**Kinetic Door Gauge**

**Instructions**

1. Manually close the door(s) to a point where a door torque gauge (Part No. 9869657) can be placed between the leading edge of the door and the closed door jamb.

2. Verify that the gauge is in position, and then complete the following:
   a. Manually operate the CD input—This action will cause the doors to compress the gauge and stall out.
   b. Manually apply pressure to the doors in the OPEN direction—This action will cause the torque reading to be reduced.
   c. Slowly release the manual pressure to allow the torque to increase to a maximum value.

   **NOTE:** This value is the closing force of the doors from the at-rest position. By code, this force shall NOT exceed 30 lbf (pounds-force). See Rule 112.4 of the ANSI 17.1e – 1987 Code.

3. To set the required torque, adjust Tap 2 or resistor R3D.

   **NOTE:** DO NOT exceed 30lbf. If the desired torque cannot be achieved with this adjustment, it may be necessary to use the other groove in the drive motor sheave.

4. Ensure that the doors are OPEN, and complete the following:
   a. Position one end of the gauge against the jamb or leading edge of one door (center opening)
   b. Align the gauge so that the leading edge of the moving door will strike the opposite end of the gauge.
   c. Verify that the O-Ring on the gauge is positioned below the lower end of the kinetic energy scale.

**WARNING**

When making kinetic energy readings with the prescribed gauge:

1. Place an obstruction in the door that will cause the doors to stop at a distance 12” or greater from the fully CLOSED position. Place the obstruction so that the kinetic energy gauge will normally stop the door motion before the doors encounter the obstruction.

2. Grasp the gauge so that the chain that holds the two halves of the gauge together is held between the hands at the large end of the gauge.
5. With the gauge in position, operate the CD input. The doors should strike the kinetic energy gauge at high speed. Repeat this and the previous step if necessary to obtain a valid reading.

6. Determine the kinetic energy of the door.
   a. Hold the gauge vertically and locate the vertical force line that corresponds to the at-rest force reading previously taken.
   b. Follow this line up to the point where it intersects the O-ring.
   c. From this point, follow the intersecting sloping line and read the kinetic energy scale.

7. If the kinetic energy ready is excessive, reduce the door speed by repeating the CLOSED high speed adjustment.

8. If the controller uses the nudging, option, activate nudging and repeat the kinetic energy test.

NOTE: Adjust (if necessary) by moving the NDG resistor tap on R5D. Code restricts the kinetic energy level to 2 ½ ft – lbf when a re-opening device is rendered inoperative. See Rule 112.5 of the ANSI 17.1e – 1987 Code.

9. When the desired door operation is achieved, re-check the door operation at each floor.

**Maintenance**

1. Check that the motor mounting bolts are tight.
2. Remove the brush covers (where applicable), blow out the brush holders, check the brushes for wear, and reinstall the covers.
3. Inspect the operator belts for the following:
   a. Cracks or glazing.
   b. Even wear on both sides of the belt.
   c. The belts are not bottomed out in the grooves.
   d. Proper tension (belt slippage).
4. Check that all of the linkage bolts are tight.
5. Remove the door operator cover, rotate the door operator by hand, and check the operation of the DOL and DCL sensors.
6. Check the operation of the gate switch, and make sure that it is adjusted per code.
7. Use a burnishing tool or clean rough paper, and clean the gate switch contacts (if necessary).
8. Replace the door operator cover.
9. Check for excessive bearing wear.