




TECH NOTE:	08-010
TITLE:	Validation of auger sensor
DATE:	9/30/08
REVISION:	1.0

Overview: This document describes a method used to determine the status of the auger/conveyor sensor and wiring assembly.

Background: all closed loop augers and conveyor systems rely on a consistent stream of pulses returning to the controller while the auger/conveyor is in motion. If the pulse stream stops for more than 30 seconds (while the vehicle is moving), the controller triggers the “auger sensor failure” alarm. At that point, failure may be due to one of the following causes:

- 1) **Stuck auger or conveyor** – must be checked for obstruction, but do not do so with the hydraulic system engaged.

WARNING		<p>Potential for injury due to unexpected operation of auger.</p> <p>Entanglement in the auger will cause severe injury to extremities, with possible loss of extremities.</p> <p>During initial startup and testing, the auger may start without warning. Stay clear of the auger during all startup, programming, and operation procedures.</p> <p>Do not attempt to clear a jammed auger with the hydraulic or control system active.</p>
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- 2) Failed sensor;
 - a. Test by rotating the auger and observing the LED’s in the cable connection. They will flash every time the sensor sends a pulse. If no LED’s are visible, the sensor is bad;
- 3) Failed wiring harness;
 - a. Observe the LED in the junction box. If green LED is lit with system on and auger idle, power is reaching the sensor.
 - b. Observe the LED closest to the auger sensor connection while the auger is turning. It should flicker with each passing pulse if the sensor is sending pulses;

Confirm your Sensor using Test Mode: to validate that your auger sensor assembly is functioning;

- a) From the menu screen, select Test mode, enter the password;

<pre> Menu v4.15 Rx Automatic Mode Help Manual Mode → Test Mode No Speedo Mode Material Change Unload Mode Fill Tanks Storm/Season Tot. Diagnostics <SPINNER +/->=select <PASS>=accept </pre>	<pre> Test Mode Enter Password: [*000] <SPINNER +/-> to change <BLAST>=back <PASS>=next/done </pre>
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- b) Ramp up the output on the auger system until you see pulses (ppm) coming back. If the auger is moving normally and 0 pulses show, the sensor assembly is faulty.

<pre> Granular - SALT BRINE Auger Spinner Prewet 0% 0% 25% 1660 PPM 1660 PPM Speedo: 0 PPM NO GPS TEST <BLAST>=done <PASS>=zero </pre>	<pre> Granular - SALT BRINE KC12 Auger Spinner Prewet Anti-Ice 0% 0% 0% 30% 1660 PPM 1660 PPM 1660 PPM Speedo: 0 PPM NO GPS TEST <BLAST>=done <PASS>=zero </pre>
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