Tires are using a dedicated material in order to deform / flex and show damages.

• Create the tire mesh in Max, starting from a cylinder.
4 height segments
30 to 40 sides
Convert it to editable poly.

By moving vertices and using scale tool, refine the object to obtain the half-tire shape.

Extrude the center to get a small chamfer then delete it. Delete the back poly too.

Mirror the object, attach it to original mesh and weld vertices on the seam.
You get a basic tire shape.

Select the faces that will be the tire tread surface, and set Material ID to 1
Select the faces that will be the tire wall surface, and set Material ID to 2
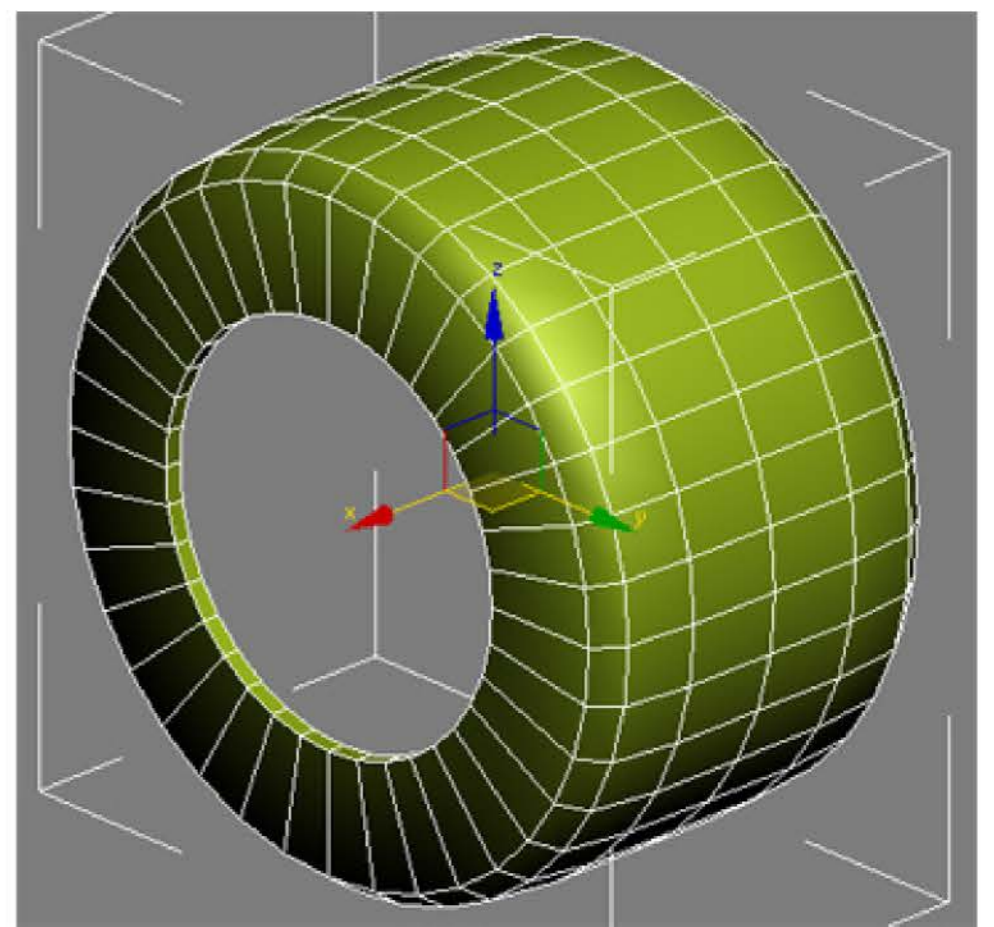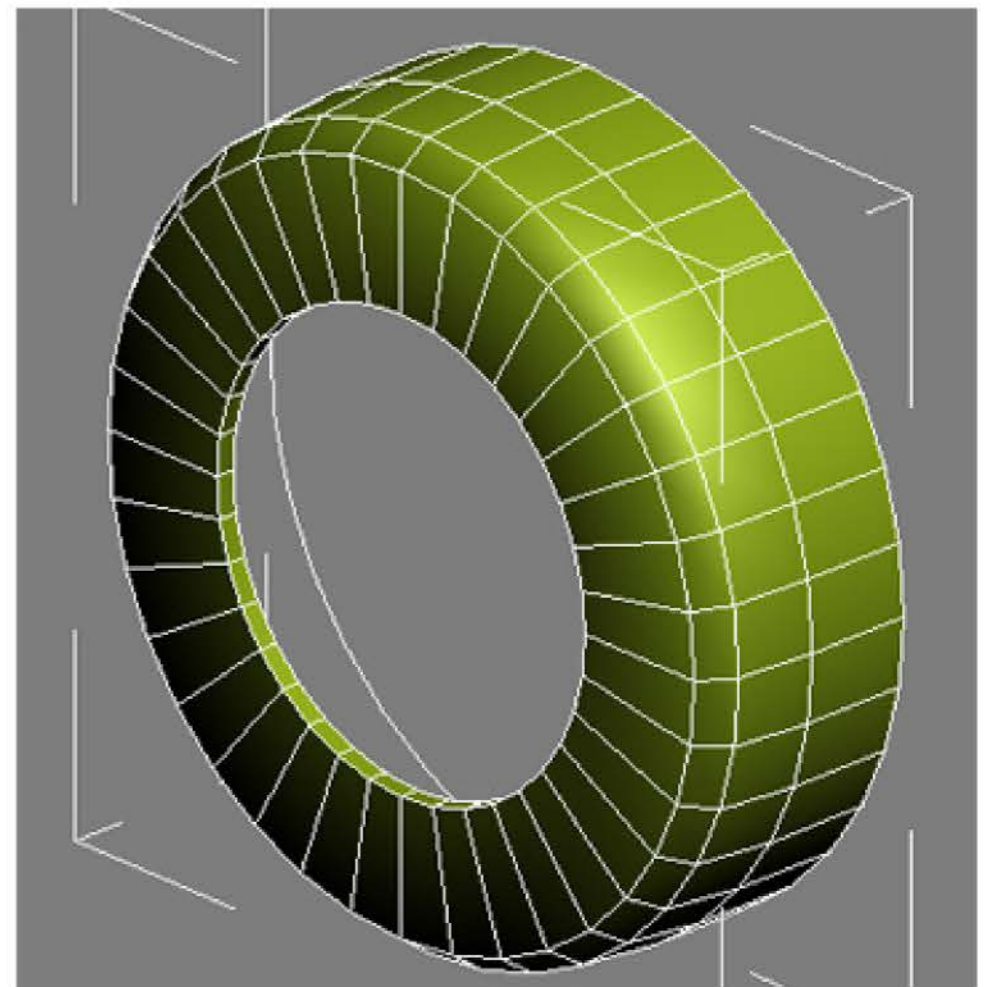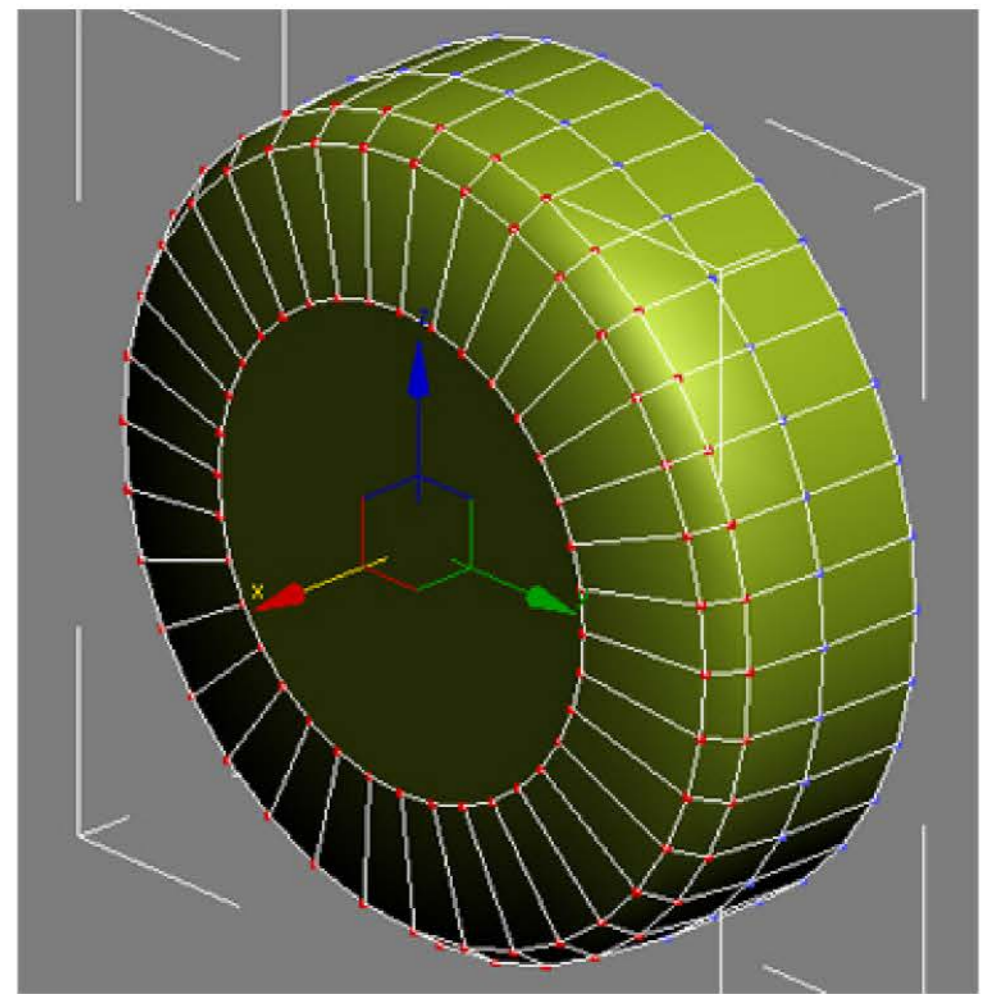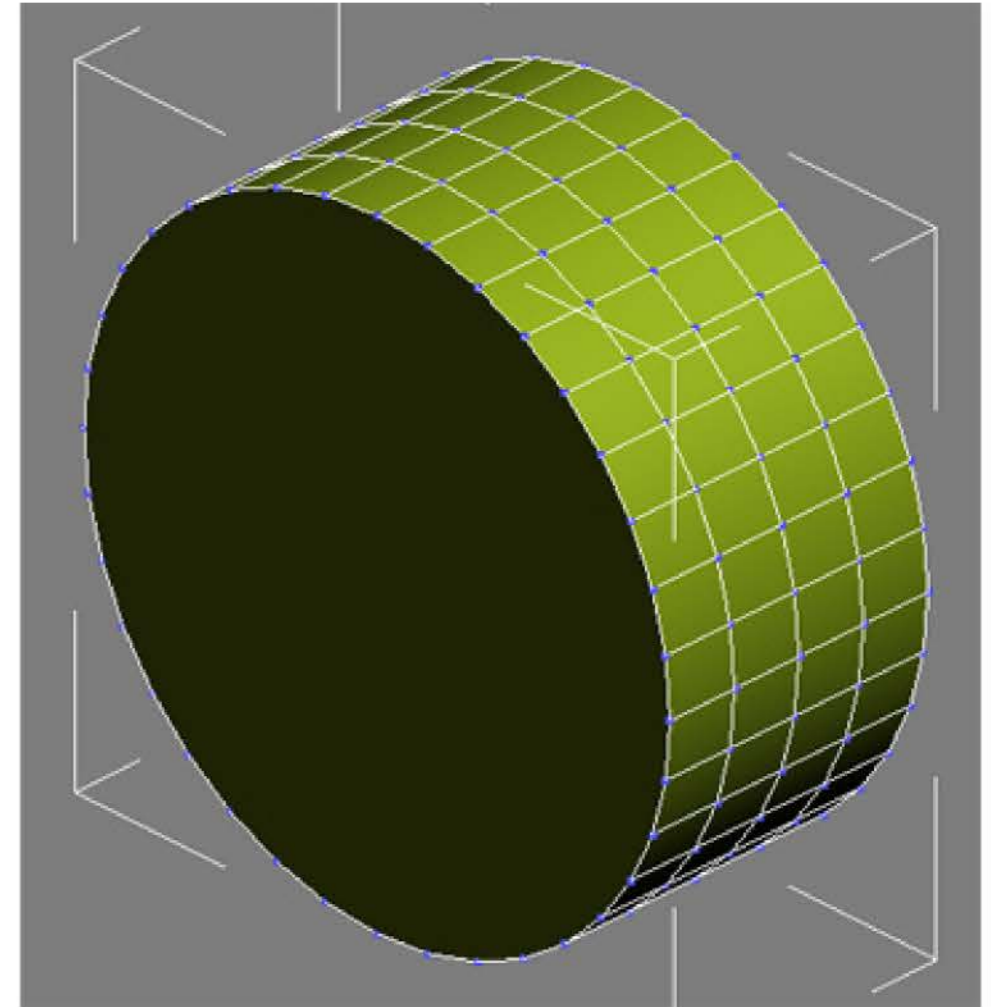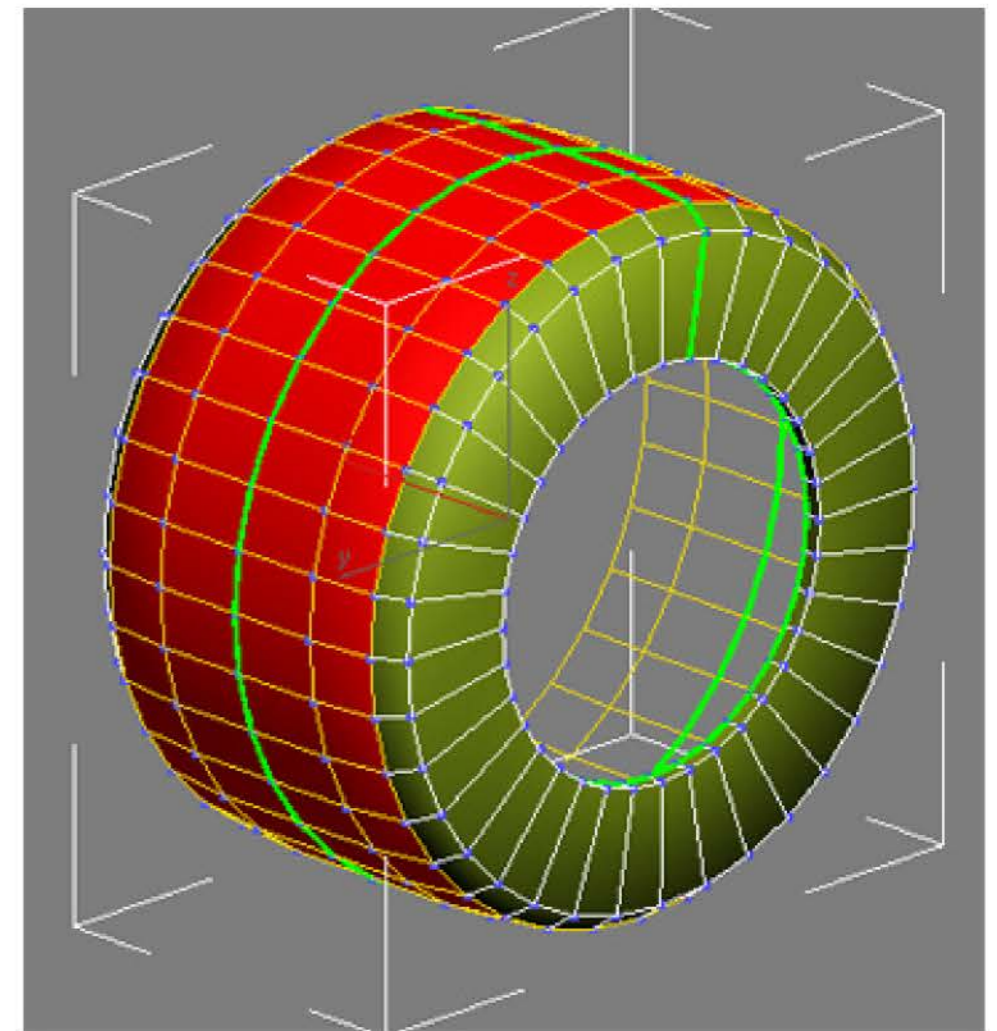
Now in vertex selection mode, add an Unwrap UVW modifier. Click Edit in modifier Parameters panel. Move everything out of the map area.
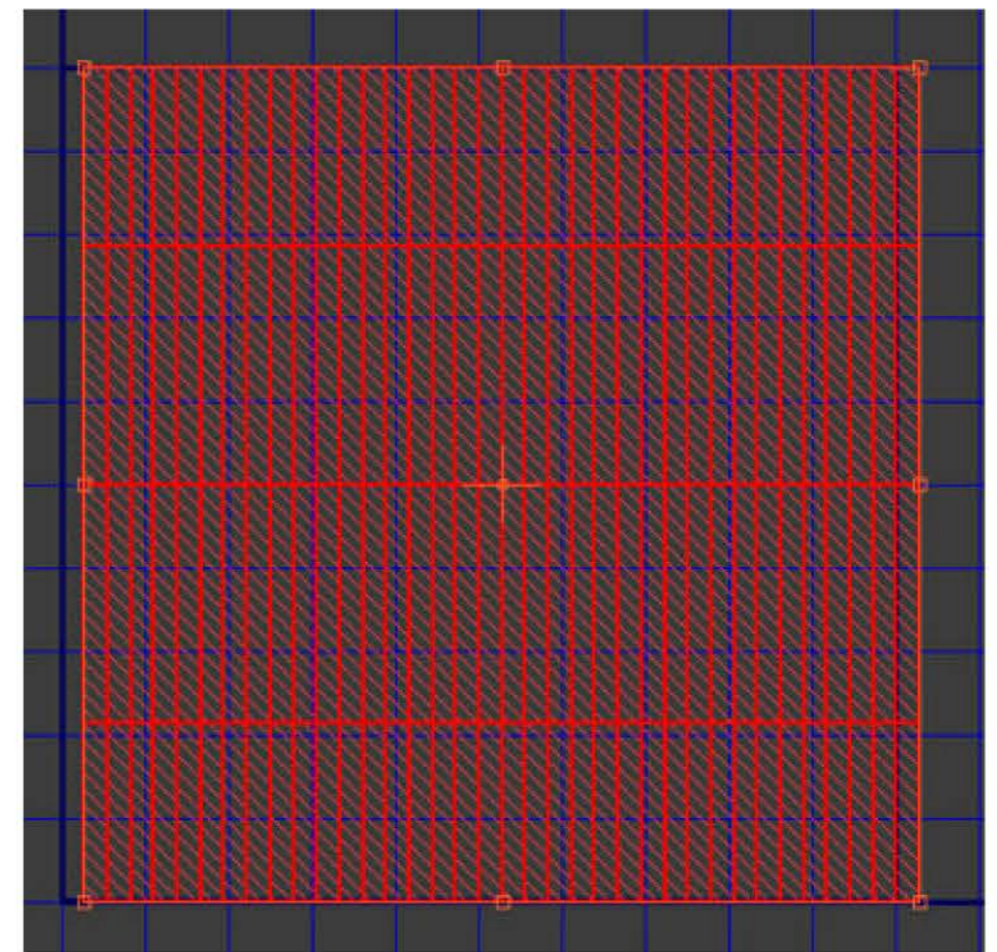
You will now map two distinct parts : tire tread and tire wall.

• Tire tread
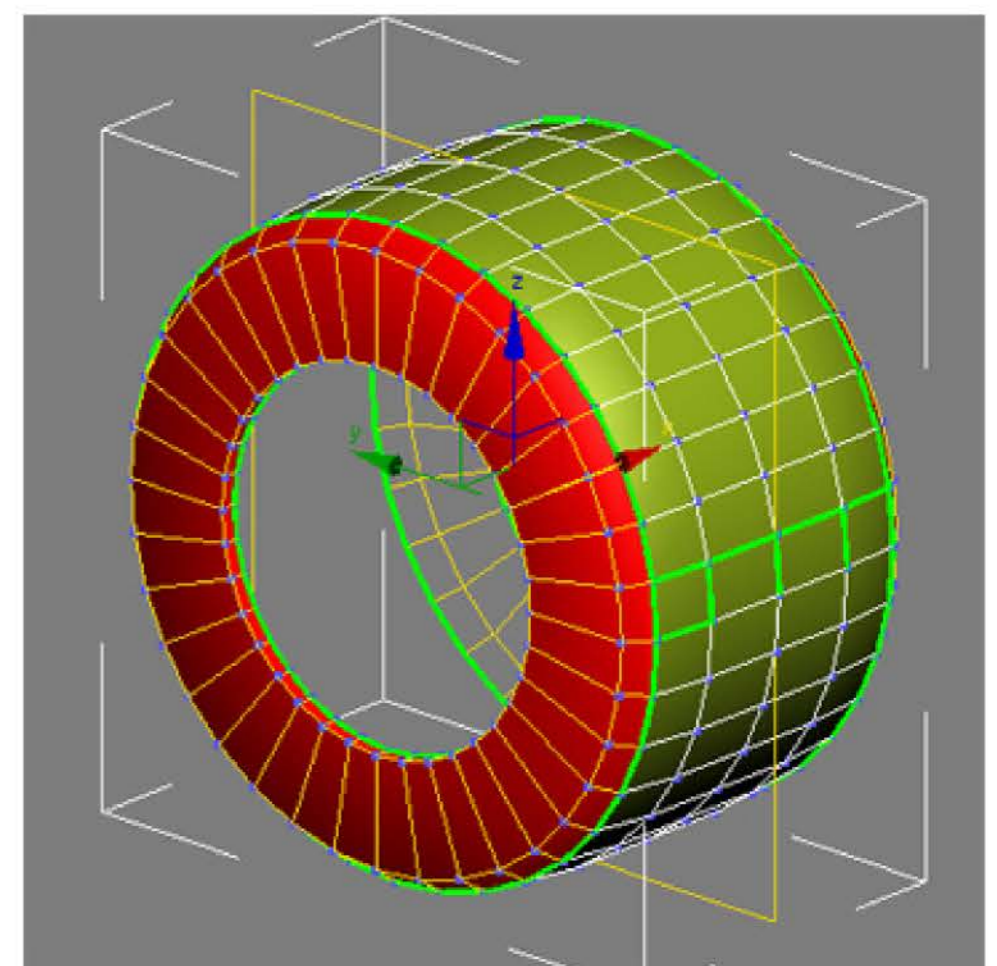Select all faces that will actually touch the ground.

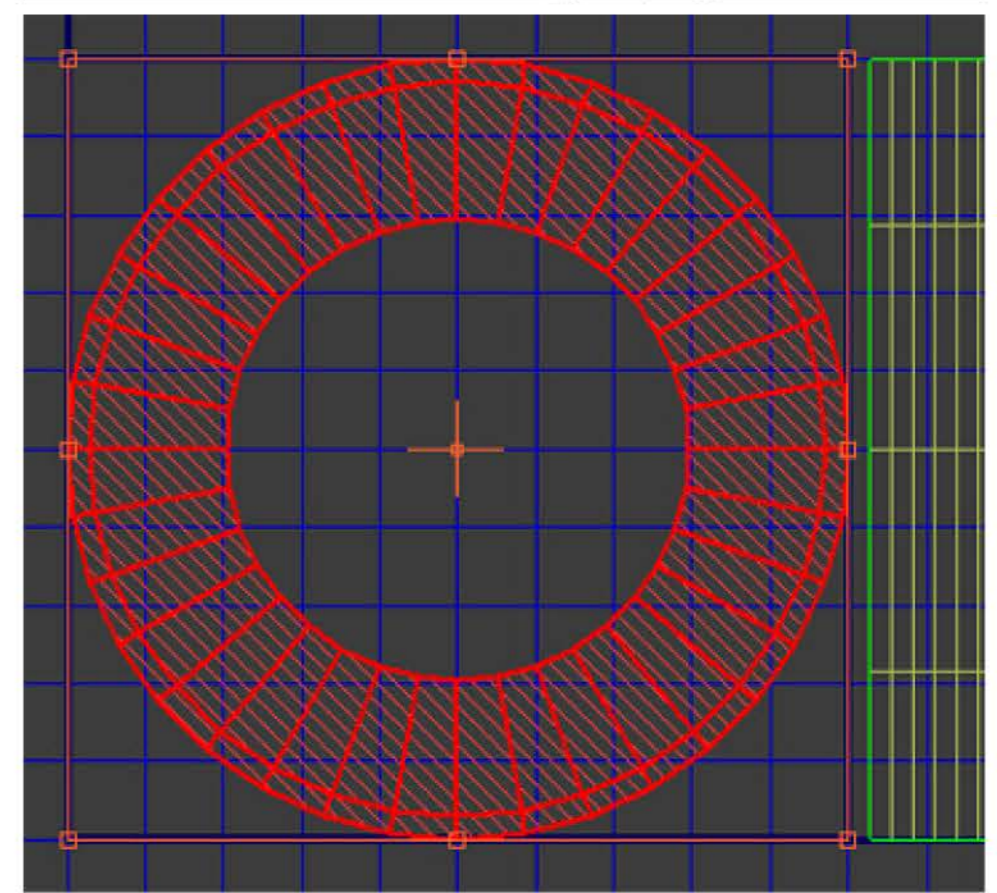Use side view, click cylindrical (Map parameters) and Fit button. Move UVs out of the map zone.

• Tire wall
Select all faces left.

Use side view, click Planar (Map parameters) and Fit button.

Tire material properties and settings.

Both tire tread and tire wall are using a special gMotor material that needs to be
set properly to work. Hit M key in max and add a gMat to your multi/sub material.
In Shader list select Bump Specular Map T1 Lerp All Vertex Alpha

- First 3 material layer (Map #1, #2, #3) are new tire material and are using an
animation (default = 6 frames)
> step 0 to 2 are used for dry compound
> step 3 to 5 are used for wet compound
Those are default values you change in cockpitinfo.ini file :
WheelSpeedAnims=3
// default is 3, but up to 6 *speed* anims allowed, multiplied by any number of graphical tire compounds
WheelSpeedRPM=(168,672,1000,1500,2000)
// RPM thresholds to switch animations between *speed* anims)
GraphicalTireCompounds=2

- 3 other layers (Map #4, #5, #6) are damages material

A full set of maps is composed by :
- color maps : generic_ttread.dds + 0,1,2,3,4,5
- specular maps : generic_ttread_s.dds + 0,1,2,3,4,5
- bump maps : generic_ttread_b.dds + 0,1,2,3,4,5

When tire is damaged the original maps are gradually replaced with the damages
map set :
- color map : generic_ttread_damage.dds
- specular map : generic_ttread_damage_s.dds
- bump map : generic_ttread_damage_b.dds

Assigning textures :
• Click Map #1 button
• Click Bitmap:None button
• Go to your maps folder and select generic_ttread.dds
• Select Animation Source / Texture Maps
• Select Animation Data / Manual
• Enter map name (generic_ttread.dds) in Name field
• Set 6 Frames
• Enter (0,1,2,3,4,5) or 0-5 Seq

Do the same for :
• Map #2 with generic_ttread_s.dds
• Map #3 with generic_ttread_b.dds

And for :
• Map #4 with generic_ttread_damage.dds and no animation
(Animation Source = None)
• Map #5 with generic_ttread_damage_s.dds and no animation
(Animation Source = None)
• Map #6 with generic_ttread_damage.dds and no animation
(Animation Source = None)

Add another material to your tire multi/sub and repeat the same thing with tire
wall maps.

You have to adjust Specular Color and Specular Power for the two materials,
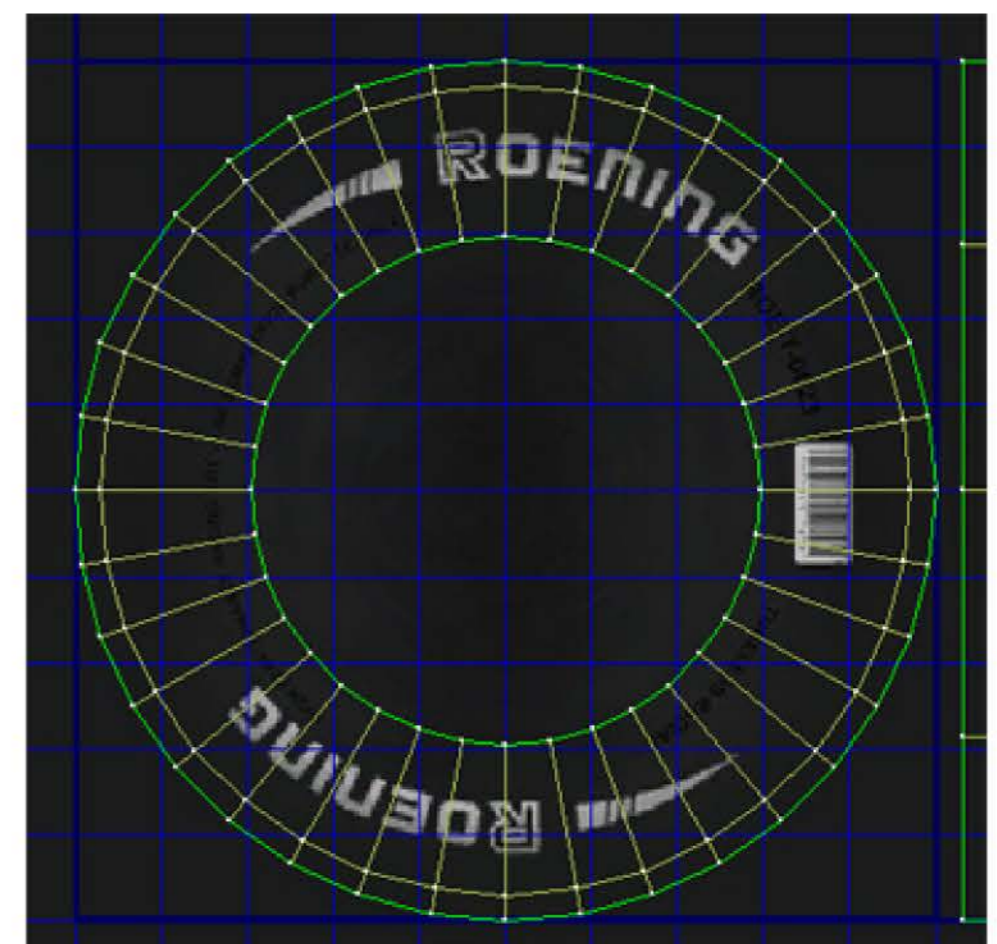using the same values to get the same effect in game.
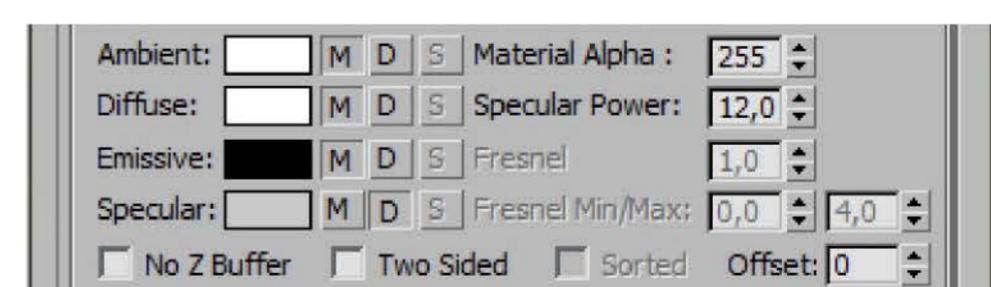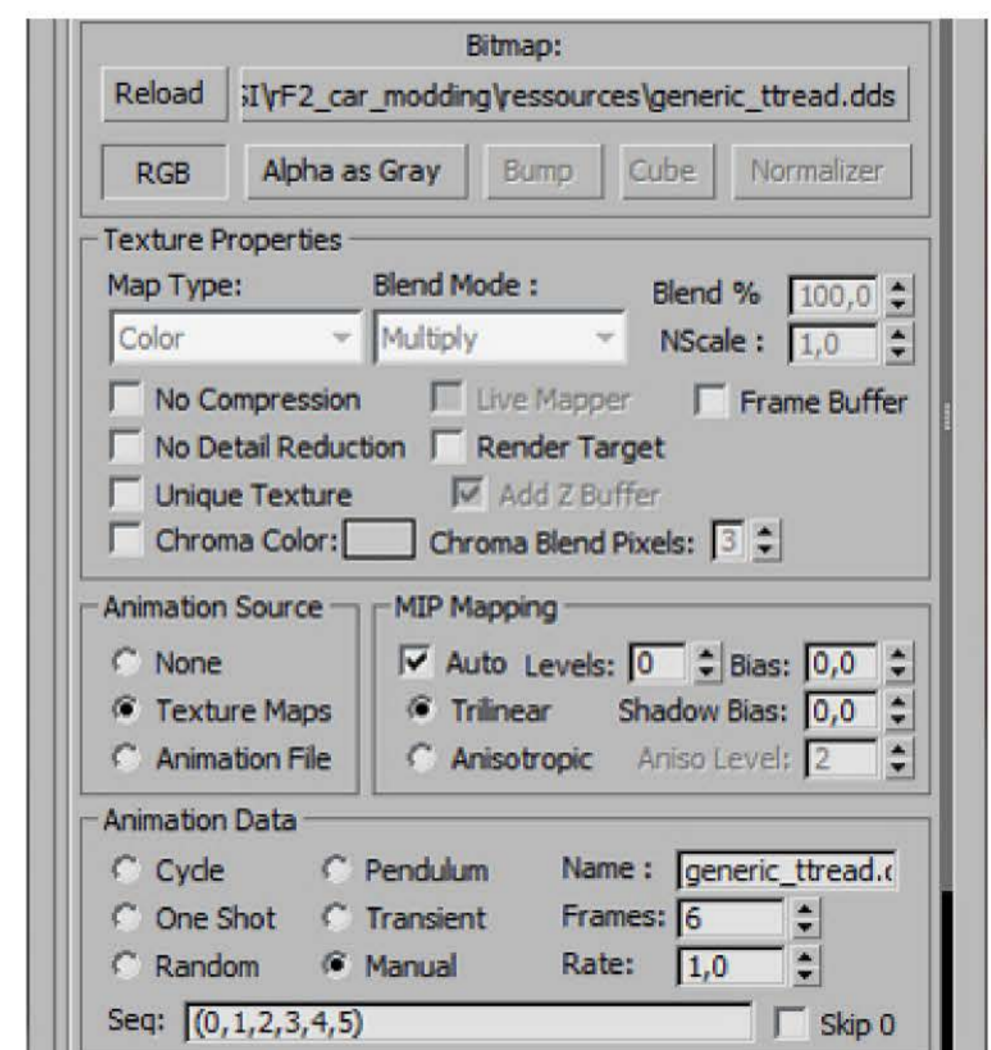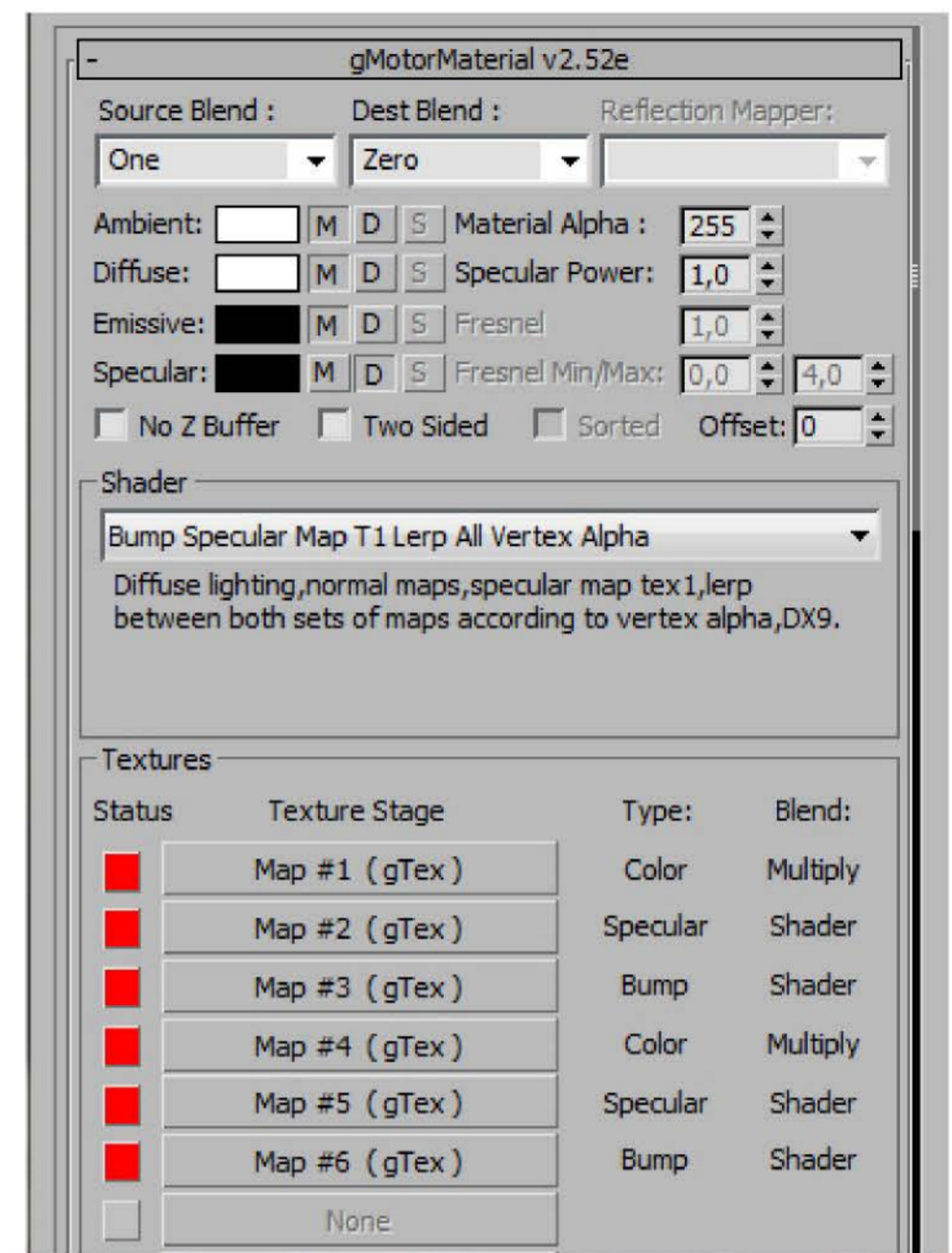
Now it is time to refine the UV mapping of the tire using our maps as reference.
Drag and drop the global tire material from the mat window to our tire.

In the UVWs Edit window, load the tire wall color map (generic_twall.dds)
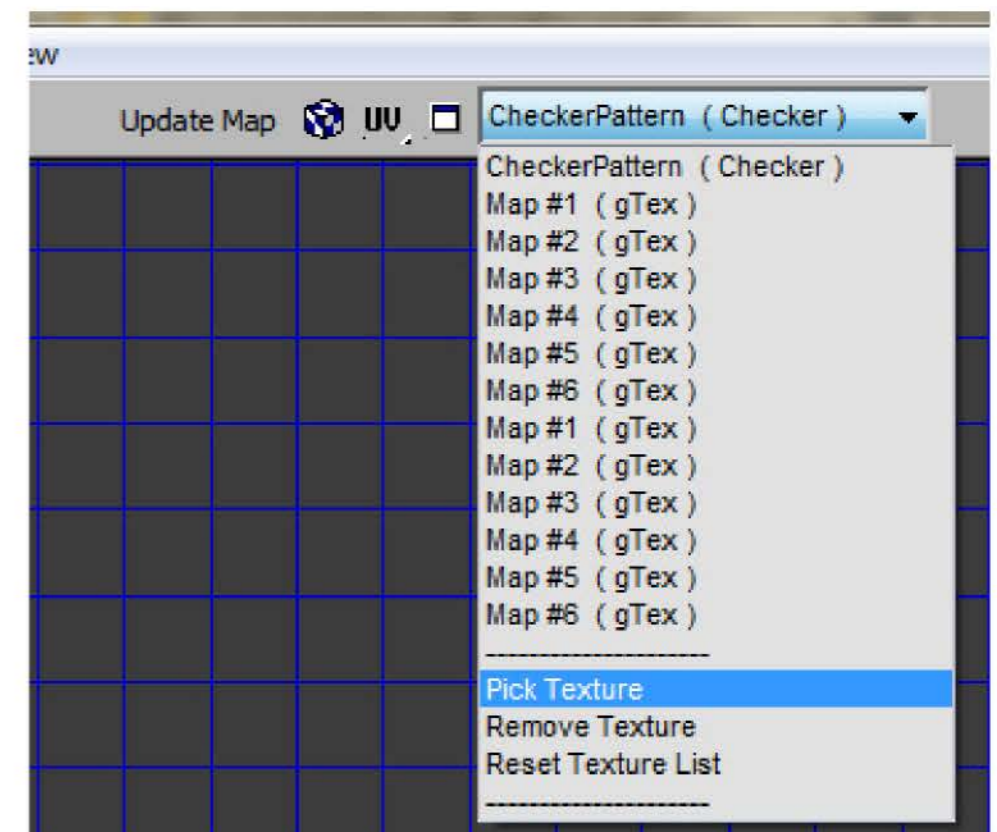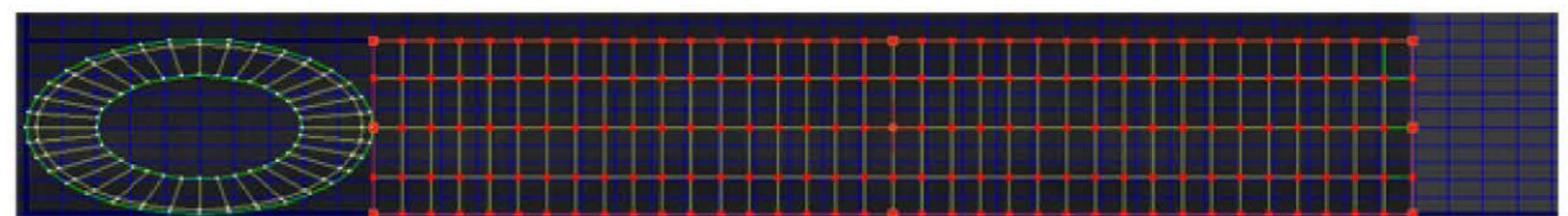

Adjust the wire to match the bitmap.

Load the tire tread color map (generic_ttread.dds)

Adjust the wire to match the bitmap trying not to
stretch the UVWs too much, not cutting tiles.

Do a quick render to have a preview of the tire textured and mapped.

Note : inside or outside tire wall texture will be flipped as both have been mapped
using the same view, don't forget to mirror this part UVWs on Edit UVWs window.