

# Using Conditional POINTS in SKF Machine Analyst with SKF MARLIN

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## Introduction

Conditional POINTS, introduced in SKF Machine Analyst version 3.0 and SKF MARLIN version 4.0, add route management intelligence to SKF MARLIN routes by allowing data collection only when a user specified condition is met. Any POINT in the measurement database hierarchy may be made a “conditional POINT”.

- Conditional POINTs are set up in SKF Machine Analyst software and downloaded to the SKF MARLIN.

As an example, consider a case where two pumps are installed in parallel with each other (→fig. 2). Under normal operating conditions, only one pump is running at a time. Let's assume that each pump's pressure gauges are read to facilitate  $\Delta P$  calculations. Logically, pressure readings should only be collected on the currently operating pump train.

For this example, we could first set up an inspection POINT that, during data collection, prompts the user to determine which pump is operating, Pump 1 or Pump 2. This first POINT is then identified as the conditional POINT for the following six “dependent” POINTs.

- Data collection for the conditional POINT must precede data collection for the dependent POINT.

During data collection, the inspection POINT prompts the user to specify which pump is running, Pump 1 or Pump 2.

If the user specifies Pump 1, then the condition is met for the first three dependent POINTs (P1 POINTs), and the SKF MARLIN proceeds with data collection for the three P1 POINTs. When the SKF MARLIN sequences to the last three dependent POINTs (P2 POINTs), their condition is not met and they are skipped.



Figure 1. The SKF MARLIN data manager.

If the user specifies Pump 2, then the condition is not met for the first three dependent POINTs and they are skipped. The SKF MARLIN proceeds to data collection on the three P2 dependent POINTs, as their condition is met.

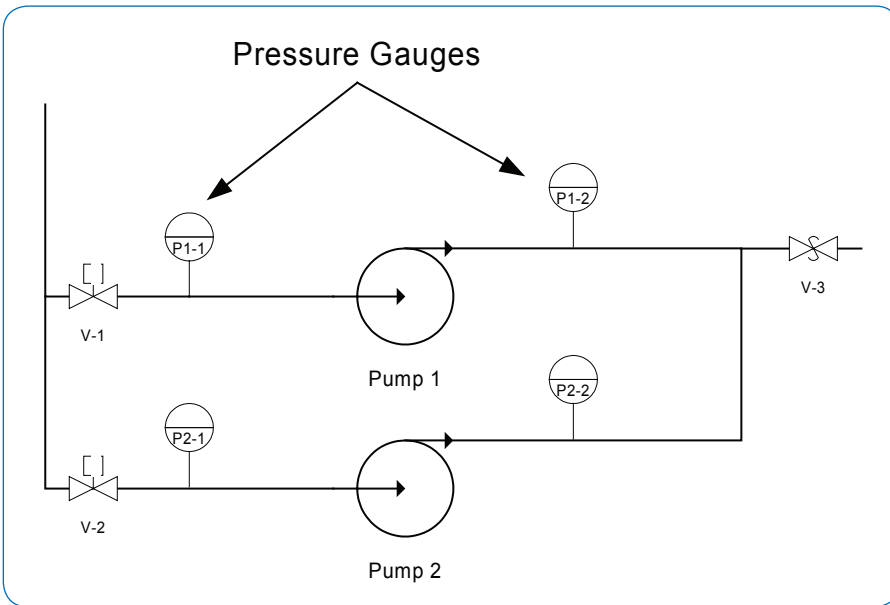


Figure 2. Dual pump trains.

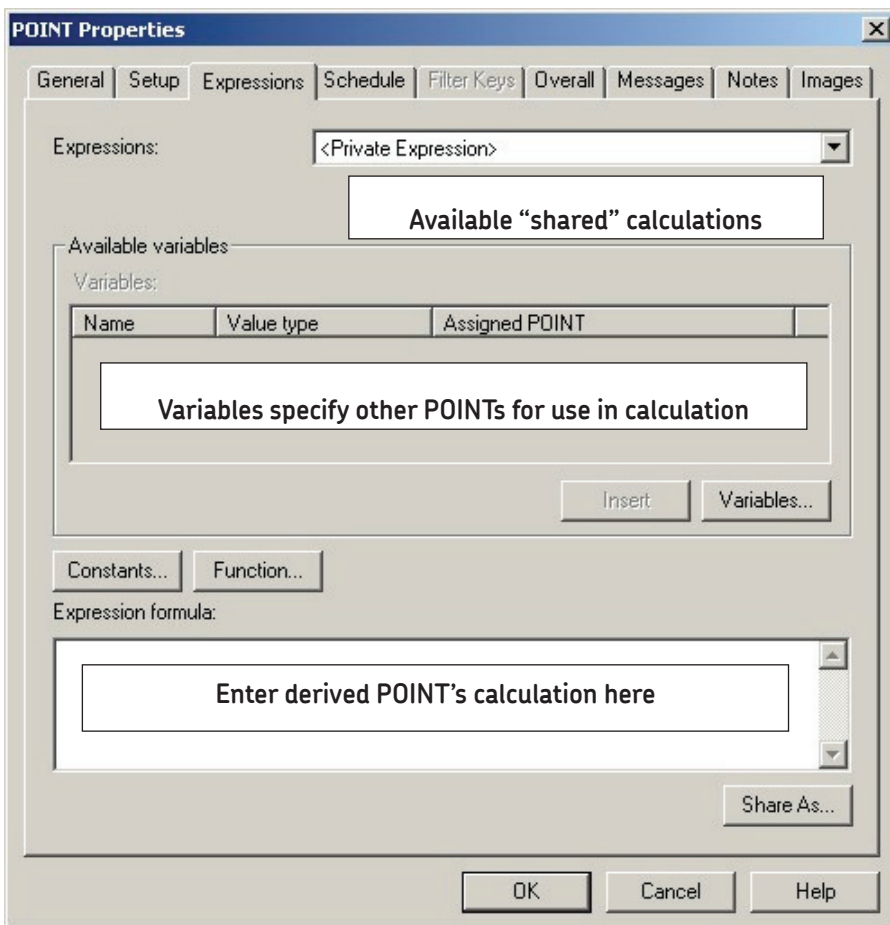


Figure 3. POINT Properties' Expressions tab.

## To specify a conditional POINT setup

- Right-click on the dependent POINT's hierarchy ID and select **Properties**.
- Select the **Setup** tab (→fig. 4).

The dependent POINTs conditional POINT is specified in the **Conditional POINT** area.

- Press the **Edit** button to display the **Conditional POINT** dialog (fig. 5).

In this example:

- The **Selected Conditional POINT** is specified as "Pick Running Pump".
- The **Criteria** is set to "is equal".
- The **Result** is set to "Pump 1".

This setup is read as: "collect data for this dependent POINT only if the **Pick Running Pump** reading is **equal** to **Pump 1**".

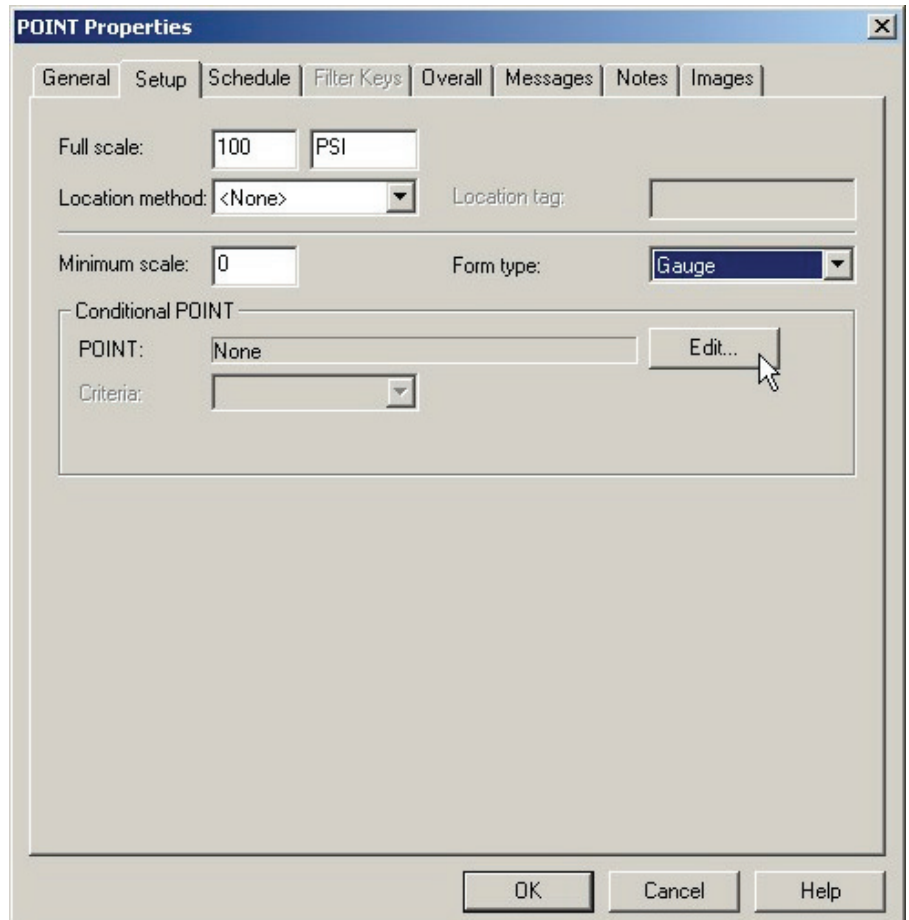


Figure 4. First conditional POINT properties.

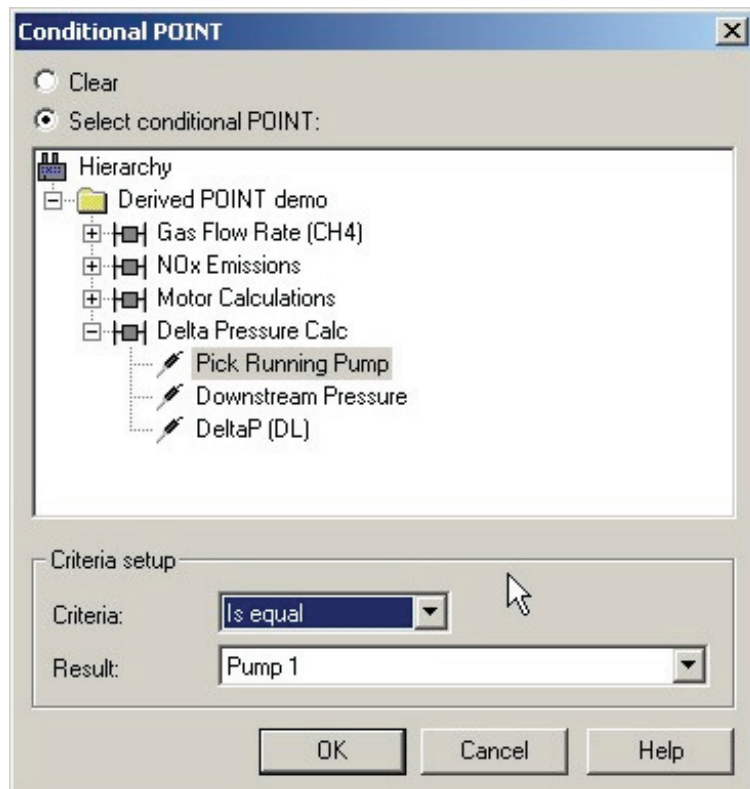


Figure 5. Criteria selection for conditional POINT.

Subsequent dependent POINTs are set up in a similar fashion.

- For sequential dependent POINTs using the same conditional POINT (as in our previous example), the conditional POINT field remembers the last conditional POINT specified, facilitating faster setup (→fig. 6).

In this manner, conditional POINTs can be used to organize a route into one or more sub-routes for more efficient data collection. Since data is recorded only on operating equipment, data collection times are reduced and potential confusion during data collection is avoided.

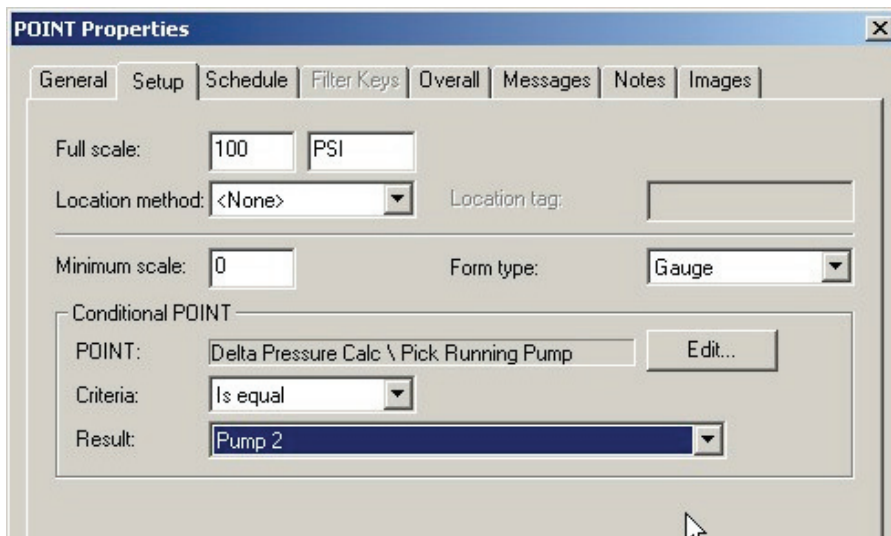


Figure 6. POINT setup for second conditional POINT.

## Conclusion

Management of route-based data collection has greatly improved with the development of conditional POINTs for SKF Machine Analyst version 3.0 and SKF MARLIN version 4.0. Using conditional POINTs, route data collection can be more tightly controlled and more efficiently organized using sub-routes and / or specific conditions for data collection.

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