How to use Shape File Fixer to stop the UP #3925 shape file from crashing MSTS on close camera passes.

IMPORTANT: Read this disclaimer and understand first before attempting this procedure

If you are at all unsure about anything in these instructions and are not happy with editing files do not attempt to carry them out, the model will function in the same state and manner to which you are already used to, IE in the no 4 camera view on very close passes MSTS will freeze and crash, most just pan the camera away if it looks as if it will pass to close to avoid this. The NS notch Noses and the alterations to the shape file are not causing this, it happens on a unmodified version of the shape. This is just a short tutorial that explains how I get over the problem on my system and I am willing to share.

I am not responsible if you do not take adequate precautions to protect yourself should a step in this process goes wrong, I have never had any problems with this fix and many engines are running trouble free on my system after carrying out this procedure, carry on at your own risk.

Programs needed

From http://steam4me.railpage.org.au/trainsim/tutorials/sfm_faq.html

Shape File manager V 2.4.2 set up in accordance with its instructions

From http://www.train-sim.com

Shape File Fixer V1 file name sfix1.zip set up in accordance with its instructions

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Just to set the scene: there are many engines that we all enjoy using in MSTS that despite being under the accepted norm of 11,000 poly's or less still give problems when used in the SIM normally the problem shows up with repeated crashing of MSTS when these engines pass very close to the camera, usually in camera View 4.

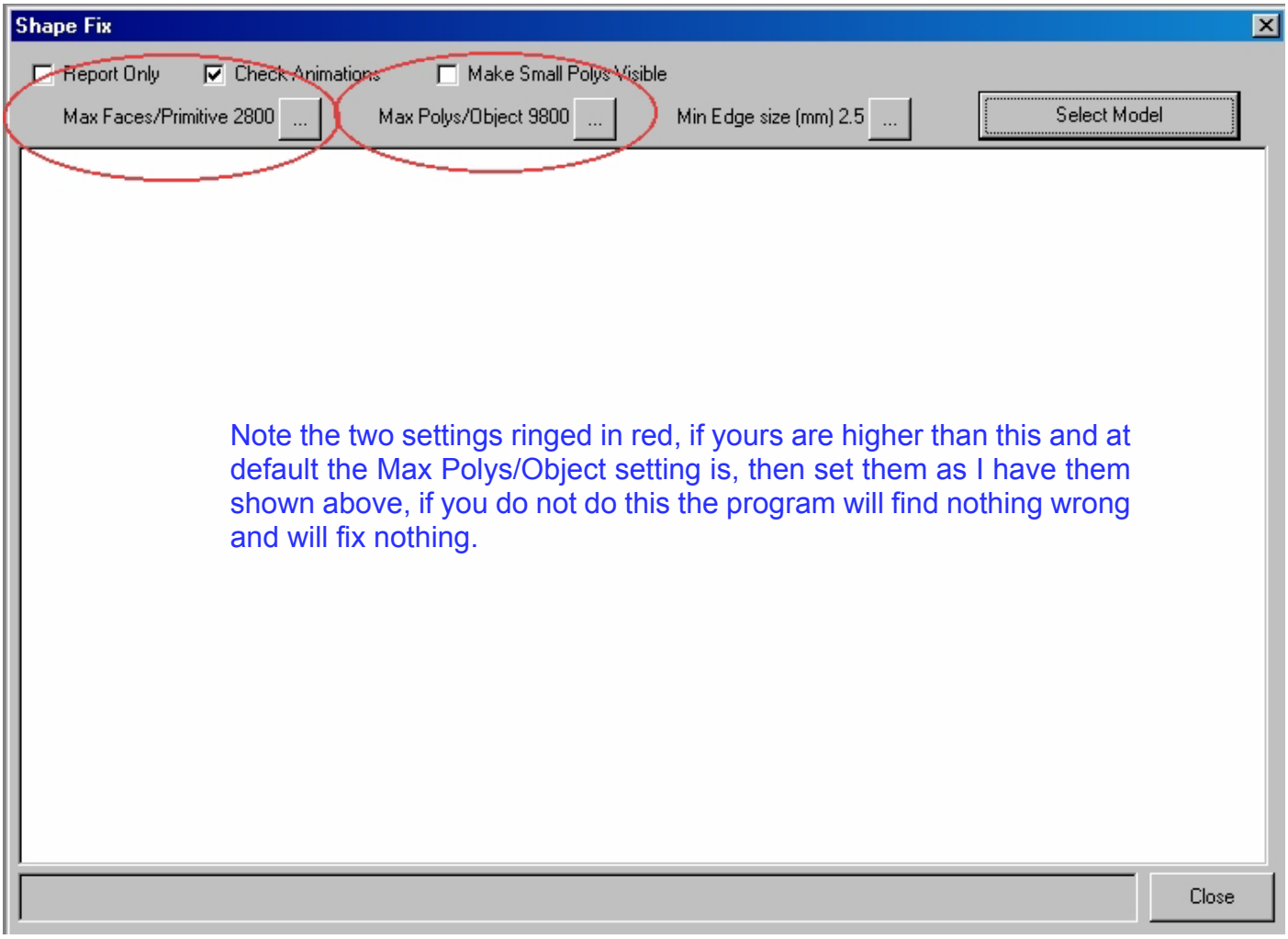
A program was released on www.train-sim.com a while back called Shape File Fixer that has the ability to check shape files and fix problems within them, but I found that at its default settings it found nothing wrong with some of the shapes the UP #3925 one included. So I played around with its settings and found this set of parameters that up to date has cured every one of these problem shape files.

That is what I am going to explain below, for those of you used to using the program all you need to do is to set the program defaults in accordance with what follows and then use the program as you are used to doing, for those who have never used the program before follow the tutorial to the end.

For the purposes of this tutorial work is going to be carried out on the first engine in the NS set #2603. For the UP engine set the sequence is the same, just substitute the NS 2603 shape file and all references to it in the tutorial with one of the UP shape files, note that step 5 in the UP set is different to step 5 in the NS set (different problems are addressed), so you need to do this procedure outlined in this tutorial to one NS and one UP shape file.

Before you start you will need to complete the installation instructions parts 1 through to 5 found in the readme_2603.txt file with the exception of recompressing the shape file, leave it uncompressed.

Create a temporary folder on your hard drive and move a copy of the newly created uncompressed NS_SD70M_2603.s shape file to it, open up the program Shape File Fixer V1 and you will see this screen.



Note the two settings ringed in red, if yours are higher than this and at default the Max Polys/Object setting is, then set them as I have them shown above, if you do not do this the program will find nothing wrong and will fix nothing.

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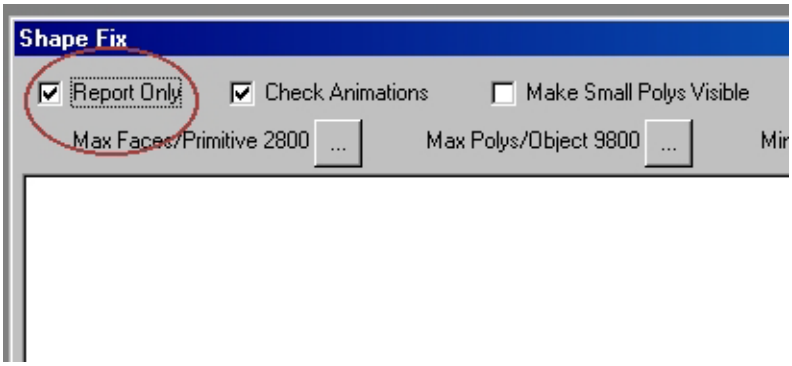
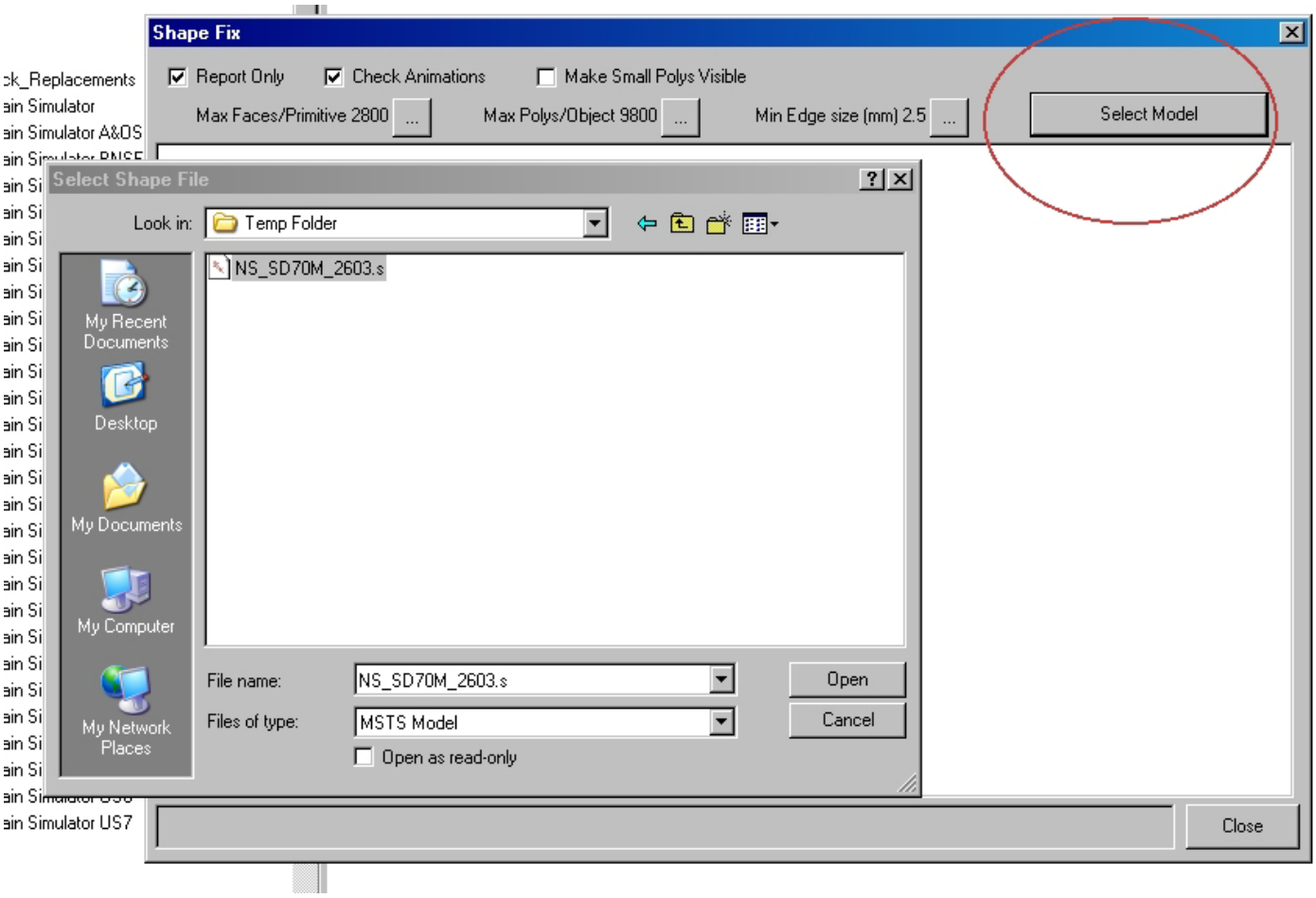
For the first try and so you can get a feel for the program before changing anything tick the “Report Only” box in the top left corner, this will allow you to see the program in action and see how it functions without any changes taking place



First Step:

Click on the Select Model button and in the resulting pop up box navigate to the temporary folder where the NS_SD70M_2603.s shape file is located. Once you have it click on Open.



Once you have clicked on open the program will run in report only mode, but what you are seeing is exactly the same as what will happen when you do it live with the exception that nothing is changed, notice that it does take a while to complete the process, Note that if for any reason you did not leave the shape file uncompressed it will warn you that it cannot work with a compressed file, so go back and uncompress it before continuing.

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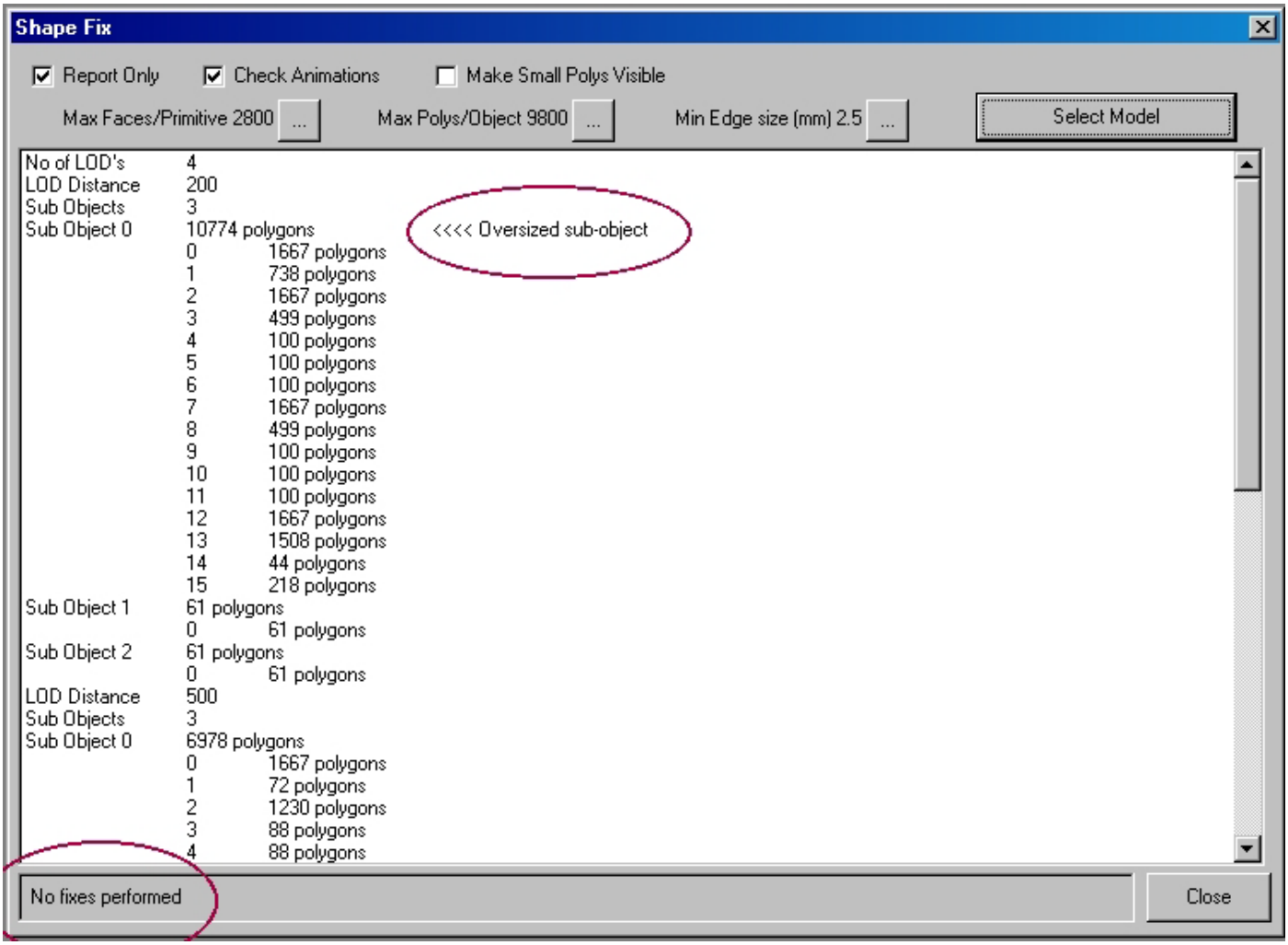

From the screen shot above you can see that it found an oversized Sub Object of 10,774 Polygons that it would not have bothered with at the default settings, also note that because this was a Report Only run that at the bottom it says No Fixes Performed.

Also note that three lines down in the report it states that there are 3 Sub Objects, we will come back to that point at the end.

If that all worked with no problems than it shows that the program is set up correctly and we can get down to curing the shape problem, if the program did not work you will need to find out what is wrong with it and correct it before continuing, that is outside of the scope of this tutorial and you would need to follow the usual channels of help to sort it out,

Right it all worked correctly than lets get going.

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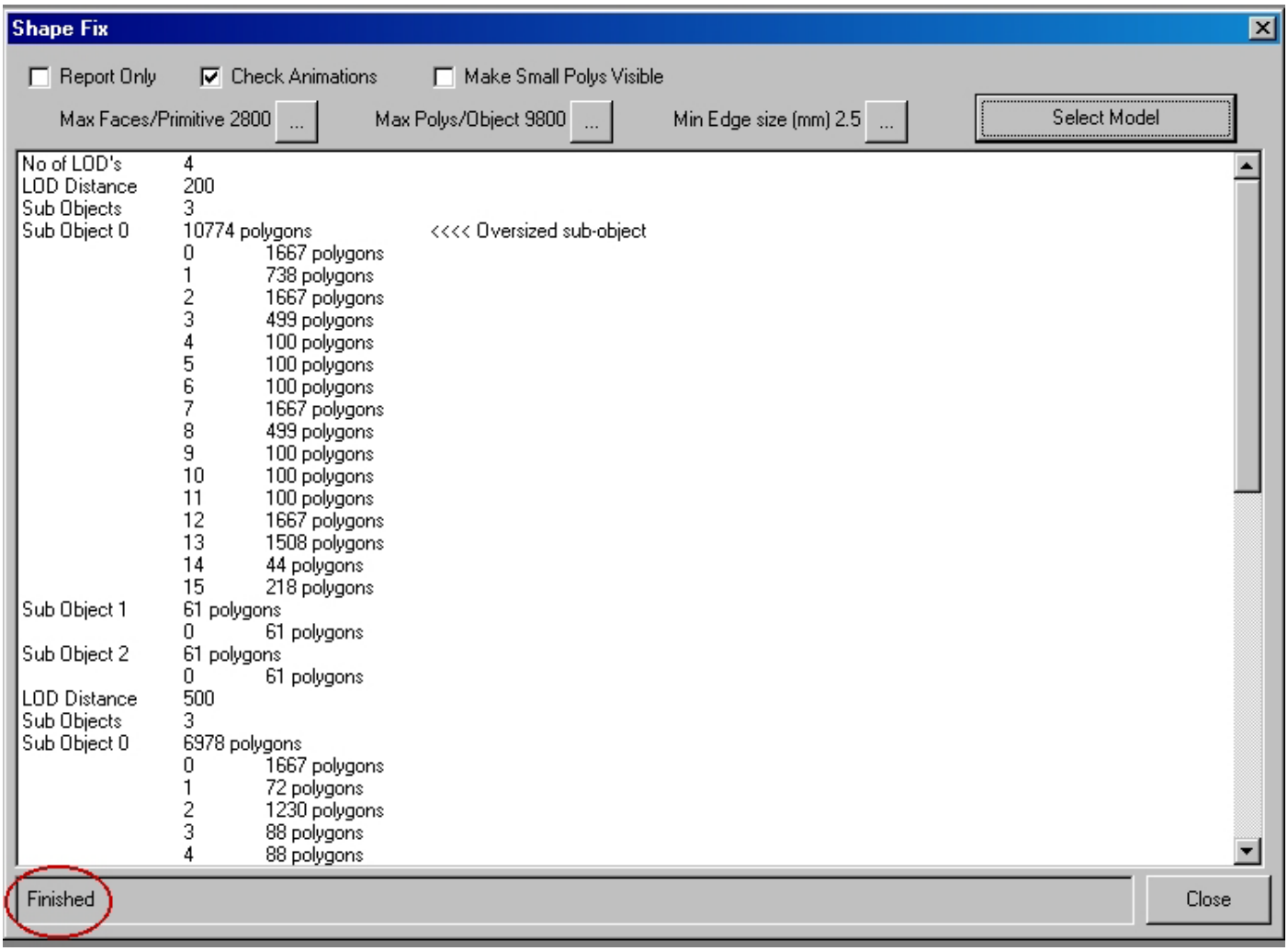
The next step is to unselect the “Report Only” Box so that the program can go ahead and fix the file, after unselecting the “Report Only” box go back to the “Select Model” button again and reselect the NS_SD70M_2603.s shape file and then open, the program wil run again but this time instead of generating a report it will fix the shape file.



Note that this time it will say “Finished” at the bottom rather than “No Fixes Performed” You can at this point close the program if you wish, be patient it does have a delay before it actually closes.

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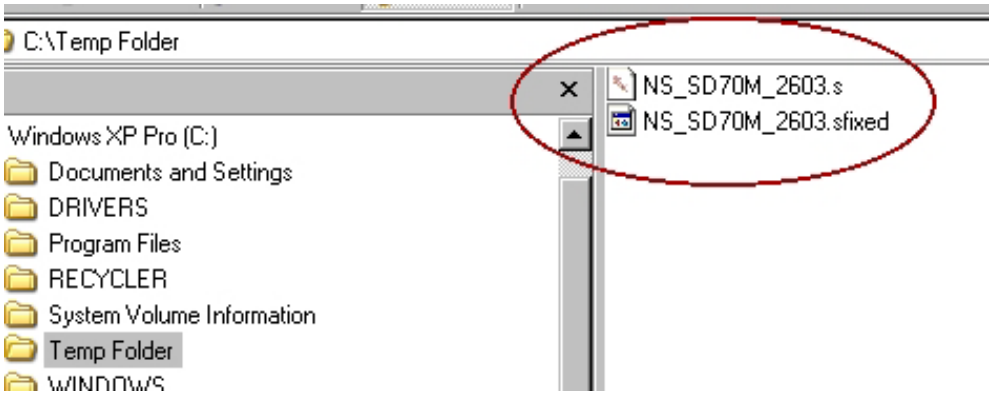
What now?,

well go back to the temporary folder you created and put the shape file in at the beginning, note there are now two shape files in there, your original and one named “NS_SD70M_2603.sfixed” this is the newly created fixed shape file.

Rename the original shape file from NS_SD70M_2603.s to NS_SD70M_2603_orig.s

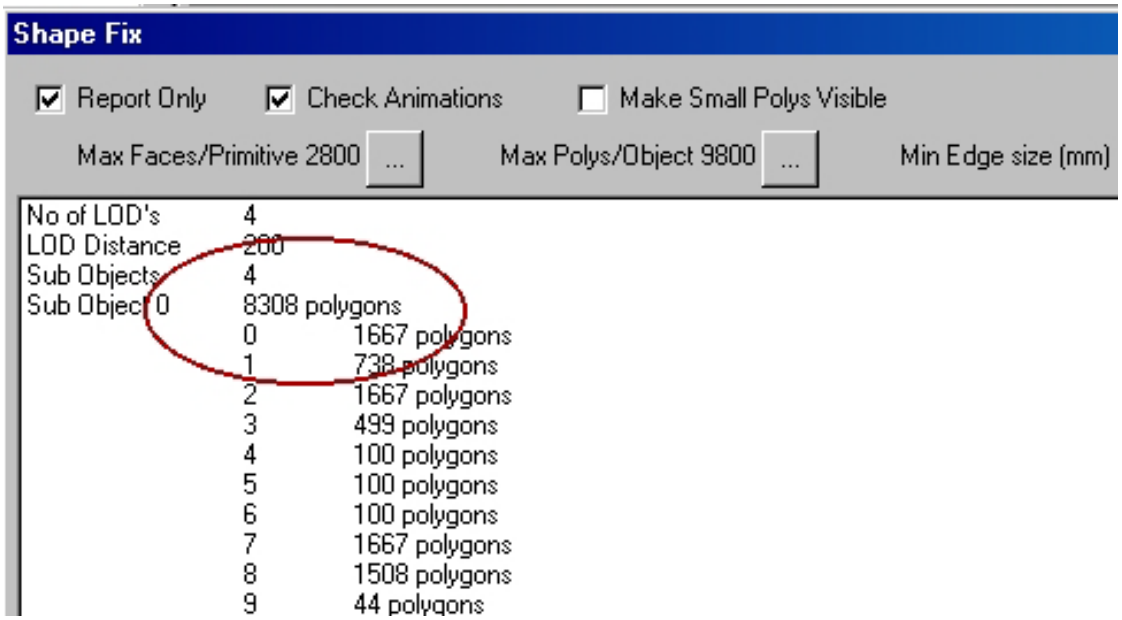
and rename the NS_SD70M_2603.sfixed file to NS_SD70M_2603.s

Then recompress it with shape file manager and move it back to the engine folder from the temp one. When satisfied that all is well go back and delete the shape file NS_SD70M_2603_orig.s and the Temp folder



By then copying and renaming this newly created shape file you can use it for all the rest of the engines in the NS set, For the UP set, again, once you have changed one shape file it can be used for all the rest of the engines in the UP set.

To conclude, what did Shape File Fixer actually do?, well remember at the beginning when we run it in report mode it showed an oversized sub-object of 10,774 polygons, now running the new shape file through a report only run shows it has been reduced to just 8,308 polygons and also notice the third line down, there are now 4 Sub Objects instead of 3, which is where all of those extra polygons went to, the program created a completely new Sub Object in order to cure the problem.



Since I started doing this to engines that consistently caused crashes when running close by the camera, they have all performed perfectly, only do this to models that cause the problem, its not worth the effort to mess about with shapes that cause no problems at all.