

### 4.2.3 Drawhead Maintenance

Refer to the drawings on page for part names and numbers.

1. Lubricate the jack screw when the grease becomes dirty or dried out.

NOTE: Remove the limit switch on the bottom of the jack screw to permit the drawhead to travel past the limit switches. Remember to reinstall the actuator after servicing.

- a. Remove the jack screw:

- i. Slide guide rollers back from jack coupling.

- ii. Operate drawhead in the up (unload) direction until the screw comes out.

- b. Clean and apply multipurpose lithium grease.

- c. Replace the jack screw.

- d. Reassemble and adjust the limit switch.

2. Lubricate jack worm gear annually with multipurpose lithium grease.

3. Lubricate drive chain annually with chain lubricant.

4. Check the gear reducer oil level annually. Refill if necessary per manufacturer's instructions.

5. If there are issues with the motor speed control, contact ATS Service at +1-724-283-1212.

### 4.3 Manual Frame Controls, Classic Version

The drawhead and weight elevator can be jogged up and down when the frame is in the Idle state.

NOTE: Weight elevators are an optional feature and are not typical.



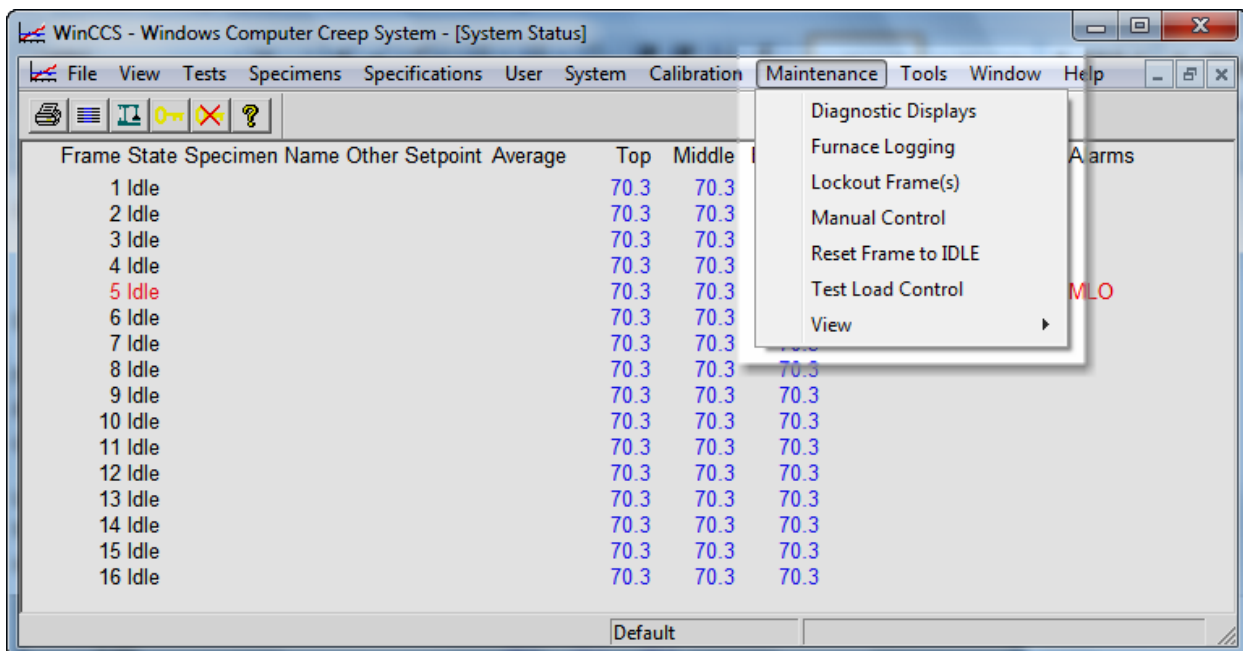
## 7.7 Maintenance

### 7.7.1 WinCCS Maintenance

The WinCCS software offers a variety of maintenance options that can be accessed easily via the Maintenance menu. The following is a list of features available under the Maintenance toolbar.



**CAUTION: DO NOT PERFORM MAINTENANCE FUNCTIONS WITHOUT ATS SERVICE PERSONNEL.**



**Diagnostic Displays:** This function is reserved for ATS Service Personnel.

**Furnace Logging:** The furnace logging option allows the operator to log data for a selected frame. This data is sent to the WinCCS Logs directory, where it can be accessed and reviewed at the operator's convenience. The directory is located at C:\ProgramFiles\Virtech,Inc\WinCCS\Logs.

**Lockout Frame(s):** If an operator wishes to prevent a frame from functioning, he may select to lockout the frame, rendering it inoperative. On the Status Display screen, the alarm code MLO will appear, indicating a Machine Lockout.

Frame	State	Specimen Name	Other	Setpoint	Average	Top	Middle	Bottom	Stress	Time %	Creep	Alarms
1	Idle					70.3	70.3	70.3				
2	Idle					70.3	70.3	70.3				
3	Idle					70.3	70.3	70.3				
4	Idle					70.3	70.3	70.3				
5	Idle					70.3	70.3	70.3				MLO
6	Idle					70.3	70.3	70.3				
7	Idle					70.3	70.3	70.3				

**Manual Control:** This feature should be used ONLY in coordination with ATS Service. This option is typically used for troubleshooting purposes. If used improperly, selecting Manual Control can damage the machine. Upon selecting manual control, the following warning will appear:



**Reset Frame to IDLE:** This option is another troubleshooting feature that may be used in the event of a computer lock-up.

NOTE: If the frame is reset to Idle, all test data for that particular frame will be lost.

**Test Load Control :** This allows the user to input a setup parameter and then test it in real-time without going to the test function.



CAUTION: THE MACHINE MUST BE SET UP PROPERLY WITH AN ADEQUATE LOAD TRAIN INSTALLED BEFORE ATTEMPTING THIS. DO NOT ENTER A LOAD GREATER THAN THE CAPACITY OF THE TESTER OR LOAD TRAIN.



APPLIED TEST  
SYSTEMS

# Instruction Manual

THE MARK OF RELIABILITY

**Viewing:** The three options listed allows the user to view various parameters.

- a. Frame Controller Status: This relates information pertaining to the frame: temperature, inputs, outputs, furnace power, etc. Some information can be viewed in volts by clicking the appropriate box on the bottom of the screen.
- b. Frame Status: This relates other information pertaining to the frame: flags, alarms, etc.
- c. Furnace Data: This relates information pertaining to the furnace: setpoint, target temperature, ramp rate, etc.

**Additional Maintenance Options:** There are two additional options, Write Communication Statistics and Write System Info, found under the File menu. These options are reserved for ATS Service Personnel only.

## 7.7.2 Lever Arm Tester Maintenance

**Knife Edges:** Check quarterly or after heavy loading. If they are damaged, rotate to a new edge. Replace when all four edges have been used.

**V-Blocks:** Regrind or replace if damaged. The lever arm must be recalibrated once the V-blocks have been removed, replaced, or reworked.

**Leveling:** Check the machine annually using a level on the upper crossbeam.

**Lubrication:** A high temperature lubricant can be used if high temperature seizing is experienced.

NOTE: Avoid excessive lubrication.

**Storage:** Coat the knife-edges and V-blocks on tester arms and couplings with a thin coat of oil to prevent corrosion.

NOTE: Avoid excessive lubrication because lubricants attract dust to the equipment.



CAUTION: Do not overload the machine. Observe rated capacity on data tag.



CAUTION: Do not overload load train components. Elevated temperatures lower their capabilities. A load train is no stronger than its weakest element.



CAUTION: Provide snubbers and/or stop nuts on the elements of the load train, where necessary, to prevent damage to accessory equipment in the event of a specimen failure.



CAUTION: Stack weights on weight pan with the slots alternating to prevent tipping.



CAUTION: Do not jam threads to the bottom on load train components. Back off one half-turn to prevent misalignment. Thread engagement should be  $1 \frac{1}{4}$  times the diameter of the thread.



CAUTION: Check the tester daily for any signs of problems with either the currently running tests or test equipment.



CAUTION: Match the serial numbers on test frames, support blocks, and lever arms when assembling multiple testers.