Experiences of Reuters with Hell Printers and Relays provided through Post Office Channels.

Reuters Ltd.,
85 Fleet Street,
E.C.4.

February 27, 1948.

Dear Mr. Perkins,

Thank you for your letter of February 24 inquiring about our experiences with the Post Office model Hellschreiber.

The answers to your queries are as follows:

1. (a) Quite a fair amount of trouble has been experienced with the paper feed mechanism, being largely due to the knurling on the tape pulling wheel wearing down. Considerable improvement has been effected by replacing these with wheels made of steel, sharply knurled, and case hardened.

   (b) Providing the commutators of the motors are kept in good condition, i.e. micas not allowed to stand proud, wear of the motor brushes is not abnormal.

   (c) Apart from the circular carbon governor brush the renewal of the brushes is a tedious business. In order to change the governor slip ring brush the L.T. Selenium rectifier has to be removed to gain access to the holder. Replacement and/or attention to the motor brushes is equally difficult. The circular cover around the motor cannot be removed without a great deal of manœuvring, and even when this is out of the way the brushes are still difficult to reach. Very often it is necessary to loosen the motor mounting bolts and disengage the gear train in order to facilitate the operation.

2. These motors give no warning of impending trouble. In tropical climates we have had a fair amount of insulation failure.

   (a) One of the major troubles experienced is lack of accurate speed control. We have found that it is advisable to remove the motor end-plate and thoroughly clean the circular governor brush and its associate nickel contact plate every two days.
(b) The governor resistance (mounted beneath chassis - circuit designation - R 4) is another source of bother. These resistors are rated at 30 watts and it has been found advantageous to increase this wattage.

It is our considered opinion that monthly inspection by an engineer would be insufficient as our experience is that these machines cannot be left for very long without some mechanical attention.

In practice we have found that the best solution where good maintenance men are scarce is to have two printers, one working, the other acting as a spare in case of trouble.

We hope the foregoing information will be of some help to you in answering the London Press Service inquiries.

Yours sincerely,

(SGD.) E. Davis.

Chief of Communications.

Post Office observations on the above letter.

1(a) This is a fault which only long use will bring to light. Post Office specifications will be amended so that future deliveries will have steel or hard brass rollers.

1(b) This is part of the normal maintenance to be given by the visiting mechanic.

1(c) Agreed. This cannot be overcome with present design and positioning of the motor. No other suitable motor is available.

2(a) It is doubted whether it is in fact necessary to clean the governor brush every two days. In this connection it should be borne in mind that the Reuter transmissions run continuously for 22 hours per day and considerable wear and tear must be expected if printers are used for such long continuous periods. The total daily running hours of printers used for the reception of the London Press Service is very considerably smaller.
The procedure for cleaning the brushes is quite simple and consists merely of undoing two screws and lifting off the end plate but even so it is doubtful whether this should be undertaken by totally unskilled staff.

2(b) The question of increasing the wattage of the governor resistor is being investigated and will be done if mounting arrangements permit.

So far as the Post Office is aware the only one of the points overcome by the new Marconi printer is 1(a).