



1. General

- 1.1 Retro Module Frame
- 1.2 Retro Module Purpose
- 1.3 Outlining Main Processes and Files updated

2. System Setup

- 2.1 System Configuration Definitions
 - a. General Options Tab
 - b. Payroll Information Tab
- 2.2 TableQ definitions
- 2.3 System Error Handling

3. Payroll Export Operations

- 3.1 Payroll Export mode – Regular
- 3.2 Payroll Export mode – Regular + Retroactive
- 3.3 Updated Files
- 3.4 Error/Warning Messages, occurring during Payroll process

4. Retroactive Modifications

- 4.1 Retroactive Editing
- 4.2 System files/programs used for Retroactive Edits

5. Unlocking pay-period for recalculation

- 5.1 Successful Retro file creation
- 5.2 Unsuccessful Retro file creation

6. Upgrading Procedure



1. General

1.1 **Retro Module Frame**

System Environment - TK2000 (32-Bit)
TKSQL

System Module - Creation of a Payroll Export file consisting of
DAILY, SALAUX, EMPLOYEE, EMPLOY1

1.2 **Retro Module Purpose**

The basic mechanism of creating a payroll file is designed to process each payroll period data based on the current data that exist in the database. This process of creating the file does not take into consideration events such as modifications made to the database after generating the payroll file. This type of event requires notifying the Payroll Department/System of the modifications made after the fact, i.e. after the payroll file has been processed and of the values that need to be modified.

In many cases, modifications made to the database affect data of previous pay-periods that were already exported to payroll. These changes (e.g. addition or subtraction of overtime hours, vacation hours etc.) should be reported to the Payroll System. The process of handling retroactive modifications entails one of the following:

- Reproducing the entire payroll file for the previous pay-period/s having the payroll system calculate the differences between the original and current records.
- Manually modify the data (report differences) using the Payroll software.

Both activities described above are time consuming and prone to errors.

The mechanism of the Retroactive Payroll Calculation module supports the automation of all processes involved in retroactive modifications: monitoring the process, calculating the differences and producing difference records for the Payroll System.

The system includes the following features:

- The ability to declare/indicate which Payroll File has been generated and transferred to the Payroll System, by marking the completion of /finalizing the Payroll File.
- The ability to monitor what modifications made to the database affect the Payroll and as result should be taken into consideration when generating the next / following payroll file.
- Automatic calculation of the differences between the original Payroll record and the current Payroll record. This process results in generating the differences record as an integral part of the current Payroll file.
- The process of recalculation previous payroll records can be applied to more than one preceding pay-period (supports up to 99 previous pay-periods to be calculated).

The main advantage of using this module is that it enables the company to perform the retroactive calculation in-house; consequently the company has full control of producing salary data and avoids additional costs of processing the data in case it uses an external payroll service. Additional advantage is that this module provides automatic and accurate calculations and reduces work hours.

The following example describes the usage of this module:

On August 1st 2002 a Payroll file for the period of July 2002 was created, containing the data known at this point. The values in this file for employee number 1 include the following data:

Regular hours 100.00

TK Retroactive Transactions For Payroll Export



Vacation hours	25.00
Trim counter	-70.00

TK Retroactive Transactions For Payroll Export



On September 5th 2002 a some modification were made in the Daily file for this employee applying to July 2002 pay-period. After running the pay-period calculations again, the end results for July 2002 are now:

Regular hours	125.00
Vacation hours	20.00
Trim counter	00.00

Previously, when a scenario such as the above occurred the operator would have been required to run again the payroll export procedure for the previous pay-period, i.e. July 2002 and transfer the file to the Payroll System together with the current data that relates to August 2002.

Alternatively, the operator would have manually modified the values so that the payroll figures will be compatible with TimeKeeper calculated data (e.g. add 25 hours to Regular etc.).

Using the Retroactive module, the activities of recalculating and reporting the differences in separate files or manually adjusting the data – are no longer required. Initiating the Timekeeper Payroll File Creation for the current pay-period in “Retro Mode” will result in the creation of Payroll Difference records referring to previous pay-periods, together with the current pay-period data.

Consequently, referring to the above example, the payroll process applying to the period of August 2002 will include the data of both August 2002 and all retroactive changes performed that refer to July 2002 pay-period.

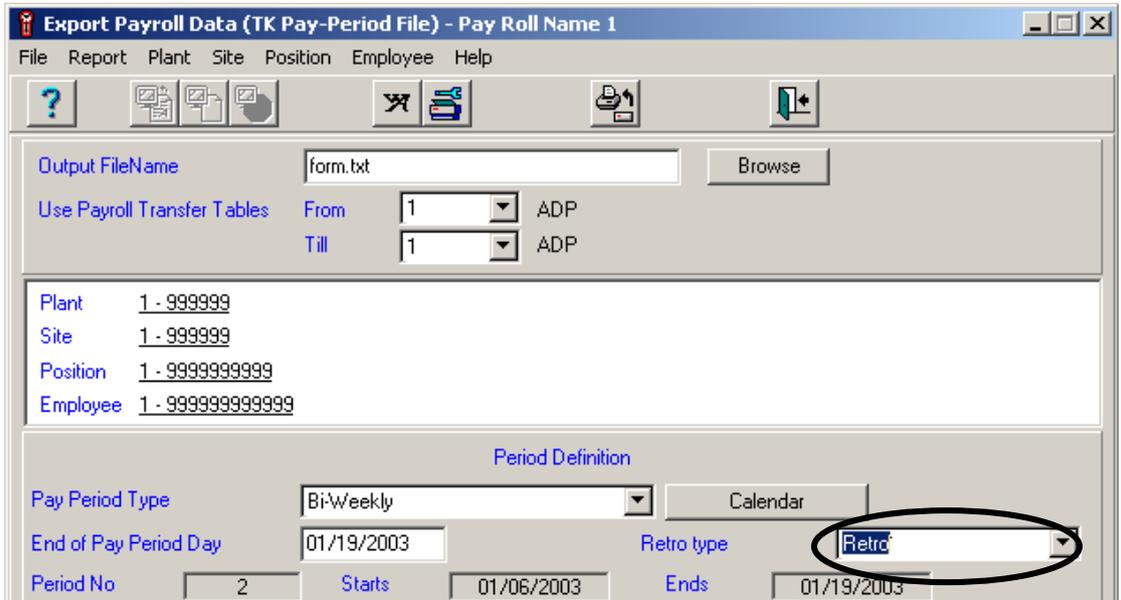
In this case the retroactive records sent to payroll together with data of August 2002 for employee number 1, will show:

Regular hours	25.00
Vacation hours	-5.00
Trim Counter	70.00



1.3 Outlining Main Processes and Files updated

The Payroll export is run on a regular mode until receiving the final approval from payroll department. Upon receipt of the approval, the user will select the Retro Mode for running the Export Payroll file.



The following processes will be performed in the background:

- After creating a final approved Payroll file for the Payroll System all records containing retroactive data per employee will be added to the **RetroPAY** file. This data will be used for comparing between current and original records and calculating the differences.

Note: When first using the system, there will be no comparison to previous pay-periods (as there are none). Therefore the first time running is used to actually initialize the Retroactive system. From the next pay-period onwards the system will have the required information for comparing records.

Data Filename: **RetroPAY**

- Successful termination of writing the data to the **RetroPAY** file will result in flagging the current pay-period as a 'Locked Pay-Period' for salary purposes. The relevant information referring to locked pay-period will be written to **RetroMNG**. Locking this specific pay-period will also result in the following:
 - The system will disable the option of running payroll export with retroactive data for this **Accumulation Code / Period Key / TableQ #**. It will still be possible to run payroll export for this pay-period on a regular basis (without retroactive data).
 - From now on modifications to pay-periods within the range of the 'locked pay-periods' will be



considered as retroactive modifications.

- To re-run the Payroll file creation process using the Retro Mode will require the operator to Unlock the file (see Chapter no. 5 - Unlocking pay-period for recalculation).

Data Filename: **RetroMNG**

Menu Option: **Maintenance/ Retro-PAY Module/ DRETRMNG**

- Retroactive modifications made in the database (via the BROWSER for example) will result in creating a 'Marker' type of record per employee/pay-period. This record will instruct the system to perform the comparison process between the original record and the current one the next time Payroll file is being created. Although there might be several modifications for employee in one pay-period only one record will be created per employee/pay-period.

Data Filename: **RetroMRK**

Menu Option: **Maintenance/ Retro-PAY Module/ DRETRMRK**

- At the end of this process a Payroll file is created. The file will include the current pay-period information together with the Retro information.

Notes:

- 1) The definition, which payroll components need to be re-evaluated for Retro purposes, is subject to TableQ definitions. See item 2.2 for more information.
- 2) The format of the Retro Differences record is defined in the 'System Configuration' file ('Payroll information' Tab) See item 2.1.b for more information.



2. System Setup

2.1 System Configuration File

The retroactive module would be activated only if configured in the System Configuration Definitions file (**SYSCNF**) and is programmed to the HASP.

a. General Options Tab

- **"Retro Module Enabled"**: Enable the Retro Module by selecting this check box.

- **"No. of Pay-Periods for Retro Calculation"** : Define number of previous/preceding pay-periods for which the system will calculate differences.
 - **Values:** 0 or 99 - Unlimited number of pay-periods
NN - Limit the range to NN pay-periods

 - **Example:** The organization allows processing retroactive calculation up to 3 preceding pay-periods. The value is therefore set to "3". To clarify this example, assume the organization works with a Monthly defined Pay-Period type.
Current Payroll file processed refers to July 2002. The Retro system will take into account all modifications that were made within the range of April to June 2002. Modifications applied to March 2002 will not be processed as this pay-period is out of range.

- **"Additional/More Button"** – as described in item 1.3 referring to the RetroMNG file, the system needs to be informed of modifications made on 'Locked Pay-Periods'. Press this button to define:
 - Which update programs will be used for performing retroactive modifications

 - The required warning level upon updating the database:
Automatic – the user will not be asked to confirm change
User Authorization required – the user will have to confirm the change



The following are the update utilities supported by the Retroactive Module:

Data File / Update Method	Available Options		
	No – Updates will not be used for Retroactive Purposes	Yes	User Authorization
Employee File	+	n/a	+
Daily File	+	+	+
SALAUX	+	+	+
Global Updates	+	+	n/a

b. Payroll Information Tab

Retro Record Format – define the format of the output record in the Payroll file. There are two options:

1) Differences record:

The record will only include the values that need to be adjusted. The values of this record are the result of the following internal calculation:

Current Pay-Period Record [minus] Original Pay-Period Record

The current Payroll file will consist of 2 records:

1st for the current pay-period

2nd differences record referring to the previous.

Example:

Current Pay-Period for payroll: August 2002

Modifications apply to: July 2002 (Status: 'Locked')

Payroll File for	Details	Regular Hours	Vacation Hours	Trim Count
July 2002	Original Record	100.00	75.00	-70.00
Internal Calculation	The new July 2002 results due to modification made in August 2002	125.00	20.00	0.00
August 2002	Differences Record generated in August-2002 for July-2002	25.00	-50.00	70.00
August 2002	Current Payroll Record for the current Pay-Period: August 2002	87.00	100.00	-13.00

TK Retroactive Transactions For Payroll Export



2) Original and Differences records:

The system will generate two records for the previous (modified) pay-period. The first is the original record and the second is the updated record. The Payroll System will be responsible to calculate the differences. The current Payroll file will consist of 3 records:

1st for the current pay-period

2nd the original payroll record for the previous pay-period

3rd the current payroll record for the previous pay-period

Example:

Current Pay-Period for payroll: August 2002

Modifications apply to: July 2002 (Status: 'Locked')

Payroll File for	Details	Regular Hours	Vacation Hours	Trim Count
July 2002	Original Record	100.00	75.00	-70.00
August 2002	The original Record as transferred on July 2002			
August 2002	The new July 2002 results due to modification made in August 2002	125.00	20.00	0.00
August 2002	Current Payroll Record for the current Pay-Period: August 2002	87.00	100.00	-13.00



2.2 TableP – and TableQ definitions

a. TableP

Most of the Payroll Systems require that the Retro Record will be different than the regular record format. To implement this requirement new output record of TableP should be created. These new records will either have the same general format as the regular ones but with different form identifier or they could have an entirely different structure.

Note: A new Salprn(Payroll report) form should also be defined

b. TableQ

When the Retro mode is active, TableQ will display an extended format. The regular form - that will be used to transfer current pay-period values and the Retro form definitions. Each salary component that should be evaluated while calculating Retro - needs to be assigned to the appropriate TableP form.

If a Retro record should not be created for a specific salary component – set TableP number to zero (in the Retro Part of the screen).



2.3 System Errors Handling

Revisions in TableQ definitions while working in Retro Mode:
Retro Calculations are based on the data in the **RetroPAY** file, identified by key fields: Table P number and Table P fields numbers (Regular form) or Codes' numbers. If a new TableP field is added or a code is changed the system will refer to these new fields as new components and will perform the calculations accordingly. This might result in incorrect values.

Example:

Pay Period 2/2002 includes code no. 145- Vacation, with a value of 9.00 hours.

The **RetroPAY file** is updated accordingly.

After creating the final Payroll file, the operator revised Table Q and instead of code 145, assigned this specific salary component to code 245.

Additionally some retroactive modifications were done for 2/2002 pay-period, which did not affect the Vacation hours that remained 9.00 hrs.

The following pay-period a new current payroll record is being created for the period 2/2002. Code 145 does not exist therefore not transferred. Code 245 is transferred with 9.00 hours value.

Comparison between the original and current records is done based on the index of TableP and Code No.

The system searches for code no. 245 in the original record in the previous pay-period. Since this code does not exist (i.e. the system assumes 'code 245' has a zero value for differences calculation purposes) the system adds this value to the difference record. If there was no change to the code the comparison result would have been zero.

Final result, the employee has been paid twice: once under Code 145 (original payroll) and again under code 245 (current payroll file).

	Code 145	Code 245
Original Record 2/2002	9.00	"0.00"
Current Record 2/2002 after Retro Calc.		9.00
Retro Calculation: Current – Original		9.00



3. **Payroll Export Operations**

When the Retro Module enabled in the System Configuration File, the Payroll Export utility offers 2 modes of operations: Regular and Retro mode.

3.1 **Payroll Export Mode - Regular**

This is the basic mode that enables exporting Payroll data referring to each pay-period selected, and as per additional selections made by the operator (Plants, Sites etc.). This mode will not perform any retroactive calculations.

The Regular mode is normally used to create Payroll files for either the current or previous pay-periods, for retrieving required information and for auditing purposes. This mode of operation is available at all times, even for retrieving information referring to 'locked' pay-periods.

3.2 **Payroll Export Mode – Regular + Retro**

This mode will be used when the Payroll Department has concluded that the update process is completed and the payroll file is now ready to be transferred to the Payroll Department/System.

This mode of operation will initiate the Retro calculation process.

Note: When choosing the Retro mode of operation it is required to define “ALL” for the organizational selection criteria (Plants, Sites etc.). The locking key consists of the following: [Accumulation Code + Period Key + Table Q no.] and applies to ALL employees in this range regardless of the partial selection made. The payroll file will include the data of the selected employees but the lockage will apply to the entire range as per the above-defined key. As a result the system will not permit creating additional Payroll file for the rest of the employees unless a process of unlocking pay-period is performed (see chapter no. 5- Unlocking pay-period for recalculation). For creating a partial file use the Regular Mode.

3.3 **Updated files**

Successful termination of creating Payroll file using the Retro mode will update the following system files:

- The entire Payroll data will be added to the RetroPAY file.
- The RetroMNG file will include the following information of the Locked pay-period:
Accumulation Code, Pay Period Key, Execution date and time, Operator name, TableQ no. and a lockage mark.
- Payroll file with current pay-period data and Retro Record. The Retro Record format will be generated according to the definition of the System Configuration file (see details in item 2.1 Differences record will be generated as per definitions in the System Configuration file: Differences Record or Original + Differences record. For more information see item 2.1.a.

3.4 **Error/Warning Messages, occurring during Payroll process**

- a. Make sure that TableQ is defined properly with Retro information assigned properly. If the Retro assignment information is not defined the Payroll file will include the Retro calculation. For more information see item 2.2
- b. **Successful termination of Payroll file creation**
result in locking the processed pay-period. Attempt to rerun the payroll creation for this pay-period will result in the following message



The operator will need to unlock this pay-period for rerunning the Retro calculation (see chapter 5 for procedure) or run the payroll process in Regular mode for information purposes.

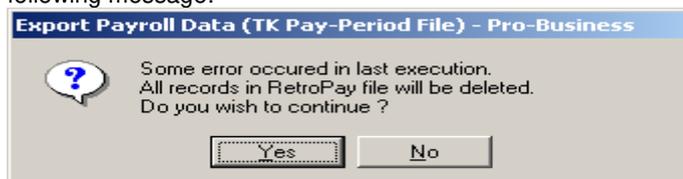
- c. Trying to remove the lockage sign from the RetroMNG file by using the DRETRMNG program while the records for this pay-period still exist in the RetroPAY file will result in the following message:



This message also indicates that the operator is required to run the procedure of unlocking the relevant pay-period (see chapter 5).

- d. The procedure of **creating the payroll file did not end successfully** as a result of aborting the process by the operator or any other error. The RetroPAY file will be updated partially and the RetroMNG file will display the indication that the process was not completed by displaying the required record colored in red.

If the operator attempts to recreate the payroll file the system will display the following message:



Yes – allow the system to automatically delete all partial information from the RetroPAY file and proceed with the Payroll file creation.

No – the operator will be prompted back to the data screen. The operator will be required to perform the unlocking procedure as detailed in chapter 5.

- e. **Retro Record does not include Negative Values**

The above results from disabling negative values to be transferred in the Payroll file (System configuration file -> Negative values). Note that this definition applies also to the Retro Record and is required when a value should be deducted. If the Payroll system cannot handle negative value, consider working with Original and Differences records format rather than with Differences record format.

- f. **Differences Records were not produced**

- When first using the system, there will be no comparison to previous pay-periods (as there are none) and consequently there will be no differences record. The first time running is used to actually initialize the Retroactive system.

TK Retroactive Transactions For Payroll Export



- There were no changes that affect the Payroll values therefore no differences records were created.
- A retroactive change has been made applying to a locked pay-period using a program that is not set as a retroactive modification program. For more information see item 2.1.a "More Button".
- Retroactive change was made but was not finally confirmed by the operator.
- The retroactive modifications applied to previous pay-periods that are not within the range defined for Retro calculation. See item 2.1.a –No. of Pay-Periods for Retro Calculation definition.



4. **Retroactive Modifications**

Retroactive Modifications are defined as changes made in the database that apply to any Locked pay-period as recorded in the RetroMNG file including creating new records in the Daily file.

Such a modification will create a record in the RetroMRK file that will instruct the system to process the Retroactive calculation in the following pay-period.

4.1 **Retroactive Editing**

The methods and required warning level are subject to the appropriate definitions in the System Configuration file. See item 2.1.a.

All modifications performed using the below listed programs will automatically update the RetroMRK file.

Manual updating of the RetroMRK file may be performed using the DRetrMRK program accessed by choosing the "Maintenance\Retro-PAY Module\Flagged Employee For Retro Processing" option from the menu.

Only one record will be created per employee/pay-period in the RetroMRK file. Additional modifications to the same employee for the same pay-period, regardless of the program/file used - will not create additional records. Example: using the Browser to modify the data of an employee will create a RetroMRK record once a unique employee/pay-period is recognized. Editing the SALAUX file for the same employee and pay-period will not result in an additional RetroMRK record, as a unique record already exists in the file for this specific employee/pay-period.

Note:

The system will refer to modifications in the range of all Locked Pay-Periods as Retroactive modifications.

The Retro Calculation, however, will calculate differences only for the range of pay-periods defined in the System Configuration.

There might be a situation in which the operator performs retroactive modifications for Locked Pay-Periods that are not in the range defined for Retro Calculation. The system will issue the appropriate notification while editing the records but will not perform the Retro Calculation.



4.2 System files/programs used for Retroactive Edits

Retroactive edits be considered as modifications made to the following files:

Program	Data File
DEmploy.EXE	EMPLOYEE- Employee File EMPLOY1 – Employee Personal Data
DSalauX.EXE / DayBrw.EXE	SALAUX – Auxiliary Payroll Data
Daily Browser (Daybrw.EXE)	DAILY – Daily Activity File
Global Updates Programs: GLB_UPD.EXE	Global Updates: Daily Updates (by Employee/by Date) Daily Calculation (by Emp./by Date) Create Daily Records Summarize Pay-Period
DRetrMRK.EXE	View/EditRetroMRK – designated rec

Notes:

- 1) Each field that is modified will flag the entire record as being revised for Retro calculation. There is no option to select which fields will be used to flag the record for retroactive calculation.
 - 2) Importing data programs including clock retrieval programs will not activate the Retroactive modifications process.
- a. **Deploy – Employee File Options**
No – Modifying the Employee/Employ1 will have no affect on Retro Calculation.
User authorization required - the operator is required to assign a date to the change made. If the assigned date is within the range of the Locked Pay-Periods a **RetroMRK** record will be created. If changes in the Employee file do not have any influence on Salary calculation then the operator may assign the change to any future date that is not within the range of Locked Pay-Periods. The Cancel button does not cancel the Retro record – it prompts the operator back to editing mode.
 - b. **Daily File - DAYBRW Options**
No - Modifying the Employee/Employ1 will have no affect on Retro Calculation.
Yes – Each modification of the Daily record (for Employee/Pay-Period) will create a record in the RetroMRK file.
User authorization Required – The operator would be requested to confirm the modification, which will result in creating the required record in the RetroMRK file.

Remember: The Retro module supports modifications made ONLY to the DAILY file! If a confirmation request appears while making changes to a secondary file record (i.e. TCday, DAday) it actually applies to the Daily record being recalculated. Recalculation is also considered as a modification activity.
 - c. **SalauX file – DSALAUX Options**
No - Modifying the Employee/Employ1 will have no affect on Retro Calculation.
Yes – Each modification of the Daily record (for Employee/Pay-Period) will create a record in the RetroMRK file.
User authorization Required – The operator would be requested to confirm the modification, which will result in creating the required record in the RetroMRK file
 - d. **Global Updates Options**
Working with the Retro Module will display a check box in the Global Update screen. The operator will be required to confirm marking the updated records for Retro calculation.
 - e. **DretrMRK.EXE program**
In addition to the above programs that automatically update the RetroMRK file, the DretrMRK.EXE program offers a direct access to the file. The program enables both



adding a new record to the file (bypassing the automatic procedures), and also enables viewing the records in the file.

Adding a record



Press the "Add Record" icon to add a new record. Choose an employee and assign the modification date.

The date assigned should be within the range of the Locked Pay-Periods otherwise an error message would appear)

All other data fields will be filled by the system automatically.

Prior to adding a record make sure that TableQ is assigned to the employee.

There is no option to delete a record unless the file has not been finally saved. Therefore if the operator changed his mind and does not want to save a record (a line in the screen), he should exit the file without saving.

Deleting a record

To delete a record in the data file - use the Backup/Delete utilities.

Viewing Records

Upon loading the file, the screen will display all current records that should be recalculated by the Retro system in the following period, i.e., the records are within the range of the Locked Pay-Periods and were modified retroactively.

To view historic records, those that were already been handled by the Retro system – Press

the "View All"  icon.

When an employee's record is displayed without the name – it means that the employee record has been deleted from the Employee file.

Sorting Records

Available sorting options:

[Last Name] + [Accumulation Code] + [Pay Period No.] or by

[Employee No.] + [Accumulation Code] + [Pay Period No.]

Choose one of the options by pressing either the [Last Name] column header or the [Employee No.] column header.



5. Unlocking pay-period for recalculation

The Retroactive Payroll Calculation is based on sequential processing of data (consecutive pay-periods), while ensuring the data integrity and security. These features are provided by the Locking mechanism. When a Payroll period is locked, the operator cannot rerun the process of creating a payroll file -with Retro Calculations - unless the 'lock' is removed.

Still, the system offers utilities to unlock Retro records that need to be recreated. The unlocking procedure depends on the status of the Retro File Creation process, whether it was accomplished successfully or not.

5.1 Successful Retro file creation

In this case the operator will need to run the following:

- Delete all relevant records of the Payroll period from the following files: **RetroPAY and RetroMRK**. To do so run the Backup/Delete utility from the Maintenance Menu.
- Remove the Lock sign from the **RetroMNG file**. To do so access the DRetrMNG.EXE from the Menu and click the Lock checkbox.

Notes:

- 1) Be sure to delete all relevant records from both files: RetroPAY and RetroMRK. Otherwise the operator will not be able to unlock the required pay-period. In such a case the following error message will be displayed:



- 2) If the Payroll period that needs to be unlocked is not the last one, then the Backup/Delete procedure should be run from the required payroll period until the current payroll period.

Example:

The RetroMNG file shows that the last payroll period is 7/2002.

The operator wishes to rerun the Retro calculation for 5/2002.

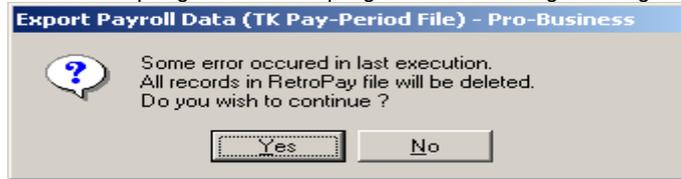
In order to so the operator needs to delete all records from 5/2002 until 7/2002. Trying to unlock 5/2002 solely will result in the following error message:





5.2 Unsuccessful Retro file creation

In cases in which the Payroll creation process was not terminated successfully there is no need to run any additional utilities. The system will identify incomplete procedure and will allow the operator to rerun the Payroll creation program. While attempting to rerun the program the following message will appear:



Yes – allow the system to automatically delete all partial information from the RetroPAY file and proceed with the Payroll file creation.

No – the operator will be prompted back to the data screen and will be required to run the procedure described in item 5.1.

