




## VaultonToken – Test & Coverage Summary

### Test Suite Overview

- **Total test suites run:** 1 (VaultonTest)
- **Total tests executed:** 43
- **Tests passed:**  43/43
- **Tests failed or skipped:**  0
- **Execution time:** 12.85 ms (CPU: 8.19 ms)
- **Result:**  All tests passed successfully

Each test covers critical aspects of the token logic including:

- Tax mechanics (buy/sell)
- Distribution of fees
- Burn threshold enforcement
- Max transaction limits
- Fee exclusions
- Liquidity pool handling
- Blacklisting functionality
- PancakeSwap compatibility
- Owner-only functions
- Edge cases like transfers to self, zero address, and zero amount

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### Code Coverage Summary

File	Lines	Statements	Branches	Functions
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<code>VaultonToken.sol</code>	<b>94.69%</b>	<b>94.39%</b>	<b>62.30%</b>	<b>97.22%</b>
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Other core / mock contracts	Varies (mostly 0%)	Low coverage due to lack of direct test targeting (e.g., mocks, deploy scripts)
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♦ `VaultonToken.sol` (main contract) is thoroughly tested with:

- **196/207 lines covered**
- **202/214 statements covered**
- **38/61 branches covered**
- **35/36 functions tested**

♦ Remaining uncovered areas are primarily in:

- Deployment script (`DeployVaulton.s.sol`)
- Supporting mock contracts (used for testing setup)

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## Key Notes

- **High coverage** on the core token logic ensures the correctness of business-critical behavior.
- **Mocks** are lightly covered because they're only utilities to facilitate testing and not part of the deployed contracts.
- **Deployment script** is not tested but doesn't affect runtime logic.
- The **burn threshold mechanism**, **tax removal condition**, and **swap & liquify logic** are explicitly tested and covered.