

PRO BARREL[®]

Operating and Maintenance Instructions



TABLE OF CONTENTS

Section 1

General InformationPage 1

Section 2

Principles of OperationPage 2

Section 3

WarningsPage 2

Section 4

Operating InstructionsPage 3

Section 5

Maintenance InstructionsPage 4

Section 6

Optional Accessories.Page 4

Section 7

Aircraft Rubber Manufacturing, Inc. ProfilePage 5



1 GENERAL INFORMATION

SCOPE:

This manual contains operating and maintenance instructions for the Pro Barrel[®] manufactured by Aircraft Rubber Manufacturing, Inc. (ARM-USA).

DESCRIPTION:

Pro Barrels are cylindrical, flexible liquid storage devices intended for the storage and transport of fuel. When empty, the Pro Barrel[®] is collapsed into a small package easily transported and stored. When filled, it is a convenient and stable cylindrical shape easily transported by helicopter, boat or truck.

Pro Barrels consist of a heavy-duty fuel resistant laminated construction that is extremely robust. An outer top coat provides an environmental barrier against weather and abrasion.

All flanges are industrial grade, heavy duty treated steel with welded lift attachments and threaded connections.

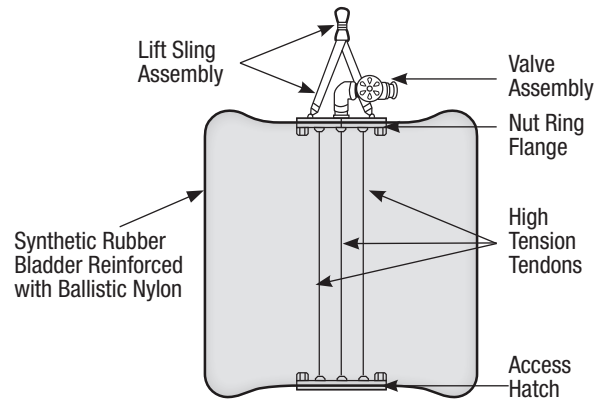


Figure 1. Section view of the Pro Barrel[®] with nut ring flange and access hatch closures, optional valve assembly and lift sling assemblies.

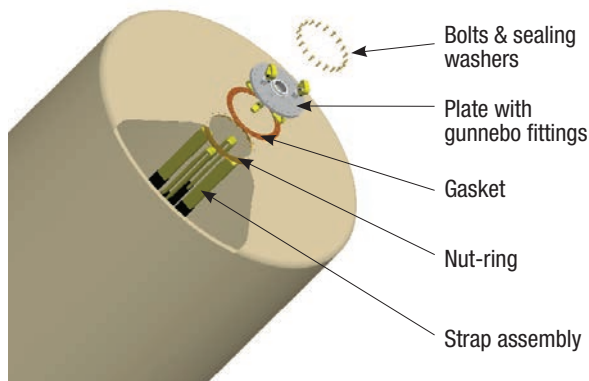


Figure 2. Internal view of Pro Barrel with expanded top plate

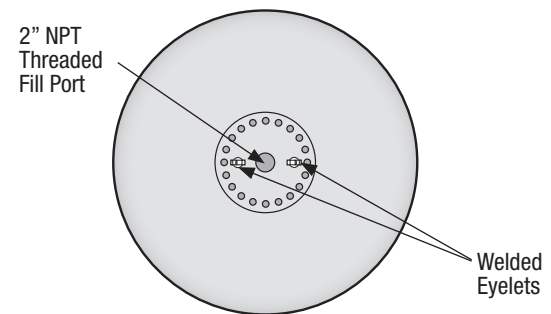


Figure 3. Plan view of the Pro Barrel[®] with heavy duty fill discharge plate. Bottom blank plate is the access hatch for cleanout.

NOMINAL OPERATING TEMP:	OPERATING PRESSURE:	CONNECTION:
-30° F to 125° F (-34° C to 52° C)	5 psi (34.5 Kpa)	2" NPT female pipe thread

PRO BARREL[®] SIZES AND SPECIFICATIONS

CAPACITY	PART NO.	DRY WEIGHT	DIMENSIONS
500 U.S. gal. (2000L)	PRO-B-500	150 lbs (68 kg)	51" dia. x 52" ht. (130 cm x 132 cm)
250 U.S. gal. (1000L)	PRO-B-250	100 lbs (45 kg)	39" dia. x 42" ht. (99 cm x 90 cm)
110 U.S. gal. (440L)	PRO-B-110	85 lbs (38 kg)	30" dia. x 35" ht. (76 cm x 90 cm)
55 U.S. gal. (220L)	PRO-B-055	60 lbs (27 kg)	23" dia. x 35" ht. (59 cm x 90 cm)

2 PRINCIPLES OF OPERATION

The Pro Barrel® is a non-vented collapsible container that is used for the storage, dispensing and transport of liquid fuel. The construction of the Pro Barrel® allows easy filling and draining at remote sites.

The Pro Barrel® is filled with fuel by gravity or pump to the operating pressure of 5 psi.

Once filled, the Pro Barrel® becomes a semi rigid cylinder capable of being transported by air, sea or ground vehicle and by helicopter sling.

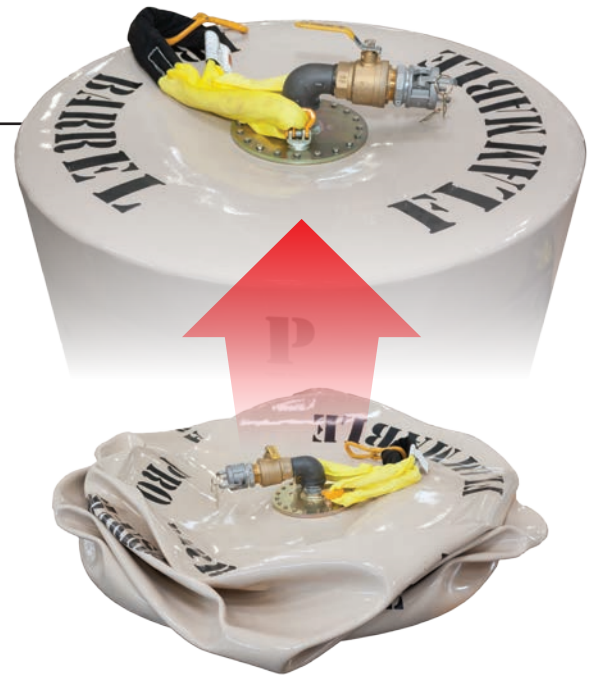


Figure 4. Pro Barrel fully collapsed

3 WARNINGS



Pro Barrels are easily delivered by helicopter to remote locations.

- A. Secure the Pro Barrel® to avoid slipping or rolling during filling and draining operations.
- B. Attach a grounding strap before filling/draining.
- C. Fill only with hydrocarbon fuels (diesel, gasoline, AVGAS, jet fuel).
- D. If spillage occurs, proper cleanup procedures must be instituted immediately.
- E. Wear protective goggles and safety clothing during fill and operations.
- F. Avoid skin contact with fuel. If there is contact, wash immediately with hot soapy water.
- G. Do not allow open flame or smoking within 100 feet of filling or draining operations.
- H. Stand clear by 50'; while the Pro Barrel® is being lifted. The Pro Barrel® is very heavy when filled and normal precautions must be taken as with lifting any heavy object.
- I. If the Pro Barrel® starts to roll, do not stand in its way.
- J. Rough surfaces and sharp objects can seriously damage the Pro Barrel®. Take precaution.
- K. Pro Barrels are not designed to be towed behind a vehicle.
- L. Do not use the Pro Barrel® for drinking water transport.
- M. Any leakage from the Pro Barrel® or fittings must be remedied immediately.
- N. Do not operate the Pro Barrel® in extreme heat or cold. Protect the Pro Barrel® from direct sunlight when possible. See section #1.

4 OPERATING INSTRUCTIONS

A. Insure that all connections and fittings are secure and liquid tight before using the Pro Barrel.

Note: The bolt torque for all 1/4-28 bolt fasteners is 100 inch lbs.

Note: The sealing washers used with the 1/4-28 bolts must be replaced if the bolts are removed. While the bolt may be tightened without changing the sealing washers, if the bolts are removed the washers must be replaced.

B. Attach ground strap.

C. The Pro Barrel® must be fully collapsed before filling can be started. Because the Pro Barrel is non-vented there is no path for air to escape during filling, hence the need to exhaust all of the air. Trapped air will limit the capacity of the filled barrel.

D. The Pro Barrel is easiest to fill if it is collapsed with the fill plate facing up like a pancake. (See Figure 4 on Page 2.)

E. Insure that the collapsed Pro Barrel is on a flat and level surface with no sharp or abrasive objects that can cause damage.

F. Connect the hose from the pump or filling source. Open the valve assembly and begin filling. The filling pressure must be regulated (max 5 psi) to insure the Pro Barrel® is not over pressurized causing catastrophic failure.

G. As the Pro Barrel® fills it will rise vertically into its cylindrical shape, guiding the Pro Barrel® up as it fills may be necessary to keep it vertical. If it is more convenient the Pro Barrel® can be filled on its side but extra care must be taken to insure that the surface under the Pro Barrel® is abrasion free.

H. Once the Pro Barrel® is filled to the operating pressure, turn off the pump, close the valve, disconnect the fill hose and attach dust-cap.

I. The Pro Barrel® is now ready for transport.

J. Do not drag the filled Pro Barrel® as this can cause abrasion.

K. To drain the Pro Barrel®, connect the drain hose to the camloc coupler (make sure the other end of the hose is securely connected to prevent spillage), open the valve and begin draining. Guiding the Pro Barrel® down, so as to create a flat pancake, will help in refueling or packing. This also will help in insuring all of the contents are fully drained.

Figure 6. Pro Barrels are available in four standard sizes. Our 500 gallon barrel weighs only 150 lbs. dry and collapses to 5% of its filled volume for easy transportation and storage.



5 MAINTENANCE INSTRUCTIONS

A. Inspect visually for the following before and after each filling or draining operation.

1. Loose fittings or bolts
2. Cuts
3. Abrasions
4. Worn components

B. Pro Barrel® Maintenance

1. Fittings and flanges can be retightened.
2. Pro Barrel® material is not field repairable; contact the factory for return procedures.

C. Any observed leakage must be repaired before further use.

D. Storage conditions

1. Drain the Pro Barrel® completely and insure that the Pro Barrel® is stored per the conditions listed below.
2. Conditions:
 - i. Temperature: 50 to 80° F (10 to 27° C)
 - ii. Relative Humidity: 20 to 70%
 - iii. Do not store in contact with water.
 - iv. Store out of sunlight.

6 ACCESSORIES



Valve Assembly - P/N GVA200
(Included with all Pro Barrels)



Lift Sling Assembly - P/N PB-LSA
(Included with all Pro Barrels)



Optional 100gpm pumping system - Call for details.

7 AIRCRAFT RUBBER MANUFACTURING, INC. PROFILE



Pro Barrel[®], a division of Aircraft Rubber Manufacturing, Inc., designs and manufactures collapsible drums and barrels for oil, gasoline, jet fuel and diesel products. These cylindrical “bladders” are built for reliability and durability. Aircraft Rubber has manufactured quality liquid containment bladders for over 30 years providing fuel bladders, portable fuel tanks and accessories for everything from long distance boat fuel tanks to race car fuel bladders.

Pro Barrel[®] storage barrels are built utilizing only the highest quality materials available. Each barrel is designed with the most advanced ballistic materials which are fuel and impact resistant. We make every effort to ensure that our products consistently offer the highest levels of protection and performance available.



PRO BARREL[®]

AIRCRAFT RUBBER MANUFACTURING, INC.

1550 NE Kingwood Ave., Redmond OR 97756

Tel: 541-923-6005 Toll Free: 800-433-6524 Fax: 541-923-6600

www.arm-usa.com www.probarrel.com

Email: techinfo@arm-usa.com

