

Transformer Hum

A ferroresonant design transformer is used in many Lester chargers to provide consistent performance with variation in the input line voltage. Additional features include tailored charge characteristics such as current limiting.

To achieve these performance features, a high level of oscillating magnetic force must be contained by the transformer design. This high force level continually stresses the transformer assembly during operation. The hum is a result of this force and can increase over time if the electrical insulating varnish weakens. The presence of excessive hum does not indicate transformer failure but can become an annoyance.

Some dealers have had success with re-wedging and coating the noisy transformers in an effort to reduce the hum. With age and use the transformer windings become brittle and easily damaged. Attempting to rework transformers with brittle windings risks damaging the transformer windings, which assures an early demise. About a quarter, one out of four, of the aged transformers we attempt to rework do not survive the process and must be replaced with new. Quite simply, replacement is sometimes necessary when a transformer becomes brittle and noisy.

The hum increases if the electrical varnish bond weakens from time and temperature allowing the transformer's steel laminations and shunt packs to vibrate in the strong magnetic field. Only class "H", high temperature and strength, electrical insulating varnish is used in the manufacture of Lester transformers. If an electric motor rewind shop is in your area they can usually re-coat the transformer with class "H" varnish for you.

If you wish, Lester Electrical can attempt to rework your transformer. Contact Lester Electrical first to obtain a "Return Material Authorization" number by calling the Service Department of Lester Electrical **(402-477-8988)** or by E-mail at service@lesterelectrical.com and record the RMA# on your packing slip and on the outside of the shipping carton. Pack the transformer or charger securely and ship prepaid to:

Lester Electrical, Inc.
625 West "A" Street
Lincoln, NE 68522
RMA# _____

If we are able to successfully rework the transformer, the charge for this service is \$30.00 for transformers received that have already been removed from the charger case and \$40.00 for those received that are still installed in the charger case. Return shipping charges, packaging and any other necessary service work are additional. If the transformer does not survive the rework or additional major service work is needed, Lester will contact you for approval/disposition.