

# EL6 / FM7 Stock Program List

September 1, 2015

This is a list of the standard wash programs provided with the control. These Programs can be modified to the user's needs by adding and deleting different cycles. Always test your new programs thoroughly before introducing them into production.

## Programs

11. Cold Wash, PreRinse
12. Warm Wash, PreRinse
13. Hot Wash, PreRinse
21. Cold Normal
22. Warm Normal
23. Hot Normal
24. Cold Gentle
25. Warm Gentle
26. Rinse & Spin
27. Reclaim
28. Soak
29. Starch
30. Test Program

This list contains descriptions of the standard cycles provided with the control. These cycles can be used to quickly setup effective wash programs. If you need to design your own cycles please study the manner in which these examples (particularly the spin routines and unroll99) have been structured, as it is possible to program operations that will produce undesirable results. Please note the spin cycles incorporate a balance detection routine, which includes the first several steps in each cycle. Please do not modify these steps. Always test your new programs thoroughly before introducing them into production.

Always make sure that there is enough spin deceleration time programmed after the final extract! Too little deceleration time may result in the operator being able to open the door before the machine has come to a complete stop.

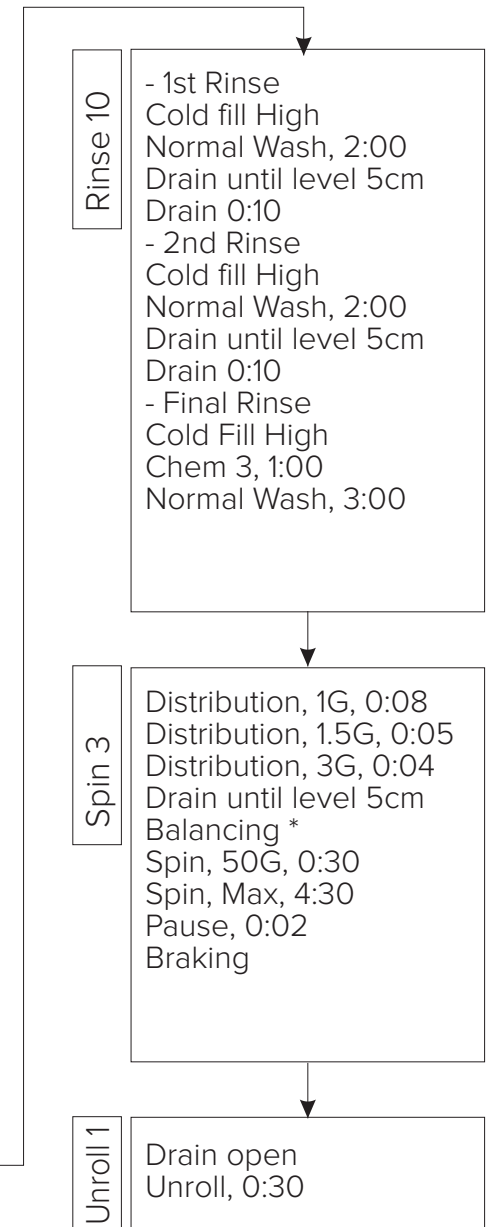
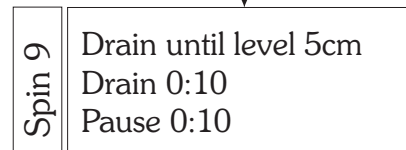
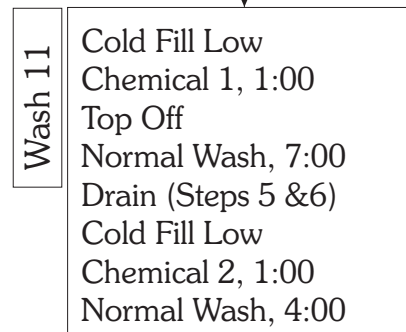
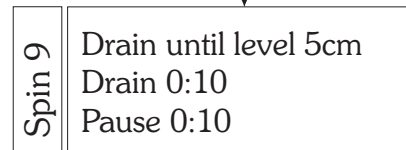
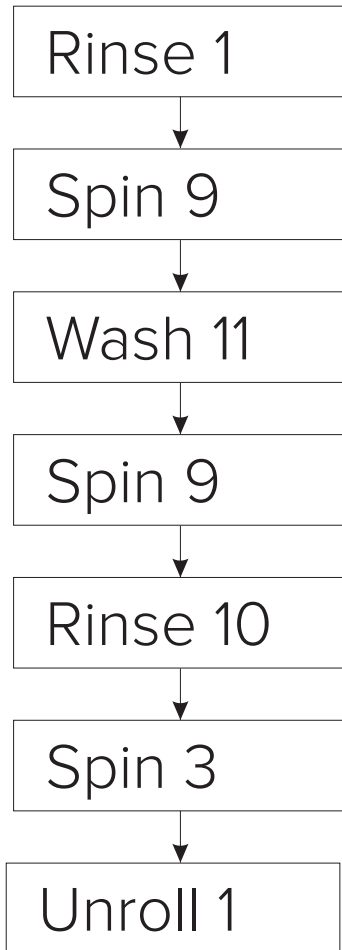
## Chemical Dispenser / Signal Assignments (Output Name in EL6):

1. Cup 1 & Chem 1 \_\_\_\_\_
2. Cup 2 & Chem 2 \_\_\_\_\_
3. Cup 3 & Chem 3 \_\_\_\_\_
4. Cup 4 & Chem 4 \_\_\_\_\_
5. Cup 5 & Chem 5 \_\_\_\_\_
6. Chem 6 \_\_\_\_\_
7. Chem 7 \_\_\_\_\_
8. Chem 8 \_\_\_\_\_

# Program 11

## Cold Wash, PreRinse

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

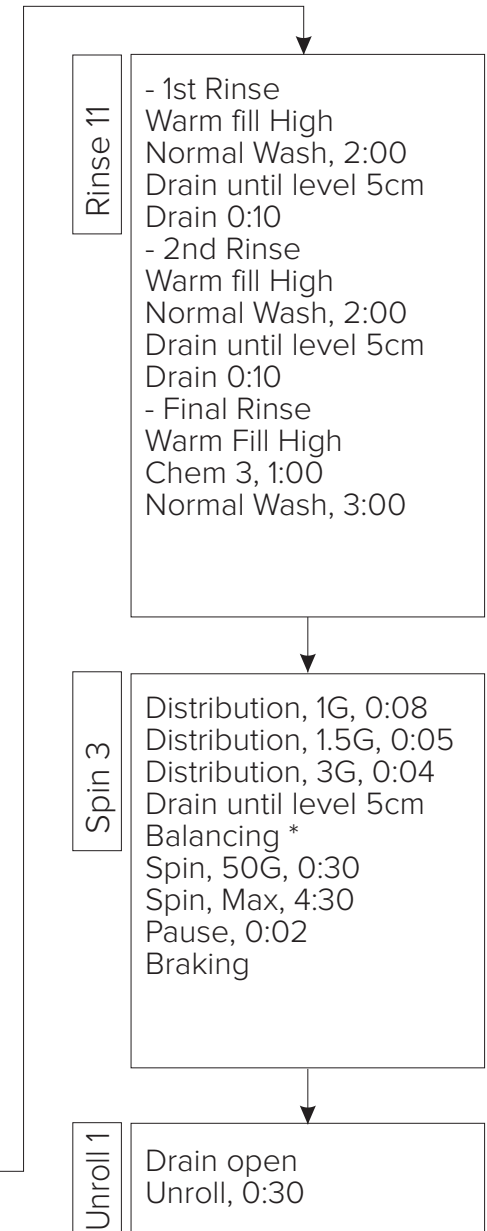
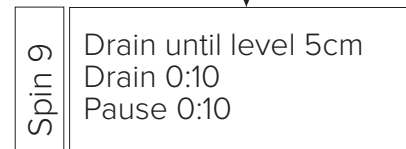
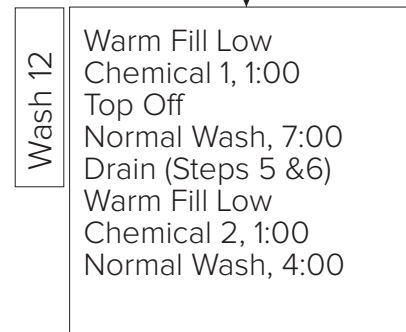
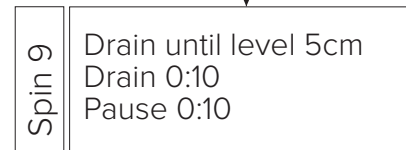
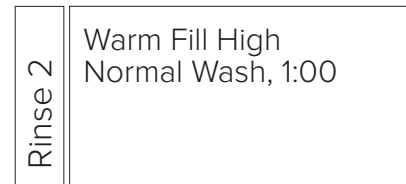
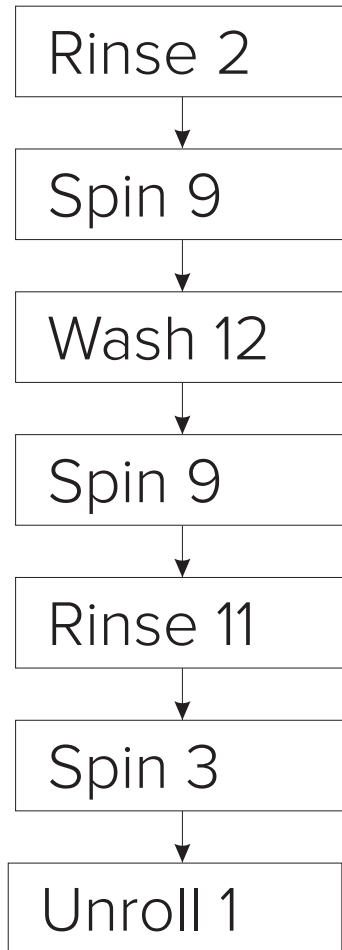


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 12

## Warm Wash, PreRinse

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

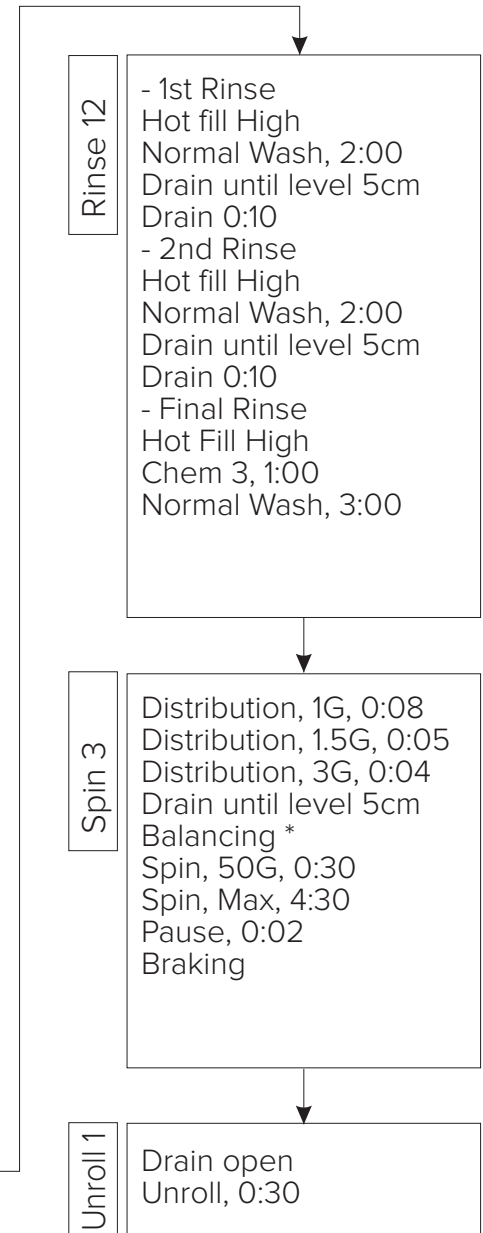
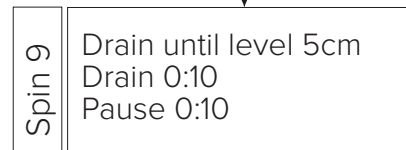
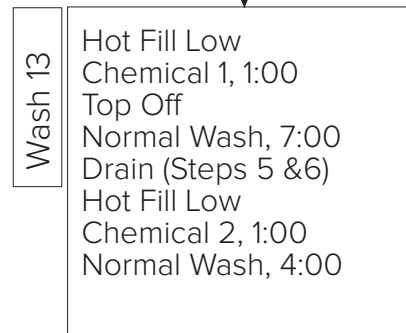
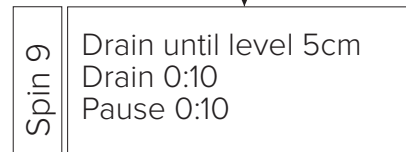
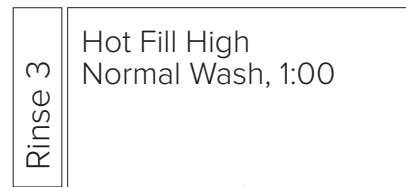
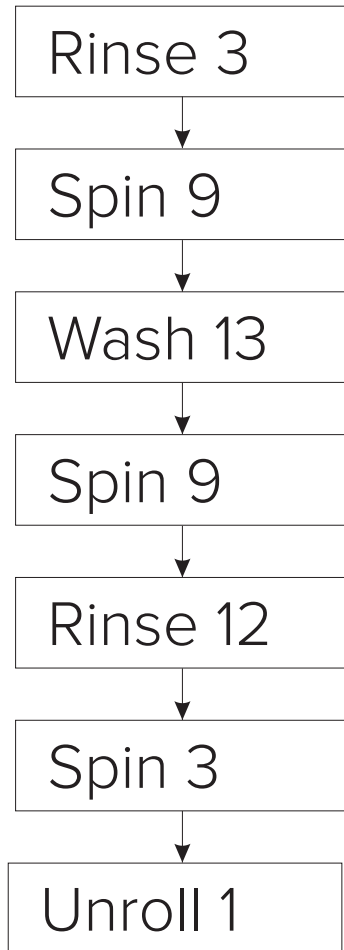


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 13

## Hot Wash, PreRinse

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

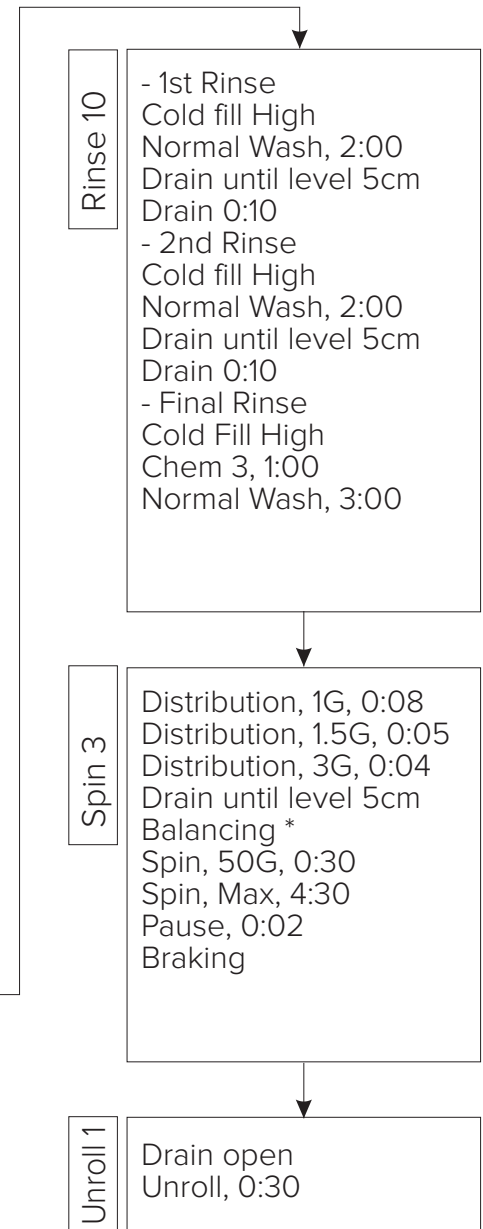
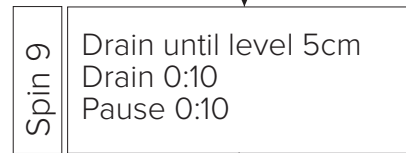
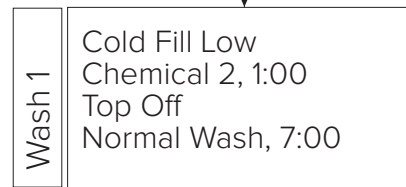
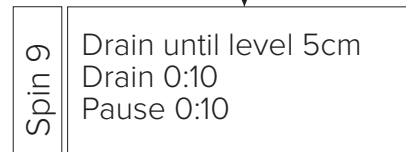
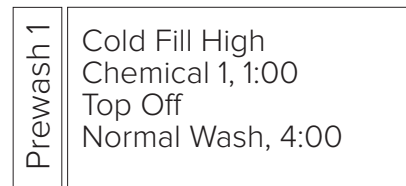
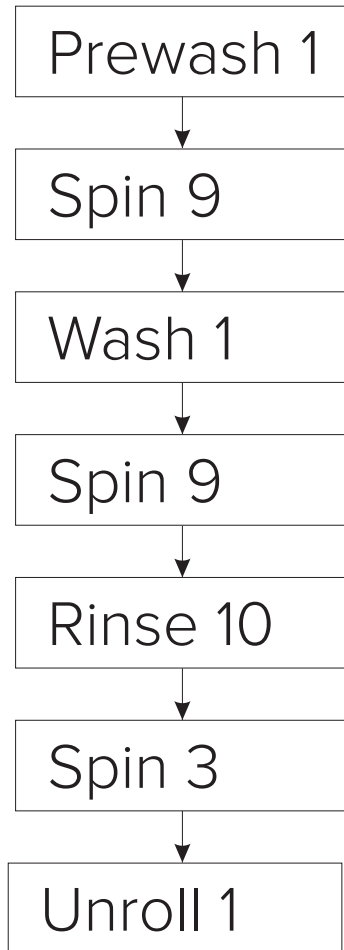


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 21

## Cold Normal

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

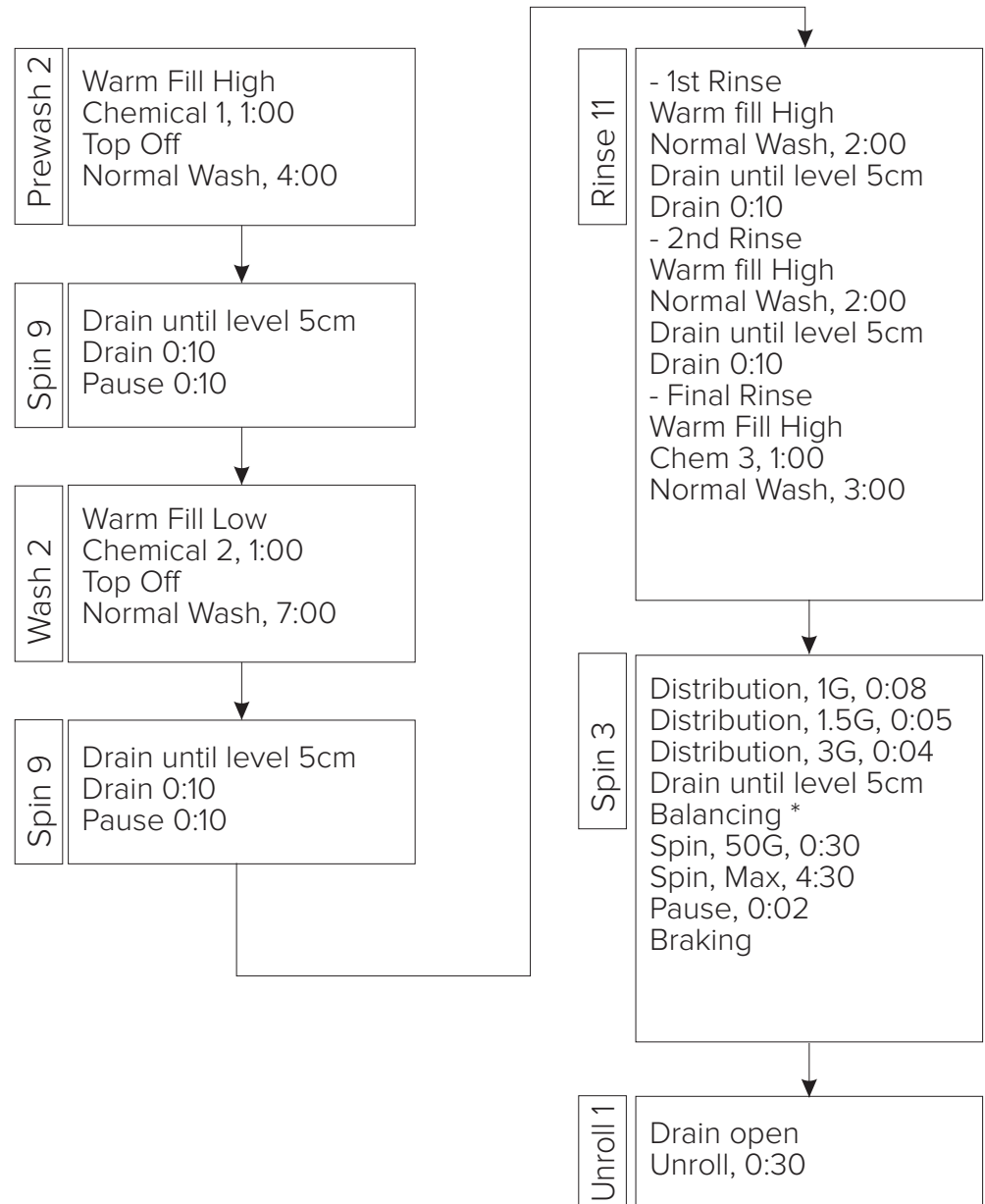
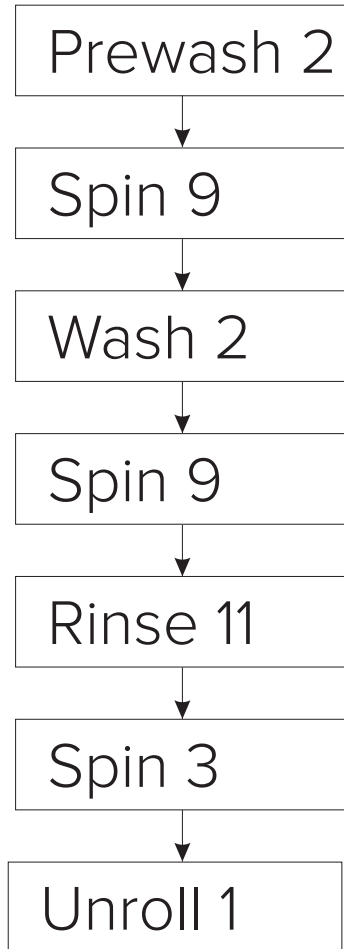


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 22

## Warm Normal

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

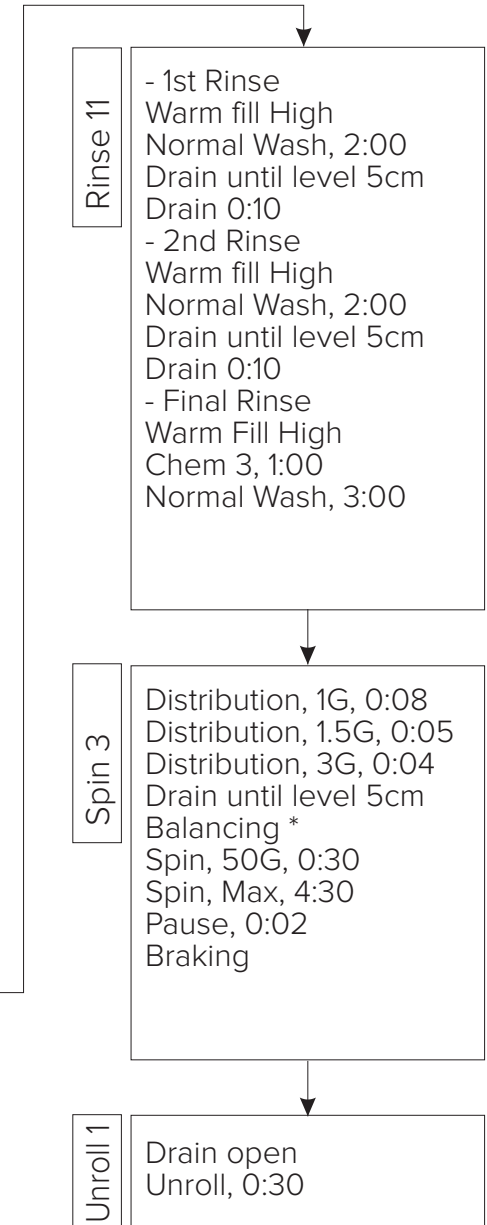
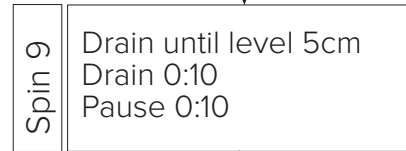
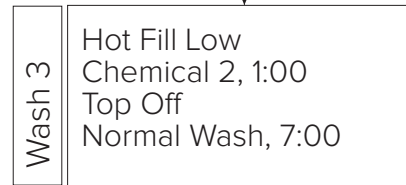
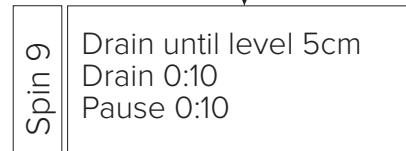
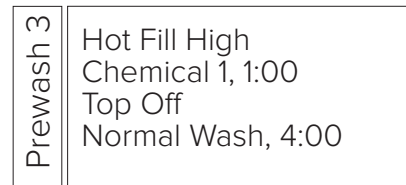
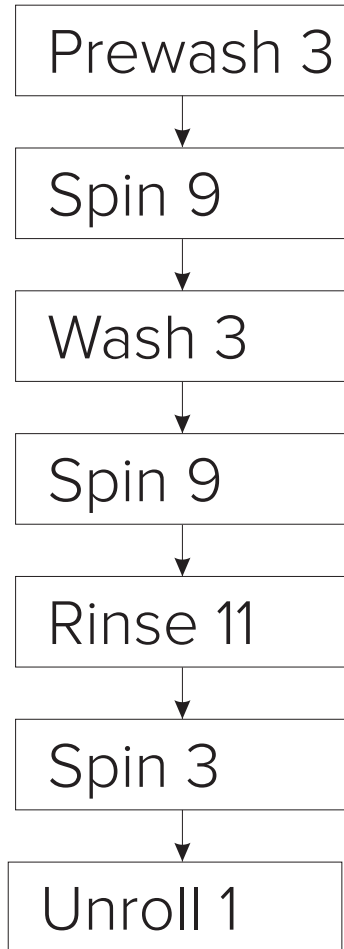


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 23

## Hot Normal

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

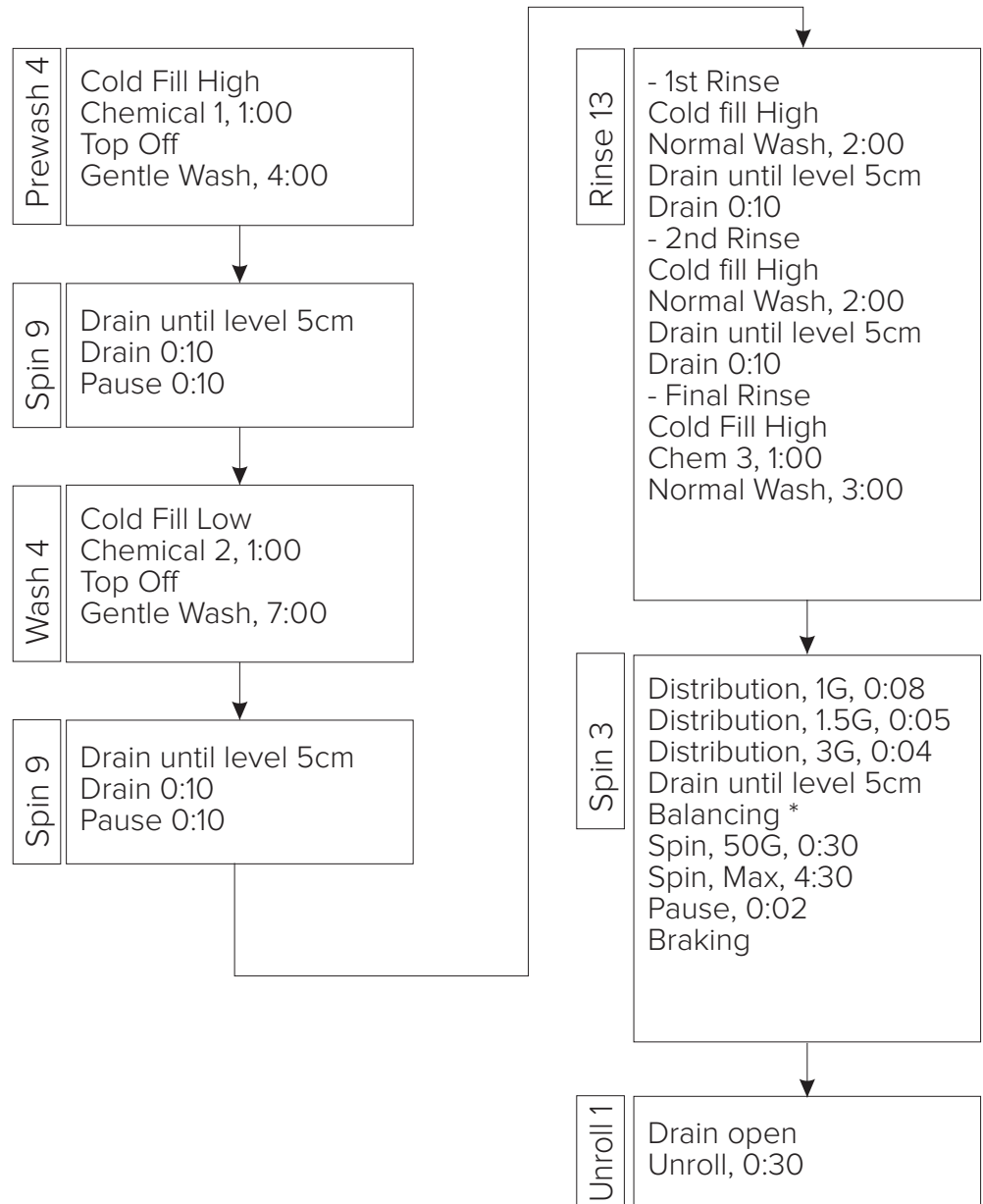
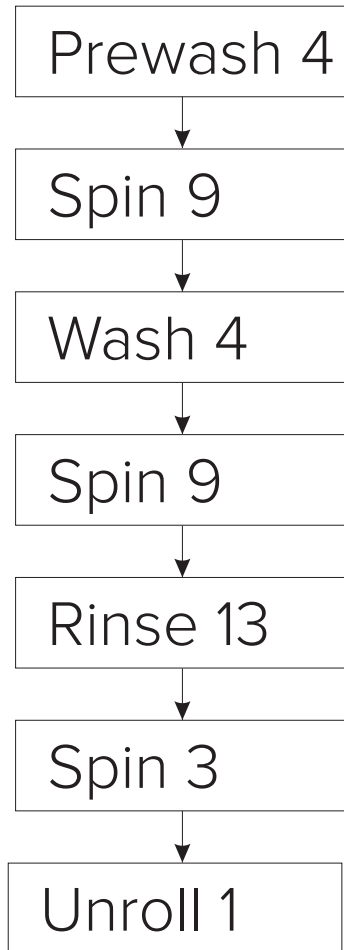


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 24

## Cold Gentle

0:04 Forward  
 0:16 Pause  
 0:04 Reverse



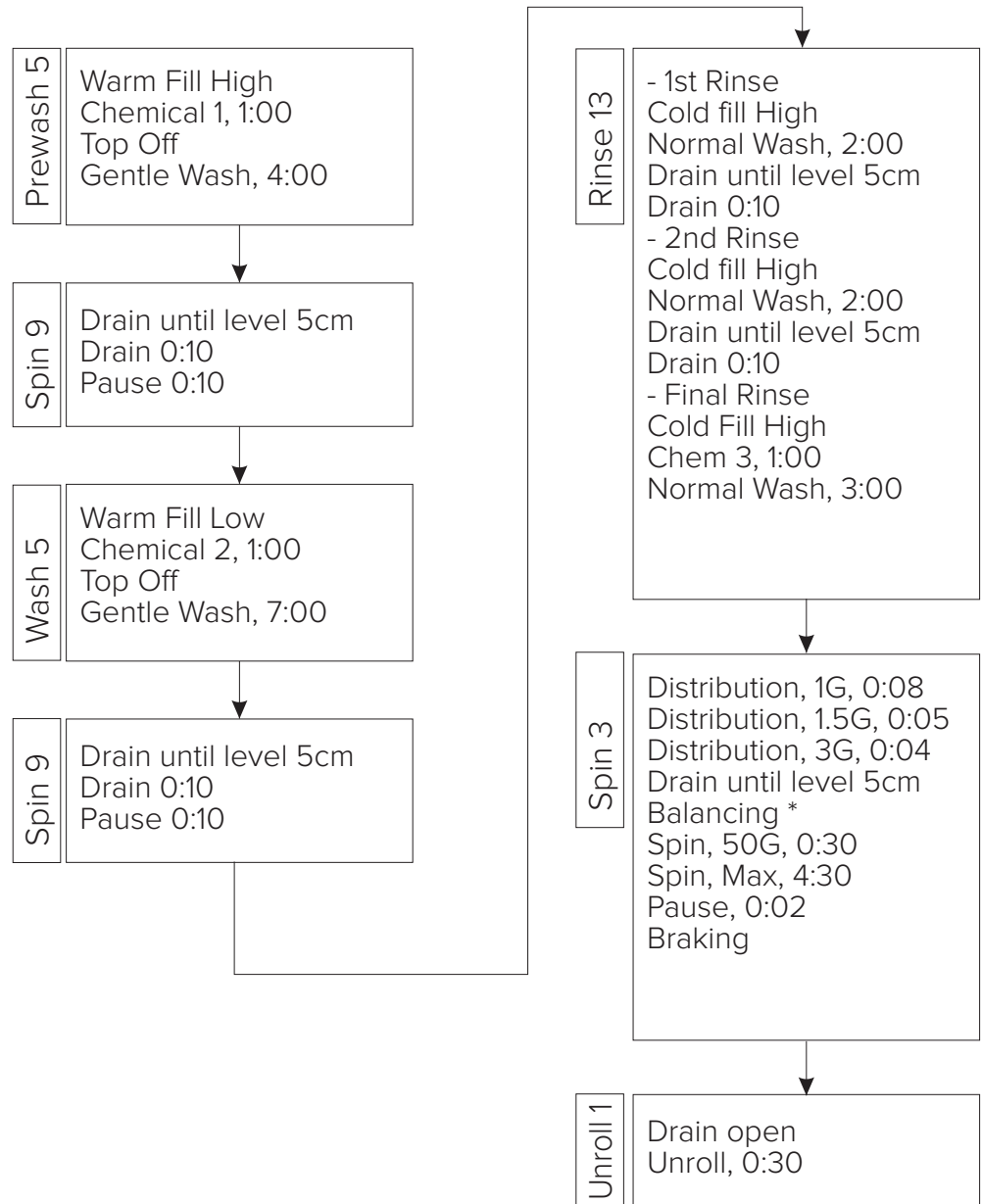
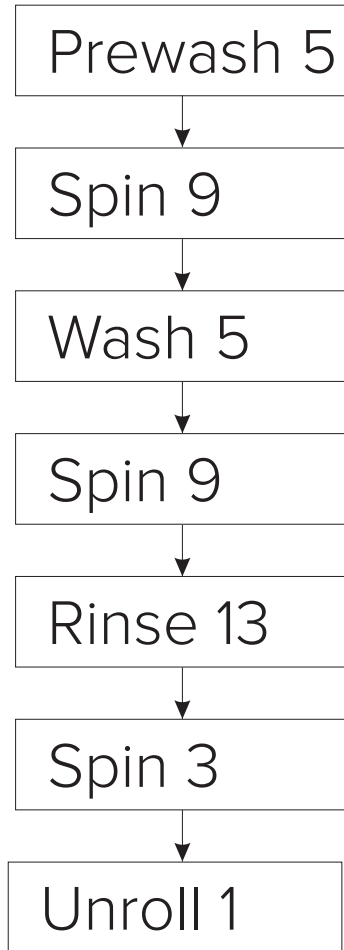
\* - Altering this step will cause the machine to fail balance detection, and not spin.



# Program 25

## Warm Gentle

0:04 Forward  
 0:16 Pause  
 0:04 Reverse

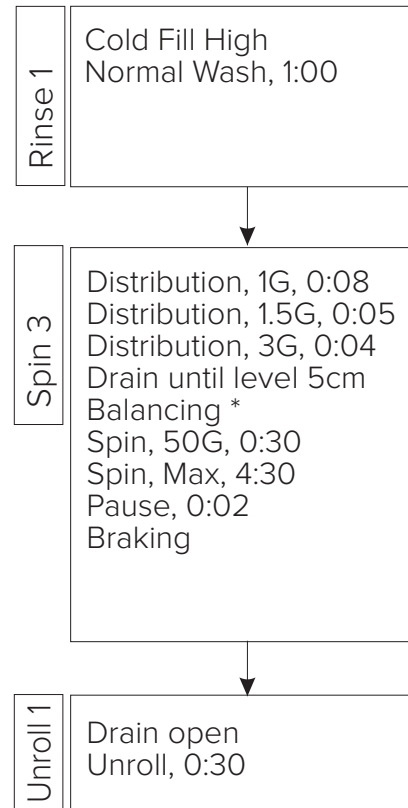
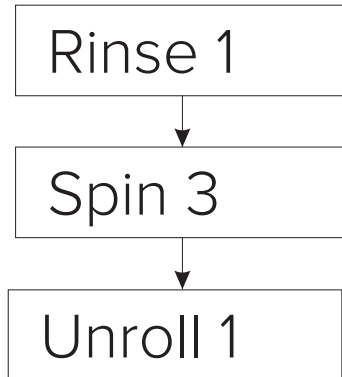


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 26

## Rinse & Spin

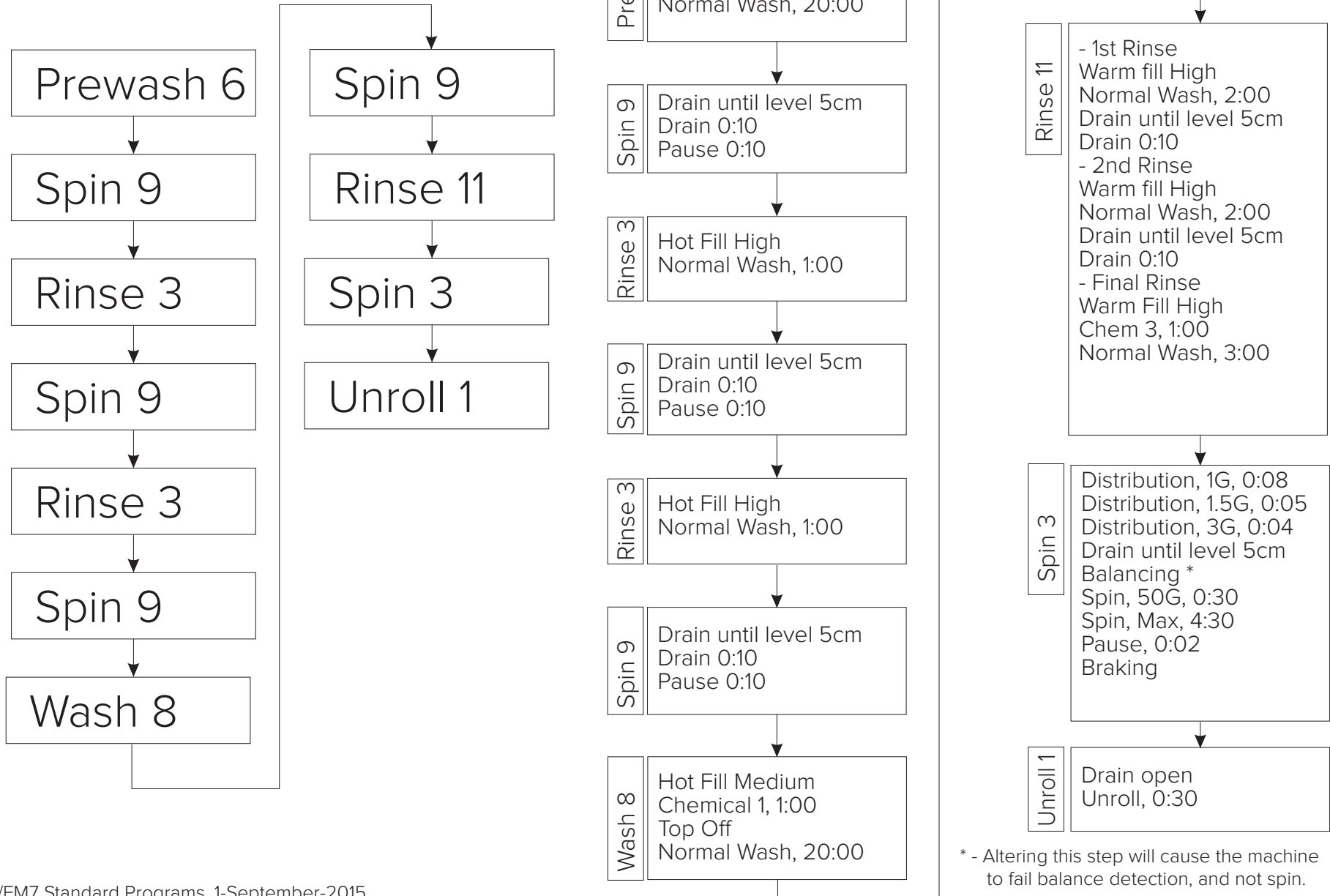
0:04 Forward  
0:16 Pause  
0:04 Reverse



# Program 27

## Reclaim

0:16 Forward  
 0:04 Pause  
 0:14 Reverse

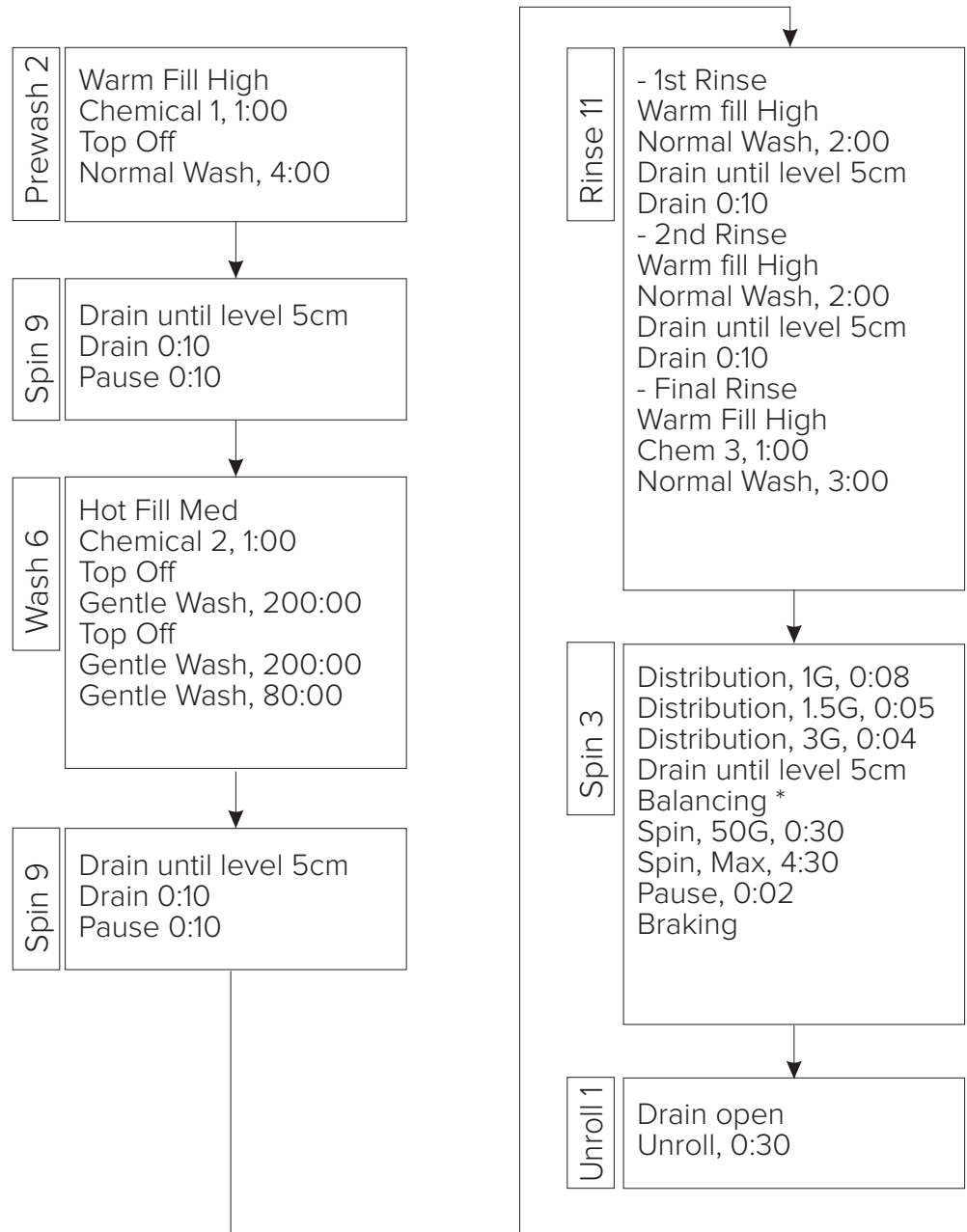
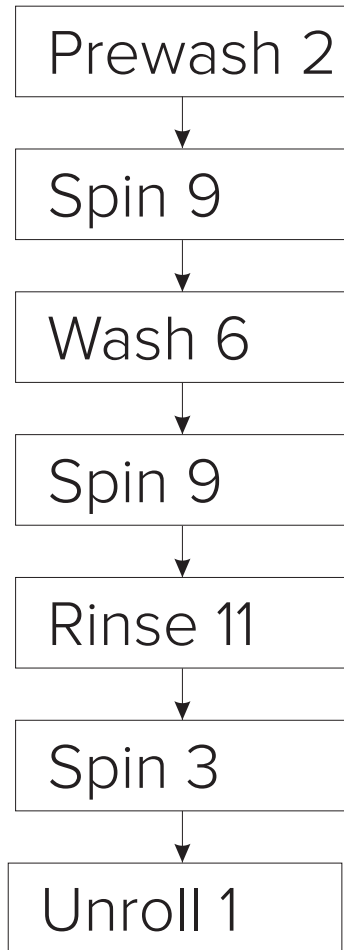


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 28

## 8 Hour Hot Soak

0:05 Forward  
 1:55 Pause  
 0:05 Reverse

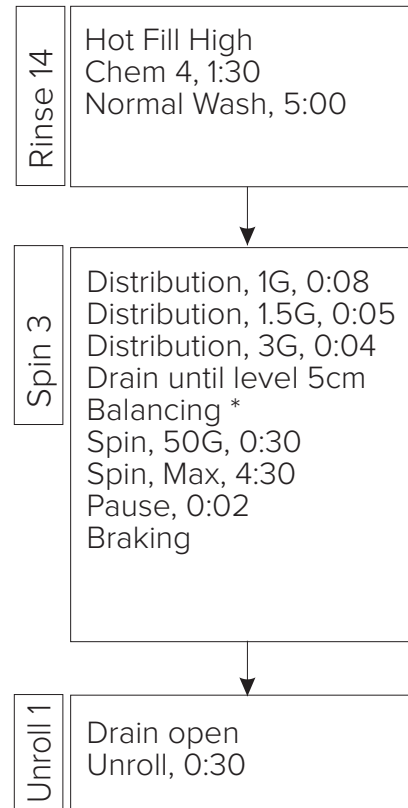
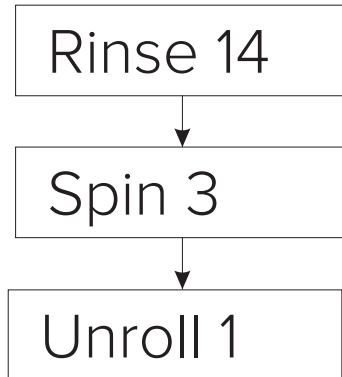


\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Program 29

## Starch

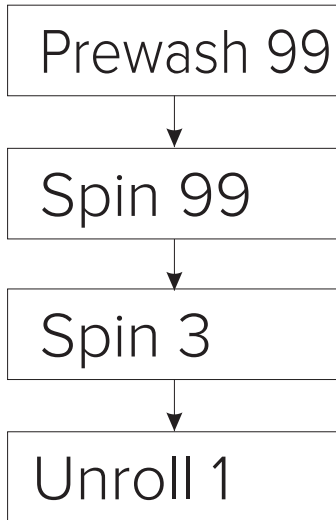
0:04 Forward  
0:16 Pause  
0:04 Reverse



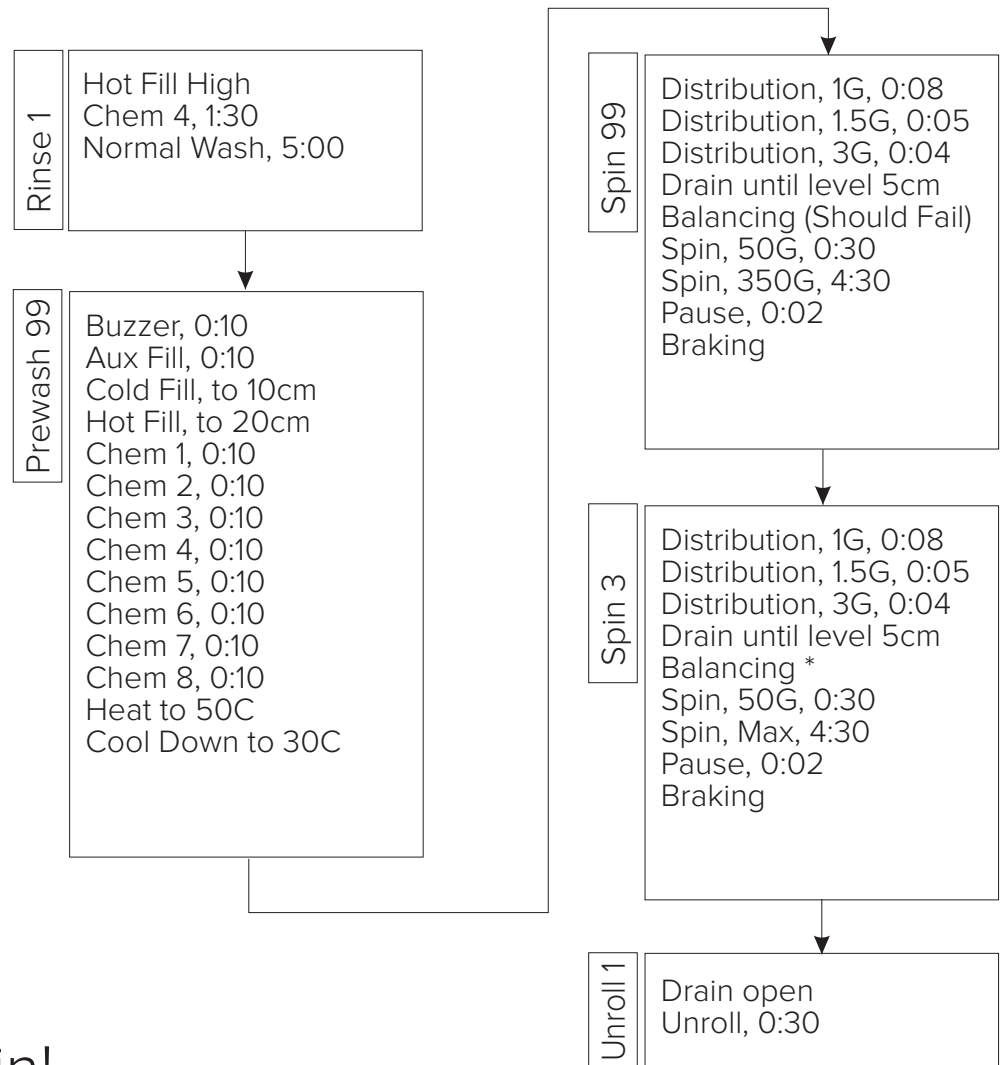
# Program 30

## Test Program

0:04 Forward  
 0:16 Pause  
 0:04 Reverse



Note: The Spin 99 cycle is designed to test the balance system, and should fail to spin!



\* - Altering this step will cause the machine to fail balance detection, and not spin.

# Prewash Cycles

Prewash 1	Cold Fill High Chemical 1, 1:00 Top Off Normal Wash, 4:00
-----------	--

Prewash 2	Warm Fill High Chemical 1, 1:00 Top Off Normal Wash, 4:00
-----------	--

Prewash 3	Hot Fill High Chemical 1, 1:00 Top Off Normal Wash, 4:00
-----------	---

Prewash 4	Cold Fill High Chemical 1, 1:00 Top Off Gentle Wash, 4:00
-----------	--

Prewash 5	Warm Fill High Chemical 1, 1:00 Top Off Gentle Wash, 4:00
-----------	--

Prewash 6	Hot Fill Medium Chemical 1 & 2, 1:00 Top Off Normal Wash, 20:00
-----------	--

Prewash 99	Buzzer, 0:10 Aux Fill, 0:10 Cold Fill, to 10cm Hot Fill, to 20cm Chem 1, 0:10 Chem 2, 0:10 Chem 3, 0:10 Chem 4, 0:10 Chem 5, 0:10 Chem 6, 0:10 Chem 7, 0:10 Chem 8, 0:10 Heat to 50C Cool Down to 30C
------------	--

# Wash Cycles

Wash 1  
Cold Fill Low  
Chemical 2, 1:00  
Top Off  
Normal Wash, 7:00

Wash 2  
Warm Fill Low  
Chemical 2, 1:00  
Top Off  
Normal Wash, 7:00

Wash 3  
Hot Fill Low  
Chemical 2, 1:00  
Top Off  
Normal Wash, 7:00

Wash 4  
Cold Fill Low  
Chemical 2, 1:00  
Top Off  
Gentle Wash, 7:00

Wash 5  
Warm Fill Low  
Chemical 2, 1:00  
Top Off  
Gentle Wash, 7:00

Wash 6  
Hot Fill Med  
Chemical 2, 1:00  
Top Off  
Gentle Wash, 200:00  
Top Off  
Gentle Wash, 200:00  
Gentle Wash, 80:00

Wash 7  
Warm Fill Low  
Chemical 1, 1:00  
Top Off  
Normal Wash, 7:00  
Drain  
Warm Fill Medium  
Top Off  
Normal Wash, 1:00  
Drain  
Warm Fill Low  
Chemical 2, 1:00  
Top Off  
Normal Wash, 7:00

Wash 8  
Hot Fill Medium  
Chemical 1, 1:00  
Top Off  
Normal Wash, 20:00

Wash 11  
Cold Fill Low  
Chemical 1, 1:00  
Top Off  
Normal Wash, 7:00  
Drain (Steps 5 &6)  
Cold Fill Low  
Chemical 2, 1:00  
Normal Wash, 4:00

Wash 12  
Warm Fill Low  
Chemical 1, 1:00  
Top Off  
Normal Wash, 7:00  
Drain (Steps 5 &6)  
Warm Fill Low  
Chemical 2, 1:00  
Normal Wash, 4:00

Wash 13  
Hot Fill Low  
Chemical 1, 1:00  
Top Off  
Normal Wash, 7:00  
Drain (Steps 5 &6)  
Hot Fill Low  
Chemical 2, 1:00  
Normal Wash, 4:00



# Rinse Cycles

Rinse 1  
Cold Fill High  
Normal Wash, 1:00

Rinse 2  
Warm Fill High  
Normal Wash, 1:00

Rinse 3  
Hot Fill High  
Normal Wash, 1:00

Rinse 4  
Warm Fill High  
Chem 3, 1:00  
Normal Wash, 3:00

Rinse 5  
Cold Fill High  
Chem 3, 1:00  
Normal Wash, 3:00

Rinse 6  
Cold Fill High  
Chem 3, 1:00  
Gentle Wash, 2:00

Rinse 10  
- 1st Rinse  
Cold fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- 2nd Rinse  
Cold fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- Final Rinse  
Cold Fill High  
Chem 3, 1:00  
Normal Wash, 3:00

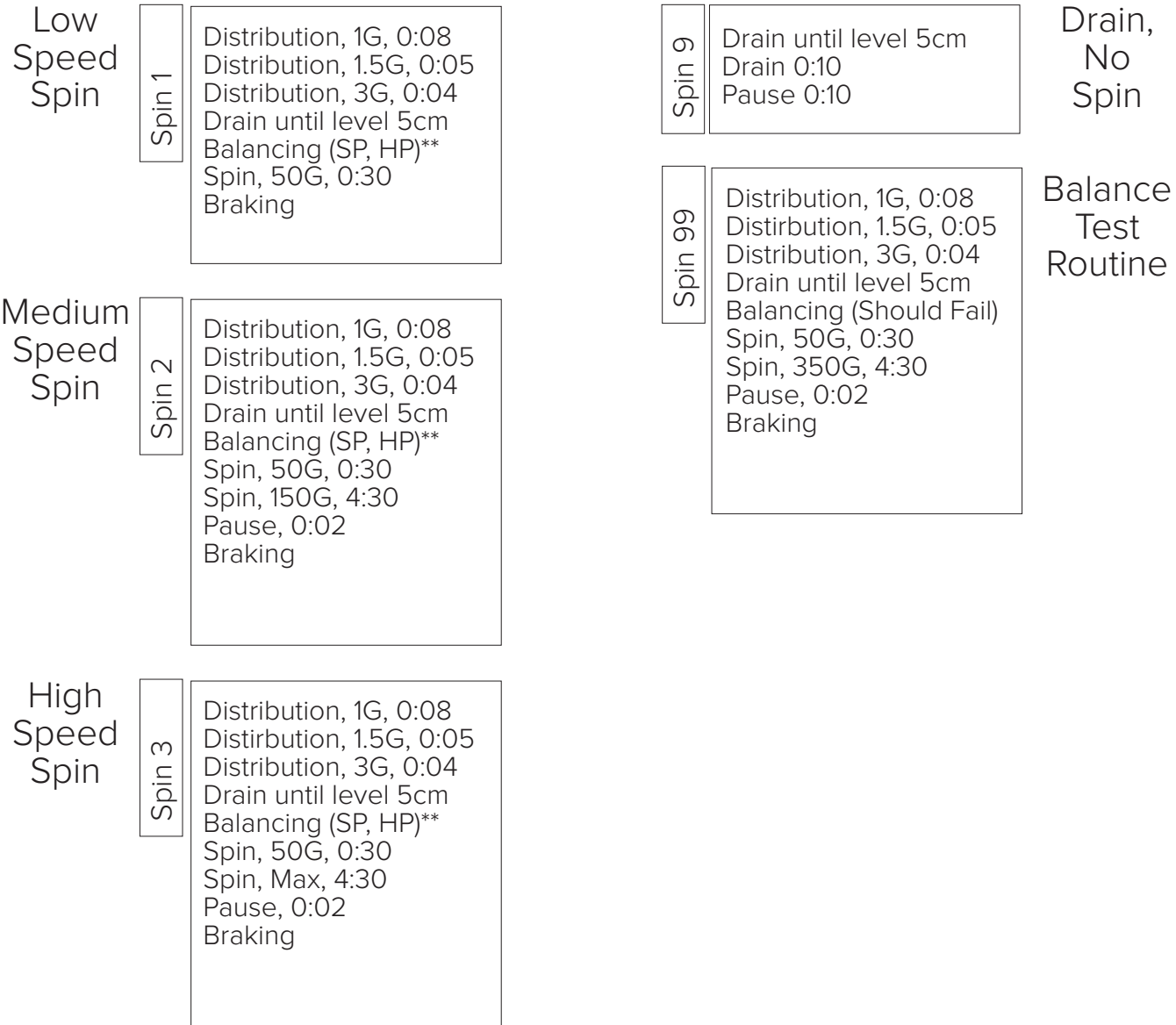
Rinse 11  
- 1st Rinse  
Warm fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- 2nd Rinse  
Warm fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- Final Rinse  
Warm Fill High  
Chem 3, 1:00  
Normal Wash, 3:00

Rinse 12  
- 1st Rinse  
Hot fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- 2nd Rinse  
Hot fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- Final Rinse  
Hot Fill High  
Chem 3, 1:00  
Normal Wash, 3:00

Rinse 13  
- 1st Rinse  
Cold fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- 2nd Rinse  
Cold fill High  
Normal Wash, 2:00  
Drain until level 5cm  
Drain 0:10  
- Final Rinse  
Cold Fill High  
Chem 3, 1:00  
Normal Wash, 3:00

Rinse 14  
Hot Fill High  
Chem 4, 1:30  
Normal Wash, 5:00

# Spin Cycles



# Unroll Cycles

Unroll 1	Drain open Unroll, 0:30
----------	----------------------------

Unroll 99	Drain open Unroll, 0:10 Redistribute, 0:20
-----------	--

Unroll 99 is used for redistribution after a failed spin.  
Do not modify!

# Example Heat Cycle

Function	Step				
	1	2	3	4	5
Cool Down					
Bal Load					
Drain					
Cold Water					
Hot Water	Yes			Yes	
Heating	Yes	Yes	Yes	Yes	Yes
C	90	90	90	90	90
Chem 1					
Chem 2			Yes		
Chem 3					
Chem 4					
Hard Water (Chem 5)					
Relay 16					
Relay 11 (Aux Fill)					
Relay 12 (Injection Flush)			Yes		
Relay 13 (Balancing)					
Motor	1	1	1	1	1
Speed RPM	42	42	42	42	42
Relay 17 (Chem 6)					
Relay 18 (Chem 7)					
Relay 19 (Chem 8)					
Relay 20 (Aux Drain)					
Relay 21					
Relay 22 (Buzzer)					
Relay 23 (Cold Spray)					
Relay 24 (Hot Spray)					
End Step					
Level cm	24			24	
Temp C		90			
WDT m:s	9:00	30:00		5:00	
Time m:s			1:00		7:00

Any cycle can be converted to a heating cycle by inserting a step after the fill, and setting the end step condition to a temperature (See Step 2 below).

Step 1 - Fill to a water level with hot water. Heat is on, and will engage when a minimum water level is met. Watchdog timer of 9:00 allows time to fill before an alarm is generated. Step 1 ends when the water level is reached.

Step 2 - Heat output is on. Watchdog timer of 30:00 allows time to heat to the required temperature before an alarm is generated. Step 3 ends when the target temperature is reached.

Step 3 - Heat output is on, Chemical 2 output is on, Relay 12 is on. Step 3 ends when a time of 1:00 elapses.

Step 4 - Top off step, same outputs as step 1.

Step 5 - Heat output is on in order to regulate temperature during the agitation phase. Step 5 and the entire cycle is complete when a time of 7:00 elapses.

