Speed Sentinel™ II - SS602-A/AX
2023 Chevrolet Express/GMC Savana
6.0L & 6.6L Engines

System Operation

Speed Sentinel II is a programmable road speed limiter for Chevrolet vehicles. It is a micro-processor controlled unit that limits maximum vehicle speed but does not limit maximum engine output. Speed Sentinel II has been designed with internal safeguards to ensure the safe operation of the vehicle. If the system senses unsafe or unknown condition it automatically reverts back to full driver control.

IMPORTANT—READ BEFORE INSTALLATION

It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers. Avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Avoid radio frequency energy from antennas or inverters next to the module. Avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

Installation Instructions

Disconnect vehicle battery before proceeding with installation

SS602 Module

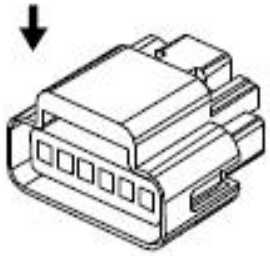
Remove the lower dash panel below the steering column area and find a suitable location to mount the Speed Sentinel II module. Do not mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module.

Data Link Harness (6-Pin Connector)

1. Locate the vehicle OBDII Data Link Connector, below the lower left dash panel.
2. Remove the mounting screws for the OBDII connector. Plug the red connector from the Speed Sentinel II Data Link T- Harness into the vehicle OBDII connector. Ensure the connection is fully seated and secured with the supplied wire tie.
3. Mount the black connector from the Speed Sentinel II Data Link Harness in the former location of the vehicle OBD II connector.
4. Secure the Speed Sentinel II harness so that it does not hang below the lower dash panel.
5. Plug the 6-pin connector from the Data Link Harness into the Control Module in the cavity labeled "Data Link".

Accelerator Pedal T– Harness

1. Locate the accelerator pedal. Remove the OEM connector by sliding back the red safety lock.
2. Install the Speed Sentinel II T-harness between the accelerator pedal position sensor (APP) and the OEM APP connector.
3. Ensure that the red sliding lock is fully seated in the locked position on both connectors.
4. Attach the 6-Pin connector from the Pedal harness to the Control Module in the cavity labeled "Pedal".



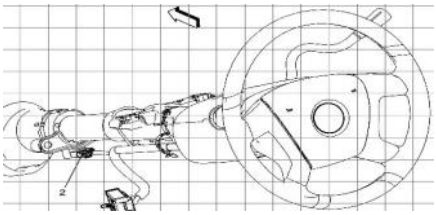
LED Display Panel

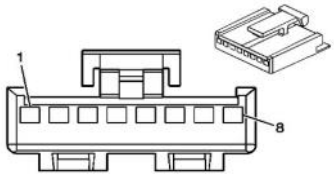
1. Locate a suitable position on the dashboard, within view of the driver, for the mounting of the LED display panel. It must be within 36 inches of the module and allow room for the LED harness installation.
2. Drill a ¾" hole in the dashboard where the center of the display will be mounted. Plug the 10-pin connector of the LED harness in connector cavity labeled "Display" on the control module.
3. Run the other end of the harness under the dash and out through the ¾" hole. Plug the 6-pin connector of the display harness into the display panel. Ensure that the panel is level and secure using the supplied screws.

Note: The SS602-AX Does not include the LED Display Panel

Auxiliary Power Harness

1. Locate the OEM 8-pin steering wheel speed sensor connector on the underside of the steering column.
2. Locate the Pink wire in pin 7 (hot in run/crank).
3. Attach the Auxiliary Red wire, in parallel, to this circuit by stripping the insulation, soldering, and taping the wires.
4. Attach the Auxiliary Black wire to a chassis ground.





Steering Wheel Sensor Connector

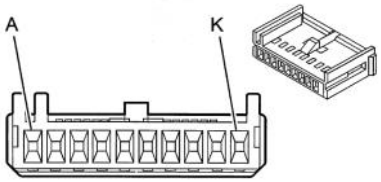
Pin	Wire	Circuit	Function
7	0.35 PK	2239	Ignition Voltage

Without Cruise Control Inhibit

If the vehicle does not have cruise control, continue to **Setting Vehicle Speed Limit.**

Cruise Control Inhibit (for vehicle equipped with cruise control)

1. Remove the upper steering column covers and locate the 10-pin connector at the Inflatable Restraint Steering Wheel Module Coil.
2. Locate the Gray wire in Pin - K of the 10-pin connector. This circuit is the Chevrolet cruise control switch signal (circuit 1884).
3. Locate the brown wire in the Auxiliary Power T-Harness and parallel tap it to the gray cruise control circuit.
4. Solder and heat shrink the parallel tap for enhanced circuit integrity.



Inflatable Restraint Steering Wheel Module Coil Connector

Optional System Override Input

The activation of a chosen equipment (i.e. PTO) installed on the vehicle will activate the Speed Sentinel II. With deactivation of the chosen equipment, the Speed Sentinel II system will not function.

1. Connect the Auxiliary harness connector Pin #7 Blue wire lead to the chosen equipment output that will apply 12V to the "Auxiliary" connector Pin #7 when the chosen equipment is activated.
2. Insert the 8-pin Auxiliary connector into the module in the cavity labeled "Auxiliary".

Optional Switch Controlled Settings (Preprogrammed by InterMotive)

- Optional Forced Engine Idle Function – Flip an operator installed switch and Speed Sentinel II forces the engine to stay in idle mode as a theft deterrent.
- System controlled electronic override of Speed Sentinel II is available for Emergency Vehicles when in code 3 mode.

Setting Vehicle Speed Limit

Remove the lid of the Speed Sentinel II module. With power disconnected from the module, locate the rotary switch and adjust the speed limit according to the chart shown.

Speed Limit can be adjusted in 1 mph increments. Please contact InterMotive for programming information.

⚠ WARNING ⚠

The Speed Sentinel II control module must be disconnected from the vehicle battery power during rotary switch adjustment.

0* = 55mph (factory default setting)	**8 = 45mph**
1 = 10mph	**9 = 50mph**
2 = 15mph	**A = 55mph**
3 = 20mph	**B = 60mph**
4 = 25mph	**C = 65mph**
5 = 30mph	**D = 70mph**
6 = 35mph	**E = 75mph**
7 = 40mph	**F = 80mph**

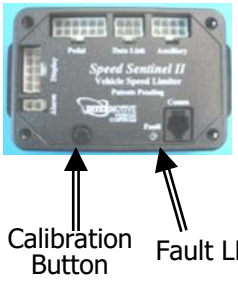
Reconnect Vehicle Battery

Accelerator Pedal Calibration (required)

Note: Accelerator pedal calibration has changed. Please use the following calibration technique for all Speed Sentinel modules with f/w versions 1.2.0.0 and higher.

Prior to calibration, ensure the following:

- Pedal harness is installed
- Auxiliary connector is **NOT** connected at module
- Key on, engine off



1. Hold down the black calibration button and plug in the 8-pin Auxiliary connector. (Button may be released after red fault light LED illuminates continuously).
2. When red LED flashes off and back on, press and hold accelerator pedal to the floor.
3. When red LED goes off, calibration is complete. If the red fault LED starts flashing, the calibration was unsuccessful. Repeat Steps 1-3
4. Connect a scan tool and check for diagnostic trouble codes (DTC's). If codes are present, document the codes and clear all DTC's prior to delivery of vehicle.
5. Mount and secure the Speed Sentinel II module, reinstall all removed panels, and perform post installation test.

Post Installation Instructions

The following checks must be performed prior to releasing the vehicle to the driver.

1. Test drive the vehicle to verify proper Speed Sentinel II operation. The Speed Sentinel II must limit vehicle speed at the preset speed limit and pass the following steps:
2. When the Speed Sentinel II engages (green LED will illuminate) and the vehicle speed is limited, press the accelerator pedal to wide-open throttle and verify that vehicle speed has been limited.
2. Ensure that the preset speed is set to the desired limit.
3. Check passing mode operation by going from wide-open throttle to closed throttle three times in a three-second span. The Speed Sentinel II passing mode will allow a temporary override of speed limiting. The override lasts for 10 seconds then resumes limiting vehicle speed.
4. If enabled, the green LED will flash once after prove out. Passing mode is optional and may be removed by contacting InterMotive Technical Support.
5. If the vehicle has cruise control, check the cruise control operation and inhibit. Verify that cruise control is operational when vehicle speed is below the limited speed and not operational during speed limiting.
6. Verify that the check engine light has not been set. (Turning the ignition switch to the "on" position with the accelerator pedal unplugged during installation will set a check engine light).

If the Speed Sentinel II fails any step in the post installation test, review the installation instructions and check all connections. If necessary, call InterMotive Technical Support at (530) 823-1048.

Leave in Vehicle
Operating Instructions SS602-A/AX Speed Sentinel™ II
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The Speed Sentinel II is a road speed limiter, which limits maximum vehicle speed to a preset limit. Once the driver attains the limited speed, any additional input on the throttle pedal will not increase the speed of the vehicle. If the throttle is pushed beyond the maximum speed, the Speed Sentinel II will maintain the preset speed. The Speed Sentinel II will maintain vehicle speed on varying terrain, much like a cruise control. However, while coasting down hills, the vehicle can exceed the limit since Speed Sentinel II does not apply the vehicle brakes.

When the Speed Sentinel II reaches the limited speed, the green LED (limit) on the LED Display will illuminate to show that maximum speed has been achieved. If the red LED is illuminated, a fault code is present and should be reported to the fleet manager.

The Speed Sentinel II has an optional passing mode, which allows for a short-time override of the limited speed (use in passing at critical moments). Verify that the Speed Sentinel II is or is not programmed with passing mode. To verify passing mode is programmed, an extra "blink" on the green LED during prove out indicates passing mode is programmed. Passing mode is entered by going from wide-open throttle to idle three times in a three second span. The override lasts for 10 seconds then resumes limited vehicle speed.

The Speed Sentinel II also has a mode that will return the engine to base idle if the service brake is applied at the same time as the accelerator pedal. This mode will only activate while the Speed Sentinel II is limiting vehicle speed. To remove Speed Sentinel II from this mode: Release and reapply the accelerator pedal to reactivate control of the accelerator pedal.

Checking Speed Sentinel II© for Diagnostic Trouble Codes (SS602-A only)

- If the Speed Sentinel II© has a stored fault code, the "fault" LED will blink twice a second and codes can be retrieved by entering diagnostic mode.
- If the Speed Sentinel II© requires calibration with the vehicle, the "fault" LED will blink on for two seconds and off for a half second. See accelerator pedal calibration section.
- If the Speed Sentinel II© has an internal programming fault, the "fault" LED will blink on/off rapidly. Call InterMotive for assistance.

Entering Diagnostic Mode

- Diagnostic mode is entered by pressing and releasing the yellow "diag" button on the LED display. Once in diagnostic mode, all codes will be displayed by the blinking "fault" LED.
- The codes will be displayed as blink codes. For example, if there is 1 blink, a short pause, and then 2 blinks, the code is 1 2. These two sets of blinks are combined to form the code.
- A zero will not blink, so when the vehicle is safe (ready to be active) it will blink once every 3 seconds. Diagnostic codes will change depending on the safe status of the vehicle.

Clearing codes:

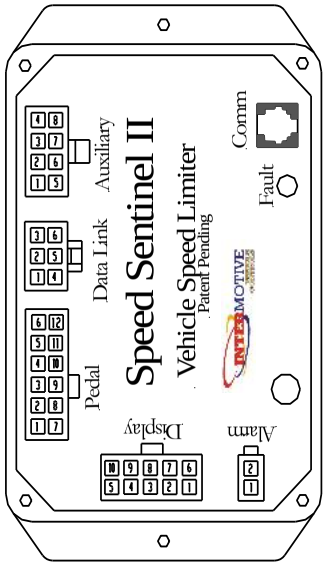
1. Place the vehicle in Park.
2. Press the yellow "Diag" button and at the same time pump the service brake three times.

Note: The SS602-AX does not include the LED Display Panel. Fault Codes can be read at the module by pressing and releasing the calibration button and reading the Fault LED.

LED Code	Terminal Code	VSS state	Drive Train state	Service Brake state
1 - 0	10	> 0	In Drive	Not applied
1 - 1	11	> 0	In Drive	Applied
1 - 2	12	> 0	Not In Drive	Not applied
1 - 3	13	> 0	Not In Drive	Applied
1 - 4	14	= 0	In Drive	Not applied
1 - 5	15	= 0	In Drive	Applied
1 - 6	16	= 0	Not In Drive	Not applied
1 - 7	17	= 0	Not In Drive	Applied
1 - 8	18	> 0	In Drive	Not applied
1 - 9	19	> 0	In Drive	Applied
1 - 10	1A	> 0	Not In Drive	Not applied
1 - 11	1B	> 0	Not In Drive	Applied
1 - 12	1C	= 0	In Drive	Not applied
1 - 13	1D	= 0	In Drive	Applied
1 - 14	1E	= 0	Not In Drive	Not applied
1 - 15	1F	= 0	Not In Drive	Applied

Contact InterMotive for assistance with codes and diagnostics of the Speed Sentinel II© .

U.S. Patent #9,469,261



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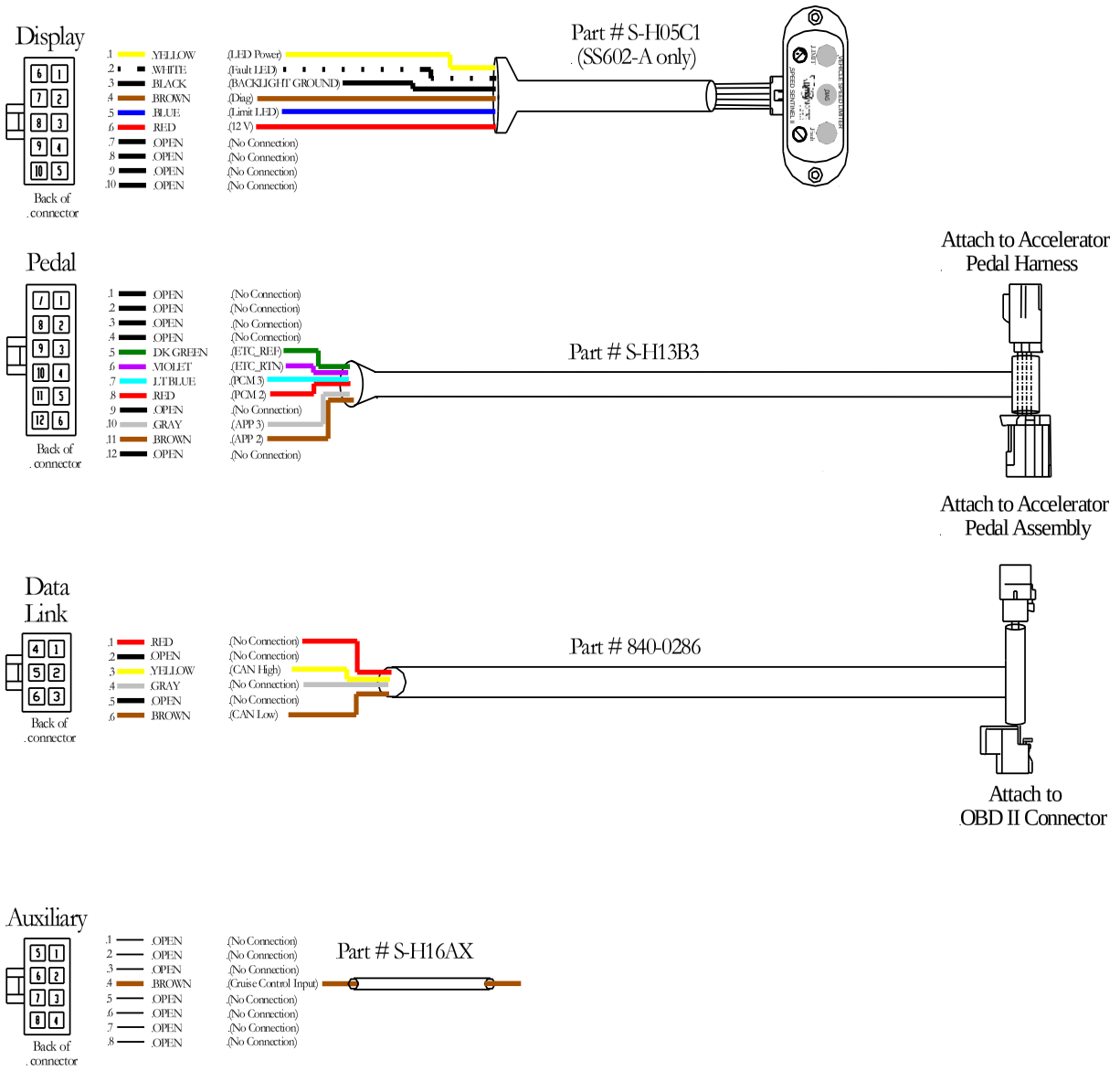

Submit product registration at www.intermotive.net

If the SS602-A fails any step in the Post Installation Check List, review the installation instructions and check all connections. If necessary, call InterMotive Technical Support at (530) 823-1048.