ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

Participants/Contributors: Jae Dobbs, Jim Furchert, William Copeland, Moshe Mango, John Hernandez, Ryan Kowalchuk, Doug Chaput, Jon Petrowski, Anthony Perkins, Mike Woodhouse, Louis Mahre, Janelle Jones, Spencer Fox, Mike Woodruff, Zach Vaders, Kyle Peart, Jeff Hawkins, Kevin Laudenbach, Nick Weber, Scott Lee, Jake Webb (Some not pictured)

Introduction: WFSE members from various armed disciplines across the state of Washington met on Whidbey Island this week to conduct an objective, thorough and highly documented test of the weapon system the Washington State Department of Corrections selected and purchased to replace the current platform. A small contingent of determined members met over the course of numerous months to discuss and select a testing protocol to ensure the weapon selected and provided by the department is safe for all employees and the community we serve. Ultimately, the group found the United States Department of Justice National Institute of Justice (NIJ) Baseline Specifications for Law Enforcement Service Pistols testing and specifications established by the NIJ which has been used in the law enforcement community to help agencies attempting to select a

weapons system account for a certain level of reliability among service pistols used by law enforcement. The group chose to use select portions of the established test to measure the new platform's reliability. Although departments are not required by law to adhere to the requirements, the testing protocol and specifications have been in use for many years by several law enforcement agencies to include the Federal Bureau of Investigation, United States Marshals Service, Department of Homeland Security, and Customs and Border Protection when selecting and testing duty weapons. The NIJ document below states, "The content is drawn from actual federal procurement actions and represents a reasonable set of physical characteristics and performance requirements achievable by pistols today for general purpose law enforcement" in reference to the specifications and performance testing. It is important to note that while the pistols selected were subjected to reliability, durability and environmental testing, not all testing in the document was done. Some tests do not apply to the pistols we would use or be issued based on them not having additional security technology (such as smart gun technology).

(All references to testing protocol or MIL standards were found and taken from the testing protocol document from the NIJ - link below)

NIJ has no affiliation with WFSE or the Washington State Department of Corrections

Baseline Specifications for Law Enforcement Service Pistols with Security Technology

The following agencies listed in the NIJ document comprised the working group that provided input and developed these testing standards regarding reliability, durability and environmental testing led by the NIJ.

Department of Justice
- Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)
- Drug Enforcement Administration (DEA)
- Federal Bureau of Investigation (FBI)
- Office of the Deputy Attorney General (ODAG)
- U.S. Marshals Service (USMS)

Department of Homeland Security
- Customs and Border Protection (CBP)
- Federal Emergency Management Administration (FEMA)
- Federal Law Enforcement Training Center (FLETC)
- Federal Protective Service (FPS)

Immigration and Customs Enforcement (ICE)
Office of the Secretary / Office of the Military Advisor Office for State and Local Law Enforcement (OSLLE)
Office of the Chief Security Officer (OCSO)
Science and Technology Directorate (S&T)
U.S. Coast Guard (USCG)
U.S. Secret Service (USSS)

Department of Defense

Office of the Chief of Staff of the Air Force (CSAF)
Pentagon Force Protection Agency (PFPA)
US Army RDECOM - Armament Research, Development and Engineering Center (ARDEC)

Pistol: The ZEV Technologies OZ9C with X Grip is a modular semi-automatic striker fired pistol system chambered in 9mm with a 17 round magazine capacity and a 4.5" barrel. On April 30th, 2025, Washington State Department of Corrections (DOC) received a large batch of new firearms from ZEV Technologies. On May 1st 2025, DOC provided the WFSE testing group 10 firearms picked by the agency for testing. Upon inspection they showed as though they had been test fired at the factory but did not show wear.

The testing group did not select the firearms to be tested.

Testing protocol and results: The NIJ document above outlines baseline or minimum requirements the pistol must meet to pass the testing. The testing portion of the document combines a host of environmental tests (Temperature exposure both high and low, sand and dust exposure, immersion conditioning, electromagnetic and mechanical shock) as well as accuracy, dispersion, reliability and durability aspects and must pass all to pass the assessment. Each portion of the test the pistols were subjected to is outlined on the testing documentation completed during the testing. Per the National Institute of Justice, the word, "shall" indicates a requirement (NIJ Baseline Specifications for Law Enforcement Service Pistols with Security Technology page 3).

Test 1: 6 pistols are to perform the firing of 10,000 rounds each and "shall exhibit a mean overall malfunction or failure rate of no greater than 1 in 2,000, or shall exhibit a mean rounds between failure of no less than 2,000." Further, "The pistols shall be durable and exhibit no failures due to wear or damage for a total of 10,000 rounds" per NIJ standards. **During the testing, the 6 pistols tasked with firing 60,000 rounds in the reliability**

portion of the test suffered 1 catastrophic failure due to wear or damage and a total of 117 malfunctions of various types across 3 different authorized and approved ammunitions.
None of the pistols subjected to this portion of the test were required to do any other test prior to completion of this portion.

Test 2: 3 pistols "shall fire 15 rounds of ammunition upon completion of high temperature exposure" of 145F +/- 5F for 8 hours per NIJ. **All pistols tested for high and low temperature performed post exposure by shooting 15 rounds of ammunition**

Test 3: 3 pistols "shall fire 15 rounds of ammunition upon completion of low temperature exposure" of -28F +/- 5F for 8 hours per NIJ. **All pistols tested for high and low temperature performed post exposure by shooting 15 rounds of ammunition**

Test 4: 3 pistols "shall fire 15 rounds of ammunition upon conclusion of sand and dust exposure" after 90 minutes of one directional sand and dust exposure per exposed side per NIJ and MIL-STD-810G 510.6 Procedure 2. **All pistols exposed to sand per the testing protocol exhibited malfunctions immediately or after 1 round was fired.**

Test 5: 3 pistols "shall fire 15 rounds of ammunition upon conclusion of environmental conditioning" by being submerged in 5% saline solution at 6" for 1 minute then placed in a 70F and 70% humidity +/- 5F and 5% for 24 hours. **2 pistols exposed to immersion conditioning performed by firing 15 rounds post exposure and 1 experienced a malfunction at 9 rounds.**

Test 6: 2 pistols shall be rated on their ability to fire after exposure to mechanical shock. *The Department did not agree to allow the testing group to subject the pistols to mechanical shock (drop tests) so they were not completed*.

The following page contains a table that outlines the pistols with serial numbers and each test they were subjected to.

Summary of results:

Pistol	Reliability	Heat	Cold	Immersion	Sand
ZK01359				Passed	
ZK01360	14 malfunctions				Malfunction after 1 round (failed)
ZK01361	3 malfunctions		Passed		
ZK01362		Passed		Malfunction at 9 rounds out of 15 (failed)	
ZK01363	19 malfunctions		Passed		
ZK01364	0 malfunctions				Did not fire (failed)
ZK01382	6 malfunctions/1 is catastrophic failure				
ZK01383	75 malfunctions				Malfunction after 1 round (failed)
ZK01386		Passed	Passed		
ZK01410		Passed		Passed	

According to the data collected over the course of the test, the ZEV Technologies OZ9C with X Grip modular pistol system has failed the reliability and durability portion as well as 2 other areas.

1. Mean overall malfunction rate allowed < or = 1 in 2000
    a. Mean overall malfunction rate achieved = 3.9 in 2000 at just under 4 times the allowed mean rate
2. Failures due to wear or damage allowed = 0
    a. Failures due to wear or damage achieved = 1
3. Failures due to immersion conditioning allowed = 0
    a. Failures due to immersion conditioning achieved = 1
4. Failures due to sand and dust exposure allowed = 0
    a. Failures due to sand and dust exposure achieved = 3

During this test, the 3 types of ammunition utilized are approved for use by the Department and were Federal 124 grain full metal jacket ammunition, Speer Gold Dot 124 grain hollow point duty ammunition and Federal 147 grain HST hollow point duty ammunition. Malfunctions were experienced with each type of ammunition and across the various

pistols tested. The types of malfunctions recorded were all failures to fire and stopped the test from continuing while being documented. These included light primer strike, failure to feed (out of battery, broken slide stop) and failure to extract (spent casing in the chamber, double feed, stove pipe). To add, each malfunction (that could be) was photographed and the corresponding round was saved until the end of the test. At the end of the test, each round associated with a light primer strike or out of battery malfunction round was photographed together. The rounds were loaded into a magazine and fired through a Smith and Wesson 2.0 Compact 9mm without issue. The shooters for this portion of confirmation testing were Kyle Peart and Mike Woodruff. There were also numerous witnesses to this who were involved in the testing. This was completed to rule out any indication that ammunition was at fault for the malfunctions.


GOLD DOT
SPEER LE
NO. 1 CHOICE IN LAW ENFORCEMENT
FEDERAL
50
CENTERFIRE PISTOL
CARTRIDGES/CARTOUCHES
124
GRAIN

The testing team also requested an armorer be present who attended the ZEV armorer course. The Department authorized a ZEV armorer who had complete the course in October of 2024 to participate in the testing. The team assigned the armorer to conduct all manufacturer recommended maintenance, scheduled replacements (per ZEV armorers handbook 4k round striker spring cup replacement and 8k round striker assembly, EDP spring and outer recoil spring replacement) and inspections and to inspect malfunctions to determine the cause as the only roles he was responsible for. NIJ testing protocol requires following manufacturers recommended replacement guidelines at specified intervals as well as detailed inspections at least every 1000 rounds. This was conducted by the armorer per the ZEV armorers course book and is documented in the associated test data. NIJ testing protocol requires pistols be cleaned and lubricated per the manufacturer's recommendations after every 250 round cycle which was also conducted by the operators at each shooting station and documented as such.

Data: In the following pages you will find the test outlined in its entirety.

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE
PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01359

Shooters: Kyle Peart (only test conducted on this pistol was immersion testing NIJ 5.3.4)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1			
2	1			
3	1			
4	1	Detailed inspection following this cycle		
5	1	147g Duty		
6	1			
7	1			
8	1	Detailed inspection following this cycle		
9	1			
10	**2**	147g Duty		
11	1			
12	1	Detailed inspection following this cycle		
13	1			
14	1			
15	1	147g Duty		
16	1	Detailed inspection following this cycle		
17	1			
18	1			
19	1	147g Duty		
20	**2**	Detailed inspection following this cycle		
21	1			
22	1			
23	1			
24	1	Detailed inspection following this cycle		
25	1			
26	1			
27	1			
28	1	Detailed inspection following this cycle		
29	1			
30	**2**			
31	1			
32	1	Detailed inspection following this cycle		
33	1			
34	1			
35	1			
36	1	Detailed inspection following this cycle		
37	1			
38	1			
39	1			
40	**2**	Detailed inspection following this cycle		

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
    - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
    - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
    - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ One directional blowing on three sides for 90 minutes per side
  - o Side one
  - o Side two
  - o Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer at 0910 on 05/05/2025 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded per specification immediately preceding test with Speer Gold Dot 124 grain duty ammunition
- ☐ Submerged six inches in 5% saline solution for one minute
  Saline solution of 2.5 gallons water with 17.59 ounces of NaCl dissolved
  Each (3) pistols submerged six inches for 60 seconds, removed, excess water allowed to run off/out
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
  All 3 pistols placed in humidity controlled HDX tote with Boveda brand 2-way humidity control packet and temperature/humidity gauge. (80% humidity and 68.9 degrees Fahrenheit achieved)
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/06/2025 at 0830 and concluded 05/07/2025 at 0850. All requirements per NIJ met and firearm performed the test with no noted issues.

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0910	Cleaned, lubed and Inspected	Weber
05/06/25 0830	NIJ immersion testing initiated	Webb
05/07/25 0850	NIJ immersion testing complete	Webb
05/07/25 1020	Cleaned, lubed and Inspected	Weber

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01360

Shooters: John Hernandez, Louis Mahre, Zachary Vaders, Ryan Kowalchuk (NIJ 10k round reliability test NIJ 5.2 and Sand and Dust exposure test NIJ 5.3.3)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1	Cleaned and lubed post cycle	John Hernandez (JH)	Webb/Lee
2	1	Cleaned and lubed post cycle	Louis Mahre (LM)	Webb/Lee
3	1	Cleaned and lubed post cycle	JH	Webb/Lee
4	1	Detailed inspection following this cycle – Cleaned and Lubed post cycle	LM	Webb/Lee
5	1	147g Duty – Cleaned and lubed post cycle	JH	Webb/Lee
6	1	Cleaned and lubed post cycle	Zachary Vaders (ZV)	Webb/Lee
7	1	Cleaned and lubed post cycle	Ryan Kowalchuk (RK)	Webb/Lee
8	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	LM	Webb/Lee
9	1	Cleaned and lubed post cycle	ZV	Webb/Lee
10	**2**	147g Duty - Cleaned and lubed post cycle	JH, LM, ZV, (RK)	Webb/Lee
11	1	Cleaned and lubed post cycle	JH	Webb/Lee
12	1	Detailed inspection following this cycle	RK	Webb/Lee
13	1	Cleaned and lubed post cycle	LM	Webb/Lee
14	1	Cleaned and lubed post cycle	ZV	Webb/Lee
15	1	147g Duty – Cleaned and lubed post cycle	JH	Webb/Lee
16	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	LM	Webb/Lee
17	1	Cleaned and lubed post cycle	RK	Webb/Lee
18	1	Cleaned and lubed post cycle	JH	Webb/Lee
19	1	Cleaned and lubed post cycle	LM	Webb/Lee
20	**2**	Detailed inspection following this cycle – Cleaned and lubed post cycle	JH, LM, ZV	Webb/Lee
21	1	147g Duty – Cleaned and lubed post cycle	LM	Webb/Lee
22	1	Cleaned and lubed post cycle	JH	Webb/Lee
23	1	Cleaned and lubed post cycle	ZV	Webb/Lee
24	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	LM	Webb/Lee
25	1	Cleaned and lubed post cycle	JH	Webb/Lee
26	1	Cleaned and lubed post cycle	JH	Webb/Lee
27	1	Cleaned and lubed post cycle	LM	Webb/Lee
28	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	ZV	Webb/Lee
29	1	Cleaned and lubed post cycle	JH	Webb/Lee

30	**2**	Cleaned and lubed post cycle	JH, LM, ZV,	Webb/Lee
31	1	Cleaned and lubed post cycle	JH	Webb/Lee
32	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	LM	Webb/Lee
33	1	Cleaned and lubed post cycle	JH	Webb/Lee
34	1	Cleaned and lubed post cycle	LM	Webb/Lee
35	1	Cleaned and lubed post cycle	JH	Webb/Lee
36	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	LM	Webb/Lee
37	1	Cleaned and lubed post cycle	JH	Webb/Lee
38	1	Cleaned and lubed post cycle	LM	Webb/Lee
39	1	Cleaned and lubed post cycle	RK	Webb/Lee
40	**2**	Detailed inspection following this cycle – cleaned and lubed post cycle	JH, LM, ZV	Webb/Lee

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours

  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
  - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
  - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
  - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped

- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

- ☐ Cleaned and lubricated
  Pistol cleaned and lubricated post 10k round 05/07/25 at 0805 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Pistol loaded per NIJ standard immediately preceding test
- ☐ One directional blowing on three sides for 90 minutes per side
    - Side one – Left side 0815-0945
    - Side two – Right side exposure 0945-1115

- Side three – Grip side exposure 1115-1245

- Fired 15 rounds

Sand and Dust chamber manufactured to mirror NIJ testing standards per MIL-STD-810 Test Method Procedure 2 with silica dioxide sand 150-850 microns from one direction at a wind speed rate of 18 meters per second (40.26MPH) (see photos below). Measured wind speed with Caldwell Wind Wizard at 40.8MPH. Shooter was Ryan Kowalchuk. Pistol fired 1 round and failed to feed the next round. Unable to complete the assessment.








HOLOSUN
ZEV TECHNOLOGIES INC.

Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber

- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0805	Cleaned, lubed and inspected	Weber
1000	NIJ accuracy test – Hernandez	Lee
1047	*Cycle 2 – Failure to extract double feed 124 duty LM	Lee
1120	Detailed Inspection optic loose and torqued	Weber
1145	Front sight loose and locktite with 12”lbs of torque	Weber
1150	Add locktite with 12”lbs of torque	Weber
1330	Detailed Inspection	Weber
1430	Detailed Inspection Front sight still loose tightened again	Weber
1510	Front sight loose tightened again	Weber
1526	*Cycle 16 – Failure to extract 124 duty LM	Lee
1535	Detailed Inspection – replaced striker spring cup at 4k rounds per manufacturers armorer book, front sight loose	Weber
1557	*Cycle 18 – Failure to extract 124 duty JH	Lee
1559	*Cycle 18 – Light Primer Strike 124 duty JH slide locked shut	Lee
05/06/25 0800	Loose front sight	LM
0830	*Cycle 20 – Light primer strike 124 duty JH	Lee
0845	Detailed inspection – front sight loose	Weber
0950	Detailed Inspection – front sight loose	Weber
1055	Detailed Inspection – front sight loose	Weber
1102	*Cycle 29 – Stovepipe failure to extract 124 ball JH	Lee
1310	Detailed Inspection – front sight loose, replaced striker assembly, edp spring and outer recoil spring per manufacturers armorer book at 8k rounds.	Weber
1353	*Cycle 35 – Failure to extract – double feed 124 ball JH	Lee
1354	*Cycle 35 – Failure to extract 124 ball JH	Lee
1357	*Cycle 35 – Failure to extract 124 ball JH	Lee
1356	*Cycle 35 – Failure to extract 124 ball JH	Lee
1410	*Cycle 36 – Light Pirmer Strike 124 ball LM	Lee

1420	Detailed inspection - front sight loose	Weber
1432	*Cycle 38 – Failure to extract 124 ball LM	Webb
1440	Detailed inspection – significant wear on slide stop	Weber
1502	*Cycle 39 – Failure to extract 124 ball RK	Webb
1518	*Cycle 40 – Failure to extract 124 ball LM	Lee
1527	10k rounds complete – 14 malfunctions	Webb
1527	Detailed inspection – slight wear on barrel hood, signs of wear on slide stop, front sight missing	Weber
05/07/25 0745	Detailed inspection, cleaned and lubed	Weber
0815	Begin sand exposure test	Webb
1245	Sand exposure test complete	Webb
1500	Clean and inspect	Weber

*See appendix ZK01360 for photos of associated malfunctions

Appendix ZK01360 – Malfunctions (most have 1 photo prior to clearance and 1 post)


DAN ROCHA · 1470
POLICE DEPARTMENT
6-3-2021
WONDER WOMAN


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WEBB


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LICE
MARSHAL
WEBB


HOLOSUN

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01361

Shooters: Spencer Fox, Mike Woodruff, Anthony Perkins, Scott Lee (NIJ 10k round reliability test NIJ 5.2 and Low Temperature Exposure test NIJ 5.3.2)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1		Woodruff	Webb/Lee
2	1		Fox	Webb/Lee
3	1		Woodruff	Webb/Lee
4	1	Detailed inspection following this cycle	Fox	Webb/Lee
5	1	147g Duty	Woodruff	Webb/Lee
6	1		Fox	Webb/Lee
7	1		Woodruff	Webb/Lee
8	1	Detailed inspection following this cycle	Fox	Webb/Lee
9	1	147g Duty	Woodruff	Webb/Lee
10	**2**		Fox	Webb/Lee
11	1		Woodruff	Webb/Lee
12	1	Detailed inspection following this cycle	Fox	Webb/Lee
13	1		Woodruff	Webb/Lee
14	1		Fox	Webb/Lee
15	1	147g Duty	Woodruff	Webb/Lee
16	1	Detailed inspection following this cycle	Fox	Webb/Lee
17	1		Woodruff	Webb/Lee
18	1		Fox	Webb/Lee
19	1		Woodruff	Webb/Lee
20	**2**	Detailed inspection following this cycle	Fox	Webb/Lee
21	1	147g Duty	Woodruff	Webb/Lee
22	1		Fox	Webb/Lee
23	1		Woodruff	Webb/Lee
24	1	Detailed inspection following this cycle	Fox	Webb/Lee
25	1		Woodruff	Webb/Lee
26	1		Fox	Webb/Lee
27	1		Woodruff	Webb/Lee
28	1	Detailed inspection following this cycle	Fox	Webb/Lee
29	1		Woodruff	Webb/Lee
30	**2**		Fox/Woodruff	Webb/Lee
31	1		Fox	Webb/Lee
32	1	Detailed inspection following this cycle	Woodruff	Webb/Lee
33	1		Fox	Webb/Lee

34	1		Woodruff	Webb/Lee
35	1		Perkins	Webb/Lee
36	1	Detailed inspection following this cycle	Fox	Webb/Lee
37	1		Woodruff	Webb/Lee
38	1		Perkins	Webb/Lee
39	1		Fox	Webb/Lee
40	**2**	Detailed inspection following this cycle	Woodruff/Fox/Perkins	Webb/Lee

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)

  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
  - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
  - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
  - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
  - Muzzle down
  - Muzzle up

  - Slide up, horizontal
  - Slide down, horizontal
  - Right side, horizontal
  - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer on 05/06/2025 at 1610 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded immediately preceding the testing with Federal 124 grain ball ammunition
- ☐ Temperature: -28 +/- 5 for eight hours
  All 3 pistols were placed in a temperature controlled deep freezer for 8 hours at -22.1 degrees Fahrenheit with a temperature/humidity gauge
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/07/2025 at 0720 and concluded 05/07/2025 at 1520. All requirements per NIJ met and firearm performed the test with no noted issues. Scott Lee was the shooter for this test.


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CLOSED

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ One directional blowing on three sides for 90 minutes per side
    - o Side one
    - o Side two
    - o Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated

- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0755	Cleaned, lubed and Inspected	Weber
1000	NIJ accuracy test – Woodruff	Lee
1230	Detailed Inspection	Weber
1335	Detailed Inspection	Weber
1343	*Cycle 9 – Light Primer Strike 147 grain duty Woodruff	Lee
1442	*Cycle 12 – Light Primer Strike 124 grain duty Fox	Lee
1500	Detailed Inspection	Weber
1557	*Cycle 16 – Light Primer Strike 124 grain duty	Lee
1600	Detailed Inspection – Replaced Striker Spring cup per manufacturer armorer book at 4k rounds	Weber
05/06/25 0915	Detailed Inspection	Weber
1020	Detailed Inspection	Weber
1220	Detailed Inspection	Weber
1415	Detailed Inspection – Front sight loose and tightened, replaced striker assembly, edp spring and outer recoil spring per manufacturer armorer book at 8k rounds	Weber
1445	Detailed Inspection	Weber
1520	Detailed Inspection – Holosun battery tray missing, front sight loose and tightened, wear on barrel hood.	Weber
1603	10k rounds completed – 3 malfunctions	Webb
1610	Final Inspection and cleaning – Holosun battery tray missing, front sight loose, holosun window scratched, moderate wear on slide stop	Weber

*See appendix ZK01361 for photos of associated malfunctions

Appendix ZK01361 – Malfunctions (most have 1 photo prior to clearance and 1 post)


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA, USA

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01362

Shooters: John Hernandez, Jake Webb (only tests conducted on this pistol were immersion testing NIJ 5.3.4 and High Temperature Exposure NIJ 5.3.1)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1			
2	1			
3	1			
4	1	Detailed inspection following this cycle		
5	1	147g Duty		
6	1			
7	1			
8	1	Detailed inspection following this cycle		
9	1			
10	**2**	147g Duty		
11	1			
12	1	Detailed inspection following this cycle		
13	1			
14	1			
15	1	147g Duty		
16	1	Detailed inspection following this cycle		
17	1			
18	1			
19	1	147g Duty		
20	**2**	Detailed inspection following this cycle		
21	1			
22	1			
23	1			
24	1	Detailed inspection following this cycle		
25	1			
26	1			
27	1			
28	1	Detailed inspection following this cycle		
29	1			
30	**2**			
31	1			
32	1	Detailed inspection following this cycle		
33	1			
34	1			
35	1			
36	1	Detailed inspection following this cycle		
37	1			
38	1			
39	1			
40	**2**	Detailed inspection following this cycle		

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
    - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
    - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
    - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated

  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer at 0746 on 05/05/2025 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine

  Loaded immediately preceding testing with Federal 124 grain ball ammunition
- ☐ Temperature: 145 +/- 5 for eight hours

  All 3 pistols tested for this portion were placed in a temperature controlled Pit Boss Electric oven with a humidity/temperature gauge for 8 hours beginning at 0800 on 05/05/25 (see photos)
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/05/2025 at 0800 and concluded 05/05/2025 at 1600. All requirements per NIJ met and firearm performed the test with no noted issues. John Hernandez was the shooter for this test.


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Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ One directional blowing on three sides for 90 minutes per side
  - o Side one
  - o Side two
  - o Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer at 0910 on 05/05/2025 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded per specification immediately preceding test with Speer Gold Dot 124 grain Duty ammunition
- ☐ Submerged six inches in 5% saline solution for one minute
  Saline solution of 2.5 gallons water with 17.59 ounces of NaCl dissolved
  Each (3) pistols submerged six inches for 60 seconds, removed, excess water allowed to run off/out
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
  All 3 pistols placed in humidity controlled HDX tote with Boveda brand 2-way humidity control packet and temperature/humidity gauge. (80% humidity and 68.9 degrees Fahrenheit achieved)
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/06/2025 at 0830 and concluded 05/07/2025 at 0850. All requirements per NIJ met. Firearm was unable to complete the assessment as it experienced a failure to feed malfunction on round 9 of the shooting portion. Jake Webb was the shooter for this test.

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0730	Cleaned, lubed and Inspected	Weber
05/05/25 0800	NIJ high temperature exposure testing initiated	Lee
05/05/25 1600	NIJ high temperature exposure testing complete	Webb
05/05/25 1600	Cleaned, Lubed and Inspected	Weber
05/06/25 0830	NIJ immersion testing initiated	Webb
05/07/25 0850	NIJ immersion testing completed 1 malfunction at 9 rounds with 124 grain Speer Gold Dot Duty Ammunition – Failure to Feed	Webb
05/07/25 1015	Cleaned, lubed and Inspected	Weber

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE
PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01363

Shooters: Junelle Jones, Moshe Mango, Zachary Vaders, Mike Woodhouse, Kyle Peart, Ryan Kowalchuk, John Hernandez (NIJ 10k round reliability test NIJ 5.2 and Low Temperature Exposure test NIJ 5.3.2)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1	Cleaned and lubed post cycle	Jones	Webb/Lee
2	1	Cleaned and lubed post cycle	Mango	Webb/Lee
3	1	Cleaned and lubed post cycle	Jones	Webb/Lee
4	1	Detailed inspection following this cycle – Cleaned and Lubed post cycle	Mango	Webb/Lee
5	1	147g Duty – Cleaned and lubed post cycle	Mango	Webb/Lee
6	1	Cleaned and lubed post cycle	Jones	Webb/Lee
7	1	Cleaned and lubed post cycle	Mango	Webb/Lee
8	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Jones	Webb/Lee
9	1	147g Duty – Cleaned and lubed post cycle	Jones	Webb/Lee
10	**2**	Cleaned and lubed post cycle	Jones/Mango	Webb/Lee
11	1	Cleaned and lubed post cycle	Jones	Webb/Lee
12	1	Detailed inspection following this cycle	Mango	Webb/Lee
13	1	Cleaned and lubed post cycle	Jones	Webb/Lee
14	1	Cleaned and lubed post cycle	Peart	Webb/Lee
15	1	147g Duty – Cleaned and lubed post cycle	Peart	Webb/Lee
16	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Jones	Webb/Lee
17	1	Cleaned and lubed post cycle	Mango	Webb/Lee
18	1	Cleaned and lubed post cycle	Jones	Webb/Lee
19	1	Cleaned and lubed post cycle	Mango	Webb/Lee
20	**2**	Detailed inspection following this cycle – Cleaned and lubed post cycle	Jones/Mango	Webb/Lee
21	1	147g Duty – Cleaned and lubed post cycle	Jones	Webb/Lee
22	1	Cleaned and lubed post cycle	Mango	Webb/Lee
23	1	Cleaned and lubed post cycle	Jones	Webb/Lee
24	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Mango	Webb/Lee
25	1	Cleaned and lubed post cycle	Jones	Webb/Lee
26	1	Cleaned and lubed post cycle	Mango	Webb/Lee

27	1	Cleaned and lubed post cycle	Jones	Webb/Lee
28	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Mango	Webb/Lee
29	1	Cleaned and lubed post cycle	Vaders	Webb/Lee
30	**2**	Cleaned and lubed post cycle	Jones/Vaders/Mango	Webb/Lee
31	1	Cleaned and lubed post cycle	Jones	Webb/Lee
32	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Mango	Webb/Lee
33	1	Cleaned and lubed post cycle	Jones	Webb/Lee
34	1	Cleaned and lubed post cycle	Mango	Webb/Lee
35	1	Cleaned and lubed post cycle	Kowalchuk	Webb/Lee
36	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Jones	Webb/Lee
37	1	Cleaned and lubed post cycle	Mango	Webb/Lee
38	1	Cleaned and lubed post cycle	Jones	Webb/Lee
39	1	Cleaned and lubed post cycle	Vaders	Webb/Lee
40	**2**	Detailed inspection following this cycle – cleaned and lubed post cycle	Mango/Jones/Hernandez	Webb/Lee

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)

  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
  - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
  - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
  - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer on 05/06/2025 at 1633 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded immediately preceding the testing with Federal 124 grain ball ammunition
- ☐ Temperature: -28 +/- 5 for eight hours
  All 3 pistols were placed in a temperature controlled deep freezer for 8 hours at -22.1 degrees Fahrenheit with a temperature/humidity gauge
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/07/2025 at 0720 and concluded 05/07/2025 at 1520. All requirements per NIJ met and firearm performed the test with no noted issues. Mike Woodhouse was the shooter for this test.


CLOSED

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ One directional blowing on three sides for 90 minutes per side
    - o Side one
    - o Side two
    - o Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0810	Cleaned, lubed and Inspected	Weber
1000	NIJ accuracy test – Mango	Lee
1018	*Cycle 1 – Failure to feed 124 duty Jones	Lee
1125	Detailed Inspection	Weber
1148	*Cycle 7 – Trigger stuck forward, would not pull to rear – Mango	Lee
1325	Detailed Inspection	Weber
1425	*Cycle 10 – Light primer strike 124 grain duty Mango	Lee
1439	*Cycle 10 – Double feed 124 grain duty Jones	Lee
1523	*Cycle 13 – Failure to feed 124 grain duty Jones	Lee
1524	*Cycle 13 – Light primer strike 124 grain duty Jones	Lee
1540	Detailed Inspection	Weber
1605	*Cycle 16 – Light primer strike 124 grain duty Jones	Lee
1615	Detailed Inspection – replaced striker spring cups per manufacturers armorer book at 4k rounds	Weber
05/06/25 0840	*Cycle 18 – Light Primer Strike 124 grain duty Jones	Lee
0842	*Cycle 18 – Failure to feed 124 grain duty Jones	Lee
0845	*Cycle 18 – Light Primer Strike 124 grain duty Jones	Lee
0955	Detailed inspection	Weber
0959	*Cycle 21 – Failure to feed 124 grain duty Jones	Lee
1003	*Cycle 21 – Failure to feed 124 grain duty Jones	Lee
1005	*Cycle 21 – Light Primer Strike 124 grain duty Jones	Lee
1007	*Cycle 21 – Failure to feed 124 grain duty Jones	Lee
1043	*Cycle 23 – Filure to feed 124 grain duty Jones	Lee
1105	Detailed Inspection	Weber
1108	*Cycle 25 – Failure to feed 124 grain ball Jones	Lee
1243	*Cycle 27 – Failure to feed 124 grain ball Jones	Lee
1310	Detailed Inspection	Weber

1423	*Cycle 31 – Failure to feed 124 grain ball Jones	Lee
1423	*Cycle 31 – Failure to feed 124 grain ball Jones	Lee
1430	Battery cover for Holosun broke off and shot out Moshe	Webb
1440	Detailed inspection – moderate wear on slide stop	Weber
1505	Detailed inspection – striker assembly, edp spring, and outer recoil spring replaced per manufacturers armorer book at 8k rounds. Holsosun battery tray missing.	Weber
1555	Detailed inspection – slide stop has significant gouge and battery tray screw missing from Holosun	Weber
1624	Brass lodged in mission first holster unable to holster weapon	
1632	10k round reliability test complete – 19 malfunctions	Webb
1633	Final Inspection post 10k rounds and cleaning/lube. Slight wear on front barrel hood, battery stray screw missing from optic, front sight loose, moderate wear on slide stop.	Weber
05/07/25 0720	Low temperature exposure test initiated	Webb
1520	Low temperature exposure test completed	Webb

*See appendix ZK01363 for photos of associated malfunctions

Appendix ZK01363 – Malfunctions (most have 1 photo prior to clearance and 1 post)


P!9


HOLOSUN


9MM
ZK01363


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FOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA, USA
ZK01367

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01364

Shooters: Jim Furchert, Jon Petrowski, Doug Chapot, Bill Copeland, Anthony Perkins (NIJ 10k round reliability test NIJ 5.2 and Sand and Dust exposure test NIJ 5.3.3)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
2	1	Cleaned and lubed post cycle	Chaput	Webb/Lee
3	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
4	1	Detailed inspection following this cycle – Cleaned and Lubed post cycle	Chaput	Webb/Lee
5	1	147g Duty – Cleaned and lubed post cycle	Petrowski	Webb/Lee
6	1	Cleaned and lubed post cycle	Chaput	Webb/Lee
7	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
8	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Chaput	Webb/Lee
9	1	Cleaned and lubed post cycle	Copeland?	Webb/Lee
10	**2**	147g Duty - Cleaned and lubed post cycle	Copeland	Webb/Lee
11	1	Cleaned and lubed post cycle	Chaput	Webb/Lee
12	1	Detailed inspection following this cycle	Not logged	Webb/Lee
13	1	Cleaned and lubed post cycle	Chaput	Webb/Lee
14	1	Cleaned and lubed post cycle	Copeland	Webb/Lee
15	1	147g Duty – Cleaned and lubed post cycle	Petrowski	Webb/Lee
16	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Chaput	Webb/Lee
17	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
18	1	Cleaned and lubed post cycle	Not logged	Webb/Lee
19	1	Cleaned and lubed post cycle	Not logged	Webb/Lee
20	**2**	Detailed inspection following this cycle – Cleaned and lubed post cycle	Petrowski	Webb/Lee
21	1	147g Duty – Cleaned and lubed post cycle	Chaput	Webb/Lee
22	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
23	1	Cleaned and lubed post cycle	Copeland	Webb/Lee
24	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Petrowski	Webb/Lee
25	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
26	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
27	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
28	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Chaput	Webb/Lee
29	1	Cleaned and lubed post cycle	Copeland	Webb/Lee

30	**2**	Cleaned and lubed post cycle	Petrowski	Webb/Lee
31	1	Cleaned and lubed post cycle	Copeland	Webb/Lee
32	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Chaput	Webb/Lee
33	1	Cleaned and lubed post cycle	Copeland	Webb/Lee
34	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
35	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
36	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Chaput	Webb/Lee
37	1	Cleaned and lubed post cycle	Copeland	Webb/Lee
38	1	Cleaned and lubed post cycle	Chaput	Webb/Lee
39	1	Cleaned and lubed post cycle	Petrowski	Webb/Lee
40	**2**	Detailed inspection following this cycle – cleaned and lubed post cycle	Not logged	Webb/Lee

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours

  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
  - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
  - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
  - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped

- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

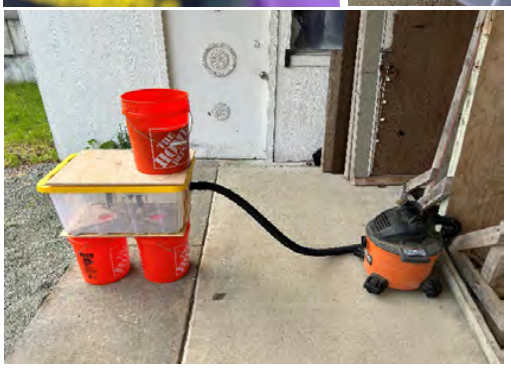
- ☐ Cleaned and lubricated
  Pistol cleaned and lubricated post 10k round 05/07/25 at 0805 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Pistol loaded per NIJ standard immediately preceding test
- ☐ One directional blowing on three sides for 90 minutes per side
    - Side one – Left side 0815-0945
    - Side two – Right side exposure 0945-1115

- Side three – Grip side exposure 1115-1245

- Fired 15 rounds

Sand and Dust chamber manufactured to mirror NIJ testing standards per MIL-STD-810 Test Method Procedure 2 with silica dioxide sand 150-850 microns from one direction at a wind speed rate of 18 meters per second (40.26MPH) (see photos below). Measured wind speed with Caldwell Wind Wizard at 40.8MPH. Shooter was Kye Peart. Pistol did not fire. Trigger was unable to be pulled and resulted in a light primer strike. Unable to complete the assessment.





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Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber

- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0910	Cleaned, lubed and inspected	Weber
1000	NIJ accuracy test – Petrowski	Lee
1130	Detailed Inspection	Weber
1355	Detailed Inspection	Weber
1515	Detailed Inspection	Weber
1610	Detailed inspection – replaced striker spring cups per manufacturers armorer book at 4k rounds	Weber
05/06/25 0920	Detailed inspection – replaced Holosun Battery	Weber
1025	Detailed Inspection	Weber
1125	Detailed Inspection	Weber
1405	Detailed inspection – striker assembly, edp spring and outer recoil spring replaced at 8k rounds per manufacturers armorer book.	Weber
1440	Detailed Inspection – significant wear on slide stop	Weber
1515	Detailed Inspection – wear on barrel hood	Weber
1605	10k rounds completed no malfunctions	Webb
1605	Detailed Inspection front takedown pin almost drifted out	Weber
05/07/25 0805	Detailed inspection clean and lubed	Weber
0815	Begin dust exposure test	Webb
1245	Dust exposure test completed	Webb

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01382

Shooters: Mike Woodhouse, Anthony Perkins, Ryan Kowalchuk (10k round reliability test NIJ 5.2)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
2	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
3	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
4	1	Detailed inspection following this cycle – Cleaned and Lubed post cycle	Perkins	Webb/Lee
5	1	147g Duty – Cleaned and lubed post cycle	Woodhouse	Webb/Lee
6	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
7	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
8	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Perkins	Webb/Lee
9	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
10	**2**	147g Duty - Cleaned and lubed post cycle	Perkins/Woodhouse	Webb/Lee
11	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
12	1	Detailed inspection following this cycle	Perkins	Webb/Lee
13	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
14	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
15	1	147g Duty – Cleaned and lubed post cycle	Woodhouse	Webb/Lee
16	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Vaders	Webb/Lee
17	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
18	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
19	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
20	**2**	Detailed inspection following this cycle – Cleaned and lubed post cycle	Perkins/Woodhouse	Webb/Lee
21	1	147g Duty – Cleaned and lubed post cycle	Kowalchuk/Woodhouse	Webb/Lee
22	1	Cleaned and lubed post cycle	Perkins/Kowalchuk	Webb/Lee
23	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
24	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Perkins	Webb/Lee
25	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
26	1	Cleaned and lubed post cycle	Kowalchuk	Webb/Lee

27	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
28	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Woodhouse	Webb/Lee
29	1	Cleaned and lubed post cycle	Kowalchuk	Webb/Lee
30	**2**	Cleaned and lubed post cycle	Woodhouse/Perkins	Webb/Lee
31	1	Cleaned and lubed post cycle	Kowalchuk	Webb/Lee
32	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Perkins	Webb/Lee
33	1	Cleaned and lubed post cycle	Kowalchuk	Webb/Lee
34	1	Cleaned and lubed post cycle	Woodhouse	Webb/Lee
35	1	Cleaned and lubed post cycle	Perkins	Webb/Lee
36	1	(Slide stop broke and seized in slide unable to complete 10k rounds)		
37	1			
38	1			
39	1			
40	**2**			

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated

  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - All fifteen rounds will be subjected to the same temperature conditioning
  - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
  - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
  - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
  - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test

- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine

- ☐ One directional blowing on three sides for 90 minutes per side
  - Side one
  - Side two
  - Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated

- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0905	Cleaned, lubed and Inspected	Weber
1000	NIJ Accuracy test – Woodhouse	Lee
1125	Detailed Inspection	Weber
1137	*Cycle 5 – Failure to feed and light primer strike 147 grain duty Woodhouse	Lee
1350	Detailed Inspection	Weber
1520	Detailed Inspection	Weber
1605	Detailed Inspection – replaced striker spring cup per manufacturers armorer book at 4k rounds	Weber
05/06/25 0900	*Cycle 18 – Failure to extract/stovepipe 124 ball Perkins	Lee
1010	Detailed inspection – lots of wear on crown of muzzle	Weber
1017	*Cycle 25 – Light primer strike 124 ball Woodhouse	Lee
1110	Detailed Inspection	Weber
1247	*Cycle 30 – Light Primer Strike 124 ball Perkins	Lee
1320	Detailed inspection – striker assembly, edp spring and outer recoil spring replaced per manufacturers armorer book at 8k rounds.	Weber
1408	*Cycle 35 – Slide failed to lock to the rear without intervention at the end of the magazine Perkins	Lee
1408	Rear sight screw missing rear sight floating right	Perkins
1410	*Cycle 35 - Slide locked to the rear on its own and magazine was not empty – Inspection showed slide stop sheered off and was stuck between slide and frame not allowing slide to be manipulated. Unable to complete test Perkins support hand. 5 malfunctions total	Lee

*See appendix ZK01382 for photos of associated malfunctions

Appendix ZK01382 – Malfunctions (most have 1 photo prior to clearance and 1 post)


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ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01383

Shooters: Jim Furchert, Jae Dobbs, Kyle Peart (NIJ 10k round reliability test NIJ 5.2 and Sand and Dust exposure test NIJ 5.3.3)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
2	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
3	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
4	1	Detailed inspection following this cycle – Cleaned and Lubed post cycle	Furchert	Webb/Lee
5	1	147g Duty – Cleaned and lubed post cycle	Dobbs	Webb/Lee
6	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
7	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
8	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Furchert	Webb/Lee
9	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
10	**2**	147g Duty - Cleaned and lubed post cycle	Furchert	Webb/Lee
11	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
12	1	Detailed inspection following this cycle	Furchert	Webb/Lee
13	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
14	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
15	1	147g Duty – Cleaned and lubed post cycle	Dobbs	Webb/Lee
16	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Furchert	Webb/Lee
17	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
18	1	Cleaned and lubed post cycle	Peart	Webb/Lee
19	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
20	**2**	Detailed inspection following this cycle – Cleaned and lubed post cycle	Peart	Webb/Lee
21	1	147g Duty – Cleaned and lubed post cycle	Dobbs	Webb/Lee
22	1	Cleaned and lubed post cycle	Peart	Webb/Lee
23	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
24	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Peart	Webb/Lee
25	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
26	1	Cleaned and lubed post cycle	Peart	Webb/Lee
27	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
28	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Peart	Webb/Lee
29	1	Cleaned and lubed post cycle	Peart	Webb/Lee

30	**2**	Cleaned and lubed post cycle	Dobbs, Peart, Furchert	Webb/Lee
31	1	Cleaned and lubed post cycle	Furchert	Webb/Lee
32	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Peart	Webb/Lee
33	1	Cleaned and lubed post cycle	Dobbs, Peart	Webb/Lee
34	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
35	1	Cleaned and lubed post cycle	Peart	Webb/Lee
36	1	Detailed inspection following this cycle – Cleaned and lubed post cycle	Dobbs	Webb/Lee
37	1	Cleaned and lubed post cycle	Peart	Webb/Lee
38	1	Cleaned and lubed post cycle	Dobbs	Webb/Lee
39	1	Cleaned and lubed post cycle	Peart	Webb/Lee
40	**2**	Detailed inspection following this cycle – cleaned and lubed post cycle	Dobbs, Peart	Webb/Lee

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours

  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
  - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
  - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
  - Three pistols will be subjected to this test
  - Cleaned and lubricated
  - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
  - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
  - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
  - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
  - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped

- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: 145 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

- ☐ Cleaned and lubricated
  Pistol cleaned and lubricated post 10k round 05/07/25 at 0755 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Pistol loaded per NIJ standard immediately preceding test
- ☐ One directional blowing on three sides for 90 minutes per side
    - Side one – Left side 0815-0945
    - Side two – Right side exposure 0945-1115

- Side three – Grip side exposure 1115-1245

- Fired 15 rounds

Sand and Dust chamber manufactured to mirror NIJ testing standards per MIL-STD-810 Test Method Procedure 2 with silica dioxide sand 150-850 microns from one direction at a wind speed rate of 18 meters per second (40.26MPH) (see photos below). Measured wind speed with Caldwell Wind Wizard at 40.8MPH. Shooter was Kye Peart. Pistol late fired 1 time after the trigger was pressed and failed to extract. Unable to complete the assessment.







Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber

- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0800	Cleaned, lubed and inspected	Weber
0945	NIJ accuracy test – Dobbs	Lee
1015	*Cycle 1 – Failure to feed 124 duty ~60 rounds in Dobbs	Lee
1020	*Cycle 1 – Failure to feed 124 duty Dobbs	Lee
1057	*Cycle 3 – Light Primer Strike 124 duty Furchert	Lee
1059	*Cycle 3 – Light Primer Strike 124 duty Furchert	Lee
1102	*Cycle 3 – Failure to feed 124 duty on trigger press out of battery then slid into battery after trigger press Furchert	Weber/ Furchert
1111	*Cycle 4 – Failure to feed 124 duty Dobbs	Weber
1113	*Cycle 4 – Failure to feed 124 duty Dobbs	Lee
1115	*Cycle 4 – Failure to feed 124 duty Dobbs	Lee
1117	*Cycle 4 – Failure to feed 124 duty Dobbs	Lee
1117	Detailed Inspection	Weber
1130	*Cycle 5 – Light Primer Strike 147 Duty Furchert	Lee
1133	*Cycle 5 – Light Primer Strike 147 grain duty Furchert	Lee
1134	*Cycle 5 – Failure to feed 147g Duty Furchert	Lee
1147	*Cycle 6 – Failure to feed 124 ball Furchert	Lee
1151	*Cycle 6 – Failure to feed 124 ball Dobbs	Lee
1314	*Cycle 7 – Failure to feed 124 ball Dobbs	Lee
1315	*Cycle 7 – Failure to feed 124 ball Dobbs	Lee
1335	Detailed inspection	Weber
1342	*Cycle 9 – Light Primer Strike 124 ball Dobbs	Lee
1343	*Cycle 9 – Failure to feed 124 ball frequently out of batter upon trigger press then slides into battery but does not fire Dobbs	Lee
1344	*Cycle 9 – Failure to feed 124 ball Dobbs	Lee
1346	*Cycle 9 – Failure to feed 124 ball Dobbs	Lee
1407	*Cycle 10 – Failure to feed 147 duty Dobbs	Webb

1411	*Cycle 10 – Light Primer Strike 147 duty Dobbs	Lee
1413	*Cycle 10 – Failue to feed 147 duty Dobbs	Lee
1420	*Cycle 10 – Failure to feed 147 duty Dobbs	Lee
1429	*Cycle 11 – Failure to feed 124 ball Furchert	Lee
1437	*Cycle 11 – Failure to feed 124 ball Furchert	Lee
1455	Detailed Inspection	Weber
1503	*Cycle 12 – Failure to feed 124 ball Dobbs	Lee
1507	*Cycle 12 – Fialure to feed 124 ball Dobbs	Lee
1508	*Cycle 12 – Light Primer Strike 124 ball Dobbs	Lee
1509	*Cycle 12 – Light Primer Strike 124 ball Dobbs	Lee
1509	*Cycle 12 – Light Primer Strike 124 ball Dobbs	Lee
1510	*Cycle 12 – Light Primer Strike 124 ball Dobbs	Lee
1523	*Cycle 13 - Failure to feed 124 duty Furchert	Lee
1525	*Cycle 13 – Failure to feed 124 duty Furchert	Lee
1537	*Cycle 14 – Failure to feed 124 duty Dobbs	Lee
1538	*Cycle 14 – Failure to feed 24 duty Dobbs	Lee
1539	*Cycle 14 – Light Primer Strike 124 duty Dobbs	Lee
1541	*Cycle 14 – Failure to feed 124 duty Dobbs	Lee
1604	*Cycle 16 – Light primer strike 124 duty Dobbs	Webb
1606	*Cycle 16 – Failure to feed 124 duty Dobbs	Webb
1607	*Cycle 16 – Failure to feed 124 duty Dobbs	Webb
1609	*Cycle 16 – Failure to feed 124 duty Dobbs	Lee
1620	Detailed inspection – replaced striker spring cups per manufacturers armorer book at 4k rounds	Weber
05/06/25 0821	Cycle 17 – Peart replaced Furchert as shooter	Dobbs
0833	*Cycle 18 – Failure to feed 124 ball Dobbs	Lee
0836	*Cycle 18 – Failure to feed 124 ball Dobbs	Lee
0838	*Cycle 18 – Failure to feed 124 ball Dobbs	Lee
0839	*Cycle 18 – Failure to feed 124 ball Dobbs	Webb

0841	*Cycle 18 – Failure to feed 124 ball Dobbs	Webb
0908	*Cycle 20 – Failure to feed 124 ball Dobbs	Lee
0925	Detailed Inspection	Weber
0945	Detailed inspection – holosun loose locktite and torqued	Weber
0952	*Cycle 22 – Light Primer Strike 124 Ball Dobbs	Lee
1013	*Cycle 23 – Light Primer Strike 124 duty Dobbs	Lee
1045	Detailed inspection holosun loose again	Weber
1050	*Cycle 25 – Light primer strike 124 ball Dobbs	Lee
1052	*Cycle 25 – Failure to feed 124 ball Dobbs	Lee
1053	*Cycle 26 – Light primer strike Dobbs	Lee
1125	Detailed inspection holosun loose again	Weber
1255	Brass stuck in holster unable to holster weapon and trigger is hot	Furchert
1318	*Cycle 31 – Failure to feed 124 ball Furchert	Webb
1325	*Cycle 32 - Failure to extract 124 duty Peart	Webb
1328	*Cycle 32 – Failure to extract double feed 124 ball Peart	Lee
1331	*Cycle 32 – Failure to extract 124 Duty Dobbs	Lee
1335	Detailed inspection – striker assembly, edp spring and outer recoil spring replaced at 8k rounds per manufacturers armorer book.	Weber
1356	*Cycle 33 – Failure to extract 124 duty Dobbs	Lee
1359	*Cycle 33 – Failure to extract 124 duty - Dobbs	Lee
1403	*Cycle 33 – Failure to extract 124 duty slide locked shut – Dobbs	Lee
1404	*Cycle 33 – Failure to extract 124 duty – Dobbs	Lee
1407	*Cycle 33 - Failure to extract 124 duty – Peart	Lee
1409	*Cycle 33 – Failure to extract 124 duty – Peart	Webb
1413	*Cycle 33 – Failure to extract 124 duty – Peart	Lee
1419	*Cycle 34 – Failure to extract 124 duty – Peart	Lee
1421	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee
1424	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee

1425	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee
1427	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee
1428	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee
1428	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee
1431	*Cycle 34 – Failure to extract 124 duty – Dobbs	
1432	*Cycle 34 – Failure to extract 124 duty – Dobbs	Lee
1435	Detailed inspection significant wear on slide stop looks almost worn through	Weber
1505	*Cycle 36 – Failure to feed 124 Ball – Dobbs	Lee
1507	*Cycle 36 – Failure to feed 124 ball – Dobbs	Lee
1510	Detailed inspection – additional wear and degradation of slide stop	Lee
1553	10k rounds complete – 75 malfunctions	Webb
1610	Post 10k Detailed inspection significant gouge in slide stop	Weber
05/07/25 0755	Detailed inspection, cleaning and lubrication	Weber
0815	Begin sand test	Webb
1245	Sand test complete	Webb

*See appendix ZK01383 for photos of associated malfunctions

Appendix ZK01383 – Malfunctions (most have 1 photo prior to clearance and 1 post)


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MADE IN CONTRACTA WARUSA


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ZKO1383


ZKO1383


GLOCK
9MM
ZKD1393
13:46


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9MM
ZKD1383
FIRST


ZKD1383
FIRST


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ZK01393


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ZX01383


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ZKO1383
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MADE IN CENTRALIA WA, USA


15:06
MON 5
SUNNY 62
FIRST


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MADE IN CENTRALIA WA, USA


HOLOSUN


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA


ZKG1389
FIRST


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HOLOSUN
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ZKD1389
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MADE IN CENTRALIA WA, USA


HOLOSUN


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA USA


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA
ZKO1383


SPEER
9mm LUGER
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA USA


HOLOSUN
9MM
FIRST


HOLOSUN


HOLOSUN
9MM
ZEV TECHNOLOGIES, INC.
FIRST


LICE
MARSHAL
WEBB
D.O.C.
HOLOSUN


HOLOSUN
9MM


ICE
ARSHAL
WEBB
D.O.C.
Pig


FIRST


HOLOSUN
9MM
ZKD1383
ZEV TECHNOLOGIES
MADE IN CENTRAL
FIRST


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA W.A. USA


HOLOSUN
9MM


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HOLOSUN
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HOLOSUN
9MM
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA
FIRST


HOLOSUN
9MM
ZEV TECHNOLOGIES INC.


HOLOSUN
FIRST


08:35


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HOLOSUN
ZEV TECHNOLOGIES INC.


HOLOSUN


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA


HOLOSUN
ZEV TECHNOLOGIES INC.


HOLOSUN


HOLOSUN
ZEV TECHNOLOGIES INC
MADE IN CENTRALIA WA


HOLOSUN
ZEV TECHNOLOGIES
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HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA, WA, USA


HOLOSUN
ZEV TECHNOLOGIES INC.


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA


HOLOSUN
Pi9


HOLOSUN


HOLOSUN
ZEV TECHNOLOGIES INC.


HOLOSUN


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA, WA
FIRST


9MM
ZEV TECHNOLOGIES INC.


ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA
FIRST


ZEV TECHNOLOGIES INC.


FIRST


CE
RSHAL
EBB
.O.C.


HOLOSUN


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRAL FLA. USA


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA USA
FIRST


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRAL FLORIDA, USA
P19


D.O.C.


POLICE
U.S. MARSHAL
WEBB
D.O.C.


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA USA


HOLOSUN
FIRST


HOLOSUN


HOLOSUN
ZEV TECHNOLOGIES
FIRST


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA USA


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA


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ZEV TECHNOLOGIES INC.


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HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA
FIRST


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA, WASH. USA


HOLOJUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRALIA WA. USA


HOLOSUN
ZEV TECHNOLOGIES INC.
MADE IN CENTRAL


9MM

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01386

Shooters: Zachary Vaders, Mike Woodruff (only tests conducted on this pistol were Low Temperature Exposure NIJ 5.3.2 and High Temperature Exposure NIJ 5.3.1)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1			
2	1			
3	1			
4	1	Detailed inspection following this cycle		
5	1	147g Duty		
6	1			
7	1			
8	1	Detailed inspection following this cycle		
9	1			
10	**2**	147g Duty		
11	1			
12	1	Detailed inspection following this cycle		
13	1			
14	1			
15	1	147g Duty		
16	1	Detailed inspection following this cycle		
17	1			
18	1			
19	1	147g Duty		
20	**2**	Detailed inspection following this cycle		
21	1			
22	1			
23	1			
24	1	Detailed inspection following this cycle		
25	1			
26	1			
27	1			
28	1	Detailed inspection following this cycle		
29	1			
30	**2**			
31	1			
32	1	Detailed inspection following this cycle		
33	1			
34	1			
35	1			
36	1	Detailed inspection following this cycle		
37	1			
38	1			
39	1			
40	**2**	Detailed inspection following this cycle		

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
    - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
    - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
    - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated

  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer at 0750 on 05/05/2025 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine

  Loaded immediately preceding testing with Federal 124 grain ball ammunition
- ☐ Temperature: 145 +/- 5 for eight hours

  All 3 pistols tested for this portion were placed in a temperature controlled Pit Boss Electric oven with a humidity/temperature gauge for 8 hours beginning at 0800 on 05/05/25 (see photos)
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/05/2025 at 0800 and concluded 05/05/2025 at 1600. All requirements per NIJ met and firearm performed the test with no noted issues. Mike Woodruff was the shooter for this test.


143.8F

Low Temperature

- Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer on 05/05/2025 at 1610 (see journal)
- Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded immediately preceding the testing with Federal 124 grain ball ammunition
- Temperature: -28 +/- 5 for eight hours
  All 3 pistols were placed in a temperature controlled deep freezer for 8 hours at -22.1 degrees Fahrenheit with a temperature/humidity gauge
- Firing began within 1 minute of removal from the conditioned environment
- Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/07/2025 at 0720 and concluded 05/07/2025 at 1520. All requirements per NIJ met and firearm performed the test with no noted issues. Mike Woodhouse was the shooter for this test.

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ One directional blowing on three sides for 90 minutes per side
    - o Side one
    - o Side two
    - o Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Submerged six inches in 5% saline solution for one minute
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated

- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber

- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0750	**Cleaned, lubed and Inspected**	**Weber**
05/05/25 0800	**NIJ high temperature exposure testing initiated**	**Lee**
05/05/25 1600	**NIJ high temperature exposure testing complete**	**Webb**
05/05/25 1610	**Cleaned, Lubed and Inspected**	**Weber**
05/07/25 0720	**NIJ low temperature exposure testing initiated**	**Webb**
05/07/25 1520	**NIJ low temperature exposure testing completed**	**Webb**

ZEV TECHNOLOGIES OZ9 MODULAR PISTOL SYSTEM – DOC / WFSE PERFORMANCE AND TESTING

Testing dates: May 5, 2025 through May 7, 2025

Weapon ID: ZEV Technologies OZ9C – X Grip 9mm modular pistol system

Serial Number: ZK01410

Shooters: Jae Dobbs, Scott Lee (Tests conducted on this pistol were immersion testing NIJ 5.3.4 and High Temperature Exposure NIJ 5.3.1)

Location: North Whidbey Sportsman's Association,
886 Gun Club Road, Oak Harbor, Washington

If you have a malfunction of any kind, do not attempt to fix it and call for the testing evaluator / armorer.

Accuracy and dispersion – **prior to and following** reliability and durability testing (NIJ 5.1)

- Pistol cleaned / lubricated in accordance with owner's manual.
- (3) targets positioned at 25 yards
- (10) rounds fired at each target (30 rounds total) using bench rest or mechanical mount
- X and Y coordinates of each impact relative to the aim point will be recorded and targets labelled and preserved for analysis

Reliability and durability (NIJ 5.2)

- 10,000 rounds performed in forty (40) cycles of 250 rounds each
  - Type 1 - 36 cycles:
    - 190 rounds – two handed
    - 30 rounds – strong hand only
    - 30 rounds – weak/support hand only
  - Type 2 - 4 cycles: 250 independent presentations from a holster firing one round per presentation
- Pistols shall be cleaned and lubricated in accordance with the owner's manual after every cycle
- A detailed examination shall be performed at least every 1000 rounds, or four cycles. These examinations may be performed more frequently at the discretion of the operator.

Cycle	Type	Notes	Shooter	Evaluator
1	1			
2	1			
3	1			
4	1	Detailed inspection following this cycle		
5	1	147g Duty		
6	1			
7	1			
8	1	Detailed inspection following this cycle		
9	1			
10	**2**	147g Duty		
11	1			
12	1	Detailed inspection following this cycle		
13	1			
14	1			
15	1	147g Duty		
16	1	Detailed inspection following this cycle		
17	1			
18	1			
19	1	147g Duty		
20	**2**	Detailed inspection following this cycle		
21	1			
22	1			
23	1			
24	1	Detailed inspection following this cycle		
25	1			
26	1			
27	1			
28	1	Detailed inspection following this cycle		
29	1			
30	**2**			
31	1			
32	1	Detailed inspection following this cycle		
33	1			
34	1			
35	1			
36	1	Detailed inspection following this cycle		
37	1			
38	1			
39	1			
40	**2**	Detailed inspection following this cycle		

Environmental Exposure (NIJ 5.3)

- High temperature exposure (NIJ 5.3.1)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at 145 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Low temperature exposure (NIJ 5.3.2)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - All fifteen rounds will be subjected to the same temperature conditioning
    - The pistols shall be in a temperature conditioned environment at -28 (+/- 5) degrees Fahrenheit w/ 0 (+/- 5) percent humidity for eight hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

- Sand and dust exposure (NIJ 5.3.3)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be subjected to a one-directional blowing sand and dust environment on three sides for 90 minutes each side
    - Each pistol shall fire 15 rounds upon conclusion of sand and dust exposure
    - Firing shall be conducted with two hands standing

- Immersion Conditioning (NIJ 5.3.4)
    - Three pistols will be subjected to this test
    - Cleaned and lubricated
    - Loaded with a round in the chamber and 14 rounds in the magazine prior to testing
    - The pistols shall be immersed in 5 (+/- 1) percent saline solution at a depth of six inches for one minute
    - Upon removal from the saline solution, the pistols shall be subjected to environmental conditioning at 70 (+/- 5) degrees Fahrenheit and 70 (+/- 5) percent specific humidity for 24 hours
    - Firing will begin within one minute of removal from the environmental chamber and all fifteen rounds fired within three minutes.
    - Firing shall be conducted with two hands standing

Mechanical Shock (NIJ 5.4)

- Two pistols shall be subjected to this test
- Cleaned and lubricated
- The drop height shall be four feet and the impact surface a concrete floor
- An electromagnet, or other method, shall be used to hold and release the pistols
- The pistols shall be loaded with a new primed casing in the chamber and a fully loaded magazine (metallic dummy rounds) inserted in the pistol when dropped
- A new primed casing will be used for each test segment
- The pistol shall be in battery when dropped
- Each pistol will be dropped in the following orientations:
    - Muzzle down
    - Muzzle up
    - Slide up, horizontal
    - Slide down, horizontal
    - Right side, horizontal
    - Left side, horizontal
- After each test, each pistol shall fire 15 rounds
- Firing shall be with two hands standing

High Temperature

- ☐ Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer at 0746 on 05/05/2025 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded immediately preceding testing with Federal 124 grain ball ammunition
- ☐ Temperature: 145 +/- 5 for eight hours
  All 3 pistols tested for this portion were placed in a temperature controlled Pit Boss Electric oven with a humidity/temperature gauge for 8 hours beginning at 0800 on 05/05/25 (see photos)
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/05/2025 at 0800 and concluded 05/05/2025 at 1600. All requirements per NIJ met and firearm performed the test with no noted issues. Scott Lee was the shooter for this test.


143.8F

Low Temperature

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ Temperature: -28 +/- 5 for eight hours
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Sand and Dust

- ☐ Cleaned and lubricated
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
- ☐ One directional blowing on three sides for 90 minutes per side
  - o Side one
  - o Side two
  - o Side three
- ☐ Fired 15 rounds

Immersion Conditioning

- ☐ Cleaned and lubricated
  Inspected, cleaned and lubricated per manufacturers specifications by certified armorer at 0910 on 05/05/2025 (see journal)
- ☐ Loaded with (1) round in the chamber and (14) rounds in the magazine
  Loaded per specification immediately preceding test with Speer Gold Dot 124 grain duty ammunition
- ☐ Submerged six inches in 5% saline solution for one minute
  Saline solution of 2.5 gallons water with 17.59 ounces of NaCl dissolved
  Each (3) pistols submerged six inches for 60 seconds, removed, excess water allowed to run off/out
- ☐ Environmental conditioning at 70% with 70% humidity for 24 hours
  All 3 pistols placed in humidity controlled HDX tote with Boveda brand 2-way humidity control packet and temperature/humidity gauge. (80% humidity and 68.9 degrees Fahrenheit achieved)
- ☐ Firing began within 1 minute of removal from the conditioned environment
- ☐ Firing of all 15 rounds was completed within 3 minutes

Test initiated 05/06/2025 at 0830 and concluded 05/07/2025 at 0850. All requirements per NIJ met and firearm performed the test with no noted issues. Jae Dobbs was the shooter for this test.

Mechanical Shock

Test administrator:

Shooter:

Test 1: Muzzle down

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 2: Muzzle up

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 3: Slide up, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 4: Slide down, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 5: Right side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)

- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

Test 6: Left side, horizontal

- ☐ Cleaned and lubricated
- ☐ Loaded with a new primed casing in the chamber
- ☐ Fully loaded magazine (inert rounds)
- ☐ Pistol in battery when dropped
- ☐ Fired 15 rounds

JOURNAL

Reference	Notes	Author
05/05/25 0746	**Cleaned, lubed and Inspected**	**Weber**
05/05/25 0800	**NIJ high temperature exposure testing initiated**	**Lee**
05/05/25 1600	**NIJ high temperature exposure testing complete**	**Webb**
05/05/25 1600	**Cleaned, Lubed and Inspected**	**Weber**
05/06/25 0830	**NIJ immersion testing initiated**	**Webb**
05/07/25 0850	**NIJ immersion testing completed**	**Webb**
05/07/25 1000	**Cleaned, lubed and Inspected**	**Weber**