

***advanced FLOW engineering***

**Instruction Manual** P/N: 46-71100A / 46-71100B

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Dana 60 – 10 Bolt Front Differential Cover

Make: **Ford** Model: **F250/F350** Year: **17-20** Engine: **V8 – 6.2L/6.7L/7.3L (td)**



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A1	1	Differential Cover – Raw, Machined Fins (46-71100A)	05-60975A
A2	1	Differential Cover – Black, Machined Fins (46-71100B)	05-60976B
B	1	RTV Silicone	05-60096
C	10	Screw, Socket Head 3/8"-16x1"	03-50229
D	10	Washer, Flat	03-50230
E	1	Washer, Crush M12	03-50384
F	2	Plug, 1/8" NPT	03-50029
G	1	Plug, 3/4" NPT (Included in 46-71100A)	03-50391
H	1	Plug, Magnetic 3/4" NPT, 6" Deep Reach (Included in 46-71100B)	03-50223
I	1	Plug, 1" NPT Sight Glass (Included in 46-71100B)	03-50224
J	1	Plug, Magnetic M12x1.25	03-50385



A1



A2



B



C



D



E



F



G



H



I



J



1. Park your vehicle on a flat, dry surface. You will need to block the tires to prevent the vehicle from rolling.
2. Place a drain pan under the differential cover.
3. Remove the bottom nine (9) bolts from the differential cover, leaving only the top bolt.
4. Loosen, but do not remove, the top bolt. Break the seal on the cover and the gear oil will begin to drain.





5. Allow all of the gear oil to drain from the differential.
6. If your vehicle has a breather port attached directly to the differential cover, remove it now.
7. Remove the one (1) remaining bolt from the top of the differential cover.
8. Carefully insert a gasket scraper between the differential cover and the housing. Pry the differential cover off. **Do not gouge the sealing surface.**
9. Remove the OEM cover from the housing.



10. Use a clean, lint free shop towel to wipe down the remaining gear oil from the housing.
11. Clean off the sealing surface with a gasket scraper. Be careful not to gouge the surface while cleaning.
12. Check the surface of the housing for any irregularities. If there are any, carefully remove high spots using a smooth flat file.

**Note: Do not "Round Off" the flat gasket surface.**





13. Hold the supplied aFe differential cover up to the gasket surface to make sure you will be able to maneuver it into place easily.

**Note: If applicable, you can re-use the OEM gasket in place of silicone.**

14. Spread the supplied RTV silicone across the gasket surface. Be generous when spreading the silicone across the surface, ensuring to follow along the inside of all the bolt holes.

**Note: Before moving on, make sure that the silicone will completely seal with the gasket surface.**

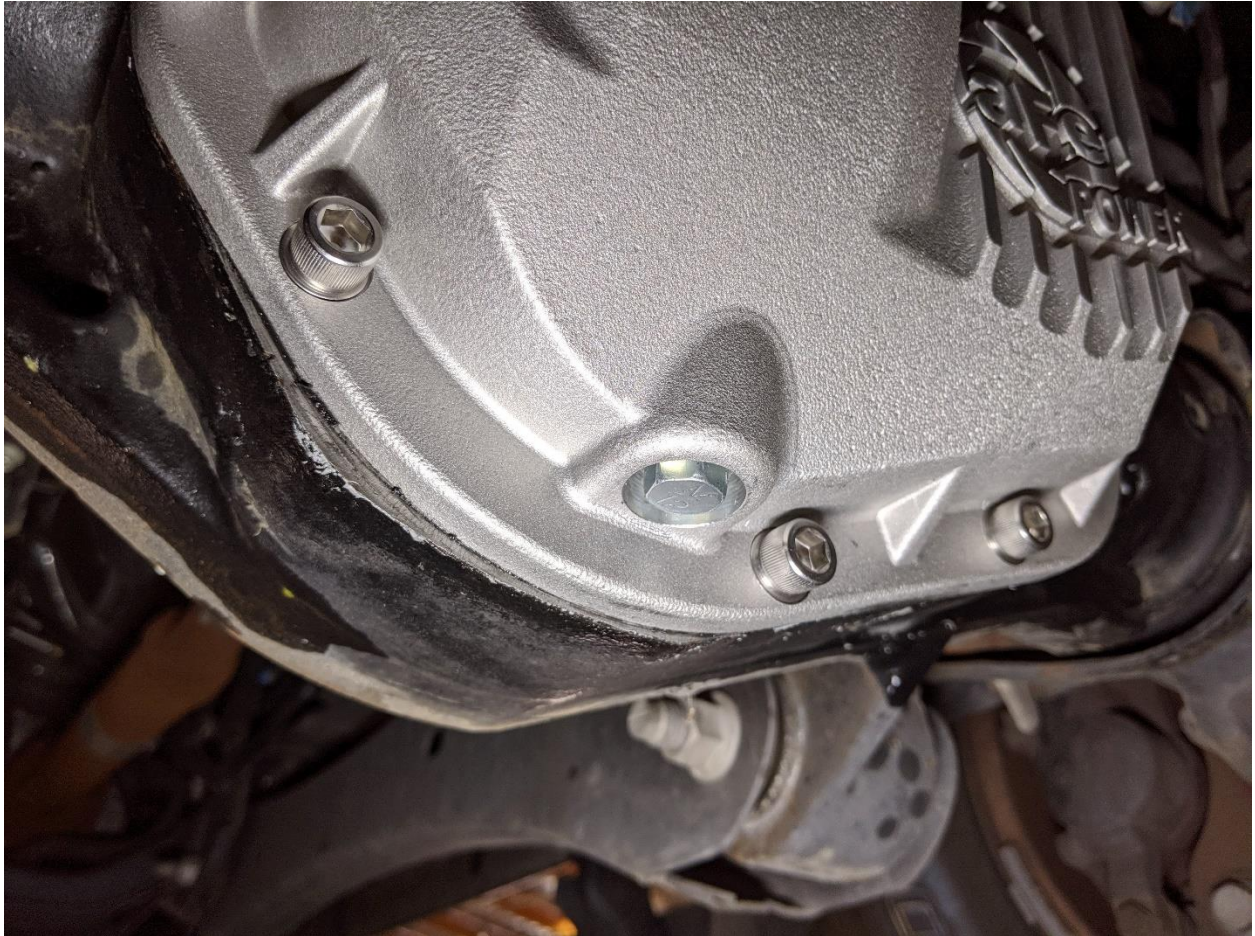


15. Hold the aFe differential cover into position, aligning the screw holes. Install four (4) of the supplied 3/8"-16x1" socket head screws and flat washers into separate sides of the cover to hold it in place.

**Note: Be careful not to move the cover around once it touches the gasket surface.**

16. Continue installing the remaining 3/8"-16x1" socket head screws and flat washers finger tight.
17. Torque the mounting screws to 12-16 ft. -lbs. in a crisscross pattern.

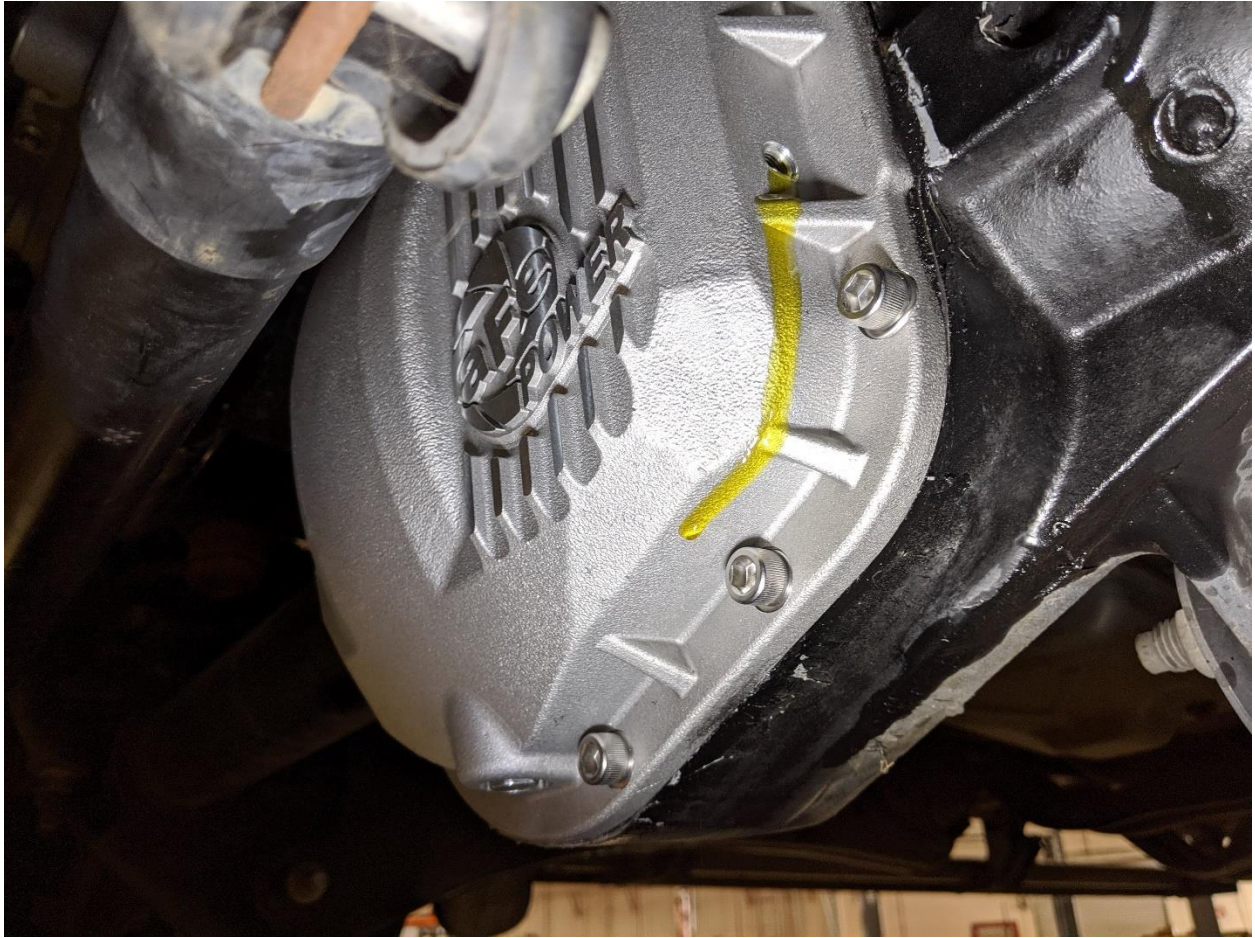




18. Install the supplied M12x1.25 drain plug and crush washer into the bottom of the cover.

**When installing kit number 46-71100B only:**

19. Apply Teflon pipe sealant to the threads and install the supplied 1" NPT Sight Glass plug into the side of the cover.



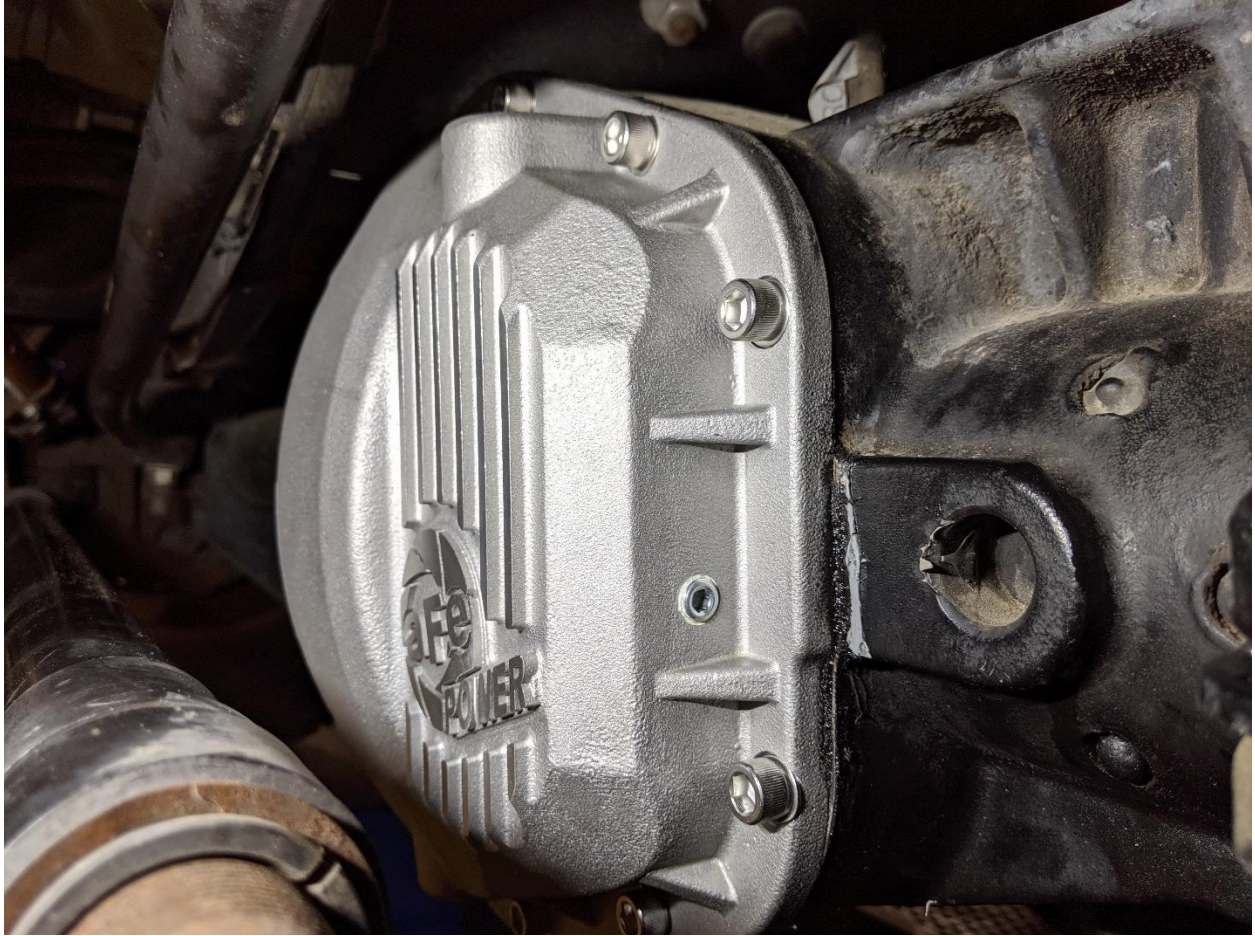
20. Using the top fill port, fill the aFe differential cover using new gear oil. Fill until gear oil runs out of the 1/8" NPT port on the side of the cover (about 4 quarts).

**Note: If your vehicle is lifted and your axle has been rotated, you will have to verify you have the correct oil level for your vehicle.**





21. Apply Teflon pipe sealant to the threads of the two (2) supplied 1/8" NPT plugs.



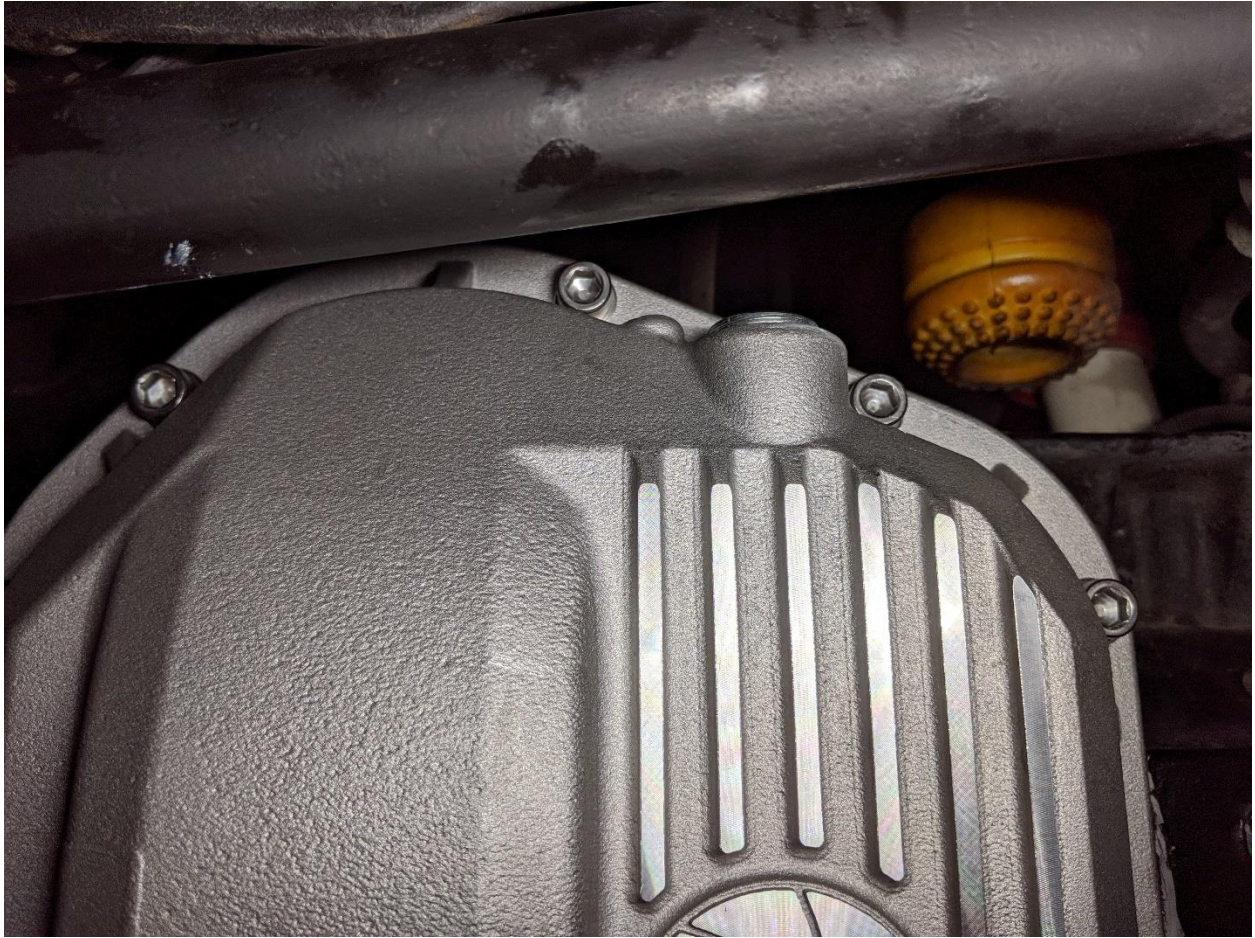
22. Install one (1) 1/8" NPT plug into the side of the cover.





**When installing kit number 46-71100B only:**

23. Apply Teflon pipe sealant to the threads of the supplied 3/4" NPT magnetic 6" deep reach plug.



**Note: If your vehicle had a breather port attached directly to the differential cover, reinstall it now in place of the 1/8" NPT plug.**

24. Install the remaining 1/8" NPT plug into the top of the cover.

**If installing kit number 46-71100A:**

25a. Install the supplied 3/4" NPT plug into the top of the cover.

**If installing kit number 46-71100B:**

25b. Install the 3/4" NPT magnetic 6" deep reach plug into the top of the cover.





26. Your Installation is complete.

# Warranty

## **General Terms:**

- aFe warrants their products to be free from manufacturer's defects due to workmanship and material.
- This warranty applies only to the original purchaser of the product and is non-transferrable.
- Proof of purchase of the aFe product is required for all warranty claims.
- Warranty is valid provided aFe instructions for installation and/or cleaning were properly followed.
- Proper maintenance with regular inspections of product is required to insure warranty coverage.
- Damage due to improper installation, abuse, unauthorized repair or alteration is not warranted.
- Incidental or consequential damages or cost, including installation and removal of part, incurred due to failure of aFe product is not covered under this warranty.
- All warranty is limited to the repair and/or replacement of the aFe part. To request Return Goods Authorization ("RGA"), email RGA@afepower.com or call (951)493-7100. Upon receipt of the RGA, you must return the product to the address provided in the RGA, freight prepaid and accompanied with a dated proof of purchase and the RGA. Upon receipt of the defective product and upon verification of proof of purchase, aFe will either repair or replace the defective product within a reasonable time, not to exceed thirty days.

<b><u>Product Category</u></b>	<b><u>P/N Prefix</u></b>	<b><u>Warranty duration</u></b>
Direct OE Replacement Filters	10, 11, 30, 31, 71, 73	Life of the vehicle
Racing Filters	18	1 year
Universal	21, 24, 72	2 years
Air Intake Systems	50, 51, 54, 55, 75	2 years
Exhaust Systems	49	2 years
Intercoolers & Intercooler Tubes	46-2	2 years
Intake Manifolds	46-1	2 years
Differential Cover	46-7	Life of the vehicle
Transmission Pans / Oil Pans	46-7	Life of the vehicle
Turbochargers	46-6	2 years
Exhaust Manifolds	46	2 years
Throttle Body Spacers	46-3	2 years
Fluid Filters	44	90 days
Pre-Filters	28	2 years
Heavy Duty OE Replacement	70	2 years
PowerSports OE Replacement	81,87	2 years
PowerSports Intake Systems	85	2 years

No other warranty expressed or implied applies nor is any person or advanced FLOW engineering authorized to assume

any other warranty. Some States do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.



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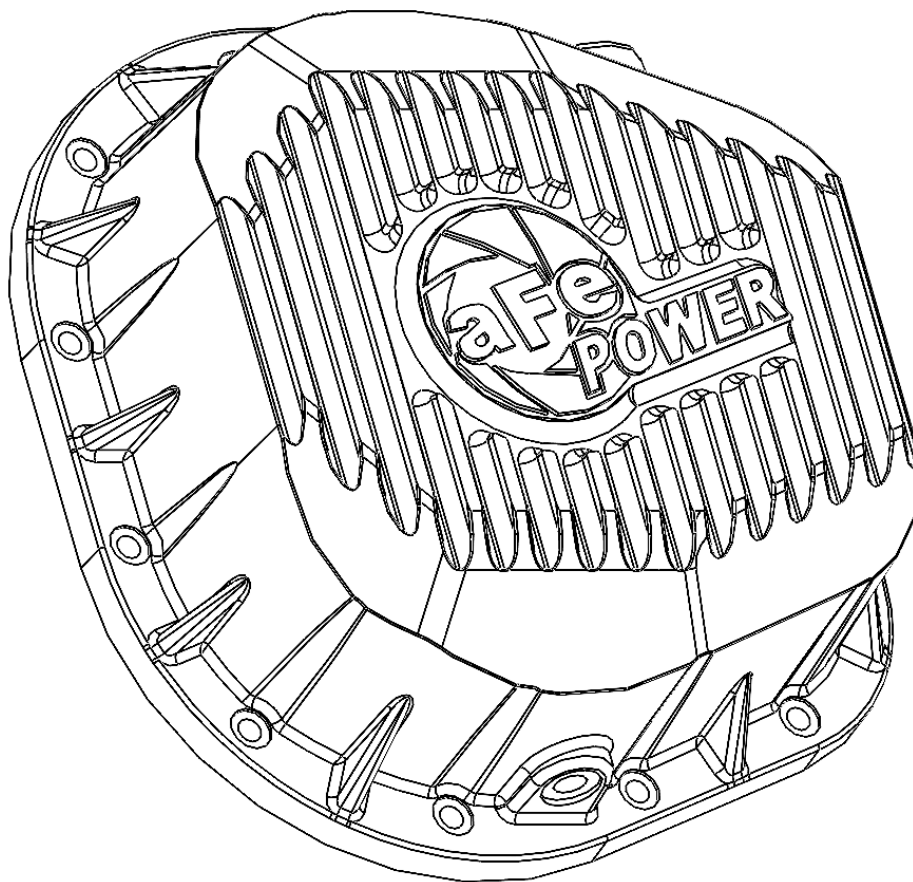
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## ***advanced FLOW engineering***

### **Instruction Manual P/N: 46-70022**

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**Ford 10.25/10.50 – 12 Bolt Rear Differential Cover**

Make: **Ford** Model: **F-250/F-350** Year: **1988-2021** Engine: **V8 7.3L/6.0L/6.4L/6.7L (td)**

Make: **Ford** Model: **F-250/F-350** Year: **1997-2010** Engine: **V8 5.8L/7.5L/5.4L**

Make: **Ford** Model: **F-250/F-350** Year: **1999-2010** Engine: **V10 6.8L**

Make: **Ford** Model: **F-250/F-350** Year: **2010-2021** Engine: **V8 6.2L/7.3L**

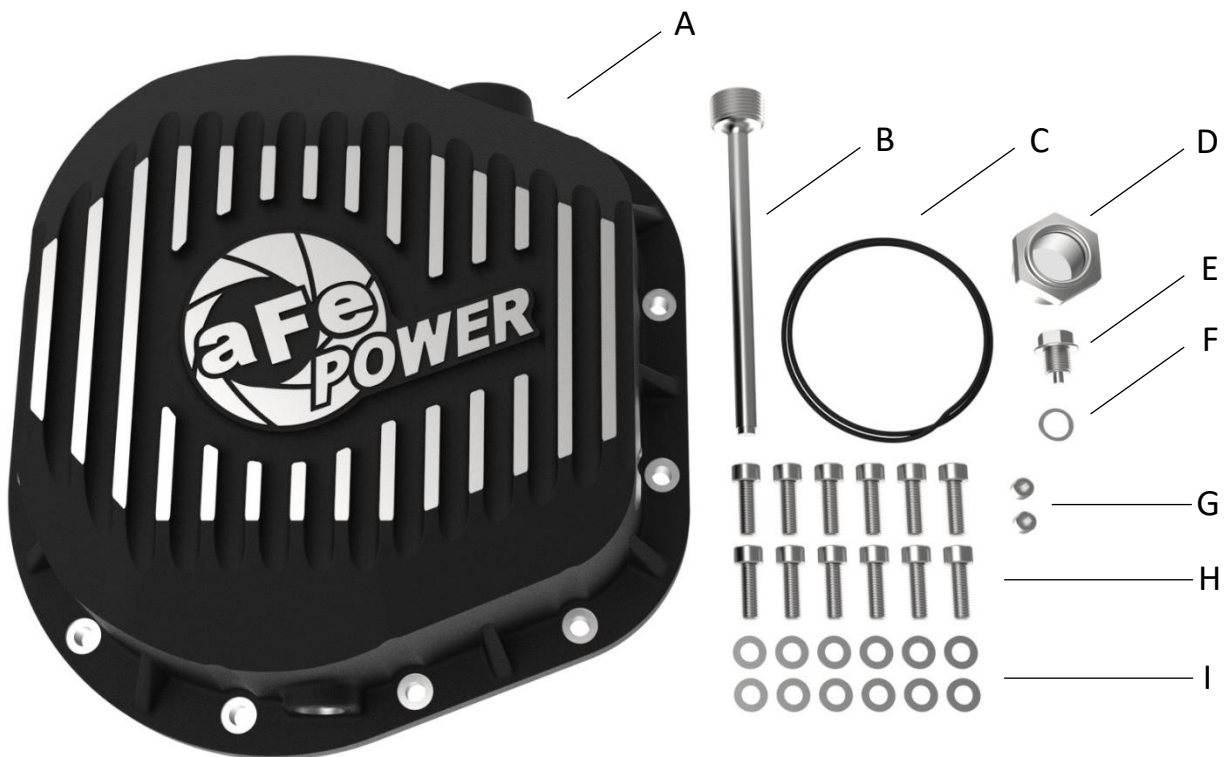
Make: **Ford** Model: **Excursion** Year: **2000-2003** Engine: **V8 7.3L (td)**

Make: **Ford** Model: **Excursion** Year: **2004-2005** Engine: **V8 6.0L (td)**



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A	1	Differential Cover – Black, Machined Fins	05-60711B
B	1	Plug, Magnetic 3/4" NPT, 6" Deep Reach	03-50223
C	1	O-Ring, 11.984 ID x 0.139 W	05-60057
D	1	Plug, 1" NPT, Sight Glass	03-50224
E	1	Plug, Magnetic M12 x 1.25	03-50385
F	1	Crush Washer	03-50384
G	2	Plug, 1/8" NPT	03-50029
H	12	Screw, Socket Head 5/16" – 18 x 1.0	03-50227
I	12	Flat Washer	03-50228



Warranty Information available at <http://afepower.com/contact#warranty>





**Note: Your vehicle must be completely cooled off before proceeding with the installation.**

1. Park your vehicle on a flat, dry surface. You will need to block the tires to prevent the vehicle from rolling.

**Note: You will need to get under the truck to do this installation. Please use every precaution when lifting the vehicle.**

2. Position a drain pan under the differential cover.
3. Remove the **bottom** 11 bolts from the differential cover.
4. Loosen, but do not remove, the remaining top bolt. Break the seal on the cover and the gear oil will begin to drain.



5. Allow all of the gear oil to drain from the differential.
6. Remove the remaining bolt from the top of the differential cover and remove the cover from the housing.
7. Use a clean, lint free rag to wipe down the remaining gear oil from the housing.
8. Clean off the sealing surface with a gasket scraper. Be careful not to gouge the surface while cleaning.
9. Check the surface of the housing for any irregularities. If there are any, carefully remove high spots using a smooth flat file.

**Note: Do not "Round Off" the flat gasket surface.**



10. Lightly coat the supplied O-Ring with oil and install onto the provided aFe differential cover.

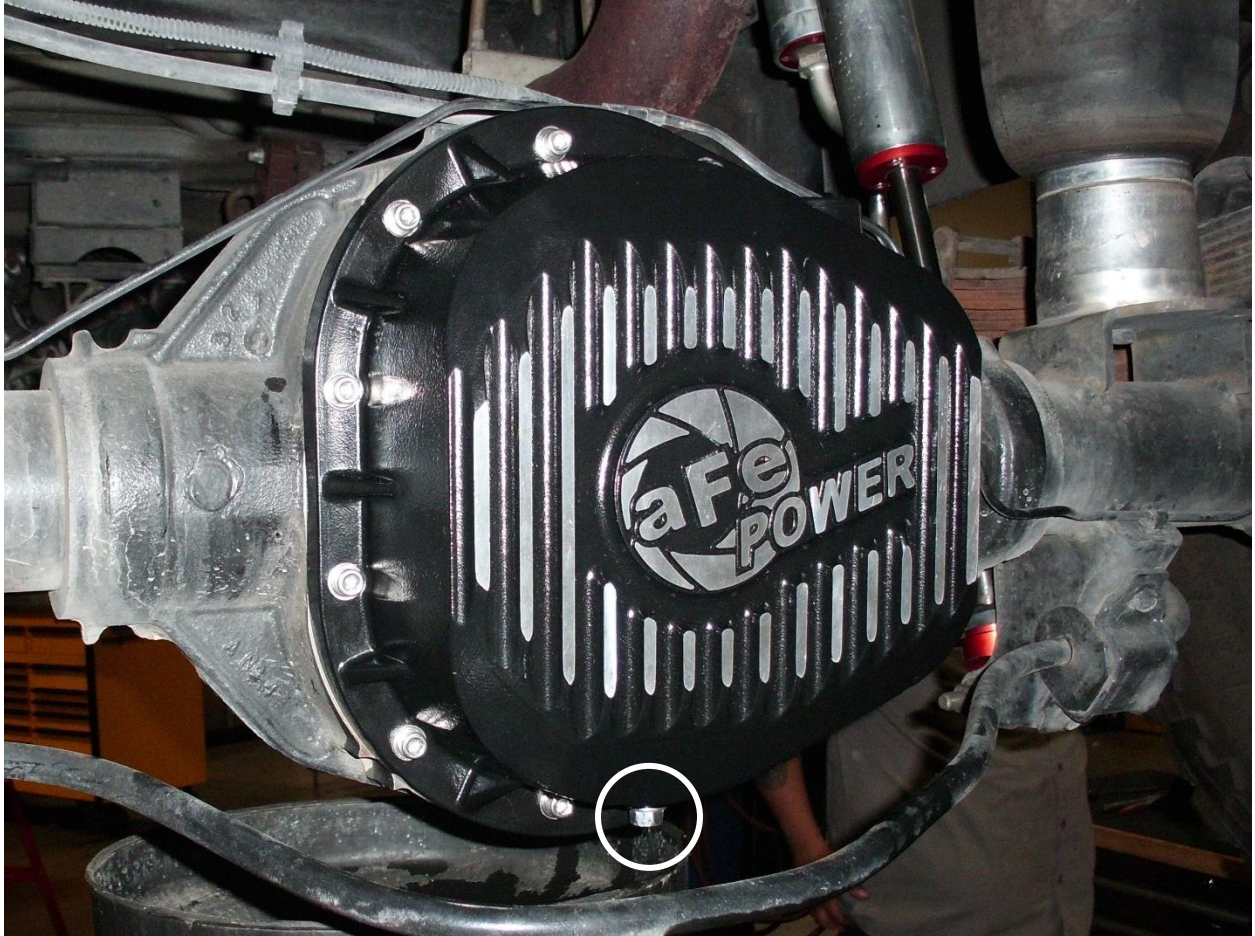




11. Hold the aFe differential cover into position, aligning the screw holes. Install one (1) of the supplied 5/16" – 18 x 1.0 socket head screws and flat washers at the top of the cover to hold it in place.
12. Continue installing the 11 remaining 5/16" – 18 x 1.0 socket head screws and flat washers finger tight.
13. Torque all of the mounting screws to 12-16 ft.-lbs. in a crisscross pattern.

**Note: For all NPT plugs, secure 1.5-3 turns past finger tight. The fitting should never bottom out in the port.**

14. Apply Teflon tape/pipe sealant to the threads and install the supplied 1" NPT Sight Glass plug into the side of the cover.



15. Install the supplied M12 x 1.25 drain plug and crush washer into the bottom of the cover (secure about ½ turn past finger tight).

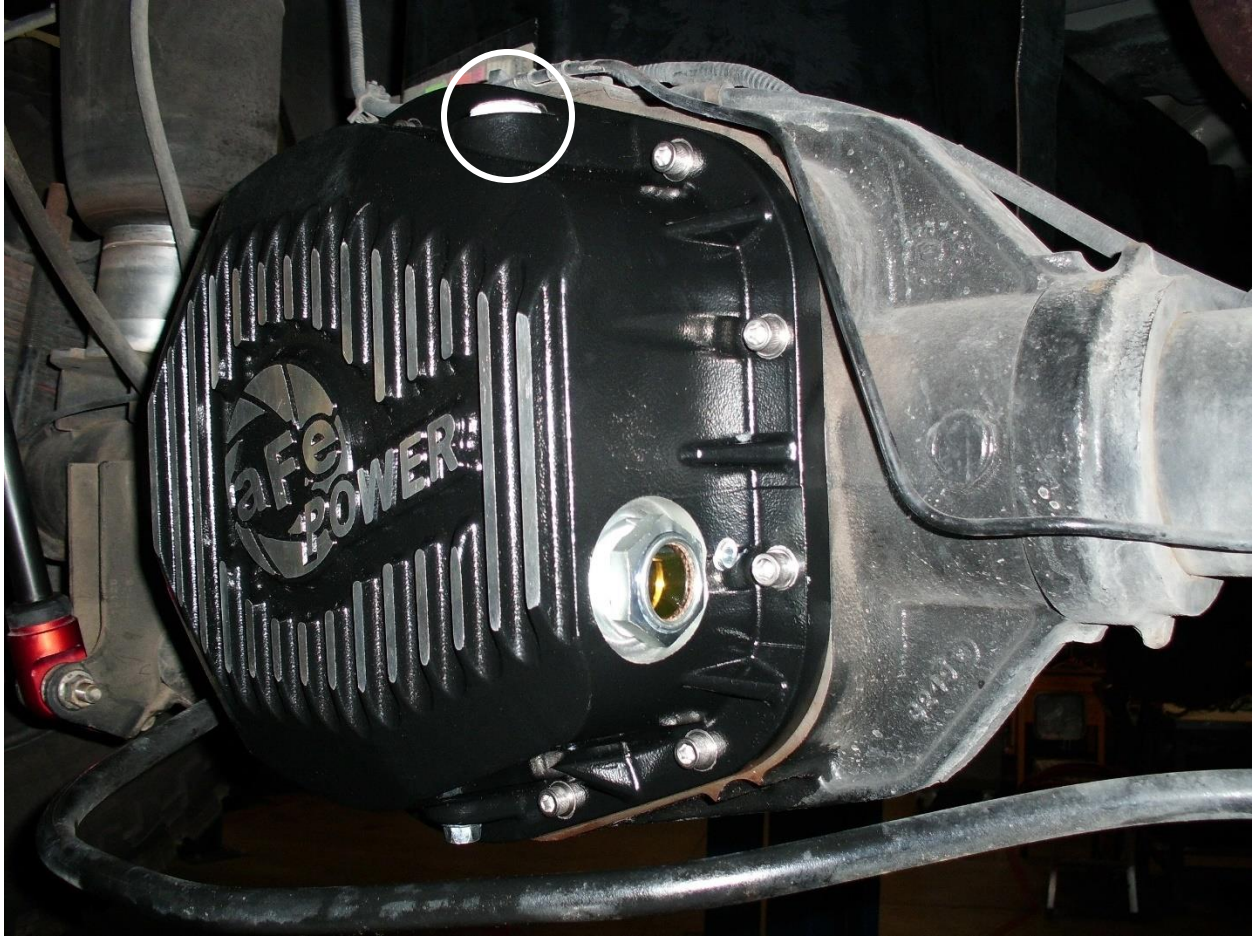


17. Using the top fill port, fill the aFe differential cover with new gear oil. Fill until gear oil runs out of the 1/8" NPT port on the side of the cover (about 5 quarts).

**Note: If your vehicle is lifted and your axle has been rotated, you will have to verify you have the correct oil level for your vehicle.**

18. Apply Teflon tape/pipe sealant and install one of the supplied 1/8" NPT plugs into the side of the cover.





19. Apply Teflon tape/pipe sealant and install the supplied 3/4" NPT 6" Deep Reach plug into the top of the cover.

**Note: If using a temperature sensor, install it instead of the 1/8" NPT plug.**

20. Apply Teflon tape/pipe sealant and install the second supplied 1/8" NPT plug into the top of the cover.



21. Your installation is complete.

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