2265 Crosswind Drive • Prescott, AZ 86301
(928) 636-3175

F1540
1980-1996 F150 & Bronco 4WD
4" Suspension Lift
INSTALLATION INSTRUCTIONS

⚠ WARNING

1. Read and understand all instructions, warnings and cautions in these instructions, your owner's manual and related service manuals before the installation or use of this product. DO NOT install or use this product if there is anything you do not understand in these instructions or related materials.

2. Certain Trail Master products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Use of oversize tires, suspension lifts, body lifts and other suspension modifications may raise your vehicle's center of gravity resulting in an increased tendency for the vehicle to pitch and roll during sudden turns or abrupt maneuvers. Extreme care must be used to prevent loss of control or vehicle roll over. Failure to drive your modified vehicle safely may result in serious injury or death. Drive at reduced speeds to ensure your ability to maintain control of the vehicle under all driving conditions. **Always** wear seat belts.

3. DO NOT combine suspension lifts, body lifts or other lift devices. Combined use of lifts may result in unsafe and/or unexpected handling characteristics (see enclosed product safety WARNING label).

4. Many states now have laws restricting vehicle modifications such as lift, bumper height or other alterations. Consult your state vehicle equipment laws to determine if the installation of this kit or other modifications are permitted.

5. The use of larger than OE tire and wheel combinations may reduce the effectiveness of the braking system (including ABS equipped) and increase the amount of pedal pressure necessary to obtain a given braking distance with normal stops and increase the stopping distance in a panic stop. Drive at reduced speeds and allow for extra stopping distance while driving a vehicle equipped with larger than OE tires. Discuss this issue with your tire and wheel dealer before installing larger tires and do not use tire and/or wheel combinations that compromise safe braking performance.

6. Supplied in this kit is a safety WARNING label. Install this label inside the cab of the vehicle where it will be highly visible to all operators of the vehicle.

⚠ CAUTION

1. Proper installation of Trail Master products requires knowledge of recommended procedures for disassembly/ assembly of OE vehicles and components (i.e. steering tie rods, control arms, brake calipers, etc.). Access to OE shop manuals and special tools is required. Attempting to install this kit without knowledge of these procedures may affect the safety of your vehicle and/or the performance of these components. Trail Master strongly recommends that this kit be installed by a certified mechanic with off-road experience.

2. Use the appropriate tool for the job and be sure that tools are in good condition. Failure to use proper tools and/ or tools in good condition may result in personal injury.

3. Always wear safety glasses while installing this kit to avoid eye damage from debris, broken tools, etc.

4. Use Loctite 243 thread locker on all metal fasteners (per the manufacturers directions) unless otherwise noted in these instructions. Failure to use thread locker may result in fasteners becoming loose over time.

5. The components included in this kit require regular inspection for wear or damage. Periodically check fasteners for proper torque (see chart of required torque specifications on next page). Worn, damaged or loose parts can fail suddenly resulting in loss of control of the vehicle and personal injury.

PRE-INSTALLATION NOTES

⚠ WARNING

1. Properly block and secure vehicle prior to installation.

Compare parts included in your system with the enclosed parts list. Placing hardware with components before you start may reduce installation time. Contact your Trail Master dealer if any parts are missing or appear to be different than those indicated on the parts list.

PRE-INSTALLATION NOTES

1. Pitman arm #PA10 is recommended for vehicles with power steering. Available separately.

2. Radius arm frame support bracket #FS84 (Available separately) is recommended for all applications.

3. On early models, cutting may be required for removal of the driver side axle pivot bracket (located on the passenger side of the vehicle) and/or the OE radius arm frame brackets. In addition, drilling may be required for some/all mounting holes when installing the Trail Master radius arm brackets.

4. If desired, longer, tubular replacement radius arms and pivot brackets are available separately. Order #8042.

5. For increased caster adjustability, replacement “cam type” polyurethane radius arm bushings are available. Order #8017.

6. Non adjustable polyurethane radius arm bushings are available. Order #SA35.

7. Rear U-bolts are included in this system. These U-bolts are intended for use on pickup applications. Due to the addition of an add-a-leaf to the OE spring pack, OE U-bolts on pickup trucks will be too short. OE Bronco U-bolts have adequate length for reuse. If desired, replacement U-bolts for Bronco applications are available separately. Order #40051 (4 required).

8. Recommended Trail Master shock absorbers:
Front: 53460, 63460, 73460
Rear: 52510, 62510, 72510

For models with factory “Quad Suspension” Additional front shocks: 53490, 63490, 73490

GLOSSARY OF TERMS

TM:	Trail Master
DRV:	Drivers side of the vehicle
PASS:	Passengers side of the vehicle
OE:	Original equipment
SRS:	Supplemental Restraint System

TORQUE SPECIFICATIONS

1/4 FASTENERS	10'LBS.
5/16 FASTENERS	17'LBS.
3/8 FASTENERS	30'LBS.
7/16-14 FASTENERS	50'LBS.
7/16-20 FASTENERS	55'LBS.
1/2-13 FASTENERS	75'LBS.
1/2 U-BOLTS	65-80'LBS.
9/16 FASTENERS	110'LBS.
9/16 GRADE 8 FASTENERS	170'LBS.
9/16 U-BOLTS	75-90'LBS.
5/8 FASTENERS	150'LBS.
5/8 U-BOLTS	85-110'LBS.
3/4 FASTENERS	175'LBS.

PARTS LIST

Driver Side Anti-Sway Bar Brkt (XJSB-DO)	1
Passenger Side Anti-Sway Brkt (XJSB-PO)	1
3/8" x 1-1/4" Bolts (38114CHHC)	4
3/8" Locknuts (N38CL)	4
3/8" Flat washers (W56F)	8
Driver Side Radius Arm Brkt (DB80L)	1
Passenger Side Radius Arm Brkt (DB80R)	1
7/16" x 1-1/4" Bolts (76114CHHC)	12
7/16" Locknuts (N76FL)	12
7/16" Flat washers (W38F)	24
9/16-18 High Nut (N96FH)	8
9/16-18 x 3-1/4" x 11-5/8" Round (963141158R)	4
Driver Side Axle Pivot Brkt (F1540SB)	1
Passenger Side Axle Pivot Brkt (F1540LB)	1
9/16" x 3-1/2" Bolt (96312CHHC)	1
9/16" Locknut (N96SCL)	1
9/16" Flat washers (W96S)	10
1/2" x 1-1/2" Bolts (12112CHHC)	2
1/2" Locknuts (N12CL)	2
1/2" Flat washers (W12F)	4
Front Coil Springs (206)	2
Bumpstop Extensions (BS35)	4
1/4" x 1" Bolts (14100CHHC)	4
1/4" Locknuts (N14CL)	4
1/4" Flat washers (W14F)	16
Rear Add-A-Leafs (R2150S)	2
3/8" Center pins (380412FCP)	2
3/8" Center pin nuts (N38FS)	2
3" Hendricks clips (4pcs) (HC300)	2

FRONT INSTALLATION

1. Park vehicle on hard level surface. Chock wheels.

2. Raise front of vehicle. Support vehicle at frame rails.

3. Disconnect anti-sway bar at frame. On '92 - '96 pickup applications, disconnect anti-sway bar and skid pan from frame.

4. Disconnect radius arm brackets from frame by removing rivets and bolts. **NOTE:** Longer replacement radius arms and pivot relocation brackets are available. Order #8042.

5. Remove radius arm brackets from radius arms.

6. Install Trail Master radius arm brackets on radius arms. Retain using OE bushings, washers, and nuts. **DO NOT TIGHTEN AT THIS TIME. Fig. 2.**

7. Position radius arms/brackets on frame. Retain brackets to frame using 7/16" x 1-1/4" bolts, washers and nuts provided in existing holes. Snug-up fasteners to align brackets with frame. **Fig. 2.**

Fig. 2

8. Using radius arm bracket holes as guides, drill additional 7/16" holes in frame. **Fig. 1.**

Fig. 1

⚠ WARNING

Use caution when drilling to avoid damage to lines/wires.

9. Install remaining 7/16" x 1-1/4" bolts, washers and nuts in new holes.

10. Torque all radius arm bracket bolts to 50'LBS.

11. Support front axles with hydraulic jacks. Remove front shock absorbers.

12. Remove clips retaining coil springs to frame. **Fig. 4.**

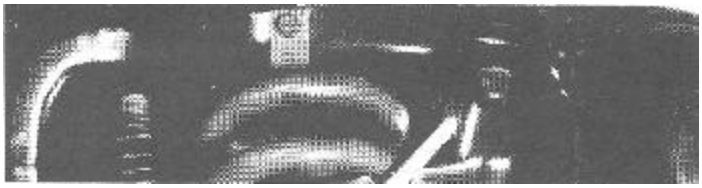


Fig. 4

13. Lower axles. Disengage coil springs from frame pockets.

14. Remove nuts and cup washers retaining coil springs to axles. Remove springs. **Fig. 3.**

15. Install replacement coil springs on axles. Retain using OE cup washers. **DO NOT TIGHTEN AT THIS TIME. Fig. 3.**

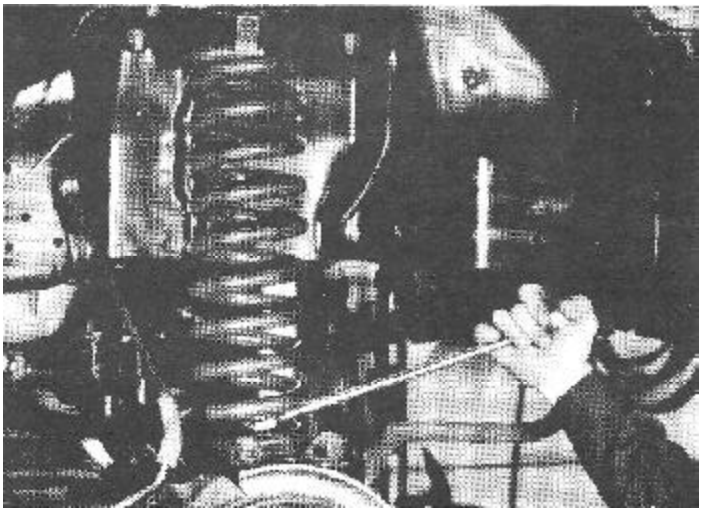


Fig. 3

16. Raise axles and engage coil springs in frame pockets. Retain using OE clips and bolts. Torque spring clip bolts to OE specifications. Torque lower spring retaining nuts to OE specifications. **Fig. 4.**

17. Remove axle pivot bolts.

18. Remove driver side axle pivot bracket from the passenger side of the frame. OE bracket looks similar to F1540LB.

19. Position relocation bracket F1540SB inside OE passenger side axle pivot bracket (located on driver side of frame). Retain bracket by installing (1) 9/16" x 3-1/2" bolt through OE pivot bolt hole. Align bracket and snug-up bolt. **Fig. 6.**

Fig. 6

20. Using relocation bracket holes as guides, drill 1/2" holes in crossmember.

21. Install 1/2" x 1-1/2" bolts, washers and nuts in new holes. Torque fasteners, retaining brackets.

22. Position axle inside pivot bracket. Retain, using OE pivot bolt and nut. **DO NOT TORQUE AT THIS TIME. Fig. 6.**

23. Position relocation bracket (F1540LB) on passenger side of frame. Align bracket with OE mount holes. Retain using OE fasteners. Torque to OE specifications. **Fig. 7.**

24. Position driver side axle pivot inside bracket. Retain using OE pivot bolt and nut. **DO NOT TORQUE AT THIS TIME. Fig. 7.**

Fig. 7

25. Remove compression limiters from frame rails.

26. Install compression limiters on relocation brackets (8535). Retain using OE fasteners and 1/4" flat washers. **Fig. 10.**

27. Install compression limiter/relocation brackets on frame. Retain using 1/4" x 1" bolts, washers and nuts. Torque 1/4" fasteners to 10'LBS. **Fig. 10.**

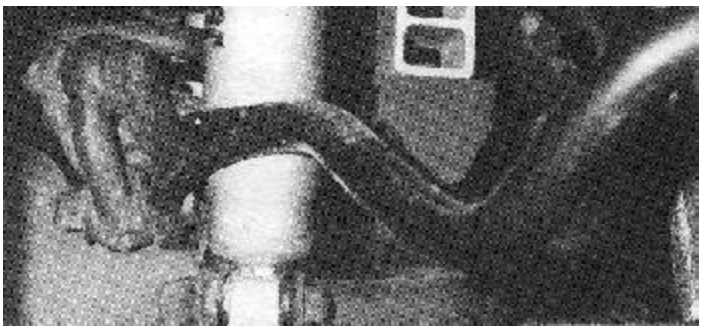


Fig. 10

28. Position anti-sway bar relocation brackets on frame. Offset in bracket goes toward rear of vehicle. Retain using OE hardware. Slide bracket forward as far as possible. Torque fasteners to OE specifications. **Fig. 9.**

29. Position anti-sway bar under relocation brackets. Retain, using 3/8" x 1-1/4" bolts, washers and nuts. Slide bar to front of slotted holes. Torque 3/8" fasteners to 30'LBS. **Fig 9.**

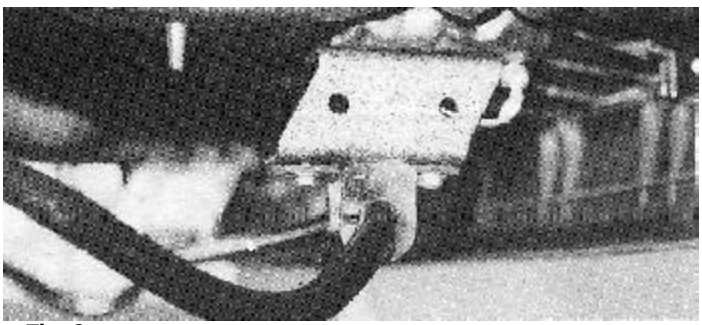


Fig. 9

NOTE: On '92 - '96 F150 models with front skid plate, skid plate and anti-sway bar mounts to underside of relocation brackets.

30. Install Trail Master front shock absorbers.

⚠ WARNING

Compression limiters, relocation brackets and correct shock absorbers must be in place on all vehicles. Allowing suspension to over extend or compress by neglecting to install or maintain components may cause serious damage and will void your warranty.

Fig. 5

Fig. 8

REAR INSTALLATION

1. Refer to System Installation Manual and OE Service Manual for proper procedures when installing or replacing U-bolts.

2. Raise rear of vehicle. Support vehicle at frame.

3. Remove rear wheels and tires.

4. Support rear axle.

5. Remove rear shock absorbers.

6. Remove U-bolts.

7. Lower axle away from springs.

8. Clamp OE spring packs securely.

9. Remove the center bolts.

10. Remove spring clips.

11. Slowly release clamps relieving pressure from spring packs.

12. Clamp spring pack together.

13. Install new center pin, from bottom up, through all leaves. Retain using nut supplied.

14. Clamp pack tightly. Torque center pin nut.

15. Raise axle. Align center bolts with holes in blocks. With pins and center bolts fully seated in axle pads and blocks, retain axle to springs using U-bolts supplied. Run-up, but **DO NOT TORQUE U-BOLTS AT THIS TIME.**

16. With axle supported in raised position, install recommended rear shock absorbers.

17. Install desired wheels and tires. Torque lug nuts per OE manual specifications.

18. Lower vehicle to ground.

19. Torque front and rear U-bolts to 85-110'LBS.

20. Torque front spring shackle and frame mount bolts to OE specifications.

21. Test drive vehicle. Note position of steering wheel when vehicle is traveling straight ahead. Note steering characteristics of vehicle when bumps or dips are encountered. If steering wheel is not centered when vehicle is traveling straight ahead or if vehicle turns sharper toward one direction, adjust drag link length. If vehicle exhibits bumpsteer or goes left or right when bumps or dips in the road are encountered, steering geometry (drag link angle) must be corrected by installing steering arm #SA40. This arm is available separately through your Trail Master dealer.

22. With suspension fully extended, check driveline universal joint(s) and C.V. joint(s) for binding/interference.

PRODUCT SAFETY LABEL

Supplied in kit is a safety warning label. Install label inside cab. Locate label in a highly visible location to all operators of this vehicle. If label becomes lost or damaged, contact Trail Master at (928) 636-3175 for a replacement.

POST-INSTALLATION NOTES

WARNING

1. Check all fasteners for proper torque before driving the vehicle for the first time with this kit, after the first 500 miles, after each off-road use and during routine vehicle servicing. Worn, damaged or loose parts can fail suddenly resulting in loss of control of the vehicle and personal injury.

2. In ALL steering and suspension positions, check to ensure that there is adequate clearance between ALL rotating, moving, fixed and heated members. Ensure adequate clearance around steering components, exhaust components, brake lines, fuel lines, fuel tank and electrical wiring.

3. Visually inspect components for wear or damage after each off-road use and during routine vehicle servicing. Worn, damaged or loose parts can fail suddenly resulting in loss of control of the vehicle and personal injury.

4. Trail Master does not recommend a particular tire and wheel combination for use with its products and assumes no responsibility for customer choice of tires and wheels. Consult your owner's manual for recommended tire sizes and warnings related to use of oversize tires and wheels. In general, larger tire and wheel combinations may increase stress and wear on steering components leading to increased maintenance and greater risk of component failure, including loss of steering control. Property damage or personal injury may result. Large tire and wheel combinations may also alter speedometer calibration, reduce braking effectiveness and alter vehicle center of gravity height (See product safety warnings). Check with an experienced off-road shop for the tire and wheel combinations that work best on your truck. Remember, **BIGGER** isn't necessarily better.

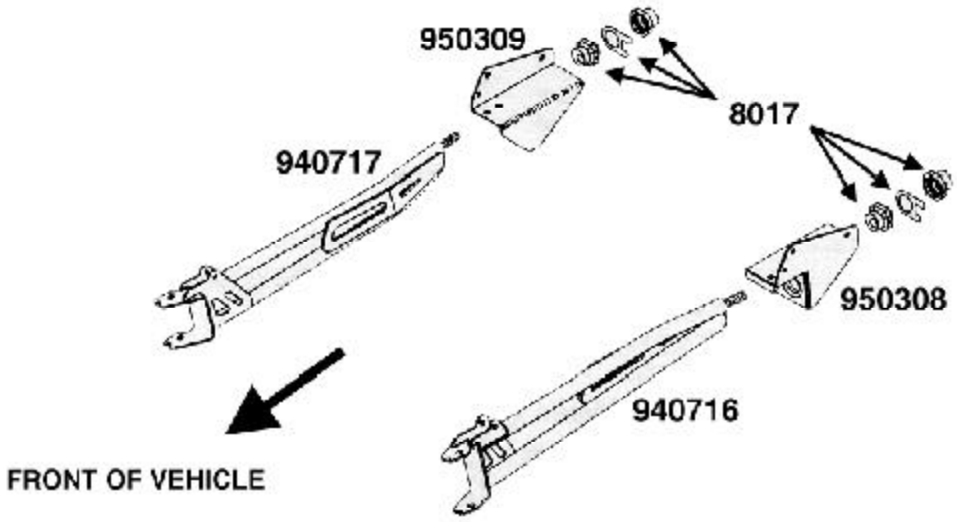
5. Trail Master's goal is to provide you with the best system possible for a reasonable cost. It must be noted that the components in your Trail Master system do not eliminate OE component weaknesses.

6. Perform headlight adjustment.

7. Set vehicle alignment within OE specifications. The size of rim and tire combinations should be considered when making front end adjustments.

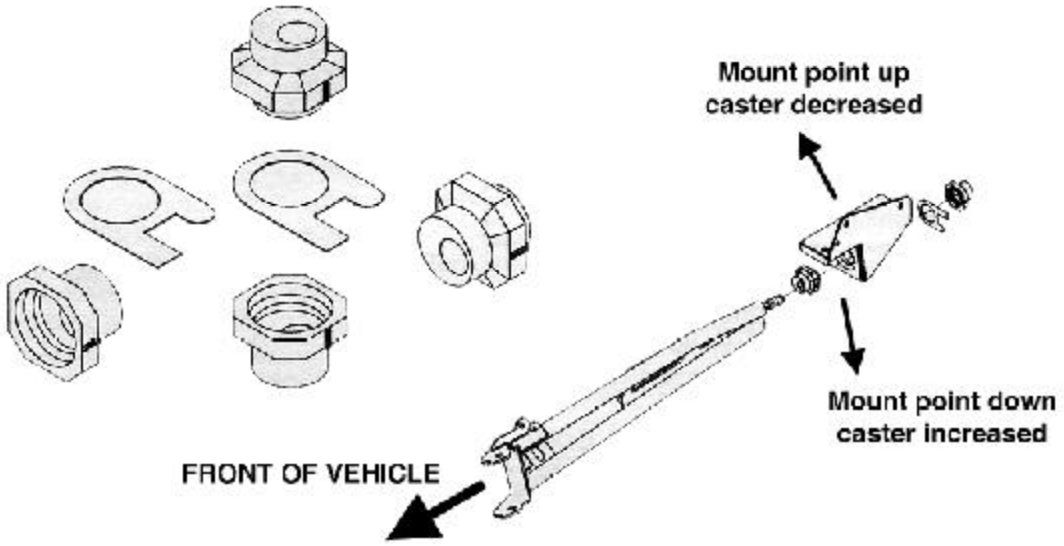
8. Retain this and all information regarding your altered vehicle for future reference. Thank you for choosing Trail Master. For questions, contact our Technical Assistance Department at (928) 636-3175.

TRAIL MASTER
8042 SUSPENSION SYSTEM
COMPONENT LAYOUT



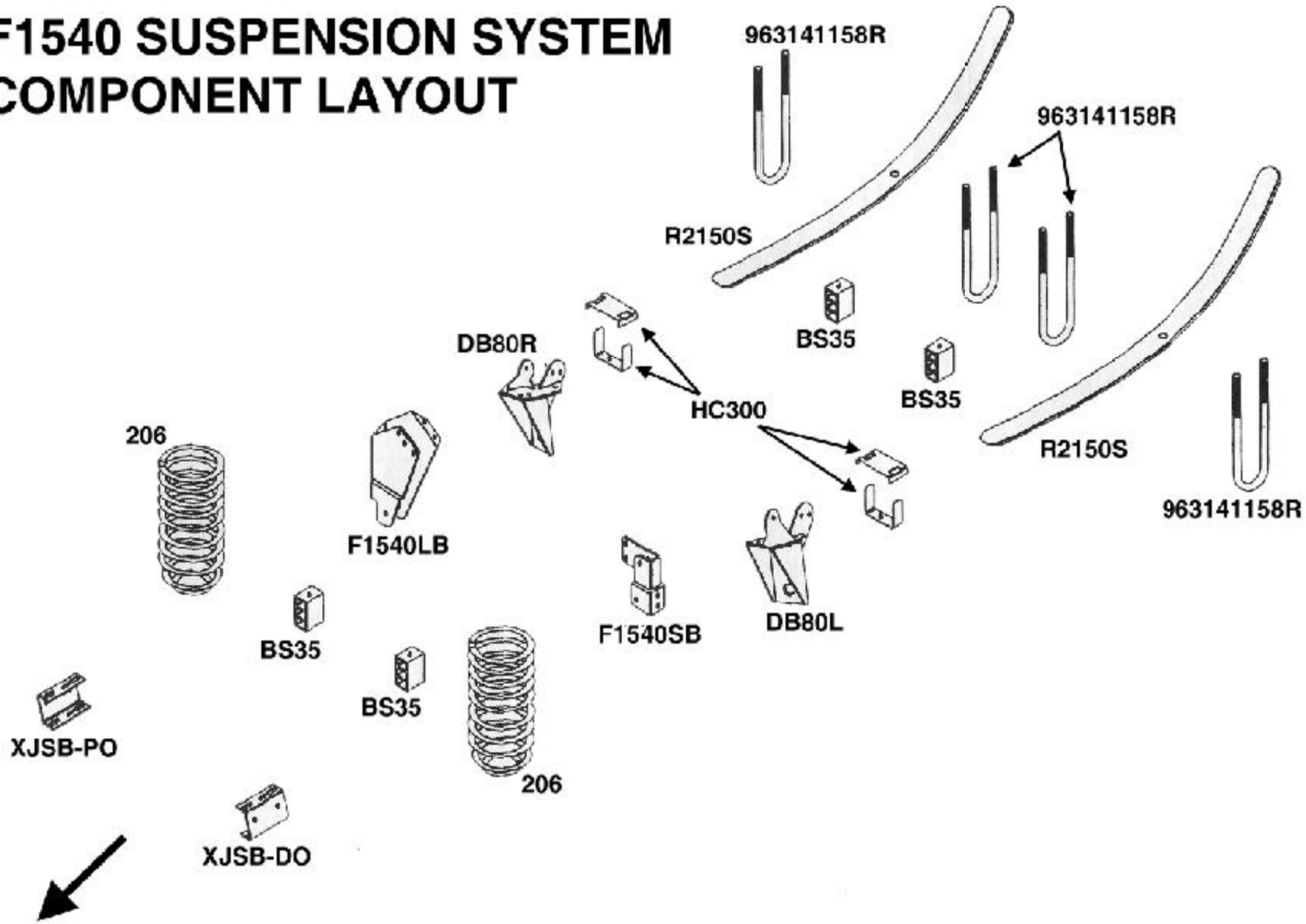
Longer than stock arms allow for higher rear mount point providing increased ground clearance over stock length arms with mount point lowering brackets.
"Bent" arm design combined with mount relocation brackets which move rear mounts inboard allow for use of larger tires and deeper wheel backspacing without the tire-arm rubbing common with stock and other aftermarket radius arms.
Includes 8017 caster adjustment poly bushing kit.

TRAIL MASTER
8017 FORD RADIUS ARM CAM BUSHING KIT
COMPONENT LAYOUT



Replaces OE bushings in both factory and lifted applications.
Rotational positioning of cam bushings increases caster adjustment range by allowing vertical adjustment of radius arm rear mount point.

TRAIL MASTER
F1540 SUSPENSION SYSTEM
COMPONENT LAYOUT



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Form No. **IF1540**