

## ACOUSTIC ASSESSMENT OF 'ALL-METAL' ENGINE MOUNTS IN A CLASS 47 LOCOMOTIVE

Following a previous major study of the noise in class 47 cabs, a series of recommendations was made which, if carried out, would reduce the noise levels present so that the 86dBa  $L_{eq}$  criterion set by the BR Medical Department would be met. One of these recommendations, the fitting of 'soft' all-metal engine mounts, has been tried on a locomotive and this report details the results obtained. The mounts fitted were produced by Stoc-Choc Ltd of Slough, and designed specifically for this application so they could be used as a direct replacement of the Silentbloc mounts that are usually used.

Significant reductions in the cab noise levels occurred as a result of the improvements made during a classified repair. The most important of these improvements was the fitting of soft Silentbloc engine mountings. The general state of the cab was also much improved. The noise levels after the classified repair are probably the lowest that can be obtained without any modifications, and would be expected to increase steadily until the next classified repair as the rubber engine mounts gradually hardened.

The fitting of Stop-Choc mounts, which are all-metal and appreciably softer than the new Silentbloc mounts, has further reduced the cab noise levels. This reduction is attributable to the reduction in the structure-borne noise level which is apparent both subjectively and when vibration levels are examined.

The Stop-Choc mounts should not deteriorate with age so that, if the general condition of the cab is maintained, the levels should not increase. Unfortunately, however, the cab condition was showing signs of deterioration only a few months after the classified repair.