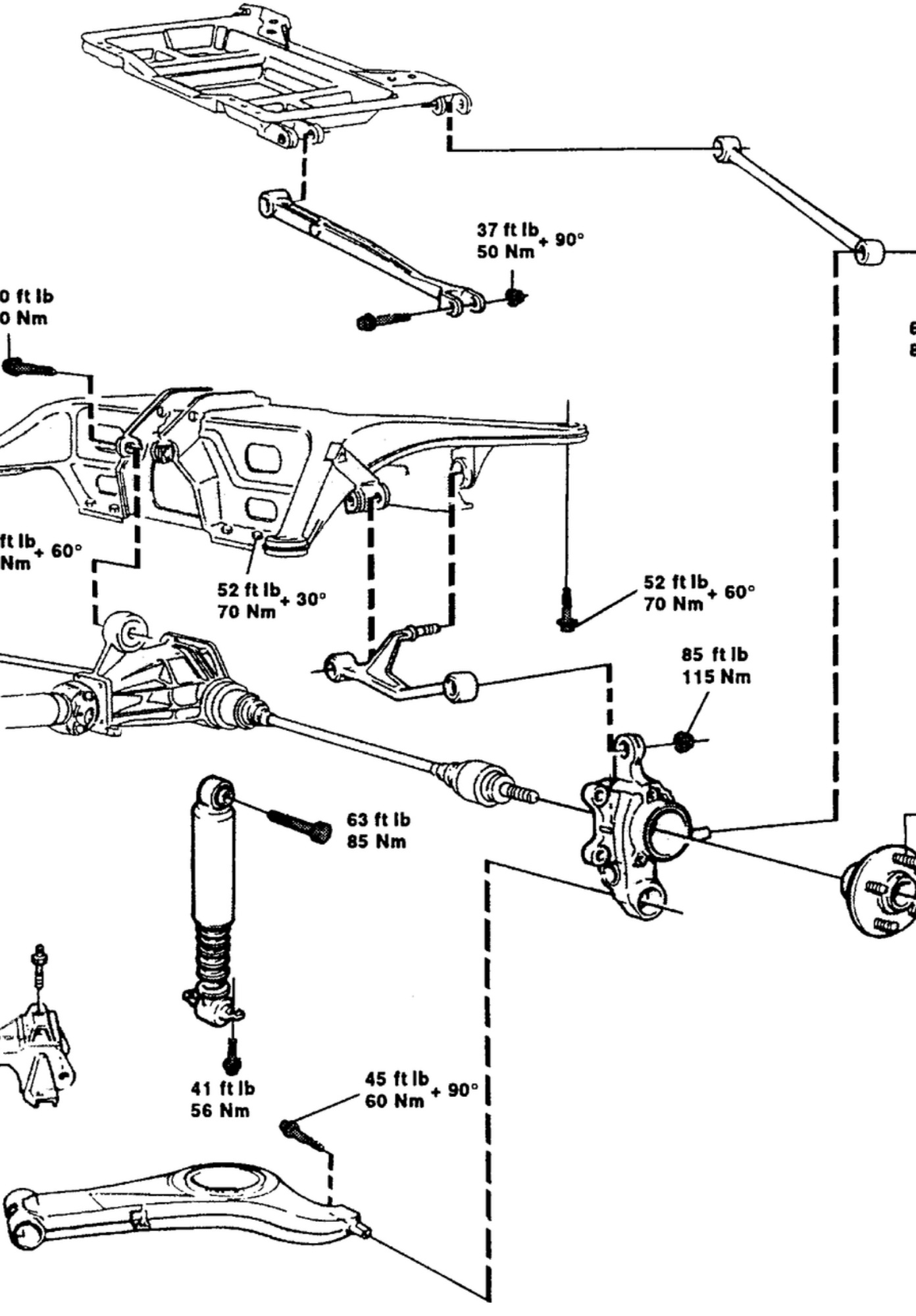
37 ft lb
50 Nm + 90°
0 ft lb
0 Nm
ft lb
Nm + 60°
52 ft lb
70 Nm + 30°
52 ft lb
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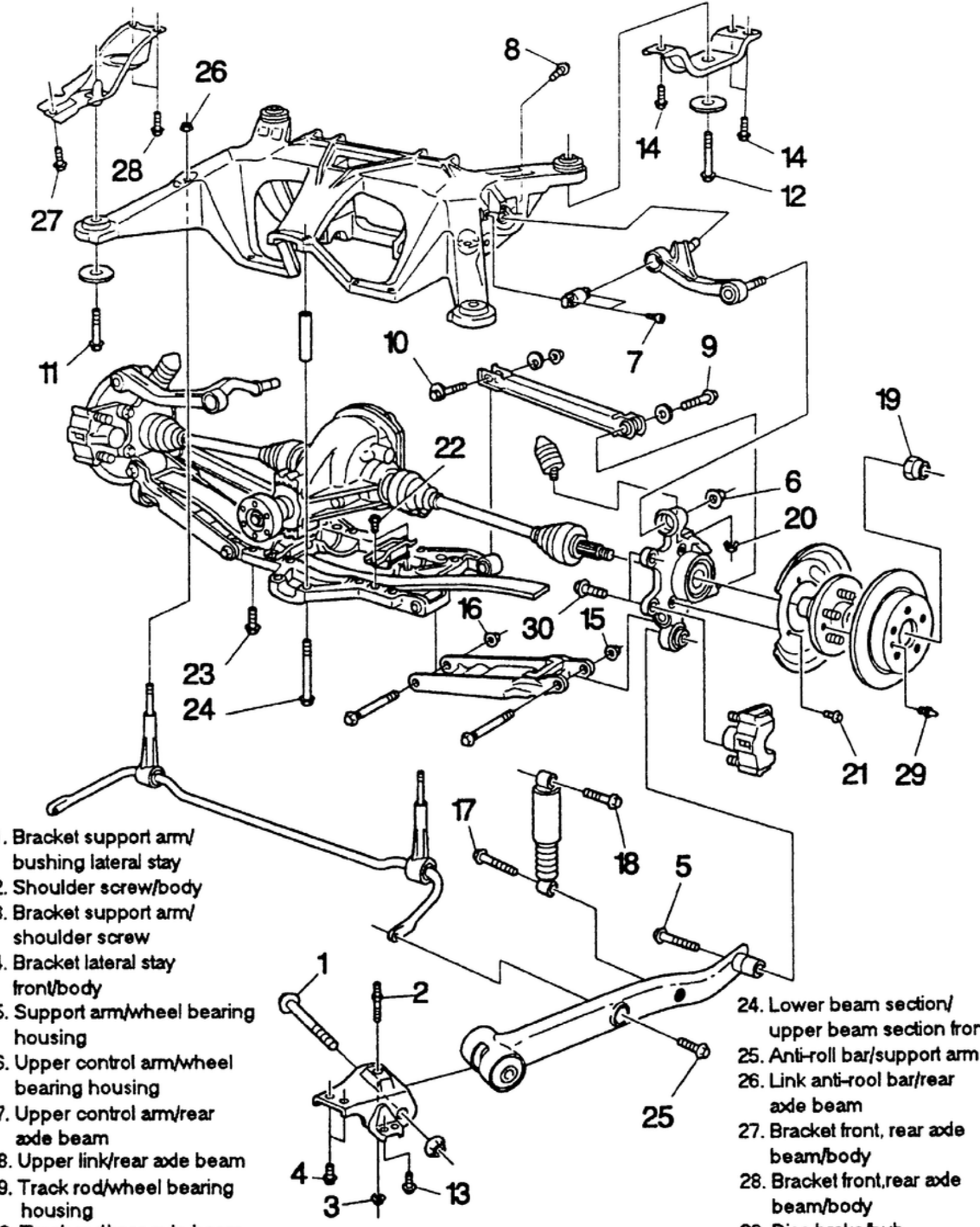
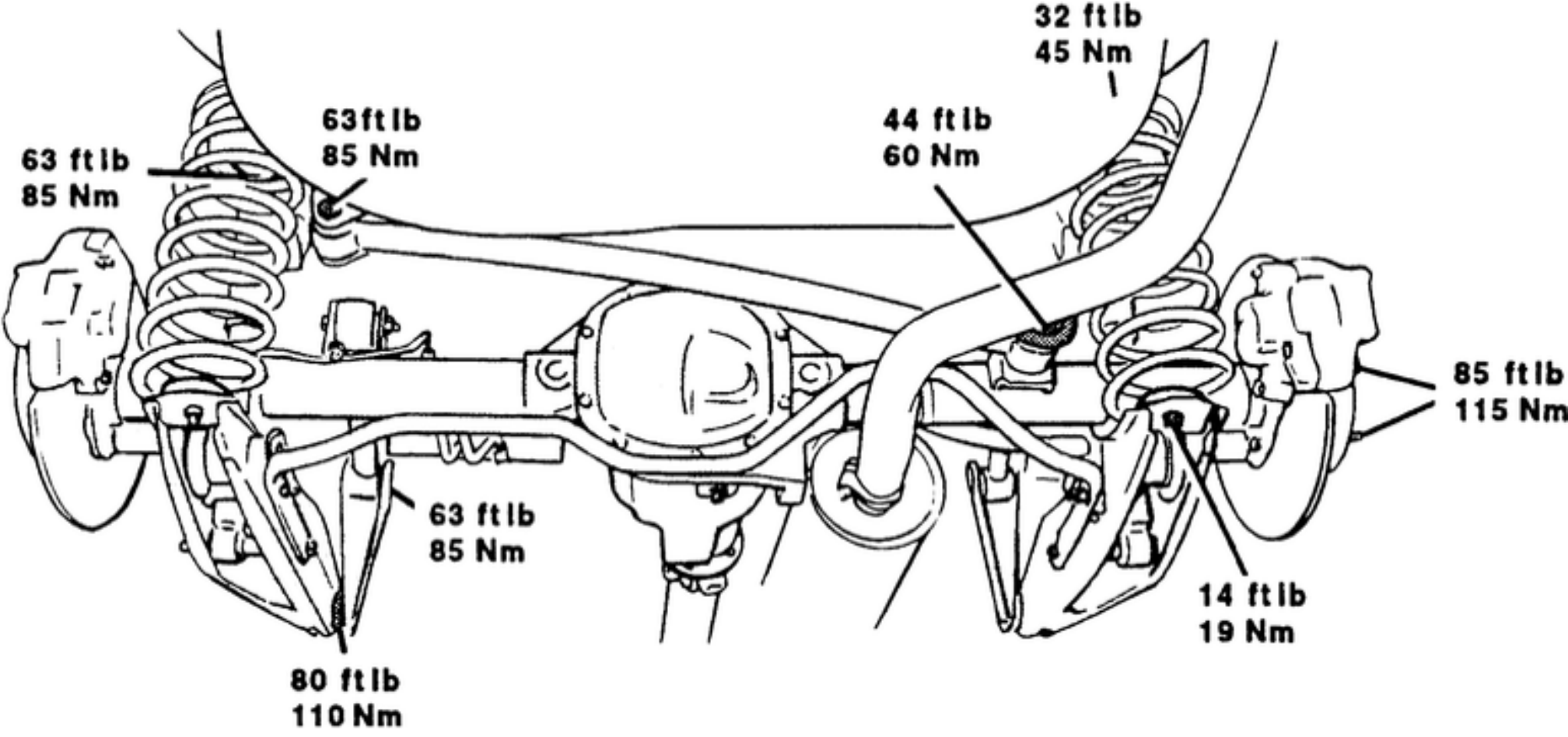
85 ft lb
115 Nm
63 ft lb
85 Nm
41 ft lb
56 Nm
45 ft lb
60 Nm + 90°



. Bracket support arm/ bushing lateral stay
. Shoulder screw/body
. Bracket support arm/ shoulder screw
. Bracket lateral stay front/body
. Support arm/wheel bearing housing
. Upper control arm/wheel bearing housing
. Upper control arm/rear axle beam
. Upper link/rear axle beam
. Track rod/wheel bearing housing
0. Track rod/rear axle beam
1. Front rear axle beam/body
2. Rear of rear axle beam/body
3. Bracket support arm,outer/body
4. Bracket rear axle beam,rear/body
5. Lower control arm/wheel bearing housing
6. Lower control arm/rear axle beam
7. Shock absorber/support arm
18. Shock absorber/body
19. Rear wheel hub/drive shaft
20. Buffer/wheel bearing housing
21. Protective plate/wheel bearing housing
22. Spring mounting/rear axle beam
23. Lower beam section/upper beam section
24. Lower beam section/ upper beam section fron
25. Anti-roll bar/support arm
26. Link anti-rool bar/rear axle beam
27. Bracket front, rear axle beam/body
28. Bracket front,rear axle beam/body
29. Disc brake/hub guide stud
30. Brake caliper/wheel bearing housing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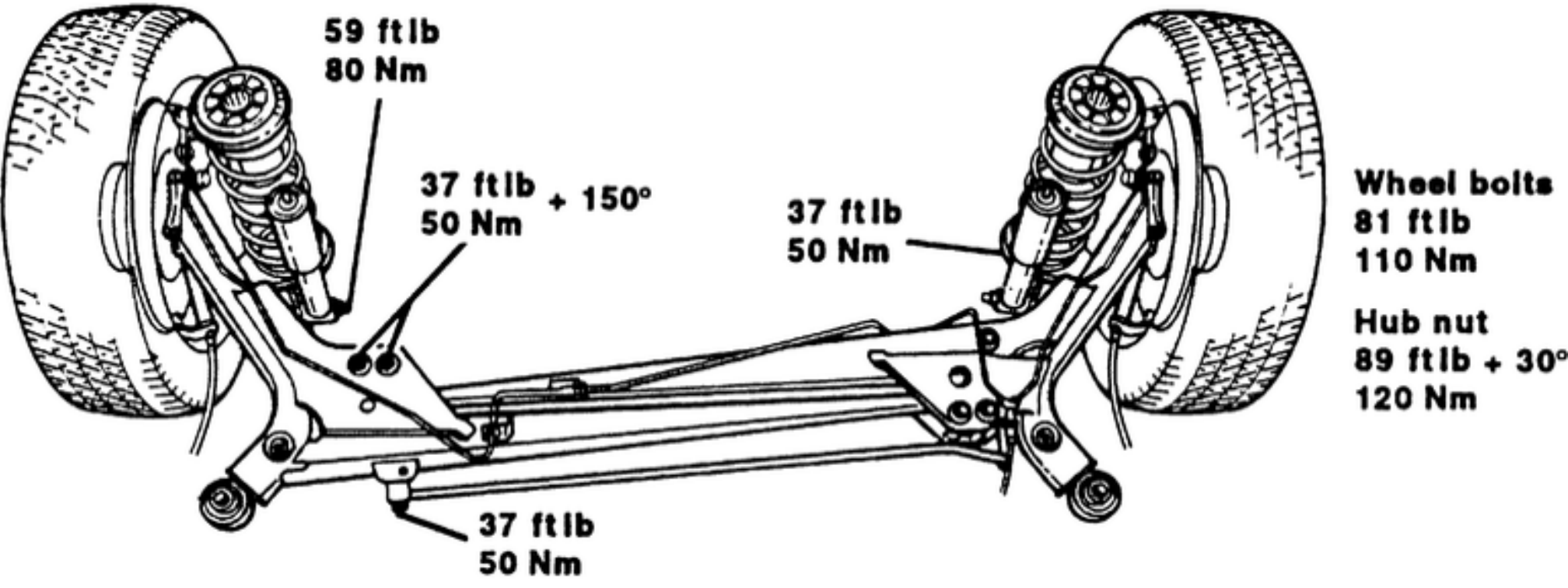
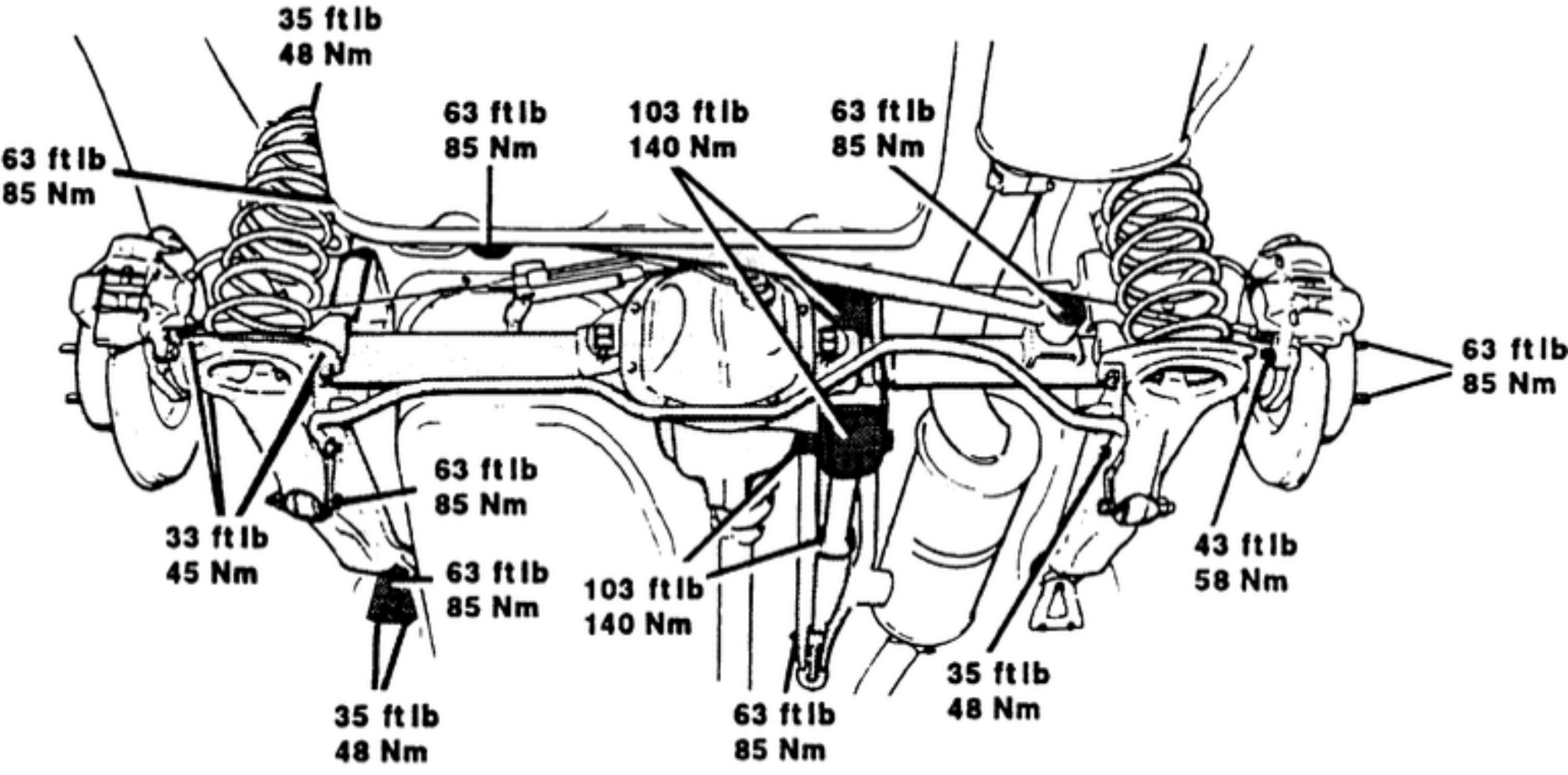
45 Nm
63 ft lb
85 Nm
63 ft lb
85 Nm
44 ft lb
60 Nm
85 ft lb
115 Nm
63 ft lb
85 Nm
14 ft lb
19 Nm
80 ft lb
110 Nm


59 ft lb
80 Nm
37 ft lb
50 Nm
+ 150°
37 ft lb
50 Nm
37 ft lb
50 Nm
Wheel bolts
81 ft lb
110 Nm
Hub nut
89 ft lb + 30°
120 Nm


35 ft lb
48 Nm
63 ft lb
85 Nm
103 ft lb
140 Nm
63 ft lb
85 Nm
63 ft lb
85 Nm
63 ft lb
85 Nm
33 ft lb
45 Nm
63 ft lb
85 Nm
103 ft lb
140 Nm
43 ft lb
58 Nm
35 ft lb
48 Nm
35 ft lb
48 Nm
63 ft lb
85 Nm

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

Except 850, 960 Sedan and 1998 Models

CAUTION
A coil spring compressor is required to remove the spring. Improper removal procedures may cause serious injury.

1. Raise and safely support the vehicle.
2. Remove the rear wheels.
3. Place a hydraulic jack beneath the rear axle housing and raise the housing sufficiently to compress the spring.
4. Install the spring compressor and tighten. Make sure there are at least 3 coils of spring between the attachment points of the compressor.
5. Loosen the nuts for the upper and lower spring attachments.
6. Disconnect the shock absorber at the upper attachment.
7. Lower the jack enough to remove the spring.

To install:

8. Make sure the coil spring is compressed.
9. Position the retaining bolt and inner washer for the upper attachment inside the spring.
10. While holding the outer washer and rubber spacer to the upper body attachment, install the spring and inner washer to the upper attachment sandwiching the rubber spacer.
11. Tighten the retaining bolt to 35 ft. lbs. (48 Nm).
12. Raise the jack and secure the bottom of the spring to the lower attachment with the washer and retaining bolt tightened to 63 ft. lbs. (85 Nm).
13. Slowly remove the spring compressor.
14. Connect the shock absorber to its upper attachment.
15. Install the wheels.
16. Lower the vehicle.

1992–94 960 Sedan

NOTE: To properly remove and install the rear coil springs, the rear support arm assembly must be removed.

1. Raise and support the vehicle safely.
2. Remove the rear wheels and support the arm guards.
3. Remove the retaining bolts at the front and rear of the support arm.
4. Separate the rear end of the support arm from the wheel bearing housing.
5. Place a jack with fixture 5972 or equivalent under the support arm and raise into place.
6. Remove the retaining bolts at the top of the shock and lower the support arm complete with the spring and shock.

To install:

7. Lift the assembly into place and tighten the upper damper bolt to 62 ft. lbs. (85 Nm).
8. Replace the mounting bolt and nut at the front of the support arm. Tighten the large nut to 51 ft. lbs. (70 Nm), plus 90 degrees of rotation. Tighten the other bolts to 35 ft. lbs. (48 Nm).
9. Tap the support arm in at the rear and tighten the bolt to 44 ft. lbs. (60 Nm), plus 90 degrees rotation.
10. Replace the control arm guard.
11. Install the wheels.
12. Lower the vehicle.

850, C70, S70, and V70 Series Except AWD

1. Raise and safely support vehicle.
2. Remove the wheels.
3. Use a jack to press the trailing arm up to unload the shock absorber.
4. Remove the shock lower mount bolt and pull the shock off of its mount,
5. Lower the jack and remove the spring mounting nut.
6. Remove the spring from the car.

To install:

7. Transfer the rubber spring spacer and lower mount if installing a new spring.
8. Install the spring in the trailing arm recess and center the mount washer guide pin in the hole.
9. Install a new nut and tighten it to 30 ft. lbs. (40 Nm).
10. Position the jack under the trailing and lift it up.
11. Install the shock on the lower mount, making sure that the spring is correctly seated in the upper mount.
12. Tighten the shock nut to 59 ft. lbs. (80 Nm).
13. Install the wheels.
14. Lower the car.

Fig. 1: Support the bottom of the spring perch or the trailing arm before disconnecting the shock absorber

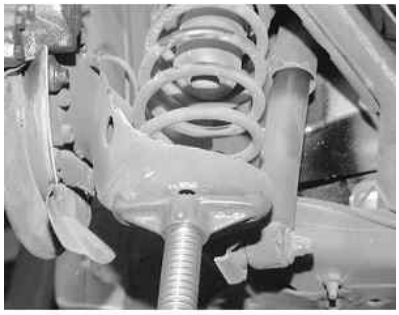


Fig. 2: Remove the shock absorber lower mount retaining nut

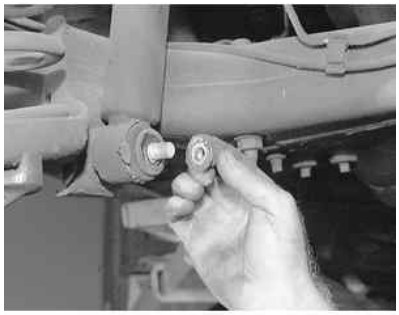


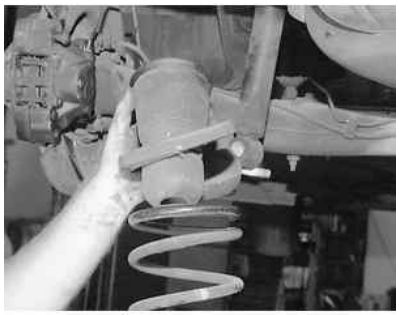
Fig. 3: Make sure the washer does not stick to the shock absorber after the shock is removed

Fig. 4: Pull the shock absorber off of the lower mount

Fig. 5: Remove the spring retaining nut

Fig. 6: Carefully lower the support device and remove the spring from the vehicle

Fig. 7: Make sure you transfer the shock spacer if you are replacing the spring



V70 AWD Models

1. Raise and safely support the vehicle.
2. Press lower control arm using jack or suitable tool to unload the pressure.
3. Remove the rear shocks.
4. Remove the sway bar.
5. Remove the control arm inner and outer mounting nuts.
6. Using a suitable tool, knock the mounting bolts out.
7. Remove the front support arm bolts.
8. Remove the jacking point.
9. Lower the control arm to release the support arm and bracket.
10. Install the jacking point to protect the brake lines.
11. Lower the control arm until spring is fully relieved of pressure, and remove the spring.

To install:

12. Replce the spring rubber inserts if worn.
13. Install the spring in the control arm.
14. Raise the control arm up slightly.
15. Remove the jacking point.
16. Raise the control arm all the way and install the support arm bracket, tighten the bolts to 48 ft. lbs. (65 Nm).
17. Install the jacking point, tighten the bolt to 78 ft. lbs. (105 Nm).
18. Install the outer and inner control arm mounting bolts, tighten the nuts to 59 ft. lbs. (80 Nm).
19. Install the sway bar.
20. Install the shocks.

21. Remove the jack from under the control arm.
22. Lower the vehicle.

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

850, S70, C70 and V70, Except AWD V70 Series

NOTE: The bearing and hub are replaced as a single component. The bearing is not available separately.

1. Raise and safely support vehicle.
2. Remove the wheels.
3. Remove the caliper and the brake line from the mounting clip. When the left brake caliper is removed, the three-way brake line connector mounting bolt must also be removed. Remove the caliper and hang it from the spring to prevent brake hose damage.
4. Back off the parking brake adjustment, so the rotor can be removed.
5. Remove the rotor.
6. Remove the cap, hub nut and hub.

To install:

7. Clean the stub axle thoroughly.
8. Install the hub using a new nut and tighten it to 89 ft. lbs. (120 Nm) plus an additional 30 degrees. Make sure that there is no play in the bearings after installation.
9. Install the dust cap using an appropriate tool.
10. Clean the face of the hub and back side of the rotor where the two mate.
11. Install the rotor and guide pin. Tighten the pin to 7 ft. lbs. (9 Nm).
12. Adjust the parking brake shoes until the disc cannot be turned, then back it off four to six notches.
13. Install the brake caliper.
14. Install the brake line and mounting clips, and the three-way connector on the left-hand side, if applicable.
15. Install the wheels.
16. Lower the vehicle.

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

1995–98 960/S90/V90

NOTE: Multi-Link suspensions require alignment any time the suspension components are disassembled. Installation tightening and torque procedures are critical to correct alignment.

1. Raise and support the vehicle safely. Make sure the front supports are placed as far forward as possible. Check that the rear supports will not interfere with the support arm.
2. Remove the rear wheels.
3. Remove the sway bar from the vehicle.
4. Install compression tool Kent-Moore® No. J-41470 (or equivalent) as follows:
   - A. Attach one end of the tool yoke into the boss on one side of the axle support beam.

     NOTE: There is a boss cast into the support on either side of where the spring is visible from underneath.
   - B. Slide the tool into the boss on the other side of the axle support beam to fully engage the yoke.
   - C. Make sure the tool is seated between the retaining tabs before any suspension components can be removed.
   - D. Make sure the rollers on the ends of the tool are positioned inside the lower control arms.
   - E. Turn the handle to raise the control arms and compress the leaf spring.

     CAUTION
     Do not tighten the tool after the pegs have contacted the axle support beam.
5. Once the spring is compressed, components can be removed.
6. Compress the suspension slightly.
7. Removed the shock absorber mounting bolt from the rear support arm.
8. Press the suspension up to normal position, as if the vehicle were on the ground.
9. Remove the bolts at the front of the support arm bracket.
10. Remove the support arm-to-wheel bearing housing bolt.
11. Loosen the support arm bracket nut a few turns.
12. Tap the support arm off the wheel bearing housing.
13. Remove the support arm bracket nut and the support arm with the bracket attached. Do not remove the support arm-to-bracket through bolt.
14. Remove the track rod-to-wheel bearing housing bolt.
15. Tap the track rod off the wheel bearing housing.
16. Remove the lower control arm-to-wheel bearing housing nut. Tap out the bolt with a brass punch.
17. Loosen the inboard lower control arm mounting nut until approximately 0.04–0.08 in. (1–2mm) of the bolt still protrudes from the nut. Tap the bolt with a brass punch until the nut contacts the lower control arm.
18. Repeat Steps 6–14 to disassemble the opposite side of the suspension.
19. Lower the compression tool and control arms completely. Inspect the spring mountings in the lower control arms. Retain the mountings in the control arms for assembly.
20. Loosen all the lower rear axle support bolts one turn.
21. Remove the two front bolts at the pinion flange.
22. Remove the spacers.
23. Install rear axle retainer 5580 (or equivalent) to the front edge of the differential. Install rear axle retainer 5579 (or equivalent) to the rear edge of the differential.
24. Position a lift or jack against the lower axle support beam.
25. Remove the lower support beam mounting bolts and lower the support beam.

NOTE: Before removing the spring mounting plates, take note of the positioning. Installation must be in the same positions.

26. Remove the spring mounting plates and remove the spring.
27. Check all spring mountings for damage or wear.

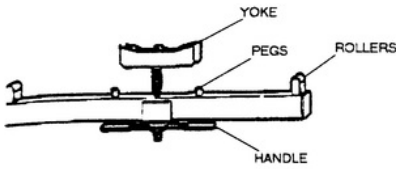
To install:

28. Install the spring. Install the spring mounting plates using new bolts.

NOTE: The leaf spring is marked with a center line.

29. Make sure the spring is centered. Tighten the spring mounting plate bolts alternately to 37 ft. lbs. (50 Nm).
30. Position the lower axle support beam on a lift or jack.
31. Make sure the lower axle support beam contact surfaces are clean and that the lower differential bushing is in place.
32. Make sure the lower differential bushings are inside the guide flanges of the lower axle support beam.
33. Raise the lower axle support beam into position.
34. Install new mounting bolts except at the pinion flange. Tighten the bolts until there is approximately 0.08–0.16 in. (2–4mm) clearance between the support surfaces.
35. Remove the lift or jack.
36. Remove the differential retainers 5579 and 5580 (or equivalents) from the differential.
37. Install the 2 front spacers between the upper and lower axle support beams.
38. Install new bolts at the pinion flange.
39. Tighten all lower axle support bolts diagonally until snug. Tighten the bolts diagonally to 59 ft. lbs. (80 Nm).
40. Install the compression tool.
41. Install the spring into the mounting in the control arms.
42. Raise the control arms up to their normal position.
43. Install the lower control arm to the wheel bearing housing,
44. Install the track rod to the wheel bearing housing using a new nut and tighten to 59 ft. lbs. (80 Nm).
45. Install the rear support arm using new bolts and nut, but do not yet tighten the bolts and nut.
46. Tighten the rear bolt and front nut to 59 ft. lbs. (80 Nm).
47. Tighten the front bolts to 37 ft. lbs. (50 Nm).
48. Install the shock absorbers.
49. Make sure the washers and bushings on the sway bar links are in place.
50. Raise the sway bar into position and install.
51. Install the wheels.
52. Lower the vehicle.
53. Check wheel alignment.

Fig. 1: Leaf spring compression tool J-41470



1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

Except 850, 960 Sedan and 1998 Models

1. Raise and safely support the vehicle on the frame and remove the rear wheels.
2. Place a hydraulic jack beneath the rear axle housing and raise the housing sufficiently to compress the spring and shock.
3. Install a compressor on the spring and tighten. Make sure there are at least 3 coils of spring between the attachment points of the compressor.
4. Remove the lower shock attachment bolts and nut.
5. Lower the rear axle and remove the spring.
6. Remove the sway bar from the trailing arms, if equipped.
7. Remove the axle-to frame through-bolt securing the trailing arm to the vehicle body.
8. Loosen and remove the through bolt securing the trailing arm to the rear axle.
9. With the rear axle firmly supported, remove the trailing arm.

To install:

10. Install the control arm on the axle housing and tighten the bolt finger-tight.
11. Raise the assembly into position and install the axle-to-frame bolts finger-tight.
12. Install the shock and coil spring.
13. Tighten all control arm bolts to 85 ft. lbs. (115 Nm).
14. Install the wheels.
15. Lower the vehicle.

1992–94 960 Sedan

NOTE: Multi-Link suspensions require alignment any time the suspension components are disassembled. Installation tightening and torque procedures are critical to correct alignment.

1. Raise and support the vehicle safely. Make sure the front supports are placed as far forward as possible. Check that the rear supports will not interfere with the support arm.
2. Remove the wheels.
3. Loosen and remove the bolts holding the protective guard to the arm and remove the guard.
4. At the front of the arm, remove the two retaining bolts which hold the bracket (for the control arm) to the frame. Do not attempt to remove the through-bolt.
5. Remove the retaining bolt at the rear of the control arm.
6. Separate the rear end of the control arm from the wheel bearing housing.
7. Using either Volvo tool 5972 or two floor jacks, support the arm at the front and rear ends. Raise the jacks just enough to relieve the tension on the shock absorber.
8. Remove the retaining bolt at the top of the shock absorber.
9. Lower the jacks slowly; the arm will come free with the spring and shock attached.
10. Unbolt the shock absorber from the arm, then unbolt and remove the bracket at the front of the arm. Take note of the relationship between the bracket and the arm: the bracket correctly mounts one way only.

To install:

11. Install the control arm bracket in the correct position and tighten the nut to 91 ft. lbs. (125 Nm) plus and additional 120 degrees of rotation.
12. Install the shock absorber on the arm and tighten the bottom mount to 41 ft. lbs. (56 Nm).
13. Install the bottom spring seat on the control arm. Take care to properly locate the grooves in the seat.
14. Install the spring and the top rubber seat. Place the assembled support arm on the jacks and raise into position.
15. Gently raise the jacks and compress the spring until the shock absorber is in the correct position. Install the shock.
16. Reinstall the mounting bolts at the front of the control arm bracket. Tighten the bolts to 35 ft. lbs. (48 Nm) and the large nut to 51 ft. lbs. (70 Nm) plus an additional 90 degrees of rotation.
17. At the rear of the control arm, tap the arm into place on the wheel bearing housing. Tighten the bolt to 44 ft. lbs. (60 Nm) plus an additional 90 degrees of rotation. Do not overtighten this fitting.
18. Reinstall the protective cover on the control arm. Install the wheel.
19. Lower the vehicle to the ground and final tighten the lugs to 62 ft. lbs. (85 Nm).
20. Roll the vehicle several feet forwards and backwards before adjusting the rear wheel alignment.

1995–98 960/S90/V90

NOTE: Multi-Link suspensions require alignment any time the suspension components are disassembled. Installation tightening and torque procedures are critical to correct alignment.

1. Raise and support the vehicle safely. Make sure the front supports are placed as far forward as possible. Check that the rear supports will not interfere with the support arm.
2. Install compression tool Kent-Moore® No. J-41470 (or equivalent):
   - A. Attach one end of the tool yoke into the boss on one side of the axle support beam.

     NOTE: There is a boss cast into the support on either side of where the spring is visible from underneath.
   - B. Slide the tool into the boss on the other side of the axle support beam to fully engage the yoke.
   - C. Make sure the tool is seated between the retaining tabs before any suspension components can be removed.
   - D. Make sure the rollers on the ends of the tool are positioned inside the lower control arms.
   - E. Turn the handle to raise the control arms and compress the leaf spring.

     CAUTION
     Do not tighten the tool after the pegs have contacted the axle support beam.
   - F. Once the spring is compressed, components can be removed.
3. Compress the suspension slightly.
4. Removed the shock absorber mounting bolt from the rear support arm.
5. Remove the sway bar-to-support arm bolts on both sides. Press the sway bar up away from the rear support arms.
6. Press the suspension up to normal position, as if the vehicle were on the ground.

7. Remove the bolt s at the front of the support arm bracket.
8. Remove the support arm-to-wheel bearing housing bolt.
9. Loosen the support arm bracket nut a few turns. Tap the support arm off the wheel bearing housing.
10. Remove the support arm bracket nut and the support arm with the bracket attached. Do not remove the support arm-to-bracket through-bolt.
11. Remove the brake caliper and hang it up with steel wire. Do not allow the caliper to hang by the brake hose.
12. Remove the lower control arm-to-wheel bearing housing nut. Tap out the bolt with a brass punch.
13. Loosen the inboard lower control arm mounting nut until approximately 0.04–0.08 in. (1–2mm) of the bolt still protrudes from the nut. Tap the bolt with a brass punch until the nut contacts the lower control arm.
14. Lower the compression tool and control arm completely. Inspect the spring mounting in the lower control arm. Retain the mountings in the control arm for assembly.
15. Remove the inboard lower control arm mounting nut. Tap out the bolt with a brass punch. Tap the lower control arm off the lower rear axle support beam.
16. Inspect the lower control arm bushings for damage or wear.

To install:

17. Install the lower control arm onto the lower rear axle support beam with a new nut and bolt. Do not tighten. Install the spring into the mounting in the control arm.
18. Use the compression tool to raise the control arms up to their normal position.
19. Install the lower control arm to the wheel bearing housing, using a new nut. Tighten both ends of the control arm to 59 ft. lbs. (80 Nm).
20. Install the brake caliper with new bolts and tighten to 44 ft. lbs. (60 Nm).
21. Install the rear support arm using new bolts and nut. Do not tighten bolts and nut.
22. Tighten the rear bolt and front nut to 59 ft. lbs. (80 Nm). Tighten the front bolts to 37 ft. lbs. (50 Nm).
23. Install the shock absorber:
    A. If equipped with standard shock absorbers, compress the shock by hand. Install a new bolt and tighten to 59 ft. lbs. (80 Nm).
    B. If equipped with self-leveling shock absorbers, lower the compression tool. Install a new bolt and tighten to 59 ft. lbs. (80 Nm).
24. Lower the sway bar into position and install new sway bar-to-support arm bolts, but do not tighten.
25. Install the wheels.
26. Lower the vehicle.
27. Tighten the sway bar bolts to 59 ft. lbs. (80 Nm).
28. Check wheel alignment and test drive vehicle.

V70 AWD Models

1. Raise and safely support the vehicle.
2. Remove the shocks.
3. Remove the spring.
4. Remove the support arm from the control arm.
5. Remove the control arm from the vehicle.

To install:

6. Install the control arm.
7. Install the support arm onto the control arm and tighten the bolt to 59 ft. lbs. (80 Nm).
8. Install the spring.
9. Install the shocks.
10. Lower the vehicle.

REAR SUSPENSION TORQUE SPECIFICATIONS

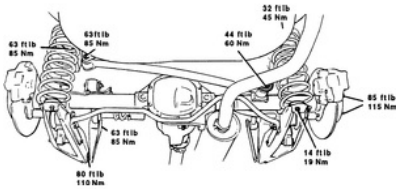
nents	English	Metric
t		
94 900 series	103 ft. lbs.**	140 Nm**
98 960/S90/V90 and V70 AWD	103 ft. lbs.**	140 Nm**
70/S70/V70	89 ft. lbs.*	120 Nm*
ring retaining nut		
e, 240 and 700 series,and 940		
er nut	35 ft. lbs.	48 Nm
er nut	63 ft. lbs.	85 Nm
70/S70/V70 except AWD	30 ft. lbs.	40 Nm
94 960		
er mount	62 ft. lbs.	85 Nm
er mount	44 ft. lbs.***	60 Nm***
ring		
ting plate bolts	37 ft. lbs.	50 Nm
control arm		
e, 240, 700series, and 940	85 ft. lbs.	115 Nm
94 960	91 ft. lbs.***	125 Nm***
98 960/S90/V90	59 ft. lbs.	80 Nm
WD	59 ft. lbs.	80 Nm
mounts		
e, A48240, 700series, and 940	63 ft. lbs.	85 Nm
94 960		
er mount	62 ft. lbs.C50	85 Nm
er mount	41 ft. lbs.	56 Nm
98 960/S90/V90 and V70 AWD	59 ft. lbs.	80 Nm
70/S70/V70 except AWD		
er mount	18 ft. lbs.	25 Nm
er mount	59 ft. lbs.	80 Nm
ar mounts		
e, 240, 700series, and 1991-94 900 series	35 ft. lbs.	48 Nm
98 960/S90/V90 and V70 AWD	15 ft. lbs.	20 Nm
70/S70/V70 except AWD		
senger side	37 ft. lbs.	50 Nm
er's side forward bolt	35 ft. lbs.***	48 Nm***
er's side rear bolt	48 ft. lbs.	68 Nm
arm		
ting bolt	59 ft. lbs.	80 Nm
et bolt	48 ft. lbs.	65 Nm
control arm		
94 960		
r nut	62 ft. lbs.	85 Nm
t nut	51 ft. lbs.**	70 Nm**
98 960/S90/V90 and V70 AWD		
-to-axle	18 ft. lbs.	25 Nm
nting bolt	92 ft. lbs.	120 Nm

n additional 30 degrees
an additional 60 degrees
an additional 90 degrees

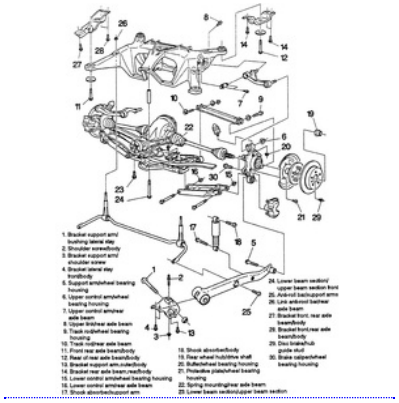
1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

240 rear suspension



1995â€“98 960/S90/V90 series rear multi-link suspension



850/C70/S70/ and V70 non-AWD models' rear suspension

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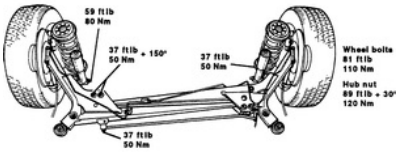
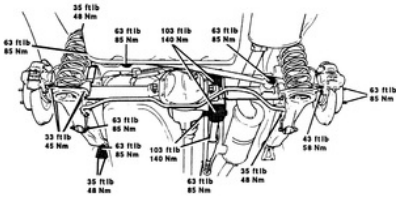
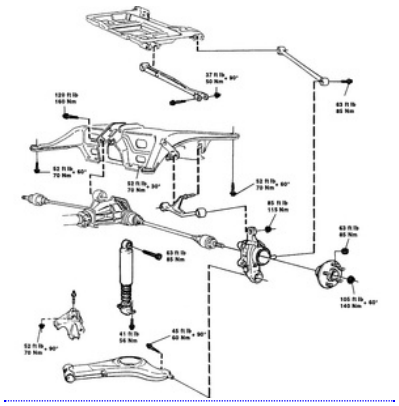


900 series solid rear axle suspension



1991â€“94 900 series multi-link rear suspension



1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

Except 850, 960 Sedan and 1998 Models

1. Raise and safely support the vehicle.
2. Place a jack under the lower arm and lift the rear suspension to unload the shock.
3. Remove the lower nut and bolt securing the shock to the rear axle.
4. Lower the vehicle enough to remove the shock.
5. Remove the upper shock absorber through-bolt.
6. Remove the old shock absorber.

To install:

7. Install the shock absorber in the upper mount and hand-tighten the through-bolt.
8. Raise the rear end and attach the shock using the lower mount bolt. Hand-tighten the nut.
9. Tighten the lower bolt to 63 ft. lbs. (85 Nm).
10. Remove the jack.
11. Lower the vehicle.
12. Tighten the upper bolt to 63 ft. lbs. (85 Nm).

1992–94 960 Sedan

NOTE: Multi-link suspensions require alignment any time the suspension components are disassembled. Installation and tightening procedures are critical to correct alignment.

1. Raise and support the vehicle safely. Make sure the jackstands are placed as far forward as possible. Check that the rear jackstands will not interfere with the floor jack.
2. Remove the wheels.
3. Remove the bolts holding the protective guard to the control arm, and remove the guard.
4. At the front of the arm, remove the two retaining bolts which hold the bracket (for the support arm) to the frame. Do not attempt to remove the through-bolt.
5. Remove the retaining bolt at the rear of the support arm.
6. Separate the rear end of the support arm from the wheel bearing housing.
7. Using either Volvo tool 5972 or two floor jacks, support the arm at the front and rear ends. Raise the jacks just enough to unload the shock.
8. Remove the retaining bolt at the top of the shock absorber.
9. Lower the jacks slowly; the arm will come free with the spring and shock attached.
10. Remove the spring with the upper and lower rubber seats.
11. Unbolt the shock absorber from the arm.

To install:

12. Install the shock absorber on the arm and tighten the bottom mount to 41 ft. lbs. (56 Nm).
13. Install the bottom spring rubber seat on the support arm. Take care to properly locate the grooves in the rubber seat.
14. Install the spring and the top rubber seat.
15. Place the assembled support arm on the jacks and raise into position.
16. Compress the spring until the shock absorber is in the correct position. The shock may be held in place temporarily with a drift in the hole.
17. Insert the bolt, and tighten to 62 ft. lbs. (85 Nm).
18. Reinstall the mounting bolts at the front of the support arm bracket and tighten to 35 ft. lbs. (48 Nm). Tighten the large nut to 51 ft. lbs. (70 Nm) plus an additional 90 degrees of rotation.
19. At the rear of the support arm, tap the arm into place on the wheel bearing housing. Tighten the bolt to 44 ft. lbs. (60 Nm) plus an additional 90 degrees of rotation. Do not overtighten.
20. Reinstall the protective cover on the control arm.
21. Install the wheel.
22. Lower the vehicle.
23. Roll the vehicle several feet forwards and backwards before adjusting the rear wheel alignment.

1995–98 960/S90/V90 and AWD V70 Series

1. Raise and safely support the rear of the vehicle with jackstands. Place the jackstands so they do not interfere with the support arm of the vehicle.
2. Remove the wheel.
3. Use a floor jack and raise up the support arm.
4. Disconnect the shock absorber from the support arm.
5. Disconnect the shock absorber from the body. Remove the shock absorber.

To install:

6. Install the shock absorber and connect it to the body using a new bolt. Tighten the bolt to 59 ft. lbs. (80 Nm).
7. With the support arm raised, connect the shock absorber to the support arm and install a new bolt. Tighten the bolt to 59 ft. lbs. (80 Nm).
8. Carefully lower the lift from the support arm.
9. Install the wheels.
10. Lower the vehicle.

850, C70, S70 and V70, Except AWD Models

1. On early four door Series, remove the plastic side panel, then fold the back seat forward and fold back the trunk carpet. Remove the support panel under the edge of the carpet and detach the side panels at the front and fold them over. Remove the back seat catch and panel mounting clip.
2. On later four-door series, remove the support panel over the shock mount. Make small cuts in the panel if necessary to fold it up.
3. On five-door series, remove the front floor panel bolts and pull the panel back to free it from the front mount.

4. Remove the panel.
5. Raise and safely support the vehicle.
6. Remove the two upper shock mount bolts.
7. Using a floor jack, press the trailing arm up to unload the shock absorber.
8. Disconnect the shock absorber from the lower mount, then pull it off of the trailing arm.
9. Lower the vehicle and lift the shock assembly out from the top.
10. Check the shock upper mount bushing for damage and replace if necessary.

To install:

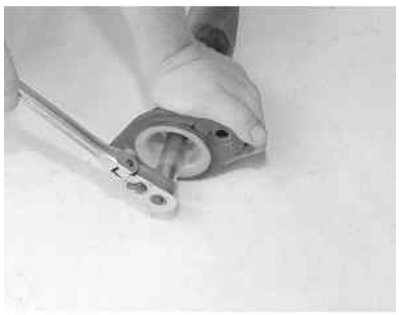
11. Install the upper mount on the new shock as follows:
    - standard shock absorbers to 30 ft. lbs. (40 Nm)
    - gas shock absorber M12 nuts to 30 ft. lbs. (40 Nm)
    - gas shock absorber M10 nuts to 15 ft. lbs. (20 Nm), plus an additional 90 degrees
12. Install the shock absorber in the vehicle and turn the upper mount bolts a few turns.
13. Raise the vehicle and position the jack under the trailing arm and lift up.
14. Connect the shock to the lower mount, making sure that the shock is seated correctly in the upper mount.
15. Tighten the nut to 59 ft. lbs. (80 Nm).
16. Lower the vehicle.
17. Tighten the upper shock mount bolts to 18 ft. lbs. (25 Nm).
18. Install the front edge of the panels using the clips.
19. Install the back seat catches and bolts with thread locking compound, tightening to 15 ft. lbs. (20 Nm).
20. Replace the cover plate and trunk carpet.
21. On later four-door series, fold down the cover over the shock mount and install the carpeting.
22. On five-door series, line up the front edge of the floor panel and install the bolt at the rear edge. Line up the panel with the rear floor panel and tighten the bolts.

Fig. 1: Remove the carpet to access the upper shock absorber mount

Fig. 2: Remove the two upper shock absorber mounting bolts

Fig. 3: Remove the shock absorber from the vehicle

Fig. 4: Remove the upper mount and bushing if replacing the shock absorber; it will need to be attached to the replacement shock



1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

The purpose of the shock absorber is simply to limit the motion of the spring during compression and rebound cycles. If the vehicle is not equipped with these motion dampers, the up and down motion would multiply until the vehicle was alternately trying to leap off the ground and to pound itself into the pavement.

Contrary to popular rumor, the shocks do not affect the ride height of the vehicle. This is controlled by other suspension components such as springs and tires. Worn shock absorbers can affect handling; if the front of the vehicle is rising or falling excessively, the "footprint" of the tires changes on the pavement and steering is affected.

The simplest test of the shock absorber is simply push down on one corner of the unladen vehicle and release it. Observe the motion of the body as it is released. In most cases, it will come up beyond it original rest position, dip back below it and settle quickly to rest. This shows that the damper is controlling the spring action. Any tendency to excessive pitch (up-and-down) motion or failure to return to rest within 2–3 cycles is a sign of poor function within the shock absorber. Oil-filled shocks may have a light film of oil around the seal, resulting from normal breathing and air exchange. This should NOT be taken as a sign of failure, but any sign of thick or running oil definitely indicates failure. Gas filled shocks may also show some film at the shaft; if the gas has leaked out, the shock will have almost no resistance to motion.

Fig. 1: When fluid is seeping out of the shock absorber, it's time to replace it

While each shock absorber can be replaced individually, it is recommended that they be changed as a pair (both front or both rear) to maintain equal response on both sides of the vehicle. Chances are quite good that if one has failed, its mate is weak also.

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

Except 850, 1995–97 960 and 1998 Models

1. Raise the vehicle and support it safely. Place the stands at the rear jacking points.
2. Remove the wheels.
3. Use a floor jack to raise the rear axle just enough to unload the shock absorbers.
4. Remove the lower shock retaining bolts.
5. Remove the nuts holding the sway bar to the brackets.
6. Remove the sway bar.

To install:

7. When installing the sway bar, attach both the bracket nut and the lower shock retaining bolt hand-tight.
8. Once all four mounting points are snug, tighten the bracket nuts to 35 ft. lbs. (48 Nm) and the shock absorber bolts to 63 ft. lbs. (86 Nm).
9. Remove the jack from the axle.
10. Install the wheels, if removed.
11. Lower the vehicle.

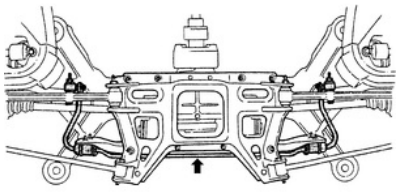
1995–98 960/S90/V90 and AWD V70 Series Models

1. Raise and safely support the vehicle.
2. Remove the wheels.
3. Remove the nut and through-bolt securing the sway bar to the support arm.
4. Remove the nuts securing the bracket retainer to the axle beam.
5. Lower the sway bar.

To install:

6. Install the sway bar to the axle beam and secure in place using the nuts. Tighten the nuts to 15 ft. lbs. (20 Nm).
7. Connect the sway bar to the support arm and attach the through-bolt and nut. Do not tighten at this time.
8. Install the wheels.
9. Lower the vehicle.
10. With all four wheels on the ground, Tighten the support arm bolts to 63 ft. lbs. (80 Nm).

Fig. 1: Sway bar — 960 models



850, C70, S70 and V70 Series

1. Raise and safely support the vehicle.
2. Remove the left-hand rubber silencer mount and hang it up as high as possible with a tie wrap.
3. Remove the outer transverse arm mount nut and bolt.
4. Mark the position of the right side transverse arm mount in relation to the left-hand trailing arm hole. Punch a mark on the edge of the hole and remove the other mount bolt.

NOTE: It is important that this mark is made properly, otherwise the toe-in will be incorrect.

5. Remove the anti-sway bar mount bolts, then the bar.

To install:

6. Install the anti-sway bar using new nuts and bolts, but do not tighten completely.
7. Connect the transverse arm mount to the trailing arm with new bolts and nuts. Install the inner bolt first and line up the mark with the outer hole, tighten it enough to keep it in position. Then install the outer bolt and nut and tighten to 37 ft. lbs. (50 Nm) and angle tighten 120°.
8. Tighten the anti-sway bar bolts as follows:
   - right side bolts to 37 ft. lbs. (50 Nm)
   - left side forward bolt to 37 ft. lbs. (50 Nm) and angle tighten 90°
   - left side rear bolt to 48 ft. lbs. (65 Nm) and angle tighten 90°
9. Cut the tie wrap holding the silencer and install the rubber mount.
10. Lower the vehicle.

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

Trailing arms are found only on the 850 series.

1. Raise and safely support the vehicle.
2. Undo the brake line and the ABS speed sensor wiring bracket on the right rear trailing arm.
3. Remove the wheels.
4. Remove the shock absorbers.
5. Remove the springs.
6. Remove the sway bar.
7. Position a jack or suitable tool under the left trailing arm.
8. Raise the left trailing arm to release the trailing arm mounting.
9. Press the right trailing arm from the left trailing arm.
10. Remove the right trailing arm body mounting bolts.
11. Remove the right trailing arm.
12. If necessary, remove the left trailing arm body mounting bolts and remove the trailing arm.

To install:

13. Install new trailing arm mountings.
14. Align the left and right trailing arms.
15. Tighten the left and right trailing arm mounting to 59 ft. lbs. (80 Nm).
16. Tighten the trailing arm-to-body bolts to the following specifications:
    - Bolt through the trailing arm bracket and rear axle link — 78 ft. lbs. (105 Nm) and angle tighten an additional 90°.
    - Bracket bolts to 48 ft. lbs. (65 Nm) and angle tighten an additional 60°.
17. Install the sway bar.
18. Install the springs.
19. Install the shock absorbers.
20. Install the brake line and ABS wiring bracket.
21. Install the wheels.
22. Lower the vehicle.

Fig. 1: Passenger side trailing arm mounting

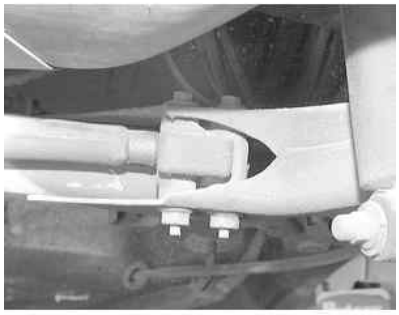


Fig. 2: Sway bar mounting

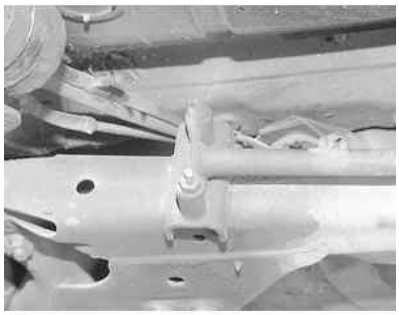


Fig. 3: Driver side trailing arm mounting

Fig. 4: Trailing arm-to-body mounting

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

1992–94 960 Sedan

1. Raise and support the vehicle safely. Make sure the front supports are placed as far forward as possible.
2. Remove the wheels.
3. Remove the brake caliper without disconnecting the brake hose. Tie it with wire out of the way. Do not allow it to hang by the hose.
4. Remove the bolt holding the lower support arm to the wheel bearing housing and tap the support arm loose.
5. Remove the nut and bolt holding the lower control arm (intermediate arm) to the wheel bearing housing.
6. Remove the bolt attaching the track rod to the wheel bearing housing.
7. Use a small bearing puller to disconnect the track rod.
8. Remove the nut which holds the upper control arm to the wheel bearing housing.
9. Collect and note the location of the spacers between the upper control arm and the bearing housing. They are alignment shims and must be reinstalled properly.
10. Remove the nut holding the rear upper control arm to the rear axle member (support).
11. At the front of the upper control arm, remove the nut and bolt which holds it to the rear axle member.
12. Use a pair of adjustable pliers to remove the control arm from the vehicle.

To install:

13. Install the arm to the rear axle member and secure with nut and bolt.
14. Install both the front and rear mounts.
15. Install the spacers at the wheel bearing housing, and install the nut holding the arm to the housing.
16. Inboard at the rear axle support, tighten the rearmost nut to 62 ft. lbs. (85 Nm).
17. Tighten the front nut and bolt to 51 ft. lbs. (70 Nm) plus an additional 60 degrees of rotation.
18. Pull the top of the wheel bearing housing outwards away from the center of the vehicle. This is essential for correct wheel alignment. Tighten the upper control arm nut at the bearing housing to 84 ft. lbs. (115 Nm).
19. Pull the wheel bearing housing outward and install the lower control arm with the bolt and nut, but do not tighten it.
20. Pull the wheel bearing housing inwards towards the center of the vehicle. Tighten the control arm nut to 37 ft. lbs. (50 Nm) plus and additional 90 degrees of rotation.
21. Reinstall the support arm; tighten the mount to 44 ft. lbs. (60 Nm) plus an additional 90 degrees of rotation.
22. Install the track rod and tighten to 62 ft. lbs. (85 Nm).
23. Install the brake caliper.
24. Install the wheels.
25. Lower the vehicle.
26. Check and adjust the rear alignment if necessary.

1995–98 960/S90/V90

1. Raise and safely support the vehicle.
2. Remove the wheel.
3. Install compression tool J-41470 or a suitable equivalent. Apply light pressure to the link arm.
4. Disconnect the shock absorber from the support arm.
5. Remove the sway bar bolts from support arm on both sides.
6. Turn the compression tool up to its fully compressed position.
7. Remove the brake caliper and hang it safely out of the way so that the brake hose is not damaged.
8. Remove the nut connecting the upper control arm to the wheel bearing housing.
9. Using a brass drift, tap the bolt out to release the upper control arm bushing from the wheel bearing housing.
10. Remove the bolt connecting the track rod to the wheel bearing housing.
11. Separate the track rod from the wheel bearing housing.
12. Remove the nut connecting the lower control arm to the wheel bearing housing. Use a brass drift to tap out the bolt.
13. Separate the wheel bearing housing from the upper control arm. Allow the wheel bearing housing to rest on the lower control arm.
14. Remove the front and rear bolts from the upper control arm.
15. Pull the upper control from the rear axle beam and remove it.

To install:

16. Install the upper control arm in the rear axle beam and attach it with new front and rear bolts. Tighten the bolts to 18 ft. lbs. (25 Nm).
17. Push the wheel bearing housing up and connect it to the upper control arm.
18. Install a new attaching nut, but do not tighten.
19. Connect the support arm to the wheel bearing housing and install a new attaching bolt, but do not tighten.
20. Connect the lower control arm to the wheel bearing housing. Install the through bolt and a new nut, but do not tighten.
21. Install the track rod and attaching bolt, but do not tighten.
22. Tighten the attaching bolts and nuts in the following sequence to the indicated specifications:
    - upper control arm nut — 92 ft. lbs. (120 Nm)
    - lower control arm nut — 63 ft. lbs. (80 Nm)
    - support arm bolts — 63 ft. lbs. (80 Nm)
    - track rod bolt — 63 ft. lbs. (80 Nm)
23. Install the brake caliper and new attaching bolts. Tighten the bolts to 47 ft. lbs. (60 Nm).
24. Install the shock absorber and a new attaching bolt. Tighten the bolt to 63 ft. lbs. (80 Nm).
25. Release the pressure on the compression tool.
26. Connect the sway bar to the support arm using new bolts, but do not tighten.
27. Install the wheels.
28. Lower the vehicle.

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

The rear wheel bearings are sealed, pressed-in units, and no adjustment is possible.

1992 Volvo 940

Submodel: | **Engine Type:** L4 | **Liters:** 2.3
Fuel Delivery: FI | **Fuel:** GAS

Except 850, 960 Sedan and 1998 Models

1. With the vehicle sitting on all four wheels, loosen the rear axle nut.
2. Raise and support the vehicle safely. Do not allow the lifting arms to interfere with the support arms.
3. Remove the wheels.
4. Remove the brake caliper and use a piece of wire to hang the caliper out of the way.
5. Remove the brake disc and parking brake shoes.
6. Disconnect and remove the parking brake cable from the wheel bearing housing.
7. Remove the retaining bolt for the support arm at the housing. Tap the support arm loose.
8. Remove the nut and bolt holding the lower link arm to the housing.
9. Remove the retaining bolt for the track rod at the bearing housing and use a small claw-type puller to remove the track rod.
10. Remove the axle nut.
11. Remove the retaining nut for the upper link at the bearing housing. The wheel bearing housing can now be removed as a unit.

NOTE: There are shims between the bearing housing and the upper link arm. Collect them when the housing is removed.

12. Mount the housing assembly in a vise.
13. Place counterhold tool 5340 or equivalent between the hub and bearing housing. Press out the hub with a proper sized drift
14. Remove the circlip retaining the bearing in the wheel bearing housing and press the bearing out. Press against the inner race.
15. Use bearing puller 2722 or equivalent to pull the inner race off the hub.

To install:

16. Press the new bearing into the housing. Make sure the press tool contacts only the outer bearing race or the bearing will be damaged. Install the circlip.
17. Support the inner race and press the hub into the bearing. If the inner race is not properly supported, the bearing will be damaged.
18. Install the wheel bearing housing onto the housing and install the axle nut hand-tight.
19. Install the shims between the upper link and the wheel bearing housing and then install the retaining nut at the upper link.
20. Pull the wheel bearing housing outwards at the top and tighten the upper link arm nut to 85 ft. lbs. (110 Nm). This is essential to insure correct wheel alignment when completed.
21. Tilt the bearing housing outwards at the bottom as necessary to refit the lower link arm and its retaining bolt. When in place, pull the bottom of the bearing housing in towards the center of the vehicle and tighten the link arm to 36 ft. lbs. (47 Nm) plus an additional 90 degrees of rotation.
22. Install the support arm and its bolt.
23. Install the track rod and tighten to 63 ft. lbs. (82 Nm).
24. Reinstall the parking brake cable at the bearing housing.
25. Reinstall the parking brake shoes, the brake disc as marked and the brake caliper.
26. Install the wheels.
27. Lower the vehicle.
28. With all four wheels on the ground, tighten the axle nut to 103 ft. lbs. (134 Nm) plus an additional 60 degrees of rotation.

1990–94 940 and 960

1. With the vehicle sitting on all four wheels, loosen the rear axle nut.
2. Raise and support the vehicle safely. Do not allow the rear lifting arms to interfere with the support arms.
3. Remove the wheels.
4. Remove the brake caliper and use a piece of wire to hang the caliper out of the way.
5. Mark the position of the brake disc relative to its small locating pin, then remove the disc. Remove the brake shoes.
6. Disconnect and remove the parking brake cable from the wheel bearing housing.
7. Remove the retaining bolt for the support arm at the housing. Tap the support arm loose.
8. Remove the nut and bolt holding the lower link arm to the housing.
9. Remove the retaining bolt for the track rod at the bearing housing and use a small claw-type puller to remove the track rod.
10. Remove the axle nut.
11. Remove the retaining nut for the upper link at the bearing housing. The wheel bearing housing can now be removed unit.

NOTE: There are shims between the bearing housing and the upper link arm. Collect them when the housing is removed.

12. Mount the housing assembly in a vise.
13. Place a counterhold tool 5340 or equivalent between the hub and bearing housing. Press out the hub with a proper sized drift
14. Remove the circlip retaining the bearing in the wheel bearing housing and press the bearing out. Press against the inner race.
15. Use a bearing puller 2722 or equivalent to pull the inner race off the hub.

To install:

16. Press the new bearing into the bearing housing. Make sure the press tool contacts only the outer bearing race or the bearing will be damaged. Install the circlip.
17. Support the inner race and press the hub into the bearing. If the inner race is not properly supported, the bearing will be damaged.
18. Install the wheel bearing housing onto the halfshaft and install the axle nut hand-tight.
19. Install the shims between the upper link and the wheel bearing housing and then install the retaining nut at the upper link.
20. Pull the wheel bearing housing outwards at the top and tighten the upper link arm nut to 85 ft. lbs. (116 Nm). This is essential to insure correct wheel alignment when completed.
21. Tilt the bearing housing outwards at the bottom as necessary to refit the lower link arm and retaining bolt. When in place, pull the bottom of the bearing housing in towards the center of the vehicle and tighten the link arm to 36 ft. lbs. (49 Nm) plus an additional 90 degrees of rotation.
22. Install the support arm and bolt. Tighten the nut to 44 ft. lbs. (60 Nm) plus an additional 90 degrees of rotation.
23. Install the track rod and tighten to 63 ft. lbs. (86 Nm).
24. Reinstall the parking brake cable at the bearing housing.
25. Reinstall the brake shoes, the brake disc as marked and the brake caliper.
26. Install the wheels.
27. Lower the vehicle.
28. With all four wheels on the ground, tighten the axle nut to 103 ft. lbs. (140 Nm) plus an additional 60 degrees of rotation.

1995–98 960/S90 Sedan and AWD V70 Series Models

1. With the vehicle sitting on all four wheels, loosen the rear axle nut.
2. Raise and safely support vehicle. Position a lift or jackstands so they do not interfere with the suspension arms. Remove the wheel.
3. Use tool 999 5577 or equivalent to compress the suspension slightly against the spring.
4. Remove the damper bolt and pull the damper from the support arm.
5. Remove the anti-sway bolts in both of the support arms.
6. Raise the suspension up into normal position.
7. Remove the axle shaft nut.
8. Remove the brake caliper and support it safely out of the way.
9. Mark the position of the brake disc and remove the disc.
10. Remove the parking brake shoes and disconnect the adjuster from the parking brake cable.
11. Disconnect the parking brake cable from the wheel bearing housing and remove the nut for the upper link bushing.
12. Tap the bushing bolt free of the wheel bearing housing.
13. Remove the bolt to the track rod and separate the rod from the wheel bearing housing.
14. Remove the support arm bolt and tap if free of the bushing.
15. Remove the link nut and tap the bolt out using a brass drift
16. Remove the wheel bearing housing.

NOTE: The bearing must be replaced any time the hub is pressed out.

17. Position the wheel bearing housing in a press so the hub can be pressed out. Using an appropriate sized drift, press the hub off.
18. Remove the circlip holding the bearing in the housing and press the bearing out.
19. Position the drift in the inner bearing race. Using the puller 999 2722 and counter hold 999 5310, or their equivalents, pull the inner race out of the hub.

To install:

20. Properly support the bearing housing and press the new bearing in. Make sure the press tool contacts only the outer bearing race or the bearing will be damaged. Install the circlip.
21. Support the inner bearing race on the press table and press the hub into the bearing. Make sure the inner bearing race is supported or the bearing will be damaged.
22. Fit the wheel bearing housing to the upper link and driveshaft Then install all the nuts and bolts before tightening any of them. Tighten the nut for the upper link to 85 ft. lbs. (115 Nm) and all others to 63 ft. lbs. (80 Nm).
23. Connect the parking brake cable to the wheel bearing housing and fasten with clip.
24. Install the adjuster for the cable with arrow on the upper side pointing up.
25. Install the parking brake shoes, retainers, and spring.
26. Install the brake disc.
27. Install a new axle nut but do not tighten it yet.
28. Install the brake caliper using new bolts.
29. Install new anti-sway bolts on both sides, but do not tighten them fully.
30. Clean the face of the brake disc and the back side of the wheel where the two mate. Lubricate the guide pin with rustproofing compound.
31. Install the wheels.
32. Lower the car.
33. Tighten the anti-sway bar bolts on both sides to 63 ft. lbs. (80 Nm).
34. With all four wheels on the ground, tighten the axle nut to 130 ft. lbs. (140 Nm) plus an additional 60°.