

BATCHEN MPP-MKII  
LPG DISPENSER

**SERVICE MANUAL**

For Model: MPP-MKII

Ref: MAN-0020 Issue 4

Printed: 13 September 2006

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## **WARNING**

THIS EQUIPMENT IS DESIGNED TO DISPENSE LIQUEFIED PETROLEUM GAS TO MOTOR VEHICLES. IT CONTAINS FLAMMABLE LIQUEFIED GAS UNDER PRESSURE AND MUST BE SERVICED ONLY BY PERSONS FULLY TRAINED AND EXPERIENCED IN THE SAFE HANDLING OF L.P.G. IN ACCORDANCE WITH ALL STATUTORY REQUIREMENTS AND RECOGNIZED INDUSTRY SAFETY STANDARDS. FAILURE TO DO SO MAY RESULT IN (BUT IS NOT LIMITED TO) THE ESCAPE OF FLAMMABLE LIQUID OR VAPOUR WHICH MAY CAUSE FROSTBITE IN CONTACT WITH EXPOSED FLESH AND MAY CAUSE A FIRE OR AN EXPLOSION IF IN CONTACT WITH A SOURCE OF IGNITION. SUDDEN UNCONTROLLED DEPRESSURISING MAY ALSO RESULT IN THE PROPULSION OF COMPONENTS AT HIGH VELOCITY.

## **CAUTION**

LATCHING OF HOSE NOZZLE IN THE OPEN POSITION MAY RESULT IN OVERFILLING OF VEHICLES NOT FITTED WITH AUTOMATIC FILL LIMITING VALVES.

## **OPERATORS**

Operators of this equipment should be fully trained in refuelling procedures as stated in AS1596 "SAA LP Gas Code". All operations must be carried out by Authorised Personnel in accordance with relevant local and statutory regulations.

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## INTRODUCTION

### GENERAL DESCRIPTION

The "BATCHEN MPP-MKII" LPG Dispenser is designed to refuel motor vehicles with Liquid Petroleum Gas (LPG).

"BATCHEN MPP-MKII" Dispensers basically consist of:

- Dispenser Hoses, Hose Nozzles and Hose Retractor Column.
- Liquid Crystal Displays (LCDs) to read LPG quantities dispensed, to set prices and obtain cumulative totals of customer prices and volumes.
- Internal meter and pipework to measure and transport LPG being dispensed.
- Lockable Dispenser computer programming pad.
- Internal Temperature Compensator that automatically corrects to a standard reference point.
- Dispenser Fluorescent Light.

This manual assumes knowledge of how to safely handle LPG and assumes experience in maintaining similar equipment.

BATCHEN's run regular training courses for both experienced and novice service people. If you would like to attend such a course please contact your local BATCHEN representative.

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## HOW TO USE THIS MANUAL

This Manual covers the equipment supplied according to Drg. No. DJB 296. These drawings are included in this manual. Please check that these drawings correspond to the equipment you are maintaining. If the equipment does not correspond to the drawings enclosed with this manual, please contact your BATCHEN representative.

The fault finding guide lists the most common faults that occur on LPG installations. The fault finding guide also includes the remedy for each fault. This is included as a guide only and if the fault is not listed please contact your BATCHEN representative for further advice.

Detailed instructions on how to repair the major equipment items can be found in the ***SERVICE MANUAL FOR BATCHEN HYDRAULICS MODULE.***

Remember: Your Model No. is MPP-MKII

## FAULT FINDING GUIDE

This FAULT FINDING GUIDE incorporates fault finding and remedies for the complete LPG installation and is not limited to the LPG Dispenser.

### FLAMEPROOF ELECTRICAL WARNING

Flameproof electrical equipment is located in the flameproof junction box. This must not be opened in the presence of LPG. If servicing is required, switch off mains power to the LPG Dispenser before opening the flameproof junction box. Remember to close the box before restoring mains power to LPG Dispenser.

**All sealing screws must be used to secure the flameproof junction box before restoring mains power to LPG Dispenser.**

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## SYMPTOM ...No LPG delivered to vehicle

### Possible Fault A1: Storage tank empty

Remedy (a) Check liquid level in storage tank. Fill if necessary.

### Possible Fault A2: No power to LPG Dispenser

Remedy (a) Check mains power circuit breaker (15A or 20A).

### Possible Fault A3: Manually operated liquid or vapour valves shut

Remedy (a) Open any manually operated valves associated with storage tank, pump or LPG Dispenser.

### Possible Fault A4: Pneumatically actuated emergency valves shut

(Only relevant to some installations.)

Remedy (a) Check all emergency shut valves are open. If not:  
(b) Check air compressor is operating and all air valves open.  
**If operating (minimum operating temperature is 600kPa):**  
(c) Check emergency stop buttons are not activated. If so, follow site procedures to de-activate.

### Possible Fault A5: Hose breakaway coupling unscrewed

Remedy (a) Tighten each half of hose breakaway coupling. See instructions on LPG Dispenser.

### Possible Fault A6: No power to computer

(Refer to Drawing No. DJB 497)

Remedy (a) Check 0.5A fuse in the Dispenser power supply board and replace if necessary.  
(b) If power supply to PCB has failed, check circuitry and replace if necessary.  
To isolate the cause of a power supply fault check the following:  
(i) LED 1 - 12 Volts  
(Totes and Communications)  
LED 2 - 5 Volts Intrinsic Safe  
(Paddle Switches and Pulsers)  
LED 3 - 5 Volts  
(Main Head PCB)  
LED 4 - 10 Volts DC  
(Power Up and Power Fail circuitry)



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- (ii) Voltages at Power Supply PCB terminals from Transformer between:  
Yellow Terminals - 20 Volts A.C  
Orange Terminals - 40 Volts A.C
- (iii) Incoming 240 Volts AC at Transformer.

## Possible Fault A7: Error Code on display

- Remedy (a) See Error Code faults ('J' Section, below).

## Possible Fault A8: Remote Pump does not start when Nozzle removed from Dispenser

- Remedy (a) For Self-serve sites only: If LPG Dispenser has been switched to Self-Serve mode, check that Console has been authorised.
- (b) Check hose Nozzle position limit switch and contacts. Clean or replace as required. Insert Nozzle to check correct switching position if necessary.
- (c) Note FLAMEPROOF ELECTRICAL WARNING Page 1. TURN POWER OFF. Open MPP Cover and check for a motor control signal fault (replace as required). To locate a MPP motor relay circuitry, press the manual test button on the side of the relay.
- (i) If the motor DOES NOT start running then check:
    - (1) 240 Volts Supply to Relay.
    - (2) Relay.
    - (3) Terminations at:  
High Voltage Output Board;  
Termination Block;  
Motor.
  - (ii) If the motor DOES start running then check:
    - (1) Control Signal LED to Relay
    - (2) Signal Connectors at:  
High Voltage Output Board;  
Power Supply Board (to High Voltage Output Board);  
Power Supply Board (to Head Module);  
Main Head Module.
    - (3) High Voltage Output Board.
    - (4) Main Head Module.
- (d) Check Remote Pump motor and replace if necessary.

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## Possible Fault A9: Remote pump starts but no LPG delivered

- Remedy
- (a) Storage tank empty.
  - (b) Check tightness of remote pump drive V-belts (if applicable). Tighten if necessary.
  - (c) Check pressure differential between storage tank and remote pump discharge (should be 700-800 kPa). **If pressure differential is low or non-existent:**
    - (i) Adjust spring tension on remote pump bypass relief valve.
    - (ii) Check pump for correct direction of rotation.
    - (iii) Inspect strainer in remote pump suction and clean if fitted.
  - (d) Check if excess flow valve is shut on tank, in liquid delivery line or in LPG Dispenser. If so, equalise pressures and try again several times. If still unsuccessful remove and inspect appropriate excess flow valve. Clean or install correctly or replace.
  - (e) If satisfied that excess flow valve in tank is not shut:
    - (i) Replace remote pump bypass relief valve.
    - (ii) Replace remote pump.
  - (f) Check filter in LPG Dispenser, clean if necessary.
  - (g) Check LPG meter for jamming with foreign bodies. Strip and clean if necessary.
  - (h) Check for solenoid control valve signal fault. Authorise a delivery on problem Hose and check the control signal LED turns ON for the appropriate valve SSR.
    - (i) If the LED does turn ON then check:
      - (1) 240 Volts Supply to High Voltage Output Board.
      - (2) Terminations at High Voltage Output Board Solenoid Box.

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- (ii) If the LED does not turn ON then check:
  - (1) Signal Connectors at:
    - High Voltage Output Board;
    - Power Supply Board (to High Voltage Output Board);
    - Power Supply Board (to Head Module);
    - Main Head Module.
  - (2) High Voltage Output Board.
  - (3) Main Head Module.

Possible Fault A10: No flow through differential valve

- |        |  |
|--------|--|
| Remedy | <ul style="list-style-type: none"><li>(a) Shut needle valve off. Vent steel tubes to isolate valve from vapor return line.</li><li>(b) Rusty differential valve causing piston to seize. Replace differential valve.</li><li>(c) Replace spring (Drg No. DJB-562, item 7).</li><li>(d) Replace piston assembly (Drg No. DJB 562, item 2 to 6).</li><li>(e) Jerky action of LPG meter due to control valve timing out of adjustment. Indicated by vapour bubbles surging in Sight Glass). See LPG meter repair guide for instructions on how to adjust.</li></ul> |
|--------|--|

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## SYMPTOM      **...Slow filling rate**

### Possible Fault B1: Hose breakaway coupling unscrewed

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | If hose breakaway coupling is unscrewed tighten each half. See instructions on LPG Dispenser. |
|--------|-----|---|

### Possible Fault B2: Excess flow valve upstream of hose is shut

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Return hose nozzle to its receptacle. Wait at least 1 minute and try again. If unsuccessful, wait longer, refer Drg. No. DJB-467, and replace excess flow valve. |
|--------|-----|--|

### Possible Fault B3: Vehicle tank is full or almost full

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check contents gauge on vehicle tank. If close to 85%, no remedy. |
|--------|-----|---|

### Possible Fault B4: Vehicle fitting restricts flow

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | No remedy. Vehicle Owner should have fitting checked with system installer. |
|--------|-----|---|

### Possible Fault B5: Vehicle tank completely empty

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Slow fill initially by intermittent short bursts from Nozzle or fit restrictor disc between nozzle and vehicle tank. |
|--------|-----|--|

### Possible Fault B6: Storage vessel contains propane/butane mixture and vehicle tank contains propane

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Cool vehicle tank so tank pressure is less than remote pump discharge pressure. If unsuccessful, no remedy. |
|--------|-----|---|

### Possible Fault B7: Remote pump is not developing sufficient differential pressure

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check Possible Fault A8 (a), (b) and (c). |
|--------|-----|---|

### Possible Fault B8: Restriction in flow system

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Check Possible Fault A8 (c), (d), (e), (f), (g), (h) above.  |
|        | (b) | Check there is no undue restriction in vapour return piping to storage tank. For example: shut valve, small bore piping (10mm dia. or less). |
|        | (c) | Check LPG meter output shaft and pulser box alignment.   |
|        | (d) | If a new installation, check clearance round excess flow valve in liquid delivery line to LPG Dispenser.                                     |
|        | (e) | Check for seized bearing in LPG meter control head.  |

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**SYMPTOM**      **...Small volume**  
**dispensed then flow ceases.**

Possible Fault C1: Solenoid valve downstream of LPG meter de-energises

- |        |      |  |
|--------|------|--|
| Remedy | (a)  | Check leads to solenoid valve for loose connection.  |
|        | (b)  | Check for solenoid control valve signal fault. Authorise a delivery on problem Hose and check the control signal LED turns ON for the appropriate valve SSR.           |
|        | (i)  | If the LED <u>does</u> turn ON then check:   |
|        | (1)  | 240 Volts Supply to High Voltage Output Board.   |
|        | (2)  | Terminations at High Voltage Output Board Solenoid Box.  |
|        | (ii) | If the LED <u>does not</u> turn ON then check:   |
|        | (1)  | Signal Connectors at:<br>High Voltage Output Board;<br>Power Supply Board (to High Voltage Output Board);<br>Power Supply Board (to Head Module);<br>Main Head Module. |
|        | (2)  | High Voltage Output Board.   |
|        | (3)  | Main Head Module.  |
|        | (c)  | Check Pump differential pressure. See Possible Fault A8 (c).   |
|        | (d)  | Vehicle tank pressure too high. See Possible Fault B6.   |

Possible Fault C2: Faulty Nozzle position switch or wiring

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Check nozzle position switch and contacts. Clean or replace if required.   |
|        | (b) | Check switch wiring, plugs, sockets etc. for faults. Replace if necessary. |

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shut

**SYMPTOM      ..Remote pump does not**

**down when hose nozzle is replaced in  
Dispenser.**

Possible Fault D1: Motor control signal fault

- |        |      |   |
|--------|------|---|
| Remedy | (a)  | Note FLAMEPROOF ELECTRICAL WARNING Page 1. TURN POWER OFF. Open MPP Cover and check for a motor control signal fault (replace as required). To locate MPP motor contactor circuitry, press the manual test button on the side of the contactor.   |
|        | (i)  | If the motor <u>does not</u> start running then check: <ol style="list-style-type: none"><li>(1) 240 Volts Supply to contactor.</li><li>(2) Contactor.</li><li>(3) Terminations at:<br/>High Voltage Output Board;<br/>Termination Block;<br/>Motor.</li></ol>  |
|        | (ii) | If the motor <u>does</u> start running then check: <ol style="list-style-type: none"><li>(1) Control Signal LED to contactor.</li><li>(2) Signal Connectors at:<br/>High Voltage Output Board;<br/>Power Supply Board (to High Voltage Output Board);<br/>Power Supply Board (to Head Module);<br/>Main Head Module.</li><li>(4) High Voltage Output Board.</li><li>(5) Main Head Module.</li></ol> |
|        | (b)  | Check Remote Pump motor and replace if necessary.   |

Possible Fault D2: Fault in remote pump motor circuits

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check Remote Pump contactor and circuits. Replace if necessary. |
|--------|-----|---|

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**SYMPTOM**                      **...Price computer**  
**registers flow before or after connection to**  
**vehicle (meter creep).**

Possible Fault E1: Long time elapsed since previous fill

Remedy                      (a)                      Fill system by replacing nozzle and restarting cycle.

Possible Fault E2: Leak in pipework or threaded joints.

Remedy                      (a)                      Check LPG Dispenser for leaks, particularly downstream of solenoid valve.

Possible Fault E3: Non return valve(s) in LPG Dispenser not holding pressure

Remedy                      (a)                      Test by fitting pressure gauge to fill Nozzle then stop pump. Hose should hold pump pressure. Refer to Drg No. DJB-374, item 38. Check soft seat of all non return valves for dirt. Replace seats or valves if necessary.

Possible Fault E4: Hydrostatic relief valves leaking or discharging

Remedy                      (a)                      Refer to Drg. No. DJB-374, item 9. More likely to occur in warmer climates. Replace with new hydrostatic valves, if necessary with valves of higher set pressure.

Possible Fault E5: Differential pressure valve seals leaking

(If this occurs LPG meter will continue to register slowly indefinitely.)

Remedy                      (a)                      Refer to Drg. No. DJB-562 items 3 and 4. Check differential valve. Replace seals if necessary.

Possible Fault E6: Hose is emptied before fill commences

Remedy                      (a)                      May occur in self-serve operation if hose nozzle is connected to vehicle and is opened before Console operator authorises sale. Replace nozzle in receptacle and start again.

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## SYMPTOM      **...All Displays are blank.**

### Possible Fault F1: LPG Dispenser fluorescent lights are OFF

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Check the mains supply circuit breaker is operating. Repair or replace if necessary. |
|        | (b) | Reset Emergency Stop Button system.  |

### Possible Fault F2: LPG Dispenser fluorescent light are ON

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check that Dispenser power supply fuse (0.5A) has blown. Replace if necessary.  |
|        | (b) | Power supply PCB has failed. If so, check circuitry and replace if necessary. To isolate the cause of a power supply fault check the following: <ul style="list-style-type: none"><li>(i) LED 1 - 12 Volts<br/>(Totes and Communications)</li><li>LED 2 - 5 Volts Intrinsic Safe<br/>(Paddle Switches and Pulsers)</li><li>LED 3 - 5 Volts<br/>(Main Head PCB)</li><li>LED 4 - 10 Volts DC<br/>(Power Up and Power Fail circuitry)</li><li>(ii) Voltages at Power Supply PCB terminals from Transformer between:<ul style="list-style-type: none"><li>Yellow Terminals - 20 Volts A.C</li><li>Orange Terminals - 40 Volts A.C</li></ul></li><li>(iii) Incoming 240 Volts AC at Transformer.</li></ul> |



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of Fuel'.

SYMPTOM

...Display showing `Out

Possible Fault G1: All Unit prices are set to zero

Remedy

- (a) Set prices at the Console (if applicable) as follows:
  - (i) Remote price setting is achieved by changing the price for each hose/Dispenser.
  - (ii) An MPP HOSE must be idle for at least 15 seconds before a price change will take effect.
  - (iii) During MPP deliveries a price change will occur on hoses not currently delivering fuel.
  - (iv) "Pr Ch" shows for 60 seconds on the unit undergoing price change. During the 60 second period fuel delivery is disabled on that MPP hose.
  - (v) At the completion of the 60 second period, the new unit price will be posted and that MPP hose will again be available for use.
- (b) Set prices locally at LPG Dispenser, as follows:
  - (i) Local price setting is achieved by changing the price for each MPP hose. Local prices will only take effect if the MPP is in Attended mode, or if the remote controlling device has the price setting disabled.
  - (ii) Make sure all hoses have been hung up and idle for at least 15 seconds.
  - (iii) Open Function Keypad flap on the side of the MPP pod.
  - (iv) Reset the c/l button and the unit price for each hose are displayed.
  - (v) Lift the Nozzle of the hose requiring new price.
  - (vi) Use the `Up' and `Down' buttons to alter unit price.
  - (vii) Hang up Nozzle and the new value will be stored.
  - (viii) "Pr Ch" shows for 60 seconds on the unit price undergoing price change. During the 60 second period LPG delivery is disabled on that MPP hose.
  - (ix) At the completion of the 60 second period, the new unit price will be posted and the MPP hose will be ready for dispensing.

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**is not metering**

**SYMPTOM**

**...Mechanical Totaliser**

Possible Fault H1: Mechanical Totaliser fault

Remedy

- (a) Check termination at:
  - (i) Main Head Module.
  - (ii) Totaliser Board.
- (b) Check Totaliser Cable is faulty. Replace if necessary.
- (c) Check for 12-Volt Power Supply.
- (d) Check Totaliser Board and replace if necessary.
- (e) Check Main Head Module and replace if necessary.

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**SYMPTOM**      **...MPP not metering**  
**delivery correctly**

Possible Fault I1: Incorrect K-Factor

- |        |       |  |
|--------|-------|--|
| Remedy | (a)   | Calibration is required to determine the correct K-Factor unless a current, dated sticker attached to the Dispenser shows the K-Factor. If adjustment is needed:   |
|        | (i)   | Make sure all hoses have been hung up and idle for at least 15 seconds.  |
|        | (ii)  | Open Function Keypad flap on the side of the MPP pod.  |
|        | (iii) | Remove the Weights and Measures cover and seal. <u>Warning!!</u> Seals can only be removed by those appropriately authorised or licensed. The Dispenser is not permitted to be used for Trade purposes if seals are removed. |
|        | (iv)  | Press the K-Factor button and the K-Factors for each hose are shown in the unit price displays and proceed as follows:   |
|        | (v)   | Lift the hose Nozzle to be calibrated.   |
|        | (vi)  | Use the `Up' and `Down' button to alter the K-Factor Value.  |
|        | (vii) | Hang up the Nozzle and the new value will be stored.   |

Possible Fault I2: Pulser unit fault

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check the pulser unit and replace if necessary. |
|--------|-----|---|

Possible Fault I3: Faulty Meter

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check the Meter for correct rotation and jamming. Repair or replace as necessary. |
|--------|-----|---|

Possible Fault I4: Specific gravity of LPG being metered is outside the range of the Price computer temperature correction

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Normal S.G. range provided is 0.510 to 0.540. Other ranges are available & can be changed by changing S.G. Program. Refer to "Programming MPP-MKII Price Computer" in this Manual. |
|--------|-----|--|

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## SYMPTOM      ..Error codes flashing in display.

Note: All Errors will clear if the cause of the error is no longer present while the hose pump is in idle mode.

### Possible Fault J1: Error 11 flashing

- |        |       |   |
|--------|-------|---|
| Remedy | (a)   | This error occurs when one of the pulser channels is not metering correctly. Check for: |
|        | (i)   | Termination at pulser Junction Box.   |
|        | (ii)  | Pulser cable.   |
|        | (iii) | I/S connectors at Junction Box.   |
|        | (iv)  | Power supply.   |
|        | (v)   | Main Head Module.   |

### Possible Fault J2: Error 12 flashing

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | This error will occur if pulser channels are incorrectly terminated for the selected hose. Check as for Error 11. |
|--------|-----|---|

### Possible Fault J3: Error 13 is flashing

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | This error is unlikely to occur. If so, it is most likely a faulty pulser unit and should be replaced. |
|--------|-----|--|

### Possible Fault J4: Error 14 is flashing

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | This error will display if a pulser error occurs. The Dispenser will be locked up until the next power-up. The side of the Dispenser not in error can still deliver fuel. Check termination at pulser Junction Box. |
|--------|-----|---|

### Possible Fault J5: Error 20 is flashing

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | This error will occur if Connector 6 or the intrinsic safe power supply of the I/O board is not connected. Replace I/O Board if fault persists. |
|--------|-----|---|

### Possible Fault J6: Error 21 is flashing

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Check I/O Board resistor for continuity. |
|--------|-----|--|

### Possible Fault J7: Error 22 is flashing

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | This error will occur if the intrinsic safe power supply potential drops below 4.5 volts. |
|--------|-----|---|

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## Possible Fault J8: Error 23 is flashing

- |        |       |   |
|--------|-------|---|
| Remedy | (a)   | This error will occur for any of the following: |
|        | (i)   | No temperature probe is connected.              |
|        | (ii)  | The temperature probe is faulty.                |
|        | (iii) | The temperature probe lead is damaged.          |
|        | (iv)  | Temperature falls below -5°C.                   |

## Possible Fault J9: Error 24 is flashing

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | This error occurs if temperature over range (>50°C). |
|--------|-----|--|

## Possible Fault 10: Errors flashing other than 11, 12, 13, 15, 20, 21, 22, 23 and 24

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Contact the manufacturer, D.J. Batchen Pty Ltd, for advice on rectification. |
|--------|-----|--|

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**SYMPTOM**      **...Computer shows**  
**different numbers on each side.**

Possible Fault K1:    Faulty liquid crystal display

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Replace liquid crystal display panel in price computer. |
|        | (b) | Fault in Price computer. Replace main display PCB.      |

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## **SYMPTOM      ..LPG Dispenser will not work with Self-Serve Console.**

This symptom is applicable to site with Self-Serve Consoles only.

### Possible Fault L1: Console not authorised

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | After power failure or power-down to reset Self-Serve mode, LPG Dispenser must be re-authorised. Press authorise button on Console. If this fails remove hose Nozzle from its holder and press authorise button on Console again. If unsuccessful see (b). |
|        | (b) | Faulty attended/self-serve switch in LPG Dispenser. Refer to Drg. No. DJB-339, item 18. Replace switch.  |

### Possible Fault L2: Self-Serve cable faulty or not connected

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Check continuity of communications cable between LPG Dispenser and Self-Serve Console. Check pins in Self-Serve, plug-in computer are securely fastened. Check for kinks or sharp turns in communications cable. |
|--------|-----|--|

### Possible Fault L3: Computer internal Self-serve switch locked in attended mode, possibly by electrical interference

- |        |     |  |
|--------|-----|--|
| Remedy | (a) | Record K-factor, unit price and totals on computer. Remove front covers on the side having Key Pad. Remove left-hand opaque plastic panel. <u>Note</u> hose configuration and pump number setting. <ul style="list-style-type: none"><li>(i) Clear computer memory by switching off power. Hose configuration switches must be set to ON and pump number set to `0'.</li><li>(ii) Set hose configuration and pump numbers to original settings. Power-up Dispenser.</li><li>(iii) Re-program K-Factor [see Possible Fault I1(a)] and Price [Possible Fault G1(a)].</li></ul> |
|        | (b) | Replace price computer and temperature probe.  |

### Possible Fault L4: Faulty Self-Serve Console

- |        |     |   |
|--------|-----|---|
| Remedy | (a) | Check that authorise lights on Console operate. Replace globe if necessary.                           |
|        | (b) | Try connecting LPG Dispenser to different pump number (preferably widely separated from other pumps). |
|        | (c) | Replace Console.  |

# BATCHEN

## SYMPTOM

...Gas leak from LPG

**Meter.**

### Possible Fault M1:

Remedy

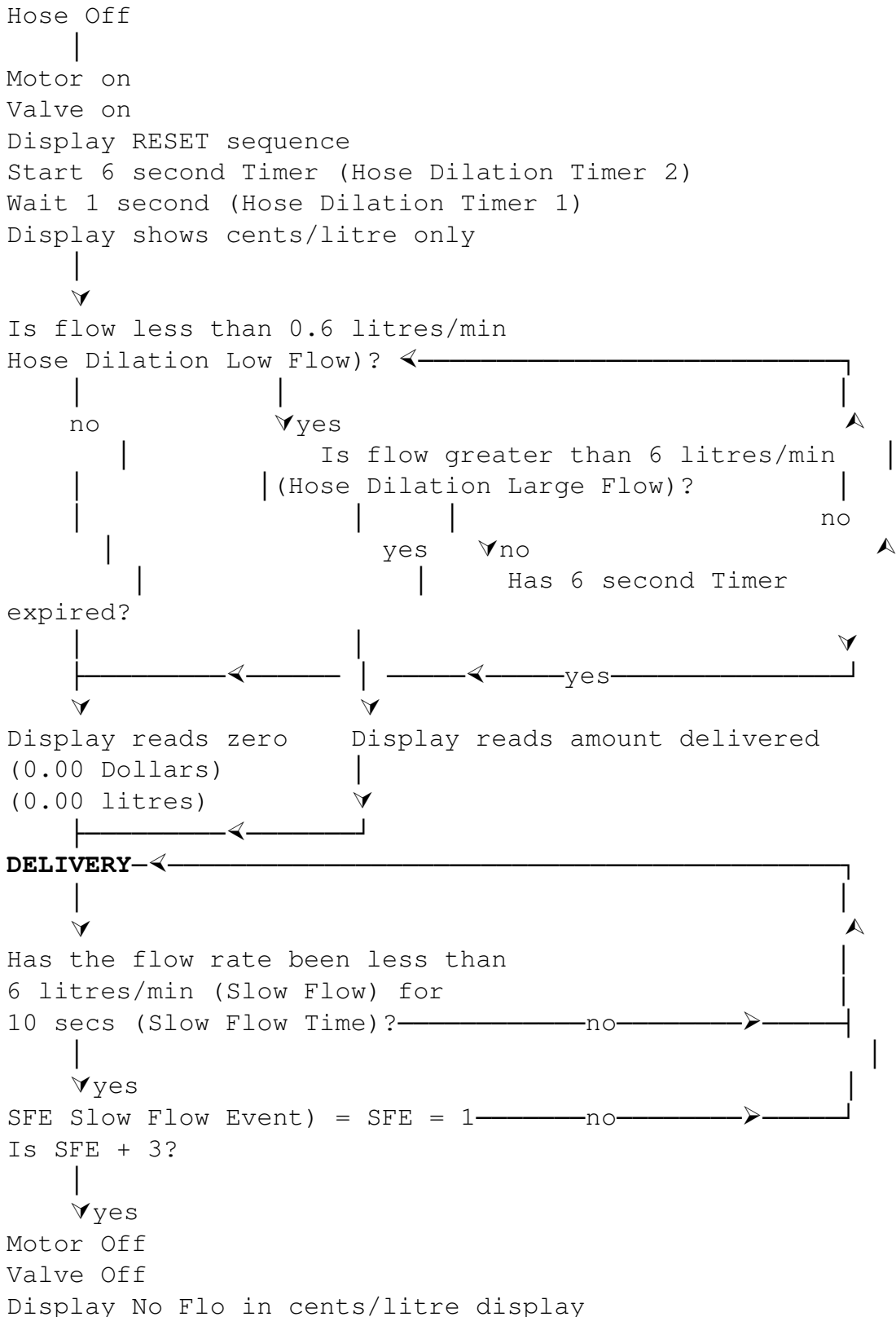
- (a) Refer to appropriate LPG Meter Repair Guide.



# BATCHEN

## PROGRAMMING MPP-MKII PRICE COMPUTER

### Delivery Sequence of MPP-MKII



# BATCHEN

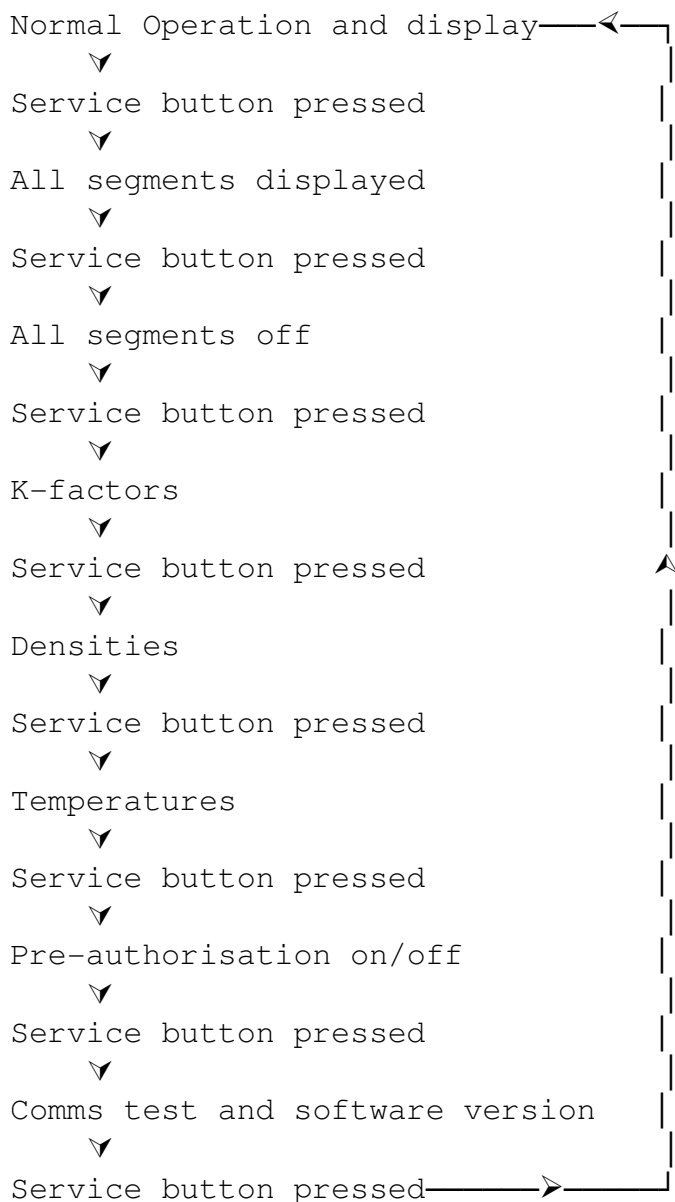
Await Hose On

# BATCHEN

## DISPLAYING MPP-MKII TEMPERATURE AND DENSITY

The temperature and density information are display via the Keypad Service button. Pressing the Service button four times will display the density for each hose in kg/l. Pressing the Service button one more time will display the temperature in degrees Celsius.

Consecutively pressing the Service button will cycle through the following displays:



# BATCHEN

## CHANGING DENSITY ON MPP-MKII DISPENSERS

**Step 1:** Press K-factor button. K-factor should be displayed.

**Step 2:** Press Cents/Litre button. Densities should be displayed at kg/l.

**Step 3:** Lift off hose for which density requires changing.

**Step 4:** Press `Up' or `Down' arrow buttons to change the density for the selected hose.

**Step 5:** Hang up hose. Display should return to normal.

# BATCHEN

## DISABLING/ENABLING MPP-MKII TEMPERATURE COMPENSATION.

Step 1: Press K-factor button on Dispenser keypad. K-factors will be displayed.

Step 2: Press and release Litre Tots button. Temperature Compensation has now been disabled and the tcOFF will be displayed in the cents/litre display.

Step 3: To enable temperature compensation, press the K-factor button and then press and release the Litre Tots button. tcOFF button should disappear from the cents/litre display.

**Note: In a case when both temperature compensation and the vapour sensor have been disabled, the tcOFF display will override the \$ OFF display.**

## DISABLING/ENABLING MPP-MKII VAPOUR SENSOR

Step 1: Press K-factor button on Keypad. K-Factors will be displayed.

Step 2: Press and release \$ Tots button. The vapour sensor has now been disabled and \$ OFF will be displayed in the cents/litre display.

Step 3: To enable the vapour sensor, press the K-factor button and then press and release the \$ Tots button. \$ OFF should disappear from the cents/litre display.

**Note: In a case when both temperature compensation and the vapour sensor have been disabled, the tcOFF display will override the \$ OFF display.**

# BATCHEN

***REPAIR GUIDES - PLEASE SEE SERVICE MANUAL FOR BATCHEN  
HYDRAULICS MODULE***

## TECHNICAL DRAWINGS

DJB 296	BATCHEN MPP-MKII
DJB 374	BATCHEN MPP-MKII Schwelm Meter
DJB 375	BATCHEN MPP-MKII Batchen Meter Schematic Diagram
DJB 382	BATCHEN MPP-MKII Frame Base and Flange Details
DJB 497	BATCHEN MPP-MKII Electrical Schematic
DJB 504	BATCHEN MPP-MKII Connection Details
DJB 562	Differential Valve MKII Exploded Assembly