

M2

Operator Manual



STARLINE®
PROFESSIONAL WASH SYSTEMS



WARNING

Before installation and commissioning, you must read the safety instructions and warnings carefully and all the warning labels attached to the equipment.



IMPORTANT

Failure to comply (even partially) with the instructions given in this manual will invalidate the product warranty and relieves the manufacturer of any responsibility



IMPORTANT

The alteration of machine operation, design or the replacement of parts not approved by the manufacturer may void warranties and approvals.



IMPORTANT

This machine is intended for commercial use only.

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We have checked that the contents of this document correspond to the model described. There may be discrepancies nevertheless, and no guarantee can be given that they are completely identical. The information contained in this document is reviewed regularly and any necessary changes will be included in the next edition. We welcome suggestions for improvement.

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Parts 09 829 0930

STARLINE[®]

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Safety Instructions



WARNING

Equipment contains dangerous voltages and can be hazardous if installed or operated incorrectly. non-compliance with warnings or failure to follow the instructions contained in this manual can result in loss of life, severe personal injury or serious damage to property.

Installation

- Use qualified, skilled personnel
- Follow installation instructions
- Connect to correct voltage and supply current
- Provide fully accessible electrical Isolation Switch & water supply valves

Training and Supervision

- Read and understand the Operating instructions and train all staff
- This appliance must not be operated by children or infirm persons
- Machine panels must only be removed by suitably qualified and trained personnel – internal hazards include live electrics and very hot surfaces
- This appliance is not intended for use as a stepladder

Hot Surfaces

- Some surfaces may be hot or very hot

Chemicals

- Commercial dishwashing detergents are hazardous – handle with care
- Read and follow the safety information found on the labels of detergent containers and Material Safety Data Sheets
- Use protective eyewear and clothing if decanting containers

Hot Water

- Do not put hands in wash water which may be over 60°C and contain hazardous caustic detergent
- Rinse water can be over 90°C
- Door safety switches are designed for emergency use only

Cleaning

- Do not hose down the machine or splash water over the exterior
- Watch for broken glass etc when cleaning the inside of the machine

Service/repair

- Under no circumstances should the user attempt to carry out repairs
- All service/repair work must be carried out by qualified personnel only

Installation Checklist



WARNING

Installer must be suitably qualified and ensure compliance with all codes and standards including AS/NZS3500.1.

Unpack

- Unpack the machine, check for damage and complete delivery.

Positioning

- Place machine on sound waterproof self draining floor and adjust feet to level
- Allow room for adjacent chemical containers

Water

- Flush supply lines before connection
- Connect hose supplied to adjacent accessible isolator valve – 20 mm 3/4 male
- Flow rate required – 15 litres per minute
- Temperature – 65°C
- Consumption per cycle – 2.4 litres
- Pressure required – 200-350 kPa – fit limiter above this pressure
- Back Flow – Atmospheric Vacuum Breaker
- Potable water quality is required – filter or soften if necessary

Water Quality Requirements

Hardness	ppm		pH			
min	20		7			
max	100		8			
Ions	Cl ⁻	SO ₄	Fe	Mn	Cu	Cl ₂
Max mg/L	100	400	0.1	0.5	0.05	0.1

Power

- Machine ships single phase 25 A 230V 50Hz
- Upgradable to three phase 15 A per phase 400V 50Hz onsite

Waste

- Connect drain pump hose supplied to vented upstand or sink waste connection

Detergent

- Insert hose into container of commercial dishwasher low foam detergent
- Adjust detergent dosing and prime detergent using the keypad (refer to page 7)
- Use good quality chemicals and regularly check containers

Rinse Fluid

- Insert hose into container of commercial dishwasher rinse fluid
- Adjust rinse fluid dosing and prime rinse aid using the keypad (refer to page 7)
- Use good quality chemicals and regularly check containers

Operation

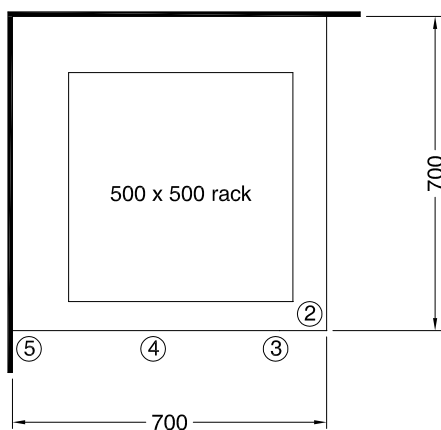
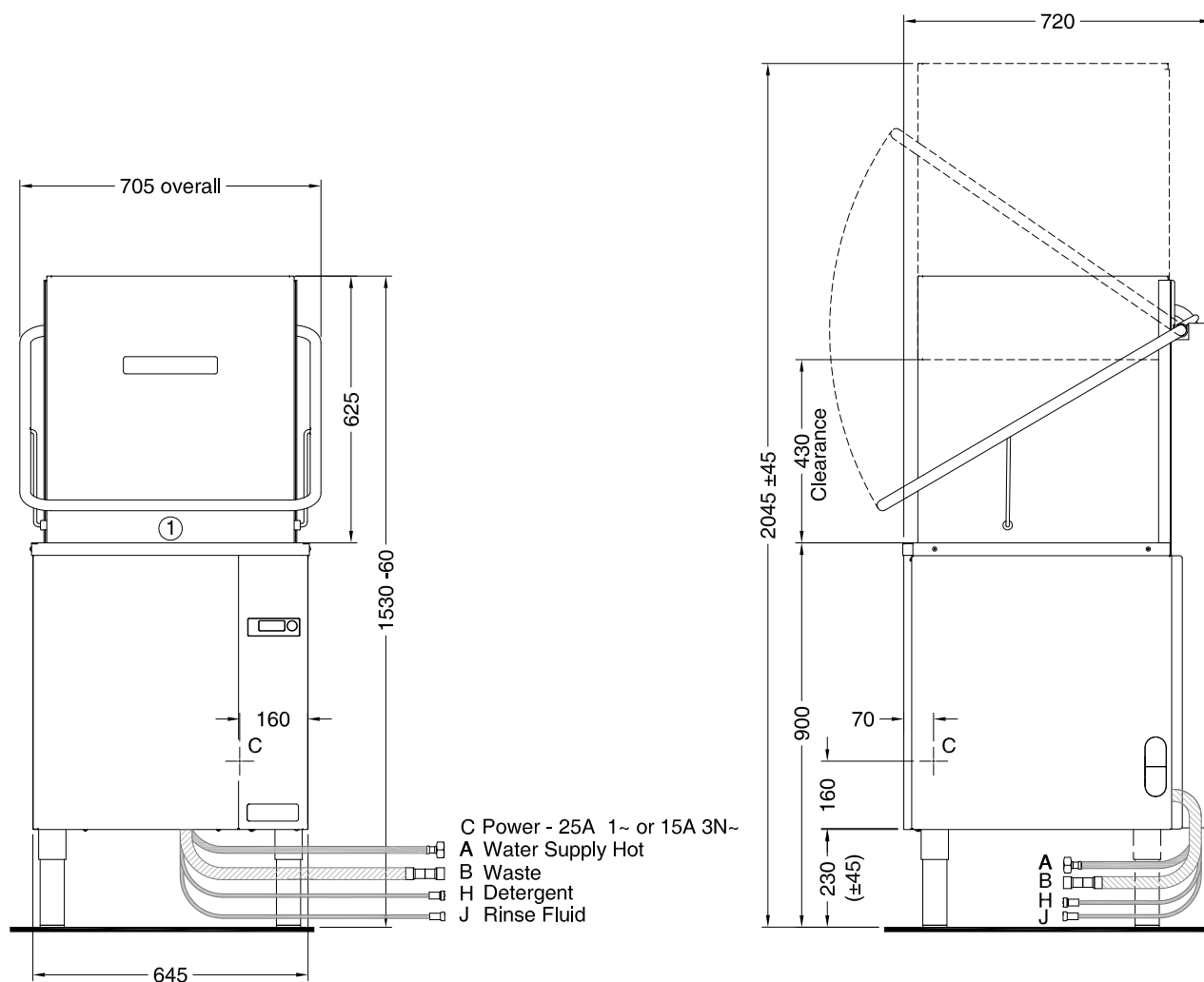
- Run several cycles, ensure that operator has read and understands instructions

Troubleshooting Installation

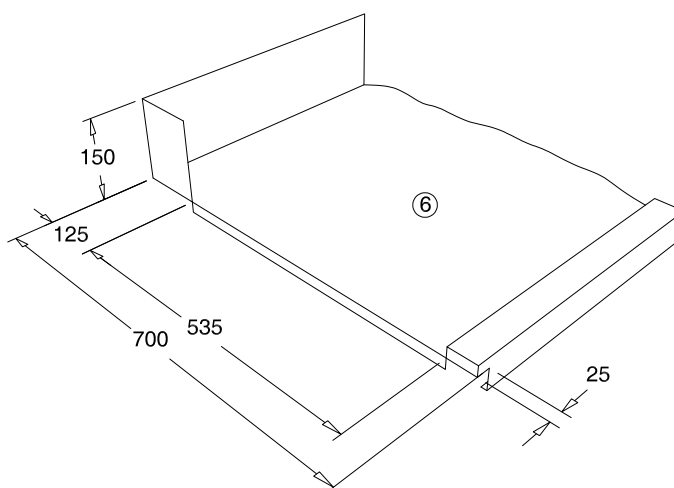
- If machine doesn't fill after switching on power, check & ensure that hot water supply tap is open and water supply pressure is not below specification.

M2 Installation Diagram

M2-S INST 11-01-16 3 D



Bench detail



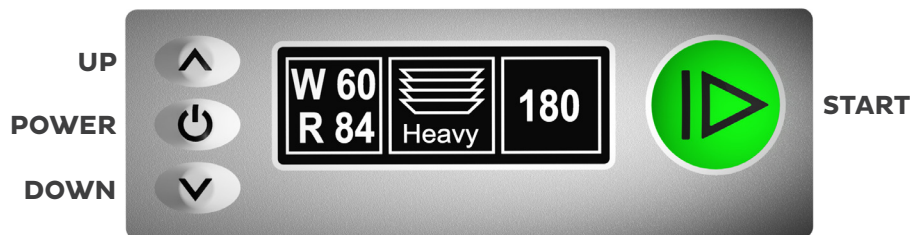
In-line Installation

- ① Bench gap is 595 or 640 with bench brackets removed

Corner Installation

- ② wall to front inside corner of wash tank 700
- ③ machine must face left for access to controls
- ④ allow 300 clearance beneath bench to front for service access
- ⑤ splashback return no higher than 150
- ⑥ left side is mirror image

M2C Operating Instructions



START

- Turn on at wall
- Ensure the Scrap tray (1) is in place
- Ensure the Upstand (2) is in place and shut door
- Press Power button for 3 seconds to turn machine on and begin the fill cycle

OPERATION

- Select cycle using Up/Down buttons (use the Heavy cycle whenever possible)
- Press Start button (once this is Green or Orange) to begin washing
- Timer counts down to 00 then resets after door is opened

START BUTTON COLOURS

- | | |
|--|-----------------------------|
| White = machine is filling | Purple = door is open |
| Red = cycle is running | Orange = machine is heating |
| Green = rinse water is up to temperature | Blue = power saving mode |

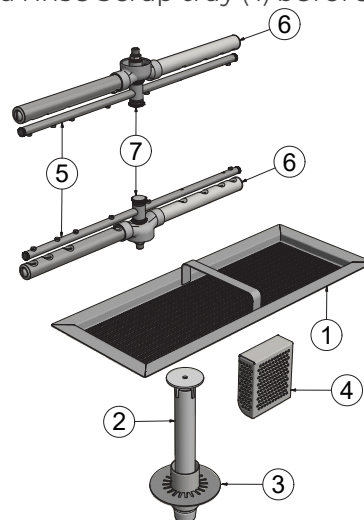
NOTE: The machine may be started while Orange light is on and while rinse water is being heated and the timer will pause at 22 seconds until rinse water is up to 83 degrees

SHUT DOWN – EVERY NIGHT

- Select Drain cycle via Up or Down buttons
- Remove drain Upstand (2) and shut door
- When Drain cycle is finished after 100 seconds, remove and rinse Scrap tray (1) before replacing back in machine along with Upstand (2)

CLEANING – AT LEAST ONCE A WEEK

- Remove, rinse and replace:
- Scrap Tray 1
- Upstand 2
- Drain filter 3
- Wash Pump Filter 4
- Rinse Arm 5
- Wash Arm 6
- Thumbscrews 7
- Inspect and clear all jets in the wash and rinse arms



SUGGESTED BEST PRACTICE

- Pre-rinse Scrape and/or rinse plates and glasses in cool water
- Chemical Use good quality non foaming commercial detergent and drying agent
Do not use domestic detergent which will cause the machine to foam

User Programming

The **User Settings** menu is accessed by pressing the UP and DOWN keys simultaneously for 5 seconds, the screen should then change to:



Press the POWER button to scroll between settings.
Press the UP and DOWN keys to change a specific setting,
Press the START button to return to the operator screen.

The programming options are specified in the table below:

User Settings	Factory Setting	Selection
Power Save	ON	ON/OFF
Detergent Prime	OFF	ON/OFF
F-Detergent Injection Time	40	0 - 180 secs
W-Detergent Injection Time	15	1 - 30
Rinse Aid Prime	OFF	ON/OFF
W-Rinse Aid Time	12	1 - 30
Display Contrast	27	10 - 40

Power Save function reduces the rinse temperature setting by 10°C when the machine is idle for 5 minutes or more. The temperature settings return to the set value when door is opened or START/STOP key is pressed.

Detergent Prime function allows manual operation of the detergent pump to fill the detergent hose with chemicals. Press UP key to switch the detergent pump on, DOWN key to switch the pump off. If the detergent pump is turned on and left running, it will stop automatically after 1 minute of operation.

F-Detergent Time controls the operation time of the detergent pump during the fill of the wash tank. The factory settings for passthrough models – 80 seconds.

W-Detergent Time sets the injection time of the detergent pump at the beginning of each wash cycle. Ex-factory setting is 15 seconds as board default.

Rinse Aid Prime function allows manual operation of the rinse aid pump to fill the rinse aid hose with chemicals. Press UP key to switch the rinse aid pump on, DOWN key to switch the pump off. If the rinse aid pump is turned on and left running, it will stop automatically after 1 minute of operation.

W-Rinse Aid Time controls the injection time of the rinse aid peristaltic pump. The rinse aid pump is set to operate at the beginning of each wash cycle. Ex-factory setting is 12 seconds as board default.

Troubleshooting

If an error message appears on the control display first try turning the machine OFF for 30 seconds and then back ON - If the error message remains call for service.

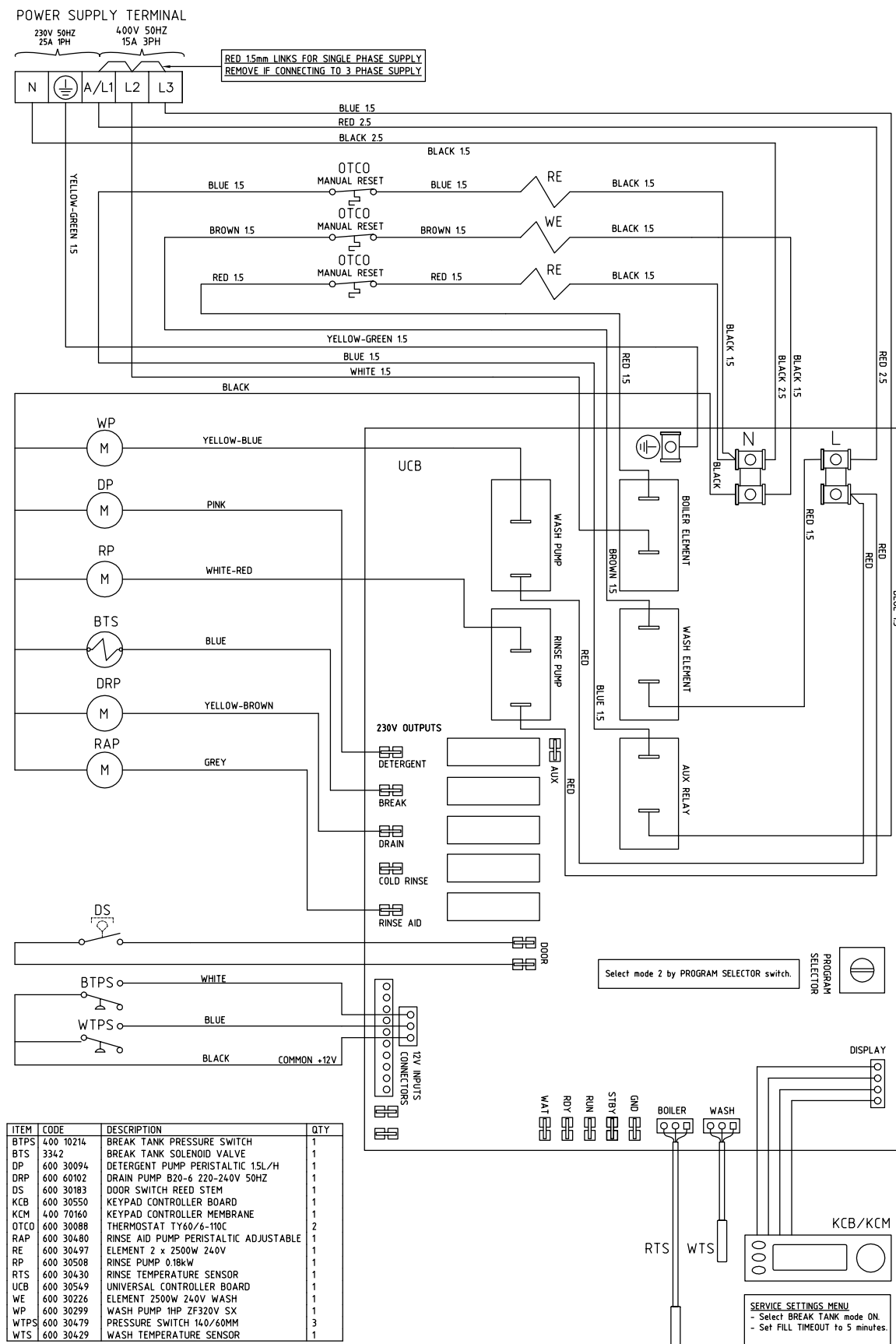
Issue	Resolution
Error 7	Fill failure – check drain upstand is fitted & water supply is turned on and good flow rate.
Error 8	Drain failure – check drain upstand is removed & drain hose is not kinked or blocked
Not Filling	Check water supply is on and door is closed
Refills During Wash	Check drain upstand is fitted
Cycle Does Not Start	Check door is closed
Foaming Wash	Excessive use of rinse fluid and/or low wash temperature can cause foaming
Poor Results	Read and carefully follow the machine installation, operating and care procedures

All of the following is actually in the instructions on previous pages of this manual

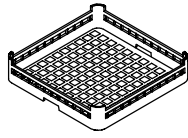
Pre-scrap and pre-rinse washware
Do not overload dishracks – avoid overlap of plates, wash cutlery unsorted, handles up
Use quality low foam detergent and rinse fluid – check containers and adjustment
Use heavy cycle – Baked on soil requires pre-scraping and/or pre-soaking
Remove and check wash & rinse arms & jets are clean and arms rotate freely
If plates are not pre-rinsed wash water may need changing regularly
Check wash and rinse temperatures
Remove rack when cycle ends and leave on bench a few minutes for drying

M2-4(S) Wiring Diagram

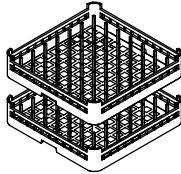
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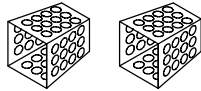
Accessories



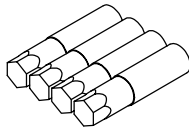
600 70029
CUPRACK 500mm OPEN



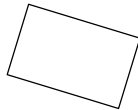
600 70028
DISHRACK 500mm 9 x 9 DIVISION



C660503
CUTLERY CONTAINER G

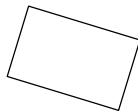


600 90023
ASSY SL/M1/M2 LEG (INOX 50x240xM12)

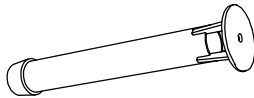


ELECTRICAL WIRING DIAGRAM

(UNDER
FRONT
COVER)



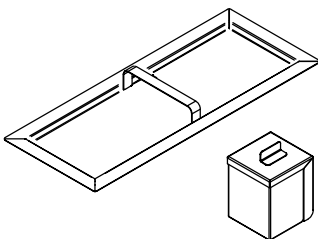
OPERATOR MANUAL



400 10145
DRAIN UPSTAND



328 10032
DRAIN FILTER ASSEMBLY



328 10003
SCRAP TRAY ASSEMBLY

328 12018
WASH PUMP FILTER ASSEMBLY



600 60080
2M S/S HOSE

Parts

Description

Controls & Indicators

	Part No
Digital Temperature Sensor 500mm	600 30429
Digital Temperature Sensor 1000mm	600 30430
Door Switch	600 30183
Electronic Controller Kit	KIT0440067
LCD Board with Spacers Kit	KIT0440069
Pressure Switch Break Tank	400 10214
Pressure Switch Wash Tank	600 30479

Heating Components

Over Temperature Thermostat	600 30088
Rinse Element 2 x 2.5KW	600 30497
Wash Element 2.5KW straight	600 30159

Hoses

Hose Drain Pump 2.5m	600 60105
Hose Drain Pump Inlet	600 90074
Pressure Switch Hose	3067
Rinse Hose	600 60073
Wash Pump Inlet Hose	1262
Wash Pump Outlet Hose	6195
Lower Wash Connection Hose	6196

Pumps & Solenoids

Detergent Pump	600 30094
Detergent Squeeze Tube	600 30134
Drain Pump	600 60102
Rinse Aid Pump	600 30480
Rinse Aid Squeeze Tube	600 30119
Rinse Pump CRC-R-DX	600 30508
Solenoid Valve 1 way	3342
Wash Pump	600 30299

Wash Tank Components

Drain Filter	328 10032
Drain Upstand	400 10145
Rinse Arm End Plug	400 30200
Rinse Jet Machined	400 30087
Rinse Spindle	400 30073
Scrap Tray	328 10003
Wash Arm End Screw	600 80072
Wash Jet Machined	400 30088
Wash/Rinse Arm Bush	C190624
Wash Inlet Filter	328 12018
Wash Spindle Nut	400 30074

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