Tankslacno

Live for Speed (LFS) Patch 0.7D41 – Report

IMPORTANT/RELATED BUGS TO TEST PATCH

Unnecessary game crash/force quit

How to reproduce this crash?

Thankfully, it's easy to reproduce this:

1) Enter single player.
2) Choose a mod which AI drivers can drive.
3) Select a track where AI drivers path for that track has not yet been generated
4) Add AI driver to grid, it's easier to reproduce this if you use more than one mod.
5) Start the path generation. And in the middle of that path generation, change to another track by using command /track
6) Game crashes/quits instantly – but does not freeze.

How to fix this?

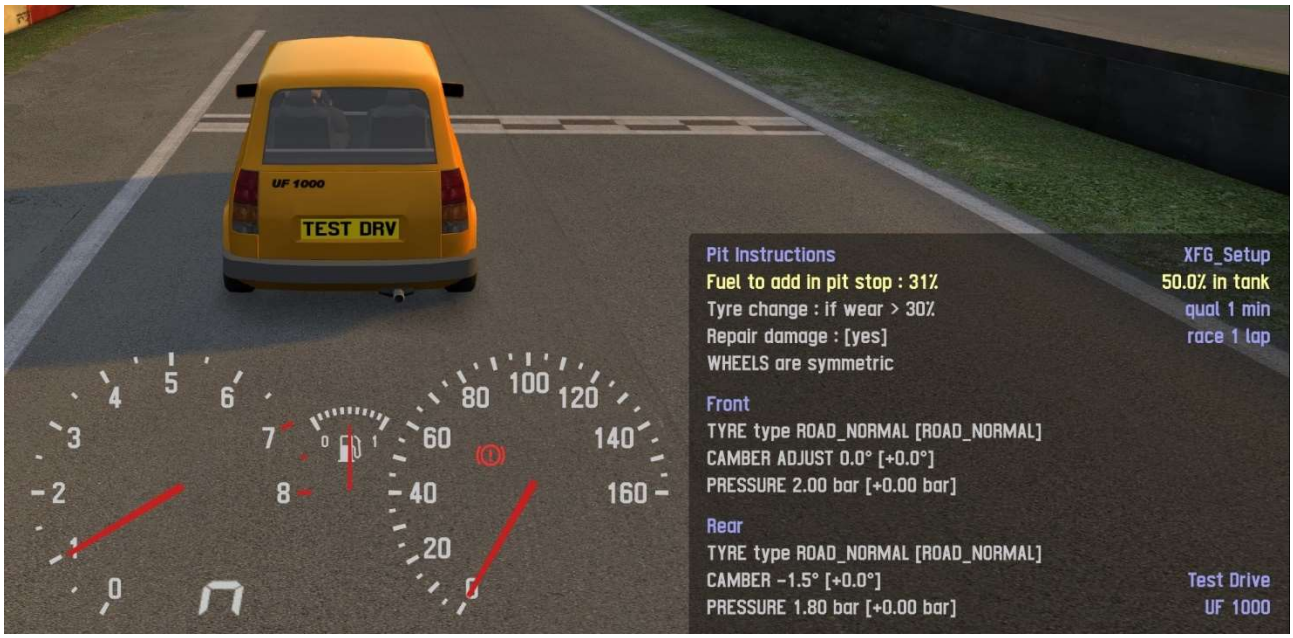
I think the way to fix this is simply to forbid player from typing chat binds and messages/commands when it generates that path for AI drivers - after all, you can always cancel that from generating by pressing Esc or just wait until that path generation is complete.

Small bug when test driving in D41

This is related to this update in the interface.

> "Simple versions of F11/F12 displays are now available during an SPR"

There seems to be a bug that when you enter test drive from replay. During that test drive, if you open F12 display, you can see that the setup name is your most recently chosen setup. I've attached a photo below:



1) As you can see from F12 display, the setup name is XFG_Setup. So it chooses most recently chosen setup, even if it's from a different car. That "XFG_Setup" is actually from XFG, not UF1!
2) This name does appear correctly if your most recent chosen setup is default setup, like [hard track]. Weirdly, if you choose [rallycross] and then test drive a car which does not have that as a default setup, it does not display setup name at all.

Other D41 updates:

Now I'm checking out other AI updates in D41.

"Better line following by bikes (contact patch / effective weight)"

Does "effective weight" refer to the bike's actual weight? Because if so, I'm not sure if it's still good enough. I've addressed this in "Problems with AI's using bikes" section.

"Overtakes are considered on a group instead of only individuals"
"More distant consideration of other vehicles at high speed"
"Better estimate of the possibility and duration of a pass"
"When planning an overtake, time is allowed to pull in after pass"

All these four updates seem to have a positive effect for AI drivers on track. Of course, there is a room for improvement. For example, I tested AI having GTR-cars on Kyoto Ring Oval (KY1) and could clearly see they have a much better distant consideration.

I also noticed that AI drivers can now clearly overtake at corners as well. And probably the best feature is that AI drivers no longer slam their breaks when they're beside another driver and think they cannot do that overtake. Instead, they really try to commit to make that overtake successful and usually, they can do that!

All in all, overtaking seems to be improved massively. It seems like AI drivers are way more confident when alongside another driver they're about to overtake. From these several replays what I've attached, you can clearly see that AI's improved behaviour at the track has been successful.

"Better collision avoidance when close behind or beside"

One thing I noticed that even though it has better collision avoidance on straights and apexs, this seems to have gotten bit worse when approaching corners. If AI drivers have different skill levels/speed, it's not uncommon in this test patch that they just ram behind the car in front of them.

Best way to test this is to have AI drivers driving same cars but apply different skill level for each of them and then make sure that the slowest AI's start at front and fastest at back of the grid.

I'm not sure does this apply how well when AI's drive on pit entry lane. I tested with GTR's and it seems like they can still ram behind the car in front of them when approaching pitlane which can inadvertently cause drive-through or 30 second time penalty to the car in front for speeding in a pitlane.

"Possible to reset if an approaching vehicle is moving slowly enough"

I would be interested to know, what speed is considered as "slowly enough". Does this update take considerations the distance between approaching vehicle and that vehicle wanting to reset? My AI drivers didn't seem to reset their bikes at South City Long (SO4) considerably faster when compared to before.

"Less rapid turning of the wheel when initiating a pass"

This seems to work great as well. I noticed that sometimes AI driver goes offset from the car in front, but then tries overtaking from the other side. In that situation, one could clearly see that AI doesn't try to "force" their vehicle to the offset from the car in front.

Remaining issues mentioned in that thread:

> "They are still a bit too keen to overtake when their current speed is low, because they aren't taking account of the time it will take to accelerate to the speed they should be at."

Them being keen is actually a good thing if they are at least somewhat faster than the car in front of them. As I mentioned, they can overtake in corners more often even though their current speed in those is usually low. For example, AI drivers with GTR cars manage to overtake other AI's that had lower skill level on Blackwood Historic Reverse (BL2R) during the corner located just before that long backstraight.

> "I've looked at the calculation for braking and think there is (and always has been) an issue where it assumes the brake balance is *just right* for each corner. I wonder if I can make the braking adapt for the actual brake balance…"

I noticed one potential problem with this already: since 0.6U we can change our local AI drivers live settings and pit instructions (F11 / F12). If you change its brake balance just before the corner, does it have enough time to still make that braking adaption for that actual brake balance before they are at that corner?

AI at the pitlane:

Now, for the bad news. While I praised about AI drivers being improved on track, same cannot be said about them being at the pitlane. This is because at pitlane, AI drivers seems to have become a lot worse than previously. Not only they still get stuck at pitlane if something is blocking them, but this also occurs for them:

I'm not sure did you do this on purpose, but my main issue on pitlane is that AI-drivers don't seem to have a clear logic anymore that which pit stop box they enter when they're pitting:

- Previously, AI drivers entered that pit box which was corresponding to their position when they started last sector. So, for example, if AI driver was in 1st place when they started last sector of a lap they're about to pit, they always went to the pit box furthest ahead which is the one closest to pit exit. If they were second in the race, they usually went to the second furthest pit stop box to do a pit stop.

- Now it seems like it's completely random which pit box they do enter. And because AI's are still way too careful on pitlane since that update on 0.6K, it seems way more likely AI's are temporarily stuck on pitlane when doing a pitstop. Some AI drivers seem to dive into same pit stop box almost at the same time. What this result is in worst case that about 5 AI drivers are stuck in the area of 1-2 pit stop boxes and vast majority of them are waiting for one AI driver to finish their pit stop and leave that box.

This situation can be easily seen in replay I've attached where AI drivers drove GTR-cars at Aston Historic Reverse (AS4R). At one point they enter a pitlane to make their mandatory pit stop. And at one point there was one GTR-car pitting and behind it, a line with three GTR-cars waiting to pit at that same pit stop box!

So my question is: could you tell do AI drivers have a new logic to determine which pit stop box they choose when they're pitting? And if so, what is their new logic of choosing a pit stop box?

I should mention that this problem does not happen in the lap of honour after the race or in-lap during qualifying. AI's will enter inside their corresponding pit box like they have always done.

Problems with AI's using bikes:

First of all, it seems like they're ignoring yellow flags / crashed bikes way more likely when compared to other vehicles.

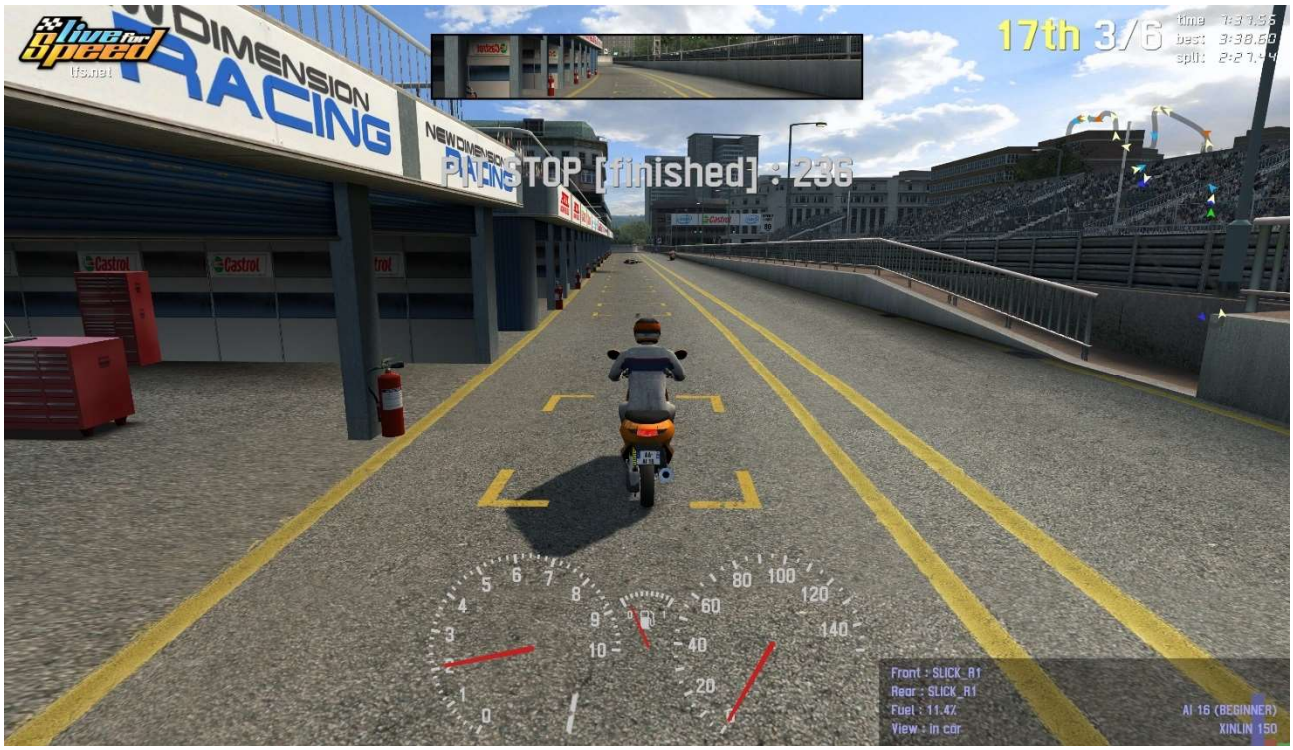
I'm not completely sure is this the reason, but I think there is one significant factor that determines how much does AI driver struggle when driving a bike. And that is does that AI driver has a passenger as well.

I held a race with AI drivers on different Westhill Karting National. There you can see two AI's driving on mod "MOSQUITO - 150cc". They are using the exact same setup with one difference: one of them doesn't have a passenger and one of them does. You can see that the one with passenger crashes sideways way more often compared to other bikes.

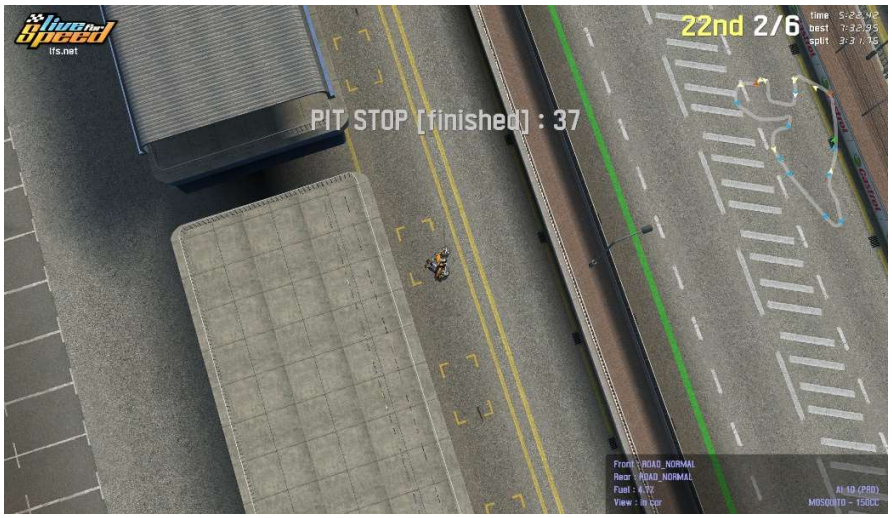
Another factor that should be taken into consideration is a possible wind. Now, that race was held without wind so I'm not sure how much more difficult low wind could make AI drivers racing with bikes.

Additionally, sometimes, after they reset the bike, they start driving again and immediately wobble left and right before falling again.

I also did a race at South City Long for AI drivers driving with bikes. Some AI's are driving with scooter "XINLIN 150" and they got stuck to pit stop box. I don't have this problem when I itself drove that mod.



Sometimes they also shut their engine off with no clear reason, even though resetting a vehicle is allowed. I think apparent reason is that if they're facing an uphill and don't have enough speed/power, they give up and shut their bike off, which may result them being end up driving backwards, if they're at the middle of uphill. But there is another problem with bikes. Here's a screenshot of what has happened to bike "MOSQUITO":



As you can see of the screenshot from the previous page, this is from the same race. I noticed that if you/AI fall sideways during or entering a pit stop, it results that driver making a pit stop like normal, but after that it has been completed, they then get stuck to that pit stop box! Why they're stuck? Because if you're doing a pit stop, you cannot reset your car even if resetting a car is allowed! This same restriction occurs even when game tells your pitstop has been finished and you haven't left that pit stop box.

I already have a solution, where this can be at least partially fixed: if resetting is allowed, it could be also allowed after you have finished your pit stop but haven't yet left that pit stop.

Since it's way more common for AI's to roll with bikes than is it with cars, this seems to be a real issue.

OTHER CAVEATS WITH AI DRIVERS

Fuel load at start bug:

It's not related to this test patch, but this still seems to be quite weird. This situation happens on closed circuits where AI drivers can drive but cannot make a pit stop. These tracks (plus reverse configurations) are:

- South City Sprint 1 (SO2)
- South City Sprint 2 (SO3)
- Fern Bay Rallycross Green (FE6)
- Autocross Drag Strip (AU3)
- Autocross 8 Lane Drag (AU4)
- Westhill Karting (WE4)
- Westhill Karting National (WE5)
- Rockingham Lake (RO5)

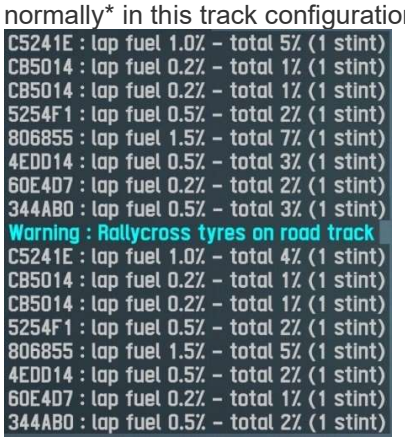
On these tracks during a race, it is possible that AI will have different fuel load at start depending purely on the fact that did you allow refuelling or not.

In both cases, AI drivers do have enough fuel to finish a race, but it's still a bit weird that for example, when I tested GTR-cars in SO2: they did have 5% for FXO GTR (FXR) and XR GTR (XRR) and 7% for FZ50 GTR (FZR) when I allowed refuelling, and when I did not, they were 6% and 8% respectively.

Even more weird was in AU4 where I tested with 8 bikes. When refuelling was allowed, four of the bikes had 1% of fuel at the start, 3 had 2% and 1 had 3%. But when I disallowed refuelling, all bikes had 1% except one which had 2%.

I'm assuming this is due to the same bug in qualifying, which is if don't allow refuelling on qualifying, AI will run out of fuel during their in lap (usually lap 4, sometimes lap 5) and stop in the middle of track. That bug happens on every track which has pitlane.

Below is a screenshot which compares fuel loads at start of two identical races, separated by that warning text. Track configuration was WE5R and race length 3 laps. Only difference is that in the first one, refuelling was allowed and that in the second one, it was forbidden – even though you cannot even refuel at all normally* in this track configuration! (*=Normally means without adding custom pit stop boxes.)



As I mentioned above, this same situation happens in qualifying, but in practice session, there's no difference. All AI's have 50% fuel load at start of every practice session.

AI driving RallyCross with forbidden cars?

So it seems like it's possible to have AI drivers driving rallycross tracks with cars where it wasn't previously possible. You just have to let game generate path for those cars - similarly it does to mods when AI's drive mod for first time. At least I haven't seen this being mentioned before that you can apparently do that now.

Now, I'm not sure since when this has been possible as Scawen did mention this in January last year (https://www.lfs.net/forum/post/1982051#post1982051) :

Question: "Is AI driving on rallycross tracks always disabled for car mods? Maybe there is a chance it could work acceptably for lower power cars. I don't know what is the rule for standard LFS cars regarding this. Is it based on tyre availability and power-to-weight ratio? Or is it just hardcoded after some experiments?"
Answer: "How it works at the moment - if the mod car has a default setup with off road tyres, then the AI can use it."

However, I tested this with mod "LILLIA-X GTR" which does not have off road tyres at all and it still let AI drive on Blackwood RallyCross (BL3. Same thing happened with "FORMULA RC6" at FE6. I did check out Version history of LFS in LFSManual and there is not a single mention that AI cars can now drive previously prohibited cars on RallyCross tracks.

Patch 0.7A2 mentions: "AI paths can be generated for **mods**…". Reason why I'm writing about this is because I'm not sure is this on purpose?

Below is a screenshot of two AI drivers driving with Formula V8 (FO8) and Formula RC6 at FE6. Granted, Formula V8 does have "ROAD_SUPER" tyres, but it's still weird to see it driving.

AI having a problem with entering a pit lane on Fern Bay Club / Gold / Black (FE1/3/4):

AI drivers seem to spin when trying to enter a pitlane on FE1, FE3 and FE4. I've attached a replay of GTR cars driving on FE1. So WE1R/WE2R are not the only tracks where AI have problems entering a pitlane.

OTHER BUGS I NOTICED:

Driving forbidden car at Kart Track:

So, normally, you cannot drive with certain cars on track configurations WE4 and WE5. However, there is a way, where you can kind of bypass this check. You can do it via Training Lesson Editor.

How to reproduce this?

1) Open a Lesson Editor in main menu.
2) Add a new training lesson from scratch.
3) Choose either Westhill Karting or Karting National as a track.
4) Choose a car which is normally prohibited to use on that karting track configuration.
5) Save that training lesson and try that lesson in Training mode. Use List Editor if necessary.

It does not matter, what is the lesson type, but I recommended that you use Test Drive as a lesson type, since it's related to this: if you happen to have another LFS instance open when you do that lesson, it allows you to even save that replay so that you can test drive it afterwards.

How to reproduce this?

1) Open two LFS instances – and just to make sure, put Single player replay save setting to [auto save – not recommended]
2) Start doing that custom lesson. If you chose Test Drive, just drive one lap on track to end it automatically.
3) After that lesson has ended and you are presented with congratulations screen. Do not exit that screen and open that another LFS instance and go to replays. You notice that the newest single player replay is that lesson you just did. Open that replay. (If you did exit from that congratulations screen, that replay will be deleted automatically)
4) Enter test drive. Drive for a bit and you should be able to automatically save that replay in a different name.
5) Now you can always test drive with a car that is otherwise prohibited to drive on karting track.

Bugs related to custom training lessons:

Speaking of training lessons, there are few bugs in custom training lessons. First of all, there is a possibility where LFS displays wrong required licence when choosing a training lesson. How to reproduce this?

1) Create any kind of lesson and then add it to the Training List by List Editor
2) Now, open Lesson Editor, load that lesson you just created and edit that lesson by changing its track and/or car so minimum required licence to access it changes.
3) Save that lesson and open that Training screen again. You notice that in the "Mode" column the minimum required licence remains the same. Thankfully, you cannot access that without sufficient licence.
4) You need to update that mode manually. Luckily, just open List Editor, it then changes automatically.

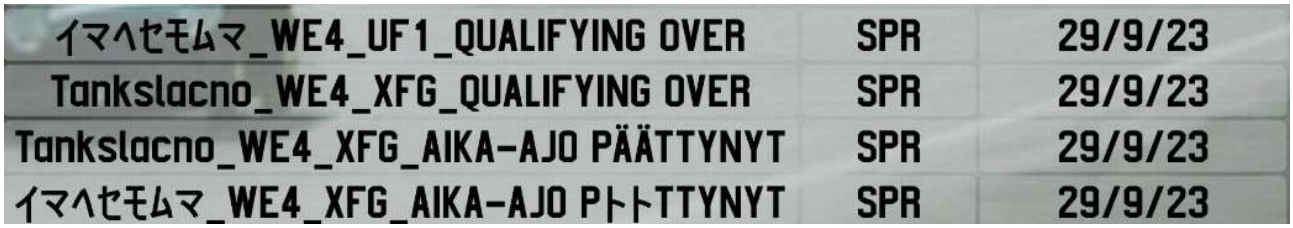
So, if you first create a lesson where track is Rockingham / Layout Square and you then update it by changing its track environment, it's mode will still stay as S3 in Training screen until you open List Editor.

Another bug is this: it seems like it's better to give up in the middle of the test drive. Why? Because if you start that test drive and then quit it in the middle of it, your grade will always be "PRO". But, if you actually complete a lap on that test drive, there is a chance your grade will be just "OK". On LFS default test drives, this problem doesn't occur, since you will always be graded with "PRO" provided you participated for at least a moment and didn't make any critical mistakes (such as speeding).

Yet another bug can be found from grades. In default lessons, if you are graded with "PRO" and then retry that lesson and you are graded with "QUICK" or "OK", you won't be demoted to that grade. However, this can occur in custom lessons. If you test drive custom lesson and quit it, your grade will be "PRO" but if you complete it and that time your grade is "QUICK" or "OK", your grade will be demoted in Training menu.

Finally, in custom overtaking lessons, changing grid spacing doesn't seem to do anything. Not sure what it's main purpose is though, so I'm not sure is there a bug at all.

Bug when saving replays:



These four replay names are automatically generated by LFS. These were saved automatically after qualifying over. As you can see, for the first three replays, name is correctly written. However, at the fourth one, it is incorrect. Weirdly though, that name is displayed correctly in Windows File Explorer.

If your driver name (not username) is written in different code page (in this case, Japanese), it does not support possible special characters in-game language is using. As you can see, it should read “AIKA-AJO PÄÄTTYNYT” (qualifying over), but based on the driver’s name, it thinks the code page is in Japanese, so it does not recognize those special characters.

In English there seems to be no problem since there are no special characters in letters (well, at least not in LFS). This seems to only happen on replays which names are automatically generated by LFS. If you manually save a replay, of course you don’t face this problem. How to reproduce this bug?

1) Create a player name with different code page (for example, use Japanese)
2) Use in-game language which has special characters (for example Finnish)
3) Make sure you have automatic single player replay save enabled.
4) Start qualifying (preferably 1 minute length)
5) Drive 1 outlap and 1 timed lap. Make sure it ends during your timed lap so that lap will still count.
6) Exit that session by going to lobby. You can then see that your replay is not named correctly.

ATTACHMENTS:

Basic information about attachments:

I’ve attached a lot of SPR’s in that LFS message. Basic information about these SPR’s:

- All AI’s use default setup, but it’s still player’s chosen setup – so they do use [default]/[hard track], but it’s not setup which AI get when player selects [no] to a setting “AI use player setup :” in options.

- AI drivers have different skill levels:
  - AI 1, 6, 11 etc. are Beginner
  - AI 2, 7, 12 etc. are Learner
  - AI 3, 8, 13 etc. are OK
  - AI 4, 9, 14 etc. are Quick
  - AI 5, 10, 15 etc. are Pro

- Usually, I did on purpose that the lower the skill level, the higher the grid position for that AI is. Bike is an exception, there I made the grid based on vehicles, meaning positions 1-5 were related to one bike, positions 6-10 to another and so on. This is because I wanted to see how passing is improved.

Main purpose for each attached SPR:

Here you can see each replay I’ve attached and description of the main purpose of showing these.

- D41_TestRace_AS4R – here you can see the problem where four AI drivers try to enter same pit stop box.
- D41_TestRace_FE1 – here you can see the problem AI are having when trying to enter pits.
- D41_TestRace_SO4_Bikes – here you can see problems bikes are having.
- D41_TestRace_WE4_Bypass – here you can see me driving FXR in Westhill Karting, even though it should not be possible.
- D41_TestRace_WE5R_Bikes – here you can see problems one bike with passenger is having.