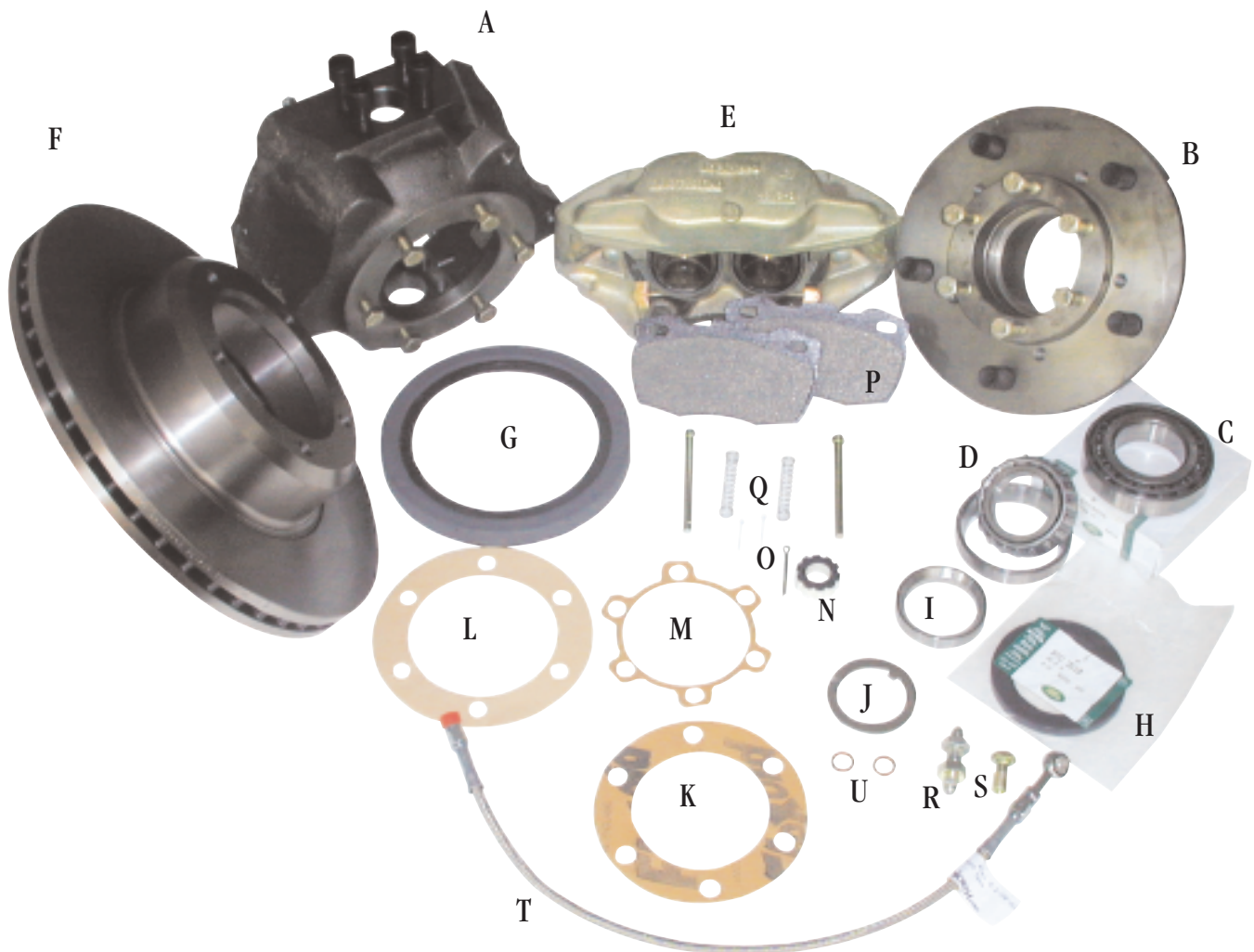




T H E S P E C I A L I S T S I N L A N D R O V E R S • U S A

# Front Disc Brake Conversion Kit For RNA6100KV and PLA6100KV



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### Contents List:

ILLUSTRATION	QUANTITY	GENUINE KIT	PROLINE KIT	
	1	RNA6100KV :	PLA6100KV :	Disc Brake Conversion Kit Front Series IIA & III
<b>A</b>	1	BCB01R	BCB01R	Swivel Housing RH Front
<b>A</b>	1	BCB01L	BCB01L	Swivel Housing LH Front
<b>B</b>	2	BCB02	BCB02	Hub Assembly Front & Rear
	1	BCBHK1	BCBHK1	Hardware Kit- SPH
	1	BCBHK2	BCBHK2	Hardware Rotor/Hub/Caliper
	1	BCBHK3	BCBHK3	Filler Plug Set
	1	BCB18	BCB18	Retainer RH SPH Seal
	1	BCB19	BCB19	Retainer LH SPH Seal
<b>C</b>	2	RTC3426	RTC3426	Bearing- Wheel, Outer
<b>D</b>	2	RTC3416	RTC3416	Bearing- Wheel, Inner
<b>E</b>	1	STC1266	PLF300A	Caliper Assembly RH Front
<b>E</b>	1	STC1267	PLF301A	Caliper Assembly LH Front
<b>F</b>	2	FTC902	PLB022A	Disc Rotor- Front, Vented
<b>G</b>	2	RTC3528	PLE618	Oil Seal, Swivel Ball
<b>H</b>	2	RTC3510	RTC3510	Hub Seal Front & Rear
<b>I</b>	2	599698	599698	Race Hub Seal
<b>J</b>	2	217352	217352	Lock Washer Hub Bearing Nut
<b>K</b>	2	232413	232413	Gasket SPH/ Axle Case
<b>L</b>	2	277289	277289	Gasket SPH Backing Plate
<b>M</b>	2	231505	231505	Gasket Drive Flange
<b>N</b>	2	RTC3515	RTC3515	Felt Seal
<b>O</b>	2	PS608101L	PS608101L	Split Pin Castle Nut
<b>P</b>	1	SFP000260	PLF323	Disc Pads Front 90 Defender
<b>Q</b>	1	Not Needed	PLD161	Fitting Kit For Front Brake Pads
<b>R</b>	2	RNA6100-01	RNA6100-01	Adapter Brake Pipe-Flex
<b>S</b>	2	RNA6100-02	RNA6100-02	Banjo Bolt 10mm x 1mm
<b>T</b>	2	RNA6100-03	RNA6100-03	Flex Line 18" Front
<b>U</b>	4	RNA6100-04	RNA6100-04	Copper Washer 10mm
	1	RNA6100I	RNA6100I	Disc Brake Conversion Kit Front Instructions

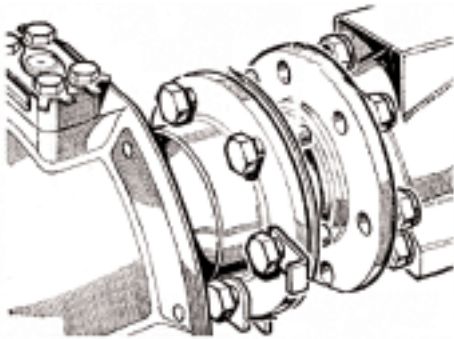
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1. Raise and secure the front of your Land Rover.
2. Remove the front road wheels.
3. Disconnect the front brake flex lines from the steel brake pipe at the chassis bracket.
4. Pry off your hub cap, remove the castle nut and drive flange. Remove the hub assembly, brake assembly, and spindle from the swivel pin housing (SPH). Remove the half axle assembly. Remove the top pin from the SPH. Clean and inspect the disassembled components for wear. Replacement components can be found on page 7 of these instructions.
5. Remove the top pin and shim stack from the SPH. Disconnect the steering arm from the bottom of the SPH. Remove the swivel housing. The brake assembly and swivel housing can be recycled.



Steering Stop Bracket

6. Remove the swivel ball oil seal retainer and oil seal from the SPH.
7. Disconnect the swivel ball from the axle housing. Make note of the location of the steering stop bracket.
8. Clean the swivel ball and reinstall onto the axle housing, first placing the seal (G) and modified retainer (Part number BCB18 or BCB 19) onto the swivel ball before rebolting to the front axle, using the axle swivel ball gasket (K) supplied.
9. Install the bottom steering arm and top pin assembly with shim pack. The installation procedure for the swivel pin housing varies slightly from the steps outlined in the workshop manual. Slide the swivel ball with the lower bearing installed into the housing and then install the steering arm and top pin without using thread locker on the supplied bolts. Be sure to lubricate the top pin and lower bearing prior to installation. Check the clearance between the swivel ball and the swivel pin housing. It is unlikely that you will have to make any modification to the housing; if needed you can grind away any material that interferes with the swivel ball. Install the front half axle assembly.
10. Using a spring balance attached to the steering lever at the track rod connecting eye, measure the resistance to rotation of the swivel pin housing, which must be 14lb to 16lb (6,3 kg to 7,3 kg) after having overcome inertia. Adjust as necessary by adding or subtracting shims at the top only, until the correct resistance figure is obtained. Once you have set the steering preload, remove the top pin and steering arm mounting bolts and re-install using blue (medium strength) thread locker. Torque bolts to 60 ft lbs. DO NOT use the original soft steel locking plates! They compress over time with shock loading and allow the bolts to loosen!

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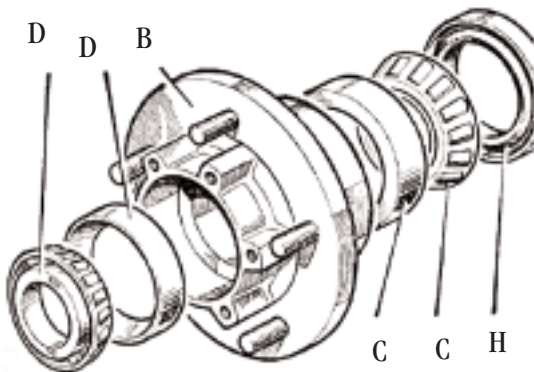
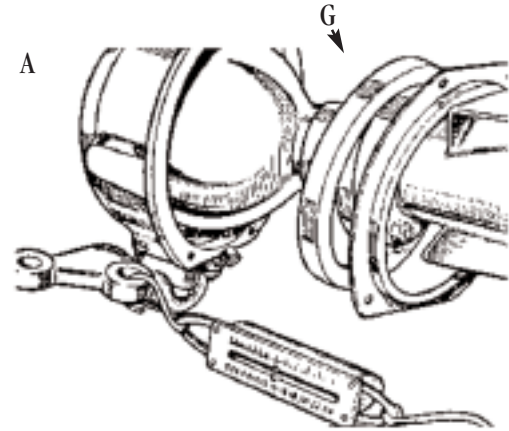
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11. Replace the hub seal race (I) on the spindle, (a new race must be installed as it is critical to brake rotor location) and using gasket (L), bolt the spindle to the new swivel housing (A). Use blue thread locker on the bolts, torque to 40ft lbs.

12. Install the inside wheel bearing race and wheel bearing (C) and hub seal (H) into the new hub assembly (B). Do not drive the hub seal too far into the hub; it should be flush with the edge of the hub. Make sure that the inside bearing is grease-packed prior to installation. At this time, only install the outer bearing race (D).

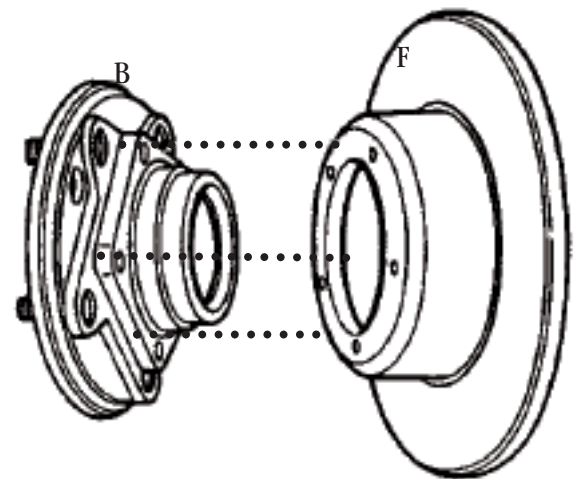


13. Bolt the hub assembly (B) to the disc assembly (F) using the bolts supplied. Use blue thread locker and torque bolts to 40 ft lbs.

14. Slide the assembled hub (B) and disc (F) onto the spindle and insert the outer wheel bearing packed with grease.

15. Install the hub flat washer and hub nut. Tighten the hub nut so that all play is removed from the bearings. Do not over-tighten, only remove the play.

Install lock washer (J) and hub lock nut. Tighten and re-check bearing adjustment. To double check bearing adjustment, bolt your road wheel on and check for play placing your hands at the top and bottom of your tire. Push and pull the tire perpendicular to rotation. If play is detected you need to tighten the wheel bearings. You must set the wheel bearings in this manner; incorrect setting will cause brake pad "knock back" and also contribute to hub seal wear. ZERO tolerance with a slight pre-load is required!



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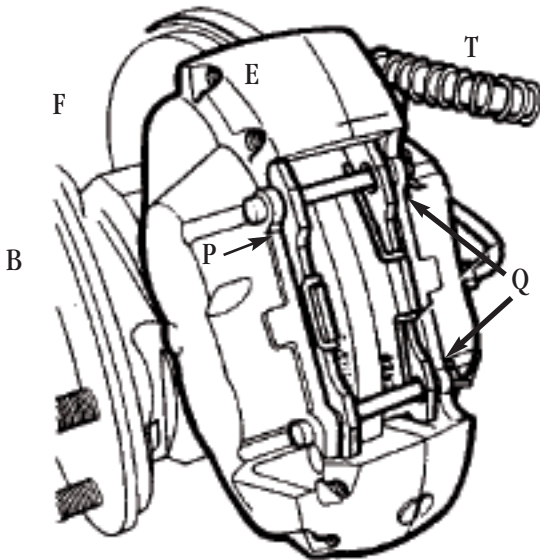




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16. Fit drive flange and gasket (M) with sealant, to the hub assembly (B) using the hub bolts provided. If you are installing locking hubs you will need to source the proper length bolts to fit your application. Thread size and pitch is 3/8"-24 UNE. Fit the felt washer (N) to the half axle, followed by the flat washer and castle nut. Tighten the castle nut, and fit the split pin (O) into the half axle. Refit your hub cap.

17. Mount the brake caliper (E) to the SPH (A) using the bolts provided. Brake caliper bolts require a 10mm allen key. Test fit the calipers. Some may require very slight grinding on the inner edge of the caliper where it fits down into the slot in the swivel housing. Install the pads (P) with hardware kit (Q) as shown below. Verify that the steering stops are set to factory specifications to avoid interference between caliper and front shock.



18. Fit the flex line (T) using the banjo bolt (S) and copper washers (U) to the caliper. Using adapter (R), fit the flex line (T) to your brake.

19. Using Girling approved brake fluid, top off your master cylinder and bleed the front brakes until all air is removed. Carefully test drive the vehicle! Recheck torque settings on all fasteners!

For future replacement of brake components, caliper and rotor are identical to NAS Defender 90.

NOTE: These hubs and swivel housings were designed with different threads.

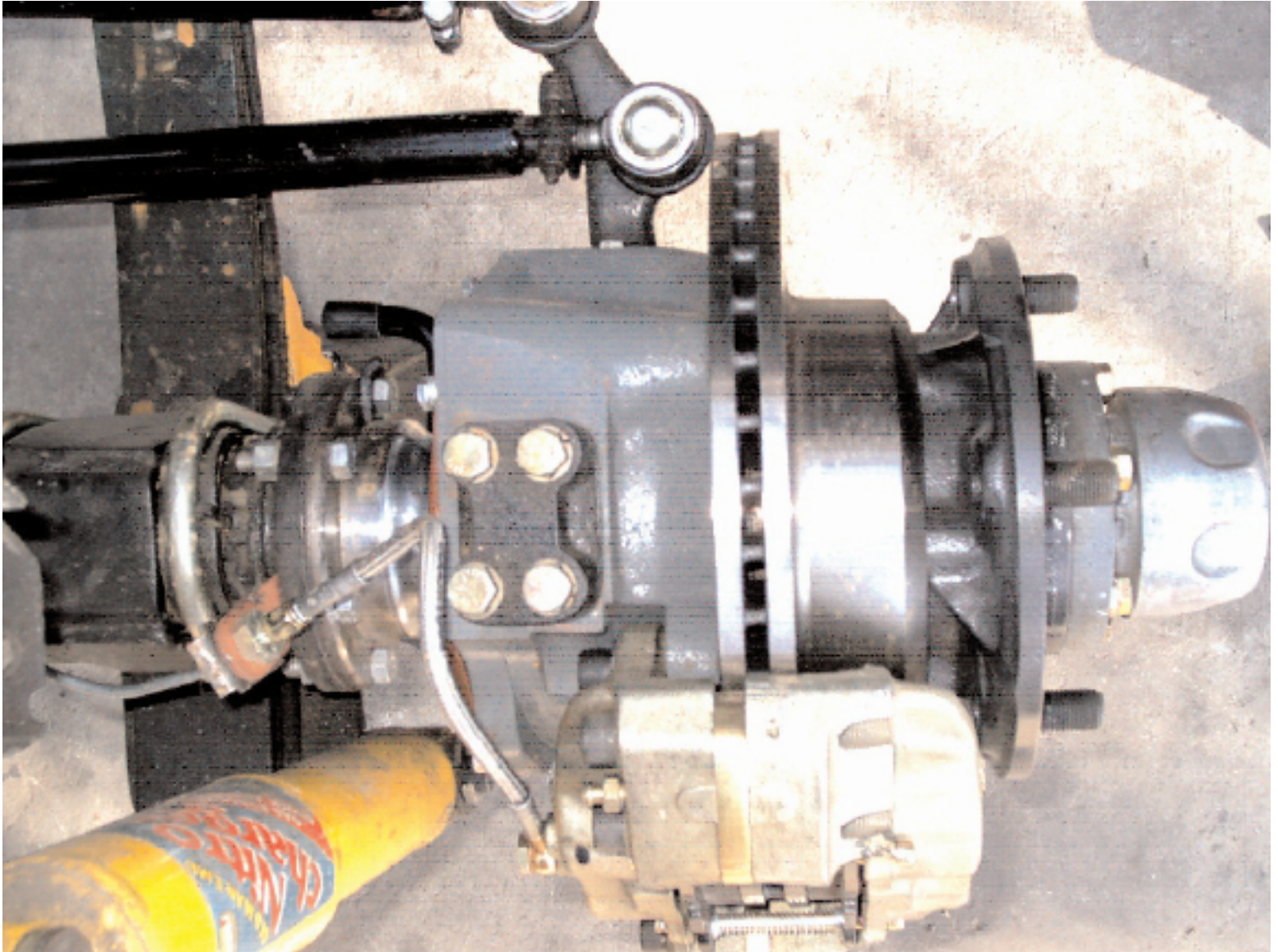
Thank you for relying on Rovers North to keep your vehicle running its best. If you find you need more technical advice, feel free to contact us at (802) 879-0032, or visit our website at [www.roversnorth.com](http://www.roversnorth.com). We are more than happy to help.

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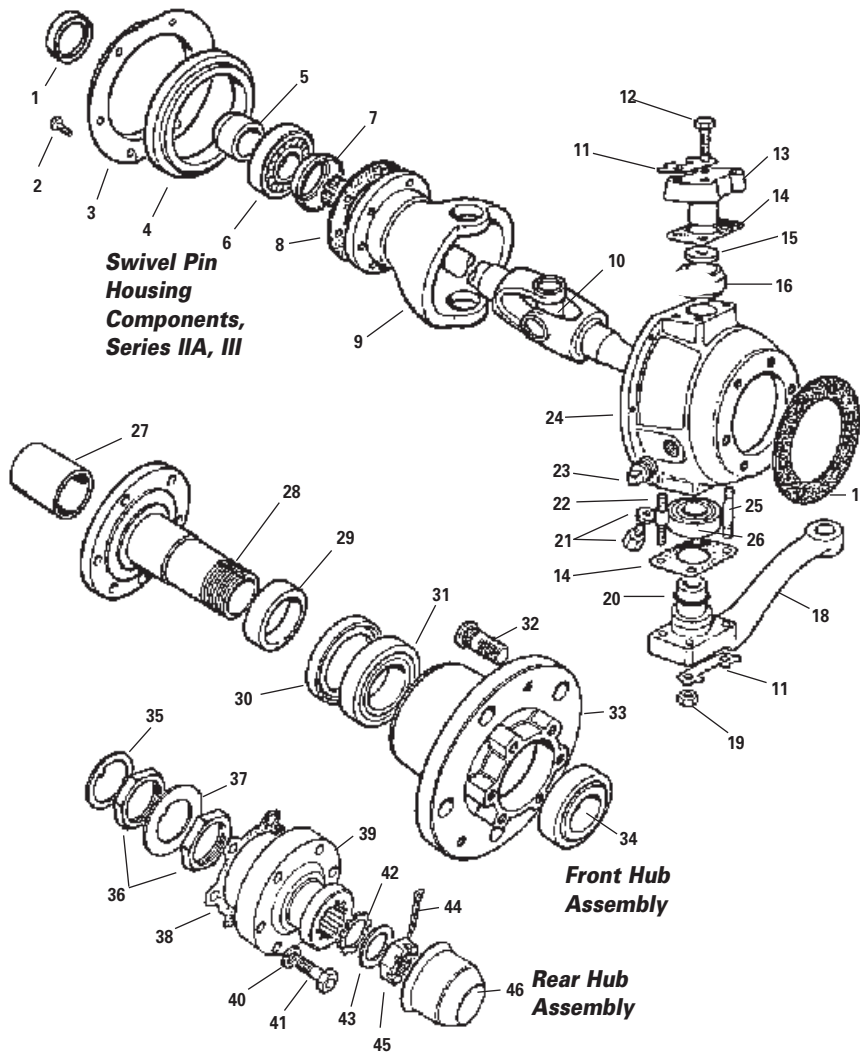
RNA6100KV installed

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**Swivel Pin  
Housing  
Components,  
Series IIA, III**

**Front Hub  
Assembly**

**Rear Hub  
Assembly**

- 20. RNC267 O-Ring
- 21. BCB17 Drain Plug
- 22. BCB04 M12 x 1.25 x 35mm Swivel Pin Mounting Bolt
- 23. BCB16 Oil Filler Plug 1/4" pipe thread.
- 24. Swivel Pin Housing
- BCB01R Right
- BCB01L Left
- 25. BCB04 M12 x 1.25 x 35mm Swivel Pin Mounting Bolt
- 26. RNA934 SPH Bottom Bearing

#### Front Hub Assembly

- 27. RNA937 Drive Shaft Bush Front only  
Early type Stub Axle
- 28. RNB413 Spindle
- 29. RNC596 Hub Seal Race All Models
- 30. Hub Oil Seal
- RNE615 All Models up to Sept 1980
- RNE616 From Oct 1980
- 31. Inner Hub Bearing
- 88" up to July 1980 & 109" up to 1972
- RNE609 Inner Bearing
- 88" from July 1980 except V8 & 109" Series III
- RNH003 Inner & Outer Bearing
- 32. Wheel Studs
- RNC501 Series III press fit
- 33. Hub with Wheel Studs
- BCB02 Disc brake hub assembly
- 34. Outer Hub Bearing
- Series II, IIA, III up to July, 1980
- RNE610 Outer bearing
- Series III from July, 1980
- RNH003 Inner & Outer Bearing

#### Genuine Hub Seal Kit

Includes Genuine hub seal, hub gasket, hub seal race and locker for hub nut.  
RNC552 Seal Kit, Genuine (4 req)

#### Rear Hub Assembly

- 35. RNH022 Flat Washer
- 36. RNH006 Lock Nut
- 37. RNH005 Lock Washer
- 38. RNA975 Drive Flange Gasket
- 39. RNC468 Drive Flange Rover Type
- 40. BCB09 Bolt & Washer 3/8" x 1 3/4" Drive Flange to Hub
- 41. BCB09 Bolt & Washer 3/8" x 1 3/4" Drive Flange to Hub
- 42. RNE617 Felt Washer
- 43. RNC470 Flat Washer
- 44. RNE523 Cotter Pin
- 45. RNB716 Castle Nut
- 46. RNA953 Hub Cap

#### Swivel Pin Housing and Hub Assembly

88" & 109" up to July 1980

- 1. RNA939 Axle Case Oil Seal
- 2. BCB 11 Bolt 1/4" x 1/2" UNF SPH Seal Retainer
- BCB 12 Bolt 1/4" x 1/2" UNF SPH Seal Retainer
- Steering Stop
- BCB 13 Nut 1/4" SPH Retainer Steering Stop
- 3. BCB18 RH Retainer
- BCB19 LH Retainer
- 4. RNE618 SPH Oil Seal Genuine
- PLE618 SPH Oil Seal ProLine
- 5. RNC728 Retainer Collar for Bearing
- 6. RNB546 Halfshaft Bearing
- 7. RNB547 Bearing Distance Piece
- 8. RNA981 SPH Gasket
- 9. RNC314 Swivel Ball
- RNC315 Swivel Ball with Halfshaft
- Bearing Installed
- 10. RNE640 Halfshaft U-Joint
- 11. Not applicable to this kit
- 12. BCB04 M12 x 1.25 x 35mm Swivel Pin Mounting Bolt
- 13. RNC487 Top Pin
- 14. RNC258 Shim Pack .003
- RNC259 Shim Pack .005
- RNC260 Shim Pack .010
- RNC261 Shim Pack .030
- 15. RNC253 Wafer for Railco Brush
- 16. RNC316 Railco Bush
- 17. RNB652 SPH Housing Gasket
- 18. SPH Steering Arm
- RNC262 Right
- RNC263 Left
- 19. Not applicable to this kit.

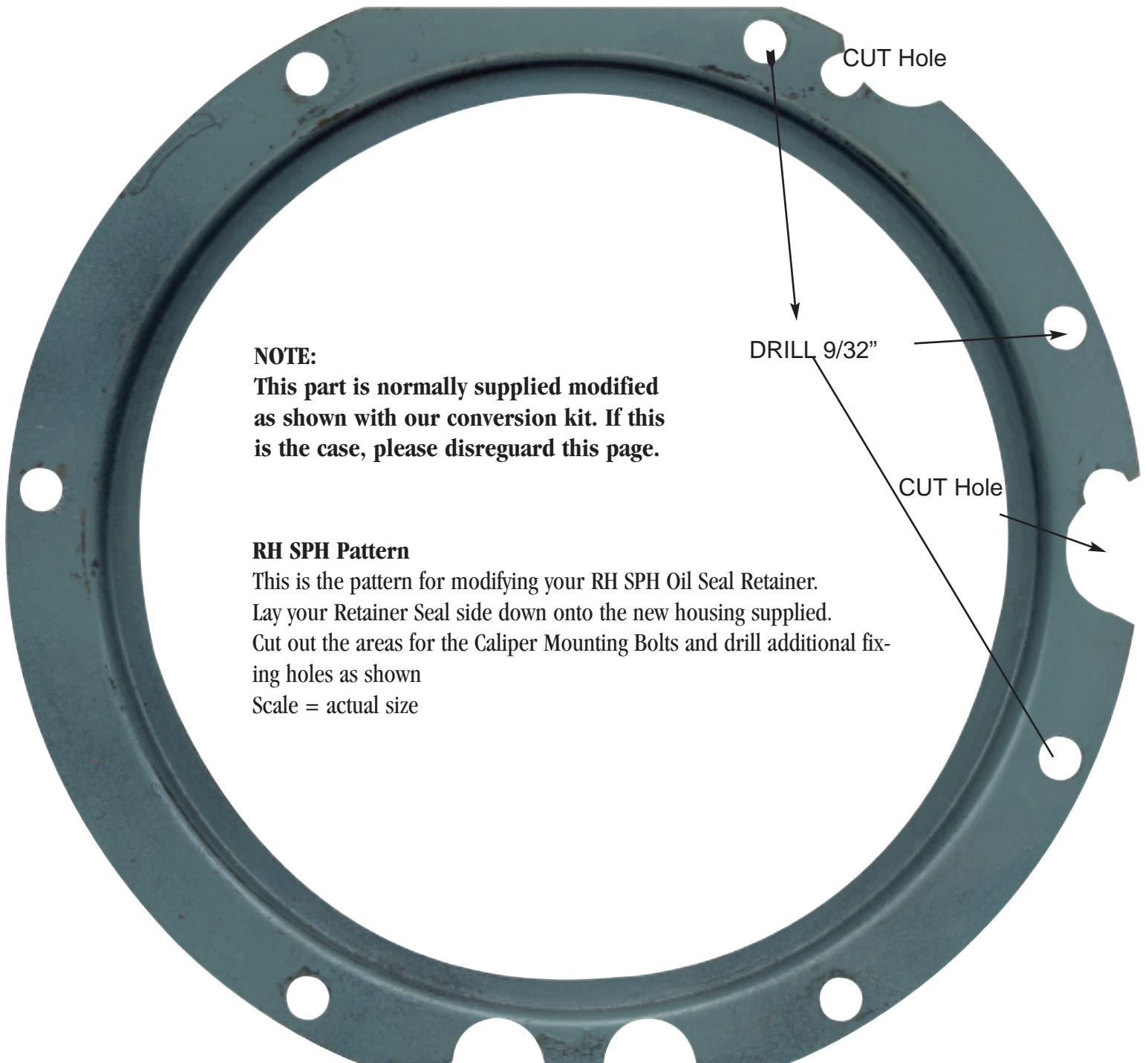
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**NOTE:**

**This part is normally supplied modified as shown with our conversion kit. If this is the case, please disregard this page.**

**RH SPH Pattern**

This is the pattern for modifying your RH SPH Oil Seal Retainer. Lay your Retainer Seal side down onto the new housing supplied. Cut out the areas for the Caliper Mounting Bolts and drill additional fixing holes as shown  
Scale = actual size

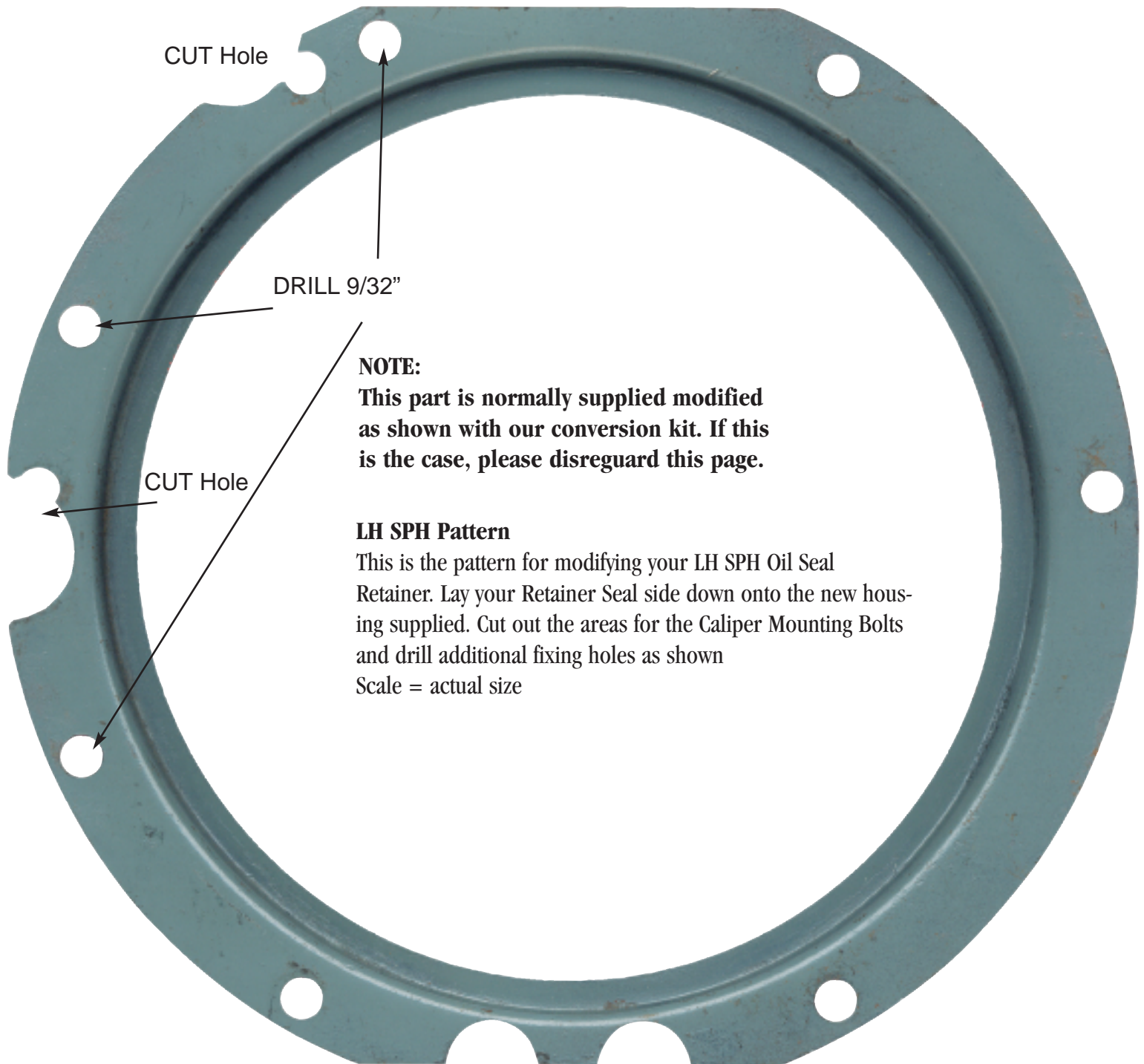
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**NOTE:**

**This part is normally supplied modified as shown with our conversion kit. If this is the case, please disregard this page.**

**LH SPH Pattern**

This is the pattern for modifying your LH SPH Oil Seal Retainer. Lay your Retainer Seal side down onto the new housing supplied. Cut out the areas for the Caliper Mounting Bolts and drill additional fixing holes as shown

Scale = actual size

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Phone #: \_\_\_\_\_  
Email Adrs: \_\_\_\_\_

Instruction part number (top right corner) or description of what instructions are: \_\_\_\_\_

Overall, how would you rate the quality of this set of instructions? (please circle one):

Poor		Fair		Good		Very Good		Excellent	
1	2	3	4	5	6	7	8	9	10

Ideas, Comments, or Corrections (please include specifics, such as page number, or step number):

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**THANK YOU!**

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