|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Owner: AI/TK | | Code: 3151\_MCS\_0044a | | | | AST:  CHI: |
| Test Stage : ST | | | | | | |
| Time Allotted: | [AST]: | | | | [CHI]: 05.12.2019 | |
| Prerequisites:  For this stage, the MCC, the HHD, the PXI and the main and auxiliary control cabinets of the MCS are required. Moreover, all hardware required for the Camera Cable Wrap (CCW) and Mirror Cover subsystems is also required. All SW running in the MCS must be developed. A PTP (Precision Time Protocol) clock master Linux server will be used to check that all clocks throughout the network are correctly synchronized to the clock master. | | | | | | |
| Supplied by LSST | | | Supplied by UTE | | | |
| Rigs, Tools & Equipment: TCS Visit Simulator | | | Rigs, Tools & Equipment: None | | | |
| Verification Method: execute all the steps in each test. | | | | Comments: | | |
| Success Criteria: all the steps described for each test are completed correctly. And the post-condition is fulfilled. | | | | Comments: | | |
| Safety Concerns: None | | | | | | |
| Acquisition processing and Analysis Method: None | | | | | | |
| Results storage: Locally in the control computer. | | | | | | |
| Related Requirement: 3.10.13 from LTS-103 | | | | | | |
| Comments & Assumptions: None | | | | | | |

# Reference procedures

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Change Setting *x* to value *y* | | **Number** | CE\_CCW0a |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Steps** | 1 | The operator clicks onto the home button. | | | *Operator* |
| 2 | The EUI changes to the home interface. | | | *EUI* |
| 3 | The operator clicks “Settings”. | | | *Operator* |
| 4 | The EUI changes to the parameter interface with the page “Azimuth Parameters” loaded. | | | *EUI* |
| 5 | The operator clicks on the arrow down. | | | *Operator* |
| 6 | The operator selects the “Camera Cable Wrap Settings” from the menu on the left hand side. | | | *Operator* |
| 7 | The EUI loads “Camera Cable Wrap Parameters” page. | | | *EUI* |
| 8 | The operator sets the *x* setting to *y*. | | | *Operator* |
| 9 | The operator clicks “WRITE” on the panel “CONTROL” on the right hand side. | | | *Operator* |
| 10 | The operator clicks onto the home button. | | | *Operator* |
| 11 | The EUI changes to the home interface. | | | *EUI* |
| 12 | The operator clicks “Monitor & Control”. | | | *Operator* |
| 13 | The EUI changes to the “General View”. | | | *EUI* |
| 14 | The operator selects the “Camera Cable Wrap” from the menu on the left hand side. | | | *Operator* |
| 15 | The EUI changes to the “Camera Cable Wrap” page. | | | *EUI* |
| **Post-condition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Date** |  | | **Responsible** |  | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Change Set of settings | | **Number** | CE\_CCW0b |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle” or “Fault”. | | | | |
| **Steps** | 1 | The operator clicks onto the home button. | | | *Operator* |
| 2 | The EUI changes to the home interface. | | | *EUI* |
| 3 | The operator clicks “Settings”. | | | *Operator* |
| 4 | The EUI changes to the parameter interface with the page “Azimuth Parameters” loaded. | | | *EUI* |
| 5 | The operator clicks on the arrow down. | | | *Operator* |
| 6 | The operator selects the “Settings Sets” from the menu on the left hand side. | | | *Operator* |
| 7 | The EUI loads “Settings Sets” page. | | | *EUI* |
| 8 | The operator selects the XXX setting set. | | | *Operator* |
| 9 | The operator clicks “WRITE & SAVE” on the panel “CONTROL” on the right hand side. | | | *Operator* |
| 10 | The operator clicks onto the home button. | | | *Operator* |
| 11 | The EUI changes to the home interface. | | | *EUI* |
| 12 | The operator clicks “Monitor & Control”. | | | *Operator* |
| 13 | The EUI changes to the “General View”. | | | *EUI* |
| 14 | The operator selects the “Camera Cable Wrap” from the menu on the left hand side. | | | *Operator* |
| 15 | The EUI changes to the “Camera Cable Wrap” page. | | | *EUI* |
| **Post-condition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Date** |  | | **Responsible** |  | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Move Camera Cable Wrap to *x* with speed *z* using drive *y* | | **Number** | CE\_CCW0c |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Steps** | 1 | If *y* is 1 the operator executes CE\_CCW1b, otherwise the operator executes CE\_CCW1b. | | | *Operator* |
| 2 | The operator enters *x* into the “position deg” field. | | | *Operator* |
| 3 | The operator enters *z* into the “speed deg/s” field (if *z* is not given, the operator uses 3). | | | *Operator* |
| 4 | The operator clicks “MOVE”. | | | *Operator* |
| 5 | The “Status” changes from “On\Enable” to “On\Discrete Move”. | | | *EUI* |
| 6 | The camera cable wrap starts rotating until “position *y* deg” shows *x*° ±0.1° and the “Status” changes back to “On\Enable”. | | | *EUI* |
| **Post-condition** | * The “position *y* deg” has changed and is at *x*° ±0.1°. * The “drive status” of Drive *y* is “Standstill”. | | | | |
| **Date** |  | | **Responsible** |  | |
| **Note** |  | | | | |

# Testing procedures

Before performing any test the procedure CE\_CCW0b must be executed with MT\_CCWAux for CCWAux manual tests, AT\_CCWAux for CCWAux automatic tests, MT\_MTMount for manual test of CCW mounted in MTMount and AT\_MTMount for automatic test of CCW mounted in MTMount

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Power On | | **Number** | CE\_CCW1a |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Steps** | 1 | The operator clicks onto the “ON” button. | | | *Operator* |
| 2 | The “Status” changes from “Idle” to “On\Enable”. | | | *EUI* |
| **Post-condition** | * Either Drive 1 or Drive 2 (depending on the usage time) is in the status “Standstill” and the corresponding “run/alarm” LED is lit up green. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Select Drive 1 | | **Number** | CE\_CCW1b |  |
| **Precondition** | * CE\_CCW1a has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. | | | | |
| **Steps** | 1 | The operator clicks onto the “1” button. | | | *Operator* |
| **Post-condition** | * The “drive status” of Drive 1 is “Standstill” and of Drive 2 is “Off” and the corresponding “run/alarm” LEDs are green and gray respectively. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Select Drive 2 | | **Number** | CE\_CCW1c |  |
| **Precondition** | * CE\_CCW1a has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. | | | | |
| **Steps** | 1 | The operator clicks onto the “2”. | | | *Operator* |
| **Post-condition** | * The “drive status” of Drive 1 is “Off” and of Drive 2 is “Standstill” and the corresponding “run/alarm” LEDs are gray and green respectively. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Power Off | | **Number** | CE\_CCW1d |  |
| **Precondition** | * CE\_CCW1a has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. | | | | |
| **Steps** | 1 | The operator clicks onto the “OFF” button. | | | *Operator* |
| 2 | The “Status” changes from “On\Enable” to “Idle”. | | | *EUI* |
| **Post-condition** | * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Jog using Drive 1 | | **Number** | CE\_CCW2a |  |
| **Precondition** | * CE\_CCW1b has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.1° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator selects 50% under “speed %”. | | | *Operator* |
| 2 | The operator clicks onto the “+” button under the “Jog” and releases it after 3 seconds. | | | *Operator* |
| 3 | The “Status” changes from “On\Enable” to “On\JogMove”. | | | *EUI* |
| **Post-condition** | * The “position 1 deg” has increased in the positive direction. * The camera cable wrap has moved for 3 seconds and is in standstill. * The “drive status” of Drive 1 is in “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Jog using Drive 2 | | **Number** | CE\_CCW2b |  |
| **Precondition** | * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 2 deg” is at 0° ±0.1° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator selects 50% “speed %”. | | | *Operator* |
| 2 | The operator clicks onto the “+” button under the “Jog” and releases it after 3 seconds. | | | *Operator* |
| 3 | The “Status” changes from “On\Enable” to “On\JogMove”. | | | *EUI* |
| **Post-condition** | * The “position 2 deg” has increased in the positive direction. * The camera cable wrap has moved for 3 seconds and is in standstill. * The “drive status” of Drive 2 is in “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| **Name** | Move using Drive 1 | | **Number** | CE\_CCW2c |  |
| **Precondition** | * CE\_CCW1b has been executed * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.01° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator enters 80 into the “position deg” field. | | | *Operator* |
| 2 | The operator enters 2 into the “speed deg/s” field. | | | *Operator* |
| 3 | The operator clicks “MOVE”. | | | *Operator* |
| 4 | The “Status” changes from “On\Enable” to “On\DiscreteMove”. | | | *EUI* |
| 5 | The camera cable wrap starts rotating until “position 1 deg” shows 80° ±0.03° and the “Status” changes back to “On\Enable”. | | | *EUI* |
| 6 | The operator enters -80 into the “position deg” field. | | | *Operator* |
| 7 | The operator enters 2 into the “speed deg/s” field. | | | *Operator* |
| 8 | The operator clicks “MOVE”. | | | *Operator* |
| 9 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 10 | The camera cable wrap starts rotating until “position 1 deg” shows -80° ±0.01° and the “Status” changes back to “On\Enable”. | | | *EUI* |
| **Post-condition** | * The “position 1 deg” has increased in the negative direction and is at -80° ±0.01°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Move using Drive 2 | | **Number** | CE\_CCW2d |  |
| **Precondition** | * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 2 deg” is at 0° ±0.03° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator repeats steps 1-10 of CE\_CCW2c with Drive 2. | | | *Operator* |
| **Post-condition** | * The “position 2 deg” has increased in the negative direction and is at -80° ±0.01°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MUserName** | Jog using Drive 1 to SW Limit | | **Number** | CE\_CCW2e |  |
| **Precondition** | * CE\_CCW1b has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” i at -90° ±0.03° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator selects 70% “speed %”. | | | *Operator* |
| 2 | The operator clicks onto the “-” button under the “Jog” and holds. | | | *Operator* |
| 3 | The “Status” changes from “On\Enable” to “JogMove”. | | | *EUI* |
| 4 | The “Status” changes from “JogMove” to “FAULT” as the -91° ±0.5° software limit is triggered. An alarm appears at the bottom of the EUI. | | | *EUI* |
| 5 | The operator changes the setting “Software Limit Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 6 | The operator clicks onto the “Reset Alarms” button. | | | *Operator* |
| 7 | The “Status” changes from “FAULT” to “Idle”. | | | *EUI* |
| 8 | The operator clicks onto the “ON” button. | | | *Operator* |
| 9 | The “Status” changes from “Idle” to “On\Enable”. | | | *EUI* |
| 10 | The operator moves the camera cable wrap “position 1 deg” to 0° with speed 5 according to CE\_CCW0c. | | | *Operator* |
| 11 | The operator changes the setting “Software Limit Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| 12 | The operator moves the camera cable wrap “position 1 deg” to 90° with speed 5 according to CE\_CCW0c. | | | *Operator* |
| 13 | The operator clicks onto the “+” button under the “Jog” and holds. | | | *Operator* |
| 14 | The “Status” changes from “On\Enable” to “JogMove”. | | | *EUI* |
| 15 | The “Status” changes from “JogMove” to “FAULT” as the 91° ±0.5° software limit is triggered. An alarm appears at the bottom of the EUI. | | | *EUI* |
| 16 | The operator changes the setting “Software Limit Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 17 | The operator clicks onto the “Reset Alarms” button. | | | *Operator* |
| 18 | The “Status” changes from “Fault”. to “Idle” | | | *EUI* |
| 19 | The operator clicks onto the “ON” button. | | | *Operator* |
| 20 | The “Status” changes from “Idle” to “On\Enable”. | | | *EUI* |
| 21 | The operator moves the camera cable wrap “position 1 deg” to 0° with speed 5 according to CE\_CCW0c. | | | *Operator* |
| 22 | The operator changes the setting “Software Limit Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| **Post-condition** | * The “position 1 deg” is at 0° ±0.01°. * The “drive status” of Drive 1 is “Off”. * The “Status” of the module is in Idle. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Move using Drive 1 without SW Limits | | **Number** | CE\_CCW2f |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 1 deg” is at 0° ±0.03° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator changes the setting “Software Limit Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 2 | The operator executes CE\_CCW1b. | | | *Operator* |
| 3 | The operator moves the camera cable wrap “position 1 deg” to 90° with speed 5 according to CE\_CCW0c. | | | *Operator* |
| 4 | The operator selects 10% “speed %”. | | | *Operator* |
| 5 | The operator clicks “+”. | | | *Operator* |
| 6 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 7 | The camera cable wrap starts rotating until “position 1 deg” is higher than 90° | | | *EUI* |
| 8 | Release the “+” button | | | *Operator* |
| 9 | The operator repeats steps 3-8 moving beyond -90° (Jog with “-“ instead of “+”). | | | *Operator* |
| 10 | The operator moves the camera cable wrap “position 1 deg” to 0° with speed 5 according to CE\_CCW0c. | | | *Operator* |
| 11 | The operator changes the setting “Software Limit Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| **Post-condition** | * The “position 1 deg” is at 0° ±0.01°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Move using Drive 2 without SW Limits | | **Number** | CE\_CCW2g |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator repeats steps 1-10 of CE\_CCW2fCE\_CCW2 with Drive 2. | | | *Operator* |
| **Post-condition** | * The “position 2 deg” is at 0° ±0.01°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Move using Drive 2 triggering HW Limits | | **Number** | CE\_CCW2h |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 2 deg” is at 0° ±0.03° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator changes the setting “Software Limit Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 2 | The operator executes CE\_CCW1c. | | | *Operator* |
| 3 | The operator moves the camera cable wrap “position 2 deg” to 90° with speed 5 according to CE\_CCW1c. | | | *Operator* |
| 4 | The operator selects 10% under “speed %”. | | | *Operator* |
| 5 | The operator clicks “+”. | | | *Operator* |
| 6 | The “Status” changes from “On\Enable” to “JogMove”. | | | *EUI* |
| 7 | The camera cable wrap starts rotating until “position 2 deg” shows 92° ±1 ° and the “Status” changes to “FAULT”. | | | *EUI* |
| 8 | The operator changes the setting “Limit Switch Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 9 | The operator clicks onto the “Reset Alarms” button. | | | *Operator* |
| 10 | The “Status” changes from “FAULT” to “Idle”. | | | *EUI* |
| 11 | The operator clicks onto the “ON” button. | | | *Operator* |
| 12 | The “Status” changes from “Idle” to “On\Enable”. | | | *EUI* |
| 13 | The operator moves the camera cable wrap “position 2 deg” to 90° with speed 1 according to CE\_CCW1c. | | | *Operator* |
| 14 | The operator changes the setting “Limit Switch Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| 15 | Execute steps 3 to 14 but in negative direction. Position -90 deg and clinking on “-“ | | | *Operator* |
| 16 | The operator changes the setting “Software Limit Switch Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| **Post-condition** | * The “position 2 deg” is at -90° ±1°. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Stop a move using Drive 1 | | **Number** | CE\_CCW3a |  |
| **Precondition** | * CE\_CCW1b has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.03° according to CE\_CCW0c. | | | | |
| **Steps** | 1 | The operator enters 50 into the “position deg” field. | | | *Operator* |
| 2 | The operator enters 2 into the “speed deg/s” field. | | | *Operator* |
| 3 | The operator clicks “MOVE”. | | | *Operator* |
| 4 | The “Status” changes from “On\Enable” to “On\DiscreteMove”. | | | *EUI* |
| 5 | The camera cable wrap starts rotating. | | | *EUI* |
| 6 | After 5 seconds the operator click on the “STOP” button on the right hand side of the EUI. | | | *Operator* |
| 7 | The “Status” changes from “On\DiscreteMove” to “Stopping”. | | | *EUI* |
| 8 | The camera cable wrap stops rotating. | | | *EUI* |
| 9 | The “drive status” of Drive 1 is “Standstill”. | | | *EUI* |
| **Post-condition** | * The “position 1 deg” has increased in the positive direction and is between 0° and 50°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | Stop a move using Drive 2 | | **Number** | CE\_CCW3b |  |
| **Precondition** | * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator enters -50 into the “position deg” field. | | | *Operator* |
| 2 | The operator enters 2 into the “speed deg/s” field. | | | *Operator* |
| 3 | The operator clicks “MOVE”. | | | *Operator* |
| 4 | The “Status” changes from “On\Enable” to “On\DiscreteMove”. | | | *EUI* |
| 5 | The camera cable wrap starts rotating. | | | *EUI* |
| 6 | After 10 seconds the operator clicks on the “STOP” button on the left hand side of the EUI. | | | *Operator* |
| 7 | The “Status” changes from “On\DiscreteMove” to “Stopping”. | | | *EUI* |
| 8 | The camera cable wrap stops rotating. | | | *EUI* |
| 9 | The “drive status” of Drive 2 is “Standstill”. | | | *EUI* |
| **Post-condition** | * The “position 2 deg” has increased in the negative direction and is between 0° and -50°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Camera Tracking | | **Number** | CE\_CCW4a |  |
| **Precondition** | * **The CCW is in standalone. Not connected to camera rotator** * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” is “On\Enable”. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Change settings “Camera Deviation Override” to “TRUE” CE\_CCW0a | | | *Operator* |
| 2 | The operator clicks load and selects “MT\_TrackTest.txt” file | | | *Operator* |
| 3 | The operator clicks on the “EXECUTE” button. | | | *Operator* |
| 4 | The “Status” changes to “Tracking”. | | | *EUI* |
| 5 | The camera cable wrap (“position 2 deg”) moves to predefined positions in the file. | | | *EUI* |
| 6 | Wait until test is finished. | | | *Operator* |
| 7 | The camera cable wrap stops rotating. | | | *EUI* |
| 8 | The “drive status” of Drive 2 is “Standstill”. | | | *EUI* |
| 9 | The “Status” changes to “On\Enable”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. * The “Status” is “On\Enable”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Tracking changes not yet completed.* | | | | |

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| **Name** | Camera Tracking – Stop Camera Tracking | | **Number** | CE\_CCW4b |  |
| **Precondition** | * **The CCW is in standalone. Not connected to camera rotator** * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” is “On\Enable”. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Execute steps 1 to 5 of test CE\_CCW4a | | | *Operator* |
| 2 | Wait for 1 minute. | | | *Operator* |
| 3 | The operator clicks on the “STOP CAMERA TRACKING” button. | | | *Operator* |
| 4 | The “Status” changes from “Tracking” to “Stopping”. | | | *EUI* |
| 5 | The camera cable wrap stops rotating. | | | *EUI* |
| 6 | The “drive status” of Drive 2 is “Standstill”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. * The “Status” is “On\Enable”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Tracking changes not yet completed.* | | | | |

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| **Name** | Camera Tracking – Stop | | **Number** | CE\_CCW4c |  |
| **Precondition** | * **The CCW is in standalone. Not connected to camera rotator** * CE\_CCW1b has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” is “On\Enable”. * The “position 1 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Execute steps 1 to 5 of test CE\_CCW4a | | | *Operator* |
| 2 | Wait for 1 minute. | | | *Operator* |
| 3 | The operator clicks on the “STOP CAMERA TRACKING” button. | | | *Operator* |
| 4 | The “Status” changes from “Tracking” to “Stopping”. | | | *EUI* |
| 5 | The camera cable wrap stops rotating. | | | *EUI* |
| 6 | The “drive status” of Drive 2 is “Standstill”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Standstill”. * The “Status” is “On\Enable”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Tracking changes not yet completed.* | | | | |

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| **Name** | Camera Tracking – No data fault | | **Number** | CE\_CCW4d |  |
| **Precondition** | * **The CCW is in standalone. Not connected to camera rotator** * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” is “On\Enable”. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Set “ATS Simulate not send track” button to “TRUE” | | | *Operator* |
| 2 | Execute steps 1 to 4 of test CE\_CCW4a | | | *Operator* |
| 3 | The “Status” changes from “Tracking” to “Fault”. | | | *EUI* |
| 4 | The “drive status” of Drive 2 changes to “Off”. | | | *EUI* |
| 5 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 6 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 7 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has not moved and is in idle. * The “drive status” of Drive 2 is “Off”. * The “Status” is “Idle”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Tracking changes not yet completed.* | | | | |

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| **Name** | Camera Tracking – Excessive time between commands fault | | **Number** | CE\_CCW4e |  |
| **Precondition** | * **The CCW is in standalone. Not connected to camera rotator** * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” is “On\Enable”. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
|  | 1 | Execute steps 1 to 5 of test CE\_CCW4a but with file “MT\_TrackTest\_Faulty.txt” | | | *Operator* |
| 2 | Wait about 5 seconds | | | *Operator* |
| 3 | The “Status” changes from “Tracking” to “Fault”. | | | *EUI* |
| 4 | The “drive status” of Drive 2 changes to “Off”. | | | *EUI* |
| 5 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 6 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 7 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has moved and is in idle. * The “drive status” of Drive 2 is “Off”. * The “Status” is “Idle”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Tracking changes not yet completed.* | | | | |

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| **Name** | Camera Tracking – Excessive time between commands fault | | **Number** | CE\_CCW4e |  |
| **Precondition** | * **The CCW is in standalone. Not connected to camera rotator** * CE\_CCW1c has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” is “On\Enable”. * The “position 2 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator changes the setting “Force Drive Selection” to “TRUE” and “Forced Drive” to “1” according to CE\_CCW0a. | | | *Operator* |
| 1 | Execute steps 1 to 5 of test CE\_CCW4a | | | *Operator* |
| 2 | Wait about 5 seconds | | | *Operator* |
| 3 | Execute the python interface command produceAlarm for drive 1 or remove encoder input in the drive 1 | | | *EUI* |
| 4 | The “drive status” of Drive 1 changes to “Fault”. | | | *EUI* |
| 5 | A warning shows up at the bottom of the page. | | | *EUI* |
| 6 | The “Status” changes to “” and then to “Tracking” again | | | *EUI* |
| 7 | The “drive status” of Drive 2 changes to “stantill” or “discrete move” | | | *EUI* |
| 8 | Execute the python interface command produceAlarm for drive 2 or remove encoder input in the drive 2 | | | *EUI* |
| 4 | The “drive status” of Drive 2 changes to “Fault”. | | | *EUI* |
| 5 | The “Status” changes to “FAULT”. | | | *EUI* |
| 8 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 6 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 7 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has moved and is in idle. * The “drive status” of Drive 2 is “Off”. * The “Status” is “Idle”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Tracking changes not yet completed.* | | | | |

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| **Name** | Speed Limit Warning using Drive 1 | | **Number** | CE\_CCW5a |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 1 deg” is at 0° ±0.1° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator changes the setting “Speed Limit” to 0.4 according to CE\_CCW0a. | | | *Operator* |
| 2 | The operator executes CE\_CCW1b. | | | *Operator* |
| 3 | The operator enters 50 into the “position deg” field. | | | *Operator* |
| 4 | The operator enters 3 into the “speed deg/s” field. | | | *EUI* |
| 5 | The operator clicks “MOVE”. | | | *Operator* |
| 6 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 7 | The camera cable wrap starts rotating until “position 1 deg” shows 50° ±0.01° and the “Status” changes back to “Idle”. | | | *EUI* |
| 8 | The EUI will show a warning fired at the bottom of the screen. | | | *EUI* |
| **Post-condition** | * The “position 1 deg” has increased in the positive direction and is at 50° ±0.01°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Standstill”. * A warning is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Speed Limit Warning using Drive 2 | | **Number** | CE\_CCW5b |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 1 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator repeats steps 1-8 of CE\_CCW5a with Drive 2. | | | *Operator* |
| **Post-condition** | * The “position 2 deg” has increased in the positive direction and is at 50° ±0.01°. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. * A warning is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Critical Speed Limit Alarm using Drive 1 | | **Number** | CE\_CCW5c |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 1 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator changes the setting “Critical Speed Limit” to 0.4 according to CE\_CCW0a. | | | *Operator* |
| 2 | The operator executes CE\_CCW1b. | | | *Operator* |
| 3 | The operator enters 50 into the “position deg” field. | | | *Operator* |
| 4 | The operator enters 3 into the “speed deg/s” field. | | | *EUI* |
| 5 | The operator clicks “MOVE”. | | | *Operator* |
| 6 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 7 | The camera cable wrap starts rotating and after some seconds the “Status” changes to “FAULT”. | | | *EUI* |
| 8 | The “drive status” of Drive 1 changes to “Off”. | | | *EUI* |
| 9 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 10 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 11 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The “position 1 deg” has increased in the positive direction. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Off”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| **Name** | Critical Speed Limit Alarm using Drive 2 | | **Number** | CE\_CCW5d |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “Idle”. * The “drive status” of Drive 1 is “Off” and the corresponding “run/alarm” LED is gray. * The “drive status” of Drive 2 is “Off” and the corresponding “run/alarm” LED is gray. * The “position 1 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator repeats steps 1-11 of CE\_CCW5c with Drive 2. | | | *Operator* |
| **Post-condition** | * The “position 2 deg” has increased in the positive direction. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Off”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Driver 1 Faulty Warning | | **Number** | CE\_CCW5g |  |
| **Precondition** | * **This test can be done only with simulated hardware or by autorithed personnel** * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. | | | | |
| **Steps** | 1 | The operator changes the setting “Force Drive Selection” to “TRUE” and “Forced Drive” to “1” according to CE\_CCW0a. | | | *Operator* |
| 2 | Execute the python interface command produceAlarm for drive 1 or remove encoder input in the drive 1 | | | *Operator* |
| 3 | The operator clicks on the “ON” button. | | | *Operator* |
| 4 | The “Status” changes to “Activating”. | | | *EUI* |
| 5 | A warning is shown at the bottom of the page. | | | *EUI* |
| 6 | The “Status” changes to “On\Enable”. | | | *EUI* |
| 7 | The “drive status” of Drive 2 changes to “Standstill”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap is in standstill. * The “Status” is “On\Enable”. * The “drive status” of Drive 1 is “Off”. * The “drive status” of Drive 2 is “Standstill”. * A warning is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

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| **Name** | Driver 2 Faulty Warning | | **Number** | CE\_CCW5h |  |
| **Precondition** | * **This test can be done only with simulated hardware or by autorithed personnel** * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. | | | | |
| **Steps** | 1 | The operator repeats steps of CE\_CCW5g with Drive 2. | | | *Operator* |
| **Post-condition** | * The camera cable wrap is in standstill. * The “Status” is “On\Enable”. * The “drive status” of Drive 1 is “Standstill”. * The “drive status” of Drive 2 is “Off”. * A warning is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

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| **Name** | Both Driver Faulty Alarm | | **Number** | CE\_CCW5i |  |
| **Precondition** | * **This test can be done only with simulated hardware or by autorithed personnel** * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. | | | | |
| **Steps** | 1 | Execute the python interface command produceAlarm for drive 1 and 2 or remove encoder input in the drive 1 and 2 | | | *Operator* |
| 2 | The operator clicks on the “ON” button. | | | *Operator* |
| 3 | The “Status” changes to “FAULT”. | | | *EUI* |
| 4 | An alarm shows up at the bottom of the page. | | | *EUI* |
| 5 | The operator un-presses the pressed physical emergency button. | | | *Operator* |
| 6 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 7 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap is in standstill. * The “drive status” of Drive 1 and Drive 2 is “Off”. * No alarm is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Lubrication Level 1 Warning | | **Number** | CE\_CCW5j |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “On\Enable”. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.3° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Force the input IO variable “diELCB101\_CCW\_LUB1level” for lubrication level to TRUE. | | | *Operator* |
| 2 | A warning shows up at the bottom of the page. | | | *EUI* |
| 3 | Unforce the Digital Input. | | | *Operator* |
| **Post-condition** | * The camera cable wrap is in standstill and has not moved. * The “Status” is “On\Enable”. * No warning is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

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| **Name** | Lubrication Level 2 Warning | | **Number** | CE\_CCW5k |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “Status” is “On\Enable”. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.1° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Force the input IO variable “diELCB101\_CCW\_LUB2level” for lubrication level to TRUE. | | | *Operator* |
| 2 | A warning shows up at the bottom of the page. | | | *EUI* |
| 3 | Unforce all variables | | | *Operator* |
| **Post-condition** | * The camera cable wrap is in standstill and has not moved. * The “Status” is “On\Enable”. * No warning is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** |  | | | | |

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| **Name** | Positive SW Limit using Drive 1 | | **Number** | CE\_CCW5l |  |
| **Precondition** | * CE\_CCW1b  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Name** | Select Drive 1 | **Number** | CE\_CCW1b |  |  * has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.1° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator moves the camera cable wrap “position 1 deg” to 90° with speed 3 according to CE\_CCW0. | | | *Operator* |
| 2 | The operator selects 100% “speed %”. | | | *Operator* |
| 3 | The operator clicks “+”. | | | *Operator* |
| 4 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 5 | The camera cable wrap starts rotating until “position 1 deg” is higher than 90° and the “Status” changes to “FAULT”. | | | *EUI* |
| 6 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 7 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 8 | The “Status” changes to “Idle”. | | | *EUI* |
| 9 | The operator changes the setting “Software Limit Switch Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 10 | The operator executes CE\_CCW1. | | | *Operator* |
| 11 | The operator moves the camera cable wrap “position 1 deg” to 0° according to CE\_CCW0 | | | *Operator* |
| 12 | The operator changes the setting “Software Limit Switch Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| **Post-condition** | * The “position 1 deg” is at 0° ±0.01. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 1 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Negative SW Limit using Drive 2 | | **Number** | CE\_CCW5n |  |
| **Precondition** | * CE\_CCW1c  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Name** | Select Drive 2 | **Number** | CE\_CCW1c |  |  * has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 2 deg” is at 0° ±0.1° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator moves the camera cable wrap “position 1 deg” to -90° with speed 3 according to CE\_CCW0. | | | *Operator* |
| 2 | The operator selects 100% “speed %”. | | | *Operator* |
| 3 | The operator clicks “-”. | | | *Operator* |
| 4 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 5 | The camera cable wrap starts rotating until “position 2 deg” is lower than -90° and the “Status” changes to “FAULT”. | | | *EUI* |
| 6 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 7 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 8 | The “Status” changes to “Idle”. | | | *EUI* |
| 9 | The operator changes the setting “Software Limit Switch Override” to “TRUE” according to CE\_CCW0a. | | | *Operator* |
| 10 | The operator executes CE\_CCW1. | | | *Operator* |
| 11 | The operator moves the camera cable wrap “position 2 deg” to 0° according to CE\_CCW0 | | | *Operator* |
| 12 | The operator changes the setting “Software Limit Switch Override” to “FALSE” according to CE\_CCW0a. | | | *Operator* |
| **Post-condition** | * The “position 2 deg” is at 0° ±0.1. * The camera cable wrap has moved and is in standstill. * The “drive status” of Drive 2 is “Standstill”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | No Alarm Detection | | **Number** | CE\_CCW6 |  |
| **Precondition** | * Do not execute this test for CCWAux * CE\_CCW1a has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” shows “On\Enable”. | | | | |
| **Steps** | 1 | The operator executes mirror cover trial CE\_MC5e. | | | *Operator* |
| 2 | An alarm will trigger in the mirror cover module. | | | *EUI* |
| 3 | The “Status” remains at “On\Enable”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap is in standstill. * The “drive status” of either Drive 1 or Drive 2 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “Status” shows “On\Enable”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | *Julen Garcia* | |
| **Note** | *Skipped due to redesign of Setting System.* | | | | |

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| **Name** | Alarm Processing in Idle State | | **Number** | CE\_CCW7 |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Steps** | 1 | The operator press emergency trip button. | | | *Operator* |
| 2 | The “Status” remains at “Idle” | | | *EUI* |
| 3 | At the bottom of the Camera Cable Wrap page, no alarm is shown to be triggered. | | | *EUI* |
| 4 | The operator clicks on the “ON” button. | | | *Operator* |
| 5 | A “No Ack” message is received with the information of active interlock “Camera Cable Wrap Safety” | | | *EUI* |
| 6 | Click on “Continue” button | | | *Operator* |
| **Post-condition** | * The “Status” of camera cable wrap is “Idle”. * The “drive status” of Drive 1 and Drive 2 is “Off”. * No local alarm is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Alarm Processing in Moving/Executing State | | **Number** | CE\_CCW8 |  |
| **Precondition** | * CE\_CCW1b has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.1° according to CE\_CCW0. | | | | |
| **Steps** | 1 | The operator enters 70 into the “position deg” field. | | | *Operator* |
| 2 | The operator enters 0.5 into the “speed deg/s” field. | | | *Operator* |
| 3 | The operator clicks “MOVE”. | | | *Operator* |
| 4 | The “Status” changes from “On\Enable” to “Executing”. | | | *EUI* |
| 5 | The camera cable wrap starts rotating. | | | *EUI* |
| 6 | The operator presses emergency trip button. | | | *Operator* |
| 7 | The “Status” changes to “FAULT”. | | | *EUI* |
| 8 | The EUI will show an alarm fired at the bottom of the screen. | | | *EUI* |
| 9 | The camera cable wrap starts stops rotating. | | | *EUI* |
| 10 | The “drive status” of Drive 1 changes to “Fault”. | | | *EUI* |
| 11 | An alarm shows up at the bottom of the page. | | | *EUI* |
| 12 | Release the emergency trip button and reset the safety. | | | *Operator* |
| 13 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 14 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has moved in the positive direction and is in standstill. * The “drive status” of Drive 1 and Drive 2 is “Off”. * The “Status” is “Idle”. * No alarm is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Incorrect Operation Sequence - Move | | **Number** | CE\_CCW9a |  |
| **Precondition** | * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 and Drive 2 are “Off” and the corresponding “run/alarm” LEDs are gray. * The “Status” is “Idle”. | | | | |
| **Steps** | 1 | The operator enters -35 into the “position deg” field. | | | *Operator* |
| 2 | The operator enters 1.5 into the “speed deg/s” field. | | | *Operator* |
| 3 | The operator clicks on “MOVE” in the “CONTROL” panel section. | | | *Operator* |
| 4 | A “No Ack” message is received. | | | *EUI* |
| **Post-condition** | * The “drive status” of Drive 1 and Drive 2 is “Off”. * The “Status” is “Idle”. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |

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| **Name** | Incorrect Operation Sequence - Fault | | **Number** | CE\_CCW9b |  |
| **Precondition** | * CE\_CCW1b has been executed. * The EUI is on the Camera Cable Wrap page. * The “drive status” of Drive 1 is “Standstill” and the corresponding “run/alarm” LED is lit up green. * The “position 1 deg” is at 0° ±0.01° according to CE\_CCW0. | | | | |
| **Steps** | 1 | Press Emergency trip button. | | | *Operator* |
| 2 | The “Status” changes to “FAULT”. | | | *EUI* |
| 3 | An alarm is shown at the bottom of the page. | | | *EUI* |
| 4 | The “drive status” of Drive 1 is “Fault”. | | | *EUI* |
| 5 | The operator enters -55 into the “position deg” field. | | | *Operator* |
| 6 | The operator enters 1 into the “speed deg/s” field. | | | *Operator* |
| 7 | The operator clicks on the “MOVE” button. | | | *Operator* |
| 8 | A “No Ack” message is received. | | | *EUI* |
| 9 | The camera cable wrap does not move. | | | *EUI* |
| 10 | The operator clicks on the “POWER ON” button. | | | *Operator* |
| 11 | A “No Ack” message is received. | | | *EUI* |
| 12 | The “Status” remains at “FAULT”. | | | *EUI* |
| 13 | The operator clicks on the “POWER OFF” button. | | | *Operator* |
| 14 | A “No Ack” message is received. | | | *EUI* |
| 15 | The “Status” remains at “FAULT”. | | | *EUI* |
| 16 | The operators clicks the “STOP” button. | | | *Operator* |
| 17 | A “No Ack” message is received. | | | *EUI* |
| 18 | The operator loads a track file and clicks on the “EXECUTE” button. | | | *Operator* |
| 19 | A “No Ack” message is received. | | | *EUI* |
| 20 | The “Status” remains at “FAULT”. | | | *EUI* |
| 21 | The operator clicks on “RESET ALARM”. | | | *Operator* |
| 22 | The “Status” changes to “Idle”. | | | *EUI* |
| **Post-condition** | * The camera cable wrap has not moved and is in standstill. * The “drive status” of Drive 1 and Drive 2 is “Off”. * The “Status” is “Idle”. * No alarm is shown at the bottom of the page. | | | | |
| **Date** | 05.12.2019 | | **Responsible** | Julen Garcia | |
| **Note** |  | | | | |