



# Dc Motor Inspections

## WORK SCOPE AND DELIVERABLES

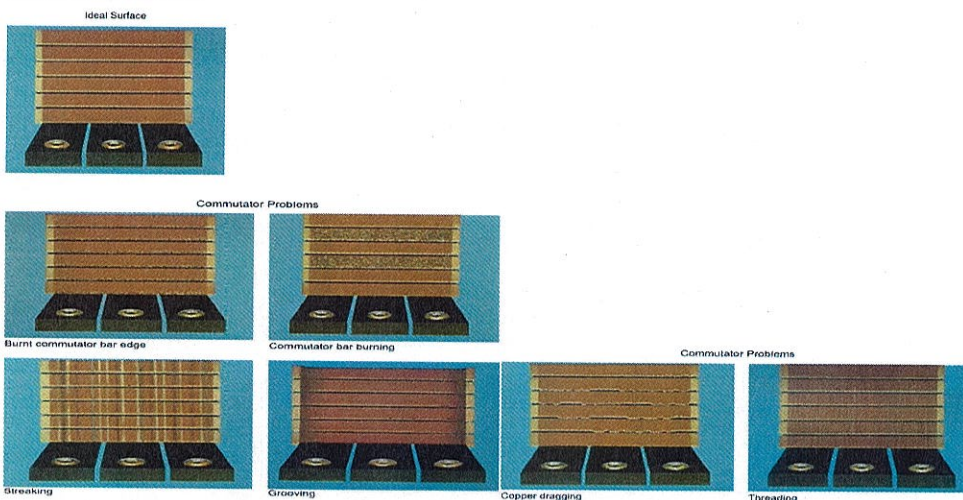
---

- ✓ Physical inspections of DC motors as detailed on report provided by Kurz.
- ✓ Check brush spring tension and brush length.
- ✓ Check commutator condition/color, blow out carbon dust – away from commutator.
- ✓ Clean all motor windows.
- ✓ Inspect brushes for wear and change out brushes as needed, document and manage inventory.
- ✓ Final inspection and double-check that covers are secure.
- ✓ Provide report and recommended action items to the customer.

## VISUAL INTERIOR INSPECTION

---

- Inspect field coils wherever visible for overheating or charred conditions.
- Inspect field coil connectors wherever visible for discoloration, cracks or looseness of connections.
- Inspect the security of brush holder to motor.
- Inspect the condition of the string band or Teflon band. Epoxy type string band must not indicate signs of cracking, chipping, flaking appearance or uneven color. Teflon type must indicate a tight fit to V ring and contact with commutator bars with no peeling or any type of hole that may have been caused by motor flashover. If any of these conditions exist, then replace the motor.
- Inspect the mounting hardware for looseness. All hardware shall be torqued to OEM specifications.
- Inspect bearings for lubrication leakage. No leakage is allowed on the interior of the motor.
- Inspect for signs of flashovers (end of commutator, string/Teflon band and flash arc horns). If flashing is noted, then dress and clean all areas. Vacuum or blow out inside of motor after dressing flashovers.
- Inspect the commutator condition. Review the commutator conditions burnt bar edge, bar burning, streaking, grooving, copper dragging and threading. If any one of these conditions is observed, then stone the commutator.



## VISUAL EXTERIOR INSPECTION

---

- Inspect leads for any overheating at the opening in the lead cleat. If found, determine cause and replace the lead as required. All loose hardware shall be torqued to OEM specifications.
- Inspect motor leads shall not chafe or indicate broken insulation. If chafing is found, then reposition the lead. If broken insulation is found, then replace the motor.
- Inspect bearing caps or cartridges for overheating and lubricant leakage. If found, then perform corrective action to determine the cause. Replace the motor as required.
- Inspect all mounting hardware for looseness. If any are found loose, then torque to OEM specification. To expedite future inspections, apply torque stripes and/or witness marks to the mounting hardware.
- Inspect that all ground straps/cables insulation is in good condition and show no signs of cracking, over heating or fraying. Replace if required.
- **NOTE:** *If any motor is found to be vibrating unusually or noisily, identify the problem. If found, then, repair or replace the motor as required.*

## MECHANICAL INSPECTION

---

- Inspect brushes for missing, chipping (incidental chips do not require replacement), discoloration, loose/broken strands and fraying. Replace in kind if these conditions exist.
- Measure brush lengths per OEM/individual RTS property specifications. Ensure that they will not exceed condemning limits before the next inspection.
- Measure brush holder distance from commutator
- Verify that brushes move freely (no binding), but not excessively in the brush box.
- Inspect for proper shunt dressing. Correct shunt dressing is essential for motor operation.
- Inspect commutator for high mica, low mica or commutator deficiencies.
- Inspect flash pins for signs of damage.

## CLEANING

---

- Use low-pressure compressed air nozzle to blow carbon dust and dirt from interior of motor at each preventive maintenance cycle or as determined by service environment.
- Filters with gaskets should be checked for proper seal when installed.
- Check security of gaskets when the filter is removed. Replace or repair as necessary.
- If equipped with removable filters, then clean in accordance with OEM recommendations.

ABC Company

Date

---

*DC Motor Inspection*

*Job # XXXXXXXXXXXXX*

---





1325 McMahon Drive  
Neenah, WI 54956  
(800) 776-3629

Date:

TO ABC Company

## DC Motor Inspections

### WORK SCOPE & DELIVERABLES:

- ✓ Physical inspection of (5) DC motors as detailed on report provided to Kurz
- ✓ Check brush spring tension and brush length
- ✓ Check commutator condition/color, blow out carbon dust- away from commutator
- ✓ Clean out all motor windows
- ✓ Change out brushes as needed, document and manage inventory
- ✓ Final inspection and double-check that covers are secure
- ✓ Provide report and recommended action items to ABC Company

### SUMMARY:

**Machine #1 – Threading on comm.**

**Machine #2 – Grooving threading and a new groove wore**

**Machine #3 - Important Observe – Over greasing on ODE bearing. Pull to recondition  
Brushes Changed – 5**

### RECOMMENDATIONS:

**Machine #1 – Threading on comm. Install cleaning brushes to clean up the comm.**

**Machine #2 – Grooving threading and a new groove wore. Install cleaning brushes to clean up the comm.**

**Machine #3 – Pull to Recondition. Over greased on the ODE bearing**

# DC MOTOR INSPECTIONS

## Motor Condition Date 8-13-2018

Motor Description	Equipment Sub	Motor Condition Red - Pull ASAP Blue - Important/Observe Green - OK	HP	# Of Brushes Changed	Brush # Grade	Brush Mfg.	Calc'd current Density amps sq./in.	Stocked Brush	New Brush Length
Machine #1	1A-600-060		20		RELE-526/04-52AA	MERSEN	8.0	Rele-526/04-52AA	1 9/16
Machine #2	1A-525-060		150		TOS-97/EG-34D		12.86	installed	1 3/4
Machine #3	1A-300-060		250		36A164452AA P28/T606	National	28.83	36A1644 52AAP28 /T606	3 1/8
Machine #4	1A-210-060		100		36A164451AB X27/T341	National	28.89	installed	2 3/4
Machine #5	1A-120-060		150		36A164452AA P05/T566	National	57.14	installed	3 1/4

CONTACTS:

- REMEMBER YOUR LOCKS
- Final inspection - recheck all motors for covers and cleanup area before leaving.



# DC MOTOR INSPECTIONS

## Shortest Brushes Length

Motor	Motor Description	Date	Date	Date	Date	Date	Date	Date	Date
1	Machine #1	8-13-18							
2	Machine #2								
3	Machine #3								
4	Machine #4								
5	Machine #5								

CONTACTS:

- REMEMBER YOUR LOCKS
- Final inspection - recheck all motors for covers and cleanup area before leaving.

# DC MOTOR INSPECTIONS

## Comm. Condition 8-13-18

Motor Description	Armature FLA	Actual Armature Amps	Brush Thickness	Brush Width	# Of Brushes In Use	# Of Brushes Full Set	# Of Brush Arms	Comm. Condition	Comm. Wear	Brush Angle
Machine #1	33.3	10	.625	1.0	4	4	4			Radial
Machine #2	245	51	.787	1.260	8	12	4			Both
Machine #3	398	227	.875	1.5	12	12	4			Both
Machine #4	159	130	.750	1.5	8	8	4			Both
Machine #5	283	150	.875	1.5	4	8	4			Both

**CONTACTS:**

- REMEMBER YOUR LOCKS
- Final inspection - recheck all motors for covers and cleanup area before leaving.



# DC MOTOR INSPECTIONS

## Comments and Recommendations

Red – High Priority

Blue – Important/Observe

Green - OK

### Comments and Recommendations

8-13-2018

Motor  
Description

Machine #1

Machine #2

Machine #3

Machine #4

Machine #5

### CONTACTS:

- REMEMBER YOUR LOCKS
- Final inspection - recheck all motors for covers and cleanup area before leaving.