



This manual contains important warnings and information.
READ AND KEEP IT FOR REFERENCE.

INSTRUCTIONS

ULTRA[®] Airless Paint Sprayer FDR Control Retrofit Kit

Model 238-057, Series A, Ultra 1000, 230V

207 bar (3000 psi) Maximum Working Pressure

Model 238-059, Series A, Ultra 500, 230V

195 bar (2750 psi) Maximum Working Pressure

Pressure Relief Procedure

WARNING



INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tip.

1. Engage the gun safety latch.
2. Turn the ON/OFF switch to OFF.
3. Unplug the power supply cord.
4. Disengage the gun safety latch. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Engage the gun safety latch.
6. Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the tip guard retaining nut or hose coupling to relieve pressure gradually, then loosen completely. Now clear the tip or hose.

Pressure Control Replacement

DISASSEMBLY

WARNING



FLUID INJECTION HAZARD

To reduce the risk of serious injury, follow the **Pressure Relief Procedure** warning whenever you are instructed to relieve pressure.

1. Relieve pressure.
2. See Fig. 1. Disconnect the filter/drain valve assembly and the pump supply hose at the pressure control.
3. See Fig. 1. Remove the four mounting screws (B) from the pressure control cover and remove the pressure control cover.
4. Disconnect the pressure control black M+ and black M- leads from the motor + and - leads.
5. Disconnect the red motor leads.
6. Disconnect the conduit from the motor and the control.

7. Remove the three 5/16 x 3/4 in. bolts from under the pressure control box and remove the pressure control box from the frame. Carefully pull the four motor wires from the box.
8. Remove the grey conduit from the motor. Pull the wires through the conduit.

ASSEMBLY

WARNING

Do not attempt to adjust or calibrate the pressure control. If the pressure control is faulty, replace it.

1. Install the 8 in. black conduit. Thread the four motor wires through the black conduit. Connect the black conduit to the motor.
2. Install the FDR control to the frame with the three 5/16 x 3/4 in. bolts from the old pressure control.
3. Carefully remove the pressure control board/cover (301) so as not to stress the wires.
4. Thread the four motor wires from the black conduit through the bottom conduit connector of the FDR control. Tighten the conduit nut.
5. See Fig. 2. Connect the red leads from the pressure control to the red leads from the motor, the black M+ to the + lead and black M- lead to the - lead from the motor. Be sure that L2 is plugged into B1 and that all other connections are intact.

CAUTION

Do not allow any of the wires to become pinched between the cover and the box. This may damage the insulation and result in a short. Do not over tighten the screws when attaching the pressure control board/cover. Over tightening the screws may shift the calibration of the pressure control.

6. See parts drawing and list. Carefully route the wires away from the filter board (320). Attach the pressure control board/cover (301) using the four mounting screws and washers (302, 303, 304). Torque mounting screws to 22 ± 2 in-lb.

CAUTION

Do not allow the fittings (A) to turn when removing or connecting the hose and filter/drain valve assembly. Turning the fittings may shift the calibration of the pressure control.

7. For upright carts go to step 10.
8. Install the 1/4 in. 45° swivel union to the control box side near the tire. Tip the swivel union up slightly to clear the tire.
9. See Fig. 1. Install the pump outlet hose to the male end of the 1/4 45° swivel union (C). Go to step 11.
10. Connect the pump outlet hose to the control box.
11. Remove the drain hose from the brass fitting of the drain valve. To remove the drain hose, push in on the collar of the brass fitting as you would to remove a hose from a quick disconnect, and pull out the hose.
12. Remove the drain valve from the filter assembly.
13. Install the new drain valve to the filter assembly.
14. Install the drain hose in the the brass fitting of the new drain valve assembly by simply pushing it into the fitting.

CAUTION

Do not allow the fittings (A) to turn when removing or connecting the hose and filter/drain valve assembly. Turning the fittings may shift the calibration of the pressure control.

15. Install the filter/drain valve assembly to the 3/8 in. outlet of the FDR control.

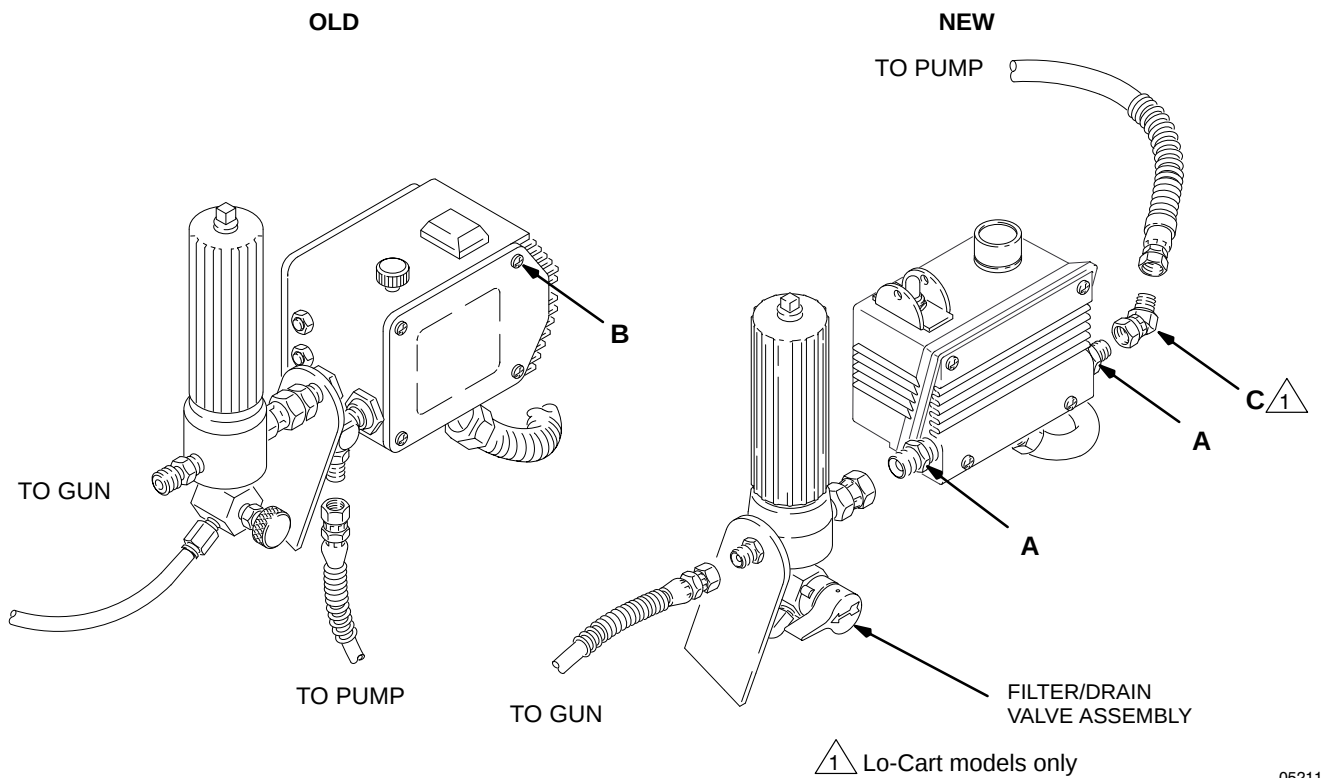


Fig. 1

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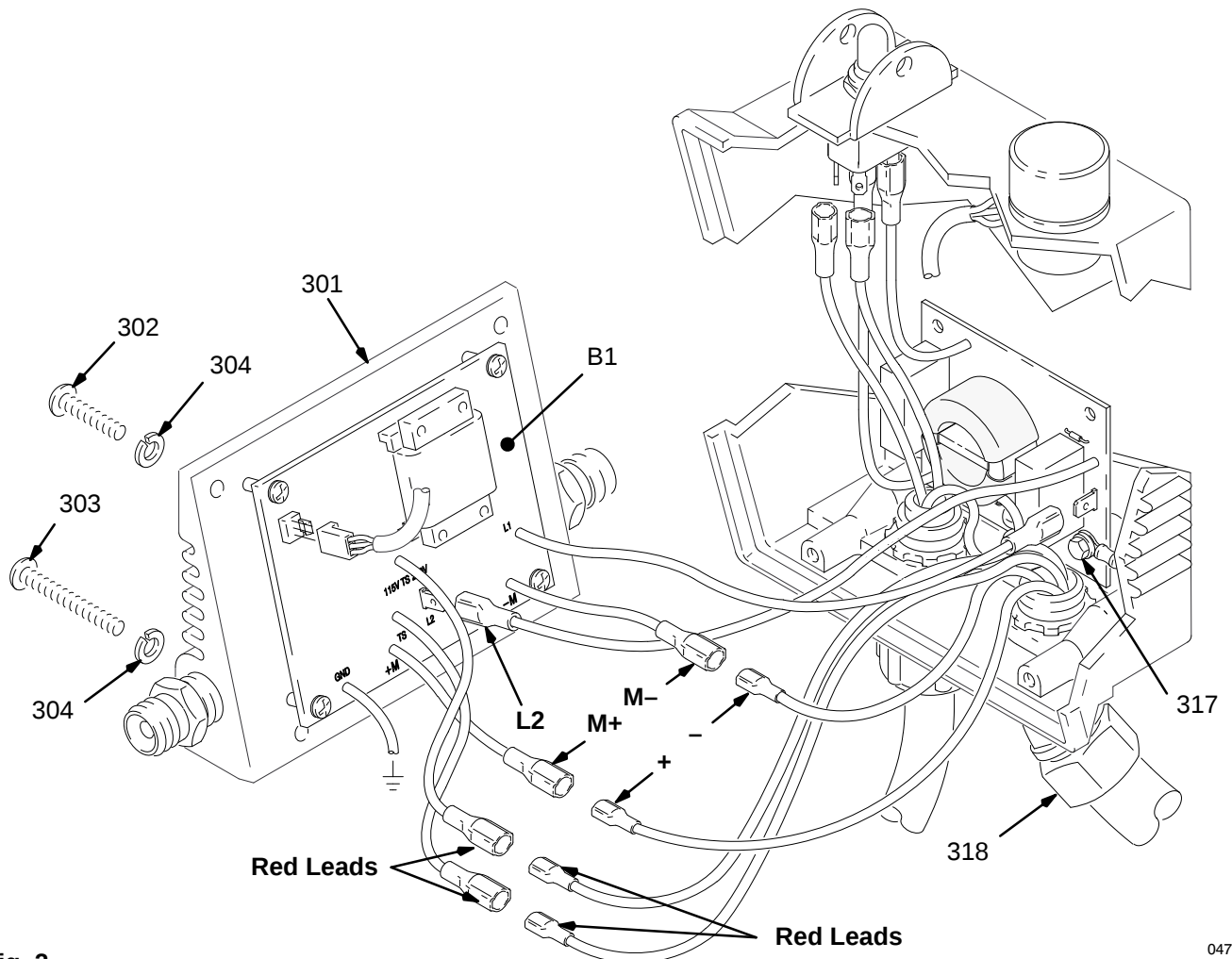
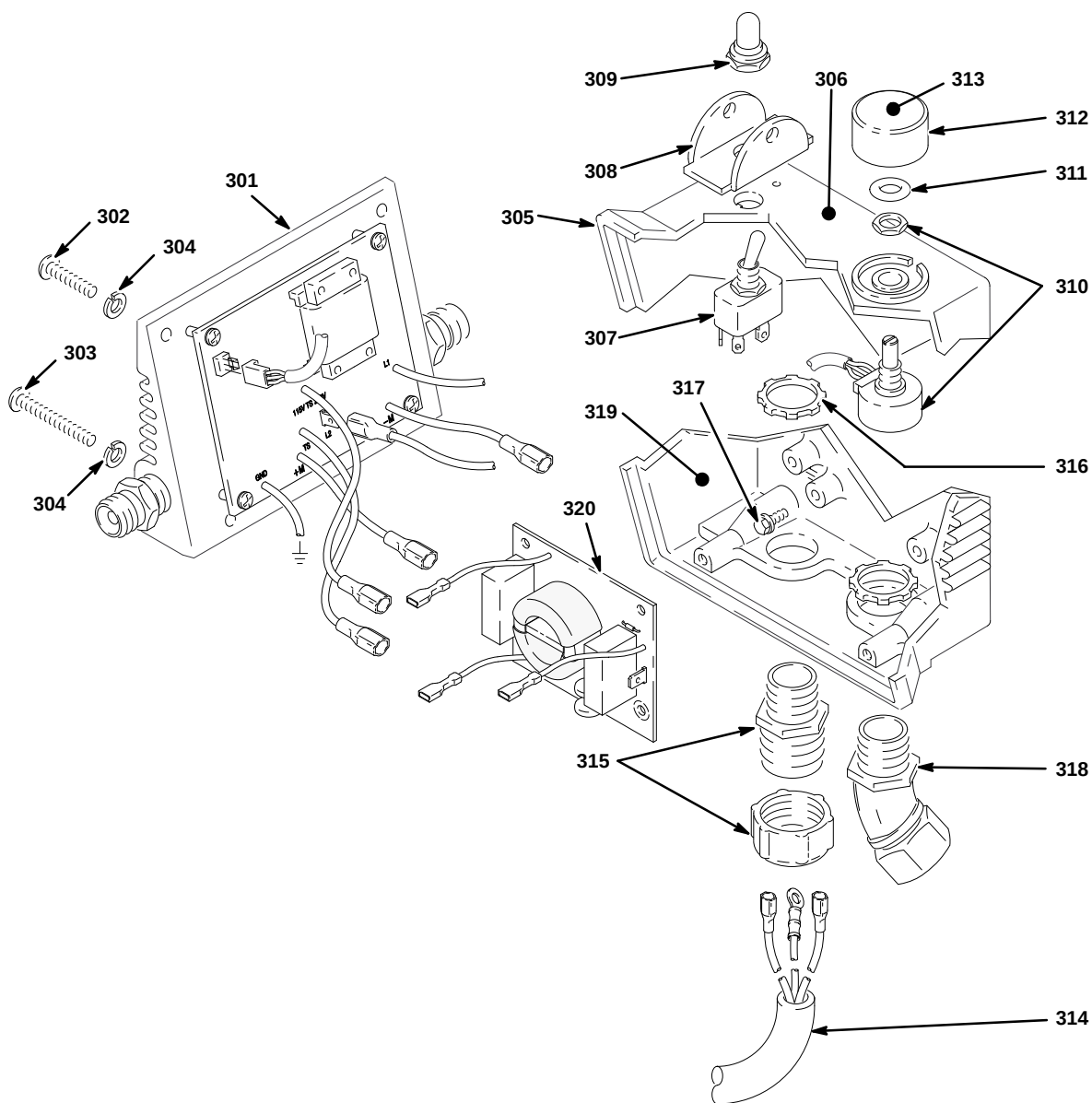


Fig. 2

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Parts Drawing and List – Pressure Control



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Basic Pressure Control for the ULTRA® Sprayer

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
301	237-663	BOARD, pressure control 3000 psi Model 238-057	1	310	236-352	POTENTIOMETER, pressure adjustment	1
	238-073	BOARD, pressure control 2750 psi Model 238-059	1	311	108-358	SEAL, shaft	1
302	107-251	SCREW, panhead, 10-24 x 1"	2	312	112-768	KNOB, control	1
303	112-610	SCREW, panhead, 10-24 x 2"	2	313	185-565	LABEL, knob	1
304	100-020	WASHER, lock, #10	4	314	237-822	CORD, power	1
305	189-095	HOUSING, cast	1	315	105-746	BUSHING, strain relief	1
306	290-034*	LABEL, caution	1	316	112-376	LOCKNUT	1
307	111-826	SWITCH, toggle	1	317	100-078	SCREW, hexhead, 8-24 x .375	4
308	107-255	GUARD, locking	1	318	108-460	CONNECTOR, conduit	1
309	105-659	BOOT, switch	1	319	189-286*	LABEL, warning	1
				320	237-491	BOARD, filter	1

*Extra Warning and Caution labels are available free.

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