



VOLUME

3

GROUP

Campaign

MODEL

Spectra

NUMBER

047

DATE

May 2005

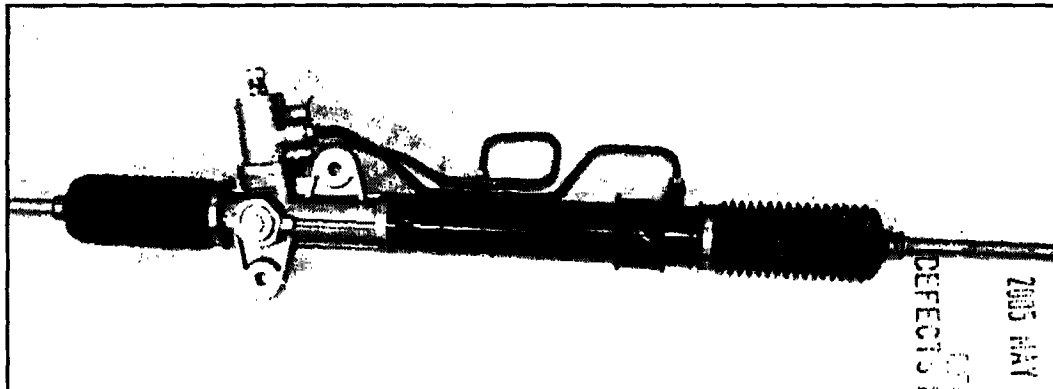
TECHNICAL SERVICE BULLETIN

SUBJECT:

SAFETY RECALL: SPECTRA 2.0L STEERING RACK REPLACEMENT

This bulletin provides information on a safety recall campaign to replace the steering rack on some 2005MY Spectra 2.0L vehicles produced between 2/22/05 and 3/28/05.

The steering tie rods on some 2005MY Spectra vehicles may have a manufacturing flaw that affects the metallurgy. If the tie rod cracks or fails, it could result in loss of vehicle steering control and could result in accidents and related injuries. To correct the potential risk of the steering tie rod failure, Kia is recalling affected 2005MY Spectra vehicles to replace the steering rack assembly, which includes the tie rod components.



2005 MAY 24 A 9:42
OFFICE OF
DEFECTS INVESTIGATION

RECEIVED
NVS-215

* NOTICE

There is no charge to the vehicle owner for this repair. Under applicable law, you may not sell or otherwise deliver any affected 2005MY Spectra 2.0L until it has been repaired, pursuant to the procedures set forth in this bulletin.

File Under: Campaign

- Circulate To: General Manager Service Manager Parts Manager
 Service Advisor(s) Technician(s) Body Shop Manager Fleet Repair

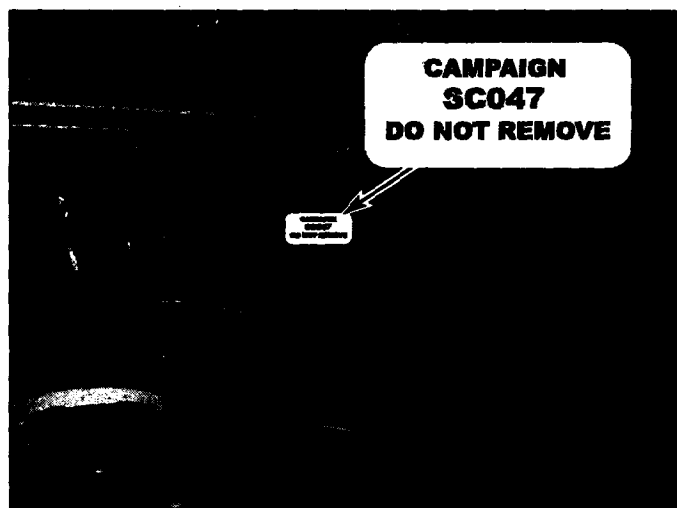
SAFETY RECALL: SPECTRA 2.0L STEERING RACK REPLACEMENT

* NOTICE

If your dealer has customer or in-stock vehicles that are a part of this campaign, a specific VIN list containing those vehicles will be included with your recall campaign package. Before starting the steering rack replacement procedure ensure that the vehicle is on the attached VIN list. Check the vehicle warranty history to make sure that the steering rack was not already replaced. If your dealer did not receive a specific VIN list with your recall campaign package then your dealer does not have any customers or vehicles in stock that are part of this recall campaign.

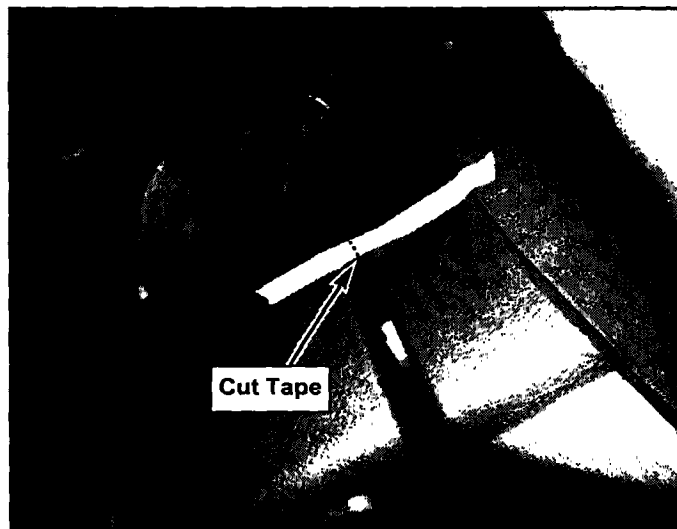
INSPECTION PROCEDURE:

1. Open hood and check for SC047 Campaign Completion Label on bulkhead above brake booster.
 - If label exists, NO FURTHER ACTION IS REQUIRED.
 - If label DOES NOT EXIST and the vehicle VIN is on the list that was sent to your dealer, continue to the Removal Procedure.



REMOVAL PROCEDURE:

1. Position vehicle on lift with steering wheel and front wheels straight. Mark top of steering wheel and steering column with tape to help keep wheel centered and avoid damage to the clockspring. Cut tape to allow slight steering wheel rotation and centering.



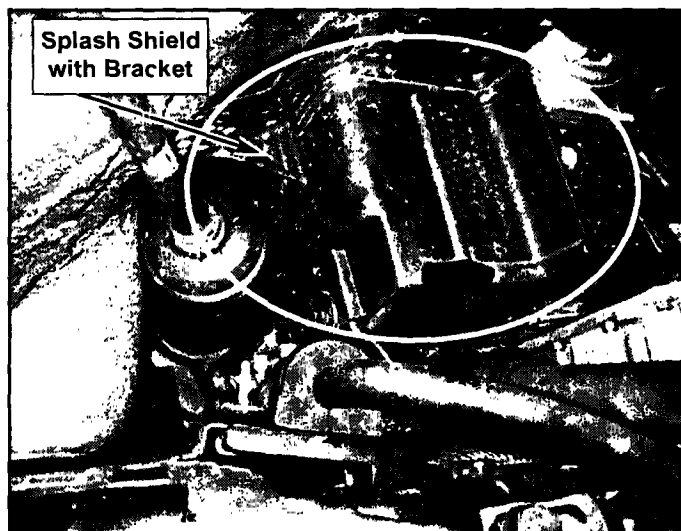
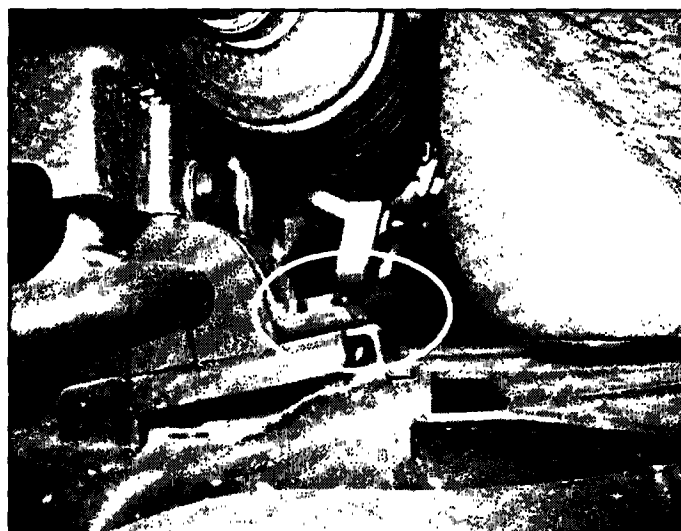
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2. From the inside of the vehicle, disconnect the steering column lower U-joint connection from the rack. Completely remove the bolt and separate the column joint from the steering rack. Spread the lower joint slightly with a screwdriver to aid removal and installation.

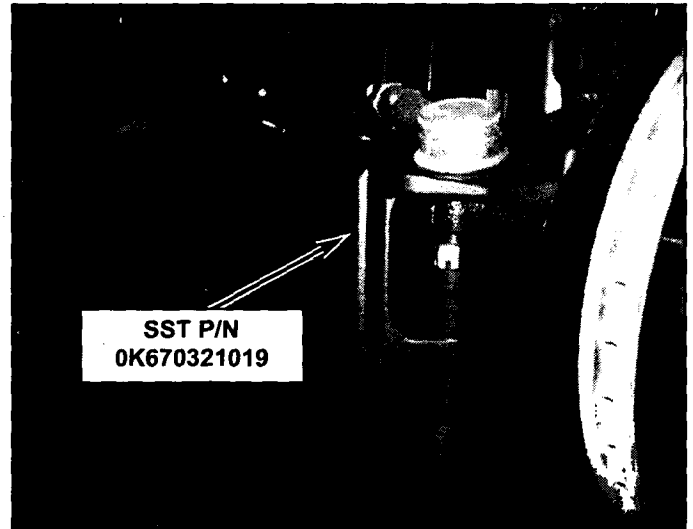


3. Remove both front wheels, then remove the right and left stabilizer bracket bolts, splash shield and brackets. Remove the power steering oil line bracket from the right splash shield bracket.

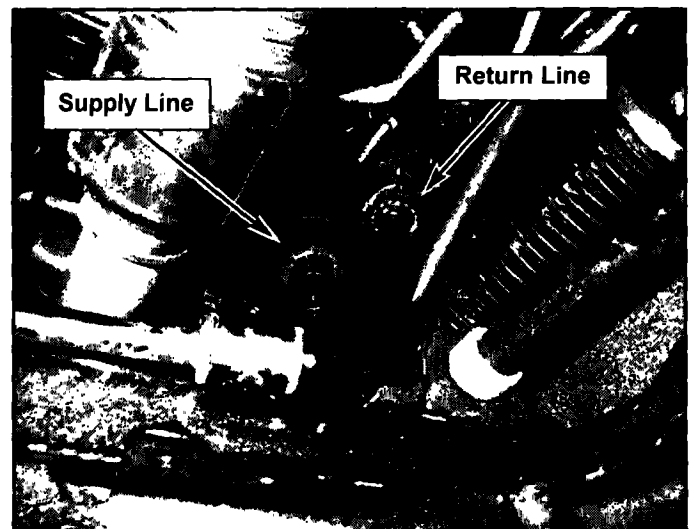


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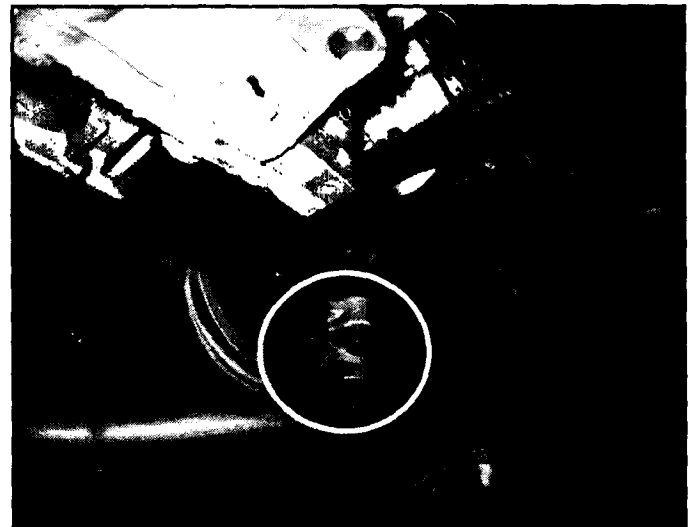
4. Remove both tie rod end ball joints with SST 0K670321019 (drawer 6 of SST Storage Box).



5. Disconnect power steering supply and return lines near right side of rack, as shown. Plug or cover both lines to protect against contamination.



6. Remove three (3) lower rear engine mount bolts and let drivetrain drop down 1/2 inch.



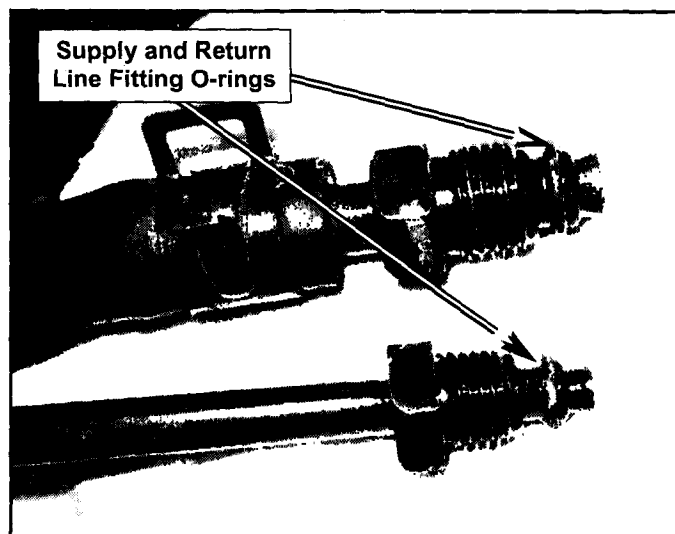
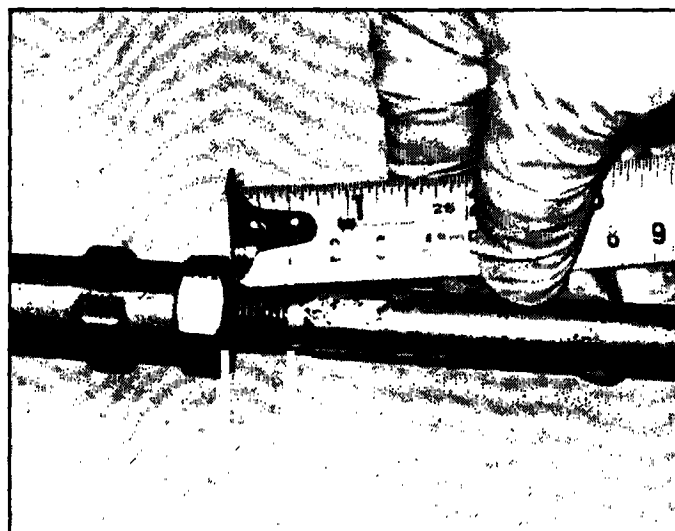
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7. Remove the four (4) rack bolts starting with the lower bolts.
8. Move stabilizer bar forward to allow rack to drop down and clear firewall. Slowly slide rack out of the driver's side being careful not to bend or break the hydraulic lines and hoses.

**NEW STEERING RACK PREPARATION:**

1. Measure the distance from the old steering rack left and right tie rod end lock nut to the end of the threads and transfer those measurements to the new rack.
2. Ensure that the supply and return line fitting O-rings are in place and undamaged.

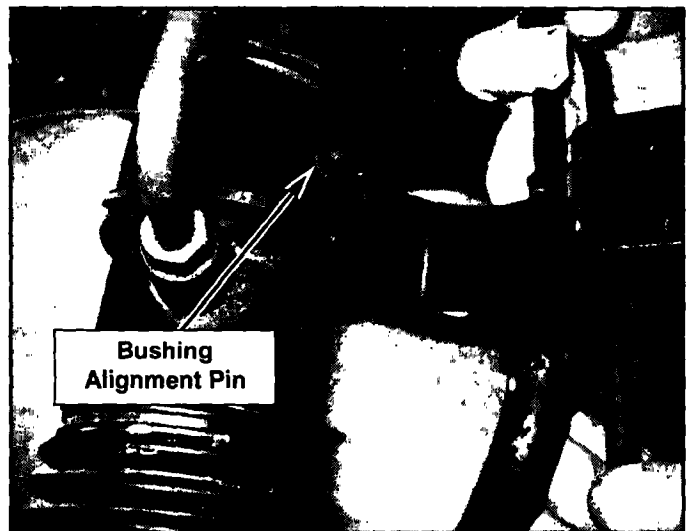


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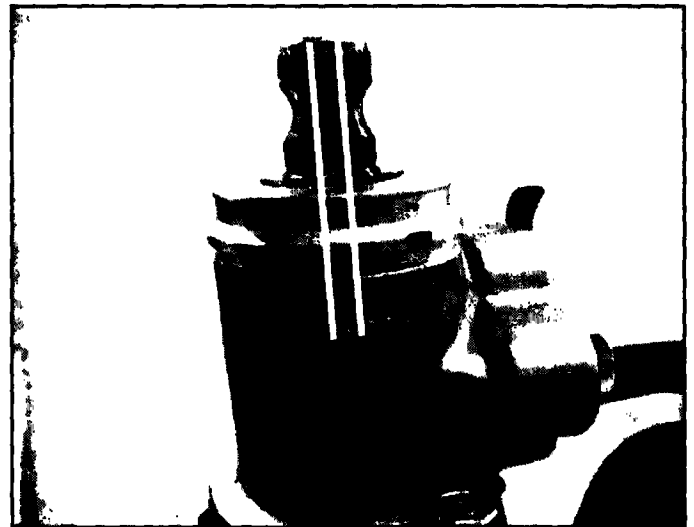
3. Transfer rack supply and return lines from old to new rack. Torque fittings to 7-12 lb ft.



4. Transfer the rack bracket to the new rack, making sure the bushing alignment pin goes in the hole in the bracket.



5. Make sure the rack centering marks stay aligned before installation in vehicle.

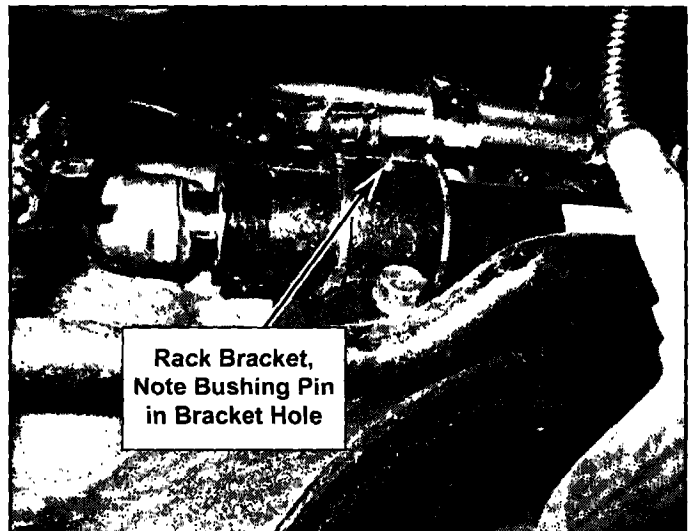
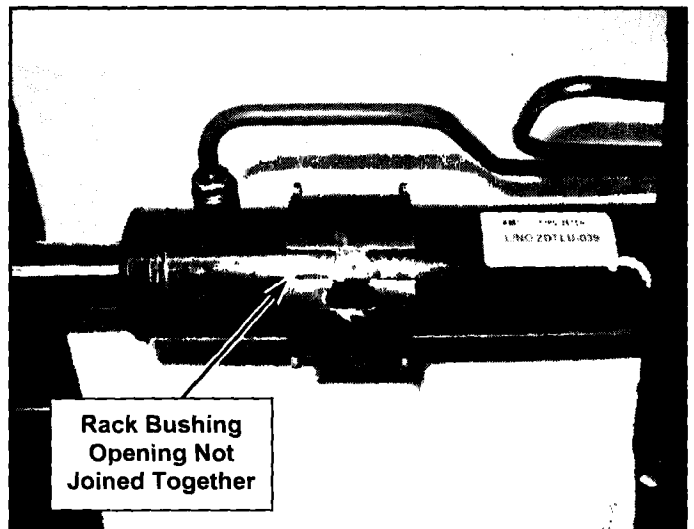
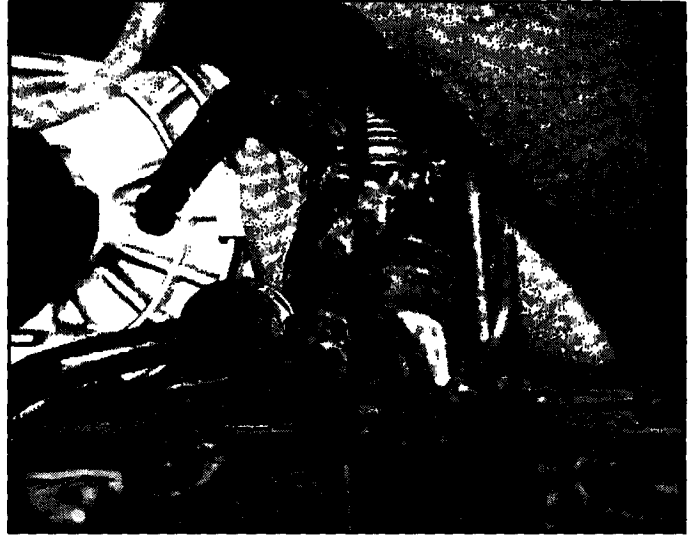


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INSTALLATION PROCEDURE:

1. Slowly slide the new rack into position from the driver's side. Do not bend or break the hydraulic lines and hoses as you move the rack into position.
2. When in proper side-to-side position, lift the rack up and guide the top up through the large rubber grommet.
3. Confirm rack bushing opening is joined and the alignment pin is pointed toward the front of the vehicle.
4. Place rack bracket onto bushing, align bushing pin with bracket hole and start lower bracket bolt.

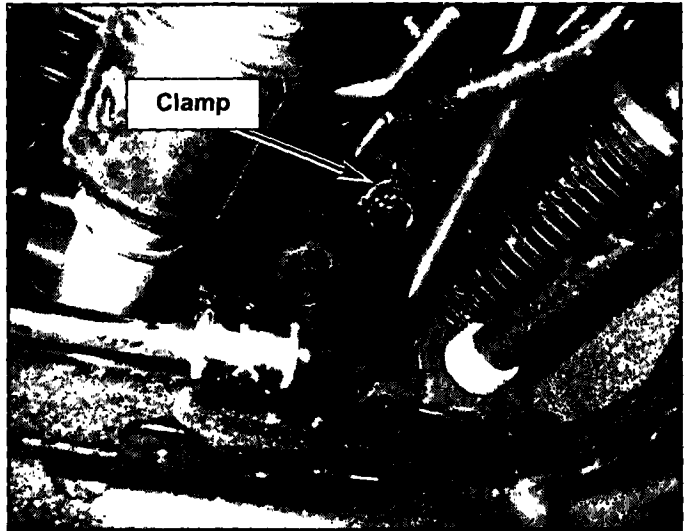


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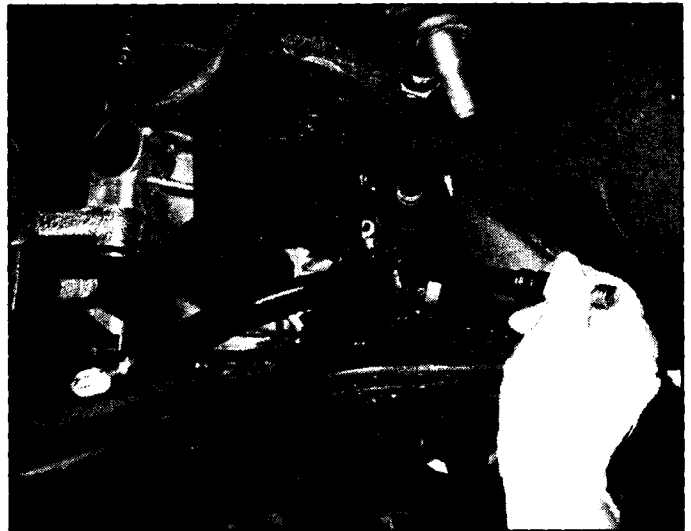
5. Install remaining rack bracket bolt and rack upper and lower left side bolts and torque to 43-58 lb ft.
6. Connect power steering supply line and torque to 7-12 lb ft.



7. Install power steering return line hose onto tube and slide clamp into proper position.



8. Install left and right stabilizer brackets and bolts with splash shield brackets under rear bolts and torque to 22-33 lb ft. Install three (3) lower rear engine mount bolts and torque to 29-36 lb ft.



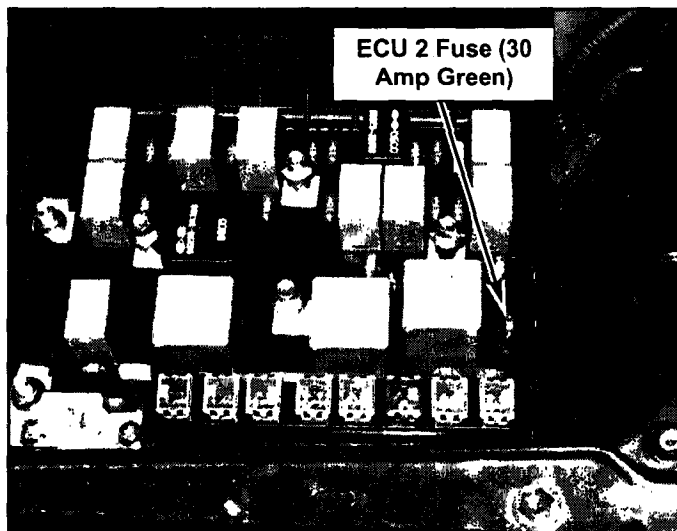
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9. install left and right tie rod end ball joints in knuckle, torque to 18-25 lb ft and install new cotter pins through nuts.
10. Install front wheels on vehicle. Torque lug nuts in a cross pattern to 65-87 lb ft.
11. Install lower steering column joint onto rack pinion shaft while keeping steering wheel and vehicle front wheels straight (align tape segments that were applied according to directions on Page 2, Step 1). Torque lower steering column joint bolt to 11-14 lb ft.

**POWER STEERING PUMP BLEED PROCEDURE:**

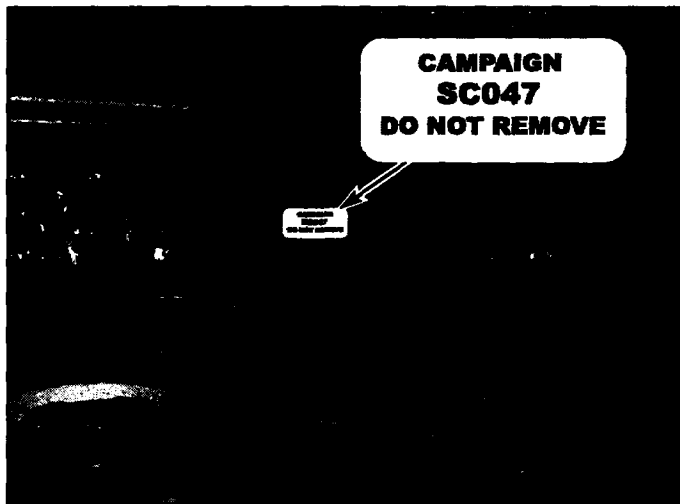
1. Remove ECU 2 fuse (30 Amp.green) from under hood fuse box to prevent engine from starting.



2. Fill power steering fluid reservoir to full with PSF III or its equivalent.
3. Operate starter while turning steering wheel all the way to the left and then all the way to the right two times. Allow the starter to rest for 30 seconds and then repeat operation of starter and steering wheel rotation cycle two more times to bleed air from fluid.
4. Install ECU 2 fuse and fill power steering fluid reservoir to the full line.
5. Start engine and turn the steering wheel all the way to the left and then right while checking for proper operation and noise. Some noise when wheels are all the way to the left or right is normal.
6. Test drive to ensure that the steering wheel is straight when the vehicle is going straight. If the steering wheel is off by several degrees the steering column joint may be one spline off and must be removed and corrected.
7. Perform two wheel alignment of the front wheels.

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8. Install SC047 Campaign Completion Label onto the bulkhead above brake booster.



AFFECTED PRODUCTION RANGE:

2005MY Spectra 2.0L vehicles with production dates from 2/22/05 through 3/28/05. Vehicle VIN MUST be on list supplied to your dealer.

PART NUMBER INFORMATION:

Description	P/N
Gear and Linkage Assembly - P/S	57700 2F100
SC047 Campaign Completion Label*	U2F50 SC047

*Extra SC047 Campaign Completion labels in sheets of 20 are available at no cost through the KMA parts system or your DPSM.

Note: Part 57700 2F100 (Gear and Linkage Assembly) will automatically be shipped to dealers with affected VIN number vehicles in stock.

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty.	Cond. Code	Cause Code	Repair Description	Labor OP Code	Time	Related Parts	Qty.
R	57700 2F100	1	N94	C06	Gear & Linkage Assy P/S R & R & Alignment	051029R0	1.7	U2F50 SC047	1

To improve customer satisfaction always remember to refer to the Warranty Coverage Validations Inquiry Screen (Select 3) on your Kia Standard System (KSS) Dealer Main Menu for a list of any additional campaigns that may need to be performed on the vehicle before returning it to the customer.