

## Maintenance and Improvement of the Wheel Brake

General

In an emergency situation the wheel brakes can be very important and helpful to prevent accidents, e.g. outlandings on dry and hard fields or landings on cements, asphalt runways.

However, the size of the 5" wheel does not allow a brake large enough to decelerate a 900 lbs glider from a speed of 100 km/h ( e.g. w/tail-wind ) very many times. Disc brakes are also no improvement. A person needs only to check the sizes of the brakes on motorcycles which are necessary to decelerate a mass of about the same amount.

Thus if we increase the effectivity of the wheel brake by the following measures, we must reckon with a rapidly increased wear of the brake linings.

## 1. Modification of brake handle at stick :

- (A. File edge so that handle fits better to curved part of stick.
- (B. File off stop so that handle moves more forward.
- (C. Make stick longer by a piece of wood ( ASW 20 only ).  
Schleicher part number 200.48.00-12

## 2. Modification of Bowden cable :

- (A. Pull cable out of spiral housing and clean with thinner. Grease with molybdenum disulphide paste ( "Liqui-Moly" or "Dri Slide" ) and reinstall.
- (B. Mount Bowden cable in fuselage so that it is as short as possible and has a minimum of curves and deflections.
- (C. If the operation of the brake still indicates weak or soft reaction at lever of wheel, the next larger cable/housing combination should be used to produce a stiffer or "more direct " operation.
- (D. By means of a knurled nut ( wheel ) an additional adjustment of the brake system from inside the cockpit is possible.

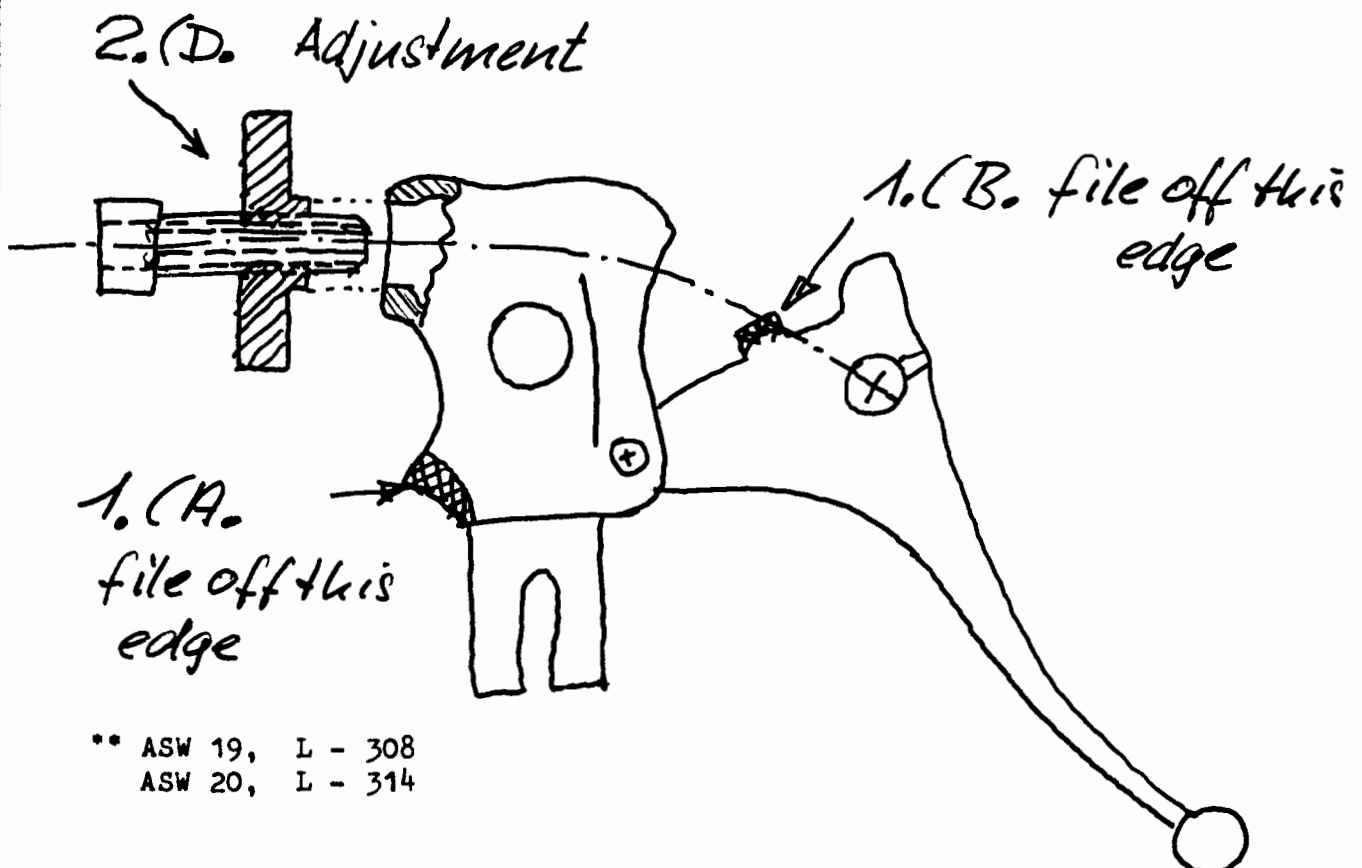
\*\* ASW 19, L - 308  
ASW 20, L - 314

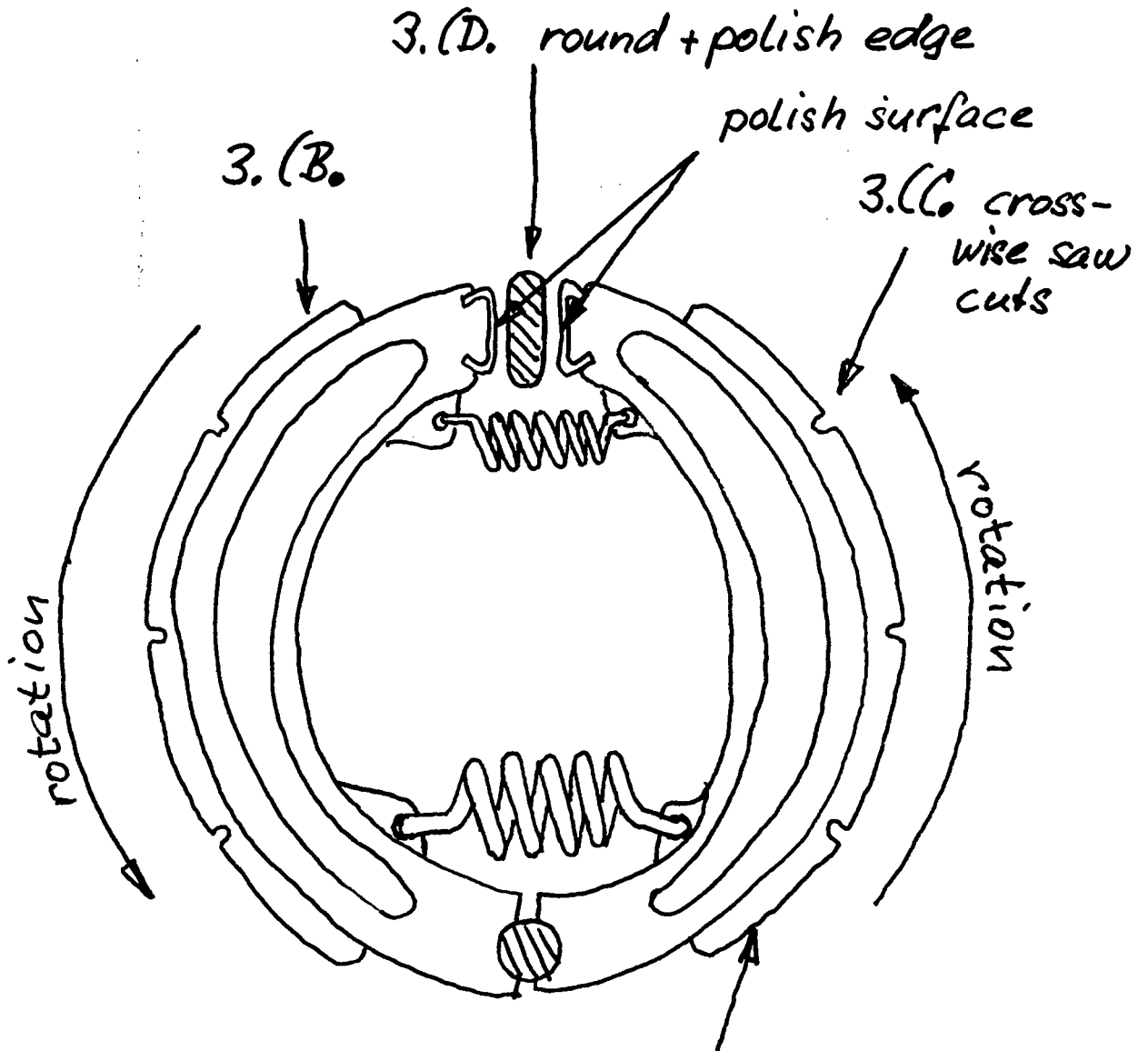
## 3. Modification of brake drum :

- (A. Remove wheel and clean brake with compressed air.
- (B. Sand brake linings so that lining contacts drum at all lining surfaces and in such a way that leading edge of shoes touches sooner. This leads to a servo effect of the brake system.
- (C. Cut three crosswise grooves ( approx. 1 mm deep ) in each lining so that lining cleans itself from dust.
- (D. Round and polish brake cam ( corners ), polish surface where brake cam lays.
- (E. Exchange springs against each other.

Grease is not to be used inside the brakes !

Assemble brake system and adjust Bowden cable such that the wheel just may be turned by hand.





3.(B. Lining should touch here first!

Poppenhausen, 17 Jan 78

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