



## TopKAT Fuel Management System

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# Parts Manual

## Computer Programs and Documentation

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## Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

## Approvals

Gasboy, Greensboro, is an ISO 9001:2000 registered facility.

### Underwriters Laboratories (UL):

UL File#	Products listed with UL
MH4314	All dispensers and self-contained pumping units
MH6418	Power operated Transfer Pump Models 25, 25C, 26, 27, 28, 72, 72S, 72SP, 72X, 73 and 1820
MH7404	Hand operated Transfer Pump Models 1230 Series, 1243 Series, 1520 and 1720 Series
MH10581	Key control unit, Model GKE-B Series Card reader terminals, Models 1000, 1000P Site controller, Model 2000S CFN Series Data entry terminals, Model TPK-900 Series Fuel Point Reader System

### New York City Fire Department (NYFD):

NYFD C of A #	Product
4823	9100A, 9140A, 9152A, 9153A, 9800A, 9840A, 9850A, 9852A, 9853A, 9140
4997	9822A, 9823A
5046	9100Q, 9140Q, 9152Q, 9153Q, 9800Q, 9840Q, 9852Q, 9853Q

### California Air Resources Board (CARB):

Executive Order #	Product
G-70-52-AM	Balance Vapor Recovery
G-70-150-AE	VaporVac

## National Conference of Weights and Measures (NCWM) - Certificate of Compliance (CoC):

Gasboy pumps and dispensers are evaluated by NCWM under the National Type Evaluation Program (NTEP). NCWM has issued the following CoC:

CoC#	Product	Model #	CoC#	Product	Model #	CoC#	Product	Model #
95-179A2	Dispenser	9100 Retail Series, 8700 Series, 9700 Series	91-019A2	Dispenser	9100 Commercial Series			
95-136A5	Dispenser	9800 Series	91-057A3	Controller	1000 Series FMS, 2000S-CFN Series			

## Patents

Gasboy products are manufactured or sold under one or more of the following US patents:

### Dispensers

5,257,720

### Point of Sale/Back Office Equipment

D335,673

Additional US and foreign patents pending.

## Trademarks

### Non-registered trademarks

Atlas™  
Consola™  
Infinity™

### Registered trademarks

ASTRA®  
Fuel Point®  
Gasboy®  
Keytrol®  
Slimline®

Additional US and foreign trademarks pending.

Other brand or product names shown may be trademarks or registered trademarks of their respective holders.

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# 1 – Introduction

## Using This Parts List

This manual is designed to aid the authorized service contractor (ASC) or technician in ordering replacement parts for the Series 900 TopKAT system.

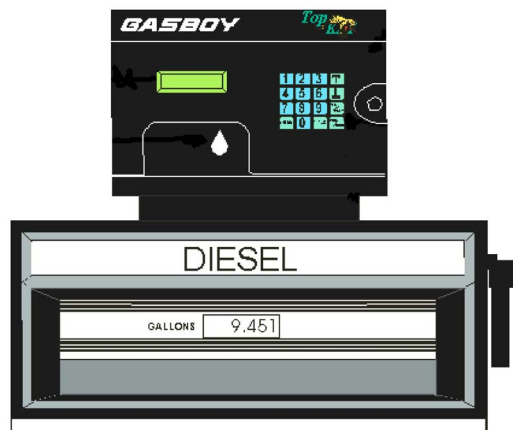
⚠ **WARNING**



Electrical shock hazards exist in Gasboy Series 900 components. Gasboy systems are to be serviced only by properly trained personnel. During the warranty period, Gasboy systems must be serviced and repaired only by trained ASCs (see the Warranty for details or contact your Gasboy representative). To reduce the risk of electrical shock when servicing, turn off and lock out all breakers which supply power to the Series 900 System (all components) at the master electrical panel.

The drawings and part lists starting with “[Illustrated Parts List](#)” on [page 5](#) provide an easy reference for identifying Series 900 parts and their corresponding part numbers. Use the part numbers when ordering to expedite your order and reduce the possibility of the wrong parts being shipped. Multiple views of the system are provided to ensure all parts are identified.

**Figure: 1-1 Typical TopKAT Installation**



## Abbreviations and Acronyms

Abbreviation or Acronym	Expansion
A	Amp or Ampere
AC	Alternating Current
ASC	Authorized Service Contractor
BT	Battery
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
CPU	Central Processing Unit
DC	Direct Current
IC	Integrated Circuit
LCD	Liquid Crystal Display
NEC	National Electrical Code
NFPA	National Fire Prevention Association
OSHA	Occupational Safety and Health Administration
PC	Printed Circuit
PCB	Printed Circuit Board
PCMCIA	Personal Computer Memory Card International Association
PCU	Pump Control Unit
PG	Plug
PROM	Programmable Read-Only Memory
SPST	Single Pole, Single Throw
SRAM	Static Random Access Memory
STP	Submerged Turbine Pump
T	Thickness
TB	Terminal Block
V	Volts
VAC	Volts AC
VDC	Volts DC
W	Width

# Important Safety Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock or pressure release could occur and cause death or serious injury if these safe service procedures are not followed.



## Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain or service this equipment.



### Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump and island. Locate the switch or circuit breakers that shut-off all power to all fueling equipment, dispensing devices, and submerged turbine pumps (STPs).

<b>⚠ WARNING</b>	
	The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser.
	This means that even if you activate these stops, fuel may continue to flow uncontrolled.
You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not only these cashier station stops.	

### Total Electrical Shut-Off Before Access

Any procedure requiring access to electrical components or the electronics of the dispenser requires total electrical shut-off of that unit. Know the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gasboy equipment.

### Evacuation, Barricading and Shut-Off

Any procedures requiring accessing the pump/dispenser or STPs requires the following three actions:



- An evacuation of all unauthorized persons and vehicles using safety tape, cones or barricades to the effected units
- A total electrical shut-off of that unit

## Read the Manual

Read, understand and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gasboy Authorized Service Contractor or call the Gasboy Service Center at 1-800-444-5529. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

## Follow the Regulations

There is applicable information in NFPA 30A; *Automotive and Marine Service Code*, NFPA 70; *National Electrical Code (NEC)*, OSHA regulations and federal, state, and local codes which must be followed. Failure to install, inspect, maintain or service this equipment in accordance with these codes, regulations and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

## Replacement Parts

Use only genuine Gasboy replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gasboy replacement parts could create a safety hazard and violate local regulations.

## Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

### Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

### Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions that follow must be followed to prevent death, injury or damage to the equipment



**DANGER** - This signal word is used to alert you to a hazard to unsafe practice which will result in death or serious injury



**WARNING** - This alerts you to a hazard or unsafe practice that could result in death or serious injury.



**CAUTION** with Alert symbol - This signal word designates a hazard or unsafe practice which may result in minor injury.

**CAUTION** without Alert symbol - When used by itself, CAUTION designates a hazard or unsafe practice which may result in property or equipment damage.

## Working With Fuels and Electrical Energy

### Prevent Explosions and Fires

Fuels and their vapors will become explosive if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause explosive vapors in the vicinity of dispenser or island.

## Important Safety Information

### No Open Flames



Open flames from matches, lighters, welding torches or other sources can ignite fuels and their vapors.



### No Sparks - No Smoking

Sparks from starting vehicles, starting or using power tools, burning cigarettes, cigars or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuels and their vapors. After getting out of a vehicle, touch the metal of your vehicle to discharge any electrostatic charge before you approach the dispenser island.

### Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Be familiar with Cardiopulmonary Resuscitation (CPR) methods if you are working with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA tag out and lock out procedures. If you are not familiar with this requirement, refer to information in the service manual and OSHA documentation.

### Working With Electricity Safely

Be sure to use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Be sure grounding connections are properly made. Make sure that sealing devices and compounds are in place. Be sure not to pinch wires when replacing covers. Follow OSHA Lock-Out and Tag-Out requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

### Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Be sure to clean hands after handling equipment. Do not place any equipment in mouth.

#### WARNING

This area contains a chemical known to the State of California to cause cancer.

#### WARNING

This area contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**IMPORTANT:** Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

## Emergency First Aid

### Informing Emergency Personnel

Compile the following information for emergency personnel: Location of accident (for example, address, front/back of building, and so on.)

Nature of accident (for example, possible heart attack, run over by car, burns, and so on.)

Age of victim (for example, baby, teenager, middle-age, elderly.)

Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on.)

Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on.)

#### WARNING



Gasoline ingested may cause unconsciousness and burns to internal organs.

Do not induce vomiting.

Keep airway open.

Oxygen may be needed at scene.

Seek medical advice immediately.

#### WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth and lungs.

Keep airway open.

Seek medical advice immediately.

#### WARNING



Gasoline spilled in eyes may cause burns to eye tissue.

Irrigate eyes with water for approximately 15 minutes.

Seek medical advice immediately

#### WARNING



Gasoline spilled on skin may cause burns.

Wash area thoroughly with clear/water.

Seek medical advice immediately.

**IMPORTANT:** Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

### Lockout/Tagout

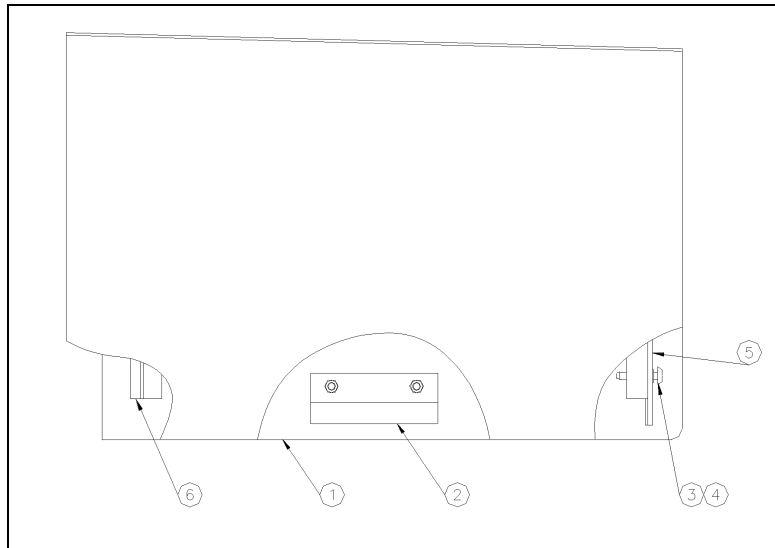
Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical or other energy, but does not cover electrical hazards. Reference Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.



## 2 – Illustrated Parts List

### Wrapper Assembly

Figure: 2-1 TopKAT Wrapper Assembly



### Wrapper Assembly Parts

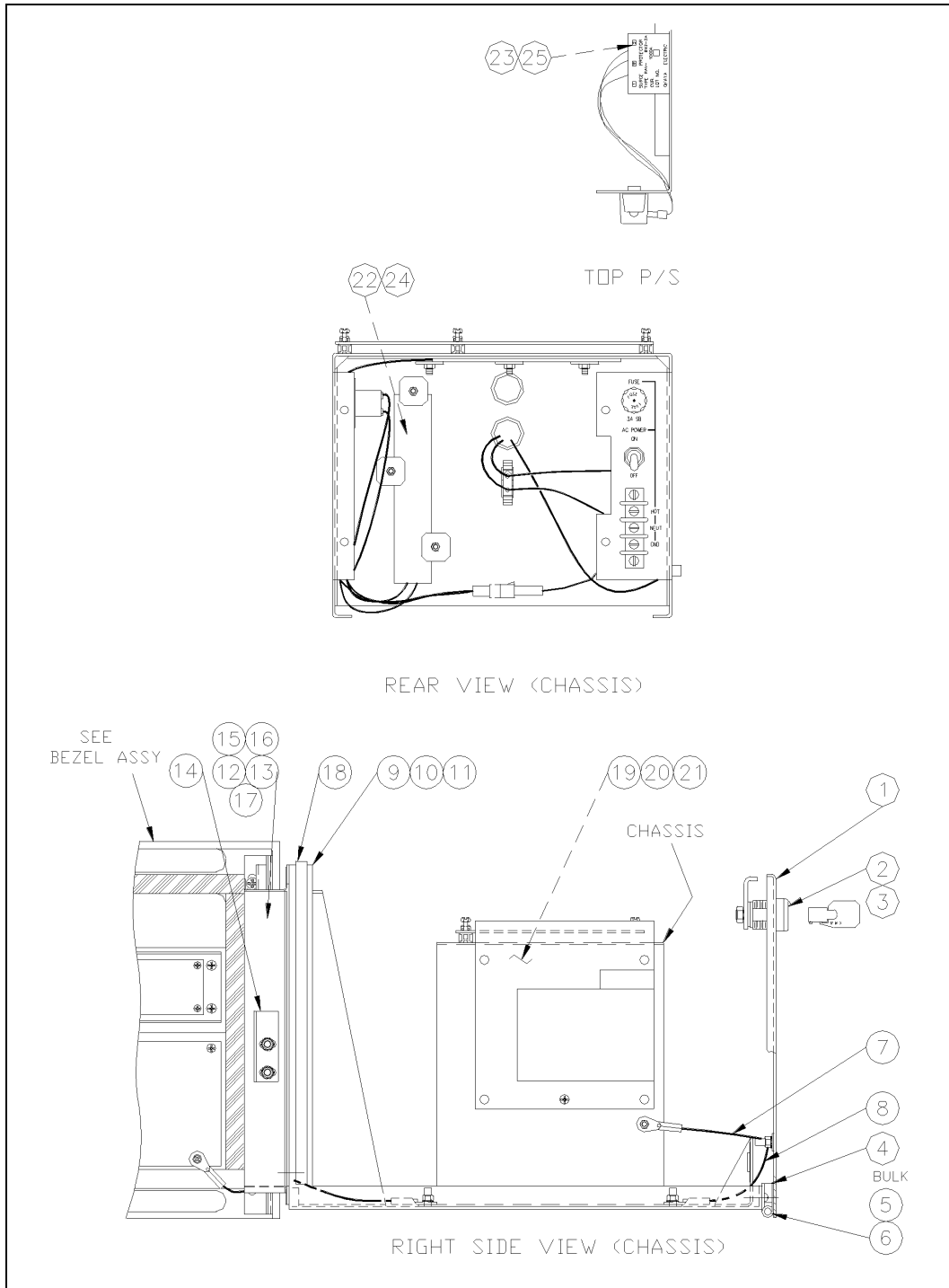
Item (see <a href="#">Figure 2-1</a> )	Part Number	Description
1	C35656	Wrapper Weld Assembly, Series 900
2	C35659	Slide Bracket, Wrapper, Series 900
3	C09612	Screw, Captive Phillips®
4	C03286	Washer, Retaining, 12-11014-12
5	027065	Gasket, Bulk, 1/8T x 1/2W Self Adhesive
6	C01989	Gasket, Bulk, 1/4T x 1/2W Self Adhesive

### Optional Field Kits

Part Number	Description
C06966	Field Installation, Internal Modem 2400 Baud (see <a href="#">Figure 2-3</a> , item 21)
C07198	Field Installation, Internal Modem 33600 Baud (see <a href="#">Figure 2-3</a> , item 21)
C07063	Field Installation, Report Printer
C06968	Field Installation, PCMCIA PCB

# Parts as Viewed from Right and Rear Sides

Figure: 2-2 Series 900 - Partial Right Side View and Right Rear View



## Parts - Right Side

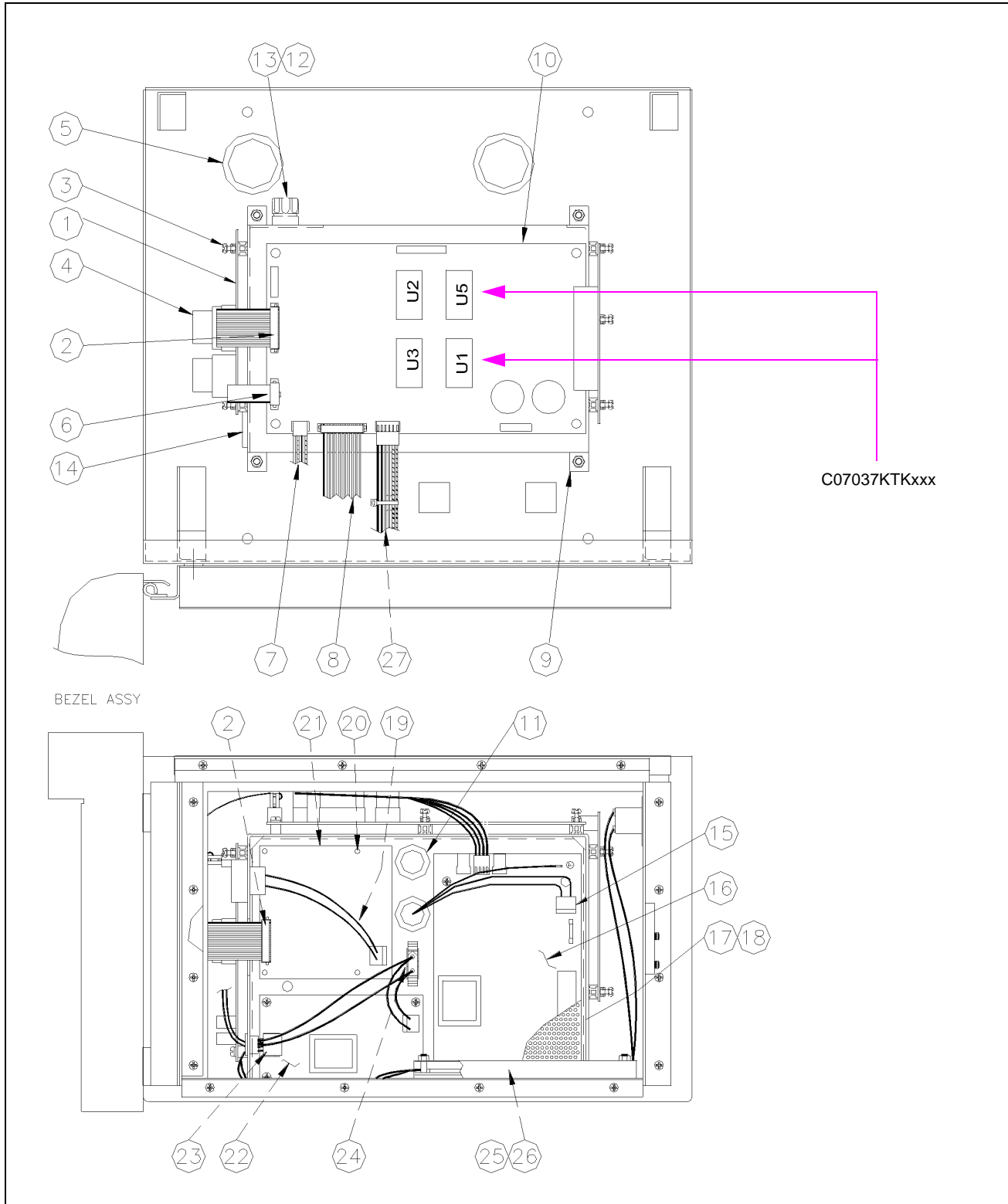
Item (see <a href="#">Figure 2-2</a> )	Part Number	Description
1	C35683	Rear Door Assembly (items 2 - 6 are subparts of this assembly)
2	035009	Lock, 90° with Cover and Seal, Black
3	C35712	Lock Cam, Rear Door, Series 900
	026808	Gasket, Lock (not shown)
4	C01989	Gasket, Bulk, 1/4T x 1/2W Self Adhesive
5	C35660	Hinge, Rear Door
6	049870	Pop Rivet
7	C09518	Flexible Cable/Ring Assembly
8	C06859	Cable Assembly Ground Strap
9	C35673	Rain Gutter, Lower, Series 900
10	C35672	Rain Gutter, Upper, Series 900
11	C35689	Base Weld Assembly
12	C35675	Rain Gutter, Right Side
13	C35677	Rain Gutter, Left Side Assembly
14	C35694	Bracket Lock, Series 900
15	C35686	Gasket, Upper Gutter
16	C35687	Gasket, Side Gutter
17	C35685	Gasket, Lower Gutter
18	027078	Gasket, 1/16" x 1/2" Rubatex® R411N
19	C06740	PCB Assembly, PCMCIA
20	C09419	Standoff, 1/4-turn, 1/4" Plastic
21	C09849	Card, PCMCIA 256K SRAM with Battery (one of the indented parts below is a part of this assembly)
	C09625	Battery, Lithium Coin, #BR2325 (not shown)
	~ OR ~	
	C09417	Battery, Lithium Coin, #CR2025 (not shown)
22	C06813	Cable Assembly, System Heaters, 115 VAC
23	C06757	Cable Assembly, Surge Protector, 115 VAC

## Parts - Right Rear Side

Item (see <a href="#">Figure 2-2</a> )	Part Number	Description
24	C06815	Cable Assembly, System Heaters, 230 VAC
25	C06820	Cable Assembly, Surge Protector, 230 VAC

# Parts as Viewed from Top and Front Side

Figure: 2-3 Series 900 - Top and Front View



## Parts - Top

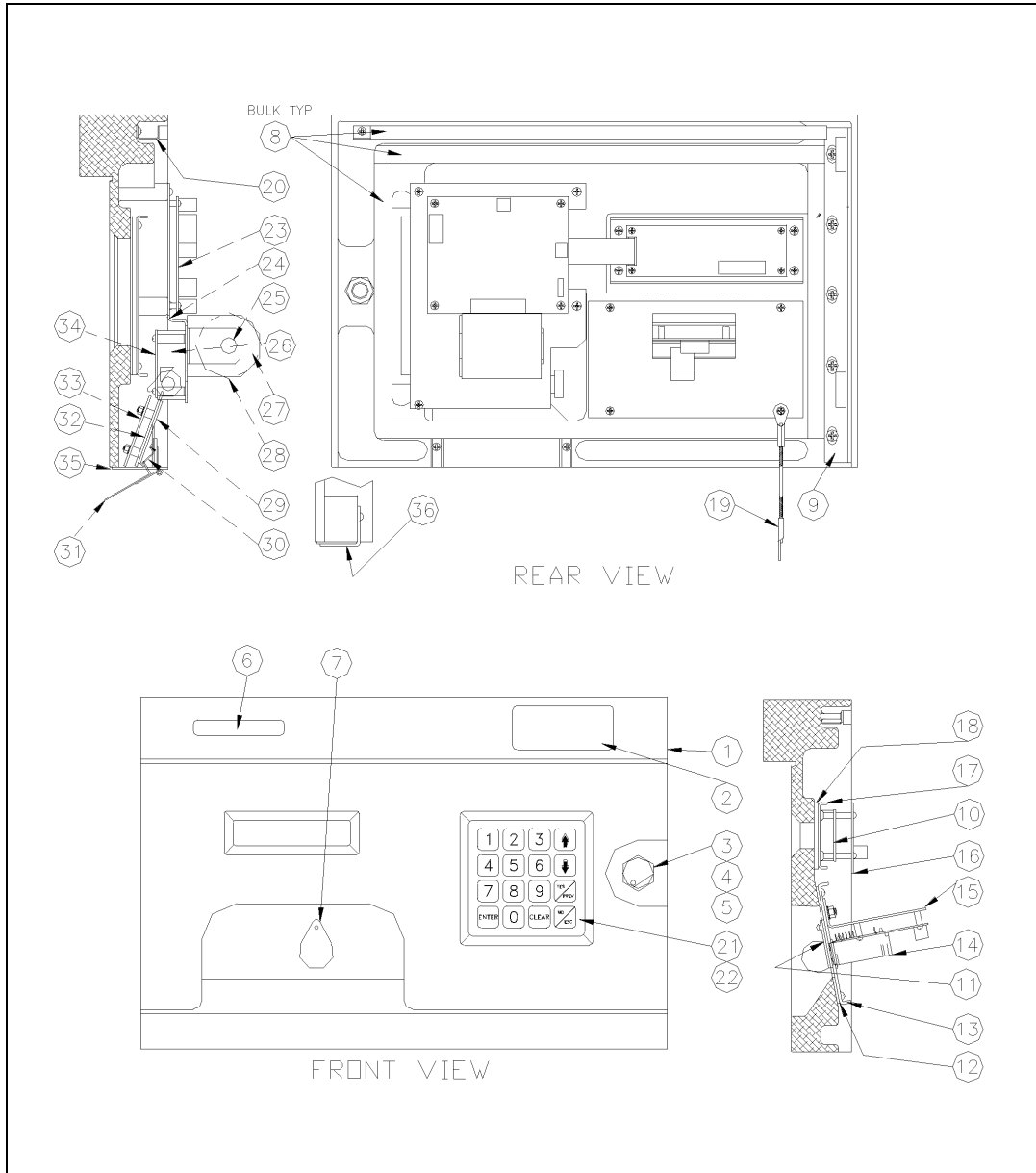
Item (see Figure 2-3)	Part Number	Description
1	C06498	PCB Assembly, Communications Ports
2	C06752	Cable Assembly, Ribbon, 20-position
3	C09419	Standoff, 1/4-turn, 1/4" Plastic
4	C08235	Connector, 5-position terminal block
5	C09435	Bushing, 1-5/16"
6	C06751	Cable Assembly, Ribbon, 10-position
7	C06750	Cable Assembly, CPU DC Power
8	C06753	Cable Assembly, Ribbon, 20-position
9	C35680	Mounting Bracket, Assembly, Power Supply - TopKAT
10	C06741	PCB Assembly, Series 900 CPU (indented parts below are part of this assembly)
	C09415	Battery, Lithium Coin, 3 V (not shown; for use in BT1 or BT2 location)
	C07037KTKxxx	TopKAT Programmed IC PROM (two required for locations U1 and U5) where xxx = one of the following: <ul style="list-style-type: none"> <li>• ENG (for English version)</li> <li>• HTZ (for Hertz version)</li> <li>• SPN (for Spanish version)</li> </ul>
11	C02188	Bushing, Snap-in
12	C09546	Fuse Holder, 3AG Panel Mount
13	C02634	Fuse, 3 Amp
14	C03756	Bushing, Snap-in

## Parts - Front View

Item (see Figure 2-3)	Part Number	Description
15	C06756	Cable Assembly, AC Input Harness
16	C09053	Power Supply with Ground Wire
17	C35635	Cover Perforated Int Hsg
18	C08756	Label, Danger High Voltage
19	C06762	Cable Assembly, 2-conductor, Modem
20	C02896	Support, PC Board
21	C07122	Modem, Internal, 2400 Baud
	~ OR ~	
	C07123	Modem, Internal, 33600 Baud
22	C09370	Power Supply, 5 V
23	C06812	Cable Assembly, Printer DC Power
24	C06755	Cable Assembly, Printer/Heater, 115 VAC
	~ OR ~	
	C06748	Cable Assembly, Printer/Heater, 230 VAC
25	C35704	Heater Mounting Bracket
26	C35708	Cover, Printer Heater
27	C06745	Cable Assembly, Printer Serial/Logic

# Bezel - Parts as Viewed from Front and Rear

Figure: 2-4 Series 900 - Front and Rear Views

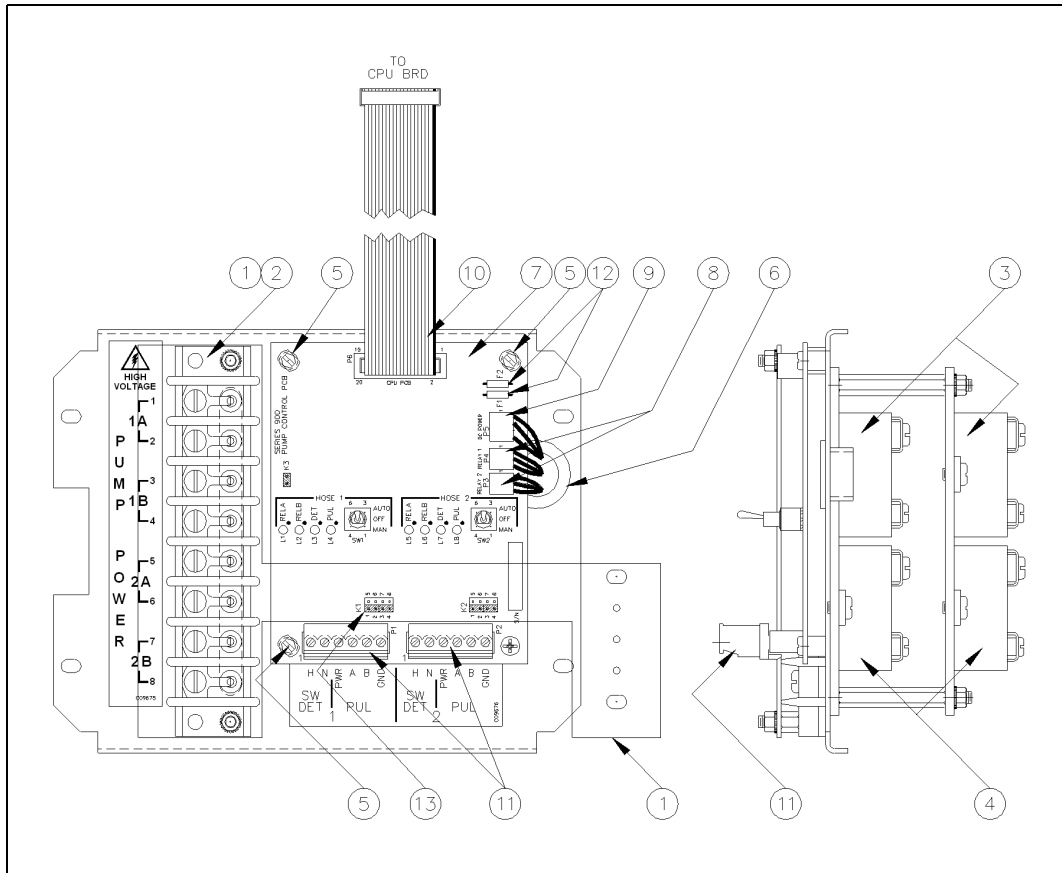


## Bezel Parts - Front and Rear

Item (see <a href="#">Figure 2-4</a> )	Part Number	Description
1	003118	Bezel, Mach Series
2	C09512	Decal, TopKAT
3	035009	Lock, 90° with cover and seal
4	C35698	Cam Lock, Bezel
5	026808	Gasket, Lock
6	C09511	Decal, Gasboy Series
7	C35653	Cover, Key Receptacle
8	027065	Gasket, 1/8" x 1/2"
9	C35678	Bracket, Hinge Bezel
10	C06814	Display, 40-character, 2-row LCD
11	C09513	Decal, Insert Key
12	C35651	Key Receptacle Gasket
13	C35650	Key Receptacle Mounting Plate
14	C06499	PCB Assembly, Key Receptacle
15	C35652	Key Receptacle Mounting Bracket
16	C06495	PCB Assembly, Display/Keypad
17	C35646	Bracket Assembly, Display Mount, Series 900
18	C35647	Window Display
19	C06986	Cable Assembly, Ground Strap
20	C35720	Rain Gutter, Bezel
21	C06995	Keypad Kit (indented part below is part of this assembly)
22	C35649	Gasket, Keypad
23	C06739	PCB Assembly, Printer Controller
24	C35644	Bracket Support Printer
25	C35702	Paper Roll Support Shaft
26	C09414	Printer, Thermal, 24-column
27	C35701	Paper Roll Secure Bracket
28	C01819	Paper, Thermal
29	C35705	Bracket, Paper Deflector
30	C35719	Stop Cover Chute
31	C06849	Cover Weld Assembly, Chute
32	C35638	Paper Guide, Front
33	C35707	Paper Guide, Front
34	C35640	Paper Deflector, Upper
35	026980	Gasket, 1/16" x 1/8" x 3"
36	C35695	Cover, without Printer

# Mechanical Interface - 2-Hose

Figure: 2-5 Series 900 - Mechanical Interface - 2-Hose View



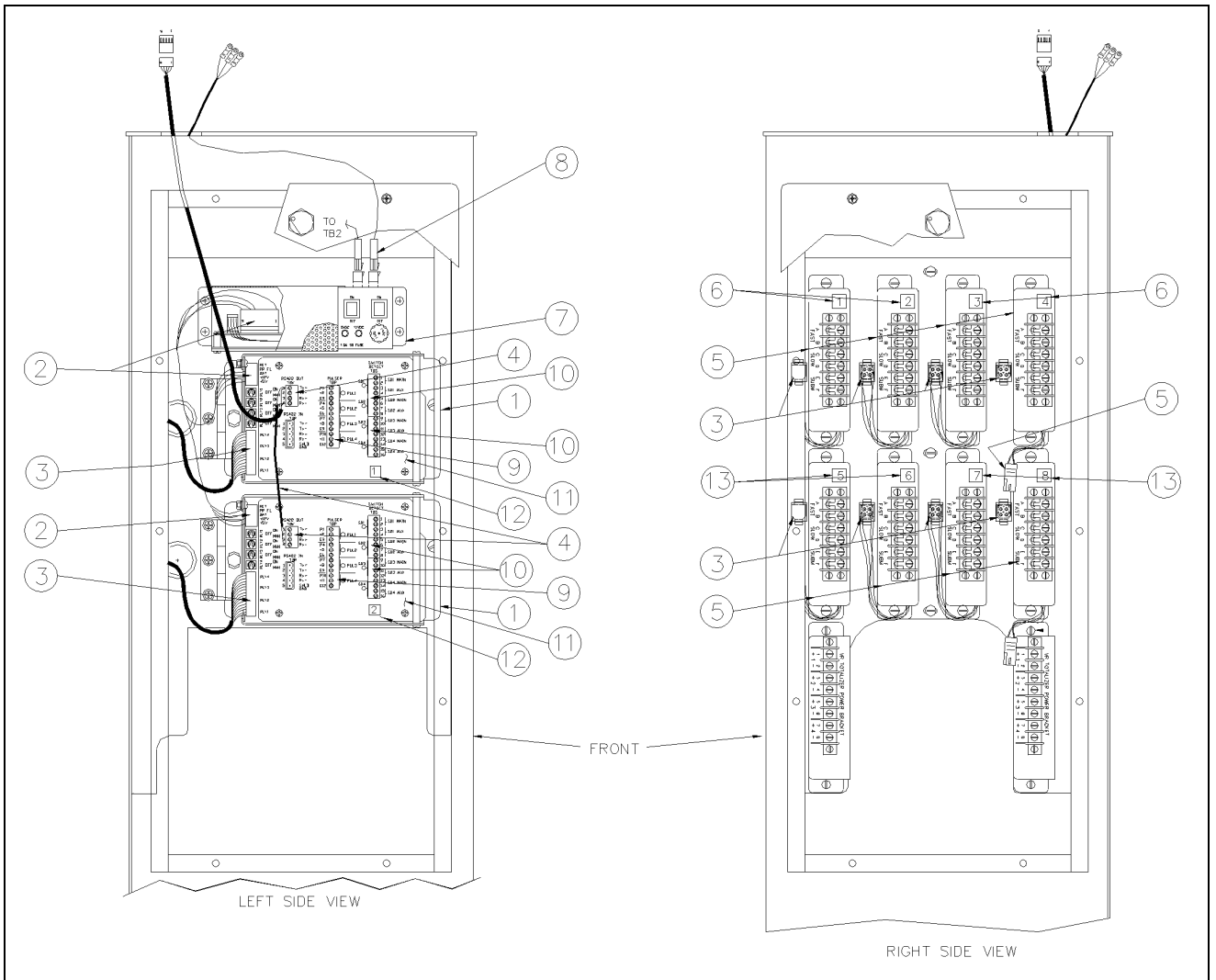
## Mechanical Interface Parts - 2-Hose

Item (see Figure 2-5)	Part Number	Description
1	C35890	Terminal Block, Cover, 8-position
2	C06754	Cable Assembly, 8-position Terminal Block to Relays
3	C08746	Relay, Solid-State, 240 VAC, 40A SPST
4	C04477	Relay, Solid-State, 240 VAC, 25A SPST
5	C09419	Standoff, 1/4-turn, 1/4" Plastic
6	C02188	Bushing, Snap-in, 5/8" Diameter
7	C06493	PCB Assembly, Mechanical Pump Option
8	C06747	Cable Assembly, PC Relay Input
9	C06749	Cable Assembly, Mechanical Pump Control DC Power
10	C06752	Cable Assembly, Ribbon 20-position, 4" length
11	C08809	Connector, 6-position, TB/PG
12	C01846	Fuse, 2 Amp, Quick Blow, Pico, Axial
13	C03315	Connector, 2-position Jumper, Female, 0.100"



# Mechanical PCU - 4-to-8 Hose

Figure: 2-6 Series 900 - Mechanical PCU - 4-8 Hose View



### Mechanical PCU Parts - 4-8 Hose

Item (see Figure 2-6)	Part Number	Description
1	C06600	Cage Assembly
2	C06591	Cable Assembly, DC Power, 4-Hose Unit
	~ OR ~	
	C06590	Cable Assembly, DC Power, 8-Hose Unit
3	C06593	Cable Assembly, Relay Control
4	C06005	Cable Assembly, PCU Communications, 4-Hose Unit
	~ OR ~	
	C06009	Cable Assembly, PCU Communications, 8-Hose Unit
5	C05052	Relay and Cable Assembly
6	C02418	Decal, Numbers 1, 2, 3, 4
7	C05059	Power Supply Assembly
8	C06592	Cable Assembly
9	C08237	Connector, 8-position
10	C08528	Connector, 12-position
11	C32731	Plate, Silkscreened
12	C02293	Decal, Numbers 1, 2, 3, 4
13	C02952	Decal, Numbers 5, 6, 7, 8

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7300 West Friendly Avenue • Post Office Box 22087  
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Phone 1-800-444-5529 • <http://www.gasboy.com> • Printed in the U.S.A.  
PT-1957 TopKAT Fuel Management System Parts Manual · January 2006