

-GLOSSARY OF GUN MALFUNCTIONS-

1.0 Background

- 1.1 Traditionally the terminology used to describe gun malfunctions has been extremely varied, imprecise, and has often included slang terms. This variation has frequently led to misunderstandings and ambiguities.
- 1.2 In order to standardize the terminology used to describe gun malfunctions, H.P. White Laboratory, Inc. has developed this glossary of terms which, unless directed to the contrary, shall be used in conjunction with all gun and gun-related testing conducted by H.P. White Laboratory, Inc.

2.0 Scope Of Terminology

- 2.1 The scope of the terms defined herein is limited to small arms from hand and shoulder fired firearms through machine gun calibers, but do not necessarily apply to small, medium or large bore cannon calibers.
- 2.2 The terms defined herein include all predictable forms of gun malfunctions, the cause(s) to which those malfunctions are attributable and the levels of action necessary to correct those malfunctions.

3.0 Malfunctions (General)

- 3.1 Malfunction as used herein includes any and all conditions of configuration, performance and operation not intended by the manufacturer and are of four (4) types - stoppages, inadvertent firings, breakages not related to the firing sequence and miscellaneous conditions not appropriately characterized by the first three (3) categories.
- 3.2 **STOPPAGES** - Failure of gun to fire as intended. This is a generic term used to describe any malfunction - including breakage - which prevents or interrupts the intended operating cycle of the gun. Examples of stoppages are:

3.2.1 Failures to Feed (FF-)

- FFA** - Bolt closed on empty chamber
- FFB** - Separation of belt
- FFC** - Failure of belt to cross feed
- FFD** - Double feed
- FFE** - Failure of nose of cartridge to enter chamber
- FFF** - Failure of bolt to close fully
- FFL** - Failure of bolt to lock
- FFS** - Failure to strip from belt or magazine
- FFU** - Failure to feed up in magazine
- FFO** - Other (Explain)

3.2.2 Failure to Fire (FI-)

- FIA** - Cartridge primer failure
- FIE** - Bolt/trigger failed to sear
- FIL** - Light firing pin fall
- FIP** - Failure of firing pin to fall on otherwise properly chambered cartridge
- FIS** - Safety inadvertently engaged
- FIT** - Failure of trigger to function
- FIO** - Other (Explain)

3.2.3 Failure to Extract (FX-)

- FXL** - Fired case fully chambered but loose and easily removed
- FXP** - Fired case not fully extracted
- FXT** - Fired case fully chambered but tight in chamber
- FXO** - Other (Explain)

3.2.4 Failure to Eject (FJ-)

- FJC** - Fired case not expelled from gun
- FJL** - Fired link not expelled from gun
- FJO** - Other (Explain)

3.2.5 Functional Failure due to Breakage (FB-)

- FBA** - Failure to function due to failure to remain in assembly
- FBD** - Failure to function due to deformed part or component
- FBR** - Failure to function due to breakage
- FBW** - Failure to function due to worn part or component
- FBO** - Other (Explain)

3.3 **INADVERTENT FIRE** - Gun fires without operator action intended to result in firing or despite operator action intended to prevent firing. Examples of Inadvertent firings are:

- IFB** - Uncontrolled burst fire. Gun fired more than number of rounds intended after trigger was released but firing ceased before magazine or belt was exhausted without operator action.
- IFC** - Thermally induced firing (Cook-Off)
- IFJ** - Firings caused by jarring, bumping or dropping of a loaded gun
- IFU** - Uncontrolled continuous fire. Gun continued to fire far after trigger was released and fired - or would have fired - remainder of magazine or belt had operator action not interrupted firing sequence.
- IFO** - Other (Explain)

3.4 **BREAKAGES** - Breakage as used herein includes breakage, deformation, failure to remain in assembly and wear and are of two types - breakages resulting in failures to function (or which will, with reasonable expectation result in a failure to function but which

was discovered during an inspection or maintenance cycle) and breakages which are not related to the functioning of the gun (sights, stock, etc). The former is to be included in FAILURES TO FUNCTION while the later forms a separate and distinct category of malfunctions. Categories of breakage which do not interrupt functioning are:

- BPA** - Failures to remain in assembly not effecting basic function(s) of gun
- BPB** - Broken part not effecting basic function(s) of gun
- BPD** - Deformed part not effecting basic function(s) of gun
- BPW** - Excessively worn part not effecting basic function(s) of gun
- BPO** - Other (Explain)

3.5 **MISCELLANEOUS** - Malfunctions which neither interrupt functioning of the gun nor involve breakage. Examples of miscellaneous deficiencies not effecting the function(s) of the gun are:

- MMH** - Adverse human factors such as ejection pattern, uncomfortably increased surface temperatures of handled components, excessive debris from muzzle or chamber, etc. (Explain)
- MMR** - Failure of the gun to remain open after firing last round
- MMS** - Failure of safety to engage
- MMO** - Other (Explain)

4.0 Corrective Action

4.1 All malfunctions will be characterized by the level of action required to correct the deficiency. Corrective action shall be categorized as follows:

- 4.4.1 **Level I** - Operator correctable without tools, parts or implements within 10 seconds.
- 4.4.2 **Level II** - Operator correctable without tools, parts or implements but requiring more than 10 seconds. This level includes cleaning and lubrication only to the extent that disassembly is limited to "Field Stripping".
- 4.4.3 **Level III** - Correction requires tools, parts, instructions or experience not normally associated with operator including disassembly beyond "Field Stripping".

5.0 Attributable Cause

5.1 Malfunctions will, to the extent possible, be attributed to one of the following basic causes:

- 5.1.1 **GUN** - Malfunction which is clearly unavoidable by a trained and conscientious operator observing recommended procedures and maintenance except as attributable to other causes.
- 5.1.2 **MAG** -Malfunctions clearly identifiable as deficiencies induced by the magazine
- 5.1.3 **LINK** - Malfunctions clearly identifiable as deficiencies induced by the link
- 5.1.4 **AMMO** - Malfunctions clearly identifiable as deficiencies induced by the ammunition
- 5.1.5 **PERS** - Malfunctions clearly identifiable as deficiencies induced by technician error
- 5.1.6 **EXP** - Malfunctions clearly identifiable as deficiencies induced by inadequate training
- 5.1.7 **TEST** - Malfunctions clearly identifiable as deficiencies induced by conditions of the test, ie., thermally induced firing during Cook-Off Test, etc.
- 5.1.7 **SYST** - Malfunctions which are clearly NOT attributable to technician error, inadequate training or conditions of the test and which cannot be clearly attributed to a specific element of the test (Gun, Magazine, Linking or Ammunition).