

SUSPENSION - FRONT

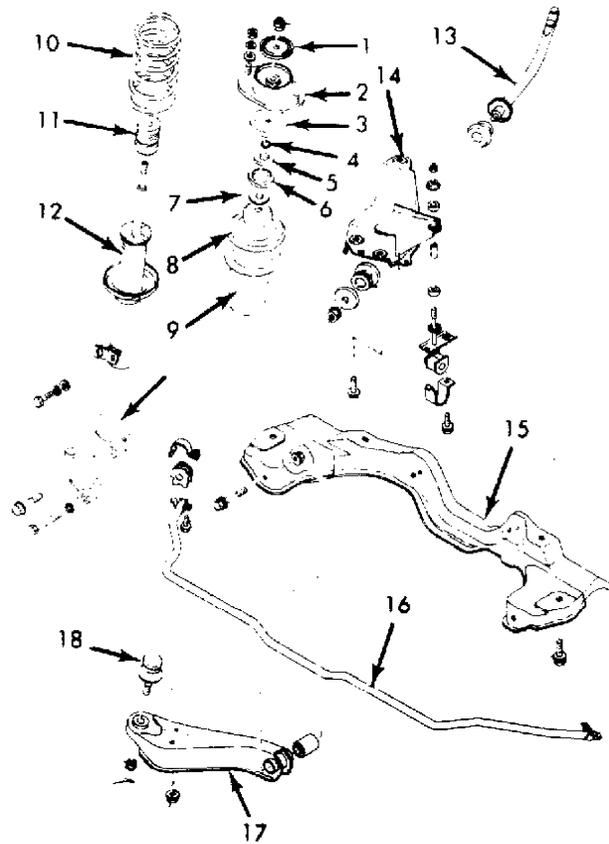
1992 Subaru SVX

1992 SUSPENSION
Subaru Front

Justy, Legacy, Loyale, SVX

DESCRIPTION

Front suspension is a MacPherson strut type, consisting of lower control arms and ball joints, knuckle housings, stabilizer bar and leading rods (except SVX). Leading rods are mounted between lower control arms and brackets on body.



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|-----------------|-----------------------|
| 1. Upper Washer | 11. Bumper |
| 2. Strut Mount | 12. Strut |
| 3. Lower Washer | 13. Leading Rod |
| 4. "O" Ring | 14. Bracket |
| 5. Washer | 15. Crossmember |
| 6. Oil Seal | 16. Stabilizer Bar |
| 7. Washer | 17. Lower Control Arm |
| 8. Spring Seat | 18. Ball Joint |
| 9. Dust Cover | 19. Knuckle |
| 10. Coil Spring | |

Fig. 1: Exploded View Of Front Suspension (Justy)
Courtesy of Subaru of America, Inc.

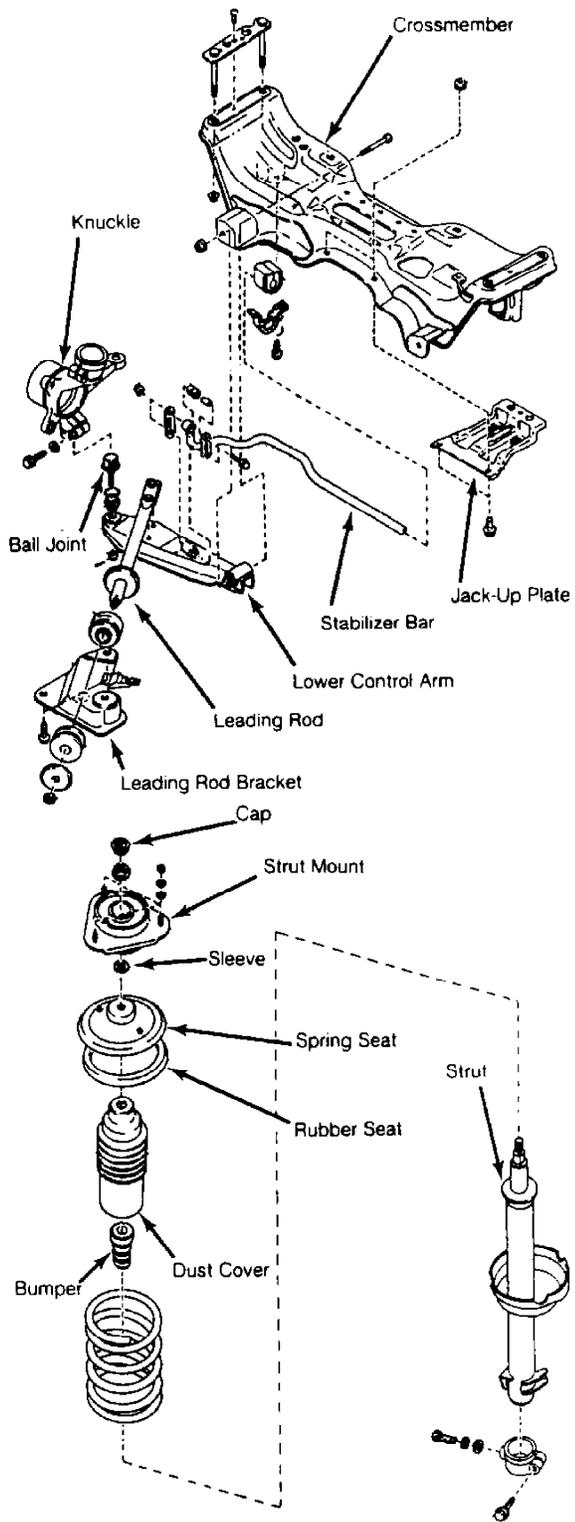
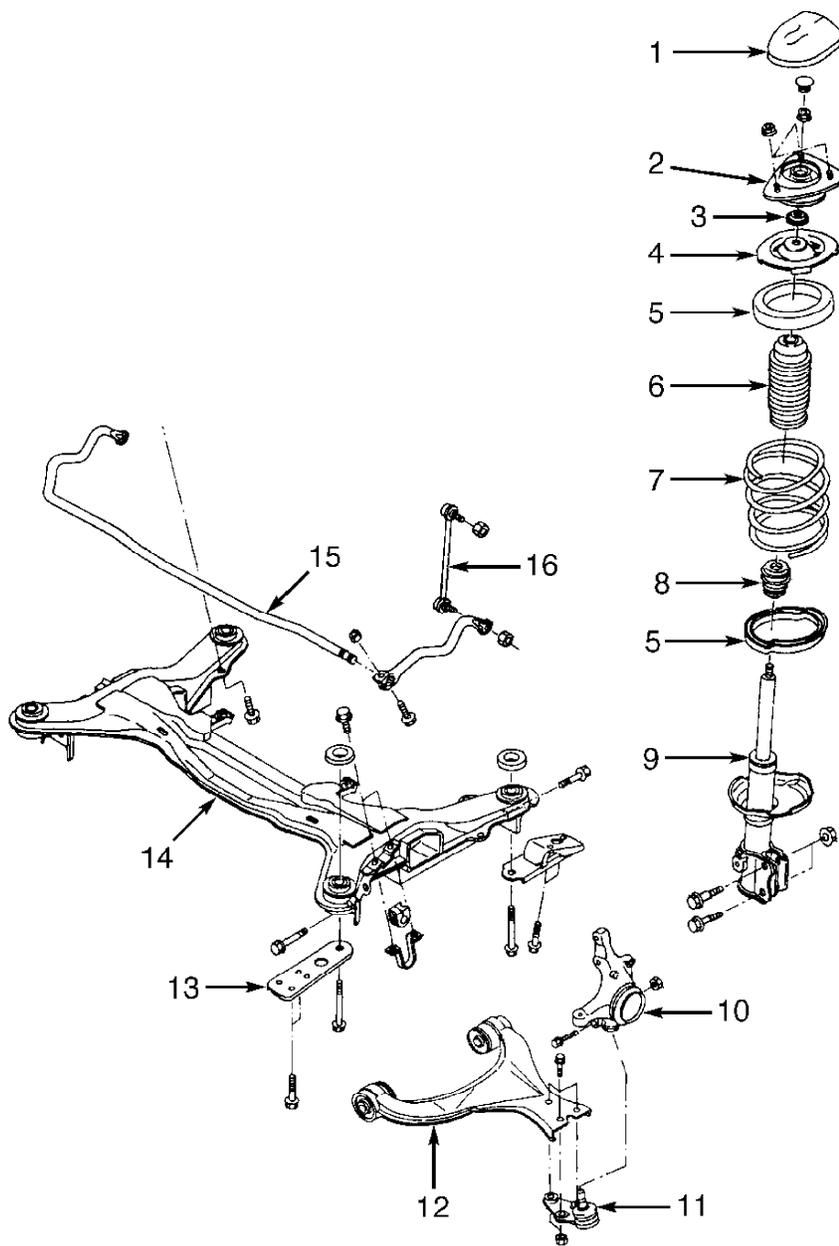


Fig. 2: Exploded View Of Front Suspension (Loyale; Legacy Is Similar)
Courtesy of Subaru of America, Inc.



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|----------------|-----------------------|
| 1. Cap | 9. Strut |
| 2. Strut Mount | 10. Knuckle |
| 3. Spacer | 11. Lower Control Arm |
| 4. Spring Seat | 12. Ball Joint |
| 5. Rubber Seat | 13. Stopper |
| 6. Dust Cover | 14. Crossmember |
| 7. Coil Spring | 15. Stabilizer Bar |
| 8. Bumper | 16. Stabilizer Link |

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Fig. 3: Exploded View Of Front Suspension (SVX)
 Courtesy of Subaru of America, Inc.

ADJUSTMENTS & INSPECTION

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

NOTE: See SPECIFICATIONS & PROCEDURES article in the WHEEL ALIGNMENT Section.

WHEEL BEARING

Front wheel bearings do not require periodic adjustment, but should be inspected at 60,000 mile intervals for proper lubrication.

BALL JOINT CHECKING

NOTE: Manufacturer does not provide ball joint specifications for SVX.

On Justy, Legacy and Loyale, load ball joint stud with 154 lbs. (69 kg). On Justy, vertical play should not exceed .016" (.40 mm). On Legacy and Loyale vertical play should not exceed .012" (.30 mm). Replace ball joint if play is excessive.

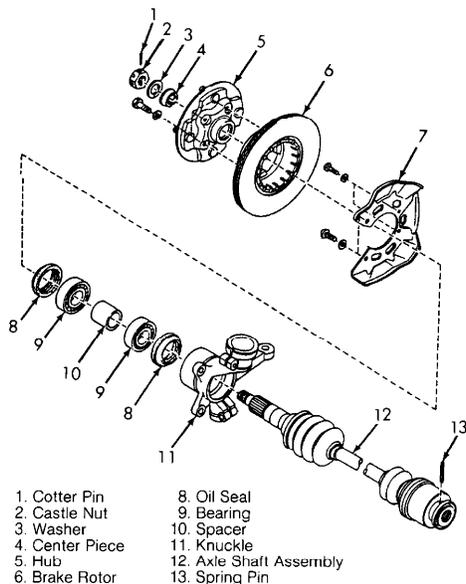
REMOVAL & INSTALLATION

KNUCKLE & WHEEL BEARING ASSEMBLY

Removal & Installation (Justy)

1) Pull parking brake lever. Loosen axle nut and lug nuts. Raise and support vehicle. Remove wheel assembly. Remove brake caliper assembly and axle nut. Remove brake rotor from axle shaft. Remove disc cover from knuckle.

2) Drive out spring pin attaching axle shaft to differential. DO NOT reuse old spring pin. Disconnect tie-rod from knuckle. Remove bolt attaching knuckle to strut. Disconnect ball joint from control arm. Remove knuckle and axle as a unit. Use Remover (922493000 and 921122000) to separate knuckle and axle. To install, reverse removal procedure. See Fig. 4.



- | | |
|-----------------|-------------------------|
| 1. Cotter Pin | 8. Oil Seal |
| 2. Castle Nut | 9. Bearing |
| 3. Washer | 10. Spacer |
| 4. Center Piece | 11. Knuckle |
| 5. Hub | 12. Axle Shaft Assembly |
| 6. Brake Rotor | 13. Spring Pin |
| 7. Disc Cover | |

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Fig. 4: Exploded View Of Front Axle Hub (Typical)
Courtesy of Subaru of America, Inc.

Removal & Installation (Legacy & SVX)

Raise and support vehicle. Remove axle shaft. Remove brake caliper and rotor from knuckle. Disconnect tie-rod and ball joint from knuckle. Remove front speed sensor from knuckle. Disconnect knuckle from strut. On Legacy, remove stabilizer bar from crossmember. To install, reverse removal procedure. See Fig. 4.

Removal & Installation (Loyale)

1) Apply parking brake. Loosen axle nut and lug nuts. Raise and support vehicle. Remove wheel assembly. Release parking brake. Pull parking brake cable outer clip from caliper. Remove parking brake cable end from caliper lever.

2) Remove caliper assembly and wire aside. Remove bolts connecting knuckle to strut. Disconnect tie rod from knuckle. Pull strut from knuckle. DO NOT spread housing slit more than .16" (4.0 mm).

3) Remove castle nut, spring washer and center piece on axle shaft. Remove hub and disc assembly. Remove disc cover. Use Puller (926470000) to pull knuckle from axle shaft. Disconnect ball joint from knuckle and remove knuckle. To install, reverse removal procedure. See Fig. 4.

LOWER CONTROL ARM & BALL JOINT

Removal

1) Raise and support vehicle. Remove front wheels. Disconnect stabilizer bar and leading rod from control arm. On Loyale, disconnect parking brake cable mounting bracket from lower control arm. See Fig. 1, 2 or 3.

2) On all models, remove bolt and separate control arm from front crossmember. Remove ball joint pinch bolt and separate ball joint from knuckle housing. Without damaging CV joint boot, carefully use a screwdriver to spread knuckle (if necessary). DO NOT spread housing slit more than .16" (4 mm).

3) Remove control arm from vehicle. Remove ball joint nut and remove ball joint from control arm.

Installation

To install, reverse removal procedure. Check bushing for wear or damage. Replace if necessary. Install NEW cotter pin. Tighten control arm to crossmember bolt after vehicle has been lowered to ground.

STRUT ASSEMBLY

Removal

1) Raise and support vehicle. Remove wheel assembly. Disconnect brakeline from caliper. Disconnect brake hose from strut bracket. Remove knuckle to strut retaining bolts.

2) Separate knuckle from strut by pushing knuckle down. On Loyale, without damaging CV joint boot, carefully use a screwdriver to spread knuckle if necessary. DO NOT spread housing slit more than .16" (4 mm). Remove upper strut retaining nuts. On all models, remove strut from vehicle.

Disassembly

Compress coil spring with Compressor (926110000) until upper seat is separated from coil spring. On Justy, hold strut rod with an Allen wrench and remove self-locking nut. On all models, use Spanner (926510000) to hold spring seat while removing self-locking nut. Remove components from strut. On Justy, note position of thrust washers and washers for reassembly reference.

Inspection

Check all parts for wear or damage. Replace if necessary. Check rod deflection. Fully extend rod and mount a dial indicator .4" (10 mm) from end of rod. Apply a load of 4 lbs. (1.8 kg) to end of rod and measure play. Maximum side play is .031" (.80 mm). Replace strut if play exceeds specification. Strut cannot be disassembled. Check action of rod for abnormal noise or resistance.

Reassembly & Installation

- 1) To reassemble, reverse disassembly procedure. Use NEW self-locking nut. On Justy, coat thrust washer with grease. Ensure projection on dust cover fits into notch on upper spring seat.
- 2) Ensure groove in washer for "O" ring faces up. Ensure notch in thrust washer aligns with notch in upper spring seat. Ensure notches in upper and lower spring seats are aligned.
- 3) On Legacy, Loyale and SVX, ensure flat side of coil spring is up when assembling strut. To install, reverse removal procedure. Bleed brakes.

STABILIZER BAR

Removal & Installation

Raise vehicle and support with safety stands. Remove brackets securing stabilizer bar to lower control arm. Remove brackets attaching stabilizer bar to crossmember. Remove jack-up plate of crossmember and remove stabilizer. To install, reverse removal procedure. Tighten bolts after vehicle has been lowered to ground.

CROSSMEMBER

Removal & Installation (Justy)

Raise and support vehicle. Support engine at front and rear with Engine Support (921540000). Remove engine splash shield. Remove engine mount center member. Remove exhaust system with muffler attached. Remove lower control arm from crossmember. Remove engine mount nut from crossmember. Remove crossmember from vehicle. To install, reverse removal procedure.

Removal & Installation (Legacy, Loyale & SVX)

- 1) Raise and support vehicle. Remove wheels. Remove spare tire, air cleaner assembly, and pitching stopper rod. Cover throttle body to keep out dust.
- 2) Remove parking brake cable bracket from lower control arm. Disconnect tie rod end from knuckle housing. Remove front exhaust pipe. Remove lower control arm from crossmember.
- 3) Remove nuts attaching engine mounts to crossmember. Remove nuts connecting steering torque rod and pinion shaft. Lift engine assembly .4" (10 mm). Support crossmember with jack. Remove nuts and remove crossmember along with steering box.
- 4) To install, reverse removal procedure. Tighten crossmember nuts and lower control arm-to-crossmember bolt with vehicle on ground and suspension unloaded.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application (1)	Ft. Lbs. (N.m)
Justy	
Ball Joint-To-Control Arm Nut	29 (39)

Ball Joint-To-Knuckle Nut	25-40	(34-54)
Caliper-To-Knuckle Bolt	38-49	(52-66)
Control Arm-To-Crossmember Nut	44-58	(59-78)
Crossmember-To-Body Bolt	44-51	(59-69)
Stabilizer-To-Control Arm Bolt	15-22	(20-30)
Strut Piston Rod Lock Nut	43-51	(59-69)
Strut-To-Body Nuts	29-44	(39-59)
Strut-To-Knuckle Bolt	25-40	(34-55)
Tension Rod Nut	40-55	(54-74)
Tension Rod-To-Control Arm Nut	55-69	(74-93)
Tie Rod End Nut	18-22	(25-30)
Legacy		
Ball Joint-To-Control Arm Nut	29	(39)
Ball Joint-To-Knuckle Nut	28-37	(38-50)
Caliper-To-Knuckle Bolt	36-51	(49-69)
Control Arm-To-Crossmember Nut	61-83	(83-113)
Crossmember-To-Body Bolt	61-83	(83-113)
Stabilizer-To-Control Arm Bolt	15-21	(21-28)
Strut Piston Rod Lock Nut	36-51	(49-69)
Strut-To-Body Nuts	10-18	(14-25)
Strut-To-Knuckle Bolt	97-120	(132-162)
Tension Rod Nut	40-55	(54-74)
Tension Rod-To-Control Arm Nut	55-69	(74-93)
Tie Rod End Nut	18-22	(25-30)
Loyale		
Ball Joint-To-Control Arm Nut	29	(39)
Ball Joint-To-Knuckle Nut	28-37	(38-50)
Caliper-To-Knuckle Bolt	36-51	(49-69)
Control Arm-To-Crossmember Nut	44-51	(59-69)
Crossmember-To-Body Bolt	61-83	(83-113)
Stabilizer-To-Control Arm Bolt	15-21	(20-29)
Strut Piston Rod Lock Nut	38-49	(51-67)
Strut-To-Body Nuts	19-27	(26-36)
Strut-To-Knuckle Bolt	28-37	(38-50)
SVX		
Ball Joint-To-Control Arm Nut	80-102	(108-138)
Ball Joint-To-Knuckle Nut	33-44	(45-59)
Caliper-To-Knuckle Bolt	51-65	(68-88)
Control Arm-To-Crossmember Nut	56-74	(76-100)
Crossmember-To-Body Bolt	94-123	(127-167)
Stabilizer-To-Control Arm Bolt	16-21	(21-28)
Strut Piston Rod Lock Nut	36-44	(49-59)
Strut-To-Body Nuts	25-35	(34-48)
Strut-To-Knuckle Nut	97-127	(132-172)

(1) - Use NEW self-locking nuts.
