



# RELIANT

## SERVICE PROCEDURE

This Product Service Procedure conveys a list of components and service procedures that reflect the Reliant as it was configured at the time of this writing (2/19/05).

It also contains Supplemental Information intended to assist the Authorized Oceanic BC Service Technician who is servicing a Reliant configured with older components.

**RELIANT INFLATOR****CONTENTS**

REMOVING THE RELIANT FROM THE BC .....	3
UPPER HOUSING DISASSEMBLY AND SERVICE .....	3
LOWER POWER INFLATOR ASSEMBLY INSPECTION AND SERVICE .....	4
UPPER HOUSING REASSEMBLY .....	5
LOWER POWER INFLATOR ASSEMBLY INSTALLATION .....	5
INSTALLING THE RELIANT ON TO THE BC .....	6
PARTS LIST AND EXPLODED VIEW DIAGRAM .....	7
SUPPLEMENTAL INFORMATION .....	8

**OTHER RELATED PROCEDURES**

ADMINISTRATION .....	DOC. 12-2201
BC GENERAL INSPECTION .....	DOC. 12-2235

**SPECIFICATIONS****Torques**

Inflator Hose into First Stage Body                      35 to 40 in-lbs

**TOOLS REQUIRED****Standard Tools**

3/32" Drift Pin Punch  
Magnifier  
Adjustable Wrench  
Pure Air Source

**Specialty Tools**

P/N 08.9500      Retaining Nut Tool  
P/N 40.2302      Christo-Lube MCG111 - 2 oz.  
P/N 40.9520      O-ring Tool Kit

## REMOVING THE RELIANT FROM THE BC

1. Using a Retaining Nut Tool, turn the Nut portion of the UPPER HOUSING ASSEMBLY (4) counter clockwise to loosen and remove the Airway Assembly from the BC Upper Valve Retainer.
2. Remove the Upper BC Gasket. Discard and DO NOT attempt to reuse it.
3. Clean and inspect the Upper Housing Retainer on the BC for any signs of cracking or distortion, especially around the Threads.

**△ NOTE:** If any damage is detected, refer to the procedures titled: Valve Retainer Disassembly and Replacement.

## UPPER HOUSING DISASSEMBLY AND SERVICE

1. Clean and inspect the Nut portion of the UPPER HOUSING ASSEMBLY (4) for any signs of cracking or distortion, especially around the Threads (Fig. 1).
2. Remove the UPPER HOUSING CAP (1) by turning it counter clockwise.
3. Remove the EXHAUST VALVE SPRING (2) and examine it, checking for any signs of distortion or corrosion. Replace with new if found.
4. Remove the GASKET/POPPET ASSEMBLY (3). Discard and DO NOT attempt to reuse it.
5. Clean all parts, and inspect for cracks or defects. Replace with new if found.
6. Clean and examine the condition of the Exhaust Valve Gasket seating surface inside the UPPER HOUSING ASSEMBLY (4) for any nicks, scoring, or other signs of damage (Fig. 2). Replace with new if found.
7. Hold the UPPER HOUSING ASSEMBLY (4) secure with one hand and pull the Lower Power Inflator straight away several times. The Arm on the RAPID EXHAUST CABLE (6) will pivot outward indicating that the CABLE is securely intact and of the correct length (Fig. 3).
8. Inspect the CORRUGATED AIRWAY HOSE (8) for any signs of decay or damage that may result in future leakage. Replace with new if found.

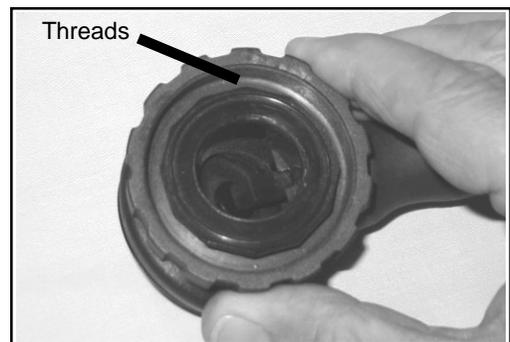


Fig. 1

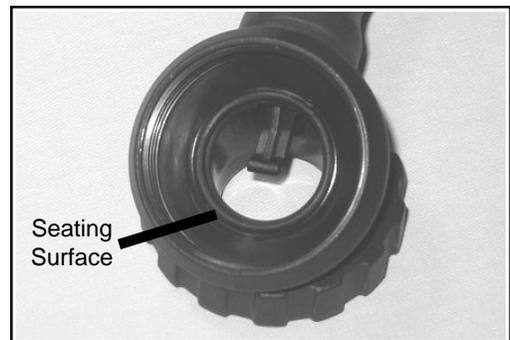


Fig. 2

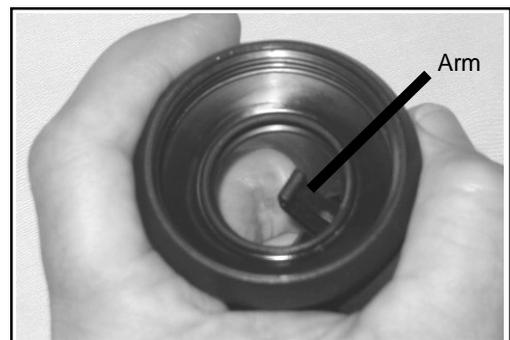


Fig. 3

## RELIANT INFLATOR

9. If necessary to remove the CORRUGATED AIRWAY HOSE (8) and RAPID EXHAUST CABLE with Arm (6) from the UPPER HOUSING ASSEMBLY (4) proceed as follows:

a. Being careful to avoid damaging the CORRUGATED AIRWAY HOSE remove the TIE WRAP (7) from around the HOSE and pull the HOSE off and away from the UPPER HOUSING ASSEMBLY.

b. Using a 3/32" drift pin punch, press or lightly tap out the RAPID EXHAUST PIN (5) that secures the RAPID EXHAUST CABLE with Arm in the UPPER HOUSING ASSEMBLY (Fig. 4).

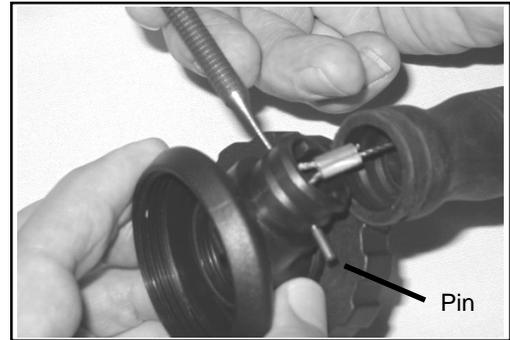


Fig. 4

- △ **NOTE:** To replace the RAPID EXHAUST CABLE or the CORRUGATED AIRWAY HOSE, they must also be disconnected from the LOWER POWER INFLATOR ASSEMBLY (10).

### LOWER POWER INFLATOR ASSEMBLY INSPECTION AND SERVICE

- △ **NOTE:** Oceanic recommends that all Gaskets and accessible O-rings, both static and dynamic, that are removed during Disassembly should be discarded and replaced with new.

1. Being careful to avoid damaging the CORRUGATED AIRWAY HOSE (8) remove the TIE WRAP (7) from around the HOSE and pull the HOSE off and away from the Housing of the LOWER POWER INFLATOR ASSEMBLY (10).
2. Using a 3/32" drift pin punch, press or lightly tap out the INFLATOR CABLE PIN (11) that secures the RAPID EXHAUST CABLE (6) in the LOWER POWER INFLATOR ASSEMBLY (10) (Fig. 5).
3. Clean and thoroughly inspect the LOWER POWER INFLATOR ASSEMBLY (10). DO NOT disassemble any components.

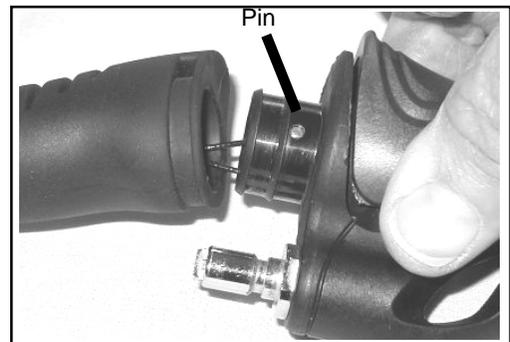


Fig. 5

In good lighting and with the use of a magnifier, examine the inner wall surfaces of the ASSEMBLY, checking for any signs of stress cracks, decay, corrosion, nicks, scratches, or other damage. If any damage is found, DO NOT attempt to reuse it.

4. Ensure that the Buttons operate freely without sticking.

- △ **NOTE:** If it is determined that ANY Component of the LOWER POWER INFLATOR ASSEMBLY requires replacement, the complete ASSEMBLY must be replaced. Component parts are not available for servicing the unit and NO attempt is to be made to disassemble and service it.

## UPPER HOUSING REASSEMBLY

1. To install the RAPID EXHAUST CABLE with Arm (6) and CORRUGATED AIRWAY HOSE (8) on to the UPPER HOUSING BODY ASSEMBLY (4):
  - a. Inspect both ends of the RAPID EXHAUST CABLE with Arm to ensure the Crimps are securely intact. Compare the CABLE and the HOSE side by side to ensure they are of matching lengths.
  - b. Lay the UPPER HOUSING BODY ASSEMBLY flat with the Retaining Nut facing down and insert the RAPID EXHAUST PIN (5) partially into one of the Pin Holes in the side of the Airway Hose Inlet (Fig. 6).
  - c. Holding the RAPID EXHAUST CABLE with Arm by the crimp, insert the Arm into the Inlet opening and insert the PIN through the Loop of the CABLE and into the Pin Hole in the opposite side of the Inlet (Fig. 7).
  - d. Using care not to allow the PIN to fall out, slide the CORRUGATED AIRWAY HOSE over the CABLE and onto the Inlet opening of the UPPER HOUSING BODY ASSEMBLY until the Ridge of the HOUSING is seated securely inside the Recessed Groove of the HOSE.
  - e. Fasten a TIE WRAP (7) around the Groove of the HOSE and tighten with the lock Tab positioned at the side of the HOUSING. Snip off the excess length.
2. Install the GASKET/POPPET ASSEMBLY (3) into the UPPER HOUSING BODY ASSEMBLY (4) with the Gasket resting on the seating Rim in the HOUSING.
3. Set the EXHAUST VALVE SPRING (2) on top of the GASKET/POPPET ASSEMBLY (3), outside the alignment Tabs (Fig. 8).
4. Set the UPPER HOUSING CAP (1) on top of the EXHAUST VALVE SPRING (2), pressing it straight down to compress the SPRING and thread it clockwise until secure. DO NOT over-tighten.

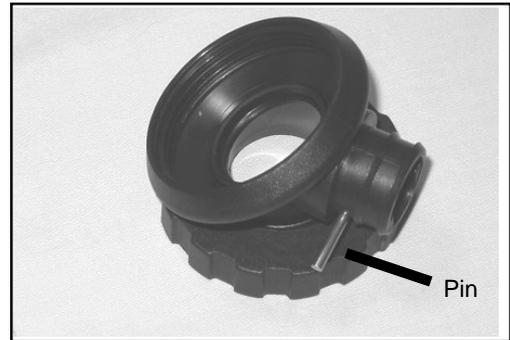


Fig. 6

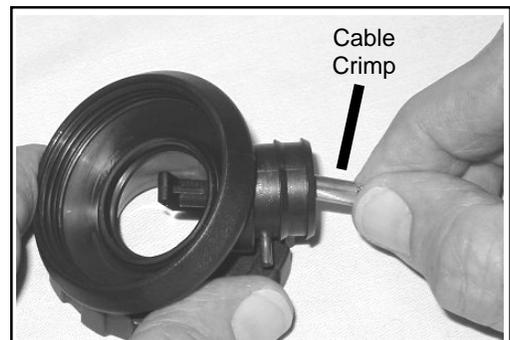


Fig. 7

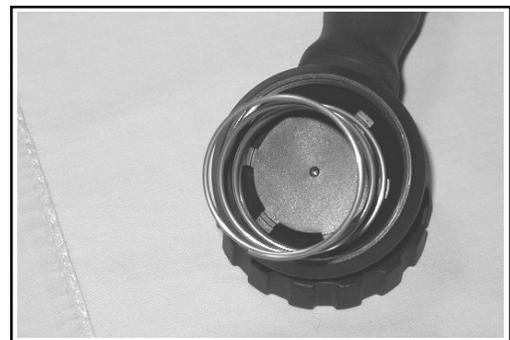


Fig. 8

## LOWER POWER INFLATOR INSTALLATION

**△ NOTE:** Prior to Installation, inspect the ASSEMBLY to ensure that it has been thoroughly cleaned.

1. Attach the Power Inflator to a pure air source, via a Quick Disconnect LP Hose and immerse it in water checking that no air is leaking out around the Intake (Schraeder) Valve.
2. Press the Power Inflator Button several times to ensure that the Intake (Schraeder) Valve operates freely.

## RELIANT INFLATOR

3. Insert the INFLATOR CABLE PIN (11) through one of the Pin Holes and half way into the Barrel of the Corrugated Airway Hose opening of the LOWER POWER INFLATOR ASSEMBLY (10) (Fig. 9).
4. Pull the crimped Loop of the RAPID EXHAUST CABLE (6) to ensure it is straight and not twisted. Place the crimped Loop over the INFLATOR CABLE PIN (11) inside the Barrel of the Corrugated Airway Hose opening of the LOWER POWER INFLATOR ASSEMBLY (10) and push the PIN through the Loop until it is seated flush inside the opposite Wall of the Barrel (Fig. 10).
5. Press the CORRUGATED AIRWAY HOSE (8) onto the Barrel of the LOWER POWER INFLATOR ASSEMBLY (10) ensuring that it is properly oriented (Fig. 11).
6. Fasten a TIE WRAP (7) around the Groove of the HOSE and tighten with the lock Tab positioned at the side of the HOUSING. Snip off the excess length.



Fig. 9



Fig. 10

## INSTALLING THE RELIANT ON TO THE BC

**⚠ WARNING:** Certain Oceanic BCs do not have a lower over-pressure relief valve and rely on the function of one that is included in the Oceanic integrated airway assembly that was originally sold with the BC. DO NOT attempt to attach a non-Oceanic airway to the BC. Doing so may result in permanent, unreparable damage to the bladder, and render the BC unsafe.

1. Place the Upper Housing Gasket inside the Upper Retainer of the BC.
2. Holding the Reliant Inflator in the desired position, thread the Retaining Nut of the UPPER HOUSING BODY ASSEMBLY (4) clockwise onto the BC's Upper Retainer.
3. Using a Retaining Nut Tool, tighten the Retaining Nut until completely secure.

**⚠ CAUTION:** DO NOT overtighten.

4. Attach the Power Inflator to a pure air source, via a Quick Disconnect LP Hose, and perform the General Air Leak Inspection described in the BC General Inspection section of the Service Procedures to ensure that leakage is not present and the Power Inflation Valve is functioning properly.

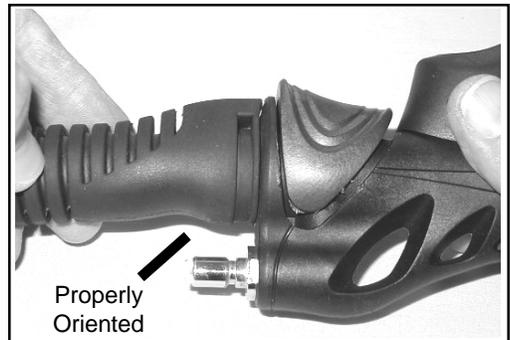


Fig. 11

**RELIANT INFLATOR**

Dia. No.	Part #	Description
1	819719	CAP, UPPER HOUSING
2	819041	SPRING, EXHAUST VALVE
3	<b>819040.1</b>	<b>ASSEMBLY, GASKET/POPPET</b>
4	819039	ASSEMBLY, UPPER HOUSING BODY
5	819014	PIN, RAPID EXHAUST
6	819002.14	CABLE (with Arm), 14" RAPID EXHAUST
	819002.16	CABLE (with Arm), 16" RAPID EXHAUST
	819002.18	CABLE (with Arm), 18" RAPID EXHAUST
	819002.20	CABLE (with Arm), 20" RAPID EXHAUST
7	<b>84408</b>	<b>WRAP, TIE (2)</b>
8	819740.14	HOSE, 14" CORRUGATED AIRWAY
	819740.16	HOSE, 16" CORRUGATED AIRWAY
	819740.18	HOSE, 18" CORRUGATED AIRWAY
	819740.20	HOSE, 20" CORRUGATED AIRWAY
9	819638	CLIP, AIRWAY HOSE
10	<b>08.1510.29</b>	<b>ASSEMBLY, LOWER POWER INFLATOR</b>
11	<b>814948</b>	<b>PIN, INFLATOR CABLE</b>
12	83.903	O-RING, QD HOSE
13	810257.26	HOSE, 26" QD
	810257.30	HOSE, 30" QD
	810257.34	HOSE, 34" QD

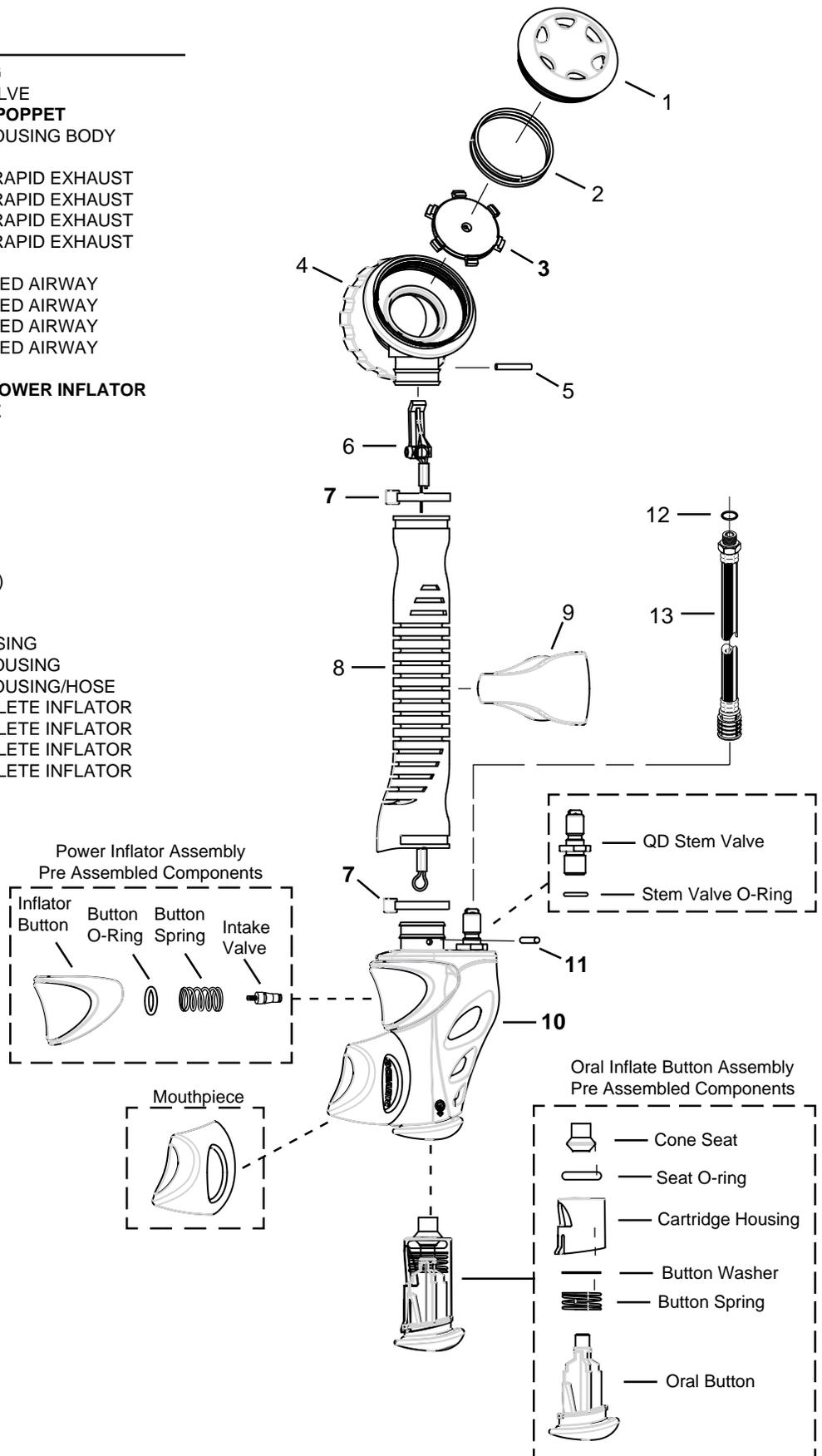
**SERVICE PARTS KIT**

n/s 08.4030 KIT, SERVICE PARTS  
(Includes all **Bold** items.)

**ITEMS NOT SHOWN**

n/s	819045	GASKET, UPPER HOUSING
n/s	08.19729	ASSEMBLY, UPPER HOUSING
n/s	08.19739	ASSEMBLY, UPPER HOUSING/HOSE
n/s	08.7034.14	ASSEMBLY, 14" COMPLETE INFLATOR
n/s	08.7034.16	ASSEMBLY, 16" COMPLETE INFLATOR
n/s	08.7034.18	ASSEMBLY, 18" COMPLETE INFLATOR
n/s	08.7034.20	ASSEMBLY, 20" COMPLETE INFLATOR

**NOTE**  
Pre Assembled Components are shown at the right for reference only, the Parts are not available for service of the Reliant.



## RELIANT INFLATOR

## SUPPLEMENTAL INFORMATION

*Due to design enhancements that have been made since the Reliant was originally released, the unit being serviced may not have the same components previously described in this Service Procedure.*

*The intent of this Supplemental Information is to assist the Oceanic BC Service Technician with identification of previous component parts and provide guidelines for their reuse or replacement.*

*The exploded view diagram on page 10 can be used as a reference for older units.*

**Dia. Part No. 10 - LOWER POWER INFLATOR ASSEMBLY**

current p/n- 08.1510.29

- Identified by its smooth Power Inflator Button.
- Must be installed as a complete Assembly.

older p/n - 08.1510.29 (supplier PN 19625)

- Identified by having a Power inflator Button with a rubber coating.
- Replacement with the newer part is required.



LOWER POWER INFLATOR  
ASSEMBLY - Older version  
(Rubber covered Button)



LOWER POWER INFLATOR  
ASSEMBLY - Current version  
(Smooth/Hard Button)