

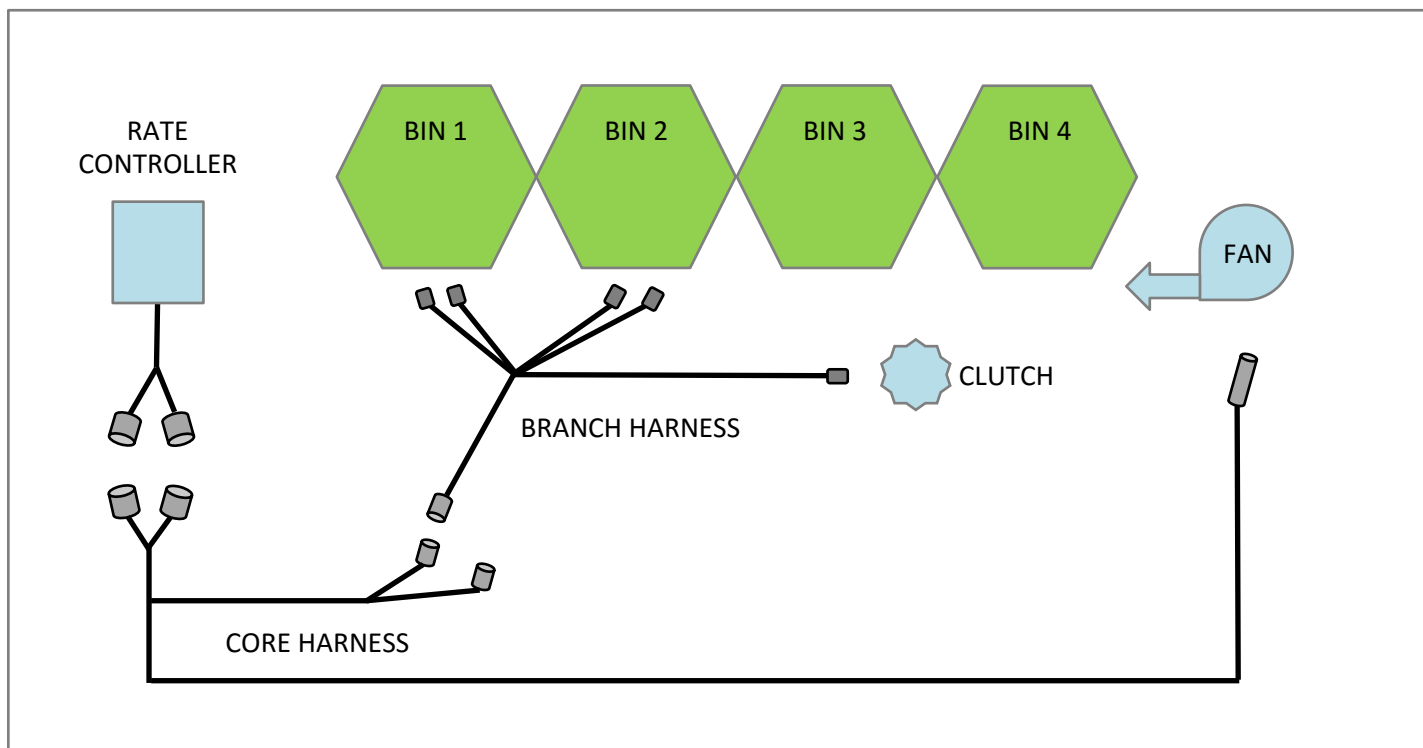
### HARNESS KIT SUMMARY

#### DRC TO GENERIC GROUND DRIVE AIR CART (INCL HYDRAULIC DRIVE MODIFICATION)

#### COMPONENTS

- Core Harness
- Branch Harness
- Sensors and Connectors as optional extras

#### BASIC LAYOUT



#### CORE HARNESS

The Core Harness connects to the Rate Controller.

There is a 7metre length with fan sensor installed, and a connector for a second fan sensor.

There is a 2metre length with two 16pin connectors which couple to the branch harnesses.

#### BRANCH HARNESES

The first Branch Harness connects to Bin1 and Bin2.

This harness also connects to the ground drive clutch, and Bin clutches.

If there are more than 2 bins, a second branch harness is required.

The branch harnesses are identical, so the second branch harness will also have a connector for the ground drive clutch (main clutch), leave this disconnected.

#### GROUND DRIVE vs HYDRAULIC DRIVE

These kits are designed for ground drive air carts, but they can be easily adapted to run most hydraulic drive machines. Details are shown later in this guide.

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CONNECTION

These kits are designed to be as generic as possible. Many air cart sensors/clutches/components do not conform to a standard pinout. Please check the pinouts during the installation, to ensure the components are wired correctly. The pinout descriptions are listed in this guide.

ERRATIC PRODUCT RATES

Meter sensors monitor the speed of the product delivery. These sensors must provide a high number of pulses per second. For machines with slow turning shafts (low rates like Canola/Clovers/Grass Seeds etc), they must be equipped with high resolution encoders, or high pulse tone wheels (or moved to high speed shaft).

SENSORS

The sensors are inductive proximity type, they will detect metal (they do not detect magnets). There should be approximately 2mm gap between the sensor and the tone wheel teeth. There is a diagnostic led in the rear of the sensor, which will light up when it detects metal (and sends a pulse signal).

FAN SPEED SENSOR

If the fan speed readout dies when the fan speeds up, it means the tag/bolt is flicking past the sensor too quickly. Use a larger tag for the sensor to read, or move the tag closer to the center of the fan shaft.

CONTROLLER WARNING

It is common for rate controllers to generate the warning "DRIVER OVERCURRENT". This may be caused by a wiring or component fault. It is most commonly caused by the component requiring high current levels to operate correctly (there is actually no fault). The controller simply cannot provide the current required. Plug in 'High Current Driver' options can be supplied for these kits to prevent this problem.

LOW SHAFT SPEED SENSORS

These rate controllers do not provide low shaft speed monitoring (therefore the harness kits are not fitted with low shaft speed sensor wiring). For some machines that absolutely require this, a low shaft speed controller kit can be added to installation.

CORROSION

It's recommended to regularly apply a corrosion protectant to the connectors (electrical silicone spray / water dispersant / dielectric grease etc). Contact cleaner will clean the pins but it will not prevent corrosion. Filling the rear of the connector with silicone sealant can trap moisture and cause premature failure.

CLUTCH CONNECTORS

PIN A: 12v switched  
PIN B: Ground

ACTUATOR CONNECTORS

PIN A: Decrease/Increase  
PIN B: Increase/Decrease

SENSOR CONNECTORS

PIN A: Signal to Controller  
PIN B: Ground  
PIN C: 12v sensor power



CORE HARNESS OVERVIEW

CORE HARNESS



CONNECTORS TO BRANCH HARNESS



CONNECTORS TO RATE CONTROLLER

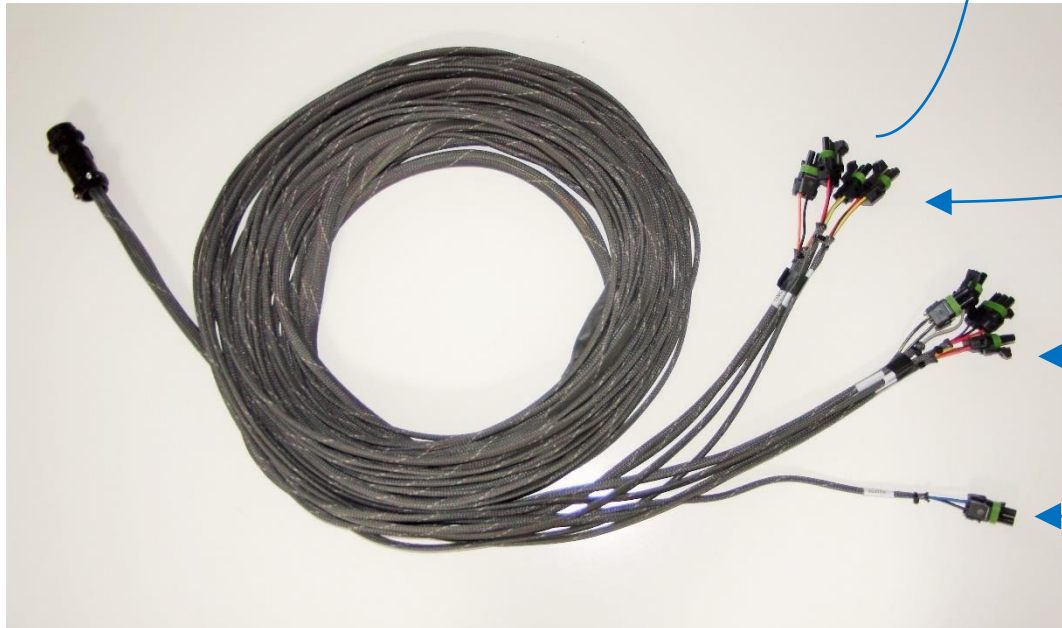
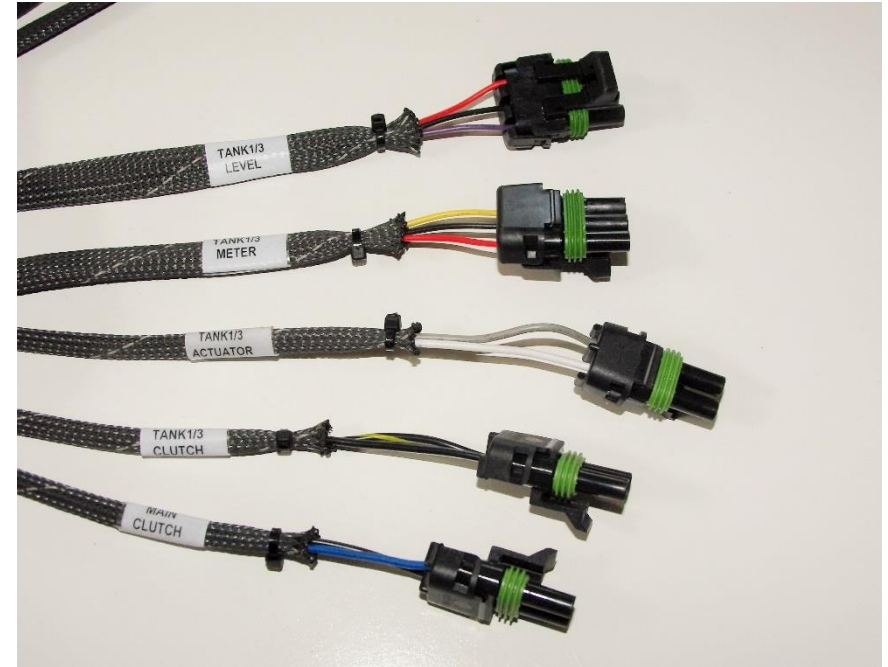


FAN SPEED SENSOR



BRANCH HARNESS OVERVIEW

BRANCH HARNESS



BIN 1 (OR BIN 3 ON SECOND BRANCH HARNESS)

BIN 2 (OR BIN 4 ON SECOND BRANCH HARNESS)

MAIN CLUTCH (GROUND DRIVE)

ADAPTING THE HARNESS FOR PWM SOLENOID VALVES

**ORIGINAL BRANCH HARNESS**

**MODIFIED BRANCH HARNESS**

