

Zxo on PulseChain Deployment Report

VERIFIED SOURCE · EXACT MATCH

DATE	BASED ON	COMPILER	BUILD SETTINGS
5 October 2026	Security Audit Revision 3.1	solc 0.8.36 commit 8a079791	Optimizer 200 runs · Shanghai · via-IR off
MAIN DEX	REVIEWER		
LibertySwap V3 (PancakeSwap-style)	Claude (Anthropic), AI-assisted		

01 Statement

AUDIT SCORE

8.8/10

8.7 → 8.8 in Revision 3.1

Score of the audited code as deployed.
It is not a rating of the tokens, the team or any investment.

The Zxo contracts deployed on PulseChain mainnet at the six addresses in section 02 are built from the source code reviewed in the Zxo Security Audit. Sourcify reports an exact match of creation and runtime bytecode for each one. It is the same code that runs on Arbitrum One.

The deployed source differs from the reviewed files in three places only: the BUSL-1.1 license header on each file, the ChainLib import (now `PulseChainLib.sol`), and the PulseChain addresses and HOLDER settings inside `PulseChainLib.sol`.

No audit finding is open in the deployed code, and no path was found that lets anyone take user principal. The protocol ran as audited on LibertySwap, a PancakeSwap-style V3 DEX: nine pools launched in the enforced order, and a live reward claim was reproduced to the last wei.

The open items are operational (section 08): the owner is a single wallet, and no static-analysis or third-party audit report was provided to this review.

6

Contracts with
exact-match
source

9

Pools launched
in the enforced
order

100

Zxo transactions
reviewed

0

Differences from
audited logic

02

Deployed contracts

CONTRACT	ADDRESS (LINKS TO SOURCIFY)	BLOCK	VERIFIED (UTC)	BYTECODE
ZxoTreasury Fee and referral receiver	0x923cbe1C05e9c0014D6514a506A8E74B9254FF86	27704288	5 Oct 2026 11:30	EXACT MATCH
ZxoOracle 15-minute average price reader	0xC8CaA5F5961d4679C79A18731C53b6023Ac8862B	27704319	5 Oct 2026 11:31	EXACT MATCH
ZxoVerify (first run) Configuration check before the deployer	0xa8D7A6A9291E60400F0CA64c5dfed64997Cd3817	27704333	6 Oct 2026 00:51	EXACT MATCH
ZxoV3Deployer Seeds other DEXes, then finalizes	0x3D62C13A12F246A2CAC2d7fCe1A43D63ED253FBE	27704349	5 Oct 2026 11:33	EXACT MATCH
ZxoVerify (second run) Configuration check with the deployer	0x923028273B38b24fb98F846f0e4c809fAB58523f	27704375	6 Oct 2026 00:52	EXACT MATCH
Zxo Farm, staking, rewards, core LP	0x813984963d4e0CC7fF5d04E830767fe63D815B0A	27704394	5 Oct 2026 11:34	EXACT MATCH

All six were deployed on 3 October 2026 by

0x98C3eEc2b28D82b05edfA3D40F8A468a58BD1e24, an externally owned account that is also the current owner of Zxo. The order on-chain was ZxoTreasury, ZxoOracle, ZxoVerify, ZxoV3Deployer, ZxoVerify again, then Zxo at 16:46 UTC, followed by `ZxoV3Deployer.setZxoContract(Zxo)` at block 27704538. That is the order the audit requires. Both ZxoVerify deployments succeeded, and ZxoVerify reverts unless its checks pass.

The nine reward tokens are ZxoToken instances created by `Zxo.createPool` from the same token source. No reward token address was submitted for separate

verification, so they are covered through the Zxo build, which contains the token code.

Deployed source against audited source

HASH MATCH keccak256 in the Sourcify metadata equals the hash of the reviewed file

LINE MATCH verified source compared line by line with the reviewed file

FILE	METHOD	KECCAK256 OF DEPLOYED FILE	RESULT
contracts/ZxoTreasury.sol	HASH MATCH	0x7fe7c3597e1ce0a7d1a47af5d8be8c6790ffe8e45a3e25ab8da0b671fd7168ea	Identical to the reviewed file
contracts/ZxoOracle.sol	HASH MATCH	0xece409c3f72fb085760937016f8814eb054fd3bac85d914f881cdf4aa9b187b3	Identical to the reviewed file
contracts/ZxoV3Deployer.sol	HASH MATCH	0x21a2fcf6c4845487ce4e4bc1706e70ea7d54c1b4aee1c697bc15fd0ca18ae07c	Identical; import switched to PulseChainLib
contracts/ZxoVerify.sol	HASH MATCH	0xcfd4a46a8ab850909f1dda4f844190438c0ff81b1c85af4e31d0e85651eee4779	Identical; import switched to PulseChainLib
contracts/interfaces/IZxo.sol	HASH MATCH	0x585cf1d293808b83e594f728c802a9af8b8d2f46ed657a4f3868347513f1d720	Identical to the reviewed file
contracts/interfaces/IZxoOracle.sol	HASH MATCH	0x18f282e363125d95b610fbe5f0a5fc0a2d6e2a0e5adec5943a1b5b30399de13e	Identical to the reviewed file
contracts/interfaces/Iv3PosManager.sol	HASH MATCH	0x982265f349185d696df1f26f1954c203c0ac4bc7498ae34b2001edd61dc1a917	Identical to the reviewed file
contracts/interfaces/IUniswapV3.sol	HASH MATCH	0xb0a9deea3bcffc41b32de19bdfd5100d138914f070f882238e18208942c4875a	Identical to the reviewed file

FILE	METHOD	KECCAK256 OF DEPLOYED FILE	RESULT
contracts/libraries/PulseChainLib.sol first ZxoVerify and ZxoV3Deployer	HASH MATCH	0xd0cb26af18a7dd188 72a6f910cb5c29998c9 0e64bca50399c411858 38dae3dad	Treasury and oracle set, deployer still zero, HOLDER settings as in section 04
contracts/libraries/PulseChainLib.sol second ZxoVerify and Zxo	HASH MATCH	0x22ad53a7a2ad2bde4 c76fca9f3f3ef59ffde 50211f497bec90715a2 07feaa789	All three Zxo addresses set. The copy compiled into Zxo reads the same line for line
contracts/Zxo.sol	LINE MATCH	0x48a1be203e0ce18d0 741af8144f37ffb120d d89937467915edd6ac1 5ccc9e6ff expected value, see note	907 lines compared, no difference; import switched to PulseChainLib
contracts/libraries/ZxoLib.sol	LINE MATCH	0x5824ce7e7131aa46e d589ba47d7178c5c442 a349eff7c7f97b52ccc a6a7f200b expected value, see note	428 lines compared, no difference
contracts/tokens/ZxoToken.sol	LINE MATCH	0x52566870113cb2dea 33c69495c8a3c31e775 283ed0e2e9ceeb55b43 d33dfb00a expected value, see note	83 lines compared, no difference
contracts/interfaces/IZxoToken.sol	LINE MATCH	0x3f5b34c68c2abafac ea47bdb3a9ee7b0ad0e 89a19091e56cbb8cc78 73bb929ae expected value, see note	No difference
contracts/interfaces/IZxoV3Deployer.sol	LINE MATCH	0x5865997e0c6674cd4 ced4204abb6c3dfaba0 f14ed91c0de32ea3284 aa1b42617 expected value, see note	No difference

Hash match. The compiler metadata embedded in each deployment lists a keccak256 hash for every source file. For the files marked Hash match, that hash

equals the hash of the reviewed file with the published license header (Change Date 2029-10-03) placed in front. This is an exact, byte-level result. It covers ten files here, including both versions of `PulseChainLib.sol` and `ZxoVerify.sol`.

Line match. The Zxo metadata is too large for this review's reader to reach the hashes of the files compiled only into Zxo. Those files were read from the Sourcify-verified input and compared with the reviewed files line by line, ignoring whitespace. No line differs. The hash shown is the value the reviewed file produces; anyone can confirm it against `metadata.json` on Sourcify.

Interface. The verified ABI of Zxo has 24 functions, 3 events and 4 errors and is the same as on Arbitrum. The OpenZeppelin files carry the same hashes as in the Arbitrum deployment; they were not compared with an upstream release.

04

Configuration compiled into Zxo

CONSTANT (PULSECHAINLIB)	VALUE	NOTE
CHAIN_ID	369	PulseChain mainnet
POS_MANAGER	0x19b1347900840e7a299F339868881750918FAD91	LibertySwap position manager
FACTORY	0x796fcbDC956b85797EFfe21145Aa97599B7FB36a6	LibertyV3Factory, verified on Sourcify
ZX0_TREASURY	0x923cbe1C05e9c0014D6514a506A8E74B9254FF86	Matches section 02
ZX0_V3_DEPLOYER	0x3D62C13A12F246A2CAC2d7fCe1A43D63ED253FBE	Matches section 02
ZX0_ORACLE	0xC8CaA5F5961d4679C79A18731C53b6023Ac8862B	Matches section 02
HOLDER_TOKEN	0xDb3fF08284f0874860281b3A84a0D48ab25040d6	Labelled DYNASTY in the source. Was zero in the reviewed library
HOLDER_THRESHOLD	3,690,000,000 tokens	Was zero in the reviewed library

What a successful Zxo deployment proves

The Zxo constructor reverts unless every check passes, so the deployment at block 27704394 shows that on that block: the chain id was 369; all six configured addresses held code; the LibertySwap position manager used the configured factory; the 0.01% fee tier had tick spacing 1; the HOLDER token reported 18 decimals and the threshold was at least one token; the treasury and deployer returned their identity markers; the deployer was not yet linked to another Zxo; and the oracle reported its 15-minute window. It also shows the contract fits the 24,576-byte size limit under the Shanghai EVM that PulseChain supports.

LibertySwap, a PancakeSwap-style V3 DEX

The original audit's finding H-02 was that a typed `slot0()` read reverts on PancakeSwap-style V3 pools, because those pools return one field in a different size from Uniswap. It would have blocked stake and harvest. The fix reads the price with a low-level call and decodes only the two fields every V3 fork shares.

PulseChain is the first deployment where the main pools are that pool type. The LibertyV3Factory is verified on Sourcify, and its interface has the functions that PancakeSwap added to the Uniswap V3 factory (`poolDeployer` , `setLmPoolDeployer` , `setWhiteListAddress` , and `setFeeProtocol` with a `pool` argument).

CODE PATH ON A LIBERTYSWAP POOL	SEEN ON MAINNET	RESULT
Create the pool, then read its price and require the launch price (<code>initializePool</code> , <code>core</code>)	9	WORKED
Health gate: spot price read and 15-minute average through <code>observe</code> (stake, harvest)	22	WORKED
Mint positions through the LibertySwap position manager (pool initialization and stake)	34	WORKED
Collect core LP trading fees to the treasury	1	WORKED

This confirms the H-02 fix on a live PancakeSwap-style pool. PancakeSwap itself on BNB Chain has not been run, but it uses the same pool design and the same `Zxo` code path, so the remaining risk there is low. The health gate count is the 16 stake and 6 harvest transactions. The mint count is the 18 successful pool initializations and the 16 stakes.

On-chain activity reviewed

Transactions and events for `Zxo` and `ZxoV3Deployer` were read through the PulseChain explorer API, from deployment on 3 October 2026, 16:46 UTC to 5 October 2026, 22:39 UTC: 100 `Zxo` transactions with 119 `ZxoEvent` logs, and all 38 `ZxoV3Deployer` transactions with their 39 logs.

Functions exercised on mainnet

OPERATION	SEEN	WHAT IT CONFIRMS
Pool launch: createPool, core LP, seed, finalize, core stake	9 pools	All nine followed the enforced order. Every reward token was finalized before its core stake was minted.
Seeding on other DEXes	27	Three position managers per pool (section 07). Each <code>TokenFinalized</code> event followed the third seeding.
Stake	16	The health gate passed on LibertySwap pools: spot price and 15-minute average both read and in range.
Harvest (claim and collect)	6	Rewards were minted on claim and trading fees were forwarded.
Unstake	2	Positions were held 27.1 and 24.4 hours, past the 1-day lock-up. Forfeited pending rewards were logged, not minted.
Core LP fee collection	1	133.09 pair tokens of trading fees from pool 0's core LP went to the treasury. Core liquidity was not touched.
HOLDER bonus	8 stakes	Stakes from qualifying wallets received 13.74%, exactly 1.25 times the standard 10.99%.
Config changes and rate re-targeting	17 + 24	Target APR and referral rates logged the stored value; emission rates re-targeted after each.
ZxoV3Deployer set-up	1	The validator was set to the zero address at deployment, which disables the testnet-only token path. <code>setZxoContract</code> was called once.

Numbers recomputed from the audited formulas

CHECK (POOL 0)	FORMULA	RESULT	ON-CHAIN VALUE	RESULT
First reward claim, using the contract's integer steps over 6,990 seconds	$637,524,190,098,746,069 \text{ wei}$		$637,524,190,098,746,069 \text{ wei}$	EXACT
Staked value counted for emissions with only the core stake present	$110,385,144.43 \text{ tokens}$		$110,385,144.43 \text{ tokens}$	MATCH
Stake bonus at the launch price	10% to 12% expected		10.99% to 11.00% standard	IN RANGE
HOLDER bonus multiplier	$1.25 \times$		$13.74\% \div 10.99\% = 1.25$	EXACT

The first row reproduces a live claim to the last wei from the reward formula in the audit. The second shows that the single-sided core stake counts toward the value used for emissions (finding M-01): the on-chain figure comes from the first emission rate, and the formula figure from the core-stake liquidity and its tick range.

Who used it

- 94 of the 100 transactions came from the deployer wallet.
- Four other addresses sent 6 transactions: 5 stakes and 1 harvest, in pools 6, 7 and 8.
- This review cannot tell whether those four are team wallets or the public. One of them named a team address as its referrer.

Two failed transactions

- The first two `initializePool(0, core)` calls reverted. Each had a 4,000,000 gas limit and used 3,761,352.
- The third call, with a 7,800,000 limit, succeeded using 5,072,846. Creating the LibertySwap pool needs more than the first limit allowed.
- A reverted call changes nothing on-chain. This was a gas setting, not a contract fault.

Pools and owner settings observed

POOL	REWARD TOKEN	CREATED (UTC)	TARGET APR AT 5 OCT	REFERRAL RATE	PAIR TOKEN
0	0x4542fD562bBa19AE85e017d5b50B e7C4b16443DF	3 Oct 17:24	10%	3%	WPLS
1	0x27381e9925B58133136297d7dd79 dab1F2A1dD32	3 Oct 21:25	15%	5.55%	HEX
2	0x3647464C8e72CdB4Ea3Fc58002D2 A1C9E0fe2daF	4 Oct 01:41	21%	10%	PLSX
3	0x2dE787C0AB8DeCb4167d43ee00A0 eE4d2e3f6f9E	4 Oct 03:59	12%	7%	INC
4	0xbce06Bb11FF7fEb628eE80589BC7 0206085A63Be	4 Oct 11:40	28%	16%	PRVX
5	0x518bC3Ce004a6d6f074eD24cE0e6 e730786aE99f	4 Oct 17:26	360%	25%	INTARSIA
6	0x8fA5C2a7CD2974b5b817136A986b f5475F310887	4 Oct 17:52	510%	30%	ZXO
7	0x3BfefFA660696417b8068E19E8De 1456211063d5	5 Oct 00:13	48%	18%	PCOCK
8	0x204250574e7c7BE7fc6AEdD38c36 5DA651695eaF	5 Oct 00:30	110%	26%	pDAI

- **Target APR.** Pools 5 and 6 target 360% and 510%. Both were created with the 320% cap, which doubles to 640% in the first year. Each pool's emissions are also limited by its 30-day cap, fixed at creation.
- **Referral rate.** It ranges from the 3% default to the 30% maximum (pool 6). The referral share comes out of each claim, so a staker on pool 6 keeps 70% of rewards unless they are their own referrer.
- **Core stake and your APR.** The core stake counts toward a pool's reward weight but never claims (finding M-03, accepted). What that costs stakers depends on its size beside theirs. The core stakes are small, so the cost fades quickly as a pool fills; the table below gives the sizes.
- **Seeding.** Every pool was seeded through three position managers: 0xCC05bf158202b4F461Ede8843d76dcd7Bbad07f2, 0x18A532b36A9F6B10b3FEC5BF225C00A0Ec89B79E and 0xC36442b4a4522E871399CD717aBDD847Ab11FE88. The third is the Uniswap V3 position manager address. This review did not identify the DEX behind the first two; the team should publish their names so users can check them.

- **Token-only calls.** 23 of the 32 `createPool` calls used `withoutPool = true` . These deploy a token with no pool and no supply and have no effect on the pools.

These settings are within the limits the contract enforces and are the owner's to choose. They are listed so that users can see them; they are not findings.

Core stake size and what it costs stakers

POOL	PAIR TOKEN	CORE STAKE (REWARD TOKENS)	ABOUT, IN USD	USER STAKES BESIDE IT, 5 OCT	STAKERS EARN, SHARE OF TARGET APR
0	WPLS	110,385,144.43	\$1,030	None (test stake withdrawn)	n/a
1	HEX	246,560.14	\$590	0.7% of it	about 50%
2	PLSX	55,206,463.20	\$420	0.6% of it	about 50%
3	INC	1,949.70	\$790	0.3% of it	about 50%
4	PRVX	3,538,570.42	\$330	under 0.01% of it	about 50%
5	INTARSIA	0.9615	\$450	0.3% of it	about 50%
6	ZXO	769,033.58	\$560	8 times	about 90%
7	PCOCK	36,900.00	\$390	1.3% of it	about 50%
8	pDAI	217,058.82	\$360	885 times	about 99.9%

- **Size.** The nine core stakes are worth about \$330 to \$1,030 each and about \$4,900 together, at DEX prices of the pair tokens on 5 October 2026. The team reports \$1,078.57 for pool 0 and about \$200 to \$600 for the others. This review's figures agree, except pool 3, which comes out near \$790 at the INC price used here.
- **Fixed at creation.** Each amount is set in the `createPool` call, stored as an immutable value in the reward token, and minted once. It cannot be increased later. The amounts above are decoded from those calls and match each pool's first emission rate exactly.
- **Effect on APR.** A core stake carries about 2.2 times the reward weight of a user stake of the same value. When user stakes equal the core stake, stakers earn about 62% of the target APR. At ten times the core stake they earn about 90%, and at one hundred times about 99%. For pool 0 that is roughly \$10,000 and \$100,000 of user stakes; for a \$400 core stake, \$4,000 and \$40,000.
- **Where the pools stood.** Pools 6 and 8 held real user stakes, and stakers there were earning about 90% and 99.9% of target. The other pools held test-size stakes far smaller than the core stake, or none. That is the only case where stakers earn about half of target.

Open items

OPEN not done or not evidenced

TEAM-REPORTED stated by the team, not independently checked

ITEM	STATUS	DETAIL
Owner is a single wallet	OPEN	Zxo and ZxoV3Deployer are owned by the deployer account. No ownership transfer appears in the logs. The team plans a multisig after all mainnet deployments. Until then one key can create pools, change target APR and referral rates, and collect core LP fees. It cannot touch staked positions, block unstaking or withdraw core liquidity.
Static analysis (Slither or Aderyn)	OPEN	No report has been provided.
Independent human audit	TEAM-REPORTED	The team states that all audits passed. No third-party report was provided to this review, so none is relied on here.
Seeding DEX names	OPEN	Publish which DEX each of the three seeding position managers belongs to (section 07).
Price history per pool	TEAM-REPORTED	Stakes and harvests succeeded, so the 15-minute average was available. The stored history size of each pool was not read. Run <code>set-observations.py</code> for all nine pools if not already done.
HOLDER settings	TEAM-REPORTED	The token and the 3.69 billion threshold were set after the audit reviewed this library. The bonus worked for qualifying wallets, which suggests the values are the intended ones. Confirm.
Deployment gas limit	TEAM-REPORTED	Use at least the 7,800,000 limit for <code>initializePool</code> on LibertySwap, as the later calls did.

Limits of this report

- It covers the six addresses in section 02 on PulseChain mainnet only. Other chains need their own report.
- Source and bytecode status come from Sourcify. Transactions and events come from the PulseChain explorer API, up to 5 October 2026, 22:39 UTC. Later activity is not covered.
- No contract state was read directly from a node. The current owner, the deployer link, pool history sizes and treasury settings are inferred from events, not read from storage.

- Dollar values of the core stakes use DEX prices of each pair token read from DexScreener on 5 October 2026. They are approximate and move with the market. Pool 5's pair token has thin liquidity, so its figure is the least reliable.
- 11 of the 119 event records came through the reader with damaged data and were only partly decoded. None of the checks in section 06 relies on them.
- The files compiled only into Zxo were matched line by line, not by hash (section 03).
- The LibertySwap pool and position manager contracts themselves were not audited. Their type was inferred from the verified factory interface.
- No fuzzing, static analysis or fork testing was run by this review. This AI-assisted report does not replace an independent human audit.

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Verify it yourself

Source and bytecode

- Open each address in section 02 on Sourcify and check that it shows Exact Match.
- Download `metadata.json` for Zxo and compare the `keccak256` of `contracts/Zxo.sol` and `contracts/libraries/ZxoLib.sol` with section 03.
- Or compile the published standard JSON input with solc 0.8.36 and compare the runtime bytecode with the chain.

Before you stake in a pool

- `ZxoV3Deployer.isFinalized(rewardToken)` returns true.
- The deployer's balance of the reward token is 0.
- Each `PoolStarted` event names a position manager you recognize.
- `Zxo.owner()` shows who controls pool settings; check whether it is a multisig yet.
- `Zxo.poolInfo(id)` shows the target APR and referral rate that apply to you.

This report is an AI-assisted review of publicly verified source code and on-chain records for the addresses listed. It is not a guarantee that the code is free of defects, and it is not financial or legal advice. Behavior depends on the external DEX contracts, chain conditions and the owner's settings. An independent professional audit is recommended for contracts that hold user funds.