



# Installation Instructions

## SYSTEM #817158

### 1968-1974 CHEVROLET NOVA

**AMERICAN THUNDER**

**409S Stainless Steel**

10/11/11

#### Removal:

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



- 3) On the frame, at the rear of the vehicle there are two 5/16" threaded holes in the frame on either side of the vehicle. This is where hanger **#425HA** will be mounted on both sides of the vehicle to support the rear of the tailpipes. Use the 5/16" x 1" bolts, washers and lock washers to secure the two hangers into place. Then slide the **#HA168** rubber hanger onto the two hangers.



- 4) On the underside of the vehicle slightly forward of the rear axle there are a pair of holes on either side of the vehicle that will be used to mount the rear muffler hangers, **#424HA** (left side) and **#423HA** (right side). Once mounted, the two hangers will point toward the center of the vehicle.



- 5) Thread the supplied 1/4"-20 x 1-1/4" allen bolts through the back side of the jack-nuts.



- 6) Insert the bolt threads through the back of the hanger and install the washers and nuts. Place the assembly into the pair of the holes in the floor as shown in Step 4. Tighten the nuts securely. As you tighten, the jack-nuts will collapse and secure the assembly in place.



7) After mounting the hangers into place, slide a **#HA168** rubber hanger onto the ends of both hangers. Place clamp hanger **#389HA** into the bottom hole of both rubber hangers, they will point to the center of the vehicle.



8) Place right tailpipe **#16703S** over the rear axle and so that the rear of the tailpipe exits between the quarter panel and the leaf spring. Place the hanger at the rear of the pipe into the rubber mount installed in step 1 above. Then slide the front of the tailpipe through hanger **#389HA**. Do the same for the left tailpipe **#16704S**.



9) Install the left muffler **#842546-Z** by placing the outlet of the muffler into the clamp of hanger **#389HA** and onto the tailpipe, rotate the muffler so that it's level and support with a stand. Tighten the clamp/hanger enough to hold the muffler in place but still allow for adjustment. Repeat this step for the right muffler.



10) Install H-Pipe assembly **#16701S** by placing the front of assembly up over the parking brake cable and the rear into the inlets of both mufflers, centering it in the drive line cavity. Support the front of the assembly with a stand. Be sure the mufflers and H-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. Adjust H-pipe and mufflers forward or back as needed to get the correct fit.



11) The **#16149S** front connector pipes are long enough to allow for many different header combinations, therefore, it is necessary to determine the proper length of the inlet connector pipes. Place one of the **#16149S** adapter pipes under the front slip fit joint of the front pipe assembly, and also under the header collectors or manifold down pipes and accurately mark the pipes where they need to be cut. Once the proper length is determined, trim the front connector pipes.



12) Once the pipes are cut to the proper length, raise them into position and connect them to the H-pipe and header collectors or manifold down pipes using a standard Header Flange or FLOWMASTER reducer Cone.

13) 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.

14) Adjust and align the position of all the pipes to provide a satisfactory fit. Maintain at least 3/4" clearance around the new FLOWMASTER Exhaust System, the drivetrain and all chassis components. Also keep suspension travel in mind.

15) After the hangers are adjusted to their final position, place the provided hanger keepers onto the end of all hanger rods above the mufflers and hangers that support the tailpipes. This will keep the hangers from slipping out of the rubber mounts.

### PACKING LIST

<u>Qty</u>	<u>Description</u>	<u>Part #</u>
2	Connector Pipe	16149S
1	H-pipe Assembly	16701S
2	Muffler	842546-Z
1	Tailpipe (Right)	16703S
1	Tailpipe (Left)	16704S
1	Parts Kit	PK590
4	2-1/2" Clamp	MC250BS
1	Upper Muffler Bracket (L)	424HA
1	Upper Muffler Bracket (R)	423HA
1	Rear Hanger Bracket (R/L)	425HA
2	Lower Muffler Bracket (L)	389HA
4	Rubber Hanger	HA168
4	1/4"-20 Jack Nuts	HW111
4	1/4"-20 x 1-1/4" Allen Bolt	HW230
4	1/4" Flat Washers	HW301
4	1/4" Lock Washers	HW307
1	1/4" Hex Nut	HW101
4	5/16" x 1" Hex Bolts	HW204
4	5/16" Flat Washers	HW302
4	5/16" Lock Washers	HW308
8	7/16" Hanger Keepers	HW502

# Helpful Hints

## FOR CHALLENGES YOU MAY ENCOUNTER WHILE INSTALLING KIT #817158

1) In Step 1 of the instructions there are two holes located at the rear of the frame. If these holes were not being used to support the previous exhaust system and it is difficult to install the bolts, it may be that they may have become gummed up and could use a little attention with a 5/16"-18 tap to clean out the threads. This will greatly ease the installation of the bolts.

2) In Step 4 of the instructions you are instructed to place the right and left tail pipes 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 tail pipes in first because there is not much room to install them after the mufflers are in place.



Installation diagram for:  
**SYSTEM #817158**  
1968-1974 CHEVROLET NOVA  
V8 ENGINE

**AMERICAN THUNDER**

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