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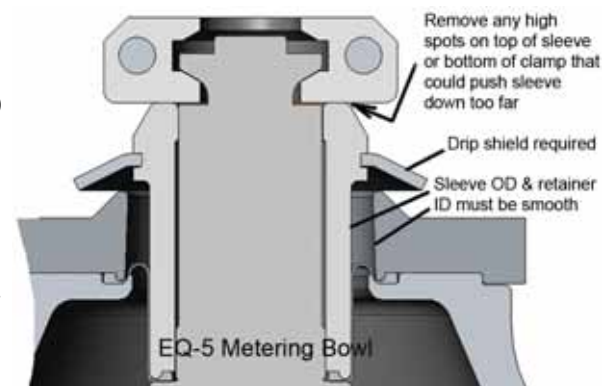
ASK AN ENGINEER

## How can I make my fill diaphragms last longer?

Fill diaphragms (PN 3285458) can fail prematurely for various reasons, most of which can easily be prevented. Here are some steps you can take to make sure you get maximum life and performance out of your diaphragms.

1. Periodically check the alignment of the metering bowl system using alignment fixture PN 3110720. Misalignment is indicated when wear patterns are all on one side of the diaphragm. Note that excessive free play in the upper fill pivot bearings will not allow proper alignment to be maintained. Worn bearings must be replaced.
2. Do not rotate any of the hardware while installing the diaphragm. When rotated, the hardware can cause the diaphragm to twist which will shorten its life.
3. Keep the sterilization temperature low. Sterilization temperatures range from 260 to 280 degrees F. The lower the temperature, the longer the diaphragms will last.
4. Make sure only Dow Corning #7 (PN 5902727) is used on the diaphragms. Petroleum-based lubricants are not compatible with the EPDM rubber in the diaphragms and will cause softening, swelling, and stretching and lead to premature failure.

5. Make sure rubber shields (P/N 5904200) are installed in the groove near the top of the diaphragm sleeve. The shields prevent debris and petroleum-based grease from the upper pump lever bearing from dropping into the cavity at the top of the diaphragm. Very important!
6. Remove any nicks, scratches or roughness on the outside of the diaphragm sleeves (P/N 3482501) and on the inside of the retainer (P/N 3281681). Rough spots will abrade the fabric side of the diaphragm and lead to premature failure. Replace any badly damaged parts.



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The *Run Time* is the newsletter of the Evergreen Packaging Equipment Sales Services Department. Its purpose is to provide customers with Evergreen Packaging gable top parts and service information.

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We welcome comments and suggestions. Please send all mailing address changes to the editor.

Evergreen Packaging Equipment is proud to be ISO 9001:2008 certified.

#### QUALITY POLICY

As employees, we will perform our jobs in conformance to customer and industry requirements with a commitment to doing it right the first time. We will manufacture and deliver on time, defect-free products and services to our customers.

We are dedicated to quality and continuous improvement.

## PARTS DISCOUNTS

# Surplus/Obsolete Discounts

Take advantage of these huge discounts on overstocked parts. The part numbers and prices in **red** may have been further reduced from previous discounts. To order, make sure you ask for the surplus/obsolete price. Stock is limited to the quantities shown, so order now!

Part no.	Description	Model	Qty	List price	DISCOUNT PRICE
3056184	Bottom Oven Housing	H5	3	\$2,061	\$990
3056620	Oven Housing	H5, H90	1	\$2,517	\$2,300
3109831	Dater Mounting Block	Q12, Q14	2	\$2,653	\$1,500
3111800	Dater Mounting Block	H5	4	\$1,450	\$650
3111802	Dater Mounting Plate	H5	3	\$1,094	\$700
3113184	Dater Jaw, Movable, Line 2	GT30, GT60, Q10, Q11	3	\$1,655	\$795
3114500	Top Seal Mounting Plate	H5, H6	3	\$1,500	\$990
3150184	Heater	N5	2	\$2,816	\$1,450
3151199	Carton Stop Block	Q14, QPC11	17	\$239	\$150
3151230	Top Breaker Eccentric	H5, H90	1	\$3,191	\$2,950
3151891	Top Pour Spout Side Oven	QPC11	9	\$4,038	\$695
3158285	Top Oven Housing - Line 1	H5	4	\$4,038	\$2,600
3171306	Air Cap for Air Atomizing Nozzle	CQL80, EQ70, GTLS60, N100, Q70	44	\$121	\$50
3282858	Fill Cam	EH1, EH2	2	\$1,725	\$995
3283670	Anvil Spindle - Half-gallon SA Spout	EH2, H9	2	\$3,257	\$2,500
3286429	Positioner - Half-gallon, 2 Liter	EH	14	\$975	\$350
3474190	Dater Jaw, Stationary, Line 2	GT30, GT60, Q10, Q11	2	\$2,344	\$795
3481257	Top Seal Movable Dater Jaw - Line 1	EQ5	3	\$1,298	\$900
3482809	H2O2 Pump Enclosure Assembly	EH3, EQ5, Q140	1	\$4,510	\$3,400
3483081	Infeed Drive Shaft Assembly	EQ5	1	\$13,080	\$8,700
3491991	Top Squeezer Jaw	N8	4	\$2,496	\$1,200
3491992	Top Squeezer Jaw	N8	4	\$2,496	\$1,200
3493668	Infeed Support Assembly	N8	1	\$10,990	\$7,500
3702745	Cap Diverter Hose Kit	Spout	13	\$450	\$150
5517385	Horn, VE2 Quart Spout	H9, EH2, EQ5	1	\$3,928	\$2,500
5903675	Outlet Valve	H6	11	\$449	\$250
5905326	Piston and Rod Assembly	H5	3	\$1,676	\$850
5906663	14 Mesh Gasket Nozzle Screen	EQ5	22	\$177	\$75
7056586	Clamp Hold Down	N7	9	\$692	\$235
9000193	Wire - 10 AWG 200 Deg C Black	Many	1,700	\$1.90/ft	\$1.00/ft
9000207	Flex Cord - 16AWG-6C 600V .429OD	Many	953	\$18/ft	\$7/ft

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7. When purging product at the beginning or end of a production run, do not cycle the fill pistons for more than a few seconds when the product tank is empty. If you cycle the diaphragms with no liquid in the metering bowls, there is no inflation pressure to hold the convolution in place. This will allow the diaphragm convolution to collapse, and greatly accelerate wear on the diaphragm material.

8. Carefully inspect metering bowls for dried Dow Corning #7 in the sleeve groove and piston shelf, including the small undercut



on the piston. Look closely, because sometimes the dried material is hard to see. Cleaning with an abrasive pad can be difficult, so you may have to scrape it out with a pick or a knife.

9. Make sure sleeves are fully inserted to properly seat the small bead. If not fully inserted, part of the diaphragm side wall will be trapped under the sleeve, which is

more material than the sleeve groove can hold. Then when the clamp is tightened, some of the rubber will extrude out of the groove, tearing and cutting the rubber.

10. Remove any high spots on the top of the sleeves and bottom of the clamps. High spots will over-compress the diaphragms when the clamp is tightened. Replace any badly damaged parts.
11. Make sure the clamp is not distorted from over-tightening the wing nuts.

I hope these suggestions provide some assistance. If you have questions about this or any other issue, don't hesitate to "Ask An Engineer."



- Clete Kreher  
Manager,  
Production Engineering

#### SERVICE TIP

## New Auto Sanitize Nozzles Offer Improved Corrosion Resistance

Get these new and improved all stainless steel auto sanitize nozzles for longer nozzle life and more run time.

Although the old nozzle assembly PN 5903758 was also all stainless steel, it was made of 303 stainless. The new nozzle assembly PN 5907454 is made of the more corrosion-resistant 304 stainless. Both nozzle assemblies come with Teflon gaskets.

The new auto sanitize nozzle assembly is a direct replacement for the old. Also available for the new nozzle assembly is rebuild kit PN 3058577.



EVERGREENPACKAGING is a global leader in beverage packaging systems, serving the dairy, juice, specialty, and other liquid food markets. The Evergreen Packaging business employs nearly 4,100 people worldwide. Besides the North American facilities, Evergreen Packaging includes wholly owned subsidiaries in China, South Korea and Taiwan, and joint ventures in Israel, Latin America, North Africa and Saudi Arabia.

Evergreen Packaging is owned by Reynolds Group Holdings Ltd, an investment company that also owns Reynolds Packaging, Pactiv Corporation, Closure Systems International and Graham Packaging.

The Evergreen Packaging product line includes:

- Gable top packaging equipment—which forms, fills, and seals paper gable top cartons—available for pasteurized, ESL (Extended Shelf Life), ELL (Extended Long Life), and hot fill applications. These machines fill cartons from 4 oz. up to half-gallon (150 ml up to 2 liter), at speeds from 30 to 340 cartons per minute.
- SPOUT-PAK® twist-off closures for most gable top cartons.
- Gable top materials available through our global network of converting plants.

## PRODUCT SPOTLIGHT

# Get Quick Changeovers, More Run Time With NEW Low-Volume QL-30 Packaging Machines

Evergreen Packaging Equipment is introducing two new low-volume additions to their line of gable top packaging machines: the QL-30 and the QL-30ESL

The QL-30 can handle fill volumes of 6 to 32 oz (180 ml to 1 liter), and fills quarts/liters up to 3,000 cph (cartons per hour) with a single-stage, bottom-up fill system. Allen Bradley PLC controls and servo driven technology provide repeatable package performance and automatically control fill volumes and profiles based on product and carton size. Infinite fill adjustments allow for less downtime with quick and easy changes in carton size or product.

A simple and reliable high-capacity infeed allows operators the opportunity to manage

more than one machine at a time. An optional SPOUT-PAK® System is available to enhance consumer convenience and preserve product freshness.

The QL-30ESL is manufactured with sanitization features to help maintain product quality, including the machine enclosure, HEPA, auto sanitize, and 35% H<sub>2</sub>O<sub>2</sub> carton decontamination with hot air drying.

As with all Evergreen Packaging gable top machines, the QL-30 is backed by 24/7 OEM parts and technical service to fulfill customer needs.

For more information on the QL-30 and QL-30ESL machines, please contact your local Evergreen sales specialist or call 319-399-3294.



## MACHINE TRAINING

# Learn From the Experts at Evergreen Schools

Let trainers Dennis Meagher and Mike Tisdale show you how to keep your Evergreen filler properly maintained for top performance and long life. Training schools include both classroom and hands-on training.

To request training for a specific filler model, please contact Dennis at 319-399-3584 or at [dennis.meagher@everpack.com](mailto:dennis.meagher@everpack.com).

Training can be held at the Evergreen Cedar Rapids facility or at your own plant. Also ask about in-plant training using our N-8 fill system or Spout-Pak® training stands.

For the most up-to-date training school information, look online at [evergreenpackaging.com](http://evergreenpackaging.com).



Every part you purchase from EVERGREEN PACKAGING EQUIPMENT is backed by our:

- Commitment to quality.
- Technical Service Team (TST) of engineers to answer your questions.
- Team of knowledgeable sales coordinators to make sure you get the part you need, when you need it.
- Emergency parts and service availability 24 hours a day, 7 days a week.
- Experienced field service technicians available to maintain your filler in peak operational condition.
- Six-month warranty.

#### TO ORDER PARTS:

Email: [evergreenparts@everpack.com](mailto:evergreenparts@everpack.com)  
Phone: 319-399-3399 or 800-553-5981  
Fax: 319-774-2194 or 800-553-5986

#### TO REQUEST SERVICE:

Email: [evergreenfieldservice@everpack.com](mailto:evergreenfieldservice@everpack.com)  
Phone: 319-399-3570 or 800-331-6083  
Fax: 319-540-8958

#### FOR TECH SUPPORT:

Phone: 319-399-3300

## ANNOUNCEMENT

The Evergreen Packaging facility will be closed on Mon, Sep 4 for the Labor Day holiday. On that day, we will ship parts and schedule service on an emergency basis only.

Happy holiday!