

Hot Tub at Centuria Urban Village developed a leak. The Hot Tub was immediately closed and below is a summary as well as the latest findings as we have worked on a fix. A summary of events in a timeline format is presented below.

Timeline Summary:

January 16, 2025	- Hot Tub Leak Identified
April 2, 2025	- Leak Seal Applied
October 9, 2025	- KO Engineer Contracted
November 28, 2025	- Drawings Obtained City of Kelowna
February 18, 2026	- Pilot Hole Drilled Top Hot Tub
March 26, 2026	- Precision Scanned & Pilot Hole
April 27, 2026	- Whole Cut in Top of Hot Tub
May 12, 2026	- Precision Scanned Area of Leak
May 28, 2026	- Precision Cut Slab Open
June 4, 2026	- Pipe Repair Made and Filled
June 8, 2026	- Hot Tub Filled & Another Leak
July 2, 2026	- Precision Cut Opposite Side of Step
July 7, 2026	- Precision Radar Scanned Hot Tub
July 8, 2026	- Camera Scan Again
July 14, 2026	- Precision Cut Another Area (Step & Top)
July 15, 2026	- Whole Cut in Top of Hot Tub & Pipe Exposed
July 20, 2026	- Pipe Repaired Both Sides of Step
July 21, 2026	- Hot Tub Filled with Water and Leak Detected
July 29, 2026	- Precision Cut Another Area
July 31, 2026	- Slab Trim and Pipe Fix
August 6, 2026	- Pipe Repair Made to 3 rd Leak Area
August 13, 2026	- Better Connection was Ordered
August 27, 2026	- 3 rd Leak Addressed with Fittings and System Tested for 5 Days
September 7, 2026	- Pumps Removed in Pool Room
September 10, 2026	- Concrete Repairs
September 15, 2026	- Pumps Re-Installed
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Hot Tub Repair Cost / Budget:

HOT TUB REPAIR

16-Sep-26

ACTUAL COSTS TO-DATE		
Structural Engineer	KO Engineer	\$3,531
Scan Deck	Precision Radar	\$609
Pool Contractor	Ron the Poolman	\$3,686
Cut Wall TOP & Slab Left Slab	Preceision Coring	\$2,231
Cut Slab Right Stairs	Preceision Coring	\$1,724
Scan Deck Again	Precision Radar	\$609
Cut Stair & Wall Top	Preceision Coring	\$2,097
Cut Slab North Corner	Preceision Coring	\$980

\$15,466

PROJECTECT COSTS		
Pool Contractor	Ron the Poolman	\$2,900
Glycol Contractor	Glycol Repair	\$750
Hot Tub Pumps	Ron the Poolman	\$1,200
Repair Finishes	General	\$2,400

\$7,250

\$22,716

Project Summary:**January 16, 2025**

A leak was identified in early winter of 2025, and an initial investigation revealed a leak when the hot tub jets when they were turned on. Our pool contractor (Ron) used a camera to further investigate and identified cracks in several jets due to Teflon tape used in the past which expands and can crack fittings.

Additional leaks were identified in the drain, and our pool contractor was able to fix some leaks and stated he would use a stop leak (a commercial product) that he has used with success in the past.

As this process can only be done was done when the temperature is above freezing meant this process would likely be in the spring.

April 2, 2025

After the leak seal product was applied and adequate time to setup the jets were re-tested, but a large leak persisted near the pool deck as shown above (red arrow).

It was recommended that the top of the concrete area above the jets be cut open to investigate. Issues with getting the location of the leak pinpointed and what is required to repair were as follows:



1. For the coring contractor to cut into the hot tub walls, the contractor is requesting sign off from a structural engineer before they will do any cutting.
 - a. The reason for this is to confirm the wall can safely handle the opening
 - b. Ensure the cut won't cause additional leaks or failure
 - c. Specify the exact size, location and method of the core hole or cut
 - d. Recommend and reinforcement if needed
 - e. Limit Liability for the contractor doing the work
2. This was further complicated as Centuria did not have the full set of structural blueprints on site showing the location and elevations of the beams, structural suspended slab detail around the tub, or how the walls are constructed.
3. The original engineering firm declined to have construction documentation and strata called a number of local structural engineering companies to see if they would take the work on including a site review of the issues, and provide

input was not easy as this is a small job and many were not going to waste time on this as the bigger jobs are taking up their man-hours.

October 9, 2025

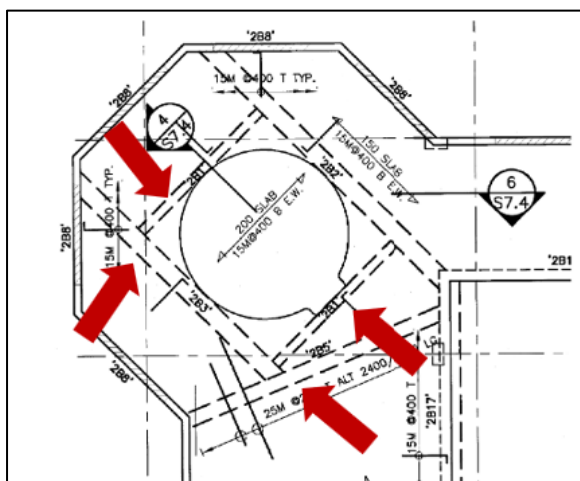
Centuria was able to contact a local engineer (KO Structural Engineering) that agreed to provide us with their service; however, they required structural drawings which there were none at Centuria. The engineering firm recommended that we contact the city Building Department, and they were able to provide a pdf package which after strata investigated further the file contained complete architectural and structural drawings.

Structural drawings were copied and sent to KO Structural for their review and did a site visit. KO Structural Engineers issues a report as to what concrete could and could not be cut.

March 26, 2026

Precision Cutting and Coring provided a hole in the top of the hot tub to provide some visual inside the cavity. Our pool contractor laid out the likely location of pipes.

Once KO Structural reviewed the drawings and another site visit they required a scan report to be done to determine where the support beams where and the size of the beams, and rebar in the concrete as shown in the diagram below.



April 27, 2026

In the meantime, our pool contractor was able to get a radar scan (Precision Cutting and Coring) done on the upright hot tub wall and we opened the top section of the double wall up to see if we could find a leak or check to see how the lines were run, or how the walls were constructed.



Our pool contractor with the top section open has located two lines, one line is the scrubber line which when tested did not leak. There was also one jet line in the cavity, but it was concrete, and when the jets are turned on it sprays water out the side of the hot tub bottom step (but not from the visible line).



Our pool contractor cut the jet line and used a scope camera to try locating the leak with the amount of cable he ran out it appears the cracked line may be slightly below the structural suspended concrete deck which the structural engineer will not allow cuts in the deck. A further challenge is the bottom of our hot tub is concealed in the ceiling of a commercial tenant and not visible.

On the advice of KO Structural Engineer, our pool contractor is currently working to get a more in-depth radar scan done to accurately locate the structural beams supporting the hot tub.

The structural engineer will review and guide strata on the next steps as to how we can access the problematic pipe that is below the structural slab somewhere to the left of the red arrow.



May 12, 2026

Precision Radar Scan was on site and scanned the area that our engineer (KO Structural Engineer) and our pool contractor (Poolman - All Service Properties) requested. As Poolman used a scope camera and noted the pipe with the leak is 4 1/2" below the pool deck.

Precision Radar scan revealed there is a 6" reinforced slab with welded wire mesh about 5 1/2" below the slab. This concrete rests directly on the 10" reinforced 2-way suspended slab supported by concrete beams. A scan report was received from Precision Radar Scanning, and he made notes directly on the slab near the leak as shown below.



Our pool contractor (Poolman) has been contacted to connect with Precision to cut open the slab area to expose the leak.

May 28, 2026

After the structural engineer sign-off the concrete slab was cut open by Precision Cutting and Coring. Ron the Poolman identified the leak on the right side of the cut.



June 4, 2026

After the leak was identified the damaged piece was removed and a plumbing repair made.



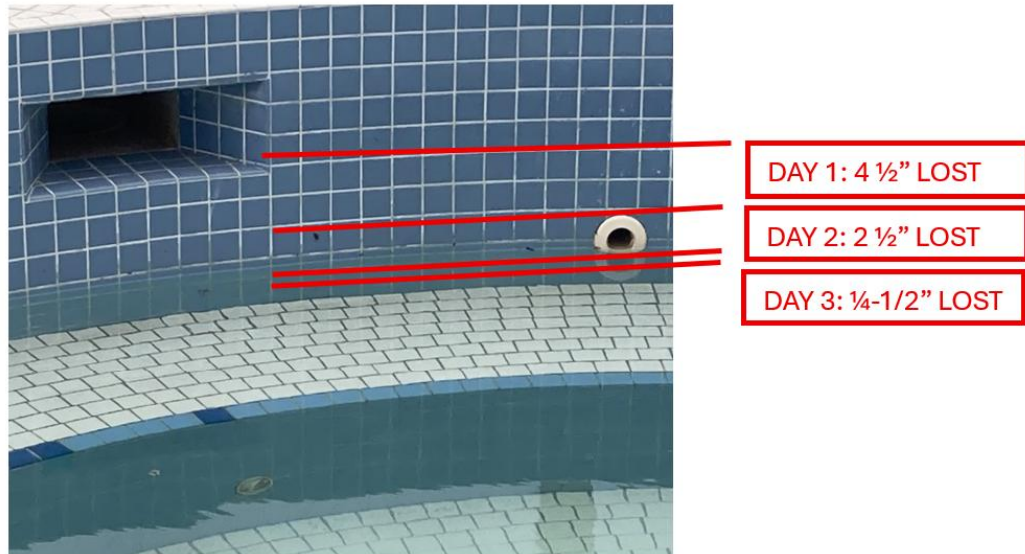
Ron our pool contractor repaired the pipe and after the repair had time to set, the hot tub was filled with water and the system was evaluated.

The jets were turned-on briefly, and no leaks were visible in the repaired section. Water levels were monitored and it was noted that water was leaking from other areas (see levels over 3 days) indicating a leak



June 8, 2026

Hot Tub was filled with water, and levels were monitored and it was noted that water was leaking from other areas (see levels over 3 days) indicating a leak



The fixed plumbing area had to be opened up, and camera was used to investigate another possible leak.



Another leak was identified on other side of steps to hot tub.

July 2, 2026

Our pool contractor (Ron the Poolman) arranged for Precision Cutting and Coring to cut open another around to the right of the hot tub stairs to expose pipes. The area identified was cut open.



As the jet supply pipe was not located additional investigation with camera was undertaken and strategy generated.

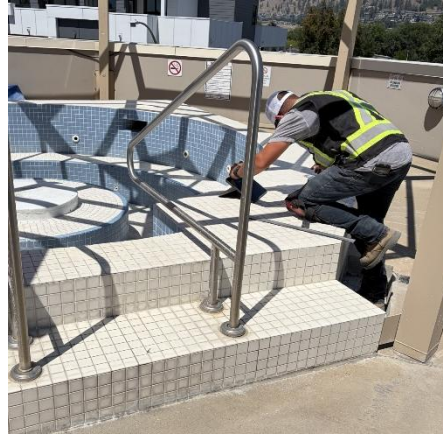
Additional camera scope work identified a crack near the end of the hot tub stair, and it was decided to cut open the top of the hot tub and if need be when area was exposed stair may have to be cut.



July 7, 2026

Jason from Precision Scanning was on site scanning the top of the Hot Tub as well as the perimeter to locate jet line.

The top of the Hot Tub outlined the concrete walls below and the location of the electrical box and conduit. Electrical appeared not to be in the way of the cut outlined at the top of the Hot Tub.



The perimeter was scanned for future use if additional leaks happened.

North Sid



West Side



South Side



East Side



Before leaving our pool contractor Ron filled the Hot Tub with 8" of water and this will be checked tomorrow to see if any additional water leaked. Ron noted before filling Hot Tub there was water in the bottom drains.



Water level in the Hot Tub was monitored over a 5 day period with the following results.



Tuesday 8" Water
Level Fill

Wednesday 7"

Thursday 4 ½"

Friday 2"

Saturday 1"

Sunday 0" Empty

Ron (Poolman) feels there is a small leak in one of the three drains. A dye was used to detect a leak in the drain with the lowest water level. The leak was sealed as shown to the right.



July 14, 2026

Precision Cutting and Coring with Ron (Poolman) were on site to cut 2 areas of the Hot Tub including to the right of the stairs and the top above the area to the right of the stairs

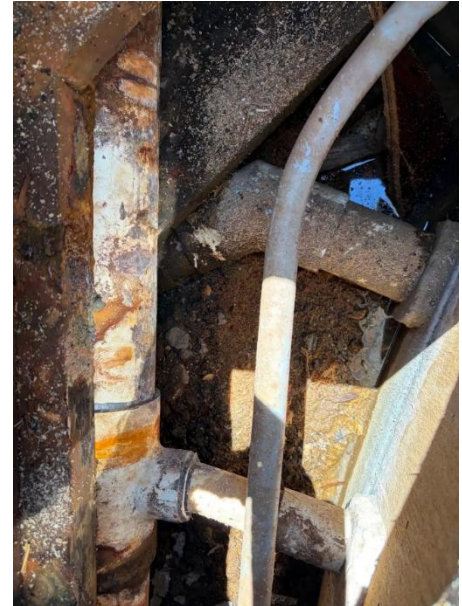
To the right is a graphic of Precision Coring and Cutting as they cut the stairs and the top of the Hot Tub.



Below Precision Cutting and Coring continues with the work to exposed problem areas..



The two areas were exposed that require access. The area of concern was the pipe under the slab to the right of the stairs as shown below. A crack was identified in the elbow.



July 15, 2026

The top of the Hot Tub wall was exposed and conduit, jet piping and drain system was exposed.

The other area of concern is the jet supply elbow section with a crack was exposed and illustrated below.



July 20, 2026

Our pool contractor (Ron the Poolman) repaired the 2 sections of pipe for the jets supply on both sides of the step. Left side of the stairs was addressed as shown below. The right side of the stairs was addressed as shown below.



July 21, 2026

After plumbing joints were allowed to set-up Hot Tub was filled with water.



After the jets were turned on water was detected in the area to the left of the stairs. The plumbing fixes were not leaking but water was seen coming from under the fabric likely from somewhere between the left and right side of stairs.



The northwest corner of the Hot Tub revealed another area of potential leak which is an elbow located by Precision Scanning last visit.. Our pool contractor Ron stated he would contact Prerecession Cutting and Coring to cut open another concrete area.



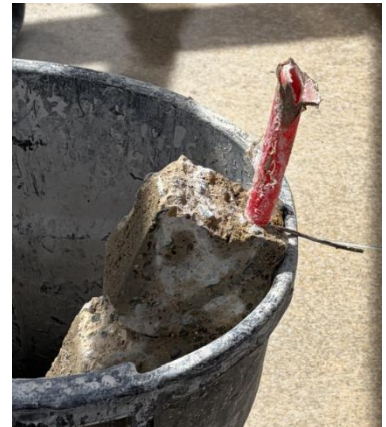
July 28, 2026

Precision Cutting and Coring was onsite at centuria at 12:30pm to make another cut into the slab as another leak was indicated. Our pool contractor laid out the area to be cut for the Precision Cutting and Coring crew.



Concrete slab and unfortunately the glycol line was accidentally in the process and will have to be repaired.

Below the jet pipe was exposed.



July 31, 2026

Our Building Manager (Pete) exposed the glycol lines, so a repair is possible.

Our pool contractor (Ron) removed old pipe and obtained pipe required for repair.



August 6, 2026

Our pool contractor (Ron Poolman) completed jet pipe fix on the 3rd leak area with a compression fitting.



Hot Tub was drained, cleaned, and filled with water. Next repair areas were monitored for any leaks.



August 9. 2026

As Hot Tub work repair nears completion strata council prepared a completion list and distributed it to the pool contractor (Ron Poolman).

Hot Tub Completion Task List

Task	Assigned to	Estimated Completion Date
Replace pump seals on hot tub pumps	Ron Pinkly	Aug 14
Reconnect glycol line for winter deck heating	TBD	Aug 12
Insulate and fill in areas where deck was cut open	Ron Pinkly	Aug 18
Insulate and fill in the two areas where top of wall was cut open	Ron Pinkly	Aug 18
Reinstall hand rail into tub	Ron Pinkly	Aug 14
Clean and wash out hot tub before final fill	Ron Pinkly	Aug 20
Paint concrete step on side where cut was made with concrete paint	Pete	Aug 19
Clean up area and wash down	Pete	Aug 20
Estimated start up Date		Aug 22

Augst 19, 2026

Compression fitting on the 3rd leak was failing and it was decided that a better option consisting of a glued connection was needed. This was a special order from Untied States.

August 27, 2026

Special fittings arrived and were installed with epoxy and a secondary fitting applied for best possible solution.

Fitting was allowed to properly set-up and hot tub was filled with water and tested for 5 days.

Minimum loss of water was experienced, and all connections showed no leaks or moisture.



September 7, 2026

It was decided at this time to remove the 3 pumps that serviced the hot tub and replace seals to ensure future use.



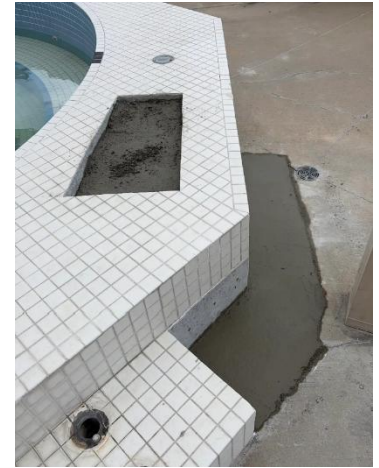
September 10, 2026

Repairs began on the hot tub. Foam insulation was installed around 3 new connections. Sand surface product installed and concrete repairs made.



Concrete repairs were underway for the areas on the concrete slab. Holes in the top of the hot tub wall were addressed as they needed to be supported and areas filled with concrete.

Once set up white epoxy finish to be applied.



Circulating pump was run and heaters turned on to further test the hot tub. No leaks were identified. Hot tub covers was placed over hot tub.



September 15, 2026

Pool contractor was onsite and re-installed 2 pumps with replaced seals and installed new pump for the hot tub jets.

LOCATION of PLUMBING in POOL DECK SLAB (From Scan)

For future reference the following sketch indicates where pipe for jets is located under the slab.

