

# National Motor Freight Classification (NMFC)®

## Data Files Record Layouts for Mainframes

### Index File

#### *NMFCIDX - INDEX FILE - ASCII*

Field	Length	Columns	Notes
NI-NOUN	20	1 – 20	Contains the noun from the Index to Articles (Upper Case).
NI-ADJ-1	20	21 – 40	Contains an adjective for the noun from the Index to Articles (Upper Case).
NI-ADJ-2	20	41 – 60	Contains a second adjective for the noun from the Index to Articles (Upper Case).
NI-ITEM-NO	6	61 – 66	Contains the NMFC item number described by the noun and adjectives.
Filler 1	2	67 – 68	Not Used. It contains 2 spaces.
NI-SOUNDEX-NOUN	4	69 – 72	Contains a Soundex of NI-NOUN.
NI-SOUNDEX-ADJ-1	4	73 – 76	Contains a Soundex of NI-ADJ-1.
NI-SOUNDEX-ADJ-2	4	77 – 80	Contains a Soundex of NI-ADJ-2.
NI-NOUN-LOWER	20	81 – 100	Contains a NI-NOUN in upper/lower case.
NI-ADJ-1-LOWER	20	101 – 120	Contains a NI-ADJ-1 in upper/lower case.
NI-ADJ-2-LOWER	20	121 – 140	Contains a NI-ADJ-2 in upper/lower case.
NI-REFERENCE	2	141 – 142	Contains either a "V" or 2 spaces. The V indicates a mixed articles entry.
NI-EFF-DATE	8	143 – 150	Effective date of the index record in CCYYMMDD format.
NI-EXP-DATE	8	151 – 158	Expiration date of the index record in CCYYMMDD format.
Filler 2	1	159	Contains a space.
NI-LTL	3 or 4	160 – 162 or 160 – 163	Contains either a valid NMFC Class or S. The S means there are Sub Items for this item or multiple classes. Left-justified. "77.5" and "92.5" appear as "77." and "92." in RLCA file.

**TARS - INDEXC FILE - EBCDIC**

Field	Length	Columns	Notes
NI-NOUN	20	1 - 20	Contains the noun from the Index to Articles (Upper Case).
NI-ADJ-1	20	21 - 40	Contains an adjective for the noun from the Index to Articles (Upper Case).
NI-ADJ-2	20	41 - 60	Contains a second adjective for the noun from the Index to Articles (Upper Case).
NI-ITEM-NO	6	61 - 66	Contains the NMFC item number described by the noun and adjectives.
Filler 1	2	67 - 68	Not Used, contains 2 spaces.
NI-SOUNDEX-NOUN	4	69 - 72	Contains a Soundex of NI-NOUN.
NI-SOUNDEX-ADJ-1	4	73 - 76	Contains a Soundex of NI-ADJ-1.
NI-SOUNDEX-ADJ-2	4	77 - 80	Contains a Soundex of NI-ADJ-2.
NI-NOUN-LOWER	20	81 - 100	Contains a NI-NOUN in upper/lower case.
NI-ADJ-1-LOWER	20	101 - 120	Contains a NI-ADJ-1 in upper/lower case.
NI-ADJ-2-LOWER	20	121 - 140	Contains a NI-ADJ-2 in upper/lower case.
NI-REFERENCE	2	141 - 142	Contains either a "V" or 2 spaces. The V indicates a mixed articles entry.
NI-EFF-DATE	2	143 - 144	The effective date of the index record. See the Note below.
NI-EXP-DATE	2	145 - 146	The second field is the expiration date of the index record. See the Note below.
Filler 2	1	147	Contains a space.
NI-LTL	3	148 - 150	Contains either a valid NMFC Class or S. The S means there are Sub Items for this item or multiple classes. Left-justified. "77.5" and "92.5" appear as "77." and "92."

**Note:** Both the effective and expiration dates in the index are converted to a date format which will fit in a **binary** halfword by subtracting the value 2018 from the year. (19860510 was the beginning effective date of the data when the system was first developed). The binary date range values are -31634 to +32366. When reformatted (I.E., by adding 2018 to the year), the largest corresponding date is 20501231. The value 9999 is arbitrarily stored in the binary expiration date for the NMFC value 99999999.

## Reverse Index File

### *NMFCRIDX - REVERSE INDEX FILE - ASCII*

Field	Length	Columns	Notes
NR-ITEM-NO	6	1 - 6	Derived from NI-ITEM-NO.
NR-NOUN	20	7 - 26	Derived from NI-NOUN. Always set to upper case.
NR-ADJ-1	20	27 - 46	Derived from NI-ADJ- 1. Always set to upper case.
NR-ADJ-2	20	47 - 66	Derived from NI-ADJ-2. Always set to upper case.
Filler 1	2	67 - 68	Not used, contains 2 spaces.
NR-NOUN-LOWER	20	69 - 88	Same as NI-NOUN; in upper/lower case.
NR-ADJ-1-LOWER	20	89 - 108	Same as NI-ADJ-1; in upper/lower case.
NR-ADJ-2-LOWER	20	109 - 128	Same as NI-ADJ-2; in upper/ lower case.
NR-REFERENCE	2	129 - 130	Derived from NI-REFERENCE.
NR-EFF-DATE	8	131 - 138	Derived from NI-EFF-DATE in CCYYMMDD format.
NR-EXP-DATE	8	139 - 146	Derived from NI-EXP-DATE in CCYYMMDD format.
Filler 2	1	147	Contains a space.
NR-LTL	3	148 – 150	Derived from NI-LTL. Contains either an NMFC Class or S. The S means there are Sub Items for this item or multiple classes. Left-justified. "77.5" and "92.5" appear as "77." and "92."

### *TARS - REVERSE INDEX - EBCDIC*

Field	Length	Columns	Notes
NR-ITEM-NO	6	1 - 6	Derived from NI-ITEM-NO.
NR-NOUN	20	7 - 26	Derived from NI-NOUN. Always set to upper case.
NR-ADJ-1	20	27 - 46	Derived from NI-ADJ- 1. Always set to upper case.

Field	Length	Columns	Notes
NR-ADJ-2	20	47 - 66	Derived from NI-ADJ-2. Always set to upper case.
Filler 1	2	67 - 68	Not used, contains 2 spaces.
NR-NOUN-LOWER	20	69 - 88	Derived from NI-NOUN-LOWER.
NR-ADJ-1-LOWER	20	89 - 108	Derived from NI-ADJ-1-LOWER.
NR-ADJ-2-LOWER	20	109 - 128	Derived from NI-ADJ-2-LOWER.
NR-REFERENCE	2	129 - 130	Derived from NI-REFERENCE.
NR-EFF-DATE	2	131 - 132	Derived from NI-EFF-DATE. Binary field.
NR-EXP-DATE	2	133 - 134	Derived from NI-EXP-DATE. Binary field.
Filler 2	1	135	Contains a space.
NR-LTL	3	136 – 138	Derived from NI-LTL.

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## Soundex File

### NMFCSNDX - SOUNDEX FILE - ASCII

Field	Length	Columns	Notes
NS-SOUNDEX-NOUN	4	1 - 4	Derived by using the noun from NI-NOUN and performing a Soundex routine on that data.
NS-SOUNDEX-ADJ-1	4	5- 8	Derived by using the adjective from NI-ADJ-1 and performing a Soundex routine on that data.
NS-SOUNDEX-ADJ-2	4	9 - 12	Derived by using the adjective continue from NI-ADJ-2 and performing a Soundex routine on data.
NS-ITEM-NO	6	13 - 18	Derived from NI-ITEM-NO.
NS-NOUN	20	19 - 38	Derived from NI-NOUN. Always set to upper case.
NS-ADJ-1	20	39 - 58	Derived from NI-ADJ- 1. Always set to upper case.
NS-ADJ-2	20	59 - 78	Derived from NI-ADJ-2. Always set to upper case.

Field	Length	Columns	Notes
NS-NOUN-LOWER	20	79 - 98	Same as NI-NOUN except in upper/lower case
NS-ADJ-1-LOWER	20	99 - 118	Same as NI-ADJ-1 except in upper/lower case
NS-ADJ-2-LOWER	20	119 - 138	Same as NI-ADJ-2 except in upper/ lower case.
NS-REFERENCE	2	139 - 140	Contains either a "v" or 2 spaces. The v indicates a mixed articles entry. Not sure if used anymore.
NS-EFF-DATE	8	141 - 148	Derived from NI-EFF-DATE in CCYYMMDD format.
NS-EXP-DATE	8	149 - 156	Derived from NI-EXP-DATE in CCYYMMDD format.
Filler 2	1	157	Contains a space.
NS-LTL	3	158 – 160	Derived from NI-LTL. Contains either an NMFC Class or S. The S means there are Sub Items for this item or multiple classes. Left-justified. "77.5" and "92.5" appear as "77." and "92."

### TARS - SOUNDEX FILE - EBCDIC

Field	Length	Columns	Notes
NS-SOUNDEX-NOUN	4	1 - 4	Derived by using the noun from NI-NOUN and performing a Soundex routine on that data.
NS-SOUNDEX-ADJ-1	4	5- 8	Derived by using the adjective from NI-ADJ-1 and performing a Soundex routine on that data.
NS-SOUNDEX-ADJ-2	4	9 - 12	Derived by using the adjective continue from NI-ADJ-2 and performing a Soundex routine on data.
NS-ITEM-NO	6	13 - 18	Derived from NI-ITEM-NO.
NS-NOUN	20	19 - 38	Derived from NI-NOUN. Always set to upper case.

Field	Length	Columns	Notes
NS-ADJ-1	20	39 - 58	Derived from NI-ADJ- 1. Always set to upper case.
NS-ADJ-2	20	59 - 78	Derived from NI-ADJ-2. Always set to upper case.
NS-NOUN-LOWER	20	79 - 98	Same as NI-NOUN except in upper/lower case.
NS-ADJ-1-LOWER	20	99 - 118	Same as NI-ADJ-1 except in upper/lower case.
NS-ADJ-2-LOWER	20	119 - 138	Same as NI-ADJ-2 except in upper/ lower case.
NS-REFERENCE	2	139 - 140	Contains either a "v" or 2 spaces. The v indicates a mixed articles entry. Not sure if used anymore.
NS-EFF-DATE	2	141 - 142	Derived from NI-EFF-DATE. See the Note below.
NS-EXP-DATE	2	143 - 144	Derived from NI-EXP-DATE. See the Note below.
Filler 2	1	145	Contains a space.
NS-LTL	3	146 – 148	Derived from NI-LTL. Contains either an NMFC Class or S. The S means there are Sub Items for this item or multiple classes. Left-justified. "77.5" and "92.5" appear as "77." and "92."

**Note:** Both the effective and expiration dates in the index are converted to a date format which will fit in a **binary** halfword by subtracting the value 2018 from the year. (19860510 was the beginning effective date of the data when the system was first developed). The binary date range values are -31634 to +32366. When reformatted (I.E., by adding 2018 to the year), the largest corresponding date is 20501231. The value 9999 is arbitrarily stored in the binary expiration date for the NMFC value 99999999.

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## Text File

### NMFCTXT - TEXT FILE - ASCII

Field	Length	Columns	Notes
NT-CUST	4	1 - 4	Always 'CSA'.
NT-ITEM	6	5 - 10	Item number from NMFC publication.
NT-SUB	2	11 - 12	Sub item number from NMFC publication. Equals "00" if not a sub.
NT-EFFECTIVE-DATE	8	13 - 20	In the form of CCYYMMDD. This is the effective date of the item from the NMFC supplements. This date corresponds to the effective date found in NMFCCTL field NC-EFFECTIVE-DATE.
NT-CLASS-SEQUENCE	1	21	Number from 0 to 9. When item/sub in NMFC contains multiple classes, this field is incremented for each class. Currently all values = 0.
NT-SEQUENCE-NO	2	22 - 23	Number from 00 to 99. This field starts at 00 and the NT-SEGMENT-TYPE/NT-TEXT-DATA can contain from 1 to 20 description lines from the NMFC publication. If the description is greater than 20 lines, 1 is added to this field and the description continues in the next record.
Filler 1	5	24 - 28	Not currently used. All blank spaces.
NT-GENERIC-CODE	6	29 - 34	Item number of the Generic Heading that this item is under.
NT-LTL	6	35 - 40	Contains a valid LTL class or space from the NMFC publication. Left justified. "NotTaken" = "NOT".
Filler 2	12	41 - 52	Not currently used. All blank spaces.

Field	Length	Columns	Notes
NT-SEE-ITEM-NO	6	53 - 58	Contains an item number if the NMFC publication contains the wording, "See item _____ in the LTL/TL/MW columns " or the verbiage "See item _____ for release value." This usually means that the item has a description for released value items. Equal to "NOT" if NT-LTL = "NotTaken".
Filler 3	1	59	Not currently used. All blank spaces.
NT-RELEASE-VALUE	1	60	Contains either an R or space. If item in NMFC publication contains the wording, "See item _____ for released value", this field will contain an R and the item number is in NT-SEE-ITEM-NO. If item in the NMFC publication is an exempt commodity, this field will contain an R and the NT-SEE-ITEM-NO will contain 000000.
NT-NO-SEGMENTS	2	61 – 62	Contains a number from 1 to 20, which relates to the number of description lines of the item in the NMFC publication. If the description in the NMFC is greater than 20 lines, the field NT-SEQUENCE-NO is incremented by one and another record read that continues the next 20 lines of description. This process continues until the complete description is captured on the display.
NT-SEGMENT-TYPE	1	63*	This field will contain either a T or S. If a T, the information found in NT-TEXT-DATA is a description text line for the item. If an S, the information found in NT-NOTE-NO (up to 13) is item numbers found in the text description information. There can be multi S types if the item contains more than 13 notes. The S types will always occur after the T types.

Field	Length	Columns	Notes
NT-TEXT-DATA	79	64 - 142*	If NT-SEGMENT-TYPE equals T, then this field will contain a descriptive text line for the item. If NT-SEGMENT-TYPE equals S, then this field will contain up to 13 item numbers. Left justified, fill with zeroes with 1 space at the end.

\* NT-SEGMENT-TYPE and NT-TEXT-DATA may repeat up to 20 times, depending on the length of the Item text.

### *TARS - TEXTC FILE - EBCDIC*

Field	Length	Columns	Notes
NT-CUST	4	1 - 4	Always 'CSA'.
NT-ITEM	6	5 - 10	Item number from NMFC publication.
NT-SUB	2	11 - 12	Sub item number from NMFC publication. Equals "00" if not a sub.
NT-EFFECTIVE-DATE	8	13 - 20	In the form of CCYYMMDD. This is the effective date of the item from the NMFC supplements. This date corresponds to the effective date found in NMFC CTRL field NC-EFFECTIVE-DATE.
NT-CLASS-SEQUENCE	1	21	Number from 0 to 9. When item/sub in NMFC contains multiple classes, this field is incremented for each class. Currently all values = 0.
NT-SEQUENCE-NO	2	22 - 23	Number from 00 to 99. This field starts at 00 and the NT-SEGMENT-TYPE/NT-TEXT-DATA can contain from 1 to 20 description lines from the NMFC publication. If the description is greater than 20 lines, 1 is added to this field and the description continues in the next record.
Filler 1	5	24 - 28	Not currently used. All blank spaces.
NT-GENERIC-CODE	6	29 - 34	Item number of the Generic Heading that this item is under.

Field	Length	Columns	Notes
NT-LTL	6	35 - 40	Contains a valid LTL class or space from the NMFC publication. Left justified. "NotTaken" = "NOT".
Filler 2	12	41 - 52	Not currently used. All blanks.
NT-SEE-ITEM-NO	6	53 - 58	Contains an item number if the NMFC publication contains the wording, "See item ____ in the LTL/TL/MW columns " or the verbiage "See item ____ for release value." This usually means that the item has a description for released value items. Equal to "NOT" if NT-LTL = "NotTaken".
Filler 3	1	59	Not currently used. All blank spaces.
NT-RELEASE-VALUE	1	60	Contains either an R or space. If item in NMFC publication contains the wording, "See item ____ for released value", this field will contain an R and the item number is in NT-SEE-ITEM-NO. If item in the NMFC publication is an exempt commodity, this field will contain an R and the NT-SEE-ITEM-NO will contain 000000.
NT-NO-SEGMENTS	2	61 – 62	<b>BINARY</b> field. Contains a number from 1 to 20, which relates to the number of description lines of the item in the NMFC publication. If the description in the NMFC is greater than 20 lines, the field NT-SEQUENCE-NO is incremented by one and another record read that continues the next 20 lines of description. This process continues until the complete description is captured on the display.
NT-SEGMENT-TYPE	1	63*	This field will contain either a T or S. If a T, the information found in NT-TEXT-DATA is a description text line for the item. If an S, the information found in NT-NOTE-NO (up to 13) is item numbers found in the text description information. There can be multi S types if the item contains more than 13 notes. The S types will always occur after the T types.

Field	Length	Columns	Notes
NT-TEXT-DATA	79	64 - 142*	If NT-SEGMENT-TYPE equals T, then this field will contain a descriptive text line for the item. If NT-SEGMENT-TYPE equals S, then this field will contain up to 13 NOTE item numbers. Left justified, fill with zeroes with 1 space at the end.

\* NT-SEGMENT-TYPE and NT-TEXT-DATA will repeat 20 times for the full 1662 characters, using a blank (hex 40) to fill unused segments.

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## Control File

### NMFCCCTL - ITEM CONTROL FILE - ASCII

Field	Length	Columns	Notes
NC-CUST	4	1 - 4	Always 'CSA'.
NC-ITEM	6	5 - 10	Item number from NMFC publication.
NC-SUB	2	11 - 12	Sub item number from NMFC publication.
NC-SEQUENCE-NO	2	13-14	Starts at 00. When an item changes more than 20 times, the number is incremented by 1, and a new record is written that will contain the next 20 changes to the item.
NC-ITEM-STATUS	1	15	When an item is cancelled, this field is set to a 'C' and the date the item was cancelled is moved to the NC-EXPIRATION-DATE. Equal to one blank if the item is active.
NC-NO-SEGMENTS	2	16-17	Contains a number from 1 to 20. This number corresponds to the number of times this item has been changed. If the number is 20 and the field NC-ITEM-STATUS is blank, then the item control is continued in another record.
NC-EFFECTIVE-DATE	8	18-25*	This is the date this item was added or was changed by the NMFC publication. Format = ccyyymmdd.

Field	Length	Columns	Notes
NC-EXPIRATION-DATE	8	26-33*	If the item was cancelled, the field contains the date the item was cancelled. Format = ccyyymmdd. If the item was modified, the field contains the date the item was modified. Format = ccyyymmdd. If the item is active and unchanged, then field = "99999999".

\*NC-EFFECTIVE-DATE and NC-EXPIRATION-DATE may repeat up to 20 times, depending on how many modifications have occurred for the Item/Sub.

### TARS - ITEM CONTROL FILE - EBCDIC

Field	Length	Columns	Notes
NC-CUST	4	1 - 4	Always 'CSA'.
NC-ITEM	6	5 - 10	Item number from NMFC publication.
NC-SUB	2	11 - 12	Sub item number from NMFC publication.
NC-SEQUENCE-NO	2	13-14	<b>BINARY</b> field. Starts at 00. When an item changes more than 20 times, the number is incremented by 1, and a new record is written that will contain the next 20 changes to the item.
NC-ITEM-STATUS	1	15	When an item is cancelled, this field is set to a 'C' and the date the item was cancelled is moved to the NC-EXPIRATION-DATE. Equal to one blank if the item is active.
NC-NO-SEGMENTS	2	16-17	Contains a number from 1 to 20. This number corresponds to the number of times this item has been changed. If the number is 20 and the field NC-ITEM-STATUS is blank, then the item control is continued in another record.
NC-EFFECTIVE-DATE	8	18-25*	This is the date this item was added or was changed by the NMFC publication. Format = ccyyymmdd.

Field	Length	Columns	Notes
NC-EXPIRATION-DATE	8	26-33*	If the item was cancelled, the field contains the date the item was cancelled. Format = ccyyymmdd. If the item was modified, the field contains the date the item was modified. Format = ccyyymmdd. If the item is active and unchanged, then field = "99999999".

\*NC-EFFECTIVE-DATE and NC-EXPIRATION-DATE will repeat 20 times for the full 337 characters, using a blank (hex 40) to fill unused segments.