



# Preliminary Information

## PIP5663 Information On AFM DFM Usage

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Cadillac	CTS-V	2016 - 2019	All	All	6.2 LT4	All
Cadillac	Escalade	2015 - 2019	All	All	6.2 L86	All
Chevrolet	Camaro	2016 - 2019	All	All	6.2 LT1 LT4	All
Chevrolet	Corvette	2014 - 2019	All	All	6.2 LT1 LT4 LT5	All
Chevrolet	Silverado LD	2014 - 2019	All	All	4.3L LV3 5.3 L83 6.2 L86	All
Chevrolet	Silverado 1500 (New Model)	2019	All	All	4.3L LV3 5.3 L84 6.2 L87	All
Chevrolet	Silverado 2500 3500	2020	All	All	6.6 L8T	All
Chevrolet	Suburban	2015 - 2019	All	All	5.3 L83 6.2 L86	All
Chevrolet	Tahoe	2015 - 2019	All	All	5.3 L83 6.2 L86	All
GMC	Sierra Limited	2014 - 2019	All	All	4.3L LV3 5.3 L83 6.2 L86	All
GMC	Sierra 1500 (New Model)	2019	All	All	4.3L LV3 5.3 L84 6.2 L87	All
GMC	Sierra 2500 3500	2020	All	All	6.6 L8T	All
GMC	Yukon Models	2015 - 2019	All	All	5.3 L83 6.2 L86	All

<b>Involved Region or Country</b>	<b>North America</b>
<b>Condition</b>	AFM / DFM usage
<b>Cause</b>	Informational

**Correction:**

**AFM**

To provide maximum fuel economy under light load driving conditions, the engine control module (ECM) will command the cylinder deactivation system ON to deactivate engine cylinders 1, 7, 6, and 4, switching to a V4 mode. The engine will operate on 8 cylinders, or V8 mode, during engine starting, engine idling, and medium to heavy throttle applications.

**AFM - active fuel management strategy which deactivates the lifters on specific cylinders. On V8 engines it deactivates half of the cylinders (1,7,6, and 4) and on V6 engines it deactivates only 2 of the cylinders (3 and 6).**

**LOMA - lifter oil manifold assembly is only used on legacy AFM applications**

**DFM (Dynamic Fuel Management)**

Dynamic Fuel Management (DFM) is recognized as active fuel management technology with the additional ability to deactivate any combination of cylinder valves for an internal combustion engine. This technology combines millisecond-accurate torque control with cylinder deactivation to optimize fuel consumption of spark ignited engines. The control of every cylinder event optimizes engine operation such that peak efficiency is obtained throughout the range of engine operation. DFM extends cylinder deactivation to all cylinders, which allows for a large variety of firing sequences. DFM can have rotating cylinder deactivation patterns as well as fixed patterns. For rotating patterns, which cylinders are being deactivated can change with each subsequent engine cycle. Transitions between firing sequences is done in a continuous fashion, making the transitions seamless and transparent to the vehicle operator.

**DFM - dynamic fuel management which can deactivate the lifter on any cylinder at any time. Unlike AFM, this can result any many different types of firing patterns, some of which are fixed patterns (like 1/4, 1/2, 3/4) and others which are rotating (like 1/5, 1/3, 2/5, 2/3). This is only available on small block engines (L84 and L87).**

**OCV - oil controlled valve is only used on small block engines. These provide faster response times than LOMA and are required for DFM (on L84 and L87). OCVs are also used on L82 for AFM.**

Below is a AFM DFM usage chart

Vehicles	AFM VLOM	4 Cylinder Deac.	DFM. OCV's	DFM	None	Notes
Cadillac CTS-V LT4	Yes	Yes	No	No		Always active
Camaro LT1	Yes	Yes	No	No		Automatic only. AFM not active with Manual trans
Camaro LT4	Yes	No	No	No		Has the hardware, Not active
Corvette LT1	Yes	Yes	No	No		Auto Trans active, Manual Trans active in ECO only
Corvette LT4	Yes	Yes	No	No		Auto Trans active, Manual Trans active in ECO only
Corvette LT5	No	No	No	No	Yes	No hardware on LT5
Escalade L86	Yes	Yes	No	No		
<b>Silverado /Sierra L83, L86</b>	Yes	Yes	No	No		
Suburban / Tahoe / Yukon L83, L86	Yes	Yes	No	No		
<b>Silverado /Sierra L82</b>	No	Yes	Yes	No		
<b>Silverado /Sierra L84</b>	No	No	Yes	Yes		
<b>Silverado /Sierra L87</b>	No	No	Yes	Yes		
<b>Silverado /Sierra HD L8T</b>	No	No	No	No		No hardware on L8T
<b>Silverado /Sierra LV3</b>	Yes	Yes	No	No		
GMT610 Van LV1	No	No	No	No		No hardware on LV1
GMT610 Van L8T	No	No	No	No		No hardware on L8T

## Version History

Version	<b>1</b>
Modified	07/31/2019 - Created on



GENERAL MOTORS