



**409S Stainless Steel**

Installation Instructions for:

**SYSTEM #817522**

**2009-2014 FORD F-150 TRUCKS**

4.6L, 5.0L & 5.4L ENGINE · V8 · ALL WHEELBASES

04/04/2014

### Removal:

- 1) Raise the vehicle up on a hoist or rack to working height. If you do not have access to a hoist or rack, raise the vehicle and support securely with jack stands.
- 2) Begin by applying a lubricant to each of the rubber hanger mounts, as well as the clamp and flange bolts. This will make the removal and installation process much easier.
- 3) Remove the two bolts at the front flange connection, and loosen the band clamp connection that is behind it on the inlet pipe. There is a locking pin at this joint. To separate it you will have to slide the muffler assembly back a little bit, twist the front inlet pipe clockwise, and then you can slip the front inlet pipe back to remove.
- 4) Now you can slide the muffler and tailpipe assembly to the rear to disengage the rubber hanger mounts that support it. Once free, the assembly can be removed by working it forward over the rear axle. (If you are working on the ground it may be easier to cut the tailpipe off at the rear of the muffler to simplify removal)

### Installation:

- 1) Mount the left hanger bracket **#211HA** to the frame on the driver's side of the vehicle. There are factory holes (one round, one square) on the bottom of the frame next to spare tire. Place the 5/16" bolt and flat washer up into the square hole and back down through the round hole. Using a flexible head magnet to help guide the bolt makes this process *much* easier. Now place the bracket in position and install a flat washer, lock washer and nut. Using two 1/2" wrenches tighten firmly (do not overtighten).
- 2) Based on production variations this is a list of cab designs, bed lengths and wheel bases that outlines the requirements for the front inlet pipe. Please follow the instructions for your particular wheelbase listed on the next page. Double check all measurements before cutting your inlet pipe:

**126" WB - Regular Cab/6.5' Bed** - Trim 18" off of inlet pipe #26336S (do not use #26277S)

**133" WB - SuperCab/5.5' Bed** - Trim 12" off of inlet pipe #26336S (do not use #26277S)

**145" WB - SuperCrew/5.5' Bed** - Use inlet pipe #26336S with no modifications (do not use #26277S)

**145" WB - Regular Cab/8' Bed** - Use inlet pipe #26336S with no modifications (do not use #26277S)

**145" WB - SuperCab /6.5' Bed** - Use inlet pipe #26336S with no modifications (do not use #26277S)

**157" WB - SuperCrew /6.5' Bed** - Trim 6" off of extension pipe #26277S and use with inlet pipe #26336S

**163" WB - SuperCab /8' Bed** - Use inlet pipe #26336S and extension pipe #26277S with no modifications.

- 3) Place the inlet pipe onto the back of the existing OEM head pipe and fasten using the nuts, bolts and washers provided in the hardware kit. Tighten just enough to hold in place, but still allow for adjustment.
- 4) Slide the inlet hanger **#382HA** over the back of the inlet pipe and insert the hanger into the factory rubber mount. Do not tighten this clamp yet.
- 5) Place 3" clamp onto the inlet neck of the muffler, and then install the muffler onto the back of inlet pipe and support with a stand. Tighten the clamp just enough to hold in position.
- 6) Install two clamps onto the outlets neck on the muffler. Then place the right side tailpipe **#16503S** into position over the axle and into the right side muffler outlet, and the hanger rod into the factory rubber mount. Tighten the ring clamp enough to hold, but still allow for adjustment. Tighten the muffler clamp just enough to hold the pipe in position.
- 7) Place the front section of the left side tailpipe **#16444S** into the left side of the muffler outlet and insert hanger welded to pipe into the factory rubber mount. Tighten muffler clamp just enough to hold the pipe in position. Place another clamp onto the rear (expanded) end of the pipe, and tighten just enough to keep it in position.
- 8) Slip a rubber hanger **#HA168** onto the hanger rod on the left rear tailpipe section **#16506S**. Place the pipe into the expanded connection of the front section, and connect the hanger mount installed in Step 1. Tighten the clamp down just enough to hold the pipe in position.
- 9) Slide either the side exit pipe **#16317S** or rear exit pipe **#16397S** onto the ends of both over axle pipes. Place a clamp onto these slip-fit connections and tighten just enough to hold in position. Place the two stainless tips **#ST396** onto the exit pipes and tighten the pinch bolts just enough to hold in position. Rotate the exit pipe and tip to the desired distance from the fender or bumper so that the tips are in the desired location. The final adjustment of the tips is best left to the final step, with the vehicle on the ground so that you can get a good view.
- 10) Now go back and adjust the position of all pipes and muffler to provide a satisfactory fit. A minimum of 3/4" clearance around all parts of the system must be maintained; while keeping suspension travel and vibration in mind. After adjustments have been made, you may now securely tighten all clamps, including the front hanger/clamp assembly.
- 11) After the system is secure, slide the 7/16" hanger keeper onto the left tailpipe hangers. This keeper will prevent the hanger rods from slipping out of the rubber mount.

## PACKING LIST

<u>Qty</u>	<u>Description</u>	<u>Part#</u>
1	Inlet Pipe	26336S
1	Adapter Pipe	26277S
1	Muffler	8530452-176
1	Right Tailpipe	16503S
1	Left Tailpipe, Front	16444S
1	Left Tailpipe, Rear	16506S
2	Side Exit Pipes	16317S
2	Rear Exit Pipes	16397S
2	Stainless Tip	ST396
1	Parts Kit	PK497
5	2 1/2" Band Clamp	MC250BS
2	3" Band Clamp	MC300BS
1	Rubber Hanger	HA168
1	Ring Clamp Hanger	382HA
1	Frame Hanger, Rear	211HA
1	5/16" Nut	HW102
1	5/16" x 1 1/4" Bolt	HW205
2	5/16" Flat Washer	HW302
1	5/16" Lock Washer	HW308
2	3/8" x 2 1/2" Bolt	HW212
2	3/8" Nut	HW103
4	3/8" Flat Washer	HW303
2	3/8" Lock Washer	HW309
3	7/16" Hanger Keeper	HW502



Installation diagram for:  
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**AMERICAN THUNDER**  
**409S. Stainless Steel**

