## 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 |