
STEERING, SUSPENSION, WHEELS AND TIRES

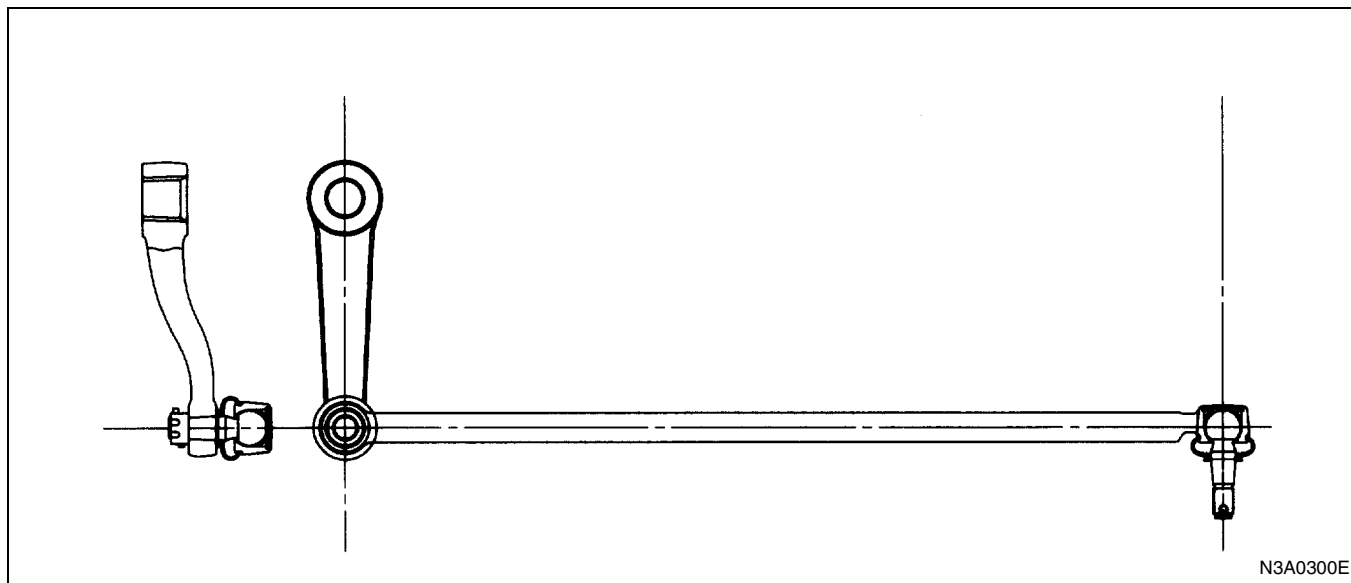
SECTION 3B3 STEERING LINKAGE

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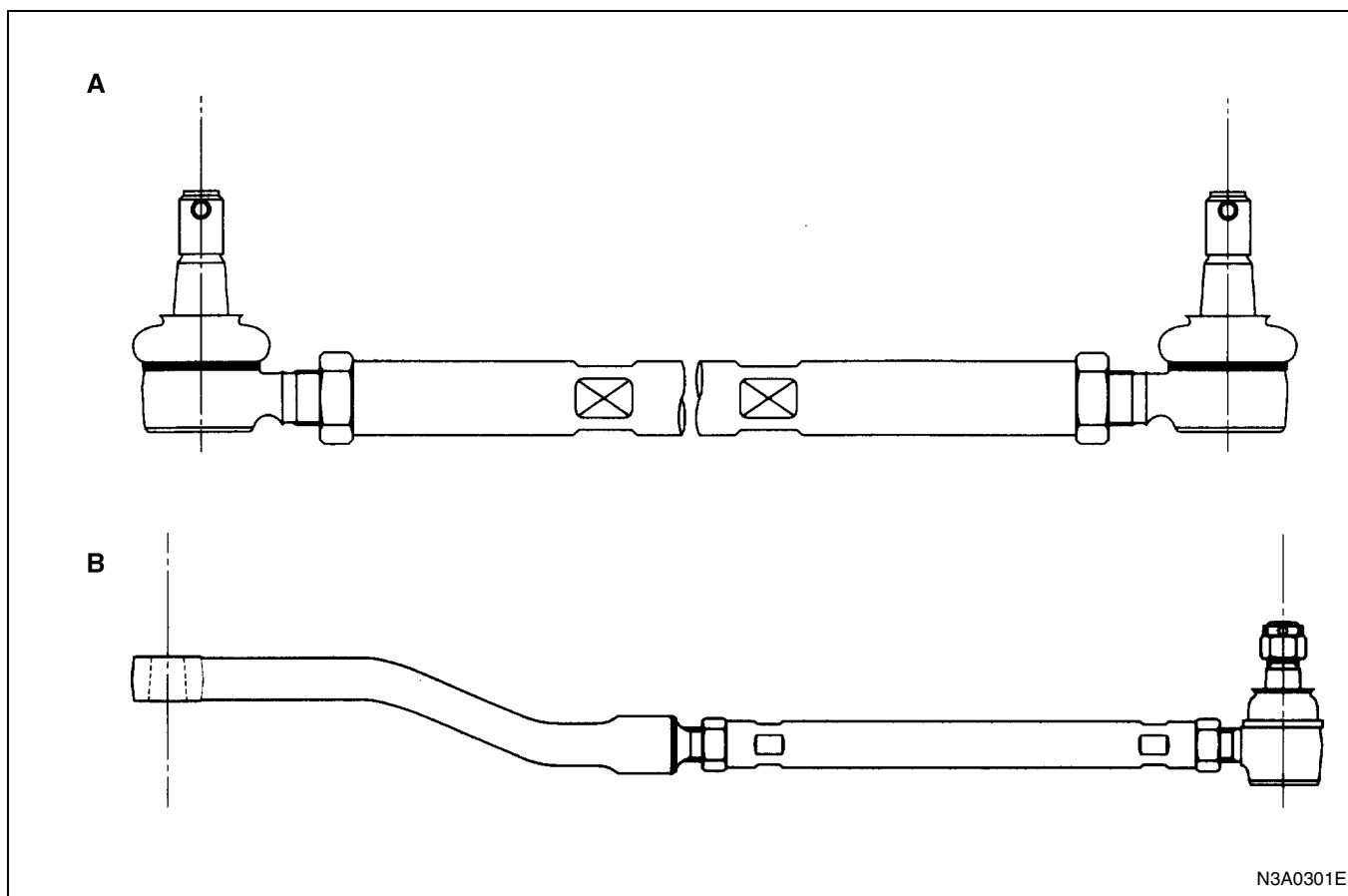
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GENERAL DESCRIPTION

Drag Link and Pitman Arm



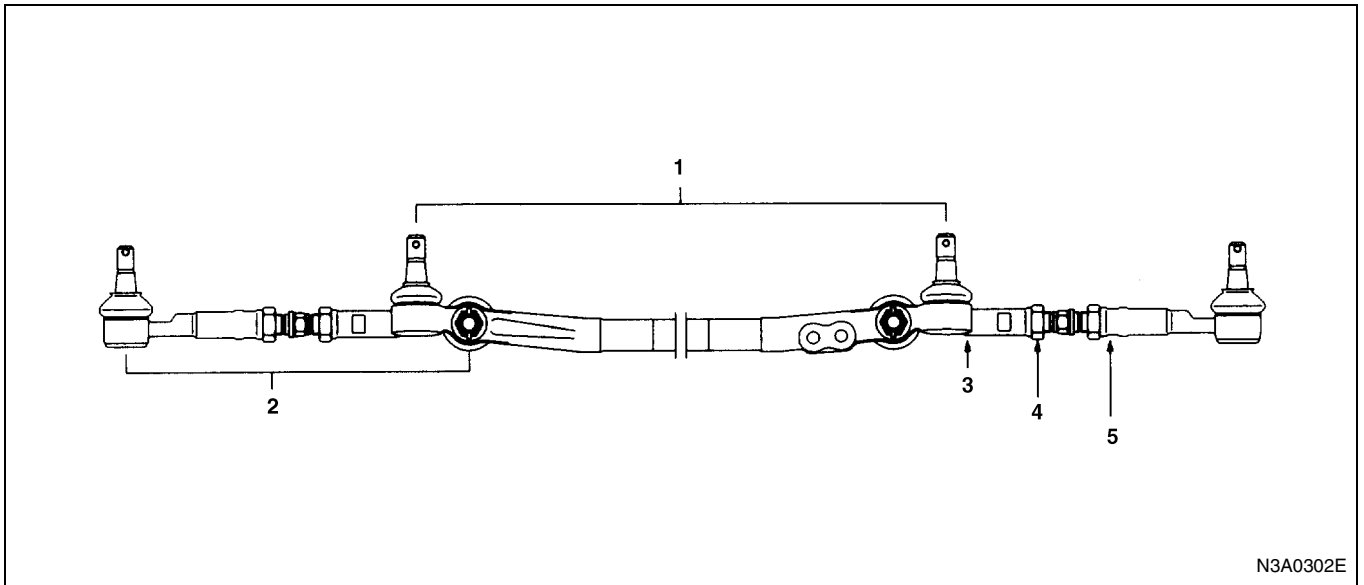
Tie Rod Assembly



Legend

A. Rigid suspension

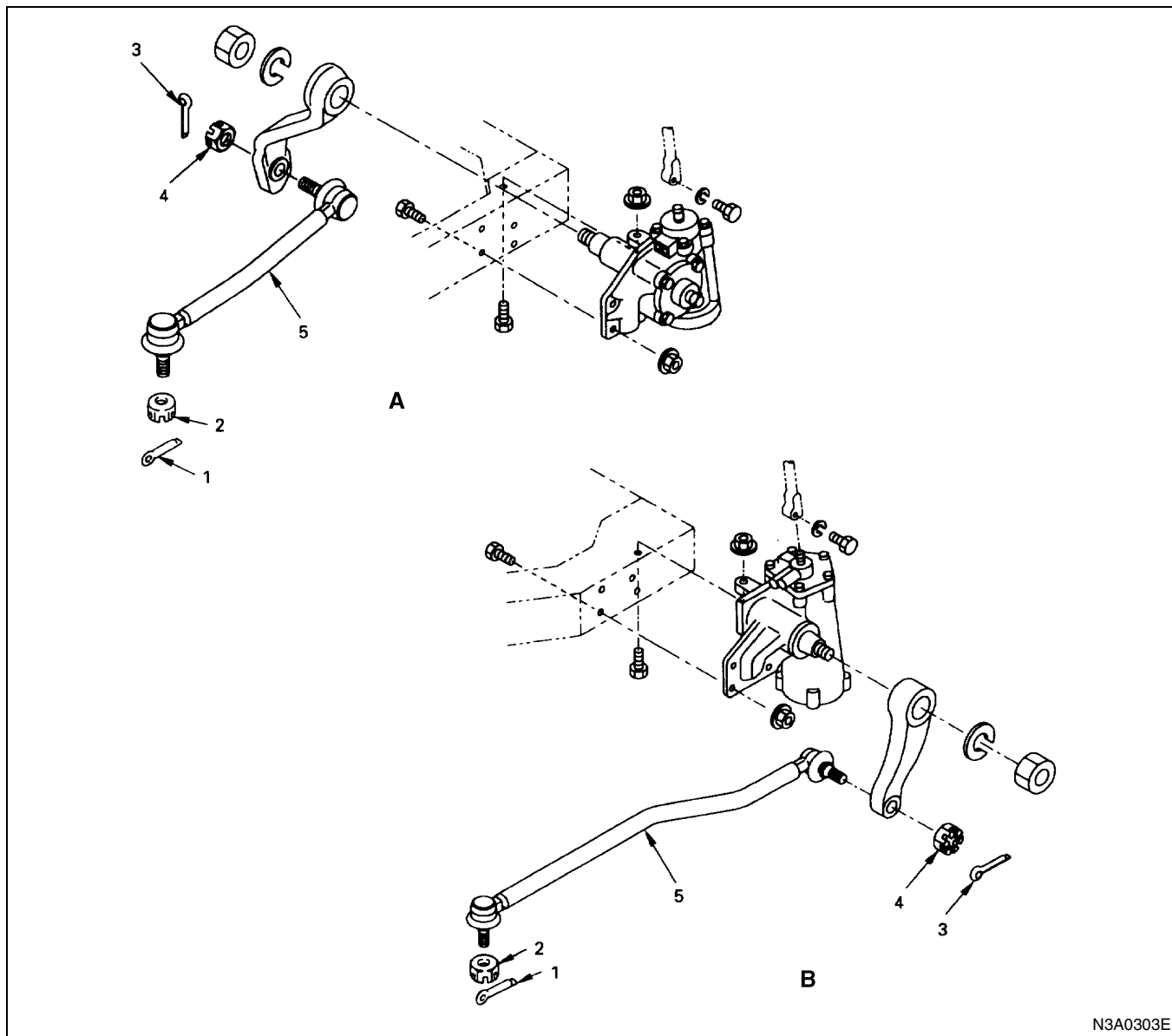
B. NPS

Steering Link Assembly**Legend**

- | | |
|------------------------------|--------------------|
| 1. Center track rod assembly | 4. Track rod |
| 2. Outer track rod assembly | 5. Rod end (outer) |
| 3. Rod end (inner) | |

ON-VEHICLE SERVICE

Drag Link Replacement



Legend

- A. Wishbone suspension
- B. Rigid suspension
- 1. Cotter pin
- 2. Nut

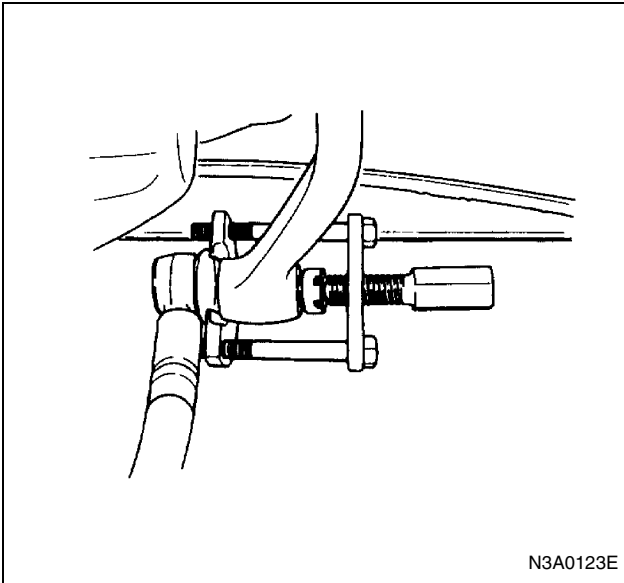
- 3. Cotter pin
- 4. Nut
- 5. Drag link

Removal

1. Cotter Pin
 2. Nut
 3. Cotter Pin
 4. Nut
 5. Drag Link
- Remove the drag link using a special tool.
Remover: 5-8840-2017-0

Caution:

Be careful not to damage the ball joint boot.



Inspection and Repair

Make necessary correction or parts replacement if wear, damage, corrosion, bending, deteriorations or any other abnormal conditions are found through inspection. Check the following parts.

- Ball joint (Boot, screws and tapered surface)

Installation

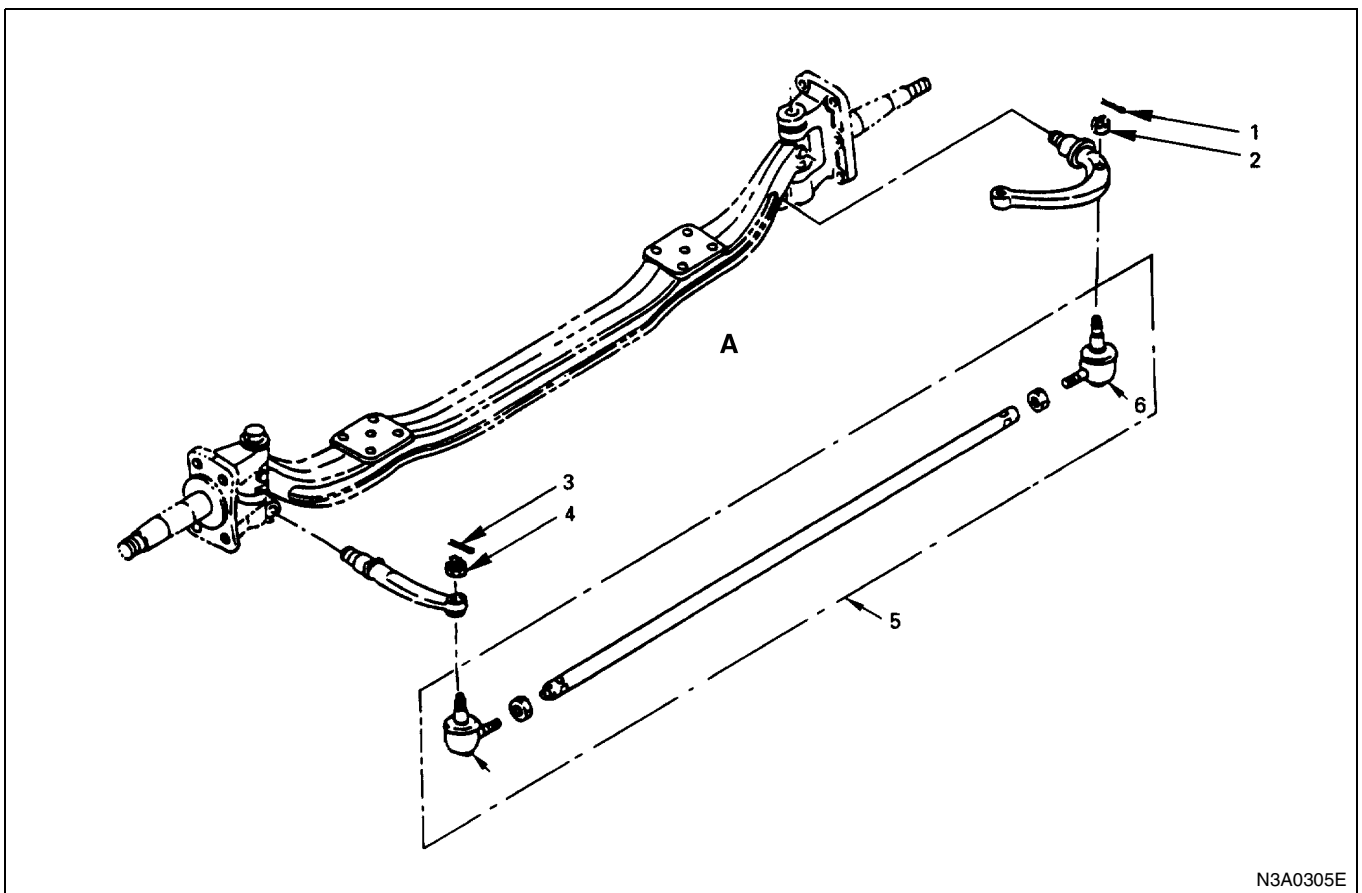
1. Drag Link
2. Nut
3. Cotter Pin
4. Nut
5. Cotter Pin

Tighten the nut to the specified torque, with just enough additional torque to align cotter pin holes. Install new cotter pin.

Tighten:

- Drag link nut to 167 N·m (17 kg·m / 123 lb·ft)

Tie Rod Replacement (2WD Rigid Suspension)

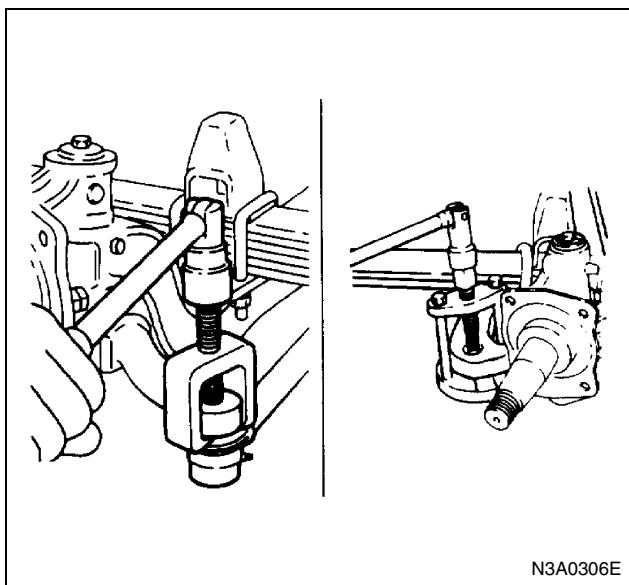


Legend

- | | |
|---------------|---------------------|
| A. Front Axle | 4. Nut |
| 1. Cotter pin | 5. Tie rod assembly |
| 2. Nut | 6. Tie rod end |
| 3. Cotter pin | |

Removal

1. Cotter Pin
2. Nut
3. Cotter Pin
4. Nut
5. Tie Rod Assembly
Remove the tie rod assembly using a special tool.
Remover
Driver side: 5-8840-2017-0
Assistant side: 5-8840-2018-0



6. Tie Rod End

Inspection and Repair

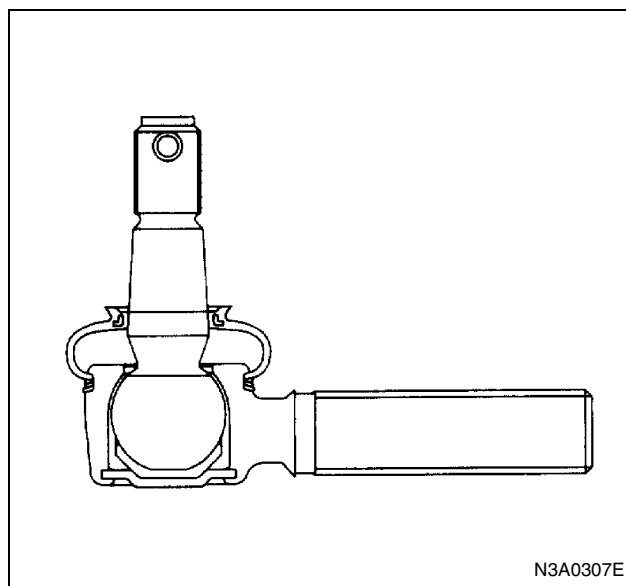
Make necessary correction or parts replacement if wear, damage, or any other abnormal conditions are found through inspection.

Tie Rod End

Inspect the ball joint taper fitting part for contact condition or abnormal wear.

Inspect the boot for damage or grease leak. Move the ball joint to confirm its normal movement.

If abnormal condition is found, replace the assembly because it cannot be disassembled.



Tie Rod

Inspect the tie rod tube for bending or damaged threads. If abnormal condition is found, replace the assembly or correct if bending is small.

Installation

1. Tie Rod End
2. Tie Rod Assembly
 - 1) Install the tie rod end to the tie rod.
 - 2) Adjust length of tie rod by turning the connecting rod.

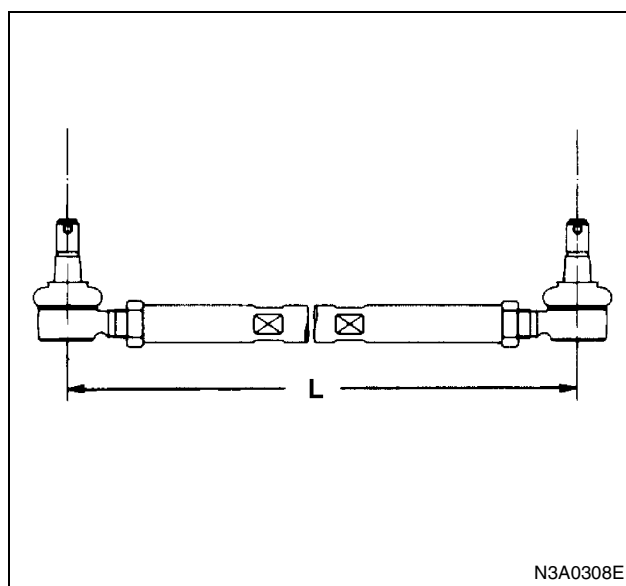
Tie Rod Length (L)

NHR: 1153.5 mm (45.413 in)

NKR: 1160.5 mm (45.925 in)

NPR, NQR: 1446.5 (56.949 in)

- 3) After adjustment of length, temporarily tighten the tie rod end lock nut.



3. Nut
4. Cotter Pin
5. Nut

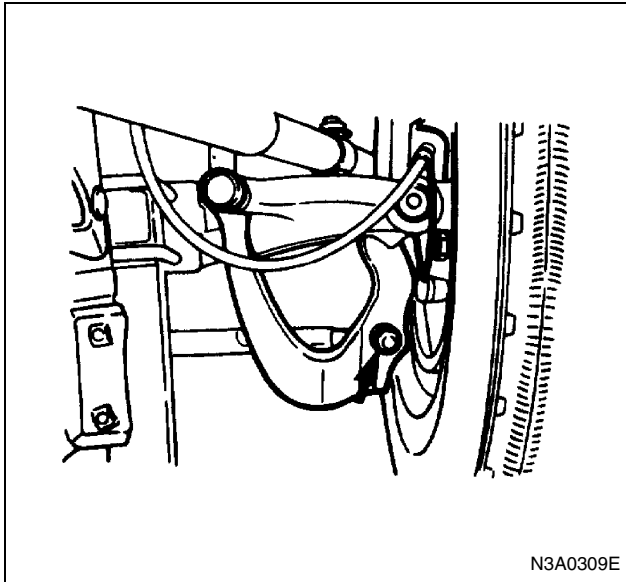
6. Cotter Pin

- 1) Tighten the nut to specified torque, with just enough additional torque to align cotter pin hole.

Install new cotter pin.

Tighten:

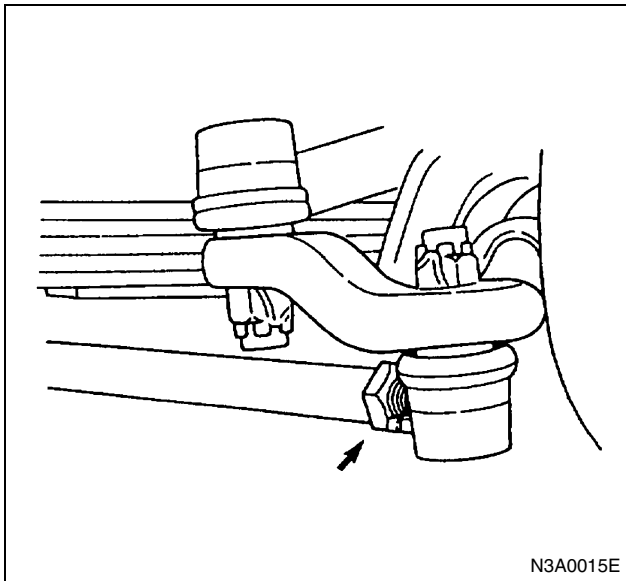
- Tie rod nut to 108 N·m (11 kg·m / 80 lb·ft)



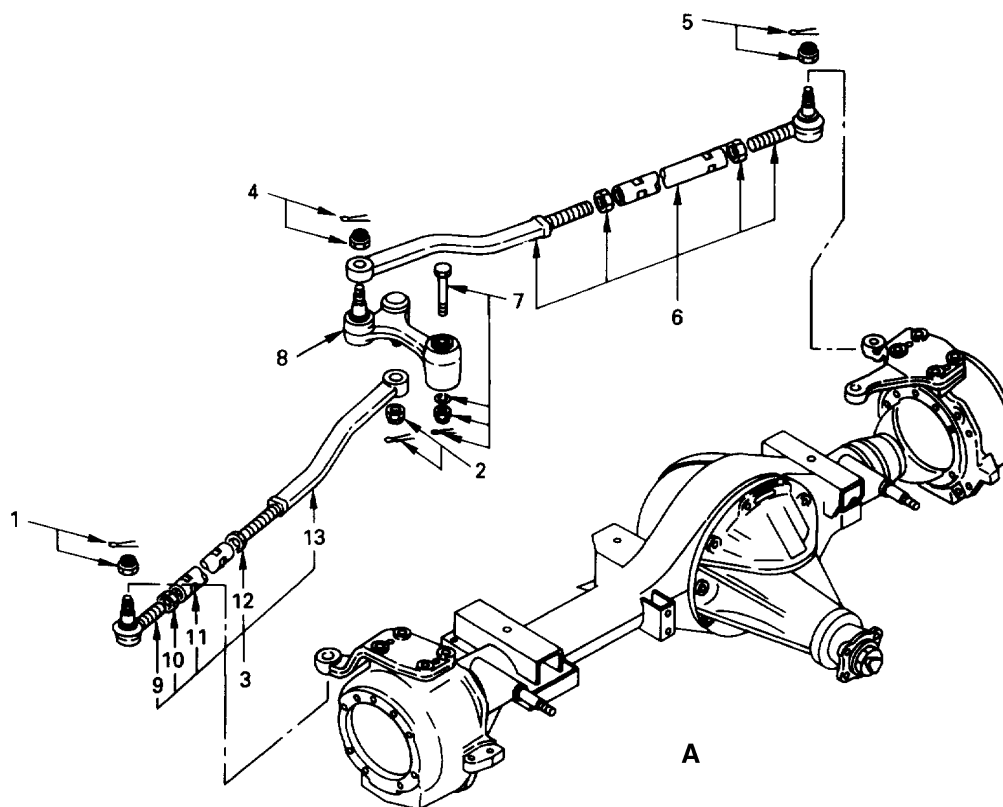
- 2) Adjust the front end alignment after installation. Refer to "Front end alignment".
- 3) Tighten tie rod end lock nuts to specified torque after adjustment of front end alignment.

Tighten:

- Lock nut to 113 N·m (11.5 kg·m / 83 lb·ft)



Tie Rod Replacement (NPS)



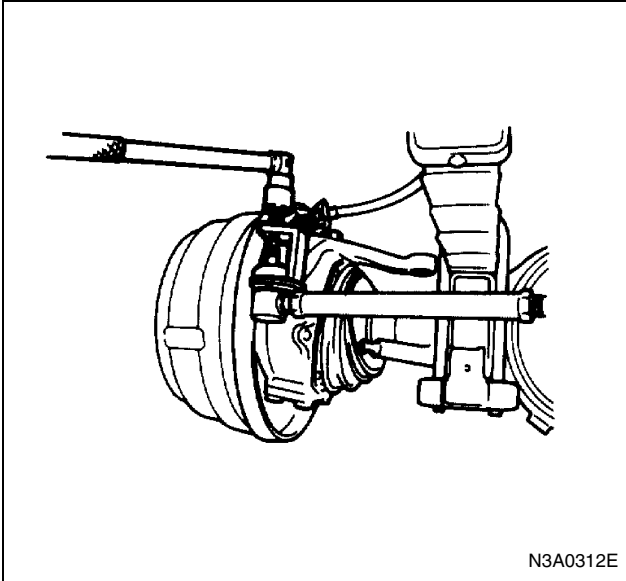
N3A0311E

Legend

- | | |
|-----------------------|-------------------------------------|
| A. Front Axle | 7. Bolt, nut, washer and cotter pin |
| 1. Nut and cotter pin | 8. Relay lever |
| 2. Nut and cotter pin | 9. Tie rod end |
| 3. Tie rod assembly | 10. Lock nut |
| 4. Nut and cotter pin | 11. Tie rod tube |
| 5. Nut and cotter pin | 12. Lock nut |
| 6. Tie rod assembly | 13. Tie rod |

Removal

1. Nut and Cotter Pin
 2. Nut and Cotter Pin
 3. Tie Rod Assembly
 4. Nut and Cotter Pin
 5. Nut and Cotter Pin
 6. Tie Rod Assembly
- Remover: 5-8840-2189-0



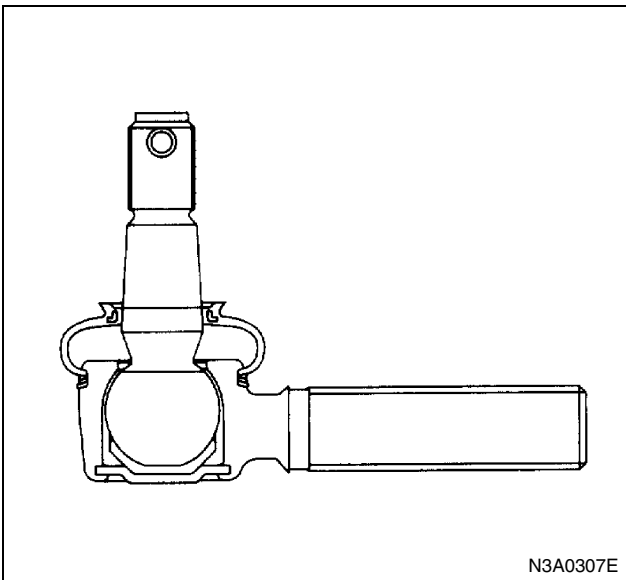
7. Bolt, Nut, Washer and Cotter Pin
8. Relay Lever
9. Tie Rod End
10. Lock Nut
11. Tie Rod Tube
12. Lock Nut
13. Tie Rod

Inspection and Repair

Make necessary correction or parts replacement if wear, damage, or any other abnormal conditions are found through inspection.

Tie Rod End

- Inspect the ball joint taper fitting part for contact condition or abnormal wear.
- Inspect the boot for damage or grease leak.
- Move the ball joint to confirm its normal movement.
- If abnormal condition is found, replace the assembly because it cannot be disassembled.



Tie Rod

Inspect the tie rod tube for bending or damaged threads. If abnormal condition is found, replace the assembly or correct if bending is small.

Relay Lever

Inspect the relay lever bushing. If bushing is defective, replace the relay lever assembly.

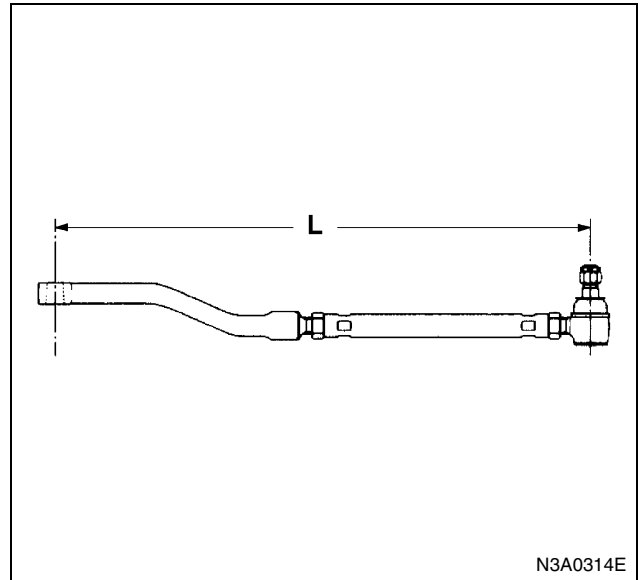
Installation

1. Tie Rod
2. Lock Nut
3. Tie Rod Tube
4. Lock Nut
5. Tie Rod End

- 1) Install all parts and adjust tie rod length (L).

Tie Rod Length (L)

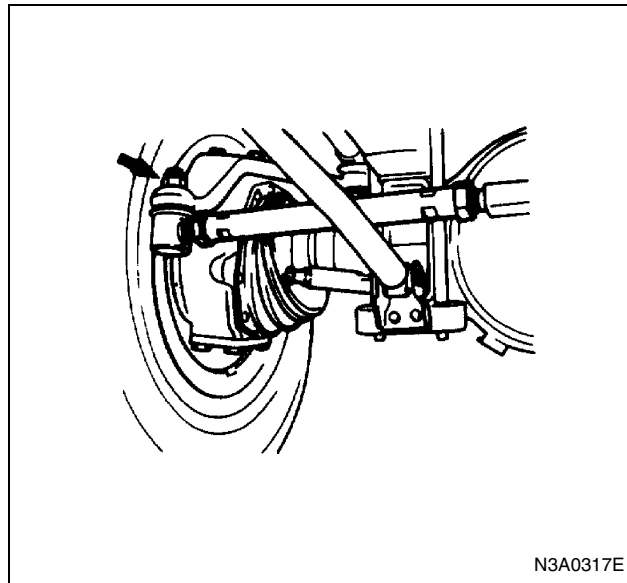
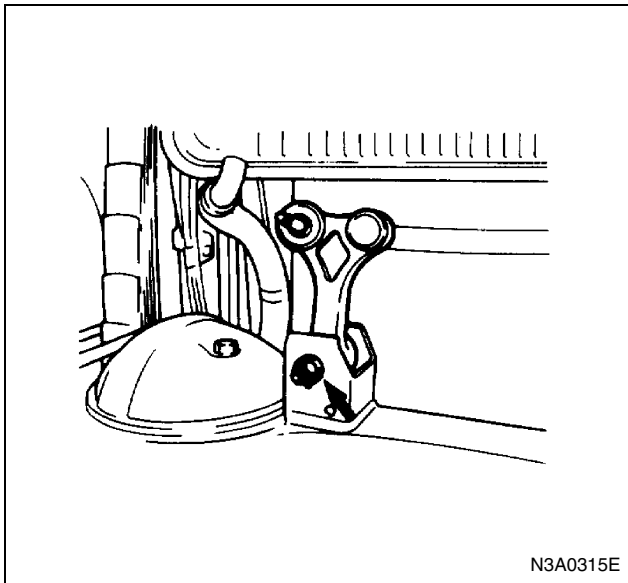
781 mm (30.748 in)



- 2) After adjustment, tighten lock nuts temporarily.
6. Relay Lever
7. Bolt, Nut, Washer and Cotter Pin
 - 1) Install the relay lever to the bracket.
 - 2) Tighten the nut to specified torque, with just enough additional torque to align cotter pin hole.
 - 3) Install new cotter pin.

Tighten:

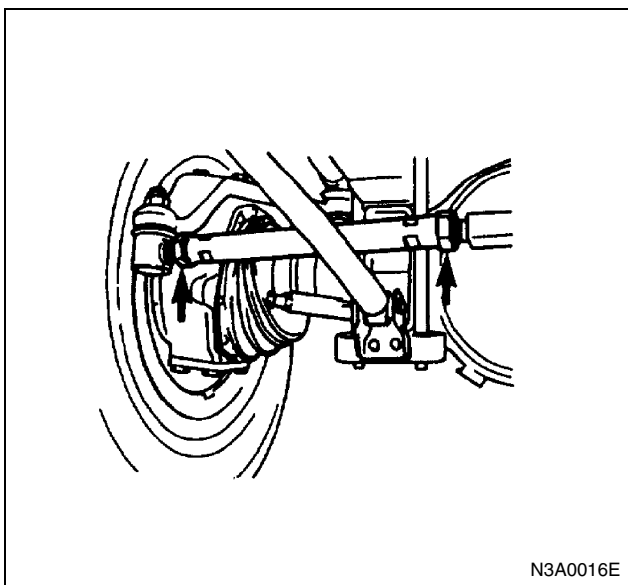
- Relay lever nut to 147 N·m (15 kg·m / 108 lb·ft)



8. Tie Rod Assembly
 9. Nut and Cotter Pin
 10. Nut and Cotter Pin
 11. Tie Rod Assembly
 12. Nut and Cotter Pin
 13. Nut and Cotter Pin
- 1) Tighten tie rod end nut to specified torque, with just enough additional torque to align cotter pin hole.
Install new cotter pin.

Tighten:

- Tie rod end nut to 186 N·m (19 kg·m / 137 lb·ft)

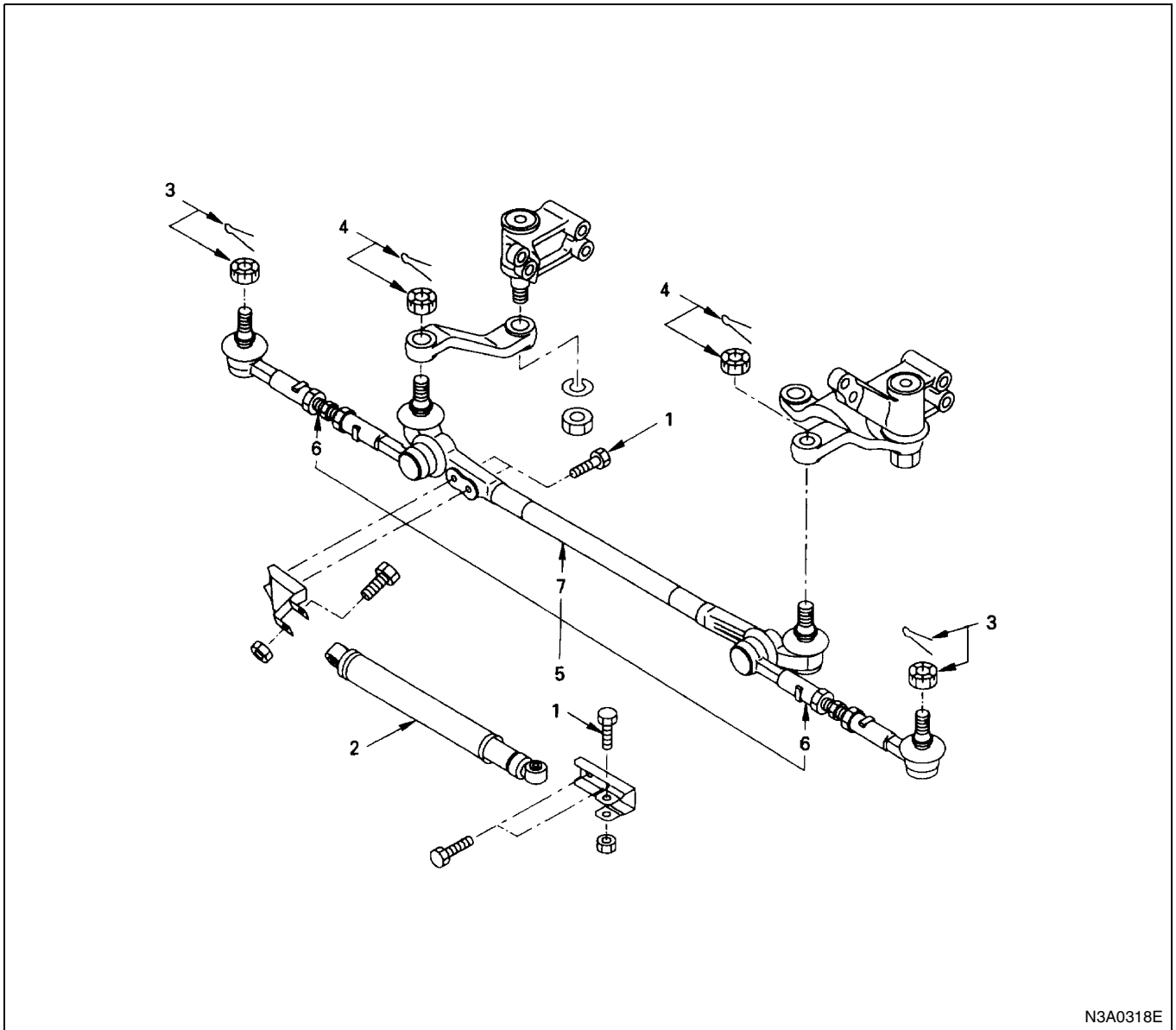


- 2) Adjust the front end alignment after installation. Refer to "Front end alignment".
- 3) After adjustment, tighten the lock nuts to specified torque.

Tighten:

- Lock nut to 113 N·m (11.5 kg·m / 83 lb·ft)

Steering Link Replacement (Wishbone Suspension)



N3A0318E

Legend

- | | |
|-----------------------|---------------------------|
| 1. Bolt | 5. Steering link assembly |
| 2. Steering damper | 6. Outer track rod |
| 3. Nut and cotter pin | 7. Center track rod |
| 4. Nut and cotter pin | |

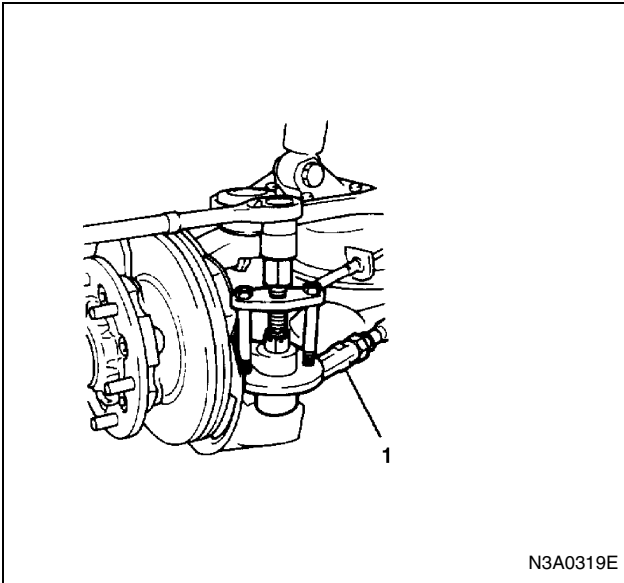
Removal

Preparation

Raise the vehicle and support the frame with suitable safety stands.

1. Bolt
 2. Steering Damper
 3. Nut and Cotter Pin
- Disconnect outer track rods (1) from knuckle.

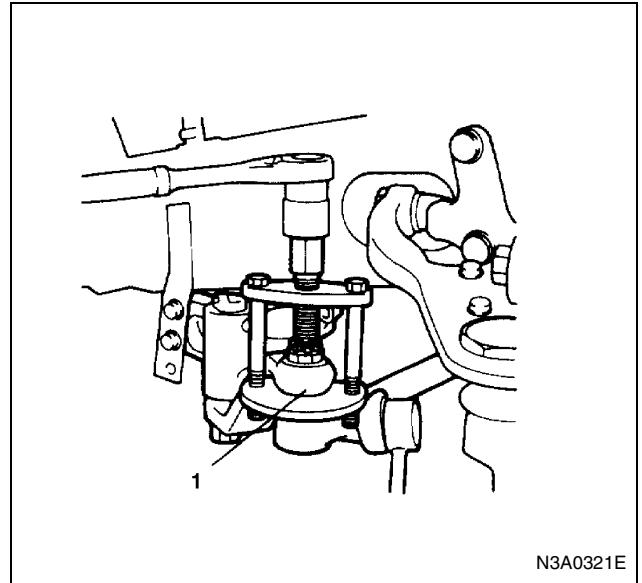
Remover: 5-8840-2017-0



4. Nut and Cotter Pin

- 1) Disconnect center track rod (1) from relay lever (2).

Remover: 5-8840-2017-0



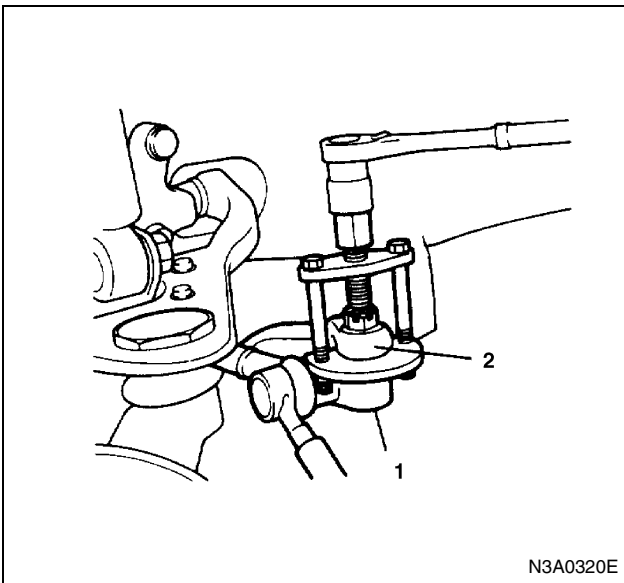
5. Steering Link Assembly

6. Outer Track Rod

7. Center Track Rod

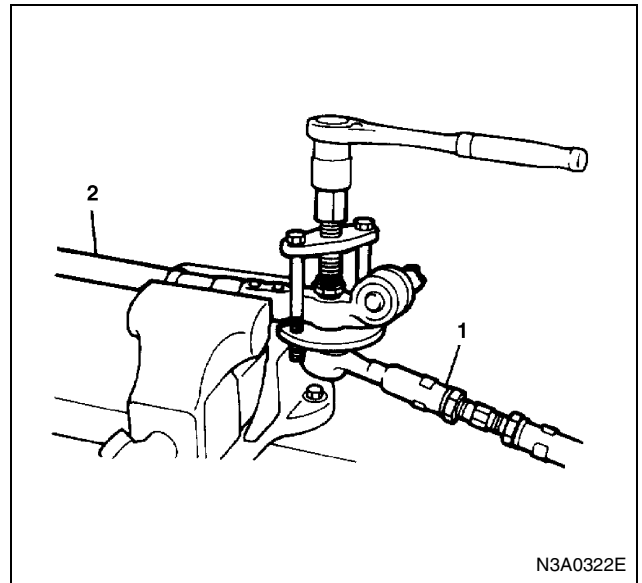
Disconnect outer track rods (1) from center track rod (2).

Remover: 5-8840-2017-0



- 2) Disconnect center track rod from idler arm (1).

Remover: 5-8840-2017-0



Inspection

Make necessary correction or parts replacement if wear, damage or any other abnormal conditions are found through inspection.

Outer Track Rod End

- Inspect the ball joint taper fitting part for contact condition or abnormal wear.
- Inspect the boot for damage or grease leak.
- Move the ball joint to confirm its normal movement. If abnormal condition is found, replace the rod end assembly because it cannot be disassembled.

Center Track Rod

- Inspect the center track rod for bending or any other abnormal conditions.

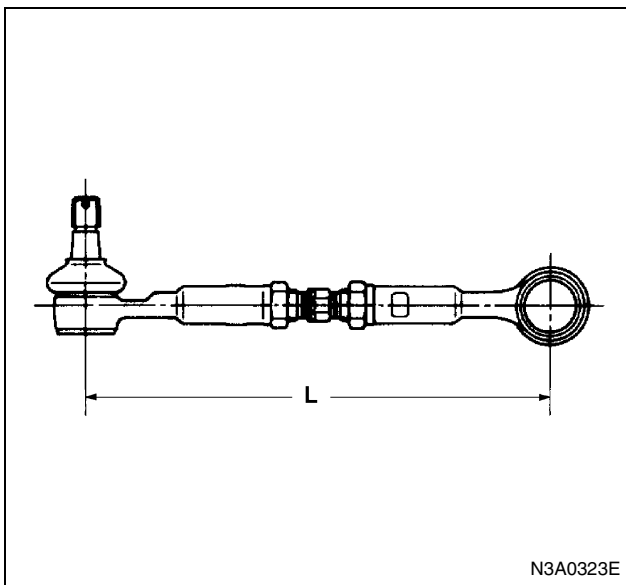
- Inspect the ball joint taper fitting part for contact condition or abnormal wear.
- Inspect the boot for damage or grease leak.
- Move the ball joint to confirm its normal movement. If abnormal condition is found, replace the center track rod assembly because it cannot be disassembled.

Installation

1. Center Track Rod
2. Outer Track Rod
 - 1) Adjust outer track rod length (L) to specified length.

Rod Length (L)

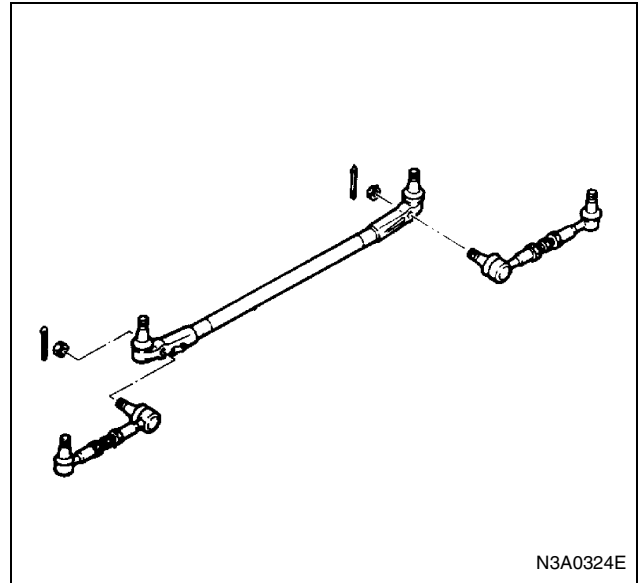
323.5 mm (12.736 in)



- 2) After adjustment, tighten track rod end lock nut temporarily.
- 3) Install outer track rods to the center track rod. Tighten nuts to specified torque, with just enough additional torque to align cotter pin hole. Install new cotter pin.

Tighten:

- Outer track rod nut to 108 N·m (11 kg·m / 80 lb·ft)



3. Steering Link Assembly
4. Nut and Cotter Pin
5. Nut and Cotter Pin
 - 1) Connect center track rod ends to the idler arm and relay lever.
 - 2) Connect outer track rod ends to knuckle.
 - 3) Tighten nuts to specified torque, with just enough additional torque to align cotter pin hole. Install new cotter pin.

Tighten:

- Center track rod end nut to 167 N·m (17 kg·m / 123 lb·ft)
- Outer track rod end nut to 108 N·m (11 kg·m / 80 lb·ft)
- 4) Adjust the front end alignment after installation. Refer to "Front end alignment" in Section 3A.
- 5) Tighten outer track rod end lock nuts to specified torque after adjustment of front end alignment.

Tighten:

- Lock nut to 167 N·m (17 kg·m / 123 lb·ft)
- 6. Steering Damper
- 7. Bolt

Tighten:

- Steering damper bolt to 50 N·m (5.1 kg·m / 37 lb·ft)