

2009 Kyoto 250 Regulations

This document was last updated on 26 December 2008. This version applies to the 2009 Calendar Year and the 2009 Running of the Kyoto 250. No materials contained within this affect events held prior to the publish date of this document.

The New Dimension Racing Sporting Code is in effect with this document. Conflicts between the two documents, if not explicitly stated as to which applies in this document, shall be pointed out to New Dimension Racing as soon as they are discovered.

1. General Event Information

- The 2009 Kyoto 250 shall be defined as an event occurring in the Live for Speed Simulation software utilizing the Standard Kyoto Oval configuration (Code: KY1) utilizing the XR GT Turbo car (Code: XRT).
- **2.** The Race Director for the Kyoto 250 shall be the current standing Chief Race Administrator for New Dimension Racing.
 - a. Shall this person be unavailable for the Kyoto 250 at any time for any reason, the order of succession shall be followed as stated in the New Dimension Racing Sporting Regulations.

2. Entry Procedure

- To participate in the Kyoto 250 Qualification and Race sessions, you must have obtained the following requirements prior to the start of the Official Qualification Session.
 - a. 175 Online Laps of XRT on KY1
 - **b.** An hotlap uploaded to LFSWorld of XRT on KY1 within 103.50% of the WR
 - c. Attendance at two (2) or more Official 2009 Kyoto 250 Practice Sessions
- **2.** Failure to meet any of these requirements will result in you not being permitted to participate in the Kyoto 250 for the year in which you are applying.
- **3.** Entrants shall be one car, one driver. There are to be no driver swaps during the race.
- **4.** A "Team" is defined as two or more cars from the same Live for Speed team.
- 5. To enter, please submit the following information in the thread titled "Kyoto 250 Entry" thread. There will be a standard form for all
 - a. LFSName
 - **b.** First and Last Name
 - c. Car Number
 - d. Team Affiliation (if applicable)

- 6. Once your entry has been submitted, your name will be placed in a document which will track your progress towards meeting entry requirements. Once all requirements are met, the row you are on in the document will be highlighted in green. Until all requirements are met, your name will be red as well as any requirements you have yet to meet. Once you meet them, that particular field will turn green.
- 7. An unlimited amount of drivers may enter.
- 8. The Defending Champion of the Kyoto 250 has first right to a car number. They will be automatically assigned the number 1, however, they may request another number, and in the event of a conflict, the defending champion has right to the number.

3. Practice Events

- **1.** New Dimension Racing shall hold regular practice events from the time one week after entry opens until the day prior to qualifying.
- 2. These events may vary in format, but the formats are from the following:
 - a. One (1) hour Timed Free Non-Drafting Practice open track, unlimited laps, drafting prohibited.
 - b. One (1) hour TImed Free Drafting Practice open track, unlimited laps, drafting permitted.
 - c. Short Race a hotlap qualification period followed by a race between 15 and
 40 laps to start by rolling start.
 - d. Long Race a hotlap qualification period followed by a race between 50 and 100 laps, to start by rolling start.
- **3.** The Chief Race Administrator has the right to determine whether or not the participation at the practice events attended is satisfactory to be counted as an attended session.

- a. The New Dimension Racing administration team may issue a "Monitoring Penalty" which is defined as required attendance at additional practice sessions, between one (1) and five (5) more depending on the severity of the need for the Monitoring Penalty. This type of penalty will supersede the practice session requirements.
- 4. Penalties may be issued for the Practice sessions, but may not be enforced for the Kyoto 250 Qualifying, or Race sessions. The penalties that are applicable for the Practice Sessions are as follows:
 - a. Drive-Through Penalty: A racer receiving this penalty shall do a drive through the pit lane at or under the pit lane speed limit.
 - b. Stop-and-Go Penalty: A racer receiving this penalty shall drive into pit lane, stop in any pit stall for ten (10) seconds, and return to the track. The pit lane speed limit must be followed during this penalty.
 - c. Post-Race Time Penalty: A racer may receive a time penalty, to be added to his/her total race time of varying amounts. This penalty may affect how many laps behind the highest finisher they are, or with any other cars position, if the penalty exceeded the literal on-track gap between the positions.
 - d. Probation Period: A racer may be placed on probation for rule violations.
 Probation shall follow all standing regulations on probation in the New
 Dimension Racing Sporting Regulations.
 - e. Monitoring Penalty: A racer may be asked to attend additional practice sessions to further evaluate their performance. The amount shall be between one (1) and five (5) sessions. This is an aggregate value. No more than five total sessions may be applied overall.
- **5.** Racers who are not officially entered into the Kyoto 250 may be permitted to participate in the practice events, at the Race Director's discretion. Any racers

who participate shall be briefed with applicable rules, as well as provided with a link to the current official rules which apply.

6. The name format shall follow the New Dimension Racing Sporting Code Regulations. Should a driver not be entered, they may choose a car number that is not in use by anyone else in that particular session. The Race Director may set limitations as to a range to choose from.

4. Official Kyoto 250 Qualification and Grid Setting

- **1.** The Kyoto 250 Qualification shall be two parts to set the final grid of the race.
- 2. The Qualification Day shall start with a hotlap session.
 - a. Racers signed up shall arrive at the server 10 minutes prior to session start time. Failure to arrive by this time without prior contact to the Race Director shall result in qualifying last in the session, in order of late arrivals.
 - **b.** For all racers who arrive on time, they shall be called out to take their attempt in numerical order.
 - c. Each qualifying run shall consist of one (1) outlap, two (2) hotlaps, and one (1) inlap.
 - **d.** Tyre warming is prohibited for qualifying runs. No burnouts, no swerving, no wall-riding, et cetera.
 - e. Once you complete your run, slow down and park at the defined "Completed Runs" line in pit lane. You may Tab through to other cars to watch the session. A Pitlane Marshal will spectate you shortly after completion of your run.
 - f. When the Race Director calls you out for the run, you shall immediately enter the track.
 - g. There are no setup or fuel restrictions for the Qualification Session.
- **3.** Upon completion of the Hotlap Session, the front row of the grid will be locked into place.

- a. All qualifiers occupying an odd-numbered (i.e. 1, 3, 5, 7, 9, etc) position will participate in Race 1 of the Twin 115-mile races. A maximum of thirty-one (31) drivers may start this race.
- b. All qualifiers occupying an even-numbered (i.e. 2, 4, 6, 8, 10, etc) will participate in Race 2 of the Twin 115-mile races. A maximum of thirty-one (31) drivers may start this race
- **4.** There will be two (2) 115-mile races held after a ten-minute break following the hotlaps to finalize the grid.
 - **a.** Regardless of what happens, the pole-sitter for each event will hold their grid position.
 - b. The races will start with two laps behind the Safety Car followed by a rolling start.
 - c. The Race 1 result will determine the Odd File of the grid.
 - d. The Race 2 result will determine the Even File of the grid.
 - e. The top eleven (11) finishers in each race shall start in their respective file in the order they finished the race. Should the pole-sitter for that race finish in the top 11, they will be factored out.
 - f. The Twin 115 Races shall have one required pit stop under green flag conditions.
- 5. The final three rows of the grid shall be classified as "Provisional" starting positions. These are to be filled by the fastest 6 cars from hotlaps who did not make it into the race via the Twin 115s.

5. Official Kyoto 250 Race Day and Start Procedure

1. All drivers who are qualified to race in the Kyoto 250 shall be prepared to race on the Kyoto 250 race day. should one of the pre-gridded 30 starters be unable to start, someone will be advanced into each position vacated at the back of the grid.

- a. The placement is based off of qualifying times.
- 2. The Official Distance of the Kyoto 250 is 135 laps.
- **3.** The server shall be passworded one (1) hour prior to the scheduled green flag time.
- 4. All drivers who are listed in the Official Starting Grid shall be in server thirty (30) minutes prior to start time. Arriving between thirty (30) and twenty (20) minutes prior to start time will see you starting from the back of the grid. After ten minutes late, you will lose your spot in the Kyoto 250 to the next eligible replacement. The grid will begin to be set up at 18 minutes until start time.
- 5. There shall be no lag start. There shall be no complete restarts, except when there is a severe incident involving more than 80% of the grid. A complete restart may be done up until the second full racing lap (Seventh total lap) is completed.
- **6.** The race will start with five (5) laps under Safety Car. The first three (3) shall be single-file, in order. Upon exiting Turn 3 on the third lap, the cars starting in an odd-numbered position shall hold to the inside half of the circuit, the evennumbered positions shall hold to the outside half of the circuit. Rows shall be even, and there shall be approximately three car lengths between cars.
 - a. The Race Director may order certain cars to close up gaps or lay back.
 - **b.** There is to be no weaving, swerving, or brake-checking or other tyre warming acts during the pace laps.
 - c. The pace car shall travel at 90 km/h, 55 mi/h
 - d. The field shall follow all orders of the race director on the Safety Car's in Iap. The pole-sitter shall hold pacing speed until the Green Flag is displayed.
 - e. Once the green flag is out, overtaking is permitted.

f. Should a car spin or have another instance that causes that car to lose it's position, it shall start from the back of the pack, regardless of the cause. Penalties may be issued for drivers who caused a car to lose it's place.

6. Incidents

- Should you be involved in an incident that renders your car unable to continue, please remain in your position until further directions are received from the Race Director. If the car is in an unsafe location, the Safety Car will be deployed.
 - a. All drivers shall heed any yellow flags displayed by LFS, as well as a full-course caution that may be declared by the Race Director. Incidents caused by failure to heed yellow flags can result in a Stop-and-Go Penalty minimum.
- 2. Should you be involved in an incident that you can return to course or return to pits from, take all possible care to stay off the racing line. If you are deemed to be a hazard for the time it will take you to get to pits or return to racing, the Safety Car will be deployed. The Rescue Car in use may be called to assist you or shadow you on your return to pitlane.
- 3. Should you run out of fuel, and are unable to make it back to the pits, and you end up in an unsafe location, the Rescue Car will be called to push you to pitlane under Safety Car Conditions.
 - a. You may also be pushed back to the pits by another competitor. This may be done on every lap with the exception of the last lap. No assistance may be rendered on the final lap.
- 4. If you are involved in an incident with another car(s) and you feel that it was caused by another competitor, you may file a complaint in the thread specified for such in the LFS Forums. A format for appeals will be provided in the thread.
 - a. The race administration has the right to initiate investigations of incidents by itself.

7. Pit Lane

- During green flag conditions, the pitlane shall remain open and pitstops may be made freely.
 - a. The entry lane as marked by cones along the yellow line is to be followed on pit entry. You must enter from before turn three. Entering after the line starts may result in a drive-through penalty
 - **b.** You may use any currently open pit stall for your pitstop. Travel to the furthest stall down to reduce risk of collisions in pitlane.
 - c. Do not re-enter the track until the yellow line with cones ends past turn 1.
 Crossing this line may result in a drive-through penalty.
- **2.** Under Safety Car, the pitlane will close until the Race Director is satisfied all cars are in the queue. Once pits open, anyone may pit.
 - **a.** Enter the pits from the exit of Turn 3 under caution. There is a gap between the orange poles and blue cones sufficient to fit through.
 - **b.** You may use any currently open pit stall for your pitstop. Travel to the furthest stall down to reduce risk of collisions in pitlane.
 - c. Do not re-enter the track until the yellow line with cones ends past turn 1.
 Crossing this line may result in a drive-through penalty.
 - d. You are not permitted to advance your position entering the pitlane. You must hold your position while entering. You may change positions in pitlane, as cars slow and stop and speed up. Once you exit pitlane again, and are in the warmup lane, you are to hold position.
- **3.** Pitlane speed limit shall be 80 kph / 49 mph
- 4. You shall not cross more than the stall preceding and the stall following the stall you wish to stop in. You shall drive in the pit driving lane (closest to the pit wall) until you reach your desired stall. You may be issued with a Drive-Through Penalty for violation of this rule.

5. The penalty for entering a closed pit is a drive-through penalty.

8. Safety Car

- **1.** The Safety Car shall be used by administration to neutralize the race in the event of a car stranded on track or an incident.
- **2.** When not deployed, the safety car shall park at the end of the pitlane, as directed by the Race Director, and wait for deployment.
- **3.** The Safety Car shall ensure that its engine is running and is ready to take to course when the message "SAFETY CAR STANDBY" appears on screen.
- 4. When the message "SAFETY CAR DEPLOYED" appears on screen, and the track indicator button turns to "T: YELLOW", drivers are to cease racing for position, and gently slow down and be alert for a situation anywhere on the track, and proceed around to catch the Safety Car queue.
 - a. Pitlane will close when the Safety Car is deployed. It will reopen when the field is satisfactorily in queue. Entering a closed pit will result in a drive-through penalty.
 - b. Cars are to obey Safety Car speed once they catch it. Should the leader not be the first car behind the Safety Car, the cars between the Safety Car and the leader will be ordered around it and are to continue around at a safe pace and in order, until they catch the queue.
 - c. Make every effort to pit the lap the pits open. Should all stalls be taken, take one more lap and come in the next lap. Do not wait more than three laps, as the Race Director has the option to recall the Safety Car and restart the race with not all cars caught up.
- 5. Should the Safety Car be deployed on the final lap, racing back to the chequered flag is permitted, although drivers are to be aware of any incident once they have taken the chequered flag and shall slow down quickly, yet safely after crossing the finish line

6. The Free Pass car (defined in Section 9) will be waved around with two laps until green. The Safety Car will turn its lights out as it crosses the start/finish line to start its inlap. A message indicating "SC IN THIS LAP" will be displayed to the field. Once the Safety Car is clear of the track, the leader holds Safety Car speed until the Restart Line which is marked on the track with orange cones on the wall, located just past the first checkered line. At this line, the leader may begin to go regardless of if the green is out or not.

a. The Restart Line does NOT apply on the initial race start.

- g. Race restarts shall take place with lead lap cars to the outside, and lapped cars to the inside. Lapped cars are not required to come to the inside, but they may. The are to go no further than alongside the leader.
 - a. If a restart is to occur with less than twenty (20) laps remaining, only cars that are one lap down may exercise this option. All others are to hold in line, or allow leader lap cars ahead in the line.
 - b. If a restart is to occur with less than ten (10) laps remaining, the restart shall be single file. All cars not on the lead lap shall fall to the back, behind all cars on the lead lap.
- 8. The driver shall be proficient in driving the vehicle that is chosen to be the Safety Car. The driver shall also be in Radio Contact with the Race Director throughout the race.

9. Free Pass

- **1.** The Free Pass is designed to allow a car to gain a lap back during a caution, as racing back to the caution is prohibited.
- 2. The driver receiving the free pass will be declared once the field is in queue, and before the pitlane opens. This car is defined to be the first car a lap or more down to the leader.
 - a. The overtake is not permitted until the Race Director calls for it.

- b. The free pass car may not pit while catching back up after the wave around.
 This car must pit when the pits open, before being called around.
- **c.** The free pass car shall take the restart on which he received the free pass from the end of the longest line.
- 3. Should the first car one or more laps down to the leader be the cause of the caution, the right to the Free Pass is forfeited: No one shall receive the Free Pass that caution.
- **4.** The Free Pass is not applied when there will be ten (10) or less laps remaining at the restart.

10. Penalties

- **1.** The Race Director may levy penalties for incidents.
 - **a.** Incidents may be investigated during the race. These are started by the race administration.
 - b. Incidents that might be missed by administration, or are not stated for investigation may be appealed for in a thread on the LFS Forums specifically for protests. The person filing must provide all information required by the thread.
- 2. The following penalties may be levied against a racer during the race. These types of penalties may only be applied if there are more than five (5) laps remaining in the race (Based on scheduled distance: The Green White Checkered Rule does not affect this).
 - **a.** Drive-Through Penalty: A racer receiving this penalty shall do a drive through the pit lane at or under the pit lane speed limit.
 - b. Stop-and-Go Penalty: A racer receiving this penalty shall drive into pit lane, stop in any pit stall for ten (10) seconds, and return to the track. The pit lane speed limit must be followed during this penalty.

- c. Holding Penalty: A racer receiving this penalty shall drive into pitlane, stop in any pit stall for the period of time which the Race Director states. This may be applied on the end of a pitstop, or on a separate trip to the pits. A marshall will monitor the car and ensure that the driver is stopped for the length of time. The time may be in seconds, or in laps.
- **d.** Black Flag: A racer receiving this penalty must enter pitlane for conferral with race administration. This may be used to order a car to pit for repairs, or to retire a car from the race.
- e. Kick: A racer may be kicked from the server for actions such as dangerous driving, foul or abusive language, or for extreme lag. A kick may only be performed after a Black Flag has been served.
- f. Penalties in subsections a through d must be served within four laps of issuance, or the car will no longer be scored until the penalty is served. Laps will be removed manually post-race.
- **3.** For investigations where the result is levied after the race, the following penalties may be levied, to affect the driver's result.
 - a. Time Penalty: A racer receiving this penalty will have the time with the penalty added to their total race time. If the penalty would have resulted in a drive-through in the race, the time penalty shall be thirty (30) seconds. If the penalty would have resulted in a stop-and-go, the time penalty shall be forty-five (45) seconds. A holding penalty converts into 30 seconds plus the time the hold would have been. Holding of a lap or more shall be applied via the subtraction of that amount of laps plus 45 seconds.
 - b. Disqualification: A racer is disqualified when their time is erased due to a severe transgression of the rules. They are placed at the end of the results table, behind all cars which Did Not Finish (DNF). In the event that multiple racers receive a Disqualification, they are listed in order of laps completed,

from most to least. Disqualified racers are not listed with a finishing position: Instead, their position shall be replaced with "DSQ."

- c. Probation Period: A racer may be placed on probation for rule violations.
 Probation shall follow all standing regulations on probation in the New
 Dimension Racing Sporting Regulations.
- 4. The period for post-race appeals will be stated as to when it opens and closes in the thread for such purposes. The submission process shall be defined in the thread for Protests.

11. Red Flags

- 1. A red flag may be used when the Race Director feels that conditions on course are unsafe to continue under Safety Car (e.g. Server Lag or cars stranded on course in significant spots), or if an incident involves more than 80% of cars running at the time.
 - a. If the red flag comes out during a practice session, cars are to immediately, yet safely return to pitlane. Once in pitlane, racers may either telepit or wait at pit exit for the session to resume. Time will not be added to the session in the event of a red flag.
 - b. If the red flag comes out during a race, racers shall park at the point designated by the Race Director. Except in cases of force majeure (e.g. Server Lag or major incident blocking the circuit), the Safety Car will have the field under control before the red flag is displayed.
 - A red flag during a race means that all work on a car shall cease. If you are in a pitstop at the time of red flag, you will be assessed a stop-and-go penalty on the restart.
 - 2. You are to stop at the prescribed location and wait for further instructions. No driving is to be done without the express permission of the Race Director ONLY.

2. Please see "Server Failure" in section 14 for procedures when the Server is deemed to have failed.

12. Green-White-Checkered

- Should the race have a caution that would end the race under yellow, there will be a maximum of two (2) attempts at a Green-White-Checkered Finish.
 - a. Due to limitations of the software, this will result in ten laps added to the race distance for each occurrence. This does not affect any practice races with under 100 laps scheduled. An appropriate number will be added to those.
 - **b.** The pitlane will open as per usual during this procedure.
 - c. If a restart occurs with two scheduled laps remaining (before an extension), that shall not count against the maximum attempt limit. A waved off Green-White-Checkered restart will be counted against an attempt, but the restart may come the next time around (a one-lap finish)
- 2. Should the caution come out after the leader has started the final lap, the field may continue to race back to the chequered flag, but are to be aware of any situation once they finish the race and be prepared to take evasive action.

13. Official Classification

- With the exception of a Disqualification, all racers which start the Kyoto 250 shall be classified in the results.
 - **a.** The length of the pace laps will be subtracted from the total time of each racers race, and laps will be adjusted accordingly.
 - **1.** Each driver running at the finish shall have "Running" placed in the "Reason" column for their result line.
 - b. A driver who is not Running in the race at the end shall be classified as a "Did Not Finish" (DNF) with one of the following reasons listed in the "Reason" column:

- **1.** Accident: This driver was involved in an accident and was therefore unable to complete the race.
- **2.** Clutch: This driver was unable to complete the race due to excessive clutch heat.
- **3.** Suspension: This driver was unable to complete the race due to being unable to return to pits for repairs due to excessive suspension damage.
- **4.** Fuel: This driver was unable to complete the race due to running out of fuel and unable to return to pits without assistance. This generally will only apply on the last lap.
- **5.** Spectated: The driver joined the spectators without having another applicable reason
- **6.** Disconnected: The driver disconnected from the server from racing, without having another applicable reason.
- 7. Lost Connection: The driver lost connection to the server, or timed out.
- 8. Penalty: The driver was Disqualified.
- c. Drivers who time out or lose connection or disconnect from the server (disconnections except those who disconnect after retiring) are not permitted to rejoin, unless the disconnection falls under Server Failure.

14. Server Failure

- There shall be a server designated for "Primary" and a server designated for "Backup" for the Kyoto 250 events.
- 2. Should the "Primary" fail at any time during the thirty minutes before, or during an event, the "Backup" server shall be the destination for racers and administrators. Should the "Primary" server be restored before the event was scheduled to start, the event may return to that server. Should the event be already in progress, the "Backup" server shall be used.

- **a.** An announcement shall also be made in the Kyoto 250 subforum alerting of the server change and status.
- **3.** A failure during racing conditions shall automatically result in a Red Flag, and the race temporarily suspended.
 - a. The order for the restart shall be taken from a minimum of two (2) laps prior to the lap in which the server failure appears to have started. The laps remaining at this back-count shall be the laps remaining for the restart. Should the back-count leave more than 100 laps remaining, the order shall be taken from the next highest multiple of ten laps remaining to give an appropriate number of laps remaining.
 - b. A minimum of 15 minutes delay shall occur should this procedure be enacted. The fifteen minutes shall start upon the Race Director's declaration of "Server Failure."
 - **c.** A restart time shall be announced in the forums, as well as repeated every four minutes while in the gameserver.

15. Server Access

- Only New Dimension Racing Administrators and broadcast team shall be logged onto the server with the administrator password during official Sessions.
 Competitors who know the administrator password (if any) shall log in with the standard user password during official sessions. There will be administrator slots reserved for the number of admins scheduled to be present for sessions.
- 2. The user password shall be Private Messaged to all competitors and race officials. There shall be one password used for all practice events, one for qualifying, and one for Race.
 - a. Practice races can be opened to the public. However, all registered entrants should log in with the user password in the event that it is decided to password the server.

- **b.** The time at which the user password will be set shall be announced on the forums prior to each event
- **3.** LFSRemote shall be enabled for the duration of events at a minimum. There shall be no spectator password set for LFSRemote.
- **4.** No one other than administrators, competitors, or the broadcast team may be in the server during a passworded session.

16. Communication

- For efficient communication, use of Ventrilo is mandatory. The server and channel information for each event shall be posted. Talkback capabilities are recommended, but not required. The name format to use shall be defined partly by the server host, and these will be posted in the forum as well.
 - a. Minimal chat is allowed in Ventrilo during Race sessions. No talking is permitted in Ventrilo during qualification.
- **2.** Blocking of in-game messages is prohibited, with the exception of your qualifying run.
 - a. Chat is not permitted during the race sessions. As no Ventrilo talk is permitted during qualifying, and blocking of chat messages is allowed in qualifying, text chat is permitted during qualification, unless the Race Director declares "CHAT CLOSED"
- 3. Chat in-game shall be opened and closed by "CHAT OPEN" and "CHAT CLOSED", respectively. Chat displayed shortly after the "CHAT CLOSED" may be allowed depending on circumstances.
 - a. Penalty for chat during a "CHAT CLOSED" period is a Holding Penalty of five
 (5) seconds per line.
 - b. Administrative query chat is permitted, as long as it is simply one line asking, or multiple to completely ask a question. Any more is subject to penalty. If you are able to ask your question in Ventrilo, ask it there.

c. Chat shall remain closed until at least the final car has taken the chequered flag.

17. Miscellaneous

- The Racer Name format to be observed shall follow that of the New Dimension Racing Sporting Code.
- **2.** The Number Plate format to be observed shall follow that of the New Dimension Racing Sporting Code.
- **3.** Bump Drafting is permitted.
- 4. High Resolution skins must be posted in the high-resolution skins thread prior to qualification day. These skins must comply with LFSWorld standards to be accepted.
- 5. Upon completion of the race, all cars are to return to a designated "Parc Ferme" area. The Winner is to proceed to the finish line for photographs. Once this official photograph is taken, and a message stating "RACE COMPLETE" has been displayed, the finish line is open for team or car photos. Driving of laps is prohibited at this point.
- 6. Administrative decisions are final and may only be contested or queried once.
 Once a reply has been given, the matter is closed and no further protest may be made into it.
- 7. The administration reserve the right to modify this document at any time as it sees fit to close loopholes, add in items that are missing, or delete items that are no longer needed.