

FORD RACING DIFFERENTIAL COVER 8.8 IRS



Tools Needed:

- Socket set, metric and standard
- Sledge hammer
- Puller device, pitman puller
- Jack
- Jack stands
- Flat head screw drivers
- Torque wrench, capable of 8 ft/lbs and 250 ft/lbs
- Extra set of hands
- Differential fluid (75w-140 1.5-2 quarts)

Installation Instructions:

Place the car in your workspace, put the car in gear with the parking brake on.

1. Place the car on jack stands on all four corners; place the rear end as high up as you can.
2. Remove the rear tires, 21mm deep socket.
3. Remove mid pipe and cat back; 15mm deep socket.
4. Removing the cat back involves taking the hangers out of the rubber holding pieces, should be three of them. Use wd-40 to ease removal.





5. Remove both brake caliper bolts, 12mm. On both sides of the car.
6. Remove brake caliper on both side of the car.
7. Remove brake caliper bracket bolts, 15mm. On both side of the car.



8. Remove tire rod cotter pin using a pair of needle nose pliers.
9. Remove tire rod nut 15mm.
10. Remove tire rod using a puller device.
11. Remove lower control arm from wheel hub by removing the nut, 15mm.



12. Remove wheel hub center nut, 36mm deep socket. Very hard to get off.

13. Sledge hammer or puller device will be needed to hit the center stud to remove the hub assembly



14. Once both sides are removed, use a crow bar or big flat head screwdriver to pop out the half-shaft from the differential *USE A PAINT MARKER AND MARK THE OREINTATION OF THE HALF SHAFT*.

15. Then pull the half shaft out far enough to rest on the lower control arm.

16. Next you will need to remove the drive shaft. *MARK WITH A PAINT MARKER AT TWO DIFFERENT SPOTS* from the drive shaft on to the pinion.

17. Remove all four bolts holding the drive shaft to the pinion.

18. Once the bolts are removed push the drive shaft up and tie it in place with a piece of string or zip ties.

19. Next remove the sensors from both sides of the differential. One on each side.

20. Next loosen the differential rear isolator nuts, leave in place for now but loosen.

21. Loosen pinion cross member brace where it is connected to the sub frame. Leave brace in place.

22. Now bring the jack under the car to support the weight of the differential.

23. Now remove the two bolts on the pinion cross member that are connected to the differential, after this the differential should drop out.
24. Make sure you remove the rear bolts that we already loosened, and take the pinion cross member out now.
25. Once the differential is removed and lowered from the car place it on a work bench or clean surface.
26. Remove the drain plug and drain fluids into an oil pan.
27. Remove the differential pressure relief valve hose (save it).
28. Remove all 10 differential housing bolts.



29. Stock cover should fall off now.
30. Get a razor blade and a flat head screw driver and scrape away all the old gasket.
31. Get some sand paper and parts cleaner and scrape way any impurities, you need a clean surface.
32. Once the surface is clean and all excess fluid is drained get the grey rtv.
33. Apply the grey rtv around every single bolt area to make a very healthy gasket, use allot but make sure it is even. Apply the same on the ford racing differential cover.
34. Once both areas have been covered place the cover on the housing and place all ten bolts hand tight into the holes.
35. After ten minutes has passed torque down to 25ft/lbs.



36. Let differential sit for 24hrs before reinstalling

37. *EXTRA* since the fuel filter is such a pain to replace, replace now since there is so much room to get to it now

38. Follow all the steps in reverse in order to reinstall the diff housing

39. Torque specs need:

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| a. ABS bracket-to-lower arm = 17 ft-lbs | p. Rear brake disc dust shield-to-knuckle bolts = 89 in-lbs |
| b. ABS bolt-to-diff = 5 ft-lbs | q. Stabilizer bar bracket bolt = 41 ft-lbs |
| c. Brake banjo bolt = 30 ft-lbs | r. Stabilizer bar link nuts = 35 ft-lbs |
| d. Brake caliper anchor bolts = 76 ft-lbs | s. Subframe-to-body bolts = 76 ft-lbs (14mm bolts = 131 ft-lbs; 9/16" bolt = 145 ft-lbs) |
| e. Brake caliper bolt = 25 ft-lbs | t. Subframe-to-rear bracket bolts = 76 ft-lbs |
| f. Brake line-to-rear brake caliper bolt = 30 ft-lbs | u. Subframe rear bracket-to-body bolts = 59 ft-lbs |
| g. Diff cover = 25 ft-lbs | v. Shock-to-lower arm and bushing bolts = 98 ft-lbs |
| h. Diff pinion nose crossmember-to-diff = 52 ft-lbs | w. Shock-to-body nuts = 30 ft-lbs |
| i. Diff pinion nose crossmember-to-subframe = 184 ft-lbs | x. Toe link-to-subframe nut = 35 ft-lbs |
| j. Diff rear insulator-to-axle housing bolts = 76 ft-lbs | y. Toe link-to-knuckle nut = 35 ft-lbs |
| k. Driveshaft to pinion flange = 83 ft-lbs (Blue Loctite) | z. Upper arm and bushing-to-subframe nuts = 66 ft-lbs |
| l. Hub nut = 250 ft-lbs | AA. Upper arm bushing-to-knuckle nut = 66 ft-lbs |
| m. Lower arm and bushing-to-subframe bolts = 184 ft-lbs | BB. Wheel lugs = 95 ft-lbs |
| n. Lower arm and bushing-to-knuckle nut = 85 ft-lbs | |
| o. Parking brake cable bracket-to-lower arm bushing bolt = 11 ft-lbs | |

Before reinstalling the wheels and catback fill from the middle hole on the cover with 75w-140 royal purple differential fluid. 1.5-2 quarts is needed



Installation Instructions provided by AmericanMuscle customer Marc Missera 11.30.12