

LEWY v. REMINGTON
Trial Testimony of JOHN P. LINDE
June 23, 1986

UNITED STATES DISTRICT COURT WESTERN DISTRICT OF MISSOURI

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| EVELYN LEWY AND JACK LEWY | NO. 83-3172-CV-S-2 |
| Plaintiffs, | |
| vs | Springfield, MO |
| REMINGTON ARMS COMPANY, INC. | June 23, 1986 |
| AND K-MART CORPORATION, | |
| Defendants | |

PARTIAL TRANSCRIPT OF TRIAL BEFORE THE HONORABLE WILLIAM R.
COLLINSON AND A JURY

APPEARANCES:

FOR THE PLAINTIFF: WILLIAM H. MCDONALD ESQ.
RICHARD C. MILLER ESQ.

FOR THE DEFENDANT: JACK HEADLEY ESQ.
JOHN SHAW ESQ.
RANDY LOOMER ESQ.

COURT RECORDER: JANE HARING

TRANSCRIBER: DEANNA J. MILLER

2
1 COURT IN SESSION AT 9:42 A.M.
2 MR. SHAW: Your Honor, we would put Mr. Linde on the
3 stand for some redirect please?
4 THE COURT: Take the stand, Mr. Linde.
5 JOHN LINDE, DEFENDANT'S WITNESS, PREVIOUSLY SWORN
6 REDIRECT EXAMINATION
7 BY MR. SHAW:
8 Q. Mr. Linde, last Thursday when Mr. Miller was asking you
9 some questions he showed you what was marked as Exhibit K-5
10 which was a letter from George Martin to E. F. Barrett dated
11 May 20, 1975. Do you remember that?
12 A. Yes, I do.
13 Q. And that letter and some attachments to it, if I might
14 hand it to you, refers to justified complaints regarding FSR.
15 Do you remember that?
15 A. Yes, I do.
16 Q And what does the term justified complaints mean?
17 A. That means that the complaint, that the customer says what
18 the rifle would do, was duplicated by the people at the
19 factory.
20 Q. So justified only means that when Remington got the gun
21 and they were able to duplicate it?
22 A. Exactly.
24 Q. Justified does not mean that the complaint was due to some
25 manufacturing defect in the rifle.

3 A. No, it does not.
2 Q. Now what were some of the typical causes for an FSR that
3 Remington received back and was able to duplicate?
4 A. You could have a broken part, you could have the trigger
binding back, you could have the trigger assembly misadjusted.
6 Q. All right. Now Mr. Miller also asked you some questions
7 about two gun examination reports which did not indicate that
8 there had been any adjustments of the parts of the rifle that
was being examined or broken parts and that Remington could
not duplicate the FSR. Do you remember that?
A. Yes, I do.
Q. Now have you seen over the course of your time with
Remington gun examination reports where Remington was able to
duplicate an FSR?
A. Yes.
Q. And where the fire control had been adjusted or had broken
parts for example?
A. Yes, I have.
18 Q. Now Mr. Miller also asked you some questions about the
20 policy expressed in some letters back to the customers offer-
ing to return a rifle if the FSR could not be duplicated without
replacing the trigger assembly. Now do you remember that?
23 A. Yes, I do.
24 Q. Now do you think that Remington would offer to return, and
return a rifle to the customer

4
1 THE COURT: Well that's an opinion of his now, that's
2 not -- he's not the one that made the decision is he?
3 MR. SHAW: Your Honor?
4 THE COURT: You're asking for his opinion.
5 MR. SHAW: Yes, Your Honor.
6 THE COURT: Well, did you make the decision whether
7 to return the rifle or not, Mr. Linde?
8 THE WITNESS: Not directly, no.
9 THE COURT: Well, he can't say what Remington might
10 or night not do.
11 BY MR. SHAW:
12 Now Mr. Miller questioned you as to whether an FSR can be
13 an intermittent condition and you said yes, if the FSR was due
14 to the trigger return spring being backed out. Do you remem-
15 ber that?
16 A. Yes, I do.
17 Q. Could you explain that please to the Court and the jury
18 using this model?
19 A. If the trigger return spring right here was backed out
20 such that we had a minimum engagement, if you'll watch the
21 engagement here between the sear and the trigger connector,
22 and so you're just sitting on like a knife edge, like a hair
23 trigger, that could set up the condition. Now that could be
24 caused by either backing out the trigger return spring or it
25 could be caused by cranking in the engagement screw such that

Linde - Redirect

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1 you have a hair trigger. Now the reason I say this is that
2 the condition of what the gun would do then would depend upon
3 where the relationship of those two parts are. If it returned
4 a little more maybe it would work okay. If it returned where
5 it was right on the radius then it would no doubt FSR, so it
6 could be a random -- depending on where the trigger is, with
7 respect to that connector.

8 Q. And where the trigger would be would relate to this return
9 force which is getting to this spring.

10 A. Yes. Yes, it is.

11 Q. Okay. And this intermittent condition due to the return
12 force being changed in that spring, is that the kind of condi-
13 tion you would observe in the factory?

14 A. No, it's not.

15 Q. Is retraction, this return force tested in the factory?

16 A. Yes, it is, as we discussed on Thursday. It's tested a
17 number of times.

Q. All right. Now Mr. Miller in cross-examination asked you
19 if the sear lift on this rifle was .0095, nine and a half
20 thousandths, the sear being raised nine and a half thousandths
21 and the clearance between the trigger and connector was 10
22 thousandths. He asked you doesn't that mean there was a
23 defect in the rifle and you said no.

24 A. That's correct.

25 Q. And then he asked you why and you said because connectors

Linde - Redirect

6

1 don't rise. Do you remember that?

2 A. Yes, I do.

3 Q. Now why did you say connectors don't rise?

4 A. Because if you go through it and calculate it out from an

5 engineering standpoint, you can see the connectors will not

6 rise. I could demonstrate that.

7 Q. All right.

8 A. Let me go through on the models and explain what I mean.

9 If you take the situation as we discussed on Thursday where we

10 have the firing pin, and this is right here, the firing pin is
pushing forward on this sear stopping the forward motion.

12 It's also pushing down. As we discussed the sear is pushing

13 down on the trigger connector. Now the gun is -- the safety is
in the fire position, the gun is ready to fire. If I pull the
trigger the sear drops down and lets the firing pin go forward.

In this situation right here there's no way that
17 that connector can rise up because that connector is what is

18 the part that's supporting the sear, which in turn is support-

19 ing the firing pin. So when the gun is in the ready to fire

20 position there's no way that the connector can rise up. The

21 next condition would be if the rifle had the safety on. In

22 this situation the safety arm is supporting sear which is

23 supporting the load from the firing pin. The connector is

24 right underneath the sear now, as you can see. If -- whether

25 it's inertia or whatever, shifts that connector, the

Linde - Redirect

7

1 connector has no place to go but to go up and bottom on the
2 bottom of the sear. The connector can't get up. If it gets
3 up -- or pardon me, it can't get past the sear, it can't catch
4 because if it goes straight up it's going to hit the bottom of
5 the sear, so the connector cannot be trapped if the safety is
6 on. The only way that you could trap the connector is if the
7 trigger was artificially pulled -- not artificially pulled,
8 but if you had an artificial condition where the trigger is
9 pulled and it gets to right here, we're going to pull the
10 trigger and compressing the trigger return spring, and I've
11 got the connector now forward of that sear surface. That's
12 the only condition where that connector could come up and get
13 trapped and that condition has to be set up by having the
14 trigger forward, out of the way of the sear.

15 Q. Okay and if you impact forces then -- why don't you

1 6 explain it to the jury, Mr. Linde.

17 A. Okay, let me take it a step farther. If you take a look
18 at impact forces which you've just brought up, if you take a
19 look at this trigger you can see that the trigger clearly
20 balanced about that pivot. By balances that is -- like this
21 would be a balanced system, that magic marker is balanced
22 about the center. So if there's an inertia load, the piece
23 stays in the same position. Now here would be --

24 Q. What's an inertia load?

25 A. This is an inertia load if I take and I stop it real

8
1 quick. You see, it's off center loading caused by inertia.
2 Inertia is an impact.
3 Q. All right.
4 A. Okay? So here if I have this in inertia loading, I come
5 down and it stops, the mass keeps going. As I explained here,
6 the trigger is designed such that it's a balanced -- it's bal-
7 anced so that I have essentially the same kind of mass up here
8 as I have down here, so that if I impact it, it's going to
9 come down and stay right where it's at. Now let's go on,
10 let's get back to the condition where we got this trigger
11 pulled and we got it so that the connector can get by that
12 sear surface. So we have to have that situation first, and
13 then at the same time I've sketched out what that would look
14 like. See, all I've done here is just sketched a sear, the
15 trigger and the connector and I have the spring force on it,
16 and I've put it right in the position that I was describing.
17 I've compressed that trigger spring and pulled it so that the
18 connector can get by the corner of the sear if there was a
19 load on it. I've also taken and let's just go through what
20 the forces are on this system so we can get some idea of the
21 loads that exist on the mechanism. When the gun is back into
22 the ready to fire position, it's got a load of about 24 to 27
23 pounds in the firing pin pushing here, and that load is trans-
24 mitted through this pin and also down onto that connector. So
25 when I pull that trigger I'm getting a frictional component of

9
1 the rubbing here, and of the -- any kind of resistance I have,
2 frictional components with the trigger on the side housing,
3 and I'm also compressing the spring. So the trigger pull that
4 you feel when you pull the rifle is a combination of the fric-
5 tion from this load, friction of the system working in the
6 mechanism and compressing the trigger spring. Now if you have
7 a rifle that's in the three to five pound specification, say
8 the rifle is at four and a half pounds. When you pull the
9 trigger you could have, say, two pounds friction and two and a
10 half pounds where you're compressing the spring, and that
11 would be a good approximation that we could just kind of work
12 through. So with the safety in the on safe position I've
13 taken this frictional component out of the system, haven't I?
14 When I pull the trigger all I'm doing is I just have the
15 resistance, any friction of the trigger with the side panels,
16 and I'm compressing the spring. So if I'm trying to get back
17 to this condition here with the safety on, I've lifted the
18 sear up and as I pull the trigger to get it into this what you
19 Might call artificial position, I have a spring force right
20 here acting on the connector, pushing the trigger back and
21 any kind of frictional forces. Now what is this? What would
22 be the force on the spring? What I've done here is -- well,
23 if you could visualize this, this would be like a teeter-
24 totter, when you're young or when you take your kids to the
25 park. If I have two and a half pounds down here pulling on

Linde - Redirect

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1 the trigger and the distance between here and here is about
2 half the distance from here to the spring, so if I've got a
3 weight of two and a half pounds here and I go through that,
4 through my teeter-totter, I'm going to have about five pounds
5 on the spring. So I take that and put it the other way. If I
6 have a small kid here I've got to put the light boy all the
7 way to the end of the teeter-totter and I've got to put the
8 heavy kid about halfway down on the other side to get the
9 thing to balance, right? And that's all I'm saying here, I
10 Just equating back through saying what would be the force on
11 the spring, it was a two and a half pounds pull on the
12 trigger. And the force on the spring, the spring force is
13 around five pounds in this case. I chose five pounds because
14 that's one of the lowest -- that would be pretty much the
15 lowest that you would have on the spring. The spring might
16 run anywhere from five, say, to six and a half pounds. So
17 this is

18 Q. Would this be a gun in factory specification you're talk-
19 ing about?

20 A. Yes, it would be.

21 All right.

22 A. I'm talking a gun in factory specifications and I'm talk-
23 ing a gun where I'm holding the trigger here so that there's a
24 clearance between the connector and the sear. Now if I take
25 and say well okay, here's what the question is, what kind of a

Linde - Redirect

11

2 load does it take to move that connector up?

3 Q. Now by load you mean force?

4 A. Force, yes. Now I just went ahead and sketched this out.

5 Again what I've done here is I've just sketched the trigger

6 upside down. So say okay, here's the connector weight, the

7 connector weighs a certain amount. The connector in the 700

8 weighs .08 ounces.

9 Q. Okay, excuse me. You've sketched that trigger now upside

10 down just as if a gun owner had the gun over his shoulder

11 upside down. Is that right?

12 A. Yes, and also I can't get the connector to fall when it's

13 already flat in this position.

14 Q. Okay.

15 A. But you know, the force of gravity is down so I can't

16 demonstrate it unless we can turn it upside down, so I turned

17 it upside down. Here again we had our trigger pull force of

18 two and a half pounds which gives us the spring force of five

19 pounds. That spring force is pushing that connector up

20 against the trigger so that connector is setting between the

21 spring on one side and the trigger on the other side and it's

22 being held there. And what's holding it there is the fric-

23 tional force. Now the friction force, and let me just regress

24 a minute, the friction force is a force that it takes some-

25 thing to move, restrains motion. If I take this mechanism here

sitting on a table, if I take this -- and say this

12
1 mechanism weighs 30 pounds. It feels like 50, but let's say
2 30 pounds and I take -- and I take a rope and I hook up to
3 it. If the coefficient of friction between this surface and
4 that surface was .1, or one, which is the maximum, if this
5 weighs 30 pounds and I pull horizontal here, I'd have to pull
6 with a force of 30 pounds to move it. If I took and put nylon
7 bushings underneath the four corners and I put that on a piece
8 of like polished marble, then I could pull that and maybe have
9 a coefficient of friction of, say, .1 and that 30 pound force,
10 I could move that with three pounds. Because coefficient of
11 friction is just the ability of one material to slide on
12 another. Another case in point, on your caliper brakes, if
13 you had something with a very low coefficient of friction,
14 your press your brakes on real hard. An example would be when
15 YOU change the coefficient of friction, if your brakes got
16 real wet and you know how you keep going when you put a lot of
17 pressure on, that would be a low coefficient of friction. A
18 higher coefficient of friction would be when the brakes really
19 grab and stop you immediately. All I'm trying to do here is
20 just explain that when I push perpendicular to one piece of
21 steel on another piece of steel, there's a certain restraining
22 force called the coefficient of friction. And this frictional
23 force that's holding it there is determined by the coefficient
24 of friction times the spring force. Just as this -- when I
25 pull on this, whatever it takes me to move that is the coeffi-

Linde - Redirect

13

cient of friction of this material to this material times the
2 weight of the part. And again, if that weighed 30 pounds and
3 the coefficient of friction was one, then it would take 30
4 pounds to pull it. In this case, if you look in -- oh, your
5 engineering manuals, steel on steel, the coefficient of friction
6 is about .3, so the friction force that I have on the
7 connector, between the connector and the trigger, is about .3
8 times my five pound load, or one and a half pounds. So
9 there's about one and a half pounds -- this system then would
10 resist a weight up to one and a half pounds. So if I put one
11 and a half pounds on here and I pushed, I could move that
12 connector. Now we just went through and said well, what does
13 the connector weigh? The connector weighs .08 ounces. So how
14 many times, or how much -- how many times that connector
15 weight does this spring force exert on the connector and a
16 frictional force would hold back? Let me rephrase -- that
17 didn't come across very clear, let me rephrase that. I have a
18 frictional force, it will support a weight up to one and a
19 half pounds. It has to support a weight of .08 pounds -- .08
20 ounces. So what I would like to know is how many times
21 greater is this frictional force than the weight that it
22 actually has to support? The times greater, if I take one and
23 a half pounds, that's my frictional force, times 16 ounces to
24 get it to ounces, divide it by .08 ounces which is the weight
25 of the connector, and it comes out to 300. That's saying that

Linde - Redirect

14
2 that spring force would support, for example, 300 connectors
3 piled up, or 300 times the connector weight. So that system,
4 if you turn it upside down, will support 300 times the weight
5 of that connector with that spring force, and you can see why,
6 because you have a spring force of five pounds then you have a
7 connector that only weighs .08 ounces. So the comparison of
8 what's trying to fall with the kind of force that you're putt-
9 ing on it to keep it from falling is, you know, it's very
10 the order of magnitude is different.
11 Is this G force, Mr. Linde?
12 A. You could go to -- if you wanted to go to inertia loading,
13 then the next step is you could say well, okay, the connector
14 weighed .08 ounces, and that connector, the weight of the
15 connector really is the force of gravity. The force of gravity
16 is what's trying to make that connector go down, so that
17 weight is essentially one G, or one times the force of
18 gravity. So you could say this system, at 300, would go 300
19 times the force of gravity. Now how you equate that is, you'd
20 say well, I'd have to have an inertia load and the only way I
21 get an inertia load on a rifle is I can drop it or force it
22 down, or I can take something and I can hit it. And the kind
23 of loads that you'd be talking about, you'd have to take like
24 300 -- let's see, if you had a rifle with a scope, a 700, it
25 would weigh Just about eight pounds. So if you took eight
26 pounds, and this is the connector and trigger that reside in

Linde - Redirect

15

that rifle, then the kind of forces that you'd have to exert
2 on that rifle would be eight pounds times 300, or around 2,400
3 pounds.

4 Q. So what you're saying then is if you had a gun owner that
5 was walking through the woods and somehow in one instant he
6 pulled that trigger such that it was out here, to have these G
7 forces exerted because that connector is in the rifle, the
forces exerted on the connector would likewise have to be
9 exerted on the rifle and that would be 2,400 pounds?

10 A. Yes. That's an approximately, you know, because it would
11 have to come on and then it would have to peak and then the
12 thing would have to move, and it would have to be transmitted
13 into this system. So you get a little cushioning, so it would
14 probably have to be a little something more than the 2,400 to
15 get 2,400 pounds on the -- or to get the 300 G's on the
16 connector.

17 Q If you hit this rifle with 2,400 G's would that likely
18 knock the hunter down?

19 A. No, 2,400 pounds would yes, obviously.

20 Q. Could you exert 2,400 G's just

21 A. 2 400 pounds.

22 Q. 2,400 pounds just by bumping into a tree?

23 A No.

24 Q. Let me ask you this, could you exert 2,400 pounds on this
25 rifle if it were riding along in a pickup truck?

Linde - Redirect

16

2 A. No. No. if you had that kind of forces on it, you would

3 actually be --

4 Q. You'd break the rifle.

5 A. Yes, you would -- it would show damage in some way.

6 Q. All right.

7 THE COURT: Let me interrupt and ask a question. I'm

8 just -- I'm trying to follow all this, but we have seen -- I

9 think you and I know some of these other witnesses --.take a

10 pencil and push in there with the rifle upside down and make
that connector

12 THE WITNESS: Yes. If you take a

13 THE COURT: Now they're not pushing with 2,400

14 pounds, are they?

15 THE-WITNESS: No, no. When I went through this

16 here, excuse me.

17 THE COURT: I can see it all right.

18 THE WITNESS: When I went through and calculated, I'm

19 saying that the frictional force is .3 times five pounds, or 20
-- times five pounds which is one and a half pounds. So what

21 I'm saying is that you can move that connector with just a

22 screwdriver or a pencil with one and a half pounds. But I'm

23 also saying that the connector only weighs .08 ounces, and one

24 and a half pounds compared to the .08 ounces is a tremendous

25 difference, and if you're talking inertia loads

THE COURT: Impact.

Linde - Redirect

17

THE WITNESS: Impact, the force relates to the
2 object. For example, the classic is a feather, you know,
3 being hit with a feather or being hit with something that's
4 heavier. This is very, very light at .08 ounces, and that's
5 why it will withstand the tremendous inertia loads.

6 MR. SHAW: If I might, Your Honor, explain it
7 further, or ask the witness some questions.

8 THE COURT: I believe you'd better ask him.

9 MR. SHAW: All right.

10 THE COURT: I don't believe you're qualified to
11 answer that question.

12 THE WITNESS: Sir, do you understand what I'm

14 THE COURT: Yes, I understand.

BY MR. SHAW:

Q. Mr. Linde, when the screwdriver test is being performed,
16 that's deliberate pressure on this connector. Is that right?

17 A. That's correct.

18 Q. And what you've been explaining

19 A. Just a minute, it's not only deliberate pressure but it's
also -- you also have to have the trigger pulled forward so 21
that when you apply the deliberate pressure the connector can
move up and catch on that, catch on that corner.

23 Q. All right, and when is

A. So you can apply deliberate pressure with that gun on safe
and the connector under the sear or you can apply deliberate

Linde - Redirect

18

1 pressure when the gun is in the ready to fire position and you

2 cant t move the connector.

3 Q. All right. Now when this deliberate pressure is being

4 applied, it's not being applied to the rifle it's just being

5 applied to that .08 ounce connector..

6 A. That's right.

7 Q. Is that right?

8 A. Right where this -- excuse me, right where this arrow

9 points down and that's where your force would be applied.

10 Q. All right, and Mr. Butters and Mr. Olson were here and

11 were talking about impact. They said that it would take

12 impact to make this connector move in the field, and what

13 you've explained to the jury is what impact or vibration would

14 be necessary to make that connector move. Is that right?

15 A. Yes. I'm saying it would take impact but I'm quantifying

16 hcw much impact it would take to make the connector move.

17 Q. And because the impact is on the connector that is inside

18 of this rifle, that impact force would also be exerted on the

19 rifle. Is that right?

20 A. That's correct.

21 Q. And that's the force that's 2,400 pounds.

22 A. That's right.

23 Q. Now Mr. Miller also asked you some questions regarding the

24 dimensions for the trigger on a Model 700 in 1975 when the

25 Lewy rifle was manufactured. Do you remember that?

Linde - Redirect

19

A. Yes, I do.

2 Q. And he was talking in particular about the dimension for

3 this surface on the trigger that mates with the connector. Do
you recall that?

5 A. Yes.

6 Q. And you said that the drawing dimension in 1975 for that

7 dimension was 1.06 plus or minus five thousandths. Is that

8 right?

9 A. I believe so, yes. If you want to hand me the trigger

10 drawing

Q. Excuse me, 1.076.

12 A. Plus or minus five.

13 Q. Plus or minus five thousandths.

14 A. Is that off the drawing? If you say so.

15 Q Yeah, Okay. So that would mean that you could have that

16 surface be anywhere from 1.081 to 1.071. Is that correct?

17 A. Yes.

18 Q. And does that mean that a trigger made in 1975 such as for

19 the Lewy rifle that had a dimension on that surface anywhere
between 1.071 and 1.081 would be in specification?

A. Yes, it would be.

22 Q. And this dimension as shown in reports which have been

23 admitted in evidence on the Lewy rifle is 1.073. Now Mr.

24 Olson and Mr. Butters who were plaintiff's experts were here

25 and they testified that this Lewy trigger on that surface was

Linde - Redirect

20

not in specification for 1975. Is that wrong?

2 A. Yes, it is. From your dimensions you can see that it's in
3 specification.

4 Q. Okay, because 1.073 falls between 1.081 and 1.071. Is
5 that right?

6 A. That's correct.

7 Q. Now Mr. Miller, also if you remember, did he ask you some
8 questions about the clearance here between the connector and
9 the trigger on this surface? Do you remember that?

10 A. Yes, I do.

11 Q. And you told him that the maximum clearance allowed
12 between the trigger and connector on a rifle that was manu-
13 factured in 1975, which was when the Lewy rifle was manu-
14 factured, was .012. Do you remember that?

15 A. Yes, it's minus one to .012.

16 Q. Okay. Like this?

17 A. On the other side, but that's okay.

18 Q. Okay. I never was very good at math. Now this clearance
19 between the trigger connector and the trigger on the Lewy
20 rifle is shown in Remington's second gun exam to be .008 to
21 .010. Now is that clearance then on the Lewy rifle within the
22 specification that applied in 1975 when the Lewy rifle was
23 manufactured?

24 A. Yes, it is.

25 Okay, and again that's because .008 to .010 is within

Linde - Recross

21

these two other numbers.

2 A. Yes, that's right.

3 Q. .001 to .012. Is that right?

4 A. Yes.

5 Q. And so if you had clearance between the trigger and

6 connector that was anything less than .012 for a rifle made in

7 1975, then that aspect of the rifle would be within the

8 Remington specification?

9 A. Yes, that's correct.

10 MR. SHAW: No further questions.

11 THE COURT: Any recross?

12 MR. MILLER: Yes, Your Honor. Your Honor, if you

13 don't mind just leave my chart up on that.

14 THE COURT: All right. The jury will have to have a

15 lot better eyes than mine if they can read that.

16 MR. MILLER: Can you see it?

17 THE WITNESS: Well I can, yes.

18 MR. MILLER: Okay.

19

THE WITNESS: And if I can't I'll just get up and

20 look.

21 RECROSS-EXAMINATION

22 BY MR. MILLER:

23 Q. Now since John ended with some figures let's start with

24 some figures. What I've tried to do here is go through and

25 give a comparison from your testimony the other day. Let's go

Linde - Recross

22

through and make sure we've got it right. First we've got the
2 Lewy rifle measurements from the second examination. We've

3 1.073 for the trigger, 1.0835 to 1.0845 for the trigger

4 connector depending on where you measure it on the trigger

5 connector, .0105 to .0115 when you subtract the two, the

6 trigger connector which is bigger minus the trigger, that's

7 the difference you get in play. We'll get to the sear lift

8 later on. Okay? Is that a fair statement of what the --

9 MR. HEADLEY: Well, we'd better check with the exhi-

10 bits. The question with you, Mr. Linde, because I don't know

11 if you'd have to have instant recall memory to get all those

12 figures.

13 BY MR. MILLER:

14 Q. Is that what you remember going through yesterday?

15 A. We didn't go through this --

16 Q. Friday Thursday. All right, Mr. Linde, here is the

17 second exam which is Plaintiff's Exhibit F-6. I'll turn you

18 back to one of the later pages, and first can you confirm that

19 that's the trigger connector measurement that I have up there

20 on the board or the Lewy rifle? 1.0835 to 1.0845?

21 A. Yes, I can.

22 Q. Can you confirm by turning the next page that we got the

23 right trigger measurement?

24 A. Yes, I can.

25 Q. All right, and then if you subtract the two do you agree

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23

1 with my subtraction here that we've got a play of anywhere
2 from 10 1/2 thousandths to 11 1/2 thousandths?
3 A. Well, I have a little trouble with that because of the
4 when you actually measure the play which is your 7- right here
5 on the same page, it shows eight to 10 thousandths.
6 Q. But if you subtract the measurements that Remington took
7 -- those are Remington's measurements by the way?
8. A. Yes, they are.
9 Q. If you subtract their measurements you get a difference
10 between the trigger and trigger connector of 10 1/2 to 11 1/2
11 thousandths. Isn't that right?
12 A. Okay, let's --
13 Q Doesn't this minus that give you this?
14 A I just -- I'm not that fast, I'm sorry. Yes.
15 Q Okay. Now if you compare that to the Remington specifica-
16 tions for 1975, August '75, the date of manufacture of this
17 rifle, and then after 1975 when there were some changes made,
18 I think you testified to these figures here for the trigger,
19 1.071 to 1.081, that's 1.076.
20 A Yes, I did, I testified to that.
21 Q Plus or minus five thousandths, right?
22 A. Yes, I remember that.
23 Q. And isn't the specification of the trigger connector 1.080
24 1.083?
25 A. Yes, it is.

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1 Q. Okay. Do you need to look at the chart for that?

2 A. No, I remember that.

3 Q. Okay. So you can have -- this is what you said I think a
4 moment ago, the difference by specifications of the trigger,
5 trigger connector fit of anywhere from negative one thou-
6 sandths which would be an interference, it wouldn't fit
7 together, right?

8 A. That's right.

9 Q. Up to

10 A. And that's what I said last, you know, Thursday.

11 Q. Right.

12 A. That you'd have to file it.

13 Q. Up to 12 thousandths.

14 A. Yes, that's right.

15 That's for August of 1975.

16 A. Yes.

Q And when you made the change after '75, you went to a
tolerance here of 1.077 to 1.079. Is that right?

19 A. Yes.

20 No change in the trigger connector though.

A No.

22 All right, and that reduced your play, as we went through
23 the other day.

24 A Yeah, it reduced the clearance.

25 Q To a maximum of six thousandths play trigger and trigger

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connector. Right? That's those figures that we figured out.

2 A. oh, okay, yes.

3 Q. Remember that?

A. That's right, I remember.

6 Q. All right. Now, if you compare the Lewy rifle to the

7 specifications in 1975, which is what you just went through
with John.

8 A. Yes.

9 Q. What you said was if you compare the trigger it's within

10 specs by two thousandths of an inch.

11 A. Yes, it is.

12 Q. If you compare the trigger connector it's out of specs,

13 isn't it?

14 A. Yes.

15 Q. By one and a half thousandths of an inch.

16 A. No, it would be half a thousandth.

17 Q. Well, it depends on what you measure it.

18 A. Yeah, I understand, but how we're selling the gun you'd

19 have to take the minimum, the 1.083 -- where is it -- 5.

20 Q. Right up here.

21 A. Right here. You'd have to take that because it works

22 how it works.

24 Q. Isn't there a point on that trigger connector where it's

25 1.0845 apart?

A. Yeah.

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Q. Then

2 A. That would never see the trigger. You have to take the
3 minimum dimension when it works over something.

4 Q. All right.

5 A. So that would be half a thousandth.

6 Q. .0005.

7 A. Yes.

8 Q. So you say a half a thousandth -- you say a half a thou-
9 sandth, we say a thousandth and a half, but it's out of-spec
10 either way, right?

A. Yes.

12 Q. Now that point, the point of the trigger connector which is
1.0845, a little wider.

14 A. Yes.

15 Q. Isn't that the edge point of the trigger connector, out
16 here in the edges?

17 A. I don't believe so.

18 Why don't we take a look and see. Didn't they get a mea-
surement of 1.0845?

20 A. They showed both dimensions the same way, so the way it
21 looks to me is they went across the part, you know, this way,
and at one point they got 1.0835 and someplace else they got 23
1.0845.

24 . Let's go back to the shim test point where they stuck a
25 shim in there between the two.

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A. Yes.

2 Q. They stuck a piece of metal in between the two.

3 A. Yes, and that's really the best because that's what you're

4 checking for, is you're checking for the clearance.

5 Q. Didn't they find it was wide at the outer edge of the

6 trigger connector at the points than it was towards the inside

7 of the trigger?

8 A. Yes.

9 Q. All right.

10 A. Yes.

Q So can't we assume that this figure here, the 1.0845 is at
12 the outer edge of the trigger?

13 A. No, you can't, not based on this.

14 Okay.

15 Q Because if you go back in how they measured it, it shows

16 that the vernier caliper coming in -- well it would be coming

17 in to measure this way in that dimension. So it could have

18 been anyplace, you know, across that part.

19 All right, but at some point in that part isn't it a

20 thousandth and a half out of spec?

21 A. Yes.

22 All right. The difference when you subtract the two

23 these are the measurements that we've been referring to in

24 that document. That's the shim clearance, 10 thousandths?

25 A. Yes. That's what we used used to, we said 10 thou-

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sandths. We didn't say eight thousandths.

2 Q. Okay, and the trigger there, 1.073 and Bill, there's

3 another one in there that will show the trigger connector

4 either right before or right after it. All right, now the

5 point I want to make is next, after you change, what happened

6 to the trigger as far as the specs were changed after 1975,

7 given the minimum specification after 1975, 1.077. Is that

8 1.073 trigger out of specifications?

9 A: Yes, it would be.

10 Q. By four thousandths of an inch, right?

11 A. Well now just a minute. It's not out of specifications

12 because the specifications are applied to what existed. It's

13 different than what we had in 1975.

14 Q. But you changed the specifications, or Remington did.

15 A. Yes, we did.

16 Q. And it does not meet the new specifications.

17 A. No, it doesn't.

18 Q. Let's go and look at the trigger connector. There was no

19 change in specification of the trigger connector, we've got

20 the same specs here and here.

21 A. That's correct.

22 Q. 1.083, -- 1.080 to 1.083, right?

23 A. Yes, that's right.

24 Q. It's still out of specs either five thousandths or

25 A. No, five ten-thousandths.

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2 Q. Five ten-thousandths or one and a half thousandths.

3 A. Yes.

4 Q. Okay.

5 A. In this case it would be your five ten-thousandths.

6 Q. Now let's go down to the trigger, trigger connector inter-

7 play.

A. Yes.

Q. Up here we agreed you could have a maximum twelve thou-
10 sandths when the change was made and we're down to six thou-

11 sandths. We went through that the other day, right?

A. Yes.

13 Q. Well, when you made the change you went from something

14 that was in specs by one half of a thousandth to something
that was out of spec according to the new specs by five and a
15 half thousandths. Isn't that right?

16 A. No, it would be -- wouldn't it be four and a half thou-

17 sandths?

18 Q. Well, regardless.

20 A. I think it would be four and a half because it would be

21 ten and a half to six, and six from ten and a half would be

22 four and a half thousandths.

23 Q. Going back and using this figure here rather than that

24 one, right?

25 A. I'm Just trying to be consistent.

Q. All right. I'll put down four and a half.

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2 A. Okay.

3 Q. if that makes you feel better. It is either four and a half
or five thousandths out.

5 A. No. No, there's a change in specs and that's a change in
clearance.

7 Q. I'm talking about in relationship to the new specifications.

9 A. Yes.

Q. It doesn't meet the new specifications by four and a half
thousandths.

12 A. No, it doesn't.

13 Q. And the new specifications, the end result of those new
specifications when they changed the trigger, reducing the 14
15 tolerances from the ten thousandths range to a two thousandths
range, the end result was to change the maximum allowable play
of the trigger and the trigger connector from twelve thou-
sandths to six thousandths. Cut it in half, isn't that right?

19 A. Yes, it did, and also of course you can see it eliminated
the interference where you go from one thousandths negative to
21 one thousandths positive.

I understand that.

23 A. And that was, of course, the reason for the change so we
didn't have to file anymore.

25 Q. We don't have any interference in this trigger and trigger
connector, do we?

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A. No, we do not.

3 Q. What we're interested in is the maximum amount of play.

4 A. Yeah, the clearance.

Q. And that went from twelve thousandths down to six thousandths.

6 A. Yes, and we know what the rifle is because it says right
7 up there that it's ten thousandths.

8 Q. Okay. Even if we take the figure that Remington's got up
9 there, ten thousandths; over in the left hand side there right
10 under trigger/connector, the shim test of ten thousandths.

A. Yes.

Q. Does that ten thousandths meet the new specification of a
13 maximum of six thousandths?

14 A. No, it does not.

15 Q. So even using your shim test up there which you've
16 referred to where you stick a piece of metal in between the
17 two.

18 A. Yes.

19 Q. It still doesn't fall within the new specifications.

20 A. No, it does not.

21 Q. All right. All right, now you were talking about the
22 amount of force necessary to don't know if I'll use the
24 correct terms here, I'm not -- like Don is, I'm not going to
25 profess to you that I can even begin to
UNIDENTIFIED MALE SPEAKER: Know engineering?

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MR. MILLER: Use the right terms.

2 UNIDENTIFIED MALE SPEAKER: English.

3 BY MR. MILLER:

4 Q. You say that this force on the trigger connector

5 A. Yes.

6 Q. They was Mr. Olson and Mr. Butters do it and maybe some

7 other people, a pencil lead on a trigger connector of maybe

8 one and a half pounds is transferred to the field to 2,400

9 pounds or even more?

10 A. That's right.

11 Q. And of course then your position is that, of course, could

12 never occur in the field.

13 A. No, I didn't say it couldn't occur. You could have a

14 you know, if it would drop down a cliff or something sure, you

15 cold have that kind of force.

16 It couldn't occur in the type of hunting situation Mike

17 Lewy was in the day of the accident.

18 A. I wouldn't think so, no.

Q. You did say that there is inertial force. When you were

20 talking about -- find the right one here, there we go, we

haven't seen this one for awhile -- you did say there was

22 inertial force that could cause the trigger connector to rise

23 up on the trigger as long as it was underneath the sear,

because I think you used the words if there was inertia or

25 whatever that might cause it to rise up

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A. Yes.

2 Q. Rise up while it's underneath the sear, the sear would stop it.

4 A. Yes.

5 Q. Yeah, exactly. What I'm saying is, is whether the --

6 A. There can be inertia forces on the rifle regardless of

7 where the connector is with respect to the sear. If that

8 connector is underneath the sear and the gun is ready to fire

9 and there's an inertia force, nothing is going to happen

10 because it's wedged tight, right?

11 Q. Okay.

12 A. Now if you have an inertia force where the safety is on,

13 then yes. If you have a tremendous inertia force that

14 connector could move. It's being retained by the spring, but

15 if you overcome the frictional force that we were talking

16 about it could move. If you pull the trigger and you get it

17 to this place and you have an inertia force, it's being again

18 squeezed by the spring but it could move.

20 Q. Well I think you admitted in your examination that there could be an inertial force that could cause it to rise up as long as it was underneath the sear, but the sear would stop it.

A. Oh, yes, as long -- there could be an inertia force on
23 this rifle if it's on safe or whether it's pulled. If there's

24 a clearance there, then the only force that I could see that

25 would move the connector up other than sticking a screwdriver

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or pencil would be an inertial force.

2 Q. Now Mr. Linde, in your calculations you didn't allow for

3 any lubricant in the rifle, did you? You took a steel to

4 steel coefficient of friction.

5 A. Not a -- no, no friction was affected by --

6 Q. No, if you took a dry, you know, dry on dry I think the

7 coefficient of friction of dry steel and dry steel is some-

8 thing like .6 or .7.

9 A. You said steel to steel, you didn't --

10 MR. HEADLEY: Wait, let him finish.

11 MR. MILLER: I thought he was.

12 MR. HEADLEY: You keep cutting him off.

13 THE WITNESS: Yeah, what I'm considering is steel to

14 steel and I'm using a coefficient of friction like you'd use

15 where you have a sear, on the sear mechanism like you get in

16 where you've got a connector pulling off from case right here

17 underneath the sear. And I just from experience happen to

18 know it's around .3 and this is steel on steel, and so that's

19 why I used .3. If you wanted to get out a textbook you could,

20 you know, you could check me on that.

21 Q. My point is, Mr. Linde, you didn't mention anything about

22 the affect of lubrication in the system when you went through

23 your example, did you?

24 A. No. No, I never and I --

25 Q. All right.

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A. I was trying to

2 MR. SHAW: Let him finish --

3 MR. HEADLEY: Wait a minute, let him finish.

4 THE WITNESS: I was trying to make it simple and

5 BY MR. MILLER:

6 Q. My question was whether or not you mentioned anything

7 about lubrication.

8 A. No, I never.

9 Q. Your answer was yes or no?

10 A. No, I never.

11 MR. SHAW: Do you have an explanation? Let him

12 finish his answer.

13 THE WITNESS: Well I went through my

14 MR. McDONALD: Your Honor, Your Honor, the rule

15 everywhere is one lawyer objecting.

16 THE COURT: Yeah, I don't want any more two lawyers

17 MR. HEADLEY: All right, I apologize. I noticed Mr.

18 McDonald did it during their evidence when Mr. Miller was --

19 or I was cross-examining both of them. One cross-examined and

20 the other objected, but I won't do it any more.

21 THE COURT: Very well.

22 MR. MILLER: Your Honor, one other point. I've been

23 very free in letting Mr. Linde make explanation, but what I'd

24 like to get is an answer to my question before he launches

25 into his examination or explanation. My question was merely

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THE COURT: He answered it.

2 MR. MILLER: Okay.

3 BY MR. MILLER:

4 Q. Now vibration can occur to these rifles in the field,

5 can't it, rather than just one solid inertia force?

6 A. Yes, it can.

7 Q. And vibration is a different type of force, it's a grad-

8 ual, periodic force that could occur to this rifle, couldn't

9 it?

10 A. It would be a cyclic force.

11 Q. Right. It might occur here, it might occur a few minutes

13 later, it might appear for quite a long period of time.

A. Yes, it could.

14 Q. Another point that was brought up, you used a five pound

15 calculation on spring force, didn't you?

16 A. Yes, I did.

17 Q. That's the maximum of your range of force, is three to

18 five pounds.

19 A. No. Can I explain it?

20 Q. Yeah, go ahead and explain it.

21 A. Okay. The -- I said I used a spring force as felt by the

22 trigger of two and a half pounds, and if I go through my

23 teeter-totter, the distance from the spring to the pivot is

24 about half the distance from the pivot to the trigger. Can

25 you see what I'm saying?

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Q. Um hmm.

2 A. This here is about twice this distance here so if I pull
3 on here with two and a half pounds the spring force is going
4 to be five pounds.

5 Q. All right, so the spring force was five pounds is what
6 you're saying.

7 A. Yes.

8 Q. All right.

9 A. Yes.

10 Q. Now you also mentioned the example where you were going
11 through this where you said that there are more forces in that
12 rifle besides the spring force. Is that right? When you pull
13 the trigger you feel more things than just the force of that
14 spring.

15 A. Yes.

16 Q. I think you used an example where you took a four and a
17 half pound trigger pull.

18 A. Yes.

19 Q And you separated that out into the usual condition where
20 two and a half pounds might be the spring force, which is what
21 you were just describing here.

22 A. Okay two and a half -- oh, I'm sorry.

23 Q. Let's get that answer down first.

24 A. Okay. The two and a half pounds would be the force on the
25 trigger, because that's where the shooter -- that's where it's

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2 measured. When you measure trigger pull you measure here, so

3 I'm trying to relate everything back to the trigger pull. So

4 the two and a half pounds would be for the spring and then two
pounds would be for the frictional forces.

6 Q. All right, but four and a half altogether.

A. Yes, for trigger pull.

7 Q. Okay. Four and a half for the trigger pull altogether,

8 that's what I was trying to get at.

9 A. Yes.

10 Q. And that was to be separated into two and a half for the

11 spring

12 A. Yeah, two and a half

13 Q. On the spring.

14 A. Yeah, which comes out to five on the spring.

15 Q. All right. Two and a half down there

16 A. Yes.

18 Q. -- which comes up to five up there.

19 A. Yes.

Q. And two pounds of frictional force.

20 A. Yes.

21 Q. And that frictional force is the result of the friction

22 between the trigger connector and the sear is one component,

23 right?

24 A. Yes.

25 Q. And the other component would be how the thing works in

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the housing.

2 A. Yes, and on the pivot.

3 Q. The frictional force that's involved in moving back and forth in the housing?

5 A. Yes.

6 Q. And then the frictional forces involved to the pivot.

7 A. Yes.

8 Q. And that might be two pounds, right?

9 A. Yes, I'm just using that as an assumption.

10 Q. You said that would be a typical example.

11 A. Yes.

12 Q. All right. My question to you then is, does that mean

13 that you can adjust these rifles down to as low as two pounds

14 of force and it can have two pounds of frictional force in the

15 rifle like you just said in your example.

16 A. Yes.

17 Q. Does that mean that you can still adjust that rifle within

18 specifications of two pounds of frictional force and take the

20 spring entirely out of play?

A. Oh, no way.

Well you've got two pounds of trigger pull here.

A. Yes.

24 Q. And you said you could have just two pounds of frictional force in the trigger.

A. Yes.

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1 Q. Doesn't that mean if somebody adjusts it down to two
2 pounds by that gunsmith's manual -- that's the gunsmith's
3 manual.

4 A. Yes, it is.

5 Q. What the person is feeling is the trigger force minus the
6 spring force, which would leave the frictional force?

7 A. That's right.

8 Q. Okay. Now going back to this, you mentioned the other day
9 that this does not apply, this trigger pull adjustment in any
10 target rifle should never be adjusted below two pounds?

11 A. That's right.

12 Q. You said that didn't apply to the 700 in spite of the fact
13 that this is a page from the 700 gunsmith's manual, field
14 service manual.

15 A. That's right.

16 Q. And you said that was because the 700 is not a target
17 rifle, it's a field rifle.

18 A. That's right.

19 Q. And you should follow the three pound specification.

20 A. That's exactly right.

21 Q. Even though this whole page applies to Model 700s and this
22 page is given to Remington recommended gunsmiths when they're
23 given their field service manual.

24 A. Yes. Just a minute.

25 Q. Would you like to see the front page, the paper copy of

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1 that?

2 A. But do you have the -- let me see the second page.

3 Q. Of the second page?

4 A. Yeah. I think it has my initials on the second page and I
5 supplied the information on that and the intent of that was to
6 separate the trigger pull on the target rifle from the trigger
7 pull on, you know, a field rifle. So the intent that I had
8 was that that could be a trigger rifle -- oh, God -- the
9 intent I had was for that to be the trigger pull of a target
10 rifle as separated from the trigger pull on a field rifle, yes.
11 Well, do you see that reflected anywhere in that page so a
12 gunsmith would pick it up? It says --

13 A. Yes. Yes, I do. If you -- it says let me read it
14 again.

15 Q. Can you read it?

16 A. It says trigger pull adjustment on target rifle -- on any
17 target rifle, and it's trigger pull adjustment on any field
18 rifle, and it's separation as rifle. It doesn't say field
19 use, it says field rifle.

20 Q. Okay.

21 A. So to me, the intent is clear.

22 Q. Was Mike Lewy using his rifle -- excuse me, did Mike Lewy
23 buy his rifle for purposes of target shooting or hunting or
24 both?

25 A. If he bought a .30-06 700 ADL I would think that he bought

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it for field shooting.

2 Q. Meaning hunting?

3 A. Meaning hunting, yes.

4 Q. You weren't here when he testified that he bought it pri-

5 marily for target shooting although he did go hunting with it

6 now and then?

7 A. No, but the

8 Q. -All right.

9 A. That is still a field rifle as it shows there.

10 Q. I still fail to make the connection between the 700 being a

11 field rifle and not a target rifle, but we'll go on. Isn't it

13 common for people to buy 700s for target shooting rather than
hunting?

14 A. Not in my mind.

15 Q. You mean people don't buy Model 700s for target shooting?

16 A. The only 700 that I know that's used for target shooting,

17 and this is a certain classification of target shooting, is

18 the 700 varmint.

19 Q. All right, so they do buy 700s for target shooting don't

20 they?

21 A. Yes, the one with the heavy barrel.

22 Q. And that has the same type of fire control system as the

23 700 ADL which Mike bought, doesn't it?

24 A. It's similar, yes.

25 Q. All right. It's the same isn't it?

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A. Well, I'd have to think on the varmint.

2 Q. It is. And isn't it true that Remington advertise the 700

3 as a target rifle in addition to a hunting rifle?

4 A. The 700 as a target rifle?

5 Q. The 700, the generic 700 as a target rifle?

6 A. No.

7 Q. Or a shooting rifle, or a target shooting rifle in addi-

8 tion to a hunting rifle?

9 A. They advertise it as highly accurate, but advertising it

10 as used as a target rifle? Not that I'm aware of.

11 Q Let me show you a couple of catalogs here. Let's start

12 with -- this is Exhibit D-3. Let's start with this page from

13 the 1964 --

14 A. Could you wait until I get my copy?

15 Q. Sure, go right ahead.

16 A. D-3?

17 Q. D-3.

18 A. Do you have another you're going to use?

The whole set, but I'm just going to refer to a couple of
20 pages.

21 THE COURT: We'll take a 20 minute recess at this

22 time.

23 MR. MILLER: All right.

24 THE COURT: Maybe a little longer, I have to make a

25 couple of long distance calls. Court's in recess.

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COURT IN RECESS FROM 10:43 A.M. UNTIL 11:10 A.M.

2 AFTER RECESS

3 THE COURT: Proceed.

4 MR. MILLER: Thank you, Your Honor.

5 BY MR. MILLER:

6 Q. Now one of the goals of the target shooter is to achieve

7 accuracy type groupings as Mike testified to. Isn't that

8 right?

9 A. Yes, it is.

10 Q. Okay, that's what target shooting is all about, accuracy.

11 A. Yes.

12 Q. Let me show you the owner's manuals where we got the

13 owner's manuals -- excuse me, the sales catalogs for

14 Remington, Exhibit D-3. I'm Just going to refer you to a

15 couple of pages and I'm going to read, and I'd just like you

16 to confirm what's there -- what I read is what's there if you

17 would.

The Remington 700 bolt action is designed for the

19 real rifleman. The shooter who wants the accuracy

20 bonus of Remington's famous precision rifling and

21 short, crisp trigger pull, the hunter who appreciates

22 the comfort of a checked cheek piece and Monte Carlo

23 comb on an all purpose stock that gives the superb

24 balance and perfect alignment with either scope or

25 sights, and the craftsman who loves the traditional

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1 beauty of fine checkering.

2 Doesn't it refer to the shooter and the hunter in there?

3 A. Yes, it does.

4 Q. All right, and don't they use --

5 A. And the craftsman.

6 Q. And the craftsman. Don't they use that same paragraph

7 throughout the '60s?

8 A. There's the craftsman

9 In about '65.

10 A. -- where's the hunter?

11 Q. There's the hunter.

12 A. Yes.

13 Q. Over here the shooter?

14 A. Shooter, hunter and craftsman.

15 Q. And it does it in '66 too, doesn't it? Craftsman, hunter,

16 shooter?

17 A. Yes.

18 Q. So it's an all purpose rifle, isn't it? At least that's

19 the way you sold it. '67 does the same thing?

20 A. Yes, it has the shooter, the hunter and the craftsman.

21 Q. So isn't that an all purpose rifle?

22 A. It's a field rifle, yes.

23 Q. Well isn't it a target rifle? Isn't a shooter a target

24 shooter?

25 A. If you're a -- if you buy a 700, like a 700 .30-06 like

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myself, I go out and I set up at target 100 yards and I'll
3 shoot it, and I'll shoot different loads at that target and
I'll see how well my rifle performs. I'll try different hand
4 loads or factory loads and then I'll use it for plinking

5 also. I'll shoot different things with it. But my primary
6 intent of that rifle is to use it as a hunting rifle.

7 Q. My point is --

8 A. But definitely I shoot it for -- I'm a shooter, I'm a
9 craftsman and I'm a hunter.

10 Q. But it's an all purpose rifle to the public, isn't it?
According to your sales catalog it's for the shooter,
it's for

13 the hunter and it's for the craftsman.

A. It's for the shooter, hunter and craftsman, right.

1 4 Now going on to the next page, doesn't it talk about here

1 5 on this page

1 6 MR. SHAW: What year are you on, Mr. Miller?

1 7 MR. MILLER: Let me flip back here. The year would

18 be -- well I'll give you the deposition page number, it's

19 FF-26. You Just gave me excerpts and I don't find the front

20 page. So it's -- excuse me, it's FF-25.

21 MR. SHAW: Well let me get over there then.

22 MR. MILLER: All right.

23 (CONFERENCE BETWEEN ATTORNEYS, AFTER WHICH:)

24 BY MR. MILLER:

25 Doesn't it talk here about in the 1972 catalog about

5

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the varmint special, the one you mentioned before and its
2 superb accuracy?

3 A. Yes, it does.

4 Q. All right. Going on to the Model 700 center fire rifles,

5 let's see if we can find a year in this one.

6 MR. MILLER: Can you find a year, John, I don't have

7 the year marked on the front page again.

8 BY MR. MILLER:

9 Again, they're talking about the accuracy of the gun?

10 A. Oh, yes.

Q. For target shooting?

13 A. No. the accuracy for the rifle.

Okay.

A. I said that any bolt action rifle is designed for accuracy

15 Q. All right.

16 A. When I first started -- I agree with that.

17 Q. Let's talk about page 30, FF-38. That's a 1977 catalog

18 two years after the Lewy rifle was made, five years before :he

19 accident. Don't they in the first paragraph say:

20 I shot one of the tightest groups I ever fired with

21 this 700 just as it came from the box and it seems to:

22 improve with age?

23 A. Yes, they sure do.

24 Q. Isn't that a target shooting feature of the rifle? Isn't

25 that target shooting when you shoot a tight group?

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1 A. No. it's -- yes, it tells about the accuracy potential if
2 this rifle.

3 Q. One other thing I noted on this page, does it say there
4 the Model 700 will make a great hand me down some day?

5 A. Yes, it does.

6 Q. How long do these rifles last, or will they last?

7 A. I could say, but it would be quite a while.

Q. All right. Again, in this catalog they're talking about
9 accuracy?

10 A. Extreme accuracy, superior strength, attractive styling.

12 Q. Isn't the Model 700 favored by a lot of people who either
compete in competitions or just informally target shoot
13 because of that accuracy?

14 A. The 700 action, that's just the action, is used by a
16 number of target shooters, that's right.

17 Q. That's what we're talking about here, the action of this
rifle, the fire control system.

18 A. No. the action -- what they do is they'll take the action,
19 the bolt and the receiver and that's about all they use. And
they put a new barrel, a new trigger assembly group, a new
21 stock.

23 Q. Let's go to the '84 catalog.

A. Okay.

Q. Are you all through?

A. Yeah.

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Q. Put them up there because they'll fall out otherwise. Now
2 let's talk about Model -- first, this is the page on the Model

3 700, isn't it?

4 A. Yes.

5 Q. All right, and accuracy and power is what it talks about.

6 Let's read this here. It says, "Accuracy and power for every
hunter's taste."

8 A. That's right.

9 Q. "Let me just read you the first column of the '84 catalog,
10 the newest one I have.

11 In the world of center fire rifles there's no

12 stronger, more accurate bolt action rifle than the

13 legendary Model 700. The way we build our 700s from

14 the least costly ADL to the highest grade custom has
made its barrel Action the first choice of hunters

16 for 20 years. More finalists at major national bench

17 rest shooters association events used Remington
actions than all other commercial actions combined.

19 Remington bolt actions are also the clear favorites

20 of metallic silhouette events coast to coast.

21 On the page in which they're talking about the 700, aren't

22 they talking about a national bench rest shooter's association

21 A. Ye, they are, and they're saying that they use the

24 Remington action, and all that is is just the action, that's

25 the bolt and that round receiver. They favor that as opposed

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1 to a Mauser action or somebody else's action.

2 Q. Now --

3 A. But that's not a Remington rifle.

4 Q. I thought that was the page of the 700 we were just
5 referring to.

6 A. That is the page, yes, but an action is not a rifle.

7 MR. MILLER: Your Honor, I'd offer this exhibit into
8 evidence, D-3, which are the catalogs for the Model 700 that's
9 been provided by defendant to us.

10 MR. SHAW: No objection.

11 THE COURT: It will be admitted.

12 MR. MILLER: Thank you, Your Honor.

13 BY MR. MILLER:

14 Q. Let's look at one other exhibit in which we've used before
15 -- talked about before. Mike Walker is the man who designed
16 the fire control systems that's used in the 700 and the 600.
17 Was he a bench rest shooter of some renown?

18 A. Mike Walker designed the -- had the original patent on the
19 to a Mauser action or somebody else's action.

20 Q. Now --

21 But that's not a Remington rifle.

22 Q. I thought that was the page of the 700 we were just
23 referring to.

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6 BY MR. MILLER:

7 Q. Let's look at one other exhibit in which we've used before
8 talked about before. Mike Walker is the man who designed
9 the fire control systems that's used in the 700 and the 600.

10 Was he a bench rest shooter of some renown?

A. Mike Walker designed the had the original patent on the
12 721, 722, yes, and that was

13 Q. That's been used in the 700 and 600, hasn't it?

14 A. The same principles, yes.

15 All right. Now was he a bench rest shooter or target
16 shooter of some renown?

17 A. Excuse me, the only point I wanted to make is he didn't
18 design the 600 trigger assembly.

19

Q. All right. He did design the 700 though, didn't he?

A. Yes. He was responsible for that.

21 Q.

Was he a bench rest shooter, target shooter?

A. Yes, he was.

23 Q.

And --

24 A. He was a bench rest shooter and he was a hunter.

25

Q. All right. Now isn't one of the reasons for the trigger

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connector which was referred to before -- that's my chart,
2 it's over there but they know what the trigger connector looks

3 like -- to give you a clean, crisp trigger pull, something
4 that's desirable in target or bench rest shooting?

5 A. It's a clean, clear, crisp trigger pull, it's desirable
6 whether you're hunting or whether you're target shooting.

7 Q. But isn't it particularly desirable for a target shooter
8 because that's where you want the most extreme accuracy that
9 you can get?

10 A. It's desirable for target shooting, yes.

11 Q. That's the goal of target shooting, isn't it?

12 A. The goal of target shooting is accuracy.

13 Q. All right.

14 A. That's right.

15 Q. And didn't he design the Model 700 with target shooting in
16 mind as well as hunting?

17 A. No, he -- I would say that he designed the 700 as for a
18 hunter's -- the best rifle he could supply the hunter, and he
19 designed the 40X, which he's also responsible for, for the
20 best target rifle.

21 Q. Even though he was a target shooter he designed the 700
22 for hunters.

23 A. Yes. He used the 40X when he did his target shooting.

24 Q. But let's

25 A. He won a number of events with the 40X.

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2 Q. Let's look at the patent which we referred to before, this
3 is the Walker patent, isn't it?

4 A. Yes, it is.

5 Q. Okay, and let's go back to the -- excuse me, the second
6 page, column four, down to that language I have highlighted
7 there in blue. Let me just read this paragraph.

8 These advantages of freedom from creep or slop with
9 the short life trigger pull, crisp let-off and short
10

11 A. Lock time.

12 Q. Lock time, thank you.

13 -- lock time characteristic of negative angle sears
14 have been achieved in the construction which is absolutely
15 safe in the hands of the hunter or target
16 shooter and rugged enough to remain, in spite of
17 absence and neglect which are often heaped upon
18 sporting arms.

19 Doesn't he talk about use of this mechanism, the fire control
20 mechanism that he's designed here, the firing mechanism for
21 firearms both by hunters and target shooters?

22 A. Yes, he does.

23 Q. And this is the patent on which the 700 was based, right?

24 A. That's the basic patent, yes.

25 Q. Okay. It says on this page here:
Trigger pull adjustment of any target rifle should

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never be adjusted below two pounds.

2 In other words, two pounds is the minimum for those rifles which this page talks about, right?

A. No. Those rifles are target rifles.

5 Q. Now you mentioned I think the other day on direct examina-

6 tion and cross-examination that dirt or debris could interfere

7 with the sear but could not interfere with the trigger or

8 trigger connector. Is that right?

9 A. I don't recall saying that.

10 Q. Okay. Would you agree with that statement?

11 A. That it could interfere with one and not the other?

12 Q. Right.

13 A. No, I wouldn't say that.

14 Q. Can dirt and debris interfere with the mechanism at all?

15 A. Yes, it could.

16 Q. Okay.

It can interfere with any of those three parts, can't it?

18 A. Yes, it could.

19 And it can bind any of those three parts.

20 A. It could bind the bolt and it can bind any mechanism.

21 Well I'm talking about the trigger, the trigger connector

22 and the sear. Could it bind any of those three parts?

23 . Yes, it could.

24 Particularly in combination with gun oil, if there's some oxidized or dried gun oil in there too.

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A. Yes, you're Just -- dirt would be dirt.

3 Q. Now this change that we talked about a moment ago from six
thousandths -- or from twelve thousandths to six thousands in
4 the worst condition, tightened the fit of the trigger

6 connector to the trigger, right?

A. Yes, it did.

7 Q. Did also the change made in the 1950s from the original

8 Walker patent from an L shaped connector on the trigger which

9 had no lower leg to a U shaped connector which does have a

10 lower leg -- did that also control the fit of the trigger to

11 the trigger connector?

12 A. Oh it changed the relationship as I described.

13 Q. Well what I'm trying to get at is when you made this

14 when you added that part to the trigger connector --

15 A. Yes.

16 Q. -- from an L shape to a U shape --

17 A. Yes.

18 Q. -- didn't that also control the fit of the trigger
connector to the trigger?

20 A. It gives you a relationship between the two parts.

21 Q. It also prevented it with that lower leg from rising up

22 until it hits the sear, didn't it? Because you've got a lower

23 leg down there that's going to stop at some point.

A. Yes, it does.

25 Q. Okay, and that was done in the '50s, wasn't it?

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1 A. Yes, it was.

2 Q. And so back in the '50s you were interested in controlling
3 the fit of the trigger connector to the trigger by adding that
4 lower leg.

5 A. No, I explained that in my direct and said that that lower
6 leg, to my understanding in talking to people at the factory
7 was added as a pivot for that connector to pivot about.

8 Q. But it also

9 A. And also I explained the deformation that you could have
10 in the connector and where the thing could pivot about, so it
11 gives you a common pivot so that the trigger mechanism will
12 work the same every time.

13 Q. But it also gave you a stop point to, didn't it?

14 A. Just by the nature of the relationship between the to
15 parts, yes.

16 Q. Now you also mentioned on direct the other day that the
17 Model 700 has very tight, very close tolerances, or small
18 clearances. Right?

19 A. Yes, I did.

20 Q. Remington Was able to do this after the war, do their
21 machining processes and things like that.

22 A. Remington has tight tolerances or been able to manufacture
23 tight tolerances for years.

24 Q. And --

25 A. If you even take a look at the firearms made by Remington

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in the 1870s and 1880s, they're made with tight tolerances.

2 Q. And with a tight tolerance if there's interference between

3 parts, say the trigger connector and sear, a small mistake in

4 those tolerances could produce that interference, couldn't

5 they?

6 A. I don't understand your question.

7 Q. Well, a small mistake in the size of parts as we went

8 through here could produce interference between the trigger

9 and the trigger connector of anywhere from -- well, a play in

10 the trigger and trigger connector from four and a half thou-

11 sandths to five and a half thousandths. Right?

12 A. I'm not tracking with you, I'm sorry.

13 Q. Well, my point is -- I don't want to go through all that

14 again. If You live with tight tolerances don't you die by

15 tight tolerances too?

16 A. I wouldn't say that, no.

17 Q. Now you mentioned the other day when I asked you the ques-

18 tion about the sear lift on the Model 700, you said you didn't

19 know what that specification was.

20 A. That's correct.

21 Q. Do you know what it is now?

22 A. No, I don't.

23 Q. I'm going to show you, I went back and looked through some

24 of the things you gave me trying to find the sear lift.

25 A. Okay.

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1 Q. And the best I could find was not the actual lift of the
2 sear, this piece here when the safety was put on, but I did
3 find a test that Remington did in 1975 and later years to find
4 out what the measurement was between the trigger connector and
5 sear when the safety was on.

6 A. Okay.

7 Q. Do you remember those measurements in the mid-70s and
8 later?

9 A. I remembered the test, yes.

10 Q. Do you know what the measurements were?

11 A. No, I don't.

12 Q. Let me show you some process records which you've given
13 me, the first one I'm going to show you is Exhibit H-79.
14 Excuse me, that's the second one, I went past the first one.
15 The first one I'm going to show you is H-75.

16 MR. SHAW: Could I see it for a second?

17 MR. MILLER: Sure.

18 BY MR. MILLER:

19 Q. All right, on that page there which is the first page of
20 Exhibit H-75, did you find a point where they're talking about
21 the measurement as in terms of the shim test?

22 A. I see where it says tri safety.

23 Q. Excuse me, let me go back to this page, I've got it clipped
24 there.

25 A. Oh. okay. It says:

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Close full safety to on position, close and lock bolt
2 down, try five thousandths feeler between sear and

3 connector.

4 Q. Okay, and so'--

5 A. "Must enter with no bind, five thousandths."

6 Q. Okay, so it has to be five thousandths or greater, is that
7 right?

8 A. That's correct.

9 Q. And that's as of -- if I've got the-dates down right, that
10 was -- it was that way before June, '76.

A. Yes, it would have been.

12 Q. So in '75 we had a clearance here of five thousandths. In
13 other words where you compare the trigger and trigger connec-
14 tor you had to have five thousandths or more space between the
15 two when the -- excuse me, when you compared the trigger
16 connector and the sear. You had to have five thousandths of
17 space between the two when the sear was on safe.

18 A. That's correct.

19 Q. All right. Now was there a subsequent change made to
20 that, and for that I'll refer you to Exhibit H-79, the first
21 page.

22 MR. SHAW: Let me see it for one second.

23 MR. MILLER: Sure.

24 MR. SHAW. See which operation Mr. Miller, you've
25 got H-82 stapled to this too. Are you going to use that also?

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MR. MILLER: No, just H-75.

2 MR. SHAW: 79?

3 MR. MILLER: 79, yes, sorry.

4 THE WITNESS: Okay, could I look at it?

5 BY MR. MILLER:

6 Q. Yeah. I think the figures you'll find there are seven

7 thousandths, and that was changed down to six thousandths.

8 Something like that, or five thousandths.

9 A. Okay, this says insert the special dial base gauge into

10 the receiver which is a duplication of the bolt. It goes all

11 the way in and then you put the safety in the fire position,

12 you zero the dial indicator and pull the safety on, and then

13 it tells you how much sear lift you have.

14 Q. Okay, you're still measuring the same thing though, aren't

15 you?

16 A. You're measuring the sear lift, yes.

17 Q. You're measuring the sear lift? How much sear lift do you

18 need there?

19 A. It says six thousandths.

20 Q. Six thousandths. And that's as of that change is as of

21 when, '82 or something I think?

22 A. Yes, it looked and appears to be.

23 Q. June of '82?

24 A. Yeah.

25 Q. I have trouble reading those too.

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1 A. It's a correct revision, a branch of that it looks like.

2 Q. Well, let me add that to this chart here. I lost my

3 easel, but let's see. In 1975 you had a maximum permitted of

4 twelve thousandths play in the trigger and trigger connector

5 which we'd gone through before, yet all you required was a

6 minimum of five thousandths of space between the sear and the

7 trigger connector. Right?

8 A. Yes.

9 Q. And if that's the case, if a rifle was manufactured with

10 twelve thousandths vertical play between the trigger and

11 trigger connector, and only five thousandths was required of

12 sear lift off the trigger connector, would that rifle if it

13 was manufactured that way fail the screwdriver test?

14 A. It could, yes.

15 Q. All right, because you would have interference set up in

16 the screwdriver test between the trigger connector and the

17 sear because the sear does not rise high enough on the five

18 thousandths of an inch to allow for the interference between

19 the trigger -- or the play in the trigger and trigger connec-

20 tor.

21 A Yes, you could have that.

22 Q. Okay. Then you made a change sometime in '82 to this

23 figure, five thousandths, and it went to six thousandths, and

24 we already talked about how you reduced the trigger and

25 trigger connector play to six thousandths.

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2 A. Yes, that's right.

3 Q. Now you've got a situation that if you manufacture a rifle
4 it has to have a sear lift of greater than six thousandths and
5 it can't have a trigger, trigger connector play of anything
6 more than six thousandths, and so you've eliminated the possi-
7 bility of the failure of the screwdriver test by changing your
8 design specs, haven't you?

9 A.- No, that isn't the reason why we did it, but yeah, that's
10 the way it comes out.

Q. I realize you feel that isn't the reason, but that is the
way it comes out.

13 A. Yes, it does.

14 Q. All right. One other question, I don't know whether I've
asked it or not, but just to be sure. A rifle that meets
15 these specs in 1975 could have an interference between the
16 trigger

17 connector and sear, couldn't it?

18 A. If you pushed up on the connector, yes.

Q. And it would fail the screwdriver test, wouldn't it?

20 A. That's Just what I was explaining.

21 Q. And it is susceptible to firing on release of safety,
22 isn't it?

23 A. If you hold it there with the screwdriver.

24 Q. Whereas by your new design specs that is not the case.

25 A. No, that's not.

Q. Now

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1 (CONFERENCE BETWEEN ATTORNEYS, AFTER WHICH:)

2 BY MR. MILLER:

3 Q. Of course you take the position that this force here could
4 never occur in the field.

5 A. I not only take that position, but I demonstrated why I
6 felt that way.

7 Q. And therefore you say this difference in tolerance could
8 never cause an FSR in the field.

9 A. That's right.

10 Q. Or a difference in size I should say, a difference in lift.
The trigger connector can never get up above the sear
12 in the field, even though your own specifications would seem
13 to allow it.

14 A. That's right. I went ahead and explained that.

15 Q. Okay. One other question are rifles covered by the
16 Consumer Products Safety Act? Firearms in general?

17 A. I do not know.

18 Q. Do you now whether the Consumer Products Safety Act or any
19 other governmental act has any provision for recall of rifles
20 by government order such as we have with other consumer pro-
21 ducts?

22 A. No, I don't.

23
MR. MILLER: That's all the questions I have, Your
24 Honor.

25 THE COURT: Any redirect?

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2 MR. SHAW: Just a few, Your Honor.

3 REDIRECT EXAMINATION

4 BY MR. SHAW:

5 Q. Mr. Linde, with regard to Mr. Miller's questions on your
6 demonstration that these connectors don't rise in the field,
7 he asked you about vibration. It was my understanding that I
8 had asked you about vibration, but my question to you is
whether it's hitting it or vibrating it, does that change your
9 opinion With regard to the ability of field conditions to make
that connector rise?

A. No. You have to overcome the force that I explained, the
12 frictional force.

14 MR. SHAW: No further questions.

MR. MILLER: None from plaintiff, Your Honor.

THE COURT: You may step down.

THE WITNESS: Thank you.

THE COURT: May this witness be excused?

MR. SHAW: Yes.

MR. MILLER: Yes.

21 THE COURT: You may be excused, Mr. Linde.

THE WITNESS: Thank you, sir.

END OF REQUESTED PROCEEDINGS

23

24

25 I CERTIFY THAT THE FOREGOING IS A CORRECT TRANSCRIPT OF THE
RECORD OF PROCEEDINGS IN THE ABOVE ENTITLED MATTER.

June 25, 1986