A Guide to the Inspection and Refurbishment of Vintage Drive Units I

S2 Pressure Units.

The S2 was first introduced in 1947 and whilst over the years it has been subject to a number of minor design revisions and improvements, it remains fundamentally the same unit today. We offer a refurbishment and repair service for units of all vintages, to a level of the customer's choosing. What follows is an outline of the various levels of refurbishment that we offer. As all units are different and some may require a combination of approaches, it is intended for use as a guide only.

Level 1. Clean/check/test.
Unit demagnetised and magnetic gap cleaned. Unit remagnetised and diaphragm replaced if required.

Level 2. Mechanical refurbishment.
Unit demagnetised and dismantled. All component parts cleaned. Unit reassembled in accordance with manufacturing tolerances and remagnetised. New diaphragm fitted if required. Written report issued on completion.

Level 3. Mechanical/cosmetic refurbishment.
Unit demagnetised and fully dismantled. All component parts cleaned and checked for compliance. Chassis components stripped and repainted, damaged components restored or replaced where necessary. Bright metal parts cleaned/polished or replaced with cosmetically excellent used parts. Unit reassembled in accordance with manufacturing tolerances and remagnetised. New diaphragm fitted if required. Written report issued on completion.

Level 4. Mechanical/cosmetic refurbishment.
As level 3 except all bright metal parts made as new.

Level 5. Unit rebuilt as new.
Full unit rebuild to 'as new' standard. Offered with full factory warranty. Note that this service is only available for units from Ser. No. 4642.

Assessments are made on an individual basis and are quoted accordingly. Please note that quotations are bracketed to take account of any potential issues which cannot be assessed without dismantling the unit. Customers are kept informed of the status of their unit(s) throughout the process, so allowing choices to be made as to the degree to which refurbishment is carried out.

Given the longevity of the product it is understandable that some drivers we see have had a rather interesting history. Components may very well have been replaced or repaired at various times throughout the working life of the unit. This can mean that the serial numbers carried on some units are spurious. Except in cases where there are obvious legitimacy issues it is our policy to retain the serial numbers on the units as they are presented to us, adding a suffix for the purposes of our own records.

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A Guide to the Inspection and Refurbishment of Vintage Drive Units II

15" Bass Drivers. Factory refurbishment guide

Vitavox has been manufacturing 15" bass drivers for over 60 years. Whilst their magnetic motor assemblies may vary they all share a common chasss, and the impedance/resonance specification of the unit is defined by the cone assembly fitted. This means that all models can not only be refurbished to original factory specification but that this specification can be changed if required. What follows is a guide to the type of refurbishment that can be undertaken. As all drive units differ, and a mixed approach may be necessary, it is intended to be used as a guide only.

Level 1 (alnico). Clean/check/test
Chassis and motor assembly cleaned. Motor unit demagnetised and magnetic gap cleaned. Unit remagnetised and cone assembly replaced if required.

Level 1 (ferrite). Clean/check/test
Chassis and motor assembly cleaned. Magnetic gap cleaned. Cone assembly replaced if required.

Level 2 (alnico). Mechanical refurbishment.
Unit demagnetised and fully dismantled. All component parts cleaned, checked and reassembled in accordance with manufacturing tolerances, and re-magnetised. Hardware component parts replaced as required. Cone assembly replaced if required. Written report issued on completion.

Level 2 (ferrite). Mechanical refurbishment.
Unit dismantled. All component parts cleaned, checked and reassembled in accordance with manufacturing tolerances. Hardware component parts replaced as required. Cone assembly replaced if required. Written report issued on completion.

Level 3 (alnico). Mechanical/cosmetic refurbishment.
Unit demagnetised and fully dismantled. Chassis components stripped and repainted. All bright metal cleaned. Unit reassembled in accordance with manufacturing tolerances, and re-magnetised. Hardware component parts replaced as required. Cone assembly replaced if required. Written report issued on completion.

Level 3 (ferrite). Mechanical/cosmetic refurbishment.
Unit fully dismantled. Chassis components stripped and repainted. All bright metal cleaned. Unit reassembled in accordance with manufacturing tolerances. Hardware component parts replaced as required. Cone assembly replaced if required. Written report issued on completion.

Level 4 (alnico only). Unit rebuilt as new.
Full unit rebuild to 'as new' standard. Offered with full factory warranty.

Assessments are made on an individual basis and are quoted accordingly.

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A Guide to the Inspection and Refurbishment of Vintage Drive Units III

A few notes on corrosion...

Vitavox units have always been manufactured to the highest standards. During the manufacturing process, all ferrous metal components are electroplated to prevent corrosion. Given the long working lives of some Vitavox units, however, and the poor and damp conditions in which many have been kept this plating layer is sometimes compromised. On inspection we classify the degree of corrosion in accordance with either one, or a mix of the following:

Level 0: No corrosion present. Plating layer still as originally applied.

Level 1: Very mild local 'spot' corrosion present.

Level 2: Extensive spot corrosion present across large parts of the component

Level 3: Corrosion present in larger continuous but isolated patches.

Level 4: Extensive continuous corrosion present, but machined geometry not critically compromised.

Level 5: Corrosion in an advanced state. Original machined geometry critically compromised.

Our approach to dealing with these various levels of corrosion varies accordingly. No components are stripped and re-plated as this process is both impractical and uneconomic, but only in the case of level 5 corrosion do we deem the component to be beyond repair. In the case of Levels 1-4, if the customer does not wish for a new component to be fitted, we seek to remove the corrosion and stabilise the surface with a conversion coat. This will give a perfectly acceptable operational result,and though it comes with the obvious proviso that future corrosion resistance cannot be guaranteed, in a normal domestic environment this should not prove an issue.

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