

Date: \_\_\_\_\_ Instrument Serial # \_\_\_\_\_

**Description:** This Process Guide provides instructions to complete the Preventative Maintenance (PM) process for the ANKOM XT15 Standard or XT15 High Penetration Fat Extractor.

**Before you start:** Prior to starting the Preventative Maintenance process, it is advisable to flush the solvent from the instrument. This can be completed by following the steps in Service Procedure X5S019 Solvent Drain & Flush, found on the ANKOM website or at this link: [https://www.ankom.com/sites/default/files/document-files/X5S019\\_Solvent\\_Drain\\_%26\\_Flush.pdf](https://www.ankom.com/sites/default/files/document-files/X5S019_Solvent_Drain_%26_Flush.pdf)

**This process guide assumes there are no current faults or leaks within the instrument.**

**Frequency:** Perform annually for instruments used daily or every 2-3 years for lesser used instruments.

**Supplies:** Standard XT15 PM Kit (X32) or High Penetration XT15 PM Kit (X33)

### Preparation (Approx. 15 minutes)

This phase includes gathering the needed parts and tools. These instructions support 2 unique kits: XT15 Standard (X32), XT15 High Penetration (X33).

#### 1. Kit Contents:

**PM Kit X32 or X33:** Each kit includes parts listed below appropriate for the specific instrument:

- X97—Water Filter Assembly (1) either kit
- 146.1-Solvent Filter Element (1) either kit
- 198—Solvent Filter Flat Washer (1) either kit
- Z135—Valve Springs-Standard (6) either kit
- X35—Q5 Unique Spring (1) either kit
- Z132—Valve Seat-Standard (7) for X32 and (3) for X33
- Z133—Valve O-Ring (7) either kit
- 5806—O-Ring for Cup (1) either kit
- 969.5—Standard O-Ring for Vessel (1) for X32 only
- 5663—High Penetration O-Ring for Vessel (1) for X33 only
- X55—(4 Pack of 5649)High Penetration Piston for X33 only
- Z276—Torx 20 Tool to disassemble valves
- Z240—Scotch-Brite Abrasive Pad to clean valves

#### 2. Gather the following tools:

- Hex (Allen) driver 1/8" (Included with instrument)
- Wire Brush and extension to fit drill to clean out vessel
- 9/16" Open end wrench (14mm)
- 3/4" Open end wrench
- Adjustable wrench (minimum 3/4")

## 1 — Vessel (Approx. 20 min)

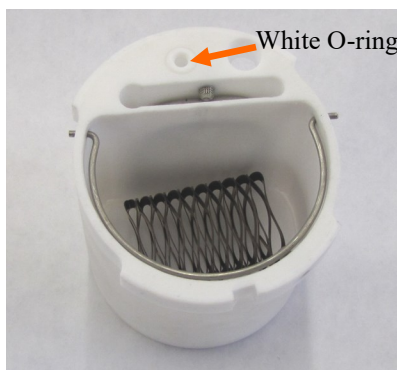
### Clean the Vessel

*Certain solvents or solvent mixtures can create a black residue in the bottom of the vessel. This is normal but should be periodically cleaned.*

- 1.1 First, removed the white vessel insert and set it aside. The vessel itself can be cleaned by using a drill with an long-shafted stiff wire brush to remove most of the black coating that accumulates on the bottom of the vessel. **Note:** When cleaning the vessel, do not damage the level sensor glass tip found in the middle of the back of the vessel. The glass tip can be cleaned with alcohol or window cleaner as needed.
- 1.2 Once the stainless steel (copper on older models) on the vessel bottom has been revealed, put some solvent on a cloth or paper towel and wipe out the inside of the vessel. This effort is intended to remove any oil residue and particles that have been loosened from the vessel bottom. **DO NOT use soap and/or water to clean the vessel.**

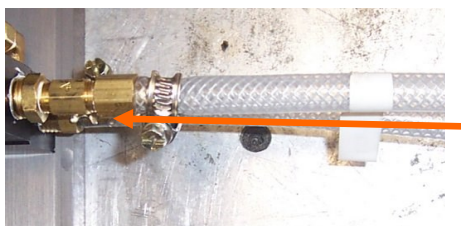
### Replace O-rings

- 1.3 Replace the small white O-ring in vessel insert (5806) and replace the large black O-ring. The Black O-ring (969.5) is part of the X32 PM Kit and the High Penetration O-ring (5663) is part of the X33 PM kit.

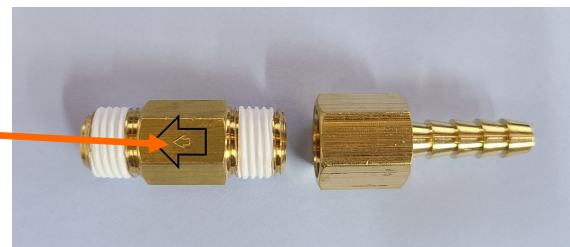


## 2 — Water Filter (Approx. 10 Minutes)

- 2.1 Remove the outer cover. Using the 1/8" hex head driver (supplied with the instrument), remove the 8 hex head screws that secure the cover assembly. Lift and remove cover.
- 2.2 Inspect for any leaks and repair the leaks. Contact ANKOM for any support you need for repairs.
- 2.3 Turn off Supply Water. With a 9/16" wrench, disconnect the X97 water filter from the side of the instrument.
- 2.4 Unscrew the hose clamp that secures the water line. Discard the old filter and reassemble with the new water filter.



Filter  
Assembly

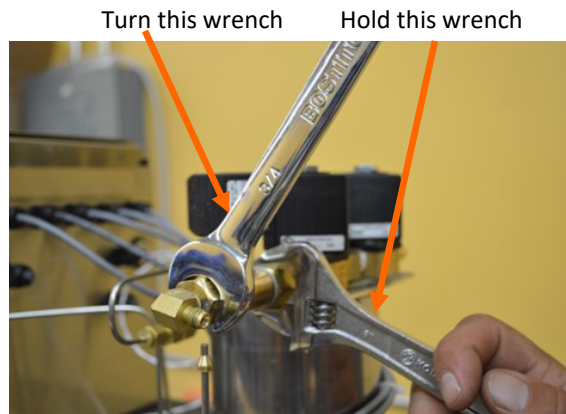


## 3 — Replace Solvent Filter (Approx. 15 Minutes)

- 3.1 Unscrew the compression fitting using a 9/16th wrench.
- 3.2 Unscrew the filter body using two 3/4" wrenches.
- 3.3 Remove the filter body.
- 3.4 Remove and replace the white washer (198) using a small screwdriver.
- 3.5 Remove and replace the Solvent Filter Element (146.1) by unscrewing it from the body.



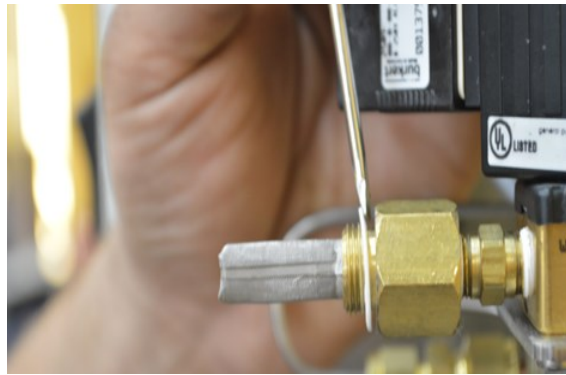
Step 3.1



Step 3.2



Step 3.3



Step 3.4



Step 3.5

## 3 — Replace Solvent Filter (Continued)

3.6 Reinstall the filter body. Don't overtighten the filter body.

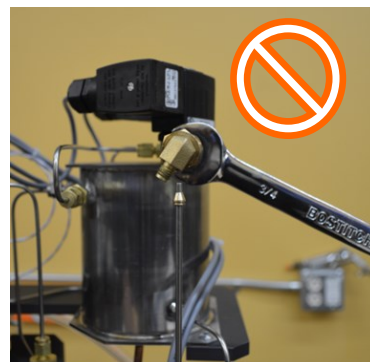
3.7 Tighten only until vertical and reconnect the tube disconnected in step 1. Don't overtighten the compression fitting. Turn until snug and then only 1/8th turn more.



Step 3.6



Step 3.7



Do not overtighten.

## 4 — Solenoid Valve Service (Approx. 1 Hour)

Notes:

- The procedure is shown with the valve removed from the instrument. **DO NOT remove your valves unless directed by ANKOM.** Service can be performed without removing the valves.
- These steps work with all Q valves, however Q5 valve has a special spring (X35). Do not mix this spring up with the others. It is recommended that you service one valve at a time.

4.1 Remove the nut on the top of the valve using a 9/16" or 14mm wrench (Step 1). Lift the black valve coil off the valve and remove the black plastic cover (Step 2). Your valve coil might appear different than the one shown here.

4.2 Using the provided T20 Torx driver, remove the four screws holding the valve top in place (Step 3). Slowly remove the valve top, while capturing the spring-loaded contents in the shaft.

Step 1



Step 2



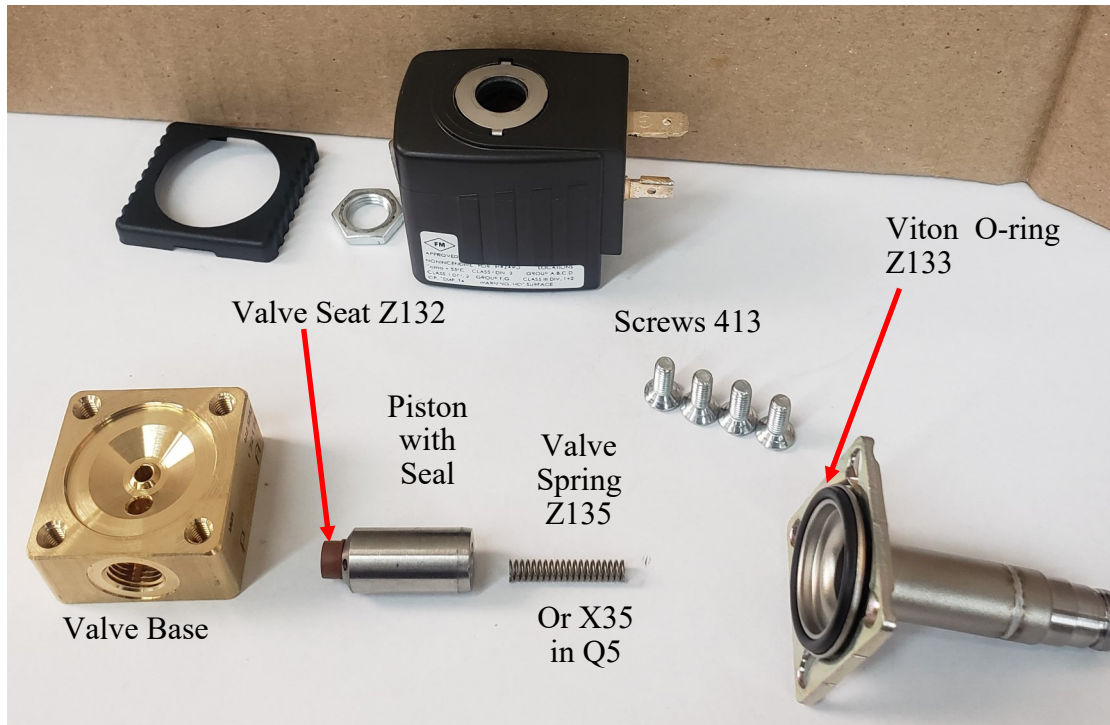
Step 3





## 4 — Solenoid Valve Service (Continued)

- 4.3 Use the included abrasive pad (Scotch-Brite pad) to remove the corrosion in the “bowl” of the Valve Base. Check the valve based for debris or damage. The raised center of the bowl needs the closest inspection. Any damage to the lip on the top of the center hole indicates a need for replacement. Contact ANKOM for the appropriate replacement parts. Carefully remove any debris from the face of the valve body after cleaning.
- 4.4 For a standard XT15 valve body, replace the valve seat (Z132), the valve spring (X35 for Q5 or Z135 for all other valves), and the Viton O-ring (Z133).
- 4.5 For an XT15 equipped with the high penetration valve kit, the valve piston does not have a removable valve seat. The entire piston (5649 part of X55—4-pack) needs to be replaced (Step 5). These pistons are only used in Q4, Q5, Q6, and Q7 positions. Reassemble and reinstall all valves.



Step 4.4



Step 4.5

### 5 — Final Test and Verification (Approx. 2 hours)

#### Short Test

- 5.1 With the cover still removed, set the instrument up for a short test. Fill the instrument with the appropriate level of solvent.
- 5.2 Ensure that the water line is reconnected and turned back on.
- 5.3 Set instrument for a test run for 10 minutes (no samples) at 90 degrees.
- 5.4 Run the 10 minute routine.
- 5.5 Allow the solvent to settle after the short run. Then, with a felt-tip marker, mark the solvent level on the Sight Glass.
- 5.6 Inspect for any leaks within the instrument. Repair any leaks found.

#### Long Test

- 5.7 With the cover still removed, set the instrument up for the long test.
- 5.8 Set instrument for a 60 minute test run (no samples) at 90 degrees.
- 5.9 Run the 60 minute routine.
- 5.10 After the run, allow the solvent to settle.
- 5.11 Note the new level of solvent viewed on the Sight Glass versus the mark made after the short test. The level of solvent should be within approximately 5mm of the short run mark. If the new level has reduced more than 5mm, contact ANKOM for support.

The Preventative Maintenance routine is complete. Reinstall all covers.

The XT Instrument is now ready to return to service.