

# Slither Audit Report

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## Slither Audit Report

This report was generated from Slither's JSON output. It aims to provide a comprehensive overview of all detected issues, the contracts involved, and recommended fixes.

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### 1. Contracts Analyzed

Total Contracts: 1

- **GTRX** at address `TPmPPtsiqHoNPT1XHputd3L6VAwyuVJ1Sq` (from `Token.sol`)

## 2. Summary of Detectors

Number of Detectors (categories): 11

Total Issues Found: 31

Distribution by Impact:

- **Informational:** 7 detector(s)
- **Low:** 4 detector(s)

Distribution by Confidence:

- **High:** 8 detector(s)
- **Medium:** 3 detector(s)

## 3. Detailed Detectors & Issues

Detector 1: shadowing-local

- **Impact:** Low
- **Confidence:** High

Description:

Token.constructor(string,string,uint256).totalSupply shadows: - ERC20.totalSupply() (function) - IERC20.totalSupply() (function)

**Recommended Fix:** Variables or functions are shadowing existing names (e.g., from parents). Consider renaming your local variables or parameters to avoid confusion.

Issues:

- **Issue Type:** variable
  - **Name / Signature:** totalSupply
  - **Parent:** function constructor
  - **Location:** L649
- **Issue Type:** function
  - **Name / Signature:** totalSupply
  - **Parent:** contract ERC20
  - **Location:** L233-L235
- **Issue Type:** function
  - **Name / Signature:** totalSupply
  - **Parent:** contract IERC20
  - **Location:** L27

Detector 2: shadowing-local

- **Impact:** Low
- **Confidence:** High

Description:

Token.constructor(string,string,uint256).symbol shadows: - ERC20.symbol() (function) - IERC20Metadata.symbol() (function)

**Recommended Fix:** Variables or functions are shadowing existing names (e.g., from parents). Consider renaming your local variables or parameters to avoid confusion.

Issues:

- **Issue Type:** variable
  - **Name / Signature:** symbol
  - **Parent:** function constructor
  - **Location:** L648
- **Issue Type:** function
  - **Name / Signature:** symbol
  - **Parent:** contract ERC20
  - **Location:** L209-L211
- **Issue Type:** function
  - **Name / Signature:** symbol
  - **Parent:** contract IERC20Metadata
  - **Location:** L105

### Detector 3: shadowing-local

- **Impact:** Low
- **Confidence:** High

#### Description:

Token.constructor(string,string,uint256).name shadows: - ERC20.name() (function) - IERC20Metadata.name() (function)

**Recommended Fix:** Variables or functions are shadowing existing names (e.g., from parents). Consider renaming your local variables or parameters to avoid confusion.

#### Issues:

- **Issue Type:** variable
  - **Name / Signature:** name
  - **Parent:** function constructor
  - **Location:** L647
- **Issue Type:** function
  - **Name / Signature:** name
  - **Parent:** contract ERC20
  - **Location:** L201-L203
- **Issue Type:** function
  - **Name / Signature:** name
  - **Parent:** contract IERC20Metadata
  - **Location:** L100

### Detector 4: events-maths

- **Impact:** Low
- **Confidence:** Medium

#### Description:

Token.setMode(uint256) should emit an event for: - \_\_mode = v

**Recommended Fix:** State-changing functions or arithmetic operations may need event emissions or additional checks. Emitting events helps track off-chain changes.

#### Issues:

- **Issue Type:** function
  - **Name / Signature:** setMode

- **Parent:** contract Token
- **Location:** L668-L672
- **Issue Type:** node
  - **Name / Signature:** `_mode = v`
  - **Parent:** function `setMode`
  - **Location:** L670

#### Detector 5: pragma

- **Impact:** Informational
- **Confidence:** High

#### Description:

2 different versions of Solidity are used: - Version constraint `^0.8.0` is used by: `-[^0.8.0](audit/contracts/gtrx.sol#L4)` `-[^0.8.0](audit/contracts/gtrx.sol#L89)` `-[^0.8.0](audit/contracts/gtrx.sol#L118)` `-[^0.8.0](audit/contracts/gtrx.sol#L145)` `-[^0.8.0](audit/contracts/gtrx.sol#L535)` - Version constraint `0.8.6` is used by: `-0.8.6` `-0.8.6` `-0.8.6`

**Recommended Fix:** No specific fix recommendation available.

#### Issues:

- **Issue Type:** pragma
  - **Name / Signature:** `^0.8.0`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L4
- **Issue Type:** pragma
  - **Name / Signature:** `^0.8.0`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L89
- **Issue Type:** pragma
  - **Name / Signature:** `^0.8.0`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L118
- **Issue Type:** pragma
  - **Name / Signature:** `^0.8.0`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L145
- **Issue Type:** pragma
  - **Name / Signature:** `^0.8.0`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L535
- **Issue Type:** pragma
  - **Name / Signature:** `0.8.6`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L617
- **Issue Type:** pragma
  - **Name / Signature:** `0.8.6`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L629
- **Issue Type:** pragma
  - **Name / Signature:** `0.8.6`
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L639

#### Detector 6: dead-code

- **Impact:** Informational
- **Confidence:** Medium

#### Description:

ERC20.\_burn(address,uint256) is never used and should be removed

**Recommended Fix:** Unused code found. Remove or justify the presence of code that isn't called.

#### Issues:

- **Issue Type:** function
  - **Name / Signature:** \_burn
  - **Parent:** contract ERC20
  - **Location:** L424-L440

#### Detector 7: dead-code

- **Impact:** Informational
- **Confidence:** Medium

#### Description:

Context.\_msgData() is never used and should be removed

**Recommended Fix:** Unused code found. Remove or justify the presence of code that isn't called.

#### Issues:

- **Issue Type:** function
  - **Name / Signature:** \_msgData
  - **Parent:** contract Context
  - **Location:** L135-L137

#### Detector 8: solc-version

- **Impact:** Informational
- **Confidence:** High

#### Description:

Version constraint ^0.8.0 contains known severe issues (<https://solidity.readthedocs.io/en/latest/bugs.html>)

- FullInlinerNonExpressionSplitArgumentEvaluationOrder - MissingSideEffectsOnSelectorAccess - AbiReencodingHeadOverflowWithStaticArrayCleanup - DirtyByteArrayToStorage - DataLocationChangeInInternalOverride - NestedCalldataArrayAbiReencodingSizeValidation - SignedImmutables - ABIDecodeTwoDimensionalArrayMemory - KeccakCaching. It is used by: - [^0.8.0](audit/contracts/gtrx.sol#L4) - [^0.8.0](audit/contracts/gtrx.sol#L89) - [^0.8.0](audit/contracts/gtrx.sol#L118) - [^0.8.0](audit/contracts/gtrx.sol#L145) - [^0.8.0](audit/contracts/gtrx.sol#L535)

**Recommended Fix:** Multiple or incorrect Solidity versions are used. Align all contracts to a single, newer compiler version (e.g., ^0.8.19).

#### Issues:

- **Issue Type:** pragma
  - **Name / Signature:** ^0.8.0
  - **Parent:** UnknownParentType UnknownParentName

- **Location:** L4
- **Issue Type:** pragma
  - **Name / Signature:** ^0.8.0
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L89
- **Issue Type:** pragma
  - **Name / Signature:** ^0.8.0
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L118
- **Issue Type:** pragma
  - **Name / Signature:** ^0.8.0
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L145
- **Issue Type:** pragma
  - **Name / Signature:** ^0.8.0
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L535

#### Detector 9: solc-version

- **Impact:** Informational
- **Confidence:** High

#### Description:

Version constraint 0.8.6 contains known severe issues (<https://solidity.readthedocs.io/en/latest/bugs.html>)

- VerbatimInvalidDeduplication - FullInlinerNonExpressionSplitArgumentEvaluationOrder - MissingSideEffectsOnSelectorAccess - AbiReencodingHeadOverflowWithStaticArrayCleanup - DirtyByteArrayToStorage - DataLocationChangeInInternalOverride - NestedCalldataArrayAbiReencodingSizeValidation - SignedImmutables. It is used by: - 0.8.6 - 0.8.6 - 0.8.6

**Recommended Fix:** Multiple or incorrect Solidity versions are used. Align all contracts to a single, newer compiler version (e.g., ^0.8.19).

#### Issues:

- **Issue Type:** pragma
  - **Name / Signature:** 0.8.6
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L617
- **Issue Type:** pragma
  - **Name / Signature:** 0.8.6
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L629
- **Issue Type:** pragma
  - **Name / Signature:** 0.8.6
  - **Parent:** UnknownParentType UnknownParentName
  - **Location:** L639

#### Detector 10: naming-convention

- **Impact:** Informational
- **Confidence:** High

#### Description:

Variable `TokenStorage._mode` is not in `mixedCase`

**Recommended Fix:** Some names do not follow best practices (`mixedCase`, etc.). Use standardized naming conventions for clarity and maintenance.

**Issues:**

- **Issue Type:** variable
  - **Name / Signature:** `_mode`
  - **Parent:** contract `TokenStorage`
  - **Location:** L623

#### **Detector 11: naming-convention**

- **Impact:** Informational
- **Confidence:** High

**Description:**

Function `IProxy._acceptImplementation()` is not in `mixedCase`

**Recommended Fix:** Some names do not follow best practices (`mixedCase`, etc.). Use standardized naming conventions for clarity and maintenance.

**Issues:**

- **Issue Type:** function
  - **Name / Signature:** `_acceptImplementation`
  - **Parent:** contract `IProxy`
  - **Location:** L632

*End of Slither Audit Report*