

CERTAIN 1998-2003 MODEL YEAR WINDSTAR VEHICLES REPAIRED UNDER SAFETY RECALL 10S13 WITH REAR AXLE REINFORCEMENT BRACKETS – REAR AXLE INSPECTION AND REPAIR

NEW ! OVERVIEW

Determine if repairs completed under Safety Recall 10S13 were performed properly. If repairs were not completed properly, the rear axle must be replaced under Safety Recall 15S27. If repairs were completed properly under Safety recall 10S13, no further service action is required.

NOTE: *If a vehicle is affected by both safety recalls 11S16 and 15S27, dealers must perform 11S16 prior to performing 15S27.*

AXLE REINFORCEMENT BRACKET INSPECTION

1. Inspect and verify both rear axle reinforcement brackets are positioned within 0 to 38 mm (0 to 1.5 in) from the top of the rear axle weld on each side of the axle. Inspect for evidence that adhesive was used during rear axle reinforcement bracket installation. See Figures 1 and 2.

- If both rear axle reinforcement brackets are positioned within 0 to 38 mm (0 to 1.5 in) from the top of the rear axle weld and the use of adhesive is evident, this inspection has passed. No further service is required.
- If either rear axle reinforcement bracket is not positioned within 0 to 38 mm (0 to 1.5 in) from the top of the rear axle weld and/or the use of adhesive is not evident, the inspection has failed. Photograph the rear axle reinforcement bracket(s) and/or missing adhesive for dealer records. Use a tape measure to illustrate the incorrect rear axle reinforcement bracket-to-axle weld distance in the photograph. Proceed to Rear Axle Replacement on Page 2.

NOTE: RH rear axle reinforcement bracket shown, LH similar.



FIGURE 1



NOTE: RH rear axle reinforcement bracket shown, LH similar.

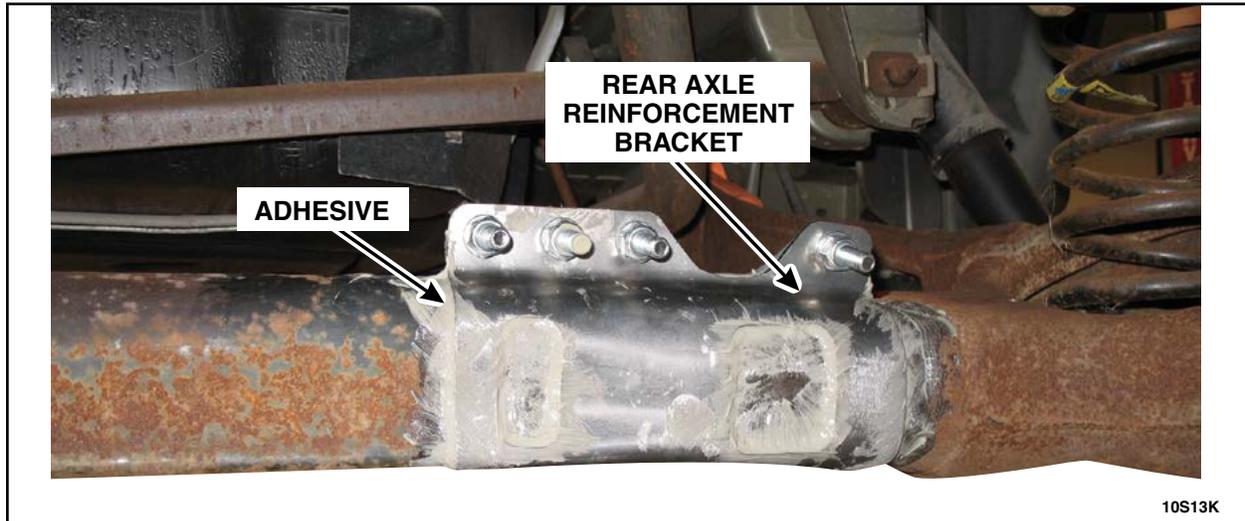


FIGURE 2

REAR AXLE REPLACEMENT

Removal

NOTICE: Suspension fasteners affect performance of vital components and systems. The failure of suspension fasteners can result in major service expense. If replacement is necessary, they must be replaced with the same part number, or an equivalent part. Do not use a replacement part of lesser quality or substitute design. Torque values must be used as specified during reassembly to ensure proper retention of these parts.

NOTE: The following rear axle replacement procedure is different than the procedure described in the Workshop Manual (WSM). The procedure was revised because the emergency brake cable and service brakes do not need to be disconnected in order to remove and replace the rear axle.

1. **NOTE:** To prevent the brake drum from sliding off the hub, reinstall one wheel nut on each hub. Remove both rear wheel and tire assemblies. Please follow WSM procedures in Section 204-04.



2. Remove the parking brake cable bracket nuts and position the parking brake cable brackets aside.
See Figure 3.

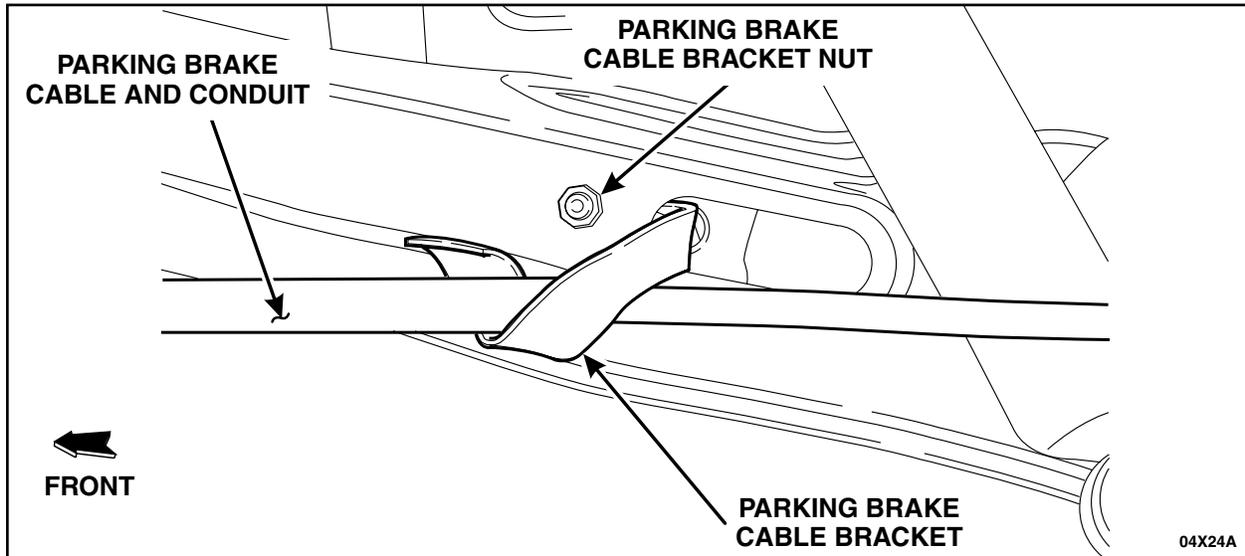


FIGURE 3

3. Secure the rear axle to High Lift Transmission Jack 014-00942 or equivalent.
4. Disconnect the track bar from the rear axle. See Figure 4.
 - a. Remove the track bar bolt.
 - b. Remove the track bar from the rear axle track bar mounting bracket.
 - c. Remove the J-nut from the rear axle track bar mounting bracket. The bolt and J-nut will be reused on the **new** rear axle. If the bolt or J-nut has been damaged, replace as necessary.

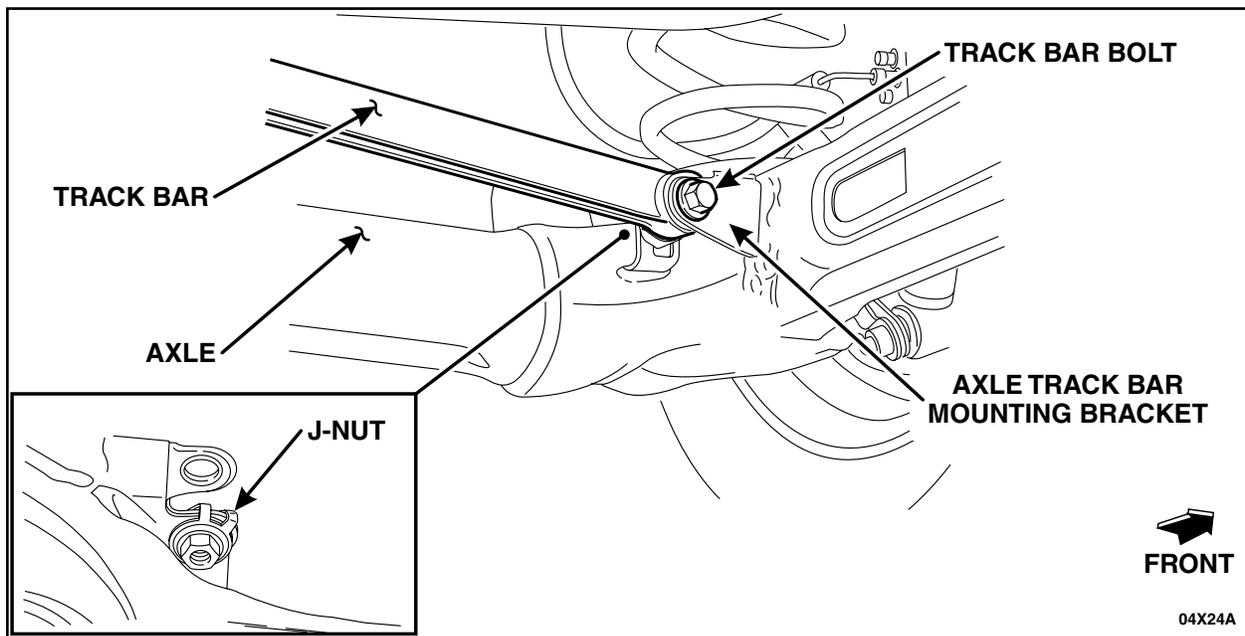


FIGURE 4



5. Remove the shock absorber lower bolts.

6. NOTE: The spring insulators may come out with the spring when the spring is removed.

Carefully lower the rear axle assembly enough to remove the rear springs. See Figure 5.

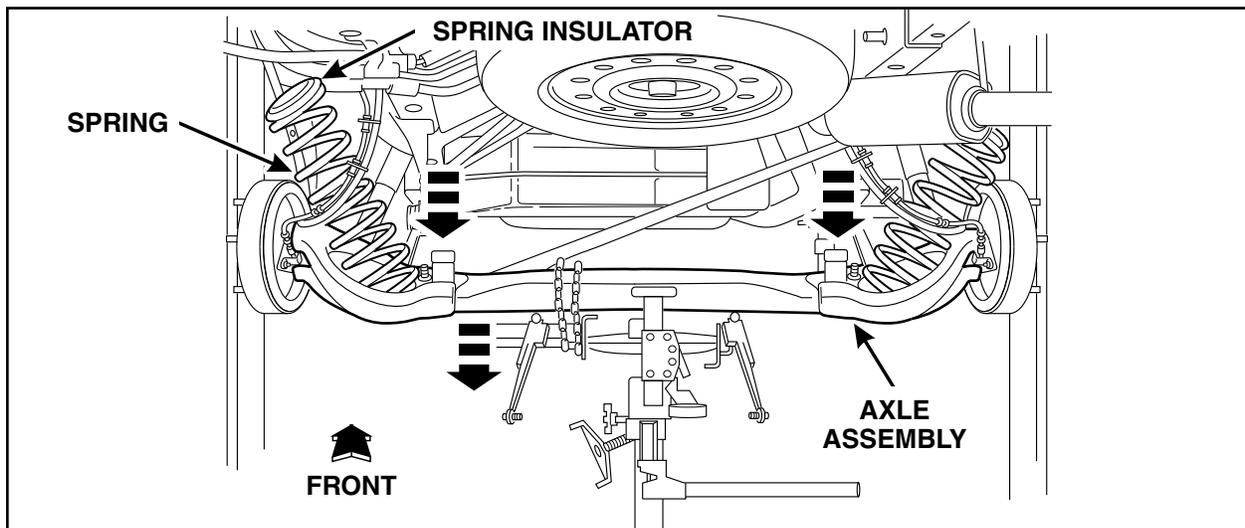


FIGURE 5

7. Remove the four spindle retaining nuts. See Figure 6.

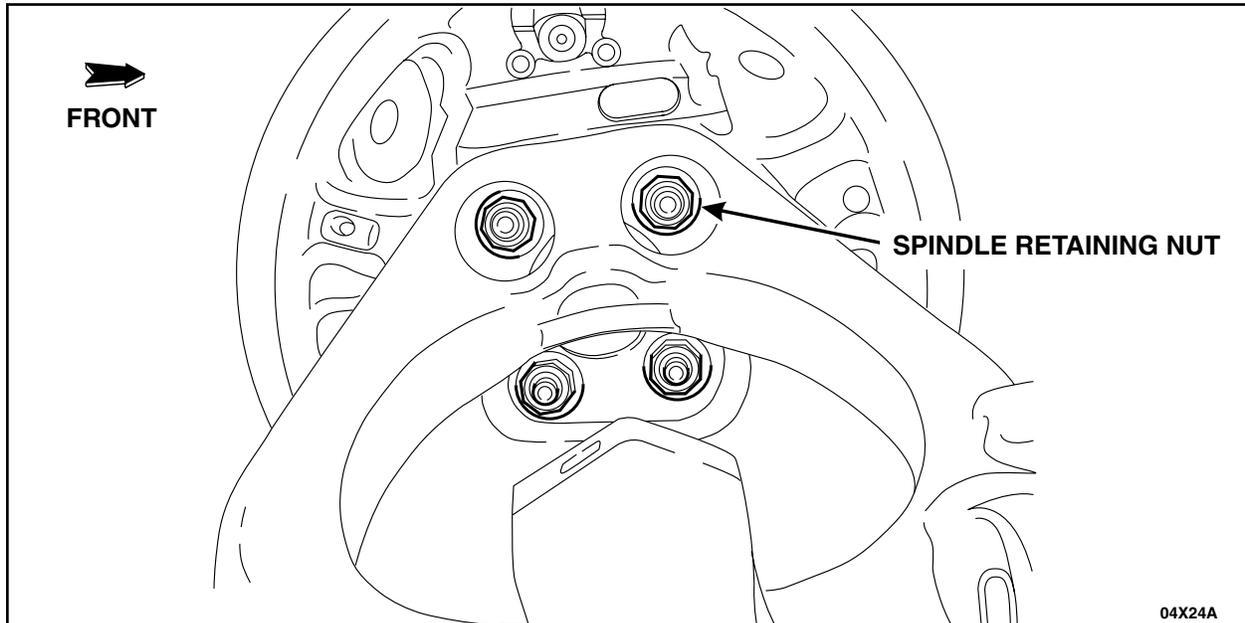


FIGURE 6

04X24A



8. **NOTICE:** When removing the spindle, hub and brake assembly, never allow it to hang from the brake caliper flexible hose. To prevent damage to the flexible hose, provide suitable support.

Position the spindle, hub and brake assemblies aside. See Figure 7.

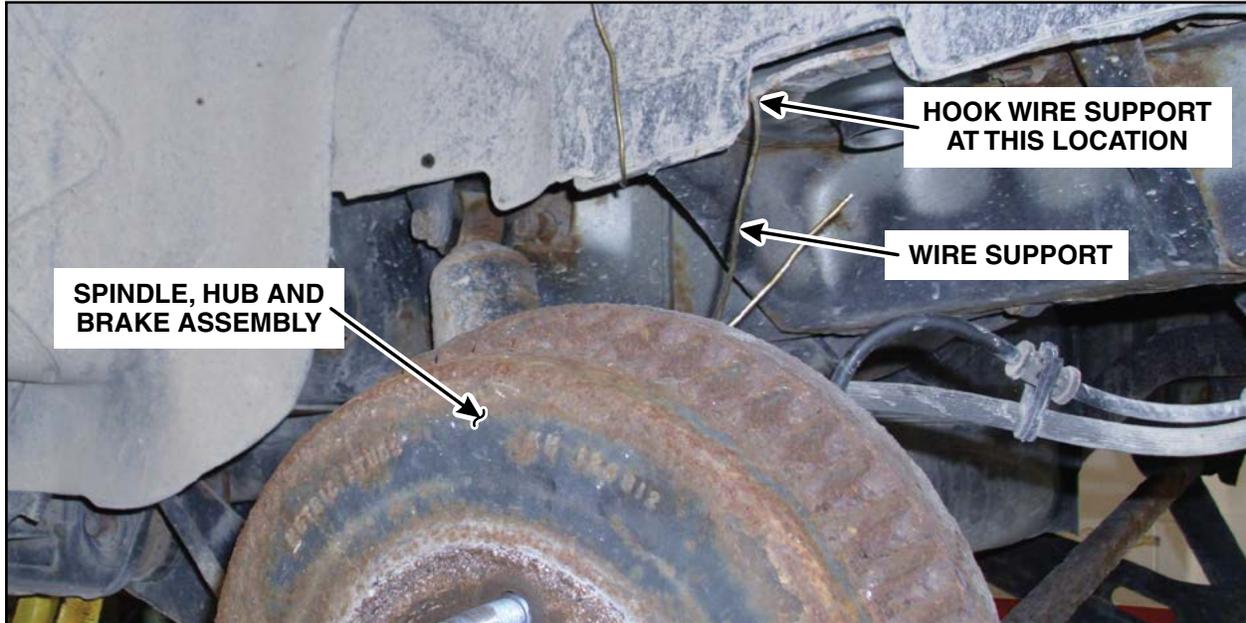


FIGURE 7

9. Remove the trailing arm-to-subframe bolts. See Figure 8.

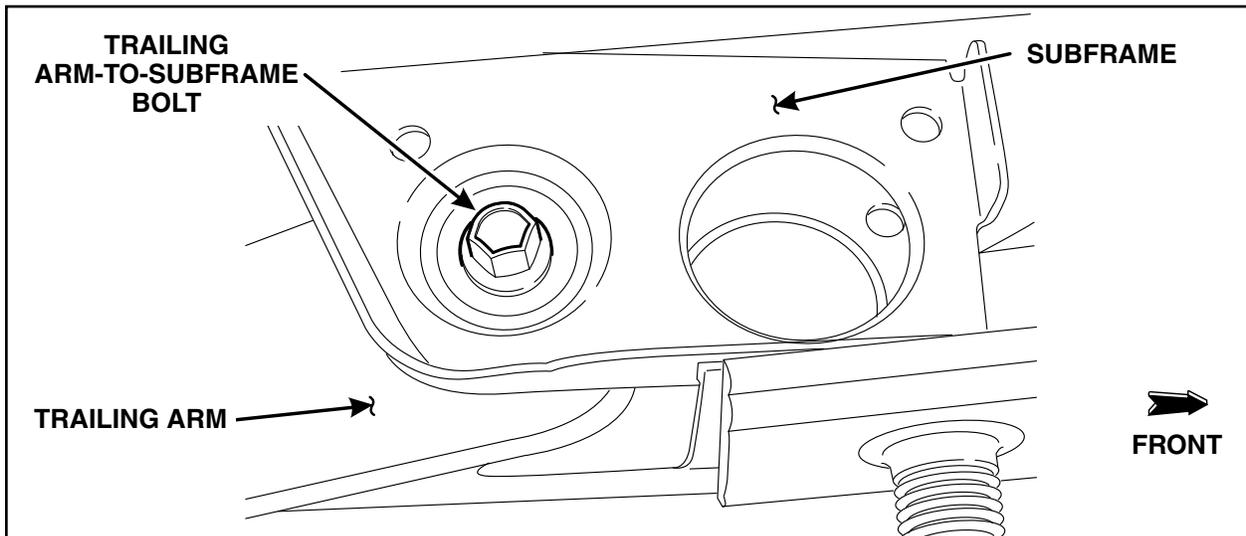


FIGURE 8



10. Carefully lower the rear axle and remove it from the vehicle.
11. **NOTE:** If the spring lower insulators did not come out with the springs, remove the insulators from the rear axle assembly.

Remove the jounce bumper bolts and bumpers, and if necessary, the spring lower insulators. The jounce bumpers and the spring lower insulators will be reused with the **new** rear axle.

Installation

NOTICE: Do not tighten the rear suspension fasteners until the rear axle has been raised and the rear suspension has been loaded. By lifting the rear axle and loading the rear suspension, it will simulate the vehicle's ride height. Failure to follow these instructions may result in incorrect clamp load and bushing damage may occur.

12. Install the jounce bumpers, and if necessary, the spring lower insulators on the **new** rear axle.
 - Tighten to 25 Nm (18 lb-ft).
13. Using a High Lift Transmission Jack 014-00942 or equivalent, raise the rear axle assembly in position and install the trailing arm-to-subframe bolts. See Figure 8.
14. Position the spindle, hub and brake assemblies in place. See Figure 7.
15. Install the four spindle retaining nuts. See Figure 6.
 - Tighten to 70 Nm (52 lb-ft).
16. **NOTE:** Make sure the spring upper insulators are positioned correctly on the springs.

Install the springs on the rear axle assembly. Make sure the springs are correctly seated.
17. Raise the rear axle assembly and position the shock absorbers on the rear axle. Install the shock absorber lower bolts.
18. Install the J-nut on the rear axle track bar mounting bracket. Position the track bar on the rear axle track bar mounting bracket and install the track bar bolt. See Figure 4.
19. Load the rear suspension by raising the axle assembly. Once the rear suspension has been loaded, tighten the following components:
 - a. Tighten the trailing arm-to-subframe bolts to 133 Nm (98 lb-ft).
 - b. Tighten the shock absorber lower bolts to 80 Nm (59 lb-ft).
 - c. Tighten the track bar bolt to 80 Nm (59 lb-ft).



20. Remove High Lift Transmission Jack 014-00942 or equivalent.
21. Position the parking brake cable brackets in place and install the parking brake cable bracket nuts.
See Figure 3.
 - Tighten to 25 Nm (18 lb-ft).
22. Install both rear wheel and tire assemblies. Please follow WSM procedures in Section 204-04.
23. Lower the vehicle.

