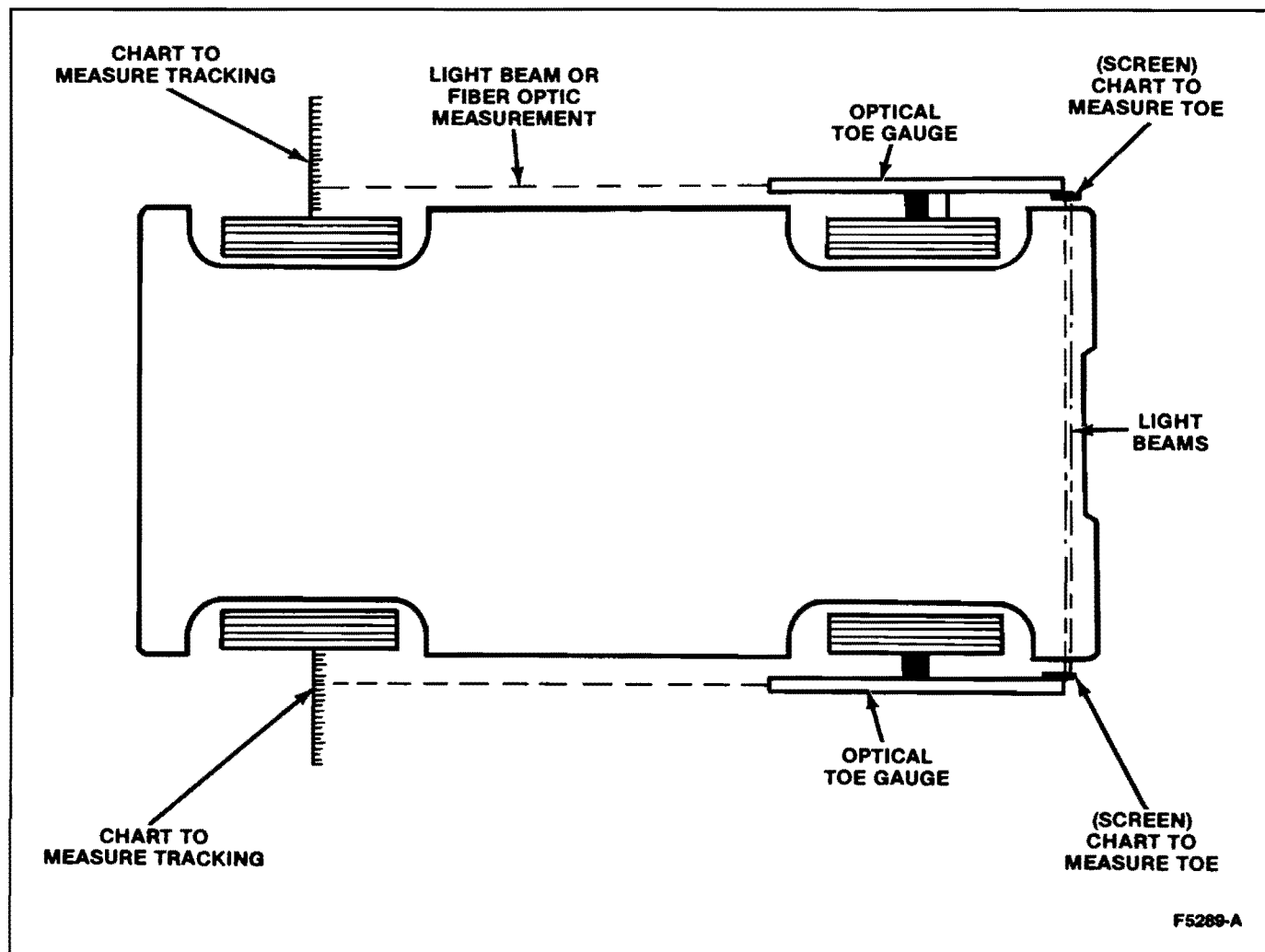
2. Turn the tie rods into or out of the tie rod ends an equal amount on each side, to keep the steering wheel centered.

**F5288 A**

NOTE: Tracking must always be set directly after setting toe.

3. Check front tracking. Tracking is set by using the rear wheels as a reference point. Follow your equipment manufacturer's instructions to check tracking. The angle of each front wheel in relationship to the rear wheels must be the same. This ensures a straight steering wheel while driving.

ADJUSTMENTS (Continued)

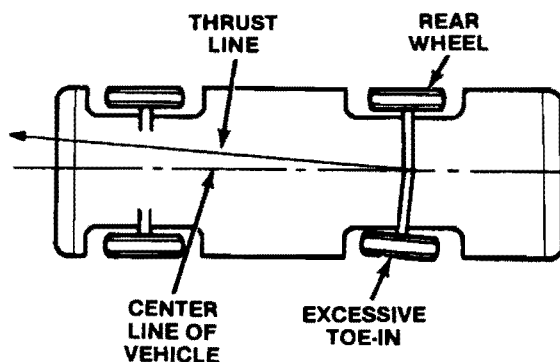


4. Always double check the toe setting after setting tracking.
5. When toe-in is correct, tighten the tie rod end locknuts to 35-40 N·m (26-28 lb-ft). Verify that the steering gear boot ends are positioned in the reduced-diameter sections of the tie rods and install the boot clips.

Toe, Rear

NOTE: If rear toe and tracking are not set correctly, it may cause excessive tire wear. It may also affect the thrust line of the rear wheels. The thrust line is the path the rear wheels take as they roll down the road. Ideally, the thrust line should align perfectly with the centerline of the vehicle. If the thrust line is not correct, it will cause the vehicle to slightly understeer in one direction and oversteer in the other direction. It will also affect the wheel centering.

This is why both front and rear alignment angles should be checked at the same time.

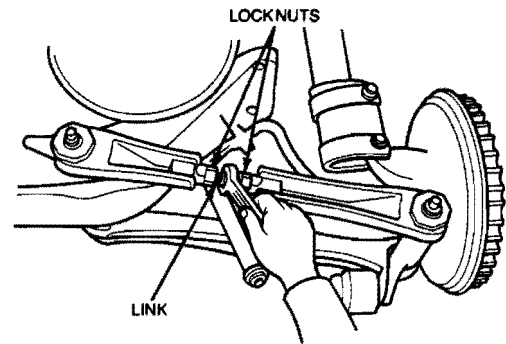


NOTE: THE THRUST LINE IS THE PATH BOTH REAR WHEELS TAKE AS THEY ROLL DOWN THE ROAD.

F5290-A

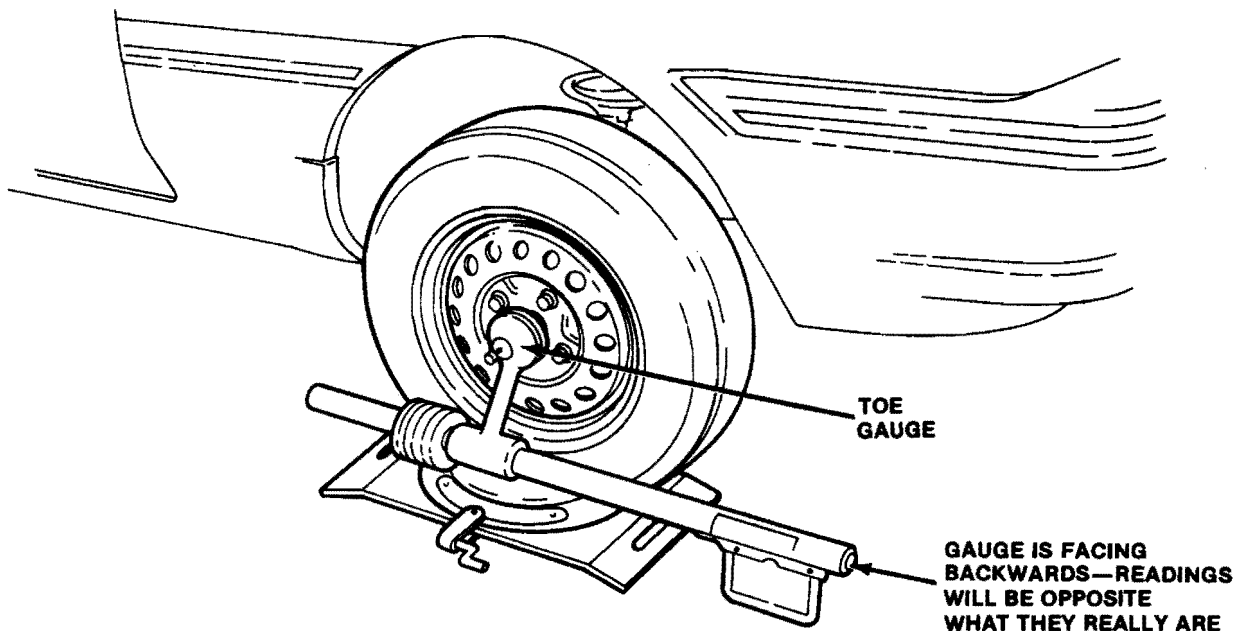
ADJUSTMENTS (Continued)

Rear toe should always be checked whenever an alignment on the front wheels is required. Rear toe should be adjusted prior to setting the front alignment angles. Rear toe is adjusted by loosening the locknuts and rotating the adjustment link on the rear control arms.



F7008-A

NOTE: One turn of the link changes toe 11.3mm (0.44 inch).



F5294-A

NOTE: With many toe gauges, rear wheel readings will be opposite of what they really are. Follow your equipment manufacturer's instructions for proper usage.

Rear tracking is adjusted by setting the steering wheel straight ahead and using the front wheels as a reference point for the back wheels.

After setting rear tracking, always double check the rear toe settings. After checking the toe, tighten the locknuts to 55-64 N·m (41-47 lb-ft).

Centering the Steering Wheel

If the steering wheel is not properly centered when the vehicle is driven straight ahead, mark its position with a piece of tape across the gap between steering wheel hub and steering column shroud. Mark and cut the tape at the gap to permit steering wheel operation.

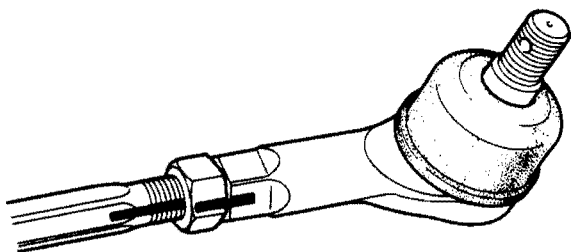
If the steering gear has been serviced, a lock-to-lock centering is advisable to be sure the gear is correctly assembled. Refer to Section 13-46.

ADJUSTMENTS (Continued)

In most cases, once front toe and tracking are correctly set, the steering wheel will be centered. If not, further adjustment will be required.

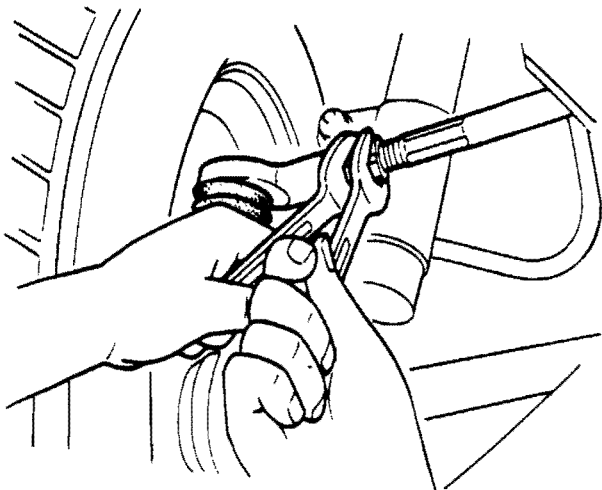
To center the steering wheel, the tie rods must be turned into one tie rod end and out of the other, in equal amounts to avoid changing the toe setting. This shifts the steering rack right or left, turning the pinion, steering column and wheel to the desired position.

1. Mark the tie rods and tie rod ends with paint or grease pencil to indicate their original relative positions.



F5286-A

2. Loosen and back off the tie rod end locknuts and release the steering gear boot clips. Be sure the boots are free on the tie rods to avoid twisting.



F5287A

3. Screw the tie rods into one tie rod end and out of the other, depending on which way the steering wheel is to be moved and how much. For example, if the left tie rod is screwed in and the right tie rod out, the steering rack moves to the left and the steering wheel movement is counterclockwise as seen from the driver's seat. For clockwise correction, the rack must be moved to the right.

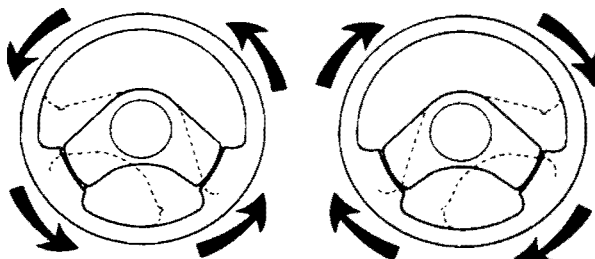
Check the marks on tie rod ends to be sure the tie rods are turned equal amounts.

4. If toe-in is to be adjusted, turn BOTH tie rods in or out BY EQUAL AMOUNTS before locking the locknuts. This ensures that the steering wheel will remain centered. Tighten locknuts to 35-40 N·m (26-28 lb-ft). Position the boot ends in the reduced-diameter sections of the tie rod ends, and install the boot clips.

**CLOCKWISE
ANGULAR
ERROR
TURN BOTH
TIE-RODS AN
EQUAL AMOUNT
COUNTERCLOCKWISE
TO CORRECT**

**COUNTER-
CLOCKWISE
ANGULAR
ERROR
TURN BOTH
TIE-RODS AN
EQUAL AMOUNT
CLOCKWISE
TO CORRECT**

**CLOCKWISE AND COUNTERCLOCKWISE
ARE AS VIEWED FROM THE LEFT
SIDE OF THE VEHICLE**



F5291-A

SPECIFICATIONS

Description	N·m	Lb·Ft
Front axle		
Knuckle to strut (P/T nut)	93-117	69-86
Knuckle to lower arm ball joint	43-54	32-40
Lower arm to lower arm ball joint	93-117	69-86
Knuckle to brake assembly	39-49	29-36
Knuckle to tie rod end	29-44	22-35
Disk plate to wheel hub	44-54	33-40
Rear axle		
Hub spindle to strut (P/T nut)	93-117	69-86
Lateral link through bolt	93-117	69-86
Hub spindle to back plate	45-67	33-49

CF5884-A

SPECIFICATIONS (Continued)**FRONT AND REAR SUSPENSION**

Description		mm	Inch
Front Spring Dimensions	Wire Diameter	13.4	0.53
	Coil Diameter	145.0	5.70
	Free Length	283	11.1
	Stabilizer Bar Diameter	29.2	1.14
Rear Spring Dimensions	Wire Diameter	11.4	0.45
	Coil Diameter	123	4.84
	Free Length	309	12.2
	Stabilizer Bar Diameter Naturally Aspirated Vehicles	14	0.55
	Turbocharged Vehicles	17.3	0.69

CF7060-A

WHEELBASE AND TREAD WIDTH

Wheelbase		Tread Width			
		Front		Rear	
mm	Inches	mm	Inches	mm	Inches
2405.3	94.7	1389.3	54.7	1414.8	55.7

CF7059-A

FRONT WHEEL ALIGNMENT

Alignment Factor	Degrees-Minutes	mm (inch)
King Pin Inclination	12° 20'	
Camber	0° 48' ± 45'	
Caster	1° 35' ± 45'	
Caster Trail		10 (.039)
Toe-in		2 ± 3 (0.08 ± 0.12)

CF5886-A

REAR WHEEL ALIGNMENT

Alignment Factor	Degrees-Minutes	mm (inch)
Camber	0° + 20' - 1° 10'	
Toe-in		0 + 5 (0.197) - 0

CF7058-A

SECTION 14-10 Suspension, Front

SUBJECT	PAGE	SUBJECT	PAGE
DESCRIPTION	14-10-1	REMOVAL AND INSTALLATION (Cont'd.)	
DISASSEMBLY AND ASSEMBLY		Steering Knuckle	14-10-5
Control Arm	14-10-5	Strut and Spring	14-10-3
REMOVAL AND INSTALLATION		SPECIAL SERVICE TOOLS	14-10-6
Ball Joint	14-10-2	SPECIFICATIONS	14-10-6
Control Arm	14-10-5	VEHICLE APPLICATION	14-10-1

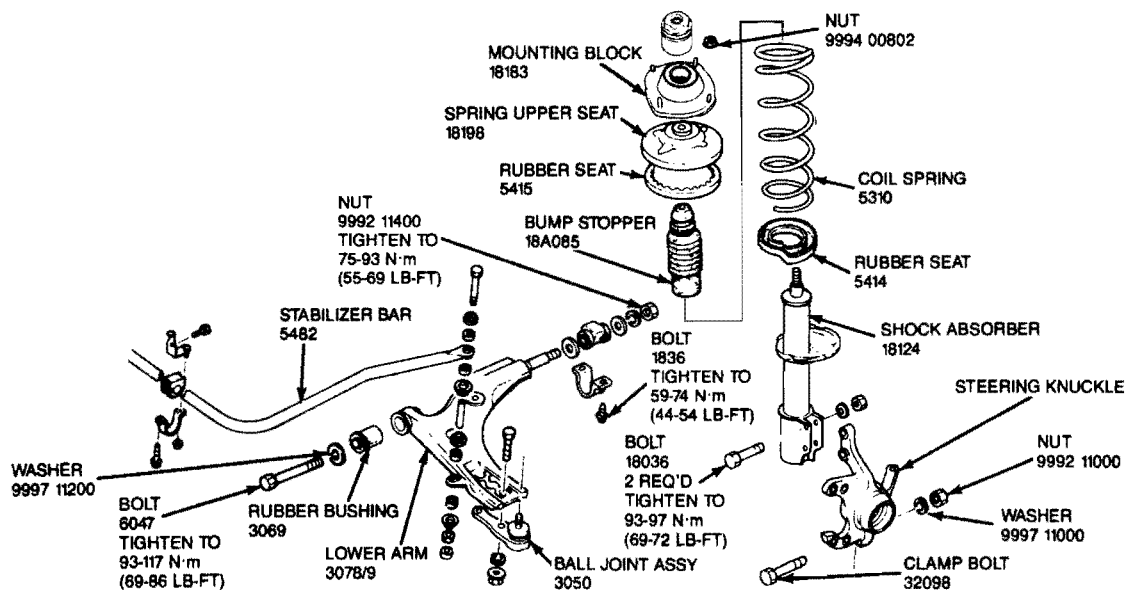
VEHICLE APPLICATION

Capri.

DESCRIPTION

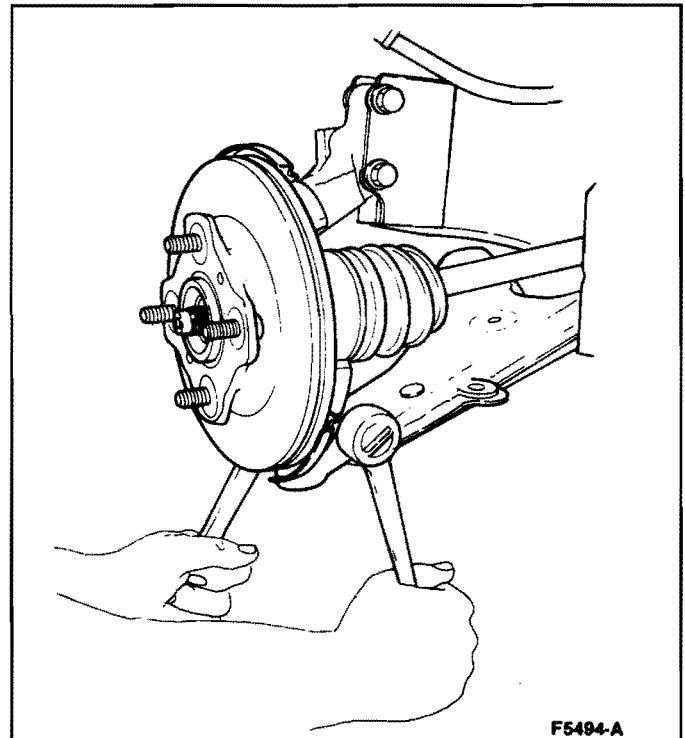
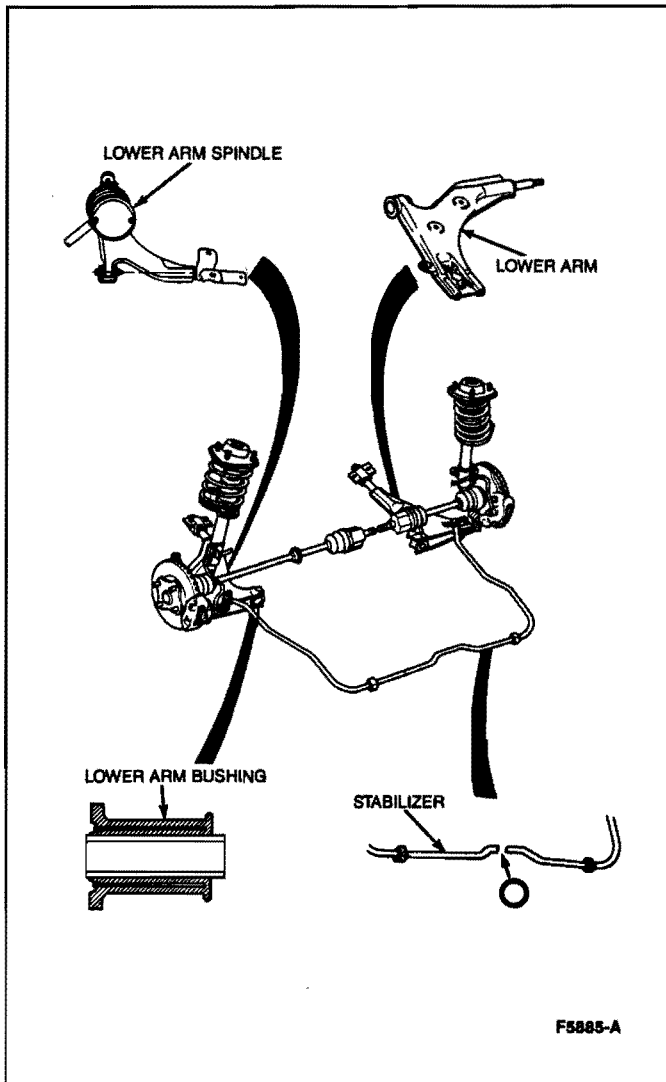
The front suspension consists of MacPherson struts, coil springs and single control arms. Strut towers located in the wheel wells locate the upper ends of the MacPherson struts. The strut mounting blocks house rubber mounted strut bearings. Both the upper and lower end of the coil springs ride in heavy rubber spring seats. A forged steering knuckle bolts to each strut assembly.

Ball joints connect the control arms to the steering knuckles. The wide stance control arms are supported by rubber bushings at each end. Body lean on turns is controlled by a hollow stabilizer bar that connects to both lower control arms.

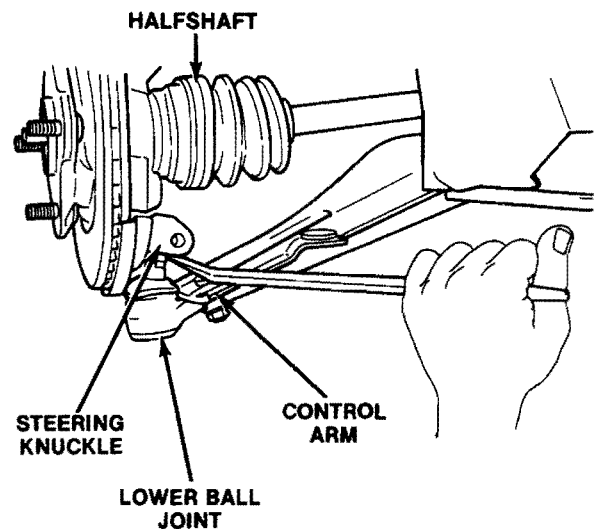


F5882-A

DESCRIPTION (Continued)



4. Using a small pry bar, pull down on lower control arm to separate it from steering knuckle.



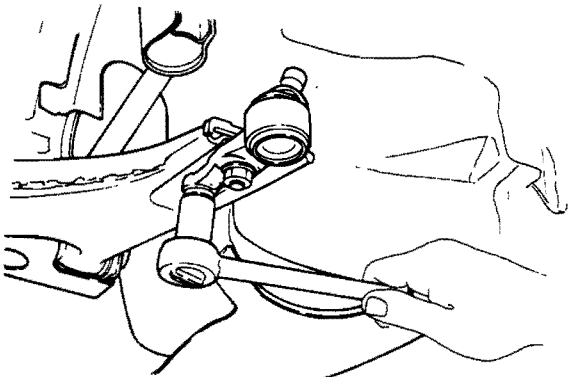
REMOVAL AND INSTALLATION

Ball Joint**Removal**

1. Raise vehicle on a hoist. Refer to Section 10-04.
2. Remove the tire and wheel assembly.
3. Remove ball joint clamp bolt from steering knuckle.

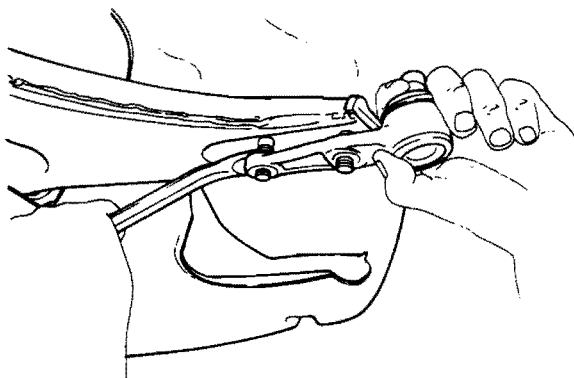
REMOVAL AND INSTALLATION (Continued)

5. Remove two ball joint retaining bolts from control arm.



F5495-A

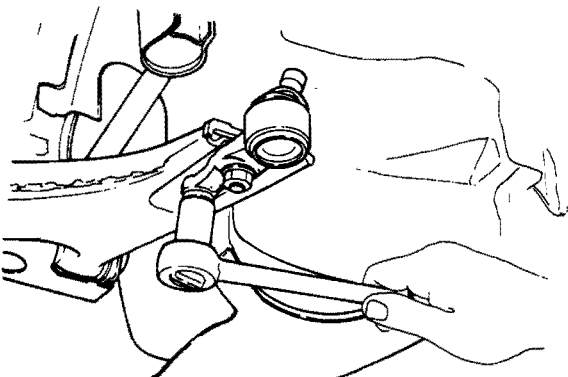
6. Using a small pry bar, pry ball joint off control arm.



F5496-A

Installation

1. Install ball joint to control arm. Tighten bolts to 93-117 N·m (69-86 lb-ft).



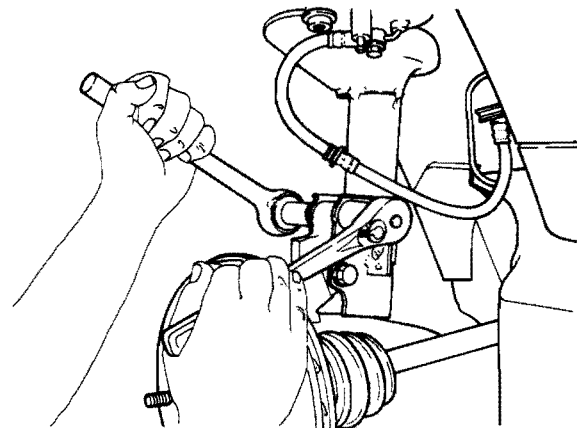
F5495-A

2. Raise lower control arm and install ball joint stud in spindle.

3. Install ball joint clamp bolt in spindle. Tighten the ball joint clamp bolt to 43-54 N·m (32-40 lb-ft).
4. Install the tire and wheel assembly. Tighten lug nuts to 90-120 N·m (65-88 lb-ft).
5. Lower vehicle.

Strut and Spring**Removal**

1. Raise vehicle on a hoist. Refer to Section 10-04.
2. Remove the tire and wheel assembly.
3. Remove the brake caliper and support it from the coil spring. Refer to Section 12-20.
4. Paint a white aligning mark on the inside of the strut mounting block.
5. Loosen and remove the steering knuckle to strut attaching bolts and nuts.



F5497-A

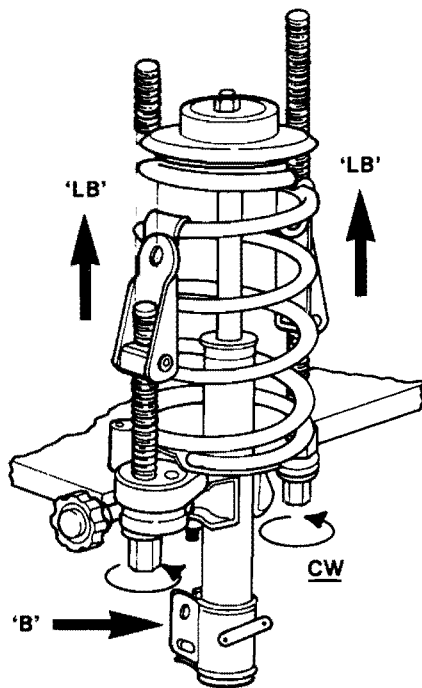
6. Remove the U-clip from the brake line hose and slide it out of its bracket on the strut.
7. Remove the strut mount nuts from the strut tower.
8. Remove the spring and shock absorber assembly from the vehicle.
9. Compress the spring with Rotunda Spring Compressor 086-00029 or equivalent.
10. Remove the strut rod nut.
11. Gradually release the spring compressor.
12. Remove the mounting block, upper spring seat, bump stopper, coil spring and lower spring seat from strut.

Installation

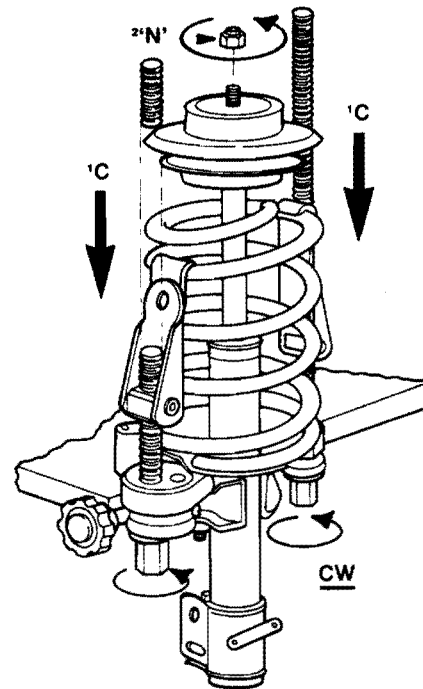
1. Install the lower spring seat, coil spring, bump stopper, upper spring seat and mounting block on the strut.

REMOVAL AND INSTALLATION (Continued)

2. Compress the spring with Rotunda Spring Compressor 086-00029 or equivalent.



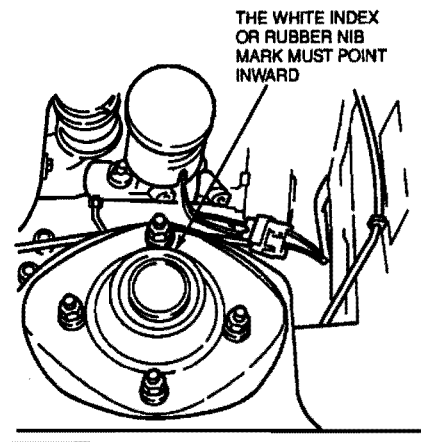
1. REMOVE STRUT FROM CAR
2. CLAMP STRUT IN VISE WITH LOWER BRACKET (B) FACING THE BENCH
3. SET CAMS
4. USE 4° HOLE AND INSTALL LONG BOLTS (LB) AND HOOKS



1. FIND CENTER OF FREEPLAY AND LOCK CAMS
2. COMPRESS SPRING (C) MOVING SIDE TO SIDE
3. WHEN TOP MOUNT IS UNLOADED, REMOVE ROD NUT (N)
4. SET MOUNT ON BENCH

F5855-A

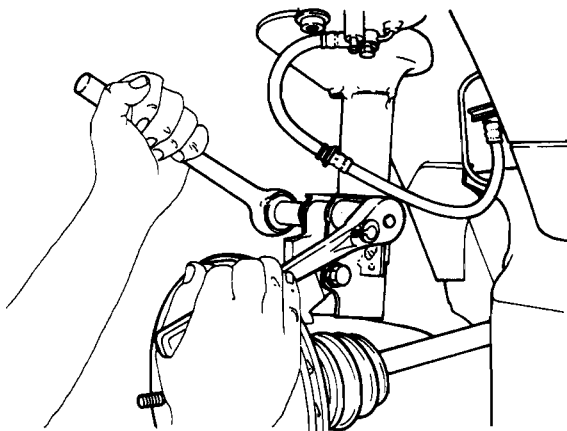
3. Install the strut rod nut. Tighten to 29-36 N·m (22-37 lb-ft).
 4. Gradually release the spring compressor.
 5. Install the strut and spring assembly in strut tower.
 6. Install the four strut attaching nuts. Tighten to 23-29 N·m (17-22 lb-ft).
- NOTE: Be sure that the white aligning mark faces the center of the vehicle.



F5891-A

REMOVAL AND INSTALLATION (Continued)

7. Install the steering knuckle to strut, install attaching bolts and nuts. Tighten the steering knuckle to strut attaching bolt to 93-117 N·m (69-86 lb-ft).

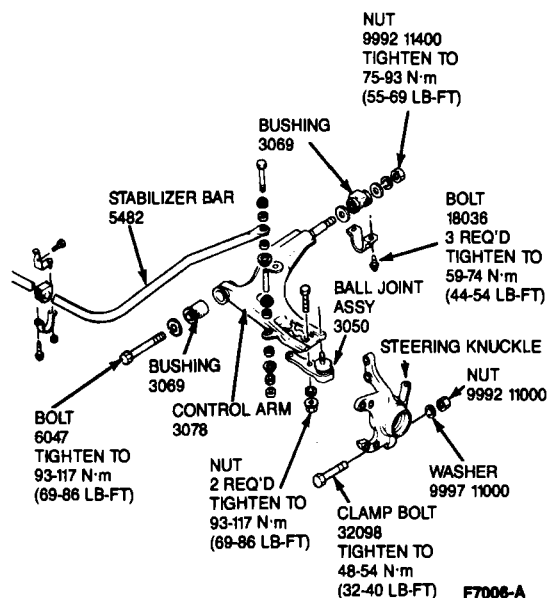


F5497-A

8. Install the brake caliper and brake hose in bracket. Refer to Section 12-20.
9. Install the tire and wheel assembly. Tighten lug nuts to 90-120 N·m (65-88 lb-ft).
10. Lower vehicle.

Control Arm**Removal**

1. Raise vehicle on a hoist. Refer to Section 10-04.
2. Remove tire and wheel assembly.
3. Disconnect stabilizer bar from control arm, if equipped.
4. Remove ball joint clamp bolt.
5. Remove control arm front retaining bolt.
6. Remove control arm rear bracket and retaining bolts.
7. Remove control arm.

**Installation**

1. Position control arm. Loosely install front retaining bolt.
2. Install control arm rear retaining bracket and bolts. Tighten retaining bolts to 59-74 N·m (44-54 lb-ft).
3. Tighten front retaining bolt to 93-117 N·m (69-86 lb-ft).
4. Install ball joint to steering knuckle. Tighten clamp bolt to 43-54 N·m (32-40 lb-ft).
5. Install tire and wheel assembly. Tighten lug nuts to 90-120 N·m (65-88 lb-ft).
6. Lower vehicle.

Steering Knuckle

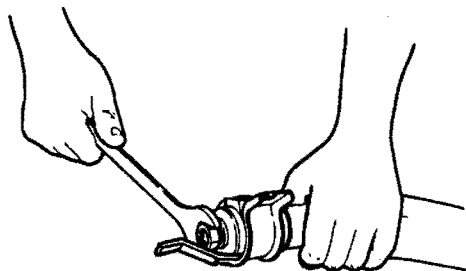
Refer to Section 11-10 for replacement procedure.

DISASSEMBLY AND ASSEMBLY**Control Arm****Disassembly**

1. Remove bolt retaining ball joint to control arm.

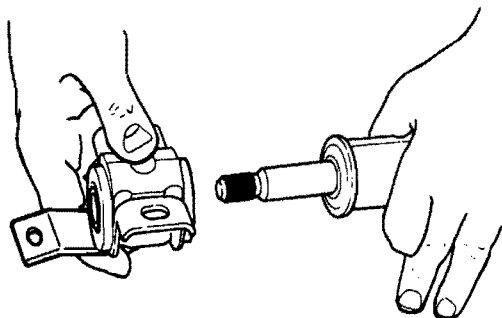
DISASSEMBLY AND ASSEMBLY (Continued)

2. Remove the rear bushing retaining nut and washer.



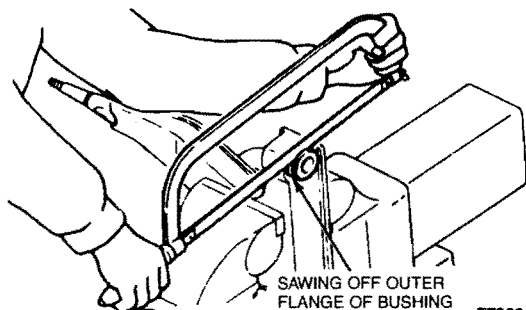
F6305-A

3. Remove the rear bushing.



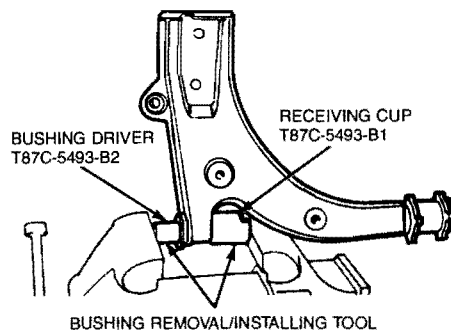
F6306-A

4. Using a hacksaw, saw off the rear flange of the front control arm bushing.



F7029-A

5. Use a vise and Bushing Driver T87C-5493-B2 and Receiving Cup T87C-5493-B1 or equivalent to press out the front control arm bushing.



Assembly

1. Use a vise and Bushing Driver T87C-5493-B2 and Receiving Cup T87C-5493-B1 or equivalent to press the front bushing into the control arm.
2. Install rear bushing to control arm.
3. Install washer and retaining nut. Tighten nut to 75-93 N·m (55-69 lb-ft).
4. Install ball joint to control arm. Tighten retaining bolt to 93-117 N·m (69-86 lb-ft).

SPECIFICATIONS

TORQUE SPECIFICATIONS

Description	N·m	Lb-Ft
Control Arm—Front Bolt	93-117	69-86
Control Arm—Rear Nut	75-93	55-69
Control Arm Bracket—Bolt	39-74	44-54
Ball Joint to Control Arm—Bolt	93-117	69-86
Ball Joint—Clamp Bolt	43-54	32-40
Steering Knuckle to Strut—Bolt	93-117	69-86
Strut Rod—Nut	29-36	22-27
Strut Assembly to Body—Nut	23-29	17-22
Wheel Lug Nut	90-120	65-88

SPECIAL SERVICE TOOLS

Tool Number	Description
T85M-3395-A	Tie Rod End Separator
T87C-5493-B1	Receiving Cup
T87C-5493-B2	Bushing Driver

ROTUNDA EQUIPMENT

Model	Description
086-00029	Spring Compressor

SECTION 14-32 Suspension, Rear

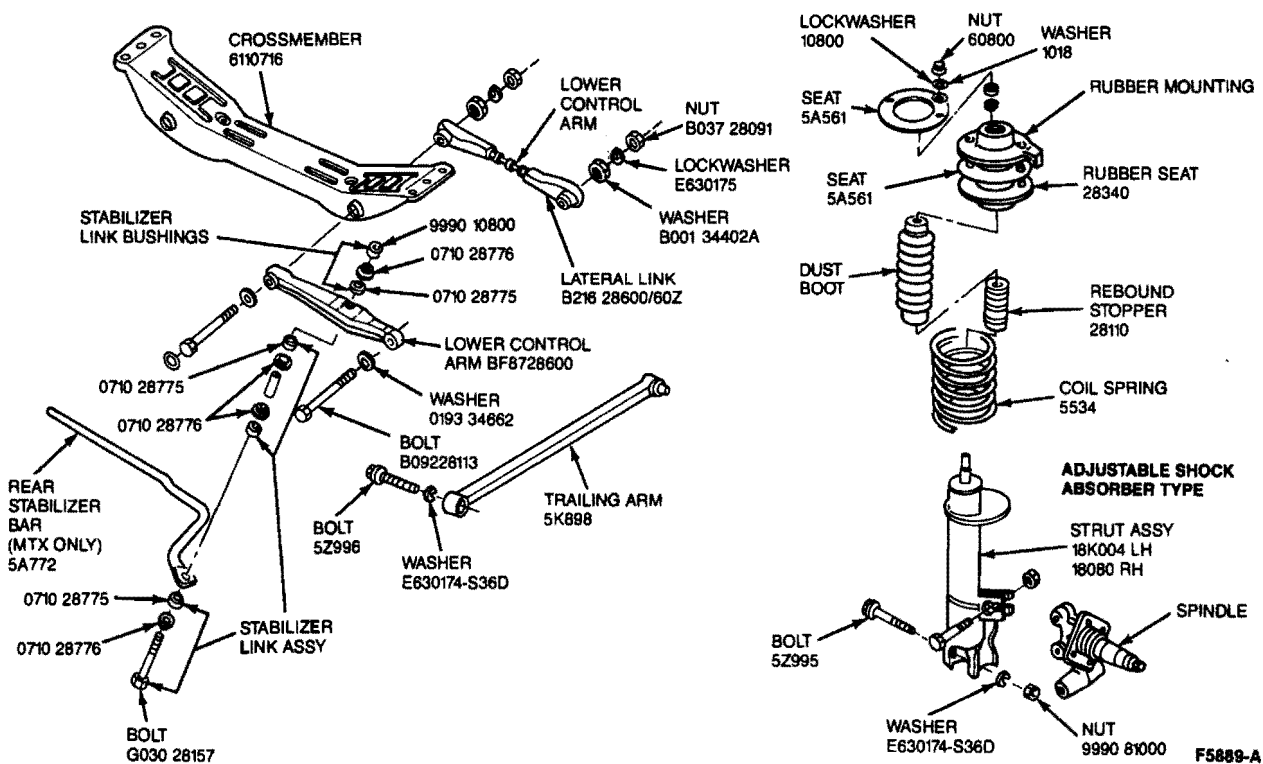
SUBJECT	PAGE	SUBJECT	PAGE
ADJUSTMENTS.....	14-32-3	REMOVAL AND INSTALLATION (Cont'd.)	
DESCRIPTION.....	14-32-1	Strut and Spring, Rear.....	14-32-4
REMOVAL AND INSTALLATION		SPECIAL SERVICE TOOLS.....	14-32-11
Control Arms and Trailing Arm.....	14-32-7	SPECIFICATIONS.....	14-32-11
Spindle.....	14-32-6	VEHICLE APPLICATION.....	14-32-1

VEHICLE APPLICATION

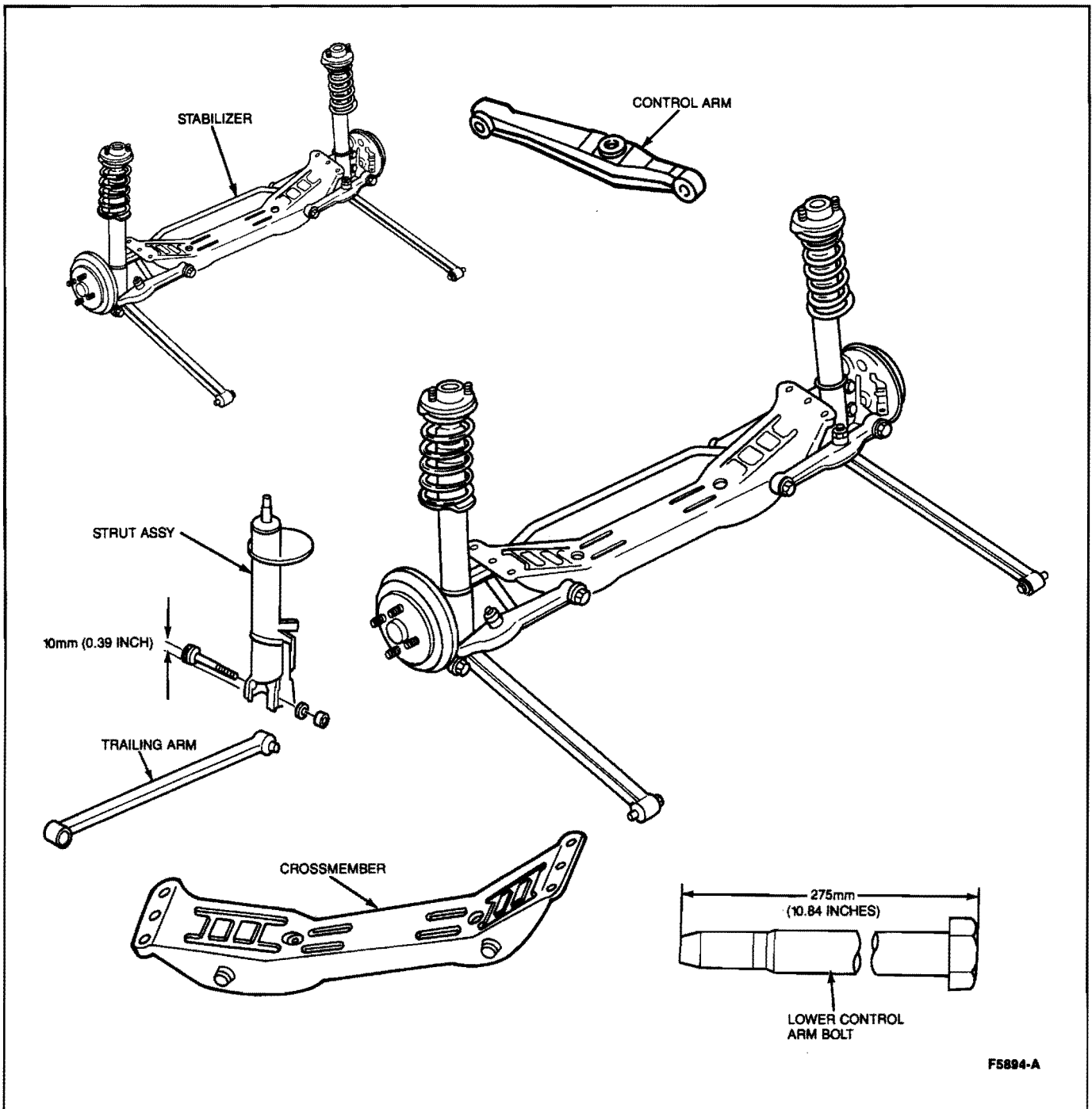
Capri.

DESCRIPTION

The rear suspension is fully independent utilizing rear MacPherson struts at each wheel. Rear strut towers locate the springs and strut. A forged rear spindle bolts to the strut double lower control arms and a single trailing arm locate the rear suspension.



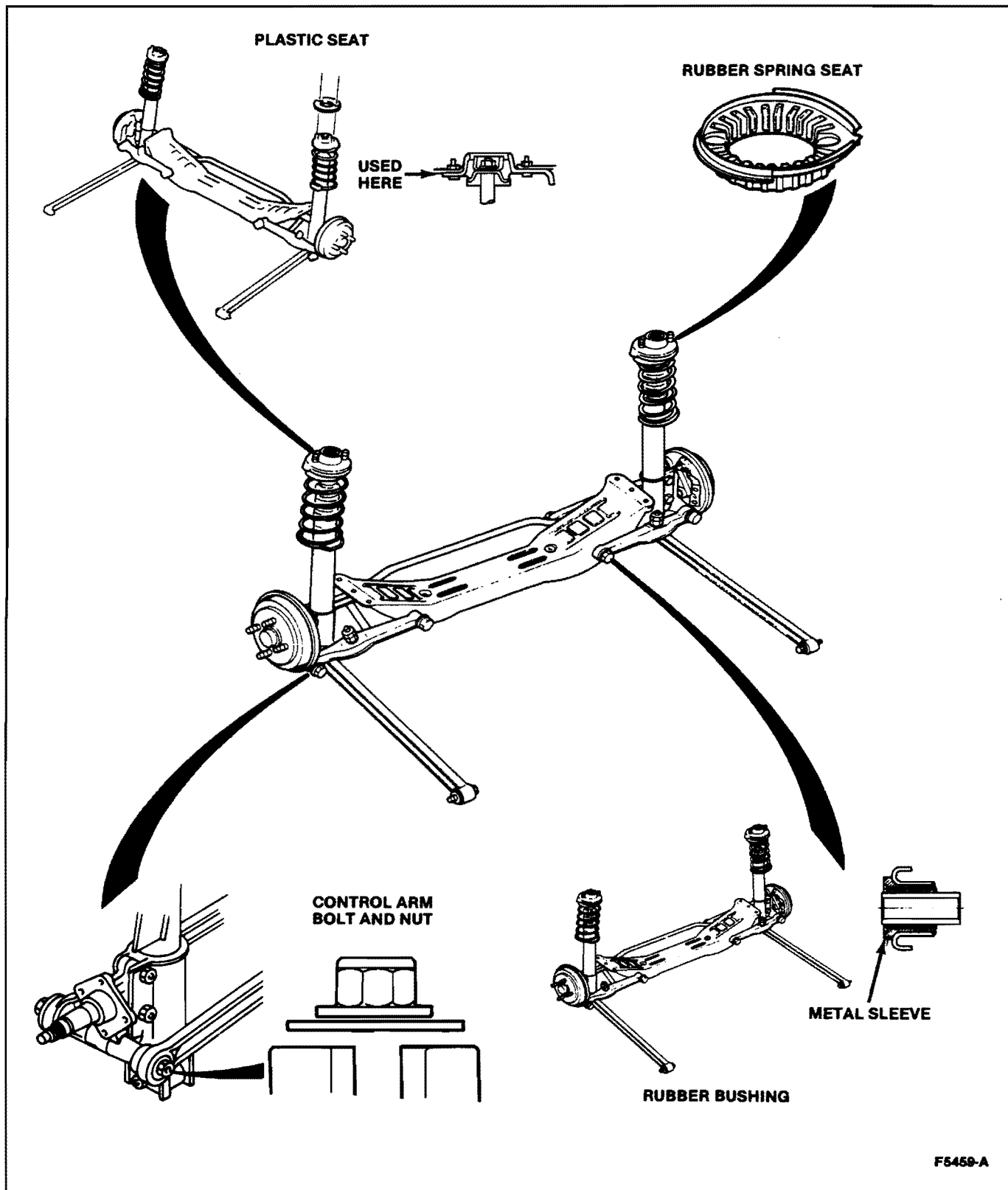
DESCRIPTION (Continued)



Both the control arm and the trailing arm have rubber bushings at each end. The control arms are attached to the rear crossmember and also to the spindle with a common bolt at each end. The trailing arm bolts to the strut and a bracket on the floorpan.

NOTE: Never attempt to heat, quench, or straighten any rear suspension part. Replace with a new part.

DESCRIPTION (Continued)



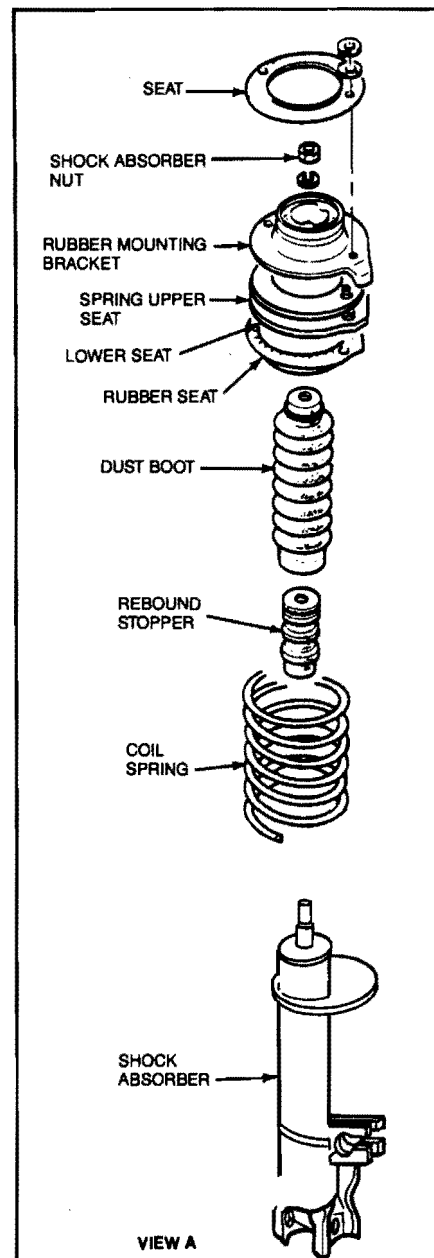
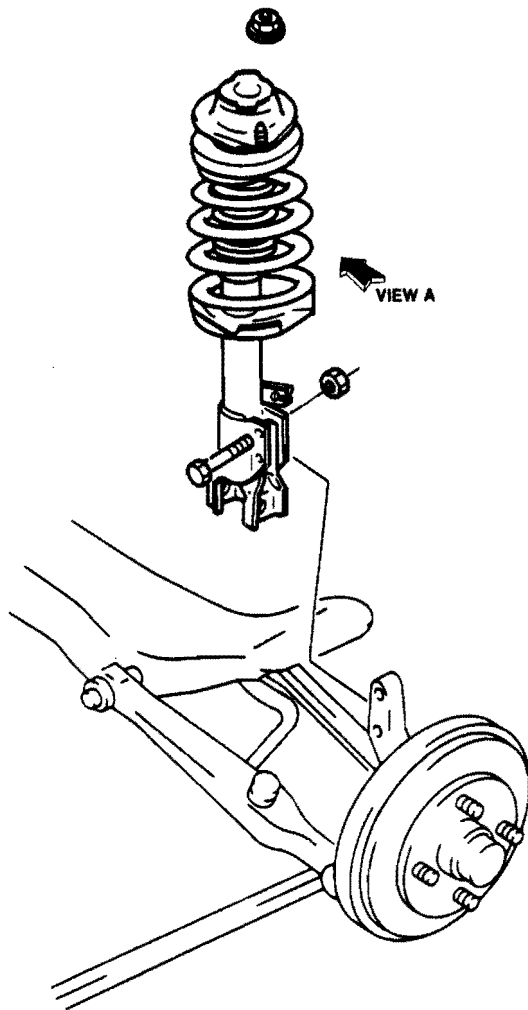
ADJUSTMENTS

Refer to Section 14-01.

REMOVAL AND INSTALLATION

Strut and Spring, Rear

Rear suspension parts such as control arms, trailing arms and spindles are normally only replaced when the part has been damaged or when the vehicle has been in an accident. If a suspension part has been damaged, be sure to check the underbody dimensions of the vehicle. If the underbody dimensions are not in alignment, the vehicle must be straightened before the suspension components are reinstalled.



F5892-A

Removal

1. Remove the tire and wheel assembly.

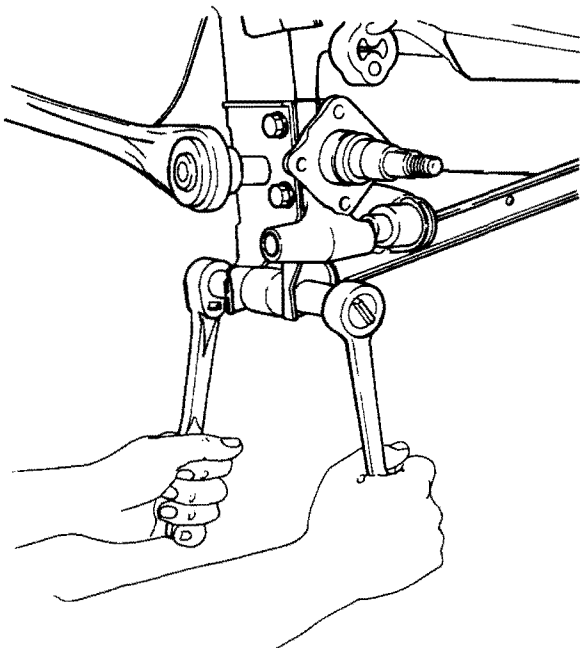
Copyright © 1990, Ford Motor Co.

2. Remove the rear disc brake caliper and rotor assembly. Refer to Section 12-25.

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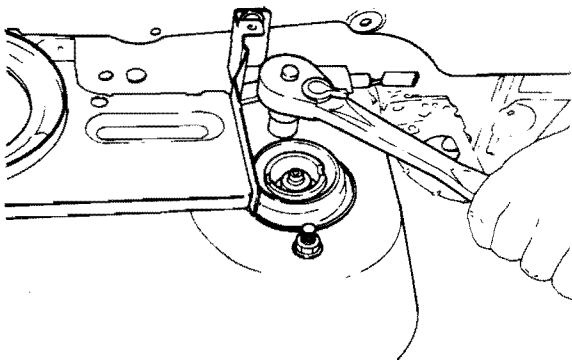
REMOVAL AND INSTALLATION (Continued)

3. Loosen the trailing arm bolt and the spindle to shock absorber attaching bolts.



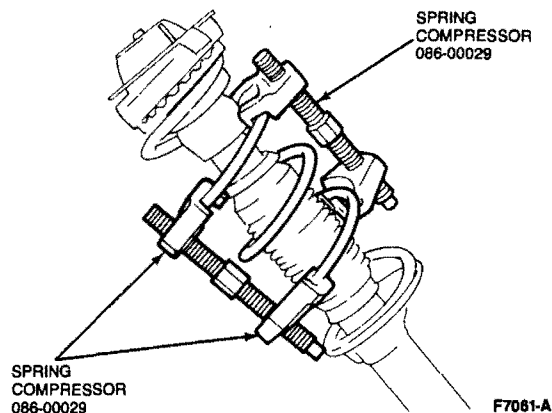
F5490-A

4. Remove the trailing arm attaching bolts and spindle attaching bolts.
5. Paint a white index mark on the strut rubber mounting bracket.
6. Remove the strut attaching nuts from inside the vehicle.



F5472-A

7. Compress the coil spring using Spring Compressor T81P-5310-A, Rotunda Spring Compressor 086-00029 or equivalent.

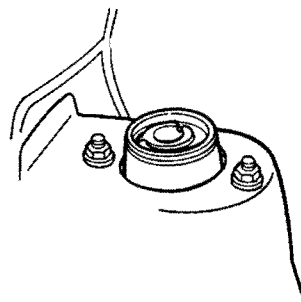


F7081-A

8. Remove the strut rod nut while the spring is compressed and remove the rubber mounting bracket, spring upper seat, lower seat and the rubber spring seat.
9. Slowly release the coil spring and remove the spring compressor.
10. Remove the coil spring, dust boot and rebound bumpers.

Installation

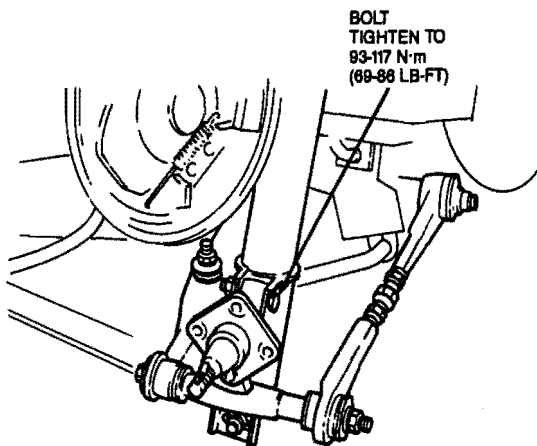
1. Install the rebound bumpers and dust boot on the strut.
2. Compress and install the coil spring on the strut. Lubricate strut rod with Long-Life Lubricant C1AZ-19590-BA or equivalent.
3. Install the rubber seat, spring upper seat with rubber mounting bracket, and strut rod nut on the strut. Tighten to 55-68 N·m (40-50 lb·ft).
4. Release the Spring Compressors, T81P-5310-A, Rotunda 086-00029 or equivalent.
5. Install the strut in the strut tower.



F5893-A

REMOVAL AND INSTALLATION (Continued)

6. Install the spindle to strut mounting bolts. Tighten the bolts to 93-117 N·m (69-86 lb-ft). Final tightening must be done with suspension loaded.

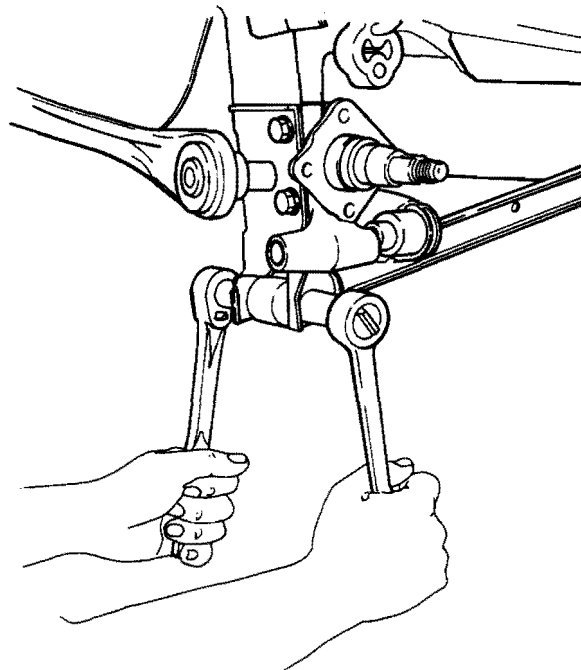


F7009-A

7. Install the rear brake assembly. Refer to Section 12-25.
8. Install the tire and wheel assembly.

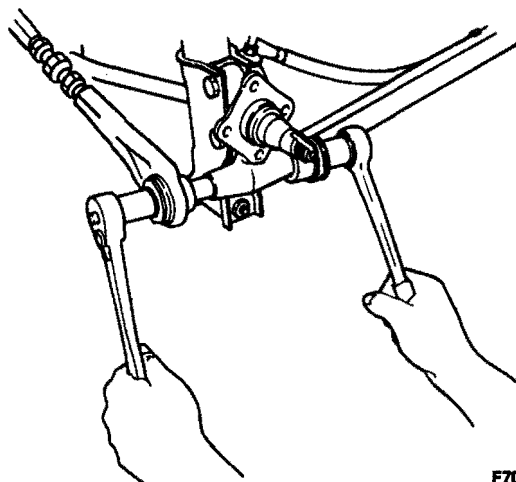
Spindle**Removal**

1. Remove the tire and wheel assembly.
2. Remove the rear disc brake caliper and rotor assembly. Refer to Section 12-25.
3. Loosen the spindle to strut attaching bolts.



F5490-A

4. Loosen the outer rear control arm common bolt and nut.

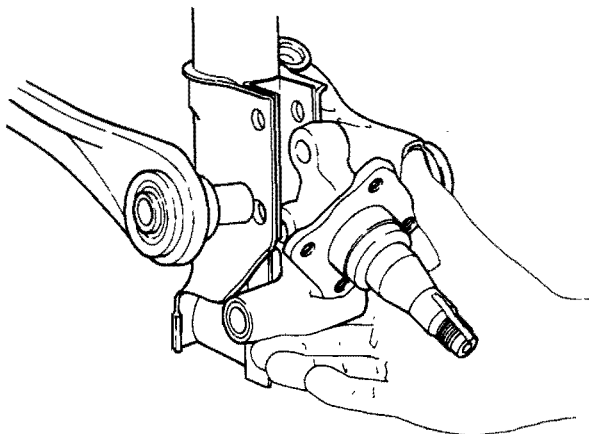


F7010-A

5. Remove the spindle to strut mounting bolts and the common control arm bolt.

REMOVAL AND INSTALLATION (Continued)

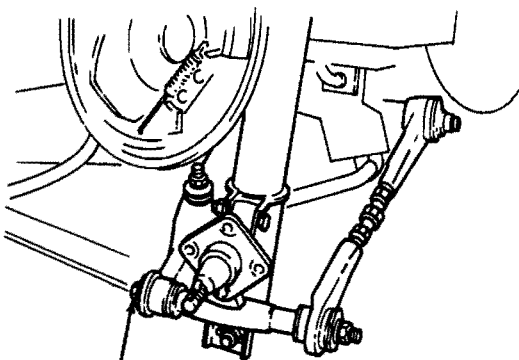
6. Remove the spindle from the strut.



F5480-A

Installation

1. Install the spindle in the strut.
2. Install the strut to spindle attaching bolts.
3. Install the common control arm bolt. Tighten to 93-117 N·m (69-86 lb-ft).



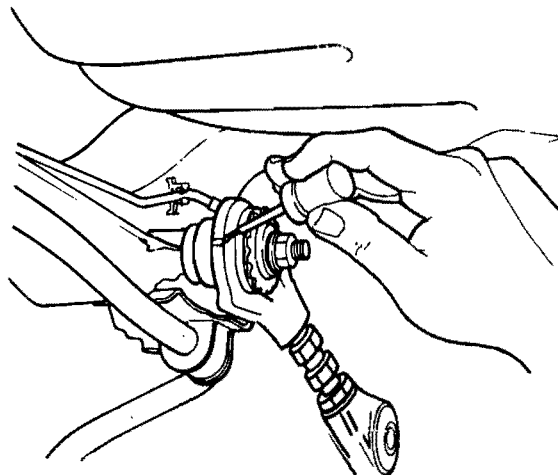
BOLT
TIGHTEN TO
93-117 N·m
(69-86 LB-FT)

F7011-A

4. Tighten the spindle to strut bolts to 93-117 N·m (69-86 lb-ft). Final tightening must be done with suspension loaded.
5. Install the rear brake assembly. Refer to Section 12-25.
6. Install the wheel and tire assembly.

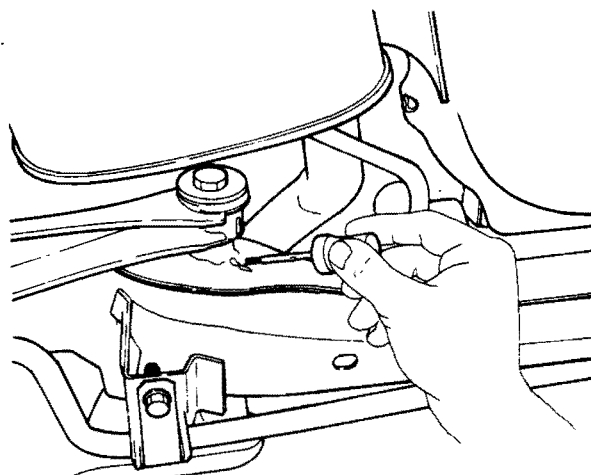
Control Arms and Trailing Arm**Removal**

1. Remove the wheel and tire assembly.
2. Remove rear disc brake caliper and rotor assembly. Refer to Section 12-25.
3. Paint an aligning mark on each control arm and control arm bushing.



F7012-A

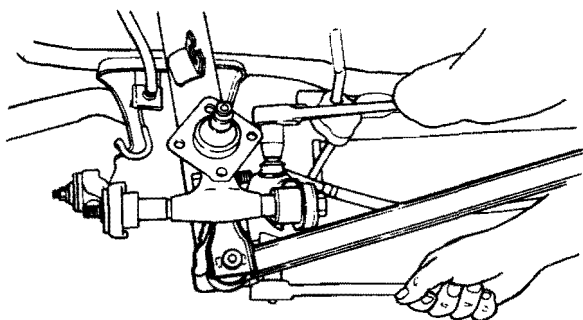
4. Paint an aligning mark on each side of trailing arm and crossmember.



F5483-A

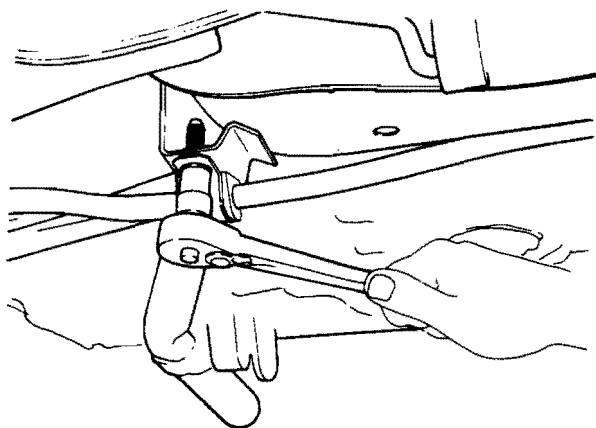
REMOVAL AND INSTALLATION (Continued)

5. Remove the stabilizer link assembly.



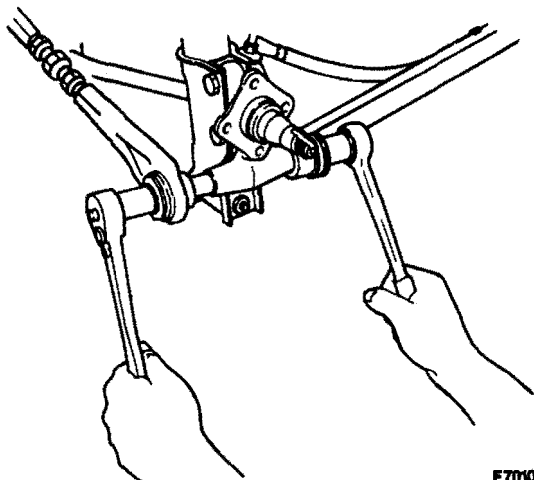
F5484-A

6. Loosen and remove the stabilizer bar, bushings and the stabilizer.

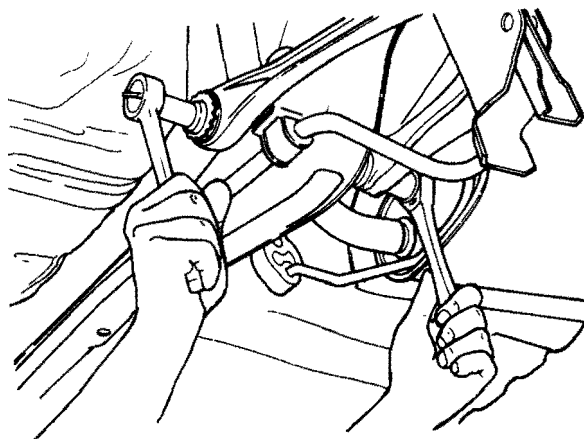


F5485-A

7. Loosen both inner and outer lower control arm bolts.

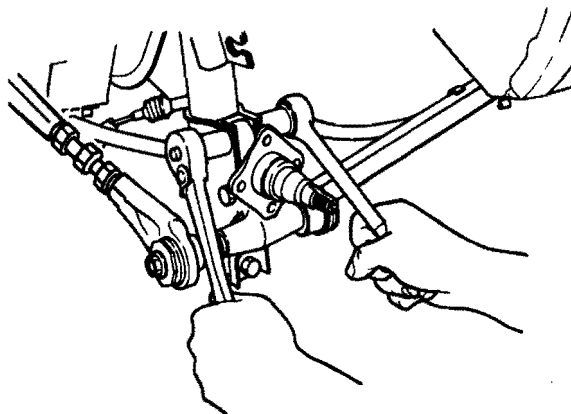


F7010-A



F5487-A

8. Loosen the spindle to strut attaching bolts.

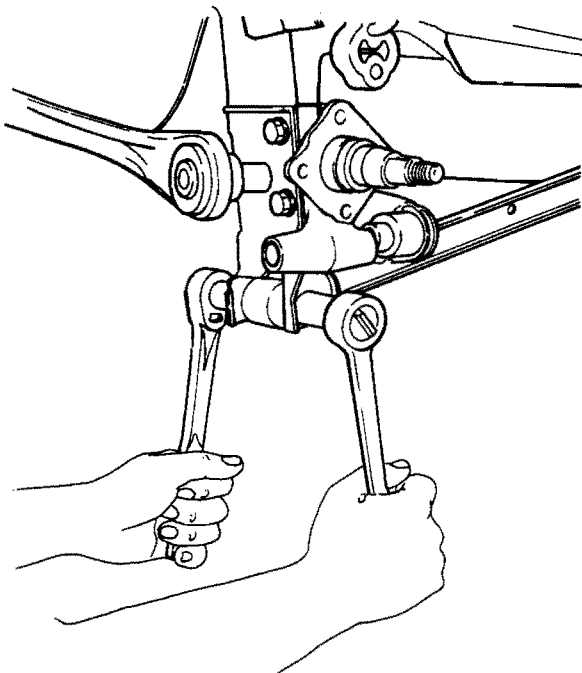


F7013-A

9. Remove the parking brake attaching bolt from the rear trailing assembly.

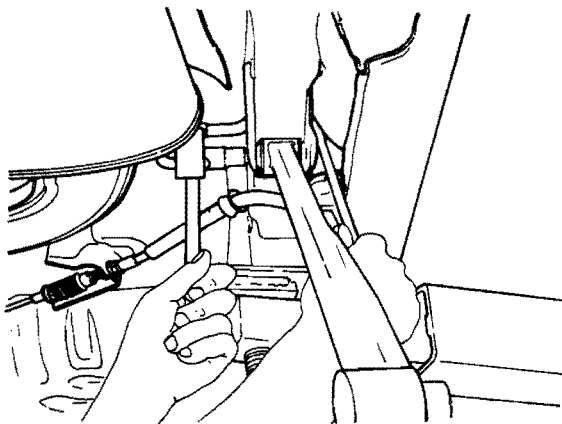
REMOVAL AND INSTALLATION (Continued)

10. Loosen the trailing arm to strut attaching bolts.



F5490-A

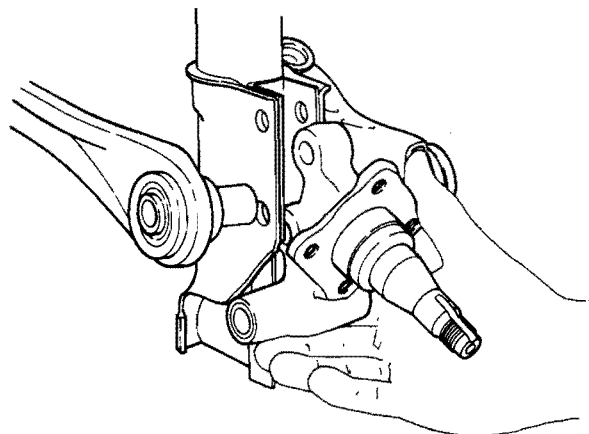
11. When all control arm and trailing arm bolts are loosened, remove all bolts and remove both the control arms and the trailing arm.



F5491-A

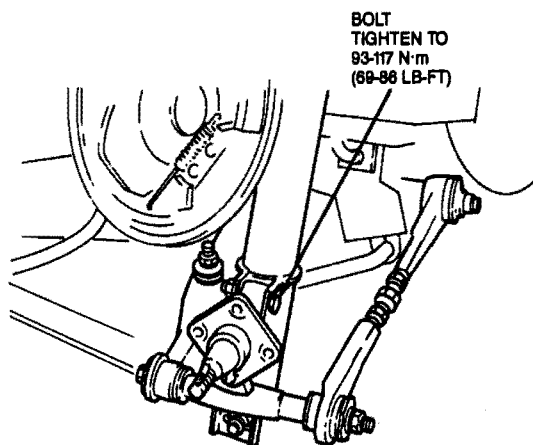
Installation

1. Mount control arm and trailing arm on the rear crossmember and hand tighten the bolts. Ensure LH and RH arms are in correct position.
2. Connect both control arms with the outer control arm bolt but do not install the spindle yet. Raise both control arms so the painted aligning stripes line up and tighten the rear control arm bolts.
3. Install the spindle in the strut.



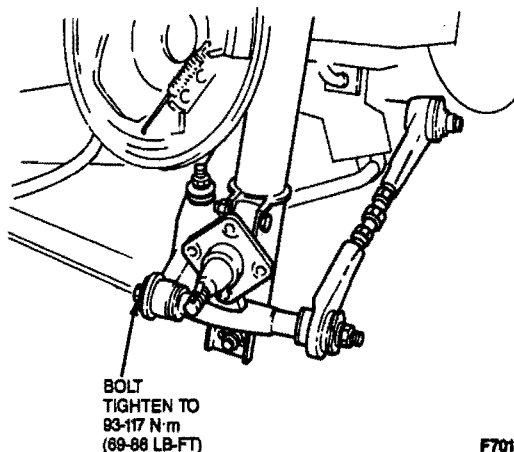
F5480-A

4. Tighten the spindle to strut attaching bolts to 93-117 N·m (69-86 lb-ft).



F7009-A

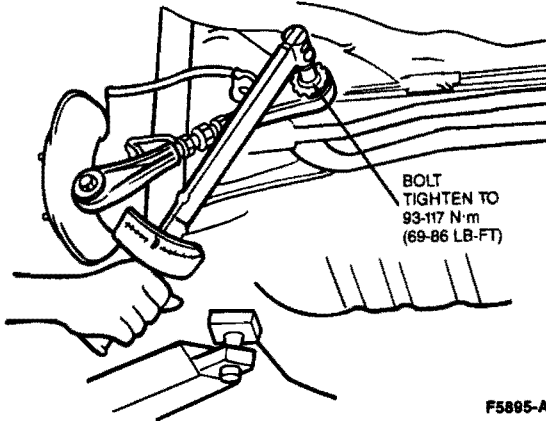
5. Install and tighten the control arm to spindle attaching bolt to 93-117 N·m (69-86 lb-ft).



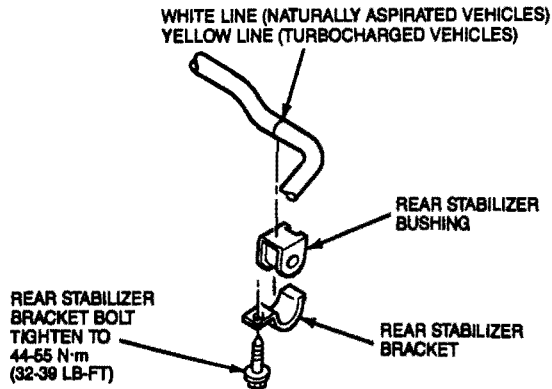
F7011-A

REMOVAL AND INSTALLATION (Continued)

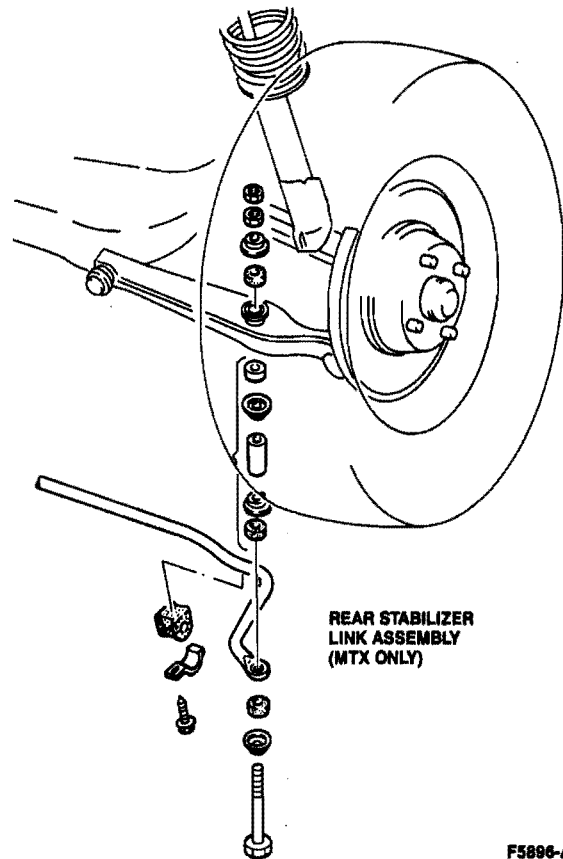
6. Tighten the inner control arm bolt to 93-117 N·m (69-86 lb-ft).



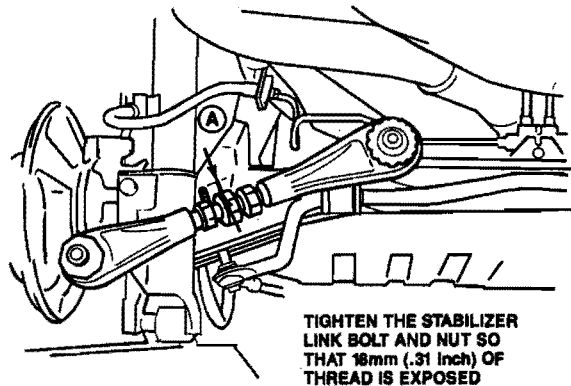
7. Loosely install the rear stabilizer bar in the stabilizer bushing.
NOTE: Be sure the alignment stripe painted on the stabilizer bar aligns with the bushings.
 8. Do not fully tighten the bracket bolts yet.



9. Install the stabilizer link assembly.



10. Tighten the stabilizer bushing bracket bolts to 45-55 N·m (32-39 lb-ft).
 11. Tighten the stabilizer link bolt until 18mm of thread extends beyond the nut. Final tightening must be done with suspension loaded.



12. Install the rear brake assembly. Refer to Section 12-25.
 13. Install the wheel and tire assembly.

SPECIFICATIONS**TORQUE SPECIFICATIONS**

Description	Nom	Lb-Ft
Control Arm Bolt	93-117	89-88
Spindle to Strut Bolts	93-117	69-88
Control Arm to Spindle	93-117	69-88
Inner Control Arm Bolts	93-117	69-88
Rear Stabilizer Bracket	44-55	32-39

SPECIAL SERVICE TOOLS

Tool Number	Description
T81P-5310-A	Spring Compressor

ROTUNDA EQUIPMENT

Model	Description
088-00029	Spring Compressor