BARRETT
Industrial Trucks

NISSAN
FORKLIFT

SERVICE MANUAL

MODEL

1W3/1W4 SERIES

(July 2005 Issue)

NISSAN FORKLIFT CORPORATION

1W31W4MAINT

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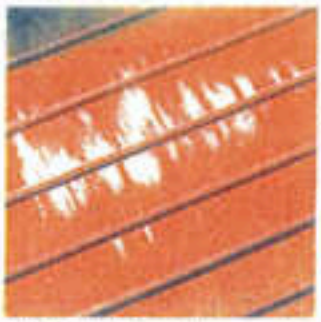
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COMMUTATOR CHECK CHART

FOR COMPARING COMMUTATOR SURFACE MARKINGS

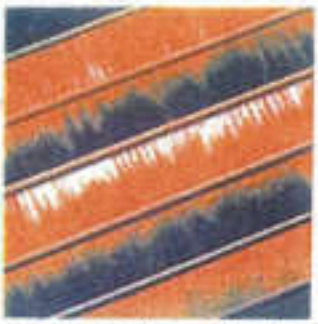
SATISFACTORY COMMUTATOR SURFACES



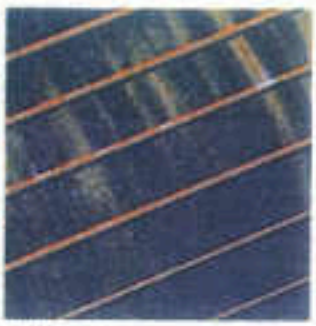
LIGHT TAN FILM over entire commutator surface is one of many normal conditions often seen on a well-functioning machine.



MOTTLED SURFACE with random film pattern is probably most frequently observed condition of commutators in industry.

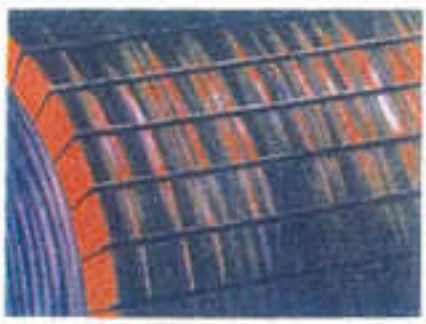


SLOT BAR-MARKING, a slightly darker film, appears on bars in a definite pattern related to number of conductors per slot.

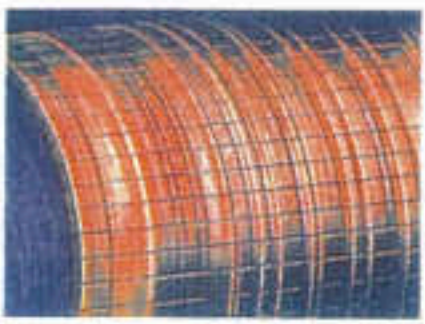


HEAVY FILM can appear over entire area of efficient and normal commutation and, if uniform, is quite acceptable.

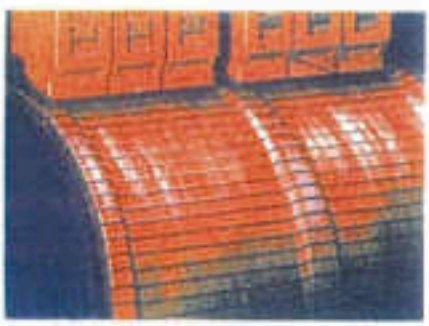
WATCH FOR THESE DANGER SIGNS



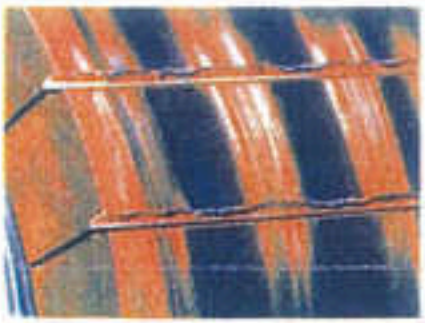
STREAKING on the commutator surface signals the beginning of serious metal transfer to the carbon brush. Check the chart below for possible causes.



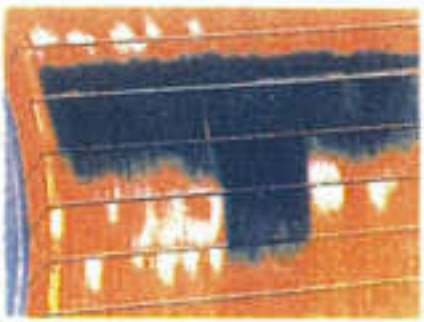
THREADING of commutator with fine lines results when excessive metal transfer occurs. It usually leads to resurfacing of commutator and rapid brush wear.



GROOVING is a mechanical condition caused by abrasive material in the brush or atmosphere. If grooves form, start corrective action.



COPPER DRAG, an abnormal build-up of commutator material, forms most often at trailing edge of bar. Condition is rare but can cause flashover if not checked.



PITCH BAR-MARKING produces low or burned spots on the commutator surface. The number of these markings equals half or all the number of poles on the motor.



HEAVY SLOT BAR-MARKING can involve etching of trailing edge of commutator bar. Pattern is related to number of conductors per slot.

CAUSES OF POOR COMMUTATOR CONDITION

Frequent visual inspection of commutator surfaces can warn you when any of the above conditions are developing so that you can take corrective action. The chart below may help divide these possible causes of these conditions, suggesting the proper productive maintenance.

How to Get the Most Value from This Chart

The purpose of the Commutator Check Chart is to help you spot undesirable commutator conditions as they develop so you can take corrective action before the condition becomes serious. This chart will also serve as an aid in recognizing satisfactory surfaces.

The key chart at the left indicates the importance of selecting the correct brush and having the right operating conditions for optimum brush life and commutator wear. General Electric offers a complete line of carbon brushes designed to meet all operating conditions and requirements of integral horsepower machines.

For additional information or help with carbon brush application or commutation problems, contact your nearest General Electric Sales Office or Distributor.

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FIGURE 5.
Remove the bushings and springs from both sides of the handle, utilizing a flat blade screwdriver.



FIGURE 5

FIGURE 6.
Note the orientation of the rear leg of spring for proper installation. *(Rear Leg)*

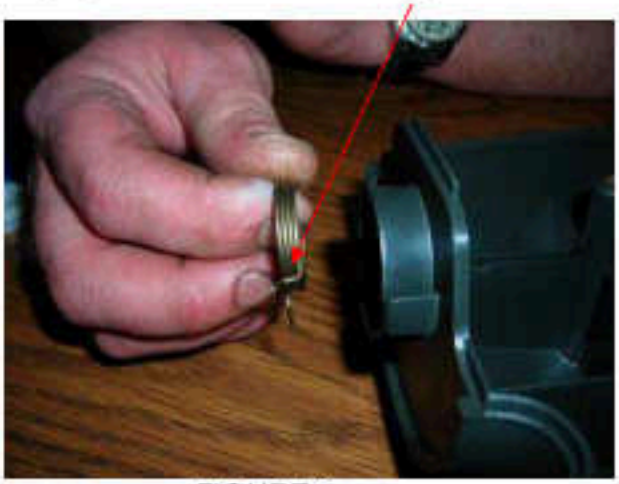


FIGURE 6

FIGURE 7.
Hook rear leg of spring over tab as shown here.



FIGURE 7

FIGURE 8.
Cross front leg of spring over and hook on tab as shown here. Repeat for other side.

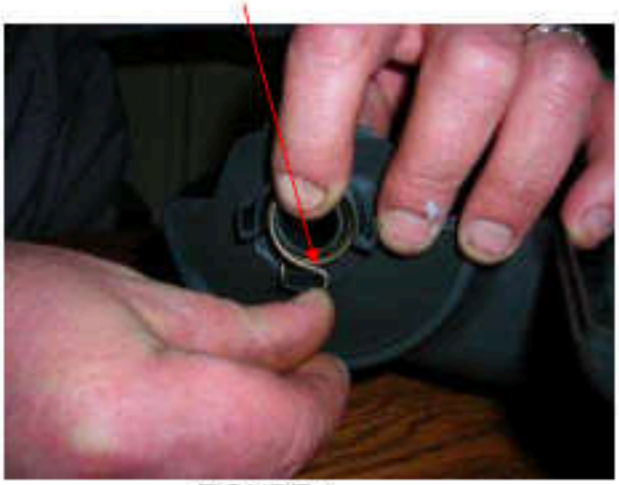


FIGURE 8

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