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Remington Arms Company Inc.
RESEARCH & DEVELOPMENT TECHNICAL CENTER
315 WEST RING ROAD
ELIZABETHTOWN, KY 42701

TLW 1005

- Use the ammunition schedule listed in the table below.
- Fire 20 rounds of ammunition (5 rounds of each type at a time from the table below) and return shotgun to chamber for 2 hours and repeat this procedure until all 100 rounds have been fired.
- Do not perform maintenance during the 100 round cycles.
- Cycle the safety from fire to safe every 5 rounds.
- The tester should wear gloves to protect his hands from the hot metal.
- After 100 rounds have been fired through each firearm, disassemble, thoroughly inspect, clean and lubricate.

Table of Ammunition to use for Thermal Tests

Manufacturer	Type	Code	RAC
Remington	High Velocity Game Load	HV12-6	20065
Remington	Premiere Target	STS12LH-8	20252
Remington	Gun Club Light Target	GC12L-8	20230
Remington	Express Mag. Buckshot	12SH00	20632
Remington	Heavy Field Load	RFI2H-8	28120

Data Required:

- Record temperature and exposure times
- Record all malfunctions.
- Record damage noted during inspection
- Record all necessary maintenance actions performed
- TLW Number
- Testers' Names

TLW1005U - Thermal Cycle Test:

This test evaluates the effects of large temperature changes due to expansion and contraction differentials of metallic and non-metallic components used in the test guns. The sample shotgun will be alternately cycled between a temperature of 120°F and -20°F for at least 3 complete temperature cycles and then brought back to ambient temperature and test fired in the test jacks for 100 rounds to evaluate both function and safety related characteristics.

Method:

- Shoot sample shotgun in test jack to determine shotgun's malfunction characteristics and rate. Shoot 100 rounds using the ammunition table below.
- Do not clean shotgun
- Place shotgun in freezer that is pre-set to -20°F and leave undisturbed for at least 24 hours.
- At completion of 24+ hours, remove shotgun and immediately place in the pre-heated test chamber at a temperature of +120°F.
- Leave shotgun undisturbed for at least 24 hours.
- At completion of at least 24 hours, remove shotgun and immediately place in the freezer.
- Repeat this cycle for a minimum of three complete hot and three complete cold cycles.
- At the completion of the final cycle (the heat cycle) remove the shotgun from the chamber and allow cooling to ambient temperature – a minimum of six hours.
- Return the shotgun to the test jack used at the start of the test and fire another 100 rounds recording malfunction types and rates using the ammunition schedule as listed in the table below.
- Remove the action from the stock and examine the shotgun for any obvious signs that the thermal cycling has affected the parts with special attention directed at the metallic and non-metallic interfaces. Look for cracked parts and for signs of material creep.