



# GM VEHICLES *With Allison Automatic Transmissions*

## PTO TROUBLESHOOTING GUIDE

Condition	Likely Cause	Correction
PTO will not engage. (Electrical) <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">             For more information on PTO installation and use visit the GM Upfitter website at: <a href="http://www.gmupfitter.com">www.gmupfitter.com</a> </div>	Activation parameters not met. Improper connections to GM wiring. PTO wiring harness must interface GM Upfitter Connection.	Check wiring for proper connections. Refer to PTO Installation and Owners Manual. Ensure that all connections are secure.
	Connection made to Transmission Connector instead of Upfitter Connector (These are located in close proximity on 4500-8500 series vehicles)	Reconnect Muncie wiring harness to Upfitter Connector
	4500-8500 series vehicles. GM relay not installed. (This relay feeds pin "H" in the Upfitter Connector)	See GM dealer for installation.
	3500 Series vehicles. PTO enable relay not activated.	See GM dealer to activate relay in vehicle computer.
	Solenoid is not shifting.	Confirm that coil is receiving 10.2 vdc minimum. There should be an audible "click" when the solenoid shifts. If not, check coil resistance with ohm meter. Resistance of 8Ω +/- 5% is normal. Replace if necessary
	Relay malfunction (GM6B series PTO).	Check for output voltage of 10.2 vdc minimum at relay terminal 87 (red wire to solenoid).
PTO does not engage and engine speed does not advance.	4500-8500 Series vehicles. Cruise control not on.	Turn on cruise control.
Engine does not advance to 1200 RPM when cruise control SET is activated. (4500-8500 series vehicles)	Cruise control not on.	Turn on cruise control.
	Vehicle ECU not programmed from factory.	Return to dealer for programming.
PTO will not engage. (Hydraulic)	Insufficient hydraulic pressure.	Confirm minimum 100 psi at solenoid inlet port. If less, check hose connection to transmission.
	Contaminates in solenoid valve.	Remove and clean.
PTO engages but does not produce specified output speed.	No signal to Transmission Control Module pin 43.	Review wiring and make proper connection for PTO series installed
	PTO load applied prior to turbine shaft achieving lock-up speed.	Reduce load until torque converter lock-up is achieved.
	4500-8500 series vehicles. Weak or intermittent signal from PTO positive indicator switch (TG6B series PTO) or pressure switch (CS6B or GM6B series PTO).	Check connection between indicator switch and Upfitter Connector pin "G". Pin should see 12vdc when PTO is engaged.
	Worn or damaged clutch pack. (CS6B or GM6B series PTO).	Have PTO inspected and rebuild as necessary.

