Section 5.19
Passmart

The PasSmart feature is available on selected on-highway engines equipped with a Vehicle Speed Sensor.

Section 5.19.1
OPERATION

The PasSmart feature allows a fleet manager to enable a second Vehicle Speed Limit (VSL) above the normal VSL to assist while passing other vehicles on the highway. This second VSL is programmed for a limited duration (PS Pass Speed Duration) during a given time period (PS Pass Speed Interval). The passing speed interval starts when the feature is programmed. An interval of 8, 12, or 24 hours will always reset at midnight.

The driver activates PasSmart by double-pumping the accelerator pedal. Starting at the full throttle position, the driver releases the throttle completely, returns the throttle to the full throttle position, releases it again and then returns to full throttle. If the driver completes this action within five seconds, PasSmart is activated.

After double-pumping the accelerator pedal, the vehicle is given 20 seconds to accelerate to a speed above the normal VSL. If the vehicle speed does not exceed the normal VSL in 20 seconds, the driver must repeat the double-pump action. Once the normal VSL has been exceeded, a new higher VSL becomes the maximum vehicle speed limit. This limit is the normal VSL plus the PS Pass Speed Increment.

A passing speed duration timer starts when vehicle speed exceeds the normal VSL and continues to count until the vehicle speed drops back below the normal VSL. At the end of the passing event when the vehicle speed drops back below the normal VSL, PasSmart is automatically deactivated and the driver cannot exceed the normal VSL unless the Accelerator Pedal is double-pumped again.

PasSmart operates only with the foot pedal and not with the Cruise Control switches or hand throttle. However, activating PasSmart does not disturb or deactivate Cruise Control if it is on when the passing event begins. Once the driver has passed the other vehicles and PasSmart has deactivated, Cruise Control automatically takes over. To deactivate Cruise Control during the pass, the driver must turn the Cruise Control switch to off.

When the Passing Speed Duration time expires, the AWL will begin to flash one minute prior to ramping the VSL back down to the normal VSL. The rampdown event always takes 5 seconds regardless of the Passing Speed Increment programmed into the controller. The rampdown alert can be distinguished from an engine fault warning in that the AWL flashes for the PasSmart alert and remains on constantly for an engine fault.

If intervals of 8, 12, or 24 hours are selected, the interval will always reset after the chosen interval and at midnight. This allows fleets to synchronize the reset with driver change periods. All other intervals reset from the time they are selected. For example, if you select 4 hours, then a reset will occur every 4 hours from the time of programming but not necessarily at midnight.

PasSmart still operates when there is an active (non-shutdown) system fault. In this situation the AWL goes from constant illumination to flashing one minute before the VSL ramps down. At the end of the

passing event when PasSmart is deactivated, the AWL will return to constant illumination if the fault is still active.

If there is an active stop engine fault, the rampdown/shutdown activity overrides PasSmart. The additional passing speed is not available until the fault is cleared.

For example, if the normal fleet speed limit is 65 mph, the fleet manager can increase the VSL an additional 10 mph for a maximum of 30 minutes per reset interval. An example of these limits is listed in Table "PasSmart Settings" .

Parameter	Setting
PS Pass Speed Duration	30 minutes
PS Pass Speed Interval	8 hours
PS Pass Speed Increment	10 mph

Table 1. PasSmart Settings

Each time the driver exceeds 65 mph, the 30 minute clock counts down as long as the speed remains above 65 mph. He or she can continue to enter and exit the PasSmart extra speed zone to pass vehicles until the entire 30 minutes of higher VSL is used up. The driver is warned by the AWL one minute before the time expires. The vehicle speed is then limited to 65 mph until the 8 hour period expires and an additional 30 minutes of passing time is available.

Section 5.19.2
INSTALLATION

An OEM supplied Vehicle Speed Sensor or output shaft speed over the SAE J1939 Data Link is required. Refer to "3.9.7 Vehicle Speed Sensor" , "Vehicle Speed Sensor," for additional information.

Section 5.19.3
PROGRAMMING REQUIREMENTS AND FLEXIBILITY

The PasSmart parameters are programmable at engine order entry or with DDDL, Vehicle Electronic Programming System (VEPS), and DRS as listed in Table "PasSmart Parameters" .

Parameter Group	Parameter	Description	Options	Default	Access
23	PasSmart Enable	Enables/disables the feature.	0 = Disable 1 = Enable	0	DDDL, VEPS or DRS
23	PS Pass Speed Duration	The duration of time per interval that is permitted at the higher speed. A value of zero will disable the feature.	0 to 255 minutes	0	DDDL, VEPS or DRS
23	PS Pass Speed Interval	The period of time when the CPC2+ resets to begin a new period.	1 to 24 hours*	8	DDDL, VEPS or DRS
23	PS Pass Speed Increment	The additional vehicle speed permitted above the programmed vehicle speed limit. A value of zero will disable the feature.	0 to 250 KPH	0	DDDL, VEPS or DRS

Table 2. PasSmart Parameters

* *The time within which the road speed limit will return to the programmed road speed limit when the feature is deactivated.*

Section 5.19.4
INTERACTION WITH OTHER FEATURES

PasSmart will increase the Vehicle Speed Limit.

A vehicle can be set up with both PasSmart and Fuel Economy Incentive, but the extra speed increments provided by the two features do not add together. For example, if Fuel Economy Incentive is set up to give 7 mph of extra speed when the driver hits the maximum fuel economy target and the PasSmart increase is 5 mph the resulting speed increase is 7 mph, not 12 mph.