



INSTALLATION MANUAL

Vehicle: 2019+ Ford Ranger - Pre-Runner - 2WD/4WD

Parent/Kit#: BJK34004, BJK34002
Box kit#: BJK3421001, BJK3421002

Level 1 Install: Bolt on
Install Time: 6-8 hours (approximate)

****NOTE:** Read through entire installation manual before deciding whether to attempt the procedure. Do not attempt if you do not possess the proper know-how and tools necessary to complete the installation.



BEFORE YOU START

Baja Kits recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/reassembly procedures and post installation checks must be known.

FOR YOUR SAFETY

Certain Baja Kits 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. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. Baja Kits does not recommend the combined use of suspension lifts, body lifts, or other lifting devices. You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Secure and properly block vehicle prior to installation of Baja Kits components. Always wear safety glasses when using power tools.
- Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

BEFORE YOU DRIVE

Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.

Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

FOR ANY TECHNICAL QUESTIONS OR SUPPORT, PLEASE CONTACT BAJA KITS

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Item	Qty	BJK3421001 / 3421002- Pre Runner - UCA - Kit
A5003	1	Pre Runner - UCA - DS
A5004	1	Pre Runner - UCA - PS
9110001	2	Steering Extender
B5176	1	Brake Line Extension - Bag Kit
	4	3/8 Brake Line Crush Washer
	2	27 in Brake Line Extension
	2	10mm x 1.5 Brake Line Fitting
	2	10mm 45 Degree Banjo
	6	11.5in Nylon Cable Tie - Black
B5003	2	UCA Delrin Bushing Kit
	8	Delrin Bushing .4"
	8	16 GA M14 Thin Washers
	4	UCA Crush Sleeve
	4	11.5in Nylon Cable Tie - Black
B5004 or B5014	2	UCA Misalign Kit - STL
	2	1/2-20 Nylock Nut Clear
	2	Sunk Misalignment 1/2"
	2	UCA Misalign - STL
	2	Bolt: 1/2 20 x 3.5 - 12 Point
	2	1/2in Washer
B5059	2	3.5" Badge Rivet Kit
	4	90 Deg Zerk Fitting 1/8 NPT
	2	Baja Kits Logo, 3.5" Rivet (BJK: BOTS-B043)
	4	1/8in 18-8 Stainless Steel Band Rivet

Item	Qty	BJK3422001/3422003 - Pre Runner - LCA Kit
A5005	1	Pre Runner - LCA - DS
A5006	1	Pre Runner - LCA - PS
B5005	2	LCA Delrin Bushing Kit
	8	Delrin Bushing .6"
	4	LCA Crush Sleeve
	4	5/8- 18 X 4-1/2 G8
	4	5/8-18 Lock Nut
	8	5/8 SAE Flat Washer

Item	Qty	BJK3422001/3422003 - Pre Runner - LCA Kit Cont'd
B5006 or B5015	2	LCA Misalign Kit
	2	Bolt: 9/16 18 x 4 - 12 Point
	2	Sunk Misalignment 9/16"
	2	LCA Misalign
	2	9/16 Fine Prevailing Torque Nut
	2	9/16 SAE Flat Washer
924-0017	1	LCA Hardware Kit
	6	12mm x 1.75 Nylock Nut Clear
	4	Bolt: 12mm 1.75x110mm
	8	1/2in Washer
B5060	2	7" Badge Rivet Kit
	4	90 Deg Zerk Fitting 1/8 NPT
	2	Baja Kits Logo, 7" Rivet
	4	1/8in 18-8 Stainless Steel Band Rivet

Item	Qty	BJK3426001 - Axle Box (4WD Only)
9100001	2	Pre Runner - 4WD Axle
865832	4	CV Clamp - Long
6865833	4	CV Boot Clamp - Short
9241007	1	Bolt Pack: Ext Axles
	2	Round Ret. Ring, 30mm Bore

Special Tools

- Basic Hand Tools
- Special Service Tool: 204-592 Separator



DISASSEMBLY

1. Secure the rear of the vehicle.
2. Lift the front of the vehicle and secure with jack stands.
3. Remove the front wheels.
4. Disconnect all brake and abs brackets from the knuckle. **(Fig.1)**



FIGURE 1

5. Disconnect sway bar link. **(Fig. 2)**



FIGURE 2

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6. Disconnect abs clips from the UCA. (Fig. 3)



FIGURE 3

7. Disconnect the tie rod end from the knuckle. Use the appropriate separation tool to disconnect. (Fig. 4)



FIGURE 4

8. Remove Axle Nut. (Fig. 5)



FIGURE 5

9. Remove your brake caliper and hang caliper to prevent line damage. (Fig. 6)

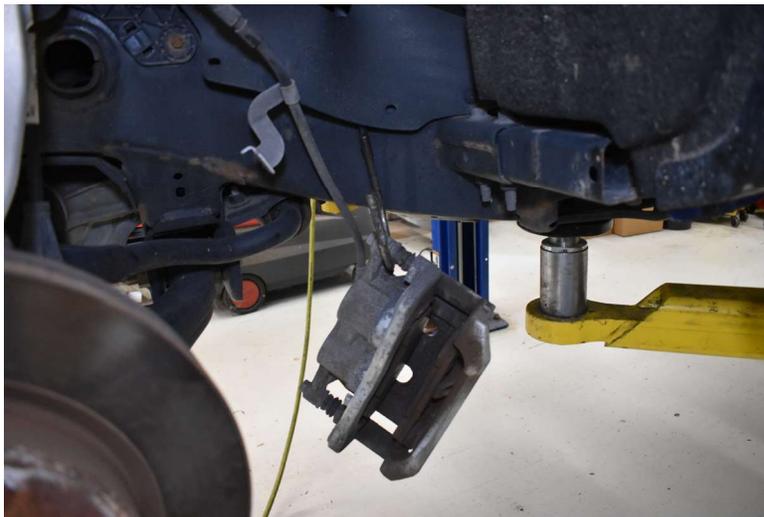


FIGURE 6

10. Remove brake rotor. (Fig. 7)



FIGURE 7

11. Remove the upper ball joint nut. Disconnect UCA from Knuckle using the STA tool to separate Ball joint from knuckle. (Fig. 8)



FIGURE 8

12. Use air hammer to dislodge axle from wheel bearing. (Fig. 9)



FIGURE 9

13. Remove LCA lower ball joint nut. Use STA tool to separate. Remove Knuckle.(Fig. 10)

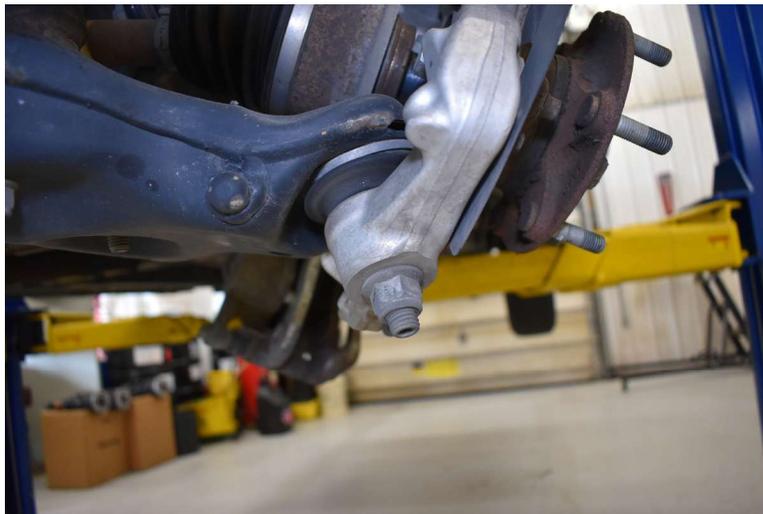


FIGURE 10

14. Loosen LCA cam bolt. (Fig. 11A, 11B)



FIGURE 11A



FIGURE 11B

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15. Remove the 2 lower bar pin strut nuts. 45 use pry bar to separate. (Fig. 12)



FIGURE 12

16. Remove LCA's

17. Remove UCA Pivot Shield. Passenger side only. (Fig. 13)



FIGURE 13

18. Disconnect the Wire harness bracket - Driver side only. (Fig. 14)

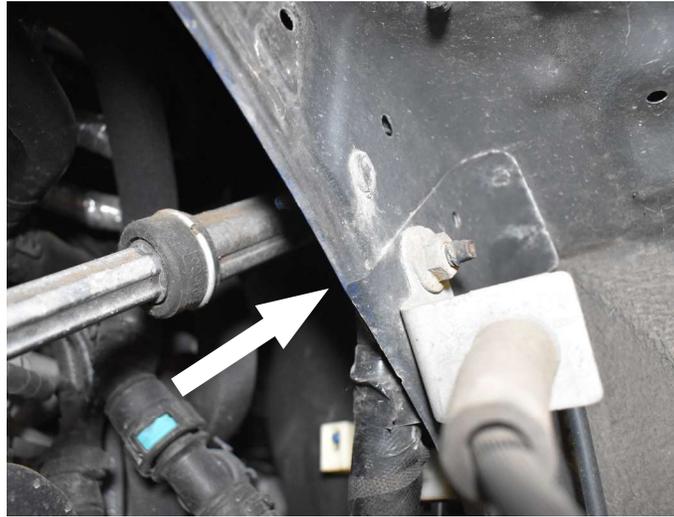


FIGURE 14

19. Remove UCA mounting nuts and bolts. Remove UCA's. (Fig. 15)



FIGURE 15

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20. Remove the 3 upper strut nuts. Do not loosen the center nut. Remove strut from vehicle. (Fig. 16)



FIGURE 16

UCA ASSEMBLY

21. Grease and install the bushings using a vice or arbor press. (Fig. 17)



FIGURE 17

22. Grease and install the sleeves. (Fig. 18)



FIGURE 18

23. Install the grease zerks. (Fig. 19)



FIGURE 19

24. Install LOGO badge using the provided rivets. (Fig. 20)



FIGURE 20

25. Install the UCA using the OE hardware and the provided washers. Leave loose. (Fig. 21A, 21B)



FIGURE 21A

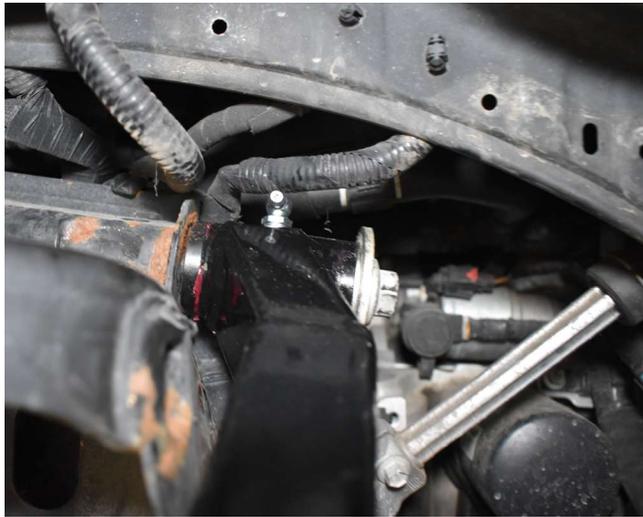


FIGURE 21B

LCA ASSEMBLY

26. Grease and install the bushings using a vice or arbor press. (Fig. 22)



FIGURE 22

27. Grease and install the sleeves. (Fig. 23)



FIGURE 23

28. Install Grease Zerks

AXLE SWAP HERE

29. Remove CV axles using a pry bar. (Fig. 24)

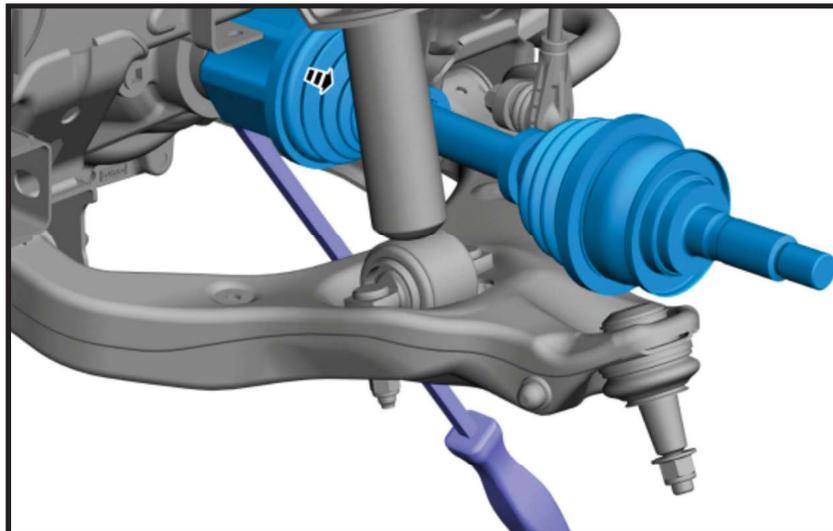


FIGURE 24

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30. Disassembly and Assembly are the same for both sides even though the axles look different. Female end is the passenger side. (Axle on the right in the photo.) (Fig. 25)



FIGURE 25

31. Remove clamps using screwdriver or chisel. (Fig. 26)



FIGURE 26

32. With both clamps removed, slide the boot down on the axle. (Fig. 27)



FIGURE 27

33. Knock off bearing housing using a wood block or a brass punch, rotating and tapping each of the three sides. (Fig. 28)



FIGURE 28

34. Remove bearing retaining snap ring. Retain retaining ring. (Fig. 29)



FIGURE 29

35. Place assembly in a vice and air hammer the end of the axle to dislodge from the yoke. NOTE: Ensure that the axle does not fall to the ground when it comes free of the yoke. (Fig. 30)



FIGURE 30

36. Clean off grease from axle and wipe excess off bearing assembly.

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37. To remove the bearing assembly from the wheel side of the axle, Cut axle off from bearing assembly. (Fig. 31A, 31B) It is recommend that you seal the bearing opening from debris for the next step. If you suspect any metal contamination of the grease, you must completely clean the housing of the old grease and replace with new.



FIGURE 31A



FIGURE 31B

38. Rotate bearing assembly by tapping with a flat brass punch to remove the 8 ball bearings. (Fig. 32A, 32B)



FIGURE 32A

FIGURE 32B

39. Remove the race from the bearing cage. (Fig. 33)



FIGURE 33

40. It is recommended that you remove the grease and clean the housing. (Fig. 34)



FIGURE 34

41. Using Hydraulic press to remove the axle shaft from the bearing race. (Fig. 35)

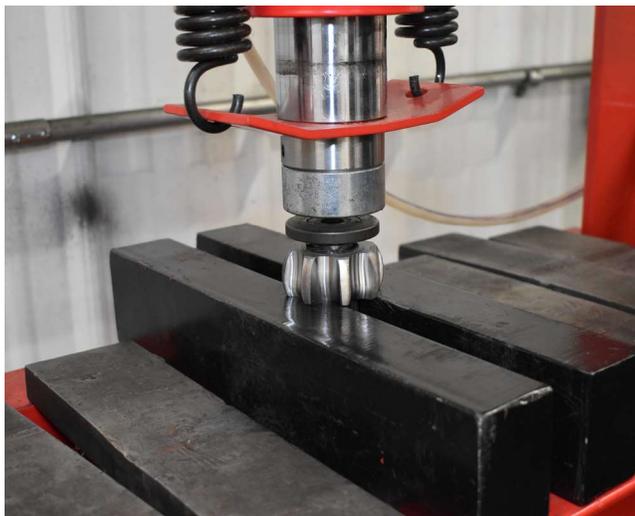


FIGURE 35

42. Remove ring from the inside of spline (Fig. 36)



FIGURE 36

43. Clean all components of any debris ie. metal, wood shavings, grinding dust, loose rust.

44. Insert bearing race into bearing cage side with the larger opening, The stepped side of the race must be to the small side opening. (Fig. 37A, 37B)



FIGURE 37A



FIGURE 37B

45. Grease Housing. Insert Bearing cage and race assembly into housing. Rotate the cage and race to install the ball bearings. (Fig. 38)



FIGURE 38

46. Install tri-bearing to the axle shaft and install the retaining ring. (Fig. 39)



FIGURE 39

47. Add grease to the inside of the tri-bearing housing, align bearings and tap the assembly into the housing. (Fig. 40)



FIGURE 40

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48. Install the CV Boots, paying attention to which boot fits each housing.

MAKE SURE YOU HAVE INSTALLED THE CV BOOTS TO THE AXLE BEFORE MOVING TO THE NEXT STEP!

49. Put snap ring on new axle shaft. Align splines. Tap new axle into bearing gear.

Note: It may be necessary to push the retaining ring down into the race using a flat head screwdriver before fully seating the axle.



FIGURE 41

50. Grease both CV ends.

51. Clean any grease off from the outside of the housings and the axle shaft. Slide the CV boots into place and secure using the provided boot clamps. (Fig. 42A, 42B)



FIGURE 42A



FIGURE 42B

52. With both axle swaps completed, install CV axles.

53. Install LCA using the OE hardware. Leave hardware loose. (Fig. 43A, 43B)



FIGURE 43A



FIGURE 43B

If Coilovers were purchased install then at this point according to the manufacturers instructions.

54. Align axle shaft end with wheel bearing. Attach the knuckle to the LCA using the sunk misalign, 12pt bolt, taper misalign, nut and washer.(Fig. 44A, 44B) Torque to 76 lbft.

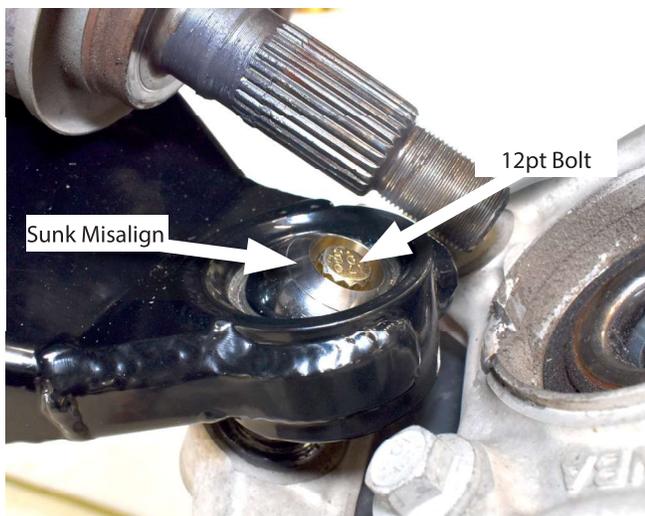


FIGURE 44A

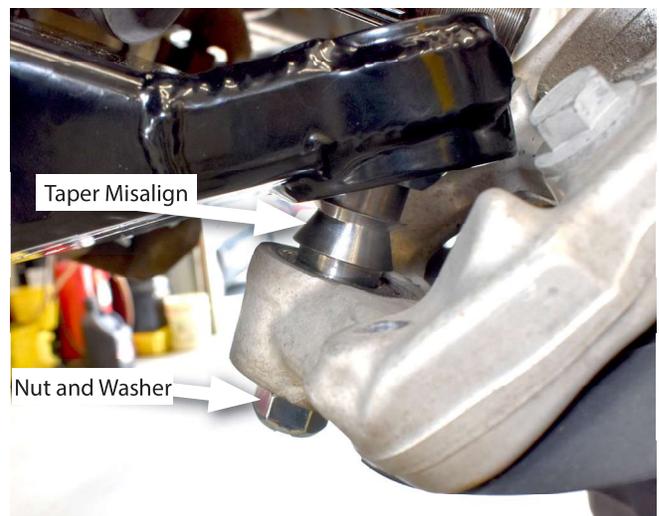


FIGURE 44B

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55. Re-Install the axle nut and torque to 221 lb.ft (Fig. 45)



FIGURE 45

56. Using the provided sunk misalign, 12pt bolt, taper misalign, nut and washer, attach the Knuckle to the upper control arm. Torque nut to 46 lb ft. (Fig. 46A, 46B)

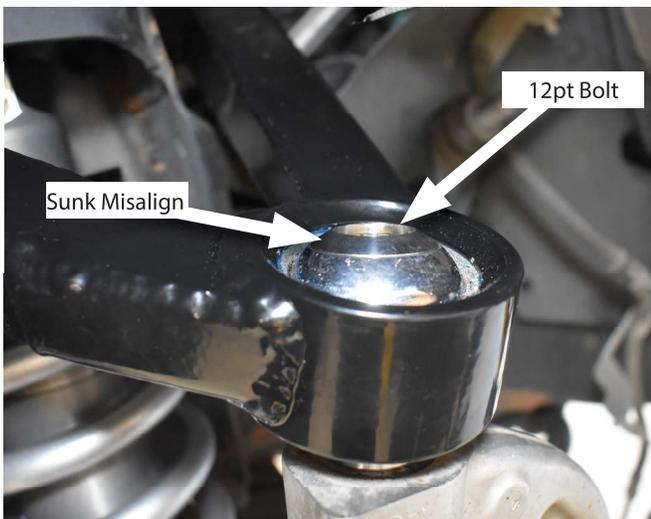


FIGURE 46A

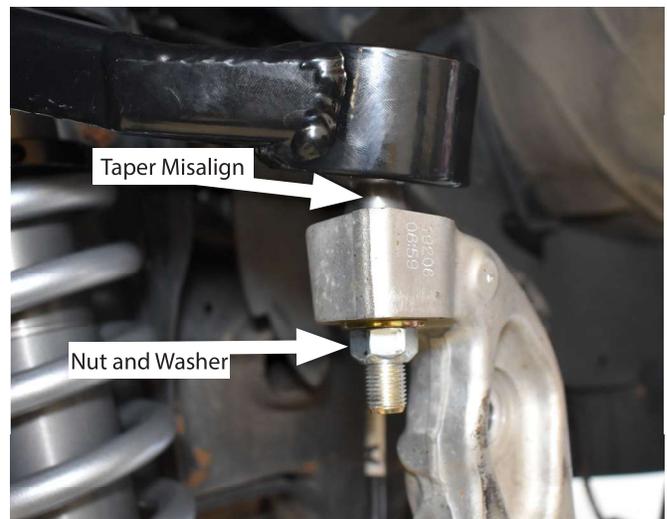


FIGURE 46B

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57. Re-Install Brake rotor and caliper. (Fig. 47)



FIGURE 47

TIE ROD EXTENSION SLEEVE INSTALLATION

58. Break the jam nut loose on the outer tie rod end. Remove the outer tie rod end. (Fig. 48)



FIGURE 48

59. Loctite and attach the extender sleeve to the tie rod end. (Fig. 49)



FIGURE 49

60. Anti seize the inner tie rod threads and attach tie rod with sleeve to the inner tie rod. (Fig. 50)



FIGURE 50

61. Attach tie rod to knuckle with OE Hardware.(Fig. 51)



FIGURE 51

BRAKE LINE INSTALLATION

62. Remove the upper brake line retaining clip. Disconnect upper line. (Fig. 52)



FIGURE 52

63. Connect provided line to the top ridged line. (Fig. 53)



FIGURE 53

64. Disconnect the bottom banjo bolt from the caliper. (Fig. 54)



FIGURE 54

65. Connect the provided line to the caliper using the OE bolt and the 2 crush washer. **(Fig. 55)**



FIGURE 55

66. Brake system will need to be bled and fluid will need to be added.

FINAL STEPS

67. Remove sway bar as it will not work with the pre-runner kit.

68. Torque UCA bolt/nut to 122 lbft

69. Tighten the LCA pivot bolts/nuts to 195 lbft.

70. Check all hardware.

71. Replace wheels and tires.

72. Lower vehicle to the ground and torque lug nuts to OE specifications.

73. The vehicle will need a full alignment.