

BEST PRACTICES GUIDE



2018

IFTA AUDIT COMMITTEE

Disclaimer

All users of the information contained in this document understand and agree that IFTA, Inc. is not responsible for the accuracy of the information provided to IFTA, Inc. by the person or persons that prepared the materials herein. All information contained in this document is provided to IFTA, Inc. by the responsible party or parties and IFTA, Inc. does not alter the information provided or independently confirm the accuracy of the information provided. The sole responsibility of the accuracy of the data lies solely with the person or persons who prepared the materials.

This document was prepared by the IFTA Audit Committee as a tool to assist member jurisdictions in conducting IFTA audits. Member jurisdictions are in no way required to implement the practices contained herein by the IFTA Governing Documents. Suggested changes or additions should be addressed to the IFTA Audit Committee.

TABLE OF CONTENTS

Goals	4
Background	4
IFTA Governing Document.....	4
Overview of the Articles of Agreement, Procedures Manual, & Audit Manual.....	5 & 6
Licensee’s Responsibilities	6
Concept of IFTA Auditing.....	6
Auditing on Behalf of all Jurisdictions.....	7
Adequacy of Records	7
Appropriateness.....	7
Sufficiency	7
Auditor’s Responsibilities.....	8
Audit	8
Pre-Audit Analysis.....	8
Initial Contact.....	9
Opening Conference	10
Reporting Responsibilities	11
IFTA and IRP Fleets.....	11
Leases.....	11
Independent Contractors	12
Trip Permits	12
Fieldwork	12
Testing Internal Control Systems	12
General Testing of Internal Controls System.....	13
Verification of inclusion of all vehicles	14
Use of third party fuel	14
Performance of mpg analysis	15
Performance of bulk fuel reconciliation	15
Establishment of cut-off dates.....	15
Sampling	16
Selecting Sample Periods.....	16

Selecting Sample Vehicles.....	17
Sample size.....	18
Discovery Sampling.....	18
Sample Stratification.....	18
Sample Representation Worksheet	19
Adjusting the Random Sample.....	19
Analyzing the Sample Results.....	19
Projections	20
Isolated Errors.....	20
Error Rates vs Error Factors	21
Examples	21
Projection Document	22
Components of Reported and Audited IFTA Figures	22
MPG/KPL's and Jurisdictional Consumption	23
Audit Fuel	24
Retail Fuel and Purchase Invoices	24 & 25
Bulk Fuel	26
Bulk Fuel purchases.....	26
Bulk tank inventory readings	26
Bulk Fuel withdrawal records	26
Taxable and Non-Taxable Bulk Fuel Withdrawals.....	27
Jurisdictional Tax Paid Credit for Bulk Fuel Withdrawals	27
Multiple Bulk Locations.....	28
Sampling of Bulk Fuel for Large Carriers	28
Bulk Fuel summaries	28
Bulk Fuel Reconciliation.....	28
Positive Taxable and Non-Taxable Unreconciled Fuel	29
Negative Taxable and Non-Taxable Unreconciled Fuel.....	30
Audit Distance	30
Monthly Mileage and Fuel Summaries	30
Manual Recordkeeping Systems	30
Testing Reported Distance with Computerized Routing Program	31

Electronic Vehicle Tracking Recordkeeping Systems	32
Electronic Recordkeeping Systems.....	33
Auditing Electronic Vehicle Tracking Systems.....	33
Electronic Formats.....	33
Record Requests	34
Review of Sample Period & Vehicle Electronic Documentation	34
Analyze Sample Data.....	34
Special Considerations	35
Gaps in Licensee’s Records	35
Gap Distance	35
Single Trip Gap Distance	36
Local Gap Distance.....	36
Untraceable Gap Distance	36
Large Gap Distance	36
Gap Fuel	36
Unit MPG/KPL	37
Miles per Gallons (MPG)/Kilometers per Liter (KPL) Analysis.....	37
Fleet MPG/KPL Analysis.....	37
Individual Vehicle MPG/KPL Analysis.....	37
Procedures for MPG/KPL Analysis.....	38
Imputing Fuel	39
MPG Adjustments for Fleets with Inadequate Records	39
Audit Adjustments in Conjunction with Reductions in MPG.....	39
Adjustments—Adequate Fleet Records & Inadequate Records for certain vehicles	40
Best Information Available Audits.....	41
Write-Up.....	41
Audit Report.....	41
Audit File.....	42
Final Conference	42
Audit Appeals	42

IFTA AUDIT BEST PRACTICES GUIDE

Goals of The IFTA Audit Best Practices Guide

The IFTA Audit Best Practices guide has been created to achieve the following goals:

1. Encourage consistency in audit practices throughout the IFTA audit community
2. Provide guidance in the application of the IFTA Audit and Procedures Manuals into practices
3. Provide a training manual for use by new and seasoned auditors
4. Provide ideas for streamlining the audit process

Background

Prior to the formation of the International Fuel Tax Agreement (IFTA), each state had its own licensing and fuel use tax reporting system. The lack of a coordinated system left carriers to maneuver multiple systems for their licensing needs. Each jurisdiction into which a carrier traveled required a license and fuel tax filings. Many required the carriers to display a jurisdictional decal. A carrier could be audited by any or all jurisdictions into which it traveled.

In 1983, a tax collection process loosely based on the International Registration Plan was developed to collect and distribute fuel taxes. Each jurisdiction would be responsible for licensing, renewals, tax reporting and auditing its registered licensees. Benefits to jurisdictions and licensees included the management by a one jurisdiction of a single license, decal, and a consolidated audit process.

Arizona, Iowa, Washington were the initial jurisdictions to sign on. Over the next three years, a working group modified the Agreement which, in 1986, was adopted by the membership at the time as IFTA. By the end of 1996, the lower 48 states and 10 Canadian provinces became members.

IFTA Governing Documents [R120](#)

The IFTA Governing documents include the Articles of Agreement, the Procedures Manual and the Audit Manual. Each document serves a particular purpose. Citations from the Agreement are prefaced with an “R”, those from the Procedures Manual with a “P”, and those from the Audit Manual with an “A”. Throughout the Best Practices Guide, these citations will be hyperlinked to the appropriate section.

In the IFTA guiding documents, the use of “must” or “shall” indicates an unconditional requirement for a member jurisdiction and a subject for compliance review. The use of “should” indicates a conditional requirement. In cases where should is used, a jurisdiction is expected to satisfy the requirement, unless circumstances beyond their control preclude the jurisdiction from

satisfying the requirement. In these cases, the jurisdiction must include an explanation in the audit file.

International Fuel Tax Articles of Agreement [R130](#)

The Agreement was created to “promote and encourage the fullest and most efficient possible use of the highway system”. This is accomplished by applying uniform rules to the administration and audit of the motor fuel tax laws. The Agreement encompasses three core concepts:

- Base jurisdiction: Reporting and payment of motor fuel use taxes to one-member jurisdiction for distribution to others in which the licensee incurred motor fuel use tax liability
- Each jurisdiction retains the sovereign authority to establish tax rates and exemptions, as well as other substantive tax authority
- A uniform definition of qualified motor vehicles subject to the Agreement

IFTA Procedures Manual

The Procedures Manual establishes the administrative and audit procedures supporting the Agreement. Sections include:

- Account and license administration
- Tax return processing
- Base jurisdiction accounting, reporting and transmittals
- Inadequate records assessments
- Tax return and decal design
- Program Compliance Reviews
- Recordkeeping requirements for licensees

IFTA Audit Manual [A100](#)

The IFTA Audit Manual documents the requirements for the performance of audits. Specific sections are:

- Audit Program Standards
- Audit Procedures
- Audit Communications.

The Audit Program Standards section details each jurisdiction’s responsibility for completing a specific number of audits, completed by qualified, unbiased auditors. The audits must be planned and supervised by the base jurisdictions. This section also establishes requirements for audit selection based on reported distance. This is often referred to as the “stratification requirement”.

The Audit Procedures section provides the basis for much of this guide. While the Audit Manual provides the requirements, this guide attempts to describe useful procedures to implement those requirements. Detailed in the Audit Procedures section of the Audit Manual and this guide are:

- Preliminary audit procedures
- Evaluation of internal controls
- Sampling and projection
- Unreported distance
- Audit adjustments
- Reduction to total fuel

The Audit Communications section outlines requirements for communications between jurisdictions, communications between the auditor and the licensee, the audit report, and the audit file. The areas detailed in the Audit Communications section of the Audit Manual and this guide is:

- Licensee notification of audit
- Request for records
- Communications between jurisdictions
- Opening and closing conferences
- Audit Report
- Audit File

Licensee's Responsibilities [R700, P510](#)

An IFTA Licensee:

- Must maintain records supporting reported activity for the later of four years from the date the tax return was due or filed
- Must make records available for audit in the base jurisdiction or pay travel expenses for an audit to be conducted outside the base jurisdiction
- May include intra-jurisdictional vehicles in an IFTA fleet

Concept of IFTA Auditing [P520](#)

An IFTA audit consists of the examination of source documentation to evaluate the internal control system and determination of the accuracy of reported mileage and fuel figures. IFTA audits should focus on verifying the accuracy of the reported figures and the licensee's recordkeeping and reporting systems compliance, rather than merely checking individual figures. To verify the recordkeeping system, the auditor must:

- Test individual trip records
- Validate reported fuel purchases
- Verify that a truck's distance and fuel source documents are accurately listed on the periodic summaries
- Compare the summary and reported figures
- Determine the adequacy and sufficiency of the records presented

In an IFTA audit, the burden of proof is on the licensee to support reported activity. This support may require all of the recordkeeping items outlined in the Procedures Manual. Depending on the licensee's operations, reported activity might be verified without all of the recordkeeping items.

An IFTA audit must cover any four consecutive quarters or all quarters that were required to be filed for a license year. This timeline enables an auditor to align the IFTA audit period with the International Registration Plan reporting period.

Auditing on Behalf of All Jurisdictions R1310

IFTA auditors conduct audits on behalf of all jurisdictions. Adhering to this requirement could be shown by:

- Auditing with fair and reasonable consideration given to all jurisdictions
- Examining material activity in affected member jurisdictions
- Acting without bias toward the base jurisdiction (avoiding bias)
- Conducting audits in compliance with the requirements of the Agreement, Procedures, and Audit Manuals

Adequacy of Records P530

Jurisdictional distance and fuel for different types of operations may be substantiated with fewer than all of the recordkeeping items listed in the Procedures Manual. Care should be taken to ensure that distance and fuel, including that of the base jurisdiction, can be verified with the presented documentation.

The existence of errors on appropriate and sufficient records does not necessarily indicate inadequate records. In an adequate recordkeeping system, the auditor shall be able to identify errors and adjust the reported information.

Appropriateness

The appropriateness standard provides a measure of the quality of the records. The auditor must determine whether the source documents and summaries contain the type of information needed to support the reported jurisdictional activity. The auditor may consider the licensee's operations in making this determination. To objectively determine the appropriateness of the licensee's records, the auditor must weigh whether the reported distance and fuel can be substantially verified, without excessive assumptions, from the presented documentation.

Sufficiency

The sufficiency standard provides a measure of the quantity of appropriate records maintained. Minor lapses in records should not jeopardize an overall adequate rating. The auditor must attempt to quantify the level of sufficiency in the audit file. To objectively assess the sufficiency of the licensee's records, the auditor must determine if enough of the records consistently detail the recordkeeping items necessary to verify the reported figures.

Auditor's Responsibilities A200

Auditor independence is vital to promote consistent application of audit requirements. Audits must be conducted by staff with no “personal, external, and organizational impairments to independence”. Even the appearance of these impairments must be avoided. The planning and supervision of IFTA audits, as well as an independent review for accuracy and IFTA compliance, must be documented in all audit files.

Audit

Pre-Audit Analysis A310

A well-conducted pre-audit analysis supports an effective and efficient audit. Questions for the licensee are drawn from the pre-audit analysis. During the pre-audit analysis, the auditor identifies issues to form questions for the licensee. The responses to these questions provide the auditor with a better understanding of the licensee's operations and reporting processes. Some jurisdictions require supervisory approval for pre-audit analysis. This approval is especially helpful to new auditors. Potential issues identified in the pre-audit shall be documented in the audit file.

IFTA Pre-Audit Information

A rigorous pre-audit analysis includes:

- Demographic detail including the licensee's name, address, Federal Employer Identification Number and Tax Identification Number. This would include understanding the business type of operations and how each type affects the appropriate/sufficient test.
- Audit contact and responsible officers' information
- Related companies
- Detail regarding unfiled returns, outstanding liabilities or other issues to be addressed during the audit
- Relevant notes maintained in the licensee's file
- Any Power of Attorney on file
- Identification of all fuel types reported for the licensee's account(s)
- Examination of prior IFTA audits of the licensee's account(s)
- A list of vehicles registered and/or operated during audit period
- Characteristics of vehicles in the audited fleet, including
 - Type of vehicles
 - Weights of vehicles
- Activation and closing dates of the account
- Unusual fluctuations in reported distance, fuel, or mpg during the audit period
- The number and identification of reported jurisdictions

- Variances between sums of quarterly reported jurisdictional distance and quarterly reported total distances
- Variances between sums of quarterly reported jurisdictional tax paid fuel and quarterly reported total fuel
- Variances between reported jurisdictional IFTA and IRP distances for quarters in the distance reporting period
- Any large variations in quarterly reported figures
- High, low or erratic reported miles per gallon or kilometers per liter figures
- Apparently rounded or estimated reported figures

An auditor may identify potential sample periods from reported figures. For discussion with the licensee, the auditor should document:

- Sample quarters
- Rationale for the selection
- Sample Selection Worksheet (if applicable)

To streamline the information gathering process, a standard questionnaire, augmented by the individualized list of questions, should be developed during the pre-audit analysis. This questionnaire can be presented to the licensee at the initial contact or initial conference stage.

Initial Contact A420; A430

Initial contact with the licensee may be made by telephone or letter. If by telephone, it may be beneficial to follow up with a letter. An initial contact letter shall be followed by a telephone call.

- The auditor may request mileage and fuel summaries during initial contact to aid in sample unit selection and to obtain an early indication of the level of internal controls in the licensees' recordkeeping system
- Follow-up communication should be made with the licensee after the initial contact to confirm:
 - The documentation to be reviewed
 - That all available information and documentation will be available at the beginning of the audit.

Receipt and review of a completed initial conference questionnaire and quarterly summaries prior to the initial conference enables the auditor to prepare follow-up questions and confirm the appropriateness of the sample selection.

Opening Conference A440

During the opening conference, the type, format and adequacy of records are to be determined. Also, the procedures used to collate information from source documents to be reported should be determined. Adequate records can be produced in many forms. It is acceptable for required elements to be maintained on several documents, rather than one inclusive document. It may be beneficial to request the records in electronic format. This is especially true of fuel records. During the opening conference, follow-up questions should be posed until the auditor is satisfied that the licensee's explanations resolve all questions raised by the pre-audit and subsequent analyses. Specific areas for clarification are:

- Identification and characteristics of subject vehicles
- Identification of the personnel, who completed the IFTA returns and maintained the records
- Type of fuel used
- Method(s) of distance reporting and verification
 - Manual systems
 - Electronic systems
- Verification of
 - Total distance
 - Total fuel
 - Jurisdictional distance
 - Jurisdictional tax paid fuel
- Documentation maintained for on road fuel purchase verification
 - Detailed vendor transaction list with required elements
 - Individual purchase invoices
 - Electronic file
- Documentation maintained for bulk fuel use verification
 - Number, capacity and location of tank(s)
 - Fuel type stored in each bulk tank
 - Subject and non-subject equipment withdrawals, by vehicle number
 - Inventories
 - Purchase Invoices
 - Supplier demographics for the audit period
 - Bulk tank reconciliations
- Summary compilation

During the opening conference, the licensee should identify the recordkeeping items on the source documents and guide the auditor through the recordkeeping system from source documents to summaries to reported figures. The auditor may then request details about how the recorded information is verified prior to inclusion on the IFTA tax return.

The auditor must summarize all pertinent supporting information gathered during the pre-audit and initial conference to include in the audit file.

Information gathered during the pre-audit and opening conference guides the auditor in determining the methodology used during the fieldwork. Knowledge of the licensee's recordkeeping system gained during earlier audit stages leads the auditor to design valid tests of internal controls or determine that the records are inappropriate and not sufficient for auditing purposes.

Reporting Responsibility R510 and Commentary

Licenses bear responsibility for reporting and paying fuel taxes for vehicles operating under their authority. In many cases, this responsibility is straightforward, with no complications. Several special situations need further examination to determine reporting responsibility.

IFTA and IRP Fleets

Fleet information for International Registration Plan registrations, is helpful to identify vehicles in the IFTA fleet. However, vehicles in a carrier's IFTA fleet may not coincide with those in the IRP fleet. Discrepancies between the IFTA and IRP fleets for the audit period should be resolved and detailed in the audit file.

Leases R500

During the initial conference, the auditor should determine whether the vehicles in the fleet are company-owned, leased or contracted with owner-operators. When a vehicle is leased or provided by an owner-operator, the leases are reviewed to determine who bears responsibility for reporting the activity and remitting fuel taxes.

When reviewing leases, these definitions are important:

- A lessor supplies the vehicle
- A lessee directs the activity of the vehicle
- A short-term lease lasts 29 days or fewer
- A long-term lease lasts 30 days or longer

Unless the lease specifies otherwise, the lessor is responsible for reporting and remitting fuel taxes when operating under a short-term lease and the lessee bears that responsibility when operating under a long-term lease.

The exception to this rule involves "lessors who are regularly in the engaged in the business of leasing or renting vehicles without drivers". These vehicle-leasing companies are responsible for reporting and remitting fuel taxes, unless:

- The rental contract specifies the lessee's responsibility
- The lessor has a copy of the lessee's IFTA fuel tax license, valid for the time of the rental

Independent Contractors (Owner/Operators)

For independent contractors, the following guidelines apply:

- For short-term leases, the lessor is responsible
- For long-term leases, the lessor and lessee have option of designating which party will report and pay

If the written agreement is silent, the lessee is responsible.

Trip Permits

A carrier may report and pay fuel use taxes using trip permits, rather than by obtaining an IFTA license. This practice is commonly used by carriers with operations predominantly in the base jurisdiction, who travel occasionally to other jurisdictions. During an audit, distance and fuel accrued during a trip permit is included in total distance and fuel, but not in taxable distance and tax paid fuel. This method yields an audited mpg that includes all activity, while excluding non-taxable distance and fuel from tax calculations.

Fieldwork

Testing Internal Controls Systems [A320](#)

An internal controls system should not be confused with data maintained in support of that system. An internal control system consists of processes that:

- Support the accurate documentation of activity
- Identify errors in the source documents
- Outline procedures to correct those errors

Data maintained by the licensee are the individual recordkeeping items maintained on the source documents and summaries. If the items are maintained, but not used for reporting purposes, the internal controls system is not robust.

The effectiveness of the internal controls system must be evaluated at the beginning of each audit. An effective system results in a higher degree of confidence in the internal controls. If the effectiveness of the internal controls is found to be minimal or there are no internal controls, the degree of confidence is reduced and may be non-existent. Lack of confidence in the internal controls may require source documents be examined with more scrutiny.

To assess the effectiveness of the internal controls system, the auditor must determine the degree to which the internal controls system can be relied upon to accurately capture and summarize the source data. A high degree of confidence in the internal controls supports the use of sample data to determine audit results. A low degree of confidence indicates that, sampling may not be

appropriate and may lead to the records being deemed inadequate. The evaluation of the internal controls system must be documented in the audit report.

To evaluate a licensee's internal control system, identify:

- The source documents used as the basis for the reported information
- The procedures or methods employed by the licensee to assure the accuracy of the reported figures
- The consistency with which the procedures were employed
- Changes to the licensee's distance or fuel accounting procedures or operations during the audit period, including changes to:
 - software system
 - accounting system
 - personnel

Once the components of the internal controls system are identified, the procedures by which the licensee assures the accuracy of the reported figures must be determined. An understanding of these processes is gained through interviews with the personnel who perform these functions. Some questions that might lend clarity are:

- Are trip reports corrected prior to entry into the system to ensure mileage and fuel accuracy?
- If so, how are the corrections performed?
- Are corrections required on all trip reports?
- How can trips that have been corrected be identified?
- Does the licensee have a policy to ensure that new vehicles are included in the reporting process upon their first activity?

If the fleet consists of subgroups with unique characteristics, tests should be conducted for vehicles belonging to each subgroup. Examples of subgroups that may require separate tests are:

- Company owned vehicles
- Owner operator vehicles
- Vehicles domiciled at different terminals
- Vehicles with different travel patterns
- Different types of vehicles
- Vehicles utilizing different fuel types (if applicable)

General Tests of Internal Controls Systems

While manual recordkeeping systems and electronic vehicle tracking systems require different tests of internal control systems, some tests will be appropriate for carriers with either type of

recordkeeping system. Tests of internal controls systems to be completed for all recordkeeping systems include:

- Verification of inclusion of all vehicles
- Use of third-party fuel
- Performance of mpg analyses
- Performance of bulk fuel reconciliations
- Establishment of cut-off dates

Verification of inclusion of all vehicles

The licensee should have a process in place to ensure that all activity from qualified vehicles is included in the reported figures. This process may include procedures for identifying:

- Whether IFTA and IRP equipment lists coincide with the unit summaries
- The date on which reporting for a new vehicle should start
- The date on which reporting for an out-of-service vehicle should cease
- The existence fuel purchases without associated recorded jurisdictional distance
- Units with accrued total distance, but no associated recorded fuel

To test this internal control, the auditor may review:

- Licensee equipment lists, IRP equipment lists and unit summaries
- Vehicle purchase and sales documents
- Accident records
- Repair records
- MCMIS in the Safer System
- Vendor fuel summaries
- Trip reports

Legitimate discrepancies that do not call into question the strength of internal controls result from:

- Leased vehicles
- Vehicles weighing less than 26,000 lbs. which may be registered for IRP, but are not subject to IFTA
- Base-jurisdiction plated units may be reported for IFTA, but not IRP

Use of Third-Party Fuel

A third-party fuel card system is often indicative of an effective internal control over fuel reporting if:

- The licensee uses the vendor generated detail for reporting purposes
- Individual fuel purchase invoices are reconciled with vendor invoices

- Cash purchases made by the driver for later reimbursement are accounted for separately

A licensee may overlook cash purchases, because they are not shown on the third party fuel cards. To test this internal control, the auditor determines whether reported fuel is calculated by summing cash purchases and vendor summary totals.

Performance of MPG Analyses

A vehicle specific mpg analyses is a component of a strong internal control system if:

- A maximum mpg is established and units whose mpg exceeds it are examined
- A minimum mpg is established and units whose mpg falls below it are examined
- Standard procedures are applied to the circumstances above to address verified and documented errors

To test this internal control, the auditor ensures that the licensee employs a consistent method to impute fuel. If the auditor finds that fuel from some vehicles is adjusted, while fuel from other vehicles with outlying mpg's is not, an explanation from the licensee must be sought.

Performance of Bulk Fuel Reconciliations

For bulk fuel reconciliations to be considered a strong internal control, the licensee must maintain adequate bulk fuel records, perform periodic bulk tank reconciliations and account for unreconciled fuel. This component of the internal controls system is effective if:

- Withdrawal records are maintained for qualified and non-qualified vehicles
- True inventory readings, not book inventory readings, are recorded
- Withdrawals are recorded by an automated card system, rather than manual recording
- The bulk fuel pump is secured
- Procedures are established to identify and report unreconciled fuel

Establishment of Cut-Off Dates

Cut-off dates for reporting of distance and fuel must coincide to support an accurate mpg analysis. To identify discrepancies resulting from inconsistent cutoff dates, the auditor reviews:

- Distance and fuel summaries
- Source distance documentation
- Source retail fuel purchase documentation
- Bulk fuel withdrawal records

After the effectiveness of the internal control system has been tested, the auditor determines the appropriate level of sampling.

If internal controls are strong and can be relied upon, a smaller sample may be warranted. If internal controls are not adequate to engender confidence in the effectiveness of the recordkeeping system, the auditor should select a larger sample size. If internal controls are lacking in only part the operations, the auditor should expand the sample for only those operations. If the internal controls are absent or have no substantive impact throughout the operations, sampling may not be possible and may lead to the records being deemed inadequate.

Sampling A330

Audits are to be conducted through sampling distance and fuel source documents, unless the licensee's recordkeeping system precludes sample techniques. Before a sample can be selected, the auditor thoroughly analyzes the licensee's tax returns, records, and operational habits. If the auditor determines that sampling methods are appropriate, the licensee is offered the opportunity to provide input into the sampling methodology. The sample results should be discussed with the licensee to verify that the sample is representative of operations. A signed agreement stating that the sampling methodology has been discussed and is appropriate and is beneficial.

A sample audit can be conducted by examining records from:

- A discovery sample
- Sample periods
- Sample vehicles
- Sample vehicles within a sample period
- A stratified sample of vehicles

Selecting Sample Periods

When selecting a sample period, the auditor should attempt to select a period that includes jurisdictional mileage and tax paid fuel similar to the mean values of the non-sample periods. Factors that indicate a period may be representative include:

- Fleet mpgs are not outliers, when compared to all periods
- Reported distance and fuel align with the mean values of the audit periods
 - The mean value of a set of reported figures is that value for which half of the reported figures are above the figure and half are below the figure
- Maximum jurisdictional coverage for material reported distance and fuel is present

A sample representation spreadsheet, such as the one detailed in Appendix B helps the auditor to select a representative sample. If the most representative sample quarter does not include all jurisdictions in which significant travel occurred, trips from non-sampled periods that include the desired jurisdictions may be audited.

Other factors to be considered in selecting a sample period include:

- If an associated IRP audit will be conducted, the IFTA sample period should fall within the IRP distance period
- The auditor should determine whether the reported figures were affected by significant changes during the audit period to the:
 - Fleet size
 - Fleet makeup
 - Drivers
- For seasonal operations, a sample period should include activity that approximates a typical period, excluding the “slow” season
- Unusual periods should not be chosen as sample periods. The auditor should avoid selecting sample periods with:
 - Low or high mpgs,
 - A large variance in distances
 - A large variance in fuel

The auditor examines unusual periods outside of the sample, but the results should not be projected.

Operational changes occurring during the period under audit may necessitate separate sample periods before and after the changes. These changes may include changes to:

- The reporting system
- Personnel responsible for reporting
- The licensee’s customer base

If the auditor decides to limit the sample to one period, the most current system should be sampled to provide timely recommendations.

Selecting Sample Vehicles

The selection of representative sample vehicles is vital to test the accuracy of the licensee’s reported figures and support the legitimacy of any adjustments. The following steps increase the likelihood of selecting a representative sample:

1. Determine a target sample size based on the evaluation of internal controls
2. Stratify the sample, if necessary
3. Use a random selection process to select a preliminary sample for testing. It should be noted that statistical sampling should not be attempted.
4. Follow discovery sampling procedures and adjust sample size, if warranted
5. Test the sample to see if it is representative of the fleet
6. Adjust the sample to increase representativeness, if necessary

Sample Size

Since sample size is inversely proportional to the strength of internal controls and the adequacy and sufficiency of the available records, the auditor must evaluate internal controls prior to the selection of sample vehicles. While each jurisdiction has specific sample size requirements, the chart below offers general requirements for sample size, to be adjusted depending on the records and internal controls.

<u>Fleet size</u>	<u>Sample size</u>
Up to 10 vehicles	3 sample vehicles
11-20 vehicles	4 sample vehicles
21-50 vehicles	10 sample vehicles
>50 vehicles	Analyze records and internal controls and discuss with management

If the records are found to be consistently adequate and sufficient through discovery sampling, the sample size may be reduced. Conversely, if records are missing or the existing records are inconsistent, the sample size may be increased.

If an IRP audit is conducted in conjunction with the IFTA audit, the IRP fleet makeup may dictate a larger sample size. Sample vehicles must be selected from each IRP fleet under audit.

Discovery Sampling

Discovery sampling indicates the nature and frequency of discrepancies that may occur in a full sample. A discovery sample is a smaller random sample of the full random sample. If variances found in a discovery sample are small or non-existent, the auditor may elect to accept the results of the discovery sample instead of conducting the full sample.

Sample Stratification

If the fleet contains different types of vehicles, vehicles of different weights, or vehicles used for different purposes, the sample should proportionally represent the differences. The auditor should stratify the sample if the IFTA fleet can be divided into distinguishable sub-fleets. Fleets can be stratified by:

- Vehicle type
- Vehicle weight
- Vehicle use
- Vehicle location
- Fuel type

A stratified sample will likely yield a more representative overall sample. If projectable error rates are calculated in a stratified sample, the error rates pertain only to the appropriate non-sampled sub-fleets.

Sample Representation Worksheet

A sample representation worksheet, such as the one found in Appendix B, is used to identify under or overrepresented sample jurisdictions in relation to reported jurisdictional distances for the entire fleet. This worksheet can be used for any size fleet.

1. The sample vehicle count percentage of the fleet vehicle total and the sampled total miles percentage of the fleet total miles are compared. This test indicates whether the percentage of total miles sampled is comparable to the percentage of total vehicles in the sample.
2. Sampled IFTA jurisdictional miles as percentages of sampled total miles are compared to the same figures reported for the fleet. This test indicates whether the percentages of reported jurisdictional miles in the sample are comparable to the percentages of reported fleet jurisdictional miles.
3. All jurisdictions with significant reported miles shall be represented in the sample. Jurisdictions with minimal miles may be omitted from the sample if it is difficult to include them. If a jurisdiction with significant miles is not well represented in the sample, an alternative or additional sample vehicle may be added to include those jurisdictional miles in the sample.

Adjusting the Random Sample

The sample size may be expanded if:

1. Jurisdictions with significant activity are not adequately represented in the sample. If this is the case, the auditor should select additional vehicles with activity in the underrepresented jurisdiction(s).
2. After full sampling, error rates indicate problems with the records of the selected sample vehicles.

The auditor can reduce the sample size if:

1. Strong internal controls are found.
2. Only immaterial discrepancies are found in the discovery sample.

Analyzing the Sample Results

Once sampling has been completed and variances found, the results must be analyzed. The auditor determines if the errors should be adjusted only in the sample period (isolated) or

projected to all periods. The auditor should consider the following factors when deciding to isolate or project variances:

1. If variances from one vehicle are driving an extreme error factor, the auditor should consider isolating those variances from the error factor calculation.
2. If extreme error factors are calculated for several jurisdictions, the auditor should consider expanding the sample for those jurisdictions or isolating the discrepancies.
3. If extreme error factors are calculated for many jurisdictions, the auditor should consider performing sample testing in another quarter. It is possible that the sample quarter is not representative.

If no consistency is found within the records, a sample audit may not be possible. This leaves the auditor with the alternative of looking at every source document, a census audit. For smaller accounts, a census audit may be possible. For larger accounts, a lack of consistency may indicate inadequate records.

Projections A330

If error factors have been calculated, the auditor must decide whether to isolate the errors to the sample period(s) or project the errors to the non-sample periods. This decision depends on whether the errors are systemic or unique.

- If it is reasonable to believe that the error will be repeated in the non-sampled vehicles or periods, the error should be projected.
- If the error was of a clerical nature, was a solitary error or is unlikely to occur in the non-sampled vehicles or periods, the error should be isolated and adjusted only in sample. See the Isolated Errors section below for more detail.
- If clerical errors found show a pattern of repetition and are found to occur in other quarters, the error must be projected.
- If the auditor cannot determine the likelihood of recurrence of the error, management should be consulted.

Small errors projected to larger numbers can have disproportionate and unfair impacts. For example, an error factor generated in a low-activity period and projected to a high-activity period can result in disproportionate adjustments.

Isolated Errors

An isolated error might be:

- a discrepancy that appears to be a one-time occurrence
- a data entry error
- a jurisdiction that was abbreviated incorrectly one time

- a simple calculation error

The auditor may find that an error is likely to recur outside of the sample, even if it occurs only once in the sample. The auditor should contact management if the auditor is unsure whether to include a possible isolated error in the error factor. The auditor may be able to gain clarity about the likelihood of recurrence by discussing the origin of the error with the licensee. The final decision to isolate or project an error lies with the auditor and management.

Error rates vs. Error factors

Sampling projections can be achieved through the use of error rates or error factors. The calculations are similar, and the use of error rates or error factors is a matter of style and yields the same results. In any audit, either error rates or error factors should be chosen. The use of error rates for some projections and error factors for others should be avoided.

An error rate is calculated by dividing the discrepancy found by the reported figure. Error rates can be negative if the audited figure is lower than the reported figure. Projections using error rates result in the adjustments in the non-sample periods.

An error factor is calculated by dividing the audited figure by the reported figure. An error factor lower than 1.000, indicates a lower audited figure than was reported. Projections using error factors result in the audited figures in non-sample periods.

Example 1

Sample period reported total miles: 1000 miles

Sample period audited total miles: 1200 miles

The error rate is $(1200-1000)/1000$, or .200

The error factor is $1200/1000$, or 1.200

If the non-sample reported total miles are 1400:

The adjustment resulting from the application of the error rate is $.200*1400$, or 280 miles. The 280 miles would be added to the reported 1400 miles resulting in audited miles of 1680.

The audited total miles resulting from the application of the error factor is $1400*1.200$ or 1680 miles.

Example 2

Sample period reported jurisdictional tax paid gallons: 5000 gallons

Sample period audited jurisdictional tax paid gallons: 4500 gallons

The error rate is $(4500-5000)/5000$, or -.100

The error factor is $4500/5000$, or .900

If the non-sample reported jurisdictional tax paid gallons are 6000:

The adjustment resulting from the application of the error rate is $-.100 \times 6000$, or -600 gallons. The -600 gallons would be deducted from the reported 6000 gallons resulting in an audited 5400 gallons.

The audited jurisdictional tax paid gallons resulting from the application of the error factor is $.900 \times 6000$, or 5400 gallons.

Projection Document

Clear communication between the auditor and the licensee is vital to the sampling and projection process. An explanatory projection agreement may be signed by the licensee to document the communication regarding the sampling and projection procedures.

This document should **NOT**:

- Bind the licensee or auditor to the projection or
- Preclude the licensee from protesting the projection method

This document simply provides a mechanism for the licensee:

- To be informed of the projection method and
- Verify that the licensee is agreeable to the method

The auditor should include a complete narrative of the procedures used in the explanation of the audit procedures. The projection agreement could include the following language:

Distance and fuel will be examined in the sample quarter(s). Examined distance and fuel within the sample quarters will be divided by the reported amounts to determine error rates, which may be projected to other quarters in the audit period to determine audited figures.

Events determined to be isolated and/or immaterial will only be used to adjust the reported amounts within the sample period(s).

If utilized, a projection agreement shall be:

- Signed by the licensee's representative and the auditor
- Provided (as a copy) to the licensee
- Included in the audit report
- Adhered to by the auditor
- Revised with new signatures, if deviations are necessary

Components of Reported and Audited IFTA Figures

Total distance, jurisdictional distance, total fuel and jurisdictional tax paid fuel are the four basic components of reported and audited IFTA figures. Miles per gallon (mpgs) and kilometers per liter (kpls) are calculated from total distance and fuel and used to determine jurisdictional consumption. The verification of each component is vital to the IFTA audit.

For reported and audited figures:

Total Distance *divided by* Total Fuel *equals* MPG (KPL)

Jurisdictional Distance *divided by* MPG (KPL) *equals* Jurisdictional Fuel Consumption

Jurisdictional Fuel Consumption *times* Jurisdictional Tax Rate *equals* Fuel Tax accruing to the jurisdiction.

Distance P540

Total Distance must equal the sum of Jurisdictional Distances. Total distance is the numerator in the mpg (kpl) fraction. Total distance may be verified by:

- Calculating periodic distance from recorded odometer or hubometer readings
- Summing verified jurisdictional distances
- Reviewing Global Positioning System data

Jurisdictional distances can be determined by:

- Routing recorded trips using a computerized program
- Reviewing recorded jurisdictional line odometer readings, origins and destinations
- Reviewing Global Positioning System data

The determination of jurisdictional distance leads to the calculation of jurisdictional consumption. Jurisdictional consumption is multiplied by jurisdictional tax rates to determine the fuel tax accruing to each jurisdiction.

Fuel

Total fuel must be greater than or equal to the sum of jurisdictional tax paid fuel. Total Fuel is the denominator in the mpg (kpl) fraction. Total fuel may include, but not be limited to:

- Fuel from retail tax paid fuel purchases
- Bulk fuel withdrawals
- Recorded fuel for which no invoice is available
- Imputed fuel (Definition of imputed fuel can be found on page 37)

Jurisdictional tax paid fuel can be determined by summing:

- Retail fuel purchases with valid invoices
- Retail vendor summaries
- Bulk fuel withdrawals with valid documentation and substantiated by tax paid bulk fuel purchases

MPG/KPL's and Jurisdictional Consumption

A periodic mpg (kpl) is determined by dividing total distance by total fuel. If total distance is overstated or total fuel is understated, the periodic mpg (kpl) will be overstated. Conversely, if total distance is understated or total fuel is overstated, the periodic mpg (kpl) will be understated.

Jurisdictional consumption is calculated by dividing jurisdictional distance by the periodic mpg. If the periodic mpg is overstated, jurisdictional consumption will be understated. If the periodic mpg is understated, jurisdictional consumption will be overstated.

While the auditing of distance and fuel are necessary in verification of reported amounts, the procedures used to audit distance vary from the procedures used to audit fuel. The procedures used to audit distance and fuel is detailed below.

Audit Fuel P550

When auditing fuel, total fuel and jurisdictional tax paid fuel are examined.

The following procedures should be followed when auditing fuel:

- Total Fuel should be reduced from reported levels **only** when a clear error is evident. Any reduction should be treated as an isolated incident and not projected to non-sample periods or vehicles.
- The sum of the Audited Jurisdictional Tax Paid Fuel must be equal to or less than Audited Total Fuel.
- If all receipts necessary to substantiate tax paid fuel for a jurisdiction are not provided, a negative error rate will result. Total fuel should not be reduced due to the projection of a negative error rate. Jurisdictional Tax Paid Fuel will be reduced by projecting a negative error rate. Guidance should be sought from management before reducing Jurisdictional Tax Paid Fuel in the non-sample periods through a negative error rate projection.
- Jurisdictional Tax Paid Fuel should be reviewed in sample and non-sample periods to ensure that immaterial adjustments are not made.

Retail Fuel

To expedite the auditing of fuel, electronic fuel records should be requested from the licensee. Depending on the format of the electronic records and the audit program, electronic fuel records may be imported into the program. If import is not possible, electronic records still enable the auditor to easily analyze the data by vehicle, jurisdiction and period.

If electronic fuel records are not available, vendor summaries may be available. Vendor summaries enable the auditor to enter period jurisdictional totals by vehicle into an onroad fuel database, rather than individual invoice entry.

If only individual invoices are available, the auditor should request that they be sorted by quarter and vehicle. To streamline data entry, individual invoices can be compared to a detailed vehicle fuel summary. Summary entries can be ticked off as the invoice is reviewed. The summary jurisdictional vehicle totals, adjusted for any missing invoices, can be entered in the onroad fuel database.

Tax paid fuel credits should not be projected to periods where records are missing or misplaced. For periods during which all travel is in one jurisdiction, the assumption or declaration that all fuel was purchased in that jurisdiction is not proof of tax paid credit.

Retail Fuel Purchase Invoices

The licensee must present proof of purchase from retail outlets to receive tax paid credit. This proof must be a supplier or vendor generated invoice, receipt, credit card slip, or transaction listing. The auditor must be satisfied that tax is included in the price per gallon. While photocopied fuel invoices may be allowed, the auditor can disallow them if their authenticity is in question.

Acceptable retail invoices must include:

- Date of purchase
- Seller's name/address
- Number of gallons/liters
- Fuel type
- Price per gallon/liter or sale total
- Vehicle unit number
- Purchaser's name

If the number of gallons is not detailed on the fuel invoices, the auditor may calculate the number of gallons using an average price per gallon. Alternatively, tax paid credit must be disallowed, if important information is missing or illegible on an invoice.

While unit numbers should be recorded on all retail fuel purchase invoices, tax paid credit may be allowed, with management approval, under any of the following circumstances:

- The licensee has only Qualified Motor Vehicles consuming the type of fuel on the invoice
- The fuel purchase is recorded with a vehicle number on a trip report or other source document
- The amount of fuel on the receipt is greater than the tank capacity of any non-subject vehicle of that fuel type
- Identifying information, such as color, license plate number, year/make of truck, truck nickname, etc., is consistently recorded on the fuel receipts
- The fuel receipts follow the route of the trip and are not from the base city of the vehicle

Care should be taken before making an exception to the requirement for a vehicle number, since this practice may affect the auditor's ability to conduct a vehicle mpg analysis to determine if any vehicles have excessive mpgs.

Receipts for an operation with lessees can be accepted with the name of either the lessor or lessee.

Bulk Fuel P550

If a licensee uses bulk fuel in qualified motor vehicles, a bulk fuel reconciliation must be completed to verify reported fuel. Reconciliation of bulk fuel requires source documentation detailing:

- Bulk fuel purchases
- Bulk tank inventory readings
- Bulk tank withdrawal records

Purchase invoices, bulk withdrawal records, and inventory readings should be reviewed for all quarters of the audit period. The exception to this rule is an audit of a large carrier with multiple tanks in multiple jurisdictions, for which a census audit of the bulk fuel would require great resources.

Bulk Fuel Purchases

Bulk fuel purchase records must be verified to ensure the proper allocation of tax paid credit. If the licensee cannot produce bulk fuel purchase invoices, it is possible that the fuel supplier maintains copies of the invoices. To verify these purchases, the auditor should:

1. Obtain purchase invoices for the audit period from the licensee
2. Obtain a list of purchases from each supplier
3. Compare the supplier's listed purchases with the purchase invoices from licensee
4. Sum all bulk fuel purchases from both sources for inclusion in the bulk fuel reconciliation

Bulk Tank Inventory Readings

Bulk fuel inventory readings contribute to the bulk fuel reconciliation by establishing static fuel levels at a specific time. When evaluating bulk fuel inventory readings, the auditor must:

- Recognize that monthly or quarterly inventory readings increase the accuracy of bulk fuel reconciliations
- Determine whether the inventories are physical measures or book calculations. Physical inventories (stick readings) may reveal discrepancies that book calculations do not.
- Determine the responsibility for maintaining the inventories. A single point of responsibility may yield more consistent inventory readings.

For licensees without bulk inventory records, the beginning and ending inventories for each period should not be estimated.

Bulk Fuel Withdrawal Records P550

The auditor examines bulk fuel withdrawal records to determine whether they accurately document all fuel withdrawn from the bulk tank. Adequate bulk fuel withdrawal records must include the:

- Location of the bulk storage
- Fuel type withdrawn

- Date of withdrawal
- Number of gallons withdrawn
- Unit number into which fuel was placed

When examining the bulk fuel withdrawal records, the auditor must perform the following initial review procedures:

- Verify that the withdrawal records contain the required items
- Determine whether individual withdrawals are manual recording of meter readings or through a card system
 - If meter readings are used, the auditor should compare total fuel withdrawn per meter readings and total recorded bulk fuel withdrawals
- Identify unit numbers found on the withdrawal detail that are not on the licensee's qualified and non-qualified equipment lists
- Determine whether non-qualified vehicle withdrawals are identified
- Determine whether the bulk fuel pump is secured against unauthorized withdrawals
- Determine the method by which the licensee verifies recorded withdrawals and summarizes them to calculated reported bulk fuel

Once the auditor has completed the initial review of the bulk fuel records and practices, audited bulk withdrawals are determined by summing recorded fuel withdrawals, by vehicle. These sums should be compared to the fuel summaries.

Reported bulk fuel withdrawals should only be reduced when clear evidence of an error is found. Documentation of this evidence must be included in the audit file.

Taxable and Non-Taxable Bulk Fuel Withdrawals

If fuel is withdrawn from a bulk tank for uses other than by qualified motor vehicles, withdrawals for both taxable (qualified) and non-taxable uses must be recorded. If the records are adequate, allocation of unreconciled fuel between taxable and non-taxable uses may be accomplished using a percentage of recorded vehicle withdrawals. If the records are not adequate to determine this percentage, all unreconciled gallons may be considered to be taxable. Management should be consulted for direction.

Jurisdictional Tax Paid Credit for Bulk Fuel Withdrawals

Jurisdictional tax paid credit is allowed for verified taxable fuel withdrawn. The auditor must verify that the tax has been paid on the fuel before tax paid credit can be allowed.

For licensees who own or control the bulk fuel tank, tax paid credit for bulk fuel withdrawals will be allowed when the following records are maintained:

- A receipt, invoice or transaction listing from the seller
- A transaction listing generated by a third party

- A credit card receipt
- An electronic or digital record of an original receipt or invoice

For licensees who withdraw fuel from a bulk fuel tank owned or controlled by another entity (secondary users), a fuel purchase invoice containing the information listed for retail fuel purchase invoices must be provided by the owner/controller of the bulk tank. The relationship between the owner/controller of the bulk tank and the secondary user is not relevant. If the entities have distinct Federal Identification Numbers or Taxpayer Identification Numbers, the secondary user's withdrawals are treated as retail purchases. To receive jurisdictional tax paid credit for bulk fuel withdrawals, a secondary user must present records detailing:

- Date of withdrawal
- Quantity of fuel withdrawn
- Name and address of the tank owner
- Type of fuel
- Name of the withdrawer
- Price per gallon or total price of the fuel withdrawn

The price per gallon of the fuel withdrawn is recorded on bulk fuel purchase invoices. In audits with multiple bulk tank users, poor or non-existent withdrawal documentation will disadvantage all users. The owner/controller of the bulk tank may be assigned imputed fuel based on a lower-than-reported mpg or unreconciled fuel. See page 39 for an explanation of imputed fuel. The secondary user will not receive tax paid credit for unverified withdrawals.

Multiple Bulk Locations

When auditing a licensee with more than one bulk fuel location, the auditor should examine each location individually, if feasible. Examining multiple bulk tank locations together could mask the results of a location with inadequate records.

Sampling of Bulk Fuel for Large Carriers

In an audit of a large carrier, the sampling procedure involves examining the licensee's summary information in the sample quarter(s). Once the summary information is verified or adjusted, the summary information is included in the reconciliations for the non-sample quarters of the audit period.

Bulk Fuel Summaries

The licensee's bulk fuel summaries link the source documentation and the reported fuel figures. To assess this linkage, the auditor must:

- Verify the method by which bulk fuel is reported. Reported bulk fuel should be calculated by summing withdrawals by vehicle, however, some licensees report bulk fuel based on purchases or from a calculation using an estimated mpg.

- Determine whether the licensee completes a bulk fuel reconciliation and how adjustments are made for positive or negative unreconciled fuel.
- Verify the licensee's threshold for and method of bulk fuel reconciliation adjustments.
- Determine whether bulk fuel withdrawals and retail fuel purchases are recorded separately and by vehicle.

Bulk Fuel Reconciliation

In an audit with bulk fuel storage, the auditor must complete a bulk fuel reconciliation for each taxable bulk fuel tank. A bulk fuel reconciliation follows this format:

Beginning bulk tank inventory
<i>Plus:</i>
Audited tax paid bulk fuel purchases
Audited exempt bulk fuel purchases
<i>Less:</i>
Ending bulk tank inventory
<i>Equals:</i>
Total fuel to be accounted for
<i>Less:</i>
Taxable Sales
Exempt Sales
Qualified Motor Vehicle Usage
Exempt Usage
Other
<i>Equals:</i>
Unreconciled Fuel

If the auditor determines that a bulk fuel reconciliation cannot be conducted due to lack of purchase invoices, bulk withdrawal record, and/or inventory records, the records may be rated as inadequate.

Positive Taxable and Non-Taxable Unreconciled Fuel

If taxable and non-taxable fuel is withdrawn from a bulk tank, and the bulk fuel records are adequate, positive unreconciled fuel may be apportioned between taxable and non-taxable usage. The taxable usage percentage is determined by dividing audited taxable withdrawals by audited total withdrawals. The taxable usage percentage is multiplied by the unreconciled gallons to determine taxable fuel to be imputed. This taxable imputed fuel is added to Audited Total Fuel and Jurisdictional Tax Paid Credit Fuel for each period.

Negative Taxable and Non-Taxable Unreconciled Fuel

Negative unreconciled fuel is calculated in the same manner as described above for positive unreconciled fuel. For negative unreconciled fuel, taxable imputed fuel is subtracted from Audited Jurisdictional Tax Paid Fuel in each period. Audited Total Fuel is not adjusted downward without clear evidence of an error.

Audit Distance P540

The auditor calculates audited total distance by summing the audited jurisdictional distances or from reliable odometer readings. Audited total distance must equal the sum of audited jurisdictional distances. Positive or negative jurisdictional distance adjustments may be necessary to achieve this equation. Jurisdictional distance adjustments should be reviewed for all sample vehicles to ensure that all adjustments are material.

Monthly Mileage and Fuel Summaries P560

The licensee should maintain monthly fleet summaries that detail the total and jurisdictional distance traveled by each vehicle, including the fuel placed into each vehicle. The auditor uses these summaries for internal controls testing, sample selection and evaluation of source documents.

Manual Recordkeeping Systems

To be assured of an adequate rating, a licensee must detail the following items in the source documentation:

- Beginning and ending trip dates
- Total trip distances
- Origins and destinations by city and state
- Beginning and ending odometer, hubometer, or engine control module reading
- Vehicle identification or unit number
- Trip distances by jurisdiction
- Routes of travel

A licensee's records may be rated adequate without some of these items. The auditor determines whether reported jurisdictional distances can be verified by the licensee's documentation. If licensee's records are missing items, a discussion with management may be necessary in determining the adequacy of the records.

The auditor may follow these initial audit steps to examine distance source documentation:

1. Determine whether the trip reports contain:
 - a. All items on the IFTA documentation list

- b. Consistent detail among trips and drivers
- 2. Trace data from the source documents through the data entry system to monthly or quarterly summaries
- 3. Compare summary totals to reported figures
- 4. Determine whether recorded trip jurisdictional distances reconcile to total trip distances from odometer readings
- 5. Proceed with testing reported or recorded jurisdictional distances

Testing Reported Distance with a Computerized Routing Program

The auditor uses computerized routing programs to verify or adjust recorded jurisdictional distances. Origins, destinations, odometer readings and, possibly, routes of travel are entered into a routing program. The routed jurisdictional distance is then compared to the recorded jurisdictional distance from the source documentation. Routing programs use a central location as a destination within a city, while the licensee’s recorded distance should measure the distance to the actual destination. The auditor must consider this difference when evaluating discrepancies between recorded and routed figures.

While entering fuel purchase locations may increase the accuracy of the routed information, it can be difficult for the auditor to determine the placement of the fuel purchase within the route. If the fuel purchase locations are not entered into the routing program, the routed figures should be reviewed to verify that the routed jurisdictions coincide with the fuel purchase locations.

Variances between recorded and routed distances will likely be found. The auditor should not adjust for immaterial variances. The following general guidelines may be helpful in determining whether to adjust reported distance, based on the results of the routing program.

If the source documentation contains...	Consider this materiality threshold:
Reliable jurisdictional line odometer readings	20 miles/32 kilometers
Reliable beginning and ending trip odometer readings	10 miles/16 kilometers
Neither of the above	5 miles/8 kilometers

Routing to rural locations presents a problem, since origins and destinations are generally entered by city and state. The auditor should consult with the licensee about the distance from the nearest town to the recorded location. This distance can be considered when deciding whether to adjust distance based on routing. If the licensee records destinations by company code, the auditor should ask for a city and state location key to enable routing.

When adjusting jurisdictional distance from routing:

- If the licensee reported sufficient jurisdictional distance to accommodate the routed figures, no jurisdictional distance adjustments are necessary
- If the licensee reported distance materially lower than routed distance for any jurisdiction, the auditor should attempt to resolve the discrepancy by:
 - Determining whether an alternative route results in the reported jurisdictional distances
 - or
 - Reviewing other jurisdictional distance discrepancies to determine whether an offsetting adjustment is merited
- If the licensee reported distance materially lower than routed distance for any jurisdiction and the discrepancy can't be resolved as described above, the auditor may reduce all reported jurisdictional distances proportionally, if reliable odometer readings establish total distance. Without verified total distance, reported jurisdictional distances should not be reduced.

Electronic Vehicle Tracking Recordkeeping Systems

Electronic vehicle tracking systems include global positioning systems (GPS), on-board recording devices, vehicle tracking systems, and electronic data recording systems.

These systems can be used in lieu of or in addition to handwritten trip reports for fuel tax reporting.

When an electronic vehicle tracking system is used, the system must document vehicle travel and the following items must be maintained for each vehicle to be assured of an adequate rating:

- Original location or GPS data
- Date and time of each system reading, at intervals sufficient to validate the jurisdictional distance traveled
- Calculated distance between each system reading
- Total distance traveled
- Vehicle identification or unit number
- Location of each system reading
- Beginning and ending reading from the odometer, hubodometer, engine control module or any similar device
- Routes of travel
- Jurisdictional distance traveled

A licensee's records may be adequate without some of these items. The auditor determines whether reported jurisdictional distances can be verified by the licensee's documentation. If licensee's records are missing items, a discussion with management may be necessary in determining the adequacy of the records.

Electronic Recordkeeping Systems

When auditing licensees with electronic vehicle tracking systems, the auditor must:

1. Determine whether ping locations are supported by fuel purchase invoices.
2. Compare total distance from electronic system to odometer reading/ECM for consistency of variation. They will not be equal, but the percentage of difference should be similar.
3. Determine whether the licensee periodically routes trips for comparison to the output of the electronic system.
4. Track the data from the vehicles through the electronic system to the reports
5. Determine whether the licensee can duplicate the results of the reported information
6. Determine how exceptions are addressed by the licensee
7. Obtain a good understanding of how the electronic system works

Electronic Recordkeeping Systems present several unique problems when evaluating internal control systems:

- GPS records may have been used for reporting, but not maintained for audit
- Pings may be too infrequent to verify reported mileage figures
- Time/Date Stamp may not be available on saved data
- Unit Specific Summaries may not be available
- Different processes are used for the distance calculation
 - Straight-line
 - Shortest distance
 - Geo-fencing
 - GPS combined with geo-fencing

Please note: Electronic records probably will not track a vehicle on a “trip” basis. This information is usually provided on a monthly or quarterly basis.

Auditing Electronic Vehicle Tracking Systems

When auditing licensees with electronic vehicle tracking systems, the auditor gains an understanding of the electronic system by:

- Determining the electronic format of the records
- Requesting, reviewing and verifying examples of records
- Requesting records limited to the sample period and vehicles
- Analyzing the sample data

Electronic Formats

During the initial contact or the opening conference, the auditor determines the types of records and the electronic formats in which they can be presented. The auditor also verifies that the data

format can be used in the audit program. Mismatched formats may produce inaccurate audited figures.

“Electronic format” could indicate records maintained in the following formats:

- Excel
- Comma Separated Value (CSV)
- Text

PDF is not an electronic format. PDF documents cannot be imported into distance routing or fuel database programs.

Records Requests

Gaining an initial understanding of the electronic records enables the auditor to request the specific records needed for review of the sample period and vehicles. To gain this understanding, the auditor should:

- Request screen shots of the column headings on the licensee’s electronic distance and fuel records
 - Identify the meanings of the column headings
 - Verify their compatibility with the audit program
- Obtain examples of distance and fuel reports to be generated
 - Verify that the information necessary to complete the audit is represented
- Request vehicle-specific summaries that:
 - Enable compliance tests of internal controls
 - Provide analytical information
 - Aid in the identification of active vehicles

Review of Sample Period and Vehicle Electronic Documentation

After the example records have been analyzed, the auditor requests specific data files for the sample vehicles and period. A general download will likely yield an unmanageable amount of data. Manipulation of the data may be necessary to convert the data into a format compatible with the audit program. Once compatibility is established, the data can be imported. In addition to the import into the audit program, the auditor should review the unit-specific summaries for:

- Units with outlying mpgs
- Units with unreasonably high or low distance figures
- Units with miles and no fuel
- Units with fuel and no miles

Analyze the Sample Data

To analyze the sample, auditor performs the following checks:

- Latitudes and Longitudes should yield distances comparable, but not equal to, distances calculated from odometer readings.

- The discrepancy percentages between these distance measures should be relatively consistent.
- If a fluctuation is detected, the data shall be investigated for that period.
- A general review of the output data shall be conducted to reveal:
 - Errors in the data
 - Summary vehicles not found in the data
 - Vehicles found in the data not on the summaries
 - Locations of fuel purchases different than vehicle locations in the electronic data
- A unit mpg analysis shall be conducted to identify units for which electronic distance and fuel systems are not functioning.
- Cutoff dates for distance and fuel reporting should be reviewed to ensure that quarterly mpgs are calculated from distance and fuel from the same trips.
- Determine whether adjustments have been made to the third party vendor transaction list. If adjustments have been made, determine by whom and whether they are documented.
- Adjustments resulting from the data processing should be analyzed for:
 - Materiality
 - Sources of the discrepancies
 - The necessity of projection or isolation

Special Considerations

Special considerations when auditing electronic recordkeeping systems include:

- A lack of uniformity amongst vendors
- A lack of uniformity in data
- Non-compliant systems previously represented to the licensee as satisfying IFTA requirements
- Large volumes of data stored in compliant systems

Gaps in the Licensee's Records

Gap Distance

The auditor can find two types of gap distance through examination of the licensee's records. A beginning odometer reading for one trip or quarter may be different than the ending odometer reading for the prior trip or quarter. With reliable odometer readings, this gap encompasses a defined distance. Alternatively, the vehicle location at the beginning of a trip or quarter may be different than the location at the end of the prior trip or quarter. A location gap does not encompass a defined distance. Both types of gaps must be addressed in the audit, but the treatment will differ depending on the type of gap.

Distance adjustments to compensate for gaps in records vary, depending on the circumstances of the gap and the travel history of the vehicle. The auditor considers a variety of reasonable methods to assign or apportion gap distance. Some reasonable methods are described in the following paragraphs; however, the auditor may explore other methods to address factors unique

to the auditing strategy. It is recommended that the auditor discuss any proposed method with management when a clear-cut method is not obvious. In apportioning or assigning gap distance, the auditor must be fair to all jurisdictions while considering the cost and benefit of the time necessary to employ a particular method.

Single Trip Gap Distance

If a gap could be the result of one missing trip report, the auditor may route a trip from the last recorded destination to the next recorded origin. If the routed distance substantially covers the gap distance, the auditor can adjust distance by adding routed distance to reported jurisdictional distance.

Local Gap Distance

Small gaps may include only local travel. The auditor should determine whether the gap could have occurred in surrounding jurisdictions when a recorded location associated with a gap is near a jurisdictional border. If the gap distance is lower than the round trip distance to the nearest border, the auditor assigns the entire gap distance to the jurisdiction in which the recorded destination and origin are located.

Untraceable Gap Distance

The auditor may consider the travel history of the vehicle when a gap is larger than one trip or may encompass more than one jurisdiction. In reviewing the travel history, the auditor determines whether the vehicle has travelled in all directions, one general direction, or between specific locations. The gap distance may be apportioned to the jurisdictions into which the vehicle has a history of travel.

Large Gap Distance

The auditor should assign large gap distances to jurisdictions as fairly as possible. If none of the methods discussed above is suitable, the gap distance may be apportioned to each jurisdiction based on the percentage of audited distance from the driver's trip reports.

The auditor clearly explains the existence and resolution of gaps in the audit report for the licensee's education. These explanations should detail the decision-making process used to assign and apportion gap distance.

Gap Fuel

The auditor considers the possibility of unreported fuel due to gaps. Unreported fuel is more common when retail fuel is utilized, and individual invoices are maintained. If the licensee maintains fuel purchase invoices with trip reports, missing trip reports will likely result in unreported fuel. For licensees with bulk fuel, retail vendor summaries or individual retail fuel

purchase invoices stored separately from the trip reports, unreported fuel due to gaps in records is less likely. If the auditor determines that reported fuel should be adjusted as the result of one or more gaps, this adjustment should be made only to total gallons. Tax paid credit is not allowed without verified fuel purchase documentation.

Using a Unit MPG/KPL

If the auditor finds gap distance and determines that unreported fuel is likely as a result, total fuel may be imputed. Imputed gap fuel is calculated by dividing the gap distance by the fleet average mpg or by the similar-vehicle average mpg, calculated as described below.

The existence of gap distance does not necessarily require fuel imputation. Audit management should be consulted if the auditor is unsure.

Miles per Gallon (MPG)/Kilometers per Liter (KPL) Analysis

Fleet MPG/KPL Analysis

For the entire audit period, the auditor evaluates fleet mpgs/kpls on a quarterly basis to detect any pattern of high mpgs/kpls indicative of consistent underreporting of fuel. Any quarter with a high mpg/kpl must be investigated. In addition to fleet mpgs/kpls, individual-unit mpgs/kpls should be evaluated.

Knowledge of the licensee's operation may help in determining if fleet mpgs are reasonable or need closer examination. As an example, a fleet with seasonal activity may have fleet mpgs that fluctuate between high and low.

Individual Vehicle MPG/KPL Analysis

The auditor completes a vehicle-specific mpg/kpl analysis when the licensee's records provide enough detail to do so. If a vehicle's mpg/kpl indicates the possibility of missing fuel, the following questions may help the auditor to identify the issue:

- Does the vehicle have low distance in the period with a high mpg/kpl?
 - Fuel purchased in the prior quarter, but consumed in the current quarter, may contribute to the excessive mpg/kpl
 - Mpgs/kpls for vehicles with very low distance may not be representative of the vehicle activity, due to fuel remaining in the tank of the vehicle
 - The auditor may calculate a combined vehicle mpg/kpl for several quarters before imputing fuel for low-distance vehicles
- Would one tankful of fuel bring the mpg/kpl into an acceptable range?
 - If adding the equivalent of one tankful of fuel to the audited fuel reduces the mpg/kpl to a reasonable level, the auditor should evaluate whether this fuel could have been in the vehicle's tank at the beginning of the period
- Does the vehicle have a pattern of excessive mpgs?

- The auditor may examine the vehicle’s mpgs/kpls in several quarters to determine whether they are consistently high or vary greatly
- Varying mpgs/kpls might stem from seasonal variations or distance and fuel cutoff differences
- The auditor should consult with the licensee to determine the cause of consistently high mpgs/kpls
- Do multiple vehicles indicate a history of excessive mpgs?
 - The auditor should verify that all provided fuel documentation is included in the audited figures
 - The auditor should determine whether distance could be overstated

A vehicle-specific mpg/kpl analysis supports the imputation of fuel for vehicles with **evidence of unreported fuel**. All mpg analyses should be retained in the audit file.

Procedures for an MPG/KPL Analysis

When completing a vehicle-specific mpg/kpl analysis, the auditor:

- Uses **audited** distance and fuel in the analysis, if possible
- Considers the weight, activity and standard cargo of the vehicles
- May calculate audited total fuel by dividing reported distance by 4.00 mpg or an mpg reduced by 20%, if distance records are not adequate
- Compares the percentage of trucks in the sample to the percentage of trucks in the fleet with mpgs/kpls that indicate missing distance or fuel
 - If the sample and fleet percentages of vehicles indicating missing distance or fuel vary significantly, the auditor may decide not to project imputed fuel

Low mpgs/kpls may indicate unreported distance, while high mpgs/kpls may indicate unreported fuel. The auditor evaluates mpgs/kpls based on vehicle weights. The following rough guide may help the auditor to detect unreported distance or fuel:

Plate Weights	MPG Range	KPL Range
0 – 40,000 lbs.	4.0 – 10.0	1.70-4.25
40,001 – 60,000 lbs.	4.0 - 8.0	1.70-3.40
60,000 to 80,000 lbs.	4.0 – 7.0	1.70-2.98

Please keep in mind that mpgs outside of these ranges could be possible, depending on the type of vehicles and the size of the loads. Management should be consulted for variances from the ranges above.

Imputing Fuel

Once the auditor determines that fuel should be imputed, the method that will yield the most accurate level of imputed fuel will be selected. If the fleet consists of vehicles of a similar type, weight and travel pattern, imputing fuel using a combined fleet mpg is appropriate. However, if the fleet consists of vehicles of different types, plate weights or activities, the auditor may find that a like-vehicle type mpg calculation yields a more appropriate level of imputed fuel.

To calculate a **combined fleet mpg**, the auditor sums the total distance and fuel figures for all units without evidence of missing fuel. The distance sum divided by the fuel sum results in a combined fleet mpg. The auditor then imputes fuel for vehicles with high mpgs by dividing the distance for the units to be imputed by the combined fleet mpg.

To calculate a **like-vehicle type mpg**, the auditor first stratifies the fleet by vehicle type, plate weight or use. For each strata, the auditor sums the total distance and total fuel. A vehicle type combined mpg/kpl is calculated by dividing the distance sum by the fuel sum. The auditor then imputes fuel for similar vehicles with high mpgs by dividing the distances for the selected vehicles by the appropriate vehicle type combined mpg.

MPG Adjustments for Fleets with Inadequate Records

If the records of the fleet are not found to be sufficient and appropriate, as outlined in P530, the records are found to be inadequate and the reported or audited mpg will be reduced:

- To 4.0 (P570.100.005), or
- By 20% (P570.100.010)

In general, the reported mpg will be reduced to 4.0 if no records are produced. If records are produced, but the auditor determines that they are not sufficient and appropriate, the mpg will be reduced by twenty percent.

Audit Adjustments in Conjunction with Reductions in MPGs

The application of P570.100 does not preclude the use of the best information available to make audit adjustments. The auditor may adjust reported figures prior to a mpg reduction. Examples of adjustments an auditor may make to reported figures are:

- The calculation of additional distance for unreported vehicles will lead to adjustments to Total and Jurisdictional Distances
- The calculation of distance for jurisdictions with reported fuel purchases, but no reported distance will lead to adjustments to Total and Jurisdictional Distances
- The discovery of reliable odometer readings indicating unreported distance, but no other distance documentation will lead to adjustments to Total and Jurisdictional Distances
- An examination of summary detail indicating underreporting of Total Distance, Jurisdictional Distance and Total Gallons will lead to adjustments to the reported figures

- The inclusion of unreported fuel purchase invoices will create adjustments to Total and Tax Paid Gallons
- The discovery of recorded, but unreported fuel purchase invoices will create an adjustment to Total Gallons
- An analysis of summaries revealing reported gallons unsubstantiated by fuel purchase invoices will create an adjustment to Tax paid Gallons

This list of possible adjustments is not all-inclusive. The auditor determines whether adjustments are necessary outside of the inadequate records determination.

Adjustments for Fleets with Adequate Fleet Records with Inadequate Records for Individual Vehicles [A350](#); [P570](#)

If the auditor finds that the records of the fleet, as a whole, are sufficient and appropriate, the records are determined to be adequate. If the auditor determines that records for individual vehicles within the fleet are inadequate, the mpgs for these vehicles will be adjusted by using one of the following:

- Prior experience of the licensee
- Licensees with similar operations
- Vehicles in the fleet with similar operations
- Industry averages
- Records available from fuel distributors or third parties
- Other pertinent information

If the auditor determines that none of these factors supports the audit adjustment, the vehicle mpg will be reduced:

- To 4.0), or
- By 20%

Best Information Available Audits

The auditor completes an estimated proposed audit assessment using Best Information Available (BIA) when the licensee's records cannot be audited. A BIA audit is completed when the records are insufficient, inappropriate or unavailable. Management approval may be necessary for BIA audits. The auditor should notify the licensee, prior to the final conference, when a BIA audit is undertaken. BIA audits:

- Are completed when few or no adequate records are provided by the licensee
- Can encompass the entire or part of the audit scope

- Cannot be used to generate refunds. The licensee must have records to support a refund to any jurisdiction
- May include reported or adjusted figures as default “audited” numbers. This designation does not constitute an irrevocable acceptance of the reported figures
- Will not be issued for the sole purpose of extending the statute of limitations.

The auditor selects BIA audit adjustments that:

- Have a reasonable basis and correlate to the licensee’s business or industry
- May include the use of the 4 mpg when no records are available
- May include the use of an mpg reduced by 20% from reported or adjusted levels
- Are labeled as “Reported” or “Unverified” when the licensee’s figures have not been verified, but are used as default audited figures
- Use the term “audited” only when an explanation is included

Write-up

Audit Report R1370; A460

Management or an audit reviewer analyzes the report and the initial questions prior to the completion of the audit. This review ensures that the auditor gathered sufficient information and used appropriate methods in completing the audit.

The audit report is delivered to the licensee and the affected jurisdictions. The audit report includes the evaluation of records, explanation of adjustments, the actual audit pages and the bill.

The auditor should include a narrative that identifies the licensee and documents the reporting system strengths and weaknesses and recommendations for future recordkeeping practices. Since this report is provided to the licensee and all audited jurisdictions, all inadequate distance and fuel ratings must be thoroughly explained.

Through the IFTA audit narrative, the auditor:

- Details the quality of the licensee’s records
- Provides information to be used in determining penalties
- Details the evaluation of the licensee’s record keeping system
- Identifies recordkeeping areas in need of improvement
- Aids in a determination of whether the licensee has implemented the recommendations made in prior audits

Audit File A470

In the audit file, the auditor includes:

- The audit report
- All supporting workpapers
- Documentation of communications with the licensee
- The pre-audit analysis
- Any internal documentation

All schedules or supporting workpapers must be provided to the licensee, upon request.

The documentation maintained in the audit file details the auditor's rationale for audit decisions. The pre-audit analysis included in the audit file must include the pre-audit questions, the licensee's responses, and additional questions and answers developed during the audit.

The supporting workpapers included in the audit file are subject to review by parties outside the auditing community. If an audit assessment is appealed, all documents in the file may be reviewed by attorneys or others with little knowledge of accounting. Inclusion of properly prepared workpapers will support the audit procedures performed.

Final Conference [A450](#)

When the audit fieldwork and write-up are completed, the auditor schedules a conference with the licensee to explain the audit adjustments and recordkeeping requirements. The licensee should not be surprised at the audit outcome at the final conference. Issues and potential adjustments should have been covered in previous discussions. The final conference should be documented in the audit file.

Audit Appeals [R1390](#)

The licensee will have at least 30 days from the date of notification of audit results to appeal the audit results in writing.

BEST PRACTICES GUIDE – APPENDICES

Definitions

Acronyms

Truck Pictures

Unit MPG Analysis

GPS Questionnaire

Odometer Schedules

Bulk Example Excel Spreadsheet

Bulk Fuel Reconcile schedule

Industry Averages Guide

Adequate/Inadequate Chart.

GENERAL:

Bill of lading (BOL, BL, B/L)

A paper document between a shipper and a carrier acknowledging the receipt of goods for transport. Usually describes the nature of the cargo; hazardous materials classification (if any); amount of cargo by weight, size, and/or number of pallets, boxes, barrels, etc.; and the origin and destination of the cargo.

Bobtailing

Operating a tractor unit with no trailer attached.

Broker

A person or company that arranges for the truck transportation of cargo belonging to others, using for-hire carriers to provide the actual truck transportation.

Consignee

The person or entity transferring legal responsibility or ownership of the cargo (or consignment) from the carrier.

Consignment

An agreement between a consignee and a consignor in which the goods are taken responsibility for and transported by a third party, the carrier. May also simply refer to the consigned goods (i.e., the cargo).

Consignor

The person or entity transferring legal responsibility or ownership of the cargo (or consignment) to the carrier.

Deadheading

Operating a truck empty.

Electronic on-board recorder (EOBR)

A device hooked into the truck which transmits useful management information such as truck location, speed, and idle time.

Intermodal

A single trailer or container that encounters multiple forms of transportation along its route, such as truck/ship/rail.

Log book

A form which describes the working duties of truck drivers for each 24-hour period.

Manifest

A document that describes the contents of a shipment in greater detail than a bill of lading. Commonly used as a checklist during unloading.

Operating authority

Motor carriers for-hire must apply for the authority to engage in interstate commerce with the Federal Motor Carrier Safety Administration.

Receiver

Consignee, importer, or buyer (who may or may not be the same) named in the bill of lading as the party responsible for receiving a shipment.

Shipper

A consignor, exporter, or seller (who may or may not be the same) named in the bill of lading as the party responsible for initiating a shipment.

Terminal

A dock or hub where freight originates, terminates, or is handled in the transportation process; or a location where motor carriers maintain operating facilities.

Tractor

A semi-truck (powered unit) used to pull a load or semi-trailer (unpowered unit) by means of a fifth wheel mounted over the rear axle(s) in a semi-truck/semi-trailer combination.^[8]

DRIVERS AND CARRIERS:

Common carrier

A for-hire carrier that is obligated to serve the general public.

Company driver

Employee of a carrier who is assigned to drive company-owned trucks.

Contract carrier

A for-hire carrier contracted to one particular shipper. A contract carrier enters into a contract whose terms are negotiated between a specific carrier and specific customer.

Dedicated route

A driver or carrier who transports cargo between regular, prescribed routes. Regular route drivers usually are at home on regular intervals, given the scheduled nature of their routes.

For-hire carrier

A licensed carrier that holds itself out to hire under either a public tariff for the general public (for-hire common carrier) or under a contract filed with a specific shipper (contract carrier). For-hire carriers must apply for operating authority with the Federal Motor Carrier Safety Administration.

Irregular route

See over-the-road.

Less-than-truckload (LTL)

A driver or carrier who specializes in, or a load composed of many different types of cargo, each typically weighing less than 10,000 pounds (4,500 kg), with many different destinations. Generally involves the use of terminal facilities to break and consolidate shipments. A LTL driver normally has a dedicated or regional route.

Long-haul

See over-the-road.

Motor carrier

A person or company providing transportation of property or passengers using commercial motor vehicles.

Over-the-road (OTR)

A driver or carrier who transports cargo to any place at any time, without prescribed schedules or routes. Long-Haul OTR involves being away for weeks, or months at a time, often cross-country or international (Canada and Mexico), given the unscheduled nature of their routes.

Owner-operator (O/O)

Self-employed independent drivers with privately owned or leased trucks, as opposed to a company driver.

Private carrier

A not-for-hire carrier contracted to or owned by a shipper that does not offer services to the general public and operates primarily to transport its own goods. Private carriers are not required to obtain operating authority by the Federal Motor Carrier Safety Administration (FMCSA).

Regional route

A driver or carrier who transports cargo in a limited geographical area, usually within a certain radius of one's own home or company terminal, and may or may not maintain a schedule.

Regular route

See dedicated route.

Team drivers

A team of two or more drivers who ride together and drive the same truck in shifts, essentially allowing the truck to remain in motion almost constantly. Primarily used for time-sensitive freight.

VEHICLES:

Bobtail

A tractor without a trailer. In verb form, this also refers to operating a truck without a trailer.

Combination vehicle

A vehicle composed of two or more separate units, a tractor (powered unit, semi-truck) and a trailer (unpowered unit, semi-trailer).

Conventional truck

A truck or tractor featuring an engine forward of the cab, with a conventional hood configuration.

Day cab

A truck cab without a sleeper berth.

Dump truck

A truck with a bucket-like cargo area which the front can be raised, hinging on the rear, allowing the load to slide ("dump") out of the cargo area. Often a straight truck, semi-trailers are also common. Flatbeds and refuse container trucks can often "dump", but are rarely called that.

Eighteen-wheeler

This term is derived from the number of tires that the typical OTR tractor-trailer configuration has. See also *semi-truck*.

Semi-truck

An articulated (jointed) combination vehicle, often composed of a 10-wheeled (three axle) tractor and a 4-wheeled (two axle) trailer. There are also two axle tractors, single axle trailers, and occasionally combinations with extra lift axles. In some applications a semi can pull additional full trailers (doubles and triples) with the use of a single axle or tandem axle converter dolly. The use of the term "semi" in the name comes from the semi-trailer, a vehicle whose load is carried partly by its own axles and partly by the pulling vehicle, which is commonly included in tractor-trailer rigs.

Straight truck/Box truck

A single vehicle, with no articulation. Normally 2 or 3 axles, sometimes with lift axles.

Tractor-trailer

See semi-truck.

BIBLIOGRAPHY

Copied from: https://en.wikipedia.org/wiki/Glossary_of_the_American_trucking_industry

ACRONYMS:

3PL - Third-party Logistics Provider

AAMVA - American Association of Motor Vehicle Administrators

AASHTO - American Association of State Highway & Transportation Officials

APU – Auxiliary Power Unit

ATA - American Trucking Association

AVI – Automatic Vehicle Identification

AVL – Automated Vehicle Location

BHP – Brake Horsepower

CARB – California Air Resources Board

CBP – Customs Border Patrol

CDL - Commercial Driver’s License

CMV - Commercial Motor Vehicle

CNG – Compressed Natural Gas

CSA – Compliance, Safety, Accountability

CVISN - Commercial Vehicle Information Systems and Networks (CVISN), a national program administered by the Federal Motor Carrier Safety Administration designed to improve motor carrier safety and to enhance the efficiency of administrative processes for industry and government.

CVO - Commercial Vehicle Operations

DC – Distribution Center

DMV - Department of Motor Vehicles

DOD - Department of Defense

DOR - Department of Revenue

DOT - Department of Transportation

ECM - Engine Control Module

ECU – Electronic Control Unit

EDI – Electronic Data Interchange

ELD - Electronic Logging Device

EOBR/ELD – Recorders, which become Electronic Logging Devices

eRODS - Electronic Record of Duty Status

FAK – Freight All Kinds

FHWA - Federal Highway Administration

FMCSA - Federal Motor Carrier Safety Administration

FTA - Federal Transit Administration

FTA - Federation of Tax Administrators

FTA - Freight Transport Administration

GAWR – Gross Axle Weight Rating

GCW – Gross Combination Weight

GIS - Geo Information Systems

GPS - Global Positioning System

GVW – Gross Vehicle Weight

GVWR – Gross Vehicle Weight Rating

HHG – House Hold Goods

HOS – Hours of Service

ICC – Interstate Commerce Commission

IFTA - International Fuel Tax Agreement

IRP - International Registration Plan

ISTEA – Intermodal Surface Transportation Efficiency Act of 1991 (*IFTA's Grandfather*)
ITS - Intelligent Transportation System
LTL – Less Than Truckload
MC – Motor Carrier
MPG – Miles-Per-Gallon
MVR – Motor Vehicle Report
NAFTA - North American Free Trade Agreement
NASTC – National Association of Small Trucking Companies
NHS - Nation Highway System
NTSB – National Transportation Safety Board
O/O – Owner Operator
OODIA – Owner Operator Independent Driver Association
OOSO/OOS – Out of Service Orders/Out of Service
OTR – Over the Road
P&D – Pick-up and delivery.
PO – Purchase Order
POD - Proof of Delivery
PTI – Pre-Trip Inspection
PTO – Power Take Off
RFG – Reformulated Gasoline
RODS - Record of Duty Status
RTV – Return to Vendor
SAFER - Safety and Fitness Electronic Records (SAFER Web)
SLSC/SLDC - Shipper Load, Shipper Count/Shipper Load, Driver Count
TIDA – Trucking Industry Defense Association
TL – Truck Load
UCR – Unified Carrier Registration
UFC – Uniform Freight Classification
ULEV – Ultra Low Emissions Vehicle
USDOT – United States Department of Transportation
VMRS – Vehicle Maintenance Reporting Standards
VMT – Vehicle Miles of Travel

IFTA QUALIFIED VEHICLES

Definition:

R245 – Qualified Motor Vehicle means a motor vehicle used, designed, or maintained for transportation of persons or property and:

.100 – Having two axles and a gross vehicle weight or registered gross vehicle weight exceeding 26,000 pounds or 11,797 kilograms; or

.200 – Having three or more axles regardless of weight; or

.300 – Is used in combination, when the weight of such combination exceeds 26,000 pounds or 11,797 kilograms gross vehicle or registered gross vehicle weight. A **Qualified Motor Vehicle** does not include recreational vehicles.

Examples:

(Remember, if a vehicle meets the above requirements, does it operate in more than one jurisdiction? If the answer is yes, then a company must have an IFTA License and file IFTA quarterly returns. If the answer is no, then it may not be necessary for the company to have an IFTA License.)



Yes



Yes



No



No



No



Probably no, unless it qualifies under a combination.



Yes – weight and three axles.



No, unless possibly used in combination.



No



Probably not – look at GVW



No, unless in combination.



No, unless possibly in combination. Look at the specs.



Yes



No



Yes



Yes



Probably no, but does the GVW exceed 26,000 lbs.?



Yes

[This page intentionally left blank.]

UNIT MPG ANALYSIS

QTR.	UNIT	TOTAL AUDITED MILES	TOTAL AUDITED GALLONS	ACTUAL AUDITED MPG	INDUSTRY STANDARD MPG	OTHER GALLONS	FOOT- NOTES
1/15	1	702	120	5.85	8.00	0	
	2	960	134	7.16	8.00	0	
	3	672	100	6.72	6.00	12	1
	6	869	250	3.48	6.00	0	
	TOTAL	3,203	604			12	
ACTUAL ADJUSTED OT:						0	
2/15	1	67	0	0.00	8.00	8	1
	2	301	186	1.62	8.00	0	
	3	403	100	4.03	6.00	0	
	6	1,441	341	4.23	6.00	0	
	TOTAL	2,212	627			8	
ACTUAL ADJUSTED OT:						0	
3/15	1	758	130	5.83	8.00	0	
	2	1,104	392	2.82	8.00	0	
	3	278	0	0.00	6.00	46	
	6	84	0	0.00	6.00	14	1
	TOTAL	2,224	522			60	
ACTUAL ADJUSTED OT:						46	
4/15	1	940	170	5.53	8.00	0	
	2	557	48	11.60	8.00	22	1
	3	899	196	4.59	6.00	0	
	6	34	0	0.00	6.00	6	1
	TOTAL	2,430	414			27	
ACTUAL ADJUSTED OT:						0	
1/16	1	940	170	5.53	8.00	0	
	2	557	48	11.60	8.00	22	1
	3	899	196	4.59	6.00	0	
	6	34	0	0.00	6.00	6	1
	TOTAL	2,430	414			27	
ACTUAL ADJUSTED OT:						0	

UNIT MPG ANALYSIS

QTR.	UNIT	TOTAL AUDITED MILES	TOTAL AUDITED GALLONS	ACTUAL AUDITED MPG	INDUSTRY STANDARD MPG	OTHER GALLONS	FOOT- NOTES
2/16	1	940	170	5.53	8.00	0	
	2	557	48	11.60	8.00	22	1
	3	899	196	4.59	6.00	0	
	6	34	0	0.00	6.00	6	1
	TOTAL	2,430	414			27	
ACTUAL ADJUSTED OT:						0	

PURPOSE: THIS WORK PAPER WAS PREPARED TO DETERMINE IF THE AUDITED MPGS WERE REASONABLE FOR EACH IFTA/IRP UNIT IN EACH QUARTER, COMPARED TO THE INDUSTRY STANDARD MPG OF EACH UNIT.

PROCEDURE: I LISTED THE TOTAL AUDITED MILES & TOTAL AUDITED GALLONS PER UNIT FOR EACH QUARTER, AND THEN CALCULATED EACH UNIT'S ACTUAL AUDITED MPG. TOTAL AUDITED MILES PER UNIT WERE THE SAME AS TOTAL RECAPPED MILES PER UNIT. TOTAL AUDITED GALLONS PER UNIT WERE THE SAME AS TOTAL RECAPPED GALLONS PER UNIT, SINCE NO FUEL CHANGES WERE FOUND DURING THE TEST QUARTER EXAMINATION.

I THEN COMPARED THE AUDITED MPGS TO THE INDUSTRY STANDARD MPG FOR EACH UNIT. IF THE ACTUAL AUDITED MPG WAS GREATER THAN THE INDUSTRY STANDARD MPG OR IF A UNIT HAD AUDITED MILES BUT NO AUDITED GALLONS, I CALCULATED ENOUGH "OT" GALLONS TO ADJUST THE AUDITED MPG TO THE INDUSTRY STANDARD MPG. THESE "OT" GALLONS WERE NOT GIVEN TAX-PAID CREDIT.

CONCLUSION: THE "OTHER" GALLONS WERE ADDED AS ONE-TIME ADJUSTMENTS IN EACH AFFECTED QUARTER (SEE EXCEPTION IN FOOTNOTE #1).

CARRIER NAME
ID #NE
GPS QUESTIONNAIRE

NOTICE:

Under the International Fuel Tax Agreement - (IFTA) and the International Registration Plan - (IRP), you are required to keep the information as stated in the IFTA Procedures Manual section P540 (Distance Records) and IRP Plan Section 1010 (Contents of Records). P540.200 of the IFTA Procedures Manual and Section 1010 (b) of the IRP Plan both state that odometer readings are required.

Please include additional information and/or explanation on separate pages. .

1. Who is your GPS vendor?

2. How often does the GPS send a signal? (transmits a ping)
Are all pings recorded? If not, why not?

3. What information is the GPS recording? (i.e. date, time stamp, location points, odometer reading, fuel stops, when the engine is turned off, jurisdiction-line border crossings, some sort of “event”, etc.)

4. If your GPS system records odometer readings, at what points are the odometer readings being captured?

5. How does your GPS system calculate miles?

6. How is the GPS data utilized to calculate distance? If the GPS system uses external mileage software (such as PC Miler or Pro Miles) to calculate the distance, please list the name of this software.

CARRIER NAME
ID #NE
GPS QUESTIONNAIRE

7. Can the following reports be generated?

- _____ Fleet mileage summaries listing total miles and jurisdictional miles per unit and for the entire fleet.
- _____ Unit mileage summaries listing total miles and jurisdictional miles.
- _____ Total and jurisdictional miles per trip.
- _____ Routes of travel (raw GPS data listing all location points) by trip.

List any other reports generated by the GPS system that would be useful for a mileage and fuel audit.

8. Is fuel integrated with the GPS data by your GPS vendor?

9. What reports do you use to prepare your IFTA returns?

10. What reports do you use to prepare your IRP renewals?

11. How long are you retaining your printed GPS reports?

12. How long are you able to retrieve GPS data?

13. Is the GPS information being edited? Why would someone edit the GPS information? What specifically is being edited?

14. Can the driver defeat or tamper with the GPS system?

CARRIER NAME
ID #NE
GPS QUESTIONNAIRE

15. Does your GPS system rely on the truck's battery for power?

16. How would you know if the truck was being towed (moving but not accruing miles)?

17. Are you or the driver alerted when the GPS system is not receiving a signal from a unit or if there is a problem with the signal?

18. What is your procedure or policy of recording mileage information if the GPS system were to malfunction?

19. Do you have units that are not equipped with the GPS? Please provide a listing of units, (by unit number) without GPS.

20. If you operate units without GPS, what records are being kept for these units?

21. Are there any other functions or internal controls that we may be unaware of that would help with our understanding of your GPS system?

Enclosures: IFTA Procedures Manual, Section P540.200
IRP Plan, Section 1010

[This page intentionally left blank.]

ODOMETER RECONCILIATION SCHEDULE

For the Periods of 07/01/12 to 12/31/14

3RD QUARTER 2013

UNIT	Beg Odo	End Odo	Elapsed Odometer
2	316,152	337,421	21,269
		Total	21,269
		Reported	21,269
		Variance	0

4TH QUARTER 2013

UNIT	Beg Odo	End Odo	Elapsed Odometer
2	337,421	354,687	17,266
		Total	17,266
		Reported	17,266
		Variance	0

1ST QUARTER 2014

UNIT	Beg Odo	End Odo	Elapsed Odometer
2	354,687	371,905	17,218
		Total	17,218
		Reported	17,318
		Variance	100

2ND QUARTER 2014

UNIT	Beg Odo	End Odo	Elapsed Odometer
2	371,905	392,489	20,584
		Total	20,584
		Reported	20,384
		Variance	-200

3RD QUARTER 2014

UNIT	Beg Odo	End Odo	Elapsed Odometer
2	392,489	411,988	19,499
		Total	19,499
		Reported	19,529
		Variance	30

4TH QUARTER 2014

UNIT	Beg Odo	End Odo	Elapsed Odometer
2	411,988	431,896	19,908
		Total	19,908
		Reported	19,908
		Variance	0

[This page intentionally left blank.]

Taxpayer Name

BULK FUEL RECONCILIATION / INVENTORY SCHEDULE

* denotes sample-quarter

1 TANKS: 300 GALS. FUEL TYPE: DIESEL

Unknown beginning inventory

			*2			*3	*4		*5	*6
Period	Beginning Inventory	Fuel Purchases	Available Fuel	Known IFTA Fuel Disbursed	Non-IFTA Fuel Disbursed	Total Fuel Disbursed	Sub-Audited Ending Inventory		Unidentified Fuel Disbursements /Shortages	Audited Ending Inventory
4th Qtr 2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	197.00
1st Qtr 2013	197.00	0.00	197.00	197.00	0.00	197.00	0.00		0.00	0.00
*2nd Qtr 2013	0.00	300.00	300.00	300.00	0.00	300.00	0.00		0.00	0.00
3rd Qtr 2013	0.00	517.00	517.00	135.00	87.00	222.00	295.00		0.00	295.00
4th Qtr 2013	295.00	260.00	555.00	310.00	185.00	495.00	60.00		0.00	60.00
1st Qtr 2014	60.00	466.00	526.00	360.00	0.00	360.00	166.00		0.00	166.00
2nd Qtr 2014	166.00	570.00	736.00	438.00	45.00	483.00	253.00		-3.00	250.00
3rd Qtr 2014	250.00	254.00	504.00	237.00	93.30	330.30	173.70		0.00	173.70
*4th Qtr 2014	173.70	378.00	551.70	411.00	150.00	561.00	-9.30		9.30	0.00
1st Qtr 2015	0.00	271.00	271.00	180.00	0.00	180.00	91.00		0.00	91.00
2nd Qtr 2015	91.00	1158.00	1249.00	1071.00	40.00	1111.00	138.00		22.00	160.00
*3rd Qtr 2015	160.00	575.00	735.00	409.00	50.00	459.00	276.00		9.00	285.00
4th Qtr 2015	285.00	250.00	535.00	341.00	110.00	451.00	84.00		-5.00	79.00

*2 Beginning inventory plus fuel purchases

*3 IFTA known fuel disbursed plus non-IFTA fuel disbursed

*4 Available fuel minus total known fuel disbursed

*5 Based on reviewing fuel disbursements and bulk purchases in conalogical order, there were some issues with missing disbursements or not enough fuel available to cover disbursements made. The missing disbursements were included to reduce inventory only since it was unknown if they were for the IFTA or Non-IFTA unit. Shortages were added as additional "untaxed" fuel purchases.

*6 Sub-Audited ending inventory plus required fuel disbursed plus unidentified fuel disbursements equals audited ending inventory.

[This page intentionally left blank.]

Industry Average

The audit committee does not recognize any single source to determine industry average as referred to in Section A350.200.020. In order to determine an industry average, the audit committee recommends that each jurisdiction take appropriate steps to create their own chart. We recommend that the chart be updated every 2-3 years. Each jurisdiction should contact sales and/or service staff at NEW vehicle dealerships of various types (Kenworth, Peterbilt, Mack, International, etc) in different regions. Generally, dealers associate the different types of vehicles by weight class, rather than registered weight as used for IFTA purposes (see chart below). When talking to the dealers, you should also ask for the MPGs of vehicles that are loaded one way and empty the other way, so you will get the optimum MPG possible for that weight class and age of vehicle.

<u>Weight Class</u>	<u>Registered Weight</u>
250 & 350 series of light trucks	¾ - 1 ton pickups
350, 450, & 550 series of light trucks	28K – 32K
450 & 550 series of light trucks	34K – 44K
Class 6 trucks	46K – 48K
Class 7 trucks	50K – 78K
Class 8 trucks	80K plus

We also recommend that jurisdictions use various web sites when calculating these averages. Jurisdictions should also use both government and independent web sites for information. Below are some examples of those web sites:

https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/index.html#chapter_4

<http://cta.ornl.gov/data/index.shtml>

<http://nacfe.org/>

The committee recognizes that each jurisdiction's historical audit data can also provide insight to regional industry MPG's. We recommend that jurisdictions incorporate this data into any chart they choose to create.

In addition, before making a final determination, be aware that certain factors may influence the rate of fuel consumption, such as :

- Vehicle type, age, condition, and added engine features
- Load type and weight
- Refrigeration or other utility units being supplied by the same fuel tank.
- Road elevations, traffic, and weather conditions

[This page intentionally left blank.]

Source	Adequate	Inadequate	Overall Rating	Result
--------	----------	------------	----------------	--------

Distance	X		Adequate	Conduct the audit Deny fuel when appropriate Use A350 for estimated Fuel Consumption, if needed
Fuel	X			

Distance	X		Adequate	Conduct the audit Deny fuel when appropriate Use A350 for estimated Fuel Consumption, if needed
Fuel		X		

Distance		X	Inadequate	P570 Inadequate Records Assessment Deny fuel when appropriate Reduce MPG/KPL to 4.00/1.7 or by 20%
Fuel	X			

Distance		X	Inadequate	P570 Inadequate Records Assessment Deny Fuel when appropriate Reduce MPG/KPL to 4.00/1.7 or by 20%
Fuel		X		

Records That are Adequate for audit

The reason the Records could be Adequate when the Distance Records are Adequate and the Fuel Records are Inadequate is because there is other language that allows for the adjustment of Tax Paid Fuel. The recently passed ballot kept the language where tax paid fuel can be disallowed and A350, in the Audit Manual, allows for the estimation of fuel consumption based on any of the factors listed in A350.200.

A350 allows for the estimation of fuel consumption for specific vehicles within a fleet when records are missing or are substantially impaired. Even when the records of the fleet as a whole are considered adequate for audit. There may be certain circumstances when the fleet MPG may need to be adjusted. For example: All of the fleet vehicles are registered at 80,000lbs and the reported fleet MPG is 10.00. Based upon industry standards, this is high. After determining that the MPG cannot be isolated to specific vehicles, the MPG can be adjusted in accordance with A350. There is the appearance that not all of the fuel has been reported.

Records that are Inadequate for audit

Once the records as a whole are determined to be Inadequate, the audit findings must be based P570 of the Procedures Manual.

A350 AUDIT ADJUSTMENTS

.100 When records for the fleet as a whole are adequate for audit, the base jurisdiction shall have the authority to adjust the MPG or KPL.

.200 In instances where the records for specific vehicles in the fleet under audit are substantially impaired or missing, the base jurisdiction may make audit adjustments for fuel and distance for those vehicles based on factors such as:

.005 Prior experience of the licensee;

.010 Licensees with similar operations;

.015 Other vehicles in the fleet with similar operations;

.020 Industry averages;

.025 Records available from fuel distributors or other third parties;

.030 Other pertinent information the base jurisdiction may obtain or examine;

.300 If the base jurisdiction determines that such factors as those in A350.200 fail to provide a basis to support an audit adjustment, the jurisdiction may, for the specific vehicles at issue, either

.005 reduce the vehicle MPG or KPL by 20% or

.010 adjust the vehicle MPG to 4.00 or the KPL to 1.7.

Please note that the MPG/KPL Reduction as indicated in A350.300 is only to be used when none of the factors identified can be used for estimating fuel consumption. If none of the factors listed can be used, are the records adequate for audit?

.400 Nothing in this section shall affect the grant or denial of credits for tax-paid fuel in accordance with P550.

***P570 INADEQUATE RECORDS ASSESSMENT**

.100 If the base jurisdiction determines that the records produced by the licensee for audit do not, for the licensee's fleet as a whole, meet the criterion for the adequacy of records set out in P530, or after the issuance of a written demand for records by the base jurisdiction, the licensee produces no records, the base jurisdiction shall impose an additional assessment by either:

.005 adjusting the licensee's reported fleet MPG to 4.00 or 1.70 KPL; or

.010 reducing the licensee's reported MPG or KPL by twenty percent.

.200 This section does not affect the ability of a base jurisdiction to disallow tax-paid credit for fuel purchases which are inadequately documented, or, for cause, to conduct a best information available audit which may result in adjustments to either the audited or reported MPG or KPL, suspend, revoke, or cancel the license issued to a licensee.

Examples of BIA Adjustments: During Pre-Audit work a Jurisdiction may search Safer or other sites for DOT Inspections and find tangible documentation to support that distance was accrued in a jurisdiction or jurisdictions when the Return shows no reported distances. It is the intent in this section to allow those one-time adjustments to be made, which should never be projected, and recalculate the MPG. The jurisdiction will adjust either the audited or reported MPG in accordance with .100.005 or .100.010.

[This page intentionally left blank.]