



## RIVERS LOCKING SYSTEMS (AUSTRALIA) PTY LTD

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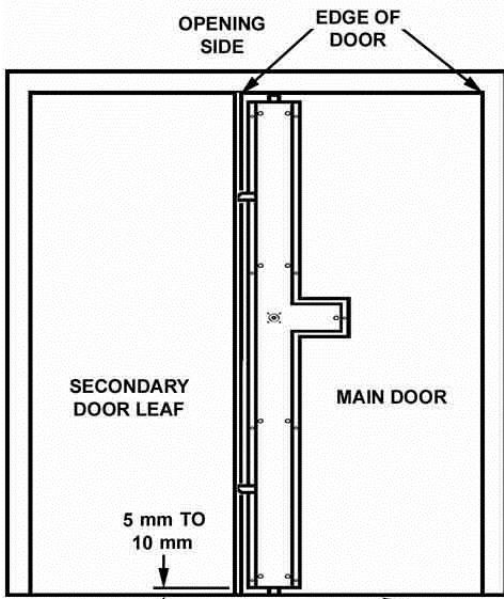
### RIVERS 410/420 SEMAPHORE LOCK - OPEN OUT DOOR

1. **Check contents of box against packing list to ensure all components have been supplied.**
2. **Remove cover from Lock Body.**
3. **Position Lock onto door so that bottom of Lock is 5-10mm up from the bottom of the door & such that the edge of the Lock Body is as close as is practical to the opening edge of the active door leaf. (Fig. 1 & 2) Fix Model 420 Lock to door using only three self-tapping screws or for Model 410 Lock (no Lock Cylinder required) use all self-tapping screws to fix Lock to door.**
4. **This step only applies to Model 420 Locks. Mark four Cylinder Shield holes & Cylinder centre using the Lock Backing Plate as a template. (Fig. 3)**
5. **This step only applies to Model 420 Locks. Remove Lock Body from door & drill four 10mm dia. holes through door, then counter bore each 15mm dia. x 25mm deep from the outside. (Fig. 4) Drill Lock Cylinder hole 32mm dia. (Fig. 5)**
6. **Mount Lock Body to door using self-tapping screws provided. Note: Model 410 Locks (no Lock Cylinder required) are already fully mounted with all self-tapping screws at this point (refer to step 3).**
7. **This step only applies to Model 420 Locks. Fit Cylinder Shield Assembly to door using screws provided. Fix through lock body. (Fig. 7)**
8. **This step only applies to Model 420 Locks. With the Locking Bars extended (i.e. locked position) & the key removed from the Cylinder, ensure that the Cam (that accepts the Cylinder Tail) is oriented such that the Cam Lobe points away from the back of the Cam Locking Bar. (Fig. 6 & 7). The door will need to be in the open position to do this. This step is critical for the Lock to function as intended.**
9. **With door closed, activate the Locking Bars so that they are touching at the head of the doorframe & on the flooring. Mark position of locking bars on frame & floor.**
10. **Drill a 12mm dia. hole in frame at either end of top Locking Bar position. Use a small cutting wheel to splice between the two holes, either side. This will create a slot in the frame to accept Locking Bar. If frame is concrete filled, drill out masonry to a depth so that Locking Bars will not 'bottom out' when fully extended. Use masonry drill to drill out floor to accept lower locking Bar. (Fig. 8, 9 & 10)**
11. **Clean edges of slots & ensure smooth action of Lock when locking/unlocking.**
12. **With the door leaves closed & Lock in the locked position, the third & fourth Locking Arms should be lying over the secondary door leaf. Position the Receiving Cups provided over these Locking Bars. Ensure that the arms swing freely in & out of the Cups. Fix through secondary door leaf with screws & nuts supplied. (Fig. 11)**
13. **This step only applies to Model 420 Locks. Fit outside Handle & Spindle to door using screws provided.**
14. **At this point check the operation of the Cam Locking Bar. Ensure when the outside Lever Handle is moved upwards to the horizontal position, the Cam Locking Bar falls freely into the cut out in the Inner Cam Plate. (Fig. 6) If this does not happen try adding a small washer under the Cam Plate. (Fig. 7)**
15. **Ensure correct Lock operation. Inside Handle must disengage Locking Bars at all times (for escape), while the outside Handle should not operate unless the Cylinder has been unlocked with the key.**
16. **Replace Lock Body Cover.**
17. **Ensure Lock operates smoothly & without resistance. Excessive force should not be required to activate lock. Inside Lever Handle must operate in a downward motion & allow escape at all times.**
18. **Apply Rivers self-adhesive label to lock body.**

***PLEASE NOTE: RIVERS RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE***

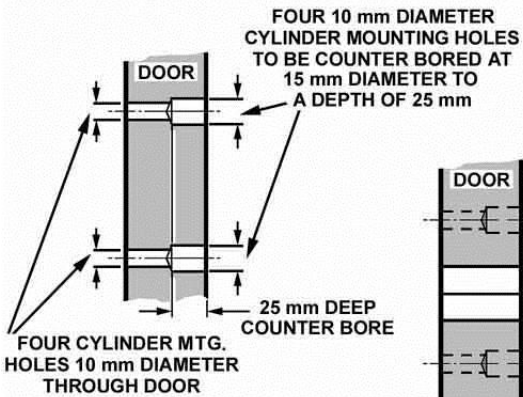
***RIVERS LOCKS SHOULD ONLY BE MOUNTED ONTO SOLID CORE DOORS***

# 410/420 SEMAPHORE LOCK-OPEN OUT DOOR



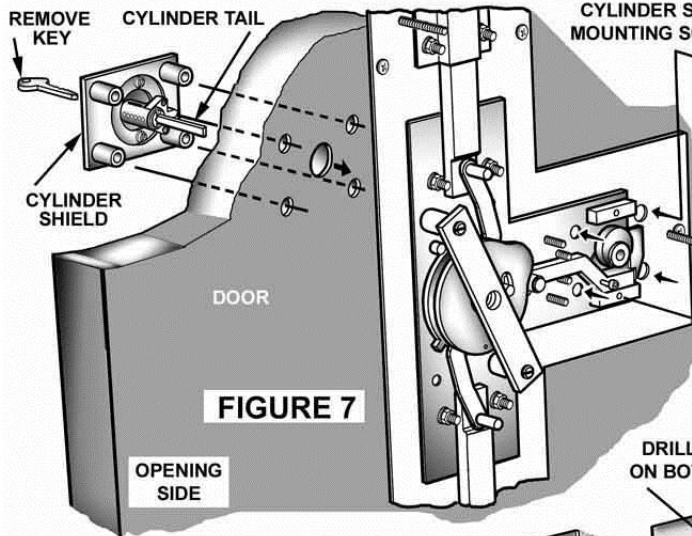
**FIGURE 1**

AS CLOSE AS IS PRACTICAL TO FLOOR LINE  
EDGE OF MAIN DOOR



**FIGURE 4**

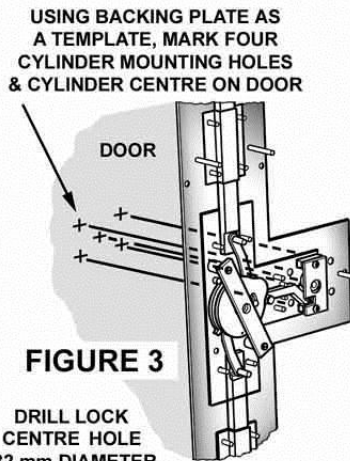
TYPICAL SECTION FOR FOUR CYLINDER MOUNTING HOLES



**FIGURE 7**

MARK CENTRE POINTS ON BOTH SIDES OF LOCKING BARS AT TOP & BOTTOM LANDING POINTS

**FIGURE 8**



**FIGURE 3**

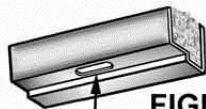
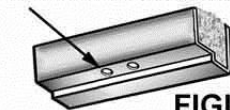
DRILL LOCK CENTRE HOLE 32 mm DIAMETER

**FIGURE 5**

DRILL 12 mm DIAMETER HOLES ON BOTH SIDES OF LOCKING BAR

**FIGURE 9**

CUT SLOT BY REMOVING MATERIAL BETWEEN 12 mm DIAMETER HOLES

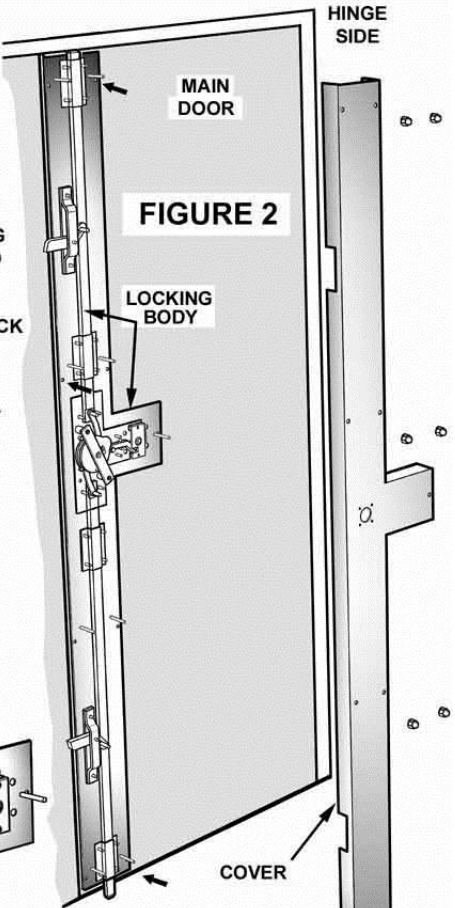


**FIGURE 10**

CUT SLOT BY REMOVING MATERIAL BETWEEN 12 mm DIAMETER HOLES

LOCKING BODY MOUNTS TO DOOR USING SELF-TAPPING SCREWS

WHEN CYLINDER MOUNTING HOLES ARE TO BE MARKED ONTO DOOR, USE ONLY 3 SELF-TAPPING SCREWS, TEMPORARILY, TO MOUNT LOCK TO DOOR OR, FOR LOCKS WITHOUT CYLINDERS, USE ALL SELF TAPPING SCREWS TO PERMANENTLY MOUNT LOCK TO DOOR

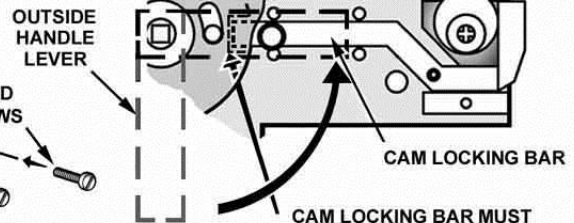


**FIGURE 2**

UNDO NUTS TO REMOVE COVER FROM LOCKING BODY

**FIGURE 6**

CAM LOBE TO POINT AWAY FROM FROM LOCKING BAR



CAM LOCKING BAR

CAM LOCKING BAR MUST DROP FREELY INTO CUT OUT IN THE INNER CAM PLATE WHEN HANDLE IS HORIZONTAL

CUP MOUNTING SCREWS QTY 4 PER CUP

NUTS QTY 4 PER CUP

KEEPER

LOCKING ARM

MOUNT KEEPER WITH FOUR SCREWS & NUTS THROUGH SECONDARY DOOR LEAF

**FIGURE 11**