a. Transition-pairing testing

State S0

In: T1, T4, T7, T10, T11

Out: T2

	Pairs	Covered Test Case
1	(T1, T2)	Test #1
2	(T4, T2)	Test #1
3	(T7, T2)	Test #3
4	(T10, T2)	Test #2
5	(T11, T2)	Test #3

State S1

In: T2

Out: T3, T5

	Pairs	Covered Test Case
6	(T2, T3)	Test #1
7	(T2, T5)	Test #2

State S2

In: T3

Out: T4, T6

	Pairs	Covered Test Case
8	(T3, T4)	Test #1
9	(T3, T6)	Test #1

State S3

In: T5, T6

Out: T7, T8

	Pairs	Covered Test Case
10	(T5, T7)	Test #2
11	(T5, T8)	Test #2
12	(T6, T7)	Test #3
13	(T6, T8)	Test #1

State S4

In: T8, T9

Out: T9, T10, T11

	Pairs	Covered Test Case
14	(T8, T9)	Test #1
15	(T8, T10)	Test #3
16	(T8, T11)	Test #3
17	(T9, T9)	Test #1
18	(T9, T10)	Test #2
19	(T9, T11)	Test #1

Test Cases

Test #	Covered Test Case
Test #1	Activate(5), Start(), PayCredit(), Reject(), Start(), PayCredit(), Approved(), StartPump(), PumpGallon(), PumpGallon(), StopPump()
Test #2	Activate(5), Start(), PayCash(5), Cancel(), Start(), PayCash(5), StartPump(), PumpGallon(), PumpGallon(), Start(), PayCredit(), Reject()
Test #3	Activate(5), Start(), PayCredit(), Approved(), Cancel(), Start(), PayCredit(), Approved(), StartPump(), StopPump(), Start(), PayCash(4), StartPump(), PumpGallon()

b. Acyclic-path testing

	Acyclic Paths	Covered Test Case
1	T1, T2, T3, T4	Test Case #1
2	T1, T2, T3, T6, T7	Test Case #2
3	T1, T2, T5, T7	Test Case #3
4	T1, T2, T3, T6, T8, T10	**not executable**
5	T1, T2, T3, T6, T8, T9, T10	**not executable**
6	T1, T2, T3, T6, T8, T11	Test Case #4
7	T1, T2, T3, T6, T8, T9, T11	Test Case #5
8	T1, T2, T5, T8, T10	Test Case #6
9	T1, T2, T5, T8, T9, T10	Test Case #7
10	T1, T2, T5, T8, T11	Test Case #8
11	T1, T2, T5, T8, T9, T11	Test Case #9

Test Case #	Covered Test Case
Test Case #1	Activate(5), Start(), PayCredit(), Reject()
Test Case #2	Activate(5), Start(), PayCredit(), Approved, Cancel()
Test Case #3	Activate(5), Start(), PayCash(5), Cancel()
Test Case #4	Activate(5), Start(), PayCredit(), Approved(), StartPump(), StopPump()
Test Case #5	Activate(5), Start(), PayCredit(), Approved(), StartPump(), PumpGallon, StopPump()
Test Case #6	Activate(5), Start(), PayCash(4), StartPump(), StopPump()
Test Case #7	Activate(5), Start(), PayCash(6), StartPump(), PumpGallon(), PumpGallon()
Test Case #8	Activate(5), Start(), PayCash(5), StartPump(), StopPump()
Test Case #9	Activate(5), Start(), PayCash(10), StartPump(), PumpGallon(), StopPump()