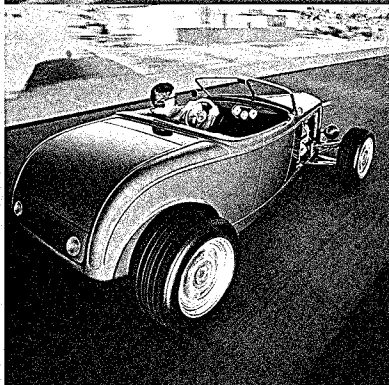
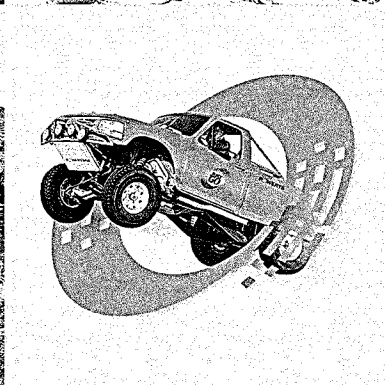
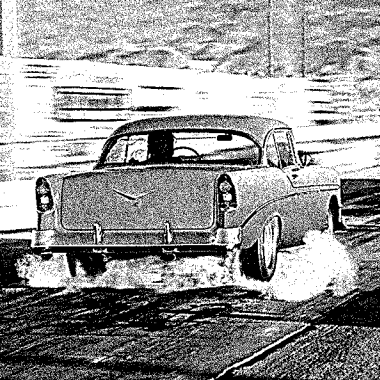


INSTALLATION GUIDE



POWERTRAX
No-Slip Traction System

POWERTRAX

No-Slip Traction System™

Installation Guide

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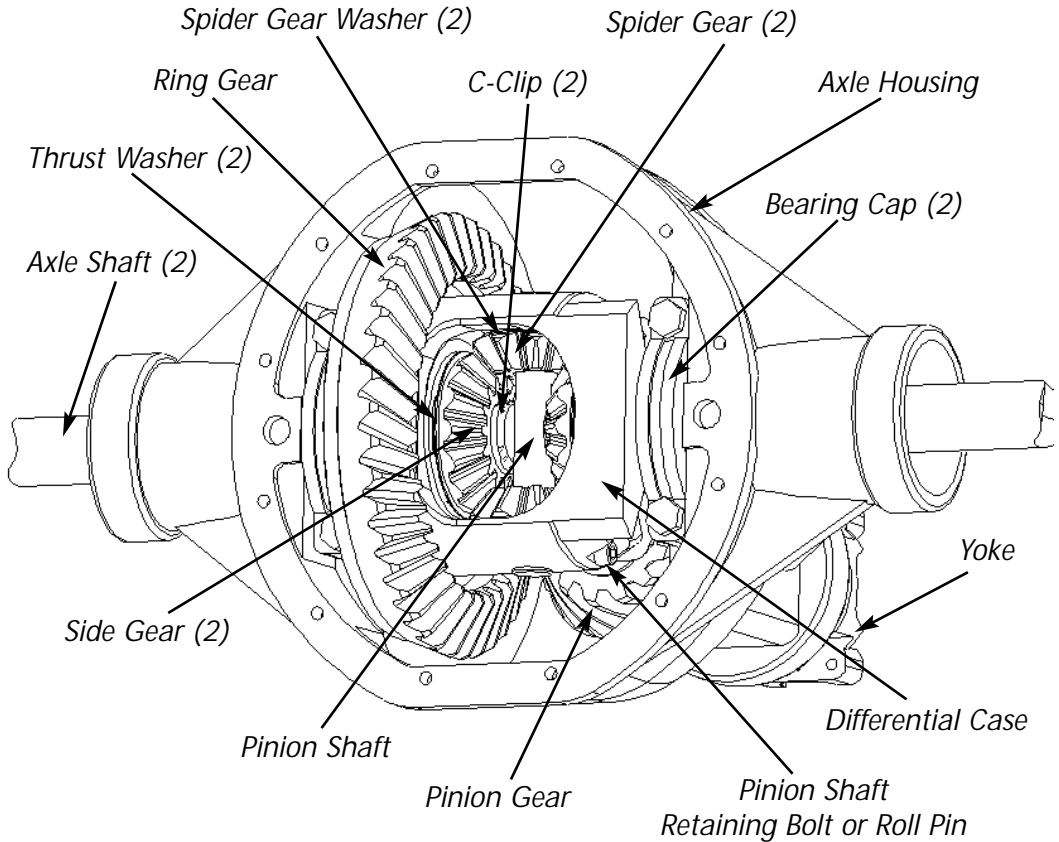
Thoroughly read User Manual.

Traction output and resulting handling characteristics of your vehicle will be modified by installation.

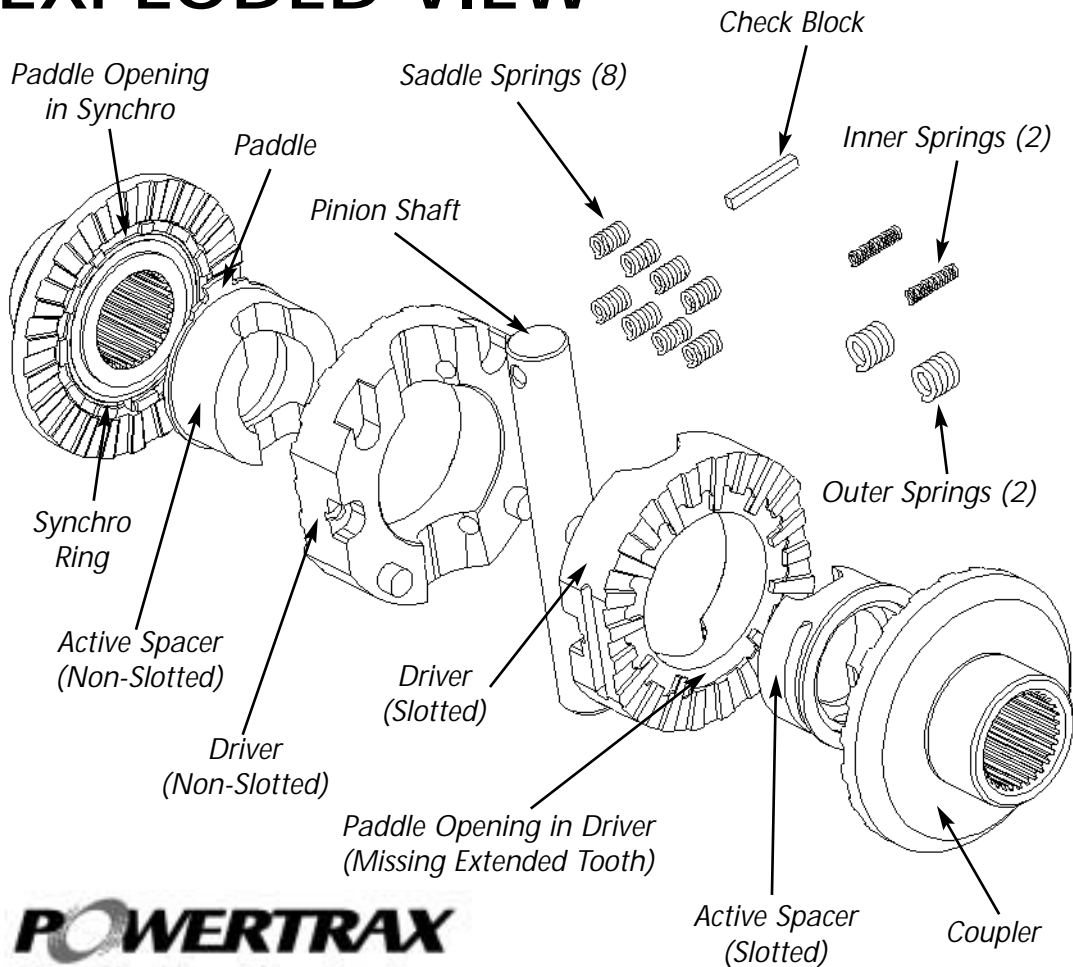
Drive carefully and use caution under all on-road and off-road conditions.

OPEN DIFFERENTIAL

PART IDENTIFICATION/TERMINOLOGY



EXPLODED VIEW



POWERTRAX
No-Slip Traction System



1. Put transmission in gear (or park),
and turn off engine.



2. Set parking brake.



3. Safeguard the vehicle from rolling.

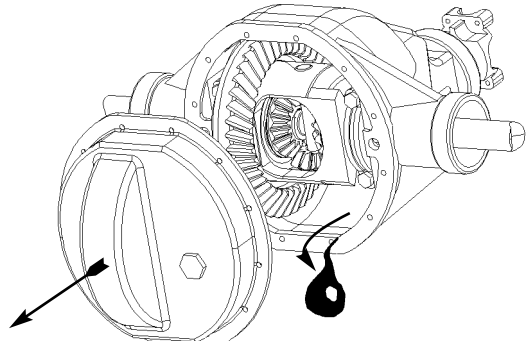


4. Safely raise vehicle and
apply jack stands.

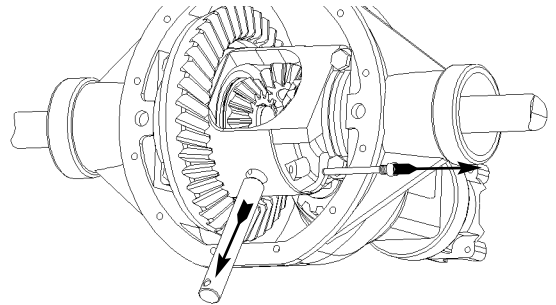
5. Put transmission in neutral and release parking brake.



6. Remove Differential cover and drain fluid. Clean the diff cover and housing sealing surface.

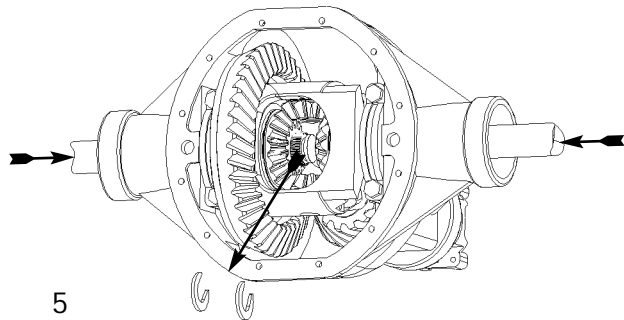


7. Expose pinion shaft; remove retaining bolt/roll pin and shaft.

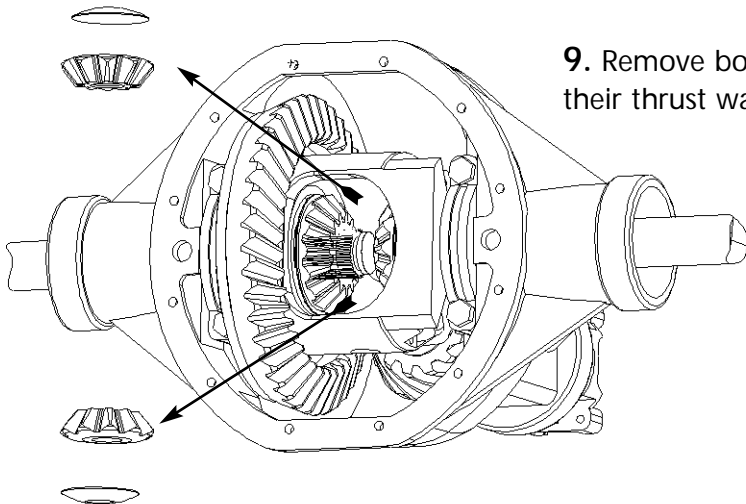


8. Push both axles inward and remove both c-clips. Remove o-rings from c-clip grooves on axle shafts if present.

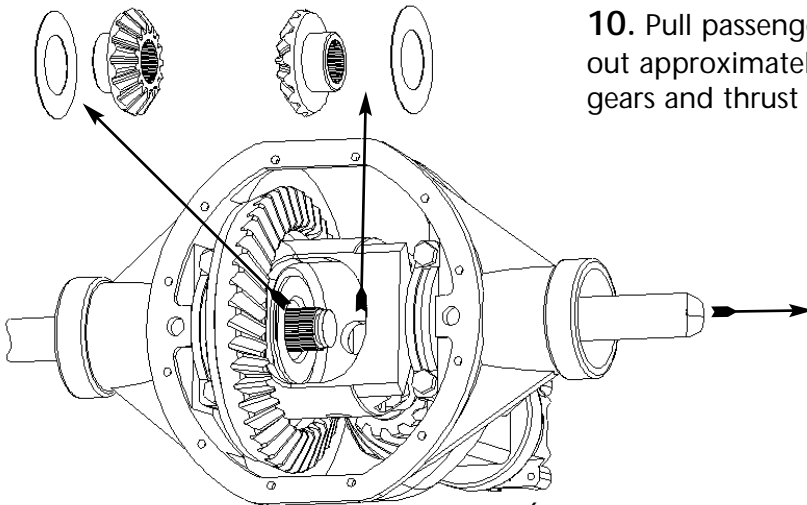
Note: It may be necessary to remove wheels and disc brake calipers.



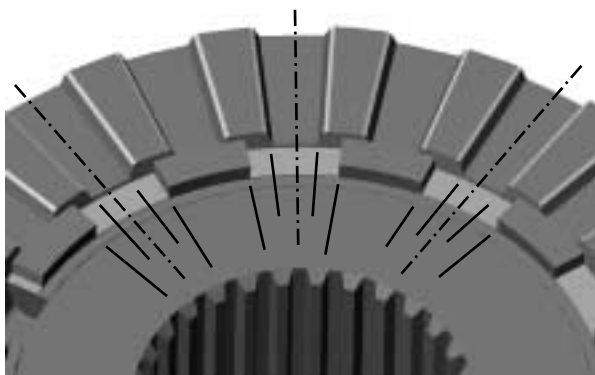
9. Remove both spider gears and their thrust washers.



10. Pull passenger side axle shaft out approximately 6". Remove side gears and thrust washers.



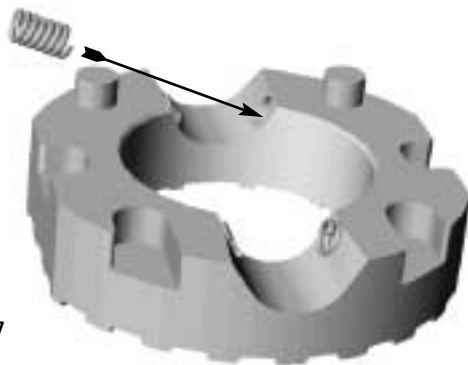
11. Verify gaps in coupler teeth are aligned with gaps in synchro ring. Place coupler in a vise and use an active spacer to align them if necessary.



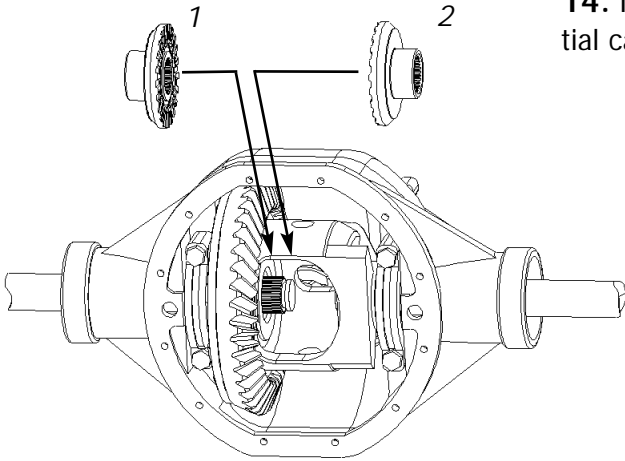
12. Apply wheel bearing grease to driver teeth and spacer.



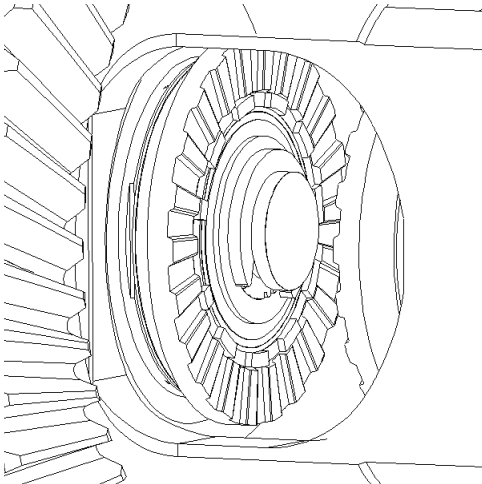
13. Apply wheel bearing grease to saddle springs and seat in holes.



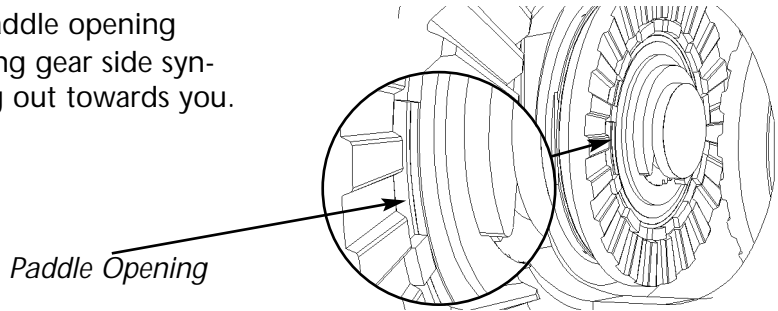
14. Install couplers inside differential case, ring gear side first.



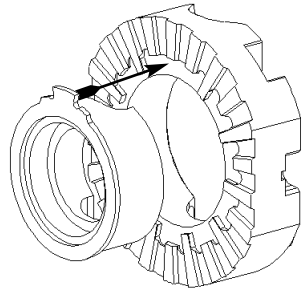
15. Install c-clip on ring gear side axle shaft only.



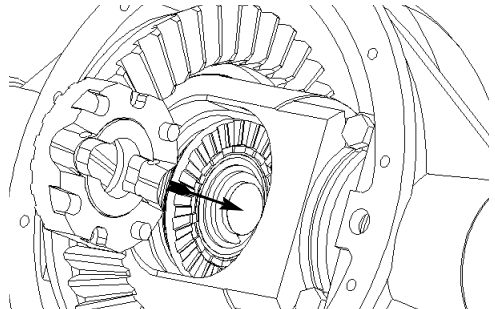
16. Make sure paddle opening (widest gap) in ring gear side synchro ring is facing out towards you.

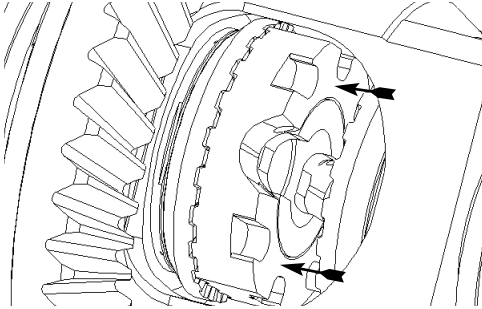


17. Insert the non-slotted spacer into the non-slotted driver. Seat the spacer paddle at the paddle opening in driver (missing extended tooth).

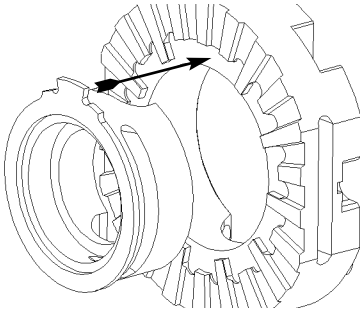


18. Insert driver/spacer as shown, making sure spacer paddle is facing out towards you.

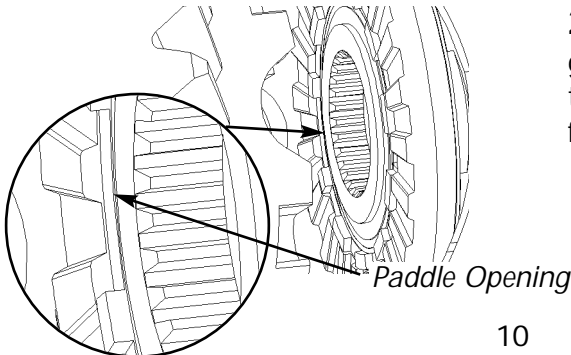




19. Verify spacer paddle is aligned with paddle opening in synchro ring and press driver/spacer down onto coupler. Driver teeth should be fully engaged all the way around.

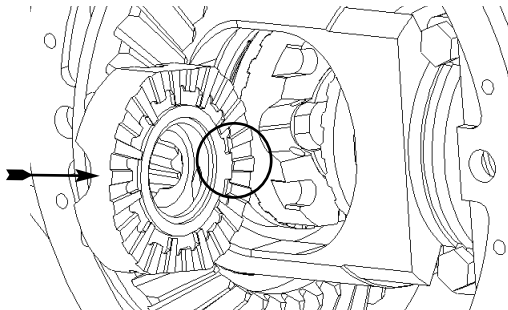


20. Insert the slotted spacer into the slotted driver. Seat the spacer paddle at the paddle opening in driver (missing extended tooth).

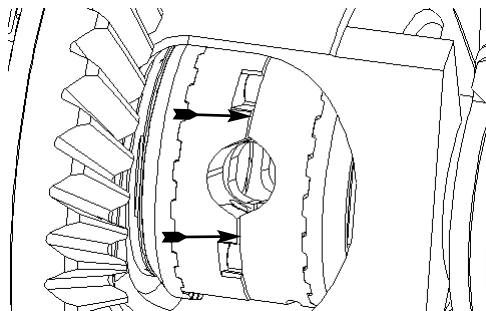


21. Verify paddle opening (widest gap) in other synchro ring is facing the back of the differential, away from you.

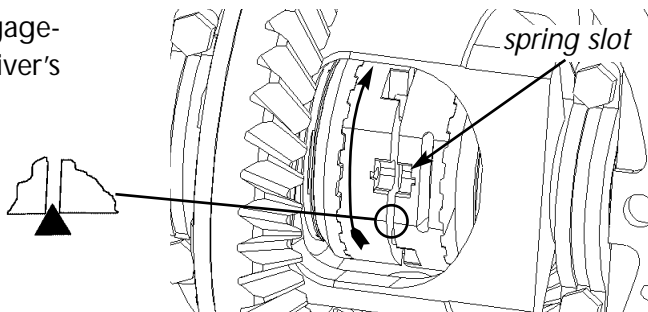
22. Install slotted driver/spacer making sure that paddle is pointing away from you toward rear of differential.

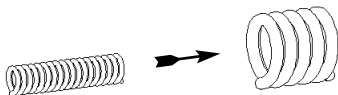


23. Verify spacer paddle is aligned with the paddle opening in synchro ring and press down on driver/spacer to seat on coupler; driver teeth should be fully engaged all the way around.

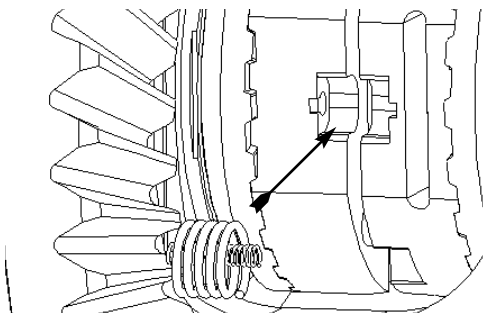
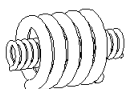


24. Wedge both drivers in engagement with couplers. Rotate driver's side wheel forward 1/4 turn to reveal spring slot.

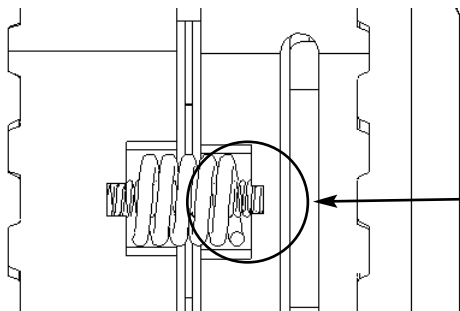




25. Place the two inner springs inside the two outer springs.



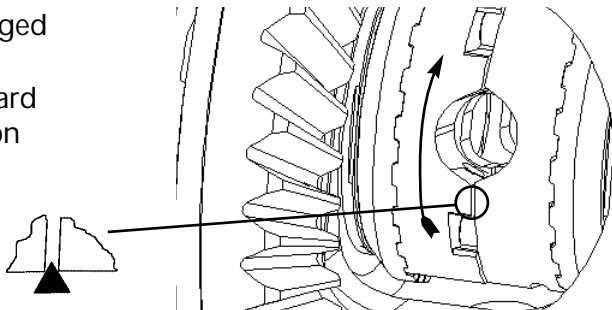
26. Compress inner spring and install spring assembly into spring slot.



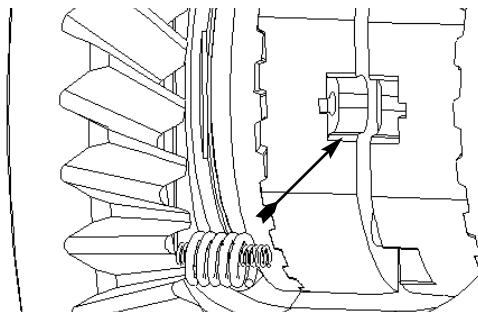
27. Visually inspect notches in spring slot to make sure inner spring is fully seated.

check spring

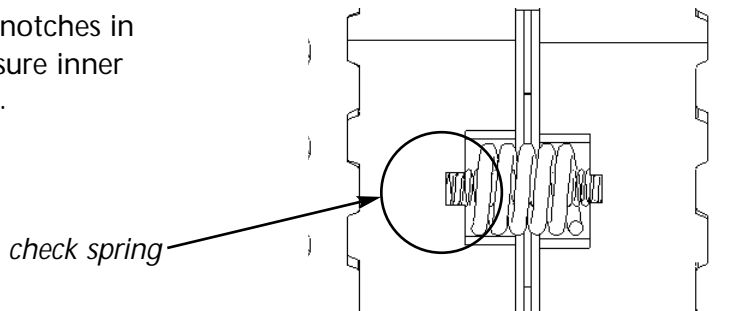
28. Keeping both drivers wedged in engagement with couplers, rotate driver's side wheel forward 1/2 turn to reveal spring slot on other side.

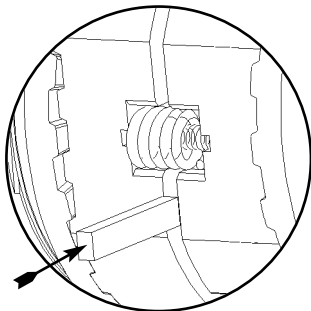


29. Compress inner spring and install the second spring assembly into the second spring slot.

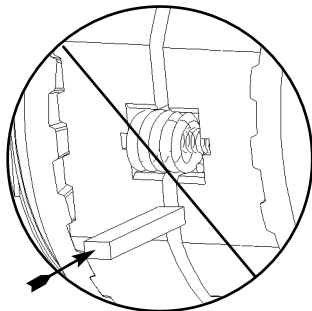


30. Visually inspect notches in spring slot to make sure inner spring is fully seated.





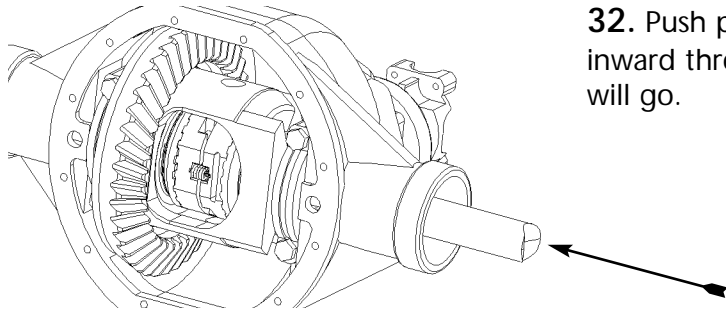
Go



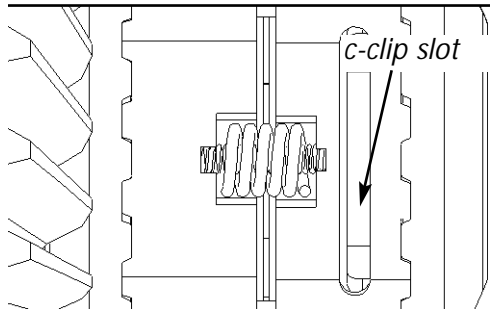
No Go

31. Check the gap between drivers using check block. The narrow side of the block should fit between the drivers, but the wider side should not fit.

If driver gap is incorrect, STOP and call Powertrax Technical Support at 800-578-1020. There may be a problem with your differential case.

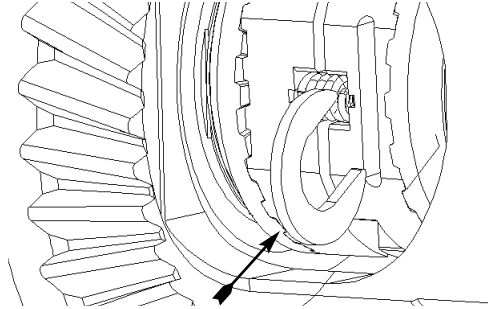


32. Push passenger side axle shaft inward through coupler as far as it will go.

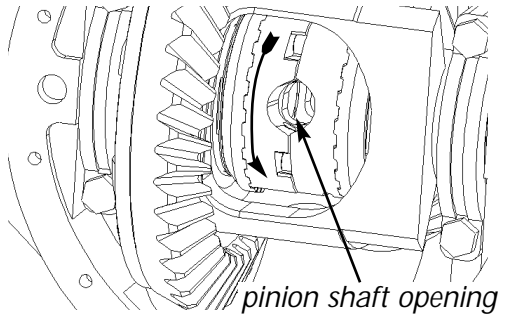


33. Making sure drivers stay engaged with couplers, carefully rotate wheels until c-clip slot is accessible. Verify c-clip groove on axle is accessible through c-clip slots on driver and spacer.

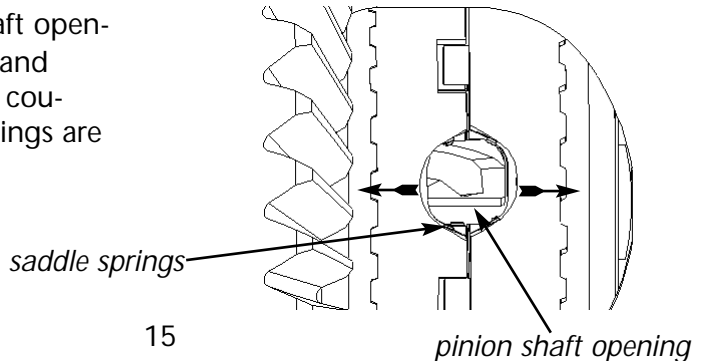
34. Insert 2nd c-clip through c-clip slot in driver onto axle shaft; pull axle shaft out to seat c-clip.

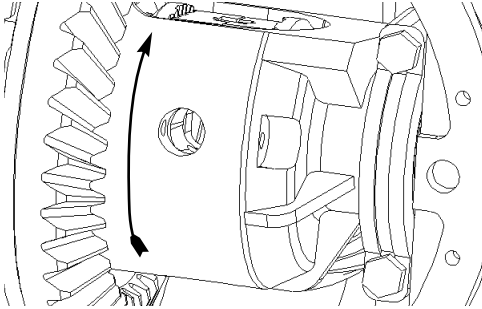


35. Making sure drivers stay engaged with couplers, carefully rotate both wheels backwards 1/4 turn to expose pinion shaft opening.

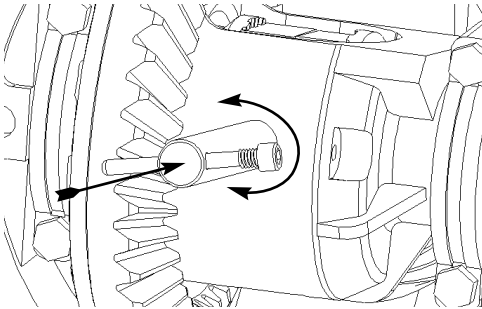


36. Feel through pinion shaft opening and verify both spacers and drivers are fully seated onto couplers. Verify all 8 saddle springs are fully seated in holes.

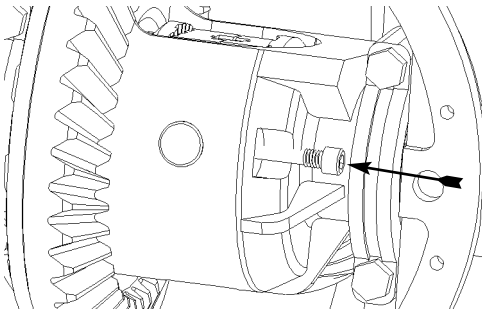




37. Keeping couplers and drivers stationary, rotate case 1/4 turn forward to align pinion shaft opening with driver saddles.



38. Using the retaining bolt/roll-pin as a handle, insert the shaft into the differential. Press hard while twisting to pass shaft by springs.



39. Insert retaining bolt/roll-pin into case/shaft. Tighten retaining bolt firmly.



40. Put transmission in gear (or park).



HOLD

41. Turn driver's side wheel forward and hold against driveline for steps 42 & 43.

42. Passenger side wheel should not be able to rotate in the same direction.



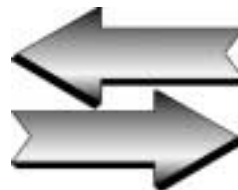
HOLD

43. Passenger side wheel should rotate freely in opposite direction.



HOLD

44. Repeat the test for both wheels in both directions.





45. Install differential cover with gasket sealant.



46. Add differential fluid.



47. Set parking brake.



48. Be sure transmission is in gear or park.

49. Remove jack stands, lower vehicle, then remove blocks.



822 1002 A

Open Differential
Integral Carrier
C-Clip Version



POWERTRAX

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