



ZEE Systems, Inc.

AIRBORNE AIR CONDITIONING and HEATING

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SERVICE LETTER 99-800

Subject: Inspection and T.B.O. intervals for the Z99-800-SERIES Motor.

Intervals: **T.B.O.:** 2,000 HRS of operation (Hobbs Meter) in moderate operating conditions. Motors used in crop dusting should be inspected at least every 500 hrs or once per spray season, whichever is greater. When chemicals with highly corrosive or abrasive properties are sprayed even more frequent inspections should be made.

BRUSH INSPECTION: 1000 HRS of motor operation (Hobbs Meter). The inspection procedure is as follows:

IF THE MOTOR IS TO BE REMOVED FROM THE SYSTEM FOR THIS INSPECTION REFER TO APPLICABLE MAINTENANCE OR SERVICE INSTRUCTIONS FOR SPECIFIC REMOVAL AND INSTALLATION INSTRUCTIONS.

1. DISCONNECT POWER LEADS TO THE MOTOR.
2. REMOVE BELT FROM MOTOR PULLEY.
3. REMOVE THE BRUSH COVERS.
4. IF BRUSHES ARE REMOVED COMPLETELY FROM THE MOTOR FOR INSPECTION MARK THE LOCATION AND RETURN EACH BRUSH TO ITS ORIGINAL HOLDER.
5. LIFT THE BRUSH SPRING OFF THE BRUSH AND SLIDE THE BRUSH FROM THE HOLDER. THE BRUSH SHOULD SLIDE EASILY IN AND OUT OF THE HOLDER. IF THE BRUSH IS TIGHT IN THE HOLDER OR IF THERE IS EXCESSIVE SIDE TO SIDE MOVEMENT OF THE BRUSH IN THE HOLDER THE MOTOR SHOULD BE REMOVED FOR REPAIR OR OVERHAUL.
6. CHECK EACH BRUSH FOR CHIPS, CRACKS, PITTING, SIGNS OF ARCING OR OVERHEATING. CHECK EACH BRUSH FOR EVEN WEAR (SEE FIG. 2). REPLACE IF DEFECT IS FOUND.
7. MEASURE EACH BRUSH CONTACT FROM THE CENTER TOP TO THE SEATING AREA. IF ANY BRUSH CONTACT IS SHORTER THAN 0.750 (3/4) INCHES REPLACE ALL BRUSHES. BRUSHES ARE NOT SOLD INDIVIDUALLY, ORDER KIT P/N: Z6386K (ALTERNATE P/N Z6386AK)., NOTE: EACH INDIVIDUAL BRUSH ASSEMBLY HAS TWO LEADS AND TWO CARBON CONTACTS ATTACHED TO ONE TERMINAL LUG (SEE FIG. 1). EACH KIT CONTAINS 4EA ASSEMBLIES.
8. WITH THE BRUSHES REMOVED INSPECT THE ARMATURE COMMUTATOR FOR SIGNS OF OVERHEATING OR UNUSUAL WEAR. A BLACKENED FILM OF CARBON ON THE COMMUTATOR IS NORMAL. CHECK FOR DEEP GROOVES OR OTHER SIGNS OF UNEVEN WEAR ON THE COMMUTATOR. TURN THE ARMATURE BY HAND AND CHECK THAT THERE IS NO BINDING OR END PLAY. IF ANY DEFECT IS NOTED THE MOTOR SHOULD BE REMOVED FROM SERVICE AND REPAIRED OR OVERHAULED.
9. WHEN RETURNING BRUSHES TO THE HOLDER GENTLY LOWER THE BRUSH SPRING ONTO EACH BRUSH. DO NOT DROP THE SPRING ONTO THE TOP OF THE BRUSH AS DAMAGE TO THE BRUSH MAY RESULT.
10. REPLACE THE BRUSH COVERS.

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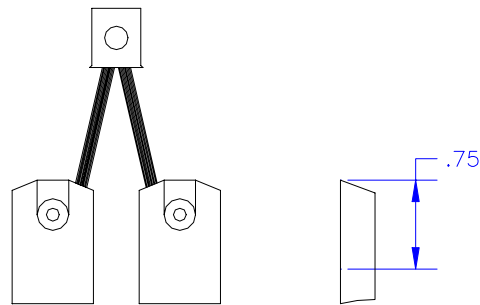
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11. RUN THE MOTOR AT 15 VDC WITH NO LOAD FOR AT LEAST 30 MINUTES FOR MINIMUM SEATING TO THE COMMUTATOR. **NOTE: THIS IS A HIGH TORQUE MOTOR. HOLD THE MOTOR DOWN AND BRING THE VOLTAGE UP SLOWLY SO THE MOTOR DOES NOT JUMP.**

12. THEN RUN THE MOTOR AT 28VDC. BRING THE VOLTAGE UP SLOWLY UNTIL THE RPM STABILIZES. CURRENT SHOULD NOT EXCEED 35AMPS. IF CURRENT IS TOO HIGH GO BACK TO STEP 11. **NOTE: THIS IS A HIGH TORQUE MOTOR. HOLD THE MOTOR DOWN AND BRING THE VOLTAGE UP SLOWLY SO THE MOTOR DOES NOT JUMP.**

12. REINSTALL MOTOR IN SYSTEM IN ACCORDANCE WITH APPLICABLE MAINTENANCE OR SERVICE MANUALS.

13. MAKE APPROPRIATE LOG BOOK ENTRIES.



CARBON CONTACTS DO NOT HAVE
TO BE THE SAME LENGTH IN A
BRUSH ASSEMBLY

FIGURE 1.

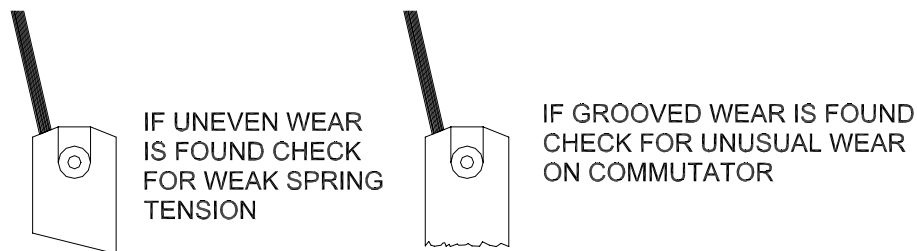


FIGURE 2.