



DSD Business Systems

Sage 100 Enhancements

Q117

Weighted Avg Calculation for O/T Hours

PR-1117

Version 7.40 / 2.xx Payroll



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Weighted Avg Calculation for O/T Hours User's Manual
Version 2.xx

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DSD Business Systems
8787 Complex Drive
Suite 400
San Diego, CA 92123
858/550-5900 8:00am to 5:00pm PST
858/550-4900 Fax

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Section A: Introduction

This manual contains a description and instructions for this DSD product. Operating instructions are included for the features added by this product to MAS 90/200. For instructions on using MAS 90/200, refer to the appropriate MAS 90/200 manual, or call your MAS 90/200 reseller. DSD Business Systems offers excellent MAS 90/200 support, at an hourly rate.

Web Resources

DSD web site: <http://www.dsdinc.com>

The Enhancement page contains:

- Current Release Schedule*
- Purchasing Information*
- Installation Instructions*
- Product Support*
- Enhancement Links*

Q117 Weighted Avg Calculation for O/T Hours: <http://www.dsdinc.com/enh/pages/Q117.htm>

The product web page contains:

- Product Description*
- Adobe Acrobat Product Description*
- Web Links*
- Current Product Version Table*
- Product Installation File Download*
- Product Manual in Word 97 and Adobe Acrobat Formats*
- Revision History*
- FAQ*

Support

DSD provides product support through MAS 90/200 resellers. Support is provided for the current version. Older versions are supported at an hourly rate. DSD's telephone number is **858-550-5900**. Fax: **858-550-4900**.

For a hard error, where the program displays an error dialog, report:

- Error number.*
- Program name.*
- Line number.*
- Program version.*

*Exact sequence that caused the error, including menus and menu selections.
Other pertinent information.*

If leaving a message or faxing, please include:

Your name.

Your phone number (and fax if applicable) and extension.

It is possible to be unable to duplicate a problem, because of data corruption or because we have not exactly duplicated a particular operating environment. In such circumstances, we can only continue to try to fix the problem if we can either access the system with Symantec PCAnywhere or by some other means access or duplicate the system.

Weighted Avg Calculation for O/T Hours Features

This DSD Extended Solution to the standard Sage 100 Payroll module calculates Overtime during Payroll Entry based on a weighted average of an Employee's total earnings per pay entry which is then applied to those hours that are in excess of their Pay Cycle or based on employee's actual overtime hours.

Section B: Getting Started



- **If you reinstall or upgrade one of the MAS 90/200 modules listed in the following table, you must also reinstall this Enhancement.**
- Enhancements from different Sage Developers are generally not designed to work together. If installed together, problems are likely to occur.
- **Check with DSD before installing more than one Enhancement.**
- **Do not install this Enhancement on MAS SQL Systems.**

Required Levels

MAS 90/200 Module	Module Required	Required Level
P/R	Y	7.40 / Payroll 2.xx

Installation

1. **Back-up:** Exit all Sage 100 sessions. Back-up existing Sage 100 data.
2. **Check Levels:** Sage 100 module levels **must match** those listed above.
3. **Run Enhancement Setup Program:** Save the executable installation program (sent to you or downloaded from our website) in a convenient location on the Sage 100 server. Launch the program from Windows Explorer or by selecting Start/Run, and then browse for the file in the location you saved it. Follow on-screen instructions.
4. **Send your Sage Serial Number to your DSD Representative:** Send your Sage Serial Number to your DSD representative in order for us to send you back the encrypted keys to unlock your system. This serial number can be found in Library Master\Setup\System Configuration, Tab 3. Registration as Serial Number.
5. **Re-Start Sage 100:** Sage 100 will be updated.
6. **Unlock the Enhancement:** DSD Enhancements must be unlocked to run. When any part of the Enhancement is run for the first time, the **DSD Enhancement License Agreement and Activation** window will appear. Follow the steps shown on that window. *You can click the Help button for more detailed instructions.*

Note: On the next page is a screenshot of the DSD Enhancement License Agreement and Activation window.

After accepting the License Agreement, you can then select the type of unlocking that you'd prefer. The choices are File, Web, Demo and Manual Entry.

File Unlock: After receiving your encrypted serial number key file from DSD, and placing that file in the MAS90/SOA directory, selecting this option will unlock all products keys contained in the file. This means you can unlock all enhancements at once using this option.

Web Unlock: If the system that is running the DSD Enhancement *has web access* and you *have sent DSD your Sage Serial number*, you can unlock the Enhancement without assistance using Web Unlock. When this option is selected, the program will attempt to download encrypted serial number key file from DSD *and then proceed to unlock all enhancements contained in the file*.

- The Sage 100 system that is being used must have web access for this option to be effective.
- You can send your Sage Serial Number to your DSD Enhancements sales representative.

Demo Unlock: If a Demo mode is available for the Enhancement you're running, you will be able to Demo unlock the product without assistance from DSD for demo purposes.

- Creating a Demo Unlock is a good way to temporarily unlock DSD Enhancements off-hours, if you do not have web or email access. Later, you can unlock the product fully, during business hours.

Manual Entry Unlock: If you want to unlock a single enhancement using a single encrypted key, you can select this option and enter the 64 character key you receive from DSD by copy and paste.

Note: You can also unlock a DSD Enhancement through the [DSD Enhancement Control Panel](#) found on the Library Master Utilities Menu. Then, select the Enhancement with your mouse from the list of Enhancements and click the **Unlock Product** button on the right side of the window.

- Convert Data:** After unlocking, the DSD Conversion Wizard will appear. Follow on-screen instructions to complete data conversion. *You can exit the conversion program without converting data. The Enhancement will not proceed, however, until data is converted. If you enter an enhanced program and data has not been converted, the conversion program will run again.*

DSD Enhancement Control Panel

Starting with version 3.61, all DSD Enhancement products include DSD's Enhancement Control Panel. The **DSD Enhancement Control Panel is accessed from the Library Master Utilities menu.**

The DSD Enhancement Control Panel is a simple to use yet powerful system to help maintain DSD Enhancements installed on a Sage 100 system. To use it, select an Enhancement product from the list on the window and then click the button, on the right side of the window, which corresponds with the desired task.

View Manual: This button will display the product manual for the selected Enhancement using Adobe Acrobat. For this to be possible, the PDF file for the corresponding manual must be in the "MAS90/PDF" folder in the Sage 100 system. If the file is not present, and the system has web access, the correct PDF file will be automatically downloaded from the DSD website, put into the "MAS90/PDF" folder and then displayed.

Check the Web for Updates: This button will check the DSD website to see what the current build is the selected Enhancement and alert the user if a later version is available. *This requires an internet connection on the Sage 100 system.*

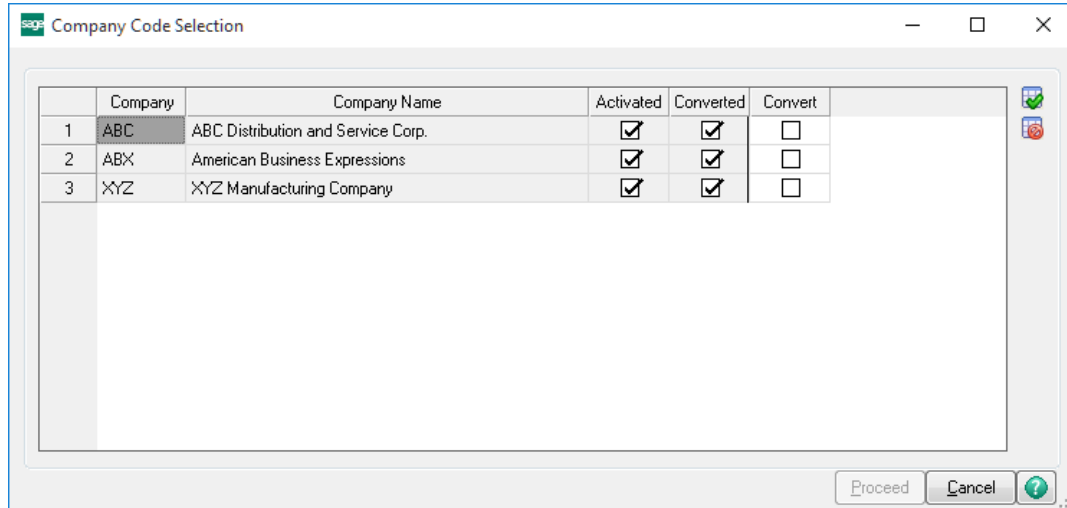
Unlock Product: This will cause the DSD Enhancement License Agreement and Activation window to appear. Using this window is described on the previous page. *This button is disabled if the selected Enhancement is already unlocked or if unlocking is not required.*

Unlock All Products: This will cause the DSD Enhancement All License Agreement and Activation window to appear. This window is similar to the one described on the previous page, but has only web and file as options to unlock. *This button is never disabled.*

Convert Data: After verification, the selected Enhancement's data conversion program will run. Data conversion is non-destructive, and may be triggered any number of times. Sometimes this is required to fix data records imported or updated from a non-enhancement installation.



Multi-Convert Data: Multiple Companies can be converted at the same time for a given Enhancement. (If you have a large number of Companies to convert, please do in batches of 20 or fewer due to memory limitations.)



Help: The Help button, located at the bottom right of the window, opens an HTML help file.

Get Adobe Acrobat: Opens the Adobe Acrobat website to the page where Acrobat can be downloaded and installed.

Uninstall Enhancement If this option is available, then selecting this button will start the un-install process, removing the enhancement from the system. (for more information see [Uninstall DSD Enhancements](#))

Section C: Setup

Upon completion of software installation, you will need to access the DSD Extended Solutions Setup from the Payroll Setup menu. Select this part number and the Setup screen for this Extended Solution will appear. Check the 'Enable DSD Extended Solution' box to activate this Extended Solution.

The screenshot shows a dialog box titled "PR-1117 Setup Options" with a close button (X) in the top right corner. Inside the dialog, there are several fields and controls:

- Enable DSD Extended:** A checkbox that is checked, with the text "Level 2.21" to its right.
- Earnings Code to Add:** A text field containing "000006" with a magnifying glass icon and the text "Tips Differ" to its right.
- Weighted Overtime Calculation:** A dropdown menu currently showing "Overtime Earnings Code".
- Buttons:** "Accept" and "Cancel" buttons are located at the bottom right of the dialog.

At the bottom of the dialog, there is a status bar with three fields: "DSD", "ABC", and "12/23/2020".

Earnings Code To Add: Specify an Earnings Code with a calculation method of Fixed Amount.

Weighted Overtime Calculation: Select 'Pay Cycle' or 'Overtime Earnings Code.' See Operations for an explanation of each.

You should visit this Setup screen after each upgrade or reinstallation of this Extended Solution.

Section D: System Operations

Earnings Code Maintenance will be modified with new options to Exclude Hours from Weighted Average Calculation, Exclude Wages from Weighted Average Calculation and Exclude Rate Multiplier in Weighted Average accessible via the 'More' button. They will default to unchecked.

Example of the “Exclude Rate Multiplier in Weighted Average”

1. Earnings Code has a rate multiplier of 1.5.
2. If selected, when calculating the weighted average, all wages for this earnings code will be calculated at the normal 1x rate. This does not affect the wages earned, which are calculated using the specified rate multiplier.
3. This is pertinent for items like Holiday Pay so that the employee doesn't get paid for both holiday wages and have those 1.5x or 2x wages also calculated into their weighted average wage.

This option is ignored if either Exclude Hours or Exclude Wages from Weighted Average Calculation are selected.

The Payroll Data Entry Lines Tab will contain a new 'Weighted Average' button.

Payroll Data Entry (PR2) 2020-01-14

Employee No. DD-0000015
 Name Owen O. Ortnier
 Entry No. 1 Pay Cycle Weekly Pay Method Hourly

1. Header 2. Lines

Line Type	Code	Rate	Hours	Basis Amount	Amount	Dept	Labor Code
1	Earning	000001	30.00	40.00	.00	1,200.00	DD 0000008
2	Earning	000002	40.00	20.00	.00	800.00	DD 0000008
3	Earning	000004	60.00	10.00	.00	600.00	DD 0000008
4	Deduction	DENTAL	.000	.00	.00	16.19	
5	Deduction	HIUH	.000	.00	.00	60.00	
6	Earning	000006	.000	.00	.00	371.43	DD 0000008
7			.000	.00	.00	.00	

Code Desc
 Earnings Type
 Date Worked
 Deduction Type
 Tax Profile Code
 Dept Desc

Pay Check Totals

Hours	Earnings	Voluntary Deduct	Taxes	Net Amount
70.00	2,971.43	76.19	.00	2,895.24

Deductions Taxes... Accept Cancel Delete

The button will be available for any employee who is eligible to receive OT (i.e., their 'Overtime Exempt' box is unchecked in Employee Maintenance). When this button is clicked, the Weighted Average Calculation will be invoked.

The Weighted Average Calculation can also be accessed from the Payroll Entry Pay Cycle Screen by clicking on the 'Weighted Avg' button. When clicked, a prompt will ask if you want to calculate the weighted average for all employees. If 'Yes' is selected, the Weighted Average calculation will be performed for each entry that is eligible to receive Overtime the same as it would if the button were clicked on each entry.

The screenshot shows the Sage Pay Cycle software interface. A dialog box is open in the center, asking the user: "Do you want to calculate the weighted average for all employees?" with "Yes" and "No" buttons. The background window is partially obscured but shows the following fields and options:

- Pay Cycle:** Weekly (dropdown menu)
- Period Start:** Sage 100
- Period End:**
- Check Date:**
- Deduction:**
- Days Worked:** 5
- Weeks Worked:** 1
- Standard Earnings Code:** 000001 (with a search icon and "Regular Hourly" text)
- Automatic Earnings:** ☒
- Print Checks:** ☒
- Direct Deposit:** ☐
- Buttons:** Clear, Weighted Avg..., OK, Cancel, and a help icon.

Weighted Average Calculation for Pay Cycle

1) Sum *Total Hours Worked** and sum *Total Earnings Extensions*

2) Calculate a *New Hourly Base Rate*:

$$\text{Sum of Total Earnings Extensions} / \text{Sum of Total Hours Worked}$$

3) Calculate the *Pay Cycle Overtime Hours*:

$$\text{Total Hours Worked} * - \text{Standard Hours for the Pay Cycle}$$

4) Calculate *Weighted Average Overtime Amount*:

$$(\text{New Hourly Base Rate} \times \text{Pay Cycle Overtime Hours}^{**}) / 2$$

5) Add Earnings Code from setup with *Weighted Average Overtime Amount* to payroll entry.

* 'Total Hours Worked' excludes the hours associated with any Earnings Code line whose 'Exclude Hours from Weighted Average Calculation' are checked in Earnings Code Maintenance.

**Weighted Average Overtime Amount is calculated with the Pay Cycle Overtime Hours greater than zero.

Weighted Average Calculation for Overtime Earnings

1) Sum *Total Hours Worked** and sum *Total Earnings Extensions*

2) Calculate a new *Hourly Base Rate*:

$$\text{Sum of Total Earnings Extensions} / \text{Sum of Total Hours Worked}^*$$

3) Calculate *Weighted Average Overtime Amount*:

$$\frac{\text{New Hourly Base Rate} \times \text{OT Hours}^{**}}{2}$$

4) Add Earnings Code from setup with *Weighted Average Overtime Amount* to payroll entry.

* 'Total Hours Worked' excludes the hours associated with any Earnings Code line whose 'Exclude Hours from Weighted Average Calculation' are checked in Earnings Code Maintenance.

** *OT Hours* is the sum of Hours of all earnings codes with a 'Type of Earnings' equal to overtime. Earnings Codes whose 'Exclude Hours from Weighted Average Calculation' setup is checked will not be included in this calculation.

Recalculation can be invoked when changes have been made to the pay entry. If the Setup-specified EA Code is already on the entry, the program will change amount, or remove it, as necessary.

Visual Integrator

The files listed below have been added or changed in the Data Dictionary by this Extended Solution for Visual Integrator purposes.

<i>File:</i>	<i>Field:</i>
PR.EARNINGS CODE	Q46_324_EXCLUDEFROMWACALC

The Data Dictionary may contain other files and data fields that are not available without their corresponding Sage Software Extended Solutions installed.

Crystal Reports and the ODBC Dictionary

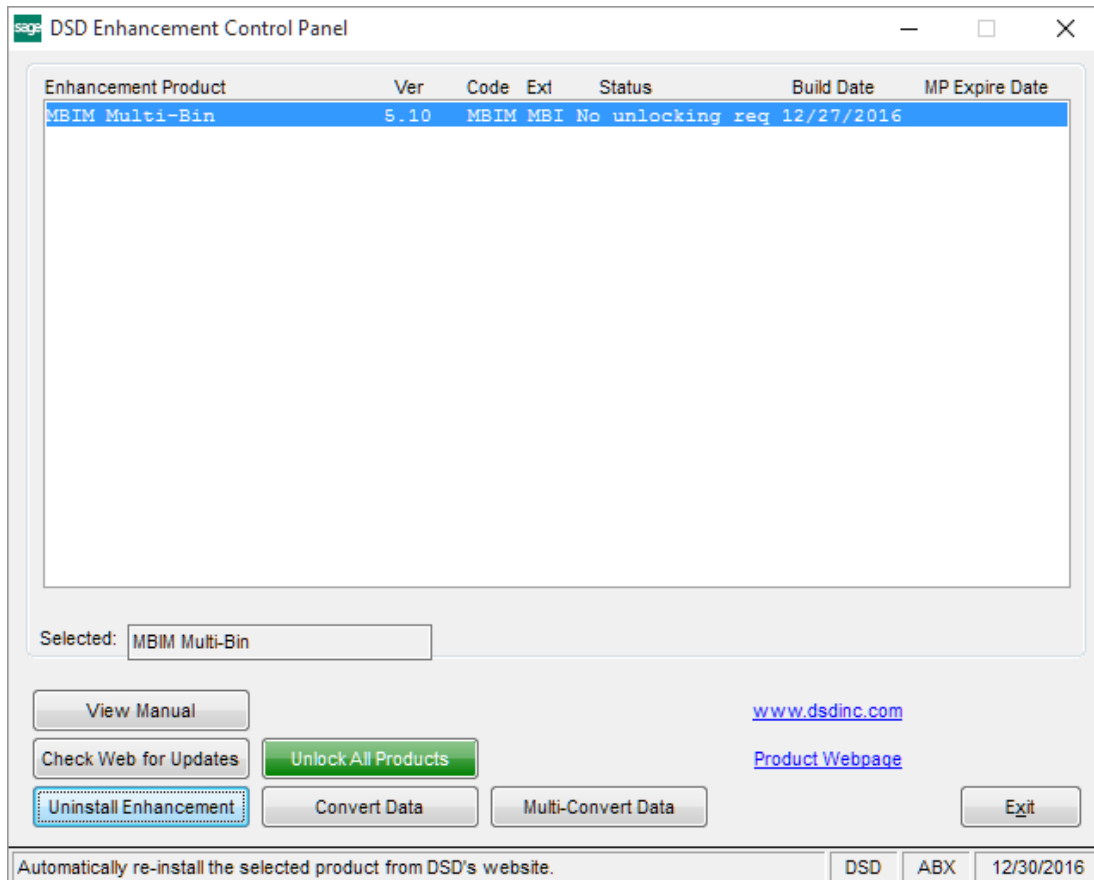
The files listed below have been added or changed in the ODBC Dictionaries by this Extended Solution for Crystal Reports purposes.

<i>File:</i>	<i>Description</i>	<i>Field:</i>
PR_EarningsCode	Earnings Code	Q46_324_EXCLUDEFROMWACALC

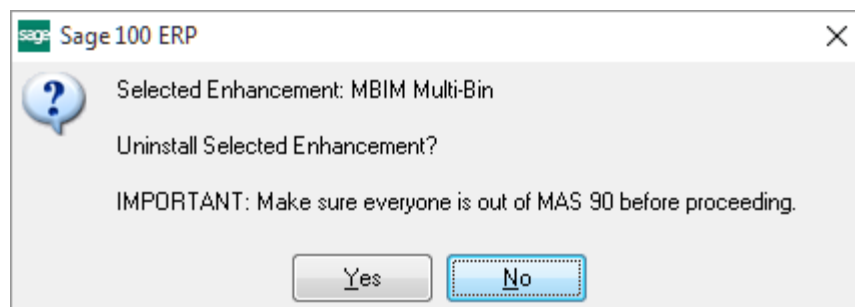
Be aware that the ODBC Dictionaries may contain other files and data fields that will be unavailable without their corresponding Extended Solutions installed.

Section E: Uninstall DSD Enhancements

A DSD Enhancements Uninstall Utility has been provided for the purposes of removing DSD Enhancements from your Sage 100 System. This utility may be accessed from the **DSD Enhancement Control Panel** menu option on the **Library Master / Utilities** menu.

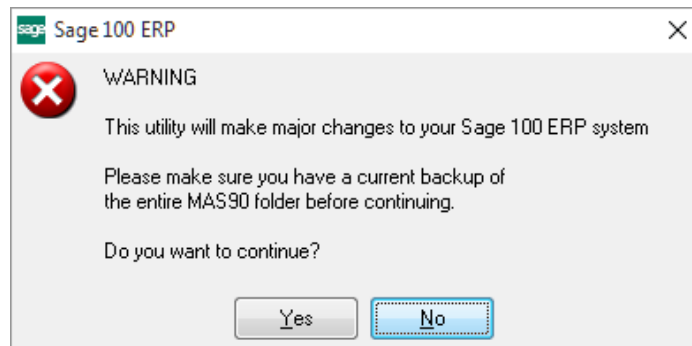


When accessing the **DSD Enhancement Control**, select the enhancement that you wish to Uninstall, and then select the **Uninstall Enhancement** button. The following message box will appear:



Select **No** to exit the Uninstall Process.
Select **Yes** to continue with the Uninstall Process.

The following message box will appear, to remind you that a complete backup of your entire Sage 100 system should be completed prior to uninstalling a DSD product.



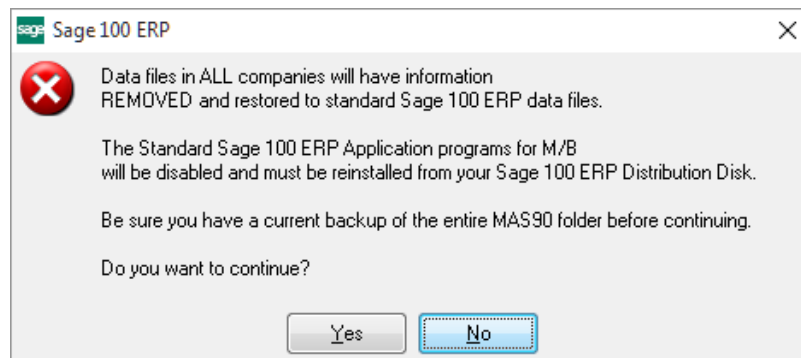
Select **No** to exit the Uninstall Process.
Select **Yes** to continue with the Uninstall Process.

After the Uninstall of the DSD Enhancement, you MUST reinstall certain standard Sage 100 modules, followed by reinstallation of Product Updates and Hot Fixes, if applicable.

A message box will appear, and will display which of those specific Sage 100 modules you must reinstall afterwards.

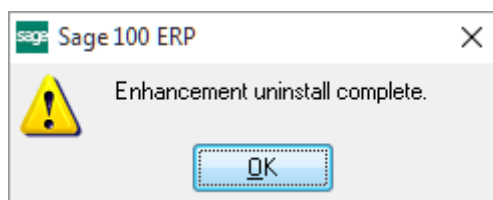
Select **No** to exit the Uninstall Process.
Select **Yes** to continue with the Uninstall Process.

The following message box will appear, displaying the final warning message.



Select **No** to exit the Uninstall Process.
Select **Yes** to continue with the Uninstall Process. At this point, the DSD Enhancement will be removed from the Sage 100 system.

After completion of the Uninstall, the following message box will appear. Select OK to continue.



Now that the Uninstall process is completed, you must:

- Reinstall the applicable standard Sage 100 modules
- Reinstall the latest Sage 100 Service Pack/Updates, if applicable.
- Reinstall any other DSD Enhancements or Developer products that are affected from the reinstallation of the standard Sage 100 module(s).