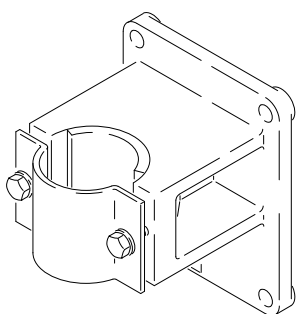


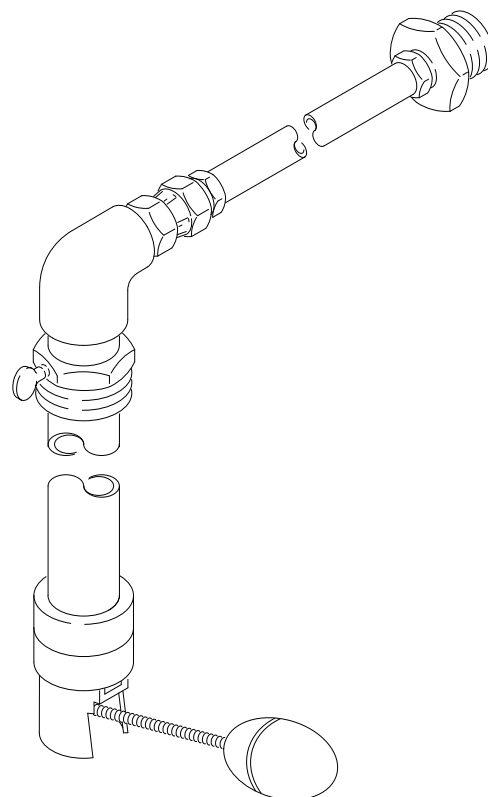
## Mounting Bracket & Suction Hose

### Model 203-981

Includes wall bracket for mounting a stubby-size 5:1 Ratio Fire-ball® Pump, a 6 ft. (1.9 m) suction hose, a bung-mounted suction tube and a low-level cut-off valve.



01357



02310

## Installation

### Mounting the Pump Bracket

1. When determining where to mount the bracket, consider the following things:
  - a. Location of the permanent supply lines from the pump to the outlet
  - b. Type of connections required
  - c. Ease in moving drums
  - d. Stress caused on the wall by the weight of the pump, pumping operation, hoses, and fluid
2. Locate the bracket 52 in. (1.3 m) off the floor. Use 3/8 in. screws and lock washers of the appropriate type and length for your installation. See Figs. 1 and 2.

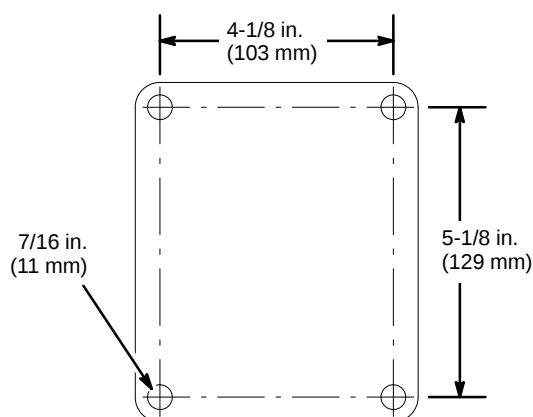


Fig. 1

02312

# Installation

## Mounting the Pump (See Fig 2)

1. Remove the screws (22), lock washers (21) and pump strap (24).
2. Mount the pump in the support (23) and reinstall the strap, lock washers and screws.

**NOTE:** Apply thread sealant to all male threads, *except at swivel connections*, and be sure all connections are tightened securely to avoid leaking.

3. Screw the bushing (20) into the pump inlet adapter (A).
4. Connect one end of the hose (10) to the bushing (20).
5. Screw the union (9) tightly into the elbow (4).
6. *Without using thread sealant*, connect the other end of the hose (10) to the swivel of the union (9).
7. Remove the supply drum's bung hole plug. Tilt the suction tube (5) and guide the float ball (11f) into the drum. Straighten the tube and lower it into the drum until the cut-off valve (11) rests on the bottom.
8. Thread the bung adapter (3) tightly into the bung hole, and tighten the adapter thumbscrew (1) against the suction tube.

Pump and Connecting Hoses Not Included

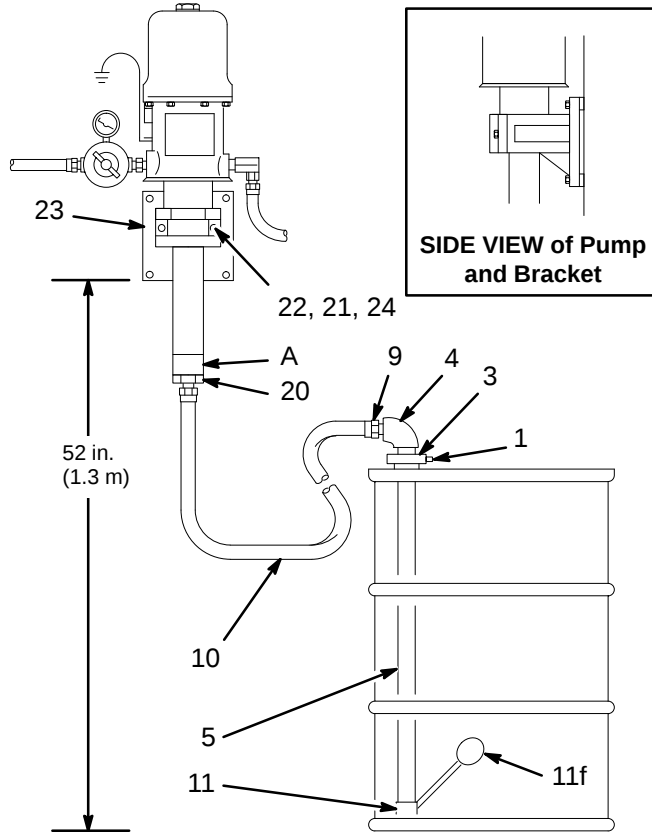


Fig. 2

02313

## Operation

When the oil level drops to within 3/4 in. (19.05 mm) of the cut-off valve seat, the valve closes stopping the flow of oil. This prevents air from entering the supply

lines and incorrectly registering on any meters. It also alerts the operator that it's time to change drums.

## Troubleshooting

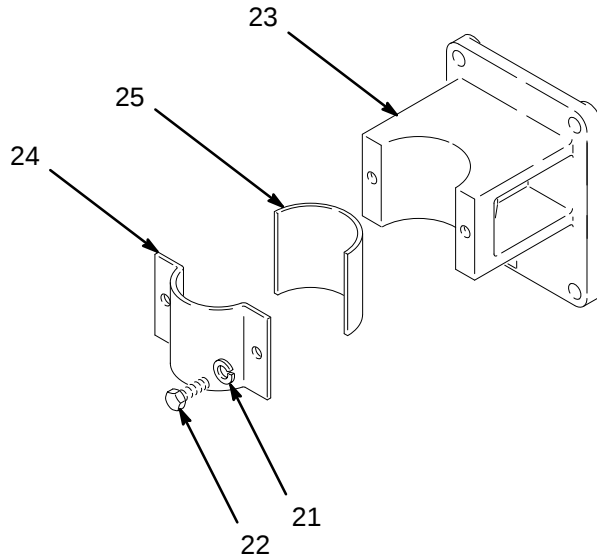
**Problem:** The pump operates but there is insufficient oil pressure or volume of flow.

| Cause                                                                             | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Low level cut-off disc (11e) is unseated (see the parts drawing)                  | <ol style="list-style-type: none"> <li>1. Shut off the air to the pump and actuate the dispensing device to relieve pressure.</li> <li>2. Remove the suction tube (5) from the drum.</li> <li>3. Unscrew the cut-off valve (11) from the pump adapter (8).</li> <li>4. Wash the valve in non-flammable solvent or cleaning fluid. Brush the fluid around and under the disc. Be sure the pin-sized hole in the face of the clapper valve (11a) is clear. Dry it with compressed air. Be careful to avoid introducing dirt or contaminants into the drum or pump.</li> <li>5. Reassemble the parts. Be sure the o-ring (7) is in place in the adapter (8) and tighten the adapter securely.</li> </ol> |
| Bushing (20) is loose at the pump intake or another threaded connection is loose. | Use thread sealant on male threads, except at swivel connections. Be sure all connections are air tight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

**NOTE:** Also check your separate pump instruction manual for possible causes and solutions.

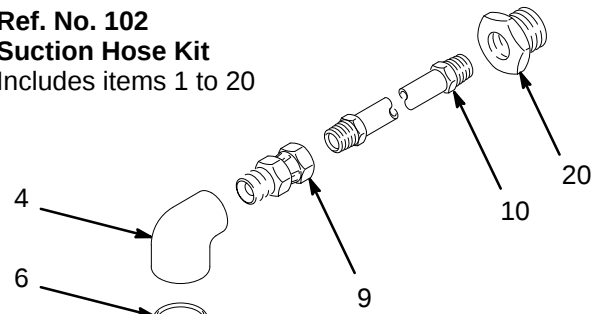
# Parts

## Ref. No. 101 Pump Mounting Bracket Includes items 21 to 25

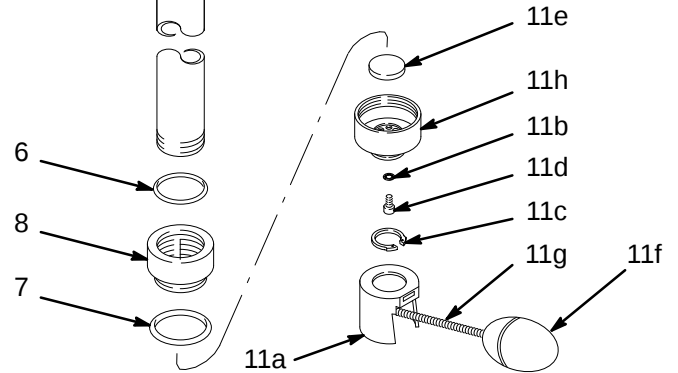


02311

## Ref. No. 102 Suction Hose Kit Includes items 1 to 20



## Ref. No. 11 Low Level Cut-off Valve Includes items 11a to 11h



02309

## Model 203-981 Mounting Bracket and Suction Hose Includes items 101 and 102

| Ref. No. | Part No. | Description                                             | Qty. |
|----------|----------|---------------------------------------------------------|------|
| 101      | 203-987  | PUMP MOUNTING BRACKET<br>See separate parts list, below | 1    |
| 102      | 203-992  | SUCTION HOSE KIT<br>See separate parts list, at right   | 1    |

## Ref. No. 101 Pump Mounting Bracket 203-987 Includes items 21 to 25

| Ref. No. | Part No. | Description                | Qty. |
|----------|----------|----------------------------|------|
| 21       | 100-214  | LOCK WASHER, spring; 5/16" | 2    |
| 22       | 100-450  | CAP SCREW; 5/16-18 x 1"    | 2    |
| 23       | 160-846  | SUPPORT, pump mounting     | 1    |
| 24       | 160-847  | STRAP, pump support        | 1    |
| 25       | 168-716  | PAD, pump                  | 1    |

## Ref. No. 102 Suction Hose Kit 203-992 Includes items 1 to 20

| Ref. No. | Part No. | Description                                              | Qty. |
|----------|----------|----------------------------------------------------------|------|
| 1        | 100-220  | THUMB SCREW; 5/16-18 x 1"                                | 1    |
| 3        | 176-684  | ADAPTER, 2" bung                                         | 1    |
| 4        | 156-591  | ELBOW, 90°; 3/4 npt(f) x 1-1/2-24 UNS(f)                 | 1    |
| 5        | 156-592  | TUBE, suction riser                                      | 1    |
| 6        | 156-593  | O-RING; buna-n                                           | 2    |
| 7        | 156-594  | O-RING; buna-n                                           | 1    |
| 8        | 156-595  | ADAPTER, low level cut-off valve                         | 1    |
| 9        | 157-785  | ADAPTER, straight union; 3/4 npt(m) x 3/4 npt(f) swivel  | 1    |
| 10       | 155-816  | HOSE, fluid; buna-n; 3/4" I.D.; 3/4 npt(mbe); 6' (1.9 m) | 1    |
| 11       | 202-135  | LOW LEVEL CUT-OFF VALVE<br>Includes items 11a to 11h     | 1    |
| 11a      | 202-314  | • CLAPPER VALVE                                          | 1    |
| 11b      | 100-718  | • LOCK WASHER, internal<br>• shake-proof; No. 10         | 1    |
| 11c      | 100-989  | • RING, retaining                                        | 1    |
| 11d      | 101-006  | • MACH. SCREW; No. 10-24 x 1/4"                          | 1    |
| 11e      | 155-350  | • DISK, low level                                        | 1    |
| 11f      | 156-619  | • FLOAT, ball                                            | 1    |
| 11g      | 156-620  | • SPRING, extension                                      | 1    |
| 11h      | 156-894  | • BODY, low level valve                                  | 1    |
| 20       | 101-496  | BUSHING; 1-1/2 npt(m) x 3/4 npt(f)                       | 1    |

# The Graco Warranty and Disclaimers

## WARRANTY

Graco warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for, any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility with Graco equipment of structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claim. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor and transportation.

## DISCLAIMERS AND LIMITATIONS

The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (express or implied), **including warranty of merchantability or warranty of fitness for a particular purpose**, and of any non-contractual liabilities, including product liabilities, based on negligence or strict liability. Every form of liability for direct, special or consequential damages or loss is expressly excluded and denied. In no case shall Graco's liability exceed the amount of the purchase price. Any action for breach of warranty must be brought within two (2) years of the date of sale.

## EQUIPMENT NOT COVERED BY GRACO WARRANTY

Graco makes no warranty, and disclaims all implied **warranties of merchantability and fitness for a particular purpose**, with respect to accessories, equipment, materials, or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motor, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

## Graco Phone Numbers

**TO PLACE AN ORDER**, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-367-4023 Toll Free**

**FOR TECHNICAL ASSISTANCE**, service repair information or assistance regarding the application of Graco equipment: **1-800-543-0339 Toll Free**

## Manual Change Summary

The manual was changed from Rev. C to Rev. D to make the following changes.

| Assembly Changed         | Part Status | Ref No. | Part No. | Name     |
|--------------------------|-------------|---------|----------|----------|
| 203-992 Suction Hose Kit | DELETED     | 2       | 100-962  | Coupling |

**Sales Offices:** Atlanta, Chicago, Dallas, Detroit, Los Angeles, Mt. Arlington (N.J.)  
**Foreign Offices:** Canada; England; Korea; Switzerland; France; Germany; Hong Kong; Japan

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