



UI BULLETIN # 64

SUBJECT: PTO vs FAST IDLE

MODELS AFFECTED: GMT800 Full Size (C/K) Pickups and Utilities, Full Size Vans and Cutaways, Medium Duty C-Series; 2002-2004 Cadillac Escalade, 2003-2004 Chevrolet SSR, 2003-2004 Hummer H2.

MODEL YEAR(S): 1999-2004, except as noted above.

DATE: 10/30/2003

REVISION DATE:

PAGE: 1 of 5

ADVISORY

The purpose of this bulletin is to describe the differences between Fast Idle and PTO. The bulletin will answer the following questions:

1. What are Fast Idle and PTO?
2. Fast Idle vs. PTO - How do you choose which feature to use for your application?
3. How do you get it? (Option order, modification and/ or programming requirements).
4. What features are available per engine, platform, and model year?

1. What are Fast Idle and PTO?

Power Take Off (PTO) and Fast Idle both allow for elevated idle speeds to allow the engine to perform a desired task. In the past, engine speed increases were often a simple mechanical adjustment. With the advent of electronic engine controls, engine speed is now controlled by engine electronics. The Engine or Powertrain Control Module must now be used. Various combinations of wiring and programming changes may be required to implement these functions.

Fast Idle is sometimes called High Idle. It can be ordered on some vehicles as RPO UF3. It causes the engine to go to a single elevated speed for increased output from normal accessory drive components. Examples are increased voltage from the alternator or increased cooling from the HVAC compressor. Fast Idle can also take advantage of increased base engine heat output for fast vehicle heating.

PTO's (Power Take Off's) are used when hydraulic fluid is needed to do the work. It can be ordered on some vehicles as RPO PTO. The PTO unit itself typically mounts to the transmission or accessory drive. Notes: GM does not sell PTO's as factory equipment; an up fitter must add them. Accessory Drive mounted PTO's will invalidate the GM Accessory Drive Warranty.

PTO differs from Fast Idle by offering a greater degree of control. These controls include multiple or variable engine speeds and increased turn on/off logic. PTO has more complex wiring for the Upfitter to install than Fast Idle. Some functionality comes standard from the factory in the PCM. Many of these variables can be changed with a service tool for each customer. These are discussed in the modification and programming sections. PTO also turns off some of the engine diagnostics to allow for the higher loads.

More detailed description are available on our website. Bulletin 53 for 1999-2002 C/K; and the Body Builders Manual for 2003 and beyond Medium Duty.

UI BULLETIN # 64 (Cont'd)



2. Fast Idle vs. PTO - How do you choose which feature to use for your application?

The chart below lists typical vehicle applications and requirements:

Typical Vehicle Application	Typical Requirement	Solution - PTO or Hi Idle?	Comments
Ambulance	Increased Air Conditioning for stationary operation	Fast Idle	Single speed OK - PTO costly
Ambulance	Increase Electrical output for stationary operation	Fast Idle	Single speed OK - PTO costly
Service Truck	Increase vehicle heating for stationary operation	Fast Idle	Single speed OK - PTO costly
Refuse & Wrecker Equipment	Operate Single speed hydraulic equipment	Preset PTO	Need to use PTO when operating Hydraulic Equipment
Lifts, Refuse & Wrecker Equipment	Operate hydraulic equipment with up to 3 preset speeds	Preset PTO	Preset mode PTO
Drills	Operate hydraulic equipment with Variable PTO speeds while stationary	Variable PTO	Program Variable mode PTO w/ Tech 2
Salt Spreaders, Plows, Street Cleaners	Operate hydraulic equipment with Variable PTO speeds while moving	Variable PTO	Program Variable mode PTO w/ Tech 2

UI BULLETIN # 64 (Cont'd)



3. How do you get it? (Option order, modification and/ or programming requirements).

PTO and Fast Idle can be obtained in many different ways. These include various combinations of option orders, vehicle modifications, and programming requirements. They are based on the Engine Type, Platform (Truck Type), and Model Year. Detailed descriptions can be found in the Bulletins and the Body Builders Manual at www.gmupfitter.com.

Fast Idle can be ordered as an option on 2003 Medium Duty C Trucks as option UF3. It comes with a cab mounted switch, wiring, and PCM programming to raise the Idle speed. A detailed description can be found in the Body Builders Manual. Other applications are summarized below:

Platform	Year	Engine	Option	Description
Medium Duty	2003	All	UF3	See Body Builders Manual
C/K	99-03	L18, LB7	*	See Bulletin #53
C/K	02-03	LB7 Diesel	*	See Bulletin #63
C/K	99-2000	L65 Diesel	*	Ground PCM PIN – See Body Builders Manual (under current C/K)
G-Van	99-2002	L65 Diesel	*	Ground PCM PIN – See Body Builders Manual (under current C/K – Not van)
G-Van	2001-2002	L18 Gas	*	See Bulletin #46 Rev. 1

PTO can be ordered as an option on 2003 Medium Duty C Trucks as option PTO. It comes with a cab mounted switch, wiring, and PCM programming to for PTO operation. A detailed description can be found in the Body Builders Manual. Other applications are summarized below:

Platform	Year	Engine	Option	Description
Medium Duty	2003	All	PTO	See Body Builders Manual
C/K	99-03	L18, LB7	*	See Bulletin #53
Medium Duty	99-00	7.4L Gas	*	See Bulletin #24

* The option is not available but can be implemented with additional equipment (switch, programming, etc.).

UI BULLETIN # 64 (Cont'd)



4. What features are available per engine, platform, and model year?

The following chart shows which powertrains are capable of supporting PTO and/or Fast Idle. It is organized by vehicle (platform), engine, and model year. Fast Idle or PTO are not available if not indicated. Example: LQ4 6.0L engines do not have the capability to support PTO or Fast Idle in any platform or year. Note: Fast Idle may be implemented with the LQ4 in many configurations by mechanically pulling on the throttle.

PTO and Fast Idle Capable Powertrain Control Systems

Vehicle Nameplate	Engine RPO	Fuel - Gas or Diesel	Engine Label	Model Year					
				99	00	01	02	03	04
Cadillac Escalade	LQ4	G	6.0L 16v ohv V8						
Chevrolet Kodiak	LB7	D	6.6L Duramax					X	X
Chevrolet Kodiak	L18	G	8.1L MARK VI-VII		X	X	X	X	X
Chevrolet Kodiak	LG5	D	7.2L CAT	X	X	X	X	X	X
Chevrolet Kodiak	LG4	D	7.8L Duramax					X	X
Chevrolet Kodiak	LP4/L21	G	7.4L 16v ohv V8	X					
Chevrolet Silverado	L65	D	6.5L 16v ohv V8	X					
Chevrolet Silverado	LP4/L21	G	7.4L 16v ohv V8	X	X				
Chevrolet Silverado	LB7	D	6.6L Duramax			X	X	X	X
Chevrolet Silverado	LQ4	G	6.0L 16v ohv V8						
Chevrolet Silverado	L18	G	8.1L 16v ohv V8		X	X	X	X	X
Chevrolet SSR	LQ4	G	6.0L 16v ohv V8						
Chevrolet Suburban	L65	D	6.5L 16v ohv V8	X					
Chevrolet Suburban	LP4/L21	G	7.4L 16v ohv V8	X					
Chevrolet Suburban	L18	G	8.1L 16v ohv V8		X	X	X	X	X
Chevrolet Tahoe	LQ4	G	6.0L 16v ohv V8						
Chevrolet Van/Express	LQ4	G	6.0L 16v ohv V8						
Chevrolet Van/Express	L65	D	6.5L 16v ohv V8	X	X				
Chevrolet Van/Express	LP4/L21	G	7.4L 16v ohv V8	X					
Chevrolet Van/Express	L18	G	8.1L 16v ohv V8		X	X	X		

X = The Engine controller is capable of fast idle and PTO if calibrated properly.
Note: Not all the above vehicle configurations are marketed as offering PTO and or Fast Idle.

UI BULLETIN # 64 (Cont'd)



PTO and Fast Idle Capable Powertrain Control Systems (continued)

Vehicle Nameplate	Engine RPO	Fuel - Gas or Diesel	Engine Label	Model Year					
				99	00	01	02	03	04
GMC Savana	LP4/L21	G	7.4L 16v ohv V8	X					
GMC Savana	LQ4	G	6.0L 16v ohv V8						
GMC Savana	L65	G	6.5L 16v ohv V8	X	X				
GMC Savana	L18	G	8.1L 16v ohv V8		X	X	X		
GMC Sierra	LQ4	G	6.0L 16v ohv V8						
GMC Sierra	L65	D	6.5L 16v ohv V8	X					
GMC Sierra	LP4/L21	G	7.4L 16v ohv V8	X	X				
GMC Sierra	L18	G	8.1L 16v ohv V8		X	X	X	X	X
GMC Sierra	LB7	D	6.6L Duramax			X	X	X	X
GMC Suburban	L65	D	6.5L 16v ohv V8	X					
GMC Suburban	LP4/L21	G	7.4L 16v ohv V8	X	X				
GMC Topkick	LB7	D	6.6L Duramax					X	X
GMC Topkick	L18	G	8.1L MARK VI-VII		X	X	X	X	X
GMC Topkick	LG5	D	7.2L CAT	X	X	X	X	X	X
GMC Topkick	LG4	D	7.8L Duramax					X	X
GMC Topkick	LP4/L21	G	7.4L 16v ohv V8	X					
GMC Yukon	LQ4	G	6.0L 16v ohv V8						
GMC Yukon XL	L18	G	8.1L 16v ohv V8		X	X	X	X	X
Hummer H2	LQ4	G	6.0L 16v ohv V8						

X = The Engine controller is capable of fast idle and PTO if calibrated properly.
 Note: Not all the above vehicle configurations are marketed as offering PTO and or Fast Idle.