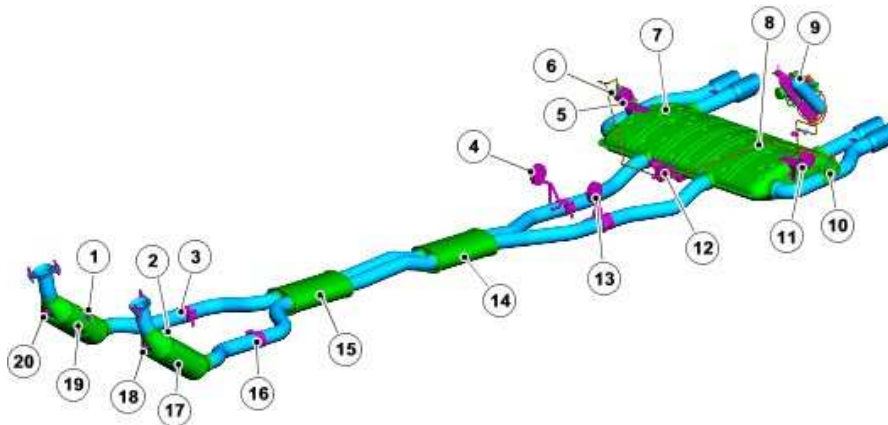
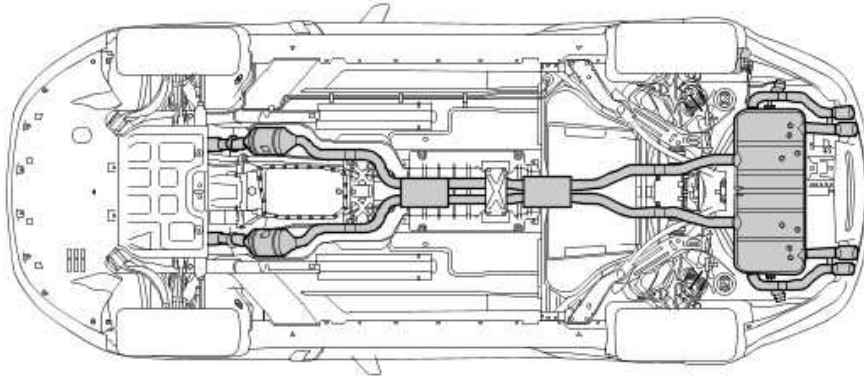


Exhaust System - 4.2L SC V8 - AJV8

COMPONENT LOCATION



EB4047

Item	Part Number	Description
1		RH Post catalyst H02 sensor
2		LH Post catalyst H02 sensor
3		RH joint
4		RH rear hanger
5		RH muffler hanger bracket
6		RH active exhaust valve
7		Muffler
8		Vacuum control lines
9		Vacuum pump and reservoir
10		LH active exhaust valve

11		LH muffler hanger bracket
12		Muffler center hanger
13		LH rear hanger
14		Center silencer
15		Center silencer
16		LH joint
17		LH catalyst
18		LH pre catalyst H02 sensor
19		RH catalyst
20		RH Pre catalyst H02 sensor

OVERVIEW

The exhaust system is fabricated from stainless steel and is supplied as four separate assemblies:

- A LH front section incorporating a catalytic converter
- A RH front section incorporating a catalytic converter
- A center section incorporating 2 silencers
- A rear section including the main silencer box.

Each section of the exhaust system is available as a service replacement.

The exhaust system is attached to the underside of the body with five mounting rubbers, two on the center section and three on the rear muffler. The mounting rubbers attach to the exhaust system via stainless steel hangers and brackets. The mounting rubbers locate on corresponding hangers which are attached to the underside of the vehicle body. The system is routed along the center of the chassis before splitting near the rear differential prior to entering the main exhaust silencer at the rear of the vehicle.

To reduce the carbon monoxide and hydrocarbons content of the exhaust gases, a catalytic converter is integrated into each of the front pipes of the exhaust system.

ACTIVE EXHAUST SYSTEM

The rear muffler unit incorporates an active exhaust system. The active exhaust system is designed to give a more sporty sound and also reduces the back pressure in the exhaust system by opening a valve in the second exhaust outlet pipe.

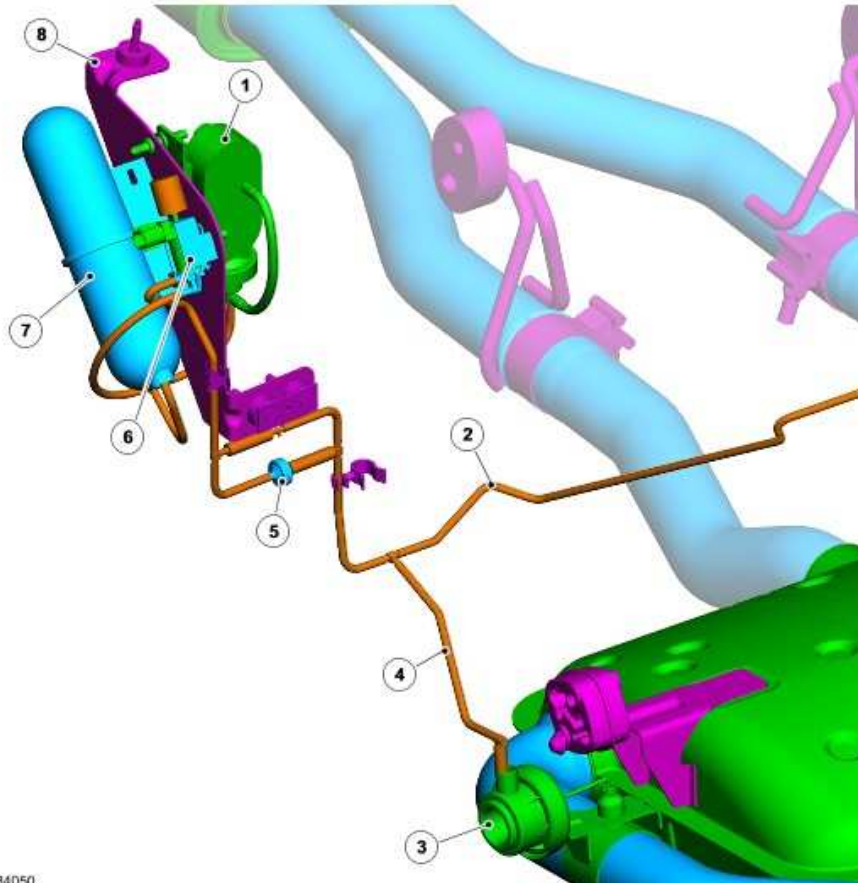
The active exhaust system is controlled by the ECM. The ECM controls a vacuum control valve which in turn applies a vacuum to the active exhaust valves. The vacuum system comprises:

- A vacuum reservoir
- A vacuum pump

- A control solenoid
- A Vacuum check/non return valve
- A vacuum restrictor valve located in the vacuum line just above the check valve

The vacuum restrictor valve allows air back into the vacuum lines to allow the active exhaust valves to open more slowly than they close.

Exhaust System Vacuum Control System



E84050

Item	Part Number	Description
1		Vacuum pump
2		Vacuum lines to RH active exhaust valve
3		Active exhaust valve
4		Vacuum lines to LH active exhaust valve
5		Vacuum check valve
6		Vacuum control valve
7		Vacuum reservoir

8	Mounting bracket
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The active exhaust valves are opened in response to engine speed and throttle angle. At startup the valve is always opened to give an enhanced sound. The following table details when the valves are open and when they are closed.

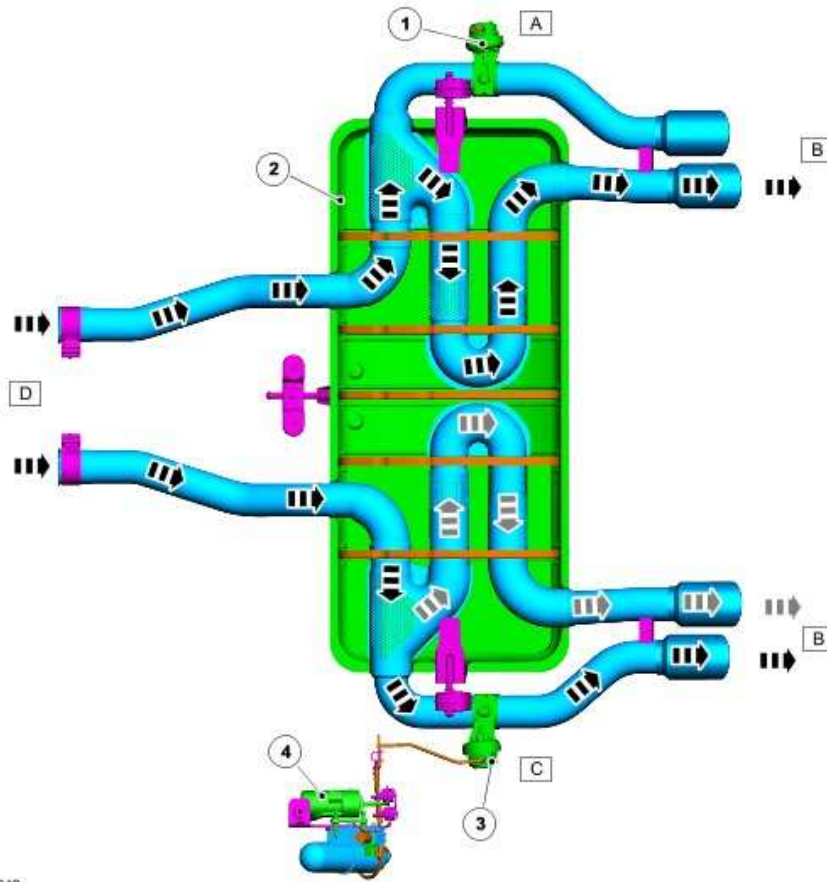
Throttle Angle%	Engine Speed RPM	500	1000	1500	2000	2500	3000	3500	4000>
0	Open	Closed	Closed	Closed	Closed	Closed	Closed	Open	
10	Open	Closed	Closed	Closed	Closed	Closed	Closed	Open	
20	Open	Closed	Closed	Closed	Closed	Closed	Closed	Open	
30	Open	Closed	Closed	Closed	Closed	Closed	Closed	Open	
40	Open	Closed	Closed	Closed	Closed	Closed	Closed	Open	
50	Open	Closed	Closed	Closed	Closed	Closed	Open	Open	
60	Open	Closed	Closed	Closed	Closed	Closed	Open	Open	
70	Open	Closed	Closed	Closed	Closed	Closed	Open	Open	
80	Open	Closed	Closed	Closed	Closed	Closed	Open	Open	
90	Open	Closed	Closed	Closed	Closed	Open	Open	Open	
100	Open	Closed	Closed	Closed	Closed	Open	Open	Open	

NOTE:

At engine speeds above 4000 RPM the valves are open independent of throttle angle.

The active exhaust valves are normally open until a vacuum is applied to them. The active exhaust valves are either open or closed they do not partially open.

Exhaust Gas Flow



E84048

Item	Part Number	Description
1		RH Active exhaust valve
2		Muffler
3		LH Active exhaust valve
4		Vacuum control assembly
A		Valve closed
B		Exhaust gas out
C		Valve open
D		Exhaust gas in