Cleveland
Wheels & Brakes

Parker Hannifin Corporation
Aircraft Wheel & Brake
1160 Center Road, P.O. Box 158
Avon, Ohio 44011 USA
1-800-BRAKING (272-5464)
216-937-1272 ● FAX 216-937-5409

SERVICE BULLETIN

POSSIBLE DEVELOPMENT OF CIRCUMFERENTIAL CRACKS IN CLEVELAND BRAKE DISCS USED ON PIPER AIRCRAFT

PURPOSE: To inspect the welded area of the brake disc for circumferential cracks. Affected brake disc assembly: P/N 164-05000 used in wheel assembly 40-124.

INSTRUCTIONS: Within the next 10 hours, or 10 landings, or at the next scheduled maintenance inspection, whichever occurs first, perform the following inspection:

1. Visually inspect the welded area (see Sketch #1) for evidence of circumferential cracks. This type of crack will split the paint and is readily visible to the naked eye. It is recommended that brake discs with singular or multiple cracks, totaling 2.00 inches (or more) in length, be replaced immediately. Crack lengths totaling less than 2.00 inches should be replaced within the next 10 hours. If replacement is necessary, use brake disc P/N 164-05006 (one-piece forging).

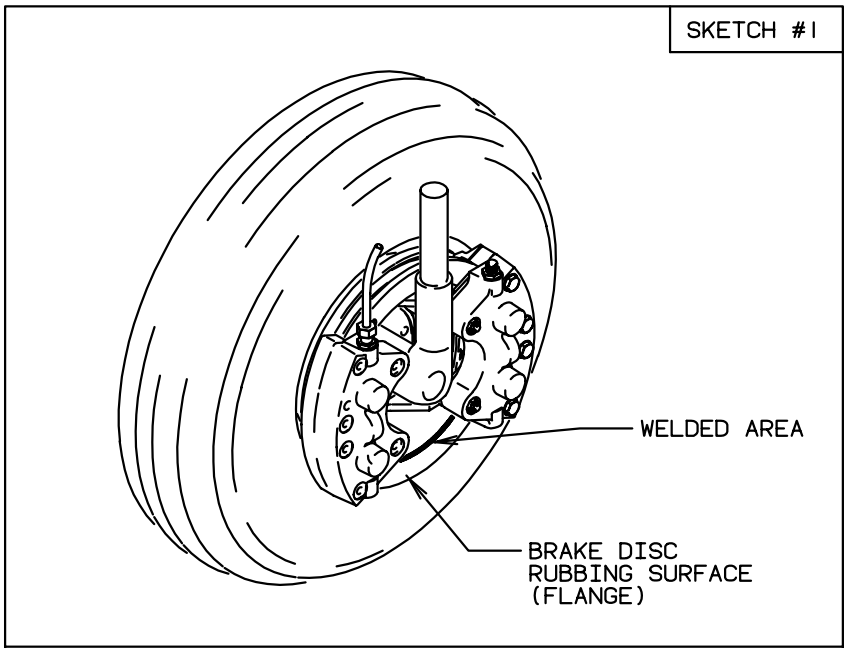
2. A slight impression or crater may be found in the weld bead (see Sketch #2). This crater is caused by electrode removal at the end of the welding cycle. Small cracks contained within this crater are not detrimental and do not necessitate brake disc removal.

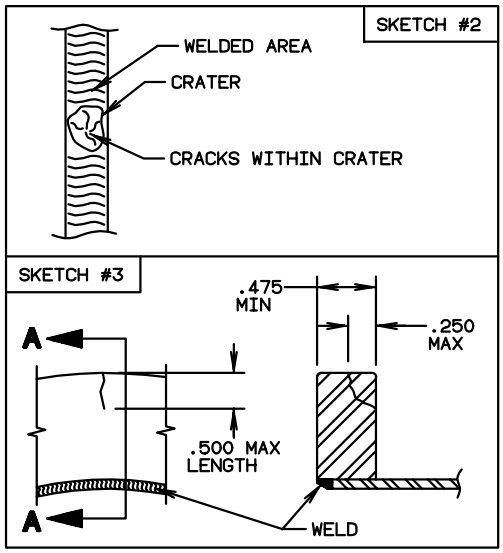
3. Heat relief cracks occasionally occur on the rubbing surfaces of the brake disc. Inspect for the following type of crack:

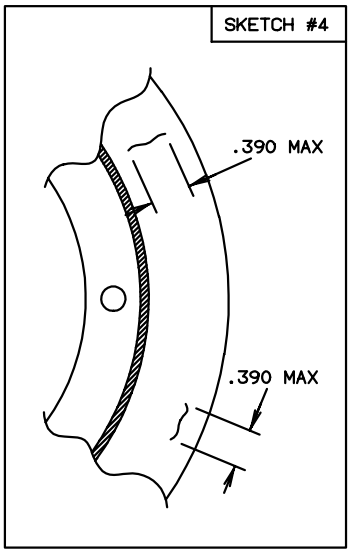
    a. Crack emanates from the flange OD, such that depth can be measured. Replace disc when length of any one crack exceeds .500 inch or depth of crack exceeds .250 inch (see Sketch #3).

    b. Crack occurs near the center of the disc and depth is not measurable. This type of crack may be either radial or tangential in direction. Replace disc when length of any one crack exceeds .390 inch (see Sketch #4).

Discs with cracks exceeding the above limits should be replaced within the next 25 hours. Replace with P/N 164-05006 brake disc.


SKETCH #1
WELDED AREA
BRAKE DISC
RUBBING SURFACE
(FLANGE)


SKETCH #2
WELDED AREA
CRATER
CRACKS WITHIN CRATER
SKETCH #3
.475
MIN
.250
MAX
A
.500 MAX
LENGTH
A
WELD


SKETCH #4
.390 MAX
.390 MAX