

ENVELOP FIELD TEST ON THE M777 LIGHTWEIGHT HOWITZER

1. The joint artillery training team at Fort Sill OK, tested the Envelop protective cover on a M777 155 mm howitzer to evaluate the effectiveness of the cover over an extended storage period.
2. The cover was installed on the M777 in November, 2005. The weapon was parked outside and was not “opened” nor was any maintenance performed on the weapon for 5 months.
3. The cover was removed on April 18 and the weapon was found to be in the same state as when it was covered in November. This is in contrast to ferrous metal lifting/tie down shackles that were outside of the cover and had substantial rust and corrosion. Following is a quote from the uniformed staff at Fort Sill:

“The envelope proved to be reliable. It was put on a M777 in November 2005. This weapon had no lubricant or rust inhibitor on it prior to placing it inside the envelope cover. The envelope cover was removed April 18, 2006.

There was no new rust on the weapon system that was under the envelope cover. It rained approximately 5 times and snowed twice. We did not remove the cover at all during this period. The cover itself retained water on the outside but did not allow it to reach the weapon. The weapon was inside the envelope cover from temperature ranges in the low teens to 105 degrees. No condensation was built up on the inside of the cover.

All components of the cover worked properly and held the cover in place during high winds.

The New Equipment Training Team would recommend this cover for the fleet forces.”

Following are pictures of the cover and selected components after the cover was removed after 5 months of storage.



Pictures of the M777 covered with the Envelop protective cover.



The barrel, muzzle breach and other components were in the exact same state after the 5 month test.



There were a few ferrous metal lifting/tie down shackles that were not covered by the Envelop test cover. The ring shows the level of corrosion that occurred when not protected with the Envelop cover.

Conclusion:

The Envelop protective cover provided complete corrosion protection on the M777 during the test period. The cover will provide opportunities for significant reductions in on going maintenance on the M777.