

**GAMMA 2 SECOND STAGE**

<b>TROUBLE SHOOTING</b>		
<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>TREATMENT</b>
* <b>Freeflow or leakage present.</b>	<ol style="list-style-type: none"> <li>1. LEVER ARM (17) bent.</li> <li>2. Excessive intermediate pressure.</li> <li>3. Damaged or worn POPPET SEAT (14).</li> <li>4. Damaged MOLDED ORIFICE (11).</li> <li>5. NYLON LOCK NUT (20) overtightened onto POPPET (15) shaft.</li> <li>6. WASHER (18) bent or distorted.</li> <li>7. MOLDED ORIFICE (11) incorrectly adjusted.</li> <li>8. POPPET SPRING (16) worn or weakened.</li> <li>9. INLET COUPLING (12) not sufficiently tightened into HOUSING (4) Inlet Tube.</li> <li>10. Trapped debris.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with new.</li> <li>2. Refer to First Stage Troubleshooting Chart.</li> <li>3. Replace with new.</li> <li>4. Replace with new.</li> <li>5. Replace with new and readjust. (Refer to tuning section.)</li> <li>6. Replace WASHER (18), SPACER (19), and LOCK NUT (20) with new.</li> <li>7. Turn in clockwise to adjust. (Refer to tuning section.)</li> <li>8. Replace with new.</li> <li>9. Follow correct procedure given in Reassembly Section to tighten.</li> <li>10. Remove and clean.</li> </ol>
* <b>Excessive inhalation resistance.</b>	<ol style="list-style-type: none"> <li>1. LOCK NUT (20) overtightened onto POPPET (15) shaft, causing excessive POPPET SPRING (16) tension.</li> <li>2. LOCK NUT (20) insufficiently tightened onto POPPET (15) shaft, causing LEVER ARM (17) slack.</li> <li>3. LEVER ARM (17) bent.</li> <li>4. MOLDED ORIFICE (11) incorrectly adjusted.</li> <li>5. Insufficient intermediate pressure from First Stage.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with new and readjust. (Refer to tuning section.)</li> <li>2. Tighten to correct Spring load and Lever height. (Refer to tuning section.)</li> <li>3. Replace with new.</li> <li>4. Adjust to correct contact. (Refer to tuning.)</li> <li>5. Refer to First Stage Troubleshooting Chart.</li> </ol>
* <b>Rattle heard inside Second Stage.</b>	<ol style="list-style-type: none"> <li>1. Gravel or sand trapped inside HOUSING ASSEMBLY (4).</li> <li>2. LEVER ARM (17) slack present.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove and clean.</li> <li>2. Tighten LOCK NUT (20) onto POPPET (15) shaft. (Refer to tuning section.)</li> </ol>
* <b>Little or no airflow when Purge Button is depressed.</b>	<ol style="list-style-type: none"> <li>1. FRONT COVER (2) not sufficiently tightened into HOUSING (4).</li> <li>2. LEVER ARM (12) slack present.</li> <li>3. MOLDED ORIFICE (11) incorrectly adjusted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten COVER RING (1) until secure.</li> <li>2. Tighten LOCK NUT (20) onto POPPET (15) shaft. (Refer to tuning section.)</li> <li>3. Adjust MOLDED ORIFICE (11) to correct contact. (Refer to tuning section.)</li> </ol>
* <b>Water entering Second Stage.</b>	<ol style="list-style-type: none"> <li>1. Tear in MOUTHPIECE (8).</li> <li>2. EXHAUST VALVE (6) distorted or damaged.</li> <li>3. DIAPHRAGM (3) distorted or damaged.</li> <li>4. Debris trapped beneath EXHAUST VALVE (6).</li> <li>5. FRONT COVER (2) insufficiently tightened onto HOUSING (4).</li> <li>6. Cracked or damaged HOUSING (4).</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with new.</li> <li>2. Replace with new.</li> <li>3. Replace with new.</li> <li>4. Remove and clean.</li> <li>5. Tighten until secure and properly aligned.</li> <li>6. Replace with new.</li> </ol>

## DISASSEMBLY PROCEDURE

**△ NOTE:** Be sure to perform the steps outlined in the Initial Inspection Procedures (Doc. 12-2202) prior to disassembling the Regulator. Review the Troubleshooting Section to gain a better idea of which internal parts may be worn, and to better advise your customer of the service that is needed.

1. Snip the plastic TIE WRAP (7) that holds the MOUTHPIECE (8), and remove the MOUTHPIECE. Inspect the condition of the MOUTHPIECE to ensure that it is supple and free of any tears or corrosion. Discard if found.
2. Remove the Hose from the Second Stage, using an 11/16" open end wrench, while holding the hex portion of the INLET COUPLING (12) secure with a 3/4" open end wrench.
3. Remove the COVER RING (1) using a universal Front Cover tool if necessary, and remove the FRONT COVER (2) to expose the DIAPHRAGM (3).
4. Grasp the DIAPHRAGM (3) by the raised edges of the center, and lift with a slight upward twist to remove. Inspect the DIAPHRAGM to ensure it is supple and free of any tears, corrosion, or other distortion. Discard if found.
5. Depress and hold the LEVER ARM (17) to remove the INLET COUPLING (12) in a counter clockwise direction, using a 3/4" open end wrench (Fig. 1).
6. Remove the COUPLING O-RING (13) from the INLET COUPLING (12) and inspect for any signs of decay. Discard if found.
7. Using a narrow slotted blade screwdriver, remove the MOLDED ORIFICE (11) by turning it counter clockwise inside the INLET COUPLING (12). When it has disengaged completely from the threads, press it out with the use of a cotton swab (Fig. 2).

Use caution to avoid nicking or scratching the delicate knife edge of the ORIFICE as this is done.

Remove and discard the ORIFICE O-RING (10). Inspect the ORIFICE carefully with the use of a magnifier to ensure that it is perfectly free of any scoring or nicks. If found, discard and DO NOT attempt to reuse.

8. Using a Poppet installation tool, push the POPPET (15) inward in the Inlet Tube of the HOUSING (4), compressing the POPPET SPRING (16), and carefully remove the LEVER ARM (17) (Fig. 3).



Fig. 1



Fig. 2



Fig. 3

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**△ NOTE:** Unless leakage has been detected, or suspected, from the area around the HOUSING PLUG (23), it does not have to be removed as described by steps 9 and 10.

9. Using a small blade screwdriver, remove the HOUSING PLUG RETAINING RING (21) by carefully prying the edges inward (Fig. 4). Discard the RING and DO NOT attempt to reuse.
10. While squeezing the Inner Tabs (Fig. 4a) with your fingers, remove the HOUSING PLUG (23) by pulling it out and away from the HOUSING (4). Inspect the HOUSING PLUG O-RING (22) for any signs of decay. Discard if found and DO NOT attempt to reuse.
11. Remove the POPPET (15), POPPET SPRING (16), WASHER (18), SPACER (19), and LOCK NUT (20) by holding the LOCK NUT secure with a 1/4" open end wrench and turning the POPPET counter clockwise with the Poppet installation tool. To avoid a sudden ejection as they are disengaged, continuously apply a slight amount of inward pressure while turning the POPPET out of the LOCK NUT.

Alternate Method of Removal: If the HOUSING PLUG (23) was removed, hold the POPPET secure with the Poppet installation tool and turn the LOCK NUT counterclockwise using a 1/4" nut driver inserted through the Housing Plug opening of the HOUSING (4) (Fig. 5).

12. Examine the SPACER (19) for deterioration. Discard if found. Discard the LOCK NUT (20) and WASHER (18), and DO NOT attempt to reuse.
13. Examine the LEVER ARM (17) and compare with new to ensure that it is not bent or distorted in any way. Discard if found.
14. Examine the POPPET SPRING (16) with a magnifier and compare with new to ensure correct tension and length. Discard if found to be weakened or corroded.
15. Remove the POPPET SEAT (14) from the POPPET (15) with the use of a dental pick. Discard, and DO NOT attempt to reuse.
16. Using the flat end of a brass o-ring tool or a thin plastic probe, carefully lift the retaining tab slats of the EXHAUST COVER (5) from the retaining tabs located on the base of the HOUSING (4) (Fig. 6). Once the EXHAUST COVER is disengaged from the retaining tabs, push straight down on the exhaust porting of the EXHAUST COVER to remove it from the HOUSING.
17. Inspect the overall condition of the HOUSING (4), and the EXHAUST COVER (5) to ensure they are free of any stress cracks or other distortions. Ensure that all threading on the HOUSING is in good condition. Discard either if any distortion or damage is found.



Fig. 4



Fig. 5



Fig. 6

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18. Using a soft probe, inspect the condition of the EXHAUST VALVE (6) to ensure that it is supple and free of any tears or corrosion, and that it seals completely around the seating surface of the HOUSING (4).

**△ NOTE: If the EXHAUST VALVE (6) is in good condition, it is not necessary to remove it. The HOUSING (4) may be cleaned with it attached.**

19. If the EXHAUST VALVE (6) requires replacement, it may be removed by grasping it at the flange and pulling it straight out, snipping the retainer Stem if necessary. Discard.

20. Inspect the VENTURI SWITCH (24) for smooth even operation, ensuring there is no resistance throughout its range of movement. Inspect for signs of debris trapped within the VENTURI SWITCH Mechanism, and ensure there is no corrosion or rust on the VENTURI SWITCH RETAINING RING (26).

**△ NOTE: If the Mechanism of the VENTURI SWITCH (24) is in good condition, it is not necessary to remove it. The HOUSING (4) may be cleaned with it attached.**

21. If disassembly of the VENTURI SWITCH Assembly is needed, proceed by closely adhering to the following steps:

A. Remove the SWITCH RETAINING RING (26) by pushing on the exposed tip of the RETAINING RING with a brass O-ring tool until the RETAINING RING is no longer seated in the groove on the VENTURI SWITCH (24) (Fig. 7).

B. Place the end of the brass O-ring tool through the Mouthpiece opening in the HOUSING (4), and into the space between the RETAINING RING (26) and the VENTURI SWITCH (24). Using caution not to damage the HOUSING, slowly pull the RETAINING RING away from the VENTURI SWITCH to remove (Fig. 8).

C. Grasp the VENTURI SWITCH (24) by the Adjustment Tab and pull it straight up and out of the HOUSING (4). Remove and discard the VENTURI SWITCH O-RING (25), and DO NOT reuse.

D. Closely examine the VENTURI SWITCH (24) and the VENTURI SWITCH RETAINING RING (26) for signs of distortion, cracks, corrosion, rust, or other damage. Discard if found.

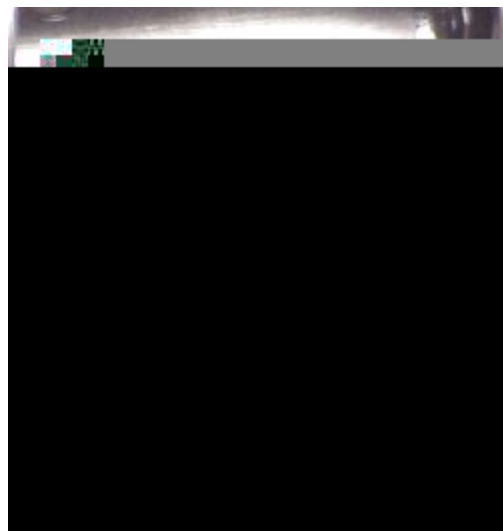


Fig. 7



Fig. 8



## REASSEMBLY PROCEDURE

**NOTE:** Prior to reassembly, it is necessary to inspect all parts, both new and those that are being reused. Check to ensure that o-rings are clean and supple, and that every part and component has been thoroughly cleaned and dried.

**WARNING:** Use only genuine Oceanic parts, subassemblies, and components whenever assembling Oceanic products. DO NOT attempt to substitute an Oceanic part with another manufacturer's, regardless of any similarity in shape, size, or appearance. Doing so may render the product unsafe, and could result in serious injury or death of the user.

1. Replace the EXHAUST VALVE (6), if removed, into the HOUSING (4) by gently pulling the Retainer Stem through the HOUSING until the Retaining Flange is inside the HOUSING and properly seated.
2. Replace the EXHAUST COVER (5) onto the Exhaust Tee portion of the HOUSING (4) by holding the COVER at a slight angle to the HOUSING with the Bottom raised and mating the Top of it with the Hinge Tabs on the HOUSING. Ensure that the Top is aligned, then press the COVER in toward the HOUSING until it snaps into place. (Fig. 9)
3. Replace the VENTURI SWITCH ASSEMBLY, if removed, by closely adhering to the following steps:

A. Lightly lubricate and install the VENTURI SWITCH O-RING (25) onto the VENTURI SWITCH (24), ensuring the O-RING is properly seated in the Groove.

B. Holding the ASSEMBLY by the Adjustment Tab, lower the VENTURI SWITCH (24) into the HOUSING (4), ensuring that the Adjustment Stop Post is seated in the Adjustment Groove located on the HOUSING. Ensure the Retaining Ring Groove on the VENTURI SWITCH is visible when looking into the HOUSING through the Mouthpiece opening.

C. Load the SWITCH RETAINING RING (26) into the Retaining Ring tool so that the rounded side of the RETAINING RING is against the Cradle of the tool, and the flat side is facing up and out (Fig. 10).

D. Insert the Retaining Ring Tool with the RETAINING RING (26) into the HOUSING (4) through the Mouthpiece opening. Press the RETAINING RING into the VENTURI SWITCH (24) Groove until completely seated, ensuring that the flat side of the RETAINING RING is against the HOUSING. Remove the tool (Fig. 11).



Fig. 9

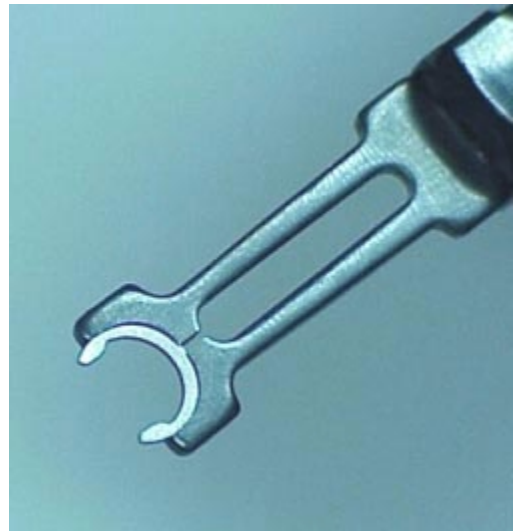


Fig. 10

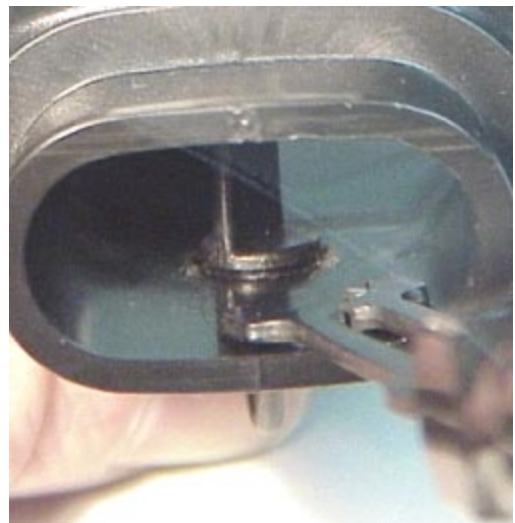


Fig. 11

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E. Turn the VENTURI SWITCH (24) back and forth through its complete range of motion ensuring smooth movement without any restriction. Verify that the SWITCH RETAINING RING (26) is completely seated into the Groove on the VENTURI SWITCH, and does not rotate.

4. Place a new POPPET SEAT (14) into the POPPET (15), with the side that is perfectly smooth facing out. Ensure that it is completely seated, flush with the Rim of the POPPET. DO NOT use adhesive.
5. Apply a light film of lubricant to each end of the POPPET SPRING (16) and place it onto the POPPET (15). Fit the POPPET into the Pronged End of the Poppet installation tool and insert the POPPET Shaft completely through the Inlet Tube of the HOUSING (4) compressing the SPRING until the threaded portion of the Shaft is completely visible inside the HOUSING. Hold in position by grasping the tool with the fingers and the outer rim of the HOUSING with the thumb.
6. Place the WASHER (18) over the Threads of the POPPET (15) and onto the Shaft. Place the SPACER (19) onto the POPPET Shaft. Turn the LOCK NUT (20) clockwise onto the POPPET Threads with your finger tips until threading is started (Fig. 12).
7. Using a 1/4" open end wrench to hold the LOCK NUT (20) secure, turn the POPPET (15) clockwise with the Poppet installation tool until 3 threads are showing beyond the outer surface of the LOCK NUT (Fig. 12 - insert).

Alternate Method of Tightening: If the HOUSING PLUG (23) was removed, continue to compress the SPRING (16) with the Poppet installation tool, and insert a 1/4" nut driver through the open Port of the HOUSING (4) and turn the LOCK NUT further onto the POPPET until 3 threads are showing beyond the outer surface of the LOCK NUT (Fig. 12 - insert). Remove the tools.



**CAUTION:** It is very important that a minimum of 2-3 threads of the POPPET (15) Shaft are adjusted outside the LOCK NUT (20). The LEVER ARM (17) may otherwise become caught on the end of the POPPET Shaft, resulting in an uncontrolled free flow.

8. If the HOUSING PLUG (23) was removed, lubricate and install the O-RING (22) onto the PLUG and press the PLUG into the open Port of the HOUSING (4) until the 3 Retaining Tabs snap into place on the inner rim of the Port.
9. Place a new HOUSING PLUG RETAINING RING (21), curved side first, onto the Shaft of the HOUSING PLUG (23) (Fig. 13) and slide it down until it is completely and evenly seated against the inner wall of the HOUSING (4).

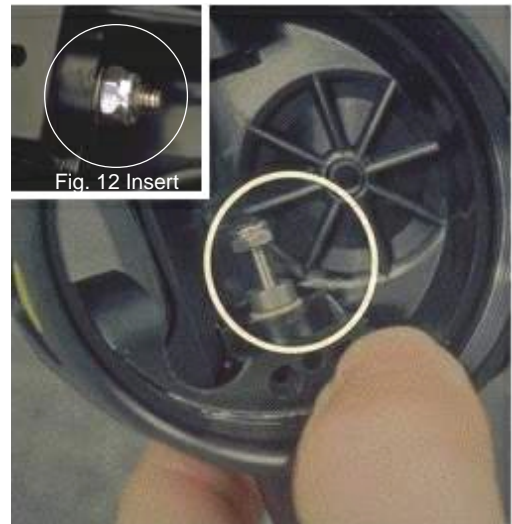


Fig. 12

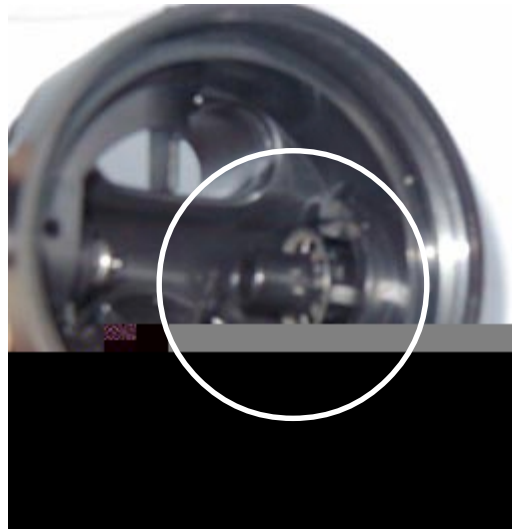


Fig. 13

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10. Using a Poppet installation tool, push the POPPET (15) into the HOUSING (4) to expose the WASHER (18) and SPACER (19) inside the HOUSING. Place the Forks of the LEVER ARM (17) over the POPPET shaft between the WASHER and the SPACER. Relax the POPPET and watch to ensure that the LEVER ARM stands upright.
11. Lubricate and install the INLET COUPLING O-RING (13) onto the INLET COUPLING (12). Install the INLET COUPLING into the Inlet Tube of the HOUSING (4) with the smaller opening facing in. Tighten clockwise with a 3/4" open end wrench **to a torque of 110 in/lbs.**
12. Lubricate and install the ORIFICE O-RING (10) onto the MOLDED ORIFICE (11). Lubricate the threads of the ORIFICE with a very thin film of lubricant and insert the ORIFICE into the INLET COUPLING (12) with the knife edge facing in (Fig. 14).

**CAUTION:** Be careful to protect the delicate knife edge as this is done.

**NOTE:** For best sensitivity of touch during Step #12, place your forefinger gently on the LOCK NUT (20) while slowly turning the MOLDED ORIFICE (11). As soon as contact is made, you will feel the LOCK NUT begin to turn. Hold the screwdriver by the shaft rather than the handle.

13. Using a narrow shafted, slotted blade screwdriver, gently turn the MOLDED ORIFICE (11) clockwise into the INLET COUPLING (12) until the knife edge is barely contacting the POPPET SEAT (14). DO NOT continue to turn the ORIFICE any further beyond this point, which will cause the LEVER ARM (17) to drop. Doing so will damage the POPPET SEAT, requiring its replacement (Fig. 15).

14. Place the DIAPHRAGM (3) inside the HOUSING (4) with the raised center facing up, and ensure that it seats flush at the base of the inner threads.

15. Place the FRONT COVER (2) directly over the DIAPHRAGM (3), and ensure that it seats flush. Position the COVER RING (1) onto the HOUSING (4), taking care to ensure that it is correctly seated on the threads. Hand tighten until secure and ensure the FRONT COVER is properly aligned, with the logo right side up (Fig. 16). Use the universal front cover tool, if necessary. DO NOT over tighten.

16. Secure the MOUTHPIECE (9) onto the HOUSING (4) with an all plastic, noncorrosive TIE WRAP (8), positioning the Locking Tab of the TIE WRAP towards the Hose.

**NOTE:** Oceanic's patented Orthodontic Mouthpieces are designed to accommodate the natural overbite of the human jaw. Ensure that it is properly positioned.



Fig. 14



Fig. 15



Fig. 16


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17. Lubricate and replace the O-ring inside the Second Stage Coupling End of the LP Hose. Install the Hose onto the Second Stage, and tighten to a **torque of 55 in/lbs** with an 11/16" crows foot wrench, while holding the hex portion of the INLET COUPLING (12) secure with a 3/4" crows foot wrench.


## FINAL TUNING AND TESTING

### FIRST STAGE TESTING

1. Perform the Leak Detection Test specified in the Initial Inspection procedure.

 **NOTE: Refer to the Trouble Shooting Section to determine the possible cause and treatment of any gas leaks that may be found.**

2. Connect the Gamma 2 Second Stage LP Hose to a low pressure port of the First Stage. Ensure that all other Ports are sealed with Port Plugs, with the exception of an additional low pressure quick disconnect Hose.
3. Connect a recently calibrated low pressure test gauge to the additional low pressure Hose, and connect the First Stage to a pure breathing gas source of 3,000PSI.
4. Slowly open the valve to pressurize the Regulator, and check the test gauge to ensure that the intermediate pressure is set as recommended in the Specifications for the First Stage used.


 **NOTE: If the intermediate pressure is found to be other than recommended, refer to that Regulator's Trouble Shooting Section to determine possible cause and treatment.**

### TUNING


1. Prior to tuning the Gamma 2, verify the following:
  - A. 2 to 3 threads on the Shaft of the POPPET (15) extend past the outer surface of the LOCK NUT (20).
  - B. The HOUSING PLUG (23), DIAPHRAGM (3), AND FRONT COVER (2) are securely installed into the HOUSING (4).
  - C. An In-Line Adjustment tool is connected between the low pressure Hose and INLET COUPLING (12).
  - D. The MOUTHPIECE (8) has been cleaned and disinfected.
2. Pressurize the regulator with a pure breathing gas source of 3,000PSI, and listen to determine that a slight airflow is initially present. If necessary, use the In-Line Adjustment tool to turn the MOLDED ORIFICE (11) counter clockwise, slightly out, to initiate this airflow.




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 **NOTE:** While pressurized, the slotted blade of the In-Line Adjustment tool will be held away from the MOLDED ORIFICE (11), and will therefore need to be pushed inward and held while turning in either direction. Locate the slotted head of the ORIFICE by touch before attempting any adjustment.

3. Use the In-Line Adjustment tool to turn the MOLDED ORIFICE (11) in clockwise using small fractions of a turn just until airflow is no longer present. Pause to listen carefully for airflow or leakage after each adjustment.

 **NOTE:** Turning the MOLDED ORIFICE (11) in further than necessary to stop airflow will result in lever slack and excessive Spring load tension, prohibiting peak performance.

 **CAUTION:** To avoid cutting the POPPET SEAT (14) with the knife edge of the ORIFICE (11), depress the Purge Button while turning the ORIFICE in or out.


4. Hold the Second Stage with the MOUTHPIECE (8) facing directly down, and gently shake up and down. Listen carefully for any rattle that may be present, indicating LEVER ARM (17) slack. If found, perform the following procedure:


A. Remove the COVER RING (1), FRONT COVER (2), and DIAPHRAGM (3) to gain access to the Valve Assembly.

B. Purge the Regulator of air.


C. Depress the LEVER ARM and hold it down to remove the INLET COUPLING (12) from the Inlet Tube of the HOUSING (4), using a 3/4" open end wrench.

D. Turn the LOCK NUT (20) further clockwise onto the POPPET (15) Shaft with small fractions of a turn, using the Poppet Installation tool and 1/4" open end wrench. Use the correct method given in step 11 of the Reassembly Procedure to replace the INLET COUPLING after each adjustment, and again determine whether slack is eliminated.

 **NOTE:** Avoid tightening the LOCK NUT (20) any further than is necessary to eliminate LEVER ARM (17) slack. It may be necessary to repeat step 4D several times to arrive at the correct setting.

 **CAUTION:** Be careful to avoid over adjusting! If airflow returns, replace the LOCK NUT and POPPET SEAT (14) with new, and start over after rereading the above procedures.

5. Purge the Regulator of air, remove the In-Line Adjustment tool, and connect the LP Hose directly onto the INLET COUPLING (12), using two wrenches as prescribed in step 17 of the Reassembly Procedure.

 **NOTE:** Be sure to clean and disinfect the MOUTHPIECE (8) in warm, soapy water before returning the Gamma 2 to the customer.

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6. Replace the DIAPHRAGM (3), FRONT COVER (2), COVER RING (1), and ADJUSTMENT PORT PLUG (23), if removed, and pressurize the Regulator again with a pure breathing gas source of 3,000PSI.
7. Inhale lightly through the MOUTHPIECE (8) to determine that air flows easily and smoothly, without any hesitation or lag.

**△ NOTE:** If hesitation or lag is detected, refer to the Trouble Shooting Section to determine possible cause and treatment.

8. Clean and disinfect the MOUTHPIECE (8) in warm, soapy water before returning the Gamma 2 to the customer.

## SPECIFICATIONS

### **Torques**

P/N 4330	Coupling	100 to 120 in-lbs
LP Hose		50 to 60 in-lbs

### **Opening Effort (IP = 140 psi)**

Preferred Primary Set-up	= 1.2 to 1.4 inches of H <sub>2</sub> O.
Acceptable (Primary)	= 1.1 to 1.5 inches of H <sub>2</sub> O.
Preferred Octopus Set-up	= 1.5 to 2.0 inches of H <sub>2</sub> O.
Acceptable (Octopus)	= 1.5 to 2.2 inches of H <sub>2</sub> O.

### **Specialty Tools**

P/N 40.9510	In-line Adjustment Tool
P/N 40.3362	Poppet Installation and Removal Tool
P/N 40.4400	Retaining Ring Installation Tool
P/N 40.9315	Intermediate Press. Gauge
P/N 40.9520	O-ring Tool Kit
P/N 40.9650	Universal FRONT COVER Tool
P/N 40.2302	Christo-Lube MCG111 - 2 oz
P/N 40.9512	Modified 1/4" Open End Wrench

### **Standard Tools**

P/N	N/A	Inch pounds Torque Wrench
P/N	N/A	5/8" Crows Foot Wrench
P/N	N/A	3/4" Crows Foot Wrench
P/N	N/A	11/16" Crows Foot Wrench
P/N	N/A	Standard Screwdriver - small
P/N	N/A	Needle Nose Pliers
P/N	N/A	1/4" Nut Driver
P/N	N/A	Allen Key - 3/32"
P/N	N/A	Cotton Swab (Q-Tip)

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Dia. No.	Part #	Description	Dia. No.	Part #	Description
1c	6408.07	RING, COVER (BK)	17c	5254	ARM, LEVER
	6408.29	RING, COVER (GY)	<b>18a</b>	<b>5117</b>	<b>WASHER</b>
2c	6286.07	COVER, FRONT (BK)	19b	4335	SPACER
	6286.18	COVER, FRONT (NY)	<b>20a</b>	<b>4336</b>	<b>NUT, LOCK (NYLON)</b>
3b	5236	DIAPHRAGM	<b>21a</b>	<b>5256</b>	<b>RING, HOUSING PLUG RETAINING</b>
4c	5248.07	ASSEMBLY, HOUSING (BK)	22b	2.016	O-RING, HOUSING PLUG
5c	5234.07	COVER, EXHAUST (BK)	23c	5241.07	PLUG, HOUSING
6b	6326	VALVE, EXHAUST	24c	6415.07	SWITCH, VENTURI (BK)
<b>7c</b>	<b>1978.07</b>	<b>WRAP, TIE (BK)</b>	25b	2.009	O-RING, VENTURI SWITCH
8c	4485.07	MOUTHPIECE ( SILICONE - BK)	26b	5251	RING, SWITCH RETAINING
9c	6325	PROTECTOR, HOSE (BK)	27c	6288.07	BUTTON, PURGE (BK)
<b>10a</b>	<b>2.010</b>	<b>O-RING, ORIFICE</b>		6288.29	BUTTON, PURGE (GY)
11c	6621	ORIFICE, MOLDED	N/S	40.2100.030	HOSE, MAXFLO (30")
12c	4330	COUPLING, INLET	N/S	40.2100.036	HOSE, MAXFLO (36")
13b	3.906	O-RING, COUPLING			
<b>14a</b>	<b>4340</b>	<b>SEAT, POPPET</b>	N/S	40.6160*	KIT, SERVICE PARTS (includes all <b>Bold</b> items)
15c	4333	POPPET			
16c	4593	SPRING, POPPET			

\* Note that the Kit contains an extra O-ring (P/N 2/004) that is not used with the Gamma 2.

