

## QGIS Application - Bug report #13368

### Difference tool generates invalid geometries

2015-09-16 07:44 AM - Jos Ferraro

<b>Status:</b>	Closed	
<b>Priority:</b>	Low	
<b>Assignee:</b>		
<b>Category:</b>	Processing/QGIS	
<b>Affected QGIS version:</b>	2.8.3	<b>Regression?:</b> No
<b>Operating System:</b>		<b>Easy fix?:</b> No
<b>Pull Request or Patch supplied:</b>		<b>Resolution:</b> end of life
<b>Crashes QGIS or corrupts data:</b>		<b>Copied to github as #:</b> 21420
<b>Description</b>		
<p>When using the Difference... tool on two layers with valid geometries, QGIS produces a layer with invalid geometries.</p> <p>To reproduce, use the attached file:</p> <p>i) open layers minizona13 and retalho</p> <p>ii) use Check Geometry Validity to verify that there is no error before</p> <p>iii) use Difference... with layer retalho as Input and minizona13 as Difference</p> <p>iv) use Check Geometry Validity to verify that there an error on the created layer</p> <p>The difference that I get goes attached as well under tghe name diff_errada13</p>		

#### History

##### #1 - 2015-09-16 03:02 PM - Saber Razmjooei

- File geo\_minizona.PNG added
- Status changed from Open to Closed
- Resolution set to invalid

There is a gap between FID 1 and FID 3 and hence the difference comes up with the small polygons.

##### #2 - 2015-09-16 03:05 PM - Jos Ferraro

there may sure be a gap, but is it a valid reason to produce an invalid geometry?

I understand that if I operate on valid geometries the result should be valid no matter what. I don't care if the result has small polygons(I may actually want that) but I would like valid ones.

##### #3 - 2015-09-16 03:23 PM - Saber Razmjooei

- Resolution deleted (invalid)
- Priority changed from Normal to Low
- Status changed from Closed to Reopened

##### #4 - 2015-09-16 11:48 PM - Jukka Rahkonen

This is the faulty geometry as WKT and it is a polygon which has a hole outside the shell. It should be either two distinct polygons or a multipolygon with two parts. JTS, GEOS, and QGIS itself is reporting it as invalid. It is also hard to correct by digitizing because the hole should be converted into another polygon feature.

```
POLYGON ((
  -43.206147 -22.908303,
```

```
-43.207488 -22.908866,  
-43.208452 -22.909126,  
-43.207489 -22.908866,  
-43.206147 -22.908303  
) , (  
-43.209573 -22.909271,  
-43.20957519759788 -22.90923750003237,  
-43.20957519759788 -22.909237500032372,  
-43.209573 -22.909271  
) )
```

**#5 - 2015-09-17 04:41 PM - Jamie Portman**

We experience similar issues when using the 'Avoid Intersection' function.  
We start with perfectly valid geometries, but when QGIS creates the new feature applying the rules, it allows itself to generate invalid geometries.

**#6 - 2017-01-02 05:50 AM - Giovanni Manghi**  
*- Category changed from 44 to Processing/QGIS*

**#7 - 2017-05-01 01:06 AM - Giovanni Manghi**  
*- Regression? set to No*  
*- Easy fix? set to No*

**#8 - 2019-03-09 03:12 PM - Giovanni Manghi**  
*- Resolution set to end of life*  
*- Status changed from Reopened to Closed*

End of life notice: QGIS 2.18 LTR

Source:  
<http://blog.qgis.org/2019/03/09/end-of-life-notice-qgis-2-18-ltr/>

Files			
difference_invalid.rar	26.8 KB	2015-09-16	Jos Ferraro
geo_minizona.PNG	16.8 KB	2015-09-16	Saber Razmjooei