

MKIV Universal Hopper Spill Proof Installation Manual



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1. Diary of Changes

- Issue 1.0.....9th April 2003
- First issue.
- Issue 2.0.....13th April 2003
- Added [Figure 17: Spill Proof Jig Dimensions](#).
 - Drawings Improved.

2. Tools Required

- Pozi-drive screwdrivers No.'s 1 and 2
- M3 Spanner / socket
- 3.5mm HSS drill bit.
- 10mm HSS drill bit.

3. Parts Required

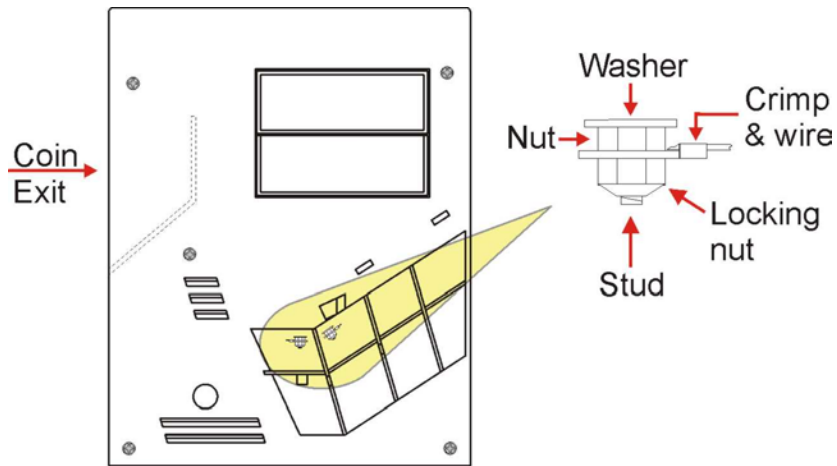
- Spill Proof Solenoid Assembly SUM4STXX00164
- Spill Proof PCB's (2) SUM4STXX00165
 {Spill Proof Exit Window
 Spill proof control board}

4. Coin Box Removal

Refer to [Figure 1](#).

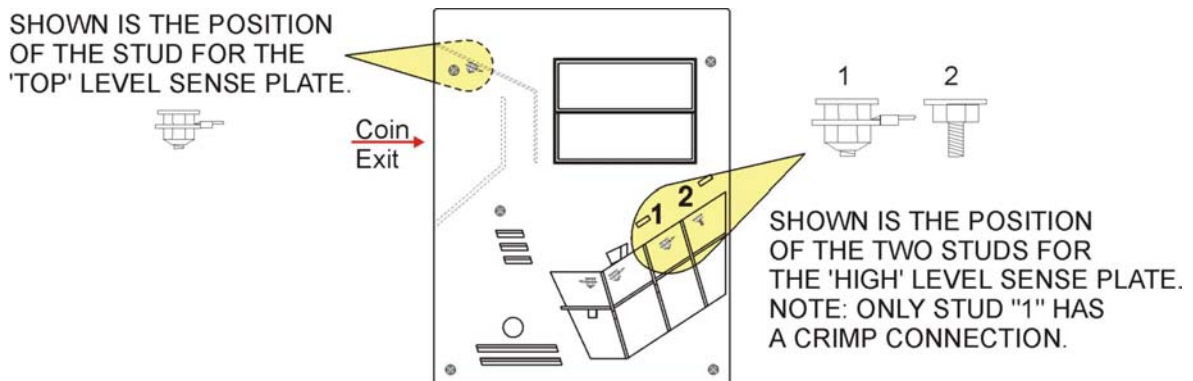
1. Place the hopper in front of you as shown, (looking at the outside of the 'Coin Box').
2. Remove the 2 locking nuts which hold the 'Low Level Sense Plate' wires to the studs.
3. Remove the crimp & wire from the studs.

Figure 1: Low level sensor crimp positions



4. If other sense plates are fitted, i.e. High/Top, then see [Figure 2](#), and remove terminals.

Figure 2: High/Top level sensor crimp positions



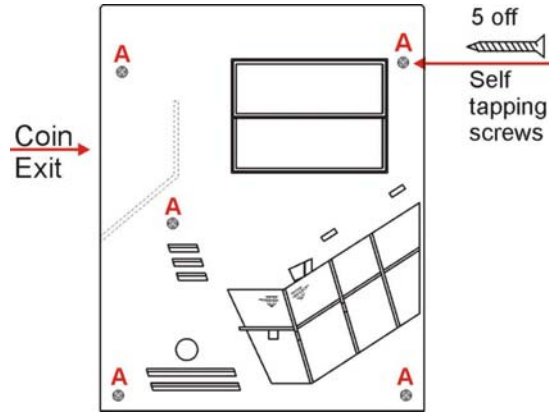
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Refer to [Figure 3](#).

5. Remove the 5 screws indicated (A), which hold the 'Coin Box' to the 'Centre Plate'.

Figure 3: Coin box screw positions



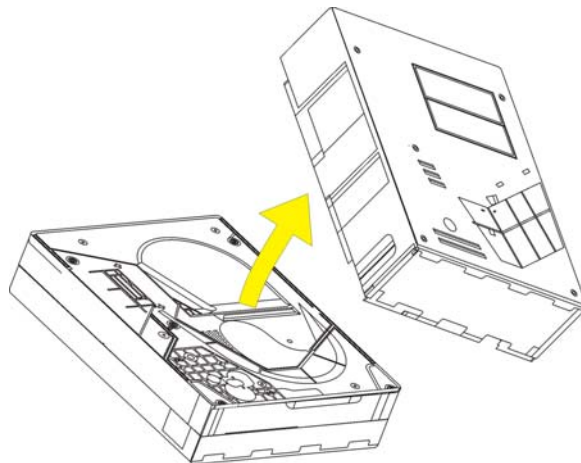
Refer to [Figure 4](#).

6. Gently lift the 'Coin Box' away from the rest of the hopper.

NOTE:- The 'Logic Board' & 'Stirrer' are located in the 'Coin Box'.

7. As the 'Coin Box' is being removed, carefully slide the 'Logic Board' out. The 'Stirrer' may stay with the 'Coin Box' or fall onto the centre plate.

Figure 4: Coin box removal



ACCESS IS NOW AVAILABLE TO THE 'LOW LEVEL' SENSE PLATES, THE MAIN PCB, THE EXIT WINDOW, THE MOTOR TERMINALS & PART OF THE WIRING LOOM.

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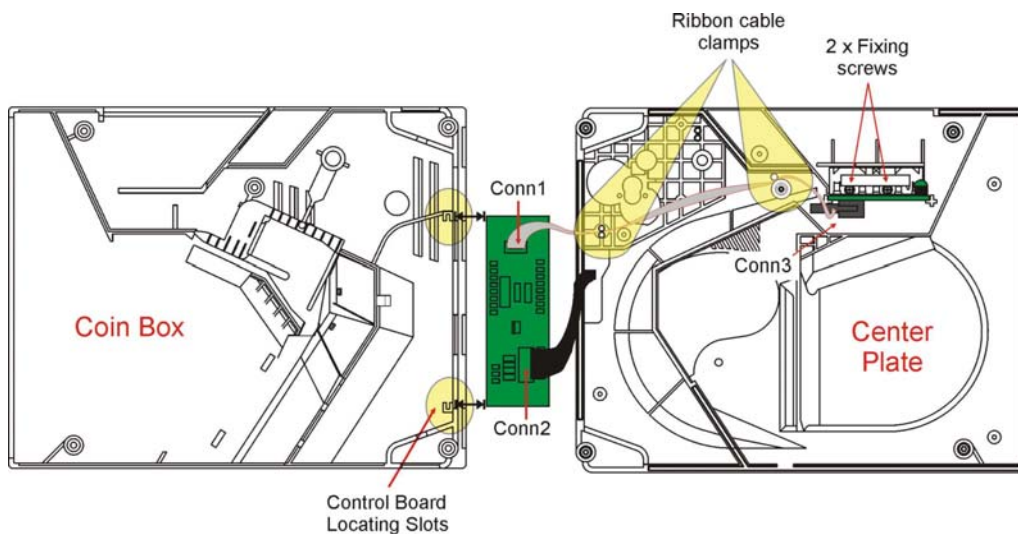
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5. Exit Window and Control Board Removal

Refer to [Figure 5](#).

1. Unscrew & remove the 2 exit window fixing screws.
2. Remove the 'Exit Window' from the 'Centre Plate'.
3. Unclip & remove the 10 way ribbon cable from the exit window - Conn3.
4. Slide the control board out of the locating slots.
5. Unclip and remove Conn2.

Figure 5: Exit window and control board positions



5. To re-assemble, follow the above steps in reverse.

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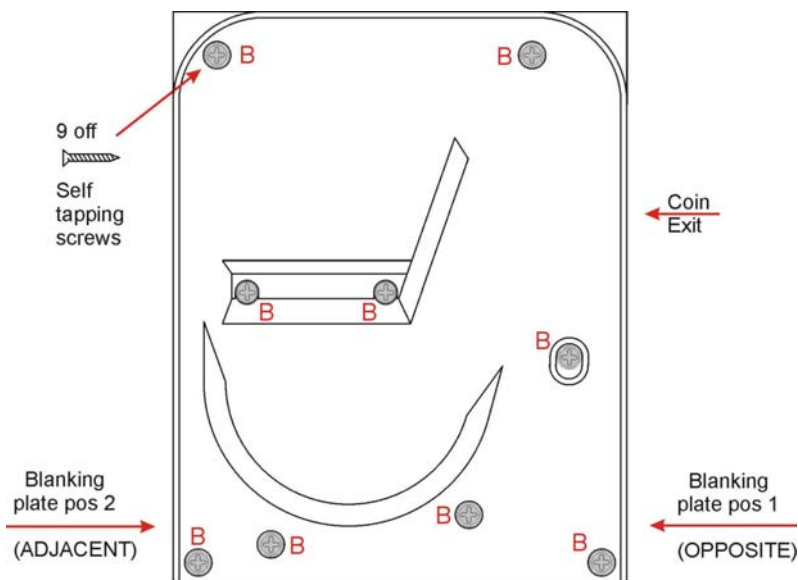
6. End Plate Removal

Refer to [Figure 6](#).

Note the position and orientation of the main interface connector, the position of the port blanking piece and the connector port adapter if fitted (MKII only).

1. Place the hopper in front of you as shown, (looking at the outside of the 'End Plate').
2. Remove the 9 screws indicated (B), which hold the 'End Plate' to the 'Centre Plate'.
3. Locate the position of the 'Connector Blanking Plate'.
4. Holding the 'Connector Blanking Plate' gently lift the 'End Plate' away from the rest of the hopper.

Figure 6: End Plate screw positions



5. To re-assemble, follow the above steps in reverse.

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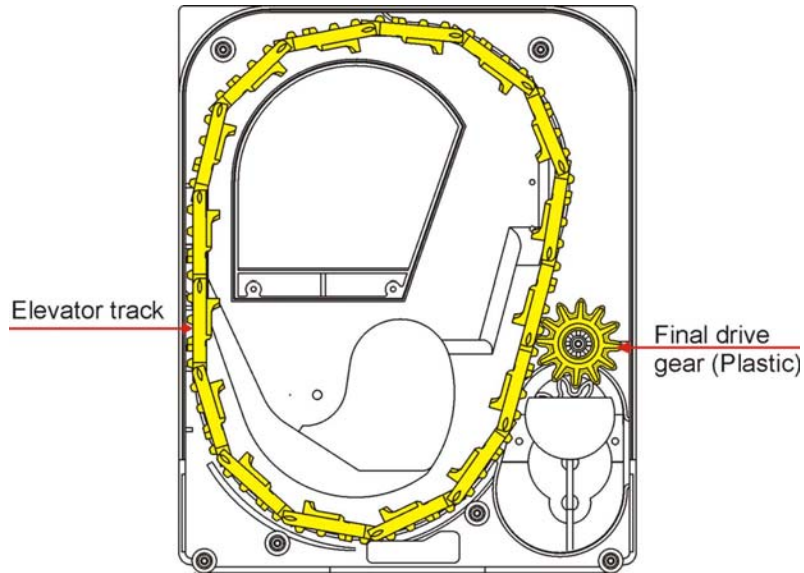
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7. Track Plate Removal

Refer to [Figure 7](#).

1. The 'Elevator Track' & 'Final Drive Gear' can now be removed by lifting up & away from the 'Centre Plate'.

Figure 7: Elevator track and Final drive gear position



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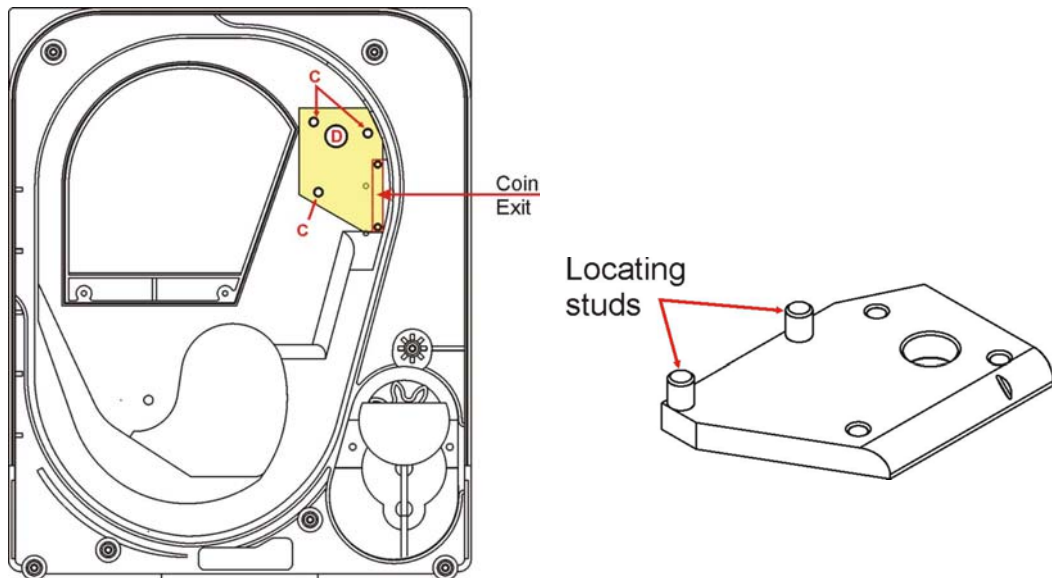
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8. Drill Jig Position

Refer to [Figure 8](#).

1. Fit the centre plate back to the cashbox (do not fit any screws).
2. Fit the jig (yellow) in the position shown.
The 2 locating studs should fit tightly into the coin exit slot.
3. Drill 3 holes of 3.5mm diameter through the 'C' holes.
4. Drill 1 hole of 10mm diameter through the 'D' hole.
5. Remove the jig.

Figure 8: Drill jig position



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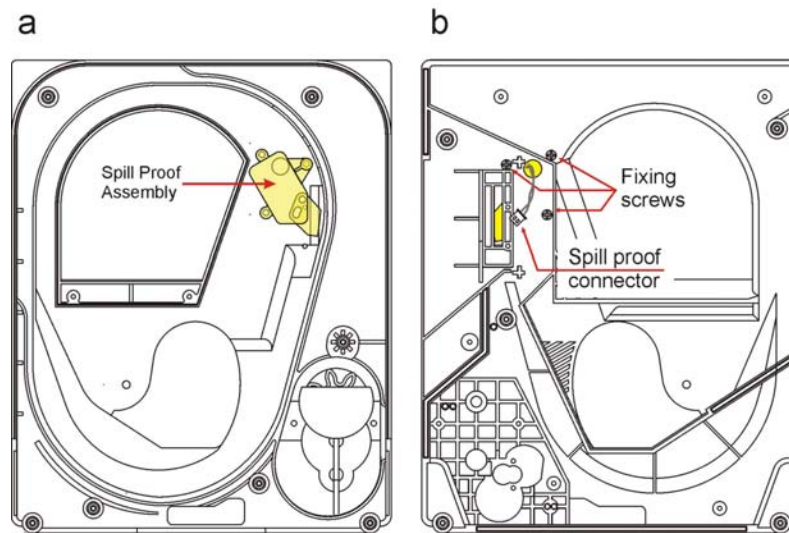
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9. Fitting the Spill Proof Assembly

Refer to [Figure 9](#).

1. Feed the 2 pin connector through the 10mm hole [Figure 9b](#).
2. Hold the assembly in position [Figure 9a](#).
3. Fix into position using the 3 fixing screws supplied - [Figure 9b](#).

Figure 9: Spill proof assembly fixing



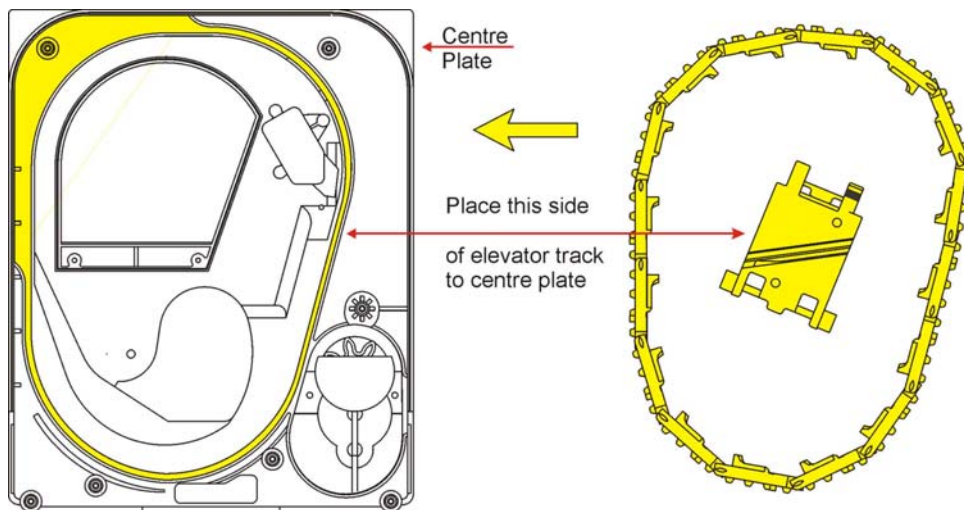
4. Place the centre plate back onto the coin box (do not fit screws.)

10. Refit Track and Final Drive Gear

Refer to [Figure 10](#) and [Figure 11](#).

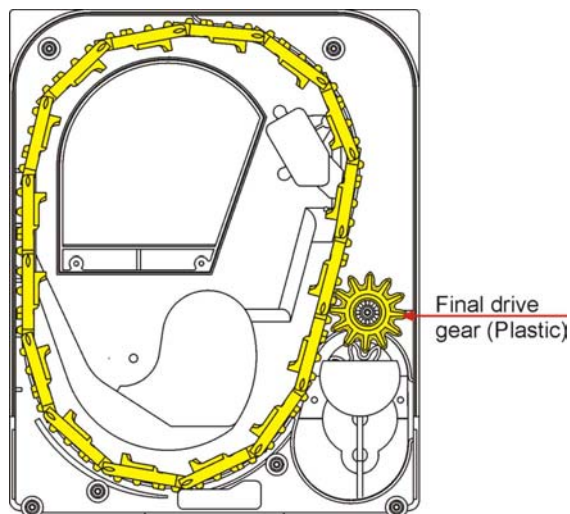
1. Refit the track as shown.
2. Ensure the track is free to rotate through 360°.

Figure 10: Elevator track positioning



3. Refit the Final Drive Gear as shown

Figure 11: Final drive gear position



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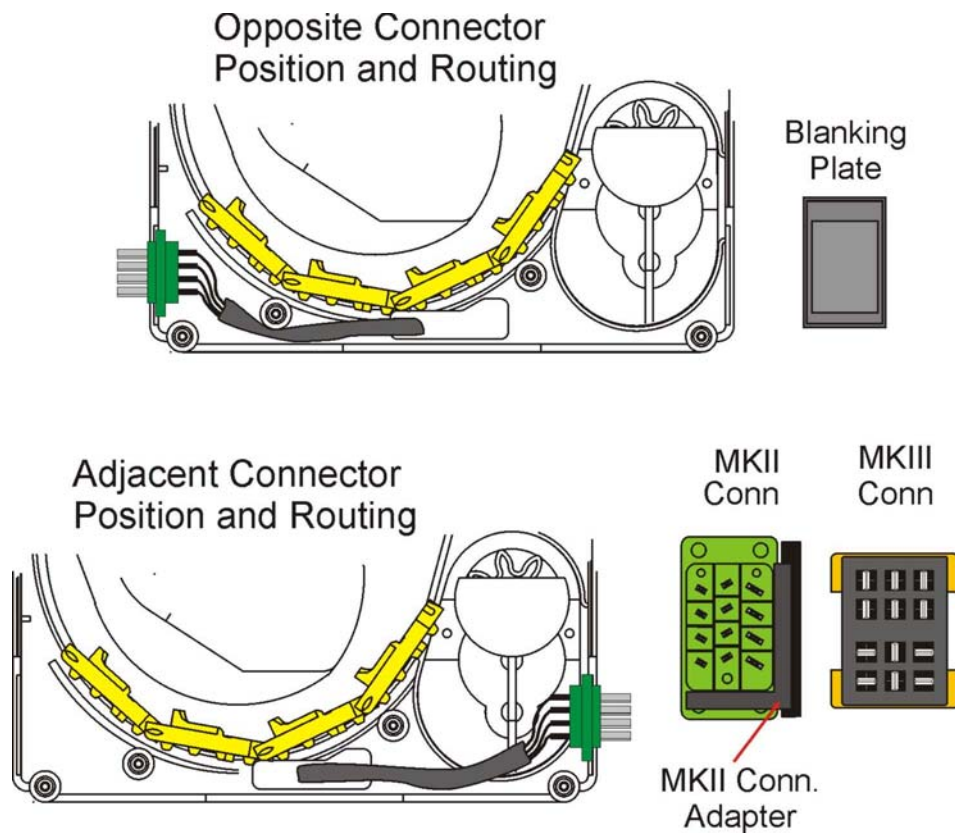
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11. Refit End Plate

Refer to [Figure 12](#) and [Figure 6](#).

1. Before fitting the end plate, ensure the loom is routed as shown below (connector position dependant).
2. Refit the end plate, ensuring the main connector and blanking piece are fitted in their original position and orientation and that the adapter plate (if fitted – MKII only) is also correct.
3. Ensure that the 2 pieces fit together correctly.
4. Refit the 9 screws – as shown in [Figure 6](#).

Figure 12: Main connector and loom positioning



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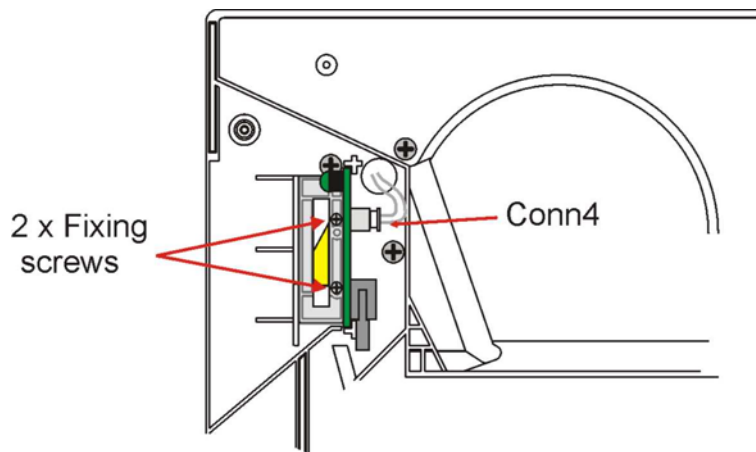
12. Refit Exit Window

Refer to [Figure 13](#).

1. Hold the light guide over the optics of the new PCB (PTH/291).
2. Slide the PCB onto the centre plate in the position shown.
3. Refit the 2 fixing screws.
4. Fit Conn4.

The exit window should now be secure.

Figure 13: Exit window position



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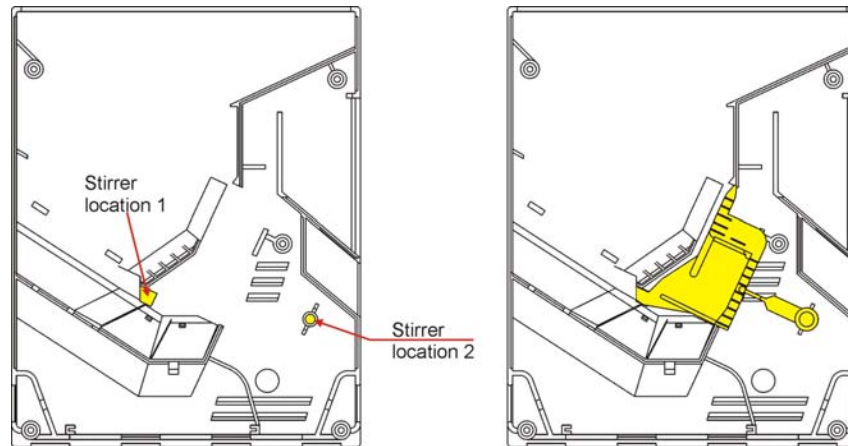
13. Re-assemble 'Stirrer'

Refer to [Figure 14](#).

1. Fit the 'stirrer' in the Coin Box as shown.

Note:- 'Stirrer' location 1 passes through the Cash Box.

Figure 14: 'Stirrer' position



14. Control Board Installation

Refer to [Figure 15](#).

1. Connect the 10 way IDC socket to the exit window, (Conn3).
2. Connect the 28 way crimp connector from the hopper to Conn2 of the Control Board.

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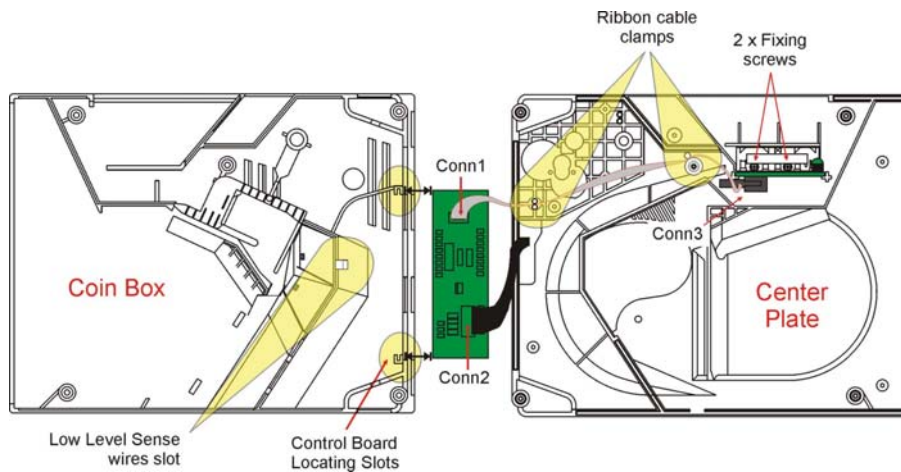
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15. Coin Box Assembly

Refer to [Figure 15](#).

1. Bring together the Centre Plate assembly and the Coin Box as shown.
2. Fit the 'Control Board' into the locating slots.
3. Route the ribbon cable in between the clamps as shown.
4. Push the wires as far as you can, out of the way, into the Coin Box.
5. Feed the level sense wires through the highlighted slot.

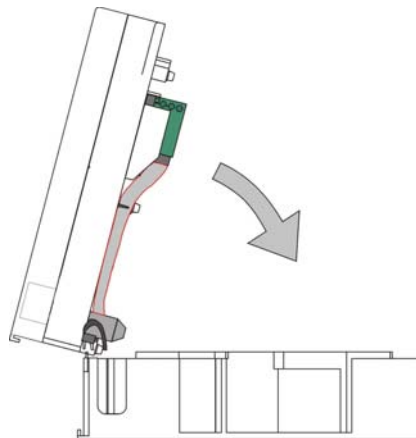
Figure 15: Coin Box Assembly (1)



Refer to [Figure 16](#).

6. Lift the 'Centre Plate' assembly to meet the 'Coin Box'.

Figure 16: Coin Box Assembly (2)



7. Align the 'centre plate' & 'coin box' & push together.
8. Turn the hopper over & refit the screws.
9. Refit the level sense wires.

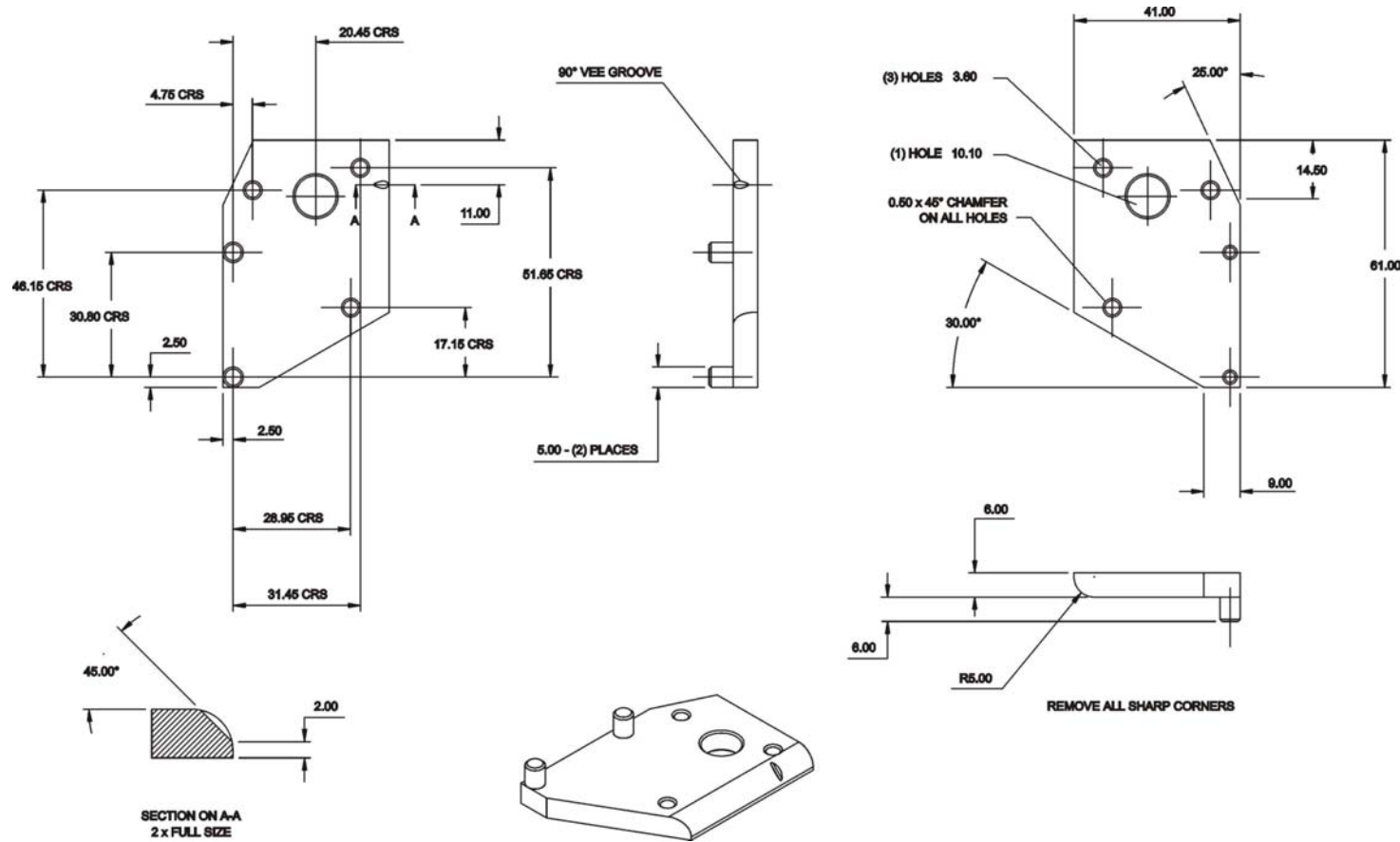
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16. Spill Proof Jig Dimensions

Figure 17: Spill Proof Jig Dimensions



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