

M/TBI ENDURANCE
TEST - 1952

Endurance gun.

No Malf.

+ Type

Break ages.

~~5~~ 5 failed to extract.
 3 " " adverse train)
 4 failed to fire. " (dust)
 3 5 failed to extract
~~17~~ failed to eject
 41 failures to extract
~~5~~ failed to eject
 1 stem chamber
~~4~~ failed to extract
~~17~~ failures to eject

129 - 2.15%

1-100 = 1%

10 - 1,000 = 1%

100 - 10,000 = 1%

extract failed to eject stem.

5	17	1
35	5	
71	14	
4	36	1
<u>85</u>		

2.15%
 6000 / 12900.00
 12000
 9000
 6000
 30000
 30000

adverse conditions
 3 failed to extract main
 4 failures fire dust.

85
 37
 122
 7

MODEL 721 30-06DATE 10-2-52

R.T. No.	Rounds Fired	Malfunctions												Remarks
		Firing	Unloading	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	
	5440 previous													QUALITY AND ENDURANCE TEST
														ENDURANCE GUN
														#199805
Pet 150 M.P.	5480													OK
	5520				III									Ext. dropped shell.
Win 150 H.P.	5560													OK
	5600													OK
	5640													OK
Win 110 M.	5680													OK
														9-3-52
	5720													OK
	5760													OK
														9-5-52
180 BP	5800												OK	Ext. dropped shell
Win 180 ST	5840													OK
Win 150 ST	5880													OK
Win 120 ST	5920													OK
Win 150 M.P.	5960													Ext. dropped shell
Win 160 BP	5980													OK
	5990													OK
														Defective Ammo Test.
														9-18-52
														SUB Zero Test (-40°F)
Win 110 S.P.														Failed to fire first two rounds.
														Third and fourth rounds fired, fifth and six didn't.
														9-19-52
														10,000 dry cycles. No broken parts.
														End of Test
														(5)

MODEL 721 30-06

DATE 9-29-52

R.T. No.	Rounds Fired	Malfunctions											Remarks		
		Firing	Unloading	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	
	4960 <i>previous</i>														QUALITY AND ENDURANCE TEST. ENDURANCE GUN. #199805
				<u>RAIN TEST</u>											
Win 180 S.T.	4980				III										Ext. dropped shell
				<u>DUST TEST</u>											
Pet. 180 P.S.P.	4985	III		Gun failed to fire after the pet. was fired. Bolt was sticky and hard to work back and forth. Firing control had grit inside which prevented the trigger from releasing the firing pin. Cleaned and oiled.											
	4990			(5) Proof rounds											OK
Pet. 180 P.S.P.	5000														OK
Pet. 180 S.P.	5040														OK
	5080														OK
	5120														OK
				Unlocking cam surface on bolt battered over making bolt stiff to unlock.											
West. 220 S.T.	5160														OK
	5200														OK
				9-2-52											
Rem 150 B.P.	5240														OK
	5280														OK
	5320														OK
Rem 220 S.P.	5360														OK
	5400														OK
	5440														1 bolt stop pin worked out causing bolt to fail to hold bolt (7)

MODEL 721-3006DATE 8-15-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	
	4040												END TEST # 199805 END GUN
REM 110 M	4080				1								EXT-Drops Shell
	4120				1								" " " "
REM 220 SP	4160												OK
	4200				1								EXT-Drop Shell
	4240				1								" " " "
					Bolt RELEASE Binds								
					8-25-52								
Rem 150 Mc	4280				111								Ext Drop Shell
	4320				1111								" " " "
Win 220 ST	4360												OK
	4400												OK
	4440												OK
Win 150 ST	4480												OK
	4520												OK
	4540												OK
Win 150 SP	4560												OK
	4600												OK
					8-29-52								
Win 150 Exp	4640												OK
"	4680												OK
Rem 150 MC	4720				14	12							Ext drop Shell + ejection
Rem 110 Mush	4760					1							fail to eject
Win 180 ST	4800					1							" " " "
Rem 150 SP	4840				1								Ext. dropped Shell
Rem 110 Mush	4880				1								" " " "
Win 180 ST	4920				1								" " " "
Rem 150 M.C.	4960				3	8							" " " "
													(49)

MODEL 721 30-06DATE 6-6-52

R.T. No.	Rounds Fired	Malfunctions												Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	
	3240													Quality and ENDURANCE TEST #199805
Um 110 S.P.	3241- 3280													ENDURANCE Gun
	3320													OK
														OK
3rd 180 M.C.	3321- 3360													6-26-52 fail to extract
	3400													" " " "
3rd 180 B.P.	3401- 3440													" " " "
	3480													" " " "
	3520													" " " "
														7-8-52
Wet 180 ST	3560													OK
	3600													" " " "
	3640													" " " "
														7-14-52
REM 180 BP	3680													OK
	3720													OK
	3760													OK
PETER 180 SP	3800													OK
	3840													OK
	3880													EXT. DROP SHELLS
REM 220 SP	3920													EXT. DROP SHELLS
	3960													" " " "
REM 150 MC	4000				4									" " " "
	1													PROOF ROUND
REM					8									OK
150 MC	4040				1									EXT. DROP SHELLS Failed to EXT
														(47)

DATE 5-26-52

**CONFIDENTIAL-SUBJECT TO PROTECTIVE ORDER
KINZER V. REMINGTON**

MODEL 721-30-06DATE 5-20-52

R.T. No.	Rounds Fired	Malfunctions											Remarks		
	2000 Previous	Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	Quality And Endurance Test Endurance Gun # 199805
		Cold Test -20°F													
Rem 180 BP	2020														OK
		ICE Test -20°F													
Win 110 SP		Had to hammer bolt home. Trigger wouldn't work													
		Waited until it thawed before I could shoot it													
	2040														OK
Rem 180 BP	2080														OK
"	2120			1											fail to extract
"	2160				1										" " "
"	2200														OK
"	2220														OK
Win 110 SP	2240														OK
"	2280	Loosened back pin on fire control causing bolt stop to drop allowing bolt to ride free, out of the breech!													
Win 110	2320														OK
SP	2360														OK
"	2400														OK
"	2440														OK

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MODEL 721 30-06DATE 5-14-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	
	1000												QUALITY AND ENDURANCE TEST. ENDURANCE GUN.
Ret. 150 M.C.P.	1001-1040 PROOF ROUND					1							#199805 fail to eject.
Rem 220 SP.	1041-1080												OK
"	1120												OK
"	1160												OK
Vert. 180 S.T.	1161-1200					1							fail to eject
"	1240					1							fail to extract.
"	1280												OK
Win 110 SP	1320					1							OK
"	1360												OK
"	1400												OK
Rem 180 BP	1440												OK
"	1480												OK
"	1520					1							fail to eject.
Vert 150 ST.	1560												OK
"	1600												OK
"	1640												OK
Win 220 S.T.	1680					1							fail to eject.
"	1720												OK
"	1760												OK
Rem 150 MC	1800					1	11						fail to eject
"	1840						111						" " eject
"	1880						1111						" " "
Win 180 SP	1920												OK
"	1960												OK
"	2000												OK
		Replaced bolt assembly with											
		1000 rds on it. (broke other while											
		removing firing pin. P. 1 18											

MODEL 721 30-06DATE 5-9-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	
	320												QUALITY AND ENDURANCE TEST. AVERAGE GUN. #199805
Rem 220 S.P.	360												OK
	400												OK
West 180 S.P.	440					1							fail to eject
	480					11							"
Win 150 S.P.	520												OK
	560												OK
Position of ejected rounds - right side of shooter at 45 degree to the gun.													
Rem 110 M.	600												OK
	620												OK
Win 220 S.T.	640												OK
	680												OK
5-13-52													
Pet 150 M.A.	681- 720												OK
Win 150 H.P.	760												OK
Pet 180 S.P.	800												OK
	840												OK
Rem 150 M.C.	880												OK
	920												OK
West 110 S.P.	960												OK
Rem 150 B.P.	1000												OK
Picked for endurance gun. cleaned and oiled.													
(5)													
(5)													

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions												Remarks	
	0	Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	QUALITY AND ENDURANCE TEST.
															# 191205
Win 220 S.P.	1-20					Jack									OK
Phm 150 B.P.	40														OK
Win 150 H.P.	60														OK
Rem 110 MUSH	80														OK
Win 180 S.P.	120					1									Fail to eject
P 220	140														OK
Win 50	160														OK
Bot 40 P.P.E.	200														OK
Win 150 S.P.	220					Fail	2.5"		(Shoulder)						OK
Win 150 S.P.	240														OK
Rem 110 M	260														OK
Win 220 S.P.	280														OK
Win 150 S.P.	300														OK
Rem 110 M	320					Jack									OK
① leading up of buck causing hard opening of bolt picked for continued test															
①															
①															

STANDARD ENDURANCE TEST
CENTER FIRE RIFLESMODEL 721 30-06GUN NO. 199805To Be Performed Every 1000 Rnds.

Clean and Oil

Head Space (Min-Max)

Trigger Pull

Firing Pin Indentation

Bolt Opening-Cocked

Bolt Opening-Cocking

Safety Mech. Test

Jar Off Test

To Be Performed Every 2000 Rnds.

Main Spring

~~EJECTOR~~
~~Sear Lock Plunger Spring~~~~SEAR~~
~~Action Bar Lock Spring~~~~Loading Door Spring~~~~Magazine Spring~~~~Extractor Spring~~~~Trigger Spring~~

	0	320	1000	2000	3000	4000	5000
		✓	✓	✓	✓	✓	✓
		OK	OK	OK	OK	OK	OK
		4 3/4"	4 3/4"	5 1/4"	4 3/4"	4 3/4"	4 1/2"
		.020"	.020"	.025"	.020"	.0215	.020
		4"	4"	2 1/2"	3 1/2"	3 1/2"	3 1/2"
		10"	10"	10"	12"	11 1/2"	11 1/2"
		OK	OK	OK	OK	OK	OK
		OK	OK	OK	OK	OK	OK
		6.2"		6.2"		6.2	
		1.2"		1 1/8"		1 1/16	
		.55"		.50"		.50	

NL 10/29/51

STANDARD ENDURANCE TEST
CENTER FIRE RIFLES

MODEL 721 30-06GUN NO. 238483To Be Performed Every 1000 Rnds.

Clean and Oil

Head Space (Min-Max)

Trigger Pull

Firing Pin Indentation

Bolt Opening-Cocked

Bolt Opening-Cocking

Safety Mech. Test

Jar Off Test

To Be Performed Every 2000 Rnds.

Main Spring

~~Extractor~~
~~Bar Lock Plunger Spring~~~~SEAR~~
~~Action Bar Lock Spring~~~~Loading Deer Spring~~~~Magazine Spring~~~~Extractor Spring~~~~Trigger Spring~~

	0	320	1000	2000	3000	4000	5000
		—					
		OK					
		5.75"					
		.020"					
		2.5"					
		10"					
		OK					
		6"					
		6.25"					
		1.19"					
		.55"					

NL 10/29/51

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	
	0												QUALITY AND ENDURANCE TEST
													237412
Win 220 S&D	20			Jacks				7					OK
Rem 180 B.P.	40												OK
Win 150 H.P.	60												OK
Rem 110 M.	80												OK
Win 180	100												OK
Win S.P.	120					1		1					Stem - full to eject
Rem 220 S.P.	140												OK
Win 180 B.P.	200												OK
Win				Field Jack					(Shoulder)				
Win 180 S.D.	220							1					1st time
Win 150 S.T.	240												OK
Rem 110 M.	260												
Win 220 S.V.	280							7	Stems				chamber loaded up.
Win 150 H.P.	300												OK
Rem 180 B.P.	320			Jacks									OK
17 leading up of brush causing hard opening of bolt picked for continued test													
(17)													

MODEL 721 30-06

DATE 5-9-52

[illegible]

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	
	0												QUALITY AND ENDURANCE TEST
													237412
Win 220 S&D	20			Jack				7					Stems
Rem 180 B.P.	40												OK
Win 150 B.P.	60												OK
Rem 110 M.	80												OK
Win 180	100												OK
Win 150	120					1		1					Stem - full eject?
Rem 220 S&D	160												OK
Rem 180 P.D.E.	200												OK
Win				Field Test					(Shoulder)				
Win 180 S&D	220							1					1 stem
Win 150 S&D	240												OK
Rem 110 M.	260												OK
Win 220 S&D	280							7 stems					chamber loaded up.
Win 150 B.P.	300												OK
Rem 180 B.P.	320			Jack									OK
(17) leading up of bench causing hard opening of bolt picked for continued test													
(17)													

STANDARD ENDURANCE TEST
CENTER FIRE RIFLES

MODEL 721 30-06GUN NO. 237412To Be Performed Every 1000 Rnds.

Clean and Oil

Head Space (Min-Max)

Trigger Pull

Firing Pin Indentation

Bolt Opening-Cocked

Bolt Opening-Cocking

Safety Mech. Test

Jar Off Test

To Be Performed Every 2000 Rnds.

Main Spring

~~EJECTOR~~~~Sear Lock Plunger Spring~~~~SEAR~~~~Action Bar Lock Spring~~

Loading Door Spring

Magazine Spring

Extractor Spring

Trigger Spring

0	320	1000	2000	3000	4000	5000
	✓					
	OK					
	4.5 [#]					
	.020"					
	5 [#]					
	9.5 [#]					
	OK					
	OK					
	6.3"					
	1.2"					
	.5"					

NL 10/29/51

R2501795

MODEL 721 30-06

DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks		
	0	Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	QUALITY and ENDURANCE TEST.
															214332
Win 220 EXP	20														OK
Rem 180 CP	40														OK
Win 150 HP	60														OK
Rem 110 M.	80														OK
Win 140	100														OK
SP	120														OK
Rem 220 S.P.	160														OK
Rem 180 P.P.E.X.	200														OK
															Failed Test (Shoulder)
Win 180 SP	220														OK
Win 180 ST	240														OK
Rem 110 M.	260														OK
Win 220 EX	280														OK
Win 150 HP	300														OK
Rem 180 P.P.E.X.	320														OK
															(1) Leading up of breech causing hard opening of bolt.

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	
	0												QUALITY AND ENDURANCE TEST.
													# 205587
Win 220 S.T.	1-20					Jack							OK
Run 180 B.P.	40												OK
Win 150 M.P.	60												OK
Run 110 Mesh	80												OK
West 180 S.P.	120												OK
Run 220	140												OK
SP	160												OK
Pet P.P.E.	200												OK
						Field Jct (Shoulder)							
West 180 S.P.	220												OK
Win 180 S.T.	240												OK
Run 110 M	260												OK
Win 220 S.T.	280												OK
Win 150 M.P.	300												OK
Run 110 M.P.	320					Jack							OK
						Locking up of mechanism causing hard opening of bolt.							

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Looking	Breakages	Replacements	
	0												Quality and ENDURANCE TEST.
													# 205306
Win 220 EXP	20					Jack							OK
Rem 180 BP	40												OK
Win 150 HP	60												OK
Rem 110 M.	80												OK
Win 120	100												OK
Win 50	120												OK
Rem 220 S.P.	160												OK
Rem 160 P.P.E.X.	200												OK
Rem 160 S.P.	220					Jack							OK
Win 150 ST	240												OK
Rem 110 M.	260												OK
Win 220 EX	280												OK
Win 150 HP	300												OK
Rem 180 BP	320					Jack							OK
													Leading up of brush causing head opening of bolt.

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions												Remarks	
		Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	QUALITY AND ENDURANCE TEST.
															238323
220 SP	20					Jack									OK
180 BP	40														OK
150 HP	60														OK
110 M.	80														OK
180	100														OK
SP	120														OK
220 SP	160														OK
110 PPX	200														OK
						Field Test									(Shoulder)
180 SP	220														OK
180 ST	240														OK
110 M	260														OK
220 EX	280														OK
150 HP	300														OK
180 BP	320					Jack									OK
						loading up of barrel									causing hard
						opening of bolt									

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks		
	0	Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	QUALITY AND ENDURANCE TEST.
															# 205406
220 S.T.	1-20					Jack									OK
180 B.P.	40														OK
150 H.P.	60														OK
110 M.S.H.	80														OK
180 S.P.	120														OK
220	140														OK
512	160														OK
150 P.B.	200														OK
						Field Test (Shoulder)									
180 S.P.	220														OK
180 S.T.	240														OK
110 M.	260														OK
220 Ex	280														OK
150 H.P.	300														OK
180 B.P.	320					Jack									OK
						Leading up of breach causing hard opening of bolt.									
											</				

MODEL 721 30-06DATE 5-7-52

R.T. No.	Rounds Fired	Malfunctions											Remarks		
	0	Firing	Unlocking	Primary Extraction	Secondary Extraction	Ejection	Cocking	Feeding	Loading	Locking	Breakages	Replacements	Gun Failures	Adjustments	QUALITY AND ENDURANCE TEST
															# 237007
Win 220ST	1-20				Jack			1							stem chamber
Rem 180 B.P.	40														OK
Win 150 H.P.	60														OK
Rem 110 M&H	80														OK
Win 180 S.P.	120														OK
Rem 220	140														OK
Rem SP	160														OK
Win 180 PEX	200														OK
															Field Test (Shoulder)
Win 180ST	220														OK
Win 180ST	240														OK
Rem 110 M	260														OK
Win 220EX	280							1111							stem chamber
Win 150 H.P.	300														OK
Rem 180 B.P.	320						Jack								OK
															(6) leading up of brush causing hard opening of bolt