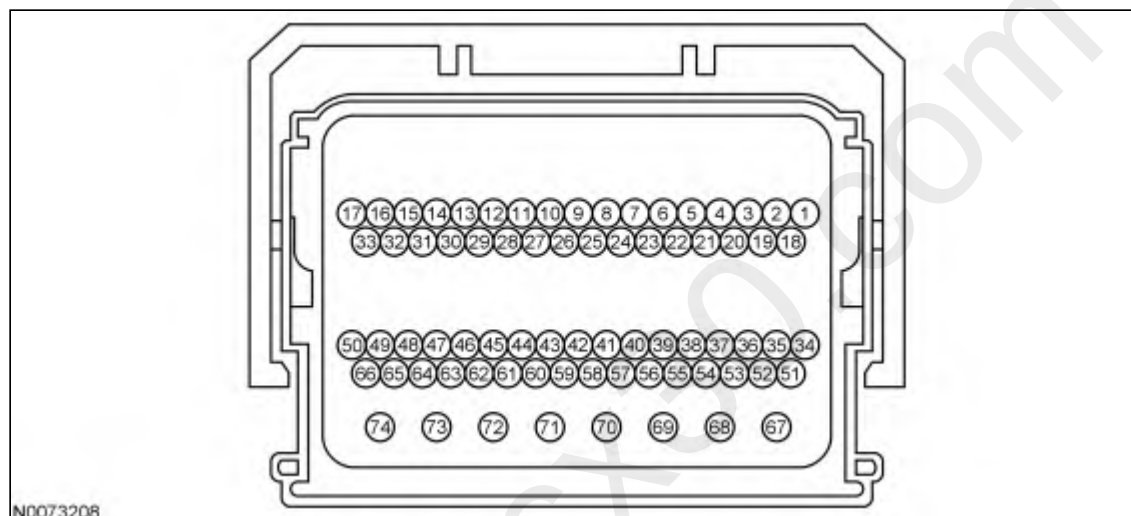
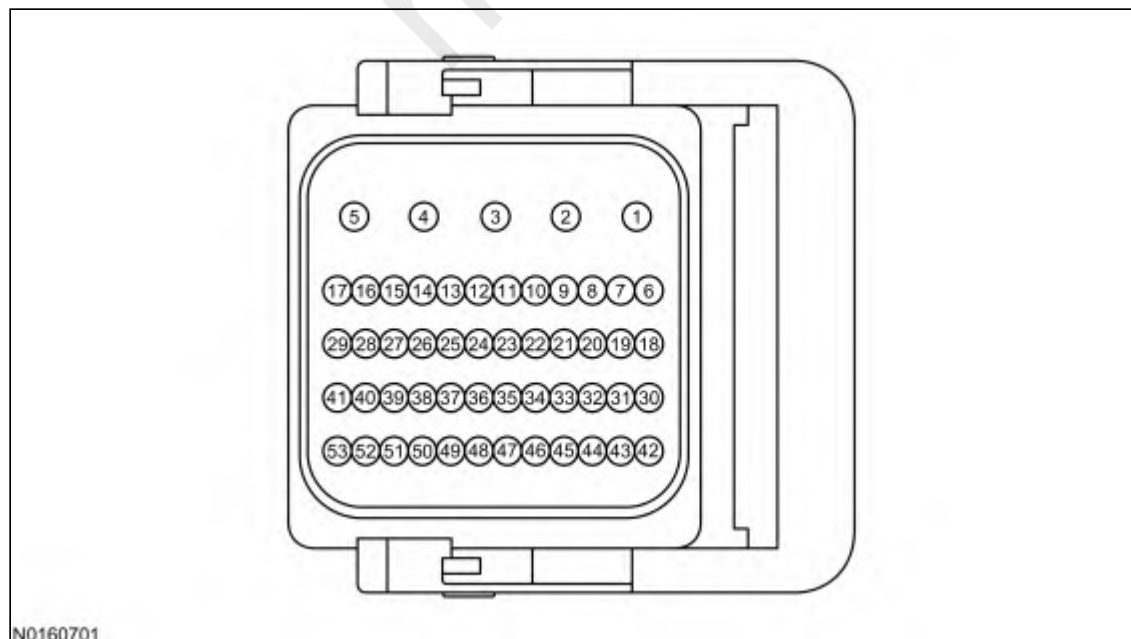


**AN: Power Take Off (PTO) Control**

**Note:** Regeneration may occur during normal operation. During regeneration, diagnostic procedures may display biased values. If a regeneration occurs during diagnostic procedures, allow the process to complete before continuing diagnostics.

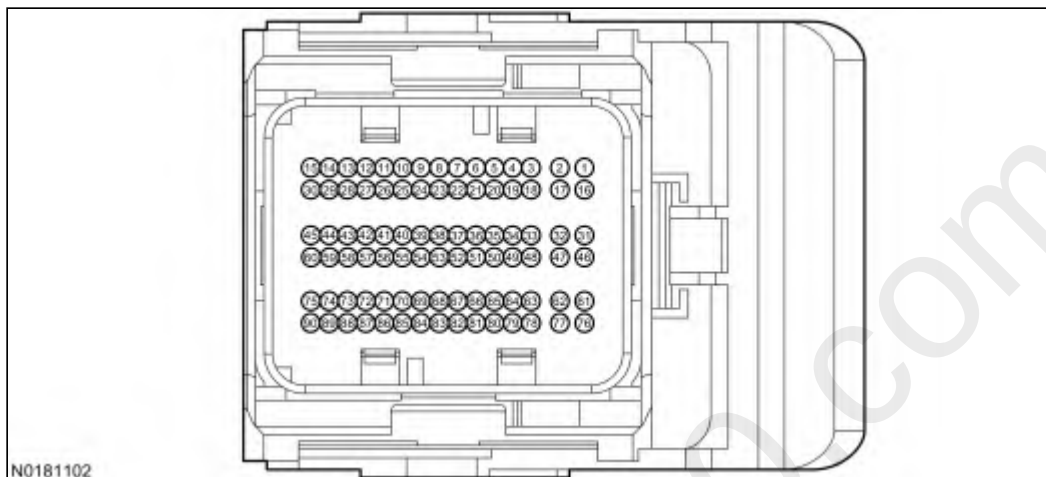
This pinpoint test is intended to diagnose the following:

- harness circuit PTO
- PCM (12A650)

**Powertrain Control Module-B (PCM-B) Connector****A****B**

| Vehicle       | Connector | Pin | Circuit |
|---------------|-----------|-----|---------|
| F-650 / F-750 | A         | 4   | PTO2    |
|               |           | 6   | PTO     |
| Transit       | B         | 43  | PTO2    |
|               |           | 33  | PTO     |

### Powertrain Control Module-T (PCM-T) Connector



| Pin | Circuit                 |
|-----|-------------------------|
| 18  | PTO2 (Power Take Off 2) |
| 19  | PTO (Power Take Off)    |

### AN1 VERIFY CORRECT PTO OPERATION

- Ignition OFF.
- Disconnect the PTO system or auxiliary idle control.
- Ignition ON, engine running.

#### Is a concern present?

|            |                                                                                                                                                                              |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Yes</b> | GO to <a href="#">AN2</a> .                                                                                                                                                  |
| <b>No</b>  | REFER to the Owner's Literature provided with the PTO system or auxiliary idle control to verify correct operating procedures, entry conditions, and diagnostic information. |

### AN2 CHECK THE PTO INPUT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- PCM-B connector disconnected.
- Ignition ON, engine OFF.
- For F-650/750,
- Measure the voltage between:

| ( + ) PCM-B Connector, Harness Side | ( - )  |
|-------------------------------------|--------|
| PTO                                 | Ground |
| PTO2                                | Ground |

- For F-Series Super Duty,
- Measure the voltage between:

| ( + ) PCM-T Connector, Harness Side | ( - )  |
|-------------------------------------|--------|
| PTO - Pin 19                        | Ground |
| PTO2 - Pin 18                       | Ground |

**Is any voltage present?**

|            |                                                                                                                                                                                                                           |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Yes</b> | REPAIR the short circuit. Clear the PCM DTCs. REPEAT the self-test.                                                                                                                                                       |
| <b>No</b>  | REFER to the Owner's Literature provided with the PTO system or auxiliary idle control to verify correct operating procedures, entry conditions, and diagnostic information.<br>Clear the PCM DTCs. REPEAT the self-test. |