



Operation Manual
Battery Operated Magnetic Yoke
AY-7B

Introduction

This manual contains the necessary information to acquaint the operator of AY-7B model Battery operated yoke with its capabilities and operation. The purpose of this manual is to furnish the operator with a functional knowledge of the operation and to make understand the safety precautions which should be applied during operation and maintenance of the equipment.

General Description

The lightweight Battery operated yoke its ideal tool for detection of surface or sub-surface cracks and flaws in any ferromagnetic material. Fast and simple to operate, it is widely used with either dry or wet method fluorescent or non-fluorescent magnetic powders, in the testing of welds, automotive or railroad components, machine parts, steel or grey iron casting, forgings, and in plant inspection maintenance and repair.



Operating Instructions

Magnetization:

Adjust the spacing between the legs / pole pieces to 120mm to 180mm and place the Yoke firmly upon the work piece by securing best possible contact, with the suspected defect transverse to the magnetic field between the legs. Depress the test switch to energize the Yoke and lightly dust the magnetic particles (dry method) or flow the magnetic particle suspension (wet method) over the area being inspected. As an example, when testing for longitudinal cracks in a "butt weld", the yoke would be positioned so that the legs straddle the weld. If the direction of a possible defect is not known, two inspections should be made in such area, turning the Yoke approximately 90 degrees for second inspection. In the dry method, using the powder puffer bulb, the area between the leg of the Yoke is dusted lightly with magnetic powder and inspected closely for flaws or other defects. Current should remain "ON" (continuous method). This process is repeated until the entire area of part is inspected. The "continuous method" should always be used for maximum sensitivity.

Always use the lowest magnetizing current necessary (in DC) to produce distinct indications. Avoid excessively strong fields which may magnetically saturate the test piece and cause a "masking effect" or "Background" which interfere with flaw indication.

Demagnetization

The AY-7B yoke can usually be used to obtain a satisfactory level of demagnetization. Place the part across the poles and while the current is flowing, slowly withdraw the part from the field to a distance of at least 60 cm (23.62") before turning off the magnetizing current.

Technical Specifications

Input supply	Rechargeable Battery 12 V DC,7 Ah
Input current	2.0 Amp max load in DC
Distance across poles	50-280mm (center to center)
Magnetic field	Constant level, in Dc-Strong FWDC magnetic field strength
Pulling capacity	Approximately 22.6 Kg max at 100mm pole spacing
Yoke weight	3.5 Kg
Battery Weight	2.7 Kg
Duty cycle	50% at max output (2 min "ON" and 4 min "OFF" at max output)
Controls	Momentary "Push-to-ON" switch, Power ON / OFF Switch, Mag ON indication LED, Overload protection

Maintenance

- A periodic visual inspection of the interior electrical components is highly recommended. Such an inspection can preclude operational malfunctions and components failure. Disconnect the supply before gaining access to the interior of the magnetic yoke.
- Check all the wiring for the discoloration, burnt insulation and loose connections. Ensure the cables are free from cuts which expose the wiring.

- Prevent the yoke body and its interior from wet particles and liquids. Liquid baths or wet magnetic particles if peeped inside the body can damage the yoke components and can affect its working efficiency.
- The equipment should be cleaned with a soft brush to loosen stubborn particles with care being exercised to avoid damaging delicate electrical leads.
- After every six months yokes should be checked for its pulling capacity. It should lift minimum 22.5 KG at 100 mm spacing.

Precautions

- DO NOT connect the yoke to AC Power Supply.
- Ensure that there is firm contact between test piece and yoke legs for better indication of the defects and less noise.
- DO NOT energize the Yoke more than the duty cycle. Overheating of the yoke handle is an indication of excessive "ON" time.
- DO NOT open Yoke handle and change any settings on the PCB or any components.
- DO NOT drop the Yoke from a height or subject the handle to any severe impact.
- Ensure that the Yoke is connected properly to the battery.
- Ensure that the Battery Pack Voltage does not drop below 10 Volts.

Product Warranty

- The AY-7B Yoke is warranted for a period of 12 months from the date of purchase.
- The warranty is void if the equipment is used in a nonprofessional manner, resulting in damage or if repairs are carried out without our consent

Thank you for your business!

WE trust, we have catered as per your expectations...



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