



Homer M. Brett

Writer • Researcher • Military Historian



P.O. BOX 111 • ALEXANDRIA, VIRGINIA 22313 USA • TEL: (703) 548-9694

THE FIRST LANCAVY CONTRACT
THE SECOND M9 ECP

30 March 1994

SUBJECT: LANCAVY'S PRODUCTION OF THE M9 BAYONET---THE NEWLY PRODUCED
BLADE BLANKS WHICH ARE MADE USING LASER CUTTING TECHNOLOGY.

Lancay has had continuous problems with the company it selected to forge blades for its M9 contract. This continuing problem and the delays it has caused, as well as the unacceptable rejection rate of blade forgings, has resulted in the institution of a new method of blade manufacture.

Currently the blades are being cut out of stock blanks by use of a laser. This includes a preliminary cutout for the T-lug hole as well. Upon delivery of the cut out blanks to Lancay, they are sent to the broaching contractor and then are machined at Lancay.

The U.S. Army has continually reported a problem with blade breakage on the M9. This usually occurs in the area of the ricasso, where the saw and blood groove are parallel. It has been constantly discussed whether to reduce the depth of the blood groove, but this Engineering Change Proposal (ECP) for some reason has become stalled in the Army's paperwork system.

In October of 1993, Lancay at the urging of the Army submitted an ECP to "Reduce the depth of the blood groove." This ECP was approved on 15 December 1993. However, no advantage could be taken from this ECP change as it was not possible to take the time out to change the forging dies, as the company was still behind on delivering bayonets.

As this normal forging process was going on, Lancay was also working to set up a program to cut out blade blanks using the latest in laser technology. These blanks finally became available in March of 1994 and the first blade blanks were finished to complete blades during this month. The blood groove was reduced in depth by 50% from the original production bayonets and as with all the other features on the blade, the blood groove was now machined into the face of the blade.

Lancay produced approximately 350 blades from laser blanks, using this new shallower blood groove with a depth of approximately .060. The Army then came back during March and agreed to eliminate the bayonets' fuller totally. This was also instituted during March, with production and delivery of the new blades taking place the last week in March. This shipment of M9 bayonets contained all the reduced depth, laser cut blades, as well as the blades without blood grooves. All laser cut blades produced from this shipment will not have blood grooves, as this feature has been totally eliminated.

The Army's acceptance of the new laser cut M9 blades does not eliminate the delivery of additional forged blades. All the blade blanks in the process of being manufactured can be delivered to the Army as part of the LanCay contract.

This manufacturing option is recognized by the latest ECP which was drafted to recognize that many of the earlier procured blade blanks were intended for the hot forging process of manufacture and so are too narrow to meet Army specifications when used for laser cut blades.

The reason for this difference is that when a hot blade blank is forged (pressed by the two sides of the forging die, including the blood groove form) it expands outwards as the pressure of the die is applied. In this manner the expansion of the metal by its displacement allows the forged blade blanks to meet the proper M9 tolerances.

With this ECP in effect LanCay is allowed to use up all the special blade steel that was originally fabricated for the bayonet blades. Both the forged and laser cut blades must meet exactly the same test and dimension specifications, with no separate variances allowed. The Army simply allowed LanCay to complete the contract using both fullered and unfullered blades. The fullered blades are forged and the unfullered are laser cut. LanCay has not yet chosen to produce any further forged blades and if it does so it will be with the existing forging dies with the full depth and length blood groove.

At this time three distinctly different LanCay M9's have been produced (not including the handful of M9's delivered with the ill fated General Cutlery contracted blades).

I) The original pattern with the original depth fuller (like the Phrobis M9 blades) which is approx .120 in depth. These were all forged blades.

II) The laser cut blades with the shallow depth machined fuller of approximately .060 depth (which is visibly quite obvious). About 350 of these bayonets were manufactured before production was halted.

III) The most current bayonet blades, which are laser cut and have absolutely no blood groove at all.

ADDENDUM--JUNE 1994.

*****This last model of the M9 bayonet was first produced and shipped with the standard Phrobis designed cutter plate on its scabbard. However as of 30 June these bayonets are now being shipped to the Army with the "Product Improved" cutter plate designed by the cooperative efforts of Barry Brown of LanCay and myself.

Submitted by



Homer M. Brett--(C.)