



**409S Stainless Steel**

Installation Instructions for:  
**SYSTEM #817139**  
**1969 CHEVROLET CAMARO/  
PONTIAC FIREBIRD**  
2.5" SYSTEM • DOES NOT FIT CONVERTIBLE

09/01/10

### Removal:

- 1) Raise the vehicle up on a hoist or rack to working height and support securely with jack stands.
- 2) Remove the existing system from the header collector or manifold down pipes back.

### Installation:

- 1) On the frame, at the rear of the vehicle there are tow holes that are punched into the frame on either side of the vehicle. This is where hanger **#204HA** (for both the left and right side) must be mounted to support the rear of the tailpipe. Use the 1/4" x 1" self tapping screws to secure these two hangers into place. Slide the rubber hanger **#HA168** onto the two hangers. *Note: See Page 3 of these instructions for helpful hints and possible alternatives for securing hanger **#204HA** into place.*
- 2) On the underside of the vehicle slightly forward of the rear axle there is a pair of holes on either side of the vehicle that will be used to mount the rear muffler hangers, **#200HA** for the left side and **#201HA** for the right side. Once mounted, the two hangers will point toward the center of the vehicle. Use two 5/16" x 1" bolts to secure each hanger into place.
- 3) After mounting hangers into place, slide rubber hanger **#HA168** onto the hangers. Next place hanger **#389HA** into the bottom hole of the rubber hanger on the left side and into the bottom hole of the rubber hanger on the right side of the vehicle. Both hangers will point toward the center of the vehicle.
- 4) Place right tailpipe **#16153S** over the rear axle and so that the rear of the tailpipe exits between the quarter panel and the leaf spring. Do the same for the left tailpipe **#16152S**.
- 5) Install the left muffler **#842546-Z** by placing the outlet of the muffler into the clamp of hanger **#389HA**, rotate the muffler to get it level and support with a stand. Tighten the clamp/hanger enough to hold, but still allow for adjustment.
- 6) Install the right muffler **#842546-Z** by placing the outlet of the muffler into the clamp of hanger **#389HA**. Rotate the muffler to get it level and support with a stand. Tighten the clamp/hanger enough to hold in place, but still allow for adjustment.
- 7) Install the front pipe assembly **#16143S** by placing the rear of the front pipe assembly into the inlets of both mufflers and centering it in the drive line cavity. Support the front of the assembly with a stand while making sure the mufflers and front pipe assembly are level. Once the mufflers and front

pipe assembly are in place, check the hangers at the rear of the mufflers to see if they are hanging straight down and adjust the front pipe and mufflers forward or back as needed to get the correct fit.

8) Install the rear hanger that is welded to the right side tailpipe **#16153S** into the lower hole of the rubber mount at the rear of the vehicle and then slide the front of the tailpipe through hanger **#389HA** and into the rear of the muffler. Repeat for the right side.

9) Adjust the rear of the tailpipe so that it is centered between the fender and the leaf spring. Repeat this step for both sides of the vehicle.

10) 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 also keeping suspension travel and vibration in mind. After adjustments have been made, tighten all clamped connections down securely. Slide the 7/16" hanger keepers onto the end of the hangers at the rear of the vehicle on the drivers' side. These will prevent the hangers from slipping out of the rubber mounts.

### PACKING LIST

<u>QTY</u>	<u>Description</u>	<u>Part #</u>
2	Muffler	842546-Z
1	H-Pipe Assembly	16143S
2	Connector Pipe	16149S
1	Tailpipe (Right)	16153S
1	Tailpipe (Left)	16152S
1	Parts Kit	PK517
6	2 1/2" Clamp	MC250BS
1	Upper Muffler Bracket (L)	200HA
1	Upper Muffler Bracket (R)	201HA
2	Rear Hanger Bracket (R/L)	204HA
2	Lower Muffler Bracket (L)	389HA
4	Rubber Hanger	HA168
4	1/4" x 1" Self Tapping Screws	
4	5/16" x 1" Bolts	
2	1/4" Rubber Well Nuts	
2	1/4" x 1" Bolts	
4	1/4" Star Washers	
8	7/16" Hanger Keepers	

# Helpful Hints

## FOR CHALLENGES YOU MAY ENCOUNTER WHILE INSTALLING KIT #817139

1) In Step 1 of the installation instructions it calls for you to locate the two holes that are located at the rear of the vehicle on both the right and left side. If the holes are in good condition you go by the instructions as normal and use the 1/4" x 1" self tapping screws to secure the hangers into place. But if the holes are damaged in any way you may have to drill out the holes to 1/2" and then use the 1/4" rubber well nuts along with the 1/4" x 1" bolts to secure the hangers in place.

a) If the holes are damaged and you wish to use the included 1/4" rubber well nuts to secure the hangers into place, start by simply inserting the well nut into the 1/2" hole that you pre-drilled, then place the hanger into the correct position and tighten the hanger into place with the 1/4" bolts and lock washers provided.

2) In Step 2 of the instructions there are two holes that are located on the underside of the vehicle just forward of the rear axle. If the holes are not being currently used to support the old exhaust system it may be that they have become gummed up and could use a little attention with a 5/16"-18 tap to clean out the threads to ease the installation of the bolts.

3) In Step 4 of the instructions you are instructed to place the right and left tailpipes over the rear axle and exit them between the quarter panel and the leaf spring. To simplify the installation of the tailpipe over the rear axle, the rear of the vehicle may have to be jacked up to increase the clearance between the rear axle and the underside of the car. This will allow the tailpipe to slip in easier. We recommend putting the tailpipes in first because there is not much room to install them after the mufflers are in place.



Installation diagram for:  
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**AMERICAN THUNDER**

**409S, Stainless Steel**

