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PRODUCT INFORMATION

Description: Idle Shutdown / Idle Cooldown

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If the Idle Shutdown Feature Activation is furnished, under normal key-on idling conditions, the engine can be programmed to shutdown after a predetermined period of time defined by the Idle Shutdown Time parameter. For this feature to be active the vehicle must be stationary and the engine must be warmed. The red shutdown lamp will illuminate on the instrument cluster followed by an audible alarm alerting the driver that a shutdown is about to occur. These alerts will activate based on the Idle Shutdown Warning Time settings. Depressing the service brake or the accelerator pedal at any time will automatically reset the idle shutdown counter, indicating that the driver is still in the vehicle. If equipped with a sleeper, the idle shutdown timer can also be reset by pressing the idle shutdown override switch at any time.

Idle shutdown can also be adapted to account for idling during the initial warmup period. An Idle Shutdown Warmup Temperature threshold and Idle Shutdown Warmup Timer ensures that the engine is fully warmed before operation. The normal idle shutdown timer will not begin until the temperature threshold has been met and the warmup timer has expired. If the engine is already above the temperature threshold after starting, the warmup timer will be bypassed and the normal idle shutdown timer will begin.

MSS	PID	VCADS ID	NAME	DESCRIPTION	RANGE	DEFAULT
A3A	908	AL	Idle Shutdown feature activation	If furnished the Idle Shutdown features below will function. If omitted, the Idle shutdown features below will not function.	Furnish/Omit	Omit
E0X	934	AM	Idle shutdown time	This parameter is used to control the normal length of time the engine will be allowed to idle before shutdown. For this parameter to function, idle shutdown must first be furnished. Additional idle time may occur during engine warmup timer. (see below)	1-60 (MIN)	10
B1A	M02	FMT	Idle shutdown warning time	This parameter regulates how long before actual shutdown the driver is warned via the red shutdown lamp and audible alarm	5-60 (SEC)	30
A8A	A17	FMY	Idle shutdown warmup temp	Once a cold engine has reached this temperature, the vehicle will idle for the time specified by the warmup timer. When that time expires, the normal idle shutdown timer begins. This occurs during warmup.	8-160 (°F)	100
A4A	A16	FNA	Idle shutdown warmup timer	The time the engine will idle after it has reached its specified warmup temperature threshold and before the normal idle shutdown timer begins.	1-60 (MIN)	5



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Several different override modes can also be enabled or disabled using customer programmable parameters. These will temporarily override the idle shutdown timer under certain operating conditions. Overriding the idle shutdown feature or timer simply means idle shutdown will not occur when this feature is furnished. Overrides include use of any Power Take Offs (PTOs), the Electronic Hand Throttle, or if the engine load is greater than 20%. The normal idle shutdown timer will restart once use of any override option ceases. Idle shutdown override defaults settings, like all V-MAC IV programmable parameters, have been carefully chosen to satisfy the needs of most customers.

MSS	PID	VCADS ID	NAME	DESCRIPTION	RANGE	DEFAULT
A7A	A14	FMW	Idle S/D Override with EHT	If furnished, using the EHT will automatically override the idle shutdown timer. If omitted, idle shutdown will occur even when using the EHT.	Furnish/Omit	Omit
A6A	A13	FPJ FPK	Idle S/D Override with PTO	If furnished, using any PTO will automatically override the idle shutdown timer. If omitted, idle shutdown will occur even when any PTO.	Furnish/Omit	Furnish
B0A	A23	FMX	Idle S/D Override w/Engine Load	If the override with engine load feature has been furnished, idle shutdown will not occur if engine load is greater than 20%. If omitted, idle shutdown will occur regardless of engine load.	Furnish/Omit	Furnish

There are two types of V-MAC IV sleeper idle shutdown override modes that can be enabled using customer programmable parameters. These include a standard Idle Shutdown Override-Sleeper Mode, and an Idle Shutdown Override-Sleeper Mode with Ambient Temperature. An idle shutdown override switch is standard on all vehicles equipped with a sleeper.

If the Idle Shutdown Override Sleeper Mode has been furnished, the shutdown timer alert has initiated, and the operator wishes to enter in sleeper mode override, he must press the override switch, or depress the throttle or brake pedal to freeze the idle shutdown timer. The timer resets and idle shutdown will remain suspended until the vehicle has moved or the ignition is cycled.

To enter the Idle Shutdown Override-Sleeper Mode with Ambient Temperature Sensing, simply press the override switch during the idle shutdown warning period. The timer will remain suspended (no shutdown) until ambient sleeper temperatures have reached a level between the minimum and maximum thresholds. These thresholds are customer programmable and represent the comfortable temperature range of the sleeper. Once sleeper ambient temperature has reached a level within this range, the normal idle shutdown sequence will begin. If ambient temperatures moved outside of this range, idle shutdown will not occur, allowing the sleeper to be properly warmed or cooled. Moving the vehicle or cycling the ignition key will reset the Idle Shutdown Override-Sleeper Mode.



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MSS	PID	VCADS ID	NAME	DESCRIPTION	RANGE	DEFAULT
A9A BAX	COZ0001	FND	Idle Shutdown Override Sleeper Mode	Idle Shutdown Override Sleeper Mode, when enabled, allows idle shutdown to be overridden indefinitely (engine continues to idle) to maintain proper sleeper interior temperatures.	N/A	Included w/ sleeper
A9A AAX	COZ0002	FPI	Idle Shutdown Override Sleeper Mode w/Ambient Air Temp Sensing	When enabled, sleeper ambient temp-sensing override will freeze the idle shutdown timer with any of the specified driver override inputs. The timer will remain frozen until the ambient sleeper temp reaches a specified comfort range. Once this range has been met, the normal idle shutdown timer will restart unless the option has been set to permanent. The default temperature range is 60-80°F	N/A	Optional



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The Idle Cooldown Feature Activation allows the engine to properly idle and cooldown after hard use. During this process, if the ignition has been turned off and/or the key removed, the engine will continue to idle until engine exhaust temperatures have a sufficient chance to decrease to acceptable levels. Temperature levels are automatically monitored until a certain level is reached or a timer has expired. At this time the engine will automatically shut off and the electrical system will power down. During the time when the idle cooldown mode is active, engine operation will be limited, as accelerator commands and all PTO/EHT controls will be inhibited.

If an override or disable idle cooldown feature is desired during the cooldown period, three options are available. By cycling the ignition key-switch twice, releasing the parking brake, or by pressing the momentary shutdown override switch, (sleeper models) the cooldown sequence will cease and the engine will immediately turn off. Normal start-up procedures are in effect after that point.

MSS	PID	VCADS ID	NAME	DESCRIPTION	RANGE	DEFAULT
B2A	B69	FQ2	Idle Cooldown Feature Activation	Furnishing the Idle Cooldown feature allows for proper cooling of the engine after hard use. Omitting idle cooldown will cause normal key on/off operation.	Furnish/Omit	Omit

By programming the engine to automatically shutdown after a predetermined interval of driver inactivity, fuel is saved by eliminating excess idling. Average fuel consumption is approximately .5 gal/hour at 650 RPM and 1.0 gal/hour at 1000 RPM. By simply reducing idling time from 50% to 25% of total driving time, up to 5% improvement in MPG can be realized. The Idle Shutdown warmup feature conveniently allows the idle shutdown timer to be extended during the warmup period, helping to reduce nuisance shutdowns. Idle shutdown also allows for greater and easier compliance with selected state anti-idling regulations, and can be custom tailored to the laws within the state of operation.

If equipped with a sleeper, a driver may have the need to idle for extended periods of time to maintain comfortable temperature levels. Unless the vehicle is equipped with other anti-idle devices, or state regulations forbid idling, the Idle Shutdown Override-Sleeper Mode can be used for extended idling. In areas of mild climate, the driver can specify normal idle shutdown to occur once comfortable sleeper temperatures have been met, or specify no sleeper shutdown override settings at all, for maximum fuel savings. In harsh climates where driver comfort is a higher priority, sleeper mode override settings can be locked permanently in place for comfortable sleeper temperatures all night long.



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For optimum turbocharger exhaust valve life, an engine should be allowed to idle for several minutes immediately following hard operation to reduce internal carbon buildup. The Idle Cooldown feature will allow the engine to idle and cooldown if the truck has been keyed off before the engine has fully cooled. Idle Cooldown will function even if the engine is not equipped with a pyrometer, based on an internal V-MAC IV timer.

As with all V-MAC IV parameters, the Idle Shutdown feature, timers, temperatures, and override settings are defaulted or preset to the most frequently used customer settings.

Additional information on Idle Shutdown/Idle Cooldown is available using VCADS PC Service Support Software. Consult your dealer's certified V-MAC technician for additional details. Examples include the capability to modify Idle Shutdown Override % Load Threshold parameter (VCAD ID: FMZ) to value other than the 20% default settings, or to determine which pedals or dash switches will initiate an idle shutdown override.