

## MECHANICAL CHECKS AND ADJUSTMENTS, RECORDER

Adjusting the electro-magnet 27

- When the magnet is energised the clearance between set screw 114 and the frame of the electro-magnet should be 0.6 mm (see Fig. 2). After adjustment, the set screw should be lock-painted.
- Potentiometer fixing bracket 303 should be fixed so that bracket 41 just remains clear of the armature of the magnet when the cassette container is pressed down (magnet not energised).
- When the magnet is energised and the cassette container is in the upper position the clearance between lever 41 and the armature should be 0.5 mm (see Fig. 2). Adjustment is possible by moving cam 61 via the slotted hole in lever 41 (see Fig. 2).

Pressure roller lever, see Fig. 3

- Before adjusting the force of the pressure roller lever, check the adjustment of bracket 88. In position playback bracket 88 should be positioned so that it just touches stop B (see Fig. 3). Adjustment is possible by moving bracket 312. After this, the two fixing screws of bracket 312 should be lock-painted.
- The force required to pull pressure roller 83 clear of the capstan in position playback should be between 330 and 360 grammes. This force can be adjusted by hooking the end of torsion spring 86 into another hole.
- In position playback the clearance between pressure roller lever 85 and tag A should be 0.3 mm. Adjustment is possible by bending tag A.

Capstan bearing 90, see Fig. 5

Because the tape guide, the playback head and the pressure roller are always in the correct position, the tape path can only be adjusted with the aid of the capstan. The capstan should be perpendicular to the tape direction. Adjustment is effected with the aid of a jig (4822 402 60245, see Fig. 4).

Adjustment:

Remove cover 57 from the cassette compartment and set the recorder to playback.  
Remove pressure roller lever assy 85. Slide the jig onto the capstan. The jig should move smoothly in the tape guides as shown in Fig. 5. If this is not the case, the position of the capstan can be re-adjusted with screw 89.

Playback head 79

The gap of the playback head can be adjusted as follows:  
Insert a cassette with a tape on which a 6300 Hz signal is modulated (code no. 8945 600 11501).  
Connect the apparatus to a supply voltage of 14.4 V. Set the apparatus to playback. Adjust playback head 79 with screw 10 (see Fig. 5) so that the output voltage is maximum. After adjustment lock-paint screw 102 with cellulose lacquer.

Brake bracket 81, see Fig. 7

The brake force should be adjusted so that the friction torque in position playback is 4-6 grem.  
For this measurement, open a cassette on one side and take so much tape out of the cassette that there is still about half a metre of tape on the frontmost reel.  
Pull a piece of tape out of the cassette and make a loop in the tape in which a spring pressure gauge can be hooked.  
The friction should be 4-6 grammes.  
The brake force can be adjusted by bending brake bracket 81. Bracket 81 should be bent as indicated in Fig. 7.

Cassette container locking, see Fig. 8

Bracket 319 should be moved 0.6 mm underneath hook A in position playback (see Fig. 7).  
Adjustment is possible by bending one end of bracket 319.

Height adjustment of the cassette container, see Fig. 8

The height of the cassette container should be adjusted so that insertion of the cassette is not impeded by the playback head or the turntables.  
Adjustment is possible by bending tag B of the mounting plate.

Adjusting idler wheel 108, see Fig. 9

Before this check is carried out the adjustment of the pressure roller lever should be checked.  
When the pressure roller just touches the capstan during switching on, tag A of lever 88 should just come clear of cam B of bracket 111. Adjustment is possible by placing for example two screwdrivers in slotted holes C of bracket 88 and bending this bracket.  
During fast winding the end of lever 111 should move approx. 1 mm in the direction of the arrow. (Idler wheel 108 should be lifted completely off the flywheel and the turntable.)

Adjusting flywheel 72

Adjust the axial play of the flywheel to 0.1 mm with screw 146. After this lock-paint screw 146.

Adjusting cassette container damper 118, 119

- Set the apparatus to playback (cassette container in lower position).
- Tighten screw 118 until it just touches the cassette container. Then tighten the screw another turn and lock it with nut 11.

Adjusting chrome-plated bracket 347

Insert the cassette and press the cassette compartment down. Bracket 347 should now have a clearance of 0.2 mm with respect to the cassette. Adjustment is possible with screws 25 and, if necessary, by bending the bracket.

## LUBRICATING INSTRUCTIONS

Lubricate the spindles with Shell Tellus 33, 4822 390 10006.  
Lubricate the contact surfaces with lubricant 10, 4822 390 10003.