

Approved (With Feedback Comments)

ORNL WORK PLAN

Operations, Maintenance and Services



62481

Work Plan Name / Rev: ADX MOTOR/COIL TEST / 0
Expiration Date: 2/19/2030

WORK SCOPE/DESCRIPTION

Requester (Name/Badge/Division):	Garrett, Jonathan / 00746806 / X186
Location of work (Bldg/Rm/Other):	/ /
Work Plan Title:	Baker ADX Chopper Motor & Coil Test
Description of Service/Work Needed: This work instruction provides guidelines for testing chopper motors and coils. To facilitate trend data collection, motor tests will be performed using the Baker ADX System. This procedure supports motor troubleshooting and is an attachment to the Predictive Maintenance plan.	
Charge Number, if required:	
Work Plan Grade/Worktype:	4 / 0
Author (Name/Badge):	Garrett, Jonathan / 00746806
File Attachments:	

INSTRUCTIONS

Prerequisites/Precautions:

- ┆ These tests are limited to testing de-energized Chopper spindles or motors. The instrument is intended to perform measurements only on de-energized and isolated conductors.
- ┆ The instrument must be operated only by suitably trained and competent persons with authorization.
- ┆ The ADX has a mass up to 45lb (19.5 kg). Two-person lift is recommended. Disconnect the test leads and close the front cover before moving the ADX.
- ┆ Ground the product: The devices covered in this manual are grounded through the power cord's grounding conductor. To avoid electrical shock, plug the power cord into a properly wired/grounded receptacle before connecting the product test leads.
- ┆ Do not connect the test leads to the mains supply or to live circuits.
- ┆ Restrict access to the test area. Establish a clear boundary around the device under test using a barricade and prominent signage. The signage should indicate that entry is limited, explain the nature of the testing, and provide contact information. Note: Do not use Red Danger tape.

Directions:

- ┆ After connecting the test leads to the device under test (DUT), route the cables in a safe manner between the DUT and the ADX tester so as not to pose a tripping hazard or interference with the testing process.
- ┆ Do not coil excess test lead length on or near the ADX, or near other equipment that may be affected by electromagnetic interference. Placing coiled test leads on top of the unit can result in damage to the ADX and could affect test results.
- ┆ The ADX provides a sufficient grounding path for winding discharge while the test leads are connected to the winding and ground/frame. If the test leads need to be removed before the full discharge time has elapsed, secondary grounding equipment should be attached between the DUT and station ground before removing the test leads. When a proper ground connection is made, the tester can be safely disconnected from the DUT.

Coil Connection

- ┆ 1. Plug the ADX test leads 1 and 2 into their respective receptacles on the back of the tester.
- ┆ 2. DO NOT plug test lead 3 into the receptacle on the back of the ADX.
- ┆ 3. Label the leads/connections on the Asset (coil) 1 and 2. (V1+ V1- exc.)
- ┆ 4. Connect corresponding numbered test leads to each numbered Asset lead.

Post Work Testing:

Closeout:

JOB HAZARD EVALUATION

HAZARDS	PERMITS / CONTROLS
Electrical Equipment and Tools: Baker ADX	┆ Not NRTL listed

	<ul style="list-style-type: none"> i Has Equipment Labels or i Have made provision for Electrical Equipment Inspector (EEI) review and Electrical Safety Officer (ESO) approval or i Equipment poses no or little hazard (see Exhibit) : ESO approved, EEI reviewed.	
Electrical Work: Testing	<ul style="list-style-type: none"> i Minimum level of electrical worker qualification for the task (i.e. EW, QEW 1, 2, 3, 4, or 5): Specify. QEW2 i Additional Electrical qualifications required for task (e.g. Direct Current, Batteries, Capacitors, or Inductors): Specify. 	
DOCUMENTATION REVIEW AUTHORIZATION (Approvals are certification of hazards assessment)		
Reviewer/Approver Roles	Signature	Date
Division Electrical Safety Officer (DESO)	Parrott Jr, Danny	2/19/2025
IS/IH	Hostetler, Aaron	2/19/2025
Review Team Member	Bradley, Joe	2/14/2025
Task Leader	Garrett, Jonathan	2/19/2025
Task Leader	Smith, Chase	2/17/2025
Work Package Concurrence		
Facility Manager		
Operations Supervisor		
Facility Manager Approval To Start Work		
Facility Manager		
Work Start Authorization		
Task Leader		
Work Acknowledged Complete		
Task Leader		
Worker Feedback:		
Work Plan Feedback:		



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PRE-JOB SAFETY REVIEW GUIDE**ID:** 62481

Scope of Work: Review work package/plan to ensure all participants understand the work activity.

Hazards: Review the hazards identified in Job Hazard Evaluation (JHE) / work plan (IOP).

- € Since the work package / plan was written: 1) Have conditions changed? 2) Are there new hazards? Refer to Field Notes and Focus Areas.

Hazard Controls / Permits: Review:

- € Written permits for the work activity.
- € Precautions, step warnings, Hold Points ...
- € Personal Protective Equipment (PPE)

- € Work instructions for information - e.g., steps where hazards are introduced.
- € ORNL subject area requirements - e.g., non-permit hazard controls.

Performing Work:

- € Discuss group/individual responsibilities for safe & effective work.
- € Follow work instructions & safety procedures.
- € Availability/location of materials, tools, etc.
- € Any previous experiences / lessons learned?
- € Response if work cannot be performed as planned.
- € What is the worst thing that could happen?
- € Are there *Potential error traps* with the job? → →
- € Take a minute before: work start & leaving work area.
- € Work Hand-off / Turnover - workers & Task Leader

→ **Potential Error Traps:**

- € Time pressures
- € Distractive environment
- € High workload
- € First time evolution
- € First day back
- € Vague guidance
- € Over confidence
- € Imprecise communications
- € Work stress

Abnormal Situation Response:

- ┆ Stop Work: Observe an unsafe act, activity or condition that creates an imminent danger.
- ┆ Emergency Response: Discuss egress paths or other responses if problems are encountered.

Field Notes and Focus Areas: (Use this area as a work space to record notes related to new hazards identified in the field or changed conditions. Record feedback in work package/plan information systems.)

By signing below, I am indicating that I have been briefed on the potential hazards associated with completing this job.

Signature / Badge	Date	Signature / Badge	Date