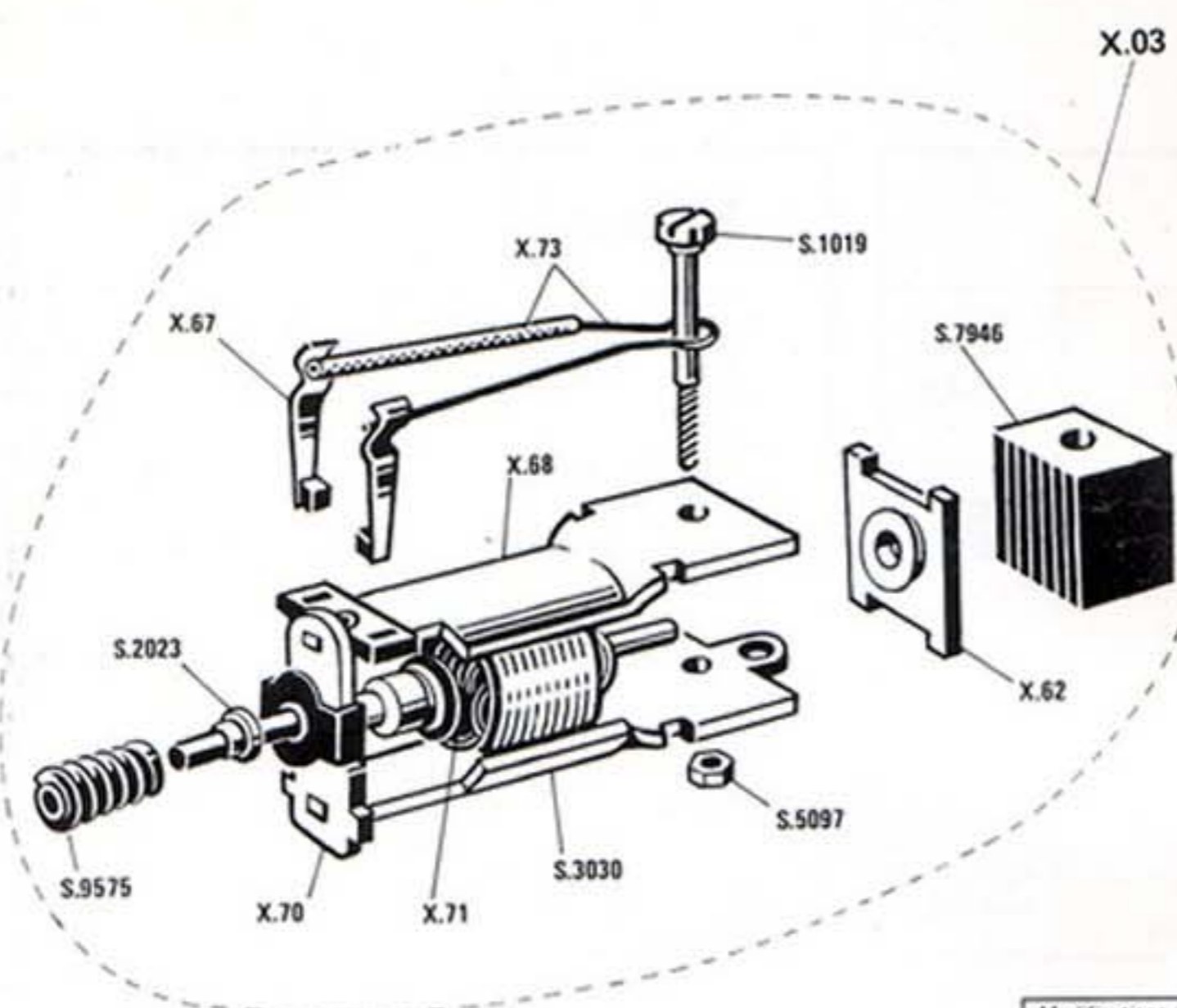


**X.03 ELECTRIC MOTOR - 12 VOLTS D.C.**



To improve control of locomotives the X.03 electric motor/driving wheels reduction ratio has been increased to 28 to 1 as compared with the 20 to 1 reduction on the older X.04 motor (Service Sheet No.81A). This improvement has been achieved by fitting the X.03 with a Single Thread Worm and the locomotive chassis with a matching 28 tooth Worm Wheel whereas the X.04 motor has a Twin Thread Worm and the older locomotive chassis a matching 40 tooth Worm Wheel.

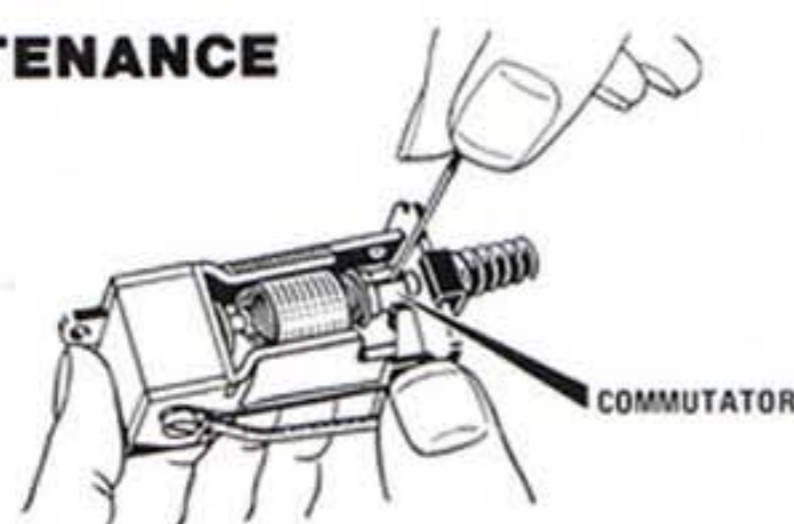
The Worms and Worm Wheels can be identified by their colour:

<b>X.03</b> Single Thread Worm	<b>S.9575</b> Black
28 Tooth Worm Wheel	<b>S.9573</b> Grey
<b>X.04</b> Twin Thread Worm	<b>S.2051</b> Brass
40 Tooth Worm Wheel	<b>S.6365</b> Black

If requiring a new motor for an older locomotive with a black Worm Wheel an X.04 motor should be fitted.

Modifications are made to models from time to time. If a spare part is required which does not coincide with the illustration, a full description should be given and, if necessary, a sketch or sample should accompany the order.

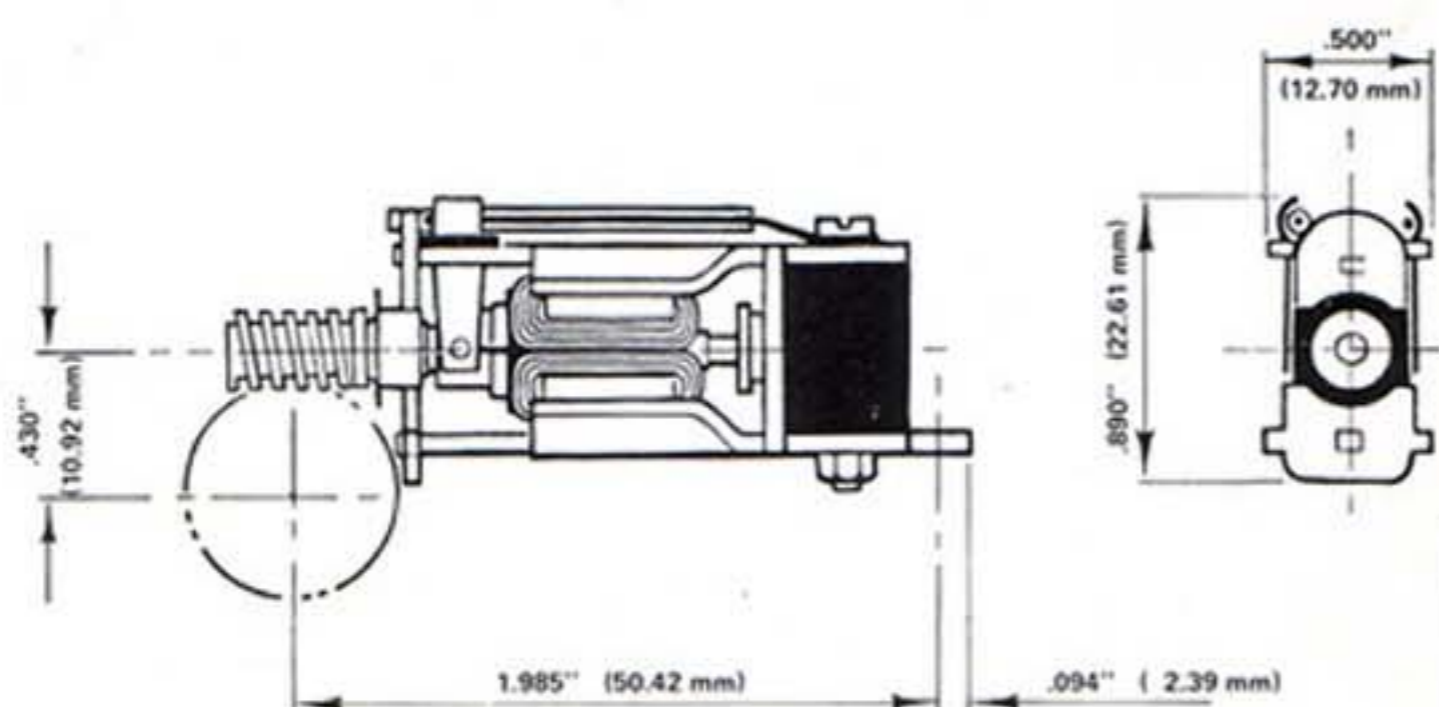
**MAINTENANCE**



With use, carbon from the brushes will accumulate in the commutator slots. These must be cleaned regularly as shown, using a pin or sharpened matchstick.

The armature shaft bearings are pre-lubricated. After prolonged use a touch of light oil where the shaft enters the bearings will be found to improve running. Do not get oil onto the face of the commutator.

**TECHNICAL SPECIFICATION**



VOLTAGE RANGE	..... 3-13V.D.C.
CURRENT	..... 0.25 AMPERES
ARMATURE SPEED	..... 20,000 R.P.M.
POLES	..... 3
MAGNET	..... ALCOMAX III
BEARINGS	..... OIL RETAINING BRONZE
ARMATURE DIAMETER	.500" (12.70mm)
SHAFT DIAMETER	.094" (2.39mm)
REDUCTION RATIO	..... 28:1 or 18:1

**ROVEX Service Centre**

Albert Street, Ramsgate,  
Kent, CT11 9HD, England.

**SERVICE SHEET No.81B**  
Issued September 1978

**X.03 ELECTRIC MOTOR - 12 VOLTS D.C.**

**List of Parts**

Cat. No.	Item	For Rovex internal use only
X.03	Motor Complete . . . . .	
X.62	Back Plate and Bearing . . . . .	R050-0461
X.67	Brush Arm and Brush . . . . .	R050-0791
X.68	Top Pole Piece with Diaphragm . . . . .	R050-0331
X.70	Front Plate and Bearing . . . . .	R050-0481
X.71	Armature and Commutator . . . . .	R050-0822
X.73	Brush Spring and Insulator . . . . .	
S.1019	Magnet Screw . . . . .	Z100-0130
S.2023	Thrust Bush . . . . .	R050-0660
S.3030	Bottom Pole Piece . . . . .	R050-0310
S.5097	Magnet Nut . . . . .	Z150-0050
S.7946	Magnet . . . . .	R050-0760
S.9575	Single Thread Worm . . . . .	R050-0010

**Notes**

**ROVEX Service Centre**  
ALBERT STREET, RAMSGATE,  
KENT, CT11 9HD, ENGLAND.