

returning to the fully engaged position. The force required to rotate the trigger to the fired position measured low on this sample.

5. Gun A-26 was examined. Trigger pull on this gun was also in specification when checked. The sear was free to move in this gun and loosening and tightening the support bracket screw did not effect sear movement. No movement of the fire control could be detected when the screw was tightened. The insert was also checked on the adjustment and inspection setup. The trigger would also not fully return to the fully engaged position on this sample.

6. The metal side plates on both A-14 and A-26 were removed. On both samples it appeared that the trigger spring adjustment screw opening was distorted slightly on the bottom side of the hole. It also appeared that the screw may not of been located central to the opening. This resulted in less space for the trigger return spring on the bottom and it was theorized that this could result in binding of the spring during operation. This was not proven however.

7. A discussion followed focused on the procedure followed during T & P build. It was discovered that after insert assemblies were built and adjusted on the adjustment and inspection station that the insert assemblies were built into guns by various assemblers. After a gun is built it is checked for trigger pull and if measured out of specification the fire control adjustment screws are adjusted to bring trigger pull into specification. This is done by the assembler at the bench and he is only focused on trigger pull, not whether the fire control change he just made has effected any other parameter in the gun, like trigger return. This is the most probable cause of the fire control related malfunctions on both A-14 and A-26, misadjusted fire controls with inadequate inspections to catch this situation. An additional factor on gun A-14 may be the support bracket bias resulting in slight sear bind caused by the location of the threaded hole in the receiver being out of specification.

8. Bolt stop breakage was discussed. One of E-town's metallurgists is currently analyzing failed samples and destructively testing DAT and T & P samples in an attempt to understand the reason for these failures. No solution can be offered at this time.

During a wrap-up meeting in Mayfield all issues were listed along with the most probable cause. This was followed by a listing of actions required by Mayfield to correct these issues on existing T & P product so that a new sample could be selected for a second T & P test. The following proposed plan was offered:

- Mayfield will screen existing guns for stock sink and trigger location in the trigger bow opening and replace stocks as required. A .020" shim must go on both sides of the trigger between the trigger and stock opening. The trigger must be biased to the appropriate side before this check is made.
- Mayfield will build new insert assemblies using all new parts. The adjustment/inspection setup will be used to set all fire control settings (engagement, over travel and trigger return spring force. All assemblies will be inspected for adequate trigger return force to ensure that all triggers return to full engagement. In addition sears should be inspected to ensure that they are free to move both in and out of the stock (with bracket installed). T & P guns will be rebuilt using these new assemblies. The assemblers will be instructed to check trigger pull and then segregate product based on whether they are below, above or in specification. It should be mentioned that Mayfield has requested a new trigger pull specification of 4 to 5.5 lbs. Yield based on trigger pull will be tabulated by Mayfield and used to support their position on this issue. Any trigger pull specification change needs to have Marketing's approval prior to T & P test start.
- Mayfield will retest product in the modified shooting test booth to verify that the trigger bending has been corrected.
- Mayfield needs to ensure that the support bracket does not bias the fire control insert in any way on all T & P product. This should include both inspection and dimensional verification that all characteristics that could effect this, like the location and orientation of the threaded hole in the receiver are in specification.

710 TRAIL & PILOT SERIES- B  
11/15/00

PRELIMINARY MEASUREMENTS &amp; CHECKS

BLUE INDICATES BELOW SPEC.  
RED INDICATES ABOVE SPEC.

TEST LAB TRACKING NUMBER- TLW0300

PROOF TEST &amp; MAGNAFLUX COMPLETED AT MAYFIELD

GUN ID #	SERIAL NUMBER	INSPECT FOR PROOF STAMP	INSPECT FOR MAGNAFLUX STAMP	REM. SPEC GAUGES	TRIGGER PULL WITH SPRING SCALE			FIRING PIN INDENT WITH COPPER CRUSHERS			SEAR TO TRIGGER ENGAGEMENT			SEAR TO TRIGGER ENGAGEMENT								
					TLW0300J LBS.			TLW0300H			TLW0300I out of stock @ 20X			TLW0300I In syn. stock @ 20X								
					1	2	3 AVERAGE	1	2	3 AVERAGE	1	2	3 AVERAGE	1	2	3 AVERAGE						
B-1	71001124	YES	YES	MIN+.002	5	5	5.5	0.017	0.017	0.018	0.0173	0.0297	0.0298	0.0288	0.0274	0.0298	0.0285	0.0298	0.0294			
B-2	71001184	Y	Y	MIN+.002	5.25	5.5	5	0.018	0.017	0.018	0.0177	0.0277	0.0278	0.0268	0.0274	0.0279	0.0284	0.0274	0.0279			
B-3	71001244	Y	Y	MIN+.002	4.25	4.75	4.25	0.017	0.016	0.018	0.0170	0.0282	0.0291	0.0272	0.0282	0.0275	0.0276	0.0265	0.0272			
B-4	71001288	Y	Y	MIN+.001	5	4.5	4.25	0.018	0.016	0.018	0.0173	0.032	0.0311	0.0307	0.0313	0.0311	0.0323	0.0336	0.0323			
B-5	71001421	Y	Y	MIN+.001	4.25	4	4	0.018	0.018	0.017	0.0177	0.0268	0.027	0.026	0.0266	0.0301	0.0298	0.0308	0.0302			
B-6	71001462	Y	Y	MIN+.001	4.75	4.25	4.25	0.016	0.016	0.017	0.0163	0.0262	0.0261	0.0259	0.0261	0.0262	0.0275	0.0267	0.0268			
B-7	71001504	Y	Y	MIN+.001	5.5	5.25	5	0.017	0.016	0.016	0.0163	0.0294	0.0299	0.0294	0.0296	0.0273	0.0278	0.0279	0.0277			
B-8	71001511	Y	Y	OUT OF TEST, TRIGGER LOCATED TO THE RIGHT OF CENTER IN TRIGGER GUARD, GUN HELD FOR MARKETING EVALUATION																		
B-9	71001524	Y	Y	MIN+.001	5.5	5.25	5.25	0.017	0.018	0.017	0.0173	0.0265	0.0267	0.0281	0.0271	0.029	0.0275	0.0267	0.0277			
B-10	71001529	Y	Y	MIN+.001	5.5	5.25	5.25	0.017	0.018	0.017	0.0173	0.0267	0.0283	0.0302	0.0291	0.0286	0.0298	0.0308	0.0297			
B-11	71001534	Y	Y	MIN+.002	4.5	5	4.5	0.017	0.017	0.017	0.0170	0.0311	0.031	0.0306	0.0309	0.0295	0.0289	0.0296	0.0293			
B-12	71001535	Y	Y	MIN+.001	5.5	5	4.75	0.019	0.018	0.018	0.0183	0.0273	0.0283	0.0286	0.0281	0.0259	0.0262	0.026	0.0260			
B-13	71001539	Y	Y	MIN+.001	5.5	5	5	0.017	0.019	0.017	0.0177	0.0291	0.0295	0.0299	0.0295	0.0289	0.0282	0.0287	0.0286			
B-14	71001559	Y	Y	MIN+.002	5	5	5	0.019	0.019	0.02	0.0193	0.0314	0.0308	0.0315	0.0312	0.0287	0.0284	0.0278	0.0283			
B-15	71001578	Y	Y	MIN.	4.5	4.75	4.5	0.017	0.017	0.017	0.0170	0.029	0.0279	0.0293	0.0287	0.0278	0.0286	0.0293	0.0286			
B-16	71001580	Y	Y	MIN+.001	5.75	5.5	8	0.017	0.018	0.018	0.0177	0.0307	0.0304	0.0313	0.0308	0.0292	0.0295	0.0305	0.0297			
B-17	71001583	Y	Y	MIN+.002	5	5	5.25	0.017	0.018	0.019	0.0180	0.036	0.0375	0.0366	0.0367	0.0368	0.0361	0.036	0.0363			
B-18	71001584	Y	Y	MIN+.001	4.75	6	6.25	0.016	0.018	0.017	0.0170	0.0291	0.0272	0.0286	0.0283	0.0277	0.0276	0.0282	0.0278			
B-19	71001595	Y	Y	MIN+.001	5	5.5	5.25	0.019	0.018	0.019	0.0187	0.0286	0.0282	0.0286	0.0285	0.0285	0.0268	0.0262	0.0265			
B-20	71001605	Y	Y	MIN+.001	5	4.5	4.75	0.016	0.016	0.017	0.0163	0.0262	0.0271	0.026	0.0264	0.0242	0.0267	0.0272	0.0260			
B-21	71001613	Y	Y	BELOW MIN.	5.75	5.75	5.25	0.017	0.017	0.018	0.0173	0.0256	0.0256	0.0251	0.0254	0.026	0.0262	0.0265	0.0262			
B-22	71001623	Y	Y	MIN.	4.75	4.75	5.25	0.016	0.018	0.018	0.0173	0.0271	0.0273	0.0262	0.0269	0.0265	0.0274	0.0282	0.0274			
B-23	71001632	Y	Y	MIN+.001	5	4.75	5.25	0.018	0.016	0.017	0.0170	0.0267	0.0271	0.0278	0.0272	0.0292	0.0286	0.0298	0.0292			
B-24	71001634	Y	Y	MIN+.001	5.5	5.5	5.25	0.019	0.017	0.017	0.0177	0.0279	0.0278	0.0268	0.0282	0.0304	0.0319	0.0315	0.0313			
B-25	71001643	Y	Y	MIN+.001	4.25	4	4.5	0.018	0.017	0.018	0.0177	0.0301	0.0304	0.0312	0.0308	0.0275	0.0274	0.0274	0.0274			
B-26	71001647	Y	Y	MIN+.001	5	5	5	0.017	0.017	0.017	0.0170	0.0269	0.0285	0.0292	0.0282	0.0293	0.0283	0.0285	0.0287			
B-27	71001724	Y	Y	MIN+.002	5.75	4.75	4.25	0.019	0.019	0.02	0.0193	0.0298	0.0304	0.0299	0.0300	0.0292	0.0278	0.0289	0.0286			
B-28	71001760	Y	Y	MIN+.002	5.25	4.75	4.5	0.016	0.017	0.016	0.0163	0.0344	0.036	0.0367	0.0357	0.0359	0.0367	0.037	0.0365			
B-29	71001782	Y	Y	MIN+.002	4.25	4.75	5	0.019	0.018	0.018	0.0187	0.0294	0.0293	0.0303	0.0297	0.0269	0.027	0.0267	0.0269			
B-30	71001789	Y	Y	MIN+.002	4.25	4.5	4.5	0.019	0.017	0.019	0.0183	0.0284	0.0285	0.0307	0.0292	0.0265	0.0252	0.0266	0.0261			
TEST AVERAGE					4.86			TEST AVERAGE			0.01752			TEST AVERAGE			0.02796			TEST AVERAGE		
SPEC. = 4.0 TO 5.5 LBS.								SAAMI MIN. = .017						SPEC. = .020 TO .025						SPEC. = .020 TO .025		

COMMENTS FROM TECHNICIANS-

STOCK TAKE DOWN SCREWS ARE NOT TIGHTENED TO TORQUE SPEC, SOME ARE BARELY TIGHTENED AT ALL.  
SCOPE RING TO MOUNT SCREWS ARE NOT TIGHT

SEAR LIFT				FIRECONTROL INSPECTION TLW0300AU		
TLW03001 out of stock @ 20X				out of stock @ 20X		SEAR MOVEMENT
1	2	3 AVERAGE		ENGAGEMENT	GAP	In stock By feel
0.0122	0.0139	0.0133	0.0131	0.0315	0.0030	FREE
0.0127	0.0132	0.0131	0.0130	0.0301	0.0037	FREE
0.015	0.0145	0.0147	0.0147	0.0330	0.0049	FREE
0.0151	0.0173	0.0167	0.0164	0.0345	0.0000	FREE
0.0134	0.0123	0.0113	0.0123	0.0291	0.0008	FREE
0.012	0.0124	0.0121	0.0122	0.0297	0.0025	FREE, SLIGHT STEP FELT IN SEAR TRAVEL
0.0154	0.0139	0.0136	0.0143	0.0328	0.0038	FREE
0.0138	0.0132	0.0145	0.0138	0.0297	0.0007	FREE
0.0123	0.0141	0.0141	0.0135	0.0302	0.0000	FREE
0.0141	0.0137	0.0131	0.0136	0.0330	0.0026	FREE, SLIGHT STEP FELT IN SEAR TRAVEL
0.0144	0.0137	0.013	0.0137	0.0309	0.0023	FREE, SLIGHT STEP FELT IN SEAR TRAVEL
0.0152	0.0143	0.0146	0.0147	0.0329	0.0017	FREE
0.013	0.0126	0.0149	0.0135	0.0352	0.0032	FREE
0.0162	0.0163	0.0158	0.0161	0.0320	0.0026	FREE, SLIGHT STEP FELT IN SEAR TRAVEL
0.0156	0.0161	0.0158	0.0158	0.0334	0.0043	FREE
0.0137	0.0135	0.0137	0.0136	0.0412	0.0000	FREE
0.014	0.0138	0.0138	0.0139	0.0282	0.0026	FREE, SLIGHT STEP FELT IN SEAR TRAVEL
0.0119	0.0119	0.011	0.0116	0.0312	0.0021	FREE
0.0175	0.0153	0.0165	0.0164	0.0318	0.0024	FREE
0.0151	0.0146	0.0145	0.0147	0.0290	0.0000	FREE
0.0134	0.0134	0.0144	0.0137	0.0297	0.0040	FREE
0.0126	0.015	0.0157	0.0144	0.0296	0.0011	FREE
0.0145	0.0141	0.0149	0.0145	0.0334	0.0000	FREE
0.0156	0.013	0.0149	0.0145	0.0308	0.0018	FREE
0.0129	0.0138	0.0135	0.0134	0.0296	0.0014	FREE
0.0163	0.0173	0.0175	0.0170	0.0315	0.0017	FREE
0.0171	0.0127	0.0149	0.0149	0.0381	0.0000	FREE
0.0162	0.0154	0.0157	0.0158	0.0302	0.0000	FREE
0.0128	0.0138	0.0131	0.0132	0.0322	0.0019	FREE
TEST AVERAGE			0.0132	0.0319	0.0025	

SPEC. = .006 TO .018

NOTE- MAR ON RECEIVER OUT OF BOX

NOTE- MISSING REAR TAKE DOWN SCREW OUT OF BOX, NOTHING IN BOX

NOTE- SAFETY IN FIRE POSITION OUT OF BOX

NOTE- MAR ON STOCK OUT OF BOX