### STAR REPORT CARD TERMS

# **Current Inspectors**

This list shows all inspectors currently entered into the Inspector Information Table(s) on each Emissions Inspection System being used to perform Smog Check inspections at a station. Stations should be sure to remove former employees from their EIS' Inspector Information Table(s) to ensure that inspectors with low FPR scores do not affect the station's STAR certification. Similarly, to guard the integrity of their data, inspectors should make sure that they have been removed from an EIS' Inspector Information Table(s) if they are no longer employed at a station.

### **Current Station Status**

Under the new STAR Program, each Smog Check station that intends to inspect directed vehicles must apply to BAR to determine whether the station meets the STAR performance measures. If it is determined that the station meets the standard for each performance measure, BAR will issue a certification to the station making it eligible to inspect directed vehicles. Applications for the STAR Program will be accepted beginning July 1, 2012 and the program will begin January 1, 2013. Stations that apply but do not meet all of the standards for the STAR Program, or stations that have their STAR certification invalidated for not meeting any of the performance standards, are not eligible to inspect directed vehicles.

#### Note:

Initially, all stations will appear as "Not STAR Certified," since the program does not begin until January 1, 2013. Once the program begins, stations that meet the performance standard and apply for STAR certification will be shown as "STAR Certified. However, a station's status of eligibility to inspect directed vehicles on this Web page may sometimes appear in conflict with the station's results on the STAR Program performance measures. For example, the STAR Web page may show a station passing all of the STAR performance measures, but still show that the station is "Not STAR Certified" and, therefore, not eligible to inspect directed vehicles. This may be because the station has not yet applied for certification under the STAR Program, or that the station has applied but not yet had its application reviewed and certified by BAR as meeting all of the STAR Program performance measures. Conversely, the STAR Web page may show that a STAR certified station is not meeting all of the STAR Program performance measures, but still indicate that the station is "STAR Certified" to inspect directed vehicles. This is most likely because the process of invalidating the station's STAR certification is pending administrative review at BAR.

### **Current STAR Result**

The Current STAR Result table summarizes a station's current performance on all of the various STAR performance measures. The result of a station's current performance will be shown in this table as a "Pass" or "Fail." A "Pass" result means that the station currently meets the FPR and all of the Short-Term performance measures of the STAR Program. This means that the station is eligible to apply for, or maintain its current, STAR certification. However, stations still may be determined ineligible for other reasons, such as not being in compliance with the enforcement-related standards of the STAR Program, such as citations and administrative actions. At this time, the STAR Web page does not include a station's performance in meeting the enforcement-related standards. We hope to add that feature to the STAR Web page before the program begins on January 1, 2013. A "Fail" result indicates that a station currently does not meet the standards for the STAR Program performance measures. A STAR certified station showing a "Fail" result may be in jeopardy of having its STAR certification invalidated.

#### Note:

The Current STAR Result table includes a summary of performance on the two main categories of the STAR Program: The Short-Term Measures and the Follow-up Pass Rate. The Short-Term Measures category summarizes a station's performance on the seven Test Deviations, Incorrect Gear Selection, and Similar Vehicle Failure Rate performance measures. Results on the Short-Term Measures will be shown as a "Pass" or "Fail." The Follow-up Pass Rate category only summarizes a station's

performance on the long-term performance measure known as the FPR. Results for the FPR will be shown as a "Pass" or "Fail."

## **Station Short-Term Summary**

The Station Short-Term Summary shows a station's results for the following STAR Program performance measures: Test Deviations; Incorrect Gear Selection; and Similar Vehicle Failure Rate (SVFR). Test Deviations are further divided into the following seven performance measures: (1) Fuel Cap Not Performed; (2) Evap Not Performed; (3) Timing Not Performed; (4) OBD II Not Performed; (5) Max Readiness Monitors; (6) ASM Restarts; and (7) Aborted Tests. Together, these ten inspection-based performance measures are considered short-term because they are calculated based on data from the three most recent months. However, STAR Program eligibility evaluations using these short-term performance measures are based only on the scores calculated at the end of each calendar quarter.

The STAR Program does not evaluate stations based on how their individual inspectors performed on these short-term performance measures. Instead, the station's short-term results are an aggregate of all inspections performed at that station for each three-month period. However, inspector results are published on this Web page in order to provide feedback to station owners and individual inspectors on their performance. Note that if an inspector performs inspections at more than one station, then the inspector results will be based on the inspections performed at all of the stations at which the inspector worked during the three-month period.

# **Fuel Cap Not Performed**

This STAR performance measure calculates the rate at which each station indicates that a fuel cap pressure test cannot be performed on vehicles when at least 90% of the inspections performed on "similar vehicles" statewide indicate that the fuel cap is testable. The fuel cap test must be performed on all 1999 and older model year vehicles unless the vehicle is specifically excluded in the <a href="Smog Check Inspection Procedures Manual">Smog Check Inspection Procedures Manual</a> or the adapter necessary to properly test the vehicle in question is not produced by the fuel cap tester manufacturer. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's rate of not performing fuel cap pressure tests is greater than the statewide average for similar vehicles. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

## **Evap Not Performed**

This STAR performance measure calculates the rate at which each station indicates that a Low Pressure Fuel Evaporative Test (LPFET) cannot be performed on vehicles when at least 90% of the inspections performed on "similar vehicles" statewide indicate that the evaporative system is testable. The LPFET must be performed on all 1976 to 1995 model year vehicles with some exceptions listed in the <a href="Smog Check Inspection Procedures Manual">Smog Check Inspection Procedures Manual</a>. The LPFET does not need to be performed when the evaporative canister or the evaporative lines cannot be tested without partially dismantling the vehicle. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's rate of not performing the LPFET is greater than the statewide average for similar vehicles. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

## **Timing Not Performed**

This STAR performance measure calculates the rate at which each station indicates that a vehicle's timing is not adjustable, and therefore cannot be tested, when at least 90% of the inspections performed on "similar vehicles" statewide indicate that the ignition timing is testable. As described in the <a href="Smog Check Inspection Procedures Manual">Smog Check Inspection Procedures Manual</a>, ignition timing does not have to be checked if the under hood label indicates that the timing is not adjustable or the vehicle is computer controlled and does not have timing adjustments. "Similar vehicles" means vehicles of the same model year, make,

model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's rate of not performing the Ignition Timing Test is greater than the statewide average for similar vehicles. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

### **OBD II Not Performed**

This STAR performance measure calculates the rate at which each station fails to perform the OBD II test on model year 1996 and newer vehicles when at least 90% of the inspections performed on "similar vehicles" statewide indicate that the OBD II system is testable. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's rate of not performing the OBD II test is greater than the statewide average for similar vehicles. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

### **Max Readiness Monitors**

This STAR performance measure compares the rate at which each station passes vehicles on the initial test with the maximum allowable unset OBD II readiness monitors to the maximum unset monitor rates for "similar vehicles" statewide. An initial test may be an official inspection or a pretest and is the first test performed on a vehicle in its current inspection cycle, which may be for biennial inspection, change-of-ownership, or initial registration. The maximum allowable readiness monitors for model year 2001 and newer vehicles is one unset monitor. Model year 2000 and older vehicles are allowed two unset monitors. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's rate of passing vehicles on the initial test with the maximum allowable unset OBD II readiness monitors is greater than 125% of the statewide average for similar vehicles. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

#### **ASM Restarts**

This STAR performance measure compares the rate at which each station restarts ASM tests on vehicles to the ASM restart rates for "similar vehicles" statewide. Restarts occur when the speed or acceleration during an ASM test mode falls outside of the allowable limits. If multiple restarts occur while performing a single test, only one restart is counted as a restart deviation. Restarting tests for legitimate reasons such as drive-by-wire vehicles that are difficult to keep within the allowable speed threshold on an ASM test will be compared to similar vehicles, and therefore will not negatively affect a station that tests these vehicles. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's ASM restart rate, during inspections where a certification was issued, is greater than 125% of the statewide average for similar vehicles. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

### **Aborted Tests**

This STAR performance measure compares the rate at which each station aborts inspections (ASM, TSI, Diesel) to the aborted test rates for "similar vehicles" tested on the same brand of emissions inspection system statewide. Inspectors who legitimately abort inspections, for reasons such as previously unidentified safety issues (e.g., a fuel leak), will tend to have abort rates at or below average. Inspectors who abort inspections for other reasons, such as trying to get a vehicle to pass through over conditioning or clean piping, will tend to have abort rates above average. "Similar

vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the station's aborted test rate is greater than 125% of the statewide average for similar vehicles tested on the same brand of inspection system. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is only based on the scores calculated at the end of each calendar quarter.

### **Incorrect Gear Selection**

This STAR performance measure compares the rate at which vehicles tested by each station are shifted into the incorrect gear during an ASM inspection to the incorrect gear selection rates for "similar vehicles" statewide. The correct gear in which to drive a vehicle during an ASM test is clearly spelled out in the <a href="Smog Check Inspection Procedures Manual">Smog Check Inspection Procedures Manual</a>. Automatic transmission vehicles should be tested in "Drive" while manual transmission vehicles should be tested in 2nd gear. Manual transmission vehicles may be shifted into another gear only when the engine RPM during the test falls outside the allowable limits.

This measure works by first finding the 90th percentile RPM reading for similar vehicles inspected statewide, and then adding 300 rpm to that reading in order to establish the maximum allowable RPM limit for a particular vehicle. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

The standard for this performance measure is not met if the overall rate that vehicles are ASM tested in the wrong gear at a station is greater than 2%. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

## Similar Vehicle Failure Rate (SVFR)

This STAR performance measure compares the initial test failure rate for vehicles inspected at each station to the initial test failure rate for "similar vehicles" statewide. An initial test may be an official inspection or a pretest and is the first test performed on a vehicle in its current inspection cycle, which may be for biennial inspection, change-of-ownership, or initial registration. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style. Additional factors such as time since last certification, previous initial test result, and odometer readings are also taken into consideration.

The standard for this performance measure is not met if the overall rate that vehicles fail their initial test at a station is less than 75% of the statewide average for similar vehicles. In other words, the overall failure rate must be well below average in order for a station not to meet the SVFR. This performance measure is calculated every month based on data from the three most recent months. However, STAR eligibility for this performance measure is based only on the scores calculated at the end of each calendar quarter.

### **Incidents**

STAR "Incidents" show specific cases where the inspection results indicate that the inspector followed incorrect test procedures based on a comparison of that inspector's inspections to test results for similar vehicles throughout the state. The STAR Report Card will detail incidents for the following STAR performance measures:

- Fuel Cap Not Performed
- Evap Not Performed
- Timing Not Performed
- OBD II Not Performed
- Incorrect Gear Selection

If an inspector or a station feels that an incident has been incorrectly identified and should be removed, they may challenge the incident by following the instructions detailed in question 4.11 of the <u>STAR</u>

# Follow-up Pass Rate (FPR)

The Follow-up Pass Rate is a long-term STAR performance measure that evaluates the performance of both stations <u>and</u> inspectors. It is the only performance measure that evaluates the performance of an inspector to determine a station's eligibility for the STAR Program. For this reason, FPR scores are given to both Smog Check stations and inspectors.

The FPR performance measure examines whether vehicles certified by stations and inspectors in their previous inspection cycle are passing their current initial inspection at a higher or lower rate than expected for "similar vehicles." Station FPR scores reflect the performance of the station at the time the vehicles were previously certified at that station. Inspector FPR scores reflect the performance of the inspector at the time they last certified the vehicle, regardless of the station at which the inspector worked when he/she previously certified the vehicle. Smog Check inspection performance during the previous inspection cycle is measured by comparing, in the current cycle, the actual failure rate on initial tests to the expected failure rate for similar vehicles statewide. An initial inspection may be an official inspection or a pretest and is the first test performed on a vehicle in its current inspection cycle, which may be for biennial inspection, change-of-ownership, or initial registration. Previously certified vehicles passing at a higher rate than similar vehicles in the current inspection cycle is an indicator of better Smog Check inspection performance in the previous inspection cycle. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

To better understand how this performance measure works, consider the following conceptual example. Two-hundred 1995 Ford Mustangs, with 5.0 liter engines, were gross polluting at the start of their previous inspection cycle. Half of these vehicles were tested improperly and certified to get the vehicles to pass without the necessary emissions repairs. The other half were tested properly, failed the inspection, repaired properly, and then certified properly. Vehicles from which of the two populations will pass at a lower rate in their next inspection cycle?

The answer to this question is clear. Unless the improperly tested vehicles received some repairs subsequent to their last inspection, they will continue to be high-polluting vehicles in their current inspection cycle. Some of the vehicles that were properly inspected, repaired, and certified in the previous inspection cycle may fall into disrepair by the time of their next inspection cycle. However, a majority of these repaired vehicles will continue to have comparatively lower emissions levels when inspected in the next inspection cycle. As a result, the vehicles that were properly inspected, repaired, and certified will fail at a much lower rate in their next inspection cycle.

FPR scores range from zero to one. A score of zero means that we are 100% confident that the performance at a station or by an inspector is below average in comparison to other stations or inspectors. In other words, that station or inspector is, for the most part, not performing proper inspections. A score of one means we are 100% confident that the performance at a station or by an inspector is above average. In other words, that station or inspector is, for the most part, performing proper inspections. FPR scores are calculated twice a year, in January and July.

Since the FPR performance measure examines whether vehicles certified in their previous inspection cycle are passing their current inspection at a higher or lower rate than expected, newly licensed stations and inspectors will initially not have an FPR score. FPR scores for new stations and inspectors can be produced once the vehicles they have certified are tested in their next inspection cycle. Similarly, stations and inspectors with extremely low test volumes cannot be evaluated on the FPR because there is insufficient data to form a statistically valid assessment of their performance. In cases where an FPR score cannot be produced, the FPR score is shown as "No Score."

Because the FPR simply compares the Smog Check failure rate in the current inspection cycle of vehicles previously certified by each station and inspector to the failure rate for similar vehicles in the same inspection cycle, a number of different inspection-related behaviors can affect one's FPR score. In short, any behavior that helps a vehicle pass an inspection when the vehicle should otherwise fail the inspection will tend to lower the FPR score of a station and/or inspector.

Specific behaviors that affect a station's or inspector's FPR score include:

- 1. Clean piping (i.e., passing a vehicle that is out of compliance with the tailpipe emissions standards by introducing a substitute clean exhaust sample through the emissions analyzer)
- Clean plugging (i.e., using a substitute source of OBD II data for a failing vehicle's OBD II selfdiagnostic test)
- 3. Shifting vehicles into the wrong gear during an ASM test
- 4. Over-conditioning vehicles (i.e., racing the engine to get a vehicle's catalytic converter hotter than would happen under normal operating conditions)
- 5. Not identifying visual inspection failures
- 6. Not identifying functional inspection failures (e.g., fuel cap, ignition timing, low-pressure fuel evaporative emissions)
- 7. Entering incorrect vehicle parameters to generate more lenient emission standards or a lighter vehicle weight loading (in order to create less treadmill resistance) during an ASM test

Stations and inspectors with low FPR scores can improve their performance by performing accurate inspections appropriate to the vehicle being inspected according to the <a href="Smog Check Inspection">Smog Check Inspection</a>
<a href="Procedures Manual">Procedures Manual</a>.

### **Overall FPR Result**

While both Smog Check stations and inspectors are given FPR scores, the process for determining whether a station is eligible for the STAR Program -- both on initial application and after becoming STAR certified -- rests, in large part, on the FPR score of the inspector(s) performing inspections at that station. In other words, the inspector FPR score is considered first when determining a station's eligibility for the STAR Program. The only time a station FPR score is considered is when an inspector does not have an FPR score, either because that inspector is a new licensee or does not have enough inspection data to establish an FPR score. Under these circumstances, the Web page will indicate that the inspector or station has an FPR score of "No Score."

There are two ways a station may bring an inspector into the STAR Program. The first occurs when a station initially applies for STAR certification using all of the inspectors currently listed in the Technician Information Table of each EIS owned by the station. The other occurs when a station, after becoming STAR-certified, wants to bring in a different inspector to perform Smog Check inspections at the station. In either case, the inspector's FPR score must be greater than or equal to 0.4. If an inspector does not have an FPR score, then the station's FPR score must be greater than or equal to 0.4. It is also possible for an inspector without an FPR score to perform Smog Checks at a STAR station without an FPR score, provided the station has at least one calendar quarter of data for the STAR short-term performance measures. This situation can occur if both the inspector and station are new licensees.

Once a station brings an inspector into the STAR Program with a score greater than or equal to 0.4, that inspector may remain in that station's EIS Technician Information Tables without affecting the station's STAR certification until his or her score drops below 0.1. If, however, an inspector does not have an FPR score, he or she may remain in a station's EIS Technician Information Tables until that station's FPR score drops below 0.1.

It is important to note that the station FPR score will not automatically change with the addition of higher scoring inspectors or removal of lower scoring inspectors from the station's EIS Technician Information Tables. The station FPR score is strictly based upon the performance of vehicles previously certified at that station, regardless of which inspector certified the vehicle. The inspector score is based strictly on the vehicles previously certified by that inspector, regardless of which station he or she worked at when certifying the vehicles. Consequently, a station FPR score will not change based upon the addition or removal of inspectors from the station's EIS Technician Information Tables.

For a table explanation of the various FPR-related rules, visit the following link Here.

## Start Date/End Date

There are two FPR-related ways an inspector's performance can affect a station's eligibility for the STAR Program. The first way results from an inspector performing low-quality Smog Check inspections while employed at the Smog Check station. When vehicles that were inspected improperly are re-inspected at a future date, the results from those inspections will tend to lower the station's FPR scores in the future.

The other FPR-related way an inspector can affect a station's STAR Program eligibility is by the inspector's current FPR scores, which are based on the quality of Smog Check inspections performed by the inspector in the past, regardless of where those inspections were performed. For example, a STAR certified station that brings in an inspector who currently has a low FPR score (less than 0.4) may jeopardize its eligibility for the STAR Program. Similarly, a STAR certified station that brings in an inspector without an FPR score while the station currently has a low FPR score (less than 0.4) also may jeopardize its eligibility for the STAR Program. This is true even if a STAR certified station brings in the inspector for one day under these circumstances. For a table explanation of the various FPR-related rules, visit the following link Here.

The STAR Web page shows a record of inspectors recently listed in the EIS Inspector Information Table(s) of a station. This information can be found under the "Station Follow-up Pass Rate Summary" table that has been created for the FPR performance measure. The "Start Date" column shows the date that an inspector was entered into any of the EIS Inspector Information Tables at a station. The "End Date" column shows the date that an inspector was removed from all of the EIS Inspector Information Tables at a station. In most cases, the "End Date" column will be blank because the inspector is currently listed in at least one EIS Inspector Information Table at the station, and presumable currently employed by that station.

## **Three Month Period Ending**

Station evaluations on each of the short-term performance measures of the STAR Program are performed at the end of each calendar quarter. The calendar quarter evaluations are used to determine eligibility for the STAR Program. However, each of the short-term performance measures also is calculated monthly based on data from the three most recent months to help stations track their progress in meeting or maintaining these performance measures.

Initial application for STAR certification evaluates a station on the short-term performance measures in the most recently completed calendar quarter. Once a station is certified under the STAR Program, failure to meet <u>any one</u> of the short-term performance measures for two consecutive calendar quarters is grounds for invalidation of the station's STAR certification.

## Score(s) Applicable As Of

The Follow-up Pass Rate is calculated and published in January and July of each year. The scores are valid until the next FPR scores are published six months later. The twice-a-year FPR evaluations are used, along with the short-term performance measures, to determine station eligibility for the STAR Program.

For more information on the FPR-based rules, please visit the following link: Here.