

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test program	Test Program Bug ID	Trigger Bug	Impact	Bug ID text
https://github	https://github	Incorrect Output	Formal Verification Error	Formal Verification	SMT-LIB Script	Incorrect Model Checker Implement	1. CL 2. play with numerical value	1	14375		14375
https://github	https://github	Incorrect Output	Syntactic Analysis Error	CLI	Helper Message		1. CL	1	14259	Low Imp; Low Effo	14259
https://github	https://github	Performance Issue	Optimization Error	CodeGen		Redundant Yul Opt	NO TEST PROGRAM	0	14241	Medium Low Effe	14241
https://github	https://github	Incorrect Output	Formal Verification Error	Formal Verification	Warning Message	Incorrect Model Checker Implement	1. CL 2. play with numerical value	1	14211		14211
https://github	https://github	Crash	Semantic Analysis Error	Formal Verification	Reject Valid Program	Scope	1. language feature (memory, array, struct, public, pure, e	1	14182		14182
https://github	https://github	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	bug	1	14181		14181
https://github	https://github	Error Omission	Formal Verification Error	Formal Verification		Incorrect Model Checker Implement	1. SMT enabler 2. play with numerical value 3. language feature (public)	1	14111		14111
https://github	https://github	Crash	Memory-Related Error	Yul	Reject Valid Program	Allocation Problem	yul	1	14037	yul	14037
https://github	https://github	Crash	Syntactic Analysis Error	Parser	Poor Error Message		1. invalid code	1	14016	Low Imp; Low Effo	14016
https://github	https://github	Crash	Memory-Related Error	Code Analyzer	Poor Error Message	Null Pointer Dereference	int8	1	14001	Low Imp; Low Effo	14001
https://github	https://github	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	1. annotation (@custom:smtchecker abstract-function-non	1	13945	Low Effo	13945
https://github	https://github	Incorrect Output	Exception Handling Error	Code Analyzer	Error message	Misleading Error Message	1. metamorphic relation 2. abstract contract	1	13824	Low Imp; Low Effo	13824
https://github	https://github	Error Omission	Exception Handling Error	Code Analyzer CodeGen		The original specification about the i is not well-designed and is modified	1. 'immutable' keyword	1	13769	Medium Low Effo	13769
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	Scope	1. language feature (library, external) 3. metamorphic relation	1	13765	Low Imp; Low Effo	13765
https://github	https://github	Error Omission	Semantic Analysis Error	Code Analyzer		Scope	1. language feature (library) 2. metamorphic relation	1	13764	Medium Low Effe	13764
https://github	https://github	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	1. SMT enabler 2. language feature (mapping)	1	13735	array	13735
https://github	https://github	Crash	Exception Handling Error	Formal Verification	Reject Valid Program		1. annotation (@custom:smtchecker b; @custom:smtche 2. SMT enabler 3. language feature (internal)	1	13732		13732
https://github	https://github	Error Omission	Syntactic Analysis Error	Parser			1. invalid code 2. language feature (event)	1	13681	Low Imp; Low Effo	13681
https://github	https://github	Incorrect Output	Optimization Error	CodeGen	ByteCode		1. assembly	1	13680	yul	13680
https://github	https://github	Incorrect Output	Exception Handling Error	Interface	ByteCode	missing type checking	1. CL	1	13628	Low Imp; Low Effo	13628
https://github	https://github	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	1. SMT enabler 2. language feature (library internal)	1	13477	Medium Low Effo	13477
https://github	https://github	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	1. language feature (struct delete) 2. SMT enabler	1	13432		13432
https://github	https://github	Crash	Semantic Analysis Error	Formal Verification	Poor Error Message	missing type checking	1. invalid code 2. tuple	1	13366		13366
https://github	https://github	Crash	Memory-Related Error	Code Analyzer	Segfault	Null Pointer Dereference	keyword: memory	1	13266		13266
https://github	https://github	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Access the slot of mapping var	yul: mstore	1	13259	yul	13259
https://github	https://github	Incorrect Output	Memory-Related Error	CodeGen	encoding	Memory Copy	dynamic array keyword: calldata	1	13249		13249
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	tuple	1	13208		13208
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	1. abi encoder 2. event 3. error	1	13101		13101
https://github	https://github	Error Omission	Optimization Error	Yul			1. assembly	1	13039	yul	13039
https://github	https://github	Crash	Exception Handling Error	Formal Verification	Reject Valid Program	Misleading Error Message	NO TEST PROGRAM	0	12998		12998
https://github	https://github	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	NO TEST PROGRAM	0	12973	member	12973
https://github	https://github	Crash	Semantic Analysis Error	Interface	Poor Error Message	Incorrect Model Checker Implement	1. mapping 2. int256	1	12953	mapping	12953
https://github	https://github	Incorrect Output	Code Generation Error	CodeGen	encoding		1. event emit 2. metamorphic relation	1	12880	ABI	12880
https://github	https://github	Error Omission	Code Generation Error	evmasm			1. assembly	1	12860	yul	12860
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	AST Visitor	1. function overload	1	12780		12780
https://github	https://github	Incorrect Output	Exception Handling Error	Code Analyzer	encoding	Poor Error Message	1. external 2. abi encoder	1	12776		12776
https://github	https://github	Incorrect Output	Optimization Error	evmasm Yul CodeGen	ByteCode		1. bytes 2. memory	0	12738		12738
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	incorrect type checking	1. memory 2. abi encoder	1	12718		12718
https://github	https://github	Error Omission	Semantic Analysis Error	Code Analyzer		OOP	1. class inheritance	1	12615		12615
https://github	https://github	Incorrect Output	Memory-Related Error	CodeGen	Value(s) of Variable(s)	Memory Copy	yul: mstore	1	12600	yul	12600
https://github	https://github	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Memory Copy	keyword: memory	1	12558		12558
https://github	https://github	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Memory Copy	dynamic array	1	12546		12546
https://github	https://github	Incorrect Output	Code Generation Error	CodeGen	Emitted Event		1. event emit 2. bytes	1	12535	IR	12535
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope	1. override	1	12528		12528

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	1. use of undefined construct		1	12505		12505
https://github.com	https://github.com	Hang	Optimization Error	evmasm			1. Large Contract 2. CL		1	12406		12406
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope	1. class inheritance 2. immutable		1	12379		12379
https://github.com	https://github.com	Crash	Exception Handling Error	Formal Verification	Reject Valid Program	Unnecessary Error Reporting	1. SMT enabler 2. library, tuple		1	12222		12222
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Reject Valid Program	storage size	large static array		1	12159		12159
https://github.com	https://github.com	Crash	Semantic Analysis Error	Yul	Reject Valid Program	Scope	1. external, 2. assembly		1	12158	yul	12158
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	Warning Message	No specification about codegen an	NO TEST PROGRAM		0	12068	yul	12068
https://github.com	https://github.com	Crash	Exception Handling Error	AST	Poor Error Message	Incorrect Error Reporting	1. typedef, mapping, library yul annotation		1	12066		12066
https://github.com	https://github.com	Crash	Yul Analysis Error	Yul	Reject Valid Program	Incorrect Source Location	1. modifier, external		1	12065	yul	12065
https://github.com	https://github.com	Error Omission	Code Generation Error	CodeGen			1. modifier, external		1	12061	IR	12061
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program		1. metamorphic relation yul calldata		1	11955		11955
https://github.com	https://github.com	Crash	Memory-Related Error	CodeGen	Reject Valid Program	calldata	1. external, payable		1	11929		11929
https://github.com	https://github.com	Incorrect Output	Formal Verification Error	Formal Verification	Warning Message	Incorrect Model Checker Implement	1. external, payable		1	11885		11885
https://github.com	https://github.com	Crash	Exception Handling Error	Error Handling	Reject Valid Program	Incorrect Error Handling Implementation			1	11878	several files	11878
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope	multiple import		1	11855	several files	11855
https://github.com	https://github.com	Incorrect Output	Code Generation Error	Yul	Value(s) of Variable(s)		NO TEST PROGRAM 1. assembly 2. CL 3. name shadowing		0	11736	IR	11736
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope			1	11734	yul	11734
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	library, internal		1	11710		11710
https://github.com	https://github.com	Incorrect Output	Optimization Error	CLI	ByteCode	Optimization Error for yul contracts	yul		1	11708	yul	11708
https://github.com	https://github.com	Crash	Type System Error	CodeGen	Reject Valid Program	Incorrect Type Conversion	calldata, external, pure, bytes, memory		1	11677	conversion	11677
https://github.com	https://github.com	Crash	Semantic Analysis Error	CodeGen	Reject Valid Program	Scope	1. unchecked 2. type()		1	11631		11631
https://github.com	https://github.com	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Stack Pop Problem			1	11611		11611
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Type	1. CL 2. calldata		1	11610		11610
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	modifier, interface		1	11557	incorrect type combination	11557
https://github.com	https://github.com	Incorrect Output	Read-write Error	CLI	Metadata Output	CL reading	empty contract		1	11553		11553
https://github.com	https://github.com	Crash	Read-write Error	CLI	Poor Error Message		1. CL		1	11552		11552
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		big constant, bitwise negation		1	11526	AST->bytecode	11526
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program	The trivial implementation is about s	assembly		1	11524	yul	11524
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Warning Message	Scope	library, external, internal		1	11522		11522
https://github.com	https://github.com	Incorrect Output	Optimization Error	Parser	ByteCode	initialization of the optimization	NO TEST PROGRAM		0	11521		11521
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	virtual, override, abstract, modifier		1	11506		11506
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	control flow	external		1	11501		11501
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	control flow	keccak256, abi.encode		1	11497		11497
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	OOP	override modifier		1	11483		11483
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Reject Valid Program	Scope	override, inheritance external		1	11445		11445
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	CodeGen	Value(s) of Variable(s)	Incorrect Source Location	event, emit, block		1	11440		11440
https://github.com	https://github.com	Crash	Optimization Error	Code Analyzer	Reject Valid Program	Optimization Setting	NO TEST PROGRAM		0	11418		11418
https://github.com	https://github.com	Incorrect Output	Type System Error	AST	Error Message	Incorrect Type System	try-catch		1	11405		11405
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler calldata, bytes, external		1	11404	array slice	11404
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope	mapping, storage, abstract		1	11356		11356
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Type	mapping, event		1	11353		11353
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	view, return		1	11341		11341
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler bytes, array		1	11336	array	11336
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Incorrect Error Reporting	external, library, using		1	11325		11325
https://github.com	https://github.com	Crash	Read-write Error	CLI	Poor Error Message	Compatibility Issue	CL		1	11233		11233
https://github.com	https://github.com	Error Omission	Formal Verification Error	Formal Verification		Incorrect Model Checker Implement	library, interface, require, assert		1	11213		11213
https://github.com	https://github.com	Crash	Doc Error	Parser Code Analyzer	Reject Valid Program				1	11194		11194
https://github.com	https://github.com	Incorrect Output	Optimization Error	evmasm	Assembly Code		assembly CLI --optimize external, payable, receive()		1	11131	yul	11131
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Poor Error Message	Circular Dependence	CLI --ir		1	11128		11128
https://github.com	https://github.com	Incorrect Output	Yul Analysis Error	Yul	ByteCode	Incorrect Source Location			1	11068		11068
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	ArraySlice `arr[beg:end]`		1	11064	array	11064
https://github.com	https://github.com	Crash	Yul Analysis Error	LangUtil	Poor Error Message	Incorrect Source Location	empty Yul		1	11041	yul	11041
https://github.com	https://github.com	Crash	Read-write Error	CLI	Reject Valid Program		CL		1	11039	several files	11039

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com/llvm/llvm-project/issues/11027	https://github.com/llvm/llvm-project/pull/11027	Error Omission	Formal Verification Error	Formal Verification		Incorrect SMT Encoding	SMT enabler bytes, internal, assert, require	1	11027	array		11027
https://github.com/llvm/llvm-project/issues/11007	https://github.com/llvm/llvm-project/pull/11007	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Function Call Graph	bytes, inheritance	1	11007			11007
https://github.com/llvm/llvm-project/issues/11005	https://github.com/llvm/llvm-project/pull/11005	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	.pop, [], SMT enabler	1	11005	array		11005
https://github.com/llvm/llvm-project/issues/11001	https://github.com/llvm/llvm-project/pull/11001	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Allocation Problem	keyword: memory	1	11001			11001
https://github.com/llvm/llvm-project/issues/10988	https://github.com/llvm/llvm-project/pull/10988	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Type	abstract, public	1	10988			10988
https://github.com/llvm/llvm-project/issues/10985	https://github.com/llvm/llvm-project/pull/10985	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler, uint256	1	10985	member		10985
https://github.com/llvm/llvm-project/issues/10975	https://github.com/llvm/llvm-project/pull/10975	Crash	Semantic Analysis Error	Yul	Reject Valid Program	missing type checking	assembly	1	10975	yul		10975
https://github.com/llvm/llvm-project/issues/10958	https://github.com/llvm/llvm-project/pull/10958	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Too Restrict Error Reporting	external, pure	1	10958	several files		10958
https://github.com/llvm/llvm-project/issues/10956	https://github.com/llvm/llvm-project/pull/10956	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	constant, import	1	10956	several files		10956
https://github.com/llvm/llvm-project/issues/10947	https://github.com/llvm/llvm-project/pull/10947	Crash	Code Generation Error	CodeGen	Reject Valid Program		bytes, pure, modifier	1	10947	IR		10947
https://github.com/llvm/llvm-project/issues/10940	https://github.com/llvm/llvm-project/pull/10940	Crash	Exception Handling Error	CodeGen	Poor Error Message	Incorrect Error Reporting	fixed	1	10940			10940
https://github.com/llvm/llvm-project/issues/10926	https://github.com/llvm/llvm-project/pull/10926	Crash	Semantic Analysis Error	Formal Verification	Reject Valid Program	OOP	super	1	10926			10926
https://github.com/llvm/llvm-project/issues/10920	https://github.com/llvm/llvm-project/pull/10920	Crash	Code Generation Error	CodeGen	Reject Valid Program		(address(1).call(""))	1	10920	IR		10920
https://github.com/llvm/llvm-project/issues/10918	https://github.com/llvm/llvm-project/pull/10918	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Allocation Problem		1	10918			10918
https://github.com/llvm/llvm-project/issues/10917	https://github.com/llvm/llvm-project/pull/10917	Crash	Code Generation Error	CodeGen	Reject Valid Program		delete	1	10917	IR		10917
https://github.com/llvm/llvm-project/issues/10916	https://github.com/llvm/llvm-project/pull/10916	Crash	Semantic Analysis Error	CodeGen	Reject Valid Program	Scope	constructor, modifier	1	10916			10916
https://github.com/llvm/llvm-project/issues/10914	https://github.com/llvm/llvm-project/pull/10914	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	bytes, push	1	10914	array		10914
https://github.com/llvm/llvm-project/issues/10900	https://github.com/llvm/llvm-project/pull/10900	Crash	Semantic Analysis Error	AST	Poor Error Message	OOP	override, calldata, inheritance	1	10900			10900
https://github.com/llvm/llvm-project/issues/10895	https://github.com/llvm/llvm-project/pull/10895	Crash	Semantic Analysis Error	CodeGen	Poor Error Message	CLI syntax	fixed	1	10895			10895
https://github.com/llvm/llvm-project/issues/10892	https://github.com/llvm/llvm-project/pull/10892	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Incorrect Error Reporting	event	1	10892			10892
https://github.com/llvm/llvm-project/issues/10891	https://github.com/llvm/llvm-project/pull/10891	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Incorrect Error Reporting	selector	1	10891			10891
https://github.com/llvm/llvm-project/issues/10889	https://github.com/llvm/llvm-project/pull/10889	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Unnecessary Error Reporting	uint[] calldata	1	10889			10889
https://github.com/llvm/llvm-project/issues/10882	https://github.com/llvm/llvm-project/pull/10882	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	OOP	receive()	1	10882			10882
https://github.com/llvm/llvm-project/issues/10881	https://github.com/llvm/llvm-project/pull/10881	Crash	Doc Error	Parser	Reject Valid Program		comment	1	10881			10881
https://github.com/llvm/llvm-project/issues/10876	https://github.com/llvm/llvm-project/pull/10876	Incorrect Output	Formal Verification Error	Formal Verification	SMT analysis result	Incorrect Model Checker Implement	ternary	1	10876			10876
https://github.com/llvm/llvm-project/issues/10874	https://github.com/llvm/llvm-project/pull/10874	Crash	Memory-Related Error	Code Analyzer	Reject Valid Program	Null Pointer Dereference		1	10874			10874
https://github.com/llvm/llvm-project/issues/10870	https://github.com/llvm/llvm-project/pull/10870	Crash	Type System Error	Code Analyzer CodeGen	Reject Valid Program	Incorrect Type System	storage array, pop	1	10870	conversion		10870
https://github.com/llvm/llvm-project/issues/10831	https://github.com/llvm/llvm-project/pull/10831	Crash	Semantic Analysis Error	Formal Verification	Reject Valid Program	Scope	SMT enabler	1	10831			10831
https://github.com/llvm/llvm-project/issues/10821	https://github.com/llvm/llvm-project/pull/10821	Error Omission	Semantic Analysis Error	Code Analyzer		Initialization	storage	1	10821			10821
https://github.com/llvm/llvm-project/issues/10796	https://github.com/llvm/llvm-project/pull/10796	Incorrect Output	Formal Verification Error	Formal Verification	SMT analysis result	Incorrect SMT Encoding	SMT enabler	1	10796			10796
https://github.com/llvm/llvm-project/issues/10793	https://github.com/llvm/llvm-project/pull/10793	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler	1	10793	array		10793
https://github.com/llvm/llvm-project/issues/10732	https://github.com/llvm/llvm-project/pull/10732	Hang	Semantic Analysis Error	Code Analyzer		missing type checking	cyclical dependency	1	10732			10732
https://github.com/llvm/llvm-project/issues/10730	https://github.com/llvm/llvm-project/pull/10730	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	ABI encoder assembly	1	10730	yul		10730
https://github.com/llvm/llvm-project/issues/10712	https://github.com/llvm/llvm-project/pull/10712	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	SMT enabler	1	10712			10712
https://github.com/llvm/llvm-project/issues/10693	https://github.com/llvm/llvm-project/pull/10693	Incorrect Output	Formal Verification Error	Formal Verification	SMT analysis result	Incorrect SMT Encoding	SMT enabler	1	10693			10693
https://github.com/llvm/llvm-project/issues/10689	https://github.com/llvm/llvm-project/pull/10689	Incorrect Output	Memory-Related Error	CodeGen	function returned value	storage -> memory	keyword: memory dynamic array	1	10689			10689
https://github.com/llvm/llvm-project/issues/10671	https://github.com/llvm/llvm-project/pull/10671	Error Omission	Formal Verification Error	Formal Verification		Incorrect Model Checker Implement	SMT enabler	1	10671			10671
https://github.com/llvm/llvm-project/issues/10667	https://github.com/llvm/llvm-project/pull/10667	Crash	Code Generation Error	CodeGen	Reject Valid Program		function array	1	10667	AST->bytecode		10667
https://github.com/llvm/llvm-project/issues/10666	https://github.com/llvm/llvm-project/pull/10666	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	try catch, SMT enabler, while	1	10666			10666
https://github.com/llvm/llvm-project/issues/10660	https://github.com/llvm/llvm-project/pull/10660	Crash	Semantic Analysis Error	Formal Verification	Reject Valid Program	Scope	virtual modifier, member access, SMT enabler	1	10660			10660
https://github.com/llvm/llvm-project/issues/10657	https://github.com/llvm/llvm-project/pull/10657	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler, push()	1	10657	array		10657
https://github.com/llvm/llvm-project/issues/10654	https://github.com/llvm/llvm-project/pull/10654	Crash	Syntactic Analysis Error	CodeGen	Reject Valid Program		pragma solidity	1	10654			10654
https://github.com/llvm/llvm-project/issues/10620	https://github.com/llvm/llvm-project/pull/10620	Incorrect Output	Semantic Analysis Error	Code Analyzer	Warning Message	missing type checking	abstract, virtual modifier, inheritance	1	10620			10620
https://github.com/llvm/llvm-project/issues/10609	https://github.com/llvm/llvm-project/pull/10609	Crash	Memory-Related Error	Yul	Reject Valid Program	Out-of-bounds Read	keyword: memory	1	10609	yul		10609
https://github.com/llvm/llvm-project/issues/10576	https://github.com/llvm/llvm-project/pull/10576	Error Omission	Formal Verification Error	Formal Verification		Incorrect Model Checker Implement	SMT enabler, interface	1	10576			10576
https://github.com/llvm/llvm-project/issues/10526	https://github.com/llvm/llvm-project/pull/10526	Crash	Formal Verification Error	Formal Verification	Segfault	Incorrect SMT Encoding	SMT enabler, tuple, internal function outside of contract	1	10526	array, member		10526
https://github.com/llvm/llvm-project/issues/10525	https://github.com/llvm/llvm-project/pull/10525	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	array push assignment	1	10525	array		10525
https://github.com/llvm/llvm-project/issues/10524	https://github.com/llvm/llvm-project/pull/10524	Crash	Semantic Analysis Error	Formal Verification	Reject Valid Program	Scope	library, tuple, using for	1	10524			10524
https://github.com/llvm/llvm-project/issues/10523	https://github.com/llvm/llvm-project/pull/10523	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	abstract modifier	1	10523			10523
https://github.com/llvm/llvm-project/issues/10522	https://github.com/llvm/llvm-project/pull/10522	Crash	Exception Handling Error	Formal Verification	Reject Valid Program	Incorrect Error Reporting	>>=(right shift)	1	10522			10522
https://github.com/llvm/llvm-project/issues/10517	https://github.com/llvm/llvm-project/pull/10517	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	Recursive struct definition	1	10517			10517
https://github.com/llvm/llvm-project/issues/10516	https://github.com/llvm/llvm-project/pull/10516	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	strucy array	1	10516			10516
https://github.com/llvm/llvm-project/issues/10485	https://github.com/llvm/llvm-project/pull/10485	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	OOP	(super), library	1	10485			10485
https://github.com/llvm/llvm-project/issues/10439	https://github.com/llvm/llvm-project/pull/10439	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	bytes	1	10439	array		10439
https://github.com/llvm/llvm-project/issues/10436	https://github.com/llvm/llvm-project/pull/10436	Crash	Memory-Related Error	Formal Verification	Segfault	Out-of-bounds Read	keyword: memory	1	10436			10436
https://github.com/llvm/llvm-project/issues/10433	https://github.com/llvm/llvm-project/pull/10433	Crash	Memory-Related Error	Code Analyzer	Segfault		@return, modifier	1	10433			10433
https://github.com/llvm/llvm-project/issues/10306	https://github.com/llvm/llvm-project/pull/10306	Incorrect Output	Formal Verification Error	Formal Verification	SMT analysis result	Incorrect Model Checker Implement	SMT enabler CL: --libraries	1	10306			10306
https://github.com/llvm/llvm-project/issues/10298	https://github.com/llvm/llvm-project/pull/10298	Incorrect Output	Others	evmasm	ByteCode	Linking Error	Metamorphic Relation	1	10298			10298
https://github.com/llvm/llvm-project/issues/10252	https://github.com/llvm/llvm-project/pull/10252	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler, bytes memory, &=	1	10252	array		10252
https://github.com/llvm/llvm-project/issues/10200	https://github.com/llvm/llvm-project/pull/10200	Incorrect Output	Semantic Analysis Error	Formal Verification	SMT analysis result	Scope	modifiers with branches	1	10200			10200

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Crash	Memory-Related Error	CodeGen	Reject Valid Program	Calldata	keyword: memory		1	10186		10186
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	encoding		revert		1	10170	AST->bytecode	10170
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	encoding				0	10156	ABI	10156
https://github.com	https://github.com	Error Omission	Syntactic Analysis Error	Parser			// SPDX-License-Identifier		1	10145		10145
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Reject Valid Program	Incorrect Error Type	CLI: --evm-version		1	10113		10113
https://github.com	https://github.com	Crash	Exception Handling Error	Formal Verification	Reject Valid Program	Incorrect Error Reporting	fixed >>>		1	10106		10106
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		int[15], calldata		1	10105	IR	10105
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Warning Message	control flow			0	10084		10084
https://github.com	https://github.com	Crash	Doc Error	CLI	Reject Valid Program		struct, mapping, require		1	10059		10059
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	A.push() = B.push()		1	10058	array	10058
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	OOP	import pragma experimental ABIEncoderV2;		1	9970	several files	9970
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		modifier, import, pragma experimental ABIEncoderV2;		1	9969	several files	9969
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	incorrect type checking	mapping		1	9957		9957
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	read and write	memory		1	9952		9952
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	struct with mapping, constant		1	9951		9951
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Poor Error Message	Unnecessary Error Reporting	library, inheritance		1	9948		9948
https://github.com	https://github.com	Crash	Doc Error	Code Analyzer	Reject Valid Program		comment		1	9947		9947
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	lack type info extraction			1	9890		9890
https://github.com	https://github.com	Error Omission	Type System Error	AST		Incorrect Type Conversion	address		1	9857		9857
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Poor Error Message		CLI: --ir		1	9855	IR	9855
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking			0	9851		9851
https://github.com	https://github.com	Incorrect Output	Memory-Related Error	CodeGen	Error Message	Memory Cleanup	keyword: memory		1	9832		9832
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type Conversion	calldata		1	9821		9821
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	struct with mapping		1	9817		9817
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System			1	9815		9815
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Reject Valid Program	OOP	function overriding		1	9752		9752
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	virtual modifier		1	9745		9745
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler, member access		1	9742	member	9742
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	ternary		1	9741		9741
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler, ~1		1	9699		9699
https://github.com	https://github.com	Crash	Doc Error	Code Analyzer	Poor Error Message		@inheritdoc		1	9669		9669
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	import		1	9667	several files	9667
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Reject Valid Program	Poor Error Message	function array		1	9666		9666
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Poor Error Message	Incorrect SMT Encoding	tuple		1	9659	tuple	9659
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Poor Error Message	Incorrect SMT Encoding	tuple		1	9631	tuple	9631
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message		constructor		1	9629		9629
https://github.com	https://github.com	Crash	Semantic Analysis Error	CodeGen	Reject Valid Program	Scope	fallback(), assembly		1	9618	yul	9618
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking			0	9611		9611
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type Conversion	super		1	9596		9596
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	mapping		1	9595	mapping	9595
https://github.com	https://github.com	Incorrect Output	Optimization Error	Yul	ByteCode				1	9573	yul	9573
https://github.com	https://github.com	Crash	Doc Error	Code Analyzer	Poor Error Message				1	9560		9560
https://github.com	https://github.com	Error Omission	Optimization Error	evmasm			assembly		1	9558	yul	9558
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Poor Error Message	Scope	constructor, internal		1	9557		9557
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	read and write about immutable	immutable		1	9550		9550
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System	signed exponent		1	9548		9548
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	tuple		1	9519	array	9519
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Reporting	constructor		1	9509		9509
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	array		1	9508	array	9508
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	index access of an array		1	9505	array, member	9505
https://github.com	https://github.com	Crash	Yul Analysis Error	Yul	Reject Valid Program		CLI: yulrun --input-file assembly		1	9499	yul	9499
https://github.com	https://github.com	Crash	Optimization Error	Yul	Reject Valid Program		CLI: --strict-assembly --optimize assembly		1	9472	yul	9472
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System			1	9443		9443
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Segfault	AST Visitor	CLI: --bin		1	9434		9434
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	address		1	9425		9425
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Segfault	Null Pointer Dereference	large static array		1	9404		9404
https://github.com	https://github.com	Error Omission	Type System Error	AST		Incorrect Type System	ternary with functions		1	9381		9381
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	tuple		1	9296		9296
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking			1	9270		9270
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	tuple		1	9233	tuple	9233
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope	struct, enum		1	9231		9231
https://github.com	https://github.com	Crash	Semantic Analysis Error	CodeGen	Reject Valid Program	Scope	library, import		1	9229		9229

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	using for	1	9217			9217
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	immutable	1	9207			9207
https://github.com	https://github.com	Incorrect Output	Code Generation Error	Yul	wasm code		yul	1	9205	yul		9205
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	memory struct	1	9174			9174
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	calldata, external	1	9134			9134
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	evmasm	ByteCode	Incorrect Source Location		1	9133			9133
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	fixed type, bitwise operator	1	9087	tuple		9087
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		OOP		1	9065			9065
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope		1	9028			9028
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding		1	9021	array		9021
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	try catch	1	9016	array		9016
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	inline arrays of some types	1	9004			9004
https://github.com	https://github.com	Crash	AST CodeGen Code Analyzer	Code Analyzer	Reject Valid Program	Incorrect Type Conversion		1	8991			8991
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding		1	8971	tuple		8971
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding		1	8963	yul		8963
https://github.com	https://github.com	Crash	Code Generation Error	Yul	Reject Valid Program		yul	1	8960	yul		8960
https://github.com	https://github.com	Crash	Memory-Related Error	Formal Verification	Reject Valid Program	Out-of-bounds Read		1	8947			8947
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System	large exponent	1	8929			8929
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Poor Error Message	stack array is too large	out-of-bound array access	1	8923			8923
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	incorrect type checking	assembly	1	8881	yul		8881
https://github.com	https://github.com	Incorrect Output	Exception Handling Error	Code Analyzer	Error Message	Poor Error Message		1	8875			8875
https://github.com	https://github.com	Incorrect Output	Doc Error	Parser	userdoc		--userdoc	1	8820			8820
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding		1	8817			8817
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Reporting	tuple	1	8760			8760
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Poor Error Message	Null Pointer Dereference		1	8738			8738
https://github.com	https://github.com	Crash	Semantic Analysis Error	Interface	Reject Valid Program		internal constructor	1	8712			8712
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	tuple	1	8711			8711
https://github.com	https://github.com	Crash	Memory-Related Error	Formal Verification	Reject Valid Program	Null Pointer Dereference		1	8674			8674
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	IR		tuple	1	8671	IR		8671
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding		1	8667	array slice		8667
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Incorrect Error Reporting		1	8656			8656
https://github.com	https://github.com	Incorrect Output	Doc Error	Interface	userdoc		comment	1	8634			8634
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implementation		1	8623			8623
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System		1	8590			8590
https://github.com	https://github.com	Incorrect Output	Exception Handling Error	Code Analyzer	Error Message	Incorrect Model Checker Implementation		1	8577			8577
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	size	tuple	1	8450			8450
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Error Message	missing type checking	abstract contract, inheritance	1	8434			8434
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implementation		1	8419			8419
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	fixed, constant, assembly	1	8412	yul		8412
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	tuple	1	8407	tuple		8407
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Incorrect Error Reporting		1	8406			8406
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	assembly	1	8386	yul		8386
https://github.com	https://github.com	Crash	Syntactic Analysis Error	SolUtil	Reject Valid Program	Format Issue	sha256	1	8368			8368
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			0	8308	IR		8308
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	IR		ternary	1	8302	IR		8302
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Reporting Location		1	8296			8296
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	AST	Poor Error Message	uint256 array	1	8286			8286
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Type	call a uncallable var	1	8283			8283
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	assignment to mapping	1	8278			8278
https://github.com	https://github.com	Crash	Optimization Error	evmasm	Reject Valid Program		CL: solfuzzer duplicate code (true ? {previously-defined v1} : {previousl	1	8269			8269
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	recursive type declaration	1	8266			8266
https://github.com	https://github.com	Crash	Memory-Related Error	AST	Poor Error Message	copy	yul	1	8265	yul		8265
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		dynamic-sized array, calldata, external	1	8210	bytecode		8210
https://github.com	https://github.com	Incorrect Output	Code Generation Error	evmasm	Assembly			1	8171	evmasm		8171
https://github.com	https://github.com	Incorrect Output	Optimization Error	Yul	IR		yul	1	8072	yul		8072
https://github.com	https://github.com	Incorrect Output	Optimization Error	Yul	IR		yul	1	7847	yul		7847
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message		CL: --evm-version istanbul chainid	1	7711			7711
https://github.com	https://github.com	Crash	Code Generation Error	Code Analyzer	Reject Valid Program	OOP		0	7627	IR		7627
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	pass library as argument member access of a library	1	7625			7625
https://github.com	https://github.com	Incorrect Output	Others	evmasm	IR	Uppercase	yul	1	7567	yul		7567

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	gas Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type Conversion		0	7558			7558
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message		modifier	1	7550			7550
https://github.com	https://github.com	Crash	Exception Handling Error	AST	Reject Valid Program	Incorrect Error Reporting	array index	1	7549			7549
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking	identifier collision	1	7488			7488
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	arrays of recursive structs	1	7448			7448
https://github.com	https://github.com	Crash	Optimization Error	Yul	Reject Valid Program		yul	1	7416	yul		7416
https://github.com	https://github.com	Incorrect Output	Optimization Error	evmasm	Assembly		yul	1	7411	yul		7411
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	push to a storage array of mapping	1	7410			7410
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		pop a dynamic storage array of mapping	1	7378	bytecode		7378
https://github.com	https://github.com	Crash	Optimization Error	Yul	Reject Valid Program		yul CLT: --strict-assembly --optimize	1	7356	yul		7356
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	overriding function	1	7314			7314
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	SMT enabler array index	1	7305			7305
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Segfault	Null Pointer Dereference	yul	1	7296	yul		7296
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Warning Message	Scope	import as	1	7273			7273
https://github.com	https://github.com	Incorrect Output	Others	LangUtil	Warning Message	Format Issue		0	7185			7185
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Formal Verification	address	Incorrect Source Location	this	1	7168			7168
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	branch, tuple, inline function	1	7164	tuple		7164
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	>>=	1	7163			7163
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	inline function from other sources	1	7162	several files		7162
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	uncalled transfer and send function	1	7155			7155
https://github.com	https://github.com	Incorrect Output	Doc Error	Parser	userdoc		CLT: --devdoc comment	1	7150			7150
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	encoding		calldata, memory	1	7114	yul		7114
https://github.com	https://github.com	Incorrect Output	Optimization Error	Yul	pre-optimization trace		yul CLT: yulrun --input-file	1	7098	yul		7098
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Poor Error Message		yul	1	7060	yul		7060
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer			pure	1	7035			7035
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	returned value		array initialization	1	6995	bytecode		6995
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	staticcall.gas	1	6901			6901
https://github.com	https://github.com	Crash	Code Generation Error	Yul	Reject Valid Program		yul CLT: --strict-assembly	1	6879	yul		6879
https://github.com	https://github.com	Performance Issue	Optimization Error	Yul			yul	1	6866	yul		6866
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding	tuple	1	6864			6864
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		struct containing an array of mapping	1	6783	bytecode		6783
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	abi.encode	1	6759			6759
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		constructor args with struct	1	6754	bytecode		6754
https://github.com	https://github.com	Performance Issue	Optimization Error	Yul			yul	1	6731	yul		6731
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		Scope	identifiers named this/super	1	6617			6617
https://github.com	https://github.com	Performance Issue	Optimization Error	Yul			yul	1	6590	yul		6590
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	inheritance, type casting	1	6575			6575
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implement	type casting	1	6574			6574
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implementation		0	6562			6562
https://github.com	https://github.com	Performance Issue	Optimization Error	Yul			yul	1	6528	yul		6528
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		function assignment	1	6525	bytecode		6525
https://github.com	https://github.com	Crash	Yul Analysis Error	Yul	Reject Valid Program		yul	1	6510	yul		6510
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Reject Valid Program	Unnecessary Error Reporting	abi.encode	1	6509			6509
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Reject Valid Program		CLT: --ast assembly	1	6505	yul		6505
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Reject Valid Program	Scope		1	6497			6497
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking	using for, library	1	6451			6451
https://github.com	https://github.com	Incorrect Output	Type System Error	AST	Emitted Event	Incorrect Type System	emit event	1	6435			6435
https://github.com	https://github.com	Incorrect Output	Optimization Error	evmasm	Assembly		yul	1	6246	yul		6246
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System	internal array of functions	1	6215			6215
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Poor Error Message		comment	1	6124			6124
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Poor Error Message	Null Pointer Dereference	yul	1	6109	yul		6109
https://github.com	https://github.com	Crash	Exception Handling Error	Yul	Poor Error Message	Poor Error Message	assembly	1	6103	yul		6103
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking	fixed size array state variable	1	5875			5875
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Poor Error Message		import ""	1	5866			5866
https://github.com	https://github.com	Error Omission	Yul Analysis Error	Yul		case	yul	1	5792	yul		5792
https://github.com	https://github.com	Crash	Syntactic Analysis Error	LangUtil	Reject Valid Program	Incorrect Source Location		1	5730			5730
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking		1	5722			5722
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Poor Error Message	Unimplemented		1	5721			5721
https://github.com	https://github.com	Incorrect Output	Optimization Error	Yul	IR			0	5706			5706
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	getter function overriding	1	5556			5556

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	gas	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking	fixed-point	1		5551			5551
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	Nested structs that are part of a mapping	1		5520			5520
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking	memory store with mappings	1		5518			5518
https://github.com	https://github.com	Crash	Memory-Related Error	CLI	Segfault	Null Pointer Dereference	keyword: calldata	1		5501			5501
https://github.com	https://github.com	Crash	Optimization Error	Yul	Reject Valid Program		yul	1	yul	5465			5465
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	incorrect type checking	event and constructor with the same name	1		5459			5459
https://github.com	https://github.com	Crash	Exception Handling Error	CLI	Poor Error Message	Poor Error Message		0		5458			5458
https://github.com	https://github.com	Crash	Others	Interface	Poor Error Message	useLiteralContent		0		5456			5456
https://github.com	https://github.com	Crash	Optimization Error	Yul	Reject Valid Program			1	yul	5384			5384
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Poor Error Message		view function	1	bytecode	5279			5279
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System	function overriding, call super function	1		5130			5130
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	non-unsigned array index	1		5059			5059
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System		0		5058			5058
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	invalid number literal	1		5056			5056
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program		internal function	1	bytecode	5055			5055
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	multi dimensional fixed-length array with 0 length	1		5054			5054
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Reporting	tuple	1		5053			5053
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System	Hex literal + >32 FixedBytes type	1		5052			5052
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message		nested struct types	1		5048			5048
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	returned value			1	bytecode	4893			4893
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	CLI	Compilation Result		CLI: --standard-json	1		4884			4884
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	redundant type checking	Inheritance	1		4879			4879
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking		1		4864			4864
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program		inheritance, library, override	1		4832			4832
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Reject Valid Program		keyword: calldata, memory	1		4771			4771
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	Parser	Source Location	Incorrect Source Location		1		4743			4743
https://github.com	https://github.com	Performance Issue	Syntactic Analysis Error	Code Analyzer		Scope	large variable name	1		4718			4718
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Reporting	large index	1		4716			4716
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking		1		4715			4715
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type System	call a non-callable type	1		4711			4711
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	yul	1	yul	4710			4710
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking	yul	1	yul	4707			4707
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type Conversion		1		4706			4706
https://github.com	https://github.com	Incorrect Output	Read-write Error	Interface	metadata			1		4702			4702
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1		4683			4683
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message			1		4679			4679
https://github.com	https://github.com	Hang	Others	AST				1		4673			4673
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			0		4670			4670
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	control flow		1		4635			4635
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Incorrect Error Type		1		4585			4585
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implementation		1		4568			4568
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implementation		1		4567			4567
https://github.com	https://github.com	Incorrect Output	Exception Handling Error	Code Analyzer	Warning Message	Incorrect Error Reporting		1		4558			4558
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking		1		4535			4535
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer AST CodeGen	Reject Valid Program	Ownership		1		4517			4517
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Reject Valid Program	Stack Overflow	large array	1		4483			4483
https://github.com	https://github.com	Hang	Type System Error	AST		Incorrect Type System		1		4477			4477
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	bytecode	4476			4476
https://github.com	https://github.com	Hang	Optimization Error	evmasm	Gas			1		4471			4471
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	Scope		1		4417			4417
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	Scope		1		4414			4414
https://github.com	https://github.com	Incorrect Output	Memory-Related Error	Code Analyzer AST	Error Message		array	1		4382			4382
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message		event	1		4292			4292
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message			1		4260			4260
https://github.com	https://github.com	Incorrect Output	Optimization Error	evmasm	Error Message			1		4162			4162
https://github.com	https://github.com	Crash	Memory-Related Error	CodeGen	Reject Valid Program			1		4051			4051
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1		3911			3911
https://github.com	https://github.com	Crash	Type System Error	AST	Poor Error Message	Incorrect Type Conversion		1		3910			3910
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1		3889			3889
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Error Message	static analysis		1		3861			3861
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			1		3796			3796
https://github.com	https://github.com	Hang	Optimization Error	Interface	Gas			1		3779			3779

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer				1	3770			3770
https://github.com	https://github.com	Hang	Optimization Error	AST		number limit		1	3759			3759
https://github.com	https://github.com	Crash	Exception Handling Error	AST	Poor Error Message	Poor Error Message		1	3738			3738
https://github.com	https://github.com	Crash	Doc Error	Parser	Reject Valid Program			1	3728			3728
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Lack Warning	yul	1	3547	yul		3547
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		static analysis		0	3522			3522
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	event			1	3493	bytecode		3493
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			1	3414			3414
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	Interface	JSON output	Incorrect Source Location		1	3409			3409
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1	3325			3325
https://github.com	https://github.com	Performance Issue	Semantic Analysis Error	Code Analyzer	RAM blowup	recursion		1	3323			3323
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Error Message			1	3307			3307
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program	ABI		1	3293	bytecode		3293
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Reject Valid Program			1	3291			3291
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	The runtime code			1	3271	bytecode		3271
https://github.com	https://github.com	Crash	Code Generation Error	evmasm	Reject Valid Program			1	3085	evmasm		3085
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	ABI encoder		1	3069			3069
https://github.com	https://github.com	Incorrect Output	Memory-Related Error	CodeGen		Memory Allocation	keyword: memory dynamic array	1	3064			3064
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Poor Error Message			1	3039			3039
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope		1	3019			3019
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect Model Checker Implementation		1	3001			3001
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	Parser	Source Location			1	2984			2984
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	2977	bytecode		2977
https://github.com	https://github.com	Crash	Type System Error	AST CodeGen Code Analyzer	Poor Error Message	Incorrect Type System		1	2969			2969
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	Error Message			1	2965			2965
https://github.com	https://github.com	Incorrect Output	Exception Handling Error	Code Analyzer	Error Message	Incorrect Error Type	yul	1	2916	yul		2916
https://github.com	https://github.com	Crash	Memory-Related Error	Code Analyzer	Reject Valid Program	array length	large array, memory access	1	2915			2915
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message			1	2913			2913
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Poor Error Message			1	2912	bytecode		2912
https://github.com	https://github.com	Incorrect Output	Type System Error	AST	JSON	Incorrect Type System		1	2804			2804
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	ABI encoder		1	2764			2764
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1	2752			2752
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	2739			2739
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer				1	2733			2733
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope		0	2676			2676
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program			1	2655			2655
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	CLI	Warning Message		CLI: --allow-paths	1	2147			2147
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer				1	2108			2108
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	2104	bytecode		2104
https://github.com	https://github.com	Crash	Exception Handling Error	Code Analyzer	Poor Error Message	Poor Error Message		1	1799			1799
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	scope		1	1769			1769
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	returned value	missing type checking		1	1731			1731
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Reject Valid Program			1	1724			1724
https://github.com	https://github.com	Error Omission	Memory-Related Error	AST		Too larger calldata array	large array	1	1721			1721
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1	1720			1720
https://github.com	https://github.com	Crash	Syntactic Analysis Error	CLI	Reject Valid Program	long linker commandline argument		1	1717			1717
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking		1	1709			1709
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	1696			1696
https://github.com	https://github.com	Incorrect Output	Read-write Error	CLI	File			0	1652			1652
https://github.com	https://github.com	Crash	Read-write Error	CLI			CLI	1	1647			1647
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	Bytecode			1	1469	bytecode		1469
https://github.com	https://github.com	Hang	Optimization Error	evmasm				1	1466			1466
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	evmasm		scope		1	1457			1457
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Segfault		self-referential constant	1	1436			1436
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	Parser	Bytecode			1	1433			1433
https://github.com	https://github.com	Incorrect Output	Optimization Error	evmasm	Value of variable			1	1416			1416
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type Conversion		1	1415			1415
https://github.com	https://github.com	Incorrect Output	Memory-Related Error	evmasm	Warning Message	Stack Size	Yul	1	1368	yul		1368
https://github.com	https://github.com	Incorrect Output	Type System Error	AST	AST	Incorrect Type Information		1	1364			1364
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	AST CodeGen Parser		value range		1	1343			1343
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Reject Valid Program	Scope		1	1286			1286

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test	gas	Test Program	Bug ID	Trigger Bug	Impact	Bug ID text
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking		1	1258	1258		1258	1258
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message	missing type checking		1	1250	1250		1250	1250
https://github.com	https://github.com	Error Omission	Type System Error	AST		Incorrect Type System		1	1246	1246		1246	1246
https://github.com	https://github.com	Crash	Memory-Related Error	AST	Reject Valid Program	Allocation		1	1242	1242		1242	1242
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			1	1192	1192		1192	1192
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Poor Error Message	Incorrect SMT Encoding		1	1177	1177		1177	1177
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Reject Valid Program	Scope		1	1151	1151		1151	1151
https://github.com	https://github.com	Crash	Memory-Related Error	AST	Reject Valid Program	Null Pointer Dereference	dynamic array	1	1150	1150		1150	1150
https://github.com	https://github.com	Crash	Exception Handling Error	evmasm	Poor Error Message	Too late Error Reporting		1	1145	1145		1145	1145
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	missing type checking	yul	1	1144	yul		1144	1144
https://github.com	https://github.com	Crash	Syntactic Analysis Error	evmasm	Reject Valid Program			1	1135	1135		1135	1135
https://github.com	https://github.com	Crash	Syntactic Analysis Error	evmasm	Reject Valid Program			1	1134	1134		1134	1134
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	1131	1131		1131	1131
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	1116	bytecode		1116	1116
https://github.com	https://github.com	Crash	Exception Handling Error	AST	Reject Valid Program	Incorrect Error Type		1	1099	1099		1099	1099
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	Gas			1	1092	bytecode		1092	1092
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	1083	bytecode		1083	1083
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen				0	1075	bytecode		1075	1075
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1	1040	1040		1040	1040
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer		missing type checking		1	1017	1017		1017	1017
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	988	bytecode		988	988
https://github.com	https://github.com	Crash	Exception Handling Error	CodeGen	Poor Error Message	Lack Checking	sha3	1	981	981		981	981
https://github.com	https://github.com	Incorrect Output	Semantic Analysis Error	Code Analyzer	output	missing type checking		1	976	976		976	976
https://github.com	https://github.com	Crash	Exception Handling Error	CLI		Lack Checking		1	970	970		970	970
https://github.com	https://github.com	Crash	Syntactic Analysis Error	AST	Reject Valid Program	AST2Converter error		1	922	922		922	922
https://github.com	https://github.com	Incorrect Output	Code Generation Error	AST	AST JSON			1	853	JSON		853	853
https://github.com	https://github.com	Crash	Code Generation Error	AST	Segfault			1	742	JSON		742	742
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Segfault			1	736	bytecode		736	736
https://github.com	https://github.com	Crash	Semantic Analysis Error	CLI	Reject Valid Program	Scope	CLI	1	733	733		733	733
https://github.com	https://github.com	Crash	Read-write Error	CLI	Reject Valid Program		CLI: --ast	1	702	702		702	702
https://github.com	https://github.com	Incorrect Output	Optimization Error	evmasm	Value of variable			1	692	692		692	692
https://github.com	https://github.com	Crash	Others	CLI	Reject Valid Program			1	674	674		674	674
https://github.com	https://github.com	Crash	Read-write Error	CLI	Reject Valid Program			1	651	651		651	651
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	Code Analyzer				1	647	647		647	647
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			1	621	621		621	621
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	asm			1	590	bytecode		590	590
https://github.com	https://github.com	Incorrect Output	Code Generation Error	evmasm	asm			1	564	evmasm		564	564
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	561	561		561	561
https://github.com	https://github.com	Crash	Semantic Analysis Error	AST	Reject Valid Program	Scope		1	549	549		549	549
https://github.com	https://github.com	Error Omission	Syntactic Analysis Error	Parser				1	535	535		535	535
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type Conversion		1	530	530		530	530
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope		1	526	526		526	526
https://github.com	https://github.com	Incorrect Output	Type System Error	Interface	JSON	Incorrect Type System		1	489	489		489	489
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	Value of variable			0	485	bytecode		485	485
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	Gas			1	484	bytecode		484	484
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	evmasm	Error Message		yul	1	478	yul		478	478
https://github.com	https://github.com	Crash	Syntactic Analysis Error	evmasm				1	472	472		472	472
https://github.com	https://github.com	Crash	Memory-Related Error	Interface	Reject Valid Program	Null Pointer Dereference	yul	1	466	yul		466	466
https://github.com	https://github.com	Crash	Type System Error	CodeGen	Reject Valid Program	Incorrect Type Conversion		1	446	446		446	446
https://github.com	https://github.com	Incorrect Output	Syntactic Analysis Error	Parser	Returned Value	Incorrect Lexical Analysis		0	428	428		428	428
https://github.com	https://github.com	Incorrect Output	Exception Handling Error	CodeGen	Error Message	Poor Error Message		0	396	396		396	396
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			1	352	352		352	352
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program			1	340	340		340	340
https://github.com	https://github.com	Crash	Formal Verification Error	Formal Verification	Reject Valid Program	Incorrect SMT Encoding		1	339	339		339	339
https://github.com	https://github.com	Error Omission	Semantic Analysis Error	AST		Scope		1	280	280		280	280
https://github.com	https://github.com	Incorrect Output	Code Generation Error	CodeGen	ByteCode			1	254	bytecode		254	254
https://github.com	https://github.com	Incorrect Output	Type System Error	AST	Error Message	Incorrect Type System		1	247	247		247	247
https://github.com	https://github.com	Incorrect Output	Memory-Related Error	CodeGen	Value	Allocation	keyword: memory	1	243	243		243	243
https://github.com	https://github.com	Incorrect Output	Memory-Related Error	CodeGen	Value	Overwrite	keyword: memory	1	212	212		212	212
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Reject Valid Program			1	179	bytecode		179	179
https://github.com	https://github.com	Crash	Syntactic Analysis Error	Parser	Reject Valid Program			1	138	138		138	138
https://github.com	https://github.com	Crash	Code Generation Error	CodeGen	Poor Error Message			1	137	bytecode		137	137
https://github.com	https://github.com	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	127	127		127	127
https://github.com	https://github.com	Crash	Semantic Analysis Error	Code Analyzer	Reject Valid Program	Scope		1	116	116		116	116

Bugs	Fix	Symptom	Root Cause	Component	Explanation - Symptom	Explanation - Root Cause	What factors are contained in the bug-triggered test program	Test Program Bug ID	Trigger Bug	Impact	Bug ID text
https://github	https://github	Crash	Semantic Analysis Error	Code Analyzer	Poor Error Message		CL1:--strict-assembly yul	1	106		106
https://github	https://github	Crash	Optimization Error	Yul	Reject Valid Program			1	93	yul	93
https://github	https://github	Incorrect Output	Type System Error	AST	Storage Location	Incorrect Type System		1	90		90
https://github	https://github	Error Omission	Type System Error	AST		Incorrect Type System		1	63		63
https://github	https://github	Crash	Syntactic Analysis Error	Lexer	Reject Valid Program	Incorrect Lexical Analysis		1	59		59
https://github	https://github	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	50		50
https://github	https://github	Crash	Type System Error	AST	Reject Valid Program	Incorrect Type System		1	28		28