

S P O K A N E   M E T A L   P R O D U C T S  
50 GALLON FUEL BOWSER  
OPERATION AND MAINTENANCE MANUAL  
MODEL NUMBER BOW 050-00

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## 1.0 INTRODUCTION

- 1.1 To obtain optimum benefit from your fuel bowser unit, it is recommended that all personnel operating it read and understand this manual prior to operation.
- 1.2 Upon receipt of bowser unit a visual inspection should be made to determine that it is complete and has not sustained any damage during transportation.

## 2.0 SAFETY

### 2.1.0 Potential Fire Or Explosion

- 2.1.1 Due to the nature of fuel, care should be exercised to eliminate all sparks and open flame in the area of the fuel bowser.
- 2.1.2 A 50 foot radius area around the fuel bowser for no smoking, sparks, or open flames is usually a good practice. It is strongly recommended all local or other regulations be consulted for further restrictions.

### 2.2.0 Telescoping Drain

- 2.2.1 Care should be exercised in using the telescope to prevent crushing fingers between clamps by dropping sections.

### 2.3.0 Grounding

- 2.3.1 To eliminate static sparks the bowser unit is equipped with two grounding reels which should be connected prior to draining or filling operations

### 2.4.0 Towing

- 2.4.1 Make sure the tow bar is securely attached to the towing vehicle.
- 2.4.2 Before moving the bowser unit check to assure the parking brake is released.
- 2.4.3 Maximum allowable towing speed is 15 M.P.H.

### 2.5.0 Parking

- 2.5.1 Parking brake must be applied when filling and draining or when left unattended.

### 2.6.0

### 2.6.1

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## 2.7.0 Inspections

- 2.7.1 Inspection of tires, under carriage, tow bar, vent, valves, hoses, sight gauge, reflectors, safety labels, etc., should be instituted at regular periodic basis. It is recommended these inspections be performed on a weekly basis.
- 2.7.2 Internal inspection will be necessary to insure structural integrity and cleanliness. It is recommended that interval inspections be performed at least every (6) six months. Caution! when entering confined spaces, such as the interior of the bowser tank, care should be taken to provide proper breathing equipment and a separate person dedicated solely to a safety watch of the person inside. It is strongly recommended that all local or other regulations be consulted.

# 3.0 OPERATION

## 3.1.0 Intended use

- 3.1.1 The fuel bowser unit is intended for use in draining and collection of fuel from aircraft and the transportation to a disposal site. Any other use is prohibited and may void any and all warranties.

## 3.2.0 Parking Brake

- 3.2.1 The bowser unit is equipped with a mechanically operated parking brake. The brake should be applied prior to disengaging tow bar. The brake should be applied when filling, or draining tank, or whenever left unattended.

## 3.3.0 Tow Bar and Undercarriage

- 3.3.1 The bowser unit is equipped with swivel type front casters controlled by the tow bar.

- 3.3.2 Care should be taken to not jackknife the bowser when backing up.

- 3.3.3 Tire inflation should be checked and maintained as described in the maintenance section.

- 3.3.4 Before towing check to see the brake is disengaged, grounding reel and hoses are disconnected, valves are closed, tow bar is securely attached to the towing vehicle, telescoping drain is collapsed, and all manways and covers are closed and latched.

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3.4.0 Telescoping Drain Assembly

3.4.1 The fuel bowser is equipped with a telescoping drain assembly. It is capable of being adjusted from 4'2" to 12'0" high.

3.4.2.0 To Raise

3.4.2.1 Loosen top clamp if necessary.

3.4.2.2 Grasp top section with one hand and lift until the top clamp raises approximately 6 inches.

3.4.2.3 Tighten clamp securely with the other hand.

3.4.2.4 Reposition lifting hand grasping tube below clamp just tightened and lift until the next clamp is raised approximately 6 inches.

3.4.2.5 Repeat operations 3.4.2.2 and 3.4.2.4 until desired height is attained or assembly is fully extended.

3.4.3 To Lower

3.4.3.1 Grasp bottom extended tube securely with one hand and loosen clamp holding it.

3.4.3.2 Slowly lower the extended sections, hand over hand, until the next clamp is resting on the lower clamp.

3.4.3.3 Repeat steps 3.4.3.1 and 3.4.3.2 until all sections are collapsed.

3.4.4 Funnel is equipped with nitrile rubber seal around top edge to allow placement against the under side of a wing.

3.4.5 When not in use telescope should be collapsed and the cover closed to eliminate contamination.

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3.6.0   **Grounding Reels**

3.6.1   The bowser unit is supplied with two grounding reels.

3.6.2   Before filling, draining, or vacuuming, the grounding reels must be attached to the aircraft or object being serviced and an appropriate ground.

3.7.0   **Drain Valves**

3.7.1   The bowser unit is equipped with an 1-1/2" NPT ball valve with a camlock connector.

3.9.0   **Telescoping drain strainer**

3.9.1   The bowser unit is equipped with a sump with removable bottom to allow cleaning of the drain strainer.

**4.0 MAINTENANCE**

4.1.0   **Parking Brake**

4.1.1   The bowser unit is equipped with a parking brake assembly built into the rear casters.

4.1.2   The brakes should require no adjustment.

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- 4.2.0 Under Carriage and Tow Bar
- 4.2.1 The bowser unit is equipped with swivel type front casters, fixed rear casters, and a tow bar.
- 4.2.2 Maintenance should consist of the following.
  - 4.2.2.2 Grease zerk on casters should be lubricated monthly with a multi-purpose grease.
  - 4.2.2.3 Check tire pressure weekly. Pressure should be maintained at 80 psi.
  - 4.2.3 Tow bar pivot pin and hook ring should be inspected monthly for excessive wear or cracks.
- 4.3 Telescoping Drain Assembly consists of stainless steel housing 4" in diameter permanently attached to the tank and four (4) aluminum tube sections.
  - 4.3.1 The stainless tube and three largest aluminum tubes are equipped with a clamp assembly.
  - 4.3.2 Each clamp has a nylon clamp sleeve.
  - 4.3.3 Each aluminum tube is equipped with a stop sleeve crimped on the lower end which acts as a stop to prevent the tube from sliding thru the clamp.

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4.3.4 Disassembling of the telescope assembly is accomplished by removing the 4 screws holding the clamp sleeve in the clamp. After removal of the clamp sleeve the stop sleeve will slide through the clamp.

### 4.5 Grounding Reels

4.5.1 Grounding reel cables should be pulled out, cleaned and inspected monthly.

4.5.2 Cable clamps and ends should be inspected for loose connections monthly.

### 4.6 Sight Gauge

4.6.1 The sight gauge should be inspected monthly for loose connections and weathering of clear tubing.

### 4.7 Telescoping Drain Strainer

4.7.1 Telescoping drain strainer is located on the bottom of the stainless steel drain housing.

4.7.2 Maintenance should consist of inspection and cleaning monthly.

4.7.3 Removal.

4.7.3.1 Removal is accomplished by loosening the wing nut on the clamp holding the base of the sump. NOTE! Check interior to assure fuel has been thoroughly drained before reloosening wing nut.

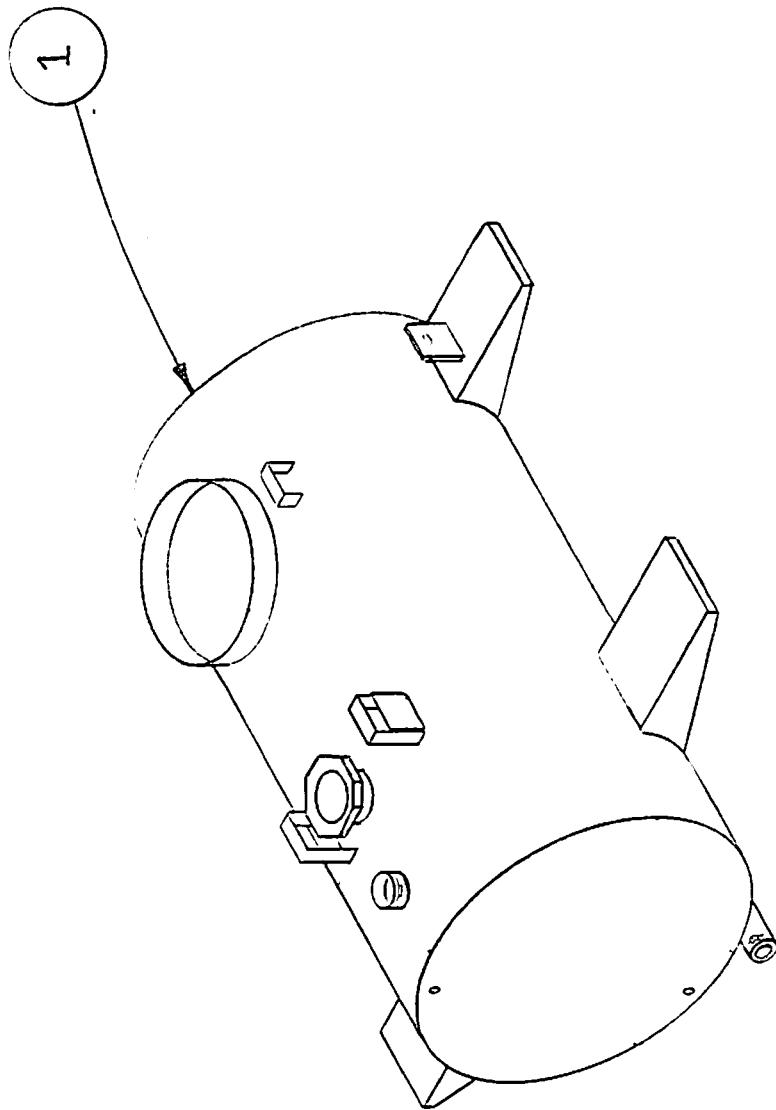
4.7.3.2 Remove camp and sump base.

4.7.3.3 Loosen clamp holding screen to stainless steel drain housing and pull screen down.

## 5.0 REPLACEMENT PARTS

This section provides information for identification of parts for ordering. To order it is important to have the Model Number, Subassembly Number, Part Number and Description. Parts may be ordered by calling or writing to:

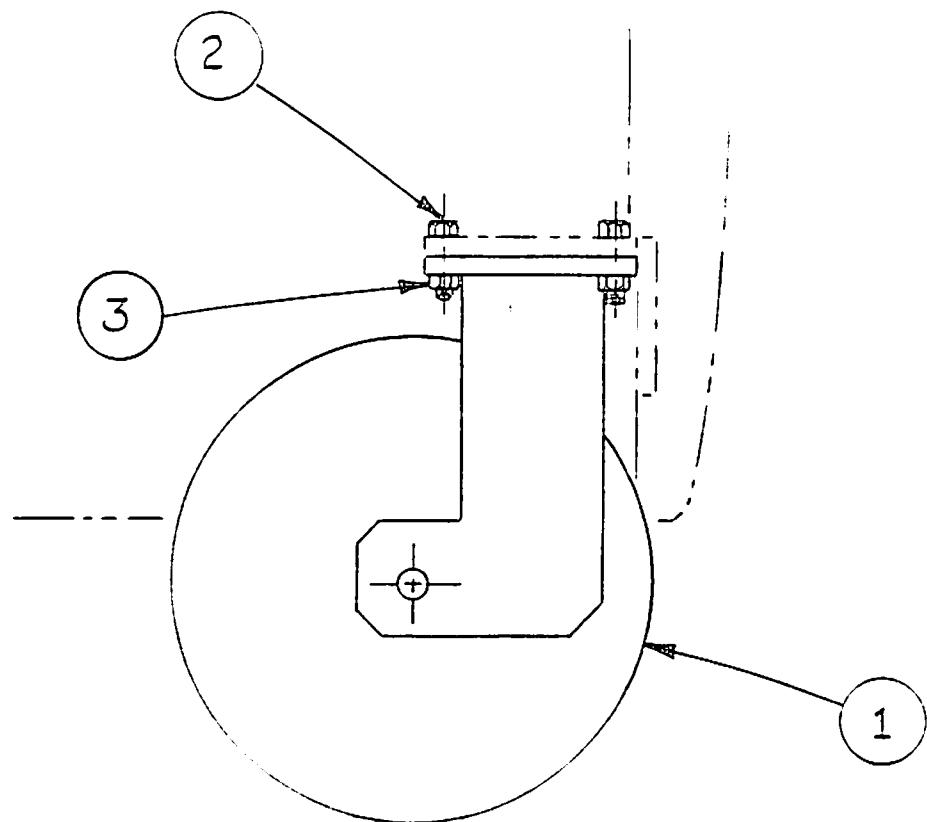
SPOKANE METAL PRODUCTS  
P.O. Box 3621  
Spokane, WA 99220-3621  
Telephone: Area Code 509-928-0720



ASSEMBLY NO. 08-10092

MAJOR ASSEMBLY - TANK WELDMENT

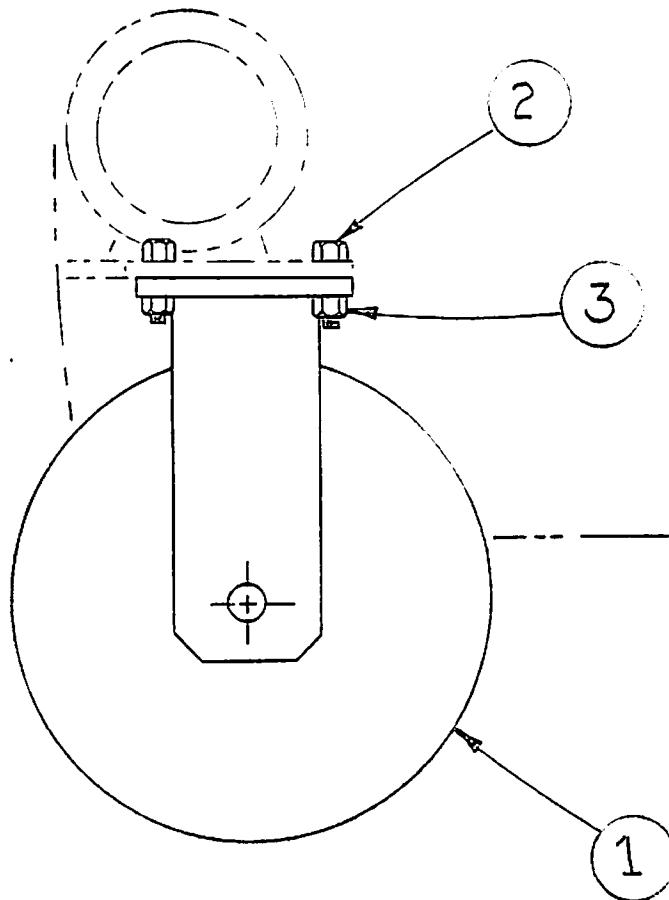
Sub Assy.	Item	Part No.	Quantity	Description	#Weight
1	08-10092	1	1	Stainless Steel Tank Weldment 50 Gallon Capacity Series B0W050-00	100



WHEEL ASSEMBLY, FRONT

Item	Part No.	Quantity	Description
1		2	Caster, Swivel Type
2	02-10041	8	Bolts
3	02-12041	8	Nuts

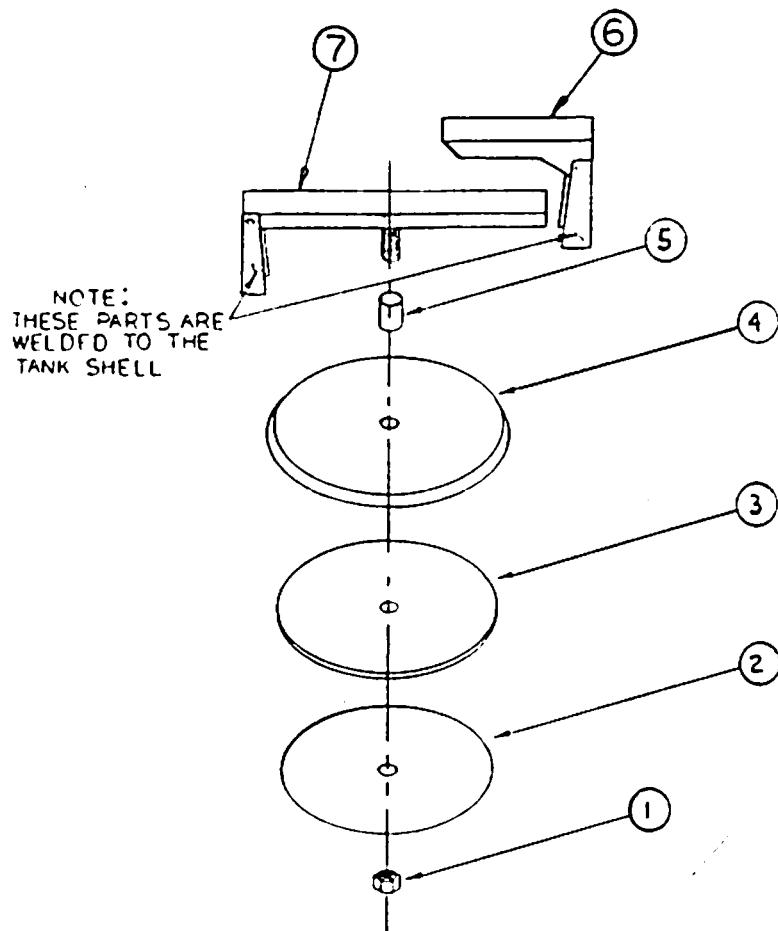
SECTION 5.2.4



WHEEL ASSEMBLY, REAR

Item	Part No.	Quantity	Description
1		2	Caster, Rigid Type
2	02-10041	8	Bolts
3	02-12041	8	Nuts

SECTION 5.2.5



### MAJOR ASSEMBLY - TANK WELDMENT 10"

Sub Assy.	Item	Part No.	Quantity	Description	Weight #
8-2012				10" Flip-Lock Manway	
	1	02-1206	1	Nut, Lock Retainer	.5
	2	07-2304	1	Gasket, Retainer	2.
	3	06-25021	1	Gasket, Manway, 10"	1.
	4	07-2299	1	Cover, Manway	5.
	5	01-93455S	1	Spacer, Manway	.5
	7	07-2103	1	Cross Arm, Assembly 10"	2.5

SECTION 5.3

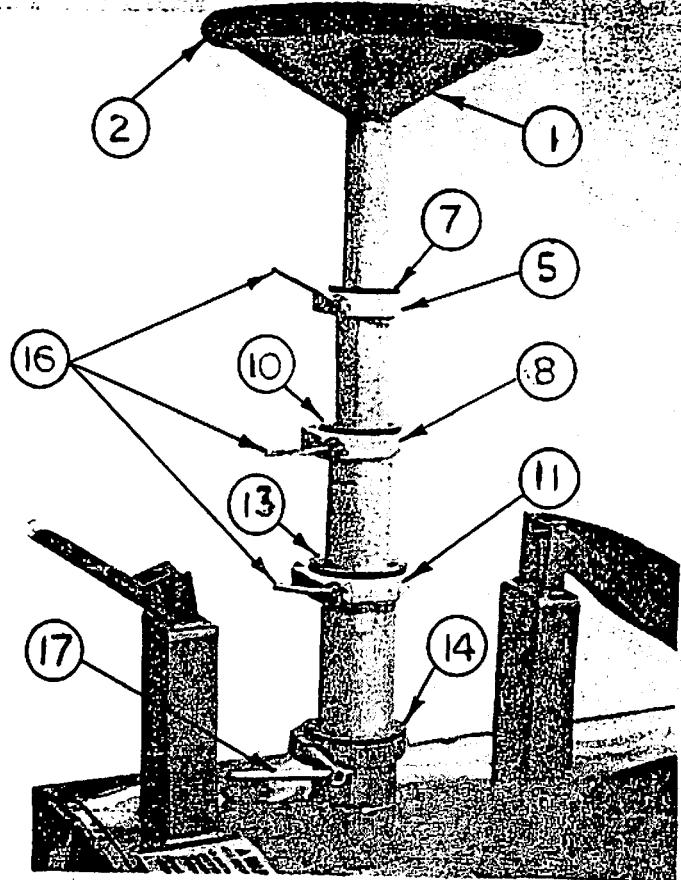
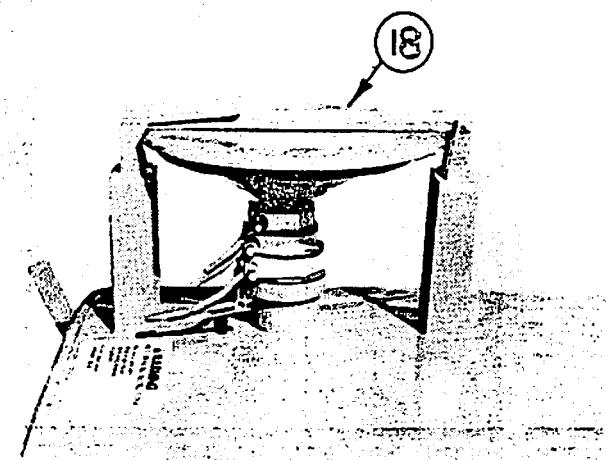
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## MAJOR ASSEMBLY - TELESCOPING DRAIN ASSEMBLY

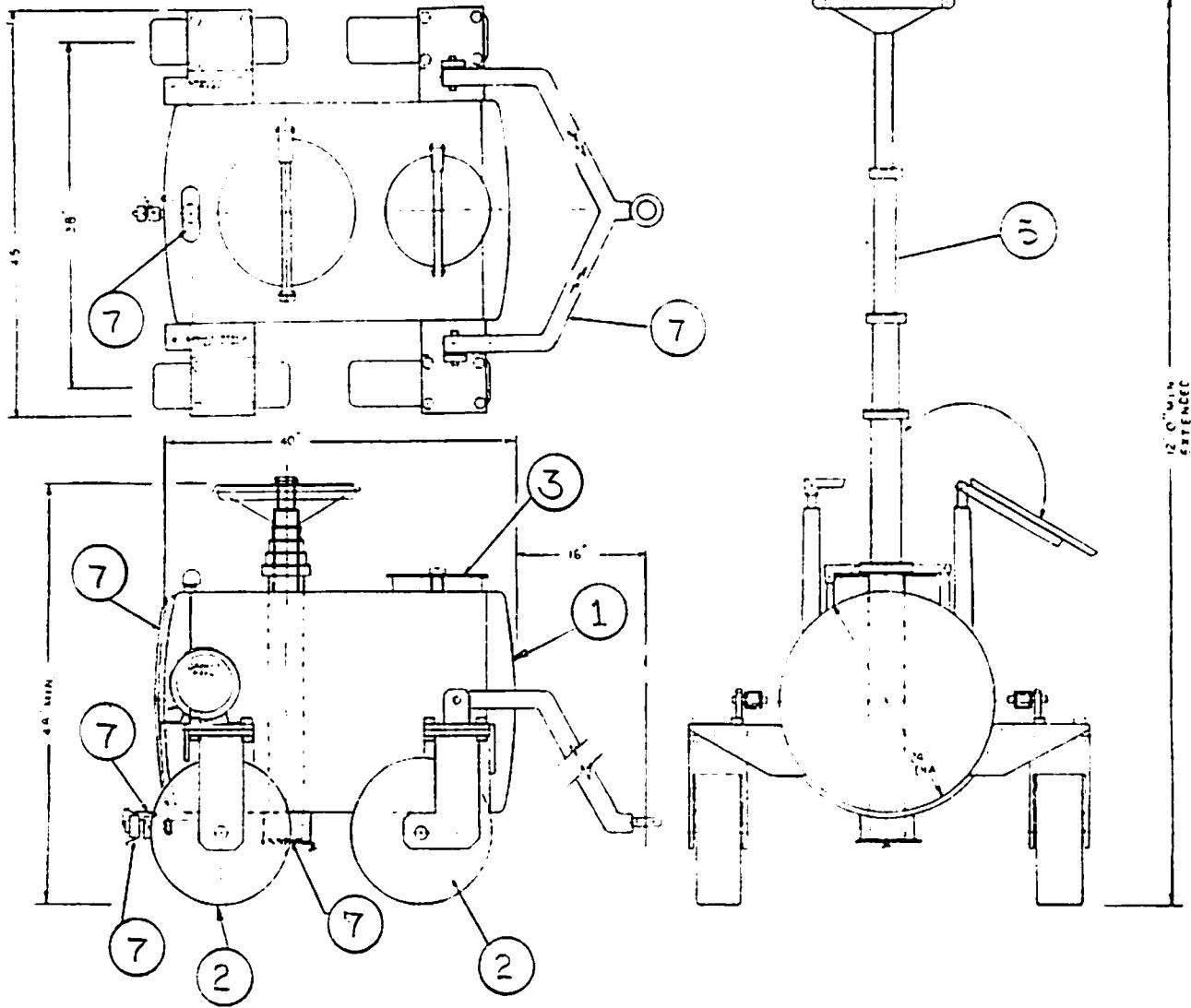
Sub Assy.	Part No.	Quantity	Description	Height
08-1016			Drain Funnel Section Assembly	
	1 07-1011	1	Drain, Funnel Section	.50
	2 06-1022	1	Gasket, Funnel Section	.71
	3 05-1000	1	Sleeve, Stop *	.18
	4 04-1039	1	Screen, Funnel Section	.51
08-1017			Drain, Telescoping Section Assy. 2-1/2"00	
	5 07-1012	1	Telescoping Section Weldment, 2-1/2"00	.39
	6 05-1001	1	Sleeve, Stop *	.38
	7 05-1002	1	Sleeve, Clamp Spacer	.19
08-1027			Drain, Telescoping Section Assy. 3" 0.0.	
	8 07-1013	1	Telescoping Section, Weldment, 3" 0.0.	3.50
	9 05-1003	1	Sleeve, Stop *	.19
	10 05-1004	1	Sleeve, Clamp Spacer	.49
08-1028			Drain, Telescoping, Sect. Assy. 3-1/2"00	
	11 07-1014	1	Telescoping Section, Weldment, 3-1/2"00	.49
	12 05-1005	1	Sleeve, Slider Spacer	.49
	13 05-1006	1	Sleeve, Clamp Spacer	.29
	14 05-1007	1	Sleeve, Lower Clamp Spacer	.59
	15 02-1500	16	Screws, Sleeve Clamp *	.38
	16A 04-1040	3	Handles, Clamp	.68
	16B 02-10021	3	Handles, Bolts	.89
	17 07-1015	1	Handle, Clamp Lower	.19
	18 08-1026	1	Cover Assembly	.50

\* Denotes: Items Not Shown



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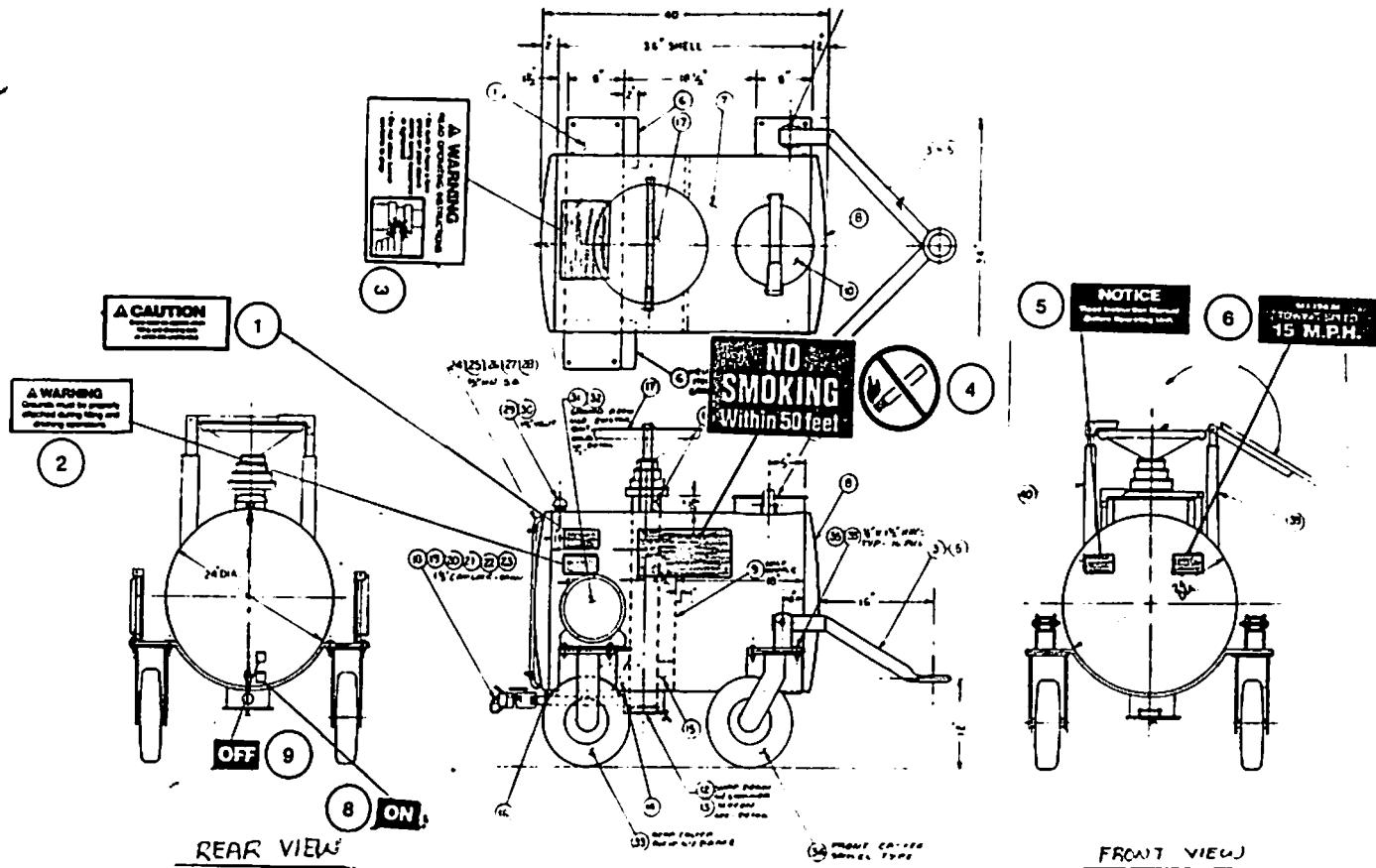


**PARTS INDEX**

**MODEL: BOW 050-00 Series**

**FUEL BOWSER**

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4	Decal Package. . . . .	5.4
5	Telescoping Drain. . . . .	5.5
7	Miscellaneous Fixtures. . . . .	5.7



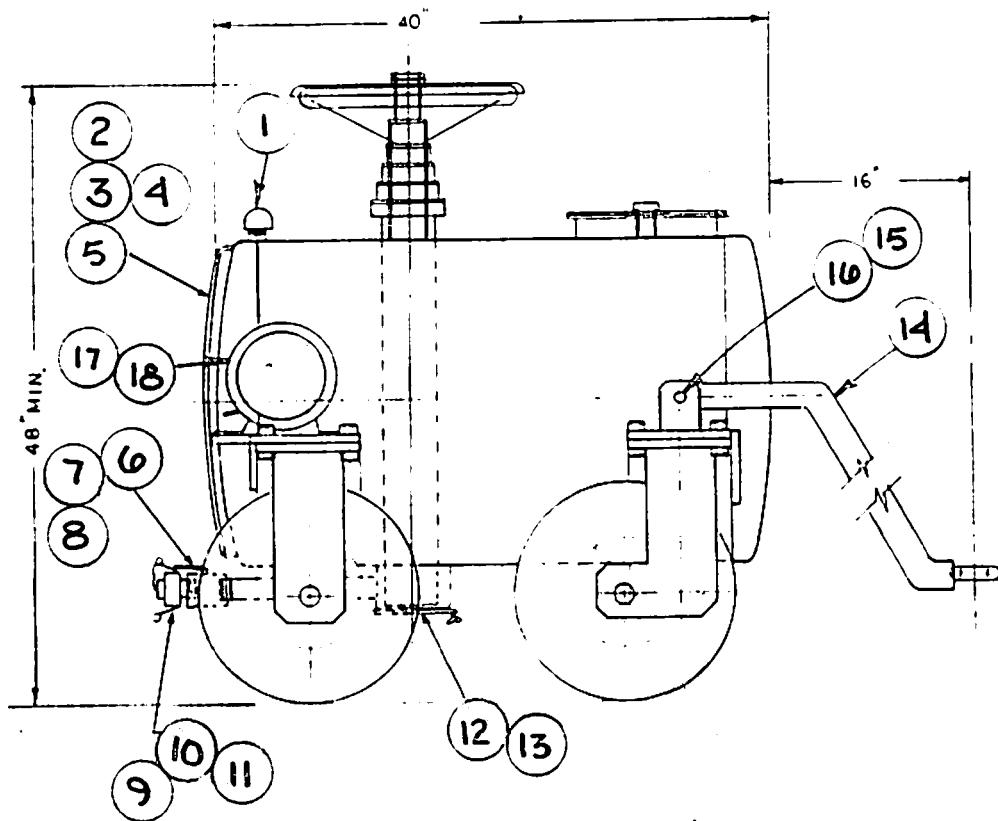
### DECAL PACKAGE FOR 50 GALLON BOWSER

Item	Part No.	Qty.	Description	Wt.
1	06-1003	1	Decal, Caution, Parking Brake	.1
2	06-1004	2	Decal, Warning, Grounding Reels	.1
3	06-1005	1	Decal, Warning, Telescoping Drain	.1
4	06-1006	2	Decal, Danger, No Smoking	.2
5	06-1007	1	Decal, Notice, Read Manual	.1
6	06-1008	1	Decal, Maximum Towing Speed-15 mph	.1
8	06-1011	1	Decal, On, Drain Valve	.1
9	06-1011	1	Decal, Off, Drain Valve	.1

Section 5.4

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#### MISCELLANEOUS FIXTURES

Sub Assy.	Item	Part No.	Quantity	Description	Weight
	1	04-1037	1	Vent Cap	
	2	03-0017S	2	Street El	
	3	03-0388S	2	Hose Barb	
	4	03-1010S	2	Hose Clamp	
	5	06-2527	1	Clear Tubing	
	6	04-10321	1	Ball Valve	
	7	04-1033	1	Cam Lock Adapter	
	8	04-10331	1	Cam Lock Male Plug	
	9	04-1034	1	Chain Safety	
	10	04-1035	1	Link, S-Hook	
	11	04-10351	1	Link, S-Hook	
	12	01-8223	1	Sump Strainer	
	13		1	"Knapco" Sump Gasket	
	14		1	Tow Bar, Sub-Assembly	
	15		2	Bolt	
	16		2	Lock Nut	
	17	04-1036	1	Grounding Reel	
	18	04-10361	1	Grounding Reel	

Section 5.7

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