

4.3 | Power Requirements

A switched 12V DC power supply with a minimum capacity of 10A is required.

The harnessing system has been designed to provide flexibility in sourcing 12V DC switched power depending on where the ECU is mounted, and where sources of protected 12V DC power are freely available.

The following power supply options are supported:

Cab Convenience Sockets

COMMAND can be powered using an available cab convenience power socket along with the T3H-F001 Power Adaptor provided by T3RRA.

NOTE: A minimum of three cab convenience sockets are required in total if providing power to **COMMAND**, a RuggON tablet and John Deere implement harnessing. If fewer than three are available, another power option may need to be used for **COMMAND** to reduce the requirement to two cab convenience sockets.

WARNING: Convenience power supply sockets should be load-dump protected and fused appropriately within tractor electrical systems, and generally are but it's always best to make sure.



Using the John Deere Constant Power Harness

The John Deere Constant Power Harness (**BPF10404**) can be connected to the COMMAND harnessing system at connector C6 on the **T3H-C005** exterior breakout harness.

NOTE: The John Deere Constant Power Harness does not possess its own fusing, so take note that when connected to **T3H-C005** for supplying power to **COMMAND**, a fuse is supplied on the **T3H-C005** harness to protect against short circuits and the like.

Connection can also be made directly into the **T3H-C002** EXT branch (Connector C6) if the **T3H-C005** is not required but the aforementioned fuse must still be added for appropriate protection using a **T3H-F003** Inline Fuse Adapter.



Providing a Custom Power Connection

A custom connection to switched 12V power can be made using the **T3H-PWR-1** Power Adaptor (DT06-2S & Loose Wire Ends). The installing technician must provide the appropriate connections / terminations depending on their own requirements.

NOTE: Avoid routing power cables near high-current or noisy signals if possible (e.g. alternator).

WARNING: The power supply must be rated and protected appropriately for the application!

Custom Power Supply Requirements

If a custom power source is used, it must meet the following requirements:

Description	Nominal Range / Rating	Notes
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Supply Voltage (V)	9-32V DC	Ripple/noise $\leq$ 100 mV peak-to-peak recommended; ensure DC/DC converters are well-filtered.
Supply Current (A)	1A for general ECU operation plus 2A per proportional solenoid in use	Depends on connected loads, MCU, sensors, and interfaces.
Power Supply Protections	Overvoltage protection	Must be protected against load dump, inductive spikes, and cranking via TVS diodes or suppression circuits. Transient protection required (TVS diode, suppressor per ISO 7637-2).
	Overcurrent protection	Must include a fuse or circuit breaker rated to a maximum of 10A.