



# OPERATION & SERVICE MANUAL



**Model: 10-6401-0010  
Lavatory Service Unit**

09/2014 – Rev. 16

REVISION	DATE	TEXT AFFECTED
14	05/2008	Modified Parts List
15	06/2009	Revised pumps
16	09/2014	Modified Parts List



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This product can not be modified without the written approval of Tronair, Inc. Any modifications done without written approval voids all warranties and releases Tronair, Inc., its suppliers, distributors, employees, or financial institutions from any liability from consequences that may occur. Only Tronair OEM replacement parts shall be used.

## 1.0 GENERAL DESCRIPTION

The Tronair Model 10-6401-0010 Lavatory Service Unit (LSU) provides a clean, sanitary means of servicing the aircraft lavatory system and transporting the waste fluid to the dump station.

Some important features are:

- Easily maneuverable with Towbar
- Drain back system on fill hose to prevent fluid spillage
- Storage tubes for storage of fill and dump hoses
- Heavy duty fill and dump pumps
- Fill and dump tanks made of non-corroding HD polyethylene material with UV inhibitor
- Permanent connection of dump hose to dump tank

## 2.0 TECHNICAL SPECIFICATIONS

Dimensions:

Length: 81 inches  
 Width: 46 inches  
 Height: 51 inches high  
 Weight: 700 pounds

### 2.1 FILL (FRESH) SYSTEM

- 68 gallon tank capacity; HD polyethylene
- Three inch (3") tank fill port with cover
- One (1) gallon per six (6) strokes fill pump
- Eight foot (8 ft) fill hose
- 20 psi max fill pump pressure

### 2.2 DUMP SYSTEM

- 136 gallon tank capacity; HD polyethylene
- 30 gpm manual diaphragm pump
- Five inch (5") tank clean out port with cover
- Four inch (4") aluminum tank flange for aircraft dump hose connection
- 18 inch long and three inch (3") I.D. dump tank hoses with 45 connector

### 2.3 MECHANICAL

- Steering, pneumatic tire, front wheels with tapered roller bearings (Tire size 4.80/4.00 x 8)
- Pneumatic tire rear wheels with tapered roller bearings (Tire size 4.80/4/00 x 8)
- Towing speed - 10 mph maximum

### 2.4 FACTORY INSTALLED OPTIONS/FIELD INSTALLED KITS

- K-2410 - Kit, Fill Connector
- K-2412 - Kit, Dump Connector with 5 foot hose
- K-2029 - Kit, Dump Connector
- K-2030 - Kit, Dump Connector; mates with K-2412
- K-3606 - Kit, Hose Cap (Dump Hose)

## 3.0 PREPARATION FOR USE

This Lavatory Service Unit has been thoroughly inspected and tested prior to packaging and shipment. The unit is shipped completely assembled and is ready for use.

You are requested to generally check over the unit to assure the tightness of all nuts, bolts and screws that may have loosened during shipment. Bolts and elastic stopnuts should be tightened to a torque not to exceed industry standards for Grade "5" bolts. Tire pressure should not exceed 30 psi.



#### 4.0 OPERATING INSTRUCTIONS

1. Open access panel on aircraft. Remove drain and fill coupling caps.
2. Connect dump hose assembly to aircraft drain coupling and fill hose assembly to mating aircraft coupling.
3. Follow aircraft manufacturer's instructions to drain sewage from aircraft into dump tank.
4. To fill the aircraft toilet, the ball valve after the fill pump must have its handle in the up position (perpendicular to valve). Follow aircraft manufacturer's requirements for filling. Six (6) strokes of fill pump will deliver one (1) gallon. An accurate measurement of the fresh flush solution is shown on the Blackmer flowmeter.
5. After filling, position ball valve handle in down position (parallel to valve.). This allows for fill hose to be partially drained prior to disconnecting from aircraft.
6. Remove dump and fill hoses from aircraft and stow.
7. Following aircraft manufacturer's instructions, replace coupling caps on aircraft fittings. Close access panel.
8. Pump sewage into approved disposal system. Refill fill tank as required. Lavatory Service Unit is now ready for re-use.

#### 5.0 MAINTENANCE

1. Lubricate wheel bearings with multi-purpose grease; every 6 months minimum.
2. Lubricate front caster swivel plate bearings with multi-purpose grease; every 6 months minimum.
3. Periodically check for leaks at hose connections and tighten hose clamps, as required.
4. Regularly wash tanks and hoses with a mild detergent according to local procedures and regulations.

#### 6.0 TROUBLE SHOOTING

1. If fill pump fails during use, refer to Illustrated Parts List Illustration WC-1053 and disassemble for inspection of pump internals. Clean inside of pump. Replace any damaged parts. Failure to pump liquid may be caused by the following reasons:  
 Pump Will Not Prime: Clogged Suction; check that suction tubes are clear.  
 Not Enough Flow: Check suction and discharge hoses for clogging or pinching. Verify that nozzle is not clogged.
2. If dump pump fails during use, refer to Illustrated Parts List Illustration WC-1054 and disassemble for inspection of pump internals. Clean inside of pump. Replace any damaged parts.

#### 7.0 PARTS LIST

Reference the following pages for ordering information of Replacement Parts and Kits.  
 When ordering Replacement Parts/Kits, please specify Model & Serial Number of your product.

#### 8.0 GUARANTEES/LIMITATION OF LIABILITY

Tronair products are warranted to be free of manufacturing or material defects for a period of one year after shipment to the original customer. This is solely limited to the repair or replacement of defective components. This warranty does not cover the following items:

- a) Parts required for normal maintenance
- b) Parts covered by a component manufacturers warranty
- c) Replacement parts have a 90-day warranty from date of shipment

If you have a problem that may require service, contact Tronair immediately. Do not attempt to repair or disassemble a product without first contacting Tronair, any action may affect warranty coverage. When you contact Tronair be prepared to provide the following information:

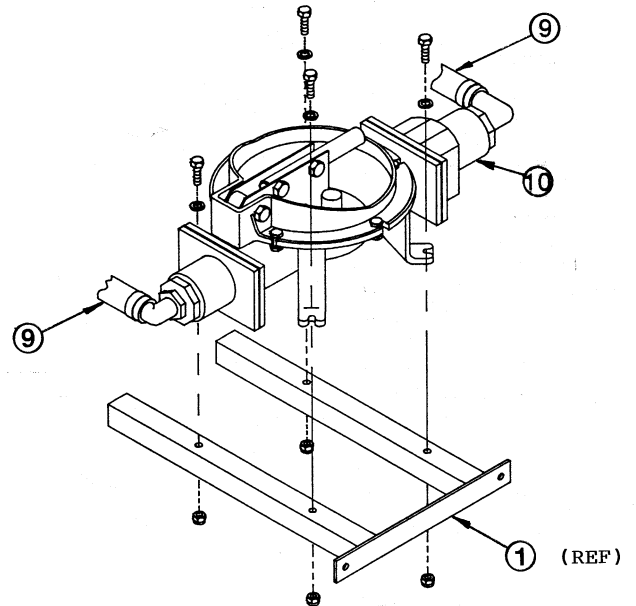
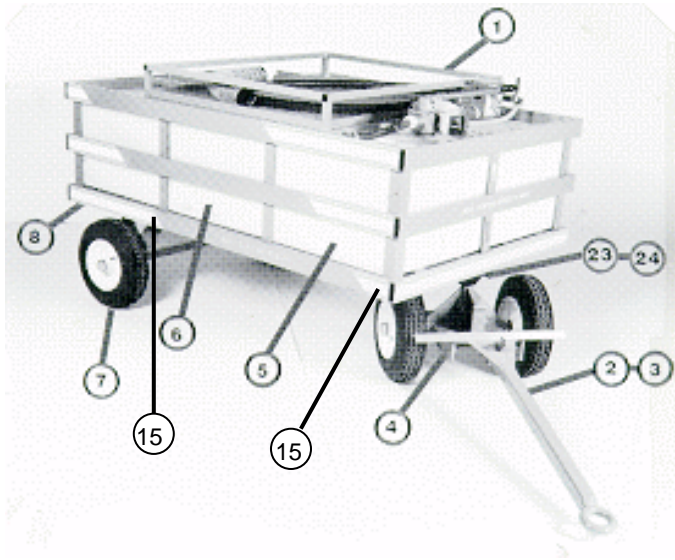
- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

If warranty coverage is approved, either replacement parts will be sent or the product will have to be returned to Tronair for repairs. If the product is to be returned, a Return Material Authorization (RMA) number will be issued for reference purposes on any shipping documents. Failure to obtain a RMA in advance of returning an item will result in a service fee. A decision on the extent of warranty coverage on returned products is reserved pending inspection at Tronair. Any shipments to Tronair must be shipped freight prepaid. Freight costs on shipments to customers will be paid by Tronair on any warranty claims only. Any unauthorized modification of the Tronair products or use of the Tronair products in violation of cautions and warnings in any manual (including updates) or safety bulletins published or delivered by Tronair will immediately void any warranty, express or implied.

The obligations of Tronair expressly stated herein are in lieu of all other warranties or conditions expressed or implied. **Any unauthorized modification of the Tronair products or use of the Tronair products in violations of cautions and warnings in any manual (including updates) or safety bulletins published or delivered by Tronair will immediately void any warranty, express or implied and Tronair disclaims any and all liability for injury (WITHOUT LIMITATION and including DEATH), loss or damage arising from or relating to such misuse.**

### Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
1	Z-1647	Weldment, Top Basket	1
4	Z-1633-01	Assembly, Steering Axle	1
5	H-1384	Tank, 68 Gallon (Includes K-1688 Tank Cover & Gasket )	1
7	◆U-1010	Wheel	4
8	Z-1702-01	Weldment, Frame	1
9	TF-1004	Hose, ¾" Fill Pump (Inlet, Outlet)	as required
15	V-2570	Label, Max Pressure 60 psi	4
2	<b>K-1631</b>	<b>Kit, Towbar Locking Lever Replacement; consists of:</b>	
	J-1496	Locking Lever	1
	G-1250-1090N	Flatwasher ½" Narrow	2
	G-1100-109526	Bolt, Hex Head, Grade 5, ½-20 X 2 ¼" long	1
	G-1202-1095	Stopnut, ½-20 Elastic	1
3	<b>K-1781</b>	<b>Kit, Towbar Replacement; consists of:</b>	
	Z-1635-01	Weldment, Towbar	1
	J-1496	Lever, Locking	1
	R-1272	Pin, Towbar	1
	G-1100-109530	Bolt, Hex Head, Grade 5, ½-20 x 3" long	1
	G-1202-1095	Stopnut, ½-20 Elastic	1
	G-1250-1090N	Flatwasher, ½ Narrow	2
	G-1301-05	Pin, Cotter, 5/32" diameter x 1 ½" long	2
6	<b>K-3146</b>	<b>Kit, 136 Gallon Tank Replacement; consists of:</b>	
	H-2668	Tank, 136 Gallon	1
	N-1506-03	Plug, 1" NPT Plastic	1

◆ See Wheel Assembly Parts List.

**Parts List**

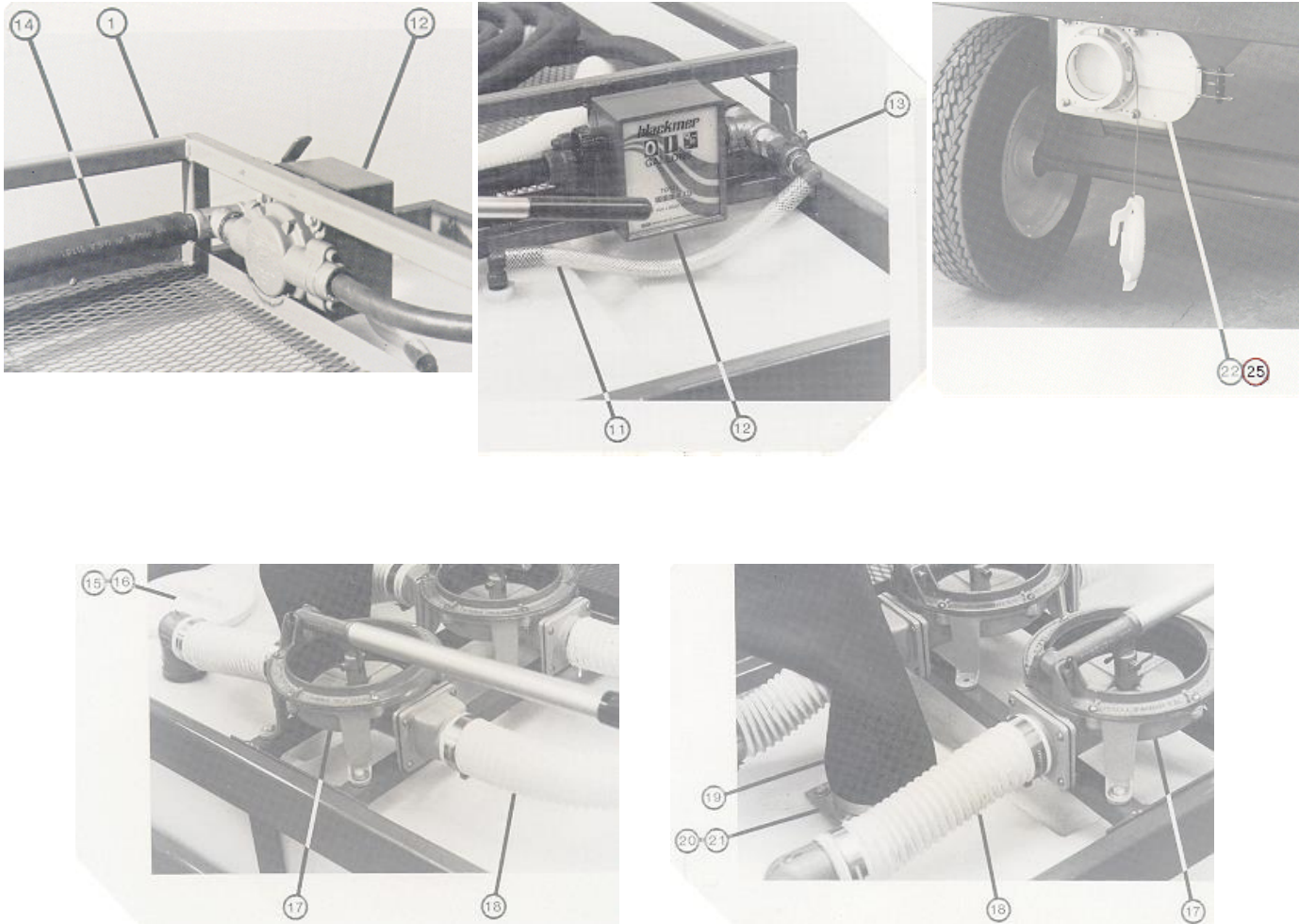
When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
10	<b>K-1730</b>	<b>Kit, Fill Pump Replacement; consists of:</b>	
	◆◆WC-1053	Pump, Hand	1
	G-1100-105516	Bolt, Hex Head, Grade 5, ¼-28 x 1 ¾" long	4
	G-1202-1055	Stopnut, ¼-28 Elastic	4
	G-1250-1050N	Flatwasher, ¼ Narrow	8
23	<b>K-1645</b>	<b>Kit, Steering Hub Replacement; consists of:</b>	
	Z-1941	Assembly, Hub	1
	H-1598	Hub, Idler	1
	G-1202-1095	Stopnut, ½-20 Elastic	5
	G-1250-1090N	Flatwasher, ½ Narrow	5
	G-1279	Washer, Spindle with Tongue	1
	G-1301-05	Pin, Cotter, 5/32" diameter x 1 ½" long	1
	G-1230-01	Nut, Axle, 1" Slotted Hex	1
	N-2411-02	Grease Zerk	1
24	<b>K-1634</b>	<b>Kit, Turning Hub Seal Replacement; consists of:</b>	
	G-1301-05	Pin, Cotter, 5/32" diameter x 1 ½" long	1
	G-1230-01	Nut, Axle, 1"-14 UNS Thread	1
	G-1279	Washer, Spindle with Tongue	1
	H-1155-01	Cap, Dust	1
	H-1559-05	Bearing	1
	H-1559-10	Bearing	1
	H-1561-01	Seal, Grease	1
	H-1676-01	Cup, Bearing	1
	H-1676-05	Cup, Bearing	1

◆◆ See *Fill Pump Assembly Parts List*.

### Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
1	Z-1647	Weldment, Top Basket	1
11	TF-1009-04*14.0	Hose, ½" diameter x 14" long (Drain Back)	1
12	H-1416	Flowmeter	1
13	HC-1137	Valve, Ball ½" diameter	1
14	TF-1005*96.0	Hose, Pressure 1" diameter x 96" long	1
18	TF-1018-02*120	Hose, Discharge	1
20	Z-1462	Weldment, Flanged Adapter, 4" Hose	1
21	J-1403-02	Flange, Inner (for Z-1462)	1
25	K-4098	Kit, Drain Hose Assembly	1
17	<b>K-4290</b>	<b>Kit, Discharge Pump Replacement; consists of:</b>	
	◆WC-1054	Pump, Guzzler	1
	G-1100-105516	Bolt, Hex Head, Grade 5, ¼-28 x 1 ¾" long	4
	G-1202-1055	Stopnut, ¼-28 Elastic	4
	G-1250-1050N	Flatwasher, ¼" Narrow	8
19	<b>K-2029</b>	<b>Kit, Dump Connector Replacement; consists of:</b>	
	TF-1001*60.0	Hose, 4" I.D. diameter x 60" long	1
	H-1426-16	Clamp, Hose	1
	H-1768	Coupling, LSU Wye Dump	1
	V-1003	Label, Serial Number	1

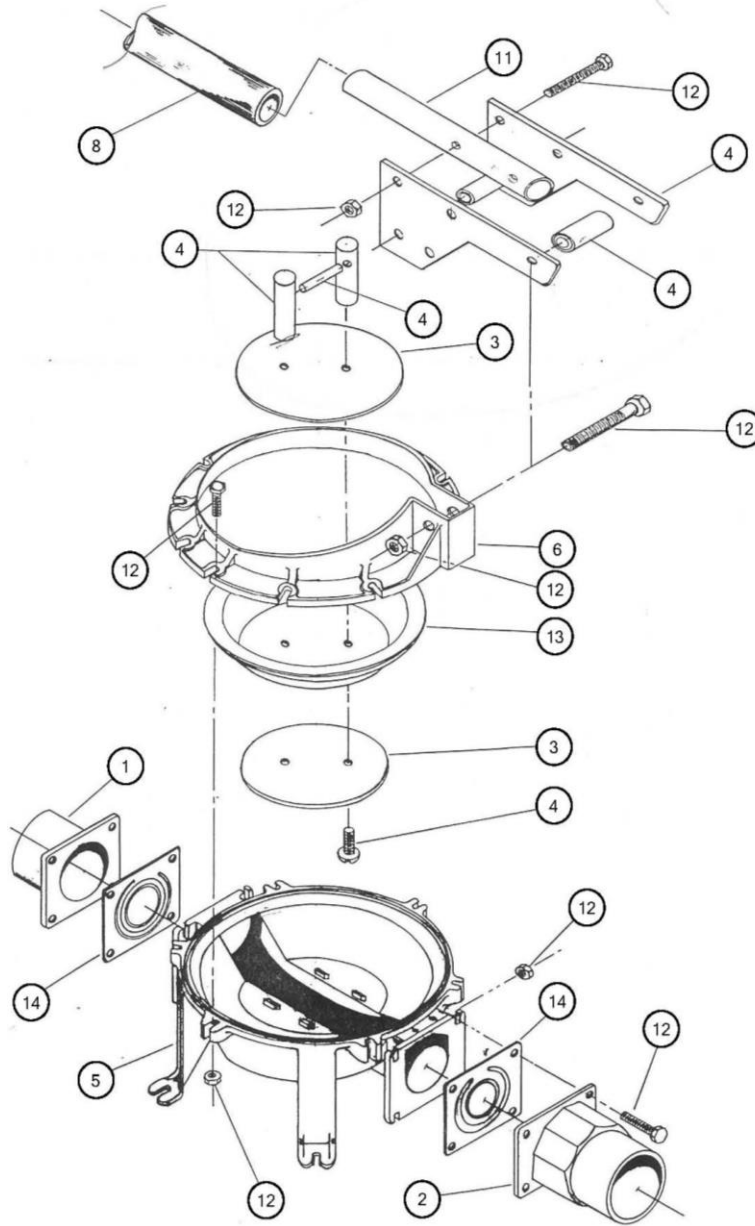
◆ See Page Discharge Pump Assembly Parts List.

**Parts List**

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
22	<b>K-1782</b>	<b>Kit, Drain Valve Replacement; consists of:</b>	
	H-1333	Valve, Drain	1
	H-1334	Seal, Stat-O	4
	G-1100-105520	Bolt, Hex Head, Grade 5, ¼-28 x 2" long	4
	G-1202-1055	Stopnut, ¼-28 Elastic	4
<i>Not Shown</i>	<b>K-4916</b>	<b>Kit, Fillwell Replacement</b>	1

### K-1730 Fill Pump Assembly Parts List

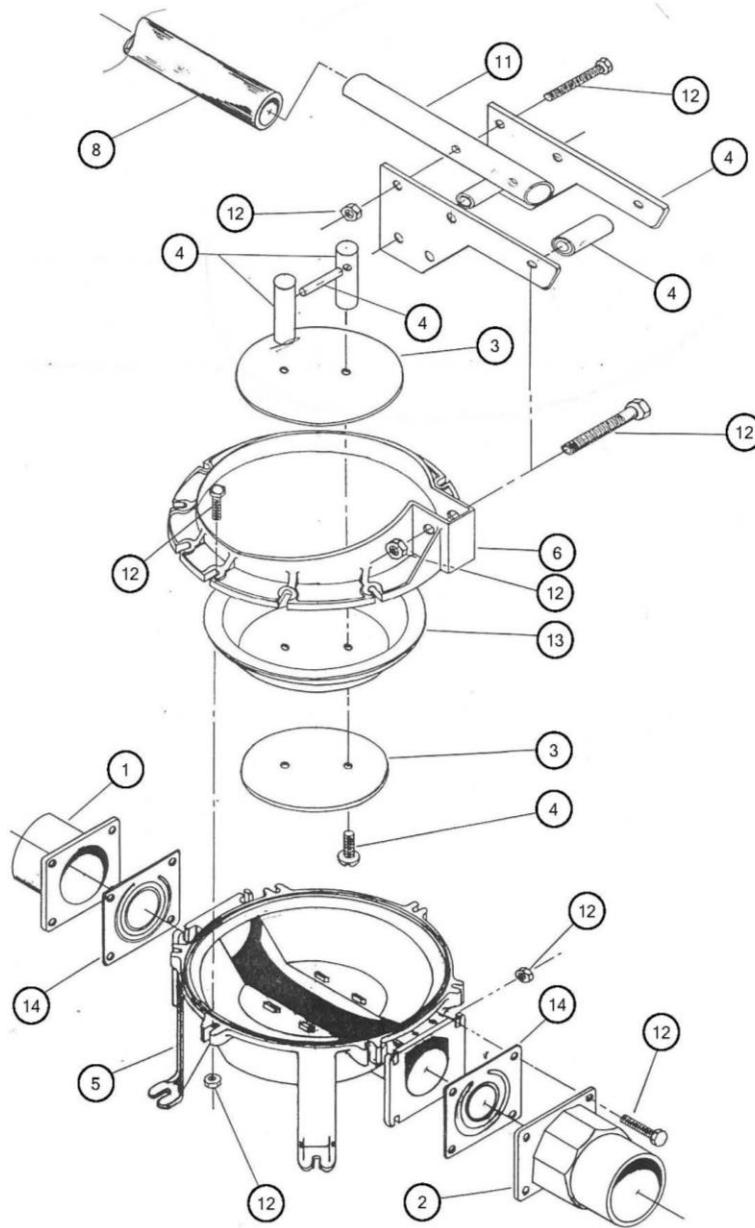


Item	Part Number	Description	Qty
	WC-1053	Pump Assembly	REF
1	WC-1053-01	Inlet Flange	1
2	WC-1053-02	Outlet Flange	1
3	WC-1053-03	Button	2
4	WC-1053-04	Clevis Assembly; <i>consists of:</i>	
	WC-1053-05	Clevis Pin	1
	WC-1053-06	Clevis Supports	2
	WC-1053-07	Side Plates	2
	WC-1053-08	Bushings A & B	2
	WC-1053-09	O-Rings #111	2
	WC-1053-10	SS Washers	2
	WC-1053-11	TH ¼ - 20 x 5/8	2

**K-1730 Fill Pump Assembly Parts List**

Item	Part Number	Description	Qty
5	WC-1053-12	Body	1
6	WC-1053-13	Clamp Ring	1
8	WC-1053-14	Handle With Grip	1
11	WC-1053-15	Actuator Extension	1
12	WC-1053-16	Hardware Set; <i>Consists of:</i>	
	WC-1053-17	HH ¼ - 20 x 7/8 (Inlet/Outlet)	8
	WC-1053-18	HH ¼ - 20 x 1 (Clamp Ring)	6
	WC-1053-19	HN ¼ - 20	14
	WC-1053-20	HH 5/16 – 18 x 1 ¼ (Actuator)	2
	WC-1053-21	HN 5/16 – 18 (Actuator)	2
	WC-1053-22	HH 3/8 – 16 x 2 (Actuator)	1
	WC-1053-23	HN 3/8 – 16 (Actuator)	1
13	WC-1053-24	Diaphragm	1
14	WC-1053-25	Flapper Valves	2

### Discharge Pump Assembly Parts List

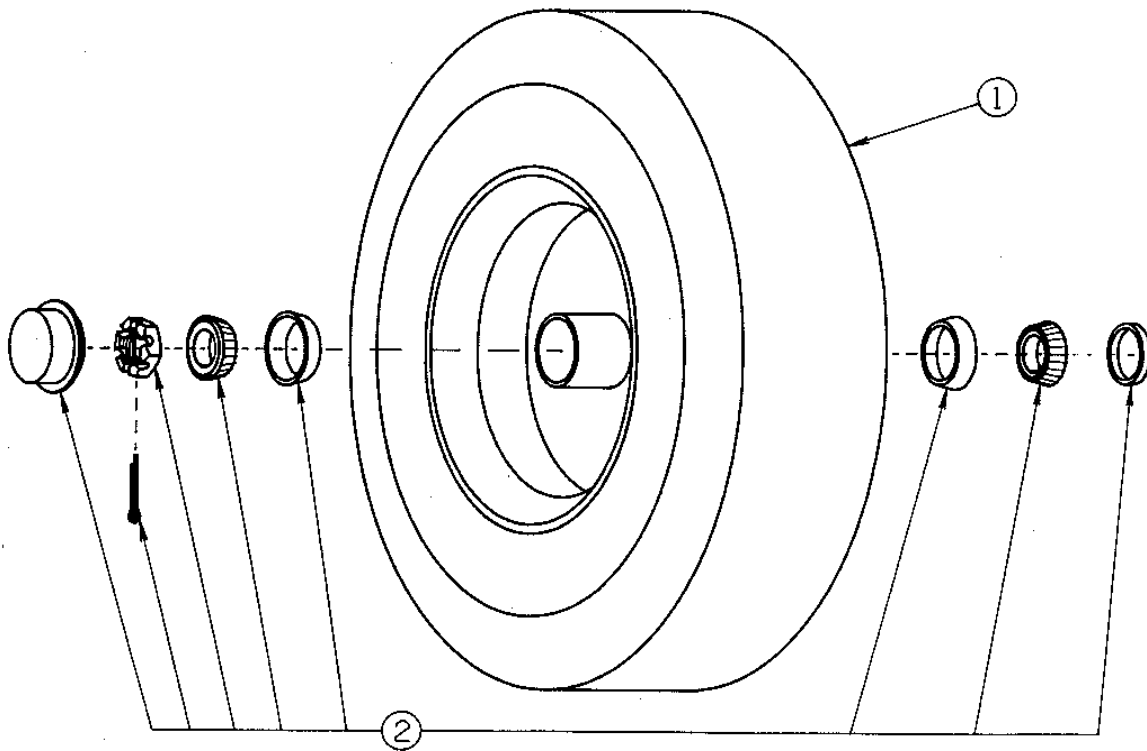


Item	Part Number	Description	Qty
	WC-1054	Pump Assembly	REF
1	WC-1054-01	Inlet Flange	1
2	WC-1054-02	Outlet Flange	1
3	WC-1054-03	Button	2
4	WC-1054-04	Clevis Assembly; <i>consists of:</i>	
	WC-1054-05	Clevis Pin	1
	WC-1054-06	Clevis Supports	2
	WC-1054-07	Side Plates	2
	WC-1054-08	Bushings A & B	2
	WC-1054-09	O-Rings #111	2
	WC-1054-10	SS Washers	2
	WC-1054-11	TH 1/4 - 20 x 5/8	2

**Pump Assembly Parts List**

Item	Part Number	Description	Qty
5	WC-1054-12	Body	1
6	WC-1054-13	Clamp Ring	1
8	WC-1054-14	Handle With Grip	1
11	WC-1054-15	Actuator Extension	1
12	WC-1054-16	Hardware Set; <i>Consists of:</i>	
	WC-1054-17	HH ¼ - 20 x 7/8 (Inlet/Outlet)	8
	WC-1054-18	HH ¼ - 20 x 1 (Clamp Ring)	6
	WC-1054-19	HN ¼ - 20	14
	WC-1054-20	HH 5/16 – 18 x 1 ¼ (Actuator)	2
	WC-1054-21	HN 5/16 – 18 (Actuator)	2
	WC-1054-22	HH 3/8 – 16 x 2 (Actuator)	1
	WC-1054-23	HN 3/8 – 16 (Actuator)	1
13	WC-1054-24	Diaphragm	1
14	WC-1054-25	Flapper Valves	2

## Wheel Assembly Parts List



Item	Part Number	Description	Qty
1	U-1010	Wheel	1
2	<b>K-1633</b>	<b>Kit, Wheel Bearing &amp; Seal; consists of:</b>	
	H-1155-01	Cap, Dust	1
	G-1301-05	Pin. Cotter, $\frac{5}{32}$ " diameter x 1 $\frac{1}{2}$ " long	1
	G-1230-01	Nut, Axle, 1"-14 UNS Thread.	1
	H-1559-01	Bearing	2
	H-1561-05	Seal, Grease	1
	H-1676-01	Cup, Bearing	2