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U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
PB-274 172

PTI/APWA Equipment Management
Information System, Program
Documentation, Billing Module

Public Technology, Inc, Washington, D C

Prepared for

Department of Housing and Urban Development, Washington, D C Assistant
Secretary for Policy Development and Research

1977

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PB 274 172

**PTI/APWA EQUIPMENT MANAGEMENT
INFORMATION SYSTEM**

PROGRAM DOCUMENTATION

BILLING MODULE

**U.S. Department of Housing and Urban Development
Office of Policy Development and Research**

PUBLIC TECHNOLOGY, INC., WASHINGTON, D.C. AND SAN JOSE, CA.

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U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161**

| | | | | |
|--|--|--------------------------------------|--|---|
| BIBLIOGRAPHIC DATA SHEET | | 1. Report No. <i>HUD/RES/1185</i> | 2. 29 NOV 1977 | 3. Recipient's Accession No. <i>1185</i> |
| 4. Title and Subtitle PTI/APWA Equipment Management Information System - Program Documentation - Billing Module | | | 5. Report Date 1977 | |
| 7. Author(s) | | | 6. | |
| 9. Performing Organization Name and Address Public Technology, Inc. Information Systems Group 1140 Connecticut Ave. N.W. Washington, D.C. 20410 | | | 8. Performing Organization Rept. No. | |
| 12. Sponsoring Organization Name and Address U.S. Dept. of Housing and Urban Development Office for Policy Development and Research 451 7th Street, S.W. Washington, D.C. 20410 | | | 10. Project/Task/Work Unit No. | |
| | | | 11. Contract/Grant No. H-2106R | |
| | | | 13. Type of Report & Period Covered Final | |
| 15. Supplementary Notes | | | 14. | |
| 16. Abstracts This document is one of a series comprising documentation for the PTI/APWA Equipment Management Information System; a system tailored to the special needs of local governments, developed by Public Technology, Inc. and the American Public Works Association. The program documentation for the Billing Module (there are six modules in the system) describes the module job streams, and explains in detail each program in the module including a program narrative, definitions of switches and flags used, a brief description of the purpose of each program paragraph, and the specifications from which each program was coded. | | | | |
| 17. Key Words and Document Analysis. 17a. Descriptors Information Systems Local Government Documentation Equipment Management : | | | | |
| 17b. Identifiers/Open-Ended Terms Equipment Management Information System | | | | |
| 17c. COSATI Field/Group 5B | | | | |
| 18. Availability Statement Released for distribution by NTIS | | | 19. Security Class (This Report) UNCLASSIFIED | 21. No. of Pages 90 |
| | | | 20. Security Class (This Page) UNCLASSIFIED | 22. Price PCAO5 MFA01 |

PTI/APWA EQUIPMENT MANAGEMENT
INFORMATION SYSTEM

COMPUTER PROGRAM DOCUMENTATION

BILLING MODULE

U. S. Department of Housing and Urban Development
Office of Policy Development and Research
Washington, D. C.

Prepared Under Contract #H-2106R

by

Public Technology, Inc.
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Washington, D. C. 20036

1977

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BILLING MODULE

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APPENDIX A-FILE DESCRIPTIONS AND RECORD LAYOUTS

| | | |
|-----|--------|---------------------------------|
| A-1 | EMGF05 | Equipment Inventory Master File |
| A-1 | EMBF10 | Equipment Inventory Master File |
| A-2 | EMBF03 | Equipment Inventory Master File |

APPENDIX A-FILE DESCRIPTIONS AND RECORD LAYOUTS (Continued)

| | | |
|------|--------|--------------------------------------|
| A-3 | EMBF08 | Equipment Inventory Master File |
| A-9 | EMBF01 | Pool Ticket and Rentals Transactions |
| A-10 | EMBF02 | Billing Transactions |
| A-13 | EMBF04 | Billing Transactions - Appendix |
| A-14 | EMBF05 | Billing Transactions - Appendix |
| A-17 | EMRF06 | Month-to-Date Repair File |
| A-18 | EMBF07 | Month-to-Date Repair File |
| A-21 | EMBF06 | Control Card |
| A-23 | EMBF09 | Control Card |
| A-25 | EMGF03 | Org/APWA Table |

APPENDIX B-SAMPLE FORMS

| | | |
|-----|--------|----------------------|
| B-1 | EMBD01 | Motor Pool Ticket |
| B-2 | EMBR03 | Monthly Meter Report |

SECTION I
INTRODUCTION

1.0

INTRODUCTION

This program documentation is one volume of the technical program documentation of the PTI/APWA Equipment Management System. There are five volumes in all. Additionally, the system is supported by Testing Instructions, an Implementation Handbook, Forms Completion Instructions, User's Guide, and Chief Executive's Report.

This program documentation is intended to help in maintaining the programs on the local government computer system. Before making the computer programs operational, the data processing staff should consult the Implementation Handbook and Computer Program Testing Instructions for relevant information.

Contact PTI if questions arise which are not addressed in this program documentation.

SECTION 1.1

Module Introductory Narrative

Billing

BILLING MODULE

The billing module produces reports in support of interdepartmental billings for equipment.

Reports are produced in support of three types of billing:

- billings for equipment based on mileage or hourage charge. This rate may vary for a particular piece of equipment depending on the usage;
- billings for equipment based on a flat rate per month, day, or hour;
- billings for equipment based on costs incurred through repairs and fueling (direct charges).

A combination of these billing types may be involved for a piece of equipment. The appropriate billing type for a piece of equipment is specified on the equipment inventory input form.

Equipment not normally billed for repairs may be billed for any particular repair by so indicating in the appropriate place on that repair order.

Billing reports are produced once a month in fund and organizational sequence. Pool equipment not permanently assigned to an organization will be billed to those organizations which have used that equipment during a given month.

Equipment billed on a usage basis (miles or hours) require a monthly statement of the end of month mileage (or hourage). Before the end of the month, the system produces a listing in organization sequence of all equipment assigned to that organization; last month's end of month mileage, or hourage, is supplied on this listing.

SECTION 2.1

JOB STREAM OVERVIEW

BILLING

COMPONENT JOB STREAMS

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT: BILLING

| JOB STREAM IDENTIFICATION | RUN FREQUENCY |
|---|---------------|
| Billing Edit/Update-EMBJ01 | Daily |
| Billing Report and Meter Reading Report - EMBJ02 | Monthly |

SECTION 2.2.1.

Daily Job

Billing

JOB STREAM PROGRAMS AND FILES

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: BILLING

JOB NAME: BILLING EDIT/UPDATE - EMBJ01

RUN FREQUENCY: Daily

| JOB STREAM PROGRAMS | COMPILED SIZE | FILES ACCESSED BY THIS PROGRAM |
|------------------------------|---------------|--------------------------------------|
| EMBU01 - Utility Sort | 50k | EMBF01 EMBF02 |
| EMBU05 - Utility Sort | 50k | EMGF05 EMBF10 |
| EMBP01 - Billing Edit/Update | 54k | EMBF02 EMGF07 EMBF03 EMBF04 |
| EMBU02 - Utility Sort | 50k | EMBF04 EMBF05 |

SECTION 2.2.1.1

Daily Job Flow

Billing

2.2.1.1

PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

JOB FLOW

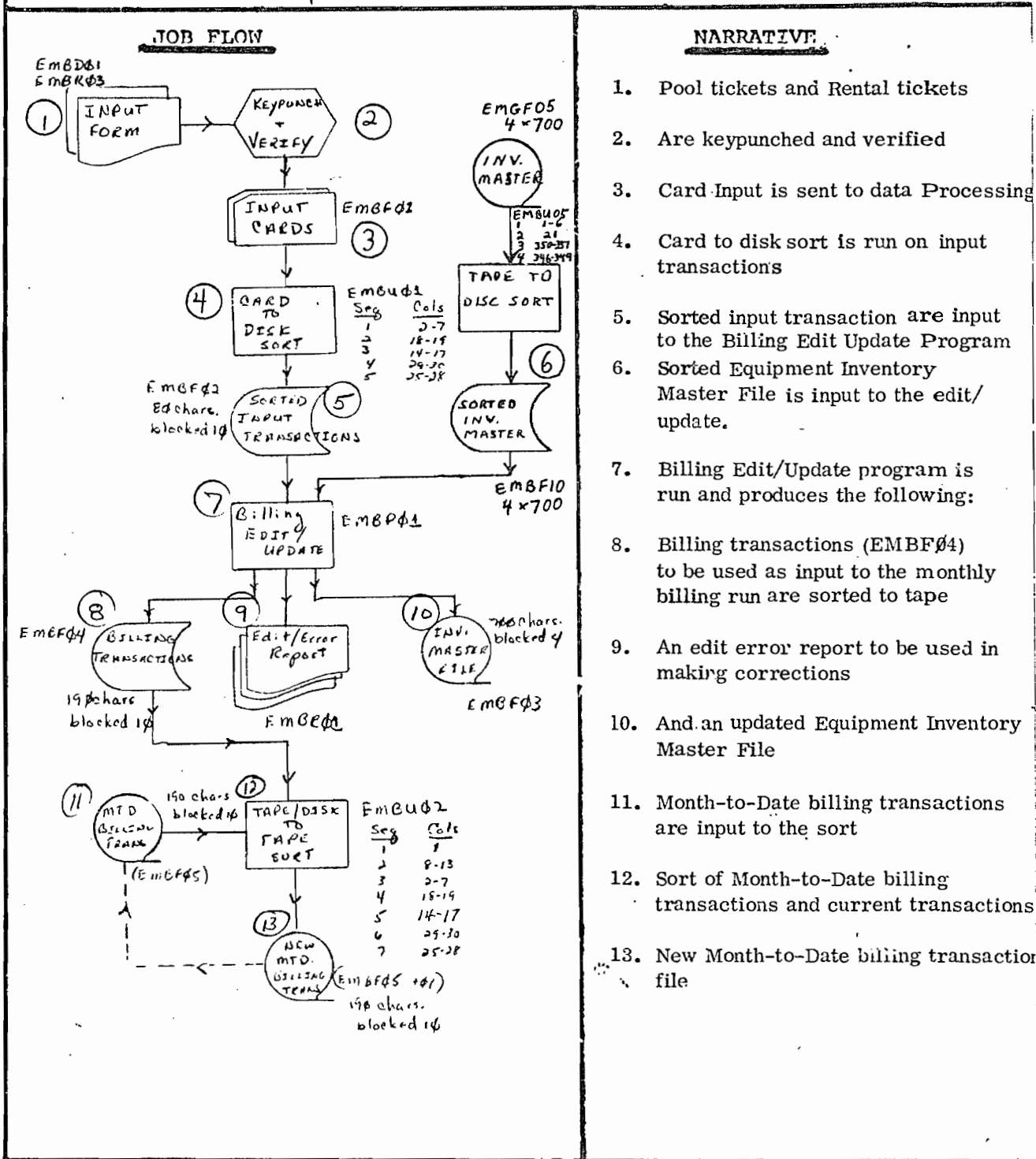
PAGE 1 of 1

MODULE NAME Billing

JOB FLOW NUMBER EMBJ01

JOB FLOW NAME Billing Edit/Update

FREQUENCY Daily



SECTION 2.2.2

Monthly Job

Billing

2.2.2

JOB STREAM PROGRAMS AND FILES

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: BILLING

JOB NAME: Billing Report and Meter Reading - EMBJ02

RUN FREQUENCY: Monthly

| JOB STREAM PROGRAMS | COMPILED SIZE | FILES ACCESSED BY THIS PROGRAM |
|-------------------------|---------------|--|
| EMBU03 - UTILITY SORT | 50k | EMRF06 EMBF07 |
| FMBU04 - UTILITY SORT | 50k | EMBF03 EMBF08 |
| EMBP02 - Billing Report | 40k | EMBF08 EMBF07 EMBF05 EMGF03 EMBF06 |
| EMBP03 - Meter Report | 30k | EMGF03 EMBF08 EMBF09 |
| | 2.2.2-1 | |

Section 2.2.2.1

Monthly Job Flow

Billing

PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

JOB FLOW

PAGE 1 of 1

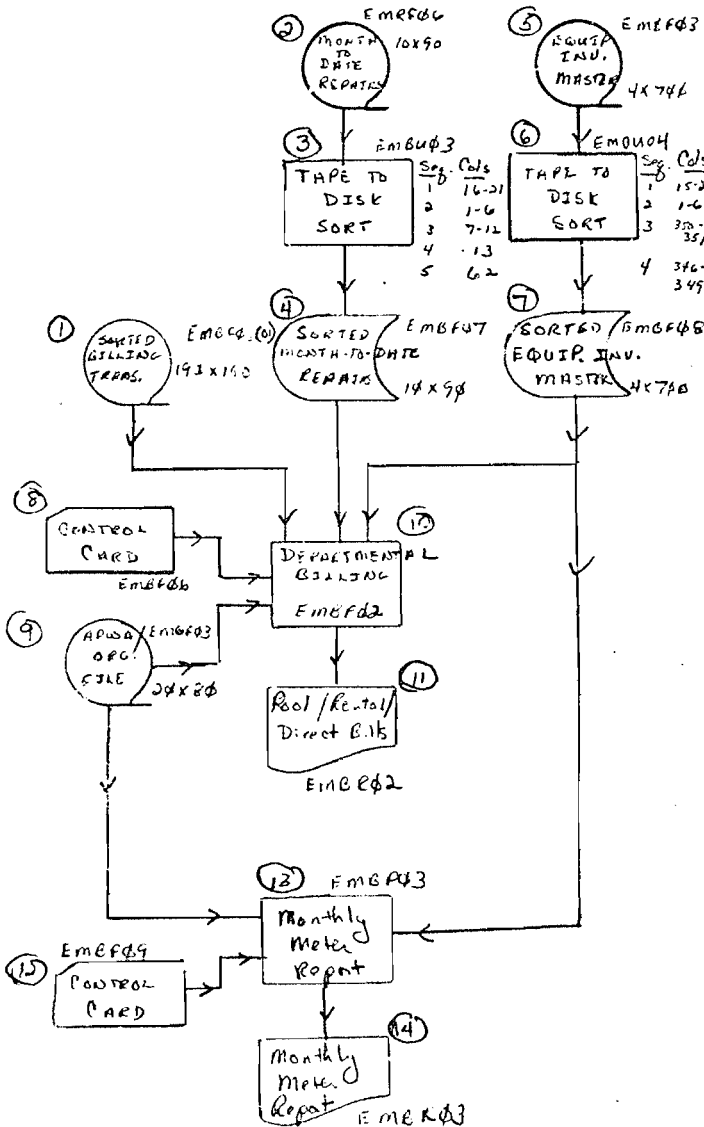
MODULE NAME BILLING

JOB FLOW NUMBER EMBJ02

JOB FLOW NAME Departmental Billing/Monthly Meter Report

FREQUENCY Monthly

JOB FLOW



NARRATIVE

1. Sorted Billing Transactions are input to Billing Program
2. Month-to-date repair file is input to sort
3. Tape to disk sort is run
4. Sorted repairs are input to Billing Program
5. Equipment Inventory Master File is input to sort
6. Tape to disk sort is run
7. Sorted Equipment Inventory Master File is input to Billing Program and Monthly Meter Report Program
8. Control Card is input to Billing program
9. APWA/Organization Table is input to Billing Program and Monthly Meter report
10. Departmental Billing program is run and produces
11. The Pool/Rental/and Direct Charge Bills
12. Control card is input to Monthly Meter Report
13. Monthly Meter Report Program is run and produces
14. The Monthly Meter Report

SECTION 3.1.1

Program Narrative

Billing Edit/Update

BILLING EDIT/UPDATE

PROGRAM NARRATIVE

This program reads and edits the daily pool tickets and monthly rental. An edit report is produced showing all transactions with any errors indicated. Valid transactions update the inventory master file with billing amounts, while invalid transactions are only listed without any update action taking place. The program also produces a billing transaction file for all valid record; this file is used as input to the departmental billing program (EMBP02).

SECTION 3.1.2

Program Specifications

Billing Edit/Update

3.1.2

BILLING EDIT/UPDATE
PROGRAM SPECIFICATIONS

Purpose:

This program edits the daily and/or monthly rental tickets and updates the following fields of the Inventory Master record with the valid transactions:

- 1) Master - Current - Meter - Read
- 2) Master - Meter - Read - Last - Mo.
- 3) Master - Rental - Charge - CM
- 4) Master - Rental - Charge - YTD
- 5) Master - Rental - Charge - LTD

Program Input:

- 1) Old Inventory Master (EMBF01)
 - a) Sort Sequence: Ascending
 1. Equipment Number
 2. Status Code
 3. Date of Last Status Change
 - b) Blocking Factor: 4 records per block
 - c) Record Size: 700 characters
- 2) Billing Transactions (EMBF02)
 - a) Sort Sequence: Ascending
 1. Equipment Number
 2. Date Out
 3. Date In
 - b) Record Size: 80 characters, blocked by 10

Program Output:

- 1) Updated Inventory Master (EMBF03)
 - a) Sort Sequence: Ascending
 1. Equipment Number
 2. Date of Last Status Change
 - b) Blocking Factor: 4 records per block
 - c) Record Size: 700 characters
- 2) Billing Transactions (Appended) (EMBF04)
 - a) Sort Sequence: Ascending
 1. Equipment Number
 2. Date Out
 3. Date In
 - b) Blocking Factor: 10 records per block
 - c) Record Size: 190 characters
- 3) Transaction Error Listing (EMBR01)

Processing Concepts:

All processing is sequential. Each Transaction is validated and then matched against the Inventory Master File until the following conditions are satisfied:

- 1) Transaction Equipment # equals Inventory Master Equipment #
- 2) Transaction Date In is less than or equal to Last Status Change Date of Master
- 3) Transaction Organization Number equals Inventory Master Organization Number ('M' type transactions only)

Since multiple transactions may use the same inventory master record billing rate schedule, individual rental ticket charges are accumulated and then applied as a single master update entry.

Because the renting organization of the pool vehicle master will differ from the user organization specified on the pool ticket ('P' type transaction), it is necessary to pull off all billing and vehicle description information from the inventory master and append it to the billing transaction. This data will be used by the departmental billing program (EMBP02) when producing itemized bills by organization.

Program Specifications:

Program processing falls into the following four (4) categories:

- 1) Individual and combined field validation
- 2) Calculation of Rental Charges
- 3) Creation of an appended billing transaction file
- 4) Updating of the Inventory Master File

1) Field Editing:

Paragraphs X204 thru X238 perform the various data element edits (refer to the sheet entitled "Individual Field Edits").

2) Calculation of Rental Charges:

Performed by paragraphs X240-Flat-Rate-Usage-Calc thru X240-Amt-Calculations.

The "Meter-out" and "Meter-in" transaction fields are used in conjunction with the "use rate" fields of the inventory master billing schedule. The "Date" and "Time" transaction fields are associated with the inventory master "flat rate" field. The following example serves to illustrate the derivation of rental charges:

EXAMPLE OF EQUIPMENT RENTAL CHARGE CALCULATION

Inventory Master Billing Rate Schedule:

| | |
|------------------|------------------|
| Flat Rate | \$125/month |
| Basic Use-Rate | 10¢/mile |
| Use-Rate-B | 8c/mile |
| Use-Rate-C | 5¢/mile |
| Use-Rate-B-Units | over 2,000 miles |
| Use-Rate-C-Units | over 3,000 miles |

Billing Transaction Data:

| | |
|--------------|----------------|
| Date-Out | 01/01/75 |
| Date-In | 01/31/75 |
| Odometer-Out | 20,000 miles |
| Odometer-In | 26,000 miles |
| Time-Out | |
| Time-In | Not Applicable |

Flat Rate Usage = Date-In minus Date-Out = 30 days = 1 month

\$125/month x 1 month = Flat Rate Amount - \$125

Odometer-In minus Odometer-Out equals 6,000 miles (usage)

| | | | |
|-------------------------------|---|---------------------|------------|
| 3,000 miles @ 5¢/mile | = | Rate-C-Amount of | 150 |
| 1,000 miles @ 8¢/mile | = | Rate-B-Amount of | 80 |
| <u>2,000 miles @ 10¢/mile</u> | = | Basic Use Amount of | <u>200</u> |
| 6,000 miles | | Total Rental Charge | \$555 |

- 3) **Creation of a Billing Transaction File**
Paragraph X240-Build-Billing-Record creates an appended billing Transaction record. The newly calculated rental amounts are added to this record before issuing a write command.

- 4) **Updating of the Inventory Master**
The two paragraphs prefixed with X209 handle the updating of the rental amount fields of the Inventory Master.

Individual Field Edits

| <u>Field No.</u> | <u>Edit</u> |
|------------------|--|
| 1 | Must contain a 'P' or 'M' |
| 2 | Must be present |
| 3 | Numeric |
| 4 | MMDDYY - MM - less than or equal to 12 DD - less than or equal to 31 YY - less than or equal to current year |
| 5 | HHMM HH - less than or equal to 12 (24) MM - less than or equal to 59 |
| 6 | X 'A' or 'P' (AM or PM) |
| 7 | MMDDYY Same as 4 |
| 8 | HHHH Same as 5 |
| 9 | X Same as 6 |
| 10 | Numeric |
| 11 | Numeric |

NOTES:

- 1) Date-out must be less than or equal to the Date-in.
- 2) Closing odometer reading (Meter in) must be greater than the opening odometer reading (Meter out).
- 3) Combination of Date-in/Time-in must be greater than Date-out/time-out.

SECTION 3.1.3

Definitions

Billing Edit

3.1.3

| Switches, Counters Data Elements | Use | |
|-------------------------------------|---|-----------------------|
| Meter-Bypass-Ind. | I/O Control indicator for the inventory master file. Records will be read only when the indicator has a value of zero (off). | '0'=off '1'=on |
| WS-Error-Ind. | When "on", a setting of '1', this indicator prevents an invalid transaction from being matched against the inventory master file. | '0'=off '1'=on |
| WS-Comb-Date-Error-Ind. | When set to '1' (on) it allows for the repetition of the error field print routine. For example, this will occur when the transaction Date-out is greater than the Date-in. | '0'=off |
| Org-No-Match-Ind. | When set to '1' (on) it indicates that an 'M' type transaction has a matching equipment number on the inventory master but the organization codes differ. | '0'=off '1'=on |
| WS-Out-Billing-Ind. | I/O control indicator for the appended billing transaction file. When set to a value of '1' (on) this file is omitted. | '0'=off '1'=on |

SECTION 3.1.4
Paragraph Explanations
Billing Edit

Paragraph Explanations

| <u>Paragraph -ID</u> | <u>Functions</u> |
|----------------------|---|
| X000 | Open Files |
| X200 | Read Transaction |
| X202 | List Transaction |
| X204 through X238 | Field Edit Routines |
| X206 | Read Master File |
| X208 | Comparison of File Criteria |
| X209 | Update Master File |
| X210 | Transaction Organization Error Routine |
| X212 | Transaction Equipment # Error Routine |
| X240 through X241 | Create Rental Billing File |
| X250 through X256 | Error Print Routines |
| X400 through X430 | Page Heading Routines |
| X900 through X906 | Print Report Line |
| X304 | Print Report Totals |
| X305 | Close Files |

SECTION 3.1.5

Report Layout

Billing Edit

3.1.5

Fold back at dotted line

Fold back at dotted line

THE 10-5 PRINT CHART PROJ. ID EMEPH PAGE _____ DATE _____

NOTE: THIS CHART IS TO BE USED FOR THE RECORDING OF THE OPERATIONS OF THE SYSTEM WITH A PAPER TAPE IN THE PRESENCE OF A PAPER TAPE.

PROGRAMMER OR DOCUMENTALIST R. Debb

PROGRAM TITLE Billing Edit Program

DATE OF PRINT 11-15-54

OPERATOR EMEPH

OPERATION EMEPH

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SECTION 3.2.1
Program Narrative
Departmental Billing

3.2.1

DEPARTMENT BILLING

PROGRAM NARRATIVE

This program reads the sorted equipment inventory master file, month-date repair file, and billing transaction file and produces monthly invoices for each vehicle. These invoices are produced for all rental, pool, and direct charge vehicles.

The bills are produced in organization sequence with totals shown for each organization.

SECTION 3.2.2
Program Specifications
Departmental Billing

DEPARTMENTAL BILLING - DIRECT AND RENTAL CHARGESPurpose:

This program generates itemized bills for each organization of all direct and/or rental charges incurred by vehicles.

Program Input:

1. Inventory Master
 - a) Sort Sequence: Ascending
 1. Organization Code
 2. Equipment Number
 - b) Blocking Factor: 4 records per block
 - c) Record Size: 700 characters
2. Month-to-Date (MTD) Repair Order File
 - a) Sort Sequence: Ascending
 1. Organization Code
 2. Equipment Number
 3. Repair Order Number
 4. Record Type
 5. Identification Code
 - b) Blocking Factor: 10 records per block
 - c) Record Size: 90 characters
3. Billing Transaction File (appended)
 - a) Sort Sequence: Ascending
 1. Record Type
 2. Organization Code
 3. Equipment Number
 4. Date-Out
 5. Date-In
 - b) Blocking Factor; 10 records per block
 - c) Record Size: 190 characters

4. Organization/APWA/Facility Name File
 - a) Sort Sequence: Ascending
 1. Record Type
 2. Organization-Facility-APWA Codes (Positions 3 thru 11)
 - b) Record Size: 80 characters, unblocked.
5. Date Card
 - a) Program-ID: Columns 1-6 Value 'EMBPØ 2'
 - b) Report Date: Columns 8-15 Value 'MM/DD/YY'

Program Output:

1. Departmental Billing Report

Detail Narrative:

All processing is sequential. Both the Organization Name File and the report date, as submitted on the date card, are stored in memory for use in page headings. The date card is required whereas the Organization Name File is optional. Except for the appearance of all organizational pool vehicle ('P' type billing transactions) rental charges at the end of the report, direct and monthly ('M' type billing transactions) rental charges will be interspersed. With minor program modifications separate reports can be generated.

Program logic is such that the appended Billing Transaction File is optional. If all billing is to be direct charge, this file should be omitted. In the situation where there are no transactions for a rental vehicle, this program will generate an estimated bill using the master record rate schedule along with the following:

1. Master-Meter-Units-OP-LM
2. Master-Normal-Duty-Hrs-Mon

The "normal duty hours per month" field of the master will be converted to days (8 hours = 1 day) for a daily flat rate rental. The method of calculating the rental charge is illustrated in the documentation for the Billing Transaction Edit and Update (EMBPØ1).

The Month-to-Date (MTD) Repair Order File contains labor, parts, and commercial costs repair information. For direct charge inventory records all repairs on a vehicle while assigned to a specific organization will be reflected. Rental vehicle repairs will be shown if either of the following conditions exist:

1. "Bill-User-Repair-Indicator" of the MTD Repair Order Header record is set to 'Y'.
2. "Bill-Accident-Repair-Indicator" of the inventory master has a value of 'Y' and the "Repair-Reason-Indicator" of the MTD Repair Order Header record has a value of 'B'.

In addition to repair and rental charges, fuel, oil, and miscellaneous costs from the inventory master are included in the total operating expense for a vehicle.

All costs are summarized by vehicle, fund, organization and report.
NOTE: The specifications did not call for the itemizing of insurance and depreciation expenses.

SECTION 3.2. 3
Definitions
Departmental Billing

| Switches, Counters, Data Elements | Use | |
|--------------------------------------|---|---------------------------|
| Out-of-Seq-Error-Ind. | When this indicator is set to '1' (on) a sequencing error has occurred in the organization name file and the job is terminated. | Space=off '1'=on |
| Date-Err-Ind. | If this indicator is off (value of space) a date card has not been processed and the job is aborted. | Space=off '1'=on |
| Master-in-Work-Area-Ind. | It initially has a value of space so as to place the first inventory master record in the work area. | Space=off '1'=on |
| EOF-Ind. | When "turned on" (value of '1') it indicates end of file on the inventory master. | Space=off '1'=on |
| Repair-Order-File-Bypass Ind. | When "turned on" (value of '1') this indicator prevents any reading from the Month-to-Date (MTD) Repair Order File. | Space=off '1' = on |
| Vehicle-Break-Ind. | When this indicator is set to '1' the vehicle cost total print routine is activated. | Space=off '1'=on |
| Fund-No. -Break-Ind. | When set to '1' this indicator activates the Fund Number print routine. | Space=off '1'=on |
| 3.2.3-1 | | |

| Switches, Counters, Data Elements | Use | |
|--------------------------------------|--|---------------------------|
| Organization-Break-Ind. | When set to '1' this indicator activates the print routine giving organization totals. | Space=off '1'=on |
| Repair-Reason-Ind. | This indicator is the stored contents of the field entitled "MTD-Head-Reason-In" in the MTD Repair Order header record. | Values 'A' Thru 'U' |
| Bill-User-Repair-Ind. | This indicator is the stored contents of the field entitled "MTD-Head-Bill-User" of the MTD Repair Order header record. | Space=No 'Y'=Yes |
| Pool-Rental-Ind. | When "turned on" (Value of '1') this indicator prevents the reading of records from the appended billing transaction file. | Space=off '1'=on |
| Records-Match-Ind. | When this indicator is set to a value of '1' the inventory master record criteria matches that of the appended billing transaction file. | Space=off '1'=on |
| Estimate-Ind. | When this indicator is set to a value of '1' an estimated rental charge is calculated for a vehicle with no associated billing transactions using last month's mileage data. | '0'=off '1'=on |
| | 3.2.3-2 | |

SECTION 3.2.4
Paragraph Explanations
Departmental Billing

3.2.4

Paragraph Explanations

| <u>Paragraph - ID</u> | <u>Function</u> |
|-------------------------------------|--|
| X000 | Program Initialization |
| X200 through X206 | Processing of Card File |
| X210 | Processing of Master File |
| X215 - Read | Reading of Rental Ticket File |
| X215 - Master | Generation of a Bill from Rental Tickets |
| X215 - Generate through X215 - Amt. | Generation of an Estimated Bill Based on Last Month's Usage |
| X215 - Repairs | Generation of R/O Column Headings |
| X220 through X235 | Processing of MTD R/O File |
| X236 | Printing of Vehicle Totals |
| X237 | Printing of Fund Totals |
| X238 | Printing of Organization Totals |
| X300 - Report | Printing of Report Totals |
| X300 - Page through X300 Exit | Page Heading Routine |
| X305 - Rental through X315 - Rental | Processing of Rental Tickets |
| X350 - X370 | Processing of Pool Vehicle Rental Tickets |
| X999 | Close Files |

SECTION 3.2.5
Report Layout
Departmental Billing

3.2.5

EMBR02

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------------------|-------------|------------|------------|---------------|-------------------|------------|--------|--------|----------|---------------|-------------------|--------|
| IN DATE: | MM/DD/YY | | | | | | | | | | | |
| PERIOD ENDING | MM/DD/YY | | | | | | | | | | | |
| ORGANIZATION | XXXXXX | | | | | | | | | | | |
| EQUIPMENT ID - | XXXXXX | XXXX | XXXXXXXXXX | XXXXXXXXXX | FUND NUMBER - | XXXXXXXXXX | | | | | | |
| PLAT RATE | XXXXX UNITS | | AT XXX.XX | PER UNIT | | | | | | | | |
| MATIC USE RATE | XXXXX UNITS | | AT XXX.XX | PER UNIT OVER | XXXX UNITS = | XXXX.XX | | | | | | |
| PER RATE | XXXXX UNITS | | AT XXX.XX | PER UNIT OVER | XXXX UNITS = | XXXX.XX | | | | | | |
| USE RATE | XXXXX UNITS | | AT XXX.XX | PER UNIT OVER | XXXX UNITS = | XXXX.XX | | | | | | |
| REPAIR NUMBER | SHIP HO. | LABOR COST | PARTS COST | COIN. COST | TOTAL COST *----- | FUEL----- | *----- | *----- | OTL----- | MISC. COST | FUEL + OTL + MISC | |
| XXXXXX | XXXX | XXX.XX | XXX.XX | XXX.XX | IF REPAIR GALLONS | XXX.XX | | | | | | |
| XXXXXX | XXXX | XXX.XX | XXX.XX | XXX.XX | | XXX.XX | | | | | | |
| XXXXXX | XXXX | XXX.XX | XXX.XX | XXX.XX | | XXX.XX | | | | | | |
| XXXXXX | XXXX | XXX.XX | XXX.XX | XXX.XX | | XXX.XX | | | | | | |
| VEHICLE SUBTOTALS | | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX | XXX.XX |
| | | | | | | | | | | VEHICLE TOTAL | XXX.XX | XXX.XX |

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SECTION 3.3.1
Program Narrative
Meter Reading Report

Program No: EMBP03

Monthly Meter Report
Program Narrative

This program produces a listing of equipment within organization for use in reporting meter readings for billing. A control card allows the selection of rental equipment, direct charge equipment, or both.

SECTION 3.3.2
PROGRAM SPECIFICATIONS
METER READING REPORT

3.3.2

MONTHLY METER REPORT

Program Specifications

I. Purpose: To produce a listing of equipment within organization sequence to provide meter readings to be used for billing purposes.

II. Inputs:

1. Equipment Inventory Master File
2. APWA/Organization Table
3. Control Card

III. Outputs:

1. Monthly Meter Report

IV. Processing

Step 1 - Read the control card and check for the following:

| cols. | contents |
|-------|---|
| 1-6 | EMBPØ3 |
| 7 | space |
| 8 | "R" - Rental "D" - Direct Charge "B" - Both |

Step 2 - If the control card is missing or invalid produce an error message

Step 3- Read the APWA/Organization table and build a table in storage for use by the heading routine.

Step 4 - Set up Current Date and Beginning Date for Meter report. Beginning Date is Current Month and Year with the Day set to "Ø1"

Step 5 - Read the Equipment Inventory Master File

Step 6 - Check that the Status code is active and the vehicle is a metered vehicle. If not active, or unmetered, go and get another master record.

Step 7 - Check the Billing Basis on the Master against the value in the control card.

| Control card value | Master File Records to be used |
|--------------------|--------------------------------|
| R | Rental vehicles only |
| D | Direct-charge vehicles only |
| B | All vehicles |

Step 8 - Perform a break whenever the organization on the master file changes.

Step 9 - Produce one line of data for each vehicle selected. (See Report Layout for data)

Step 10 - Go to step 5 and continue processing until the end of the Master File.

SECTION 3.3.3
DEFINITIONS
METER READING REPORT

3.3.3

Monthly Meter Report

| Counters. Switches Data Elements | Use |
|-------------------------------------|---|
| CNTRL-CRD | Control Card work area |
| TABLE-CRDS | Organization table input area |
| TABLE-ORGN | Organization table area |
| ORN-CNT | Counter for organization table |
| TOP-OF-PAGE | Line count to be used for top-of-page routine |
| HOLD-ORGN | Used to check for page break on organization change |
| ORGN-FIND-SW | Used to indicate organization name was found in the table Value 0 - Name not found Value 1 - Name found |
| TAB-SUB | Subscript used for searching the organization table |

SECTION 3.3.4
PARAGRAPH EXPLANATIONS
METER READING REPORT

APPENDIX A
FILE DESCRIPTIONS AND RECORD LAYOUTS

Monthly Meter Report

| <u>Paragraph Numbers</u> | <u>Paragraph Explanations</u> |
|------------------------------|---|
| 100 | Initialization of input |
| 110 | Control Card check |
| 120 | Organization table routine |
| 200 | Initialization of Dates |
| 210 | Read Equipment Inventory Master file and perform check of use status code |
| 220 | Process the master record |
| 399 | End of job routine |
| 600-610 | Control card error routines |
| 620 | Organization table error routines |
| 710-711 | Organization table search routines |
| 900 | Equipment Inventory input routines |
| 910 | Heading Routines |
| 911-912 | End of page routines |
| 920 | Printer Write routines |

SECTION 3.3.5
REPORT LAYOUT
METER READING REPORT

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Number of forms per set may vary.

15-113 PRINT CHART PROC 40

PROGRAMMER OR DOCUMENTAUST

DATE: XXX 29, 1999

ASSIGNED REGISTRATION - XXXXX - XXXXXXXXXXXXX

TRANSPORTATION EQUIP. NUMBER (8-13) (2-7) XXXXX XXXXX

ORGANIZATION NUMBER (8-13) (2-7) XXXXX XXXXX

STARTING DATE (14-19) (14-19) XXXXX

ENDING DATE (15-20) (15-20) XXXXX

STARTING METER READING (36-42) 22229.9

MONTHLY METER READING (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

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VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

VEHICLE DESCRIPTION (43-49) XXXXXXXXXXXXXXXX

VEHICLE BODY YEAR (43-49) XXXXX

FILE DESCRIPTION FORM

SYSTEM NAME: PT/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Inventory Master (EMBF10, EMGF05)

VOLUME DEVICE: Tape Drive

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME (FIRST SECOND, ETC): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 700

RECORDS PER BLOCK: 4

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: _____

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 2800

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 1 record per vehicle

CREATING PROGRAM: EMGP06. (EMGF05)
EMBU05 (EMBF10)

REFERENCING PROGRAM(S):

PROGRAM

EMBP01

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Inventory Master (EMBF03)

VOLUME DEVICE: Tape Drive

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 700

RECORDS PER BLOCK: 4

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: 6 weeks

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 2800

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 1 record per vehicle

CREATING PROGRAM: EMBP01

REFERENCING PROGRAM(S):

PROGRAM

EMBU04

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Inventory Master (EMBF03)

VOLUME DEVICE: Disk Drive

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 700

RECORDS PER BLOCK: 4

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: _____

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 2800

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 1 record per vehicle

CREATING PROGRAM: EMBU04

REFERENCING PROGRAM(S):

| <u>PROGRAM</u> | <u>ACCESS METHOD</u> |
|----------------|----------------------|
| EMBP02 | Sequential |
| EMBP03 | " |

PTI/APWA EQUIPMENT MANAGEMENT SYSTEMFILE NAME: Equipment Inventory MasterRECORD LENGTH: 700FILE NUMBER: FMGF05, EMBF03, EMBF08
EMBF10BLOCKING FACTOR: 4

| FIELD NO. | DATA ELEMENT NAME | POSITIONS | LENGTH | PICTURE OR REMARKS |
|-----------|-----------------------------|-----------|--------|----------------------|
| 1 | Equipment Number | 1-6 | 6 | X(6) |
| 2 | APWA Code | 7-14 | 8 | Refer to APWA Manual |
| 3 | Organization Code | 15-20 | 6 | X(6) |
| 4 | Use Status Code | 21 | 1 | "blank, 1, 2, 3" |
| 5 | Date Received | 22-27 | 6 | MMDDYY |
| 6 | Estimated Life | 28-30 | 3 | S999V |
| 7 | Estimated Life Code | 31 | 1 | "1-3" |
| 8 | Salvage Value | 32-36 | 5 | S99999V |
| 9 | Purchase Order Amount | 37-44 | 8 | S9(6)V99 |
| 10 | Unit Depreciation Amount | 45-50 | 6 | S999V999 |
| 11 | PM Interval-Months | 51-52 | 2 | S99V |
| 12 | PM Interval-Meter Units | 53-57 | 5 | S9(5)V |
| 13 | PM Sequence | 58-65 | 8 | X(8) |
| 14 | PM Pointer | 66 | 1 | "1-8" |
| 15 | Assigned PM Location | 67-70 | 4 | X(4) |
| 16 | Meter Unit | 71 | 1 | "H", "M" or "X" |
| 17 | Bill Accident Repairs | 72 | 1 | "Y" or "N" |
| 18 | Billing Basis | 73 | 1 | "R" or "D" |
| 19 | Insurance Schedule | 74-76 | 3 | X(3) |
| 20 | Normal Duty Hours Per Month | 77-79 | 3 | S999V |
| 21 | Seasonal Usage | 80 | 1 | X |
| 22 | Flat Rate | 81-86 | 6 | S9999V99 |
| 23 | Flat Rate Unit Code | 87 | 1 | "M", "D" or "C" |

PTI/APWA EQUIPMENT MANAGEMENT SYSTEM

FILE NAME: Equipment Inventory Master

RECORD LENGTH: 700

FILE NUMBER: EMGF05, EMBF03, EMBF08
EMBF0

BLOCKING FACTOR: 4

| Field Number | DATA ELEMENT NAME | Position | Length | Picture or Remarks |
|--------------|---------------------------------|----------|--------|-------------------------|
| 24 | Basic Use Rate | 88-93 | 6 | S999V999 |
| 25 | Use Rate B | 94-99 | 6 | S999V999 |
| 26 | Use Rate B Units | 100-104 | 5 | S9 (5) V |
| 27 | Use Rate C | 105-110 | 6 | S999V999 |
| 28 | Use Rate C Units | 111-115 | 5 | S9 (5) V |
| 29 | Old Equipment Number | 116-121 | 6 | X(6) |
| 30 | Date Released | 122-127 | 6 | MMDDYY |
| 31 | Old Property Control Number | 128-135 | 8 | X(8) |
| 32 | GVWR-Pounds | 136-141 | 6 | S9 (6) V |
| 33 | Improvement Added-Current Month | 142-148 | 7 | S9999V99 |
| 34 | Improvement Added-Life to Date | 149-156 | 8 | S99999V99 |
| 35 | Fuel Tank Capacity | 157-159 | 3 | S999V |
| 36 | Fuel Type | 160 | 1 | X |
| 37 | Description | 161-180 | 20 | X(20) |
| 38 | Fund Number | 181-192 | 12 | X(12) |
| 39 | Inspection Frequency-Months | 193-194 | 2 | S99V |
| 40 | Assigned Service Location | 195-198 | 4 | X(4) |
| 41 | Highway Code | 199 | 1 | "1-3" |
| 42 | Chassis Mfr. Code | 200-203 | 4 | X(4) |
| 43 | Chassis Model Number | 204-210 | 7 | X(7) |
| 44 | Chassis Serial Number | 211-230 | 20 | X(20) |
| 45 | Chassis Model/Year | 231-232 | 2 | Last two digits of year |

PTI/APWA EQUIPMENT MANAGEMENT SYSTEM

FILE NAME: Equipment Inventory MasterRECORD LENGTH: 700FILE NUMBER: EMGF05, EMBF03, EMBF08, EMBF10BLOCKING FACTOR: 4

| FIELD NO. | DATA ELEMENT NAME | POSITIONS | LENGTH | PICTURE OR REMARKS |
|-----------|------------------------------------|-----------|--------|-------------------------|
| 46 | Title Number | 233-241 | 9 | X(9) |
| 47 | Property Control Number | 242-249 | 8 | X(8) |
| 48 | Purchase Order Number | 250-257 | 8 | X(8) |
| 49 | License Tag Number | 258-266 | 9 | X(9) |
| 50 | Domicile Code | 267-270 | 4 | X(4) |
| 51 | Body Mfr. Code | 271-274 | 4 | X(4) |
| 52 | Body Model Number | 275-282 | 8 | X(8) |
| 53 | Body Serial Number | 283-302 | 20 | X(20) |
| 54 | Body Model Year | 303-304 | 2 | last two digits of year |
| 55 | Current Meter Reading | 305-311 | 7 | S99999V9 |
| 56 | Meter Reading Last Month | 312-318 | 7 | S99999V9 |
| 57 | Meter Failure Flag | 319 | 1 | "0" or "1" |
| 58 | Meter Reading at Failure | 320-326 | 7 | S99999V9 |
| 59 | Meter Units Operated Current Month | 327-332 | 6 | S99999V9 |
| 60 | Meter Units Operated Last Month | 333-338 | 6 | S99999V9 |
| 61 | Meter Units Operated-Life to Date | 339-345 | 7 | S99999V9 |
| 62 | Date Last Status Change | 346-351 | 6 | MMDDYY |
| 63 | Downtime Hours-CM | 352-355 | 4 | S999V9 |
| 64 | Downtime Hours-LTD | 356-361 | 6 | S99999V9 |
| 65 | Insurance Cost-CM | 362-366 | 5 | S999V99 |
| 66 | Insurance Cost-YTD | 367-372 | 6 | S9999V99 |
| 67 | Insurance Cost-LTD | 373-379 | 7 | S99999V99 |

PTI/APWA EQUIPMENT MANAGEMENT SYSTEMFILE NAME: Equipment Inventory MasterRECORD LENGTH: 700FILE NUMBER: EMGF05, EMBF03, EMBF08, EMBF10BLOCKING FACTOR: 4

| FIELD NO. | DATA ELEMENT NAME | POSITIONS | LENGTH | PICTURE OR REMARKS |
|-----------|-----------------------------|-----------|--------|--------------------|
| 68 | Current Book Value | 380-387 | 8 | S999999V99 |
| 69 | Depreciation-CM | 388-393 | 6 | S9(4)V99 |
| 70 | Depreciation-YTD | 394-400 | 7 | S9(5)V99 |
| 71 | Depreciation-LTD | 401-408 | 8 | S9(6)V99 |
| 72 | Fuel Consumption (Gal.)-CM | 409-413 | 5 | S9999V9 |
| 73 | Fuel Consumption (Gal.)-YTD | 414-419 | 6 | S9(5)V9 |
| 74 | Fuel Consumption (Gal.)-LTD | 420-426 | 7 | S9(6)V9 |
| 75 | Fuel Cost - CM | 427-432 | 6 | S9999V99 |
| 76 | Fuel Cost - YTD | 433-440 | 8 | S9(6)V99 |
| 77 | Fuel Cost - LTD | 441-448 | 8 | S9(6)V99 |
| 78 | Oil Consumption (Qts.)-CM | 449-451 | 3 | S99V9 |
| 79 | Oil Consumption (Qts.)-YTD | 452-455 | 4 | S999V9 |
| 80 | Oil Consumption (Qts.)-LTD | 456-460 | 5 | S9999V9 |
| 81 | Oil Cost - CM | 461-465 | 5 | S999V99 |
| 82 | Oil Cost - YTD | 466-472 | 7 | S9(5)V99 |
| 83 | Oil Cost - LTD | 473-479 | 7 | S9(5)V99 |
| 84 | Misc. Cost - CM | 480-484 | 5 | S999V99 |
| 85 | Misc. Cost - YTD | 485-491 | 7 | S9(5)V99 |
| 86 | Misc. Cost - LTD | 492-498 | 7 | S9(5)V99 |
| 87 | Number Repair Orders - CM | 499-500 | 2 | S99V |
| 88 | Number Repair Orders - LTD | 501-503 | 3 | S999V |
| 89 | Number Road Calls - CM | 504-505 | 2 | S99V |
| 90 | Number Road Calls - LTD | 506-508 | 3 | S999V |

PTI/APWA EQUIPMENT MANAGEMENT SYSTEMFILE NAME: Equipment Inventory MasterRECORD LENGTH: 700FILE NUMBER: EMGF05, EMBF03, EMBF08, EMBF10BLOCKING FACTOR: 4

| FIELD NO. | DATA ELEMENT NAME | POSITIONS | LENGTH | PICTURE OR REMARKS |
|-----------|-----------------------------|-----------|--------|--------------------|
| 91 | Scheduled Labor Hours - CM | 509-513 | 5 | S9(4)V9 |
| 92 | Scheduled Labor Hours - LTD | 514-519 | 6 | S9(5)V9 |
| 93 | Total Labor Hours - CM | 520-524 | 5 | S9(4)V9 |
| 94 | Total Labor Hours - LTD | 525-530 | 6 | S9(5)V9 |
| 95 | Labor Cost - CM | 531-537 | 7 | S9(5)V99 |
| 96 | Labor Cost - LTD | 538-545 | 8 | S9(6)V99 |
| 97 | Parts Cost - CM | 546-552 | 7 | S9(5)V99 |
| 98 | Parts Cost - LTD | 553-560 | 8 | S9(6)V99 |
| 99 | Commercial Cost - CM | 561-567 | 7 | S9(5)V99 |
| 100 | Commercial Cost - LTD | 568-575 | 8 | S9(6)V99 |
| 101 | Accident Cost - CM | 576-583 | 8 | S9(6)V99 |
| 102 | Accident Cost - LTD | 584-591 | 8 | S9(6)V99 |
| 103 | Warranty Cost - CM | 592-599 | 8 | S9(6)V99 |
| 104 | Warranty Cost - LTD | 600-607 | 8 | S9(6)V99 |
| 105 | Billed Amount - CM | 608-614 | 7 | S9(5)V99 |
| 106 | Billed Amount - YTD | 615-621 | 7 | S9(5)V99 |
| 107 | Billed Amount - LTD | 622-629 | 8 | S9(6)V99 |
| 108 | Miles or Hours per Gallon | 630-635 | 6 | S999V999 |
| 109 | Date Last PM | 636-641 | 6 | MMDDYY |
| 110 | Meter Last PM | 642-648 | 7 | S9(6)V9 |
| 111 | Type of Last PM | 649 | 1 | "A, B, or C" |
| 112 | Date Last State Inspection | 650-655 | 6 | MMDDYY |
| 113 | Total Repair Cost - YTD | 656-663 | 8 | S9(6)V99 |
| 114 | Filler | 664-700 | 37 | X(37) |

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Pool Ticket and Rental Cards (EMBU01)

VOLUME DEVICE: Card Reader

FILE ORGANIZATION: Sequential

FILE NUMBFR OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 80

RECORDS PER BLOCK: 1

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: 6 weeks

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 80

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 1 card each time pool vehicle is signed out. 1 card at end of month for each rental vehicle.

CREATING PROGRAM: N/A

REFERENCING PROGRAM(S):

PROGRAM

EMBU01

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Billing Transactions (EMBF02)

VOLUME DEVICE: Disk Drive

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME (FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 80

RECORDS PER BLOCK: 10

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: _____

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 800

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: Same as EMBF01

CREATING PROGRAM: EMBU01

REFERENCING PROGRAM(S):

PROGRAM

EMBP01

ACCESS METHOD

Sequential

RECORD LAYOUT

CARD TYPE M

FILE NAME: Billing Transaction RECORD LENGTH: 80
FILE NUMBER: EMBF01, EMBF02 BLOCKING FACTOR: 10

Table with 5 columns: Field Number, Field Name, Position, Length, Picture or Remarks. Rows include Card Type, Equipment Number, Organization Code, Date Out, Filler, Date In, Meter Reading Out, Meter Reading In, and Filler.

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Billing Transactions - Appended (EMBF04)

VOLUME DEVICE: Disk

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 190

RECORDS PER BLOCK: 10

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: _____

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 1900

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: Same as EMBF01

CREATING PROGRAM: EMBP01

REFERENCING PROGRAM(S):

PROGRAM

EMBU02

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Billing Transactions - Appended (EMBF05)

VOLUME DEVICE: Tape

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 190

RECORDS PER BLOCK: 10

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: until or after
next successful
run of EMBU02

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 1900

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: All billing transactions from
beginning of current month.

CREATING PROGRAM: EMBU02

REFERENCING PROGRAM(S):

PROGRAM

EMBU02
EMBP02

ACCESS METHOD

Sequential
Sequential

RECORD LAYOUTFILE NAME: Billing Transactions - AppendedRECORD LENGTH: 190FILE NUMBER: EMBF04 - EMBF05BLOCKING FACTOR: 10

| Field Number | Field Name | Position | Length | Picture or Remarks |
|--------------|---------------------|----------|--------|----------------------------|
| 1 | Card Type | 1 | 1 | X(01) "M" |
| 2 | Equipment Number | 2-7 | 6 | X(06) |
| 3 | Organization Code | 8-13 | 6 | 9(06) |
| 4 | Date Out | 14-19 | 6 | 9(03) MMDDYY |
| 5 | Time Out | 20-24 | 5 | 9(05) HHMM- ^A P |
| 6 | Date In | 25-30 | 6 | 9(03) MMDDYY |
| 7 | Time In | 31-35 | 5 | 9(05) HHMM- ^A P |
| 8 | Meter Reading Out | 36-42 | 7 | 9(06) V9 |
| 9 | Meter Reading In | 43-49 | 7 | 9(06) V9 |
| 10 | APWA Code | 50-57 | 8 | X(08) |
| 11 | User Organization | 58-63 | 6 | X(06) |
| 12 | Fund Number | 64-75 | 12 | X(12) |
| 13 | Meter Unit | 76 | 1 | X(01) |
| 14 | Flat Rate | 77-82 | 6 | S9(04) V99 |
| 15 | Flat Rate Unit Code | 83 | 1 | X(01) |
| 16 | Basic Use Rate | 84-89 | 6 | S9(03) V999 |
| 17 | Use Rate B | 90-95 | 6 | S9(03) V999 |
| 18 | Use Rate B Units | 96-100 | 5 | 9(05) |
| 19 | Use Rate C | 101-106 | 6 | S9(03) V999 |
| 20 | Use Rate C Units | 107-111 | 5 | 9(05) |
| 21 | Description | 112-131 | 20 | X(20) |
| | | A-15 | | |

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Month-to-Date Repair (EMRF06)

VOLUME DEVICE: Tape Drive

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME (FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 90

RECORDS PER BLOCK: 10

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: 6 weeks

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 900

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 20 records for each equipment repair.

CREATING PROGRAM: EMRP02

REFERENCING PROGRAM(S):

PROGRAM

EMBU03

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Month-to-Date Repair (EMBF07)

VOLUME DEVICE: Disk

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 90

RECORDS PER BLOCK: 10

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: _____

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 900

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 20 records for each equipment repair.

CREATING PROGRAM: EMBU03

REFERENCING PROGRAM(S):

PROGRAM

EMBP02

ACCESS METHOD

Sequential

RECORD LAYOUT Format 1FILE NAME: Month-to-Date RepairRECORD LENGTH: 98FILE NUMBER: EMRF06, EMBF07BLOCKING FACTOR: 18

| field number | Field Name | Position | Length | Picture or Remarks |
|--------------|------------------------|----------|--------|-----------------------|
| 1 | Equipment Number | 1-6 | 6 | X(6) |
| 2 | Repair Order Number | 7-12 | 6 | 9(6) |
| 3 | Record Type | 13 | 1 | 9(1) "1" |
| 4 | Identification Code | 14-15 | 2 | X(2) "AA" or "BB" |
| 5 | Organization Code | 16-21 | 6 | 9(6) |
| 6 | APWA Code | 22-29 | 8 | X(8) |
| 7 | Facility Number (Shcp) | 30-33 | 4 | 9(4) |
| 8 | Start Date | 34-39 | 6 | 9(6) MMDDYY |
| 9 | Completion Date | 40-45 | 6 | 9(6) MMDDYY |
| 10 | Work Class | 46 | 1 | X(1) "X", "Y", or "2" |
| 11 | Meter Reading | 47-53 | 7 | 9(6)V9 |
| 12 | Road Call | 54 | 1 | X(1) blank or "Y" |
| 13 | Warranty | 55 | 1 | X(1) blank or "Y" |
| 14 | Reason Brought In | 56 | 1 | X(1) "A" thru "U" |
| 15 | Downtime Hours | 57-60 | 4 | S9(3)V9 |
| 16 | Turn Around Code | 61 | 1 | 9(1) "1" thru "3" |
| 17 | Bill to User | 62 | 1 | X(1) blank or "Y" |
| 18 | Filler | 63-90 | 28 | X(28) |
| | | | | |
| | | | | |
| | | A-19 | | |

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Control Card (EMBP06)

VOLUME DEVICE: Card Reader

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 80

RECORDS PER BLOCK: 1

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: until next monthly run, then change date.

RECORD RELATIVE KEY POSITION:

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 80

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 1

CREATING PROGRAM: N/A

REFERENCING PROGRAM(S):

PROGRAM

EMBP02

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Control Card (EMBF09)

VOLUME DEVICE: Card Reader

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 80

RECORDS PER BLOCK: 1

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: _____

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 80

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 1

CREATING PROGRAM: N/A

REFERENCING PROGRAM(S):

PROGRAM

EMBP03

ACCESS METHOD

Sequential

FILE DESCRIPTION FORM

SYSTEM NAME: PTI/APWA EQUIPMENT MANAGEMENT INFORMATION SYSTEM

COMPONENT NAME: Billing

FILE NAME: Organization/APWA Table (EMGF03)

VOLUME DEVICE: Tape

FILE ORGANIZATION: Sequential

FILE NUMBER OF VOLUME(FIRST, SECOND, ETC.): N/A

RECORD FORMAT: Fixed Length

RECORD LENGTH: 80

RECORDS PER BLOCK: 20

FILE RETENTION:

a. TEMPORARY

b. PERMANENT

RETENTION PERIOD: Until updated with changes to organ. code, APWA code, or facility code.

RECORD RELATIVE KEY POSITION: N/A

KEY LENGTH: N/A

PHYSICAL BLOCKSIZE: 1600

MAXIMUM NUMBER OF LOGICAL RECORDS ON FILE: 225

CREATING PROGRAM: Card-to-tape Utility

REFERENCING PROGRAM(S):

PROGRAM

EMBP02
EMBP03

ACCESS METHOD

Sequential
Sequential

RECORD LAYOUTFILE NAME: Org/APWA TableRECORD LENGTH: 88FILE NUMBER: EMGF03BLOCKING FACTOR: 28

| Field Number | Field Name | Position | Length | Picture or Remarks |
|--------------|-------------------------------|----------|--------|--------------------|
| 1A | Table Identifier | 1 | 1 | "1" |
| 2A | Filler | 2 | 1 | Blank |
| 3A | Organization Code | 3-8 | 6 | X(6) |
| 4A | Filler | 9 | 1 | Blank |
| 5A | Organization Name | 18-24 | 15 | X(15) |
| 6A | Filler | 25-88 | 26 | Blank |
| | Table Identifier | 1 | 1 | "2" |
| 1B | Filler | 2 | 1 | Blank |
| 2B | APWA Code (2 high order pos.) | 3-4 | 2 | X(2) |
| 3B | Filler | 5-9 | 5 | Blank |
| 4B | APWA Description | 18-22 | 13 | X(13) |
| 5B | Filler | 23-88 | 58 | Blank |
| | Table Identifier | 1 | 1 | "3" |
| 2C | Filler | 2 | 1 | Blank |
| 3C | Facility Code | 3-6 | 4 | X(4) |
| 4C | Filler | 7-9 | 3 | Blank |
| 5C | Facility Name | 18-29 | 20 | X(20) |
| 6C | Filler | 38-88 | 51 | Blank |
| | (See NOTE on attached page) | A-26 | | |

NOTE: This file consists of three record types as shown above. The data is maintained on cards, but loaded to tape or disc before processing, using a card to tape or disc sort. The file sequence is in ascending order on pos. 1-8. There can be a maximum of 75 records for each record type (225 maximum records on the file), but there may be less of one or any type.

APPENDIX B
SAMPLE FORMS

PTI/APWA Equipment Management System
MOTOR POOL TICKET

| | | | | | |
|---|---|---------------------|----------------------|------------|---------------------------|
| 1 | P | | | | |
| | | Equipment Number | Organization Code | | |
| | | 2 | 7 | 8 | 13 |
| | | Date Out | | | |
| | | Mon | Day | Year | Time Out |
| | | 14 | 19 | 20 | 23 24 AM (A) PM (P) |
| | | Date In | | | |
| | | Mon | Day | Year | Time In |
| | | 25 | 30 | 31 | 34 35 AM (A) PM (P) |
| | | Start Meter | | Stop Meter | |
| | | 36 | 42 | 43 | 49 |

BY: _____
(Authorizing Signature)

DATE: _____

STATE OF TEXAS - DEPARTMENT OF TRANSPORTATION - TEXAS HIGHWAY DEPARTMENT

Reproduced from best available copy.

FORM 1-68 (REV. 12-64)

IBM 5220 18555 400

| CHASSIS NO | VEHICLE REGISTRATION | VEHICLE IDENTIFICATION | VEHICLE MAKE | VEHICLE MODEL | VEHICLE DESCRIPTION | VEHICLE TYPE | VEHICLE YEAR | VEHICLE WEIGHT | VEHICLE ENGINE | VEHICLE METERS | VEHICLE MILES | VEHICLE OIL | VEHICLE TIRE | VEHICLE WHEELS | VEHICLE HORN | VEHICLE LIGHTS | VEHICLE MIRRORS | VEHICLE OTHER |
|------------|----------------------|------------------------|--------------|---------------|---------------------|--------------|--------------|----------------|----------------|----------------|---------------|-------------|--------------|----------------|--------------|----------------|-----------------|---------------|
| 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 |
| 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 |
| 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 |
| 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 |
| 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 |
| 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 |

PAGE 10 OF 20

VEHICLE IDENTIFICATION NUMBER: XXXXXXXX

VEHICLE MAKE: FORD

VEHICLE MODEL: FORD

VEHICLE YEAR: 1969

VEHICLE WEIGHT: XXXXX

VEHICLE ENGINE: XXXXX

VEHICLE METERS: XXXXX

VEHICLE MILES: XXXXX

VEHICLE OIL: XXXXX

VEHICLE TIRE: XXXXX

VEHICLE WHEELS: XXXXX

VEHICLE HORN: XXXXX

VEHICLE LIGHTS: XXXXX

VEHICLE MIRRORS: XXXXX

VEHICLE OTHER: XXXXX

TO BE USED WHEN A VEHICLE IS ASSIGNED TO YOUR ORGANIZATION

END

DATE

FILMEL)

1-3-78

NTIS