



## Mack Models

---

**Mack Model** CH , RB , DM , CHN , CL , CT , CV , CX , CXM , LE , MR , RD

---

**\*\* SOLUTION \*\***

---

**Title** V-MAC III - PTO Does Not Operate

---

**Cause** Questions regarding PTO operation have been submitted.

---

**Solution** Check first if the other speed control are working properly (Electronic Hand throttle and Cruise Control). If this is the case, this narrows the search to PTO only inputs / parameters.

To operate properly, a PTO (PTO1 or PTO2) needs the 3 requirements below:

### 1. Parameters setting

To troubleshoot the condition, set the *PTO parameters* to their default values:

- Min Set speed: 475 rpm
- Max set speed: 2100 rpm
- Engine speed limit: 2100 rpm
- PTO max road speed: 10 mph (or 60 mph for driveshaft PTO2)
- Preset speed: 1000 rpm
- Ramp rate: 100 rpm/sec
- Parking brake check to enable PTO: No
- Single Speed Control: No
- Custom PTO: No

Under the *Vehicle component parameters*:

- Engine load threshold for no mph signal: 60%

Under the *Vocational features parameters* (General Option):

- Driveshaft PTO2 option: No (Yes for driveshaft PTO2)
- Set / Resume switch state: Set/Decel-Res/Accel
- PTO3: Not required
- PTO4: Not required
- CONTROL1: Not required
- CONTROL2: Not required

Under the *Idle shutdown parameters* (if idle shut is enabled):

- If PTO active: No
- If VSC active: No
- If SSC active: No

Under the *Engine customer parameters* (if driveshaft PTO2):

- Driveshaft PTO dropout threshold: 1000 rpm/s
- Driveshaft PTO dropout enabled: Yes

## 2. Switch inputs

Using the switch status screen, verify that the following switch inputs operate properly (state is changing when the switch is operated):

- Clutch switch
- Park brake switch
- Service brake switch
- Speed control switch
- Set / Decel - Resume / Accel switch
- PTO 1 or 2 switch
- Auxiliary switch (if needed)

Using the Monitor parameters screen, verify that the following parameters operates properly:

- Road speed (vehicle)
- Speed Control Mode
- Speed Control Switch
- Decel Mode
- Accel Mode
- PTO1
- PTO2

## 3. Activation procedure

To activate a PTO,

- Start the engine, parking brake applied, service brake and clutch pedal released
- Turn the Speed Control ON/OFF switch to ON and the PTO switch to ON
- Press and release the Set / Decel switch once
- Then press the Resume / Accel switch until the rpm increases to the desired speed

## 4. Further troubleshooting

If the Pro-Link version 2.1 or 3.0 or 4.0 has been used to program the PTO parameters, it is likely that some parameters are corrupted (refer to Service Bulletin SB-008-003, Date 7/2/99).

To resolve the condition, use the current Windows V-MAC Support Software, and follow the procedure below:

- Start the Customer Data Programming program
- Go to "PTO standard settings"
- For each PTO that does not work, set the PTO mode from "Standard" to "Custom", and then "Custom" to "Standard".
- Save the modifications by pressing the "Save/Exit" button.

If the PTO still does not operate, reprogram the Vehicle ECU with Mack Data Programming **WITHOUT saving the customer data**. Re-enter the customer data manually using Customer Data Programming.

If the condition persists, reflash and reprogram the Vehicle ECU with the same software version.

If it is still unsuccessful, replace the Vehicle ECU.

Solution visibility	Dealer distribution
<b>Function(s)/component(s) affected</b>	
Function affected	VECU , VMAC
<b>Function Group</b>	
Function Group	170 General - Programming, Data Monitor, Vehicle Information , 48 power take-off
<b>Customer effect</b>	
Main customer effect	calibration/programming/pairing/missing operation , stop/start
<b>Administration</b>	
Author	A241298
Dealer ID	A241298
Last modified by	A241298
Creation date	20-12-2018 22:12
Date of last update	21-12-2018 15:12
Status	Published