



## authorized service centers – service information

This service information is provided as a courtesy. Your product should be serviced by a knowledgeable and experienced diving equipment technician. Apollo does not warranty any damage or malfunction caused by improper / unauthorized service or use. We strongly recommend that you send your product for service and repair to one of the authorized centers noted below.

We offer various schematics online. In some instances the schematics have been updated and an item number may differ from those noted in this information. The information provided here refers to schematics found in the Apollo Service Manual (Volume 5).

### **Authorized Service Centers**

Tom Kepler – Midwest Scuba Center (call first)  
4306 W. 96<sup>th</sup> Street Indianapolis, IN 46268  
Ph (317) 872-2522 E-mail [mscdiver@aol.com](mailto:mscdiver@aol.com)  
Computer Battery Change, Regulators, & BC

Ernie Bourne – Pacific Offshore Divers Inc. (call first)  
1188 Branham Lane San Jose, CA 95118  
Ph (408) 265-3483 E-mail [podi@pacbell.net](mailto:podi@pacbell.net)  
AV-1 u/w vehicles, Regulators, & BC

Service Center – Underwater Sports, Inc. (call first)  
10545 Aurora Avenue N. Seattle, WA 98133  
Ph (800) 252-7177 E-mail [uws@underwatersports.com](mailto:uws@underwatersports.com)  
Drysuits, Regulators, & BC



regulator service periods

**recommended service periods for regulators**

It has come to our attention that a number of technicians do not know or do not adhere to the time frames recommended for having regulators serviced.

The use of a regulator falls into two basic categories:

- recreational use:** a regulator used primarily by the sport diver who dives mostly on the weekends, periodically during the week and uses the regulator for extended periods only on trips.
- commercial use:** a regulator used by an instructor, a commercial diver, a regulator used in a dive school or for hire situation.

The following service periods are recommended by Apollo:

Service every 12 months after normal use for recreational diving or before use after prolonged periods of storage.

Service every 6 months for commercial use or after using in contaminated waters.

**note:** Service means carrying out the procedures laid down and recommended by Apollo at technical workshops and seminars.



## regulator washing methods

### routine washing after use

The following procedures should be recommended to your customers for washing their equipment after use and also for washing rental equipment after use.

1. After completing the check that the dust cap is dry before fitting to the regulator (blow dry using cylinder air if necessary). Fit to regulator.
2. Before carrying out the washing procedure make sure the dust cap is fitted, that it is fitted the correct way up.
3. **DO NOT** depress the purge button during the washing procedure.
4. After **EVERY** dive the regulator should be soaked in fresh water (preferably warm). Allow enough time for any salt deposits to soften.
5. After the salt has softened it must be flushed away by rinsing under running water (again warm water works better than cold). To be effective direct the water into the ambient sensing chamber of the first stage as well as washing externally. The second stage should be flushed both internally and externally. Do not depress the purge button. If the button is accidentally depressed during washing; the regulator must be fitted to a cylinder, pressurized and purged until all moisture is blown from the regulator.
6. Shake the 1st and 2nd stages to help remove any rinse water from inside (pressurizing the regulator and purging with air will be more efficient).
7. Store your regulator in a dry area away from damp, fuels, paint and thinners and remember cockroaches eat silicone mouthpieces, exhaust valves, and diaphragms.

**CARRYING OUT THE ABOVE PROCEDURES WILL PROVIDE PEAK PERFORMANCE FROM ONE SERVICE PERIOD TO THE NEXT.**



a-101 1st stage

For a list of features and a description of the a-101 refer to page 3.

**Factory intermediate pressure: 145 psi +/- 7 psi**

The following items should be highlighted in your manual page 37.

**Items requiring mandatory annual replacement\*\*:**

<u>key #</u>	<u>description</u>
20	filter
23	o-ring (balance housing)
25	hp seat

**Items requiring careful inspection for serviceability before refitting:**

17	hp diaphragm
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***special notes:***

All parts must pass a visual inspection for serviceability before refitting.

Adjusting screw (#11) and guide nut (#12) have a left hand thread.

Check to ensure that chamber spacer (#21) is fitted with the two support legs facing the filter.

\*\*Apollo includes the following items in the a-101 service kit (#983-10-10-001): p. 37 key #'s 20,23, & 25.



a-105 1st stage

For a list of features and a description of the a-105 refer to page 4.

**Factory intermediate pressure: 145 psi +/- 7 psi**

The following items should be highlighted in your manual page 38.

**Items requiring mandatory annual replacement\*\*:**

<u>key #</u>	<u>description</u>
09	activated charcoal filter
11	moisturizing pad
30	filter
35	hp seat
33	o-ring (balance housing)

**Items requiring careful inspection for serviceability before refitting:**

13	o-ring (for moisturizer tube) ensure the o-ring is glued to the tube.
27	hp diaphragm

***special notes:***

All parts must pass a visual inspection for serviceability before refitting.

Adjusting screw (#21) and guide nut (#22) have a left hand thread.

Check to ensure that chamber spacer (#31) is fitted with the two support legs facing the filter.

\*\*Apollo includes the following items in the a-105 service kit (#983-15-10-001): p. 38 key #'s 9, 11, 30, 33, & 35.



a-107 1st stage

For a list of features and a description of the a-107 refer to page 4.

**Factory intermediate pressure: 145 psi +/- 7 psi**

The following items should be highlighted in your manual page 39.

**Items requiring mandatory annual replacement\*\*:**

<u>key #</u>	<u>description</u>
12	activated charcoal filter
14	moisturizing pad
33	filter
38	hp seat
36	o-ring (balance housing)

**Items requiring careful inspection for serviceability before refitting:**

30	hp diaphragm
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***special notes:***

All parts must pass a visual inspection for serviceability before refitting.

Adjusting screw (#24) and guide nut (#25) have a left hand thread.

Check to ensure that chamber spacer (#34) is fitted with the two support legs facing the filter.

\*\*Apollo includes the following items in the a-107 service kit (#983-17-10-001): p. 39 key #'s 12, 14, 33, 36, & 38.



a-102 hp module

**problem**

Some difficulty is being experienced by some technicians with disassembly of the HP module in the a-102 regulator. Refer to the drawing on page 40 or 41 of the service manual volume 5.

**causes**

Although the hp module is not over tightened during the assembly at manufacture, after a period of use it is possible for the module to experience thread lock. Supply pressure inside the module exerts a considerable force trying to push the module from the 1st stage body. In some cases this causes the thread to lock up.

If salt water is allowed to enter the 1st stage through the filter this can find its way into the hp module threads causing thread lock due to salt build up.

**remedy**

One remedy is very simple, ensure you use the correct size tool to remove the module, a standard screw driver will not engage the slot in the module without causing damage to the slot. A number of units have been returned to Apollo with this slot badly damaged.

If you are using the correct tool and the module is still too tight to move, the following procedure can be used. After disassembling the 1st stage to the point where the module is the next part to be removed and the module has thread lock, take a nylon drift 1/2" diameter x 5" long, place the 1st stage on a solid surface and position the nylon drift on top of the hp module. Then using a small engineers hammer firmly tap the module. This has the effect of breaking the thread lock and the module can now be removed using normal force.

**CAUTION: DO NOT USE** a metal drift, use only nylon or a hard wooden dowel, the module is manufactured from brass which is quite soft so using a metal drift can damage the housing.



a-102 1st stage

For a list of features and a description of the a-102 refer to page 3.

**Factory intermediate pressure: 145 psi +/- 7 psi**

The following items should be highlighted in your manual pages 40 & 41.

**Items requiring mandatory annual replacement\*\*:**

<u>key #</u>	<u>description</u>
11	filter
26	o-ring (balance housing)
28	hp seat

**Items requiring careful inspection for serviceability before refitting:**

20	hp diaphragm
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***special notes:***

All parts must pass a visual inspection for serviceability before refitting.

Adjusting screw (#14) and guide nut (#15) have a left hand thread.

\*\*Apollo includes the following items in the a-102 service kit (#983-10-10-001): pp. 40 & 41 key #'s 11, 26, & 28.





prestige "standard" 2nd stage

For a list of features and a description of the prestige 2nd stage refer to pages 2 & 5.

The following items should be highlighted in your manual page 42.

**Items requiring mandatory annual replacement\*\*:**

<u>key #</u>	<u>description</u>
18	valve seat

**Items requiring careful inspection for serviceability before refitting:**

15	valve cone (check tip for damage)
14	demand lever (distortion)
13	diaphragm
35	exhaust valve

**special notes:**

All parts must pass a visual inspection for serviceability before refitting.

It is suggested to check the diaphragm cover lock and if the lock is the early type screw with plastic lug ensure the thread is not stripped. It is suggested although not mandatory, that the screw assembly be replaced with the new metal lock (#9).

The adjusting knob (#23) should be turned counter- clockwise (all the way out) until it stops and then turned back clockwise 1 turn before commencing to adjust the orifice.

When dismantling shaft (#31) from nut (#28) the shaft has a left hand thread. This thread should be well lubricated during reassemble to maintain free movement between service periods.

Check to ensure that a liberal quantity of silicone is applied to the threads of the adjusting shaft (#31) during reassemble.

\*\*Apollo includes the following items in the prestige standard 2nd stage service kit (#983-21-00-001):p. 42 key #'s 3, 4, 18, 20, & 27.



prestige balanced / ex 2nd stage

The following items should be highlighted in your manual page 43.

Items requiring mandatory annual replacement\*\*:

<u>key #</u>	<u>description</u>
21	2 x o-rings - valve seat carrier (on end of stem)

Items requiring careful inspection for serviceability before refitting:

20	LP seat (in end of stem)
17	valve cone (check tip for damage)
18	o-ring (valve cone)
14	demand lever (distortion)
13	diaphragm
37	exhaust valve

**special notes:**

All parts must pass a visual inspection for serviceability before refitting.

The adjustable orifice has changed on this unit compared to the earlier prestige 2nd stage. An in-line adjusting tool is now required to complete the tuning operation.

The balance housing is threaded onto the adjusting shaft, this is difficult to remove although it will screw together easily for replacement. Do not remove the balance cylinder unless it is damaged, this can be safely acid cleaned while in position.

The adjusting knob (#23) should be turned counter- clockwise (all the way out) until it stops and then turned back clockwise 1/2 to 1 turn before commencing to adjust the orifice.

When dismantling the adjusting shaft (#33) from adjusting nut (#30) the shaft has a left hand thread. This thread should be well lubricated during reassemble to maintain free movement between service periods.

The latest 2nd stage housing has two design changes:

1. The diaphragm cover lock is now an integrated part of the cover, it is not removable. To remove the front cover depress the lock with a jewelers screw driver.
2. The exhaust cover is removable via a bayonet fitting, depress the lock and turn a quarter of a turn to remove the cover. This cover is now interchangeable with the ecodiver exhaust covers.

\*\*Apollo includes the following items in the prestige balanced 2nd stage service kit (#983-21-10-001):p. 43 key #'s 3, 4,16, 21,& 28.



ecodiver 2nd stage

The following items should be highlighted in your manual page 44.

Items requiring mandatory annual replacement\*\*:

<u>key #</u>	<u>description</u>
22	2 x o-rings - valve seat carrier (on end of stem)

Items requiring careful inspection for serviceability before refitting:

21	LP seat (in end of stem)
23	valve cone (check tip for damage)
24	o-ring (valve cone)
13	demand lever (distortion)
12	diaphragm
25	exhaust valve

**special notes:**

All parts must pass a visual inspection for serviceability before refitting.

The adjustable orifice has changed on this unit compared to the earlier prestige 2nd stage. An in-line adjusting tool is now required to complete the tuning operation.

Assembly and tuning procedures are located on the back of this page.

\*\*Apollo includes the following items in the ecodiver balanced 2nd stage service kit (#983-22-10-001):  
p. 44 key #'s 3, 4, 15, 17, & 22.