

TAKEDOWN SCREW MOVEMENT TEST

Objective:

Measure the movement if any that occurs with the takedown screws when subjected to normal handling/shooting environments.

Tests 1:

1. Bias stock to center trigger. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
2. Bias stock to center trigger. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Test 2:

3. Bias stock to center trigger. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
4. Bias stock to center trigger. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

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Tests 3:

5. Bias stock to center trigger. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
6. Bias stock to center trigger. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten screws
 - Tap on gun stock in several locations on shooter's left and right
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Tests 4:

7. Bias stock to center trigger. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten Screws
 - Shoot (1) proof + (2) regular rounds
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
8. Bias stock to center trigger. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
 - Tap on gun stock in several locations on shooter's left and right
 - Retighten Screws
 - Shoot (1) proof + (2) regular rounds

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- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Tests 5:

9. Seat stock in natural position before setting screws. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
 - Shoot (2) regular rounds
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
10. Seat stock in natural position before setting screws. Set torque of front and middle screw to 50 ft/lbs.; hand tighten back screw.
 - Shoot (2) regular rounds
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
11. Seat stock in natural position before setting screws. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
 - Shoot (2) regular rounds
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

TEST 6:

12. Seat stock in natural position before setting screws. Set torque of front and middle screw to 40 ft/lbs.; torque back screw to 20 ft/lbs.
---USE 4 guns
 - Shoot (5) magazines (20) regular rounds
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.
13. Set stock in natural position before setting screws. Set torque of front and middle screw to 60 ft/lbs.; torque back screw to 20 ft/lbs.
---USE 4 guns
 - Shoot (5) magazines (20) regular rounds
 - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

TEST 7:

14. Seat stock in natural position before setting screws. Set torque of front and middle screw to 40 ft/lbs.; torque back screw to 20 ft/lbs.
---USED 2 guns

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- Shoot (5) magazines (20) regular rounds off shoulder
- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

15. Set stock in natural position before setting screws. Set torque of front and middle screw to 60 ft/lbs.; torque back screw to 20 ft/lbs.

---USED 2 guns

- Shoot (5) magazines (20) regular rounds off shoulder
- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

RESULTS:

TEST 1.1

| | Before test | After Test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 32.5 | 18.75 |
| Middle | 40 | 38.5 | 3.75 |
| Back | 10 | 8 | 20 |

TEST 1.2

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 45 | 25 |
| Middle | 60 | 42.5 | 29.2 |
| Back | 10 | 9 | 10 |

TEST 2.3

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 30 | 25 |
| Middle | 40 | 35 | 12.5 |
| Back | 10 | 9 | 10 |

TEST 2.4

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 48 | 20 |
| Middle | 60 | 44 | 26.7 |
| Back | 10 | 8 | 20 |

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TEST 3.5

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 35 | 12.5 |
| Middle | 40 | 39 | 2.5 |
| Back | 10 | 10 | 0 |

TEST 3.6

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 45 | 25 |
| Middle | 60 | 48 | 20.0 |
| Back | 10 | 10 | 0 |

TEST 4.7

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 20 | 50 |
| Middle | 40 | 28 | 30.0 |
| Back | 10 | 8 | 20 |

TEST 4.8

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 32 | 46.7 |
| Middle | 60 | 40 | 33.3 |
| Back | 10 | 9 | 10 |

TEST 5.9

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 25 | 37.5 |
| Middle | 40 | 35 | 12.5 |
| Back | 10 | 5 | 50 |

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TEST 5.10

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 50 | 25 | 50 |
| Middle | 50 | 32 | 36.0 |
| Back | 10 | 0 | 100 |

TEST 5.11

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 53 | 11.6666667 |
| Middle | 60 | 50 | 16.7 |
| Back | 10 | 10 | 0 |

TEST 6.12-1

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 10 | 75 |
| Middle | 40 | 28 | 30.0 |
| Back | 20 | 18 | 10 |

TEST 6.12-2

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 20 | 50 |
| Middle | 40 | 28 | 30.0 |
| Back | 20 | 14 | 30 |

TEST 6.12-3

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 19 | 52.5 |
| Middle | 40 | 30 | 25.0 |
| Back | 20 | 14 | 30 |

TEST 6.12-4

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 18 | 55 |
| Middle | 40 | 30 | 25.0 |
| Back | 20 | 13 | 35 |

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AVERAGE TEST RESULT of 6-12:(1-4)

| | Before Test | After test | % Reduction |
|---------|-------------|------------|-------------|
| FRONT: | 40 | 16.75 | 58.2 |
| MIDDLE: | 40 | 29 | 27.5 |
| BACK: | 20 | 14.75 | 26.3 |

TEST 6.13-1

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 30 | 50 |
| Middle | 60 | 32 | 46.7 |
| Back | 20 | 15 | 25 |

TEST 6.13-2

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 18 | 70.0 |
| Middle | 60 | 42 | 30.0 |
| Back | 20 | 18 | 10 |

TEST 6.13-3

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 28 | 30 |
| Middle | 40 | 40 | 0.0 |
| Back | 20 | 16 | 20 |

TEST 6.13-4

| | Before test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 25 | 58.33333333 |
| Middle | 60 | 38 | 36.7 |
| Back | 20 | 13 | 35 |

AVERAGE TEST RESULT of 6-13:(1-4)

| | Before Test | After test | % Reduction |
|---------|-------------|------------|-------------|
| FRONT: | 60 | 25.25 | 57.91 |
| MIDDLE: | 60 | 38 | 36.67 |
| BACK: | 20 | 15.5 | 22.5 |

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TEST 7.14-1

| | Before Test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 28 | 30 |
| Middle | 40 | 30 | 25.0 |
| Back | 20 | 10 | 50 |

TEST 7.14-2

| | Before Test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 40 | 35 | 12.5 |
| Middle | 40 | 30 | 25.0 |
| Back | 20 | 13 | 35 |

AVERAGE TEST RESULT of 7-14(1-2)

| | Before Test | After test | % Reduction |
|---------|-------------|------------|-------------|
| FRONT: | 40 | 31.5 | 21.3 |
| MIDDLE: | 40 | 30 | 25 |
| BACK: | 20 | 11.5 | 42.5 |

TEST 7.15-1

| | Before Test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 42 | 30 |
| Middle | 60 | 38 | 36.7 |
| Back | 20 | 15 | 25 |

TEST 7.15-2

| | Before Test | After test | % Reduction |
|--------|-------------|------------|-------------|
| Front | 60 | 38 | 36.7 |
| Middle | 60 | 38 | 36.7 |
| Back | 20 | 16 | 20 |

AVERAGE TEST RESULT of 7-15:(1-2)

| | Before Test | After test | % Reduction |
|---------|-------------|------------|-------------|
| FRONT: | 60 | 40 | 33.33 |
| MIDDLE: | 60 | 38 | 36.67 |
| BACK: | 20 | 15.5 | 22.5 |

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