



# **STATE OF FLORIDA MEGA BUS ROADEO HANDBOOK**

**Sponsored by:**

**Florida Public Transportation  
Association  
&  
Florida Department of Transportation**

**2010**



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## **Florida Public Transportation Association “Statement of Purpose”**

The purpose of the Florida Public Transportation Association, a private, non-profit organization is:

1. To provide a forum for the exchange of experiences, discussion, and study of mutual problems among Florida’s transit systems;
2. To enhance and promote the improvement of public transportation through the use and promotion of research and factual study;
3. To provide a forum for cooperation amongst members, their employees, and the general public;
4. To act as a positive force in the State of Florida and to foster common policies, requirements, and educational efforts concerned with public mass transportation.

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## **Florida State Mega Bus Roadeo Steering Committee “Statement of Purpose”**

Florida State Mega Bus Roadeo Steering Committee was organized in June 1991 under the sanction of the Florida Public Transportation Association (FPTA) and the Florida Department of Transportation (FDOT). The purpose of the Committee is:

1. To establish, upgrade and maintain the standard Florida State Mega Bus Roadeo guidelines, rules, and procedures.
2. To provide assistance to transit properties hosting the Florida State Mega Bus Roadeo, to insure planning uniformity and compliance of the established rules and procedural policies for the annual event by all participants.
3. To act as an intermediary between the host property, the contestants, and the property representatives.
4. To enhance and to promote the improvement of public transportation by affording Florida transit properties the means to provide their Bus Operators and Technicians the opportunity to demonstrate their professional skills and to be recognized.

The Florida State Mega Bus Roadeo is sponsored by FPTA and FDOT.



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## BUS OPERATORS COMPETITION

### **Contestant Eligibility**

In order to compete in the State Bus Roadeo, the contestants will be required to meet certain qualifications. Local transit systems are expected to enforce the following rules and regulations:

Each transit system is entitled to send one operator to the State Roadeo Competition.

***Length of Employment:*** Contestants must have worked as a full-time or part-time bus employee for not less than one year prior to the date of the State Roadeo.

***Operator Status and Definitions:*** Contestants must be employed as a full-time or part-time bus driver at the time of the Roadeo entry. Individuals in the following job definitions are not eligible to participate: hostler, clerk, office worker, operator training instructor, telephone information operator, supervisory personnel, and dispatcher.

***Safe Driving Record:*** Contestants must not have had a preventable accident in the year prior to the Roadeo entry date.

***Work Attendance Record:*** Contestants must meet the local system's guidelines for attendance. The committee recommends the following as a guideline:

1. Contestants should not have more than six non-consecutive sick days and should not have more than thirty five consecutive sick days during the year preceding the Roadeo.
2. Contestants should not have more three (3) incidents of not reporting for work during the past year.
3. Contestants should not have been suspended for punitive action during the past year.



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## **BUS OPERATOR TEST CATEGORIES**

### **Personal Appearance Category:**

The bus operator is the public relation's liaison between the transit system and the public. The operator should strive to present the most professional appearance and pleasant attitude possible to the customer. For these reasons, the personal appearance category is included in the Bus Rodeo. The operator is judged on being well groomed and dressed in his/her appropriate regulation uniform.

### **Criteria to grade the driver:**

- Clean, pressed and neat uniform.
- Neatly groomed and clean hair.
- Clean hands and fingernails.
- Polished shoes/boots.

### **Driving Course Test Category:**

The Rodeo course is designed to test every phase of operation that a bus operator will encounter in normal driving situations. The course contains ten problems that test an operator's ability to negotiate left and right forward turns, left and right backing turns, passenger stops, and judgment problems.

### **Driving Obstacles:**

The driving course obstacles are listed in the scoring section and are shown in detail in the back of this handbook. The sequence of the obstacles to be used for the 2010 competition will be determined by the host property and approved by the State Rodeo Steering Committee. Contestants will be given a course diagram at the orientation meeting. Each obstacle will be laid out according to the provisions stated in this Handbook.

Every attempt possible will be made to use exact measurements, as shown in this Handbook. However, Rodeo Officials reserve the right to make changes based on space available at the Rodeo site and equipment variations. The course will be verified by the On-Field officials to ensure all event obstacles are negotiable with the equipment provided.

### **Smoothness of Operation:**

An onboard judge will evaluate each operator on his/her ability to deliver a smooth ride. Deductions will be made for occurrences of sudden starts, sudden stops, and abrupt turns. ADA announcements will also be evaluated.

### **Safety:**

While maneuvering through the obstacles, an on-board judge will evaluate the contestant's driving safety habits. The judge will observe the driver's use of feet, turn signals, horn and flashers. The use of a seat belt is required for the operator driving the bus.

### **Time:**

- A seven-minute limit is allowed for the course.
- The timekeeper will stop the watch while the judges are taking measurements. In the event of mechanical trouble, timing will stop and will not start again until the contestant resumes driving.
- A penalty of one point per second will be subtracted for failure to complete the course within the seven-minute limit.
- Penalty points will be assessed when the bus touches any portion of the cone or barrel. A driver will be penalized only once for each cone or barrel touched.
- A driver will not be penalized more points than the maximum for that event.

### **Operator's Pre-Trip Inspection:**

This requirement is included in the Roadeo as another means to test an operator's professionalism. Operator will not be allowed to have a checklist of defects to refer to during the competition.

The points earned from the pre-trip inspection will be included with the points earned on the Roadeo course. In addition, an individual award will be given to the person based on the highest points earned in this category.

A bus should be set apart from the Roadeo area, behind a fence, or some other barrier, so neither the bus nor the contestant being tested can be viewed.

### **Defects:**

- Defects are of a type that an operator would find when performing a pre-trip inspection, including items listed in F.A.C. 14-90.
- Identification of defects does not require starting the bus or crawling under the bus. These defects would make a bus operationally unready or unsafe.
- Each operator has an allotted time of seven (7) minutes to inspect, locate, and identify, and legibly record any defects found.



- The equipment-related defects or potential security/safety hazards are planted on or in a bus.
  1. The contestant is not assisted in any way, but is asked to perform the bus inspection as if about to pull out of the garage.
  2. A time warning will be given at the one (1) minute and the 30 second time marks.
  3. Recording defects and securing doors will not be allowed after time has elapsed.
  4. The contestant will write down the defect(s) and at the end of the event go over them with the Pre-Inspection Judge. It is the contestant's responsibility to make sure that the judge understands each defect written down so the judge can score appropriately. The judge will retain the defect sheet for scoring purposes.

**The planted problems could include but are not limited to: burned-out lights, horns, door chimes not working, fire extinguisher missing, flat tire, and broken mirror. The judges for that event will determine the defects. Defects that are found that have not been planted will have no value. There is no limit to the number of defects the Operator may submit.**

### **Scoring:**

- Ten defects will be planted and each defect will be worth five (5) points for a maximum of fifty (50) points.
- The operators are not told whether they have found all the defects, or if they identified the correct defects. This prevents operators from aiding each other by telling what the problems are.
- Points will be awarded only for those recorded defects that were planted by the judges. No points will be awarded for identification of defects which were not planted.
- After the contestant has completed the event, the judge will review the list of defects with each operator for clarification.
- After the judging is concluded, each contestant will be responsible for returning the bus exactly as it was prior to their event. (For example, if the Operator lifts the seats in the wheelchair area, he or she must put them back down.) If the contestant fails to do so a five (5) point penalty will be assessed overall, not for each instance.



FDOT



In the event of a tie in the Pre-Inspection Event, there will be two (2) tie breakers, which are in addition to the ten scored planted defects. (These 2 defects will be used for tie breaking only and will not affect the total score for the problem.)

**FIRST**, there will be two additional defects that will be used strictly for the purpose of the tiebreaker. The Pre-Inspection Judges will determine which defect is the primary tie breaker #1 and which is #2.

- The primary tie breaker is the first of the two defects. It will be used when more than one contestant has the same number of defects listed.
- The second tie breaker defect will apply only if the first defect is included on both the defect lists.

**SECOND**, the total time taken to find the defects will be used if more than one Contestant is still tied after the defect tie-breakers have not established a winner. An Operator can stop before seven minutes and say "I'm finished." The clock will then be stopped and the time is recorded. The quickest time will be the third tie breaker.

### **Operator's Written Test:**

A written test is used to test the operator's knowledge of rules, regulations, safety, and general attitudes as a professional bus operator. This test will contain fifty (50) questions that will be taken from the sources that are common to all operators such as CDL Handbook, Florida Driver's Handbook, and the general Defensive Driving knowledge. Each correct answer will be worth one (2) points. The points earned from the written test will be included with the points earned on the Rodeo course. In addition, an individual award will be given to the person based on the highest points earned in this category.

### 2010 Bus for Driving Course

|                   |   |
|-------------------|---|
| Bus Model         | Gillig 40 foot BRT Transit Coach  |
| Year              | 2009  |
| Length            | 40 Feet   |
| Width             | 102 inches  |
| Mirror, Road Side | 7 inch length Arm<br>8" x 8" Mirror, Remote Adjusted<br>5" Convex Mirror Remote Adjusted                          |
| Mirror, Curb Side | 12 inch length Arm<br>8" x 8" Remote Mirror Adjusted  |
| Turning Radius    | 43.75 Feet (over the bumper)<br>38.75 Feet (radius outside tire)<br>32.08 Feet (radius inside tire)<br>Angle = 38 |
| Wheel Base        | 279.0 inches  |
| Engine            | Cummins ISL   |
| Transmission      | ZF 6HP 594 Electronic   |



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## **2010 Bus for Pre-Trip Inspection, and Maintenance Inspection**

|                   |   |
|-------------------|---|
| Bus Model         | Gillig 35 foot BRT Transit Coach  |
| Year              | 2009  |
| Length            | 35 Feet   |
| Width             | 102 inches  |
| Mirror, Road Side | 7 inch length Arm<br>8" x 8" Mirror, Remote Adjusted<br>5" Convex Mirror Remote Adjusted                          |
| Mirror, Curb Side | 12 inch length Arm<br>8" x 8" Remote Mirror Adjusted  |
| Turning Radius    | 37.25 Feet (over the bumper)<br>32.08 Feet (radius outside tire)<br>25.50 Feet (radius inside tire)<br>Angle = 38 |
| Wheel Base        | 230.0 inches  |
| Engine            | Cummins ISL   |
| Transmission      | ZF 6HP 594 Electronic   |

## **SCORING**

| <b>Driving Test Obstacles</b>      | <b>Highest Possible Scores</b> |
|------------------------------------|--------------------------------|
| 1. Offset Street                   | 50                             |
| 2. Serpentine                      | 50                             |
| 3. Rear Dual Clearance             | 50                             |
| 4. Left Hand Turn                  | 50                             |
| 5. 1 <sup>st</sup> Passenger Stop  | 50                             |
| 6. Left Hand Reverse               | 50                             |
| 7. Right Turn                      | 50                             |
| 8. 2 <sup>nd</sup> Passenger Stop  | 50                             |
| 9. Right Hand Reverse              | 50                             |
| 10. Diminishing Clearance          | 50                             |
| 11. Judgment Stop                  | 50                             |
| 12. Safety Habits                  | 25                             |
| 13. Smoothness of Operation/ADA    | 25                             |
| 14. Personal Appearance            | 50                             |
| 15. Written Test                   | 100                            |
| 16. Pre-Trip Inspection            | 50                             |
| <b><u>Total Possible Score</u></b> | <b><u>800</u></b>              |



## OPERATORS TOTAL SCORES AND AWARDS

### Operator's Events

|  |                                    |
|--|------------------------------------|
| Overall Operations Champion                | Champion Trophy/\$300              |
| Overall Operations 2 <sup>nd</sup> Place   | 2 <sup>nd</sup> Place Trophy/\$200 |
| Overall Operations 3 <sup>rd</sup> Place   | 3 <sup>rd</sup> Place Trophy/\$100 |
| Overall Operations 4 <sup>th</sup> Place   | 4 <sup>th</sup> Place Trophy       |
| Highest Operator Pre-Trip Inspection Score | Plaque                             |
| Highest Operator Written Test Score        | Plaque                             |
| Rookie of the Year                         | Plaque                             |
| Yard Stick Award                           | Plaque                             |

All contestants receive a small participant plaque

### YARDSTICK AWARD

The Yardstick Award is awarded to the Operator with the lowest combined scores of the *actual measurement* at each of the two passenger stops and the judgment stop. If an Operator loses points by touching either of the curbs or the judgment cone, they are disqualified from winning the Yardstick Award.

Winner in each category are determined by the highest score for that event.

In the case of a tie, the tie will be settled as follows:

|                             | <u>Operator's Driving Event</u>   |
|-----------------------------|---|
| 1 <sup>st</sup> Tie Breaker | Least amount of time on the course  |
| 2 <sup>nd</sup> Tie Breaker | Highest Driving Score (less personal appearance)                          |
| 3 <sup>rd</sup> Tie Breaker | Highest Score on the Passenger Stop(s)                                    |
| Written Test - Tie Breaker  | Previously identified top ten (10) most difficult questions               |
| Pre-Trip - Tie Breaker      | Twelve (12) pre-planted defects;<br>Two (2) previously identified defects |

**ALL DECISIONS MADE BY THE JUDGES ARE FINAL.**



FDOT



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## **BUS MAINTENANCE COMPETITION**

***The following rules are subject to change.  
Contestants will be notified of any and all changes  
during orientation.***

### **Contestant Eligibility**

Bus Maintenance Personnel, in order to compete in the State Roadeo, the contestants will be required to meet certain qualifications. Local transit systems are expected to enforce the following rules and regulations.

Each transit system is entitled to send one (1) team to the State Bus Roadeo Competition.

- Teams can consist of two (2) or three (3) maintenance employees. No concessions will be made to those teams in the competition.
- Each team member must have worked a full-time or part-time maintenance job for not less than one year immediately prior to the date of the competition.
- To be eligible to compete, team members must be maintenance personnel (i.e., mechanics, cleaners, hostlers, etc.), who in their regular work duties maintain, and service, or move buses.
- Individuals in the following job definitions are not eligible to participate: drivers, training instructors, supervisory personnel or any other employee who is not engaged in a bus maintenance related job.
- Each mechanic must meet the local systems guidelines on avoidable accidents, sickness, absenteeism, or punitive action.



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## **COMPETITION EVENTS**

### **Maintenance Tests:**

As part of their regular duties, mechanics are required to diagnose and repair complaints. Complaints could be low power, excessive smoke, harsh shifting, and/or other performance related problems. Proper diagnostic and troubleshooting techniques then become essential to ensure that buses meet the required levels of performance for daily revenue service. This becomes another means of testing and measuring a team of mechanic's knowledge, skills, and abilities.

The Maintenance test will consist of the following:

Vehicle Inspection, Air Brake Board, Florida Detroit Diesel/Allison Engine module, Cummings ISL/ZF engine module, Thermo King A/C Module, IntelligAIRE T series module, and I/O Control troubleshooting (on bus).

In addition to the diagnostic test, each maintenance team will take a written test consisting of fifty (50) questions. Each question is worth two (2) points with a maximum score of one hundred (100). This score will be included in the overall tabulation. The team will work together on the test.

Orientation for the maintenance teams will be done at the site on Friday. All maintenance teams will be escorted as a group to each module. Three property representatives will be chosen to moderate the group during orientation. Time spent at each module will be limited.

The vendors will be required to be at their module on Friday for orientation.

### **Vehicle Inspections:**

**Equipment is the same as listed for the Operator's Driving Event.**

### **Defects:**

- Fifteen (15) equipment related defects are planted on or in a bus that would make a bus operationally unready.
- Defects are of a type that a mechanic might find during a minor maintenance inspection, including items listed in F.A.C. 14-90.
- Defects will be those that do not require the bus to be started or require the contestants to crawl under the bus.



- Teams will not be allowed to have a checklist of defects to refer to during the competition.
- Eligible defects will include broken, loose, bad, missing, or incorrect: seats, all type of lights, all windows, stanchions, flooring, destination sign, door engine, fire extinguisher, windshield, wipers, run block numbers, mirrors, license plate, bell chord and/or dipsticks.
- Ineligible defects include defects under the bus, exterior body damage, paint problems, fluid leaks such as oil, water, fuel, etc., will not be considered as defects.
- Equipment where multiple defects are possible will be counted only once (i.e., seats, windows, and lights).
- A general location must be given and must identify multiple equipment defects (i.e., left side #1 window, right-front-side directional light).
- Front and rear windows, headlight, taillights, brake lights, mirror, and turn signals, will each count as separate defects.
- The team will be provided with the necessary clipboards, paper, pencils, tools, and test equipment.

### **Time:**

- The team will be allotted seven (7) minutes to inspect, locate, identify and legibly record any defects found.
- Abbreviations used in the shop are allowed as long as they are understandable to the judges.
- Time warning will be given to the team at the two (2) minute, one (1) minute, and thirty (30) second time marks.
- Recording defects and securing doors will not be allowed after time has elapsed.

### **Scoring:**

- Points will be given for only the recorded defects that were planted by the judges. Defects that are found that have not been planted will have no value. There is no limit to the number of defects the Maintenance Team may submit. The judges will review the list of defects with each team for clarification upon completion of the event.
- Twenty-five (25) points will be awarded for each planted defect found with a



maximum of three hundred seventy five (375) points plus any bonus earned.

- If a team correctly identifies all fifteen (15) defects within the seven (7) minute time limit, a 50-point bonus will be awarded.
- Penalty points will be assessed if the bus is not returned to its original condition. Each item not returned to its original condition will constitute a loss of ten (10) points each. Some examples of these items would include, but are not limited to; the entrance door, exit door or compartment doors left in the wrong position and/or lights, switches, levers left in the on position. The total score attained in any case cannot be less than zero.
- Starting the bus constitutes a safety violation and will result in the team being disqualified from this portion of the competition. The inspection bus will be supplied with the necessary electrical power and air pressure required to operate all of the systems being inspected.
- If a tie breaker is needed within this event, the judges will decide prior to the event which three defects demonstrate a team's attention to detail. The number of tie breaking defects found will be recorded on each team's score sheet.

### **Engine Modules**

Maintenance teams will compete on both Detroit Diesel and Cummings engine modules. These are scored as separate events. The scores are not combined.

The instructions listed below will pertain to both Cummins and Detroit Diesel.

### **Detroit Diesel/Allison Power Train:**

#### **Equipment:**

Engine: Detroit Diesel Series 50  
Transmission: Allison B-400 with Retarder

### **Cummins/Voith Power Train:**

#### **Equipment:**

Engine: Cummins 2007 ISL  
Transmission: ZF Ecomat 4-HP-594C

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### **Defects:**

- Seven (7) defects or problems related to the engine and transmission are planted. One defect will render the engine inoperable. For the purpose of the Rodeo, inoperable will mean that the engine will not start, or when started will not maintain an idle of 700 rpm.
- A team may attempt to start the engine at any time to check for defects.
- Types of defects could include but are not limited to:
  - ✓ Defective sensors, wires, and/or connectors
  - ✓ Defective injector (mechanically or electronically)
  - ✓ Obstruction with the flow of air, water, exhaust, fuel, or oil
  - ✓ Improper fluid levels
  - ✓ Missing assemblies or parts thereof
- Fluid leaks such as oil, water, fuel, etc., will not be considered as defects.
- The judges will review the list of defects with each team upon the completion of the event to clarify their list of defects.
- Any defect where the engine must be running for the defect to be normally found will not be scored if the engine is not started.
- The team will be provided with the necessary clipboards, paper, pencils, tools, and test equipment.

### **Time:**

- The team will be allotted ten (10) minutes to inspect, troubleshoot, diagnose, correct and record the planted defects on paper. Only seven (7) defects are to be listed. If more than seven defects are listed, only the first seven listed will be scored.
- The team will only have to correct that defect which prevents the engine from starting and/or maintaining an idle speed of 700 rpm.
- Time warning will be given to the team at the two (2) minute, one (1) minute, and the thirty second time marks.

### **Scoring:**

- Points will be awarded for each defect correctly identified, recorded, and in the case

of the defect which renders the power train inoperable, corrected. Only those defects planted by the judges will be considered for scoring.

- Fifty (50) points are awarded for each planted defect found. A maximum of three hundred fifty (350) points plus a bonus can be earned in this event.
- If the team identifies all of the defects, corrects the one defect that caused the power train to be inoperable, and the engine maintains an idle speed of 700 rpm, a bonus of one hundred (100) points will be added to the team score.
- Once the final start has been made, a team may not go back and make additional corrections to the power train or list more defects.
- A team will be penalized fifty (50) points for revving the engine with the valve cover off or for not having the power train in operational condition before the final engine start is attempted, (i.e., valve covers, wires, connectors, dipstick, etc.) in place and secure. The team will be penalized ten (10) points for misuse of any diagnostic or test equipment.
- If a tie breaker is needed within this event, it will be the fastest time for correcting the defect that causes the engine to be inoperable and maintain the engine speed of 700 rpm. Judges will record this time on all score sheets.

### **Air Brake Board:**

#### **Equipment:**

Gillig Air Brake Board

- The team will be asked to identify the six (6) planted defects on the Air Brake Board System.
- The competition will be conducted using a functional Gillig Air Brake Board System.
- The components of the system may be downsized, but all will be functional with the exception of the air compressor.
- The team will proceed directly to the Air Brake Board and begin working on identifying the planted defects. Seven (7) minutes will be allotted for this event.

#### **Defects:**

- The team will be asked to inspect, locate, identify and record, in a legible written list, the six (6) planted defects they have found, including the location of each defect.



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The team has a total of seven (7) minutes to complete the overall event.

- Defects will be mechanical or electrical in nature, but will not be air line or connection leaks.
- Defects will be such that do not require the system to be repaired, taken apart or disconnected.
- Only the first six (6) defects listed will be counted.
- Abbreviations used in the shop or industry will be allowed as long as they are understood by the judges. Upon completion of the time, the judges will review the list of defects with each team to clarify their list of defects.
- Time warnings will be given to the team at the two minute, one minute, and the thirty second time marks.

**Scoring:**

- Points will be given only for those recorded defects that were planted by the judges. No consideration will be given for listed defects not planted. Fifty (50) points will be awarded for each planted defect found.
- A fifty (50) point bonus will be awarded to each team that correctly identifies all six (6) defects.
- Before time has expired, the team must return the Air Brake Board to its original condition and all tools must be returned to their original location. The team will receive a ten (10) point penalty for not complying with each of these requirements.
- Each team will be supplied with a clipboard, paper and miscellaneous tools.

**I/O Control Module:**

**This module WILL be included in the overall score for 2010.**

**Equipment:**

I/O Control equipped bus.



### **Defects:**

- One defect will render the engine inoperable.
  1. For purposes of the Roadeo, inoperable will mean that the engine will turn over with the starting motor, but will not continue to run after the starting circuit is disengaged.
- Defects will be mechanical or electrical in nature. Leakage of any fluid will not be considered a defect.
- Defects will be such that they do not require the coach to be repaired or taken apart.
- Only the first six (6) defects listed will be counted.
- Abbreviations used in the shop or industry will be allowed as long as they are understood by the judges. Upon completion of the time, the judges will review the list of defects with each team to clarify their list of defects.
- A total of six (6) defects will be inserted into the coach electrical system.

**Note: *The total number of defects may be reduced if it is determined the number specified is unrealistic. Mechanics will be notified of the total number of actual defects.***

- The team will be asked to inspect, locate, identify and record, in a legible written list, the six (6) planted defects they have found, including the location of each defect. The team has a total of ten (10) minutes to complete the overall event
- The team will only have to correct the defect that prevents the engine from starting.
- Time warnings will be given to the team at the two minute, one minute and 30 second time marks.

### **Scoring:**

- Possible points for this event total 350.
- Fifty (50) points are awarded for each of the six (6) planted defects found and fifty (50) points for recording and defining the cause and symptom of the defect.



- Points will be given only for those six (6) defects that were planted by the judges. No consideration will be given for listed defects not planted.
- Points will be awarded for each defect correctly identified, recorded, and in case of a defect which renders the engine inoperable, corrected.
- The team will notify the judges when they are finished. Once notice is given, the team may not list additional defects or make additional corrections to the coach.
- The team will be penalized ten (10) points for misuse of any diagnostic or test equipment.
- The team will be penalized twenty (20) points for improper use of safety equipment.
- In the event of a tie, the fastest time to complete the event will determine the winner.
- Each team will be supplied with a clipboard, paper and miscellaneous tools.

### **A/C Module- Thermo King IntelligAIRE T Series**

#### **Equipment:**

T-1M82 Thermo King operating with R-22 refrigerant.  
Thermo King X-426 compressor.  
IntelligAIRE II electronic control system.

- The unit is a functional system with the exception of the heating portion of the unit. The unit will not be connected to a hot water source for the competition.
- One team member will be identified as the person who will control the unit's power switch. Each time the unit is started that person must announce the start of the unit.
- There will be a ten (10) minute time limit for this event and it will consist of two (2) parts.



## **PART ONE**

- Correctly identify and define the planted code in the IntelligAIRE system.
- A bonus of (50) points will be awarded for the accurate retrieval and definition of the IntelligAIRE code.

## **PART TWO**

- Inspect, locate, identify and record a legible list of the six (6) planted defects found and include the location.
- Defects will be mechanical in nature, but leakage of refrigerant or oil will not be considered a defect.
- Defects will be such that they do not require the system to be repaired or taken apart.
- Only the first six (6) defects will be counted.
- Points will be given only for those defects that were planted by the judges. No consideration will be given for listed defects that were not planted. Fifty (50) points will be awarded for each planted defect found.
- Abbreviations used in the shop or industry will be allowed as long as they are understandable by the judges. The judges will review the defect list with each for clarification only. This is done after the time limit.
- Time warnings will be given to the team at two (2) minutes, one (1) minute and the thirty (30) second time mark.
- Each team will be supplied with a clipboard, paper and miscellaneous tools.

## **PENALTIES**

- Tools not returned prior to crossing finish line - ten (10) points.
- System not returned to original status - ten (10) points.
- Safety: operating system in an unsafe manner - ten (10) points.



**SCORING:**

| <b><u>Maintenance Events</u></b> | <b><u>Highest Possible Scores</u></b> |
|----------------------------------|---------------------------------------|
| Bus Inspection                   | 375 + 50 Bonus = 425                  |
| Florida Detroit Diesel/Allison   | 350 + 100 Bonus = 450                 |
| Cummins ISL                      | 350 + 100 Bonus = 450                 |
| Air Brake Board                  | 300 + 50 Bonus = 350                  |
| Thermo King                      | 300 + 50 Bonus = 350                  |
| I/O Controls                     | 300 + 50 Bonus = 350                  |
| Written Test                     | 100                                   |
| <b>Total Possible Score</b>      | <b>2,475</b>                          |



## MAINTENANCE TOTAL SCORES AND AWARDS

### Maintenance Events

|   |  |
|---|--|
| Overall Maintenance Champion              | Trophy/\$300 per team member                       |
| Overall Maintenance 2 <sup>nd</sup> Place | 2 <sup>nd</sup> Place Trophy/\$200 per team member |
| Overall Maintenance 3 <sup>rd</sup> Place | 3 <sup>rd</sup> Place Trophy/\$100 per team member |
| Highest TK A/C Module Score               | Plaque per team member                             |
| Highest Detroit Diesel Engine Score       | Plaque per team member                             |
| Highest Cummins ISL Engine Score          | Plaque per team member                             |
| Highest Air Board Score                   | Plaque per team member                             |
| Highest Bus Inspection Score              | Plaque per team member                             |
| Highest I/O Controls Score                | Plaque per team member                             |
| Highest Maintenance Written Test Score    | Plaque per team member                             |

### All contestants receive a small participant plaque

Winners in each category are determined by the highest score for that event. Overall winners in the Maintenance category are determined by the combined scores in each category.

In the case of a tie, the tie will be settled as follows:

|                             | <b><u>Maintenance Overall Competition</u></b>                         |
|-----------------------------|---|
| 1 <sup>st</sup> Tie Breaker | Highest combined Power Train Defect score                             |
| 2 <sup>nd</sup> Tie Breaker | Highest Vehicle Inspection Score                                      |
| 3 <sup>rd</sup> Tie Breaker | Time required on the combined Power Train Event                       |
| Written Test - Tie Breaker  | Previously identified top ten (10) most difficult questions           |
| Pre-Trip - Tie Breaker      | Fifteen (15) pre-planted defects; One(1) previously identified defect |
| I/O – Tie Breaker           | In the event of a tie, the fastest time to complete the event         |

**ALL DECISIONS MADE BY THE JUDGES ARE FINAL.**



## **GENERAL RULES**

- Contestants must be in consistent team uniform of their own Transit System for the competition.
- Contestants are not permitted to talk with the judges at any time during the competition.
- Contestants are not permitted to receive pay time for practice after winning the local contest and prior to the Florida State Mega Bus Roadeo competition.
- On competition day, contestants cannot watch or be in the competition area of the Vehicle Inspection event, Power Train events, Air Brake Board, or I/O Control event either before or after competing.

## **FPTA/FDOT**

### **FLORIDA STATE MEGA BUS ROADEO GUIDELINES**

In addition to the Host Property Responsibilities, State Roadeo Rules, Regulations and General Information and Judges Instructions contained herein, the FPTA Board of Directors approved the following recommendations of the Roadeo Steering Committee:

- The Roadeo Steering Committee is authorized by the Florida Public Transportation Association to solicit vendor contributions to provide supplemental financial assistance for the Florida State Mega Bus Roadeo. The host property is responsible for coordinating this solicitation effort with the aid of the Roadeo Steering Committee.
- The Florida State Mega Bus Roadeo will be conducted in a month that will provide ample time to allow the winner to be properly registered at the American Public Transportation Association sponsored International Roadeo and included in all printed material for that event. In addition to the property name, the Operator and Maintenance Team will be registered in the International Bus Roadeo as “Florida Public Transportation Association Representatives” providing recognition as the Florida State Mega Bus Roadeo Champions.



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## FPTA/FDOT STATE MEGA BUS ROADEO GUIDELINES

### HOST PROPERTY RESPONSIBILITIES

#### A. General Procedures Considerations:

- The logo for the State Bus Roadeo was created by the Steering Committee and cannot be changed without prior approval from the committee.
- Establish an initial meeting with the FPTA/FDOT Roadeo Steering Committee chairperson and at least one other Steering Committee member to review requirements, rules, procedures, and coordinate the event prior to any actual planning. The host property representative cannot be chair or vice-chair.
- The Steering Committee will consist of two members from each FPTA member transit property (preferably one from Operations and one from Maintenance) that wishes to be a part of the Committee. The Committee members will nominate and vote for the positions of Chair, Vice-Chair for Maintenance, and Vice-Chair for Operations. The Secretary will continue to be supported by CUTR. The Chairperson for the committee will alternate between maintenance and operations each year. The Vice-Chair becomes Chair. The Chair becomes Past Chair. The new Vice-Chair will be selected at the 2010 Mega Roadeo weekend meeting.
- Steering Committee designated representatives will become members of the APTA International Bus Roadeo Committee. The representatives will be one (1) from Maintenance and one (1) from Operations, and a full time representative from CUTR. All questions or concerns regarding Roadeo rules or procedures should be directed to these representatives.
- Any inquiries regarding financial responsibilities for Mega Roadeo expenses should be referred to the Florida Public Transportation Association (FPTA) Executive Director and the Florida Department of Transportation (FDOT).
  1. **FPTA** - Clarify the amount and request for expenses for the Mega Roadeo Operator Champion for travel to the International Competition.
  2. **FDOT** - Clarify of the amount and request for expenses for the Mega Roadeo Maintenance Champions for travel to the International Competition.
- Designated On-Field Officials will be responsible for the enforcement of all Roadeo Rules and Regulations, the supervision of Event Judges and on-the-spot procedural decisions.

1. These Officials will consist of one Host Property representative and two (2) Roadeo Steering Committee members. The Officials will be determined at the Host Property/Steering Committee meeting held Thursday of Roadeo weekend.
2. Host Property will hold a meeting with the Steering Committee and their designated property representatives on the Thursday afternoon of the Roadeo weekend, to review and/or clarify Roadeo events and procedures.

**B. Personnel Requirements:**

- Roadeo Event Judges should be obtained and designated by the Host Property, with at least one representative from each participating property assigned as an Assistant Judge.
  1. At least one (1) Event Judge and Assistant Judge are required for each event (obstacle).
  2. The scoring of each obstacle will be the responsibility of the Event Judge.
- It is highly recommended that the Judges be present on practice day to ensure their knowledge of their duties, responsibilities, and procedures required during the competition.
- **It is mandatory that property representatives attend the orientation meeting on Thursday. That representative is also required to be on the practice course for the duration of the practice day to help re-set the course markers and ensure that practice procedures are properly maintained.**
  1. Personnel assignment will be mutually agreed upon by the Host Property and the Steering Committee.
- A maintenance committee member will be assigned to observe at each module/exercise.
- Two (2) score Observers are to be designated to assist in the final scoring tabulation and to review/verify the final score sheet tabulation.
  1. The Observers are to be mutually agreed upon by the Steering Committee.



2. The Observers and final score tabulators should be isolated to ensure accurate tabulation with no distractions.
3. The Observers should begin the reviewing the score sheets as soon as each tabulation is completed, to eliminate any excessive delay in calculating the final results.



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### **General Recommendations:**

- The State Mega Roadeo is restricted to Transit Bus Operators and Maintenance employees, eliminating drivers of vehicles transporting less than seventeen passengers. Inexperienced drivers unfamiliar with transit coaches have created safety concerns/unnecessary practice delays at local and regional competitions.
- A detailed description of contestant qualifications is included in this Roadeo handbook
- High-point value course events cones should be marked differently than lower point value course marker cones.
- Two (2) buses should be used on competition day in order to provide all contestants equal opportunity. These buses should be used for practice.
- A replacement bus of identical model/dimensions and similar operating and mechanical characteristics is to be ready and staged in the event of a mechanical break down.
- Host property will determine which buses are to be used on practice and competition days.
- Practice buses will be the same as the buses used on competition day.



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## FPTA/FDOT STATE MEGA BUS ROADEO JUDGES' INSTRUCTIONS AND PROCEDURES

### A. Course Regulations:

Enforcement of all Roadeo Rules and Regulations, supervision of Event Judges, and on-the-spot procedural decisions will be the responsibility of the On-Field Roadeo Officials.

- Judgment of event (obstacle) scoring will be the responsibility of the Event Judges.
- Event Judges and Assistant Judges are not permitted to motion, give signals or talk to contestants at any time during the competition, except when it is in regard to official activities of the course event.
- An experienced Operations judge will be at each obstacle (if possible) to be the Event Judge to oversee the obstacle being judged. The Event judge will be responsible to ensure that the problem is being properly judged and that the scoring is accurate and complete at that obstacle.
- Event Judges or Assistant Judges will not enter an event or touch a course marker other than those in their assigned obstacle.
- Judges should not remove or turn over a marker cone in anticipation that it will be touched by the bus, even if it appears obvious that it will occur.
- Turn over any cone or course marker touched only after the bus has completely cleared the marker and/or left the course event.
- If a course marker becomes entangled with any portion of the bus that may create safety hazard or cause equipment damage, immediately order the bus to stop and remove the obstruction. The on-board timekeeper must stop the contestant's time when the bus stops, and resume the time once the bus moves, after the driver has been given the all-clear signal by the Event Judge.
- Event Judges and Assistant Judges are to position themselves as indicated on the score sheets for each course event.
  1. Judges must remain completely clear of the path of the bus as it negotiates the event obstacle.
  2. All On-Field Personnel must remain clear of the Diminishing Clearance Event (barrel obstacle) due to the potential hazard of high velocity projectiles if barrels are hit.

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## **B. Scoring Procedures for Event Judges:**

- All Event Judges should make sure that they have proper score sheets for their assigned course event, and that they understand the scoring calculations.
- All Event Judges should record the bus number and the displayed contestant number on each score sheet for their event.
- If the bus makes contact with a course marker, place circle around each one touched on the score sheet.
  1. Because the values of the cones, tennis balls, barrels, etc., vary, Event Judges must ensure the correct point value is deducted for any course marker touched.
  2. If any portion of the bus and/or its tires touch any portion of a course marker, including cone bases, curbs, barrels, etc., points will be deducted even though the course marker was not physically moved/turned over from the contact.
  3. A penalty for touching a particular course marker (cone, curb, barrel, etc.) is assessed only once. If a particular course marker is struck more than one time by the same bus in any course event, the judge should deduct the point value for the course marker only once.
  4. The Event Judge may be directed by an On-Field Official to deduct points from a contestant's score sheet if a course marker on their event is struck. If you see someone else's marker touched, report it to the On-Field Official. They will make the decision to subtract it or not.
  5. If a contestant completely misses or does not attempt an event, the score given for that event will be zero. (Note the penalty on the bottom of the score sheet).
  6. If a contestant attempts an event in the wrong sequence, a twenty-five (25) point deduction will be made. (Note the penalty on the bottom of the score sheet).

7. All Event Judges shall ensure the accuracy of the score calculation by:
  - a. Double checking the calculations.
  - b. Properly recording the total points earned.
  - c. Both the Event Judge and the Assistant Judge will sign each contestant score sheet.
- The Event Judge at the Passenger Stop should make sure to:
  1. Carefully observe the bus entering and leaving the curb area for any contact with the cones representing a parked car at either end of the obstacle, in addition to any curb contact, including front tires touching the curb while the wheels are turned as the bus prepares to leave.
  2. Take the tire measurements from the top of the curb to the tire sidewall directly under the center of the wheel hubs.
  3. Record the measurements in one inch increments—not fractions of an inch. (The same shall apply to the Judgment Stop and each Reverse).
    - a. Actual measurements of less than one-half ( $\frac{1}{2}$ ) inch is rounded down to the nearest inch for scoring
    - b. Actual measurements of one-half ( $\frac{1}{2}$ ) inch or more will be rounded up to the nearest inch for scoring.
  4. Do not finalize the score sheets until the bus completely departs all passenger stop obstacles. (Refer to Item 3-A above)
  5. If the curb is touched twice at the Passenger Stop, each incident will be deducted and the contestant will lose all fifty (50) points for the obstacle.
  6. The *actual measurement* of the front and rear tires from the curb must be recorded on the score sheet as these measurements are used in calculating the Yardstick Award.
  7. The ADA announcement at the Passenger Stops is necessary whenever, approaching, entering, or while stopped at the event. When the bus wheels begin to move, as the bus leaves the stop, a loss of ten (10) points will result for failing to announce the stop. Judging for the

ADA announcement will be made by the Smoothness judge and the deduction will be shown on the Smoothness score sheet.

- The Event Judge at the Judgment Stop:
  1. Will take a measurement from the front brace of the bicycle rack straight out to the Judgment Cone. If the normally used Judgment Cone (18") is shorter than the bicycle rack, the cone should be replaced by a 26" cone. The cone should be replaced prior to the Roadeo practice and used throughout the entire event, including the practice.

### **C. Special Penalties:**

- The full value of the Safety Habits Evaluation (25 points) will be deducted for any contestant failing to properly use the driver's seat belt at any time the coach is in motion.
- The full value of the Off-Set Street event will be deducted if a contestant makes a reverse shift in order to avoid touching a cone other than in the manner in which the obstacle is intended to be negotiated.
- The contestant may not leave his/her seat for any reason while on the course or he/she loses the full penalty value for that obstacle.

### **SPECIAL JUDGES' NOTE**

In order to ensure equal opportunity to all contestants, it is imperative that all judging personnel fully understand the procedures/responsibilities of their assigned course event and gives complete attention to each bus negotiating their obstacle. If a judge is not completely certain of his/her requirements, he or she should obtain clarification during the Judges' briefing. Additional questions / concerns during the competition may be referred to On-Field Roadeo Officials

The Steering Committee will encourage questions and should attempt to make clear all responsibilities to the judges. The Steering Committee members will remind the judges that as members of the FPTA/FDOT Mega Bus Roadeo Team, they are the most important factor of a successful state's competition. Their responsibilities are overwhelming and their decisions are critical. Their judgment and professionalism will be respected and, most of all, their participation in the event is sincerely appreciated by the Mega Bus Roadeo Host Property as well as the FPTA/FDOT Mega Bus Roadeo Steering Committee.

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## FPTA/FDOT STATE MAGA ROADEO RULE/REGULATIONS AND GENERAL INFORMATION

### A. Arrival Day:

- Two to three members of the Steering Committee will meet with the Host Property at the Roadeo site and “evaluate” the site. If any changes are needed to be made to the course or to any particular event, they should be expedited at this time.

### B. Practice Day:

- Prior to practice at the Roadeo site, the Host Property and the Steering Committee will do a walk-through on the Roadeo course as a group. Contestants may pose additional questions concerning the course. Should any “last minute” change of the course or any ruling need to be made by the Steering Committee, all Contestants will be made aware of the change at this time.
- All involved in the Roadeo (including the Contestants themselves), should do their best to eliminate distractions to the Contestants while driving the practice runs. Unnecessary or unwanted conversation with the Contestant at the wheel must be avoided.
- Operators will drive in a safe/reasonable manner and demonstrate courtesy to their fellow Contestants while on the course.
- Because time is limited and there is more than one bus on the course at a time, Contestants are encouraged to drive at a safe pace through the course. This is very important so as not to create unnecessary delays for other Contestants.
- Contestant’s attire for the practice is at the Contestant’s option.

### C. The State Roadeo Competition:

- **Weather Conditions:**
  1. Practice/Competition to be conducted rain or shine.
  2. In the event of extremely threatening weather, an On-Field Roadeo Official will evaluate conditions and will recommend to the Host Property/Steering Committee whether or not to proceed with the event. The primary factors that will be considered are the safety and welfare of all personnel and the protection of the equipment.

- **In the event of mechanical failure of the Event Bus:**
  1. Time will stop and the bus will be repaired or replaced.
  2. If replaced, the exact location of the bus will be marked and the new bus shall be positioned in the same place.
  3. Time will resume when the bus moves again, and the Contestant will continue through the course.
  
- **Mirrors:**
  1. The standard mirrors for the model bus designated by the Host Property will be used in the competition.
  
- **Scoring Regulations:**
  1. These Rules and Regulations conform to the standards set up in the APTA Roadeo Manual, as well as the Course Regulations. If a rule is not contained in this handbook, the APTA rule will apply. Any questions, contact the Steering Committee Chairperson.
  2. Points will be deducted for all event markers touched as specified on the score sheets.
  3. Ten (10) points will be deducted for any course marker (that is not associated with an event) touched.
  4. Twenty-five (25) points will be deducted for any event that is not attempted in proper order.
  5. The full value of the obstacle will be deducted for any event not attempted.
  6. The full value of the Off-Set Street event (50 points) will be deducted for any reverse movement intentionally made in an attempt to better negotiate the obstacle other than in the manner intended, in order to avoid touching any of the course markers
  7. The full value of the Safety Habits evaluation (25 points) will be deducted for failure to use the Operator's seat belt at any time the bus is in motion.

8. Points will be deducted for any portion of a course marker, or event marker touched by any part of the bus including tires.
9. Ten (10) points will be deducted for each shift into reverse at any event other than the initial reverse shift allowed at either Reverse obstacle.
10. All judgment decisions made by the Event Judges, the Roving Judges, or the On-Field Officials will be final.
11. All procedural questions or concerns will be directed to the On-Field Roadeo Officials.
12. Points will be deducted only once for any event or any course marker touched more than one time.

- **Driving Course Rules:**

1. On competition day, Contestants are allowed to watch the competition.
2. Contestants and spectators are not allowed on the course at any time during the practice or the competition, except those Operators driving.
3. Contestants are not permitted to talk to the Event Judges at any time during the competition

**D. Course Event Procedures:**

- **Passenger Stops:**

1. When approaching, turn on the signals or the flashers, make the required ADA Stop announcement, pull in, blow horn two times, and open the door.
2. Time stops when the bus stops and starts when the bus moves.
3. Judges will take measurements when horn blows and indicate to the Operator when the measurements are completed.

- **Right and Left Reverse:**

1. Blow horn, turn on-four way flashers, shift into reverse, back in, stop, shift to neutral, blow horn two times, and open the door.



2. Time stops when the bus stops and starts when the bus moves.
3. The Event Judge will take measurements when the horn blows and will indicate to the Operator when the measurements are completed.

### **Course Events Requiring Mandatory Signals:**

|                                    |   |
|------------------------------------|---|
| Left Turn                          | Signal Left   |
| Offset Street                      | Signal right to move to right side portion of offset street |
| First Passenger Stop <b>(IN)</b>   | Emergency Flashers - Call out stop                          |
| First Passenger Stop <b>(OUT)</b>  | Signal Left (Flashers off)                                  |
| Rear Dual Clearance                | No Signals needed   |
| Second Passenger Stop <b>(IN)</b>  | Emergency Flashers - Call out stop                          |
| Second Passenger Stop <b>(OUT)</b> | Left Turn Signal (Flashers off)                             |
| Right Hand Reverse <b>(IN)</b>     | Emergency Flashers-Sound Horn                               |
| Right Hand Reverse <b>(OUT)</b>    | Right Turn Signal   |
| Serpentine                         | Signal for each change of direction (right/left/right)      |
| Right Turn                         | Signal Right  |
| Left Hand Reverse <b>(IN)</b>      | Emergency Flashers-Sound Horn                               |
| Left Hand Reverse <b>(OUT)</b>     | Left Turn Signal  |
| Diminishing Clearance              | No Signals needed   |
| Judgment Stop                      | No Signals needed   |

## **SAFETY NOTE**

**All Contestants should be aware of the Event Judge taking measurements. Even when given the all clear signal by the Event Judge after taking measurement, Contestants should be sure that the area around the bus is clear of any personnel before moving!!!**

**Blowing the horn when the bus is stopped for measurement in the Passenger Stops/Reverses, is an additional precaution to ensure the safety of the judges taking measurements.**

**Requirement of blowing the horn prior to the measurements at each Passenger Stop and each Reverse (for safety sake) will not result in any loss of points.**