LEAVE ACCRUAL ENHANCEMENT
DETAIL DESIGN

August 8th, 1988

Information Systems and Computing
Office of the President
University of California
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1.0 Introduction

This document addresses Service Request 3086 which asks that vacation and sick leave accrual functions within the Payroll/Personnel System should be modified to:

- Provide the ability to differentiate the administration of leave accrual policy according to collective bargaining attributes and Appointment Title Type, and
- Support the relevant policy statements as they currently exist, in so far as possible, and
- Support the methods of leave accrual referred to in proposed personnel policy, recognizing the calendar month as the accrual period for monthly and semi-monthly employee and the quadri-weekly cycle, comprised of two bi-weekly pay periods, as the accrual period for bi-weekly employees, and
- Provide some degree of historical capability, and
- Allow flexibility for the addition of new leave types.
2.0 Control Tables

Two new tables will be added to the Control File:

- Leave Accrual Table
- Leave Rate Table

Program PPP010 will provide the facility to edit, update, print these two new tables.

Generally speaking, the Leave Accrual Table (LAT) is structured by Collective Bargaining and other attributes, and serves to point to the proper leave hours accrual rates so contained on the Leave Rate Table (LRT). In this manner, more than one designated bargaining group may point to the same set of detail hours accrual rates.

2.1 Leave Accrual Table (LAT)

The Leave Accrual Table acts to store variable factors used for:

1. The derivation of leave hours accrued for the employee and
2. The proration of leave accrued charges to the applicable employee pay distributions.

Form UPAY719, “Leave Accrual Table” (refer to Figure C) is used for table update functions.

2.1.1 LAT Key Data

The Leave Accrual Table is structured according to the following hierarchy of elements (refer to Figure A):

1. Title Type
2. Title Unit Code (TUC)\(^1\)
3. Appointment Representation Code\(^2\)
4. Special Handling Code (SHC)\(^3\)
5. Distribution Unit Code (DUC)\(^4\)
6. Effective Date (month/year)

\(^1\) Any or all of these elements may be entered as blank to designate selection default.

\(^2\) The Appointment Representation Code may be entered as blank only if the Title Unit Code, Special Handling Code, and Distribution Unit Code are also blank.
2.1.2 LAT Record Data

In addition to the above key data, each Leave Accrual Table record will contain the following elements:

1. Threshold Percent

   This is the leave earning threshold (50% time on pay status currently applies to all employee groups).

2. Maximum Vacation Hours Override

   While the maximum leave hours accrued may vary from one personnel program to another, each employee has but a single maximum for any given accrual period regardless of the number of payments in different personnel programs. The employee’s maximum is assumed to be the highest maximum vacation hours value encountered for the accrual period under consideration.

   If entered as non-blank, the Maximum Vacation Hours Override will be used to replace the derived maximum leave hours indicated by the Leave Rate Table (i.e., this employee group is restricted to this maximum accrual regardless of IRTI Leave Plan).

3. Maximum Sick Hours Override

   Refer to Maximum Vacation Hours Override.

4. Maximum Paid Time Off Override

   Refer to Maximum Vacation Hours Override.

5. Hours Per Day

   This element contains the number of normal work hours per day of the employee group (default is 8 hours).

6. Pre-Calculation Routine

   This element anticipates the need for non-standard processing by providing the means of indicating a special routine to be performed prior to the actual leave hours accrual computation. If entered this two position numeric field must correspond to a special Pre-Calculation Routine contained in module PPI_VHRS.

7. Rate Schedule Number

   This element points to the appropriate set of leave hours accrual rates contained on the Leave Rate Table. The Rate Schedule Number must be entered and must correspond to a Rate Schedule Number contained on the Leave Rate Table.

8. Post-Calculation Routine

   This element anticipates the need for non-standard processing by providing the means of indicating a special routine to be performed after the actual leave hours accrual computation. If entered, this two position numeric field must correspond to a special Post-Calculation Routine contained in module PPI_VHRS.

9. Fund Range

   Five optional Fund Ranges (plus mandatory default) are available to indicate specific Leave Utilization factors and to identify the associated Leave Reserve Account Number.

10. Leave Utilization Factors (Sick, Vacation, and Paid Time Off)
These three utilization factors are used by the Expense Distribution Process during the calculation of Leave Assessment Rates and must be present for each optional Fund Range entered as well as the Fund Range Default.

11. Leave Reserve Account Number

This account will be credited by the departmental leave assessment charges associated with each entered Fund Range. The Leave Reserve Account Number Default must be present.

2.2 Leave Rate Table (LRT)

The Leave Rate Table is used to store detail Leave Hours Accrual Rates. Two types of accrual rates may be stored:
- Hourly Rates (unrestricted) or
- Hour Accrual Table (available only to those employee groups paid monthly or semi-monthly).

Form UPAY720, "Leave Rate Table" (refer to Figure 1) is used for table update functions.

2.2.1 LRT Key Data

The Leave Rate Table is structured according to the following hierarchy of elements (refer to Figure D).

1. Rate Schedule Number

This three position numeric code is the primary selection mechanism for identifying the detail rates used to accrue hours of various type of leave for the employee.

The Rate Schedule Number on the Leave Rate Table directly corresponds to the Rate Schedule Number contained on the Leave Accrual Table.

2. Leave Plan

The Leave Plan may contain any alpha or numeric character. However, a practical restriction is made based on the Data Element Table values for the Appointment Leave Code (D.E. #2018). That is, a Leave Plan on the LRT, which does not correspond to an employee Appointment Leave Plan will never be accessed for accrual functions.

3. Pay Cycle Indicator

This code identifies which accrual period rates to use for the employee and is associated with the employee's Primary Pay Schedule (D.E. #0152). The permissible values of the pay cycle indicators are as follows:

<table>
<thead>
<tr>
<th>Pay Cycle Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Use these rates if the employee’s Primary Pay Schedule is Bi-Weekly</td>
</tr>
<tr>
<td>M</td>
<td>Use these rates if the employee’s Primary Pay Schedule is Monthly or Semi-Monthly</td>
</tr>
<tr>
<td>A</td>
<td>Use these rates for all members of this employee group regardless of Primary Pay Schedule</td>
</tr>
</tbody>
</table>
4. **Leave Type**

   The Leave Type (one position) must be one of the following:
   - V (vacation), displayed as "VAC"
   - S (sick), displayed as "SK".
   - P (paid time off), displayed as "PTO"

5. **Rate Effective Date**

   The Rate Effective Date identifies the month year with which the rates become effective.

6. **Record Type**

   This two position code identifies how leave hours are to be accrued (i.e., hourly accrual rate or hour accrual table).

   Permissible values are listed on this following table:

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>Hourly Accrual Rate is applicable</td>
</tr>
<tr>
<td>00 through 99</td>
<td>Hour Accrual Table is applicable; each Record Type corresponds to a number of Leave Hours Earned for a range of hours or percent time on pay status.</td>
</tr>
</tbody>
</table>

2.2.2 **LRT Record Data**

   In addition to the above key data, each Leave Rate Table record will contain the following elements.

1. **Maximum Accrual Base**

   This five position (numeric) field is used to develop the maximum leave hours accrued for the corresponding LRT accrual rates (this allows the accrual maximum to vary with the LRT Leave Plan).

   If the LRT Record Type is "HR", the maximum leave hours are calculated to equal the Maximum Accrual Base times the LRT Hourly Rate.

   If the LRT Record Type is "00" through "99" (hourly accrual table), the maximum leave hours are calculated to equal the Maximum Accrual Base times the highest value Leave Hours Earned associated with the LRT key.

   Note that if the Maximum Accrual Base is entered blank, no limit is placed on the leave accrued.

   Additionally, note that if the associated LRT Maximum (leave) Hours Override is non-blank, the LRT value will be used as the maximum regardless of the LRT based derivation.

2. **Hourly Accrual Rate**

   This numeric rate is entered only if the associated Record Type equals "HR" (hourly accrual rate usage). This rate will be multiplied times the applicable hours on pay status in order to calculate the leave hours earned for the accrual period.

3. **Leave Hours Earned**
This field is applicable to hour accrual table functions and is entered only if the associated Record Code equals "00" through "99". The Leave Hours Earned represents the hours of leave accrued for reporting the associated range of hours (or percent) on pay status.

4. 20, 21, 22, and 23 Day Month Limits

These four fields are applicable to hour accrual table functions and are entered only if the associated Record Type equals "00" through "99". Each field represents a range of hours on pay status for the accrual month which will yield the accrued leave hours designated by the Leave Hours Earned.

Note that only the high end of each range is entered; the low end of each range is automatically calculated based on the previous associated range high end.

5. Percent Time Limit

This field is also applicable to hour accrual table functions and is entered only if the associated Record Type equals "00" through "99". This field represents a range of percent time on pay status for the accrual month which will yield the accrued leave hours designated by the Leave Hours Earned.

Note that only the high end of the range is entered; the low end of the range is automatically calculated based on the previous associated range high end.

2.3 System Parameter Table

1. System Parameter #042 - Leave Work Hours Per Year

This System Parameter (new) will be set to a value of 2080 and will be used for all leave accrual function calculations which require work hours per year (not to be confused with Standard Work Hours Per Year. System Parameter #041 which contains a value of 2088).

2. System Parameter #044 - Active Accrual Periods

The number of "active" accrual periods may vary for each campus and is specified by System Parameter Number 044 (new). The value contained in this System Parameter indicates the number of historical accrual periods from which the campus requires automated leave to be calculated. For example, if the value of System Parameter Number 044 is "3", then leave will be calculated and history maintained for the current and the most immediate two prior accrual periods.

Because [DB record segment allocation/use depends on the Number of Active Accrual Periods. Specified increments of three are recommended since each record segment may hold information for up to three accrual periods (i.e., for each three accrual periods specified, an [DB historical segment must be maintained and stored).]

Note: If the value of System Parameters #044 is zero, then the value of Systems Parameter #051 (Automated Leave Accrual Indicator) must also be zero (no leave will be calculated; refer to Program PPI VHR5). Additionally note that the maximum value for System Parameters #044 is "13" (i.e., the current plus the previous 12 accrual periods).

3. System Parameter #052 - Pay Stub Leave Display

The usage of System Parameter #052 (check stub leave hours display) is modified for the revised leave accrual process such that the following three options are now available:
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Do not display leave balances on pay stub.</td>
</tr>
<tr>
<td>1</td>
<td>The &quot;standard&quot; pay stub display option reflects leave hours accrued up to and including the current accrual period.</td>
</tr>
<tr>
<td>2</td>
<td>The &quot;arrears&quot; pay stub display option is applicable only to monthly paid employees and reflects leave hours accrued one month in arrears.</td>
</tr>
</tbody>
</table>

4. System Parameter #046 - Approaching Leave Maximum

This parameter contains the number of leave hours such that if the employee’s leave balance is within this number of hours (or less) of achieving the maximum accrual, a warning is issued via the Time Benefits Roster (PPP6401).
3.0 EDB Data Elements

The revised leave accrual process requires the allocation (refer to Figure G, Data Element Table Updates) and usage of new Employee Data Base elements. These new data elements will be established and maintained automatically by the Payroll Gross Derivation (i.e., program PPP390).

Unless otherwise noted, these new and revised EDB elements should not be updated by user entered EDB file maintenance.

I. The following EDB elements will be maintained for the employee on the 5100 segment:

<table>
<thead>
<tr>
<th>Name</th>
<th>D.E.#</th>
<th>Format</th>
<th>Internal Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacation Hours Balance&lt;sup&gt;3&lt;/sup&gt;</td>
<td>5185</td>
<td>5 v 6</td>
<td>6</td>
<td>Vacation hours available to the employee (replaces D.E. #5108)</td>
</tr>
<tr>
<td>Sick Leave Hours Balance&lt;sup&gt;3&lt;/sup&gt;</td>
<td>5186</td>
<td>5 v 6</td>
<td>6</td>
<td>Sick Leave available to the employee (replaces D.E. #5109)</td>
</tr>
<tr>
<td>Paid Time off Balance&lt;sup&gt;3&lt;/sup&gt;</td>
<td>5187</td>
<td>5 v 6</td>
<td>6</td>
<td>Paid Time Off available to the employee</td>
</tr>
<tr>
<td>Special Vacation Maximum Hours&lt;sup&gt;4&lt;/sup&gt;</td>
<td>5105</td>
<td>7 v 2</td>
<td>5</td>
<td>Used in situations where prior maximum accrual exceeds current allowable maximum</td>
</tr>
<tr>
<td>Special Sick Leave Maximum Hours&lt;sup&gt;4&lt;/sup&gt;</td>
<td>5106</td>
<td>7 v 2</td>
<td>5</td>
<td>See Above</td>
</tr>
<tr>
<td>Special Paid Time Off Maximum Hours&lt;sup&gt;4&lt;/sup&gt;</td>
<td>5107</td>
<td>7 v 2</td>
<td>5</td>
<td>See Above</td>
</tr>
</tbody>
</table>

<sup>3</sup> These balances may be adjusted by the user, if necessary, via "VIA", "SLA" AND "PLA" DOS codes used in conjunction with the appropriate Payroll Compute time input transactions or via "Hours Adjustment" (HA) transactions.

<sup>4</sup> These balances may be adjusted by the user, if necessary, via Payroll Compute "Hours Adjustment" (HA) transactions.
<table>
<thead>
<tr>
<th>Name</th>
<th>DE#</th>
<th>Format</th>
<th>Internal Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Stub Vacation Balance</td>
<td>5139</td>
<td>7x2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Last Stub Sick Balance</td>
<td>5140</td>
<td>7x2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Last Stub Paid Time Off Balance</td>
<td>5141</td>
<td>7x2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Last Stub Vacation Indicator</td>
<td>5182</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Last Stub Sick Indicator</td>
<td>5183</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Last Stub Paid Time Off Indicator</td>
<td>5184</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

2. Seven each of the following new EDB elements will be used to maintain a Leave Plan History (LPH) for the employee. These elements will be used to assign the proper Leave Plan Code to payment distributions entered without appointment designation.

<table>
<thead>
<tr>
<th>Name</th>
<th>DE#</th>
<th>Format</th>
<th>Internal Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPH Leave Plan Key</td>
<td>8001</td>
<td>X(6)</td>
<td>6</td>
<td>Contents:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a. Title Type</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b. Title Unit Code</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c. Appointment Representation Code</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>d. Special Handling Code</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>e. Distribution Unit Code</td>
</tr>
<tr>
<td>LPH Leave Plan</td>
<td>8002</td>
<td>X</td>
<td>1</td>
<td>Maintained as</td>
</tr>
<tr>
<td>LPH Start Date</td>
<td>8003</td>
<td>9(6)</td>
<td>4</td>
<td>YYMMDD</td>
</tr>
</tbody>
</table>

3. The following EDB elements will be maintained for each "active" accrual period (System Parameter #044).
<table>
<thead>
<tr>
<th>Name</th>
<th>D.E.#</th>
<th>Format</th>
<th>Internal Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrual End Date</td>
<td>S022</td>
<td>9(6)</td>
<td>4</td>
<td>Maintained as YYMMDD.</td>
</tr>
<tr>
<td>Accrual Period Cycle Type</td>
<td>S023</td>
<td>X</td>
<td>1</td>
<td>Values are: 'B' (bi-weekly) 'M' (monthly)</td>
</tr>
<tr>
<td>Bypass Accrual Period</td>
<td>S024</td>
<td>X</td>
<td>1</td>
<td>Values are: blank (normal) 'X' (bypass).</td>
</tr>
<tr>
<td>Vacation Hours Lost</td>
<td>S025</td>
<td>3 v 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Sick Hours Lost</td>
<td>S026</td>
<td>3 v 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Paid Time Off Lost</td>
<td>S027</td>
<td>3 v 2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*These elements may be updated by the user via EDB File Maintenance 'X1' transactions. If set to a value of 'X', there will be no further automated leave hours accrued for that accrual period.
Four each of the following new data elements will be maintained for every "active" accrual period (System Parameter #044):

<table>
<thead>
<tr>
<th>Name</th>
<th>D.I. #</th>
<th>Format</th>
<th>Internal Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrual History Key</td>
<td>8101</td>
<td>X(6)</td>
<td>6</td>
<td>Contents: a.Title Type b.Title Unit Code c.Appointment Representation Code d.Special Handling Code e.Distribution Unit Code</td>
</tr>
<tr>
<td>Accrual History Leave Plan</td>
<td>8102</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hours Towards Accrual</td>
<td>8103</td>
<td>3 v 2</td>
<td>3</td>
<td>Hours on pay status which count towards leave accrual.</td>
</tr>
<tr>
<td>Hours Code</td>
<td>8104</td>
<td>X</td>
<td>1</td>
<td>Values are: 'H' (time reported in hours) &quot;%&quot; (time reported as percent).</td>
</tr>
<tr>
<td>Vacation Hours Accrued</td>
<td>8105</td>
<td>3 v 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Sick Leave Hours Accrued</td>
<td>8106</td>
<td>3 v 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PTO (Paid Time Off) Hours Accrued</td>
<td>8107</td>
<td>3 v 2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

EDB Data Elements
4.0 Program Modifications

4.1 Program PPP010

Program PPP010 will be modified to read and edit user input transactions (UPAY719 and UPAY720) in order to update, maintain, and list the new Leave Accrual and Leave Rate Tables.

4.1.1 Leave Accrual Table

4.1.1.1 Edit LAT Transaction

1. The Leave Accrual Table transaction (UPAY719, refer to Figure C) is read and the transaction key data is then value edited according to the following schedule:

<table>
<thead>
<tr>
<th>LAT Key Element</th>
<th>Edit</th>
<th>Message</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Type</td>
<td>Must equal 'T', 'M', 'P', 'S', or 'A'</td>
<td>01-497</td>
<td>Fatal</td>
</tr>
<tr>
<td>Appointment</td>
<td>Must be 'C', 'U', Representation or blank</td>
<td>01-498</td>
<td>Fatal</td>
</tr>
<tr>
<td>Code</td>
<td></td>
<td>01-499</td>
<td>Fatal</td>
</tr>
<tr>
<td>Special Handling</td>
<td>Must be blank, alphabetic Code or numeric</td>
<td>01-500</td>
<td>Fatal</td>
</tr>
<tr>
<td>Distribution</td>
<td>Must be blank, alphabetic Unit Code or numeric</td>
<td>01-495</td>
<td>Fatal</td>
</tr>
<tr>
<td>Effective Date</td>
<td>Entered in 'MMYY' format</td>
<td>01-496</td>
<td>Serious</td>
</tr>
<tr>
<td>a. Must be numeric and month positions must be in '01' through 12' range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Year positions must be within one year (plus or minus) of the current year</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. If a fatal error was detected during the key data value edit and the action was a "change" or "delete", all remaining edits are bypassed.

3. If no fatal error has occurred during the key data value edits, the standard add/change/delete record matching verification is performed.

4. The balance of the LAT transaction data is value edited as follows. Note that if "change" is specified, only non-blank fields will be processed (i.e., an "*" must be entered to return a field to initial (blank/zero) value).

<table>
<thead>
<tr>
<th>LAT Element</th>
<th>Edit</th>
<th>Message</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line Number</td>
<td>Must be '1' through '6'</td>
<td>01-501</td>
<td>Fatal</td>
</tr>
<tr>
<td>Threshold Percent</td>
<td>Must be numeric and not exceed 100%</td>
<td>01-502</td>
<td>Fatal</td>
</tr>
<tr>
<td>Maximum Leave Hours</td>
<td>Must be blank or numeric and non-zero</td>
<td>01-503</td>
<td>Fatal</td>
</tr>
<tr>
<td>Overrides (Vacation, Sick, and Paid Time Off)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours Per Day</td>
<td>Must be blank or numeric (blank defaults to 8 hours)</td>
<td>01-504</td>
<td>Fatal</td>
</tr>
<tr>
<td>Pre-Calculation Routine</td>
<td>Must be blank or numeric</td>
<td>01-505</td>
<td>Fatal</td>
</tr>
<tr>
<td>Rate Schedule Number</td>
<td>Must be numeric and non-zero</td>
<td>01-506</td>
<td>Fatal</td>
</tr>
<tr>
<td>Post Calculation Routine</td>
<td>Must be blank or numeric</td>
<td>01-507</td>
<td>Fatal</td>
</tr>
<tr>
<td>Fund Range</td>
<td>Must be blank or numeric</td>
<td>01-508</td>
<td>Fatal</td>
</tr>
<tr>
<td>Utilization Factors (Vacation, Sick, and Paid Time Off)</td>
<td>Must be blank or numeric and not exceed 100%</td>
<td>01-509</td>
<td>Fatal</td>
</tr>
<tr>
<td>Leave Reserve Account</td>
<td>Must be blank or numeric</td>
<td>01-510</td>
<td>Fatal</td>
</tr>
</tbody>
</table>

5. Consistency edits among the Leave Accrual Table transaction elements are performed as follows:

6. Zero may be a legitimate value for these fields.

7. Blank will not default to zero; zero must be entered in low order field position if a zero value is required.

Program Modifications
a. If the Title Unit Code (TUC) is blank (this indicates default attributes per Title Type) then the following three fields must also be blank; otherwise, issue message 01-512 (Fatal):

1) Appointment Representation Code (AREP)

2) Special Handling Code (SHC)

3) Distribution Unit Code (DUC).

b. If the Title Unit Code is not blank, then the Appointment Representation Code must not be blank; otherwise, issue message 01-511 (Fatal).

c. If any one or more of the following Default Fund Range fields are entered as blank, issue message 01-513 (Fatal):

1) Utilization Factors (Vacation, Sick, or Paid Time Off).

2) Leave Reserve Account

d. If a Fund Range is not entered blank, then:

1) The Low Fund Number must not exceed the High Fund Number; otherwise, issue message 01-514 (Fatal).

2) The Fund Range must not overlap any other Fund Range present on that LAT record. Otherwise, issue message 01-517 (Fatal).

3) If one or more of the following fields (associated with the non-blank Fund Range) is entered blank, issue message 01-515 (Fatal):

a) Utilization Factors (Vacation, Sick, or Paid Time Off)

b) Leave Reserve Account

e. If a Fund Range is entered blank, then all of the following associated fields must also be blank; otherwise, issue message 01-516 (Fatal):

1) Utilization Factors (Vacation, Sick, or Paid Time Off)

2) Leave Reserve Account

f. If one or more of the six possible (i.e., five Fund Ranges plus Default) Vacation Utilization Factors is entered as a zero value, issue message 01-518 (warning). This condition denotes that for this fund range, vacation leave hours may be accrued but no vacation leave assessment charges will be made.

g. If one or more of the six possible Sick Utilization Factors is entered as a zero value, issue message 01-519 (warning). This condition denotes that for that fund range, sick leave hours may be accrued but no sick leave assessment charges will be made.

6. Note that module PPCB02 is called by PPP010 after the Control File tables have been updated. PPCB02 will provide additional edits on the Leave Accrual Table entries as per the following:

a. Value/consistency edits on the Leave Accrual Table for the Title Type, TUC, AREP, SHC, and DUC will be applied based on the combinations of these elements residing on the Title Code/ Bargaining Unit Tables.

b. The Rate Schedule Number contained on the Leave Accrual Table must have a corresponding entry on the Leave Rate Table.

These edits in PPCB02 are "after the fact" edits; any fatal errors detected should be corrected; otherwise, improper leave accrual functions will result.
4.1.1.2 LAT Record Update

Any update to the Leave Accrual Table will cause:
1. PPCB02 to be called for table validation.
2. The Leave Accrual Table to be printed (report PPP0125).

4.1.1.3 Print Leave Accrual Table

After all Control File updates have occurred, produce the Leave Accrual Table report as follows (refer to Figure B):

1. Read the Delimiter record for the Leave Accrual Table from the Control File. If the record is not found do not print the Leave Accrual Table (standard action).
2. All subsequent Leave Accrual Table records are read sequentially and used to produce the formatted Leave Accrual Table (PPP0125) report as per Figure B.
3. Control page break for PPP0125 report headings will be based on change of Title Type.

4.1.2 Leave Rate Table

4.1.2.1 Edit LRT Transaction

1. The Leave Rate Table transaction (UPAY 720, refer to Figure 1) is read and the transaction key data is value edited according to the following table:

<table>
<thead>
<tr>
<th>LRT Key Element</th>
<th>Edit</th>
<th>Message</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Schedule</td>
<td>Must be numeric and non-zero</td>
<td>01-526</td>
<td>Fatal</td>
</tr>
<tr>
<td>Number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leave Plan</td>
<td>Must be alpha-numeric and not equal “S”.</td>
<td>01-527</td>
<td>Fatal</td>
</tr>
<tr>
<td>Pay Cycle Indicator</td>
<td>Must be “B” (four week accrual periods), “M” (monthly accrual periods), or “A” (all accrual periods).</td>
<td>01-528</td>
<td>Fatal</td>
</tr>
<tr>
<td>Leave Type</td>
<td>Must be “V” (Vacation), “S” (Sick Leave), or “P” (Paid Time Off)</td>
<td>01-529</td>
<td>Fatal</td>
</tr>
<tr>
<td>Rate Effective Date</td>
<td>Entered in “MMYY” format. a. Month positions must be in “01” through “12” range; b. Year positions must be within one year (plus or minus of the current year).</td>
<td>01-530</td>
<td>Fatal</td>
</tr>
<tr>
<td>Record Type</td>
<td>Must be “HR” (hourly accrual rate) or “00” through “99” (hours accrual table).</td>
<td>01-531</td>
<td>Fatal</td>
</tr>
</tbody>
</table>
2. If a fatal error was detected during the key data value edits and the action was a "change" or "delete", all remaining edits are bypassed.

3. If no fatal error has been detected, the standard add/change/delete record matching verifications is performed.

Programmers' Note: The thirteen (13) position Control File key is structured as follows:

```
KKKKSSSPCTDDDR
```

Where:

- "KKKK" is the key constant "bl RT"
- "SS" is the Rate Schedule Number (signed packed decimal; two bytes)
- "P" is the LRT Leave Plan
- "C" is the LRT Pay Cycle
- "T" is the LRT Leave Type
- "DDDR" is the LRT Rate Effective Date (signed packed decimal; three bytes; formatted as "SYYMMI", where "S" is slack, "YY" is the year, "MM" is the month, and "I" is the display sign constant).
- "R" is the LRT Record Code. This code is a one character representation of the LRT transaction Record Type. Record Type "HR" (hourly rate) will translate to Record Code "11"). Record Types "00" through "09" (hours accrual table) are represented such that Record Types "00" through "09" will translate to Record Code "0", Record Types "10" through "19" will translate to Record Code "1", and so on (i.e., each LRT Control File record will store up to ten Leave Hours Earned entries of Hours/Percent Time on Pay status limits).

4. The balance of the LRT transaction data is value edited as follows. Note that if "change" is specified, only non-blank fields will be processed (i.e., an "X" must be entered to return a field to initial (blank/zero) value).
<table>
<thead>
<tr>
<th>LRT Element</th>
<th>Edit</th>
<th>Message</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Accrual Base</td>
<td>Must be blank or non-zero numeric. Warning: blank implies unlimited accrual.</td>
<td>01-535</td>
<td>Fatal</td>
</tr>
<tr>
<td>Hourly Accrual Rate</td>
<td>Must be either blank or numeric and non-zero</td>
<td>01-536</td>
<td>Fatal</td>
</tr>
<tr>
<td>Leave Hours Earned</td>
<td>Must be blank or numeric</td>
<td>01-537</td>
<td>Fatal</td>
</tr>
<tr>
<td>20, 21, 22, and 23 Day Month Limits</td>
<td>Each of these four fields must be either blank or numeric and non-zero (each field represents the highest hours on pay status required to accrue the number of leave hours indicated by the associated Leave Hours Earned).</td>
<td>01-538</td>
<td>Fatal</td>
</tr>
<tr>
<td>Percent Time Limit</td>
<td>Must be either blank or numeric and non-zero (represents the highest percent of time on pay status required to earn the number of leave hours indicated by the associated Leave Hours Earned).</td>
<td>01-539</td>
<td>Fatal</td>
</tr>
</tbody>
</table>
5. Consistency edits among the Leave Rate Table transaction elements are performed as follows:
   a. If the Pay Cycle Indicator equals "A" (all accrual periods), the Record Type must be "HR" (hourly accrual rated); otherwise, issue message 01-541 (Fatal).
   b. If the Record Type code is "HR" (hourly accrual rated), issue message 01-542 (Fatal):
      1) If the Hourly Accrual Rate is entered blank
      2) When one or more of the following fields are entered non-blank:
         a) Leave Hours Earned
         b) 20, 21, 22, or 23 Day Month Limit
         c) Percent Time Limit
   c. If the Record Type code is '00' through '99' (hour accrual table), issue message 01-543 (Fatal):
      1) If the Hourly Accrual Rate is entered blank:
      2) When one or more of the following fields are entered blank:
         a) Leave Hours Earned
         b) 20, 21, 22, or 23 Day Month Limit
         c) Percent Time Limit
   d. If the Record Type is '00' through '99', issue message 01-544 (serious) if all of the following conditions are not true:
      1) The 20 Day Month Limit is less than the 21 Day Month Limit
      2) The 21 Day Month Limit is less than the 22 Day Month Limit
      3) The 22 Day Month Limit is less than the 23 Day Month Limit

6. Note that module PPCB02 is called by PPP0110 after the Control File tables have been updated. PPCB02 will provide additional consistency edits on the Leave Rate Table entries (refer to Program PPCB02).

   Any fatal errors detected by PPCB02 should be corrected; otherwise, improper accrual functions will result.

4.1.2.2 LRT Record Update

Any update to the Leave Rate Table will cause:
1. PPCB02 to be called for table validation.
2. The Leave Rate Table to be printed (report PPP0126)

4.1.2.3 Print Leave Rate Table

After all Control File updates have occurred, the Leave Rate Table is printed as follows:
1. The Delimiter record for the Leave Rate Table is read from the Control File. If the record is not found, bypass printing the Leave Rate Table.
2. All subsequent Leave Rate Table records are read sequentially and used to produce the formatted Leave Rate Table (PPP0126) report as per Figure E.
3. Control break for PPP0126 report headings will be based on change of Rate Schedule Number and within Rate Schedule Number, change in Record Type function (i.e., if the Record Type changes from "HR" (hourly accrual rates) to non-"HR" or if the change is from non-"HR" to "HR").

4.2 Program PPCB02

Program PPCB02 is called by PPP010 whenever an update has occurred for one or more of the following tables:

- Bargaining Unit Table (17)
- Benefits Rates Table (14)
- Gross-to-Net Table (02)
- Title Code Table (04)

PPCB02 re-accesses these Control File tables in order to perform collective bargaining consistency edits among these tables. These are "after the fact" edits; any fatal errors detected by PPCB02 should be corrected by a subsequent Control File update prior to production continuation. The failure to correct these fatal errors could result in severe system inaccuracies.

The following two new Control File Tables are added to this function:

- Leave Accrual Table (25)
- Leave Rate Table (26).

4.2.1 Process Leave Rate Table

The Leave Rate Table must be processed prior to editing the Leave Accrual Table because the Rate Schedule Number edit used for the Leave Accrual Table requires that the Leave Rate Table be present.

The Leave Rate Table is processed as follows:

1. The Leave Rate Table is read and stored via call to "PPFRTUT1".

2. For each set (a set may contain only one record) of Leave Rate Table records which have the same Rate Schedule Number, Leave Plan, Pay Cycle Indicator, Leave Type, and Effective Date, perform the following edits:

   a. A Record Code value 11 (hourly accrual rated) entry must not be present if an Record Code value "0" through "9" entry is also present; otherwise, issue message 01-552 (Fatal).

   b. If a Record Code value "0" through "9" entry is present:

      1) The Record Type "0" record entry must be present; otherwise, issue message 01-553 (Fatal).

      2) The Record Type value for all associated record entries must be incremented by an increment of one; otherwise, issue message 01-554 (Fatal).

      3) The 20, 21, 22, and 23 Day Month Limits of each successive Leave Hours Earned entry should be greater than their counterpart values from the previous Leave Hours Earned entry (e.g., the 23 Day Month Limit for the second Leave Hours Earned entry should be greater than the 23 Day Month Limit value contained on the first Leave Hours Earned entry). Otherwise, issue message 01-555 (Fatal).

      4) The Percent Time Limit of each successive Leave Hours Earned entry should be greater than its counterpart value from the previous Leave Hours Earned entry. Otherwise, issue message 01-556 (Fatal).
5) The highest value Leave Hours Earned entry present for the record set must have an associated Percent Time Limit equal to 100; otherwise, issue message 01-557 (Fatal).

All of the above consistency edit messages associated with the Leave Rate Table will be referenced on the PPP0198 report with LRT Key data.

4.2.2 Load Leave Title Array

PPCB02 currently reads sequentially, the Title Code Table and Bargaining Unit Table in order to build an array of Special Handling Code (SHC);Distribution Unit Code (DUC) combinations which is used for Gross-to-Net and Benefits Rates Table consistency verification. A similar table (the Leave Title Array) must be built as follows in order to verify the value/consistency of the Leave Accrual Table.

This Leave Title Array will contain a list of unique Title Unit Code, Special Handling Code combinations (200 maximum). Each TUC/SHC entry will contain up to:

- Five possible unique Title types
- Thirty possible unique Distribution Unit Codes (DUC)

The Leave Title Array is constructed as follows.

1. As the Title Code Table is read sequentially:
   a. Construct an entry on the Leave Title Array for each unique combination of:
      1) Title Unit Code (TUC)
      2) Special Handling Code (SHC)
   b. If a new entry is constructed or an entry already exists for that TUC/SHC combination, the Title Type from the Title Code Table record is added to the list of unique Title Types if that Title Type is not already present on the list.

2. After all Title Code Table records have been processed, the Bargaining Unit Table is read sequentially. If the Bargaining Unit Table record is a Distribution Unit segment:
   a. It is matched (on Title Unit Code) to an entry(s) on the Leave Title Array.
   b. For each matched entry, add the Distribution Unit Code to the list of unique (DUC) codes if that Distribution Unit Code is not already present on the list. Note that a blank DUC is always valid; therefore, a blank DUC is always placed as the first entry on the list.

4.2.3 Process Leave Accrual Table

After all Bargaining Unit Table records have been processed, the Leave Accrual Table is processed/edited as follows:

1. The Leave Accrual Table is read and stored via call to ‘PPIATUTC’.
2. Submit each Leave Accrual Table record to the following edits:
   a. Verify that the LAT Rate Schedule Number is also designated on at least one Leave Rate Table record entry. If no match is found, issue message 01-566 (Fatal).
   b. Use the Leave Title Array (constructed from the Title Code and Bargaining Unit Tables) in order to perform the following edits on Leave Accrual Table record elements:
      1) If the Title Unit Code on the LAT record is blank (default per Title Type), all remaining LAT edits are bypassed.
2) If the LAT Special Handling Code is blank (default), search the Leave Title Array using only Title Unit Code as matching criteria (more than one match is possible):

   a) If no match is encountered (invalid Title Unit Code), issue message 01-567 (Fatal) and bypass all remaining LAT edits.

   b) For every match encountered, perform the following:

      i. Using the LAT Title Type, search the list of possible Title Types contained on the Leave Title Array entry.

      ii. If the LAT Distribution Unit Code is not blank (default), search the list of possible Distribution Unit Codes contained on the Leave Title Array entry.

   c) After all Leave Title Array entries have been examined:

      i. If the LAT Title Type did not match one of the Title Types on at least one of the matched Leave Title Array entries, issue message 01-568 (Fatal).

      ii. If the LAT Distribution Unit Code is not blank and did not match one of the Distribution Unit Codes on at least one of the matched Leave Title Array entries, issue message 01-569 (Fatal).

3) Otherwise (neither the LAT Title Unit Code nor the Special Handling Code is blank), match the Title Unit Code and Special Handling Code combination to an entry on the Leave Title Array:

   a) If no match is found, issue message 01-570 (Fatal). This condition indicates an invalid Title Unit Code or Special Handling Code or an invalid combination of the two.

   b) Otherwise (a match is found), the following edits apply:

      i. The Title Type contained on the Leave Accrual Table record must match one of the Title Types contained on the Leave Title Array entry for that Title Unit Code/ Special Handling code. Otherwise, issue message 01-568 (Fatal).

      ii. If the LAT Distribution Unit Code is not blank (default), it must match one of the Distribution Unit Codes contained on the Leave Title Array entry; otherwise, issue message 01-569 (Fatal).

4.3 **Program PPP340**

Program PPP340 must be modified so that the three most recent Prior Bi-Weekly Accrual End Dates are placed on the Payroll Control Record (PCR). These dates are used to establish accrual period delimiters for newly hired bi-weekly paid employees.

The Prior Bi-Weekly Accrual End Dates are derived from the System Calendar as follows:

1. If System Parameter Number 030 contains a value not equal to '2' (Bi-Weekly campus), set the three PCR Prior Bi-Weekly Accrual End Dates to blank and exit the procedure.

2. Locate the Pay Period End Date (of the cycle being paid) on the System Calendar.

3. Establish the First Prior Bi-Weekly Accrual End Date:

   a. If the pay cycle being paid is bi-weekly (either 'B1' or 'B2') or special ('XX') then:

      1) Make a backwards search of the calendar

      2) Use the first 'B2' cycle end date found as the First Prior Bi-Weekly Accrual End Date.
b. If the pay cycle being paid is monthly current ("MO"), then:
   1) If the Pay Period End Date (of the cycle being paid) is also a "B1" period end date, then:
      a) Make a backwards search of the calendar.
      b) Use the first "B2" cycle end date found as the First Prior Bi-Weekly Accrual End Date.
   2) Otherwise,
      a) Make a backwards search of the calendar.
      b) Find the first bi-weekly (either "B1" or "B2") cycle end date.
      c) Continue the backwards search of the calendar.
      d) Use the first "B2" cycle end date found as the First Prior Bi-Weekly Accrual End Date.

c. If the pay cycle being paid is monthly arrears ("MA"), then:
   1) Make a backwards search of the Calendar.
   2) Find the first bi-weekly (either "B1" or "B2") cycle end date.
   3) If this first bi-weekly cycle found is both a "B2" pay cycle and the difference between the Pay Period End Date ("MA") and "B2" cycle end date exceeds 5 days, then use the "B2" cycle end date as the First Prior Bi-Weekly Accrual End Date.
   4) Otherwise:
      a) Continue the backwards search of the calendar.
      b) Use the first "B2" cycle end date found as the First Prior Bi-Weekly Accrual End Date.

4. Once the First Prior Bi-Weekly Accrual End Date is located,
   a. Continue the backwards search of the calendar.
   b. Use the next "B2" cycle end date found as the Second Prior Bi-Weekly Accrual End Date.

5. Once the Second Prior Bi-Weekly Accrual End Date is located,
   a. Continue the backwards search of the calendar.
   b. Use the next "B2" cycle end date found as the Third Prior Bi-Weekly Accrual End Date.

6. Processing Note:
   If the necessary bi-weekly cycle dates are not found on the calendar, issue message 34-032 (See Systems), set the three PCR Prior Bi-Weekly Accrual End Dates to blank, and exit the procedure. This condition would indicate that a campus has just added bi-weekly pay cycles to its production schedules. Therefore, when a campus initially establishes bi-weekly pay cycles, the System Calendar must be back dated so as to contain the six (i.e., three bi-weekly accrual periods) bi-weekly pay cycles immediately preceding the bi-weekly startup cycle.

4.4 Program PPP360

Modifications to two edit routines in Program PPP360 are required as follows:

1. The Hours Adjustment (11A) transaction edit must not restrict the entry of Data Elements 5185, 5186, and 5187 (Vacation, Sick Leave, and Paid Time Off Balances, respectively).
2. Zero time must be allowed to be entered when associated with terminal vacation pay (TRM) for the following transactions:
   a. Current Pay (TX)
   b. Late Pay (LX)
   c. Additional Pay (AP)
   d. Time Exception Pay (TE)

4.5 Program PPP390

Leave hours accrual mechanics in the Gross Pay Derivation are handled by module PPLVHRS (new module).

PPLVHRS is called by program PPP390 at the following five processing points:
1. Program Initialization
2. PAR Distributions
3. PAR Control Break
4. Close Accrual Period
5. EOJ Leave Report Print.

4.5.1 Program Initialization

Module PPLVHRS is called during program initialization in order to:
1. Read/store System Parameters applicable to leave accrual function.
2. Read/store Leave Accrual Table (via PPLATUT1).
3. Read/store Leave Rate Table.

4.5.2 PAR Distributions

As each PAR earnings distribution (excluding Expense Transfers) is processed, it must be determined whether or not the payment is eligible to accrue leave hours. If PPP390 determines that basic (DOS Table and Leave Accrual Code) eligibility have been satisfied, module PPLVHRS is called in order to determine the applicable leave accrual period (if any) and to update the proper EDB historical hours towards accrual data.

Program PPP390 initiates this process as follows:
1. If the DOS Time Benefit Code equals "N", the distribution hours are not counted towards accrual.
2. If the Leave Accrual Code associated with the distribution is blank or "N", the Distribution Hours are not counted toward accrual (Note that for Cancellations, Overpayments and Handwritten Checks, the Leave Accrual Code is contained on the distribution entry of the CPA input; for all others, the Leave Accrual Code must be retrieved from EDB appointment segment associated with the pay distribution or be derived based on the employee's EDB Leave Plan History.

If appointment correlation is not specified on a Time Input transaction entry, the Leave Accrual Code will be derived.
The following chart reflects how pay distribution transaction type affects the hours accrual process:

<table>
<thead>
<tr>
<th>Distribution Source</th>
<th>Leave Accrual Code Source</th>
<th>Count Hours Towards Accrual</th>
</tr>
</thead>
<tbody>
<tr>
<td>C, O, H</td>
<td>CPA</td>
<td>Yes (Unless Hours Adjustment Code is non-blank).</td>
</tr>
<tr>
<td>Retro Pay (RA)</td>
<td>Derived</td>
<td>Yes (Unless Hours Adjustment Code is non-blank).</td>
</tr>
<tr>
<td>Late Pay (LX)</td>
<td>Appointment Y</td>
<td>Yes</td>
</tr>
<tr>
<td>Reduced Pay (RX)</td>
<td>Appt or Derived</td>
<td>Yes</td>
</tr>
<tr>
<td>Additional Pay (AP)</td>
<td>Appt or Derived</td>
<td>Yes</td>
</tr>
<tr>
<td>Current Pay (TX)</td>
<td>Appointment Y</td>
<td>Yes</td>
</tr>
<tr>
<td>Exception (TE)</td>
<td>Appointment Y</td>
<td>Yes</td>
</tr>
<tr>
<td>One-Time Pay (FT)</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Lieu of Notice Pay (ST)</td>
<td>Derived</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic (Salaried) Pay (AU)</td>
<td>Appointment</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3. If appointment correlation is not specified on input, derive the Leave Plan Code as follows:
   a. If no EDB Leave Plan History entries are present on the employee's record, the Distribution Leave Plan Code will remain blank and the distribution is bypassed (no message is issued; these hours will not be counted toward accrual).
   b. Otherwise, search the four EDB (leave payment) historical entries associated with the PAR Distribution End Date's accrual period using a search key comprised of the following PAR distribution elements:
      1) Title Type
      2) Title Unit Code
      3) Appointment Representation Code
      4) Special Handling Code
      5) Distribution Unit Code
   c. If a match is encountered, the associated EDB Historical entry's Leave Plan is used for the PAR distribution.
   d. Otherwise, search the EDB Leave Plan History (LPH) using a search key comprised of the following PAR distribution elements:
      1) Title Type
      2) Title Unit Code
      3) Appointment Representation Code

Program Modifications
PPGRSTIM handles APs and calls PPGRSCBD to derive the TUC. In PPGRSCBD, if the AP transaction has Appointment Number on it, the TUC is taken from the EDB Appointment; otherwise, the TUC is taken from the Title Code Table (via PPTCTUTL).

After PPGRSTIM calls PPGRSCBD, it calls PPGRSERN to develop the payment amount. PPGRSERN will also call PPTCTUTL to grab the TOC rate but PPGRSERN does not reset the TUC which was derived by PPGRSCBD.

Check the Appointment TUC for 99. Otherwise, someone will have to "expedite" PPGRSERN to find out the TUC derivation problem.
4) Special Handling Code:
5) Distribution Unit Code.

e. Because more than one match is possible, set the Distribution Leave Plan Code equal to the matched LPH Leave Plan which has the newest LPH Start Date as long as that LPH Start Date does not exceed the Distribution Date.

f. If a match is not found, the Distribution Leave Plan Code will remain blank but regardless, will be passed to PPLVHRS for earning issuance (message 39-215) and then rejection (i.e., these hours will not be counted toward accrual).

4. If the Distribution Hours are eligible for accrual, call Module PPLVHRS to determine the accrual period and update the EDB hours toward accrual data.

5. Module PPLVHRS will pass back an indicator (pointer) which identifies which EDB historic entry was updated by the Distribution Hours. For each PAR distribution, save this indicator.

4.5.3 PAR Control Break

After all PAR distributions have been processed as per above, but prior to the issuance of the Payroll Audit Record (PAR), call PPLVHRS in order to:

1. Accrue leave hours for all "prior" accrual periods (if applicable payments are contained on the PAR).

2. If both the end of the employee’s accrual period is indicated and the PAR being processed is a current activity (i.e., non-C O H) PAR, then accrue leave hours for the "current" accrual period.

3. Check for excess leave usage.

4.5.4 Terminal Vacation Pay (TRM)

Program PPLVHRS will provide automated assistance in the process of making terminal vacation payments. Process modifications are as follows.

If a positive time reporting transaction (TX.AP.IX.TT) is submitted with a Description of Service (DOS) of "TRM" (terminal vacation pay) with no associated entered time, the system will use the employee's Vacation Hours Balance as the associated time reported. This terminal payoff will then cause the employee's Vacation Hours Balance to fall to zero.

Note that the proposed policy requires that terminal vacation pay be paid to the nearest, higher hundredth of an hour of the employee's ending vacation balance. For example, if the employee's Vacation Hours Balance (at termination) was 119.23 hours, the "TRM" would be for 119.24 hours.

4.5.5 Close Accrual Period

After leave hours have been accrued for all applicable accrual periods and Terminal Vacation Pay has been calculated and issued as per above, Program PPLVHRS verifies the PAR grosses and will flush the current PAR activity and restore the employee EDB record segments to their former values if any negative grosses are resident on the PAR. It is only after this process is completed that the accrual period may be properly closed.

If both the end of the employee's accrual period is indicated, and the PAR being processed is a current activity PAR, then PPLVHRS is called in order to close the accrual period. It is during this call to PPLVHRS that the following tasks are performed:

1. Slide the EDB information for each accrual period down one accrual period until the campus Leave History Limit is achieved (i.e., information for the last prior accrual period is dropped).
2. Initialize the "current" accrual period data to zero to mark the close of the accrual period.

4.5.6 Print Leave Reports

Three new reports (PPP3906, PPP3907, PPP3908), titled "Leave Accrual Exceptions", will be issued by PPP390 via PPLVHRS. Each new report will carry all messages issued that relate to leave accrual functions for the payroll compute population:

1. Report PPP3906
   a. Employee detail lines will be sorted by Personnel Program Code and within Personnel Program Code, lines will be sorted by Home Department and Employee ID Number.
   b. Page heading breaks will occur on change of Personnel Program Code.

2. Report PPP3907
   a. Employee detail lines will be sorted by Home Department and within Home Department, lines will be sorted by Personnel Program Code and Employee ID Number.
   b. Page Heading break will occur on change of Home Department.

3. Report PPP3908
   Employee detail lines will be issued in Employee ID Number order.

4.6 Program PPLVHRS

Program PPLVHRS is a new module which processes five types of call from PPP390:

- Program Initialization
- Process FAR Distribution
- Accrue Leave
- Close Accrual Period
- Print Leave Report

4.6.1 Program Initialization

1. Load System Parameters.
   a. Read and store the following System Parameters.
      - Standard Work Hours Per Day (Sys. Parm #040)
      - Leave Work Hours Per Year (Sys. parm #042: new)
      - Number of Active Accrual Periods (Sys. parm #044, new).
   b. Calculate the Work Days Per Year:
      \[
      \text{Work Days Per Year} = \frac{\text{Leave Work Hours Per Year}}{\text{Standard Work Hours Per Day}}
      \]

2. Load Leave Accrual Table (LAT):
   a. Call "PPLATUTL" in order to load the Leave Accrual Table.
   b. If PPLATUTL Error Condition "F" (no LAT Delimiter record) is returned, issue message 39-335 (See Systems).
c. If PPIATUTIL Error Condition "2" (I AT maximum number of entries exceeded) is returned, issue message 39-307 (See Systems).

3. Load Leave Rate Table (LRT):
   a. Call "PPIRTUTIL" in order to load the Leave Rate Table.
   b. If PPIRTUTIL Error Condition "1" (no LRT Delimiter record) is returned, issue message 39-301 (See Systems).
   c. If PPIRTUTIL Error Condition "2" (LRT maximum number of entries exceeded) is returned, issue message 39-303 (See Systems).

4.6.2 Process PAR Distribution

This type of call by PPP300 is made only for those PAR distributions which are eligible (based on DOS and Leave Plan Code) to accrue leave. Once having entered this call, the PAR distribution will either have the associated hours counted towards leave accrual or will be printed with a message indicating why the hours were not counted towards leave.

Processing will proceed as follows.

1. If the Distribution Leave Plan Code is blank, issue message 39-215 (Warning) and exit the module.

2. Determine which accrual period is applicable for the distribution. In order to count towards leave accrual, a distribution must fall within one of the active (depends on campus Leave History Limit) accrual periods. This determination is made as follows:
   a. If the First Prior Accrual End Date is blank (new hire or first installation accrual period):
      1) If the employee’s Primary Pay Schedule is "BW" (bi-weekly), set the EDB First Prior, Second Prior and Third Prior Accrual End Date equal to the associated Bi-Weekly Accrual End Dates contained on the Payroll Control Record.
      2) Otherwise (Primary Pay Schedule is not "BW"),
         a) Set the EDB First Prior Accrual End Date equal to the most recent end date on the Twelve Month Work Day History record (contained on the Payroll Control File).
         b) Set the EDB Second Prior Accrual End Date equal to the second most recent end date on the record.
         c) Set the EDB Third Prior Accrual End Date equal to the third most recent end date on the record.
   b. If the Distribution End Date exceeds the First Prior Accrual End Date, The Distribution Hours apply to the ‘current’ accrual period.
   c. Otherwise, the Second Prior Accrual End Date is examined.
      1) If the Distribution End Date exceeds the Second Prior Accrual End Date, the Distribution Hours apply to the ‘First Prior’ accrual period.
      2) Otherwise:
         a) Proceed as per above until either the accrual period is established or the Last Accrual End Date resident is encountered.
         b) If the Distribution Date is prior to the last resident Accrual End Date, the Distribution Hours are not counted towards leave accrual (message 39-205, Warning).
3. If it has been determined (above) that the Distribution Hours are not within the employee’s leave earning history, then leave processing is complete for this pay distribution (i.e., no leave hours will be accrued for this distribution).

4. Distribution Hours applicable to one of the active accrual periods are subjected to one final eligibility check. If the Bypass Accrual Period Indicator (associated with the Distribution Hours accrual period) is ‘X’, issue message 39-206 (Warning) and bypass further leave processing for this distribution.

5. The Distribution Hours which count toward leave are applied to the EDB historical data as follows:
   a. Search the four entries on the EDB historical array (which correspond to the distribution’s accrual period) using the following distribution elements as search arguments:
      - Title Type
      - Title Unit Code
      - Appointment Representation Code
      - Special Handling Code
      - Distribution Unit Code
      - Leave Plan
   b. If a match is encountered, the Distribution Hours (may be negative) are added to the associated EDB Hours Towards Leave Accrual.
   c. Otherwise (no match is encountered), find the first available (i.e., blank) entry:
      1) Load the following elements:
         a) Title Type
         b) Title Unit Code
         c) Appointment Representation Code
         d) Special Handling Code
         e) Distribution Unit Code
         f) Leave Plan
         g) Hours Towards Leave Accrual (set equal to the distribution hours).
      2) Derive the Hours Code:
         a) If the Distribution Percent Time does not equal zero, set the Hours Code to “%” (time reported in percent).
         b) Otherwise, set the Hours Code to “H” (time reported in hours).
   d. If no match is encountered and none of the four history entries is available (i.e., blank):
      1) Set the associated Bypass Accrual Period Indicator to ‘X’ (i.e. from this point on, no leave will be generated for this accrual period).
      2) Issue message 39-218 (Serious) and exit the module (these Distribution Hours are not counted towards leave accrual).
4.6.3 Accrue Leave

This type of call by PPP390 is made to complete processing for every non-Expense Transfer type of PAR.

1. Pre Screen Accrual Periods

   For the "current" accrual period and for every "prior" accrual period for which there was leave applicable; PAR pay activity, perform the following:

   a. Process each of the four possible FDB historical data entries as follows:

      1) If the entry is blank, proceed to the next entry.

      2) Otherwise,

         a) Establish the proper Leave Accrual Table (LAT) record:

            i. Call module PPLATUTL.

            ii. If PPLATUTL returns a non-zero error code, set the corresponding Bypass Accrual Period Indicator to "X", issue message 39-216 (Serious) and bypass the remaining FDB historical entries in the accrual period.

            iii. Otherwise, the proper LAT record index is returned by PPLATUTL.

         b) Establish the FDB historical entry's "vacation maximum".

            i. If the LAT Maximum Vacation Hours Override is non-zero, use it as the FDB historical entry's "vacation maximum".

            ii. Otherwise, search the Leave Rate Table for "vacation" type of leave via call to module PPLRRTUTL.

               i) If no match is found (vacation leave is not applicable for this Leave Plan), set the "vacation maximum" to zero.

               ii) If a match is found and the IRT Record Code is "11" (hourly rated), set the "vacation maximum" equal to the IRT Maximum Accrual Base times the IRT Hourly Rate.

               iii) If a match is found and the IRT Record Code is not "11", then set the "vacation maximum" equal to the highest value IRT Leave Hours Earned (present for the match) times the IRT Maximum Accrual Base.

      c) Establish the FDB historical entry's "sick maximum" (refer above to "vacation maximum").

      d) Establish the FDB historical entry's "paid time off maximum" (refer above to "vacation maximum").

      e) For every accrual period processed above,

         1) Establish the Lowest Threshold Percent, as the lowest value LAT Threshold Percent present for the corresponding four FDB historical entries.

         2) Establish the Lowest Hours Per Day as the lowest value LAT Hours Per Day present for the corresponding four FDB historical entries.

         3) Establish the Highest Maximum Vacation as the highest value "vacation maximum" present for the corresponding four FDB historical entries.

         4) Establish the Highest Maximum Sick as the highest value "sick maximum" present for the corresponding four FDB historical entries.
5) Establish the Highest Maximum Paid Time Off as the highest value "paid time off maximum" present for the corresponding four FDB historical entries.

   a. Develop maximum hours to be used for all "prior" accrual periods.
      1) Set the value of the Maximum Vacation Hours equal to the largest value found for:
         i) The Highest Maximum Vacation for all accrual periods and
         ii) The FDB Special Vacation Maximum.
     2) Set the value of the Maximum Sick Hours in the same manner as vacation, above.
     3) Set the value of the Maximum Paid Time Off Hours in the same manner as vacation, above.
   b. Starting with the last "prior" accrual period, accrue leave hours for every "prior" accrual period for which there was leave applicable PAR pay activity. Refer to "Accrue Leave Per Accrual Period".

   Leave hours for the "current" accrual period are accrued only at the close of the employee's accrual period.
   a. All of the following conditions must be true to indicate the end of the employee's accrual period:
      1) The PAR being processed must be a Current Activity (i.e., non-C,0,II) type PAR.
      2) The pay cycle being processed must equal the employee's Primary Pay Schedule.
      3) If the employee's Primary Pay Schedule is Bi-Weekly, then the pay cycle being processed must be the "B2" pay cycle.
      4) If the employee's Primary Pay Schedule is Semi-Monthly, the Pay Period End Date day of the month must not be the 15th.
   b. If all of the above conditions are not true, the "current" accrual period is bypassed.
   c. Otherwise, leave hours are calculated for the "current" accrual period and the "current" accrual period is closed. Processing is as follows:
      1) Establish special FDB maximums:
         a) If the Vacation Hours Balance exceeds the Highest Maximum Vacation for the "current" accrual period, set the FDB Special Vacation Maximum equal to the Vacation Hours Balance; otherwise, set the FDB Special Vacation Maximum to zero.
         b) Set the FDB Special Sick Leave Maximum in the same manner as for vacation, above.
         c) Set the FDB Special Paid Time Off Maximum in the same manner as for vacation, above.
      2) Develop maximum hours to be used for "current" accrual period leave calculations:
         a) Set the value of the Maximum Vacation Hours equal to the largest value of the following two balances:
            i) The Highest Maximum Vacation for the "current" accrual period or
            ii) The FDB Special Vacation Maximum.
b) Set the value of the Maximum Sick Hours in the same manner as vacation, above.

c) Set the value of the Maximum Paid Time Off Hours in the same manner as for vacation, above.

3) Accrue leave hours for the “current” accrual period. Refer to “Accrue Leave Per Accrual Period.”

4. Verify Leave Usage.

Leave usage is verified as follows for Current Activity PARs only:

a. If the Vacation Hours Balance is less than zero, issue message 39-111 (Warning).

b. If the Sick Leave Hours Balance is less than zero, issue message 39-112 (Warning).

c. If the Paid Time Off Hours Balance is less than zero, issue message 39-210 (Warning).

4.6.3.1 Accrue Leave Per Accrual Period.

This routine accrues leave hours for the accrual period based on the reported hours which count towards leave for this accrual period.

Processing is as follows.

1. Bypass all leave calculations (i.e., do not accrue leave hours) for this accrual period if either of the following conditions is true:

   a. The associated EDB Bypass Accrual Period Indicator equals "X".

   b. If the accrual period being processed is not the “current” accrual period and no hours toward leave have been applied to the accrual period from the PAR being processed.

2. Determine Work Days in accrual period:

   a. If Accrual Period Cycle Type is “B” (two biweekly cycles per accrual period), set the Work Days to “20” days.

   b. Otherwise (monthly accrual period), search the Monthly Work Day History record (on Payroll Control File) using Accrual End Date:

      1) If matched, set the Work Days equal to the associated month work days.

      2) If unmatched:

         a) Issue message 39-220 (Warning).

         b) Set the Work Days to “22” days.

3. Determine leave hours accrued.

   This process examines each of the four EDB historical entries in order to accrue leave hours for each Leave Type (i.e., vacation, sick, and paid time off).

   Refer to “Calculate Leave Hours Accrued”.

4. Derive the Total Hours Towards Accrual for the accrual period.

   \[
   \text{Total Hours Towards Accrual} = \sum \text{All Hours Towards Accrual contained on the four EDB historical entries for accrual period.}
   \]

5. Check the Leave Threshold:

   a. Calculate the Lowest Work Hours:

   b. Refer to “Check Leave Threshold”.
Lowest Work Hours = Work Days x Lowest Hours Per Day.

b. Calculate the Threshold Hours:
Threshold Hours = Lowest Work Hours x Lowest Threshold Percent.

c. If the Total Hours Towards Accrual is less than the Threshold Hours, set the following balances to zero for each of the four FDB Historical entries:
   1) Vacation Hours Accrued,
   2) Sick Hours Accrued,
   3) Paid Time Off Hours Accrued.

6. Check Maximum Vacation:
   a. Compute Net Vacation Hours Accrued equal to the Total Vacation Hours Accrued for the accrual period minus the previous Total Vacation Hours Accrued for accrual period.
   b. Compute a Work Sum equal to the sum of the Net Vacation Hours Accrued plus the FDB Vacation Hours Balance.
   c. If the Work Sum exceeds the Maximum Vacation Hours, set a Net Vacation Lost equal to the difference.
   d. If the Net Vacation Hours Accrued is less than zero and the previous Vacation Lost for the period is greater than zero, add the negative Net Vacation Hours Accrued to the Net Vacation Lost (allow Net Vacation Lost to be negative) such that the absolute value of the Net Vacation Lost does not exceed the value of the previous Vacation Lost for the accrual period.

7. Check maximum sick leave.
   Refer to vacation process, above.

8. Check maximum paid time off.
   Refer to vacation process, above.

9. Update the PAR totals with the leave hours accrued for the period:
   a. Add the Net Vacation Lost to the PAR Vacation Lost.
   b. Add the Net Sick Lost to the PAR Sick Lost.
   c. Add the Net Vacation Hours Accrued to PAR Vacation Hours Accrued.
   d. Add the Net Paid Time Off Lost to the PAR Paid Time Off Lost.
   e. Add the Net Sick Hours Accrued to PAR Sick Hours Accrued.
   f. Add the Net Paid Time Off Hours Accrued to PAR Paid Time Off Hours Accrued.

10. Update the FDB available leave balances with the leave hours accrued for the period.
    a. Add the amount of the Net Vacation Hours accrued less the Net Vacation Lost to the FDB Vacation Hours Balance.
    b. Add the amount of the Net Sick Hours Accrued less the Net Sick Lost to the FDB Sick Leave Hours Balance.
    c. Add the Amount of the Net Paid Time Off Hours Accrued less the Net Paid Time Off Lost to the FDB Paid Time Off Hours Balance.

11. Update the FDB leave hours lost for the accrual period.
    a. Add the Net Vacation Lost to Vacation Hours Lost.
b. Add the Net Sick Lost to Sick Hours Lost.

c. Add the Net Paid Time Off Lost to Paid Time Off Hours Lost.

12. Perform expense distribution functions:

a. Set Expense Indicator for accrual period:

1) Set the Expense Indicator to "on" (i.e., to get to this point some applicable PAR activity is present for this accrual period; the expense indicator will cause eventual leave assessment to be made for any leave applicable distribution on this PAR for this accrual period).

2) Calculate "total hours accrued" to equal the sum of:

\[
\text{Net Vacation Hours Accrued} + \text{Net Sick Hours Accrued} + \text{Net Paid Time Off Hours Accrued}
\]

3) Calculate "total hours lost" to equal the sum of:

\[
\text{Net Vacation Hours Lost} + \text{Net Sick Hours Lost} + \text{Net Paid Time Off Hours Lost}
\]

4) If the "total hours accrued" less the "total hours lost" is equal to zero (i.e., no new net hours accrued for this accrual period on the PAR; however, "RX"/"LX" activity must be charged if over threshold as indicated by the presence of any leave accrued for the accrual period):

a) If the sum of Vacation Hours Accrued plus Sick Hours Accrued plus Paid Time Off Hours Accrued for all four FDB historical entries is equal to zero:

i. Set the Expense Indicator to "off".

ii. Processing is complete for this accrual period.

b) Otherwise, the Expense Indicator remains "on".

b. Leave assessment exception warnings.

Messages are issued here whenever late pay on this PAR has caused payments on prior PARs to go over/under the leave earning threshold.

Examine each FDB historical entry in the accrual period. If both the Hours Towards Accrual exceed zero and the previous Hours Towards Accrual exceed zero, perform the following edits:

1) Issue Message 39-22 (late negative pay caused accrual period earnings to fall below the leave earning threshold) and display the (current) Hours Towards Accrual (i.e., those regular hours upon which leave charges should be credited to the department) if any of the following conditions are true:

a) The Vacation Hours Accrued do not equal previous Vacation Hours Accrued and the (updated) Vacation Hours Accrued is zero.

b) The Paid Time Off Hours Accrued do not equal previous Paid Time Off Hours Accrued and the (updated) Paid Time Off Hours Accrued is zero.

c) The Sick Hours Accrued do not equal previous Sick Hours Accrued and the (updated) Sick Hours Accrued is zero.
2) Issue Message 39-223 (late pay caused accrual period earnings to rise above the leave earning threshold) and display the previous Hours Towards Accrual (i.e., those regular hours upon which leave should be charged to the department) if any of the following conditions are true:

a) The Vacation Hours Accrued do not equal previous Vacation Hours Accrued and the previous Vacation Hours Accrued is zero.

b) The Sick Hours Accrued do not equal previous Sick Hours Accrued and the previous Sick Hours Accrued is zero.

c) The Paid Time Off Hours Accrued do not equal previous Paid Time Off Hours Accrued and the (updated) Paid Time Off Hours Accrued is zero.

d) The Sick Hours Accrued do not equal previous Sick Hours Accrued and the (updated) Sick Hours Accrued is zero.

4.6.3.2 Calculate Leave Hours Accrued.

Previously, as PAR distributions were posted to the FDB historical entries, they were consolidated based on common:

- Title Type
- Title Unit Code
- Appointment Rep Code
- Special Handling Code
- Distribution Unit Code
- Leave Plan

However, these entries must be further consolidated (temporarily) based on common Leave Rate Table elements so that the proper whole hour accruals are achieved if applicable. Once the leave is calculated, it is split among applicable historical entries.

1. Consolidate hours towards accrual:

Examine all FDB historical entries in the accrual period in order to build an array (maximum = 4) of "unique" combinations of:

- Leave Plan
- Rate Schedule Number (LAT)
- Hours Per Day (LAT)

2. Calculate leave hours accrued for each "unique" combination (above):

a. Develop the Total Hours Toward Accrual to equal the sum of Hours Towards Accrual of those FDB historical entries forming the "unique" combination.

b. Calculate vacation hours accrued:

1) If LRT vacation Index is zero (i.e. no LRT match for vacation), vacation leave is not accrued for this combination.

2) Otherwise:

   a) If the LRT record is "H" (hourly rated), calculate the Work Vacation Accrued:

      Total Hours Towards Accrual X LRT Hourly Rate.

   b) Otherwise, (hours table is applicable):
i. If any one of the EDB historical entries forming the "unique" combination contain an Hours Code of "20" (time reported as percent):
   i) Calculate Normal Work Hours in accrual period:
      Work Days X Hours Per Day.
   ii) Calculate the Search Percent:
      Total Hours Towards Accrual/Normal Work Hours in accrual period.
   iii) Search the applicable Leave Rate Table entries until the Search Percent falls within entry's LRT Percent Time range.
   iv) Use the LRT Leave Hours Earned associated with the percent range as the Work Vacation Accrued (note that if the Search Percent is greater than the last applicable range, then the LRT Leave Hours Earned for the last range is used).

ii. Otherwise (time reported in hours):
   i) Search the applicable Leave Rate Table entries until the Total Hours Towards Accrual falls within entry's LRT Month* Limit range.
      *If the Work Days per accrual period is "20", use the LRT 20 Day Month Limit; if "21", use the 21 Day Month Limit; and so on.
   ii) Use the LRT Leave Hours Earned associated with the hours range as the Work Vacation Accrued (note that if the Total Hours Towards Accrual is greater than the last applicable range, then the LRT Leave Hours Earned for this last range is used).

c. Prorate the hours accrued to applicable EDB accrual period entries.
   
   For each EDB historical entry associated with this "unique" consolidation entry, set the Vacation Hours accrued:
   
   Work Vacation Accrued X Hours Towards Accrual/Total Hours Towards Accrual

d. Calculate the Sick Leave Hours Accrued and prorate these hours among the applicable EDB historical entries in the same manner as for vacation leave, above.

e. Calculate PTO Leave Hours Accrued and prorate these hours among the applicable EDB historical entries in the same manner as for vacation leave, above.

4.6.4 Close Accrual Period

This type of call to PPI VHRS is made in order to update the EDB leave segments to reflect the end of the employee’s accrual period.

The following tasks must be performed:

1. Set the "current" period Accrual End Date equal to the Pay Period End Date.
2. Set the "current" Accrual Period Cycle Type.
   a. If the employee's Primary Pay Schedule is "BW", set the Accrual Period Cycle Type to "B".
   b. Otherwise, set the Accrual Period Cycle Type to "M" (monthly accrual cycle).
3. Slide the EDB historical information for each accrual period down one accrual period until the campus Leave History Limit is achieved (i.e., information for the last prior accrual period is dropped).
4. Initialize the four "current" accrual period EDB historical entries to initial (blank/zero) values in order to close the accrual period.

4.6.5 Print Leave Report

This type of call to PPLYHRS is made once, at the end of PAR processing, to produce the leave reports (PPP3906, PPP3907, and PPP3908).

Assuming that at least one report entry was written to the report file during PAR processing, the following tasks must be performed:

1. Properly initialize all report headings
2. Sort report entries by report number and within report number by:
   a. Personnel Program Code, Home Department, and Employee ID for report PPP3906.
   b. Home Department, Personnel Program Code, and Employee ID for report PPP3907.
   c. Employee ID for report PPP3908.
3. Print each report with proper page breaks:
   b. Home Department for report PPP3907.
   c. Full page for report PPP3908.

4.7 Program PPLRTUTL

This module is called in order to find the appropriate Leave Rate Table entry for the Leave Type requested (i.e., vacation, sick, or paid time off). If no LRT entry is found for the request, a zero value LRT index is returned (indicating that leave hours for this Leave Type will not be accrued).

4.7.1 Load Leave Rate Table

The first time that PPLRTUTL is accessed by the calling program, the Leave Rate Table is read and stored as follows:

1. Read the Delimeter record for the Leave Rate Table from the Control File. If the record is not found, return PPLRTUTL Error Condition '1' and exit from module.
2. Read each LRT record sequentially.
3. As each LRT record is read, store the record data in an array.
4. The maximum number of record entries in this LRT array is 600. If this limit exceeded, return PPLRTUTL Error condition '2' and exit from module.
5. After all LRT records have been read and stored, proceed to search the LRT array for the requested LRT key.

4.7.2 Search Leave Rate Table

1. Search the Leave Rate Table matching on:
   - Rate Schedule Number
   - Leave Plan
• Accrual Period Pay Cycle Type (if the IRT Pay Cycle Type is 'A', all, a match for Cycle Type is assumed).

• Leave Type.

2. If there is no match, set the IRT Index to zero and exit the procedure (e.g., if the Leave Type is vacation, then vacation hours will not be accrued).

3. Note that more than one match is possible, use the last match encountered where the Accrual Period End Date is not prior to the IRT Rate Effective Date.

4.8 Program PPLATUTL

The Leave Accrual Table Utility, PPLATUTL, is a new module which reads and stores the Leave Accrual Table and then searches this internal LAT table to find the requested LAT key.

4.8.1 Load Leave Accrual Table.

The first time that PPLATUTL is accessed by the calling program, the Leave Accrual Table is read and stored as follows:

1. Read the Delimeter record for the Leave Accrual Table from the Control File. If the record is not found, return PPLATUTL Error Condition 1 and exit from module.

2. Read each LAT record sequentially.

3. As each LAT record is read, store the record data in an array.

4. The maximum number of record entries in this LAT array is 200. If this limit is exceeded, return PPLATUTL Error condition 2 and exit from module.

5. After all LAT records have been read and stored proceed to search this internal LAT table for the requested key.

4.8.2 Search Leave Accrual Table.

1. Set five work indices to zero (these will represent search defaults in determining which LAT member is applicable).

2. Using the entry’s Title Type, Title Unit Code, Appointment Representation Code (a value of 'S' will be treated like 'U' for search logic), Special Handling Code, and Distribution Unit Code, search the Leave Accrual Table (LAT) Array. Examine each LAT array member as follows:

a. If the Title Type does not match the LAT Title Type, proceed to the next LAT member.

b. Otherwise (Title Types match):

   1) If the LAT Title Unit Code, Appointment Representation Code, Special Handling Code, and Distribution Unit Code are blank:

      a) If the LAT Effective Date exceeds the Accrual Period End Date, proceed to the next LAT member.

      b) Otherwise, store the LAT index in the first work index (first-level default) and proceed to the next LAT member. In this manner, the most recent LAT date is chosen as long as the LAT date does not become effective after the designated accrual period.

   2) If the Title Unit Code (TUC) and Appointment Representation Code (AREP) do not match, proceed to the next LAT member.
3) Otherwise (TUC and AREP match), 
   
a) If the LAT Special Handling Code and Distribution Unit Code are blank:
   
i. If the LAT Effective Date exceeds the Accrual Period End Date, proceed to the next LAT Member.
   
ii. Otherwise, store the LAT index in the second work index (second level default) and proceed to the next LAT member.
   
b) If the Special Handling Codes do not match and the LAT Special Handling Code is not blank, proceed to the next LAT member.
   
c) If the Special Handling Code (SHC) is blank:
   
i. If the Distribution Unit Codes (DUC) match:
   
i) If the LAT Effective Date exceeds the Accrual Period End Date, proceed to the next LAT Member.
   
ii) Otherwise, store the LAT index in the third work index (third level default) and proceed to the next LAT member.
   
ii. Otherwise, (DUCs do not match), proceed to the next LAT member.
   
d) Otherwise (SHC is not blank):
   
i. If the LAT Distribution Unit Code is blank:
   
i) If the LAT Effective Date exceeds the Accrual Period End Date, proceed to the next LAT Member.
   
ii) Otherwise, store the LAT index in the fourth work index (fourth level default) and proceed to the next LAT member.
   
ii. If Distribution Unit Codes (DUC) do not match, proceed to the next LAT member.
   
iii. Otherwise (DUCs match), a direct match (on all five non-blank search elements) has occurred:
   
i) If the LAT Effective Date exceeds the Accrual Period End Date, proceed to the next LAT Member.
   
ii) Otherwise, store the LAT index in the fifth work index (fifth level default) and proceed to the next LAT member.
   
3. After reviewing all LAT members, the LAT member chosen for the entry will correspond to the highest level non-zero work index. That is, if the fifth work index (highest level represents a direct match) is non-zero, then use the LAT entry associated with this index for the FDB entry. If the fifth work index is zero, use the fourth work index, and so on. If all five work indices are zero, set the corresponding Bypass Accrual Period Indicator to "X" and issue message 39-215 (Serious).

4.9 Program PPP400

Program PPP400 must be modified to recognize the new FDB leave segment records when read from the Segment Work File (as created by PPP300) and to include these new segment records when writing the segment update file.
4.10 Program PPP420

Currently, the system is able to report the leave balances to the employee via pay stub (or Surepay statement). Such reporting will continue given the following modifications.

Three options for displaying leave balances are available based on the value System Parameter Number ‘052’:

- No Leave Display (parameter value of zero)
- Standard Leave Display (parameter value of 1)
- Arrears Leave Display (parameter value of 2)

4.10.1 Standard Leave Display

The “standard” leave balance pay stub display option is employed as follows if System Parameter Number ‘052’ contains a value of 1.

1. Beginning vacation balance.

The Last Stub Vacation Balance (D.E. #5139, new) will now be retrieved from the employee’s EDB record in order set the Stub Begin Vacation Balance.

Note that the Last Stub Vacation Balance is maintained by program PPP390 as follows:

a. If any PAR activity (i.e., C-O-HI, Expense Transfer, or Current Activity PAR) is indicated for an employee (regardless of the type of pay cycle being paid), and if the Last Stub Vacation Indicator (D.E. #5182, new) is blank or “R” (reset):

1) The Last Stub Vacation Balance is set equal to the value of the Vacation Hours Balance (to the nearest lower one hundredth of an hour).

2) The Last Stub Vacation Indicator is set to “N” (no reset).

b. Just prior to writing each PAR record, the following processes is invoked.

If the PAR is a “Current Activity” type PAR and either the PAR Total Gross or the PAR Net Pay is greater than zero, set the Last Stub Vacation Indicator to “R” (reset). This condition indicates that a stub will be produced so, therefore, the indicator is set to “R” which will cause the Last Stub Vacation Balance to be reset to the current vacation balance after the checks have printed (i.e., it will be reset next time there is Payroll Compute activity for the employee).

2. Ending vacation balance.

The Vacation Hours Balance (to the nearest lower one hundredth of an hour) is used as the Stub End Vacation Balance.


a. The Stub Vacation Accrued is set equal to sum of the PAR Vacation Hours Accrued less the PAR Vacation Hours Lost plus the total of all those Distribution Hours contained on the PAR which are associated with vacation leave accrued (DOS equal “VLA”) time input.

b. The Stub Vacation Taken is set equal to the sum of all those Distribution Hours contained on the PAR which are associated with either vacation hours reported (DOS equal “VAC”) or terminal vacation pay (DOS equal “TRM”) time input.

c. Calculate the “anticipated ending balance” equal to the sum of the Stub Begin Vacation Balance plus the Stub Accrued Vacation less the Stub Vacation Taken. Under normal pay circumstances, this “anticipated ending balance” will equal the Stub End Vacation
Balance. However, if COH or Hours Adjustment activity has been applied between the
time of the last pay stub issuance and the current stub issuance, the stub leave hours ac-
crued or leave hours taken must be altered as follows in order to reflect this pay adjustment
activity.

d. If the “anticipated ending balance” exceeds the Stub End Vacation Balance, the difference
is added to the Stub Vacation Taken (e.g., negative Hours Adjustment to Vacation Hours
Balance, rounding “roll over”, or prior Cancellation/Overpayment type PARs).

c. If the “anticipated ending balance” is less than the Stub End Vacation Balance, the difference
is added to the Stub Vacation Accrued (e.g., positive Hours Adjustment to Vacation
Hours Balance, rounding “roll over”, or prior Hand-Drawn Check).

4.10.2 Arrears Leave Display

The “arrears” leave balance pay stub display option is used if System Parameter Number “052”
contains a value of “2”. This option only displays leave balances for monthly paid employees
where the displayed leave balances are one month in arrears.

1. If the employee’s Primary Pay Schedule is not “MO” or “MA”, the “standard” leave display
option is used.

2. Otherwise, the leave balances are displayed as follows:

   a. Ending vacation balance.

   The Stub End Vacation Balance is set equal to the Vacation Hours Balance less the total
   Vacation Hours Accrued for the current accrual period (i.e., that accrual period which was
   just closed if the pay cycle being processed is the same as the employee’s Primary Pay
   Schedule).

   b. Vacation accrued.

   If the pay cycle being paid is the employee’s Primary Pay Schedule, the Stub Vacation
   Accrued is set equal to the sum of the net PAR Vacation Hours Accrued less the net EDB
   Vacation Hours Accrued for the current accrual period plus the net EDB Vacation Hours
   Accrued for the most recent “prior” accrual period plus the total vacation leave accrued
   (“VLA”) Distribution Hours contained on the PAR.

   If the pay cycle being paid is not the employee’s Primary Pay Schedule, the Stub Vacation
   Accrued is set equal to the sum of the PAR Vacation Hours Accrued less the PAR Va-
   cation Hours Lost plus the total vacation leave accrued (“VLA”) Distribution Hours
   contained on the PAR.

   c. Vacation taken.

   The Stub Vacation Taken is set equal to the sum of all PAR Distribution Hours which
   are associated with either “VAC” or “TRM” time input (i.e., this option assumes that leave
   usage is reported one month in arrears).

   d. Beginning vacation balance.

   The Stub Begin Vacation Balance is set equal to the result of the Stub End Vacation
   Balance less the Stub Vacation Accrued plus the Stub Vacation Taken.

4.10.3 Sick Leave/Paid Time Off Stub Display

Pay stub balances for “sick leave” are calculated and displayed in the same manner as vacation,
above.

Note that until such time as the pay stub is modified to accommodate “paid time off”, if “paid time
off” is utilized for an employee, the “paid time off” balances will not be displayed on the pay stub.
4.11 Program PPP520

Leave assessment charges are developed by program PPP520 (Expense Distribution Process).

For each (non-Expense Transfer) PAR Distribution, the following leave assessment process is invoked:

1. Bypass (do not assess leave) the Distribution if any one or more of the following is true:
   a. The campus Leave Accrual Option (System Parameter #051) is zero (no leave accrual) or “1” (hours leave accrual only).
   b. The Distribution Leave Assessment Indicator (developed and placed on the PAR Distribution by PPP390) is zero (off).
   c. The Distribution applies to the current accrual period and no leave hours have accrued for the current accrual period (note that this is determined by an indicator placed on the “current activity” PAR issued for the employee at the close of his/her normal accrual period).

2. Establish the proper Leave Accrual Table (LAT) record:
   a. Call module PPI ATUTL, using the following elements as search argument:
      1) Distribution Title Type
      2) Distribution Title Unit Code
      3) Distribution Appointment Representation Code
      4) Distribution Special Handling Code
      5) Distribution Unit Code
      6) Distribution End Date.
   b. If PPI ATUTL returns a non-zero error code, issue message 52-201 (Serious) and bypass (do not assess leave) the distribution.
   c. Otherwise, the proper LAT Record Index is returned by PPI ATUTL.

3. Determine the applicable LAT Fund Range using the Distribution Fund Number as search argument. This will establish the proper:
   - LAT Leave Utilization (Vacation, Sick, and Paid Time Off) Factor.
   - LAT Leave Reserve Account Number.

Note that because of current program construction, leave and other benefits are calculated prior to the work study split; therefore, if work study employees ever start to accrue leave, a fund split anticipation (similar to Workers Compensation) must be implemented.

4. Calculate the Work Days Per Year:
   Leave Work Hours Per Year\(^8\), Standard Work Hours Per Day\(^9\)

5. Establish the Annual Vacation Hours:
   a. Determine the Base Annual Vacation Hours:

---

\(^8\) System Parameter #042, new.
\(^9\) System Parameter #040.
1) Search the Leave Rate Table (refer to Program PPP390, Search Leave Rate Table) using the following as search argument:
   a) IAT Rate Schedule Number
   b) Distribution Leave Plan
   c) Distribution Pay Cycle Code
   d) Leave Type "V" (vacation)
   e) Distribution End Date.

2) If there is no match, set the Base Annual Vacation Hours to zero.

3) Otherwise:
   a) If the LRT Record Code is "H" (hourly rated) calculate the Base Annual Vacation Hours:
      LRT Hourly Accrual Rate X Work Days Per Year X IAT Hours Per Day.
   b) Otherwise (hours table is indicated).
      i. Find the last IRT Leave Hours Earned entry for the match (this will yield
         the highest value Leave Hours Earned for the monthly schedule).
      ii. Calculate the Base Annual Vacation Hours:
         LRT Leave Hours Earned X 12.
   b. Calculate the Annual Vacation Hours:
      Base Annual Vacation Hours X IAT Vacation Utilization Factor.

6. Determine Annual Sick Hours in the same manner as for vacation, above.
7. Determine Annual Paid Time Off Hours in the same manner as for vacation, above.
8. Calculate the Total Annual Leave Hours:
   Annual Vacation Hours + Annual Sick Hours + Annual Paid Time Off Hours
9. Calculate the Annual Hours Toward Leave:
   Work Days Per Year X IAT Hours Per Day.
10. Calculate the Annual Hours To Be Worked:
    Annual Hours Toward Leave * Total Annual Leave Hours.
11. Calculate the Ratio of Leave Hours to Hours Worked:
    Total Annual Leave Hours / Annual Hours To Be Worked.
12. Determine the Benefits Percent:
    a. Search the Leave Assessment Categories (LAC) Table (CPWSXI AC) using the employee
       PAR fields (Retirement System Code, FICA Eligibility Code, and Title Code Special
       Retirement) as search arguments:
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</table>

b. If employee attributes are not matched:
   1) Issue message 52-061 (Serious),
   2) Bypass the distribution (do not assess leave charges).

c. Calculate the Benefits Percent to equal the System Parameter value (associated with the LAC System Parameter Number) plus one.

13. Calculate the Leave Assessment Rate:

   Benefits Percent X Ratio Of Leave Hours To Hours Worked.

14. Determine the Lost Leave Factor:

   \[
   \text{Lost Leave Factor} = \frac{(PAR \text{ Total Leave Hours Accrued} - PAR \text{ Total Leave Hours Lost})}{PAR \text{ Total Leave Hours Accrued}}
   \]

15. Adjust the Leave Assessment Rate:

   Leave Assessment Rate \times \text{Lost Leave Factor}.

16. Calculate the Leave Assessment Amount:

   \[
   \text{Distribution Gross} \times \text{Leave Assessment Rate}
   \]

### 4.12 Program PPP640

Program PPP640 creates the Time Benefits Roster (PPP6401). This report will be modified:

1. To use the proper new and revised LDB balances.
2. To display "paid time off" balances.
3. To display messages related to the employee's leave earning status.
a. Employee Approaching Vacation Maximum (issued for any employee who is within N hours of achieving vacation maximum; where N is defined by the value contained in System Parameter Number “046”).

b. Employee Approaching Time Benefits Review.

c. Casual Employee Approaching Vacation Eligibility.

4.13 Program PPP120

Program PPP120 will be modified to derive the Leave Plan Effective Date as follows and then to pass this date to USER12.

1. On change of employee, the Leave Plan Effective Date is initialized to equal the File Maintenance Process Date.

2. As Data Element Activity Records are read and posted to the FDB employee record, the Data Element Number is examined. If the element is the Appointment Leave Plan Code (i.e., elements 2018, 2318, 2618, 2918, 3218, 3518, 3818, 4118, or 4418), the activity record’s transaction Effective Date is used to set the Leave Plan Effective Date.

4.14 Program PPCB01

Program PPCB01 (called by USER12) will be modified to set the PPCB01 Rederive Leave History Indicator if there is any change to an employee’s Personnel Program Code, Title Unit Code, Appointment Representation Code, Special Handling Code, Leave Plan Code, or Distribution Unit Code. This indicator will be used by program USER12 to determine whether or not Leave Plan History should be redereived.

4.15 Program USER12.

USER12 must be modified as follows in order to maintain the employees’ FDB Leave Plan History and to report existing sick leave balances for rehired employees.

4.15.1 Maintain Leave Plan History

1. If the Automated Leave Accrual Indicator (System Parameter #051) is zero, bypass Leave Plan History maintenance.

2. Otherwise (as indicated by the PPCB01 Rederive Leave History Indicator), if at the appointment level the Personnel Program Code, Title Unit Code, Appointment Representation Code, Special Handling Code, or Leave Plan Code fields have been added or changed, or at the distribution level a Distribution Unit Code field has been added or changed, examine all resident appointments as follows:

   a. If the Appointment Begin Date year/month exceeds the File Maintenance Process Date year/month (i.e., future appointment), bypass the appointment.

   b. If the appointment Leave Plan code is blank (no Leave), bypass the appointment (note that Leave Plan Code “N” is treated like other Leave Plan Code values except as noted below).

   c. Otherwise, use the appointment’s Personnel Program Code, Title Unit Code, Appointment Representation Code, Special Handling Code, Leave Plan Code, and every unique

10 These messages are currently displayed on the Personnel Status Report (PPP6201).
Distribution Unit code within the appointment in order to search the employee's EDB Leave Plan History:

1) If a match is found:
   a) If the Distribution End Date is prior to the File Maintenance Process Date, set a Work Flag to indicate "expired".
   b) Otherwise, set the Work Flag to indicate "active".

2) If a match is not found, store the Appointment Distribution search information (PPC, TUC, ARTP, SHIC, Leave Plan, and DUC) as well as the Distribution Start Date (an attempt to add this appointment/distribution to the Leave Plan History will be made after all appointments currently resident have been examined).

d. After all appointments have been examined, attempt to add each stored appointment/distribution Leave Plan information entry to the Leave Plan History as follows:

1) If the stored Leave Plan Code (to be added) is "N" (no leave) and there are no Leave Plan History entries present, bypass adding this Leave Plan Code to the Leave Plan History (i.e., EDB leave segments are not maintained for employees who normally do not accrue leave; however, if an employee appointment stops accruing leave or if leave accruing appointments are present with non-accruing appointments, the Leave Plan Code "N" information should be added to the Leave Plan History).

2) Using the stored appointment/distribution Leave Plan information, search the Leave Plan History entries matching on Personnel Program Code, Title Unit Code, Appointment Representation Code, Special Handling Code, and Distribution Unit Code. If a match is encountered, it is likely that only the Leave Plan Code has changed for the appointment; therefore, the Leave Plan Effective Date (passed by PPP120) is used to overlay the stored Distribution Start Date of the entry to be added.

3) Load the first blank Leave Plan History entry with the stored appointment/distribution Leave Plan information.

4) If no blank Leave Plan History entries are available:
   a) Find the first Leave Plan History (LPH) entry which was not matched by currently resident EDB appointment/distributions; overlay this LPH entry with the stored appointment/distribution information.
   b) Otherwise (i.e., all LPH entries are matched by appointments currently resident on the EDB):
      i. Find the first Leave Plan History entry of those LPH entries whose associated Work Flag indicated "expired"; overlay this LPH entry with the stored appointment/distribution information.
      ii. Otherwise (all LPH entries are "active"), determine the earliest LPH Start Date which precedes the Distribution Start Date of the entry to be added and overlay this LPH entry with the stored appointment/distribution information to be added. If no LPH Start Date precedes the Distribution Start Date to be added, bypass the stored appointment/distribution information entry.

4.15.2 Sick Leave Balances for Rehires

Existing University policies allow for the partial or complete reinstatement of previous sick leave hours earned for an employee being rehired. The amount of reinstatement depends on the length of the employee’s break in service. To expedite this purpose, USER12 is modified as follows.
If the employee is being rehired (Personnel Action Code is '02') and the Sick Leave Hours Balance exceeds zero, issue message 12-760 (Warning) referenced by the amount of the Sick Leave Hours Balance.

4.16 Program USER12; One-Time Execution.

A special one-time version of program USER12 is required in order to initialize the employee population for the revised leave accrual process.

For every employee on the EDB, the following maintenance is performed.

1. The available leave balances (sick and vacation) are moved to their revised locations and the previous locations are then set to zero.

2. The Paid Time Off Balance is set to zero.

3. The Hours Towards Accrual, Plan A through I (D.E.#'s 5113 through 5118) are no longer used and are set to zero.

4. The EDB Leave Plan History maintenance process is triggered by temporarily simulating an Appointment/Distribution Code change.

5. The available leave balances are used to set the Last Stub Balances (Vacation, Sick, and Paid Time Off).

Note that also included in this one-time version of USER12 are modifications to the "5100" initialized segment (Hours Segment) such that the available leave balances (vacation, sick leave, and paid Time Off) are set to zero (these modifications are necessary due to the non-standard initialized segment routine for the Hours Segment in PPP0110).
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