NACS POS/Back Office Interface Guidelines

Common Data Elements

Version 2.1

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Table of Contents

Preface

CONTENTS -

This document is organized as follows:

- Fuel Product Maintenance - FPT
- Item Maintenance - ITT
- Merchandise Code Maintenance – MCT
- Tank Product Maintenance - TPT
- Tax Includes Maintenance – TIT
- Tax Level Maintenance – TLT
- Tax Strategy Maintenance – TST

- Movement
  - Fuel Sales Movement - FGM
  - Fuel Product Movement - FPM
  - Items Sales Movement - ISM
  - Merchandise Code Movement - MCM
  - Miscellaneous Summary Movement – MSM
  - Tank Product Movement - TPM
  - Tax Level Movement - TLM

- Other Table Descriptions
  - Cross Reference
    - Description
    - Mix-Match
    - Restrictions
  - Look-Up
    - Currency/Country Codes
    - Item Type Codes
    - Merchandise Code
    - Miscellaneous Summary Codes
    - Payment System Codes
    - POS Code Format
    - Price Tier
    - Reason Code
    - Service Level
    - Tender Prohibit
    - Tender Type
    - Time Tier

NOTE:

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1. Logon to www.cstorecentral.com
2. Select Technology Standards
3. Select NACS POS/Back Office Interface Guidelines, Version 2.0

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Chapter 1- General Information

BACKGROUND

Version 1.0

The NACS POS/Back Office Standards Committee (Committee), at its meeting on May 9, 1997, appointed an ad hoc Task Force to develop a list of data elements organized in tables for the exchange of information between disparate Back Office (BO) systems and Point-of-Sale (POS) systems. The Data Table Summit Task Force (Task Force) met on several occasions during 1997, 1998 and 1999. Minutes of the proceedings are available to any interested party and may be obtained from NACS at www.cstorecentral.com (See Appendix B.) The initial work of the Task Force was summarized in a draft document for industry comment and was published on March 31, 1998. All POS and Back Office solution providers in the industry were provided a copy of the draft document and were requested to provide appropriate feedback during the comment period. Over the course of approximately six months comments were received from several solution providers and one retailer. After the comments were reviewed and action taken as appropriate, the Task Force recommended to the full Committee on January 26 and 27, 1999 that Version 1.0 of this document be forwarded to the NACS Technology Project Steering Committee for approval and endorsement.

At the Technology Steering Committee meeting on March 23, 1999, NACS Point-of-Sale Back Office Interface Guidelines, Common Data Elements, Version 1.0 (Guidelines) of this document was approved and a recommendation made to forward the document to the NACS Technology Committee for approval and publication.

The NACS Technology Committee met on April 20, 1999, and approved publication of Version 1.0 of this publication as a NACS Guideline.

Version 2.0

The Task Force met again in March 1999 to begin the follow on work commissioned by the POS Back Office Committee. Several additional meetings of the Task Force were held to continue building the dictionary of “common data elements”.

The work of the Task Force was submitted on August 1, 1999, in the form of a Change Request to the Guidelines Standards Maintenance Committee following the Guidelines for Recommending Changes as contained in both Versions 1.0 and 2.0 of this document.

The changes, which were approved for inclusion/modification or enhancement of the Guidelines, are incorporated in this document. For a Record of Changes see Appendix E.

CAUTION

Although this document significantly advances the scope of material contained it Version 1.0, it should only be considered as *one more step in an ongoing effort.* Further, the scope of work defined in this document should not be construed as being all-inclusive or complete. The Task Force and Committee recognize that gaps may exist and that they will be uncovered as implementation by solution providers advances. This may mean that additional elements/tables will be needed to achieve the goal of fully facilitating the exchange of information in a standard manner. Participation by POS and Back Office solution providers in the work of the Task Force and/or Committee is essential to insure the completion of the task.

Only data that flows through the Point-of-Sale system was considered to be within the purview of the work of the Task Force. It is recognized that other data may be available at the location that needs to be entered into the Back Office but its format and structure were not considered at this time. The Task Force believes that the work of the Device Integration Working Committee and the POS Back Office Working Committee may be approaching a time of convergence with reference to the exchange of data between different types of devices.

The on-going effort to improve the Guidelines *will not* be impeded by any current, or planned implementation of the Guidelines.

INTRODUCTION

This document is the result of concerns expressed by the retail community related to the ability to pick back office solutions independently of POS solutions and yet have the two exchange data in an efficient electronic manner. Since early in the standards meetings sponsored by NACS there has been retailer input and direction regarding their interest in BO/POS integration.

Recognizing the wide array of choices available to retailers for both POS and BO systems, it was determined that a set of data elements which would represent the basic or minimal information required to be passed between the two systems should be established. Any specific implementation will undoubtedly require unique elements to be added to the specification. This document should provide a basis for interface development. It does not purport to be a 'plug and play' specification – it

is only a guideline. However, as a foundation, the Task Force believes this guideline represents the vast majority of information required to achieve an effective interface. To the extent this is achieved, thousands of hours will be saved in interface development projects.

The Task Force recognized that POS and BO systems also vary widely in capabilities. Entire generations of legacy systems are currently in use in the industry while new, next generation systems are continuing to be developed and deployed. These Guidelines address data elements. The tables are for organization and display of the elements only and do not imply any type of database structure. Implementation using relational database technology is not implied and should not be inferred to be a requirement. While these tools are certainly appropriate for some implementations, not all interfaces will be made in this manner.

Version 2.0 of these Guidelines addresses international considerations, such as currency and language. Refer to the Record of Changes for complete details.

The initial objective of the work of the Task Force was *limited to the exchange of information necessary to sell an item and report those sales*. The follow on work extended the objective to include the following:

1. *Fuel and Tank Maintenance and Movement* which includes such elements as Fuel Grade and Fuel Product Name, Service, Price and Time Tiers.
2. *Tax Setup/Maintenance and Movement* which includes such elements as tax levels, tax exempt status and tax rates.
3. *Description* – includes such things as short and long descriptions to be used for pole displays, printed receipts, kitchen display, etc. It also includes language codes.

Although specific examples of how the data elements ***might be used*** are given throughout Version 2.0, it should be stressed that, to this point, no attempt has been made to define a "transport layer" and no inferences should be drawn that such a layer is implied in these Guidelines.

No attempt has been made to date to deal with transaction level detail. This will be the subject of a future work item. The Task Force believes that the modifications and additions made in Version 2 address cash balancing and reconciliation issues.

PURPOSE OF THE GUIDELINES

This version of the Guidelines is designed to offer Point-of-Sale and Back Office solution providers a starting point for discussion regarding the exchange of information between their systems. It provides a common framework and data dictionary for those

common data elements that are likely to be exchanged between provider systems.

Nothing in these Guidelines should be construed as to require any particular data model, format or structure.

The Common Data Elements are presented in a Data Dictionary and also in a logical grouping of the elements. Each such grouping has been given a table name for ease of reference. The use of a table structure for the display of the data elements does not imply a requirement for the use of that structure in any implementation of these Guidelines.

The lack of any particular data element in the Data Dictionary that is believed to be required by any solution provider, may be added to the Dictionary on an implementation by implementation basis. If the solution provider believes the element should be permanently added to the Data Dictionary the procedures for recommending changes, given below, should be followed.

FUTURE WORK

Other elements that need to be added include:

1. *Combo and Price Multiple* – additional elements for the Mix-Match table to allow for combos, deals, and price multiples.
2. *Link Code* – to provide information on such things as bottle deposits and to link to other *items* or merchandise code values having similar characteristics, such as price and food stamp flags.
3. *Additional Item Detail* – to include complete electronic journaling.
4. *Shortened versions of Element names.*

The Committee also believes that additional work is required to investigate further whether file format and transport layers need to be defined. At its meeting on January 26 and 27, 1999, the Committee discussed XML as a possible medium for the file format structure. The consensus of the committee was that XML holds tremendous promise as the file format/transport layer for the interface between disparate POS and Back Office Systems. However, because the XML specification does not contain data definitions as to size, type and structure, as of the publication date of this document, the Committee recommended that

developments in this area should be followed closely and took no further action on the subject at this time.

The on-going effort to improve the Guidelines ***will not*** be impeded by any current, or planned implementation of the Guidelines.

PROVIDING FEEDBACK

NACS POS/Back Office Standards Committee, one of the four working committees of the NACS Technology Standards Project has an open membership policy. Membership is open to anyone desiring to participate. The results of the Committee's activities are open to feedback and comment by anyone desiring to do so. Feedback and comments are encouraged so that the POS/Back Office Interface Guidelines have the broadest possible support within the industry. See below and Appendix C for procedures for submitting feedback and comments.

RECOMMENDING CHANGES

The NACS Technology Standards Committee has approved the following interim procedures for making changes to these Guidelines:

1 – A Guidelines Maintenance Standing Committee (GMSC) shall be appointed by the NACS Standards Steering Committee. The GMSC shall be composed of all members of the NACS Point-of-Sale Back Office Standards Committee who have attended at least one of the last two meetings of that committee.(See Appendix C)

2 – A POS/Back Office Interface Guidelines Change Request shall be submitted to the Guidelines Maintenance Standing Committee (GMSC).

3 – Change requests should be submitted electronically at least 30 days in advance of the beginning of each GMSC Discussion Period. The Discussion Periods will begin on February 1, August 1, and November 1 of each year.

4 – Fifteen days prior to the start of the Discussion Period members of the Guidelines Maintenance Standing Committee will be provided a copy of each Change Request submitted.

5 – An electronic bulletin board will be provided for the discussion of the change requests submitted and a formal vote will be taken at the end of the Discussion Period: March 1, September 1, and December 1 of each year. Approval will require that at least 50% of the eligible voters vote and that at least two-thirds of the number voting agree to the change.

6 – Changes approved will be posted on the NACS web site www.cstorecentral.com in the Technology Standards Section.

A physical meeting of the Guidelines Maintenance Standing Committee may not be necessary for it to conduct its business.

CONVENTIONS

- **Table Names** - The naming convention for primary tables is **PBI** (POS/Back Office Interface), followed by the name of the table, such as **ISM** (Item Sales Movement). An underscore separates PBI and the table name. Tables are provided as a means of organizing the data elements in a logical manner. There is no implied database structure to this organization. Tables related to "maintenance" have a "T" as the last letter of the suffix. Tables related to "movement" have a "M" as the last letter of the suffix.
- **Element Names** - Data element names are unique and may be used in multiple tables. The element name is mixed case, upper and lower, with no spaces. Acronyms are mixed case within the element name. The element name is separated from the Table name by an underscore. The Task Force recognized the need to provide shortened versions of the element names and this is a future work item. Although the same element names may be used in multiple tables, the description of its use may be slightly different in each table. When this occurs the same element will have multiple occurrences in the Data Element Dictionary. The "Used in Table" is the reference for the particular description given.
- **Definitions -** Wherever used in this document the following terms are defined as indicated:
  - *Item* - Is always the combination of the elements PosCodeFormat + PosCode + PosCodeMod.
  - *MdseCode* or Merchandise Code - Is more commonly referred to as department or category.
  - *Fuel Grade* is defined as the wet stock dispensed in the customer car. See Appendix F – Fuel Grade/Product Definitions and Tank Modeling.
  - *Fuel Product* is defined as the wet stock in the underground storage tank. See Appendix F – Fuel Grade/Product Definitions and Tank Modeling.
- **Element Name Suffix** -

- *Amt* - Indicates a monetary value, in local currency, excluding price, generally a monetary sum.
- *Code* - Indicates a key to a cross reference or look-up table or has a recognized normal usage, such as bar code or U.P.C. code.
- *Cnt* - Indicates a numeric value which increments with each instance of the transaction - it cannot be negative.
- *Flg* - Indicates a logical state that may be true, false or no value.
- *Id* - Indicates an assigned identifier, may be alpha or numeric.
- *Mod* – Indicates a modifier of the element with the same name but without the suffix.
- *Num* – Indicates a numeric value such as a totalizer reading.
- *Price* - Indicates a numeric monetary value in local currency.
- *Qty* - Indicates a numeric value which increments or decrements with each instance of the transaction depending upon the type of transaction - it may be negative.
- *Units* - Indicates a numeric value of each instance of the item/merchandise code or miscellaneous transaction in local units-of-measure.
- *Vol* - Indicates a physical measurement in local units-of-measure volumetric terms.
- Other – A plain language suffix is used when its meaning is obvious and the element does not fit into any of the above categories.
- There are occasions when an element has been given a double suffix. When this occurs the modifying suffix is the last used.

- **Abbreviations** - The following abbreviations are used throughout the tables:
  - *Element* - These usage abbreviations are shown in the table column labeled "Usage". They are used to indicate the *primary* usage of the element within the primary table. In the Data Dictionary the element is listed as many times as there are different uses. The listing of abbreviations below is in the sort order used in each of the tables.
    - P = Primary Key for the table. It may also have the dual purpose of being the entry to a cross reference or look-up table.

- F = Foreign Key contains a value that is a primary key in another table.
- Q = Qualifier – (all qualifiers are optional. Qualifiers when used provide finer granularity for the data.)
- L = Logical (a flag).
- D = Descriptor (used to provide a description).
- H = Header (basic information common to all records in the exchange). This does not imply any particular structure for record layout or file format.
- M = Metric – a measured value.

♦ *Opt/Man* - O = Optional, M = Mandatory, C = Conditional

♦ *Size* - 12, 4 = (xxxxxxx.xxxx) 12 positions total, including negative sign and precision indicator, if any, with 4 positions to the right of the precision indicator. Either a comma or decimal point may be used as the precision indicator.

Indicates a range of values from a (negative) - 999999.9999 to 9999999.9999

♦ *Type - N* = Numeric, A = Alphanumeric, CUR = Currency, D = Date (defined as YYYYMMDD), T = Time is in 24 hour format (defined as HHMM), L = Logical and may have a value of "T" (True), "F" (False) or no value

♦ *Table Xref* - Indicates the cross reference or look-up table where the value may be found or which contains additional data elements qualifying the foreign key.

- Other
  - ♦ *ISO Standards* – Whenever possible ISO Standards have been used for elements such as country and currency codes. It is incumbent upon the user of these Guidelines to verify that the most current revision of the ISO standard is being used.
    - ♦ *ISO 4217 – Currency Codes*

ASSUMPTIONS

The Task Force in the development of these elements and tables made the following assumptions:

1. POS and BO systems vendors will need to map the standard elements to their own format at the time of interface development.

2. Units-of-Measure – The initial configuration and synchronization of BO and POS systems should include the units-of-measure to be used. Therefore, it is not necessary to pass units-of-measure information as a part of routine data exchanges.
3. No attempt has been made to define the "transport layer" or "file format" for data exchange at this time.
4. Currency symbols and commas should not be used.
5. The configuration of fuel dispensers is a POS/ controller/ dispenser issue and not POS BO issue. Users could define a grade/product/tank relationship that does not match the way the site is actually plumed/wired.

USAGE GUIDELINES

The Task Force recommends the following guidelines for usage.

1. Mandatory elements – An element has been designated as Mandatory only if the Task Force believed that the element was absolutely necessary for the functioning of a POS system or for reporting movement information.
2. Optional elements - If both the BO and POS systems are capable of sending and/or receiving a value for an optional element, *it should be provided.*
3. Thousands separators should not be used in numeric elements.
4. Numeric elements are fixed length and should be filled with leading blanks, if necessary. Numeric and currency fields are identical in format and differ only in use. [1]
5. Alphanumeric field lengths may be up to the maximum specified in the element description. They should not be padded or blank filled and should be left justified.
6. Currency fields are fixed length and should be filled with leading blanks, if necessary. Currency symbols should not be used. Currency and numeric fields are identical in format and differ only in use.[2]

[1] The manner of implementation will determine if the field length for numeric and currency elements will be fixed or variable in length. Conversion of an element from fixed to variable length should be accomplished by removing any leading blanks.
[2] The manner of implementation will determine if the field length for numeric and currency elements will be fixed or variable in length. Conversion of an element from fixed to variable length should be accomplished by removing any leading blanks.

7. Only negative values should be signed in numeric or currency fields. Placing a minus sign to the left of the most significant non-zero digit represents negative values. The absence of a sign in a numeric or currency field indicates a positive value.
8. Although an element may be designated as numeric, some POS/BO systems may require the element to be alphanumeric. Conversion of an element from numeric to alphanumeric should be accomplished by removing any leading blanks and left justifying the data.
9. Use of the term “data tables” does not imply any relationships among the data elements; i.e. it does not imply a relational database.
10. If detailed data is being reported from the POS to the Back Office there is not a need to report the aggregate total.

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Chapter 2 - Data Dictionary

It should be noted that Chapter 1 of this document is an integral part of the document and the purpose and use of the Data Dictionary and accompanying tables cannot be clearly understood without a thorough reading of that chapter.

This is a listing of all data elements. The Primary and Cross-Reference Tables which follow in Chapter 3 provide a logical grouping of these elements but do not imply that any particular database structure or data model should be used in implementing these Guidelines.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ActiveFlg	L	The item/merchandise code can be sold.	M	1	L	ITT MCT
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM
AllowFractionalUnitFlg	L	The sale of a fractional unit of this item is allowed.	O	1	L	RESTRICT
AllowWicFlg	L	The sale of the item/merchandise code is allowed in a WIC transaction.	O	1	L	RESTRICT
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginProhibitTimeFri	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeMon	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeSat	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeSun	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeThur	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeTue	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeWed	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
CashierId	Q	Identifies the cashier conducting the transactions in the reporting period.	O	40	A	ISM MCM FGM MSM TLM
CurrencyCode	Q	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	FGM
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM ISM
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM
CurrencySubCode	F	A pointer to the currency look-up table.	O	4	A	FGM MSM ISM
DefaultModifierFlg	Q	Indicates this is the default transaction item when there are multiple identical PosCodeFormat and PosCode combinations. It indicates the transaction item to enter into the sale when scan data is not uniquely related to one transaction item. It implies multiple modifiers.	O	1	L	ITT
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
Description16A	D	A short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	16	A	DESCRIPTION
Description24A	D	A long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	24	A	DESCRIPTION
Description48A	D	A ultra long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	48	A	DESCRIPTION
Description8A	D	A ultra short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	8	A	DESCRIPTION
DescriptionId	P	The identification id assigned to this description table element. Generally this element would include the key elements of the table being referenced. For example an item description would include the PosCode, PosCodeFormat and PosCodeMod elements.	M	30	A	DESCRIPTION
DescriptionId	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions that may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT
DiscountAmt	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmt.	O	12,4	CUR	ISM MCM FGM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DiscountCnt	M	Total number of discount transactions associated with the DiscountAmt for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
DispenserDiscountAmt	M	Sum of all discounts applied by reducing the dispenser RegularSellPrice. FuelGradeSalesAmt already reflects this discount.	M	12,4	CUR	FGM
DispenserDiscountCnt	M	Total number of discount transactions applied by reducing the dispenser RegularSellPrice.	O	8	N	FGM
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndProhibitTimeFri	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeMon	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeSat	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndProhibitTimeSun	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeThur	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeTue	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeWed	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM
FamilyCode	D	That portion of a U.P.C. on a manufacturer's coupon used to identify an item's grouping for discount purposes.	O	3	N	ITT
ForceQtyFlg	L	Force a quantity of the item to be keyed on the POS at the time of sale.	O	1	L	RESTRICT
ForceWeightFlg	L	Force the weight of the item to be keyed on the POS at the time of sale.	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeActiveFlg	L	Indicates that fuel grade may be sold.	M	1	L	FGT FOT
FuelGradeId	P	Is the FuelGradeId for the fuel grade.	M	6	A	FOT
FuelGradeId	P	Is the FuelGradeId for the fuel grade.	M	6	A	FGM FGT
FuelGradeNonResettableTotalAmt	M	The sum of the value of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	CUR	FGM
FuelGradeNonResettableTotalVol	M	The volume of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	N	FGM
FuelGradeSalesAmt	M	The difference between the present period and the prior period FuelGradeNonResettableTotalAmt.	M	12,4	CUR	FGM
FuelGradeSalesVol	M	The difference between the present period and the prior period FuelGradeNonResettableTotalVol..	M	12,4	N	FGM
FuelGradeSeqId	D	The sequence number to which the FuelGradeId is assigned. Normally hose id.	O	4	N	FOT
FuelPositionId	P	Represents physical location where fuel is dispensed to one vehicle at a time.	M	4	N	FOT
FuelPositionId	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductBlendPercent	M	This is the percentage of FuelProductId used in a blending of two fuel products to create a fuel grade. The blend percentage of FuelProductIdHigh is 100 less FuelProductBlendPercent. If not a blended fuel grade then put 100 as the FuelProductBlendPercent.	M	3	N	FGT
FuelProductDepth	M	The measured depth of fuel product in the tank. One or the other of FuelProductDepth or FuelProductVol is mandatory.	C	8,3	N	TPM
FuelProductDescription	D	A description of the fuel product indicated in the FuelProductId.	M	40	A	FPT
FuelProductId	F	Is the FuelProductId for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductId of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
FuelProductId	P	An identifier for a fuel product.	M	6	A	FPM FPT
FuelProductIdHigh	F	Is the FuelProductId for the fuel grade in a dispenser blended product that has the highest octane in the blend.	O	6	A	FGT
FuelProductNonResettableAmtNum	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable amount totalizer.	O	16,4	N	FPM
FuelProductNonResettableVolNum	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable volume totalizer for that fuel product.	O	16,4	N	FPM
FuelProductTemp	M	The temperature of the fuel product in the tank at the time of the depth/volume reading.	O	5,1	N	TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductVol	M	The measured volume of fuel product in the tank. One or the other of FuelProductDepth or FuelProductVol is mandatory.	C	12,4	N	TPM
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM
ItemId	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many PosCodes and does not need to be unique.	O	24	A	ITT ISM
ItemTypeCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeCode is allowed.	O	4	A	ITT
ItemTypeSubCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeSubCode is allowed.	O	4	A	ITT
LanguageCode	Q	A pointer to the language code lookup table.	O	4	A	DESCRIPTION
LimitUnits	M	The maximum number of units of an item/MdseCode allowed in a single transaction.	O	4	N	RESTRICT
LinkCode	F	Pointer to LinkCode Table.	O	24	N	ITT MCT
ManualEntryFlg	L	If true indicates that the MiscSumCode values are derived from manual entry at the POS.	O	1	L	MSM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MdseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ITT TLM
MdseCode	P	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	MCT MCM
MdseCodeDescription	D	Native language description of the merchandise code normally printed on the register tape.	O	40	A	MCT MCM
MinClerkAge	M	The minimum age required of the sales clerk in order to sell the item/merchandise code.	O	2	N	RESTRICT
MinCustAge	M	The minimum age required of the consumer in order to purchase the item/merchandise code.	O	2	N	RESTRICT
MiscSumAmt	M	The sum of the value of the individual transactions related to this code and sub-code.	M	16,4	CUR	MSM
MiscSumCnt	M	Total number of individual transactions related to this code and sub-code. This value may be count quantity or volume depending upon usage.	O	16,4	N	MSM
MiscSumCode	P	Pointer to the look-up table.	M	4	A	MSM
MiscSumSubCode	F	Pointer to the look-up table.	O	4	N	MSM
MiscSumSubCodeMod	Q	Modifier to the MiscSumSubCode to provide an additional level of detail.	O	8	A	MSM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MixMatchCode	F	A group number that allows other transaction items with the same group number to be bought interchangeably using some quantity discount scheme. A pointer to the Mix-Match table.	O	4	N	ITT MIX-MATCH
MixMatchMaxUnits	M	The maximum number of units of this item that may be purchased at the mix-match price.	O	4	N	MIX-MATCH
MixMatchPrice	M	The total price for this quantity purchase level.	M	12,4	CUR	MIX-MATCH
MixMatchStrictHighFlg	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if one additional unit is purchased the discount does not apply to that unit.	O	1	L	MIX-MATCH
MixMatchStrictLowFlg	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if less than the minimum number of units is purchased the discount does not apply to those units.	O	1	L	MIX-MATCH
MixMatchUnits	M	The number of units that need to be purchased to qualify for this price.	M	4	N	MIX-MATCH
OutsideSlsFlg	Q	Indicates the sale was settled at the pump island by some means, such as credit card reader, cash acceptor, or cashier.	O	1	L	FGM
PaymentSysProdCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the Payment Systems Standards Committee.	O	3	N	FGT ITT MCT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PosCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in PosCodeFormat.	M	24	N	ITT ISM
PosCodeFormat	P	The type of coding scheme used in PosCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU	M	2	N	ITT ISM Pos Code Format
PosCodeMod	P	Scan code or PLU modifier. In combination with PosCode and PosCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM
PriceTierCode	D	A pointer to the Price Tier Table. The values indicate they type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FOT
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate they type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
ProhibitDiscountFlg	L	A discount is not allowed on this item/merchandise code.	O	1	L	RESTRICT
ProhibitFoodStampFlg	L	Prohibit the use of food stamps with this item/merchandise code.	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProhibitPriceLookupFlg	L	The clerk must key the price of this item/merchandise code at the time of sale.	O	1	L	RESTRICT
ProhibitPriceOverFlg	L	Prohibit use of the quantity key.	O	1	L	RESTRICT
ProhibitQtyKeyFlg	L	Prohibit use of the quantity key.	O	1	L	RESTRICT
ProhibitRefundFlg	L	A refund of the item/merchandise code is not allowed.	O	1	L	RESTRICT
ProhibitReturnFlg	L	A return of the item/merchandise code is not allowed.	O	1	L	RESTRICT
ProhibitTaxModFlg	L	Instructs the POS to prohibit the clerk from modifying the tax amount on the sale of the item/merchandise code.	O	1	L	RESTRICT
ProhibitTenderCode	F	Prohibit the use of a specific payment method. A pointer to the Tender Prohibit Table within the Restrictions Table.	0	4	A	RESTRICT
PromoAmt	M	Sum of value of promotions associated with the item/merchandise code being reported.	O	12,4	CUR	ISM MCM
PromoCnt	M	Total count of promotion transactions associated with the item/merchandise code being reported.	O	8	N	ISM MCM
PumpTestAmt	M	Sum of the value of "pump for test" fuel grade in the reporting period.	M	12,4	CUR	FGM
PumpTestVol	M	Volume of "pump for test" fuel grade in the reporting period.	M	12,4	N	FGM
ReadingDate	D	The date of the depth/volume reading. (YYYYMMDD)	O	8	D	TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ReadingTime	D	The time of the depth/volume reading. 24 hour format (HHMM)	O	4	T	TPM
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM
RefundAmt	M	Sum of the value of refunds associated with the item/MdseCode being reported.	O	12,4	CUR	ISM MCM
RefundCnt	M	Total count of refund transactions associated with the item/MdseCode being reported.	O	8	N	ISM MCM
RegisterId	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SalesAmt	M	Sum of the value of the item/merchandise code sold, net of returns and other allowances.	M	12,4	CUR	ISM MCM
SalesQty	M	Total quantity of the item/merchandise code sold, net of returns and other allowances.	M	12,4	N	ISM MCM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SellingUnits	Q	Number of individual units in a transaction item at time of sale for example 6 for a 6 pack.	O	4	N	ITT ISM
ServiceLevelCode	D	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FOT
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
TankChartId	D	A pointer to a tank capacity chart not defined in this document.	O	4	N	TPT
TankDepth	M	The max depth of fuel product.	O	8,3	N	TPT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankDescription	D	A description of the tank.	O	40	A	TPT
TankId	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankId of the fuel product with the lowest octane in the blend.	M	2	N	FOT
TankId	P	The assigned identification for a fuel product tank.	M	2	N	TPM TPT
TankIdHigh	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankId of the fuel product with the highest octane in the blend.	O	2	N	FOT
TankInstallDate	D	The date the fuel product tank was installed	O	8	D	TPT
TankLowInventoryVol	M	The fuel product volume to indicate a critically low inventory condition.	O	12,4	N	TPT
TankManifoIdId	D	The identification of the fuel product tank manifold. Usage is implementation specific.	O	2	N	TPT
TankManufacturer	D	The name of the manufacturer of the fuel product tank.	O	40	A	TPT
TankModNum	D	The model number of the fuel product tank.	O	40	A	TPT
TankReorderVol	M	The fuel product volume in the tank at which fuel product should be reordered.	O	12,4	N	TPT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankSerialNum	D	A description of the serial number of the fuel product tank.	O	40	A	TPT
TankVol	M	The volumetric capacity of the fuel product tank in the pre-defined unit-of-measure.	O	12,4	N	TPT
TaxableSalesAmt	M	Sum of the taxable value of all sales for this TaxLevelId net of discounts and promotional allowances and after refunds.	M	12,4	CUR	TLM
TaxableSalesRefundedAmt	M	Sum of the value of the refunds of the taxable sales for this TaxLevelId.	M	12,4	CUR	TLM
TaxActiveFlg	L	Indicates whether this TaxLevelId is active, future or past.	M	1	L	TLT
TaxCollectedAmt	M	The amount of tax collected.	M	12,4	CUR	TLM
TaxDescription	D	Describes the tax authority.	O	40	A	TLT
TaxExemptAmt	M	Sum of the value of the sales given exempt status net of discounts and promotional allowances and after refunds. (Exempt refers to transactions such as sales made to a customer with a tax exempt certificate.).	O	12,4	CUR	TLM
TaxExemptRefundedAmt	M	Sum of the value of the refunds on tax exempt sales	O	12,4	CUR	TLM
TaxExemptVol	M	Total volume of tax exempt fuel grade.	O	12,4	N	FGM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxForgivenSalesAmt	M	Sum of the sales for this TaxLevelId sold on a tax forgiven basis net of discounts and promotional allowances and before refunds. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM
TaxForgivenSalesRefundedAmt	M	Sum of the value of the refunds on tax forgiven sales for this TaxLevelId. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM
TaxLevelId	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT
TaxLevelId	F	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TST
TaxLevelIncludedId	D	Identifies the tax authority whose tax amount should be included in the taxable amount.	O	8	A	TIT
TaxLevelSeqId	D	Indicates the order in which tax levels should be applied.	O	8	A	TST
TaxRate	M	Percentage applicable to the ActualSellPrice of an item unless breakpoint matrix is used.	O	4	N	TLT
TaxReceiptDescription	D	Describes the tax authority in an abbreviated format.	O	8	A	TLT
TaxRefundedAmt	M	The amount of tax refunded.	M	12,4	CUR	TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxRegistrationNum	D	Number assigned by taxing authority that must appear on the register receipt or reports.	O	16	N	TLT
TaxSeqNum	D	Identifies the sequence that the included TaxLevelId should be followed to calculate the TaxLevelIds taxes.	O	4	N	TIT
TaxStrategyDescription	D	A description of the tax strategy being employed.	O	40	A	TST
TaxStrategyId	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyId = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM
TaxStrategyId	P	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyId = 0 indicates the item is non-taxable.	M	4	N	
TaxStrategyId	P	A description of this tax strategy.	M	4	N	TST
TaxSymbol	D	Single character that prints on the register receipt to indicate the TaxLevelId.	O	4	A	TLT
TaxTableId	F	A pointer to a matrix of tax breakpoints for taxes that are not a straight percentage.	O	4	A	TLT
TaxTypeId	F	Pointer to a look up table.	M	4	A	TLT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TenderAmt	M	The sum of the value of the tender type taken.	M	12,4	CUR	
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender that was used to finalize item/merchandise code sales.	M	4	A	ISM MSM TENDER
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM TENDER
TenderTransactionsCnt	M	Count of the transactions associated with the type of tender.	O	8	N	MSM
TillId	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM
TimeTierCode	D	A pointer to the Time Tier Table. The values indicate the type of time tier by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FOT
TimeTierCode	Q	A pointer to the Operating Level Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT
TransactionCnt	M	Total number of individual transactions related to this item. This value may be count, quantity or volume depending upon usage.	O	8,3	N	ISM MCM
Ullage	M	Is the volume of the empty portion of a tank.	O	12,4	N	TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM
WaterDepth	M	The measured depth of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVol is mandatory.	C	8,3	N	TPM
WaterVol	M	The measured volume of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVol is mandatory.	C	12,4	N	TPM

Chapter 3 - Tables

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

TABLE LISTING AND GENERAL DESCRIPTION

Two types of tables have been developed to enable the two-way exchange of data between disparate BO and POS systems. Primary tables may be supplemented by cross reference or look-up tables. The use of tables and the sort order of elements in the table listings are for presentation purposes only and there is no implied implementation requirement.

PRIMARY TABLES - Sixteen primary tables have been developed by the Task Force. Additional elements are allowed as needed and agreed upon between BO and POS systems vendors. Only elements, which flow through the POS, have been considered and included in these tables. These tables do not provide for electronic journaling. The tables are grouped in the following order and are alphabetical within groups:

- Maintenance
- Movement
- Other

Maintenance Tables

1. Fuel Grade Maintenance (FGT) – Contains those data elements, which need to be sent from the BO system to the POS system to enable a *fuel grade* to be sold at the POS terminal. For a complete definition of a *fuel grade* refer to the Glossary.
2. Fuel Position Maintenance (FOT) – Contains those data elements, which need to be sent from the BO system to the POS system to establish *fuel grade* selling information for each fueling position including time tier, price tier, and service level.
3. Fuel Product Maintenance (FPT) – Contains those data elements, which need to be sent from the BO system to the POS system to enable a *fuel product* to be inventoried at the location and tied to the fuel grades sold at the POS terminal/Dispenser. For a complete definition of fuel product refer to the Glossary.
4. Item Maintenance (ITT) - Contains those data elements, which need to be sent from the BO system to the POS system to enable an *item* to be sold at the POS terminal. For a complete definition of an *item* refer to the Glossary.

5. Merchandise Code Maintenance (MCT) - Contains those data elements that need to be sent from the BO system to the POS system to properly maintain the status of all items at the *merchandise code* level. *Merchandise code* is most commonly known as department or category level. For a complete definition of *merchandise code* refer to the Glossary.
6. Tank Product Maintenance (TPT) – Contains those data elements, which need to be sent from the BO system to the POS system to establish the configuration of the locations tanks including product contained in the tank, tank capacity and other tank vital statistics. The elements contained in this table would generally be sent to the POS as part of an initial configuration.
7. Tax Includes Maintenance (TIT) – Contains those data elements, which need to be sent from the BO system to the POS system to establish taxing authority and calculation sequence for each tax level. The elements contained in this table would generally be sent to the POS as part of an initial configuration.
8. Tax Level Maintenance (TLT) – Contains those data elements, which need to be sent from the BO to the POS system to establish tax information per tax level including tax table to be used for breakpoints, tax rate, etc. The elements contained in this table would generally be sent to the POS as part of an initial configuration.
9. Tax Strategy Maintenance (TST) – Contains those data elements, which need to be sent from the BO to the POS system to maintain methods and algorithms for the application of tax to items/merchandise code/fuel grade.

Movement Tables

1. Fuel Grade Movement (FGM) - Contains those data elements the POS system needs to send to the BO system to report *fuel grade* level sales. For a complete definition of *fuel grade* refer to the Glossary. It is implied that all *fuel grade sales* are included in the Merchandise Code Movement table (MCM) at the summary level either in total or by grade depending upon implementation setup.
2. Fuel Product Movement (FPM) – Contains those data elements the POS system needs to send to the BO system to report to report the movement of *fuel product* inventoried at the location from the tanks as tied to the fuel grades sold at the POS terminal/dispenser.
3. Item Sales Movement (ISM) - Contains those data elements the POS system needs to send to the BO system to report *item* sales.

It is implied that all *item sales* are included in the Merchandise Code Movement table (MCM) at the summary level.

4. Merchandise Code Movement (MCM) - Contains those data elements the POS system needs to send to the BO system to report *merchandise code* level sales. It is implied that both *item sales* and *fuel grade sales* are included in this table at some summary level depending upon implementation setup.
5. Miscellaneous Summary Movement (MSM) - Contains those data elements the POS system needs to send to the BO system to report "non-sale" summary level detail for *miscellaneous transactions*, such as vendor payouts.
6. Tank Product Movement (TPM) - Contains those data elements the POS system needs to send to the BO system to report *fuel product* inventory levels.
7. Tax Level Movement (TLM) – Contains those data elements the POS system needs to send to the BO system to report tax collection information by *tax level* including taxable, tax exempt and tax forgiven amounts.

CROSS-REFERENCE – LOOK-UP TABLES - Three Cross Reference and twelve Look-up tables have been developed by the Task Force to support the Primary Tables listed above. Additional elements/code values are allowed as needed and agreed between BO system and POS system vendors. These tables are used for reference only and are not used to pass data.

Cross Reference Tables

1. *Description* – Contains the ultra short, short, long and ultra long descriptions for an item/merchandise code to be used by pole displays, kitchen monitors, register receipts, etc.
2. *Mix-Match* - Contains the values for the mix-match elements referenced by the element MixMatchCode.
3. *Restrictions* - Used by both the Item Maintenance and Merchandise Code Maintenance Tables to cross-reference the element SalesRestrictCode. The values given reference the various restrictions that may be applied either to the sale of an individual item or to a complete merchandise code (category/department).

Look-up Tables

1. *Currency Code* – Contains the ISO 4217 code values for country and currency. It is incumbent upon the user of these Guidelines to insure that the most current set of codes is being used. The latest version may be obtained from the American National Standards Institute (ANSI).
2. *Item Type* – Contains the code values for the elements ItemTypeCode and ItemTypeSubCode. The values given represent a classification of items to define a selling process at the POS terminal.
3. *Merchandise Code* - Contains the code values for the element MdseCode (category/department). The NACS Category Management Committee in the Category Definitions and Numbering Guide has defined the values given. The use of these values is recommended to facilitate industry-wide benchmarking and reporting consistency. The latest version of the Guide is available from NACS at www.cstorecentral.com.
4. *Miscellaneous Summary Code* - Contains the code values for the MiscSumCode and MiscSumSubCode elements.
5. *Payment System Codes* - Contains the code values for the element PaymentSysProdCode. The NACS Payment Systems Standards Committee has defined the values given. These codes provide credit card networks with information regarding the sale of products at the location. They are used by the network host to provide receipt printing and statement billing information to the consumer. The latest version of the code table is available from NACS at www.cstorecentral.com.
6. *POS Code Format* - Contains the code values for the element PosCodeFormat. The value of PosCodeFormat specifies the type of coding system used in the element PosCode.
7. *Price Tier* - Contains code values for the various price tiers that may be set for the sale of fuel grades. Typical values could include cash/credit, etc.
8. *Reason Code* - Contains the code values for the element ReasonCode. The values given represent the various reasons why an item or group of items was/were sold at a price other than the RegularSellPrice for the item(s).
9. *Service Level* - Contains code values for the various service levels which may be set for the sale of fuel grades. Typical values could include full serve, self-serve, partial self-serve, mini-serve, etc.

10. *Tender Prohibit* – Contains the code values for the elements ProhibtTenderType, Tender Code and TenderSubCode. The values are implementation defined and represent the various types of tender that may not be taken at the Point-of-Sale.

11. *Tender Type* - Contains the code values for the elements TenderCode and TenderSubCode. The values given represent the various types of tender, which may be rendered at the Point-of-Sale. Note: The range of values in this table is incomplete. Sufficient "user defined" values are provided to enable expansion of the table.

12. *Time Tier* – Contains code values for the various time tiers that may be set for the sale of fuel grades. Typical values could include day/night, Super (day of week), etc.

Other Tables – The following tables have not been completed as of the publication of this document. Development of these tables will be a future work item.

1. *Combo and Price Multiple* - The Task Force recognizes that its work in the area of MixMatch/Combos/Deals/Price Multiples is incomplete.
2. *Link Code* - Completion of the Link Code table is an open issue for the Task Force and will be addressed as a future work item. The purpose of this table is two fold: (1) to link to a look-up table to provide information on such things as bottle deposits and (2) to link to other *items* or merchandise code values having similar characteristics, such as price and food stamp flags.

TABLE DESCRIPTIONS: PRIMARY

The Primary Tables are presented in alphabetical order in two groups: (1) Maintenance Tables and (2) Movement Tables.

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Grade Maintenance - FGT

This table has been assigned the name **PBI_FGT** and contains those data elements the BO system needs to send to the POS system to enable the sale of *fuel grades*. The key to this table is **FuelGradeId**. *Fuel grade* is defined as the wet stock being dispensed into the retail consumer's tank. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeId	P	Is the FuelGradeId for the fuel grade.	M	6	A	FGM FGT
DescriptionId	F	A pointer to the Description Cross-Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions that may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT
FuelProductId	F	Is the FuelProductId for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductId of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
FuelProductIdHigh	F	Is the FuelProductId for the fuel grade in a dispenser blended product which has the highest octane in the blend.	O	6	A	FGT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MdseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ITT TLM
PaymentSysProdCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the Payment Systems Standards Committee.	O	3	N	FGT ITT MCT
FuelPositionId	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate they type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT
TaxStrategyId	Q	It is a pointer to the Tax Strategy Maintenance Table which includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyId = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TimeTierCode	Q	A pointer to the Operating Level Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT
FuelGradeActiveFlg	L	Indicates that fuel grade may be sold.	M	1	L	FGT FOT
FuelProductBlendPercent	M	This is the percentage of FuelProductId used in a blending of two fuel products to create a fuel grade. The blend percentage of FuelProductIdHigh is 100 less FuelProductBlendPercent. If not a blended fuel grade then put 100 as the FuelProductBlendPercent.	M	3	N	FGT
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Position Maintenance - FOT

This table has been assigned the name **PBI_FOT** and contains those data elements the BO system needs to send to the POS system to establish the selling parameters for fuel grades at the fueling position, including time tier, price tier and service level. The key to this table is the combination of the elements **FuelPositionId and FuelGradeId**. *Fuel grade* is defined as the wet stock being dispensed into the retail consumer's tank. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

The configuration of fuel dispensers is a POS/ controller/ dispenser issue and not POS BO issue. Users could define a grade/product/tank relationship that does not match the way the site is actually plumed/wired. This is a relevant table for device integration to enhance.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeId	P	Is the FuelGradeId for the fuel grade.	M	6	A	FOT
FuelPositionId	P	Represents physical location where fuel is dispensed to one vehicle at a time.	M	4	N	FOT
TankId	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankId of the fuel product with the lowest octane in the blend.	M	2	N	FOT
TankIdHigh	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankId of the fuel product with the highest octane in the blend.	O	2	N	FOT
FuelGradeActiveFlg	L	Indicates that fuel grade may be sold.	M	1	L	FGT FOT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeSeqId	D	The sequence number to which the FuelGradeId is assigned. Normally hose id.	O	4	N	FOT
PriceTierCode	D	A pointer to the Price Tier Table. The values indicate the type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FOT
ServiceLevelCode	D	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FOT
TimeTierCode	D	A pointer to the Time Tier Table. The values indicate the type of time tier by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FOT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Product Maintenance - FPT

This table has been assigned the name **PBI_FPT** and contains those data elements the BO system needs to send to the POS system to enable the POS system to inventory fuel product. The key to this field is **FuelProductId**. *Fuel product* is defined as the wet stock being withdrawn from the tank inventory. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductId	P	An identifier for a fuel product.	M	6	A	FPM FPT
FuelProductDescription	D	A description of the fuel product indicated in the FuelProductId.	M	40	A	FPT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Item Maintenance - ITT

This table has been assigned the name **PBI_ITT** and is designed to provide the data elements that need to be communicated from the BO system to the POS system to enable the POS terminal to sell an *item*. Additional elements are allowed as needed and agreed between BO system and POS system vendors. The sort order of elements in the table is for presentation purposes only and does not imply any implementation requirement.

The Task Force has defined an *item* as equal to the elements of PosCodeFormat + PosCode + PosCodeMod. The combination of these three elements forms this table's key for transfer of data between the two systems.

PosCodeFormat describes the type of code, which follows in the element PosCode. For example, PosCodeFormat of "0" (zero) would indicate that the PosCode to follow is in U.P.C.-A code format. A value of "4" would indicate the PosCode is a PLU code/number.

PosCodeMod is a modifier for the preceding PosCode. If not used it should have a value of "0" (zero). Values for this element other than "0" are as agreed between the two systems.

The values given for TaxStrategyId reference the various taxes that may be applied either to the sale of an individual item or to a complete merchandise code (category/department). The business rules for the uses of TaxCode are:

1. If the item does not have a TaxStrategyId, use the TaxStrategyId assigned to that MdseCode level.
2. If there is no TaxStrategyId for the item or the applicable MdseCode, use the POS default for taxes.
3. If there is no TaxStrategyId for the item or MdseCode and no POS default for Taxes, there is no tax to be applied.

The data elements RegularSellPrice, ActualSellPrice and InventoryValuePrice are defined for use in these tables as follows:

1. InventoryValuePrice – It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion, this price will reflect that fact,

and will be the same as the ActualSellPrice during the promotion.)

2. ActualSellPrice – It is the price at which the item is priced when sold in a transaction. This element does not appear in the Item Maintenance Table but it does appear in the Item Sales Movement Table.
3. RegularSellPrice – It is the non-discounted, non-promotional price at which an item is normally sold.

Examples of usage for these data elements is as follows:

1. For a single can of soda inventoried at $.89 and sold at $.89:
   - ActualSellPrice = .89
   - RegularSellPrice = .89
   - InventoryValuePrice = .89
2. For a six pack of the same soda sold at $2.99 but inventoried at the single can price:
   - ActualSellPrice = 2.99
   - RegularSellPrice = 2.99
   - InventoryValuePrice = 5.34
3. For a six pack of the same soda sold at $2.99 but with a promotional discount of $.50 on the six pack and inventoried at the single can price:
   - ActualSellPrice = 2.49
   - RegularSellPrice = 2.99
   - InventoryValuePrice = 5.34

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PosCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in PosCodeFormat.	M	24	N	ITT ISM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PosCodeFormat	P	The type of coding scheme used in PosCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU	M	2	N	ITT ISM Pos Code Format
PosCodeMod	P	Scan code or PLU modifier. In combination with PosCode and PosCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM
DescriptionId	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions which may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT
ItemTypeCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeCode is allowed.	O	4	A	ITT
ItemTypeSubCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeSubCode is allowed.	O	4	A	ITT
LinkCode	F	Pointer to LinkCode Table.	O	24	N	ITT MCT
MdseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ITT TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MixMatchCode	F	A group number that allows other transaction items with the same group number to be bought interchangeably using some quantity discount scheme. A pointer to the Mix-Match table.	O	4	N	ITT MIX-MATCH
PaymentSysProdCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the Payment Systems Standards Committee.	O	3	N	FGT ITT MCT
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT
ActiveFlg	L	The item/merchandise code can be sold.	M	1	L	ITT MCT
DefaultModifierFlg	Q	Indicates this is the default transaction item when there are multiple identical PosCodeFormat and PosCode combinations. It indicates the transaction item to enter into the sale when scan data is not uniquely related to one transaction item. It implies multiple modifiers.	O	1	L	ITT
ItemId	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many PosCodes and does not need to be unique.	O	24	A	ITT ISM
SellingUnits	Q	Number of individual units in a transaction item at time of sale for example 6 for a 6 pack.	O	4	N	ITT ISM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxStrategyId	Q	It is a pointer to the Tax Strategy Maintenance Table which includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyId = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM TST
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT
FamilyCode	D	That portion of a U.P.C. on a manufacturer's coupon used to identify an item's grouping for discount purposes.	O	3	N	ITT
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Merchandise Code Maintenance - MCT

This table has been assigned the name **PBI_MCT** and is designed to provide the data elements that need to be communicated from the BO system to the POS system to enable the POS to properly maintain the status of all items at the merchandise code level. Additional elements are allowed as needed and agreed between BO system and POS system vendors. The sort order of elements in the table is for presentation purposes only and does not imply any implementation requirement.

The values given for TaxStrategyId reference the various taxes that may be applied either to the sale of an individual item or to a complete merchandise code (category/department). The business rules for the use of TaxCode are:

1. If the item does not have a TaxStrategyId, use the TaxStrategyId assigned to that MdseCode level.
2. If there is no TaxStrategyId for the item or the applicable MdseCode, use the POS default for taxes.
3. If there is no TaxStrategyId for the item or MdseCode and no POS default for Taxes, there is no tax to be applied.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MdseCode	P	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	MCT MCM
DescriptionId	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions which may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
LinkCode	F	Pointer to LinkCode Table.	O	24	N	ITT MCT
PaymentSysProdCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the Payment Systems Standards Committee.	O	3	N	FGT ITT MCT
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT
ActiveFlg	L	The item/merchandise code can be sold.	M	1	L	ITT MCT
TaxStrategyId	Q	It is a pointer to the Tax Strategy Maintenance Table which includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyId = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MdseCodeDescription	D	Native language description of the merchandise code normally printed on the register tape.	O	40	A	MCT MCM

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Tank Product Maintenance - TPT

This table has been assigned the name **PBI_TPT** and contains those data elements the BO system needs to send to the POS system to inventory *fuel product by tank*. The key to this table is **TankId**. *Fuel product* is defined as the wet stock delivered into the storage tanks at the location. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankId	P	The assigned identification for a fuel product tank.	M	2	N	TPM TPT
FuelProductId	F	Is the FuelProductId for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductId of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
TankChartId	D	A pointer to a tank capacity chart not defined in this document.	O	4	N	TPT
TankDescription	D	A description of the tank.	O	40	A	TPT
TankInstallDate	D	The date the fuel product tank was installed	O	8	D	TPT
TankManifoldId	D	The identification of the fuel product tank manifold. Usage is implementation specific.	O	2	N	TPT
TankManufacturer	D	The name of the manufacturer of the fuel product tank.	O	40	A	TPT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankModNum	D	The model number of the fuel product tank.	O	40	A	TPT
TankSerialNum	D	A description of the serial number of the fuel product tank.	O	40	A	TPT
TankDepth	M	The max depth of fuel product.	O	8,3	N	TPT
TankLowInventoryVol	M	The fuel product volume to indicate a critically low inventory condition.	O	12,4	N	TPT
TankReorderVol	M	The fuel product volume in the tank at which fuel product should be reordered.	O	12,4	N	TPT
TankVol	M	The volumetric capacity of the fuel product tank in the pre-defined unit-of-measure.	O	12,4	N	TPT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Includes Maintenance - TIT

This table has been assigned the name **PBI_TIT** and contains those data elements the BO system needs to send to the POS system to establish tax authority and calculation sequence for the application of taxes by tax level. The key to this field is **TaxLevelId**.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelId	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT
TaxLevelIncludedId	D	Identifies the tax authority whose tax amount should be included in the taxable amount.	O	8	A	TIT
TaxSeqNum	D	Identifies the sequence that the included TaxLevelId should be followed to calculate the TaxLevelIds taxes.	O	4	N	TIT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Level Maintenance – TLT

This table has been assigned the name **PBI_TLT** and contains those data elements the BO system needs to send to the POS system to establish the tax level information including tax table to be used for breakpoints, tax rate, etc. The key to this field is **TaxLevelId**.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelId	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT
TaxTableId	F	A pointer to a matrix of tax breakpoints for taxes which are not a straight percentage.	O	4	A	TLT
TaxTypeId	F	Pointer to a look up table.	M	4	A	TLT
TaxActiveFlg	L	Indicates whether this TaxLevelId is active future or past.	M	1	L	TLT
TaxDescription	D	Describes the tax authority.	O	40	A	TLT
TaxReceiptDescription	D	Describes the tax authority in an abbreviated format.	O	8	A	TLT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxRegistrationNum	D	Number assigned by taxing authority which must appear on the register receipt or reports.	O	16	N	TLT
TaxSymbol	D	Single character that prints on the register receipt to indicate the TaxLevelId.	O	4	A	TLT
TaxRate	M	Percentage applicable to the ActualSellPrice of an item unless breakpoint matrix is used.	O	4	N	TLT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Strategy Maintenance - TST

This table has been assigned the name **PBI_TST** and contains those data elements the BO system needs to send to the POS system to establish the tax strategy for the location including the methods and algorithms used for tax calculation. The key to this table is **TaxStrategyId**.

Element	Usa	Description	Opt/	Size	Type	Used in
TaxStrategyId	P	A description of this tax strategy.	M	4	N	TST ITT
TaxLevelId	F	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TST
TaxLevelSeqId	D	Indicates the order in which tax levels should be applied.	O	8	A	TST
TaxStrategyDescription	D	A description of the tax strategy being employed.	O	40	A	TST

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Grade Movement - FGM

This table has been assigned the name **PBI_FGM** and contains those data elements the POS system needs to send to the BO system to report *fuel grade* movement. The key to this field is **FuelGradeId**. *Fuel grade* is defined as the wet stock being dispensed into the customer's vehicle. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeId	P	Is the FuelGradeId for the fuel grade.	M	6	A	FGM FGT
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM
CashierId	Q	Identifies the cashier conducting the transactions in the reporting period.	O	40	A	ISM MCM FGM MSM TLM
CurrencyCode	Q	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	FGM
CurrencySubCode	Q	A pointer to the currency look-up table.	O	4	A	FGM MSM ISM
FuelPositionId	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
OutsideSlsFlg	Q	Indicates the sale was settled at the pump island by some means, such as credit card reader, cash acceptor, or cashier.	O	1	L	FGM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate they type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM
RegisterId	Q	The identification of the register which finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT
TillId	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM
TimeTierCode	Q	A pointer to the Time Tier Code Look-up Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM MSM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM MSM
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM MSM
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice.	O	10	A	FGM FPM ISM MCM MSM TLM
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to	O	10	A	FGM FPM ISM MCM MSM TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM
DiscountAmt	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmt.	O	12,4	CUR	ISM MCM FGM
DiscountCnt	M	Total number of discount transactions associated with the DiscountAmt for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
DispenserDiscountAmt	M	Sum of all discounts applied by reducing the dispenser RegularSellPrice. FuelGradeSalesAmt already reflects this discount.	M	12,4	CUR	FGM
DispenserDiscountCnt	M	Total number of discount transactions applied by reducing the dispenser RegularSellPrice.	O	8	N	FGM
FuelGradeNonResettableTotalAmt	M	The sum of the value of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	CUR	FGM
FuelGradeNonResettableTotalVol	M	The volume of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	N	FGM
FuelGradeSalesAmt	M	The difference between the present period and the prior period FuelGradeNonResettableTotalAmt.	M	12,4	CUR	FGM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeSalesVol	M	The difference between the present period and the prior period FuelGradeNonResettableTotalVol.	M	12,4	N	FGM
PumpTestAmt	M	Sum of the value of "pump for test" fuel grade in the reporting period.	M	12,4	CUR	FGM
PumpTestVol	M	Volume of "pump for test" fuel grade in the reporting period.	M	12,4	N	FGM
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT
TaxExemptVol	M	Total volume of tax exempt fuel grade.	O	12,4	N	FGM

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Fuel Product Movement - FPM

This table has been assigned the name **PBI_FPM** and contains those data elements the POS system needs to send to the BO system to report *fuel product* movement. The key to this field is **FuelProduct**. *Fuel product* is defined as the wet stock being withdrawn from the tank inventory. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

> **Note:** In a non-blended situation the use of this table is optional. The Fuel Grade Movement table contains all necessary data for both grade and product movement. The only time product and grade differ is in a blended scenario.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductId	P	An identifier for a fuel product.	M	6	A	FPM FPT
FuelPositionId	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductNonResettableAmtNum	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable amount totalizer.	O	16,4	N	FPM
FuelProductNonResettableVolNum	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable volume totalizer for that fuel product.	O	16,4	N	FPM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Item Sales Movement - ISM

This table has been assigned the name **PBI_ISM** and is designed to provide the data elements necessary for the POS system to report *item* level sales to the BO system. This table uses the *item* as the key. An *item* is defined as the combination of the elements PosCodeFormat + PosCode + PosCodeMod.

The sum of all sales reported for a specific period, using this table, must not change regardless of how many detail records are generated.

> **Note:** Description is included in this table to facilitate visual inspection of the data stream**.**
>
> When a price change for an item or items occurs during the PriRptPer the ReasonCode may be used to differentiate sales made at different ActualSellPrices and multiple records may be exchanged to account for these sales. The BO system would need to be capable of rolling up those different records to provide sales totals for each item.
>
> Multiple records for an item could be exchanged based on any optional item from the data table, with the requirement that the multiple records sum to the correct amount for that item for the time period.
>
> If the POS system is not capable of exchanging multiple records per item, the ActualSellPrice should reflect the average price for all sales of the item over the time period being reported, and the RegularSellPrice should indicate the price at the time the report was generated.
>
> The exchange of information using this table is not intended to address cash balancing and reconciliation or cashier accountability.
>
> It is assumed that all Item Sales Movement information is included within the Merchandise Code Movement (MCM) table at the summary level for the appropriate MdseCode.

The data elements RegularSellPrice, ActualSellPrice and InventoryValuePrice are defined for use in these tables as follows:

1. InventoryValuePrice – It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has

been performed for a promotion, this price will reflect that fact, and will be the same as the ActualSellPrice during the promotion.)

2. ActualSellPrice – It is the price at which the item is priced when sold in a transaction. (This element does not appear in the Item Maintenance Table but it does appear in the Item Sales Movement Table.)
3. RegularSellPrice – It is the non-discounted, non-promotional promotional price at which an item is normally sold.

Examples of usage for these data elements is as follows:

1. For a single can of soda inventoried at $.89 and sold at $.89:
   - ActualSellPrice = .89
   - RegularSellPrice = .89
   - InventoryValuePrice = .89
2. For a six pack of the same soda sold at $2.99 but inventoried at the single can price:
   - ActualSellPrice = 2.89
   - RegularSellPrice = 2.89
   - InventoryValuePrice = 5.34
3. For a six pack of the same soda sold at $2.99 but with a promotional discount of $.50 on the six pack and inventoried at the single can price:
   - ActualSellPrice = 2.39
   - RegularSellPrice = 2.89
   - InventoryValuePrice = 5.34

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PosCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in PosCodeFormat.	M	24	N	ITT ISM
PosCodeFormat	P	The type of coding scheme used in PosCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU	M	2	N	ITT ISM Pos Code Format

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PosCodeMod	P	Scan code or PLU modifier. In combination with PosCode and PosCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM ISM
CurrencySubCode	F	A pointer to the currency look-up table.	O	4	A	MSM ISM
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender which were used to finalize item/merchandise code sales.	M	4	A	ISM MSM TENDER
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM TENDER
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM
CashierId	Q	Identifies the cashier conducting the transactions in the reporting period.	O	40	A	ISM MCM FGM MSM TLM
ItemId	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many PosCodes and does not need to be unique.	O	24	A	ITT ISM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM
RegisterId	Q	The identification of the register which finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM
SellingUnits	Q	Number of individual units in a transaction item at time of sale for example 6 for a 6 pack.	O	4	N	ITT ISM
TillId	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table	O	10	A	FGM FPM ISM MCM MSM TLM
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some	O	10	A	FGM FPM ISM MCM MSM TLM
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM
DiscountAmt	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmt.	O	12,4	CUR	ISM MCM FGM
DiscountCnt	M	Total number of discount transactions associated with the DiscountAmt for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PromoAmt	M	Sum of value of promotions associated with the item/merchandise code being reported.	O	12,4	CUR	ISM MCM
PromoCnt	M	Total count of promotion transactions associated with the item/merchandise code being reported.	O	8	N	ISM MCM
RefundAmt	M	Sum of the value of refunds associated with the item/MdseCode being reported.	O	12,4	CUR	ISM MCM
RefundCnt	M	Total count of refund transactions associated with the item/MdseCode being reported.	O	8	N	ISM MCM
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT
SalesAmt	M	Sum of the value of the item/merchandise code sold, net of returns and other allowances.	M	12,4	CUR	ISM MCM
SalesQty	M	Total quantity of the item/merchandise code sold, net of returns and other allowances.	M	12,4	N	ISM MCM
TransactionCnt	M	Total number of individual transactions related to this item. This value may be count quantity or volume depending upon usage.	O	8,3	N	ISM MCM

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Merchandise Code Movement - MCM

This table has been assigned the name **PBI_MCM** and is designed to provide the data elements that should be sent from the POS system to the BO system for the purpose of reporting merchandise code movement. Typically, this is most commonly referred to as category/department sales totals. The key for this table is **MdseCode.**

Note: In this table SalesAmt/SalesQty is the summary of all transactions affecting the merchandise code including Item Sales Movement (ISM) Table reported sales, if used. Therefore, it is assumed that all Item Sales Movement information is included within the Merchandise Code Movement (MCM) table at the summary level.

Although a separate table is provided for the sale of fuel grades (FGM) most systems would probably also report fuel sales either in total or by grade as a MdseCode depending upon implementation setup.

The exchange of information using this table is not intended to address cash balancing and reconciliation or cashier accountability.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MdseCode	P	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	MCT MCM
CashierId	Q	Identifies the cashier conducting the transactions in the reporting period.	O	40	A	ISM MCM FGM MSM TLM
RegisterId	Q	The identification of the register which finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TillId	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM
MdseCodeDescription	D	Native language description of the merchandise code normally printed on the register tape.	O	40	A	MCT MCM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM
DiscountAmt	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmt.	O	12,4	CUR	ISM MCM FGM
DiscountCnt	M	Total number of discount transactions associated with the DiscountAmt for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
PromoAmt	M	Sum of value of promotions associated with the item/merchandise code being reported.	O	12,4	CUR	ISM MCM
PromoCnt	M	Total count of promotion transactions associated with the item/merchandise code being reported.	O	8	N	ISM MCM
RefundAmt	M	Sum of the value of refunds associated with the item/MdseCode being reported.	O	12,4	CUR	ISM MCM
RefundCnt	M	Total count of refund transactions associated with the item/MdseCode being reported.	O	8	N	ISM MCM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
SalesAmt	M	Sum of the value of the item/merchandise code sold, net of returns and other allowances.	M	12,4	CUR	ISM MCM
SalesQty	M	Total quantity of the item/merchandise code sold, net of returns and other allowances.	M	12,4	N	ISM MCM
TransactionCnt	M	Total number of individual transactions related to this item. This value may be count quantity or volume depending upon usage.	O	8,3	N	ISM MCM

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Miscellaneous Summary Movement - MSM

This table has been assigned the name **PBI_MSM** and contains those data elements the POS system needs to send to the BO system to report miscellaneous summary level detail. The key to this table is **MiscSumCode**. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

> **Note:** The exchange of information using this table is not intended to address cash balancing and reconciliation or cashier accountability.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MiscSumCode	P	Pointer to the look-up table.	M	4	A	MSM
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM
CurrencySubCode	F	A pointer to the currency look-up table.	O	4	A	MSM
MiscSumSubCode	F	Pointer to the look-up table.	O	4	N	MSM
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender which were used to finalize item/merchandise code sales.	M	4	A	ISM MSM TENDER
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM TENDER

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CashierId	Q	Identifies the cashier conducting the transactions in the reporting period.	O	40	A	ISM MCM FGM MSM TLM
MiscSumSubCodeMod	Q	Modifier to the MiscSumSubCode to provide an additional level of detail.	O	8	A	MSM
RegisterId	Q	The identification of the register which finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM
TillId	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM
ManualEntryFlg	L	If true indicates that the MiscSumCode values are derived from manual entry at the POS.	O	1	L	MSM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general	O	10	A	FGM FPM ISM MCM MSM TLM
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this	O	10	A	FGM FPM ISM MCM MSM TLM
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM
MiscSumAmt	M	The sum of the value of the individual transactions related to this code and sub-code.	M	16,4	CUR	MSM
MiscSumCnt	M	Total number of individual transactions related to this code and sub-code. This value may be count, quantity or volume depending upon usage.	O	16,4	N	MSM
TenderTransactionsCnt	M	Count of the transactions associated with the type of tender.	O	8	N	MSM

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Tank Product Movement - TPM

This table has been assigned the name **PBI_TPM** and contains those data elements the POS system needs to send to the BO system to report *fuel product* inventory levels. The key to this table is **TankId**. *Fuel product* is defined as the wet stock delivered into the storage tanks at the location. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankId	P	The assigned identification for a fuel product tank.	M	2	N	TPM TPT
FuelProductId	F	Is the FuelProductId for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductId of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
ReadingDate	D	The date of the depth/volume reading. (YYYYMMDD)	O	8	D	TPM
ReadingTime	D	The time of the depth/volume reading. 24 hour format (HHMM)	O	4	T	TPM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM MSM
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
StoreLocationId	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM
FuelProductDepth	M	The measured depth of fuel product in the tank. One or the other of FuelProductDepth or FuelProductVol is mandatory.	C	8,3	N	TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductTemp	M	The temperature of the fuel product in the tank at the time of the depth/volume reading.	O	5,1	N	TPM
FuelProductVol	M	The measured volume of fuel product in the tank. One or the other of FuelProductDepth or FuelProductVol is mandatory.	C	12,4	N	FPM TPM
Ullage	M	Is the volume of the empty portion of a tank.	O	12,4	N	TPM
WaterDepth	M	The measured depth of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVol is mandatory.	C	8,3	N	TPM
WaterVol	M	The measured volume of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVol is mandatory.	C	12,4	N	TPM

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Tax Level Movement - TLM

This table has been assigned the name **PBI_TLM** and contains those data elements the POS system needs to send to the BO system to report tax level collections and sales data. The key to this field is **TaxLevelId**.

Notes:

1. Non-Taxable sales are reported elsewhere.
2. Taxable Sales reported without a MdseCode Qualifier are the total taxable sales for the TaxLevelId and period.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelId	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT
MdseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ITT TLM
CashierId	Q	Identifies the cashier conducting the transactions in the reporting period.	O	40	A	ISM MCM FGM MSM TLM
RegisterId	Q	The identification of the register which finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM
TaxStrategyId	Q	It is a pointer to the Tax Strategy Maintenance Table which includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyId = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TillId	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
EndDate	H	Ending date of the reporting period. (YYYYMMDD)	O	8	D	FGM FPM ISM MCM MSM TLM TPM
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM
PriRptPer	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
RptSeqNumId	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
SecRptPer	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general	O	10	A	FGM FPM ISM MCM MSM TLM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table	O	10	A	FGM FPM ISM MCM MSM TLM
TaxableSalesAmt	M	Sum of the taxable value of all sales for this TaxLevelId net of discounts and promotional allowances and after refunds.	M	12,4	CUR	TLM
TaxableSalesRefundedAmt	M	Sum of the value of the refunds of the taxable sales for this TaxLevelId.	M	12,4	CUR	TLM
TaxCollectedAmt	M	The amount of tax collected.	M	12,4	CUR	TLM
TaxExemptAmt	M	Sum of the value of the sales given exempt status net of discounts and promotional allowances and after refunds. (Exempt refers to transactions such as sales made to a customer with a tax exempt certificate.).	O	12,4	CUR	TLM
TaxExemptRefundedAmt	M	Sum of the value of the refunds on tax exempt sales	O	12,4	CUR	TLM
TaxForgivenSalesAmt	M	Sum of the sales for this TaxLevelId sold on a tax forgiven basis net of discounts and promotional allowances and before refunds. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM
TaxForgivenSalesRefundedAmt	M	Sum of the value of the refunds on tax forgiven sales for this TaxLevelId. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM
TaxRefundedAmt	M	The amount of tax refunded.	M	12,4	CUR	TLM

TABLE DESCRIPTIONS: CROSS REFERENCE AND LOOK-UP

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Cross reference/Look-up Tables - These tables support the POS/ Back Office Interface Tables. The Primary Data Table contains the key field for entry into these tables. A complete description of each field is contained in the Data Dictionary. These tables are for reference only and are not used to pass data.

Description Cross-Reference Table

This cross reference table is used by several tables to provide ultra short, short, long and ultra long descriptions of an item/merchandise code for use by pole displays, kitchen monitors, customer receipts, etc.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DescriptionId	P	The identification id assigned to this description table element. Generally this element would include the key elements of the table being referenced. For example an item description would include the PosCode, PosCodeFormat and PosCodeMod elements.	M	30	A	DESCRIPTION
LanguageCode	Q	A pointer to the language code lookup table.	O	4	A	DESCRIPTION
Description16A	D	A short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	16	A	DESCRIPTION
Description24A	D	A long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	24	A	DESCRIPTION

Description48A	D	A ultra long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	48	A	DESCRIPTION
Description8A	D	A ultra short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	8	A	DESCRIPTION

Mix-Match Cross-Reference Table -

The Mix-Match table defines the pricing algorithm where multiple units of one or several items can be priced at a discount to normal retail price. An example of this pricing strategy is a promotion where candy bars are normally $.59 each and a mix/match table is used to implement a '2 for $.99' price for any two candy bars purchased. Generally the candy bars are of the same size and from the same manufacturer.

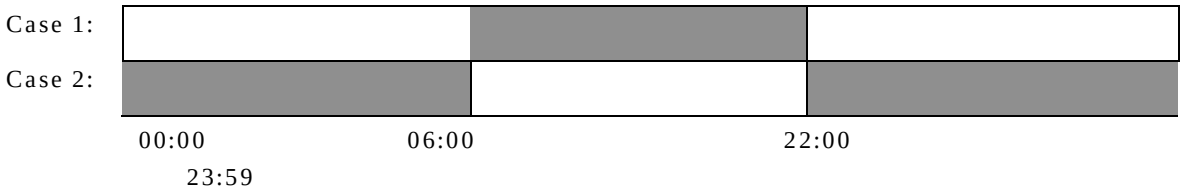
Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MixMatchCode	F	A group number that allows other transaction items with the same group number to be bought interchangeably using some quantity discount scheme. A pointer to the Mix-Match table.	O	4	N	ITT MIX-MATCH
MixMatchStrictHighFlg	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if one additional unit is purchased the discount does not apply to that unit.	O	1	L	MIX-MATCH
MixMatchStrictLowFlg	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if less than the minimum number of units is purchased the discount does not apply to those units.	O	1	L	MIX-MATCH
MixMatchMaxUnits	M	The maximum number of units of this item which may be purchased at the mix-match price.	O	4	N	MIX-MATCH
MixMatchPrice	M	The total price for this quantity purchase level.	M	12,4	CUR	MIX-MATCH
MixMatchUnits	M	The number of units which need to be purchased to qualify for this price.	M	4	N	MIX-MATCH

Restrictions Cross-Reference Table -

This cross-reference table is used by both the Item Maintenance and Merchandise Code Maintenance Tables to cross-reference the element SalesRestrictCode. The values given reference the various restrictions that may be applied either to the sale of an individual item or to a complete merchandise code (category/department). The business rules for use of this table are:

1. If the item does not have a SalesRestrictCode, use the SalesRestrictCode assigned to that MdseCode level.
2. If there is no SalesRestrictCode for the item or the applicable MdseCode, use the POS default for Sales Restrictions.
3. If there is no SalesRestrictCode for the item or MdseCode and no POS default for Sales Restrictions, the restriction does not apply.

The following table illustrates how sales restrictions are applied by time. See definitions for each of the BeginProhibitTime and EndProhibitTime elements.



- Case 1 prohibits time is 6:00 - 22:00. BeginProhitTimeDay = 0600 EndProhibitTimeDay = 2200
- Case 2 prohibit time is 0:00 - 6:00, and 22:00 - 23:59. In this case the ending time for the day precedes the BeginProhibitTime for the same day and it is implied that the BeginProhibitTimeDay is 2200 and the EndProhibitTime for the day is 0600.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProhibitTenderCode	F	Prohibit the use of a specific payment method. A pointer to the Tender Prohibit Table within the Restrictions Table.	O	4	A	RESTRICT
AllowWicFlg	L	The sale of the item/merchandise code is allowed in a WIC transaction.	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeFri	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeMon	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeSat	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeSun	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeThur	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeTue	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeWed	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeFri	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeMon	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeSat	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndProhibitTimeSun	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeThur	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeTue	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeWed	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
AllowFractionalUnitFlg	L	The sale of a fractional unit of this item is allowed.	O	1	L	RESTRICT
ForceQtyFlg	L	Force a quantity of the item to be keyed on the POS at the time of sale.	O	1	L	RESTRICT
ForceWeightFlg	L	Force the weight of the item to be keyed on the POS at the time of sale.	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProhibitDiscountFlg	L	A discount is not allowed on this item/merchandise code.	O	1	L	RESTRICT
ProhibitFoodStampFlg	L	Prohibit the use of food stamps with this item/merchandise code.	O	1	L	RESTRICT
ProhibitPriceLookupFlg	L	The clerk must key the price of this item/merchandise code at the time of sale.	O	1	L	RESTRICT
ProhibitPriceOverFlg	L	Prohibit use of the quantity key.	O	1	L	RESTRICT
ProhibitQtyKeyFlg	L	Prohibit use of the quantity key.	O	1	L	RESTRICT
ProhibitRefundFlg	L	A refund of the item/merchandise code is not allowed.	O	1	L	RESTRICT
ProhibitReturnFlg	L	A return of the item/merchandise code is not allowed.	O	1	L	RESTRICT
ProhibitTaxModFlg	L	Instructs the POS to prohibit the clerk from modifying the tax amount on the sale of the item/merchandise code.	O	1	L	RESTRICT
LimitUnits	M	The maximum number of units of an item/MdseCode allowed in a single transaction.	O	4	N	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MinClerkAge	M	The minimum age required of the sales clerk in order to sell the item/merchandise code.	O	2	N	RESTRICT
MinCustAge	M	The minimum age required of the consumer in order to purchase the item/merchandise code.	O	2	N	RESTRICT

Currency Code Look-up Table

This look-up table contains the code values for the elements **CurrencyCode and CurrencySubCode.**

This table is derived from ISO 3166 and ISO 4217. These international standards are updated and revised periodically. Users of this documentation should verify they are using the most current codes.

Notes:

1. International Standard ISO 4217 contains a three-letter alphabetic code and an equivalent three-digit numeric code for the representation of currencies and funds. The Standard is intended for use in any application of trade, banking or administration where names of currencies or funds are required to be represented in a coded form. The code is designed to be equally suitable for automated or manual applications.

2. The currencies appearing in this table are those of the countries listed in International Standard ISO 3166, "Codes for the representation of names of countries.

3. The Code Structure is as follows: the first (leftmost) two characters of a currency code provide a code unique to a currency authority; where practicable, they are linked to the geographical location of that currency authority and correspond to the ALPHA-2 codes of ISO 3166. Where the currency is not associated with a single geographical entity as described in ISO 3166, a specially-allocated ALPHA-2 code has been reserved and should be used to describe the currency authority.

4. The third (rightmost) character of the alphabetic code is an indicator derived from the name of the major currency unit - example: USD for United States dollar.

Item Type Look-up Table-

The keys to this table are the elements **ItemTypeCode** and **ItemTypeSubCode** both are found in the Item Maintenance Table. This look-up table is designed to provide for the classification of items to define a selling process at the Point-of-Sale terminal. A "null or "no value" for ItemTypeCode and ItemTypeSubCode is allowed.

This lookup table is not all-inclusive. ItemTypeSubCodes may be added as necessary for individual company use.

ItemTypeCode	Description	ItemTypeSubCode	Description
CARW	Car Wash	User Defined	
FEES	Fees	User Defined	
FUEL	Fuel	User Defined	
GIFT	Gift Certificates	User Defined	
LISC	Licenses	User Defined	
LOTO	Lotto	User Defined	
LORY	Lottery	User Defined	
MISC*	Miscellaneous	User Defined	
MORD	Money Order	User Defined	
MRH	Merchandise	User Defined	
PHON	Phone Cards	User Defined	
POST	Postage Stamps	User Defined	
QSR	Food	User Defined	
SERV	Services	User Defined	
VDEO	Video Rental	User Defined	

*Miscellaneous should be used only in the rarest of occasions.

Merchandise Code Look-up Table

The key to this table is the element **MdseCode** that is found in the Merchandise Code Maintenance (MCT) and Merchandise Code Movement (MCM) Tables. The NACS Category Management Standards Committee has defined the values given for MdseCode.

The NACS Category Definitions and Numbering Guide

- Is designed for establishing performance benchmarks.
- Enables a business framework for retailers and suppliers to work together to achieve goals.
- Provides full flexibility for retailers to define categories for category management initiatives.

The latest version of the Guide may be found at www.cstorecentral.com under "Technology Standards".

Miscellaneous Summary Codes -

This look-up table contains the values for the elements **MiscSumCode** and **MiscSumSubCode** found in the Miscellaneous Summary Movement (MSM) table.

It is possible that a separate table to handle serialized transactions may be required.

> **Note:** Sales totalizers are net totalizers. Grade totalizers are the total of all transactions whether they were sales, refunds, etc. And they are always positive.
>
> This look-up table is not all inclusive and additional codes have been reserved for individual company use.

MiscSumCode Value	MiscSumCode	MiscSumSubCode Value	MiscSumSubCode	MiscSumSubCode Mod
1	Safe Drop	0		
1	Safe Drop	1	Envelope	(Envelope Number)
1	Safe Drop	2	Reserved for use by mutual consent	
1	Safe Drop	3	Reserved for use by mutual consent	
2	Safe Loan	0		
2	Safe Loan	1	Reserved for use by mutual consent	
2	Safe Loan	2	Reserved for use by mutual consent	
2	Safe Loan	3	Reserved for use by mutual consent	
3	Refunds	0		
4	Payouts	1		
4	Payouts	2	General Ledger	(General Ledger Account Number)
4	Payouts	3	House Account	
4	Payouts	4		
4	Payouts	5	Lottery (scratch) pay	
4	Payouts	6	Lotto (online) pay	
4	Payouts	7	Vendor pay	
4	Payouts	8		
4	Payouts	9	Reserved for use by mutual consent	
5	Payins	1	Utility Payment	
5	Payins	2		
5	Payins	3	House Account	
5	Payins	4	Returned Check Fee	
5	Payins	5	Lottery (scratch) pay	
5	Payins	6	Lotto (online) pay	
5	Payins	7	Vendor pay	
5	Payins	8		
5	Payins	9	Reserved for use by mutual consent	
5	Payins	10	Reserved for use by mutual consent	
6	Totalizers	1	Beginning Grand	
6	Totalizers	2	Beginning Sales	

MiscSumCode Value	MiscSumCode	MiscSumSubCode Value	MiscSumSubCode	MiscSumSubCode Mod
6	Totalizers	3	Ending Grand	
6	Totalizers	4	Ending Sales	
6	Totalizers	5	Money Order Begin	
6	Totalizers	6	Money Order End	
6	Totalizers	7	Car Wash Begin	
6	Totalizers	8	Car Wash End	
6	Totalizers	9	Reserved for use by mutual consent	
6	Totalizers	10	Reserved for use by mutual consent	
7	Statistics	1	Correction	
7	Statistics	2	Discounts	
7	Statistics	3	Items Sold	
7	Statistics	4	No-sales	
7	Statistics	5	Suspends	
7	Statistics	6	Suspends /Void	
7	Statistics	7	Transactions	
7	Statistics	8	Void Items	
7	Statistics	9	Void Transactions	
7	Statistics	10	Post Voids	
7	Statistics	11	Tax Code Changes	
7	Statistics	12	Drive offs	
7	Statistics	13	Food stamp/WIC status changes	
7	Statistics	14	Change on checks	
		15	Refunds	
7	Statistics	16	Reserved for use by mutual consent	
8	Discount	1	Amount - applies to individual items as a fixed amount per item.	
8	Discount	2	Amount - applies to individual items as a percentage of the RegularSellPrice.	
8	Discount	3	Mix-Match - applies to all items in the sale equally.	
8	Discount	4	Mix-Match - applies to one or more items in the sale as defined in the Mix-Match table.	
8	Discount	5	Promotional - based on time of the sale, I.e., day of week, time of day, etc.	
8	Discount	6	Fuel - based on cents/gallon as defined in the Item Maintenance table.	
8	Discount	7	Coupon - as defined in the initial set-up as to the use of coupons as method-of-payment tender types or as discounts or both depending upon type of coupon.	
8	Discount	8	Senior Citizen	
8	Discount	9	Employee	
8	Discount	10	Police	
8	Discount	11	Reserved for use by mutual consent	

MiscSumCode Value	MiscSumCode	MiscSumSubCode Value	MiscSumSubCode	MiscSumSubCode Mod
8	Discount	12	Reserved for use by mutual consent	
9	Summary Totals	1	Reserved for use by mutual consent	
10	Sales	1	All sales taxable & non-taxable, net	
10	Sales	2	Non-taxable sales	
10	Sales	3	Nontaxable sales refunded	
11	Opening Balance (for cashier reconciliation this is opening till)			
12	Closing Balance (for cashier reconciliation this is the gross ending till)			
13	Balance-on-hand			
14	Balance Forward (for cashier reconciliation this is till forward)			
15	Till Loan In			
16	Till Loan Out			

Payment Systems Codes Look-up Table -

The key to this table is the element **PaymentSysProdCode** that is found in the Item Maintenance (ITT) and Merchandise Code Maintenance (MCT) Tables. The values given have been defined by the NACS Payments Systems Standards Committee and are part of the larger NACS Technology Standards Project.

These product code definitions are for use in electronic payment systems formats.

These codes define petroleum and merchandise products and services by assigning them a specific three-digit number. These codes are designed to report the sales of products in a standard manner over payment systems networks. These codes do not indicate category/department use within the Back Office or Point-of-Sale systems.

The latest version of this code table is available from NACS and may be found at ***www.cstorecentral.com*** under “Technology Standards”.

POS Code Format Look-up Table –

This look-up table contains the code values for the element **PosCodeFormat.** The value of **PosCodeFormat** specifies the type of coding system used in the element **PosCode.**

Vendor software should be prepared to strip out check digits as they may optionally appear.

This look-up table is not all inclusive and additional codes have been reserved for individual company use.

PosCodeFormat	PosCodeFormat Value	Comment
0	U.P.C.-A	This is the preferred format.
1	U.P.C.-E	If possible this code should be converted to the U.P.C.-A format.
2	EAN 8	
3	EAN 13	
4	PLU	
5	GTIN (SCC 14)	
6	Reserved for individual use.	

Price Tier Code Look-up Table

This table contains the code values for the element PriceTierCode. The values are implementation defined and represent the various types of price tiers that may in effect at a particular location. The key to this table is the element **PriceTierCode** that is found in the Fuel Sales Movement Table.

> **Notes: PriceTierCode** when used in combination with the **TimeTierCode** and **ServiceLevelCode** provides a complete description of the pricing and service method being summarized.
>
> **PriceTierCode** values above 0002 are "user defined".

This look-up table is not all inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

PriceTier Code	PriceTierCode Value
0001	Cash
0002	Credit
0003	User Defined
0004	User Defined
0005	User Defined
0006	User Defined
0007	User Defined
0008	User Defined
0009	User Defined
0010	User Defined

Reason Code Look-up Table -

The key to this table is the element **ReasonCode** that is found in the Item Sales Movement (ISM) and Merchandise Code Movement (MCM) Tables**.** This look-up table is designed to provide the various reasons why an *item* or group of items was/were sold at a price other then the regular selling price for the *item(s).*

ReasonCode	Description
EMP	Employee Discount
EXP	Expiration Date
FCW	Free Car Wash
FRS	Freshness
FSH	Frequent Shopper
GOW	Goodwill Discount
RPC	Regular Price change during reporting period
MGR	Manager Promotion
POL	Police Discount
SCD	Senior Citizen Discount
TPC	Temporary Price Change

Service Level Look-up Table

This table contains the code values for the element **ServiceLevelCode**. The values are implementation defined and represent the various types of service levels that may in effect at a particular location. The key to this table is the element **ServiceLevelCode** that is found in the Fuel Sales Movement Table (FGM).

> **Note: ServiceLevelCode** values above 0005 are "user defined".
>
> **ServiceLevelCode** when used in combination with the **TimeTierCode** and **PriceTierCode** provides a complete description of the pricing and service method being summarized.

This look-up table is not all inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

ServiceLevelCode	ServiceLevelCode Value
0001	Full Service
0002	Self Service
0003	Partial Self Service
0004	Mini Self Service
0005	Unattended Service
0006	User Defined
0007	User Defined
0008	User Defined
0009	User Defined
0010	User Defined

Tender Prohibit Look-up Table

This table contains the code values for the elements ProhibtTenderType, TenderCode and TenderSubCode. The values are implementation defined and represent the various types of tender that may not be taken at the Point-of-Sale. The key to this table is the element **ProhibitTenderCode** that is found in the Restrictions Table. This look-up table is designed to provide the various types of tender and tender sub-types that may not be used to finalize a sale.

> **Note:** TenderSubCode values from 0200 to 0900 are "user defined". TenderCode values between 0500 and 0700 are "user defined".
>
> This look-up table is not all inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

ProhibitTender Code	Tender Code	Description	Tender SubCode	Description
15	0060	Credit Cards	0001	American Express
15	0070	Fleet Cards	0201	Wright Express
16	0060	Credit Cards	0001	American Express
22	0020	Check	0220	Payroll
22	0060	Credit Cards	0001	American Express

In the example shown above a ProhibitTenderCode of 15 would indicate that neither American Express nor Wright Express cards cannot be accepted. A ProhibitTenderCode of 16 would indicate that only American Express cannot be accepted and a ProhibitTenderCode of 22 would indicate that neither Payroll checks nor American Express credit cards could be accepted.

Tender Type Look-up Table-

The keys to this table are the elements **TenderCode** and **TenderSubCode,** both of which are found in the Method-of-Payment (MOP) Table. This look-up table is designed to provide the various types of tender and tender sub-types that might be rendered at the Point-of-Sale.

> **Note: TenderSubCode** values from 0200 to 0900 are "user defined". **TenderCode** values between 0500 and 0700 are "user defined".

This look-up table is not all inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

TenderCode	Description	TenderSubCode	Description
0010	Cash	0000	
		0001	
		0002	
		0003	
0020	Check	0000	
		0001	Commercial Check
		0002	Employee Check
		0003	Government Check
0030	Money Order	0000	
0040	Food Stamps	0000	
0045	EBT	0000	
		0001	EBT Cash
		0002	EBT CB
		0003	EBT Food stamp
0050	Gift Certificates	0000	
0060	Credit Cards	0000	
		0001	American Express
		0002	Visa
		0003	MasterCard
		0004	Oil Company
		0005	Proprietary
0070	Fleet Cards	0000	
0080	Debit Cards	0000	
0090	Radio Frequency	0000	
0100	Pre-Paid Cards	0000	
0110	Smart Cards	0000	
0130	House Charges (on-account)	0000	
0140	Cash back	0000	
0150	Drive-off	0000	
0160	Lottery Winning ticket	0000	
0170	Lotto Winning ticket	0000	
0180	Coupons	0000	
		0001	Manufacturer
		0002	Store

TenderCode	Description	TenderSubCode	Description
0190	WIC Payment	0000	
0200	Pump-for-test	0000	
0210			
0500-0700	User Defined	0000	
0900	Generic	0000	

Time Tier Code Look-up Table

This table contains the code values for the element TimeTierCode. The values are implementation defined and represent the various types of time tiers that may in effect at a particular location. The key to this table is the element **TimeTierCode** that is found in the Fuel Sales Movement Table.

> **Notes: TimeTierCode** when used in combination with the **PriceTierCode** and **ServiceLevelCode** provides a complete description of the pricing and service method being summarized.
>
> **TimeTierCode** values above 0009 are "user defined".

This look-up table is not all-inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

TimeTierCode	TimeTierCode Value
0001	Day
0002	Night
0003	Super Monday
0004	Super Tuesday
0005	Super Wednesday
0006	Super Thursday
0007	Super Friday
0008	Super Saturday
0009	Super Sunday
0010	User Defined

GLOSSARY

BO - BO is the acronym for the retailers Back Office system. It is generally the system which performs “daily book” accounting for the location.

Fuel Grade - Fuel Grade is defined as the wet stock that is actually dispensed through the dispenser hose into the retail consumer's container.

Fuel Product - Fuel Product is defined as the wet stock that is delivered into the retailer's individual tanks.

Item - Item is defined as the combination of the data elements PosCodeFormat + PosCode + PosCodeMod. See the Data Dictionary for the definition of each of these elements.

Merchandise Code - Merchandise Code is most commonly referred to as department or category. It may be taken from the NACS Category Definitions and Numbering Guide.

PBI - PBI is the acronym for POS/Back Office Interface.

POS - POS is the acronym for the Point-of-Sale system, referring to the Point-of-Sale terminals or cash registers used to transact consumer sales at the store.

Table – The term “table” is used within these Guidelines to indicate a logical grouping of data elements. It does not indicate any particular database structure or data model should be used in implementing the Guidelines.

Wet Stock – This term is generally used interchangeably with Fuel Grade and Fuel Product. For clarity in this document the terms Fuel Grade and Fuel Product are used.

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Appendix A - Data Table Summit Task Force Members

NAME	Company
Bob Johnson, Chair	Pinnacle Corporation
Terry Bissonnette	Csoft International, Inc.
Chuck Blevins	Radiant Systems, Inc.
Sam Davis	Professional Datasolutions, Inc.
David Ezell	Verifone, Inc.
Richard Forrester	Syscorp
David Godwin	Verifone, Inc.
Barb Hall	Advantage Energy, Inc.
Sharon Henry	Autogas, Inc.
Fred Hoff	Autogas, Inc.
Mike McQuarrie	ACS Retail Solutions
Ricky Miller	ACS Retail Soultions
Ben Nafa	Advantage Energy, Inc.
Pablo Reiter	Csoft International, Inc.
Bill Wade	Professional Datasolutions, Inc.
Gene Gerke	Gerke & Associates, Inc
John Hervey	Gerke & Associates, Inc
Alan Thiemann	Taylor, Thiemann, & Aitken

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APPENDIX B - Obtaining Additional Information

The minutes of the Data Table Summit sessions are available from NACS at www.cstorecentral.com. To access do the following:

1. Logon to www.cstorecentral.com
2. Select Technology Standards
3. Select POS/Back Office Standards Committee
4. Select Meeting Minutes

Additional information may also be obtained by contacting:

via Mail	via Fax	via e-mail
John Hervey Gerke & Associates, Inc. 2511 Old 63 South Columbia, MO 65201	John Hervey 573-443-6995	Jhervey@gerke.com

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APPENDIX C – Instructions for Feedback, Comment, and Recommending Changes

The Data Table Summit meetings have been conducted under the auspices of the NACS POS/Back Office Standards Committee, one of the four working committees of the NACS Technology Standards Project. Membership on both the POS Back Office Technology Standards Committee and the Data Table Summit Task Force is open to anyone desiring to participate. The results of the Committee's activities are open to feedback and comment by anyone desiring to do so. Feedback and comments are encouraged so that the POS/Back Office Interface Guidelines have the broadest possible support within the industry.

Version 1.0 of the POS/Back Office Interface Guidelines were approved for publication by the NACS Technology Committee on April 20. Version 2.0 was approved as a result of the approved Change Request submitted by the POS Back Office Task Force on xxxxx. (This date to be filled in when Version 2 is approved and before publication.)

FEEDBACK AND COMMENTS

Comments on these Interface Guidelines should be addressed to:

via Mail	via Fax	via e-mail
John Hervey Gerke & Associates, Inc. 2511 Old 63 South Columbia, MO 65201	John Hervey 573-443-6995	Jhervey@gerke.com

Recommending change

The POS/Back Office Standards Committee has recommended to the NACS Technology Standards Committee the following procedures for making changes to these Guidelines:

1 – A Guidelines Maintenance Standing Committee (GMSC) shall be appointed by the NACS Standards Steering Committee. The GMSC shall be composed of all members of the NACS Point-of-Sale Back Office Standards Committee who have attended at least one of the last two meetings of that committee.

2 – A POS/Back Office Interface Guidelines Change Request shall be submitted to the Guidelines Maintenance Standing Committee (GMSC).

3 – Change requests should be submitted electronically at least 30 days in advance of the beginning of each GMSC Discussion Period. The Discussion Periods will begin on February 1, August 1, and November 1 of each year.

4 – Fifteen days prior to the start of the Discussion Period members of the Guidelines Maintenance Standing Committee will be provided a copy of each Change Request submitted.

5 – An electronic bulletin board will be provided for the discussion of the change requests submitted and a formal vote will be taken at the end of the Discussion Period: March 1, September 1, and December 1 of each year. Approval will require that at least 50% of the eligible voters vote and that at least two-thirds of the number voting agree to the change.

6 – Changes approved will be posted on the NACS web site www.cstorecentral.com in the Technology Standards Section.

A physical meeting of the Guidelines Maintenance Standing Committee may not be necessary for it to conduct its business.

Email to:
jhervey@gerke.com

NACS Control No.:_____

Point-of-Sales/Back Office Guidelines
Change Request Form

Submitter completes Sections A, B, and C
Administrator completes Section D

A. Submitter:

Name: Title:
Company: Phone:
Address:

B. Proposed Action:

C. Reason for Change:

D. Guidelines Maintenance Committee Action:

1. Received _____ (date)
2. Sent to Committee Members _____(date) _____ (number)
3. Members Voting Final Date _____

   Yes _____ No _____ Number _____ (requires 2/3 "Yes" for approval)

   Number of Eligible Voters _____

   _____ Percent of Members Voting (at least 50% must vote)

4. Change Effective Date _____

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Appendix D – Typical Cash Balancing and Reconciliation Routine.

Cashier Balancing Example – Miscellaneous Summary Movement Table

HEADER		
Data Element	**Value**	**Comment**
RptSeqNumId		
PriRptPer		
SecRptPer		
BeginDate		
BeginTime		
EndDate		
EndTime		
StoreLocationId		
VendorName		
VendorModelVersion		
CashierId		
RegisterId		
TillId		
DETAIL (Sources/To be accounted for)		
MiscSumCode	11	Opening Balance
MiscSumAmt	100	$100
MiscSumCode	5	Payins
MiscSumAmt	25	$25
MiscSumCode	10	All Sales Taxable and Non-taxable net of refunds
MiscSumAmt	500	$500
Detail (Uses/Accounted for)		
MiscSumCode	12	Closing Balance (gross ending till)
MiscSumAmt	613	$613
MiscSumCode	4	Payouts
MiscSumAmt	10	$10
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	390	$390
TenderCode	0010	Cash
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	50	$50
TenderCode	0020	Check
TenderSubCode	0003	Government Check
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	5	$5
TenderCode	0060	Credit Card
TenderSubCode	0001	American Express
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	8	$8
TenderCode	0040	Food Stamps
MiscSumCode	1	Safe Drop
MiscSumAmt	10	$10
TenderCode	0010	Cash

CurrencyCode	CAD	Canadian Dollars
MiscSumCode	1	Safe Drop
MiscSumAmt	10	$10
TenderCode	0010	Cash
CurrencyCode	CAD	Canadian Dollars
CurrencySubCode	0001	Canadian Quarters
MiscSumCode	14	Balance Forward
MiscSumAmt	100	$100
TenderCode	0010	Cash
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	30	$30
TenderCode	0020	Check
TenderSubCode	0001	Commercial Check

Total to be accounted for = $625
Total accounted for = $623
-$2 (short)

Appendix E – Record of Changes

This is a complete record of modifications, enhancements and changes made between Version 1 and Version 2.

Section	Change
Table of Contents	Updated to reflect Version 2 changes.
Preface	Updated to reflect Version 2 changes.
Acknowledgments	Updated to reflect Task Force membership additions since the publication of Version 1.
Chapter 1 - Background	Updated publication history and to add information on Version 2 development.
- Caution	Section added to clarify purpose and scope of completed work and to emphasize that the "ongoing effort to improved the Guidelines will not be impeded by any current or planned implementation of these Guidelines."
- Introduction	Added paragraph to describe significant changes in Version 2, including addressing international issues such as language and currency, new tables, and cashier balancing and reconciliation.
- Future Work	Rewritten to update based on the progress made since the publication of Version 1. Also included statement regarding future development of a transport layer using XML.
- Conventions	
- Element Names	Modified Paragraph to indicate the Data Dictionary will contain multiple instances of an element if its description and/or usage differs depending upon the table in which it is used.
- Definitions	Added definitions for Fuel Grade and Fuel Product.

Section	Change
- Element Name Suffix	Added element suffix of Num.
- Abbreviations - Element	Modified as indicated in Element Names above. In addition, element sort order for each of the tables is provided.
- Foreign Key	Redefined as “contains a value that is a primary key in another table.”
- Qualifier	Redefined as “all qualifiers are optional. Qualifiers when used provide finer granularity of the data.”
- Metric	Added to definition “a measured value.”
- Size	Modified to provide an example.
- Other	Added paragraph regarding ISO standards and the use of ISO 4217-1995 for currency codes.
- Assumptions	1. Deleted item 3. With regard to language. 2. Modified paragraph relative to currency symbols. 3. Deleted paragraph regarding cash balancing. 4. Added paragraph regarding fuel dispenser configuration.
- Usage Guidelines	1. Modified paragraph 3. to read, “Thousands separators should not be used in numeric elements.” 2. Added paragraph 10 which reads, “If detailed data is being reported from the POS to the Back Office there is not a need to report the aggregate total.
Chapter 2 – Data Dictionary	1. Removed the element usage abbreviations from the element name and added a new column with the abbreviation corresponding to the particular description and table usage. 2. Added the following elements (refer to the Data Dictionary for description, usage, size,

Section	Change
	type, requirement designator, and applicable tables): ♦ CashierID ♦ CurrencyCode ♦ CurrencyFaceValue ♦ CurrencySubCode ♦ Description16A ♦ Description24A ♦ Description48A ♦ Description8A ♦ DescriptionId ♦ DispenserDiscountAmt ♦ DispenserDiscountCnt ♦ FuelGradeActiveFlg ♦ FuelGradeId (previously Grade) ♦ FuelGradeNonResettableTotalAmt (previously GradeNonResettableTotalAmt) ♦ FuelGradeNonResettableTotalVol (previously GradeNonResettableTotalVol) ♦ FuelGradeSalesAmt (previously GradeSalesAmt) ♦ FuelGradeSalesVol (previously GradeSalesVol) ♦ FuelGradeSeqId ♦ FuelPositionId ♦ FuelProductBlendPercent ♦ FuelProductDepth ♦ FuelProductDescription ♦ FuelProductId ♦ FuelProductIdHigh ♦ FuelProductNonResettableTotalAmtNum ♦ FuelProductNonResettableTotalVolNum ♦ FuelProductTemp ♦ FuelProductVol ♦ LanguageCode ♦ MiscSumSubCodeMod ♦ PriceTierCode ♦ ServiceLevelCode ♦ TankChartId ♦ TankDepth ♦ TankDescription ♦ TankIdHigh

Section	Change
	♦ TankInstallDate ♦ TankLowInventoryVol ♦ TankManifoldId ♦ TankManufacturer ♦ TankModNum ♦ TankReorderVol ♦ TankSerialNum ♦ TankVol ♦ TaxActiveFlg ♦ TaxCollectedAmt ♦ TaxDescription ♦ TaxExemptRefundedAmt ♦ TaxForgivenSalesAmt ♦ TaxForgivenSalesRefundedAmt ♦ TaxLevelId ♦ TaxLevelIncludedId ♦ TaxLevelSeqId ♦ TaxRate ♦ TaxReceiptDescription ♦ TaxRefundedAmt ♦ TaxRegistrationNum ♦ TaxSeqNum ♦ TaxStrategyDescription ♦ TaxStrategyId ♦ TaxSymbol ♦ TaxTableId ♦ TaxTypeId ♦ TillId ♦ TimeTierCode 3. The descriptions of the following elements were modified: ♦ Description ♦ DiscountAmt ♦ DiscountCnt ♦ RegularSellPrice ♦ SalesAmt ♦ SalesQty ♦ TankId ♦ TaxExemptAmt ♦ TaxExemptVol
Chapter 3 – Tables	1. Divided listing into 2 subgroups;

Section	Change
- Primary Tables	Maintenance Tables and Movement Tables. 2. Reordered table listings to be alphabetical within subgroup. 3. Added the following Maintenance Tables: ♦ Fuel Grade Maintenance (FGT) ♦ Fuel Position Maintenance (FOT) ♦ Fuel Product Maintenance (FPT) ♦ Tank Product Maintenance (TPT) ♦ Tax Included Maintenance (TIT) ♦ Tax Level Maintenance (TLT) ♦ Tax Strategy Maintenance (TST) 4. Added the following Movement Tables: ♦ Fuel Grade Movement (FGM) (renamed from Fuel Sales Movement, modified and expanded) ♦ Fuel Product Movement (FPM) ♦ Tank Product Movement (TPM) (renamed from Tank Product Inventory, modified and expanded) ♦ Tax Level Movement (TLM) 5. Combined, modified and expanded the Miscellaneous Summary Report and Method-of-Payment Tables in a new table, Miscellaneous Summary Movement.
Cross-Reference & Look-up Tables	1. Changed order in which the tables are listed to group by either Cross-Reference or Look-up and to list alphabetically within the group. 2. Added a new Cross-Reference Table, Description. 3. Added the following Look-up Tables: (see each table for a complete description of the purpose and use.) ♦ Currency Code ♦ Price Tier ♦ Service Level ♦ Time Tier 4. Deleted FuelGrade/Product Look-up Table. 5. Redefined Miscellaneous Summary Code and Tender Code Look-up Tables.
Other Tables	Modified paragraph to reflect update work

Section	Change
	accomplishments and future work items.
Glossary	Added “Wet Stock” to the list of terms.
Appendix A	Modified to update with Task Force membership changes since the publication of Version 1.
Appendix C	Updated to reflect current status of the Guidelines.
Appendix D	1. “Summary Of Table Notes” was deleted. 2. Added “Typical Cash Balancing and Reconciliation Routine.”
Appendix E	Added “Record of Changes”
Appendix F	Added “Fuel Grade/Product Definitions and Tank Modeling”

The following changes have been made to the document in Version 2.1.

Section	Change
Chapter 2 – Data Dictionary	Changed the following Data Element names and changed from Optional to Mandatory: PosVendorName to VendorName PosVendorModelVersion to VendorModelVersion
	Add the elements CurrencyCode and CurrencySubCode as optional elements in the ISM table and CurrencySubCode as an optional element in the FGM table.
	Change the Optional/Mandatory designation from Mandatory to Optional wherever appearing for the elements PromoAmt and RefundAmt.
	Add the element MdseCode to the ISM table as an optional element.
	Change FuelProductDescription disignation in table FPT from Optional to Mandatory.
	Change TaxActiveFlg designation from Optional to Mandatory.

Section	Change
FGM Table	Add the element CurrencySubCode as an optional element.
FPT Table	Change FuelProductDescription from Optional to Mandatory.
ISM Table	Add the elements CurrencyCode and CurrencySubCode as Optional elements.
	Add the element MdseCode as an optional element.
	Change from Mandatory to Optional the elements PromoAmt and RefundAmt.
MCM Table	Change from Mandatory to Optional the elements PromoAmt and RefundAmt.
TLT Table	Change TaxActiveFlg designation from Optional to Mandatory.

Appendix F – Fuel Grade/Product Definitions and Tank Modeling

The diagram shown below provides an example of a location tank pluming and usage installation in order to illustrate the definition of terms adopted by the committee. It also shows the relationship between tanks, fuel products, fueling positions, and fuel grades.

This diagramed implementation reflects a physical site location having the following characteristics: three product storage tanks with submersible pumps, two dispensers with only one fueling position each, at each fueling position a total of three grades of product can be dispensed of which are two 'straight' grades and one is a blended grade.