Technical Service Bulletin no. 21-284-B

√ Recommendation

Recipients
Manitowoc service network and representatives, all regions.

Subject
New CCS version 1.8.21 and update of the variable frequency drives (hoisting, trolleying and slewing).

Tower crane models
HUP32-27 and HUP40-30 delivered with a CCS version less than 1.13.4

Index	Written by	Date	Comment
B	Technical Support	September 2nd 2021	Amendment of paragraph 6
A	Technical Support	August 31st 2021	Creation

Update:

- **CCS computers in version 1.8.21.**
- **Hoisting, trolleying and slewing variable frequency**

1. Purpose:

- Manitowoc recommends updating the CCS computer and variable frequency drive versions. These updates improve certain random malfunctions.
- The variable frequency drives and the CCS computers cannot be updated separately.
- Once the hoisting and trolleying variable frequency drives have been updated, please send the serial number of the crane concerned to the following address europetower.parts@manitowoc.com, so that we can update the technical manuals in GTL.

2. Updating the CCS computers:

If you have a version less than 1.8.15, loading version 1.8.21 will reset the parameters to their default values, erase the calibrations, and reset the operation counters. Teach-in programming of the crane will therefore have to be carried out again.

A. To install the new software version, you must first install the "CCS Flash" tool on your computer or tablet. An installation procedure is available on Potain e-Tech, see BST21-266-A and tutorial TUTO20-002-A.

B. Improvements provided with this new version 1.8.21:

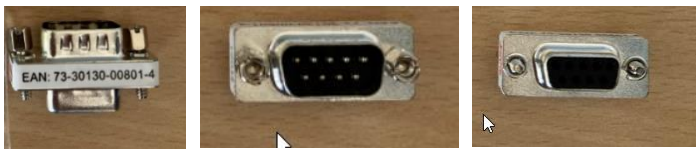
1. The operator can authorize folding of the jib, at end of shift, by activating the "limited jib access" option. To do this, the radio control switch must be set to "B". With this new version, the operator no longer needs to set the switch to position A or neutral.
2. The "limited speed" function has been added to prevent hoist rope winding faults during an emergency stop at high speed, during a hoisting movement and with a load of less than 500 kg. However, this function can be deactivated in the CCT computer menus.
   Consequently:
   a. When hoisting with no load, the maximum hoisting speed will be 36 m/min.
   b. When hoisting with a load of 200 kg, the maximum hoisting speed will be 40 m/min.
   c. When hoisting with a load of 500 kg, the maximum hoisting speed will be 56 m/min.
   d. The speeds will remain unchanged for loads greater than 500 kg and for lowering.

3. Updating the hoisting variable frequency drive:

A. Procedure for updating the variable frequency drive using the "Inverter Setting Tool" (IST):

1. Equipment required:
   - Can Open card, code **84079639.**
   - Sub D9 / RJ45 adapter, code **84112368.**

   - Sub D9 terminating resistor, code**84114136**



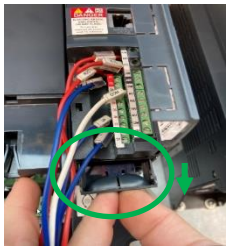
- Peak Can, code **84016291**

- Sub D9/ Sub D9 cord, code **84114894**

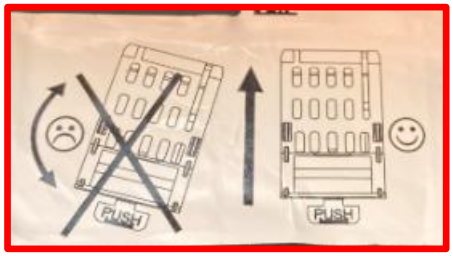
- Laptop or tablet, with Windows 10 at least.

2. Download the application in Potain e-Tech / Download / Service Tool / Inverter setting Tool / **84030396_E** for hoisting.
3. Switch off the power supply to the crane.
4. Disconnect the RJ45 cable from the hoisting variable frequency drive.

5. Remove the plug to install the Can Open card.



6. Install the Can open card.

7. Connect the RJ45 connector to the Can Open card.

8. Remove the Sub D9 / RJ45 adapter support.

9. Install the Sub D9 / RJ45 adapter on the Can Open card.

10. Install the Sub D9 terminating resistor on the Sub D9 / RJ45 adapter.

11. Connect the Sub D9 / Sub D9 cord.

12. Connect the Peak Can on the USB port of the laptop or tablet and connect the other end of the Sub D9/ Sub D9 cord to the Peak Can.

13. Reconnect the crane power supply and power up the crane.
14. Follow the Tutorial**: TUTO21-011-A** - Updating ATV320 and ATV32 with the Inverter Setting Tool.

B. Improvements made:

1. With the new software version:
   - In negative temperatures, this version corrects the cold motor parameter (TUN).
   - Robustness during brake contact bounce (BRF fault).
   - Update of the variable frequency drive version to allow remote consultation via Crane Star Diag.
2. With the addition of the Can Open card:
   - Robustness against disturbances of the control CAN bus.

4. Updating the trolleying variable frequency drive.

A. Procedure for updating the variable frequency drive using the "Inverter Setting Tool":

1. Equipment required: same as for the hoisting variable frequency drive.
2. Download the application in Potain e-Tech / Download / Service Tool / Inverter setting Tool / **84030397_E** for trolleying.
3. Follow the same procedure as for the hoisting variable frequency driver. Tutorial**: TUTO21-011-A** - Updating ATV320 and ATV32 with the Inverter Setting Tool.

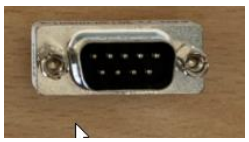
B. Improvements made:

1. With the new software version:
   - Update of the variable frequency drive version to allow remote consultation via Crane Star Diag.
2. With the addition of the Can Open card:
   - Robustness against disturbances of the control CAN bus.

5. Updating the slewing variable frequency drive.

A. Procedure for updating the variable frequency drive using the "Inverter Setting Tool" (IST):

1. Equipment required:
   - Sub D9 terminating resistor, code **84114136.**




   - Sub D9/ Sub D9 cord, code**84114894.**

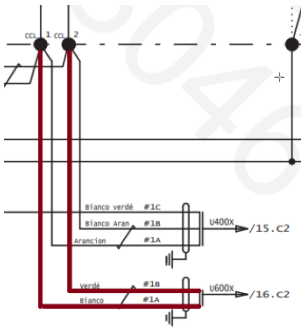
   - Peak Can, code **84016291**

   - Laptop or tablet, with Windows 10 at least.


   - Cable 84115199.

2) Download the application in Potain e-Tech / Download / Service Tool / Inverter setting Tool / **Patch V1 AC380** for slewing.
3) Switch off the crane power supply.
4) Disconnect the Can U600X cable on the side of the slewing variable frequency drive.

5) Then disconnect the CAN U600X cable on the side of the CCL terminal strip

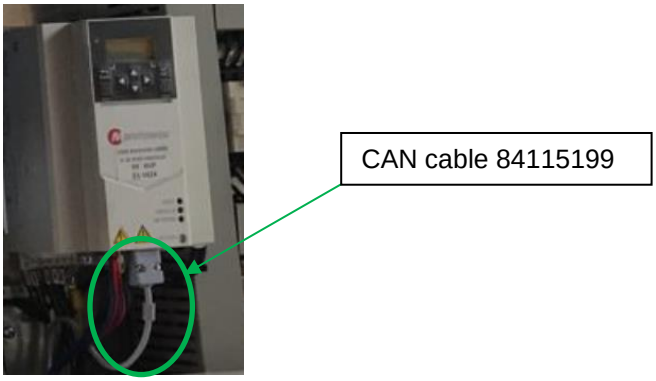


6) Install the Sub D9 terminating resistor on the Sub D9 / RJ45 adapter.

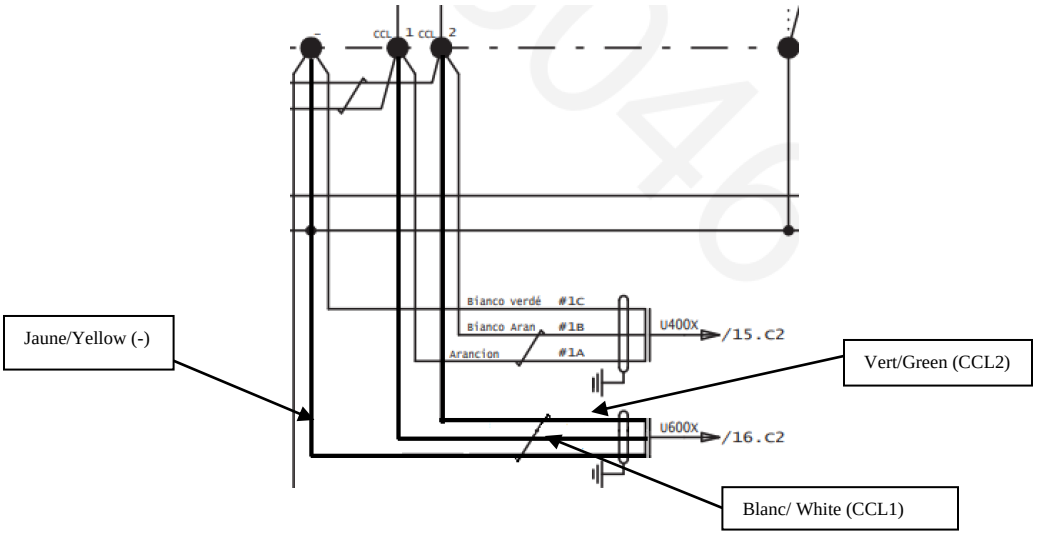
7) Connect the Sub D9 / Sub D9 cord.

8) Connect the Peak Can on the USB port of the laptop or tablet and connect the other end of the Sub D9/ Sub D9 cord to the Peak Can.

9) Reconnect the crane power supply and power up the crane.
10) Follow the Tutorial**: TUTO21-012-A** - Updating ACS380 with the Inverter Setting Tool.
11) Connect the Can cable, code 84115199, to the variable frequency drive.



12) Connect the Can cable, code 84115199, to the CCL terminal strip.



B. Improvement made:

- Robustness on the "transition 5" faults which may appear during brake application when the pinion/ring backlash is incorrectly distributed.
- If you need to check the backlash between pinions and ring, refer to TA20-276-A.

6. Extent of coverage:

Manitowoc will bear the cost of the following via a warranty request in GWX, for a period of 12 months from the date of distribution of this service bulletin, regardless of the age of the crane:

- **Parts**: According to the invoice.
- **Labor**: one hour.
- **Travel expenses**: this work must be carried out during a regular or inter-site maintenance operation. Consequently, MANITOWOC will not bear the costs related to travel.

For further information, please contact your usual Crane Care contact or Tower Crane Technical Support.