

## Calculators

There are two Calculators available to use for loans.

Select [\[Main Ribbon or Member Ribbon > Lending > Loan Calculator\]](#).

Select [\[Main Ribbon or Member Ribbon > Lending > Insurance Refund Calculator\]](#).

### Loan Calculator

The Loan Calculator is used to calculate a loan payment amount or loan term for a **fixed** payment loan or an insurance amount, etc. This calculator can also be used to calculate the APR for a loan, based on the information entered. Enter the applicable loan information and the loan calculator will do the calculations for New, Refinance, Extension or Add-On loans. The Loan Calculator can also be used to calculate an insurance estimate of the Cost per Day, the Payment and Total Payments, which include the insurance amount, to be viewed or printed from the Quote icon on the ribbon.

The Loan Calculator is usually used by credit unions that do not use the Loan Documents optional software package.

## General tab

The screenshot shows the 'Loan Calculator' application window. The title bar reads 'Loan Calculator' with a close button. Below the title bar is a ribbon with an 'Action' tab and a 'Tools' section. The 'Tools' section contains icons for 'Amortization', 'Calculate', 'Quote', and 'Summary'. The main area has two tabs: 'General' (selected) and 'Protection'. The 'General' tab contains the following fields:

Loan Type:	New	Account:	
Amount Requested:		Interest Rate:	
Payment Amount:		No. of Payments:	
Payment Frequency:	Monthly	First Payment Date:	06-25-2018
Payment Type:	Principal And Interest	Issue Date:	05-25-2018
Balloon Amount:		Balloon Date:	
Skip Payment Start:	Not Active	Skip Payment Count:	
Calculation Type:	Calculate Payment	MLA Status:	No

At the bottom left of the window, the date '05-25-2018' is displayed.

After entering the information on the General and Protection tabs, to print the Amortization, select the Amortization icon on the ribbon then click on the printer icon. The same applies to printing the Quote information. Select the Quote icon then click on the printer icon. To print the Summary, select the Summary icon then click on the printer icon.

### Description of fields:

**Loan Type** – The type of loan being calculated. Select from the drop down list. The options are:

- **New:** This is used when calculating a payment amount or term, etc. for new loan for which the account number did not exist previously. An account number is not needed for a Loan Type of New.
- **Refinance:** The Payoff Interest on the existing loan will be added to the Amount Financed. An existing loan suffix must be entered in the Account field.
- **Extension:** The Payoff Interest on the existing loan will be added to the Amount Financed. (Generally, the loan calculator is not used for a loan extension, however, it is available to use, if desired.) An existing loan suffix must be entered in the Account field.

- **Add-on:** The Payoff Interest will not be used in the calculation and will not be added to the Amount Financed field. An existing loan suffix must be entered in the Account field.

**Account** – The account number of the loan to be calculated, if the transaction type is Refinance, Extension or Add-on. This field is not available for a Loan Type of New.

**Amount Requested** – The actual amount of new funds requested by the borrower, maximum \$9,999,999.99, including charges, fees and amount to payoff other loans. Do not include the insurance amount. The payoff amount from the loan suffix entered in the Account field will be included in the calculations automatically.

**Interest Rate** – The annual interest rate for the loan. Maximum of 99.99% can be entered.

**Payment Amount** – The Payment Amount of the loan. Maximum of \$999,999.99 can be entered. The Calculation Type field must be set to Calculate Term, in order for the Payment Amount field to be activated so an amount can be entered.

**No. of Payments** – The Number of Payments required on the loan. Maximum of 999 can be entered. If this is a balloon loan, enter the number of payments for which the loan is amortized. The Calculation Type field must be set to Calculate Payment, in order for the No. of Payments field to be activated so a number (term) can be entered.

**Payment Frequency** – The frequency that the payments will be required on the loan. Select from the drop down list. The options are:

Weekly	Quarterly
Bi-Weekly	Semi-Annually
Monthly	Annually
Semi-Monthly	One Payment

**First Payment Date** – The date when the first payment is scheduled to be made on the loan. (MMDDYYYY format) This will allow the staff to enter a date in the past, if needed. However, the first payment date cannot be before the issue date entered on the window. If a different First Payment Date is entered, the date will display in the Loan Summary and Loan Amortization. The feature for entering a First Payment Date in the past is only available in the stand-alone calculator, not in Loan Application.

**Payment Type** – Indicates how the payment is applied on the loan balance. Select from the drop down list. The options are:

- Principal and interest
- Legacy variable payment
- Legacy alternate variable payment
- 360-day interest
- 360-day daily interest

**Issue Date** – The default Issue Date is the Credit Union date. (MMDDYYYY format) This will allow the staff to enter a date in the past, if needed. If a different Issue Date is entered, the date will display in the Loan Summary and Loan Amortization. The feature for entering an Issue Date in the past is only available in the stand-alone calculator, not in Loan Application.

**Balloon Amount** – The balloon payment of the loan, if applicable.

**Balloon Date** – The balloon date of the loan, if applicable.

**Skip Payment Start** – The month that the skip payment feature starts on the loan each year, if applicable. Select from the drop down list. The options are:

Not active  
January  
February, etc.

**Skip Payment Count** – Indicates how many payments will be skipped, if applicable. This is used in conjunction with the Skip Payment Start field.

**Calculation Type** – Select one of the options for calculation type. The options are:

- Calculate Payment – To calculate the payment amount, enter the No. of Payments (term) and leave the Payment Amount blank.
- Calculate Term – To calculate the number of payments (term), enter the Payment Amount and leave the No. of Payments blank.
- Calculate Payment and Term – This is used for balloon loans. Enter the Balloon Date and Balloon Amount. Leave both the Payment Amount and No. of Payments blank.

**MLA Status** – This indicates if the calculator is being used on a loan for member with a military status. If this is set to Yes, after selecting the Calculate or Summary icon, an error message will be displayed, if the MAPR is over 36%. The fields that affect the MAPR are Insurance Premiums, Debt Protection, Pre-paid Finance Charges, GAP and Extended Warranty.

The MAPR will display on the Loan Summary if the MLA Status is set to Yes and is less than the 36%.

The options are:

No (default)  
Yes

**Note:** Loan Calculator does not consider the age of the member in the calculation for insurance. This is true for refinances, also.

## Protection tab

The screenshot shows the 'Loan Calculator' application window. The title bar reads 'Loan Calculator' with a close button. Below the title bar is a toolbar with 'Action' and 'Tools' sections. The 'Tools' section contains 'Amortization', 'Calculate', and 'Summary' buttons. The main area has two tabs: 'General' and 'Protection'. The 'Protection' tab is active, showing the following fields:

- Insurance:** A dropdown menu with '(none)' selected.
- Single Premium:** A dropdown menu with '(none)' selected.
- GAP Insurance:** A text input field and a checked checkbox labeled 'Finance the GAP Insurance'.
- Extended Warranty:** A text input field and a checked checkbox labeled 'Finance the Extended Warranty'.
- Prepaid Finance Charge:** A text input field and a checked checkbox labeled 'Finance the Prepaid Finance Charges'.

The date '05-25-2018' is displayed in the bottom left corner of the window.

### Description of fields:

**Insurance** – The (user defined) insurance code, if applicable. The insurance codes and debt protection codes that the credit union has set up on the system will display in the drop down box.

**Single Premium** – The Single Premium insurance payment code, if applicable. This code is used, if the insurance is to be paid at the time the loan is issued. Select from the drop down list. The options are:

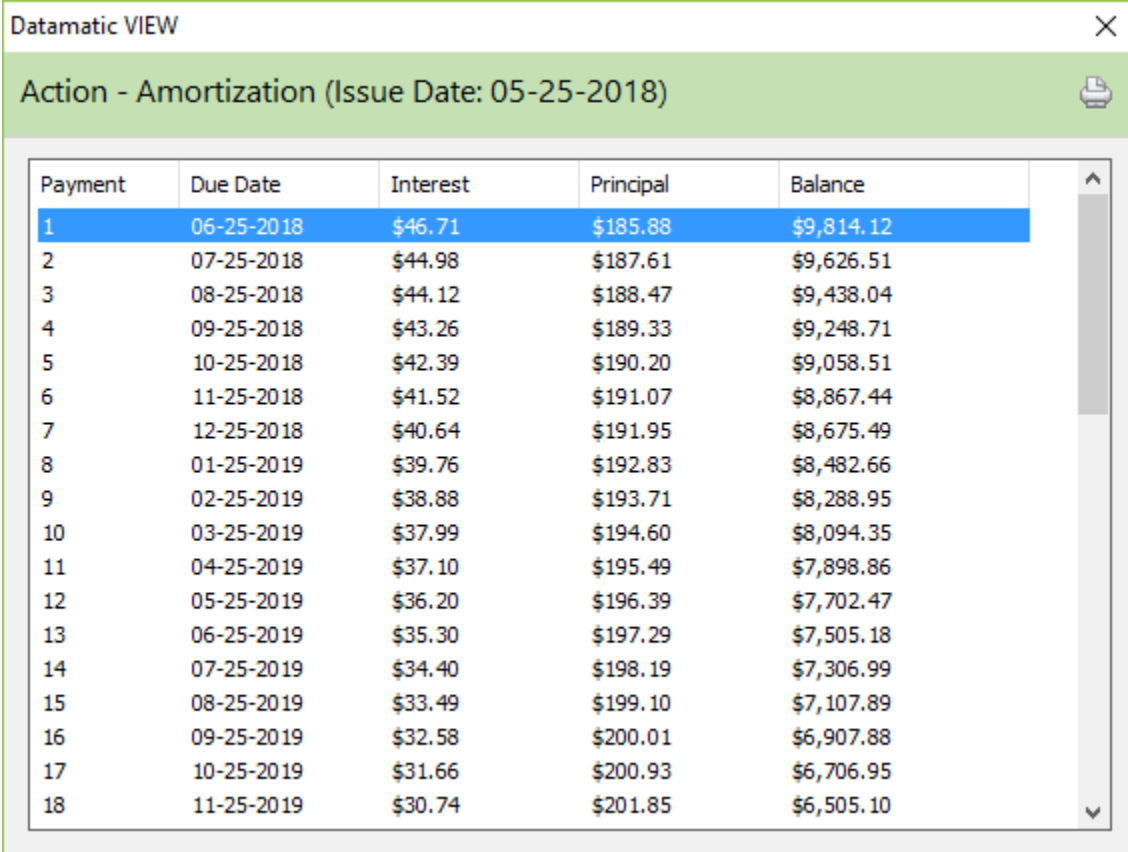
- None
- Cash
- Financed

**GAP Insurance** – Enter the amount for GAP Insurance, if applicable. Unmark the box to the right, if the amount is not being financed. (If no amount is entered, it is irrelevant whether or not the finance box is checked.)

**Extended Warranty** – Enter the amount for Extended Warranty, if applicable. Unmark the box to the right, if the amount is not being financed. (If no amount is entered, it is irrelevant whether or not the finance box is checked.)

**Prepaid Finance Charge** – Enter the amount for Prepaid Finance Charge, if applicable. Unmark the box to the right, if the amount is not being financed. (If no amount is entered, it is irrelevant whether or not the finance box is checked.)

### Amortization icon



Payment	Due Date	Interest	Principal	Balance
1	06-25-2018	\$46.71	\$185.88	\$9,814.12
2	07-25-2018	\$44.98	\$187.61	\$9,626.51
3	08-25-2018	\$44.12	\$188.47	\$9,438.04
4	09-25-2018	\$43.26	\$189.33	\$9,248.71
5	10-25-2018	\$42.39	\$190.20	\$9,058.51
6	11-25-2018	\$41.52	\$191.07	\$8,867.44
7	12-25-2018	\$40.64	\$191.95	\$8,675.49
8	01-25-2019	\$39.76	\$192.83	\$8,482.66
9	02-25-2019	\$38.88	\$193.71	\$8,288.95
10	03-25-2019	\$37.99	\$194.60	\$8,094.35
11	04-25-2019	\$37.10	\$195.49	\$7,898.86
12	05-25-2019	\$36.20	\$196.39	\$7,702.47
13	06-25-2019	\$35.30	\$197.29	\$7,505.18
14	07-25-2019	\$34.40	\$198.19	\$7,306.99
15	08-25-2019	\$33.49	\$199.10	\$7,107.89
16	09-25-2019	\$32.58	\$200.01	\$6,907.88
17	10-25-2019	\$31.66	\$200.93	\$6,706.95
18	11-25-2019	\$30.74	\$201.85	\$6,505.10

The amortization schedule can be viewed or printed. Select the printer icon in the upper right corner of the window. The information calculated is based on the entries on the General and Protection windows.

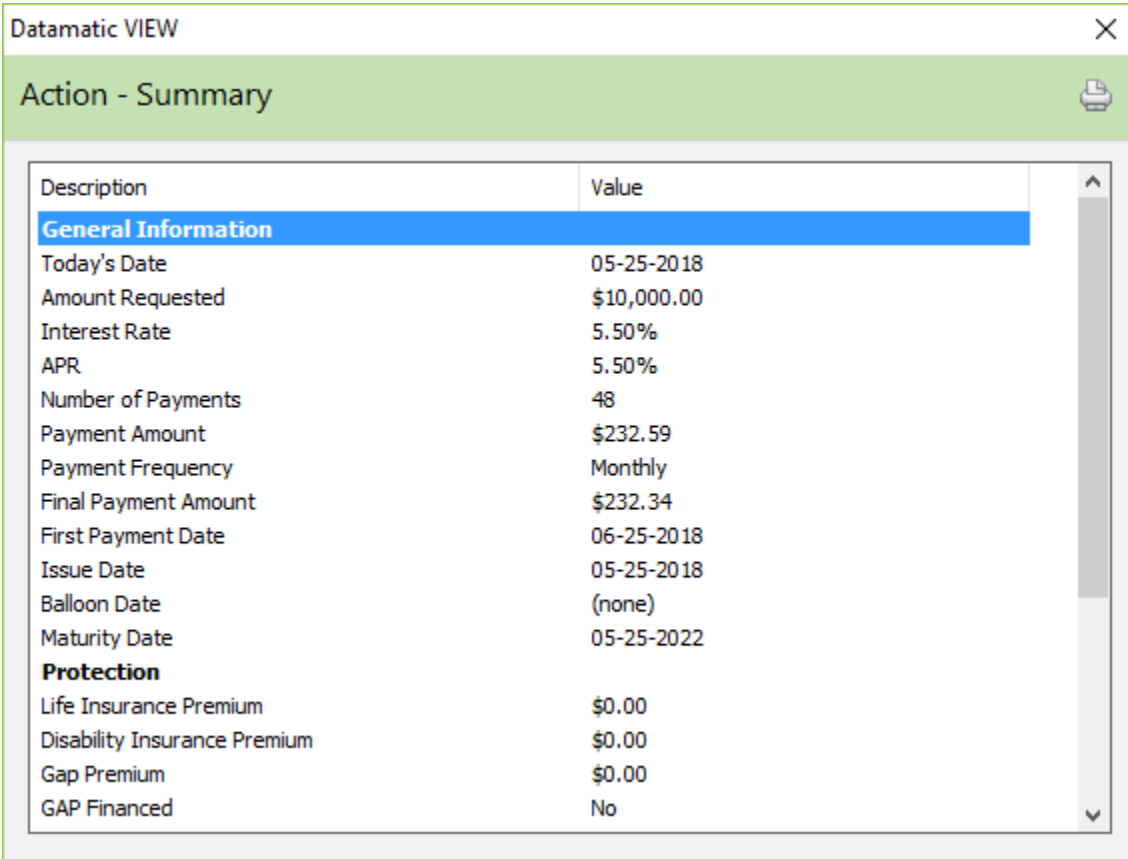
An amortization schedule is an estimate of the interest and principal amounts for the life of the loan.

The loan calculator bases the interest calculation on 12 equal periods per year ( $365 / 12 = 30.416666$ ). (This is based on information from CUNA.) Since the interest on the first payment amount could be more than one month, the interest amount for that payment is based on the actual number of days in that time period. Other interest amounts are based on 30.416 days.

$$\text{Loan Balance} * \text{Rate} / 365 * (365/12)$$

When the system calculates actual interest amounts on loan suffixes, the calculation is based on actual number of days.

## Summary icon



Description	Value
<b>General Information</b>	
Today's Date	05-25-2018
Amount Requested	\$10,000.00
Interest Rate	5.50%
APR	5.50%
Number of Payments	48
Payment Amount	\$232.59
Payment Frequency	Monthly
Final Payment Amount	\$232.34
First Payment Date	06-25-2018
Issue Date	05-25-2018
Balloon Date	(none)
Maturity Date	05-25-2022
<b>Protection</b>	
Life Insurance Premium	\$0.00
Disability Insurance Premium	\$0.00
Gap Premium	\$0.00
GAP Financed	No

The Summary information can be viewed or printed. Select the printer icon in the upper right corner of the window. The information calculated is based on the entries on the General and Insurance window.

Use the scroll bar on the right to view the Amount Financed, Total Interest and Total Payments information.

### Description of Fields

#### **General Information:**

**Today's Date** – Today's date is displayed. The Loan Calculator option always uses today's date. It cannot be effective dated.

**Account** – The Account Number is displayed, if entered on the general window.

**Amount Requested** – The Amount Requested that was entered on the general window is displayed.

**Interest Rate** – The annual Interest Rate entered on the general window is displayed.

**APR** – The calculated APR (Annual Percentage Rate) based on the information entered on the General and Protection tabs.

**Number of Payments** – If the Number of Payments was entered on the general window then that information is displayed.

If left blank on the general window then the number displayed is the Number of Payments calculated by the system.

**Payment Amount** – If the Payment Amount was entered on the general window then that amount will display here.

If the Number of Payments was entered on the general window then the amount displayed is the Payment Amount calculated by the system.

**Payment Frequency** – The Payment Frequency that was selected on the general window is displayed.

**Final Payment Amount** – The Final Payment Amount for the loan is displayed. This amount may be higher or lower than the Payment Amount.

**First Payment Date** – The First Payment date that was entered on the general window is displayed.

**Issue Date** – The default Issue Date is the Credit Union date. If a different Issue Date is entered, the date will display here.

**Balloon Date** – The Balloon Payment Date that was entered on the general window is displayed.

**Maturity Date** – The Maturity Date for the loan is displayed. This is based on the information entered on the General and Protection windows.

#### **Protection:**

**Life Insurance Premium** – The amount of the Life Insurance Premiums the system calculated based on the Insurance Method code entered on the Protection tab is displayed.

**Disability Insurance Premium** – The amount of the Disability Insurance Premiums the system calculated based on the Insurance Method code entered on the Protection tab is displayed.

When a Debt Protection coverage type is selected on the Protection tab, the Life Insurance and Disability Insurance wording on the Summary page will be replaced with Debt Protection wording.

**GAP Premium** – The amount entered in the GAP Insurance field on the Protection tab is displayed.

**GAP Financed** – This indicates if the amount entered in the GAP Insurance field is being financed.

**Extended Warranty Premium** – The amount entered in the Extended Warranty field on the Protection tab is displayed.



**Extended Warranty Financed** – This indicates if the amount entered in the Extended Warranty field is being financed.

**Prepaid Finance Charge** – The amount entered in the Prepaid Finance Charge field on the Protection tab is displayed.

**Prepaid Finance Charge Financed** – This indicates if the amount entered in the Prepaid Finance Charge field is being financed.

**Payment:**

**Payoff Other Loans** – Not applicable.

**Amount Financed** – If the Transaction Type selected is New then this field will be the Amount Requested which was entered on the general window.

If the Transaction Type selected is Refinance then this field will be the Payoff Amount plus the Amount Requested from the general window.

If the Transaction Type selected is Extension then this field will be the same as the payoff amount.

If the Transaction Type selected is Add-On then this field will be the principal balance plus the Add-On amount. If applicable, the Late Charge owed will also be included. The Payoff Interest will not be included.

**Total Interest** – The total amount of interest the system has calculated based on the information entered on the general window. This is the estimated amount that would be paid over the life of the loan, if every payment were paid on the due date.

**Total Payments** – The total amount that would be paid on the loan based on the information entered on the general window. This is the estimated amount that would be paid over the life of the loan, if every payment were paid on the due date. It will include principal, interest and insurance (if applicable).

For credit unions offering Debt Protection, when a Debt Protection coverage type is selected in Loan Calculator, the wording will be changed accordingly on the Summary window.

The screenshot shows the 'Loan Calculator' application window. The title bar reads 'Loan Calculator' with a close button on the right. Below the title bar is an 'Action' menu with icons for 'Amortization', 'Calculate', and 'Summary'. A 'Tools' section contains a 'Quote' button. The main area has two tabs: 'General' and 'Protection', with 'Protection' currently selected. The 'Protection' tab contains the following fields and options:

- Insurance:** A dropdown menu showing 'DP JT Disability Consumer #41'.
- Single Premium:** A dropdown menu showing '(none)'.
- GAP Insurance:** An empty text input field.
- Extended Warranty:** An empty text input field.
- Prepaid Finance Charge:** An empty text input field.

To the right of the input fields are three checked checkboxes:

- Finance the GAP Insurance
- Finance the Extended Warranty
- Finance the Prepaid Finance Charges

The bottom status bar of the window displays the date '05-25-2018'.

The Life Insurance Premium and Disability Insurance Premium wording on the Summary window will be replaced when a Debt Protection coverage type is selected. See example below.

The screenshot shows a window titled "Datamatic VIEW" with a sub-header "Action - Summary". It contains a table with two columns: "Description" and "Value". The table is divided into two sections: "General Information" and "Protection".

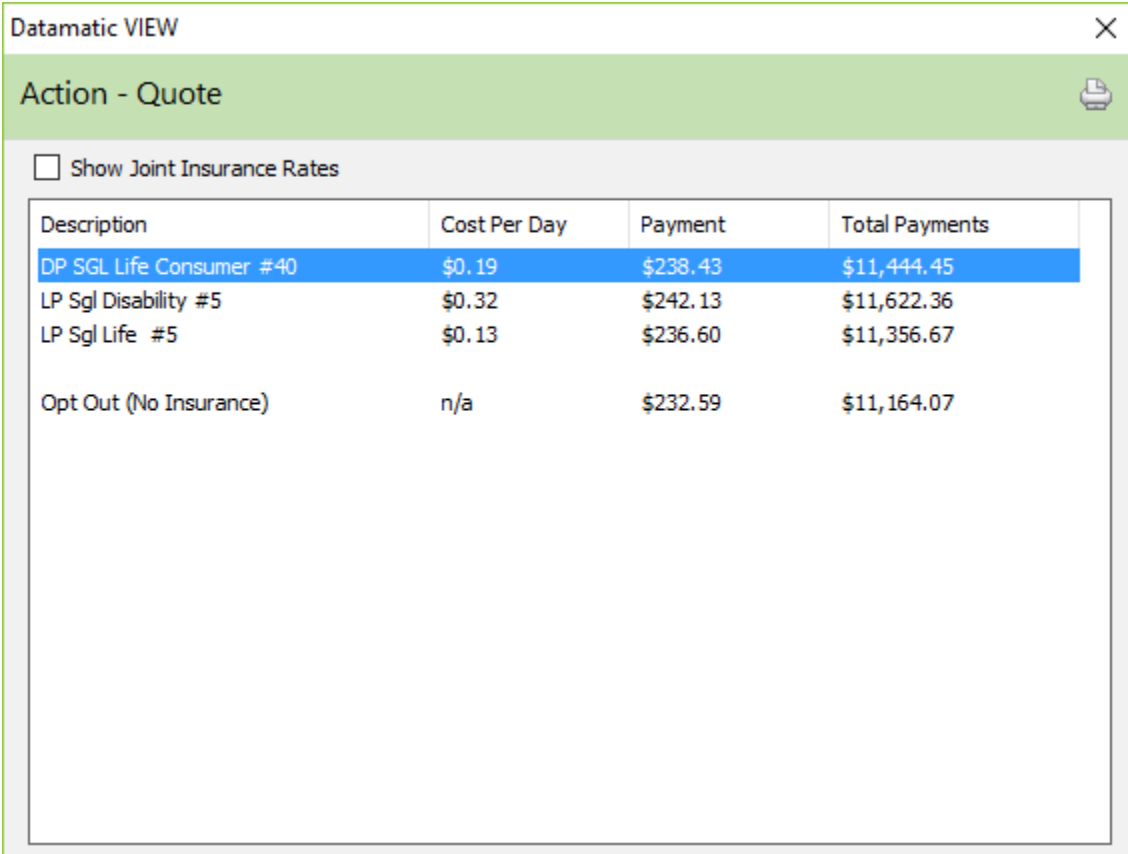
Description	Value
<b>General Information</b>	
Today's Date	05-25-2018
Amount Requested	\$10,000.00
Interest Rate	5.50%
APR	5.50%
Number of Payments	48
Payment Amount	\$253.99
Payment Frequency	Monthly
Final Payment Amount	\$254.05
First Payment Date	06-25-2018
Issue Date	05-25-2018
Balloon Date	(none)
Maturity Date	05-25-2022
<b>Protection</b>	
DP JT Disability Consumer #41 Fee	\$994.40
Disability Insurance Premium	\$0.00
Gap Premium	\$0.00
GAP Financed	No

## Quote tab

The insurance types to be used for insurance quotes are setup under [\[Main Ribbon > System Settings > Insurance Quote Setup\]](#). There are two tabs on the window. The General tab is used for monthly add-on insurance. The Single Premium tab is used for single premium insurance. Enter the insurance types desired for the insurance quotes on this window.

The system uses the Amount Requested, Interest Rate and Number of Payments entered on the General tab in Loan Calculator to calculate an estimate of the Cost per Day, the Payment and Total Payments including insurance. This information is displayed on the Quote window. This feature may even be used by credit unions that use the Loan Documents Optional Software Package.

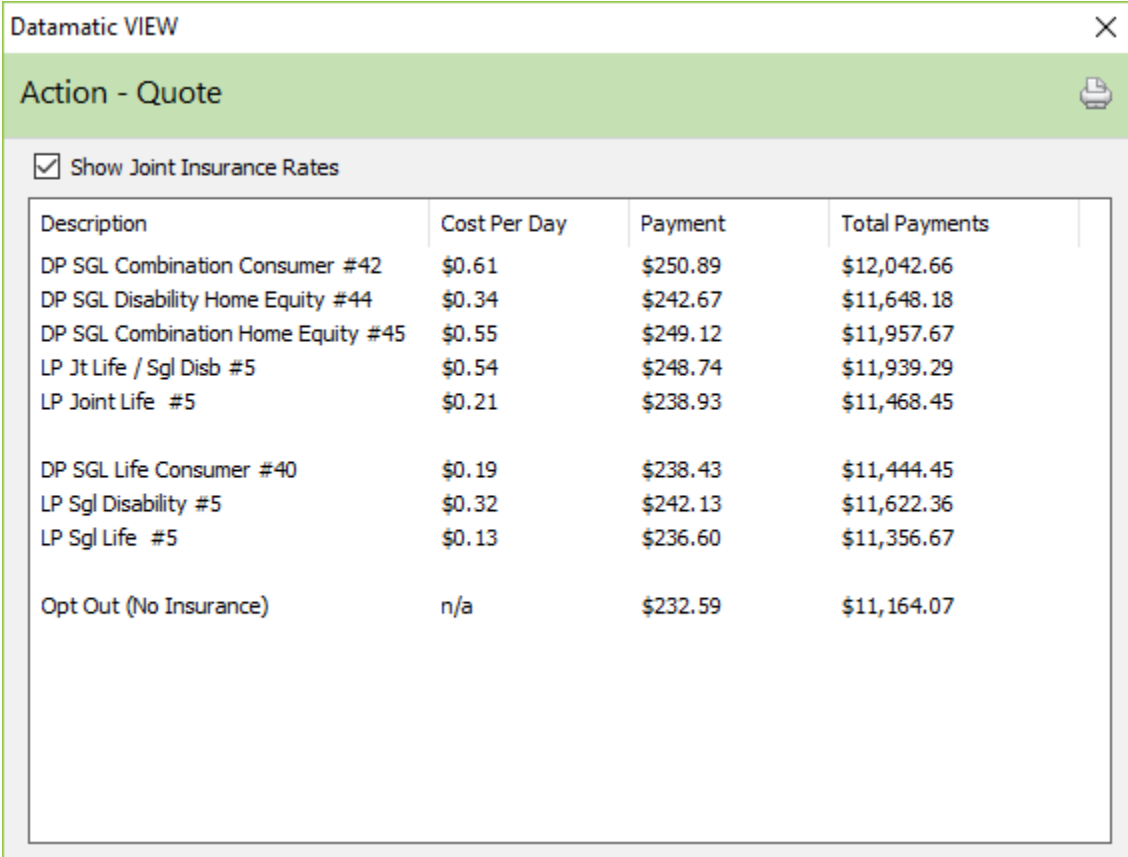
**Note:** The system does not use the Insurance Type selected on the Protection tab in Loan Calculator to calculate the insurance quotes.



The screenshot shows a window titled "Datamatic VIEW" with a sub-header "Action - Quote". Below the header is a checkbox labeled "Show Joint Insurance Rates" which is currently unchecked. A table displays the following data:

Description	Cost Per Day	Payment	Total Payments
DP SGL Life Consumer #40	\$0.19	\$238.43	\$11,444.45
LP Sgl Disability #5	\$0.32	\$242.13	\$11,622.36
LP Sgl Life #5	\$0.13	\$236.60	\$11,356.67
Opt Out (No Insurance)	n/a	\$232.59	\$11,164.07

Check the **Show Joint Insurance Rates** option at the top left side of the window and the system displays:



Description	Cost Per Day	Payment	Total Payments
DP SGL Combination Consumer #42	\$0.61	\$250.89	\$12,042.66
DP SGL Disability Home Equity #44	\$0.34	\$242.67	\$11,648.18
DP SGL Combination Home Equity #45	\$0.55	\$249.12	\$11,957.67
LP Jt Life / Sgl Disb #5	\$0.54	\$248.74	\$11,939.29
LP Joint Life #5	\$0.21	\$238.93	\$11,468.45
DP SGL Life Consumer #40	\$0.19	\$238.43	\$11,444.45
LP Sgl Disability #5	\$0.32	\$242.13	\$11,622.36
LP Sgl Life #5	\$0.13	\$236.60	\$11,356.67
Opt Out (No Insurance)	n/a	\$232.59	\$11,164.07

The Quote information can be viewed or printed. Select the printer icon in the upper right corner of the window. The information calculated is based on the entries on the Amount Requested, Interest Rate and Number of Payments entered on the General tab and the insurance types entered under [\[Main Ribbon > System Settings > Insurance Quote Setup\]](#).

## Insurance Refund Calculator

The Insurance Refund Calculator selection can be used to calculate refunds for insurance companies that use the Level Rate, Monthly Renewable or Rule 78 methods of calculation.

The Insurance Refund Calculator can be used to calculate refunds for loans with Insurance add-ons or that paid single premiums which are paid off ahead of schedule.

**Account Number:** Enter the Account Number to be used for the insurance refund.

**Original Issue Date:** Enter the date that the loan was issued.

**Cancellation Date:** Today's date will automatically display. If the refund is as of a different date, enter the date that the insurance cancellation will be effective.

**Life Premium and Calculation Type:** Enter the Original Premium Amount and Calculation Type to calculate a life insurance refund. Use the drop down box to select the calculation type.

**Disability Premium and Calculation Type:** Enter the Original Premium Amount and Calculation Type to calculate a disability insurance refund. Use the drop down box to select the calculation type.

After entering the information for the refund, select Calculate. The system displays.

Field	Value
Account Number:	51057-6-10
Original Issue Date:	01-08-2014
Cancellation Date:	05-25-2018
Life Premium:	\$325.00
Disability Premium:	\$614.00
Calculation Type:	Level Rate
Original No. of Payments:	60
Payment Frequency:	Monthly
Original Term in Months:	60
Months Since Issue Date:	53
No. of Months Remaining:	7
Life Refund:	\$37.92
Disability Refund:	\$71.63
Total Refund:	\$109.55