



# CAL Compressed Air Loader Manual



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## DESCRIPTION & FEATURES

The Dri-Air CAL Loader is a compressed air loader powered by your facility's compressed air system. It is capable of handling most materials, whether in virgin or regrind form. It is designed to transfer material from gaylords, storage bags or hoppers to material drying hoppers or mold press feed throats. With an adequate source of compressed air, the loader is capable of moving material a distance of 15 feet at a rate of 125 lbs/hr.

### Each loader package includes:

- Line-vac accelerator
- Two different length material wands
- Stainless steel receiver with level sensor and filter
- Feed throat / hopper mounting adapt
- Material hose
- Air line
- Electric control assembly with a regulator and mounting bracket. Please see Assembly Drawing on reverse side for further descriptions. The loader controls are available in either 110- or 220-volt configurations.

## INSTALLATION PROCEDURE

Prior to installing the loader, make sure that all the components listed in the previous section are in the package you received.

If the unit you are installing is a 220-volt model, a power connector will be required. When installing the loader, care must be taken to select a location with a suitable electrical power source that is as close as possible to the "hard piping" of your facility compressed air distribution system. Some hoses, pigtailed and connectors can restrict the airflow, decreasing the efficiency of the loader.

## MOUNTING CONTROL ASSEMBLY

1. Using the mounting bracket supplied with the Control Assembly, mount the assembly at a convenient location near the receiver that is accessible to the operator. It must be within 8 feet of the receiver so the sensor wires can reach and within 6 feet of the electrical power source.
2. Connect the material conveying hose (1-1/4") to the receiver and tighten the clamp.
3. Connect the Line-vac assembly to the other end of the hose and tighten the clamp. The material hose must be connected to the "FLOW" port side of the Line-vac. An arrow on the Line-vac indicates this port. The Line-vac assembly includes a wand or tube for pickup from out takeoff- box or material supply such as a bag or gaylord.
4. Connect the black compressed air hose from the control box assembly to the Line-vac. No tools are required, just push the hose into the fittings.
5. Plug the sensor wire into the proximity switch.
6. To connect the shop compressed air to the regulator on the control assembly, thread an appropriate quick disconnect nipple to the inlet port on the regulator. The supply air must be at least 90 psi using a 1/4" airline.

## RECEIVER INSTALLATION

**MOUNTING RECEIVER: on a molding machine**

1. The CAL loader is supplied with a 6" x 6" (Dri-Air part #83668) square bottom flange mounting adapter. Drill the mounting flange to match the pattern on the machine feed throat flange and bolt the mounting flange to the machine.
2. Mount the receiver to the adapter by slipping it over the flange stub. Take note that the 2 O-rings in the mounting throat of the receiver are in place.

**MOUNTING RECEIVER: to load a hopper**

1. Drill both the adapter flange and your hopper lid with matching hole patterns. Bolt the adapter to the hopper lid.  
**CAUTION:** Be sure that the hopper lid is equipped with a material retaining ring that prevents material from obstructing the hopper's process air outlet port. If one is not present use an adapter that has an extension tube on the base (Dri-Air part #83926).
2. Mount the receiver on the adapter as detailed above.

## MATERIAL WAND SELECTION

Select the wand that fits the application for the loader. (The short takeoff box wand is designed to facilitate transferring material from a hopper, while the long material wand is designed to transfer material from a storage bag or gaylord.) Insert the Line-vac assembly into the wand and press until it fits snugly. The unit is now ready for operation.

## OPERATION

Material is conveyed using the facility compressed air that is accelerated by the Line-vac. The Line-vac creates a vacuum at the tip of the wand to pull material into the hose and amplifies the air volume entering the material hose to convey the material to the receiver. The rate of material transfer can be adjusted by regulating the air pressure. The higher the pressure setting on the regulator, the more material that will be conveyed. Air pressure can be adjusted by using the regulator on the Control Assembly.

## AIR PRESSURE ADJUSTMENT

Adjust the air pressure using the regulator on the control assembly. Pull the adjustment knob up and turn the knob until the material conveys at a proper rate. Too low a pressure will result in not moving the material to the receiver or too long a fill time. If the pressure is too high, the material will not drop properly into the receiver. When the proper pressure is achieved, push the knob down until you hear a click. This locks the knob at its current setting.

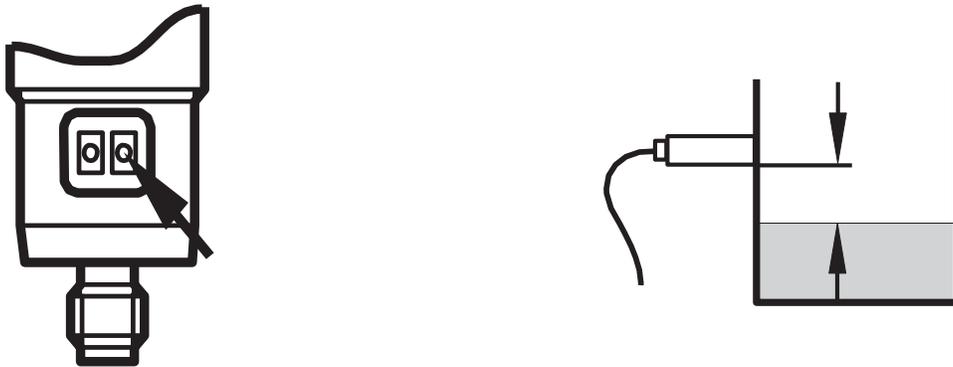
The loader will transfer material to the receiver until the level sensor on the receiver is satisfied. The sensor signal will shut off the air supply and conveying stops. The level sensor is factory adjusted, but due to some operational conditions further adjustments may be necessary. If the level sensor is out of adjustment, follow the procedures detailed in the next section.

## LEVEL SENSOR ADJUSTMENT

The sensor is adjusted at the factory for most materials. If the unit does not load material and the sensor light is not lit or the loader does not stop loading with material in front of the sensor, follow the instructions below to calibrate the proximity sensor.

To adjust the sensor's sensitivity, using the basic teach empty state, the unit suppresses the installation environment. The basic teach empty state resets the unit, an adjustment teach already carried out is deleted.

Empty the receiver so there is no material in front of the sensor (about 20 mm). The proximity switch needs to be configured as normally closed (output opens when the tank is full).



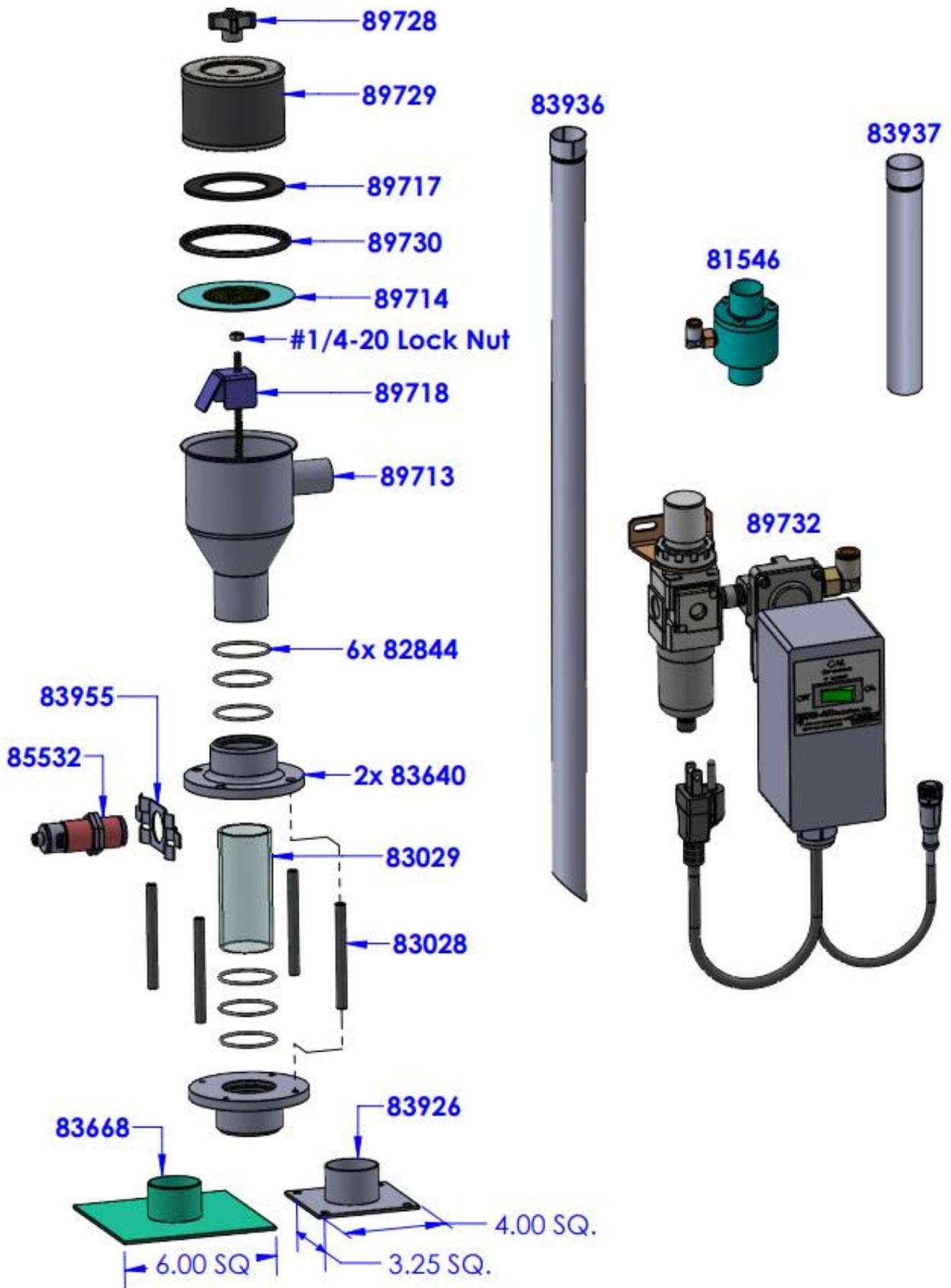
Press and hold the [OUT ON] button until the back of the proximity switch flashes twice (no longer than 6s). Once the light flashes twice, release the button and the light will stay on. If you push your finger in between the proximity switch and the tube, the light will go off. If this does not occur, please complete the sensor adjustment procedure again.

## RECEIVER FILTER

The CAL Loader is practically maintenance free. The operator need only perform the following procedures to keep the unit operating efficiently.

Due to the dust in materials being transferred, the receiver filter will require a regular cleaning, Simply remove the wing nut holding the filter element to the top of the receiver and pull the filter off. Remove the prefilter and blow out the filter with compressed air. Perform this at least monthly, sooner if material is very dusty.

# CAL ASSEMBLY DRAWING



# CAL PARTS LIST

<b>Description</b>	<b>Part #</b>	<b>Amount</b>
Control Box CAL 220V	89735	1
Control Box CAL 110V	89732	1
Gasket Edge Jacob EPDM	89730	1
Filter CAL	89729	1
Knob 1/4-20 Wingnut	89728	1
Deflector Material CAL	89718	1
Gasket CAL Filter	89717	1
Cover Top with Screen CAL	89714	1
Body CAL 1.25"	89713	1
Part-2-DESC	85532	1
Bracket Prox DAC	83955	1
Wand CAL Short 1.25" SS	83937	1
Wand CAL Long 1.25" SS	83936	1
Base Slip-Fit SS Hopper Fill	83926	1
Base Slip-Fit SS Feed Throat	83668	1
Housing Slip-Fit ALU	83640	2
Tubing 3/8" Nylon Black	83109	10 ft
Tube Butyrate 2" x 4.5"	83029	1
Rod Support 4" Long	83028	4
O Ring BUNA for Slip-Fit Bases	82844	6
Line VAC 1.25"	81546	1
Hose 1.25" Clear	81444	10 ft
Proximity Switch AC	85532	1
Proximity Switch Cable	86652	1