Installation Guide

Endurant Series I/O Calibration Package Installation and Wiring Guide

TRIG2630 EN-US

April 2025

AUTOMATED TRANSMISSION™ TECHNOLOGIES

BACKED BY Roadranger SUPPORT

General Information

I/O Configurations

I/O Configurations (Cont'd)

Appendix

Important Information

This symbol is used throughout this manual to call attention to critical information where failure to adhere to safety specifications may result in personal injury and/or component damage.

Departure from the instructions, choice of tools, material or recommended parts mentioned in this publication may jeopardize safety.

Safety Requirements:

Safety related requirements placed on the vehicle system by the transmission. Failure to comply may disable key and/or redundant safety features of the transmission system.

WARNING: Failure to follow indicated procedures and/or safety requirements could result in death or serious injury.

WARNING: While working on a vehicle, do not modify transmission components or systems. Modification (altering, substituting, relocating) of transmission components may result in major vehicle component damage, severe injury or death.

This publication has been assembled to assist the original equipment manufacturer (OEM) with proper design integration, handling and assembly of the Endurant transmission. For additional information such as transmission operation, troubleshooting and warranty information, please see the Other Useful Publications section in this manual.

The Endurant Series system is designed to operate correctly and safely when the requirements in this installation guide are met, in particular unintended or incorrect system operation could occur if requirements marked as a safety requirement are not complied with.

Transmissions installed at OEM facilities shall meet all requirements as identified in the Application Guidelines TRAG2600 and be approved by Eaton Application Engineering. Contact your OEM Application Engineering department or Eaton Application Engineering for the proper Application Approval Form. All applications shall be submitted for approval.

Endurant Series transmissions are only compatible with engines as certified by Eaton Cummins Automated Transmission Technologies. For specific engine information, please contact the engine manufacturer.

Failure to adhere to installation requirements or any handling and installation requirements may affect transmission performance and/or warranty coverage.

Any reference to brand names in this publication is made as an example of the types of tools and materials recommended for use and should not be considered an endorsement. Equivalents may be used.

Every effort has been made to ensure the accuracy of the information contained in this manual. However, Eaton and Eaton Cummins Automated Transmission Technologies makes no warranty, either expressed or implied, based on the information provided and reserves the right to discontinue or modify models and/or procedures and to change specifications at any time without notice.

The vehicle OEM shall be responsible for producing parts that meet the requirements of this document.

Input / Output Calibration Information

Overview

The Endurant Transmissions incorporate enhanced controls to support various vocational features.

Features Include:

- 2-Speed Axle
- Auxiliary Transmission (Aux Trans)
- Force Neutral
- Hold Neutral
- Power Take-Off (PTO): PTO 1 and PTO 2
- Split Shaft PTO (SSPTO)
- Reverse Output
- Rock Free Mode
- Secondary Shift Mode
- Railroad Mode

The Transmission Control Module (TCM) is equipped to receive 4 switch inputs and control 3 relay outputs that can be configured using an Input/Output (I/O) Calibration Package to support these vocational features. All external circuit inputs and outputs are connected to the TCM in the 20-Way TCM Body Harness Connector.

This document contains all the Input / Output Calibration Packages and recommended wiring diagrams to assist the OEM or body builder with vocational feature integration. Once circuit and component installation is complete, ServiceRanger is required to configure the I/O Calibration Package in the TCM.

WARNING: All vehicle safety interlock circuitry is the responsibility of the OEM or body builder. Eaton Cummins Automated Transmission Technologies does not implement any safety interlock circuitry on the OEM vehicle chassis. Eaton Cummins Automated Transmission Technologies highly recommends that the OEM or body builder perform a thorough safety analysis to determine what safety interlocks are required to support the specific vehicle vocational feature. Failure to perform a thorough safety analysis may result in major vehicle component damage, severe injury or death.

NOTICE: Incorrect feature component and/or circuit integration resulting in transmission and/or TCM damage may void the transmission warranty.

Note: Additional information can also be found in TRIG-2620 PTO installation and Body Integration Guide and the relevant transmission installation guide:

- Endurant HD Installation guide TRIG0950
- Endurant XD Installation guide TRIG0960

J1939 Control vs Hardwired Control

All Endurant Series transmissions support using the J1939 CAN data link or a direct hardwired interface for all feature controls. Each transmission feature can be controlled independently via J1939 OR direct hardwired, but no one feature can be controlled by both.

When designing the chassis/body system, the installer must decide how each feature will be controlled. If all features will be controlled over J1939, which is recommended, then no additional wiring to the transmission is necessary and no I/O Calibration Packaged need to be installed. Only features determined to be hardwired will require specific wiring schematics defined in this document as well as the associated I/O Calibration Package installed using ServiceRanger.

When installing more than one feature, it will need to be determined if each feature will be controlled over J1939 or Hardwired to the transmission. Only features that are hardwired will require an I/O calibration for that specific feature, or if installing multiple hardwired features, you must install the I/O Calibration Package that covers all the hardwired features being installed.

If installing a mix of features controlled over both J1939 and direct hardwired, only the features that are hardwired require an I/O Calibration Package. All features controlled over J1939 shall be configured independently using the Configurations section within ServiceRanger.

Example Installation

The example below shows how the transmission would be configured for the selected features to be installed.

- PTO 1 (J1939 Control)
- Split-Shaft PTO (Hardwired)
- Reverse Output (Hardwired)

In this example, you are installing a transmission mounted PTO (PTO 1) that will be controlled over the J1939 CAN datalink as well as a Split-Shaft PTO transfer case that will be controlled using a direct hardwired to the transmission. We will assume the truck was built with the Reverse Output wired directly to the transmission and I/O Calibration Package #10 Reverse Output was installed at the factory.

If PTO 1 is being controlled over J1939, there is no additional wiring required to the transmission. Refer to TRIG-2620 PTO Installation and Body Builder Guide for information on J1939 Controlled PTO.

- ServiceRanger - Configuration / PTO
  - PTO 1: J1939 Control Only

With this example the Split-Shaft PTO (SSPTO) will be directly hardwired to the transmission following the specified schematic in this document. This example includes a vehicle built from the factory with a hardwired Reverse Output; take this into account when selecting the I/O Package for the SSPTO. The transmission can only have one I/O calibration installed, so you will need to install a new I/O Calibration Package to include both the SSPTO and Reverse Output.

- ServiceRanger - Configuration / Calibration / I/O
  - Package 58: SSPTO + Reverse Output

I/O Wiring Basics

Overview

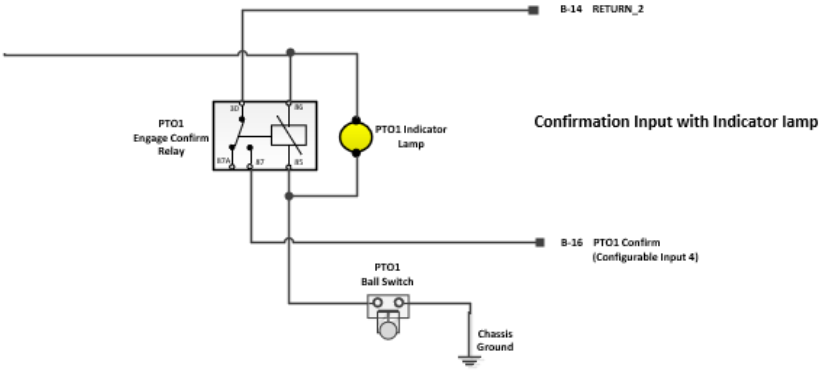
The schematics in this guide exist to help the technician install a particular function or to provide an engineer designing a chassis the basic interface to the transmission required for a function to operate correctly. Any modifications to these schematics should be reviewed with Eaton Cummins Service Engineering.

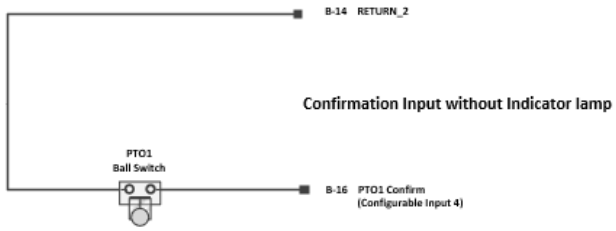
Switch Inputs

(Pins B4, B6, B15, B16)

The Endurant Transmission Control Module (TCM) has four programmable switch input pins which can be enabled using ServiceRanger when installing one of the calibrations listed in this document. These switch inputs are all set up for a “Pull to Ground” configuration; when an input is switched on, the input is pulled to ground. All inputs should be pulled to ground using the provided ground return pins on the TCM.

All switch inputs should be isolated from other loads in the circuit. For example, when using an indicator lamp for the PTO engage confirmation, a relay is required to isolate the lamp circuit from the TCM switch input. If no indicator is desired, use of a relay is not required (see examples below).

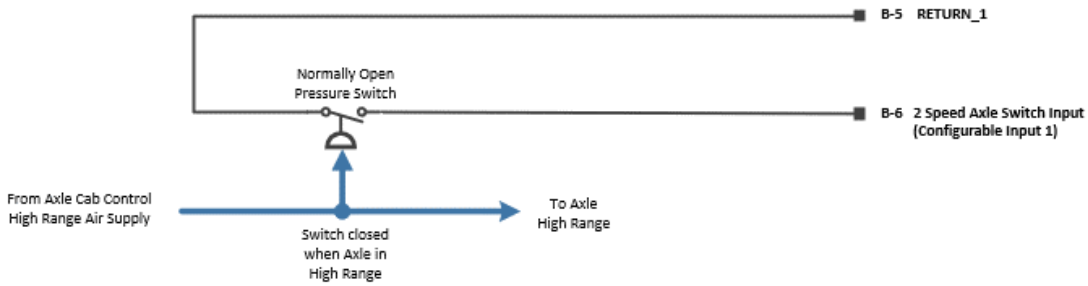




Ground Returns

(Pins B5, B14)

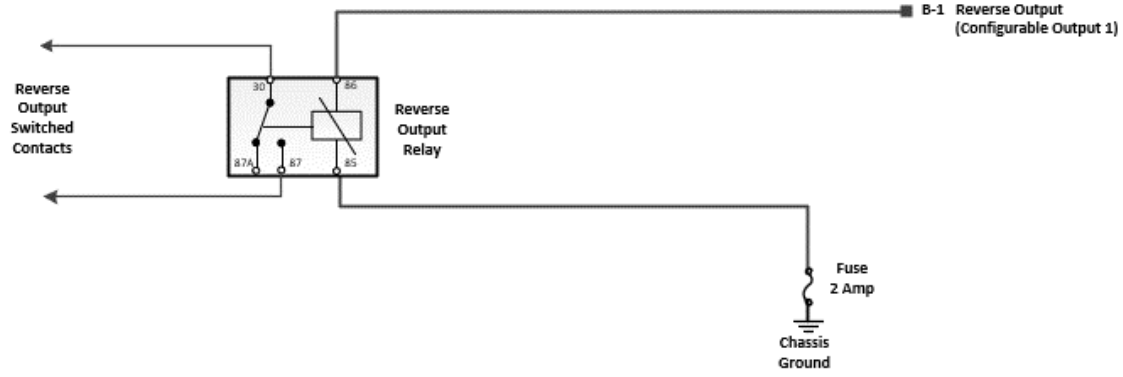
The TCM includes two ground returns which are only to be used for the switched input circuits. These returns should never be used for any load circuits including relay coils, solenoids, and incandescent lamps. These returns are protected internally so if an over current even occurs an internal fuse is blown. This fuse is no serviceable and will require the replacement of the TCM if damaged.



Relay Outputs

(Pins B1, B2, B3)

The TCM has three programmable relay output drivers which are enabled when installing one of the calibrations in this document using ServiceRanger. These outputs are specifically designed to drive a resistive load of no less than 100 ohms at 12 volts. These outputs are only to be used to drive a relay coil. All other loads in the circuit including solenoids and incandescent lamps in the circuit shall be switched by a relay and isolated from the TCM.



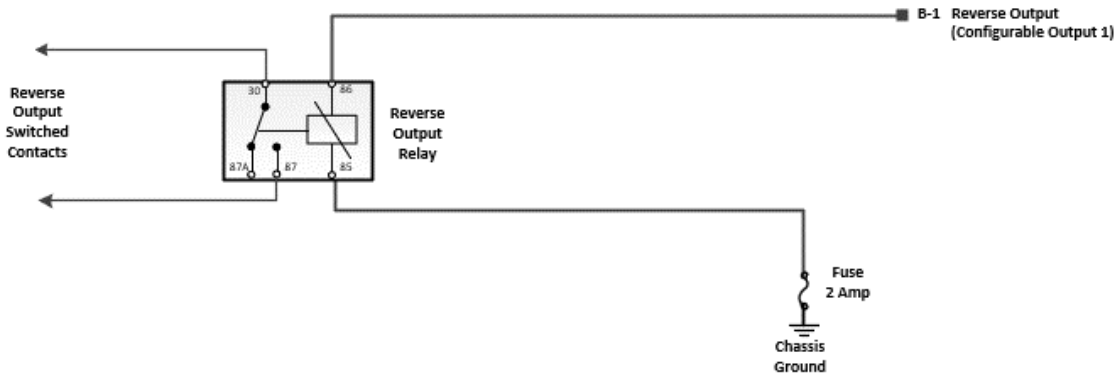
Relay Output Diagnostics

All I/O packages that have a relay output enabled must have a load applied to that output pin. The TCM monitors all the enabled outputs and expects to see a load (100-120 ohm) between the output and ground. If the output is shorted to VBATT, Ground or Open Circuit the TCM will set a fault and the function will not operate.

If the design of the actual chassis wiring does not require the use of a relay output but the calibration package installed shows a relay to be used, then an equivalent load must be applied between the output pin and ground to satisfy the diagnostics within the TCM.

Relay Output Protection Fuse (2 Amp)

All relay outputs require a 2-amp fuse in line with the load to protect the TCM relay outputs from an overcurrent event.



I/O Calibration Package Installation Process Using ServiceRanger

1. Identify I/O Calibration Package based on the vocational feature(s) to be installed - Reference I/O Calibration Package Index below.
2. Install vocational feature components (PTO, Reverse Switch, etc.) and associated wiring - Reference I/O Calibration Package schematic diagrams in this documents.

WARNING: Follow all OEM and/or vocational feature manufacturer installation instructions and recommended wiring diagram. Failure to follow instructions and wiring diagrams may result in major vehicle component damage, severe injury or death.

3. Key on with engine off.
4. Connect ServiceRanger.
5. Go To “Configuration”.
6. Select “Calibration” tab.
7. Select “I/O” on the left-hand navigation pane.
8. From the “Other Available IO Calibration Options” section, select I/O Calibration Package identified in Step 1.
9. Select “Apply” and follow on-screen prompts.
10. Go To “Service Reports”.
11. Select “Service Activity Reports”.
12. Enter required information and select “Start Report”.
13. Select “Send to Eaton”.
14. Verify vocational feature operation per OEM and/or vocational feature manufacturer guidelines.
    - If feature operates as intended and no fault codes are set Active, process complete.
    - If feature does not operate as intended and a fault code sets Active, refer to the TRTS-0950 Endurant HD Troubleshooting Guide or TRTS-0960 Endurant XD Troubleshooting Guide.

Package 37 - Reset I/O Calibration to Off

This calibration is used to reset or turn off an I/O Calibration Package configured in the TCM.

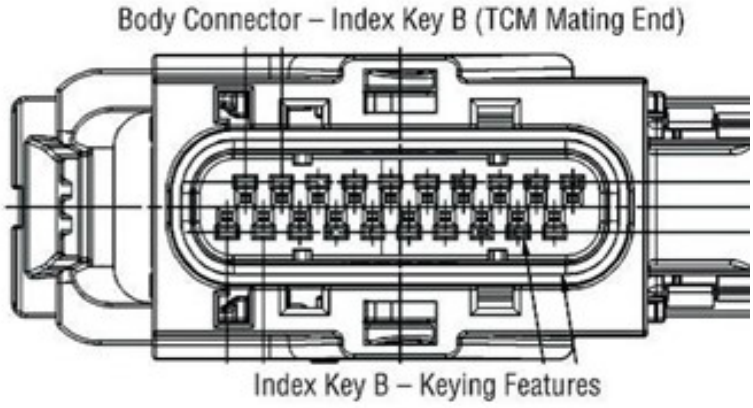
Use this procedure when:

- Before installing a new I/O calibration if one is currently installed in the TCM and a new I/O Calibration Package is desired.
  - For example, when a new feature is wired and requires a different calibration than what is currently installed.
- TCM is currently configured with an I/O Calibration Package and no I/O Calibration Package is desired.
  - For example, when a feature is being deleted and wiring has been removed from transmission TCM connector, or when a calibration was installed by mistake.

TCM 20 Way Body Connector

The TCM 20-way body connector is part of the OEM transmission harness and is installed on the transmission during manufacture.

- To add wired to the 20-way connector, first disconnect the connector from the transmission controller by releasing the cam lock.
- Remove the connector back shell and the secondary terminal lock.
- Remove terminal plugs in corresponding pin locations where new terminals / wires will be added.
- Only use approved terminals, seals, crimp tool, as well as the correct wire size (see below).



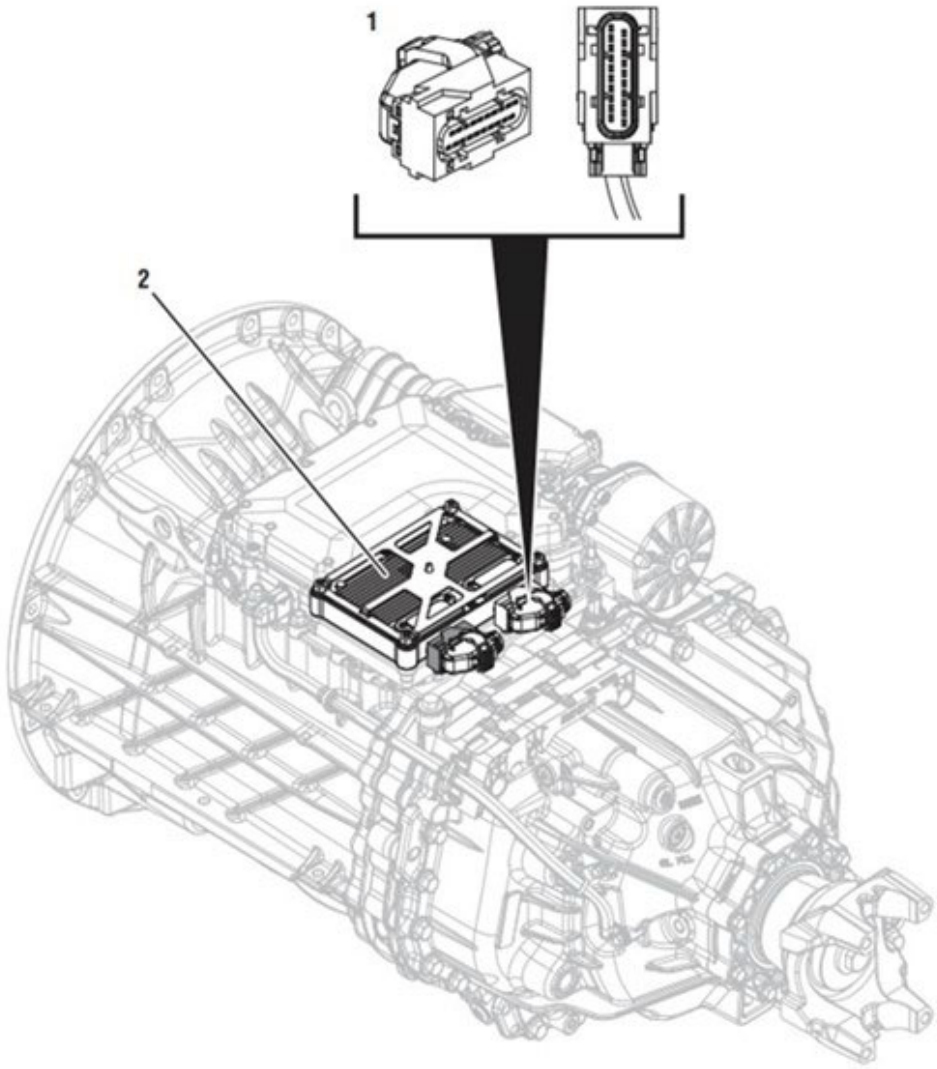
20-way TCM Body Connector Terminals and Seals Required

Component	Aptiv (Delphi) Part #
Terminal	15471370
Wire Seal	15305351

Required Wire Size for Terminals

- 0.8 mm2 (18 AWG) TXL Wire

TCM 20-Way Body Connector Location

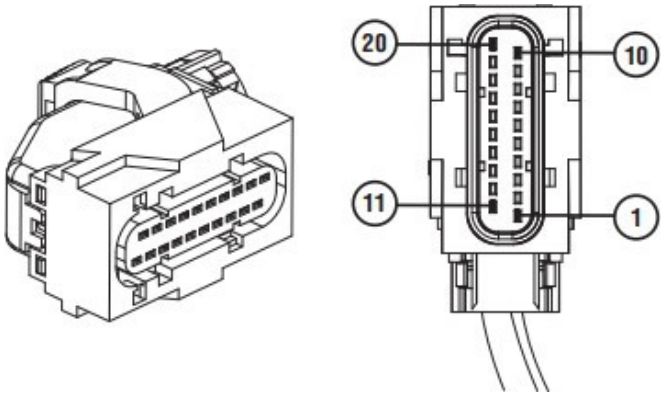


1. 20-Way TCM Body Harness Connector
2. Transmission Control Module (TCM)

1. 20-Way TCM Body Harness Connector

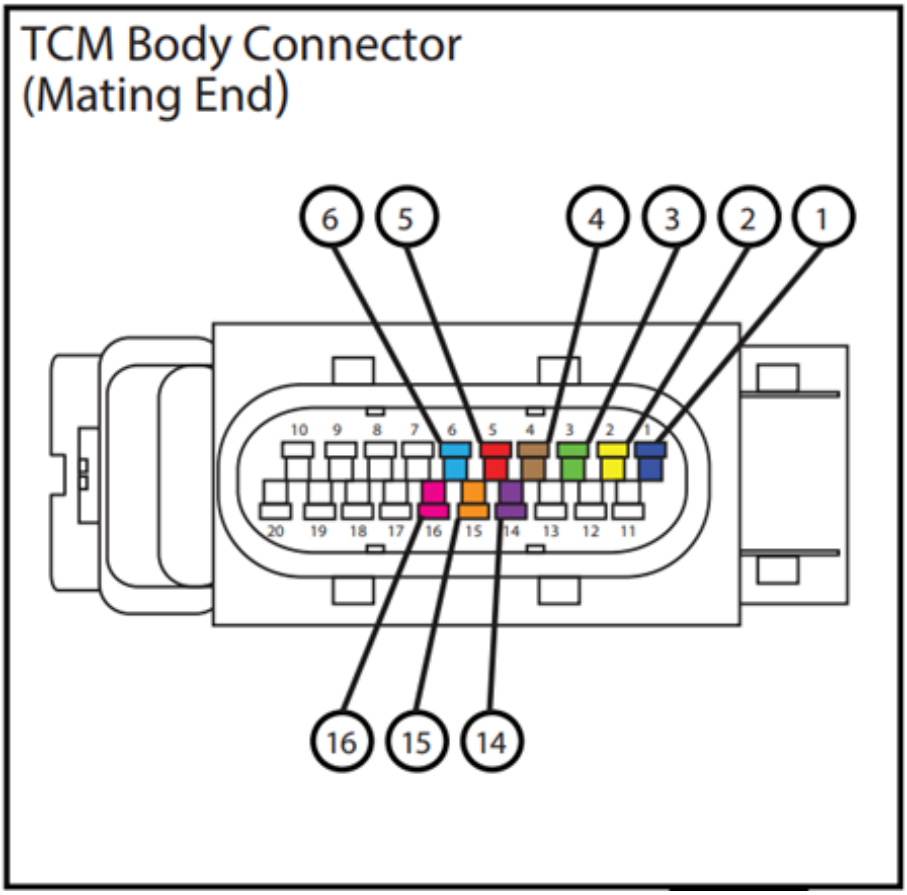
2. Transmission Control Module (TCM)

TCM 20-way Body Connector Pin Descriptions



Body Connector Pin Number	Wire Size (AWG)	Circuit Description
B-1	18	Configurable Output 1
B-2	18	Configurable Output 2
B-3	18	Configurable Output 3
B-4	18	Configurable Input 2
B-5	18	Body I/O Return 1
B-6	18	Configurable Input 1
B-7	18	CAN B - High (OEM Use Only)
B-8	18	CAN B - Low (OEM Use Only)
B-9	18	Plugged (not used)
B-10	18	Plugged (not used)
B-11	18	Plugged (not used)
B-12	18	Plugged (not used)
B-13	18	Plugged (not used)
B-14	18	Body I/O Return 2
B-15	18	Configurable Input 3
B-16	18	Configurable Input 4
B-17	18	Forced / Hold Neutral Input 5
B-18	18	Plugged (not used)
B-19	18	Plugged (not used)
B-20	18	Plugged (not used)

TCM 20-way Body Connector Pin Locations



Input / Output Calibration Index

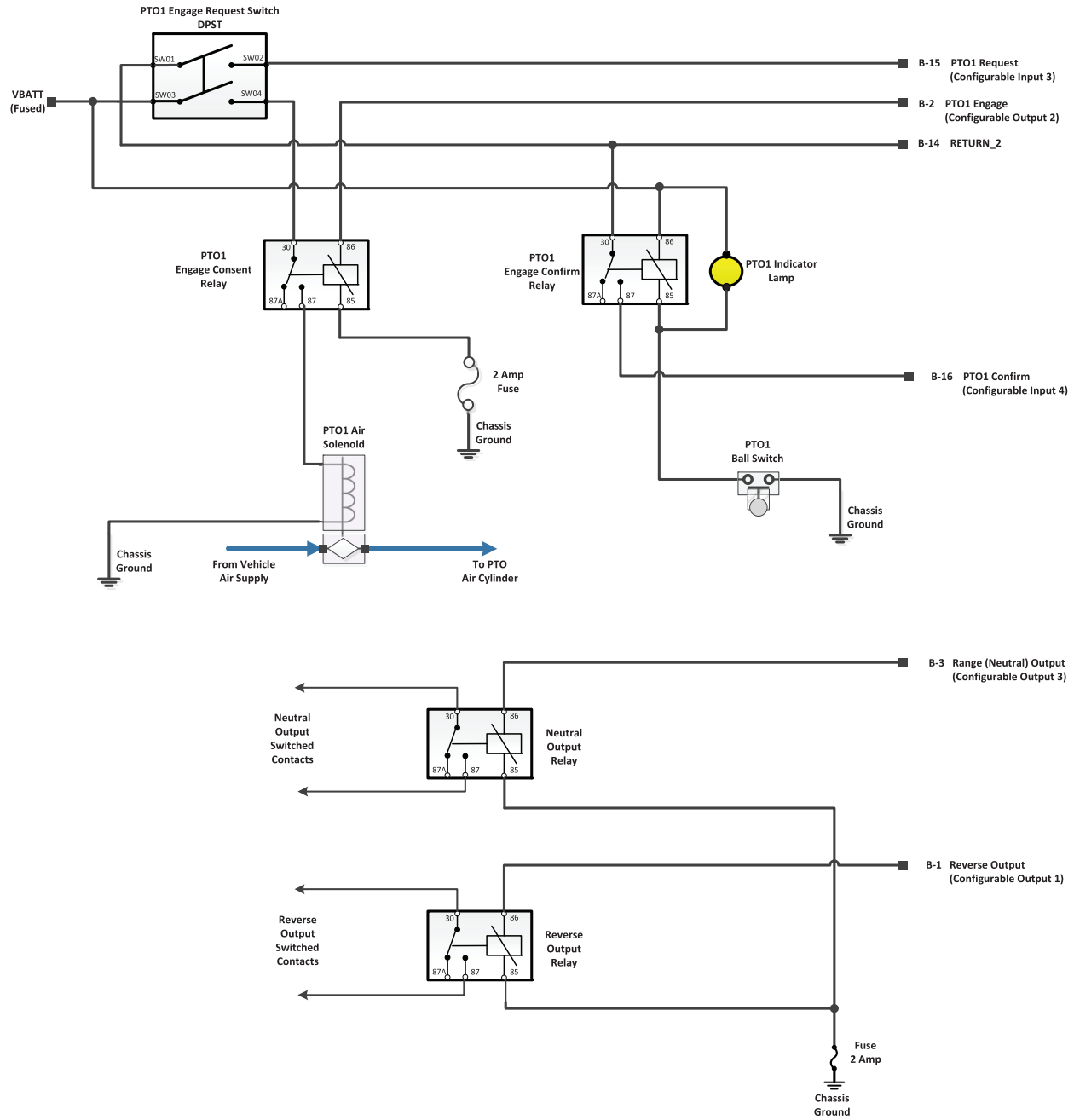
I/O Package	I/O Calibration Package Description	Wiring Diagram Link	HD-V	XD	XD Pro
1	Neutral Output + PTO 1 + Reverse Output	page 15	✓	✓	✓
2	Rock Free Mode + Secondary Shift Mode	page 16	✓		✓
3	2-Speed Aux Trans + Rock Free Mode	page 17			✓
4	PTO 1	page 18	✓	✓	✓
5	PTO 1 + PTO 2	page 19	✓	✓	✓
6	PTO 1 + Secondary Shift Mode	page 20	✓		✓
7	PTO 1 + Rock Free Mode + Secondary Shift Mode	page 21	✓		✓
8	PTO 1 + Reverse Output + Rock Free Mode	page 22	✓		✓
9	Rock Free Mode	page 23	✓		✓
10	Reverse Output	page 24	✓	✓	✓
11	PTO 1 + Reverse Output	page 25	✓	✓	✓
12	2-Speed Aux Trans	page 26			✓
13	2-Speed Aux Trans + Secondary Shift Mode	page 27			✓
14	Force Neutral	page 28	✓	✓	✓
15	Hold Neutral	page 28	✓	✓	✓
16	2-Speed Axle	page 29			✓
17	2-Speed Axle + Rock Free Mode	page 30			✓
18	2-Speed Axle + PTO 1	page 31			✓
19	2-Speed Axle + Secondary Shift Mode	page 32			✓
20	Split Shaft PTO	page 33			✓
21	PTO 1 + Split Shaft PTO	page 34			✓
22	Force Neutral + PTO 1	page 35	✓	✓	✓
23	PTO 1 + PTO 2 + Force Neutral	page 36	✓	✓	✓
24	Force Neutral + Neutral Output + Reverse Output	page 37	✓	✓	✓
25	Hold Neutral + PTO 1	page 35	✓	✓	✓
26	Hold Neutral + PTO 1 + PTO 2	page 36	✓	✓	✓
27	Hold Neutral + Neutral Output + Reverse Output	page 37	✓	✓	✓
29	PTO 1 + Rock Free Mode	page 38	✓		✓

I/O Package	I/O Calibration Package Description	Wiring Diagram Link	HD-V	XD	XD Pro
30	Reverse Output + Secondary Shift Mode	page 39	✓		✓
31	Reverse Output + Rock Free Mode	page 40	✓		✓
32	2-Speed Aux Trans + Reverse Output	page 41			✓
33	2-Speed Axle + Reverse Output	page 42			✓
34	PTO 1 + PTO 2 + Reverse Output	page 43	✓	✓	✓
35	Neutral Output + Reverse Output	page 44	✓	✓	✓
36	Neutral Output	page 45	✓	✓	✓
37	Reset I/O Calibration to Off Note: This package is used to reset or turn off an I/O Calibration Package configured in the TCM.	N/A	✓	✓	✓
38	3-Speed Aux Trans - Underdrive, Direct, Overdrive (UD, D, OD)	page 46			✓
39	3-Speed Aux Trans (UD, D, OD) + Rock Free Mode	page 47			✓
40	3-Speed Aux Trans (UD, D, OD) + Secondary Shift Mode	page 48			✓
41	3-Speed Aux Trans (UD, D, OD) + Rock Free Mode + Secondary Shift Mode	page 49			✓
42	3-Speed Aux Trans - Underdrive, Neutral, Direct, Overdrive (UD, N, D, OD)	page 50			✓
43	3-Speed Aux Trans (UD, N, D, OD) + Rock Free Mode	page 51			✓
44	4-Speed Aux Trans - Low, Underdrive, Direct, Overdrive (L, UD, D, OD)	page 52			✓
45	4-Speed Aux Trans (L, UD, D, OD) + Rock Free Mode	page 53			✓
46	4-Speed Aux Trans - Low, Underdrive, Neutral, Direct, Overdrive (L, N, UD, D, OD)	page 54			✓
47	Railroad Mode	page 55			✓
48	Railroad Mode + PTO 1	page 56			✓
49	PTO 1 (J1939 Request/Consent and Hardwired Confirm) + Reverse Output	page 57	✓	✓	✓
50	PTO 1 (Remote Engine Start/Stop)	page 58	✓	✓	✓
51	PTO 1 + PTO 2 (Remote Engine Start/Stop)	page 59	✓	✓	✓
52	Split-Shaft PTO + Force Neutral	page 60			✓
53	Split-Shaft PTO + PTO 1 + Forced Neutral	page 61			✓
54	Split-Shaft PTO + Neutral Output	page 62			✓

I/O Package	I/O Calibration Package Description	Wiring Diagram Link	HD-V	XD	XD Pro
55	Split-Shaft PTO + PTO 1 + Neutral Output	page 63			✓
56	PTO 1 (Hot Shift PTO)	page 64	✓	✓	✓
57	PTO 1 (Dual Stage Hot Shift PTO)	page 65	✓	✓	✓
58	Split-Shaft PTO + Reverse Output	page 66			✓
59	Split-Shaft PTO + PTO 1 + Reverse Output	page 67			✓
60	PTO 2 Only	page 68	✓	✓	✓
61	PTO 2 (J1939 Request, Consent) Hardwired Confirm	page 69	✓	✓	✓
62	Split Shaft PTO + Rock Free + Secondary Mode	page 70			✓
63	Railroad Mode + Reverse Output	page 71			✓

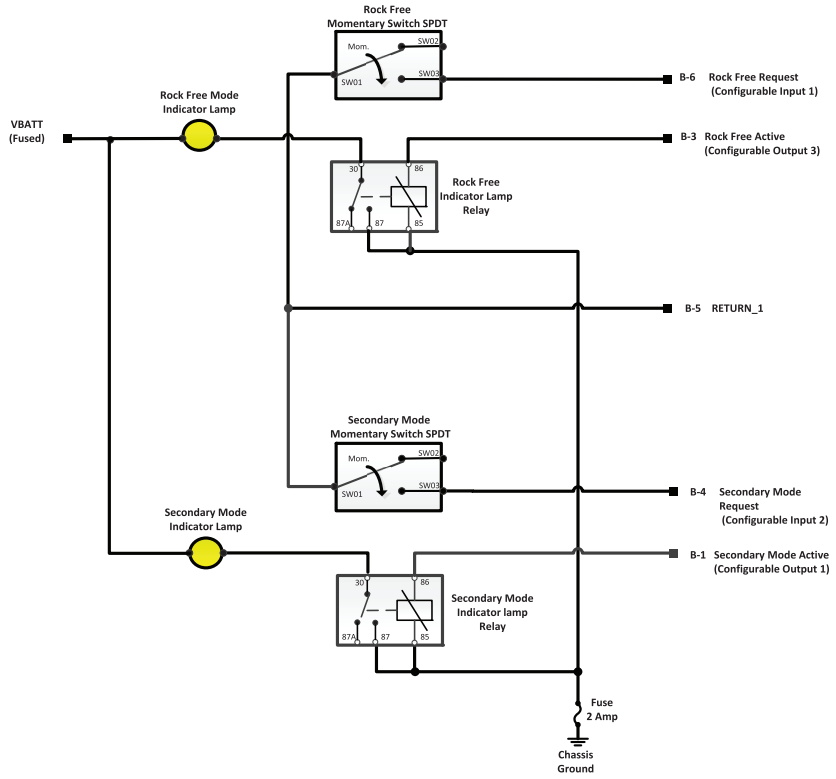
Input / Output Calibration Package 1

PTO 1 + Reverse Output + Neutral (Range) Output

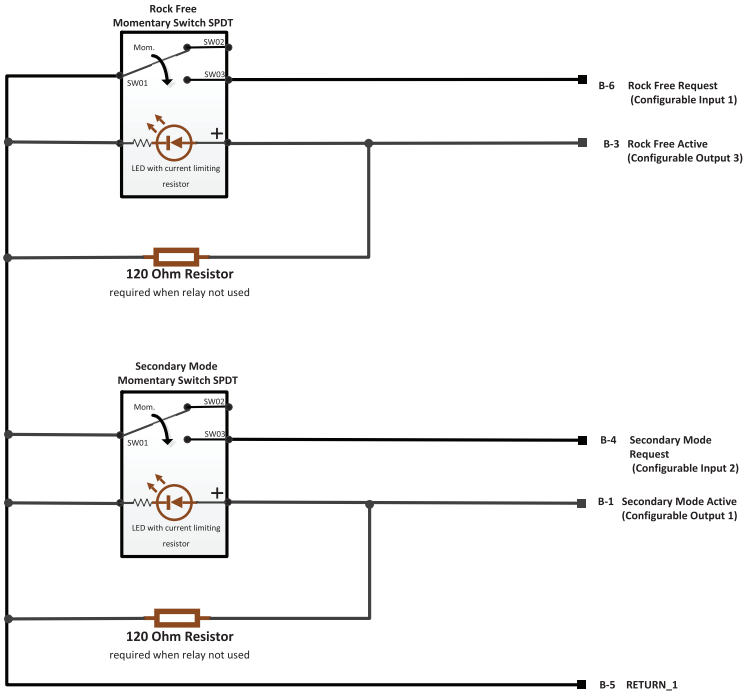


Input / Output Calibration Package 2

Rock Free Mode + Secondary Shift Mode

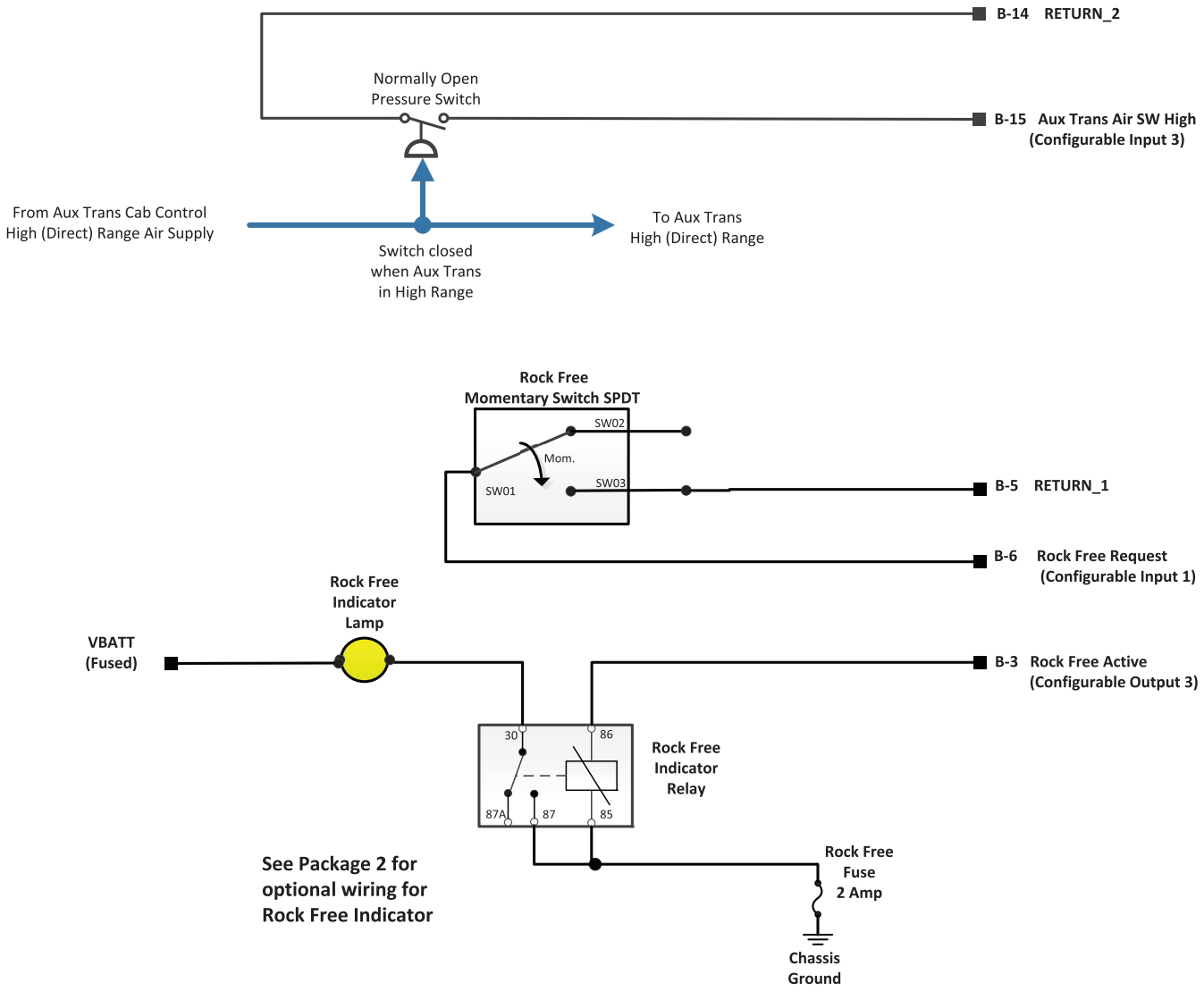


Optional schematic for Secondary and Rock Free Mode Switches when using LED Indicators



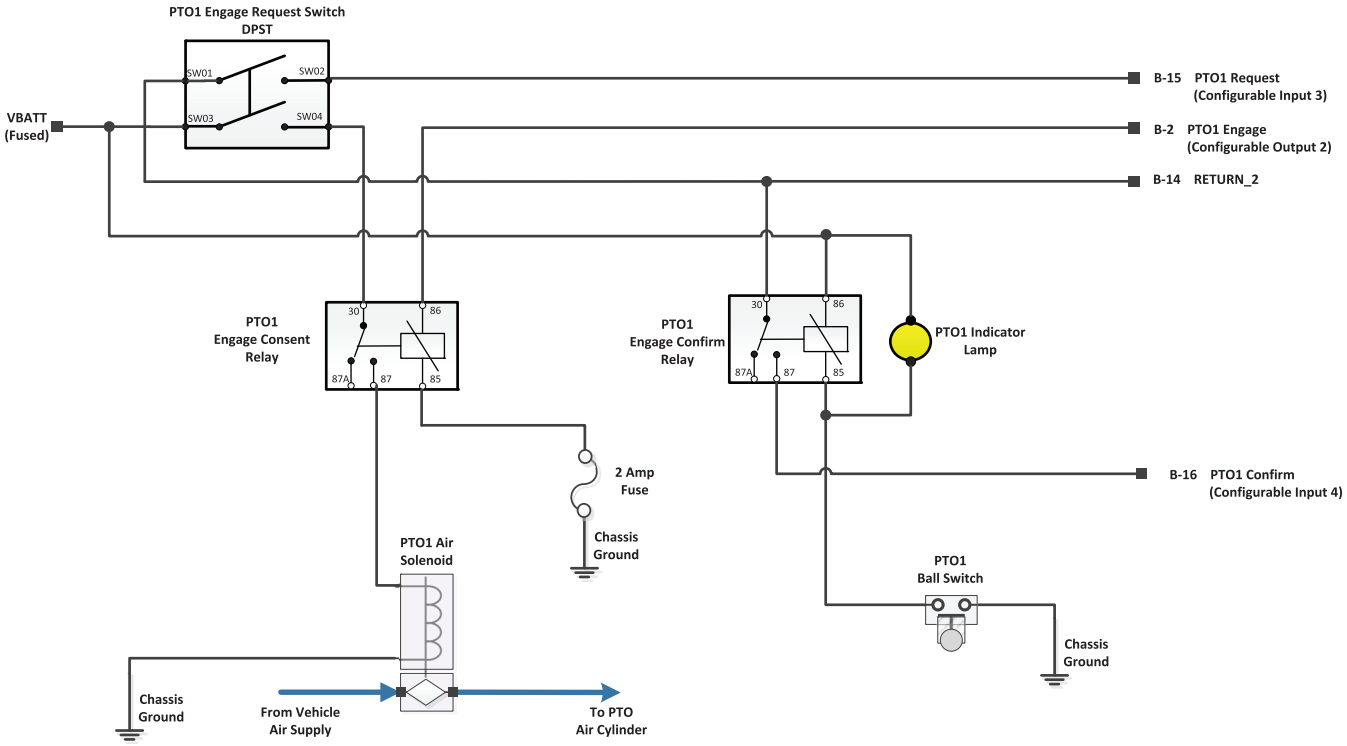
Input / Output Calibration Package 3

2-Speed Aux Trans + Rock Free Mode



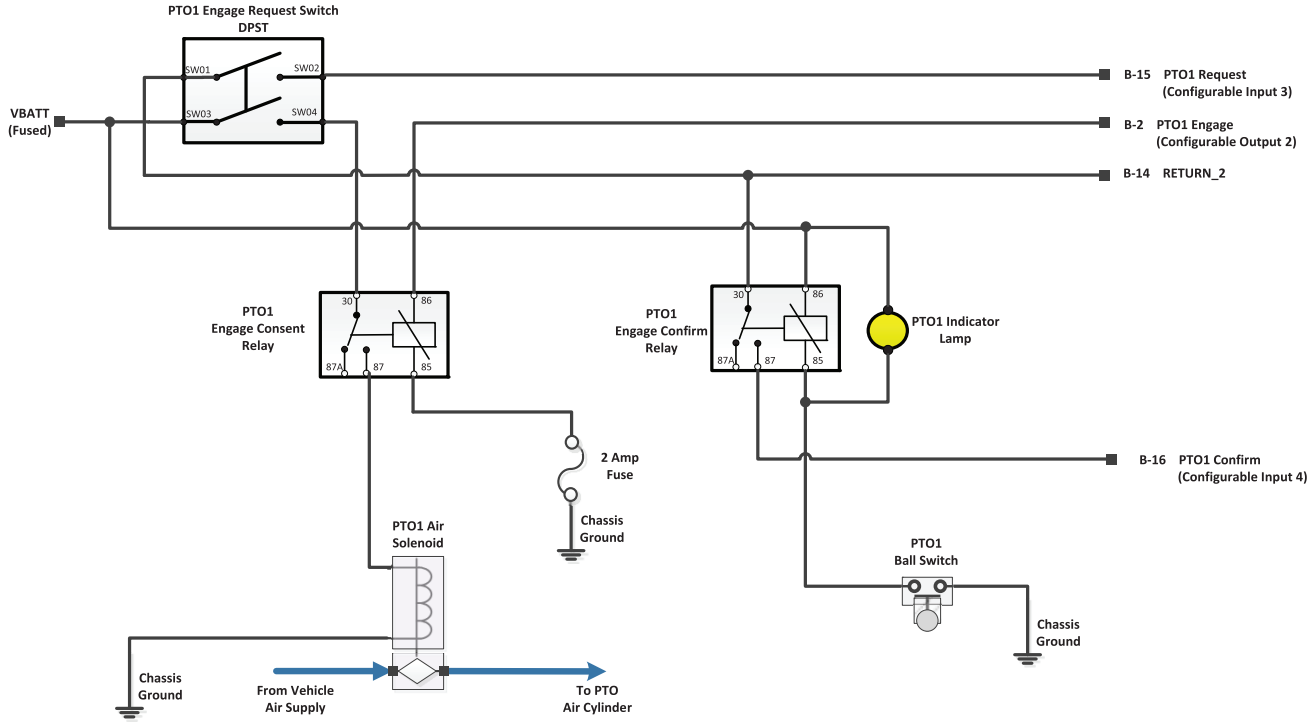
Input / Output Calibration Package 4

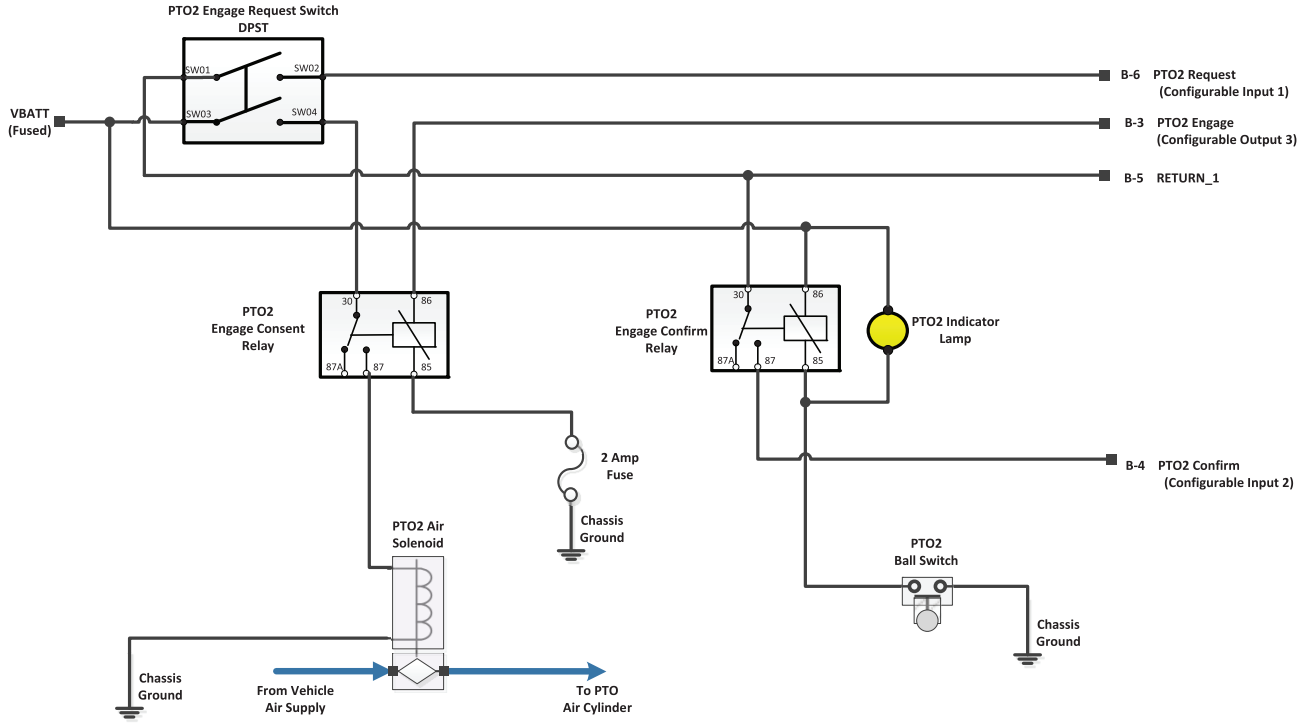
PTO 1



Input / Output Calibration Package 5

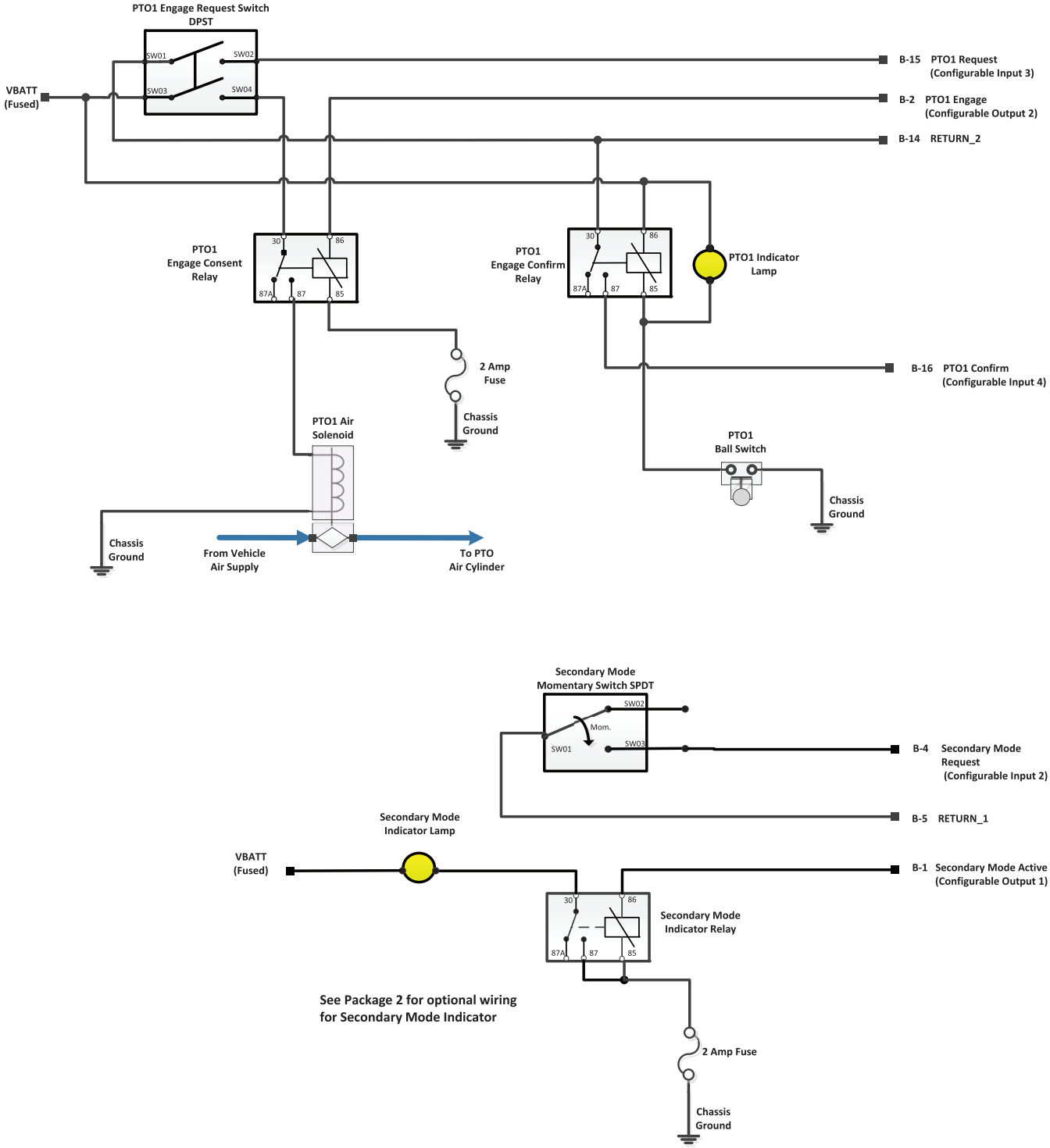
PTO 1 + PTO 2





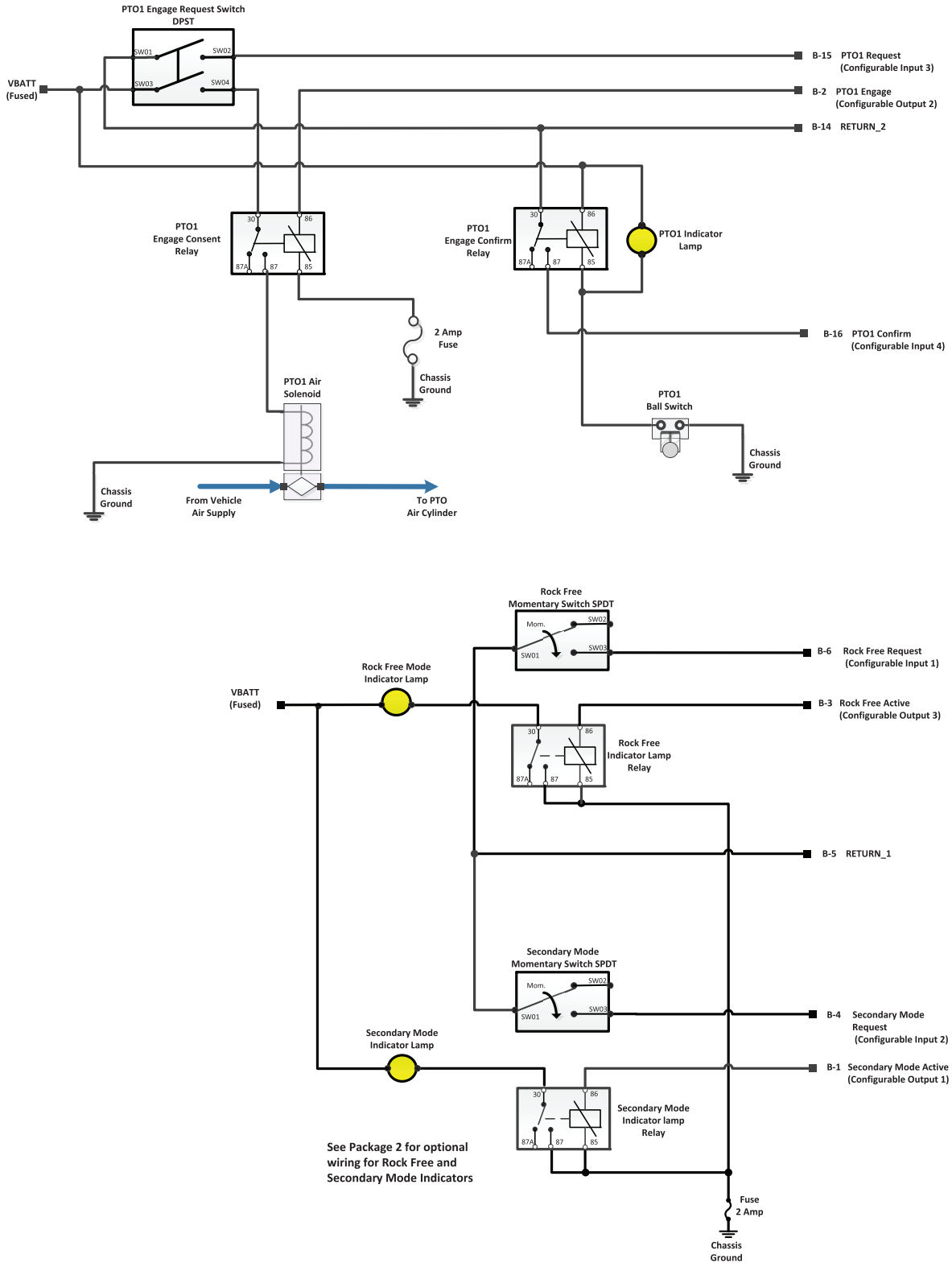
Input / Output Calibration Package 6

PTO 1 + Secondary Shift Mode



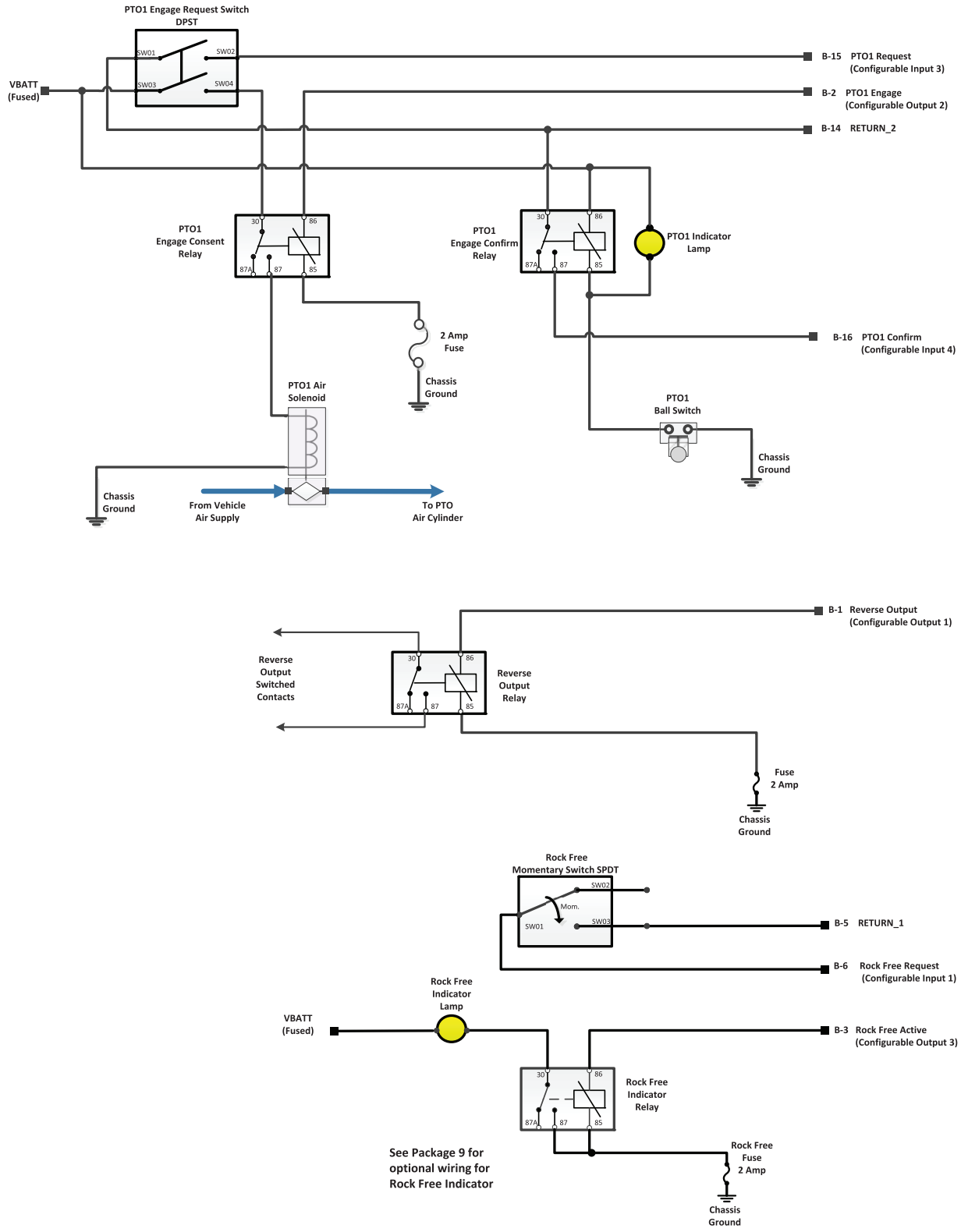
Input / Output Calibration Package 7

PTO 1 + Rock Free Mode + Secondary Shift Mode



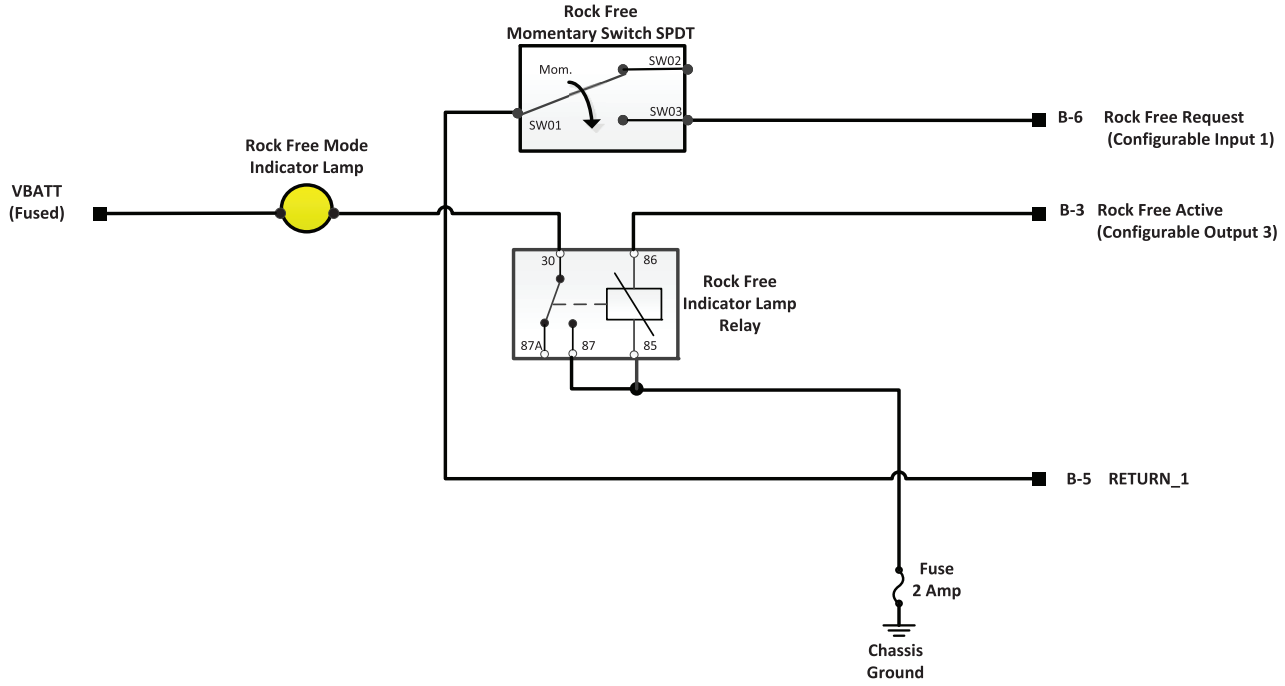
Input / Output Calibration Package 8

PTO 1 + Reverse Output + Rock Free Mode

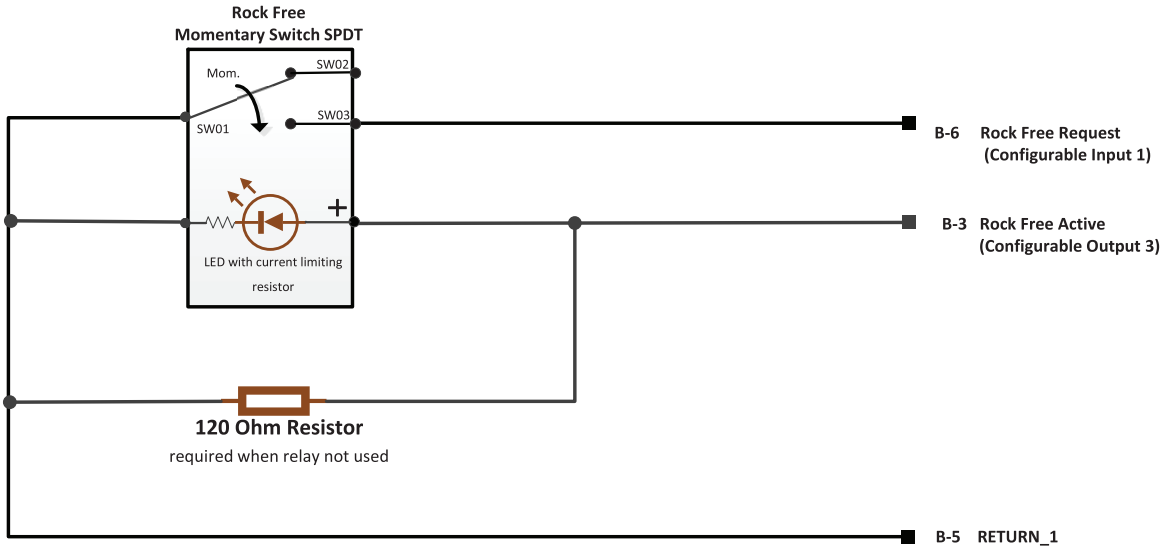


Input / Output Calibration Package 9

Rock Free Mode

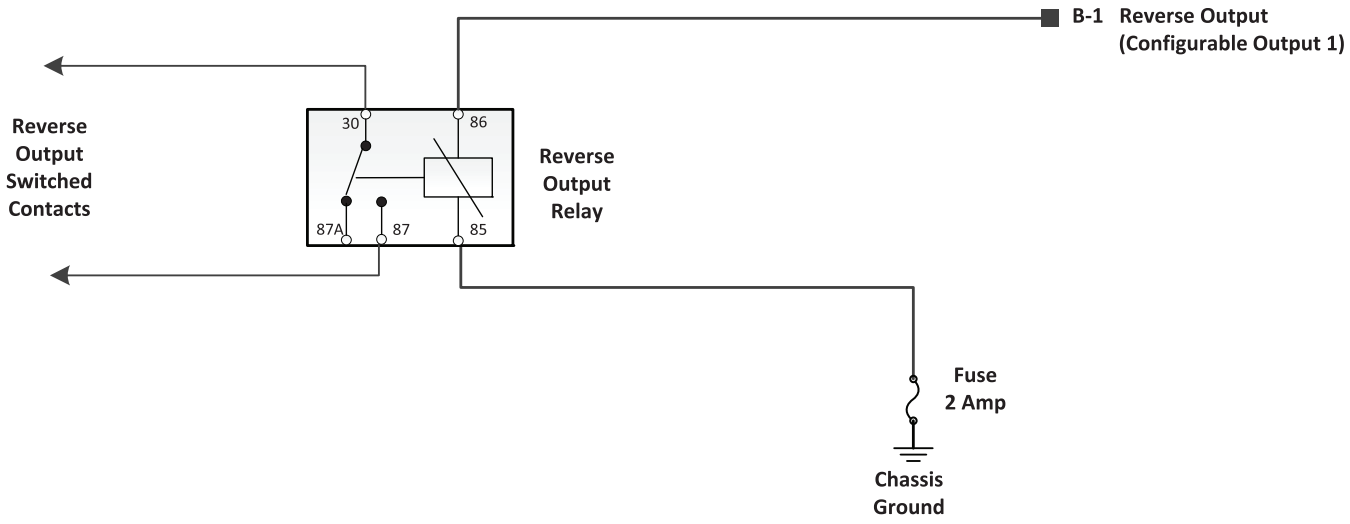


Optional schematic for Rock Free Mode Switch when using LED Indicators



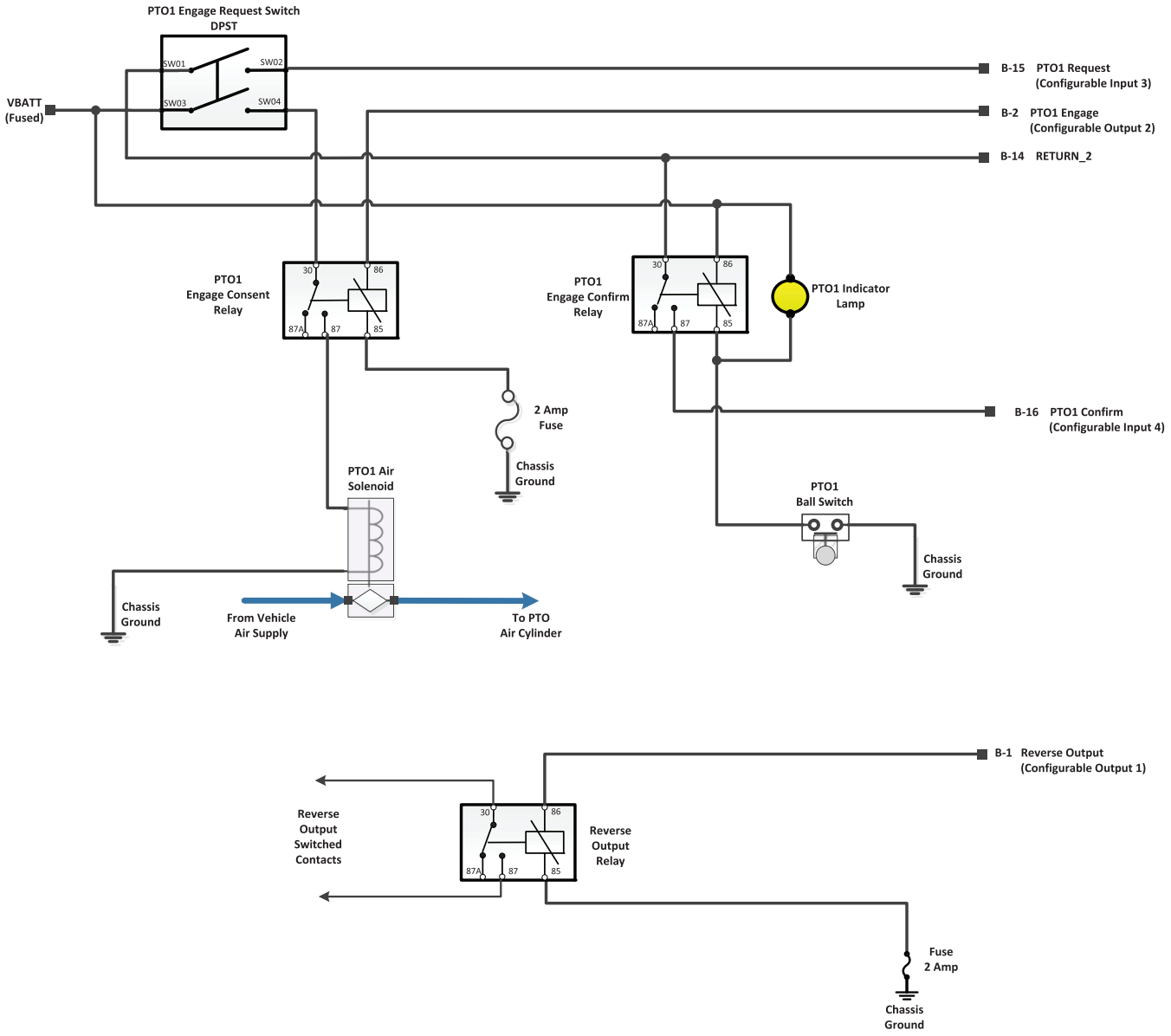
Input / Output Calibration Package 10

Reverse Output



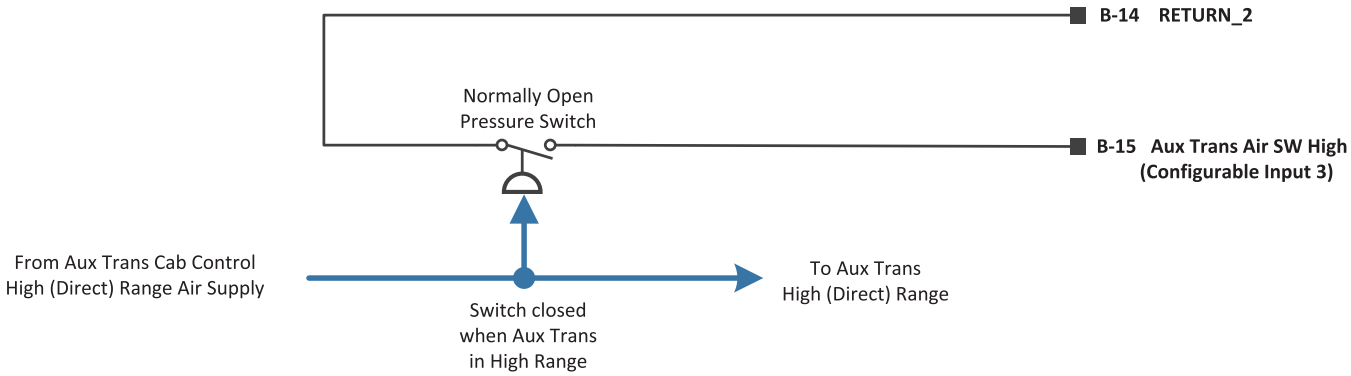
Input / Output Calibration Package 11

PTO 1 + Reverse Output



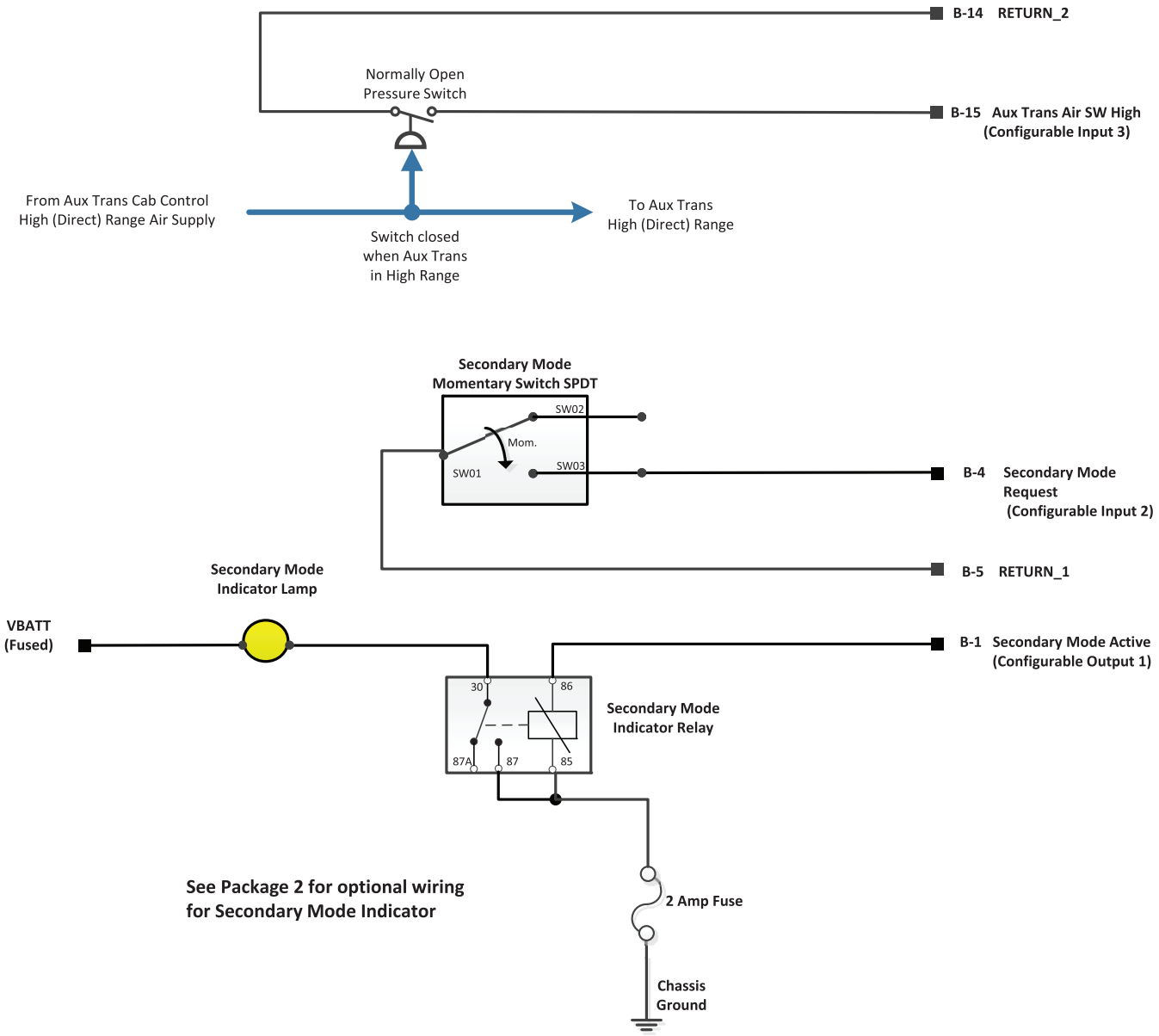
Input / Output Calibration Package 12

2-Speed Aux Trans



Input / Output Calibration Package 13

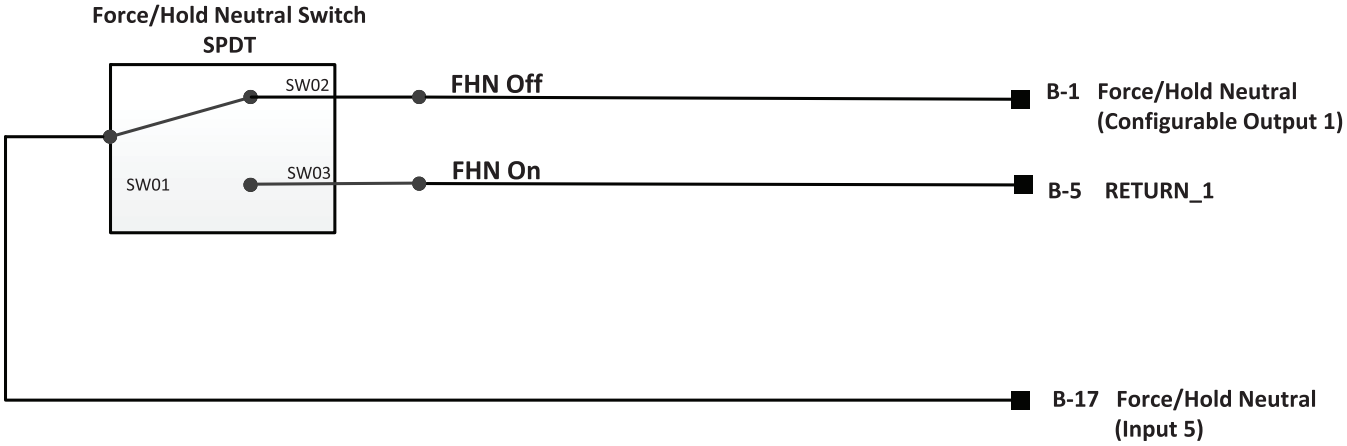
2-Speed Aux Trans + Secondary Shift Mode



Input / Output Calibration Package 14 and 15

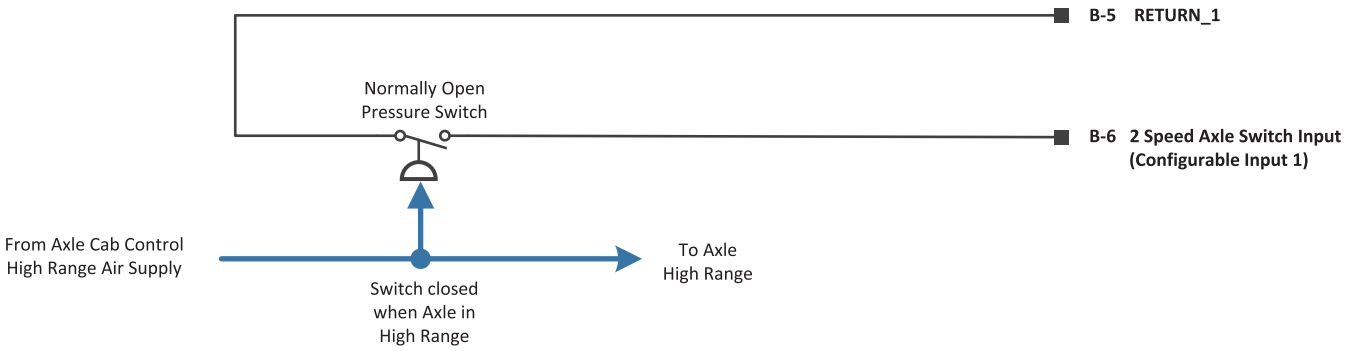
#14 Force Neutral

#15 Hold Neutral



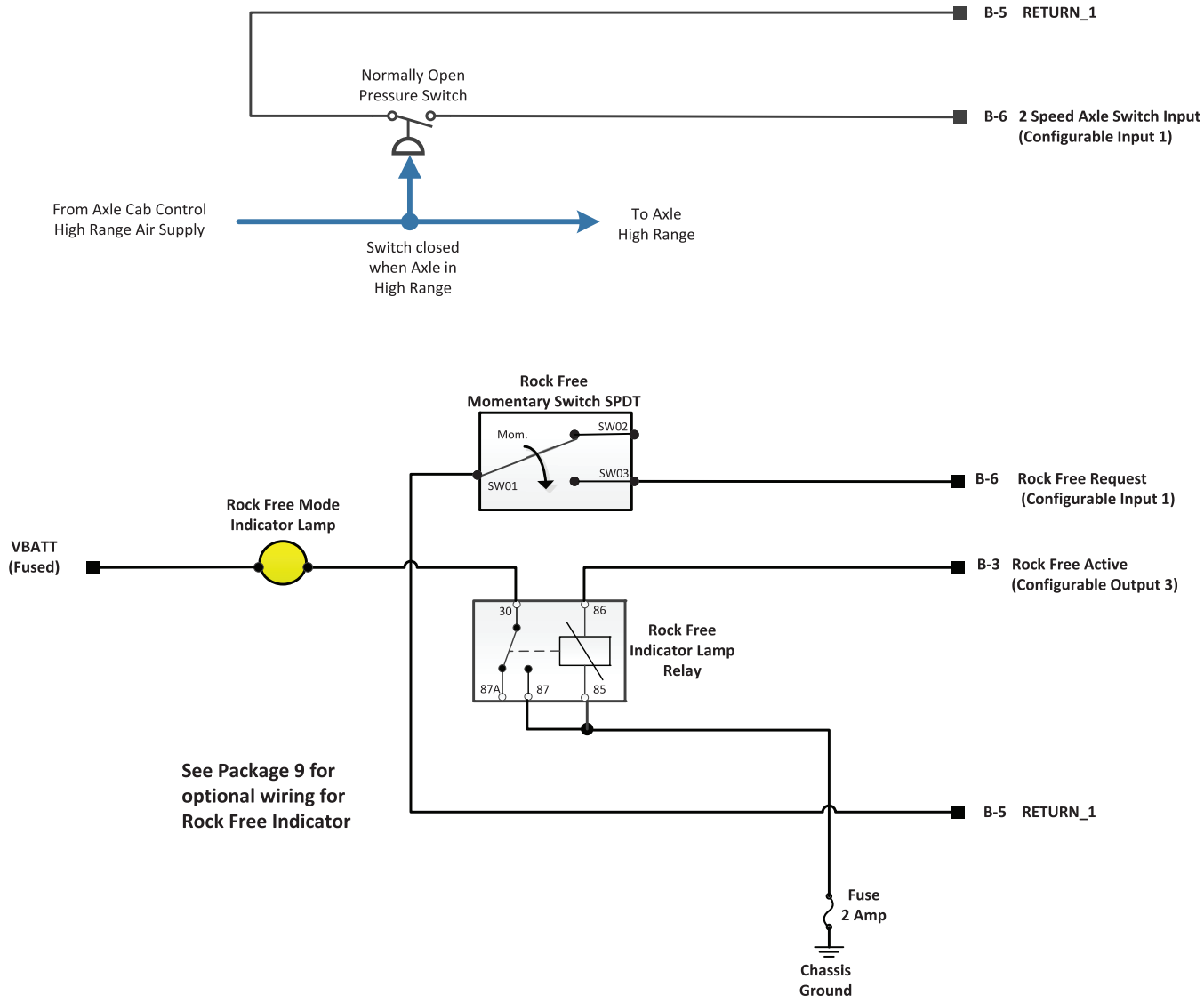
Input / Output Calibration Package 16

2-Speed Axle



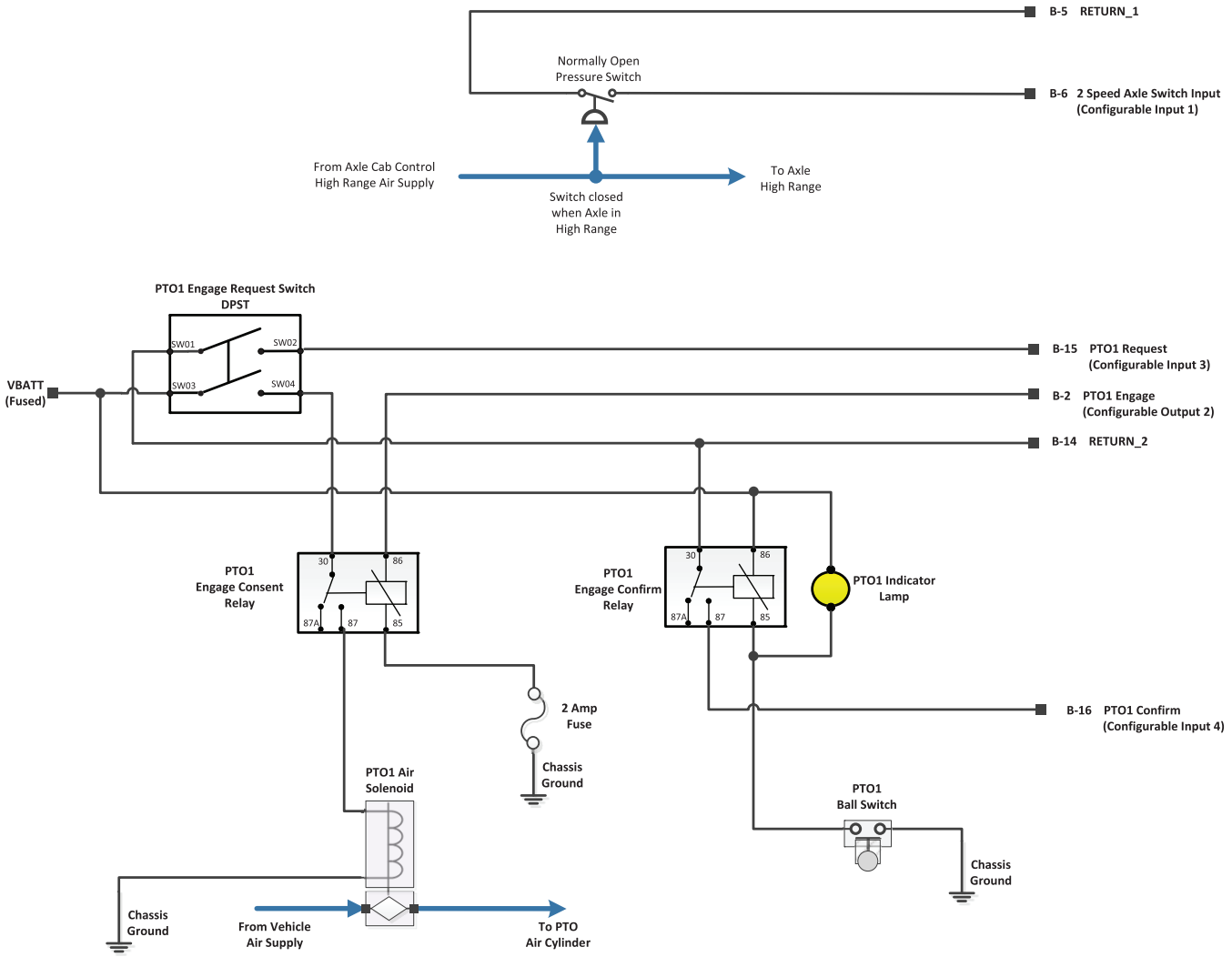
Input / Output Calibration Package 17

2-Speed Axle + Rock Free Mode



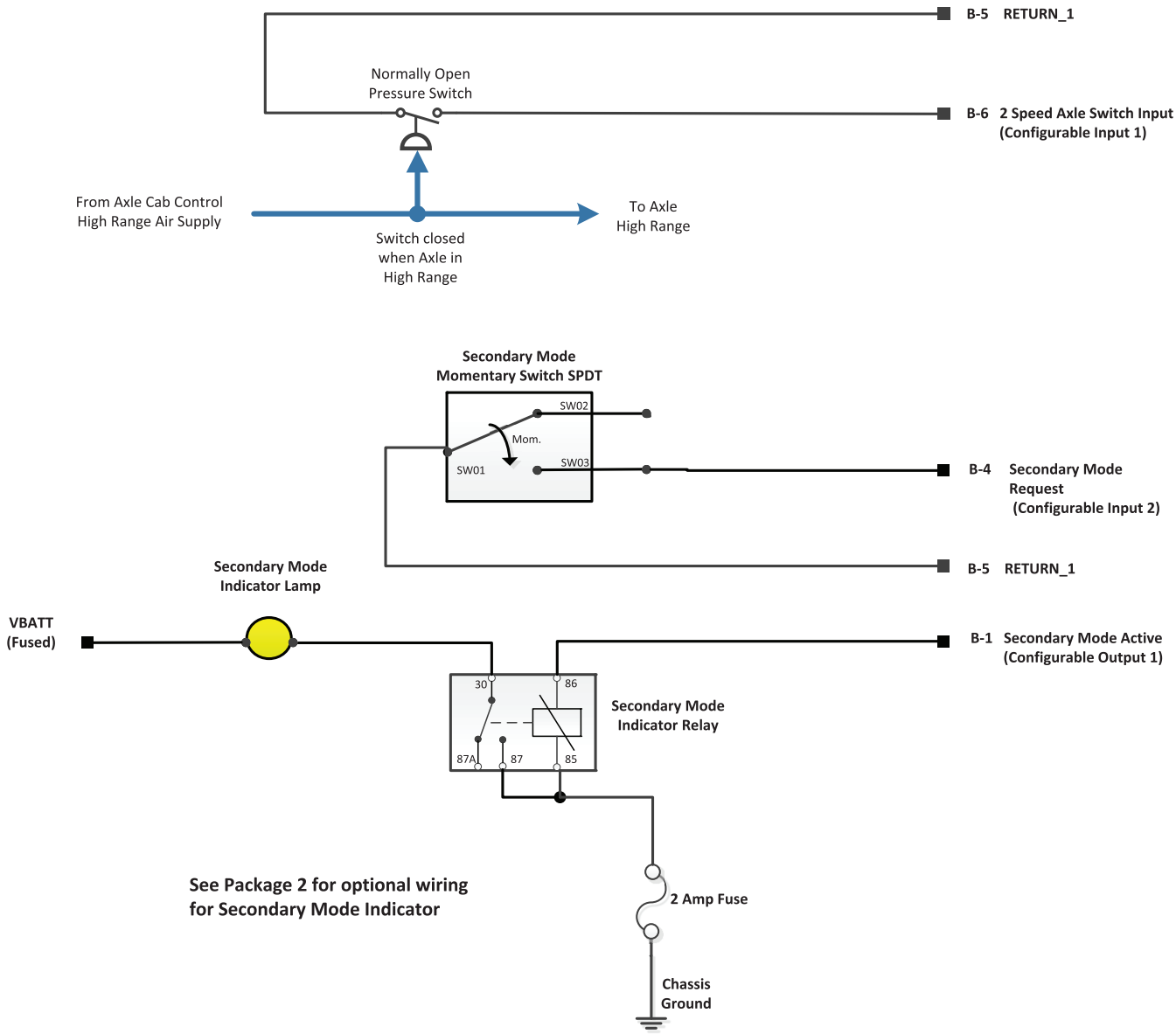
Input / Output Calibration Package 18

2-Speed Axle + PTO 1



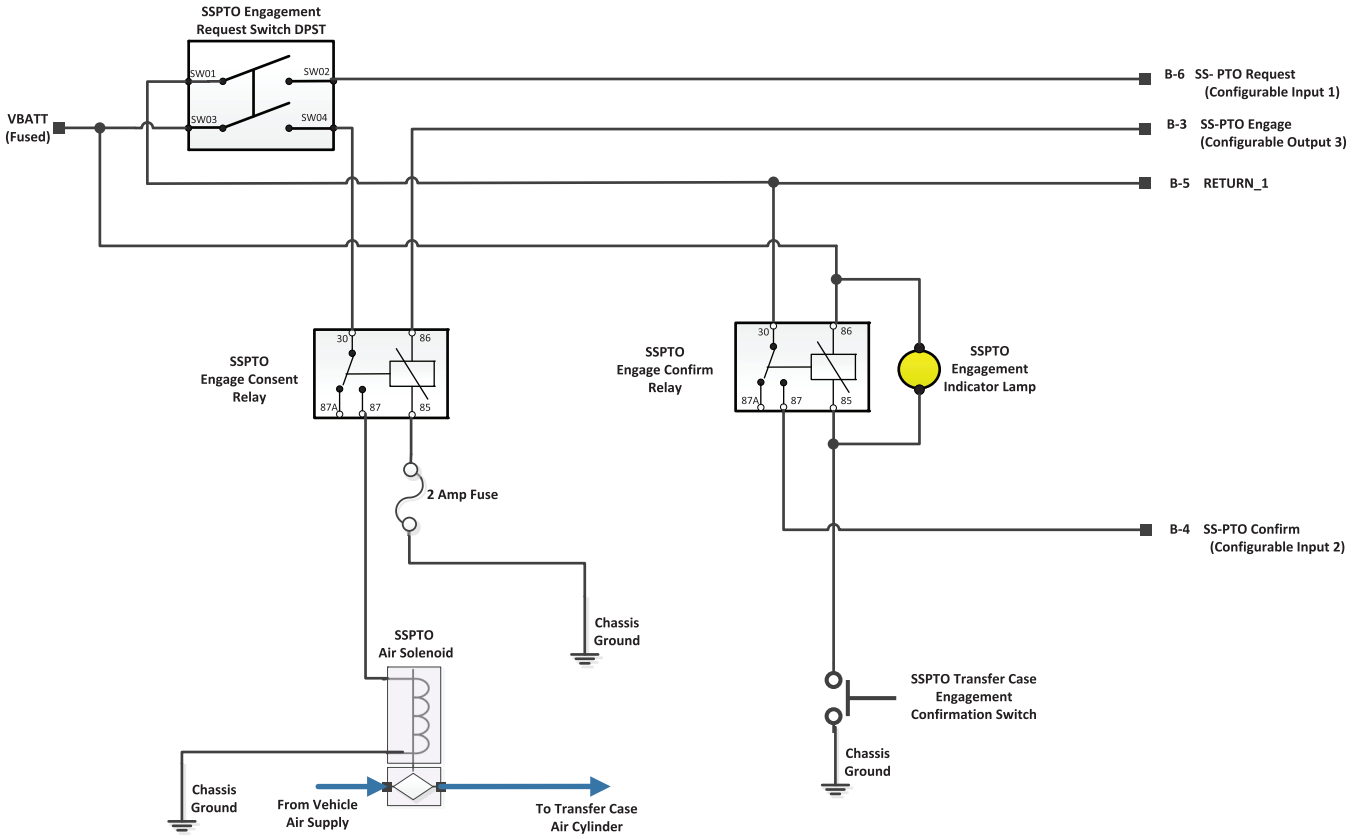
Input / Output Calibration Package 19

2-Speed Axle + Secondary Shift Mode



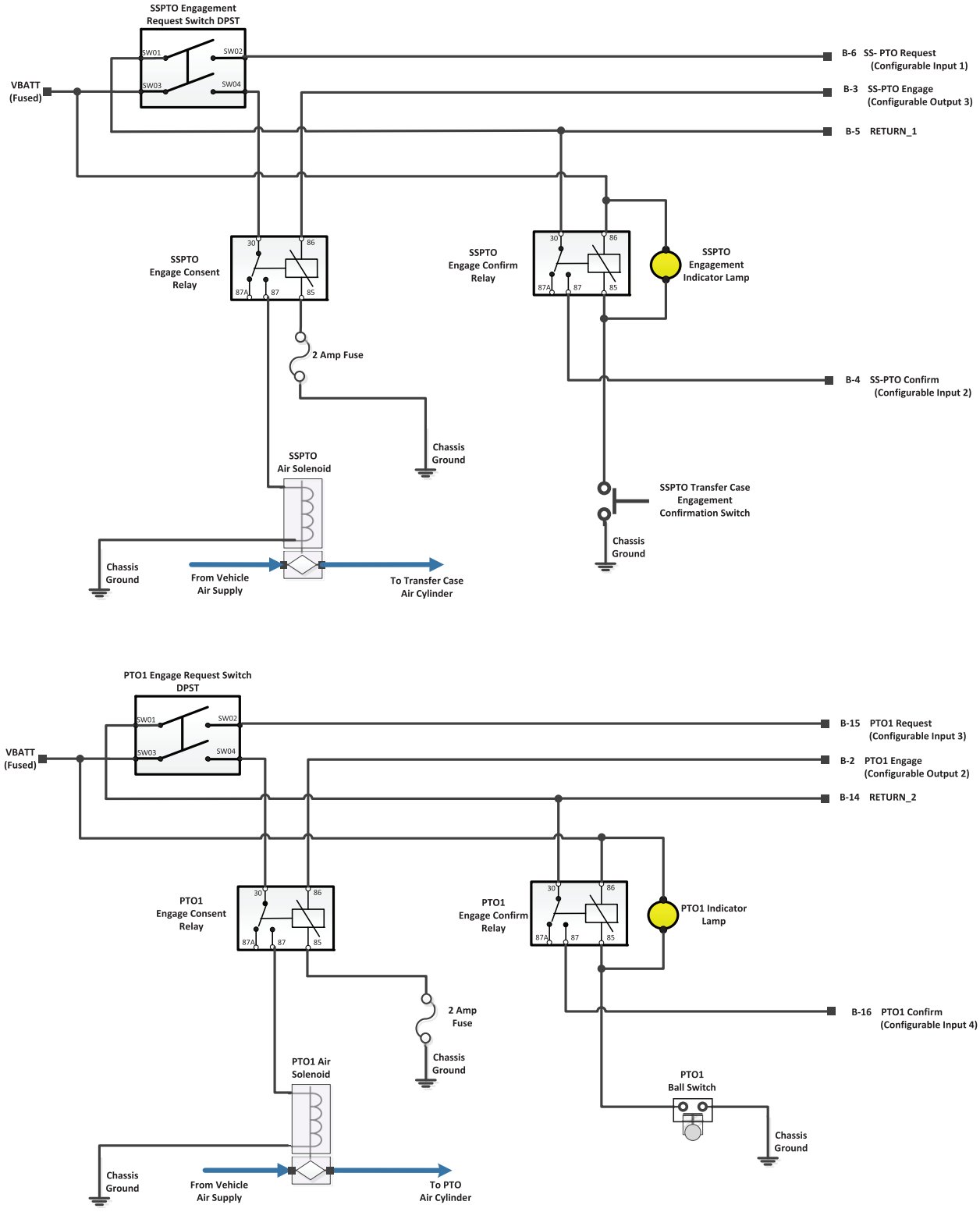
Input / Output Calibration Package 20

Split Shaft PTO



Input / Output Calibration Package 21

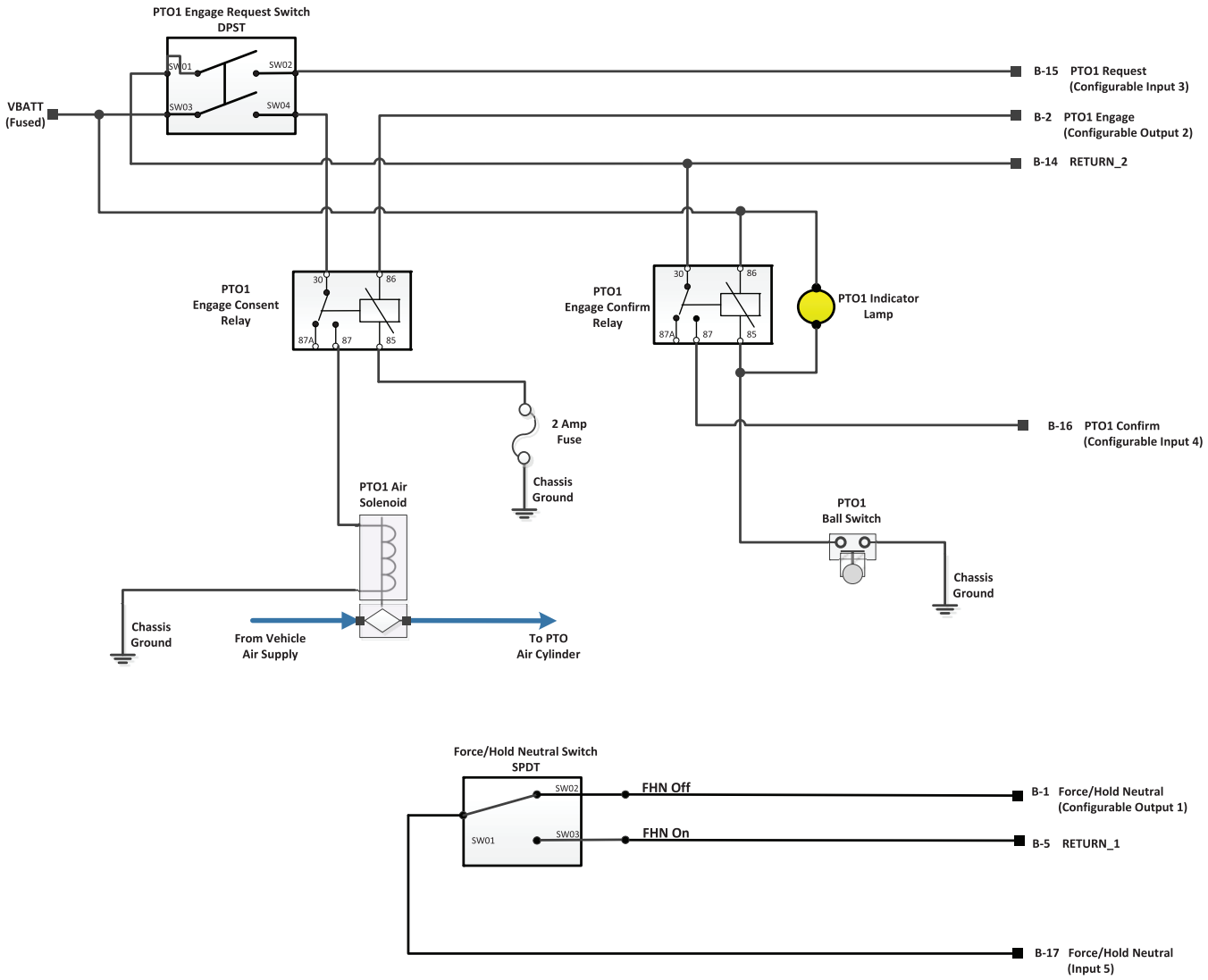
PTO 1 + Split Shaft PTO



Input / Output Calibration Package 22 and 25

#22 PTO 1 + Force Neutral

#25 PTO 1 + Hold Neutral

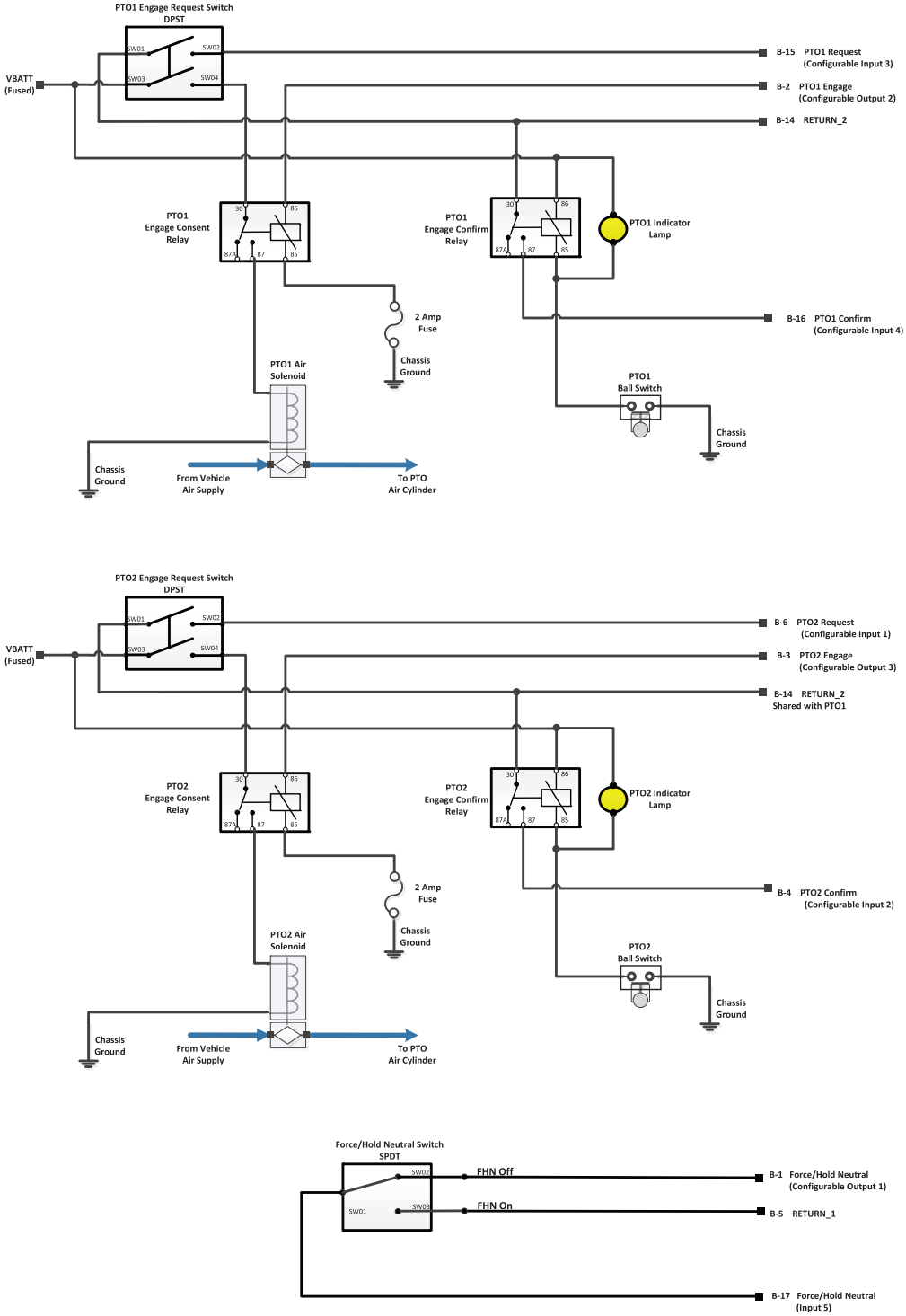


Note: Refer to I/O Package #14 and #15 for FHN Multiple Switch Schematic.

Input / Output Calibration Package 23 and 26

#23 PTO 1 + PTO 2 + Force Neutral

#26 PTO 1 + PTO 2 + Hold Neutral

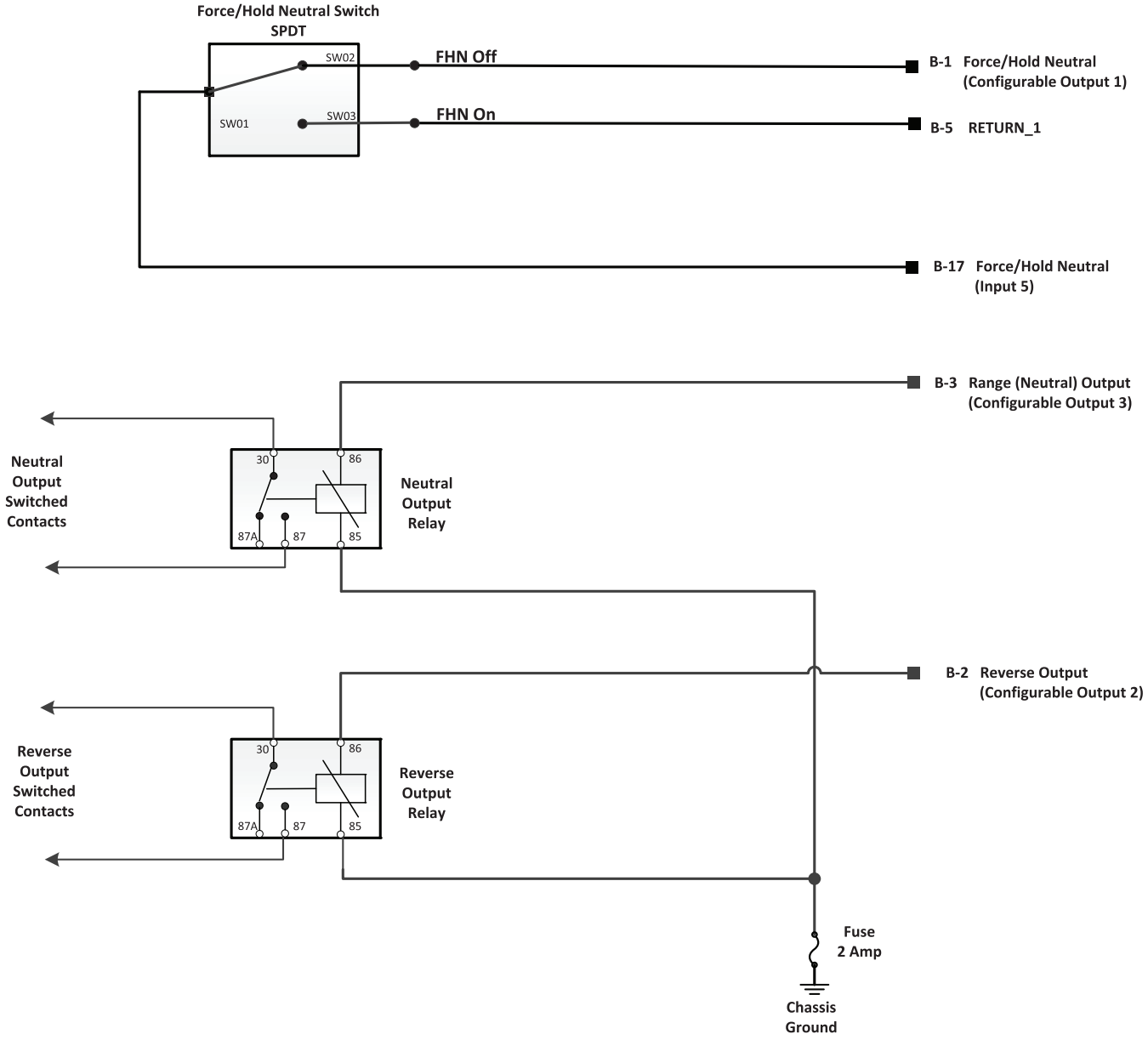


Note: Refer to I/O Package #14 and #15 for FHN Multiple Switch Schematic.

Input / Output Calibration Package 24 and 27

#24 Force Neutral + Reverse Output + Neutral Output

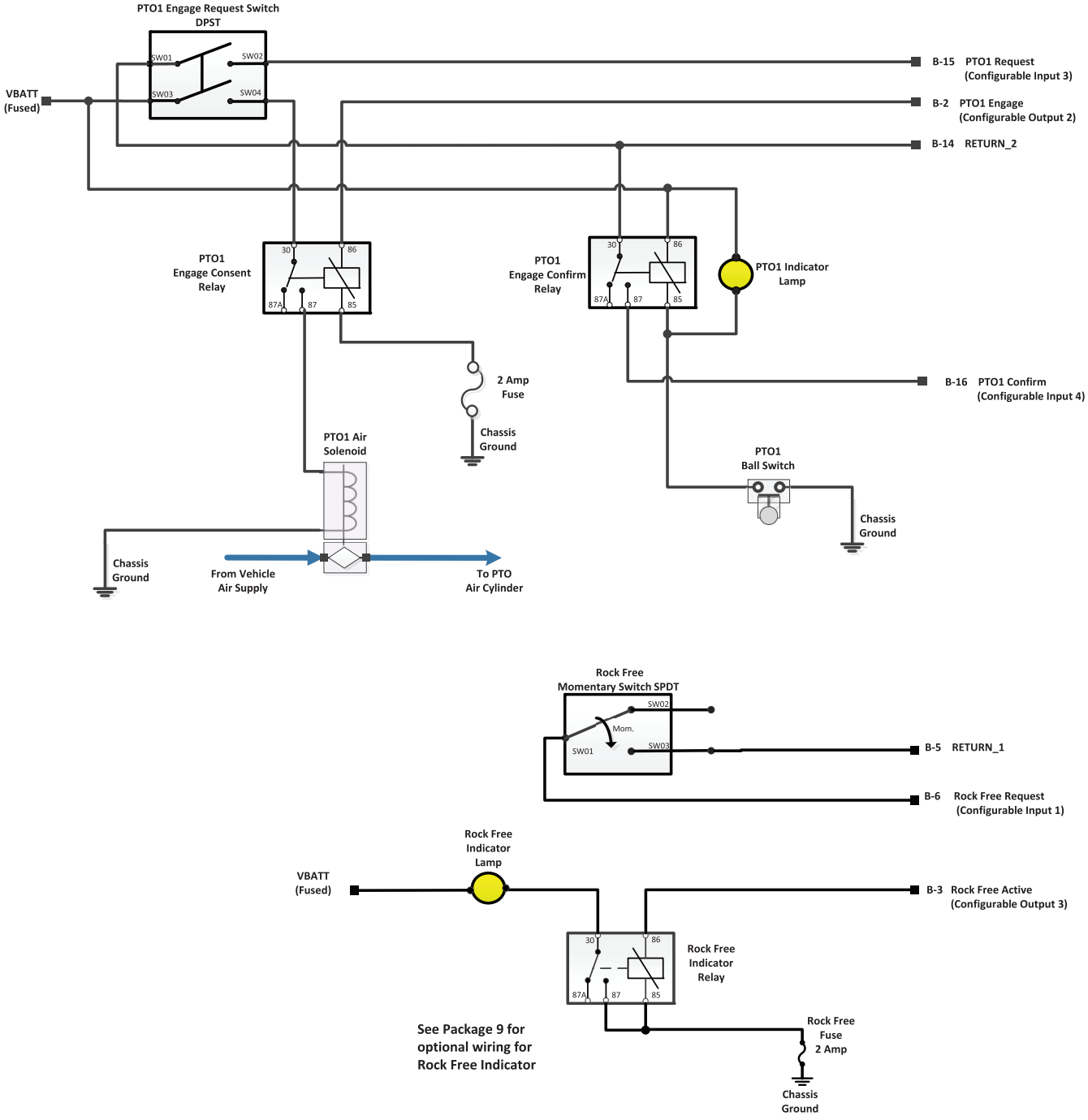
#27 Hold Neutral + Reverse Output + Neutral Output



Note: Refer to I/O Package #14 and #15 for FHN Multiple Switch Schematic.

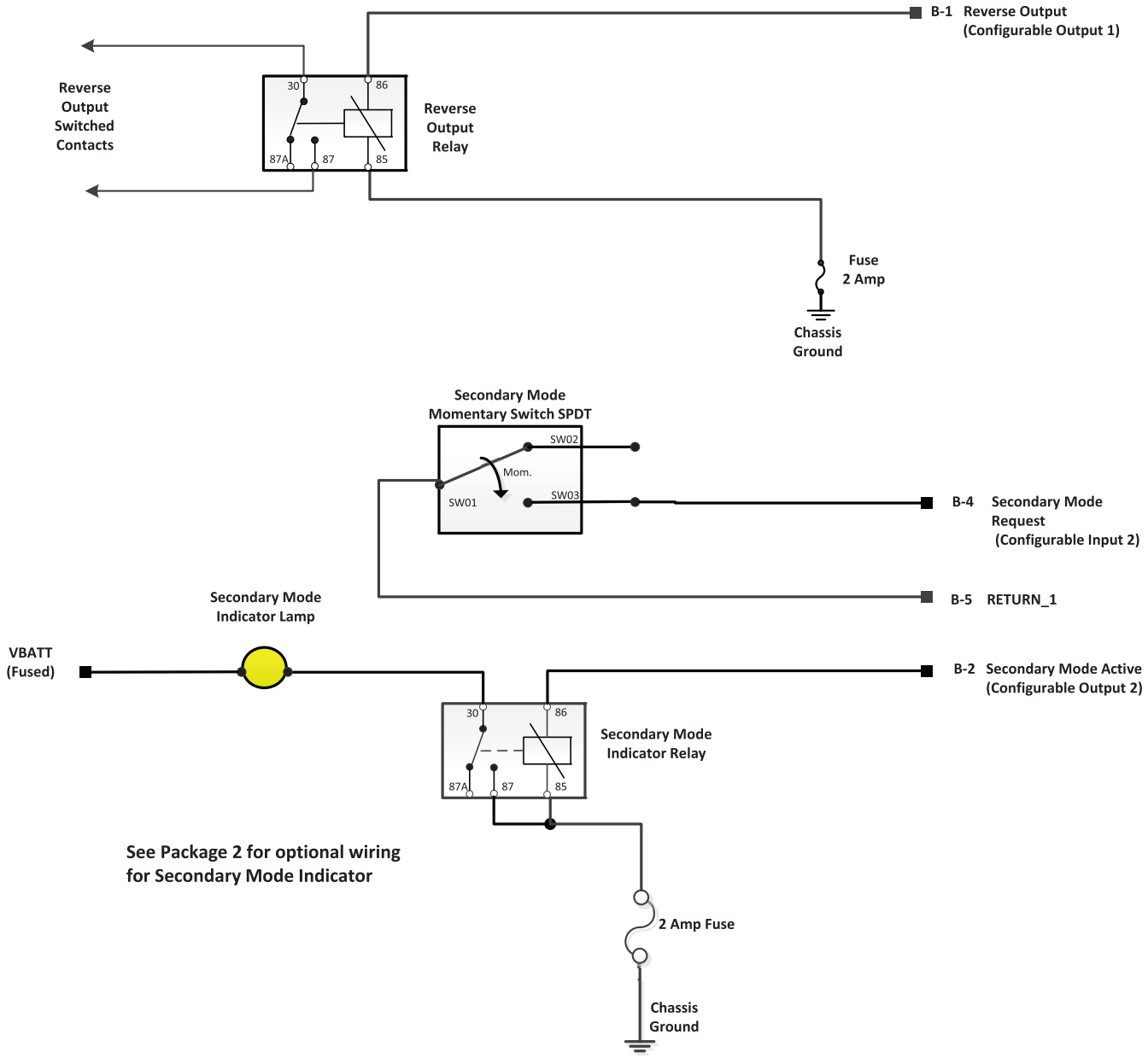
Input / Output Calibration Package 29

PTO 1 + Rock Free Mode



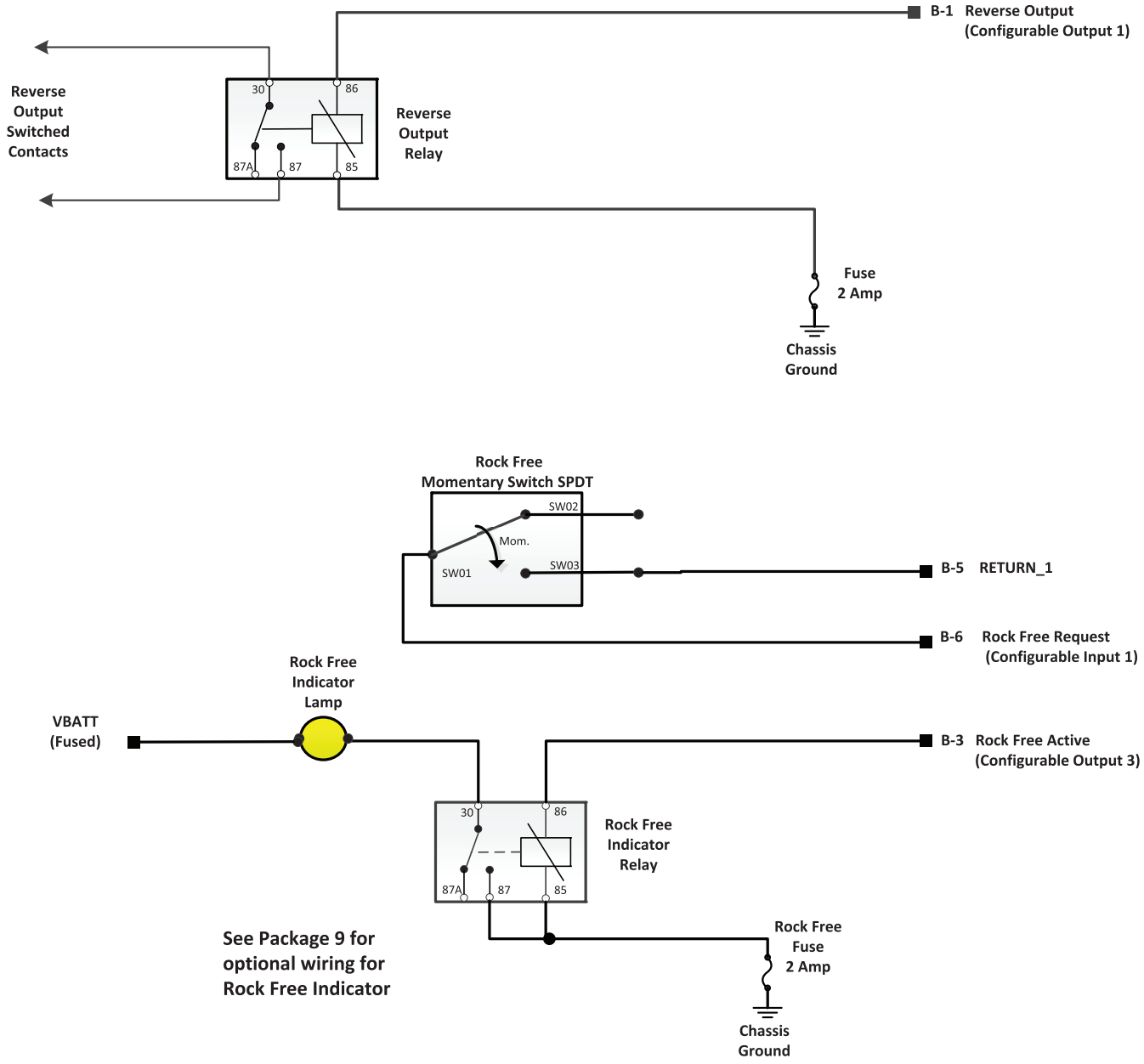
Input / Output Calibration Package 30

Reverse Output + Secondary Shift Mode



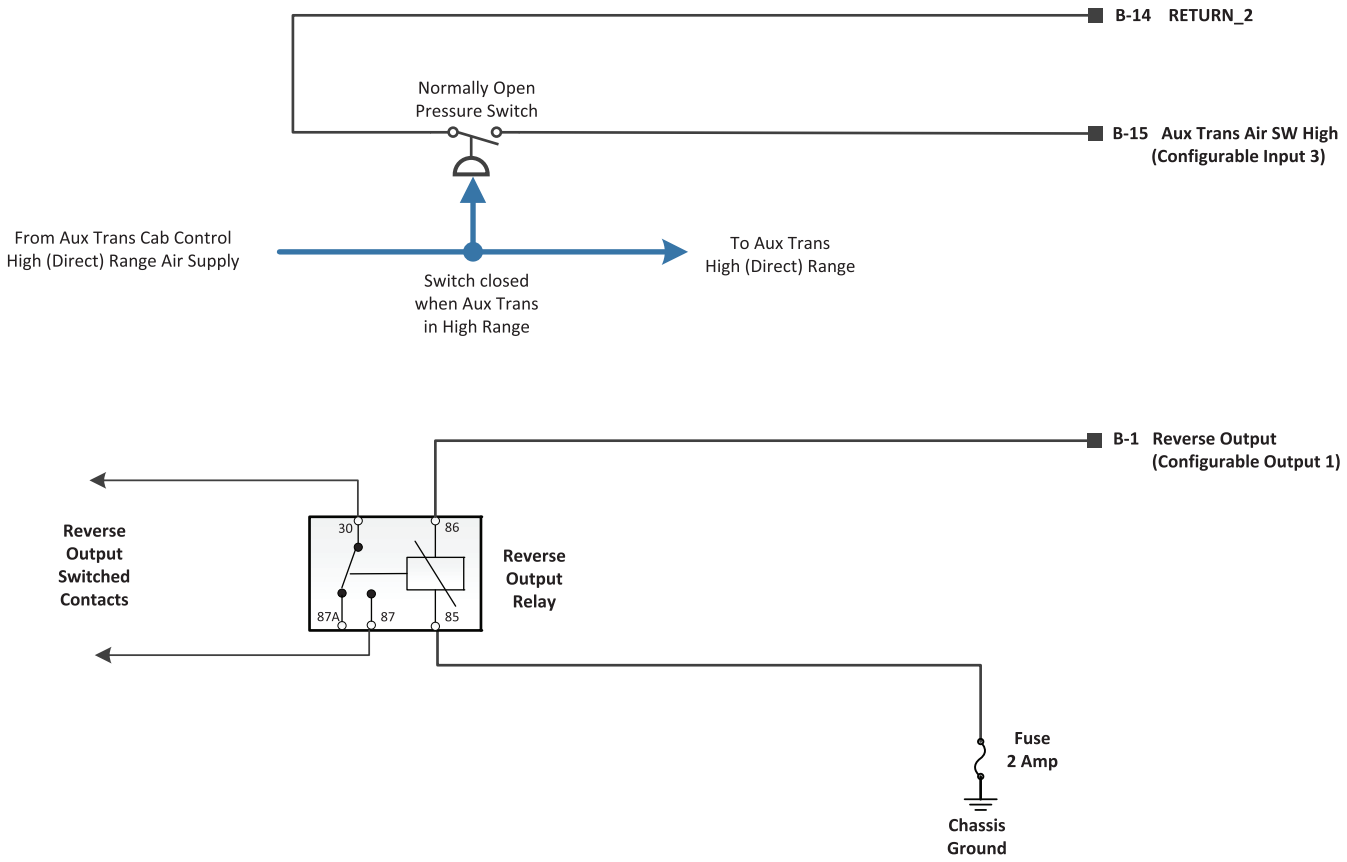
Input / Output Calibration Package 31

Reverse Output + Rock Free Mode



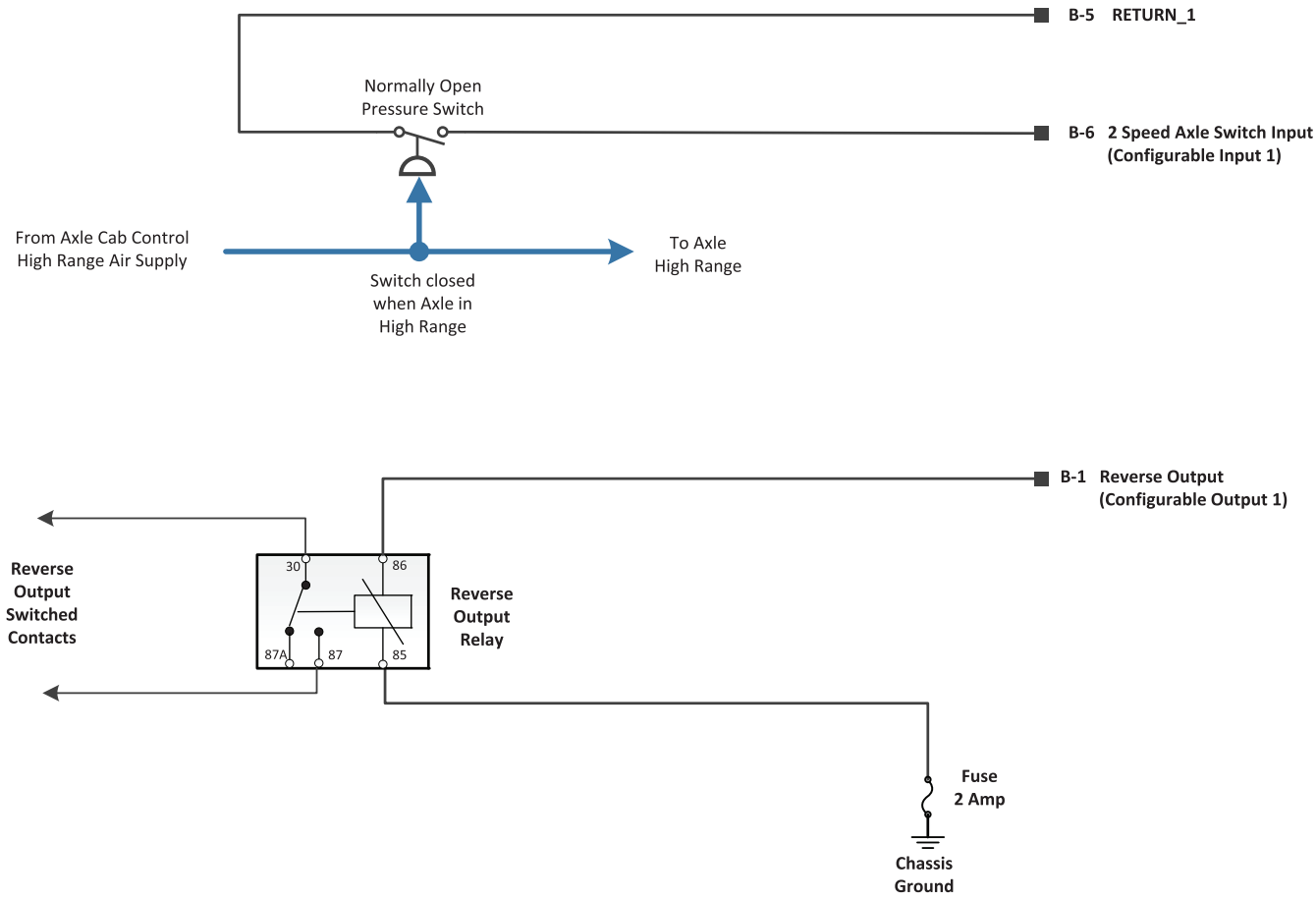
Input / Output Calibration Package 32

2-Speed Aux Trans + Reverse Output



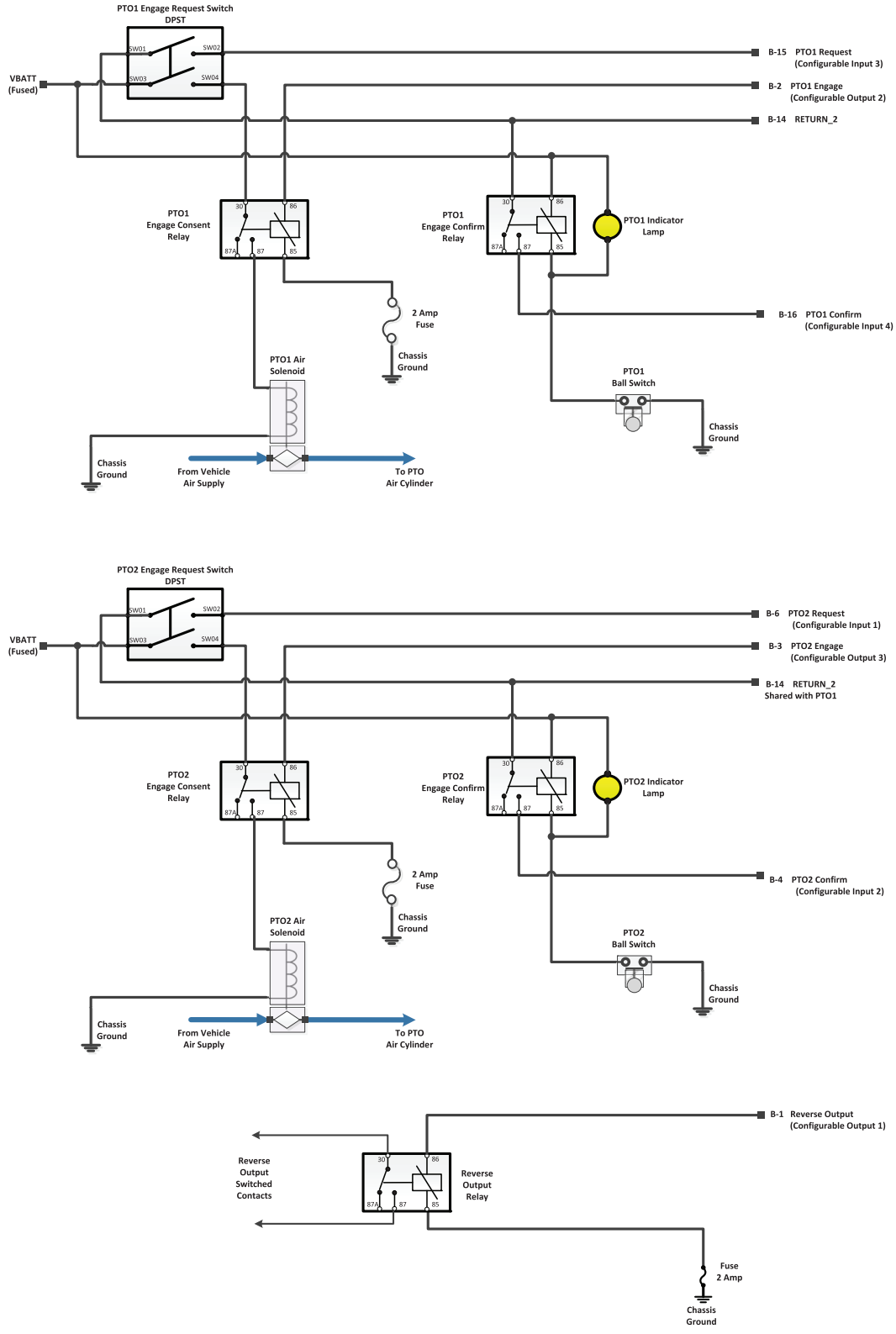
Input / Output Calibration Package 33

2-Speed Axle + Reverse Output



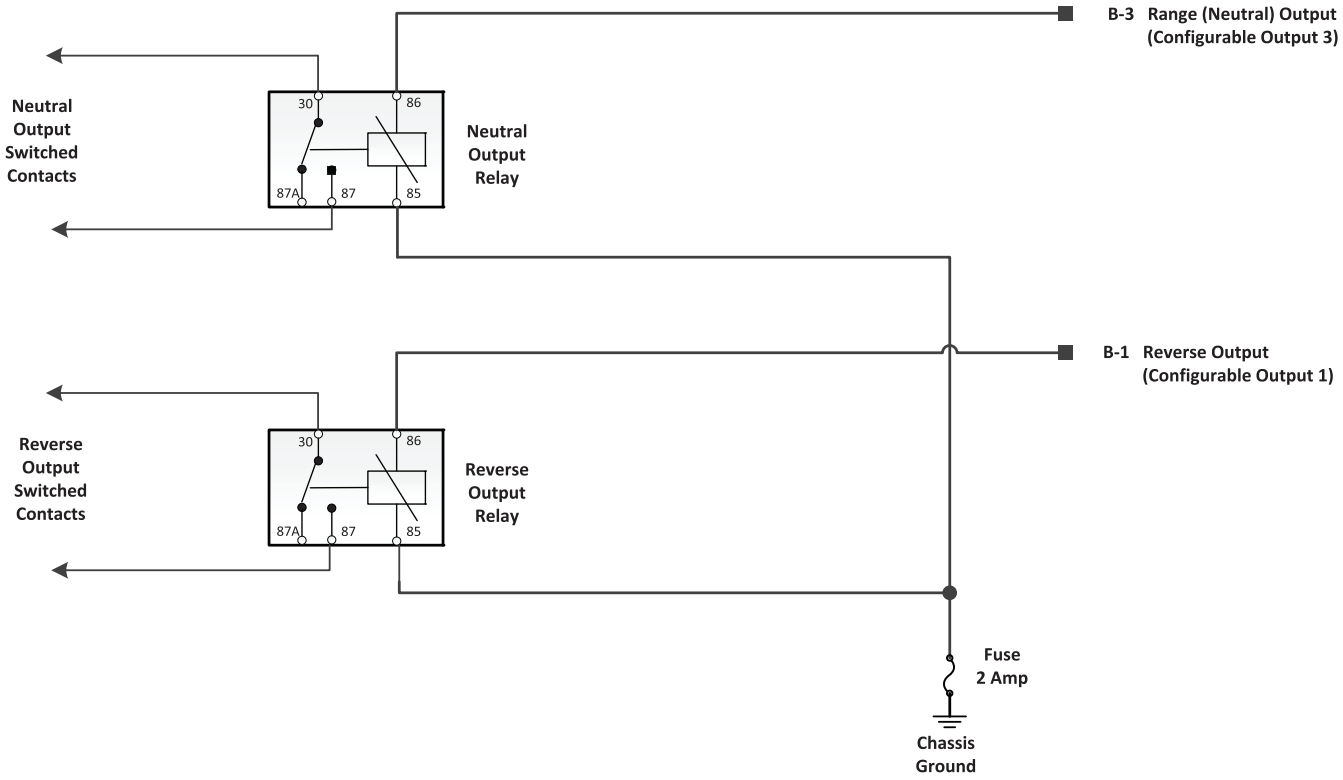
Input / Output Calibration Package 34

PTO 1 + PTO 2 + Reverse Output



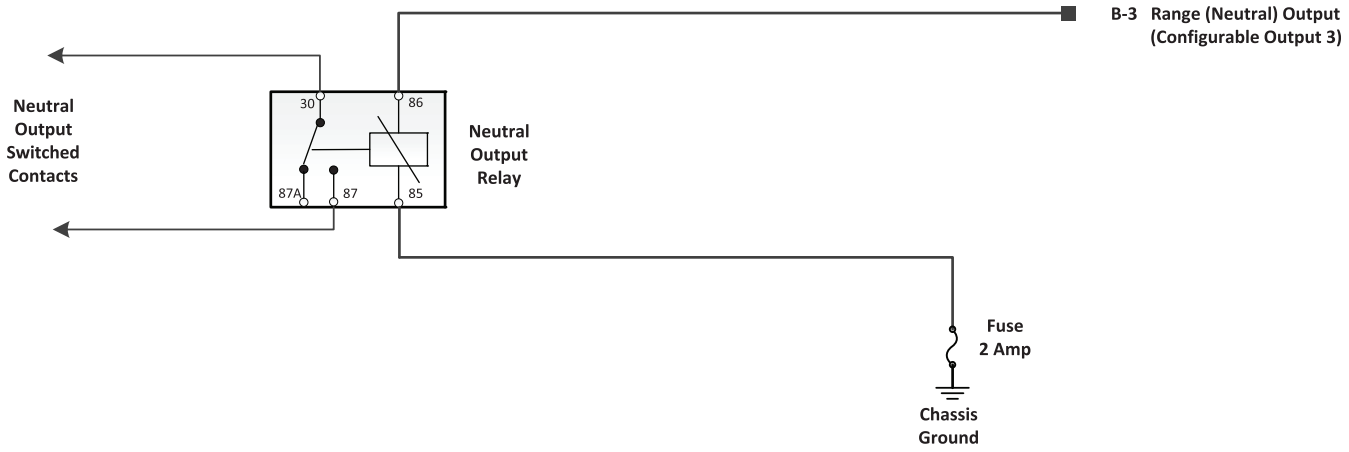
Input / Output Calibration Package 35

Neutral Output + Reverse Output



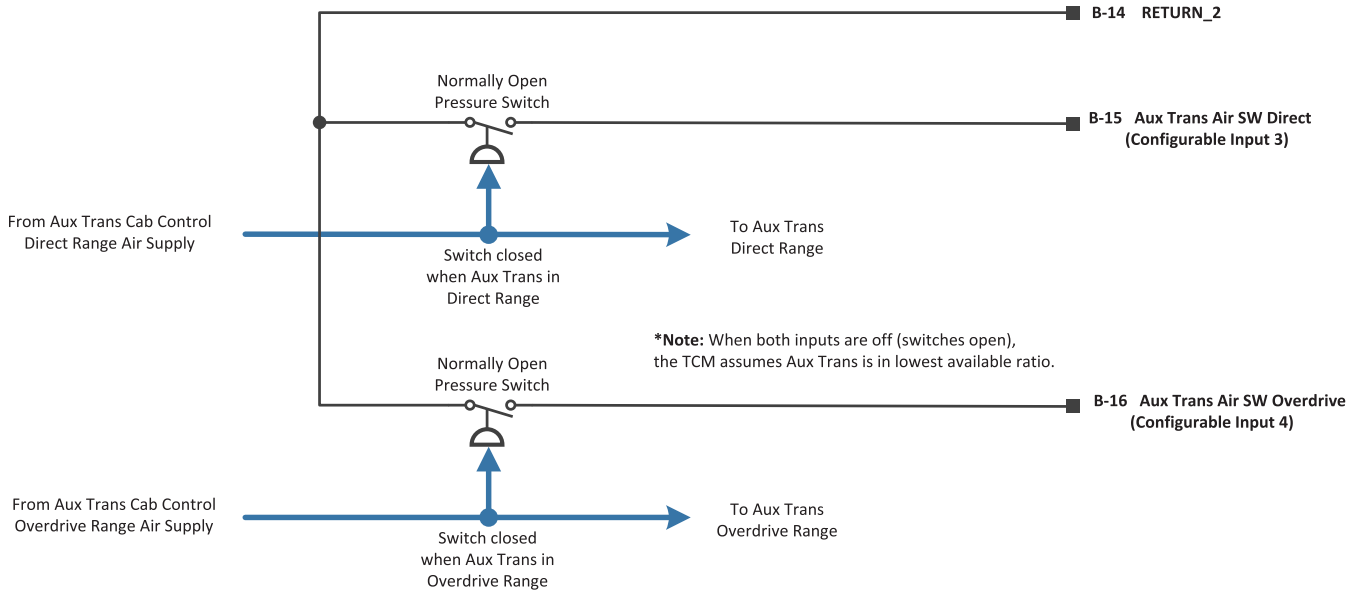
Input / Output Calibration Package 36

Neutral Output



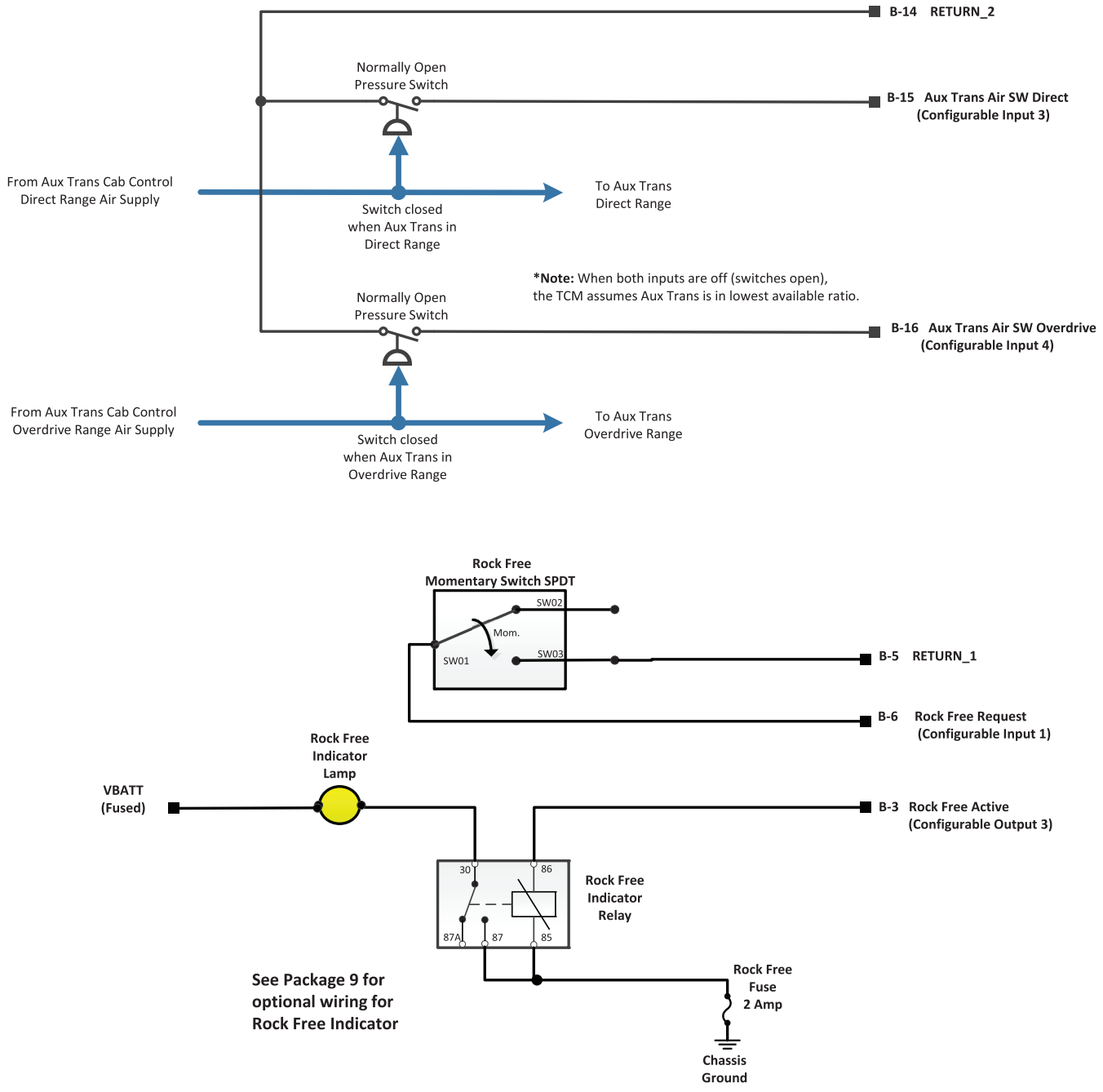
Input / Output Calibration Package 38

3-Speed Aux Trans - Underdrive, Direct, Overdrive (UD, D, OD)



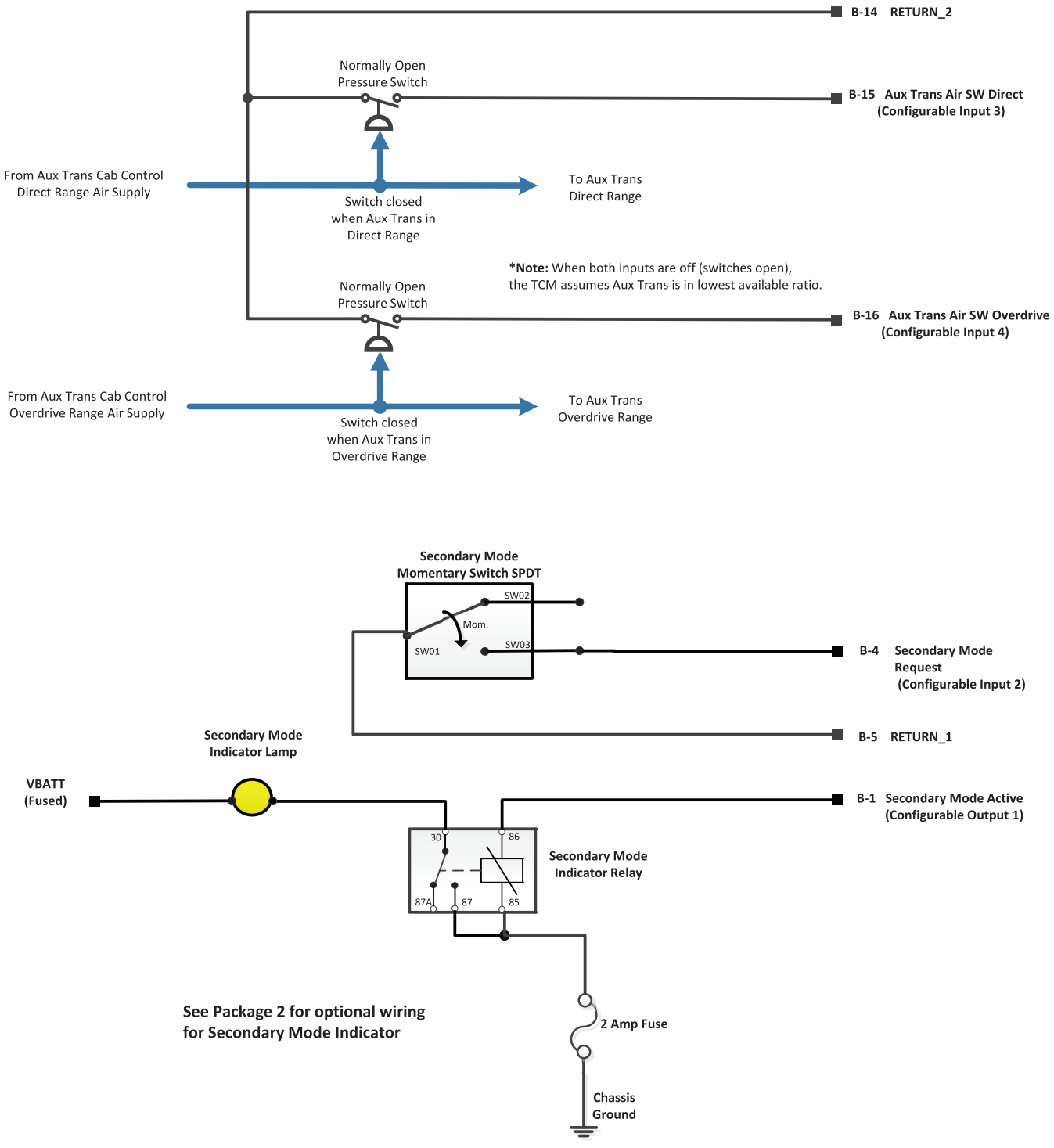
Input / Output Calibration Package 39

3-Speed Aux Trans (UD, D, OD) + Rock Free Mode



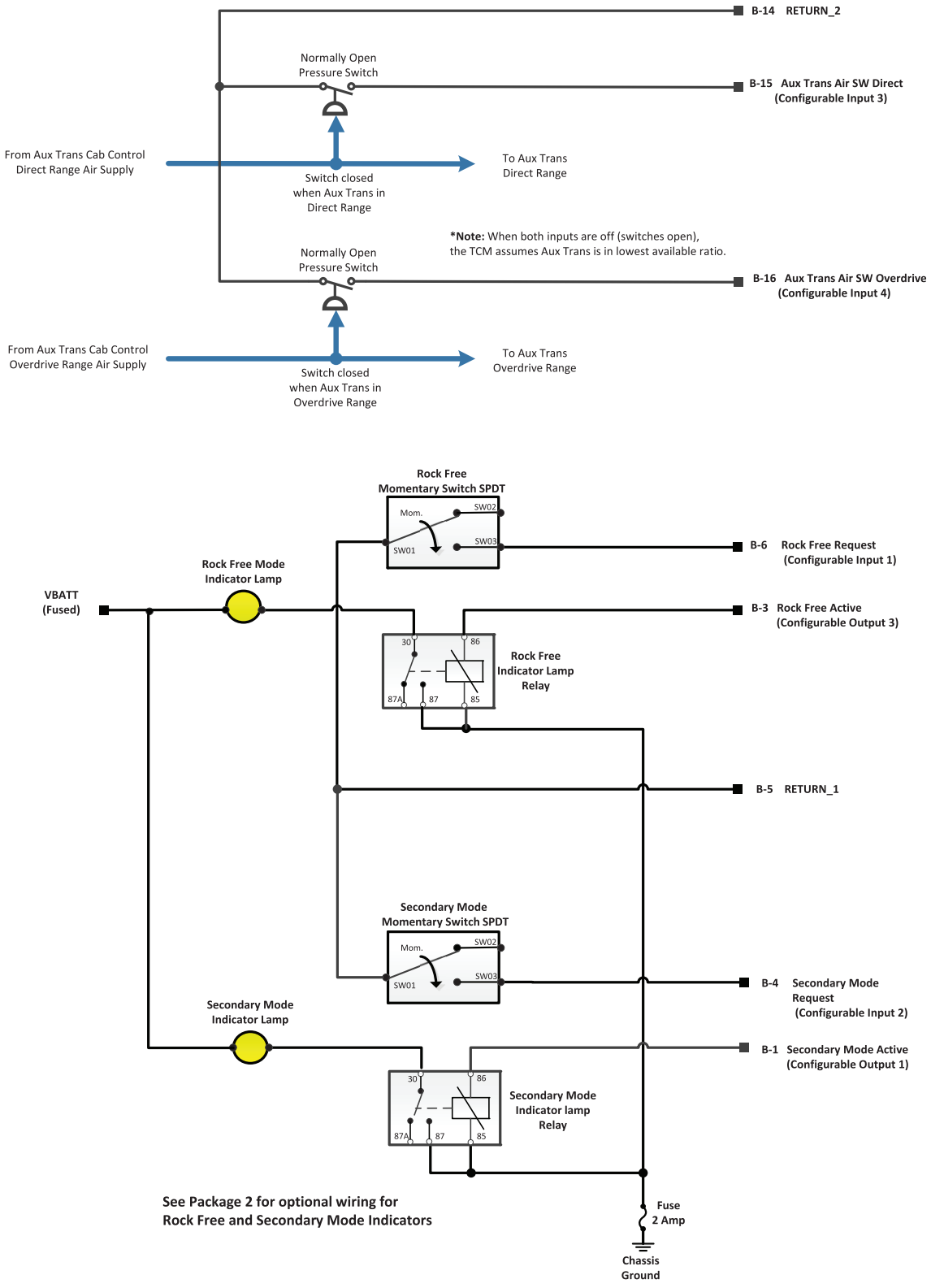
Input / Output Calibration Package 40

3-Speed Aux Trans (UD, D, OD) + Secondary Shift Mode



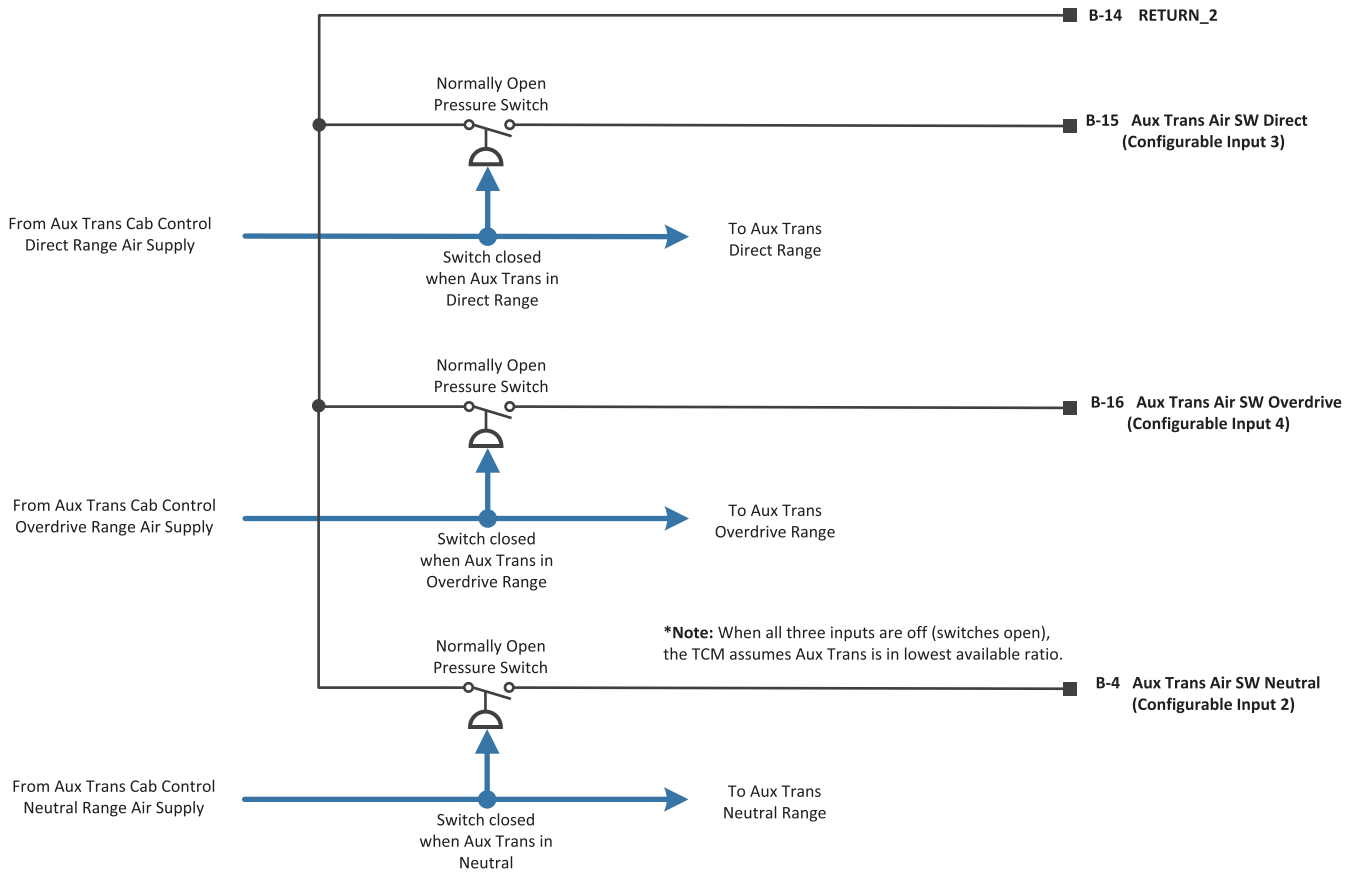
Input / Output Calibration Package 41

3-Speed Aux Trans (UD, D, OD) + Rock Free Mode + Secondary Shift Mode



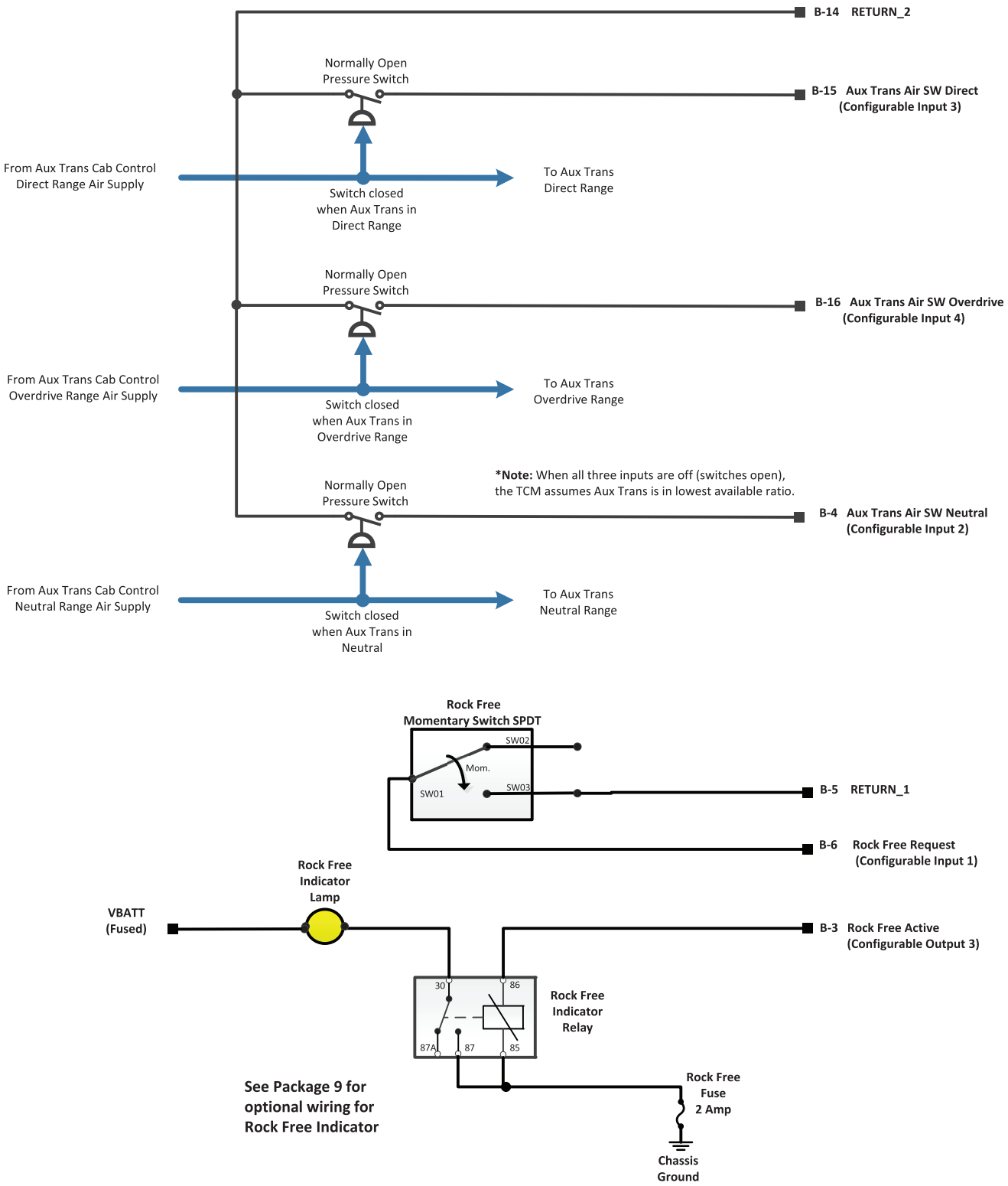
Input / Output Calibration Package 42

3-Speed Aux Trans - Underdrive, Neutral, Direct, Overdrive (UD, N, D, OD)



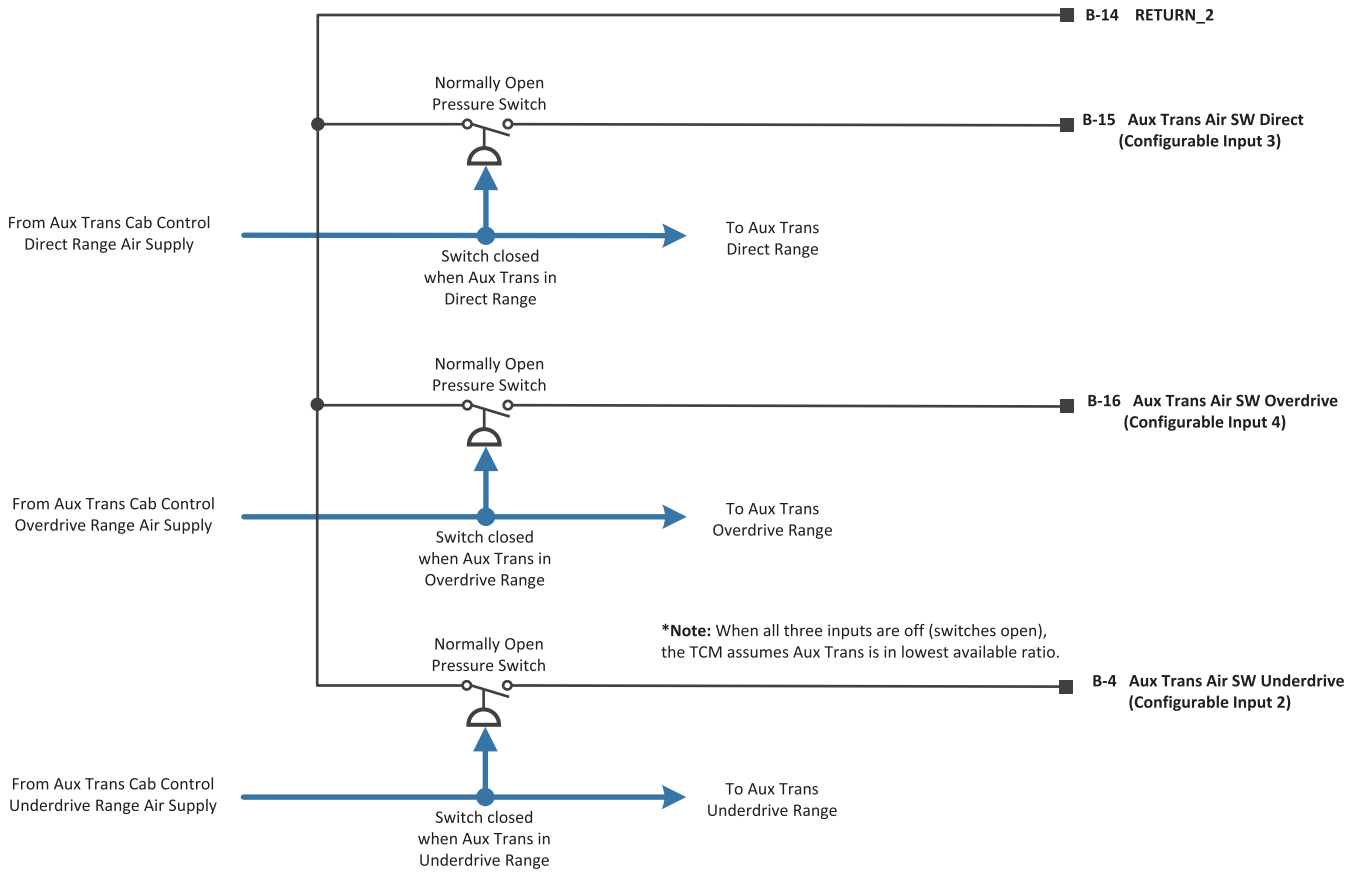
Input / Output Calibration Package 43

3-Speed Aux Trans (UD, N, D, OD) + Rock Free Mode



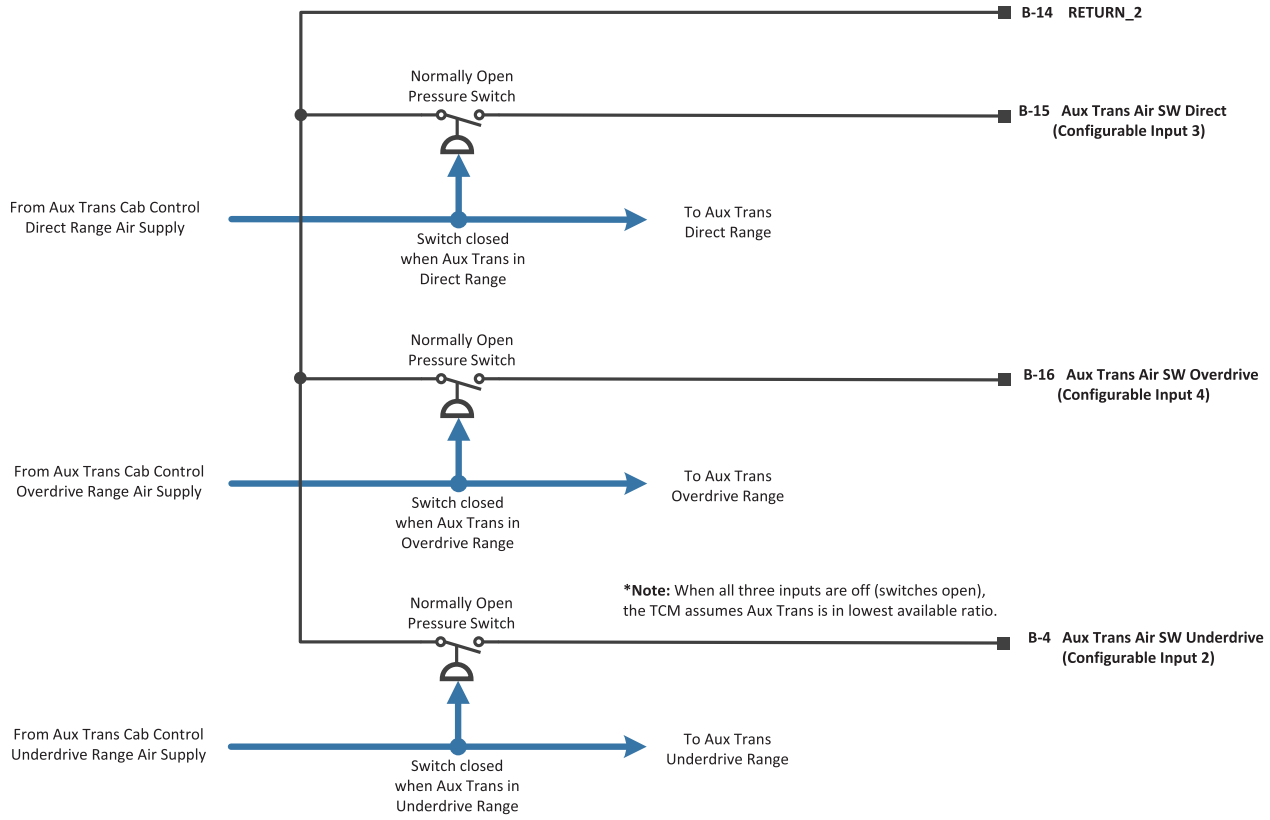
Input / Output Calibration Package 44

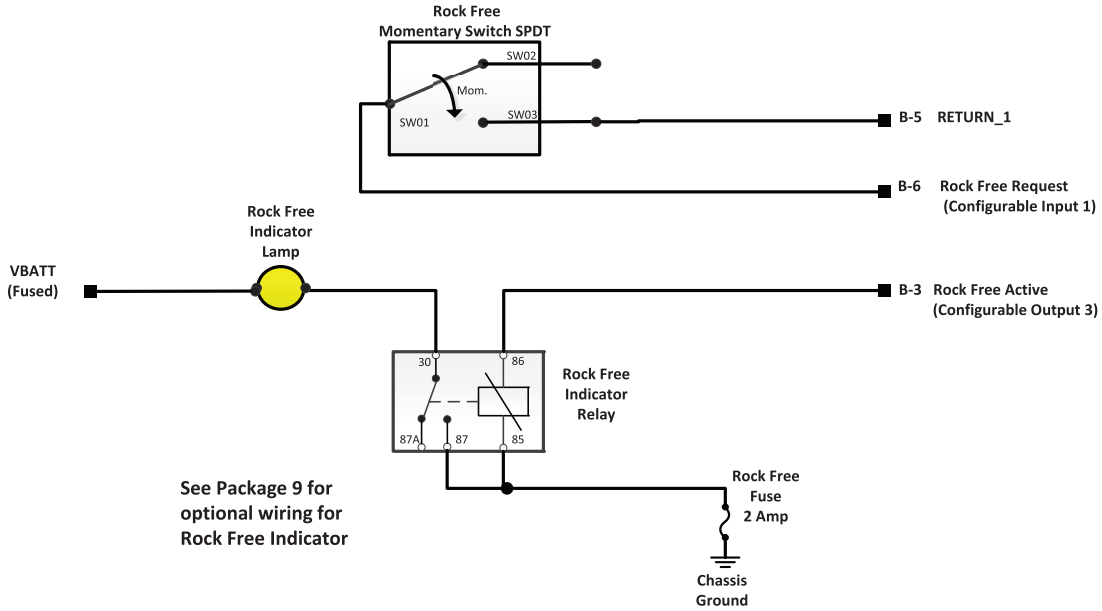
4-Speed Aux Trans - Low, Underdrive, Direct, Overdrive (L, UD, D, OD)



Input / Output Calibration Package 45

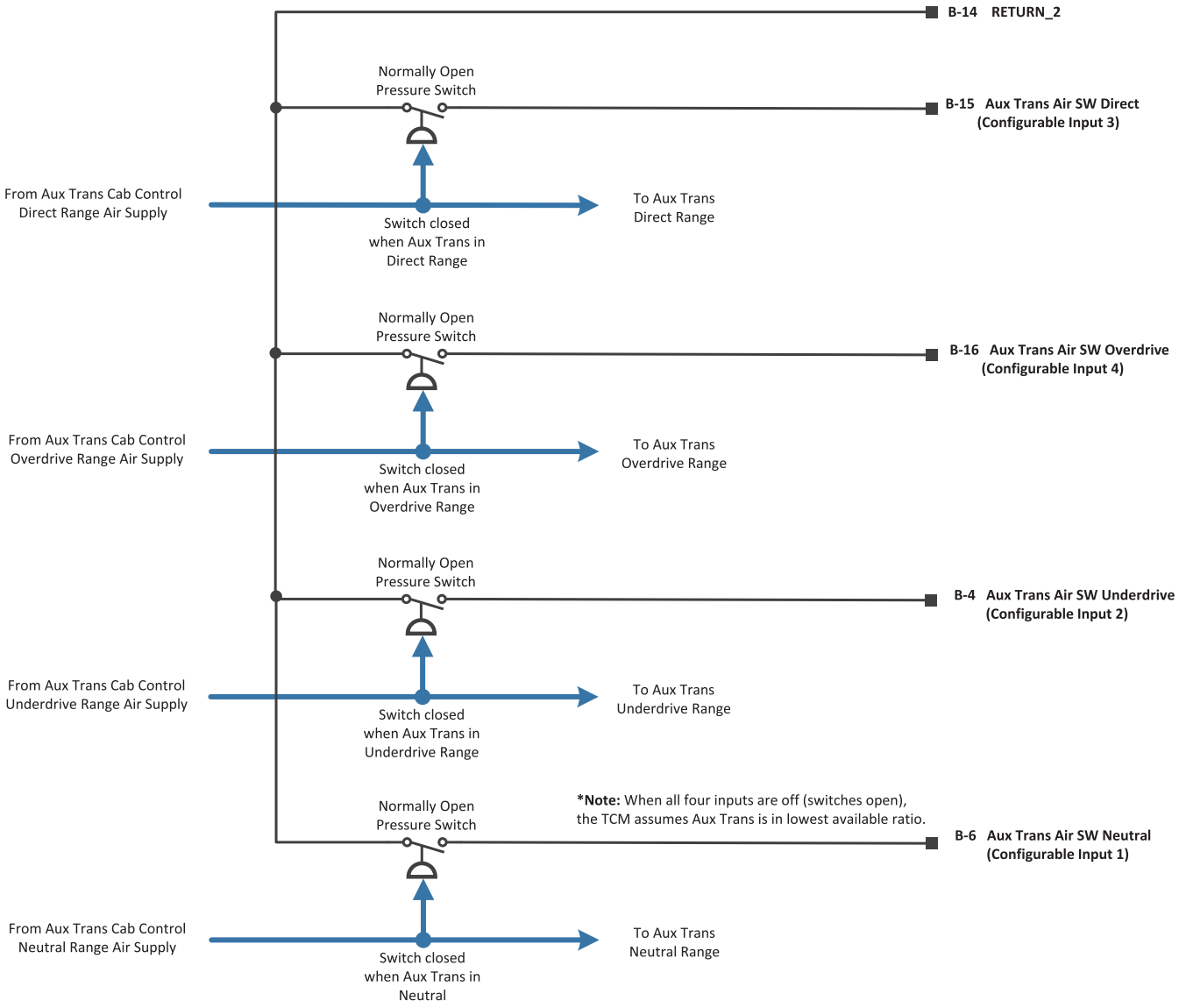
4-Speed Aux Trans (L, UD, D, OD) + Rock Free Mode





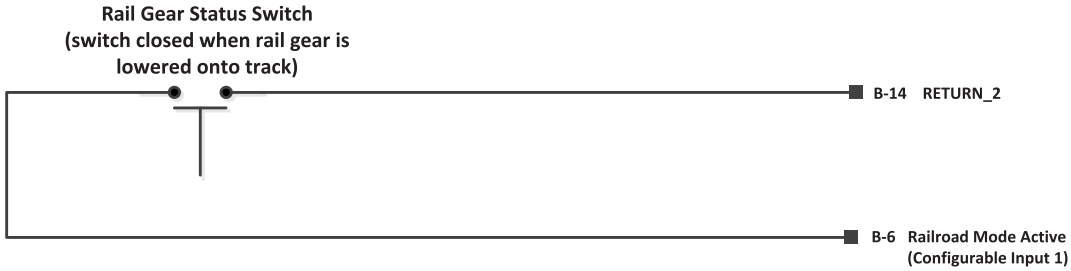
Input / Output Calibration Package 46

4-Speed Aux Trans - Low, Underdrive, Neutral, Direct, Overdrive (L, N, UD, D, OD)

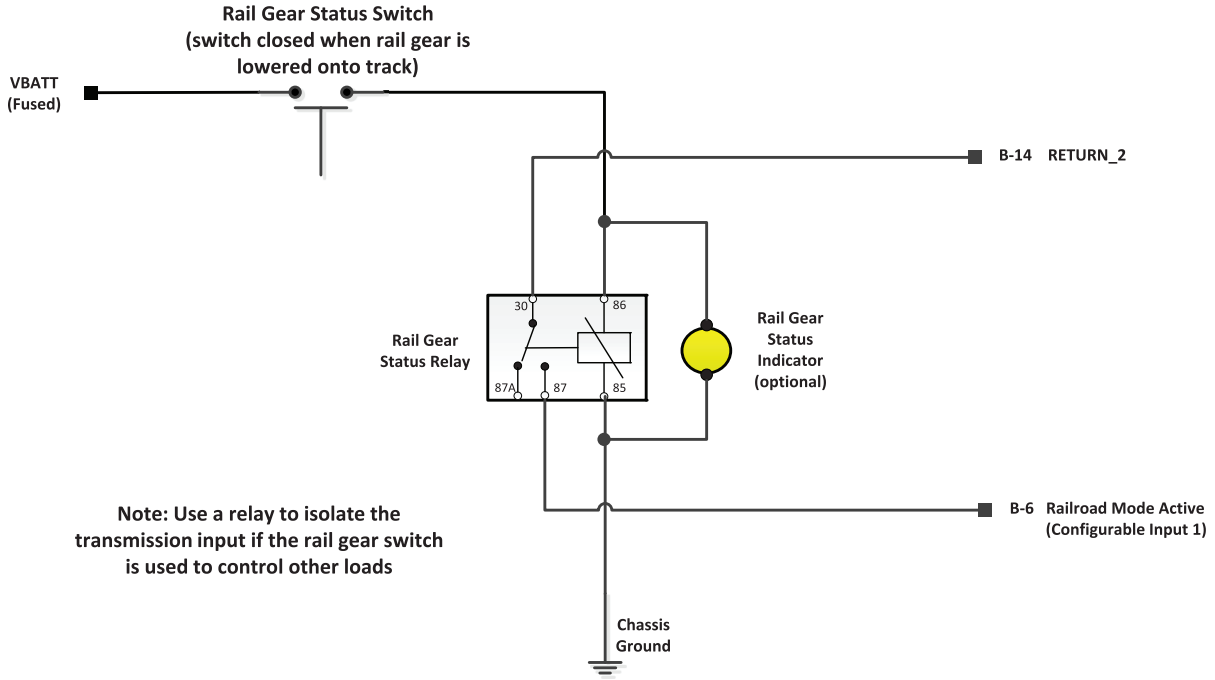


Input / Output Calibration Package 47

Railroad Mode

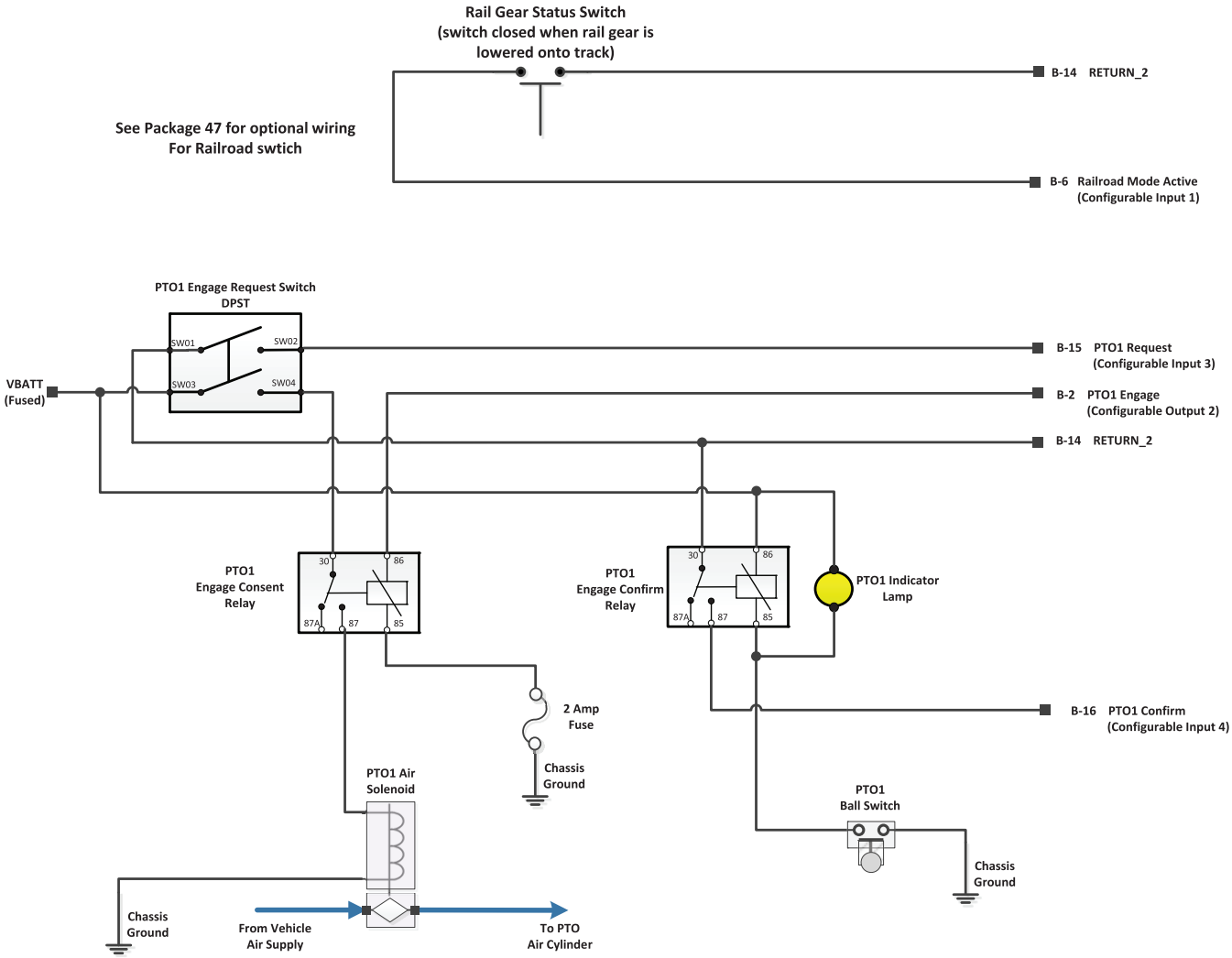


Optional wiring shown with isolation relay



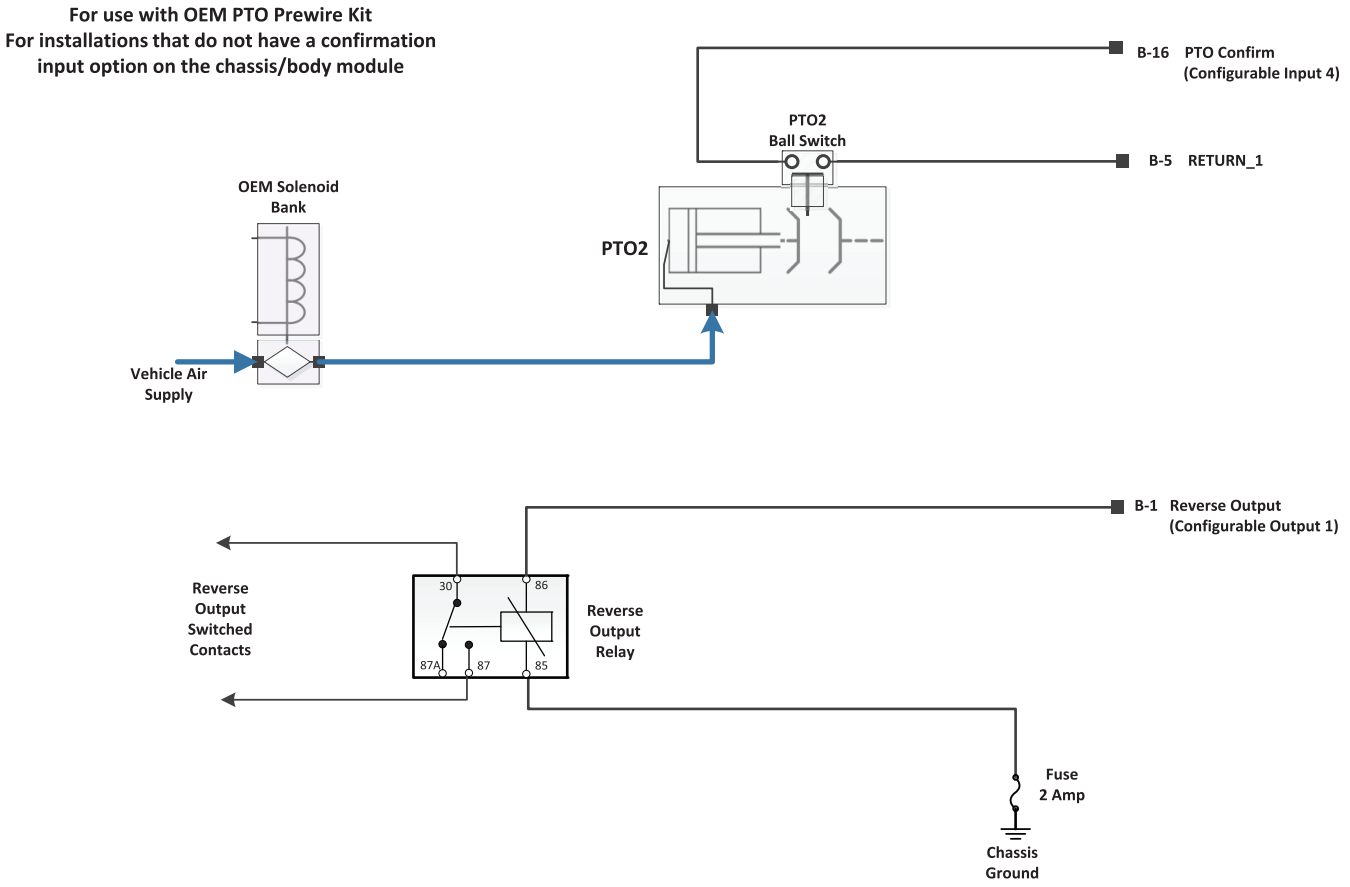
Input / Output Calibration Package 48

Railroad Mode + PTO 1



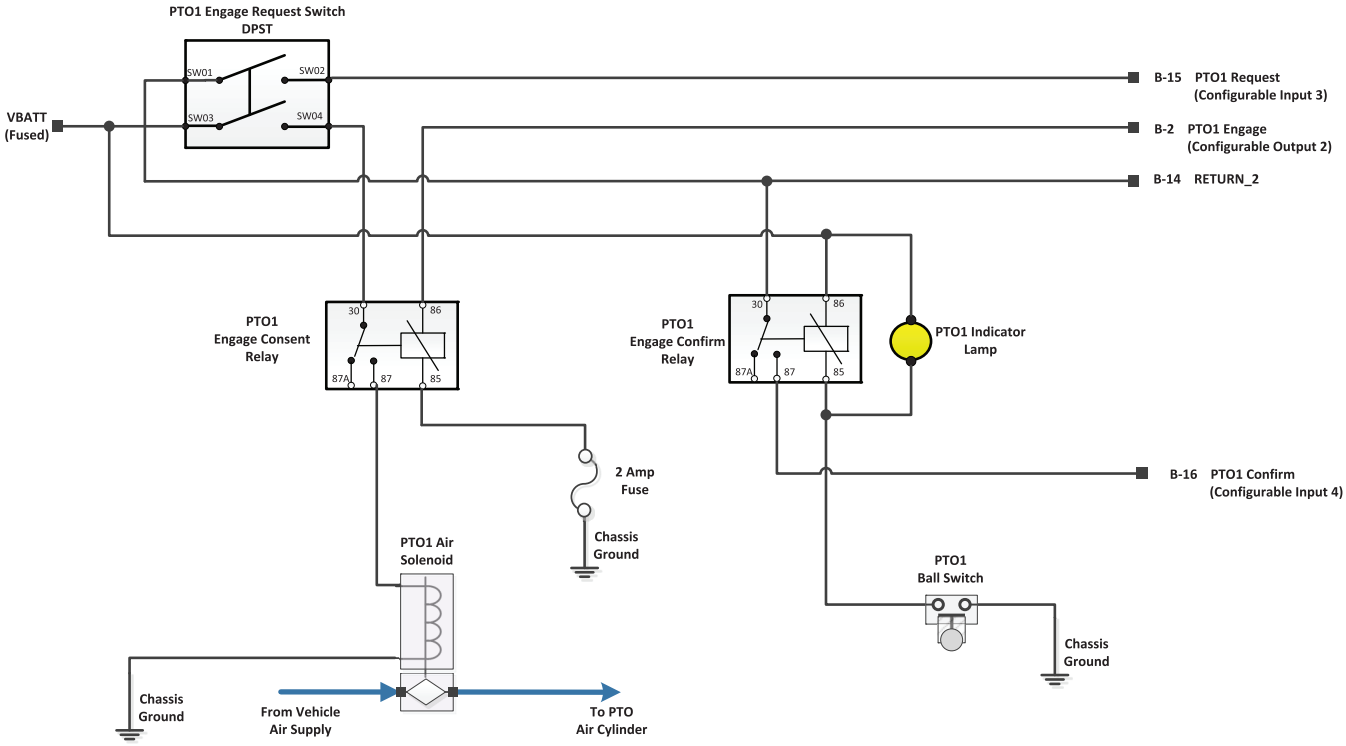
Input / Output Calibration Package 49

PTO 1 (J1939 Request/Engage, HW Confirm) + Reverse Output



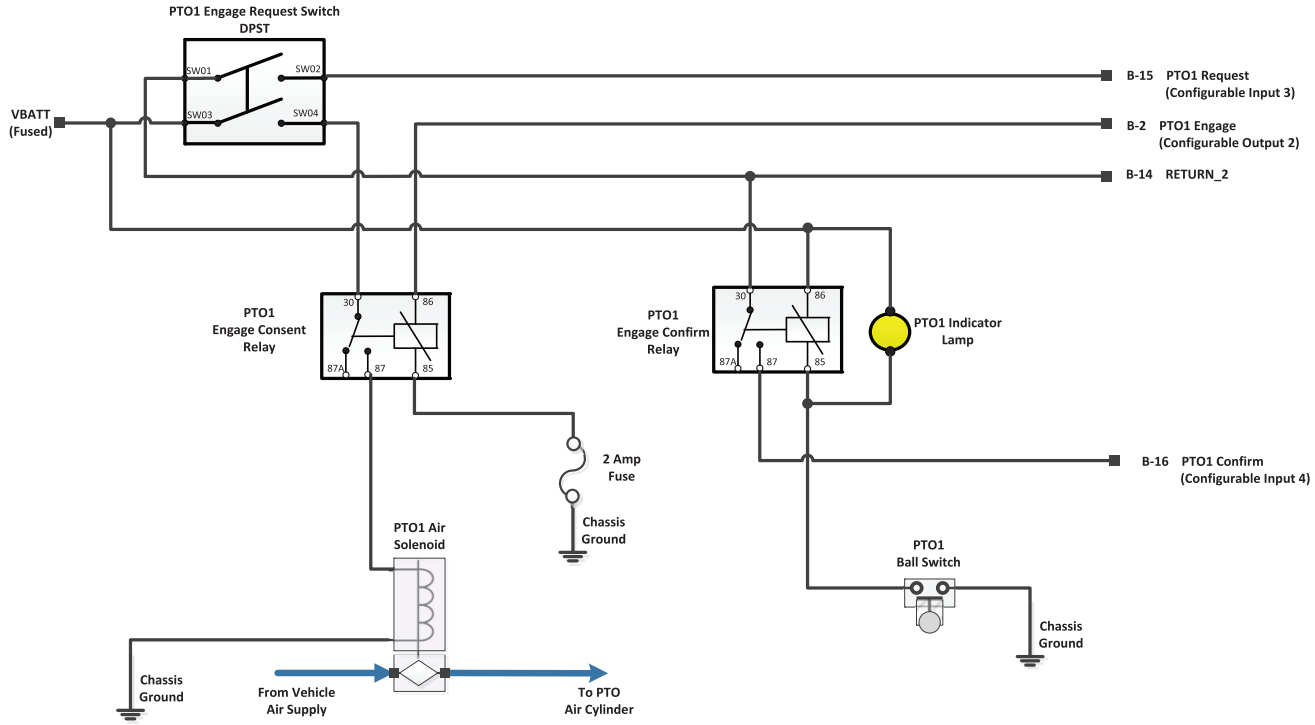
Input / Output Calibration Package 50

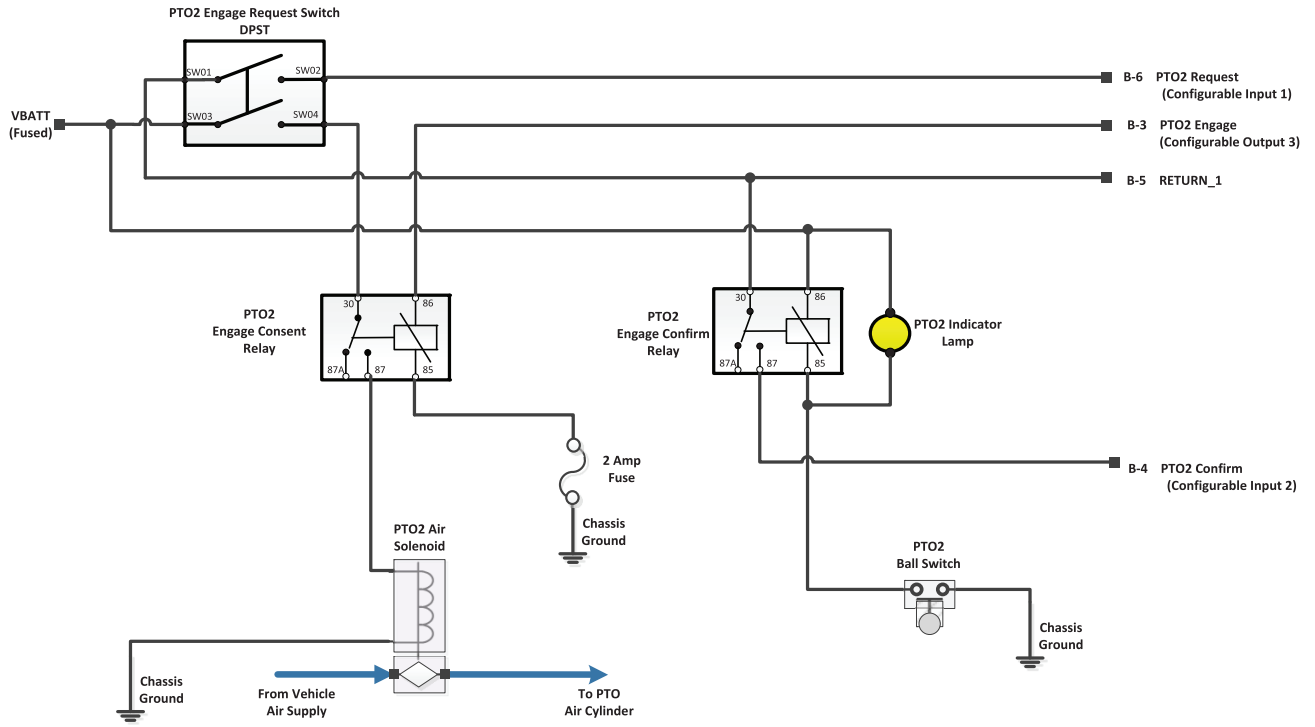
PTO 1 (Remote Engine Start/Stop)



Input / Output Calibration Package 51

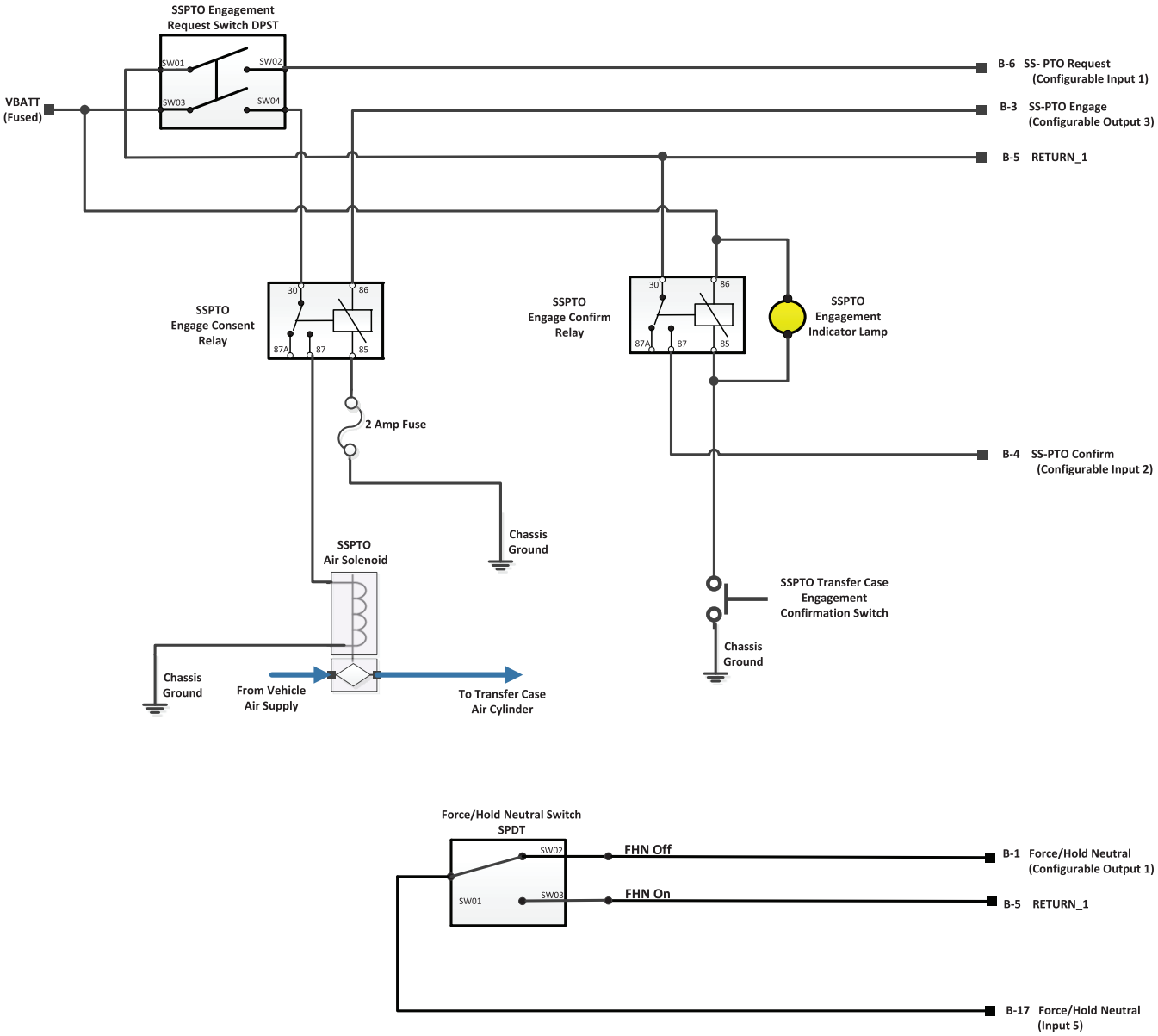
PTO 1 + PTO 2 (Remote Engine Start/Stop)





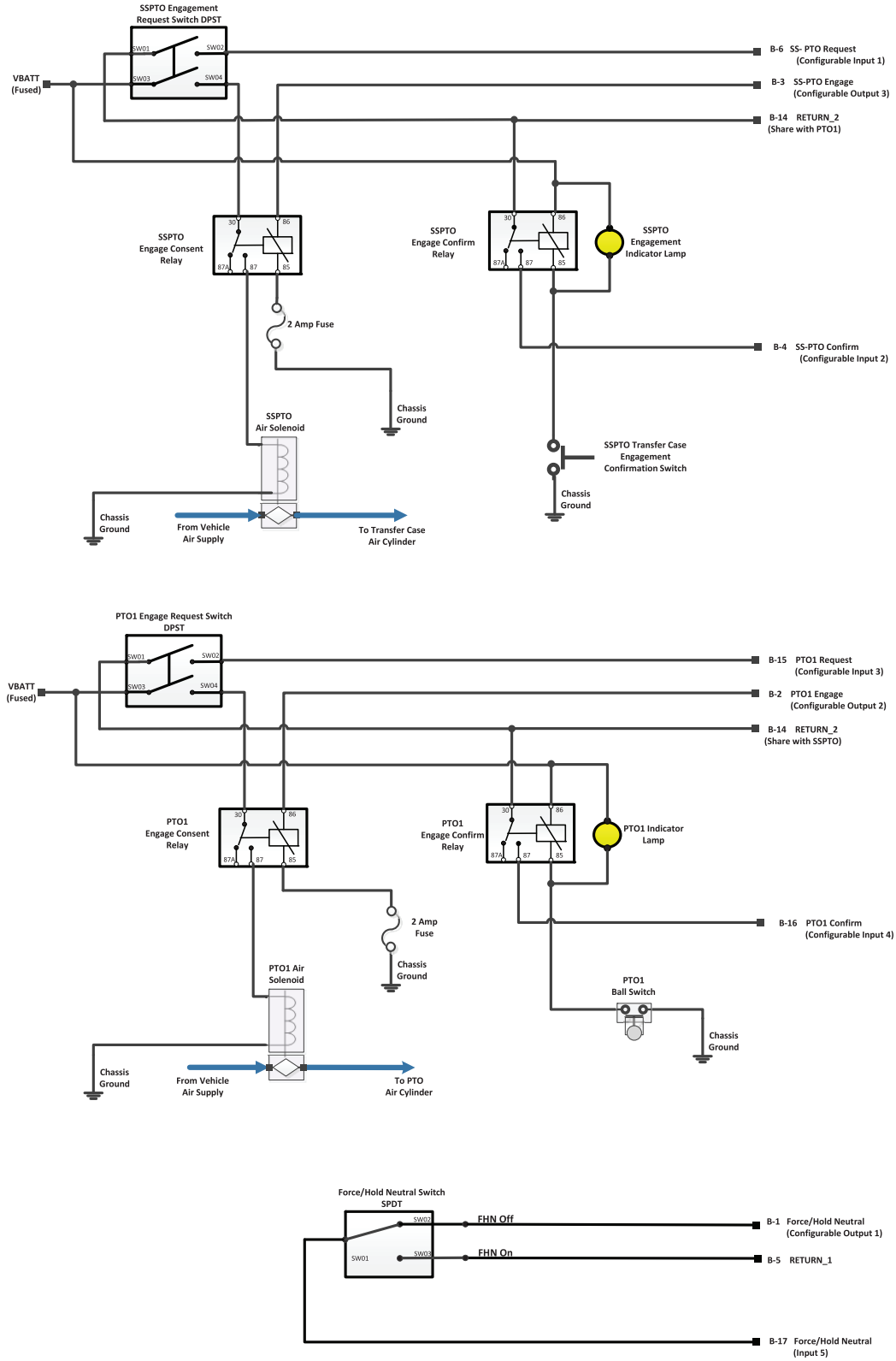
Input / Output Calibration Package 52

Split-Shaft PTO + Force Neutral



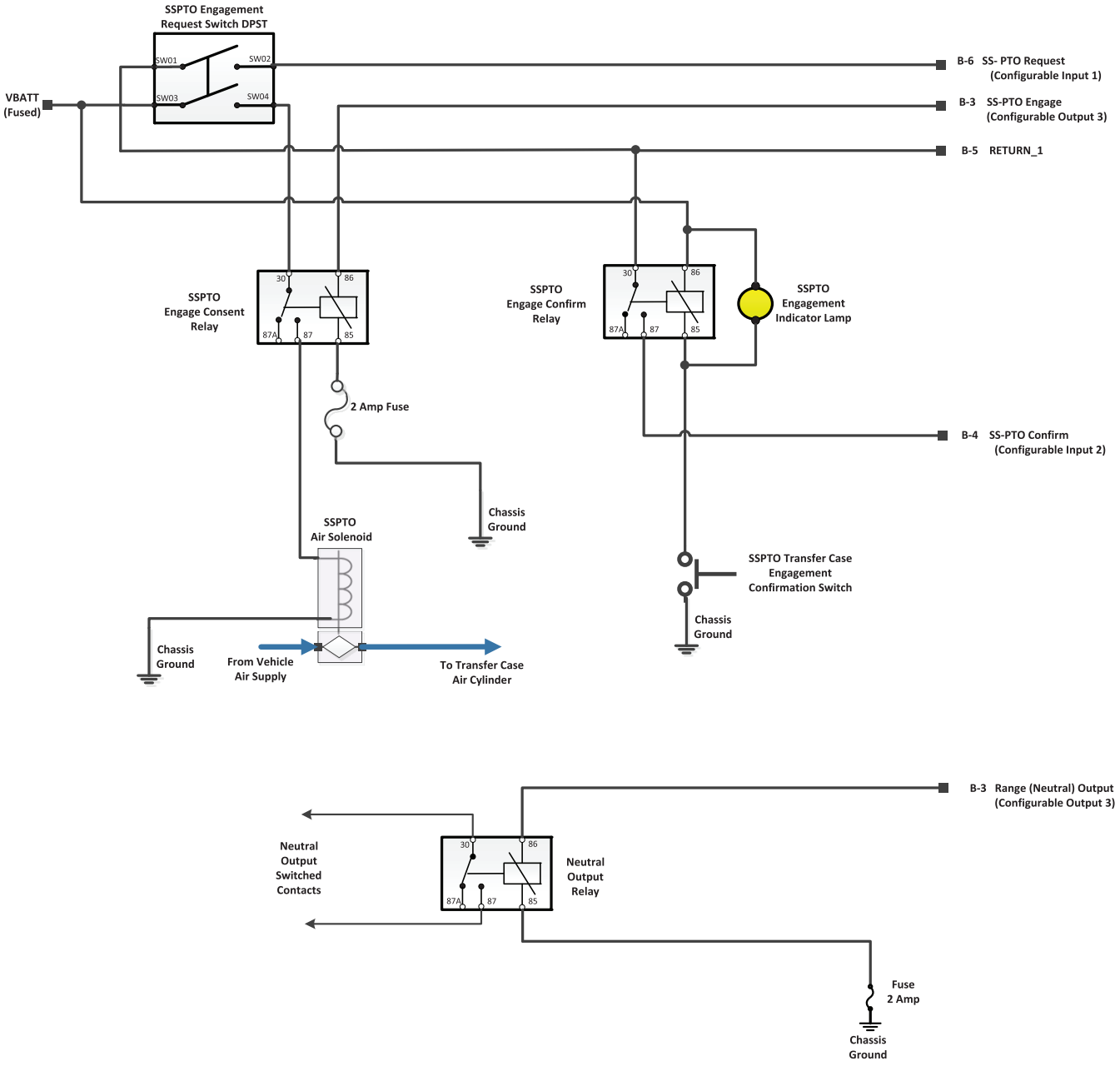
Input / Output Calibration Package 53

Split-Shaft PTO + PTO 1 + Forced Neutral



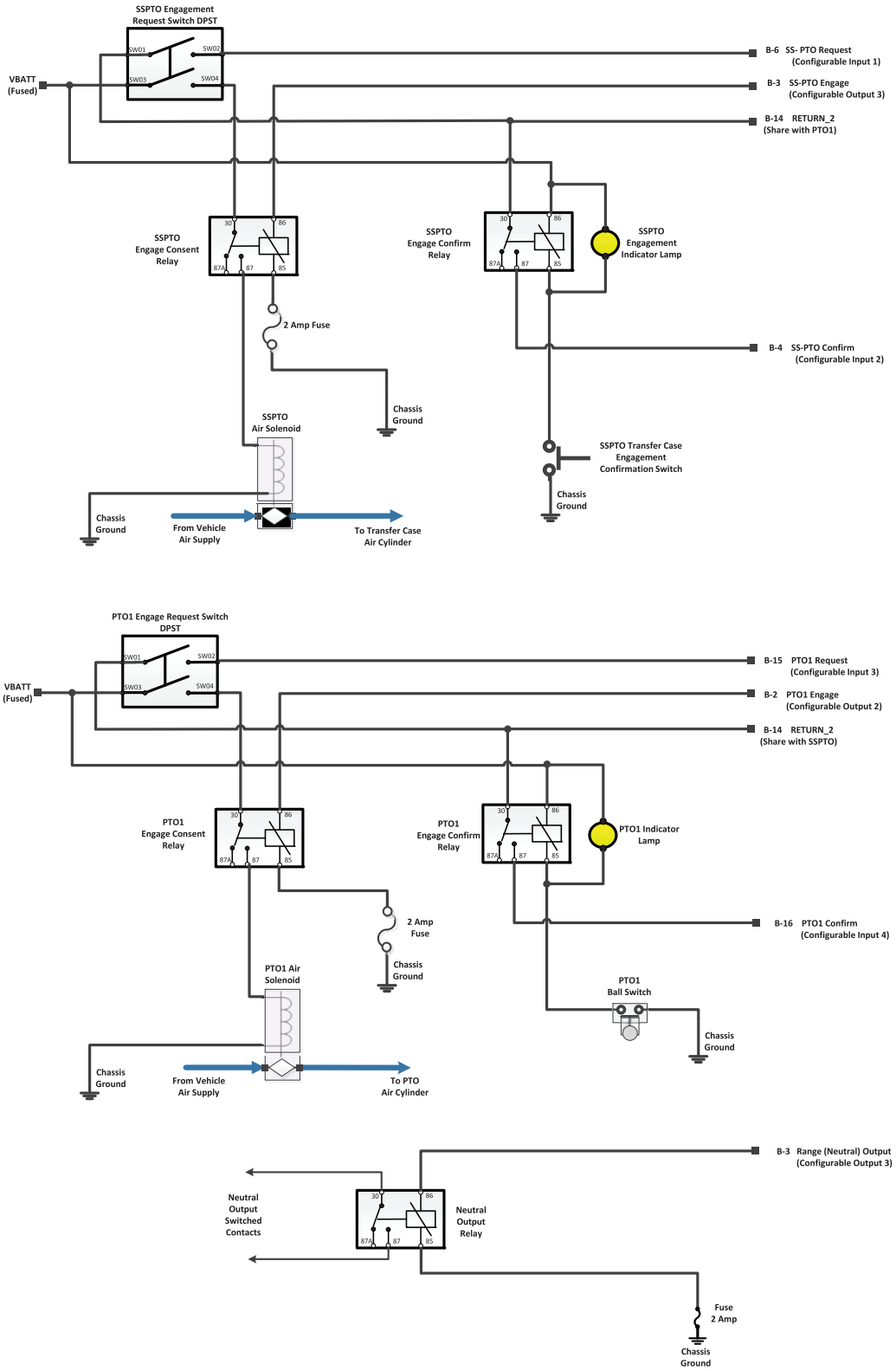
Input / Output Calibration Package 54

Split-Shaft PTO + Neutral Output



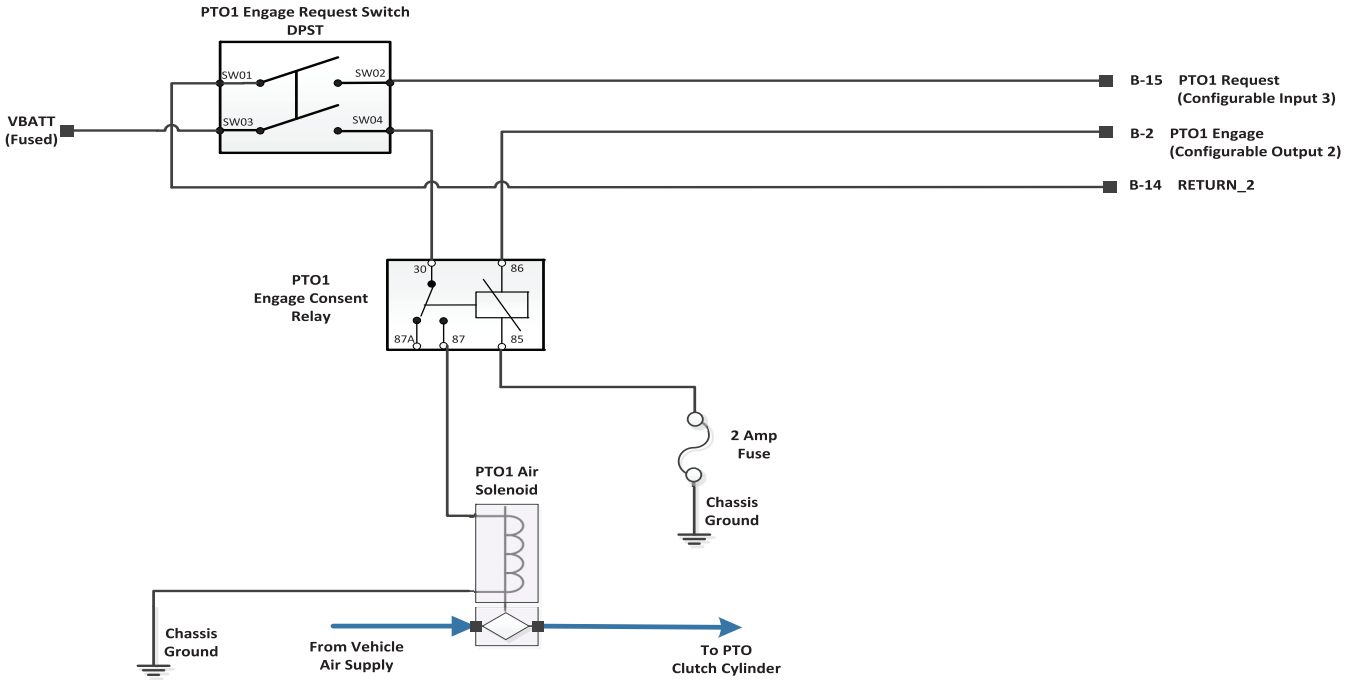
Input / Output Calibration Package 55

Split-Shaft PTO + PTO 1 + Neutral Output



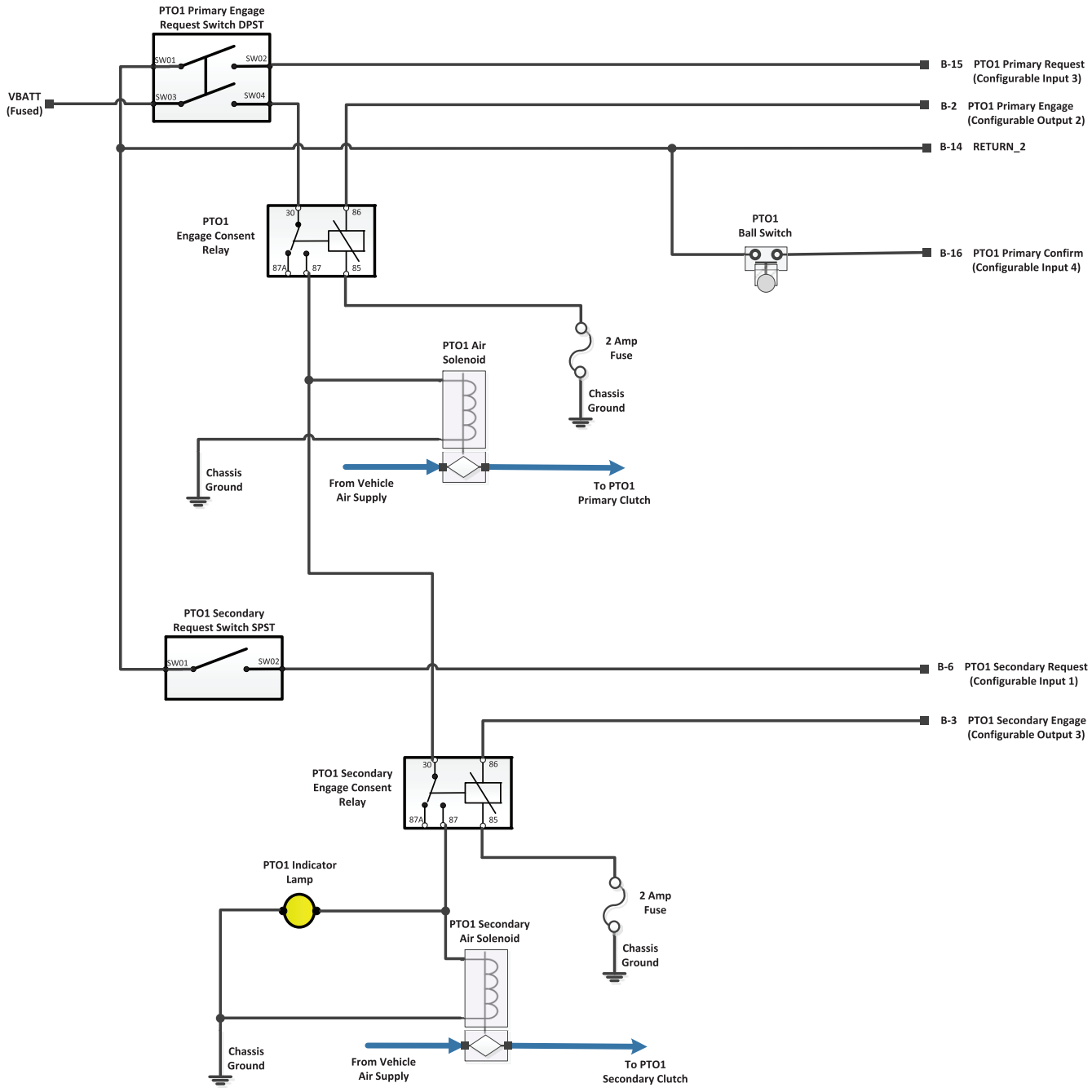
Input / Output Calibration Package 56

PTO 1 (Hot Shift PTO)



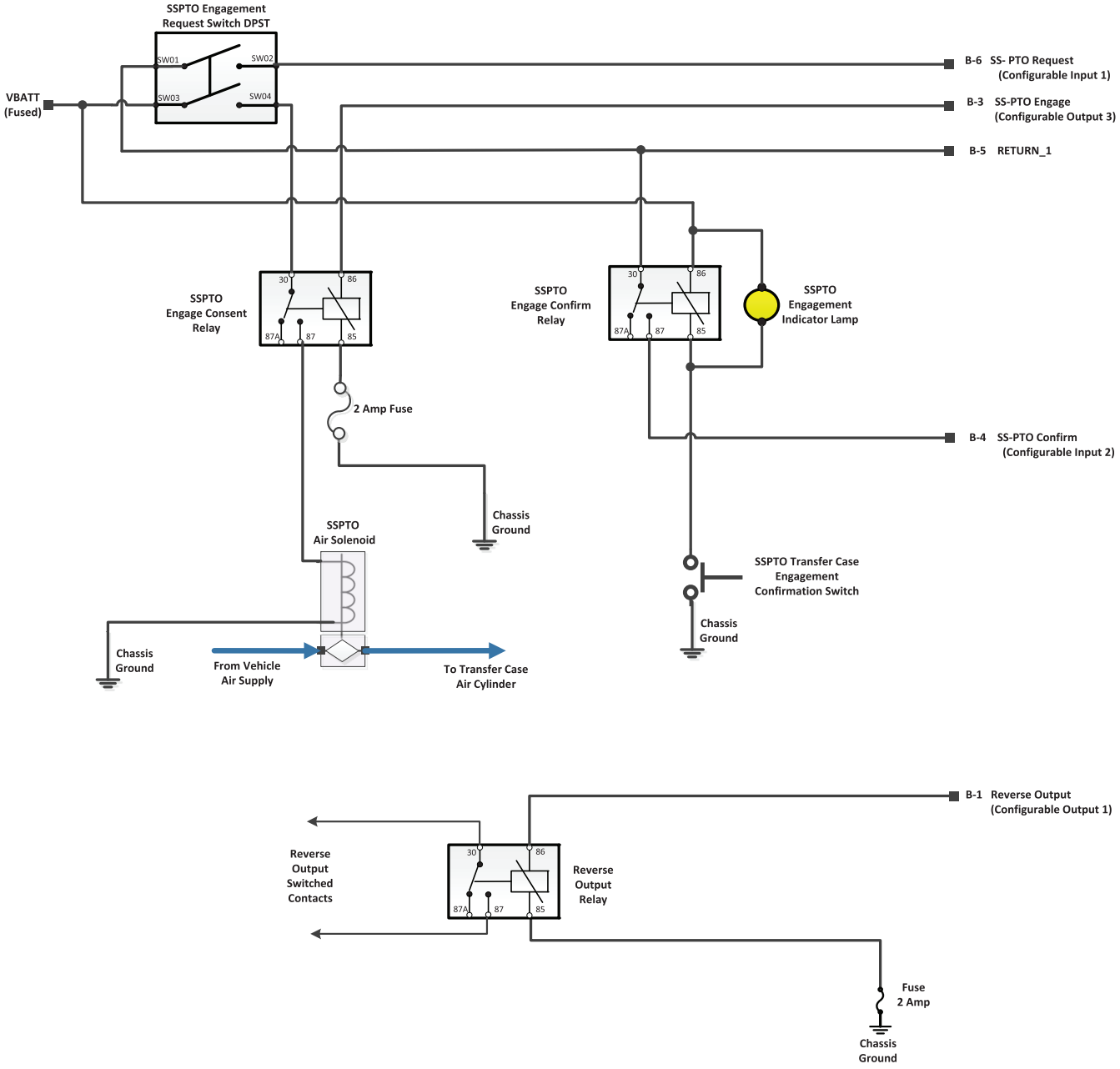
Input / Output Calibration Package 57

PTO 1 (Dual Stage Hot Shift PTO)



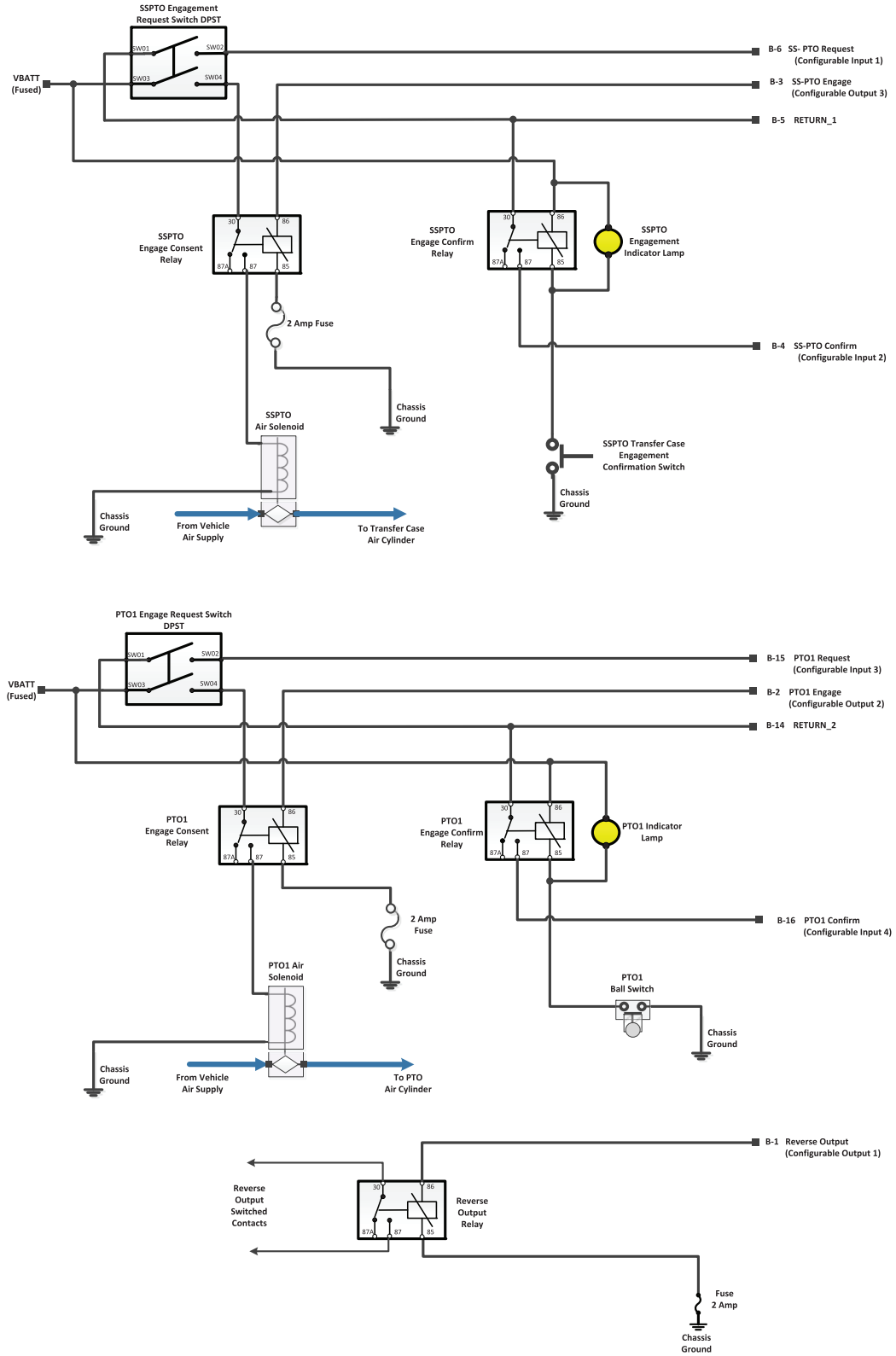
Input / Output Calibration Package 58

Split-Shaft PTO + Reverse Output



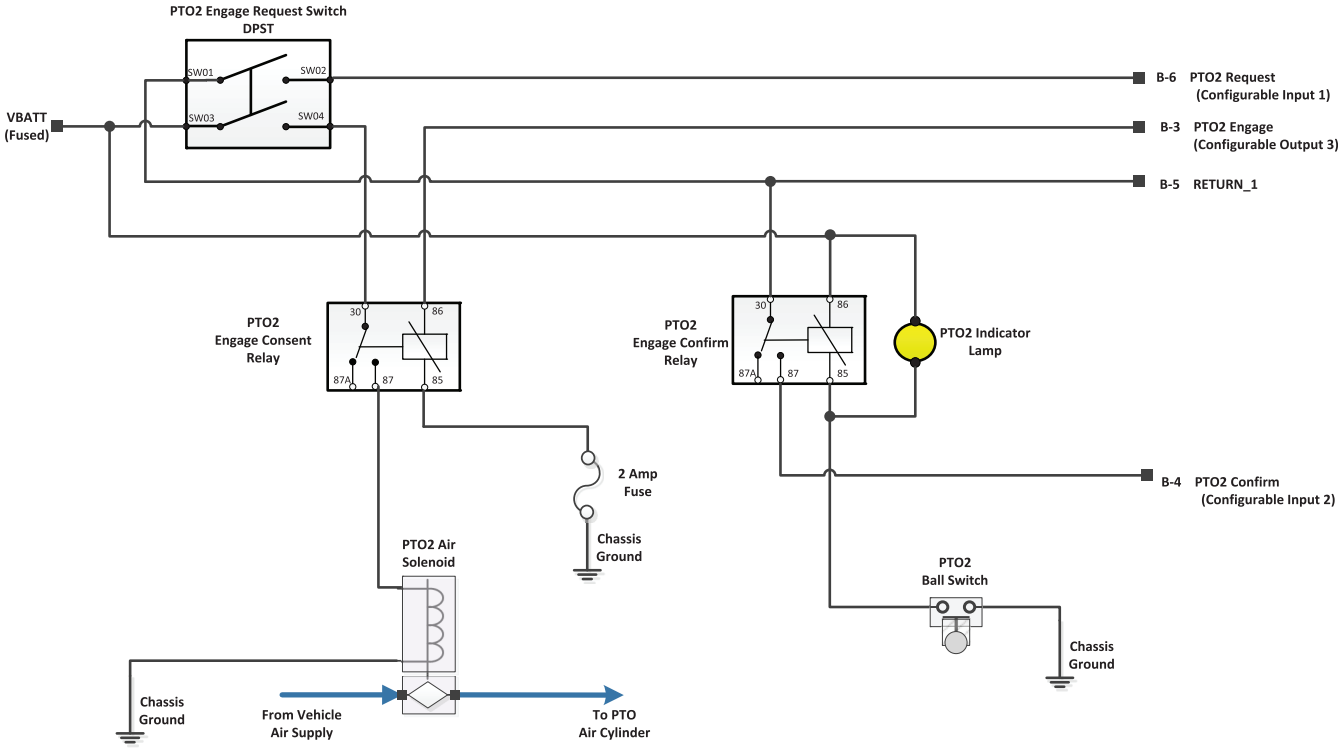
Input / Output Calibration Package 59

Split-Shaft PTO + PTO 1 + Reverse Output



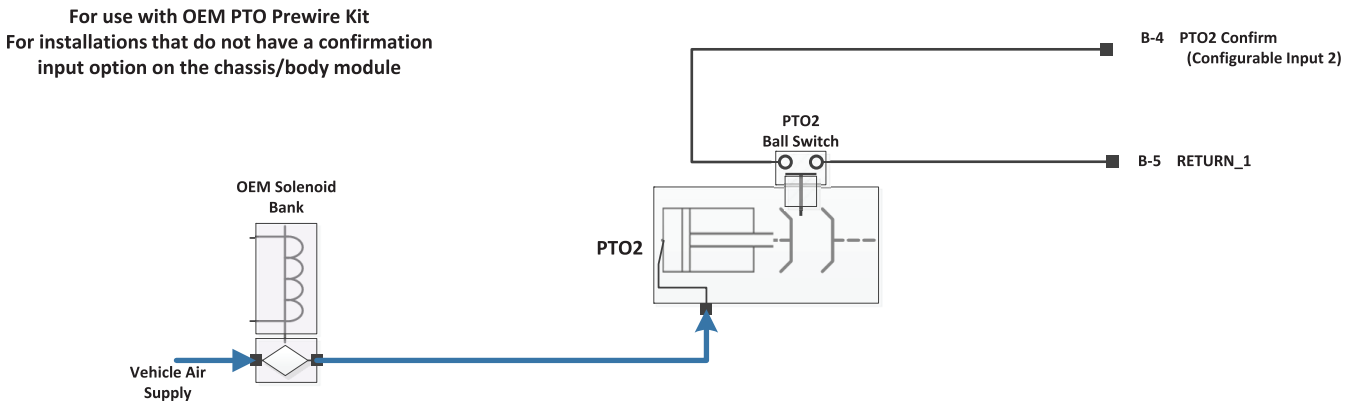
Input / Output Calibration Package 60

PTO 2 Only



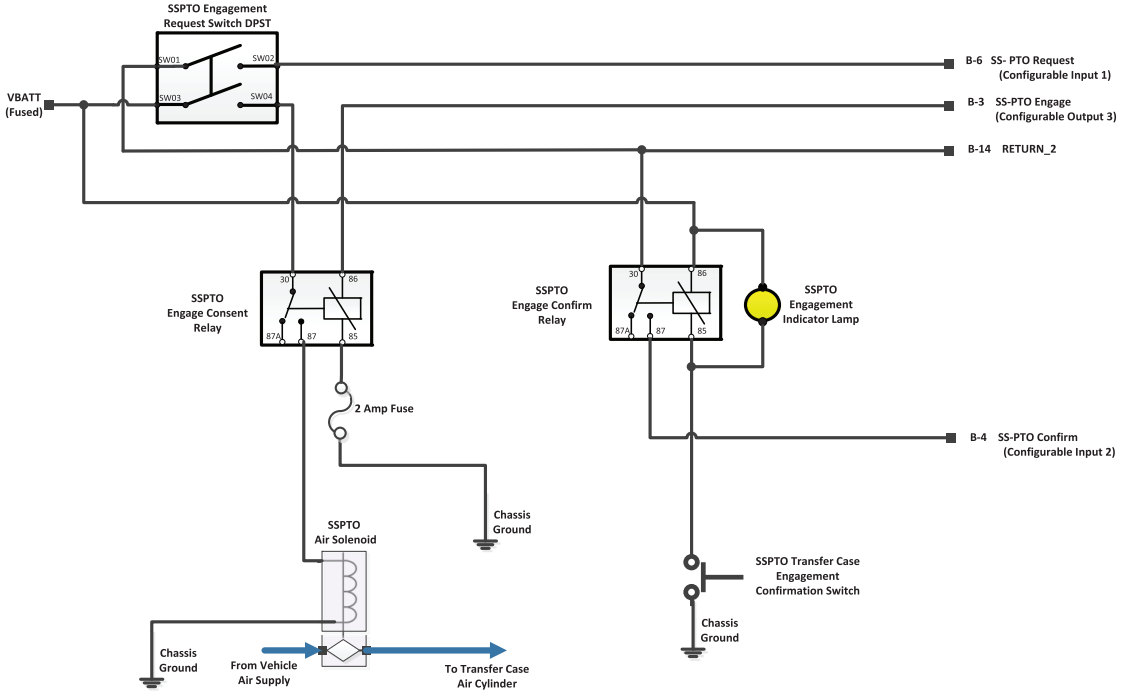
Input / Output Calibration Package 61

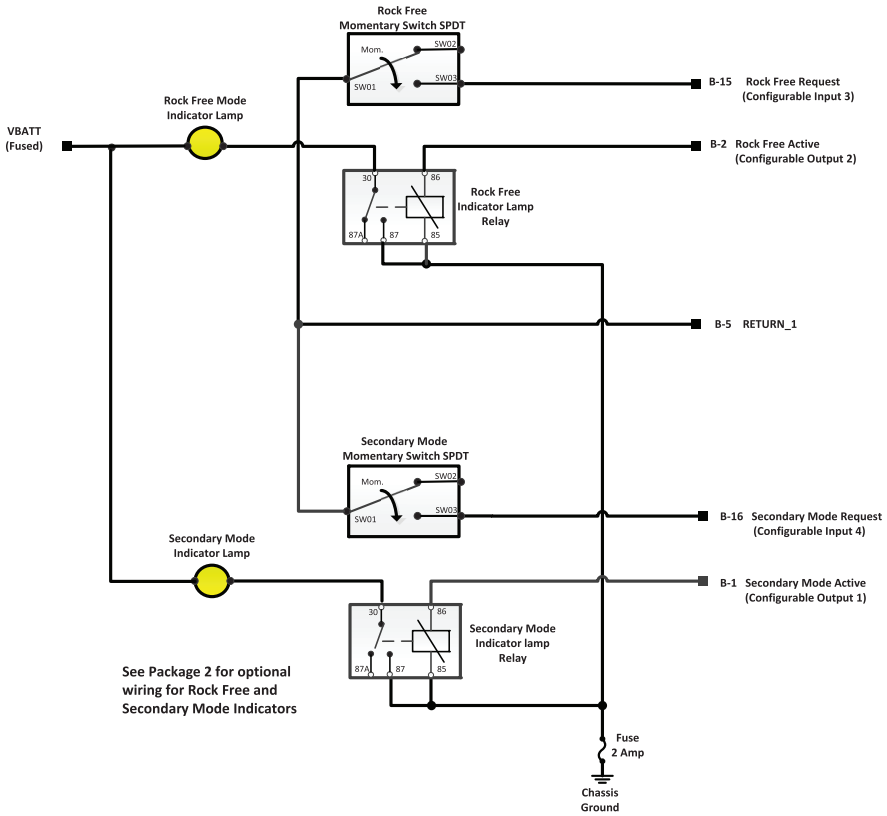
PTO 2 (J1939 Request, Consent) Hardwired Confirm



Input / Output Calibration Package 62

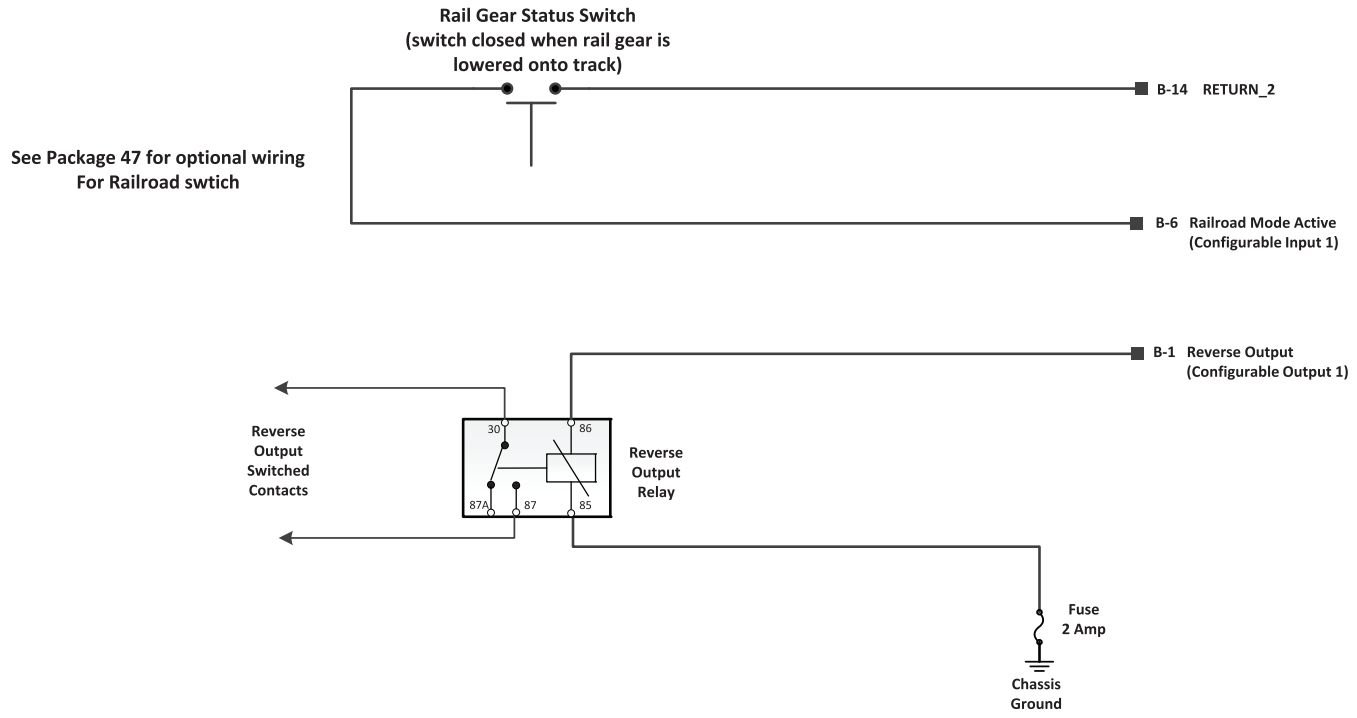
Split Shaft PTO + Rock Free + Secondary Mode





Input / Output Calibration Package 63

Railroad Mode + Reverse Output



Change Log

Date	Description
April 2025	Added new I/O Wiring Basics section, added packages 56 - 63, updated all schematics.
February 2024	I/O Package Overhaul, Change in Formatting
November 2023	Document Created

Note: Features and specifications listed in this document are subject to change without notice and represent the maximum capabilities of the software and products with all options installed. Although every attempt has been made to ensure the accuracy of information contained within, Eaton makes no representation about the completeness, correctness or accuracy and assumes no responsibility for any errors or omissions. Features and functionality may vary depending on selected options.

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