



Service Bulletin #11

Phantom Ground

Field Failure: PTO Alarm turns on by its self, while driving in rain or slush.

Cause: The system is detecting a phantom or false ground caused by leakage current in the signal wire shorting to ground.

Diagnosis: Disconnecting the signal feedback wire turns off alarm. Try disconnecting the wire at the PDC first, and then at the source (the PTO switch) to isolate the problem to damage in the vehicles wiring harness. An inline “Butt” splice was used to extend the PTO signal wire. Road grime and moisture worked into small cracks or gaps in the wire connection’s insulation producing a phantom ground.

Note; Similarly nicked insulation and frayed wires, as well as a failing signal switch can cause similar symptoms.

Field Service: See Recommended Corrective Action below.

Recommended Corrective Action: The importance of good wiring and installation practices cannot be over emphasized. To restore the integrity of the wiring harness, a new and un-spliced 18 awg wire must be run from the PTO Ground Switch to the System’s PTO- input stab.

If the circumstances of installation necessitate the use of an inline Butt Splice on signal or electrical wire, or on any chassis wire where the terminal connector is exposed to the elements, then permanent weatherproofing is required. Do NOT use electrical tape for permanent installations. The use of Butt connectors with an integral adhesive sealant (PowerUp Products PN 1701102) or Heat Shrink Tubing with an integral sealant (PN 3601001 which is 1/4”d by 1” long, or PN 3601006 which is 5/16” d by 3” long) is strongly recommended.

Power Up Products

Questions call (775) 336-2400

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