

Helston Forensics

F O R E N S I C B A L L I S T I C L A B O R A T O R I E S



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BROWNING .50 HEAVY MACHINE GUN BASIC ARMOURERS COURSE (2 DAY)

OVERVIEW

This 2 day course is designed to familiarise the student with the .50 Browning machine gun variants, there are many thousands of M2 and M3 machine guns in use worldwide. It is important for armourers/personnel who might come into contact with these equipments to be competent in their use.

AIMS AND OUTCOMES

- To enable the student to understand the method of operation of the machine gun (basic unit level)
- To be aware of the common variants of the .50 Browning including M2HB, M2QCB and M3
- The focus on this course will be on the M2HB, the most commonly used variant

FACILITIES

- Helston Forensics is the largest Forensic Ballistic teaching laboratory in Europe with over 20,000 small arms of all types including airguns, shot guns, rifles, handguns, sub machine guns, assault rifles, light machine guns, heavy machine guns, rocket launchers, mortars, recoilless rifles, cannon, artillery and tank guns
- The forensic range is used for the forensic testing of small arms and body armour (soft and hard). A range of test barrels and pressure barrels are available
- The ammunition room holds a comprehensive range of ammunition and components including a range of prohibited ammunition and components. This is used for the testing of GSR dispersion, and terminal effect on a range of targets
- Lecturers are trained armourers, forensic experts and designers of soft and hard armour. All are occupationally competent and current with all types of small arms, their use, maintenance, repair and design

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The course covers the following subjects:

1. Safety precautions
2. Method of operation (action of mechanism)
3. Cycle of operation
4. Stripping
5. Inspection standards at unit level
6. Assembly
7. Repair procedures at unit level
8. Preparation for special functions
9. Identification of components
10. Fault finding
11. Pre-firing adjustments (timing)
12. Pre-firing adjustments (CHS)
13. Basic Tools, gauges and their use
14. Special tools
15. Armourers manuals and their use
16. Ammunition types

Notes:

1. This is a CPD- related course. This course can contribute to your Continuing Professional Development (CPD) and will be evidenced through a multiple-choice summative assessment and the award of a Course Completion Certificate.
2. The course includes hand-outs, practical sessions and discussion periods.
3. Course timings 0900-1730 (0900-1530 on the second day).
4. All safety equipment required will be supplied.
5. Refreshments and lunch on each day will be provided.
6. Assistance with hotel bookings will be available from our office staff.
7. A maximum of 10 students per course.
8. The course is available to serving Police, Military, and Government personnel only.
9. Cost per person £240 + VAT.
10. To train Armourers in the principles of operation, inspection and maintenance of the M2HB .50” machine gun to basic (Unit) level.
It should be noted that the Browning machine gun is a complex mechanism, also it is a gun which requires components to be selectively fitted or even hand fitted. Armourers will require a degree of skill with hand tools such as files, hand fitting of components cannot be covered comprehensively in a two-day course.
This course will be most useful to Armourers already trained in the .50” QCB gun and who require a conversion to other variants of the system. It will also be useful to others, perhaps in planning or logistics who require a deeper insight into the ramifications of supporting (maintenance, spares, personnel) older or mixed inventories of Browning machine guns.
We would be very happy to offer more comprehensive basic or advanced level courses to suit the requirements of customers wishing to expand their capabilities with regard to Browning machine guns of various types.

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Incorrect timing will result in a malfunction or damage to the weapon, and can result in a catastrophic failure.



Correct CHS adjustment is essential for smooth running of the gun and to prevent possible breech explosion or separated cases.



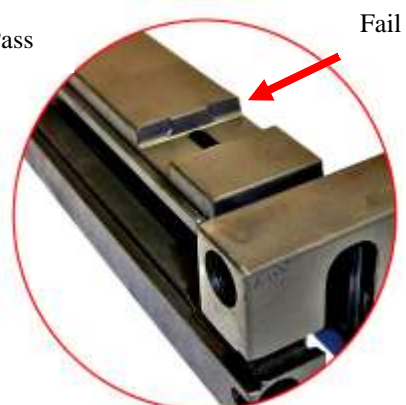
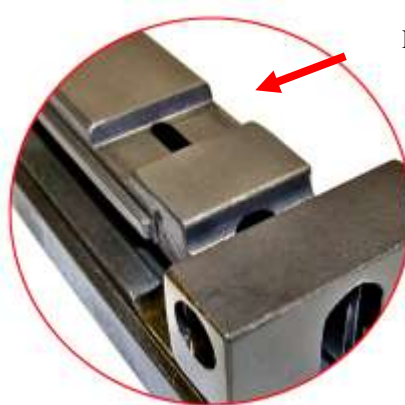
Inspection requires a trained eye and in critical areas, the correct gauge.



Components have been replaced and the major components require to be proofed.



Testing for fit and function is standard practice when replacing components.



All parts wear with use, knowing when replacement is necessary is where the competent armourer earns his keep.

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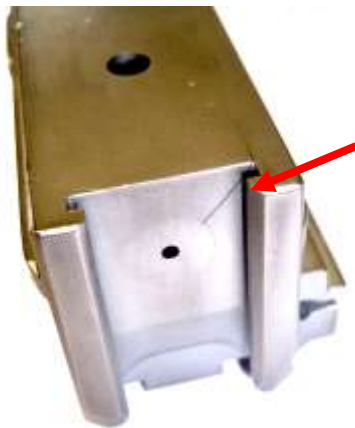
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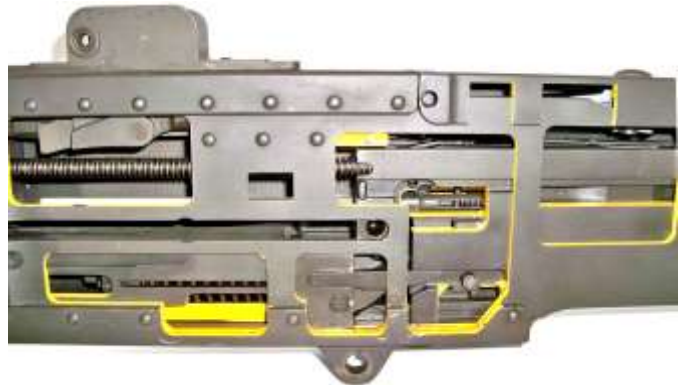
Specialist tools are used to gauge wear in the bore. Bores can be steel, chromed, choked or have a stellite liner.



Very little is interchangeable between the M2 and M3 versions of the machine gun, some examples.



Knowing where to look for wear and damage is essential when conducting an examination of the weapon.



Action of the mechanism. Understanding the function of each component is essential.



Special tools are available and invaluable to the armourer.



Ammunition types, colour codes indicate the bullets content/ use. Beware not all manufacturers worldwide use the same colour code!