Instructions – Retrofit Kit

For Rewiring Loader Control Panel

Converting a ‘BL’ Motor powered unit to a ‘6M’ or ‘8M’ Motor

This instruction bulletin allows for you to easily convert your existing Whisper® Loader™ from a “BL” Brushless-type SwitchedReluctance Motor to a “6M” Brush-type Infinity® Motor powder-powered unit. The original function of the Loader (i.e. VP, Powder Proportioning or Standard) remains unchanged.

Brushless-type Motors are no longer available from our OEM, therefor we are providing our customers with a means of converting existing Whisper Loaders to be compatible with our new Long-life Infinity® Brush-type Motor, hereafter referred to as ‘6M’ or ‘8M’ version. Units shipped after January 2019 incorporate either the ‘6M’ or ‘8M’ Infinity® Motor.

Do Not start making changes until these instructions are fully understood. If you are unsure, consult Pneu-Con Customer Support or an experienced electrician.

Tip: take photographs of the existing Control Panel wiring for reference.

Before you begin:

DANGER! LOCK OUT AND TAG OUT. Electrical shock hazard – ensure safe practices are observed. This procedure requires that the electrical power source to the Loader’s Control Panel be disconnected & locked-out prior to performing the following steps.

General Notes:

1. Recommended tools:
   a. Relay RFK – Drill Motor & Ø7/64” Bit, 1/8” & ¼” Flat Blade & #2 Philips screwdrivers, and Multi-purpose Electrician’s Wire Cutter Tool (stripper/cutter/crimper).  
   b. Additional tools VS RFK with Variable Speed – .070” Allen wrench, Ø13/32” Bit, 7/16” & ½” deep sockets or box wrenches and needle nose pliers (optional).
2. Typical Retro-fit Kits are shipped with necessary parts to make conversion as easy as possible.
   a. For basic BL to 6M/or 8M conversions the existing Sub-Panel is retained. This RFK requires adding a Relay and minor re-wiring as outlined in steps below. On Pneu-Vue™ Control Panels the PLC Module may need to be lifted up & away to access to Sub-Panel. Kit includes Lead Wires, Connectors & Wire Nuts.
i. Choose location on Sub-Panel (below Controller) to mount the Relay. Mark mounting-hole locations. Drill Ø7/64” pilot holes & Tap #6-32 threads, or use Self-tapping Screws provided. Secure Relay.

b. The Variable Speed (VS) Control kit includes the Speed Control Module (SCM) mounted onto an Aluminum SubPanel along with (3) Stand-Off Risers (for relocating the PLC) and Lead Wires, Connectors & Wire Nuts.

i. Replace existing Sub-panel with RFK VS version Sub-Panel (fitted with Relay, SCM, Cord(s) & wires). Move the PLC Controller from existing sub-panel onto Stand-Offs on new Sub-panel.

ii. Replace existing Potentiometer: Using the Allen wrench, loosen set screw to remove Adjustment Knob from front of Door, set aside for later use. With 7/16” tool remove Potentiometer mounting nut. Next, use Ø13/32” bit to increase size of mounting hole to accept NEW Potentiometer. Install (75kΩ) Potentiometer and check that it is turned to lowest setting – fully counterclockwise – secure in place with mounting nut using ½” tool. Reinstall Adjustment Knob (from old unit), positioning Knob with ‘0’ aligned with tick-mark, or vertically, if no mark evident; tighten set screw with Allen wrench.

3. Exchange the existing BL Loader Lid with the RFK 6M/or 8M Lid Assembly. The Mini-Change® Control Cord (Yellow 7-Conductor) is then connected to the Receptacle on RFK Motor Cover. Then attach the Micro-Change® Proximity Cord (Yellow 3-Conductor) to the Dump Valve Proximity Switch. Attach the Vibra-Pulse Cord (Yellow 3-Conductor with DIN Connector) to the Solenoid Body.

   a. Optional: Attach Exhaust Silencer onto motor’s exhaust port. Should your Loader not have one, an Exhaust Silencer Kit (p/n: 103749) may be ordered, separately or, with the RFK.

4. Check amperage rating of the Control Panel Circuit-Breaker ON/OFF Switch. For 6M units the existing 15Amp Switch is suitable; On 8M units either: confirm 17Amp Switch is in place or replace with 17Amp Switch provided in RFK.

5. Make final wire connections, for your specific version, as outlined in the steps below.
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**Basic – Relay added – units**

Relay Step 1: Connect Red wire from Relay [contact 3] to Output Q1-2 [labeled wire #6].

Relay Step 2: Connect 10’ long White Lead wire w/Connector from Relay [contact 4] to Common N terminal.

Relay Step 3: Connect wire #4 from Relay COM contact to ‘LAST USED’ Output Q2-1 or Q4-1.

Relay Step 4: Move wire #4 from Q2-1 to Q1-1.

Relay Step 5: Add Jumper [wire labeled #4] from Q1-1 to Q2-1.

Relay Step 6: Connect wire #6A [black wire from Control Cord] to Relay NO contact Service Lead [labeled wire #6].

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**Variable Speed units with SCM**

VS Step 1: Connect White wire [heavy gage from Control Cord from Motor] to N.

VS Step 2: Using a Wirenut connect Black [heavy gage wire #6A from Control Cord] to Black wire from Speed Control Module and Black wire from Potentiometer (Speed Control device on enclosure door) together [all labeled #6A].

VS Step 3: At ‘LAST USED’ Q2-1 or Q4-1 Output add the Red Service Lead wire [3’ length /Wirenut, labeled #4] use provided Wirenut to connect Red wire #4 from Control Cord and Red wire from SCM together.

VS Step 4: Connect Orange wire from SCM to Output Q1-1 [labeled #6C].

VS Step 5: Connect Yellow wire from Potentiometer to Output Q1-2 [labeled #6B].