## VMP Bug fixes in Rev. 1.4 Build 565 18-Sep-2023 23:32:04

When EtherNet I/P was being used to read/write the Program and/or Setup structures a buffer overflow occurred, and an error generated indicating that the given operation was not supported.

This bug has been corrected in build 565. The problem only occurred when using the MSG tag to read/write Program/Setup data.

VMP Enhancements in Rev. 1.4 Build 565 18-Sep-2023 23:32:04

The ability to change the bore size was added to the I/O messages. Using ladder logic like:
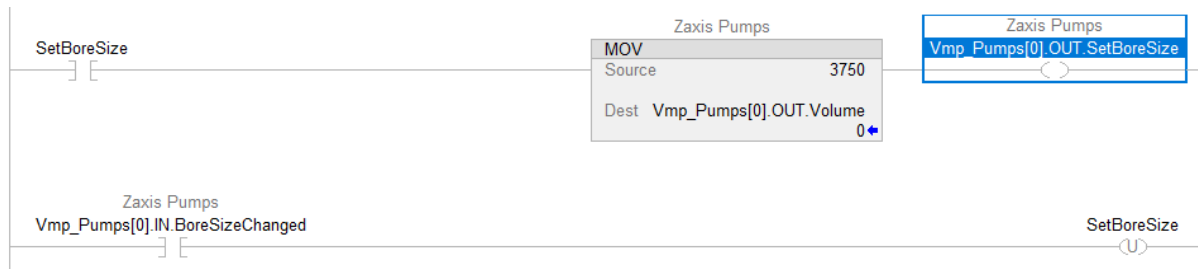
The EDS file was changed to include the Output bit SetBoreSize and the Input bit BoreSizedChanged.

VMP Version 1.4 fixes

1. Changing pump number did not always show the correct value on showed ALL.
2. TCP/IP settings screen did not refresh when the network changed state.
3. Removed causes of false faults being generated when exiting Zinch mode and changing directions.
4. Closing of EtherNet I/P connections doesn't close all EtherNet I/P connections.
5. EtherNet I/P interface. Ensure Zinch mode is canceled when going into continuous run mode.
6. Do not clear faults if Abort command has been issued.
7. Ensure the abort mode is canceled once the currently running program has been aborted.
8. Abort command and setting the Zinch mode flag to zero stop zinch mode.
9. EtherNet I/P interface. Do not automatically set the shot size when the volume changes.
10. Volume is now passed as a double integer to avoid float comparisons between the pump and the PLC.
11. Fixed major and minor revision numbers being passed back via the Ethernet/IP interface. Previously major and minor revision numbers were always zero and/or wrong.
12. Changed values passed back in major/minor revisions number on EtherNet/IP interface to indicate the current version of the EtherNet/IP interface, not the Firmware revision. Thus, preventing the wrong version number when the Firmware revision numbers where greater than 255.
13. When DHCP was on and a stepper motor was being used it would indicate a fault. Corrected.

VMP Enhancements in 1.4

1. Added the "change-of-state" mode allowing the PLC to be notified when a change occurs on the pump before the current RPI time has expired. This feature ensures important events are not lost, decreases network traffic, and ensure better response times.
2. Sample PLC code to exercise different functions of the pump.
3. Fault counters were added.
4. Return full status when the program number changes.
5. Add ability to read and save calibration data.
6. Added desired volume so the difference between actual volume and desired volume could been seen.
7. Zaxis Human to Machine Interface (zHmi) is now available for the VMP devices running version 1.4 of the firmware.
8. Added ability to reset different modules of the pump. It is now possible to reset the following:
   a. Program objects.
   b. Configuration objects.
   c. Some calibration parameters.
   d. Network parameters to factory defaults.
   e. Simulate power off then on.
9. Added the following commands to EtherNet/IP interface:
   a. Set RPM value
   b. Zero fine adjustment values to zero.
   c. Start/stop Zich mode
   d. Clear all faults
   e. Set desired volume
   f. Get status
   g. Change head
   h. Ignore the current value of and force a value to be set.
   i. Refresh the Tsi screen
10. Added the following status information:
    a. In Link delay.
    b. In Zinch mode.
    c. In Change Head mode.
    d. Fine adjustment value.
    e. Current revolutions
    f. Desired volume

Communication structures comparisons table.

Description	1.3	1.4
PLC to Pump I/O message.		
Ok to Run command bit	No Change	No Change
Start command bit	No Change	No Change
Abort command bit	No Change	No Change
Direction command bit	No Change	No Change
Continuous command bit	No Change	No Change

Set Max Shot Size command bit	No Change	No Change
Ignore command bit	No Change	No Change
Increment Fine Adjustment command bit	No Change	No Change
Decrement Fine Adjustment command bit	No Change	No Change
Reset Revolutions Count to zero command bit	No Change	No Change
Spare command bit		Added
Set Revolutions command bit		Added
Set RPM command bit		Added
Zero Fine Adjustment command bit		Added
Enter Zinch Mode command bit		Added
Clear Faults command bit		Added
Set Desired Volume command bit		Added
Note: The following fields positions changed in version 1.4		
Volume	No Change	No Change
Current Program	No Change	No Change
Revolutions	No Change	No Change
RPM's	No Change	No Change
Fine Adjustment Value	No Change	No Change
Pump to PLC I/O message.		
Ready status bit	No Change	No Change
Running status bit	No Change	No Change
Abort status bit	No Change	No Change
Direction status bit	No Change	No Change
Continuous Run status bit	No Change	No Change
Motor Running status bit	No Change	No Change
At Max Shot status bit	No Change	No Change
Command Acknowledge status bit	No Change	No Change
Bad Volume status bit		Added
At Shot Size status bit		Added
In Link Delay status bit		Added
In Zinch Mode status bit		Added
Fault Dispense Sensor	No Change	No Change
Fault Dispense Motor	No Change	No Change
Fault Adjust Motor	No Change	No Change
Fault Adjust Sensor	No Change	No Change