

TESTS FOR RIFLES AND SHOTGUNS OF NEW DESIGN

The following test procedures are recommended for use in evaluating new designs.

The test procedures apply to rifles and shotguns as defined under the Gun Control Act of 1968.

DRAFT 9-30-82 RESULTS OF 9-29-82 MEETING SAAMI FIREARMS TASK FORCE

# DROP TESTS FOR RIFLES AND SHOTGUNS

This test is to simulate abusive dropping of the firearm.

1. Drop Test - With the firearm in the "Safe Carrying" condition as defined in the Owner's Manual for the firearm being tested, the firearm should be capable of passing the below test criteria for drop testing from a height of four feet (1.22 meters) onto a 50-60 Durometer, Shore A, rubber mat, one-inch thick (2.54 centimeters) backed by concrete. The mat and concrete shall be large enough so that when the gun is dropped it will fall and come to rest without interference within the perimeter of the mat. The four feet (1.22 meters) shall be measured from the surface of the rubber mat to the center of gravity of the firearm. As an alternate to free dropping, other methods may be substituted if they provide equivalent impact characteristics. The firearm shall be re-cocked and re-set in the "Safe Carrying" condition after each drop or a separate firearm may be used for each drop.
2. Criteria - The firearm may indent a copper crusher to a depth not to exceed that shown below for the type of primer indicated.

<u>Primer</u>	<u>Maximum Allowable Indent* In Inches</u>
Shotshell	.002
Centerfire Rifle	.003 (J. Gourley to confirm)
Centerfire Pistol & Revolver	.002
Rimfire	.0005

\* Indent shall be measured in accordance with SAAMI recommended practices outlined on page 50.02, Volumes VI, VII, and VIII of the SAAMI Technical Committee Manual.

Parts breakage or other damage as a result of drop testing does not constitute failure as long as the firearm can be unloaded safely after each drop.

3. Test Procedure - The firearm or firearms shall be dropped in such a way as to strike the rubber mat surface in each of the following attitudes:
  - (a) Barrel vertical, muzzle down.
  - (b) Barrel vertical, muzzle up.
  - (c) Barrel horizontal, bottom up.
  - (d) Barrel horizontal, bottom down.
  - (e) Barrel horizontal, left side up.
  - (f) Barrel horizontal, right side up.
4. Testing of firearms which are designed to have a trigger pull force below three pounds (1.36 kg) is not covered by this procedure.

DRAFT 9/29/82

DRAFT 9/29/82

5. Tests shall be conducted with the trigger pull force set at the minimum force specified by the manufacturer.
6. The test shall be conducted with the magazine or clip fully loaded with dummy cartridges and inserted in the firearm. It is recommended that firearm weight variations introduced by combinations of accessories catalogued by the gun manufacturer be considered.

DRAFT 9/29/82

DRAFT 9/29/82

# ROTATION TEST FOR RIFLES AND SHOTGUNS

This test is to simulate the abusive fall of a firearm when left leaning against a vertical surface.

1. Rotation Test - With the firearm in the "Safe Carrying" condition as defined in the Owner's Manual for the firearm being tested, the firearm should be capable of passing the below test criteria when allowed to fall freely from an upright position with its butt resting on the surface of a 50-60 Durometer, Shore A, rubber mat, one-inch thick (2.54 centimeters) backed by concrete. The mat and concrete shall be large enough so that when the gun falls it will come to rest without interference within the perimeter of the mat. The firearm shall be tested so as to fall once on its right-hand side and once on its left-hand side. The firearm shall be re-cocked and re-set in the "Safe Carrying" condition after each drop or a separate firearm may be used for each drop.
2. Criteria - The firearm may indent a copper crusher to a depth not to exceed that shown below for the type of primer indicated.

<u>Primer</u>	<u>Maximum Allowable Indent* In Inches</u>
Shotshell	.002
Centerfire Rifle	.003 (J. Gourley to confirm)
Centerfire Pistol & Revolver	.002
Rimfire	.0005

\* Indent shall be measured in accordance with SAAMI recommended practices outlined on page 50.02 of Volumes VI, VII, and VIII of the SAAMI Technical Committee Manual.

Parts breakage or other damage as a result of drop testing does not constitute failure as long as the firearm can be unloaded safely after each drop.

3. Testing of firearms which are designed to have a trigger pull force below three pounds (1.36 kg) is not covered by this procedure.
4. Tests shall be conducted with the trigger pull force set at the minimum force specified by the manufacturer.
5. The test shall be conducted with the magazine or clip fully loaded with dummy cartridges, inserted in the firearm. It is recommended that firearm weight variations introduced by combinations of accessories catalogued by the gun manufacturer be considered.

DRAFT 9/29/28

DRAFT 9/29/82

JAR-OFF TEST FOR RIFLES AND SHOTGUNS

This test is to simulate the abusive impacting (bumping) of the firearms against a hard surface with the firearm in a condition of maximum readiness.

1. Jar-Off Test - With the firearm cocked and in the ready-to-fire condition (Safe "OFF") as defined in the Owner's Manual for the firearm being tested, the firearm should be capable of withstanding jar-off shock equivalent to being dropped from a height of twelve inches (.305 meters) onto a 50-60 Durometer, Shore A, rubber mat, one-inch thick (2.54 centimeters) backed by concrete. The mat and concrete shall be large enough so that when the gun is dropped it will fall within the perimeter of the mat striking the mat once. The twelve inches (.305 meters) will be measured from the test surface to the lowest point on the firearm. As an alternate to free dropping, other methods may be substituted if they provide equivalent impact characteristics. The firearm shall be re-cocked and re-set in the ready-to-fire condition after each drop or a separate firearm may be used for each drop.
2. Criteria - The firearm may indent a copper crusher to a depth not to exceed that shown below for the type of primer indicated.

<u>Primer</u>	<u>Maximum Allowable Indent* In Inches</u>
Shotshell	.002
Centerfire Rifle	.003 (J. Gourley to confirm)
Centerfire Pistol & Revolver	.002
Rimfire	.0005

\* Indent shall be measured in accordance with SAAMI recommended practices outlined on page 50.02, Volumes VI, VII, and VIII of the SAAMI Technical Committee Manual.

Parts breakage or other damage as a result of drop testing does not constitute failure as long as the firearm can be unloaded safely after each drop.

3. Test Procedure - The firearm or firearms shall be dropped in such a way as to cause it to strike the rubber mat surface in each of the following attitudes:
  - (a) Barrel vertical, muzzle down.
  - (b) Barrel vertical, muzzle up.
  - (c) Barrel horizontal, bottom up.
  - (d) Barrel horizontal, bottom down.
  - (e) Barrel horizontal, left side up.
  - (f) Barrel horizontal, right side up.
4. Testing of firearms which are designed to have a trigger pull force below three pounds (1.36 kg) is not covered by this procedure.

DRAFT 9/29/82

DRAFT 9/29/82

5. Tests shall be conducted with the trigger pull force set at the minimum force specified by the manufacturer.
6. The test shall be conducted with the magazine or clip fully loaded with dummy cartridges and inserted in the firearm. It is recommended that firearm weight variations introduced by combinations of accessories catalogued by the gun manufacturer be considered.

DRAFT 9/29/92

DRAFT 9/29/82