



# **ATX SECOND STAGE REGULATOR**



## **MAINTENANCE MANUAL FOR AUTHORISED TECHNICIANS**

## AMENDMENTS RECORD:

Amendments and approval of this document can only be carried out by the relevant people listed on the Approved list of signatures, which is listed in the Apeks Quality Manual. To instigate a change, a Task / Change request form, (Form No. 'DESI/10002'), must be completed and passed to the relevant person(s) for approval which are listed on the Approved List of Signatures. When approval has been granted and recorded this table can then be completed and the document up issued.

Change No.	Change Request No.	Description & Comments:	Change Date	New Issue No.	Changed By:	Approved By:
-	CRS0056	Page 11. Setting Lever Height. Direction to turn Seat was reversed in items 4 & 6.	9/06/06	5	JLH	ACD

# Contents

RANGE COVERED .....	4
COPYRIGHT NOTICE .....	5
INTRODUCTION .....	5
WARNINGS, CAUTIONS & NOTES .....	5
SCHEDULED SERVICE .....	5
GENERAL GUIDELINES .....	5
GENERAL CONVENTIONS.....	6
DISASSEMBLY PROCEDURES .....	6
REASSEMBLY PROCEDURES.....	8
FINAL TESTING .....	11
TABLE 1 - TROUBLESHOOTING GUIDE .....	13
TABLE 2 - RECOMMENDED TOOL LIST.....	14
TABLE 3 - RECOMMENDED LUBRICANTS AND CLEANERS .....	15
CLEANING AND LUBRICATION PROCEDURE .....	16
TABLE 4 -TORQUE SPECIFICATIONS .....	17
TABLE 5 - TEST BENCH SPECIFICATIONS .....	17
ATX200, ATX100, BLACK PEARL & TUNGSTEN EXPLODED PARTS DRAWING .....	18
ATX50 EXPLODED PARTS DRAWING.....	19
ATX40 & AT20 EXPLODED PARTS DRAWING .....	20

## RANGE COVERED

ATX200 / ATX100 / Black Pearl / Tungsten



ATX50



ATX40



AT20



## COPYRIGHT NOTICE

©2006 Apeks Marine Equipment Ltd.

ATX Second Stage Maintenance Manual  
(AP5826 Issue 5)

## INTRODUCTION

## WARNINGS, CAUTIONS & NOTES



**WARNINGS** indicate a procedure or situation that may result in serious injury or death if instructions are not followed correctly.



**CAUTIONS** indicate any situation or technique that will result in potential damage to the product, or render the product unsafe if instructions are not followed correctly.



**NOTES** are used to emphasise important points, tips, and reminders.

## SCHEDULED SERVICE

Regulator Service Record  
Limited Lifetime Warranty

An Official Inspection consists of:

## GENERAL GUIDELINES

## GENERAL CONVENTIONS

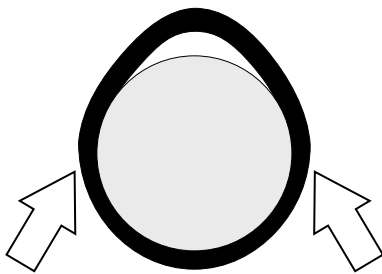
remove   unscrew   loosen

install   screw in,   tighten

### *Rkpej"Ogvjqf*

Press upwards on sides of 'O' Ring to create a protrusion.

Grab 'O' Ring or insert 'O' Ring tool at protrusion.

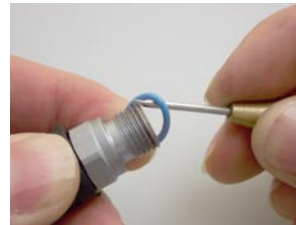


## DISASSEMBLY PROCEDURES


 NOTE:



### Removal of hose



### Removal of diaphragm

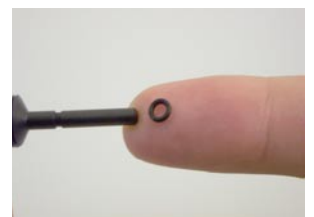
 NOTE: Ensure that the tool is firmly pressed against the Case Cover whilst unscrewing.



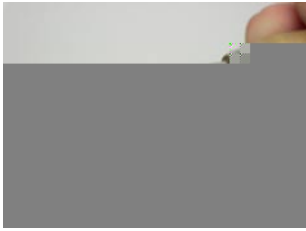
## Removal of valve assembly



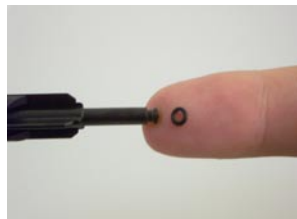
 NOTE:








### Inspection and Removal of Exhaust Valve



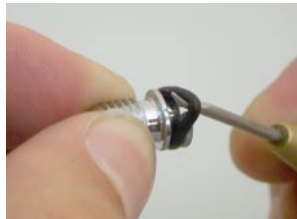
 **NOTE:** If the Exhaust Valve (13) is to be removed, pinch edge of Exhaust Valve and pull tail through hole in Case (7).

### Removal of mouthpiece



### This Ends Disassembly

Before starting reassembly, perform parts cleaning and lubrication according to the procedures outlined in 'Cleaning & Lubrication' on page 15.

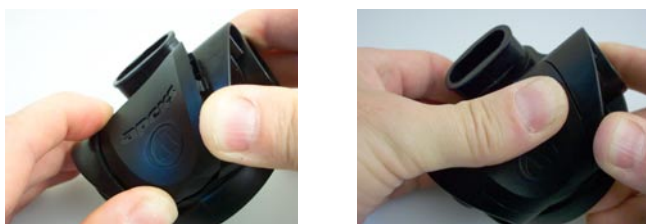
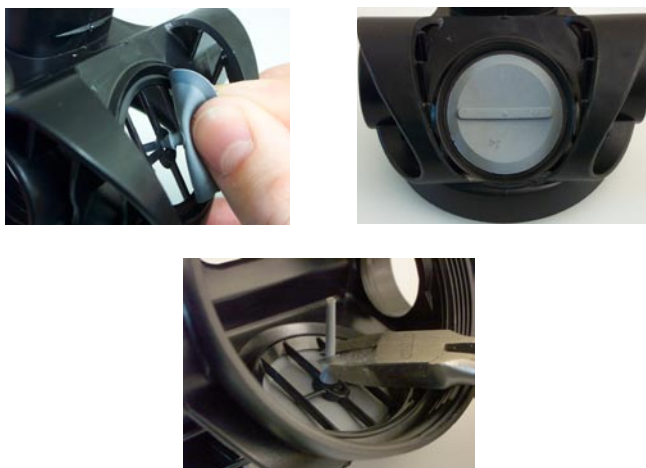




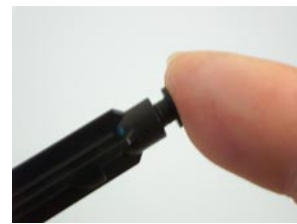
## REASSEMBLY PROCEDURES

### Fitting Exhaust Valve and Exhaust Valve Cover

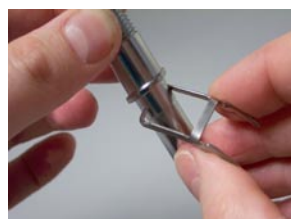
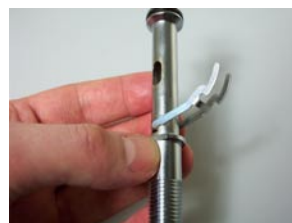
**! WARNING:** Flooding may occur if the tail of the valve is not fully pulled through. Check that barb has engaged on inside of Case.



### Assembling and fitting valve assembly

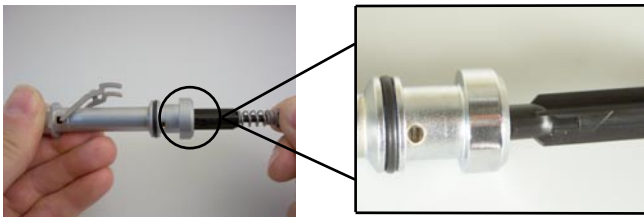
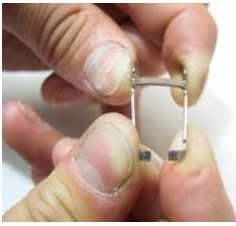



**☞ NOTE:** Ensure Rubber Seating has been fitted flush with Shuttle Valve.



**! CAUTION:** Ensure that Lever is not twisted and that legs are parallel. Lever should appear as that shown on the left, not as shown on the right. If necessary, gently squeeze legs together to straighten.







 **NOTE:** Ensure that the Lever has a full range of movement and does not catch on the Valve Spindle.






**CAUTION:** Ensure that the Lever is vertical after tightening.





**CAUTION:** Excessive tightening of the Heat Exchanger will damage the two flats inside the case.



Fitting Diaphragm




**CAUTION:** Ensure Diaphragm is seated correctly and not creased.




Before fitting hose, carry out suction test by holding thumb over Valve Spindle (25) to seal and trying to breathe through mouthpiece outlet port. No air should be drawn in.

## FINAL TESTING

### Setting the Lever Height

## FINAL TESTING (CONTINUED)

### External Leak Test

 **NOTE:** Extremely small leaks may be better detected by applying a soap solution or Snoop™ to the leak area. Bubble streams will indicate the source of the leak. Before disassembling to correct any leaks, rinse the entire regulator thoroughly with fresh water and blow out all residual moisture with filtered, low-pressure air. Disassemble and remedy the problem, referring to “Table 1 - Troubleshooting.”

### Subjective Breathing Test

This Ends Reassembly

## Table 1 - Troubleshooting Guide



SYMPTOM	POSSIBLE CAUSE	TREATMENT

Table 2 - Recommended Tool List

PART NO.	DESCRIPTION	APPLICATION



## Table 3 - Recommended Lubricants & Cleaners

LUBRICANT / CLEANER	APPLICATION	SOURCE
<div> CAUTION:</div>		
<div> CAUTION:</div>		

## Cleaning & Lubrication Procedure

General Cleaning of all Parts

Lubrication and Dressing

Nitrox


 **WARNING:** Please check the regulations regarding Nitrox in your particular country as this may differ from Apeks standard policy.

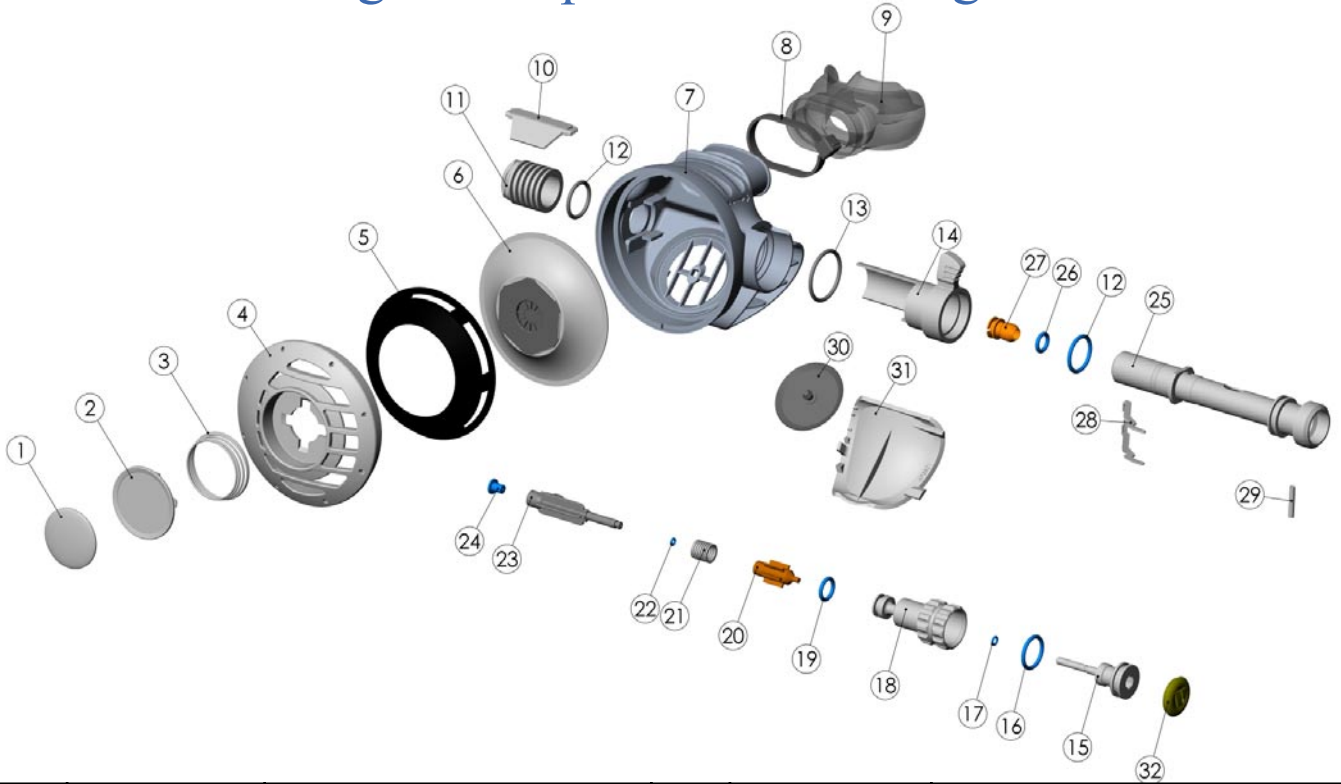
Table 4 - Torque Specifications

PART NUMBER	DESCRIPTION / KEY NUMBER	TORQUE

Table 5 - Test Bench Specifications

TEST	CONDITION	ACCEPTABLE RANGE

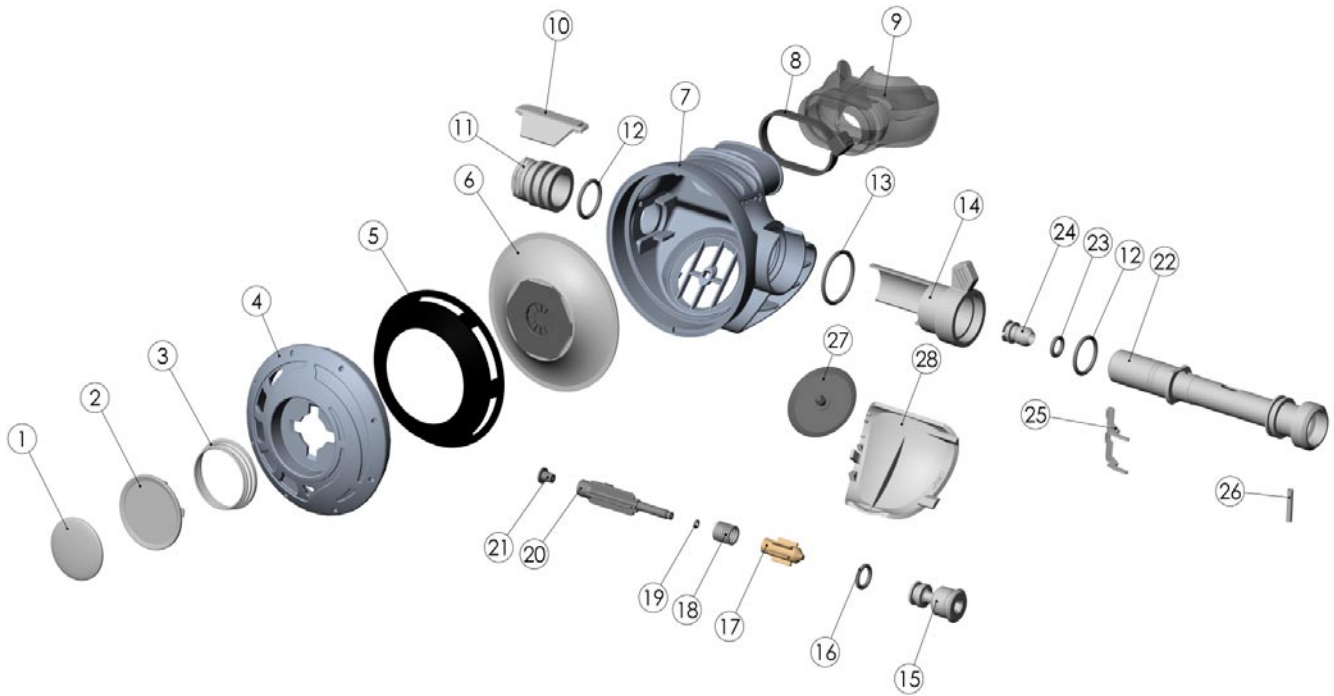
## ATX200, ATX100, Black Pearl & Tungsten Exploded Parts Diagram

[illegible]

## ATX50 Exploded Parts Diagram

[illegible]

## ATX40 & AT20 Exploded Parts Diagram

[illegible]

Notes





**ATX SECOND STAGE REGULATOR**

**MAINTENANCE MANUAL**

**FOR**

**AUTHORISED TECHNICIANS**

Apeks Marine Equipment Ltd  
Neptune Way, Blackburn, Lancs, England, BB1 2BT