

Direction of rotation clockwise (viewed from the rear) for optimum performance.

Standard features

Dynamically balanced armature
Diamond-tool-trued commutator
Fixed timing; factory-adjusted for optimum performance for clockwise rotation (viewed from the rear)
Epoxy-resin-potted armature windings
Replaceable brushes
Low-cost hi-performance motor

Operating instructions

Be sure to read and follow these instructions carefully; your motor will reward you by optimum performance and longer life.

Soldering the lead wires

The lead wires coming from controller or switch of the model are soldered to two oppositely positioned silver-coloured soldering lugs. Be sure to watch for correct polarity. The positive (+) terminal (normally colour-coded red) has to be soldered to the +-marked station of the aft motor bell, the negative (-) one to the station of the latter marked -. Direction of rotation (viewed from the rear) must be identical with the one shown by the type plate. In case the two lead wires are exchanged the motor will run counter-clockwise, that is in the opposite direction, but performance will be lower and current drain higher.

For spark suppression at least one condenser (furnished) has to be soldered between the two terminals. Preferably, however, one 470 nF (.47 uF) condenser, order No. 3588, should be soldered in between the two terminals, plus one 47 uF condenser, order No. 3584, between one of the terminals and the motor casing.

Legend to illustration (clockwise)

1. current supply cable
2. spark-suppression condenser
3. brush holder
4. soldering lug
5. current supply cable
6. solder together here

Break-in

In order to allow the moving parts of the motor to get properly adapted to each other and to "settle", so the motor will be able to deliver its optimum performance, it has to be run-in. This is best done by connecting it to a 3 or 4 volt DC power source and running the unloaded motor for 10 hours (maximum). In case a 3- or 4-volt power source is not available, use one of slightly higher voltage and reduce the duration of the motor run accordingly. But remember: the lower (closer to 3 or 4 volt) the voltage, the better. Under any circumstances do not ever use a power supply having a voltage exceeding 7.2 volt!

If a run-in motor is excessively loaded its brushes and commutator may become fouled, preventing trouble-free contacts and satisfactory operation. In such a case the motor should be run **unloaded** for 15-30 minutes at 7.2 volt. Afterwards the performance of the motor will be up again to its former standard. The motor is fastened by two M3 screws which are screwed into two oppositely positioned threaded holes of the motor front plate. Do not use excessively long screws!

Maintenance

In order to retain the good performance of the motor, make sure it does not get contaminated by dust and dirt. Also make sure that the battery voltage never exceeds 7.2 volt (6 cells). Higher voltages mean reduced motor life.

Cleaning the motor

1. The LE MANS motor cannot be dismantled. Cleaning the motor requires use of an aerosol motor-cleaning agent. Be sure to follow instructions supplied with same!
Beware of using aerosol oil or grease under any circumstances.
2. The front and aft shaft bearings should be lubricated with a light machine oil. Under no circumstances may oil seep into the inner parts of the motor, in particular not the commutator!
3. Check terminals for traces of oxidation and other impurities occasionally.

Changing the brushes

1. Brushes tend to wear in the course of time. To replace them the retaining springs are to be lifted in an outwardly direction and turned in an afterly direction, so the worn brushes may be pulled out.
2. Remove the worn brushes cautiously, replace them by new ones installed in the same position (see spare parts list).
3. Break-in the motor a new after this operation, so the brushes and commutator can settle properly.

Spare parts

- 1714/5 brushes, pair of
1714/7 brushes, 2 pairs of

Technical data (nom.)

nominal voltage	7.2 volt
dimensions, diameter	35.4 mm
length, excl. bearing	57 mm
length, o.a.	75 mm
shaft, flattened	1/8" = 3.18 mm