

ANPR 743

Manually Operating Handthrow Electric Points

Applicability

NSW

SMS

Publication Requirement

External Only

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Introduction

If the *Network Control Officer* has given authority, handthrow electric *points* machines *may* be operated manually.

These points can be operated manually with a handthrow lever that is secured in the NORMAL position and released by either:

- an SL key
- or
- a key that is obtained from an Emergency Operation Lock (EOL) cabinet located near the points.

Some electric point *crossovers* are provided with split detection of points that allows for each end of the crossover to be detected separately within the interlocking.

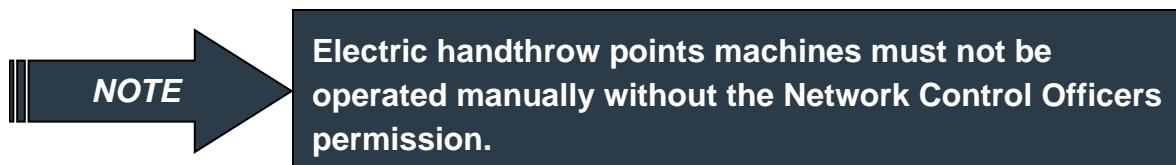
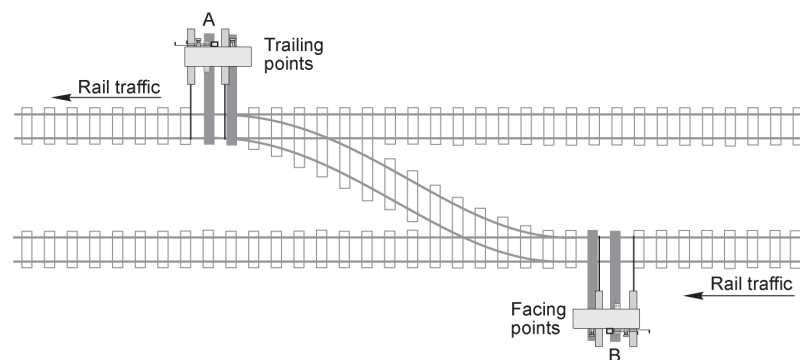


Figure ANPR 743-1



Crossover operated by two electric points machines, A and B

Handthrow points released by an SL lock

These points are fitted with a selector lever and handthrow lever to allow the points to be switched from motor mode to hand mode.

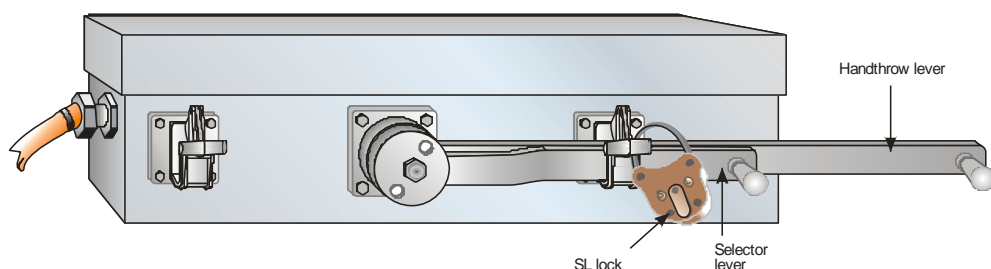
These points have:

- a short selector lever with MOTOR and HAND positions and
- a long handthrow lever with NORMAL and REVERSE positions.

When the points are in motor mode an SL lock secures:

- the selector lever in the MOTOR position and
- the handthrow lever in the NORMAL position.

Figure ANPR 743-2



Points machine with handthrow lever released by SL lock

Manually operating the points

Competent Worker



Operate points machines at crossovers in order from the trailing end to the facing end.

1. Undo and remove the SL lock securing the selector and handthrow levers.
2. Lift the catch holding the selector and handthrow levers.
3. Operate the selector lever from the MOTOR position to the HAND position.
4. Operate the handthrow lever to move the points to the required position.

5. Make sure that the switch rail is hard against the stock rail.
6. Keep the selector and handthrow levers in place with the catch. If they are not held by the catch when the switch rail is hard against the stock rail, tell the Network Control Officer.
7. Repeat steps 1 to 6 for all other point motors.
8. If necessary, clip and lock the facing points.
9. Check the position of the points at each points machine. Make sure that your changes set the correct *route*.

Returning to motor mode

Competent Worker

1. Lift the catch holding the selector and handthrow levers.
2. Operate:
 - the handthrow lever to the NORMAL position,
and
 - the selector lever to the MOTOR position.
3. Lower the catch holding the selector and handthrow levers.
4. Replace the SL lock.
5. Ask the Network Control Officer to test the points.
6. Confirm with the Network Control Officer that the points operate correctly.
7. If the points do not operate correctly, get instructions from the Network Control Officer.

Handthrow points released by an EOL key

These points are fitted with a selector lever and handthrow lever to allow the points to be switched from motor mode to hand mode.

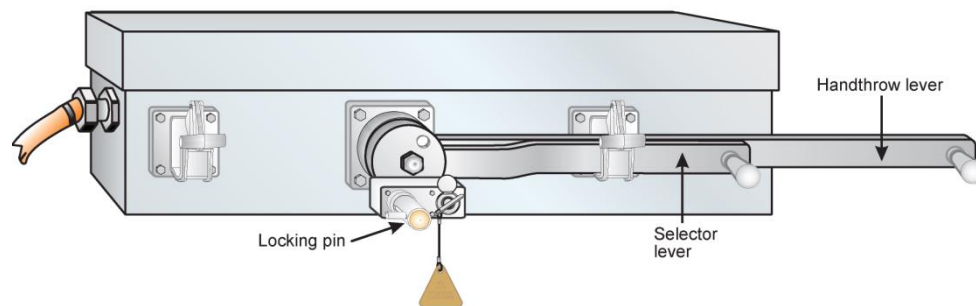
These points machines have:

- a short selector lever with MOTOR and HAND positions and
- a long handthrow lever with NORMAL and REVERSE positions.

When the points are in motor mode a locking pin or padlock released by an EOL key secures:

- the selector lever in the MOTOR position and
- the handthrow lever in the NORMAL position.

Figure ANPR 743-3



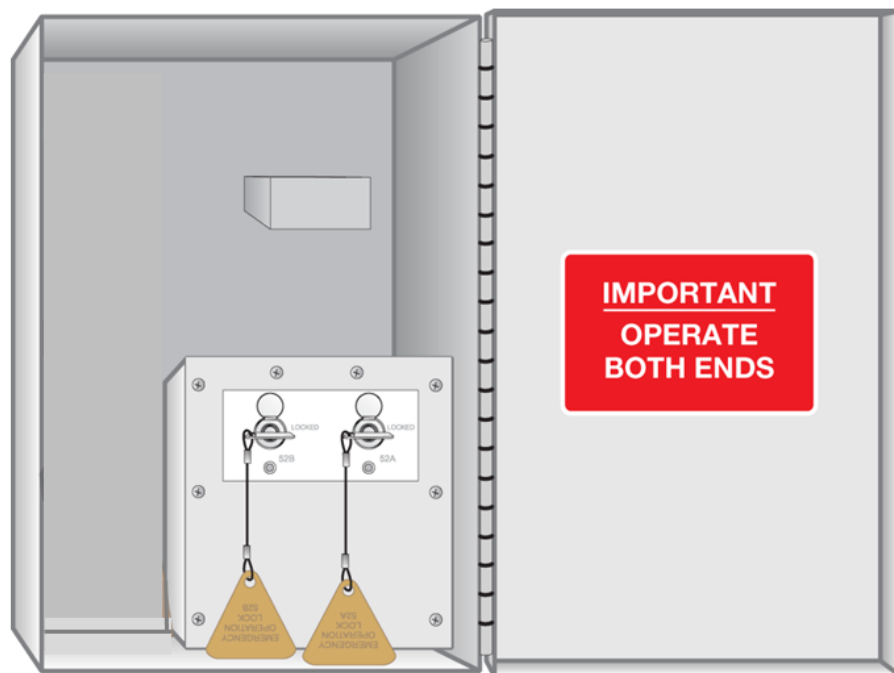
Points machine with handthrow lever released with an EOL key

Manually operating the points

Competent Worker

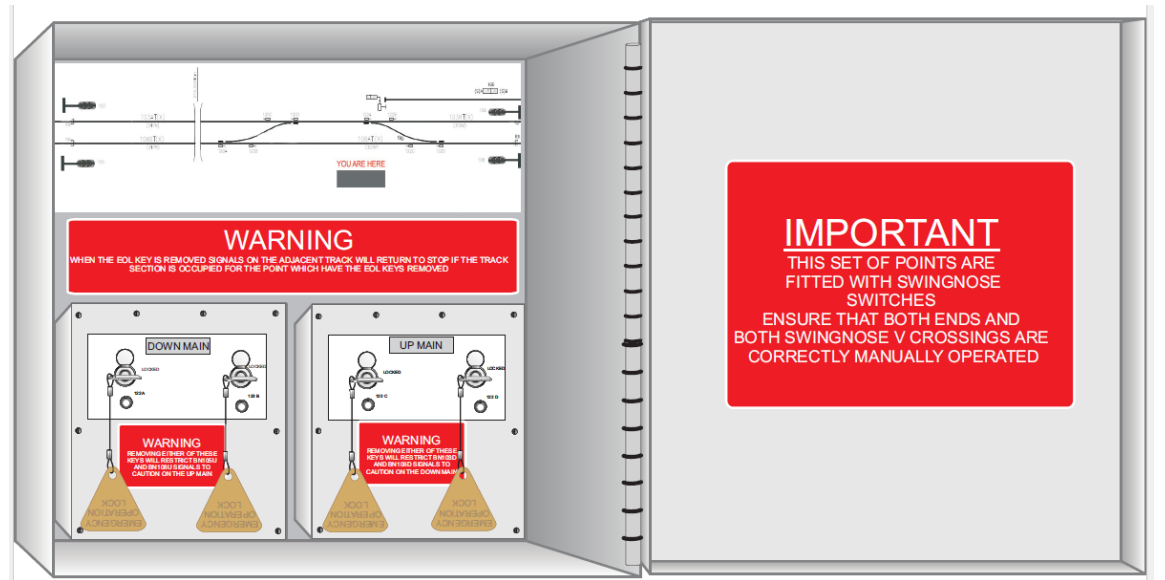
1. Find the correct EOL cabinet for the points.
2. Unlock the cabinet with an SL key.

Figure ANPR 743-4



EOL cabinet with keys for two handthrow electric points machines

Figure ANPR 743-5



EOL cabinet where split detection of points is provided, with keys for four handthrow electric points machines

3. If there are instructions in the cabinet to help you to operate the points, read and follow them.
4. Check the key labels to make sure they are the correct keys.
5. Turn the EOL keys from LOCKED to UNLOCKED. Take the keys from the cabinet. Removing the keys sets the protecting signals at STOP.



Operate points machines at crossovers in order from the trailing end to the facing end.



Where split detection of points is provided, removal of the EOL keys sets the protecting signals at STOP on the affected track and restricts the signal on the adjacent track to a Caution indication.



Where split detection of points is provided, if the track circuit over the points for which the EOL key has been removed, is occupied or failed, the signal on the adjacent track will be placed to STOP.

6. Turn the EOL key in the EOL lock on the points machine. The lock captures the key.
7. Pull out the locking pin or remove the padlock to allow the selector and handthrow levers to be moved.
8. If the points machine has an SL lock, unlock it. Lift the catch holding the selector and handthrow levers.
9. Operate the selector lever from the MOTOR position to the HAND position. Keep the lever in place with the catch.
10. Operate the handthrow lever to move the points to the required position.
11. Make sure that the switch rail is hard against the stock rail.
12. Keep the selector and handthrow levers in place with the catch. If they are not held by the catch when the switch rail is hard against the stock rail, tell the Network Control Officer.
13. Repeat steps 6 to 12 for all other point motors.
14. If necessary, clip and lock the facing points.
15. Check the position of the points at each points machine. Make sure that your changes set the correct route.
16. Get instructions from the Network Control Officer.

Returning to motor mode

Competent Worker

1. Lift the catch holding the selector and handthrow levers.
2. Operate:
 - the handthrow lever to the NORMAL position
and
 - the selector lever to the MOTOR position.



You may have to repeat the handthrow lever movement to make points detection work.

3. Push in the locking pin or lock the padlock.
4. Remove the EOL key.
5. Lower the catch holding the selector and handthrow levers.
6. Replace the SL lock if provided.
7. Return the EOL keys to the correct cabinet.
8. Turn the EOL keys in the cabinet from the UNLOCKED position to the LOCKED position and lock the cabinet.
9. Ask the Network Control Officer to test the points.
10. Confirm with the Network Control Officer that the points operate correctly.
11. If the points do not operate correctly, get instructions from the Network Control Officer.

Vossloh Cogifer points released by an EOL key

These points are fitted with a selector lever and handthrow lever to allow the points to be switched from motor mode to hand mode.

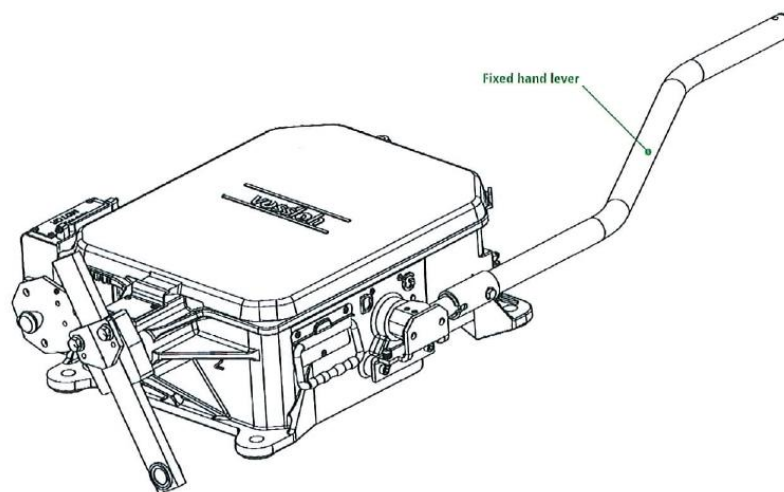
Vossloh Cogifer points machines have:

- a selector switch with MOTOR and HAND positions and
- a long handthrow lever with NORMAL and REVERSE positions.

When the points are in motor mode a locking pin or padlock released by an EOL key secures the selector switch in the MOTOR position.

When the points are in motor mode an SL lock secures the handthrow lever in either the NORMAL or REVERSE position.

Figure ANPR 743-6



Vossloh Cogifer points machine

Manually operating the points

Competent Worker

1. Find the correct EOL cabinet for the points.
2. Unlock the cabinet with an SL key.
3. If there are instructions in the cabinet to help you to operate the points, read and follow them.
4. Check the key labels to make sure they are the correct keys.
5. Turn the EOL keys from LOCKED to UNLOCKED. Take the keys from the cabinet. Removing the keys sets the protecting signals at STOP.



Operate points machines at crossovers in order from the trailing end to the facing end.

6. Turn the EOL key in the EOL lock on the points machine. The lock captures the key.
7. Pull out the locking pin or remove the padlock to allow the MOTOR / HAND selector to be moved.
8. Move the selector up from the MOTOR position to the HAND position.
9. Unlock and remove the SL lock from the handthrow lever.
10. Move the handthrow lever to move the points to the required position.
11. Make sure that the switch rail is hard against the stock rail. If it is not held against the stock rail, tell the Network Control Officer.
12. Repeat steps 6 to 11 for all other point motors.
13. If necessary, clip and lock the facing points.
14. Check the position of the points at each points machine. Make sure that your changes set the correct route.
15. Get instructions from the Network Control Officer.



Depending on the position of the points, the lever may need to be switched to the opposite side to engage the clutch to operate the points manually.

Returning to motor mode

Competent Worker

1. Replace the SL lock on the handthrow lever.
2. Operate the selector down from the HAND position to the MOTOR position (automatic) mode.
3. Push in the locking pin or lock the padlock.
4. Remove the EOL keys.
5. If necessary, replace the SL lock.
6. Return the EOL keys to the correct cabinet.
7. Turn the EOL keys in the cabinet from UNLOCKED position to the LOCKED position and lock the cabinet.
8. Ask the Network Control Officer to test the points.
9. Confirm with the Network Control Officer that the points operate correctly.
10. If the points do not operate correctly, get instructions from the Network Control Officer.

Nippon points machines released by an SL key

These points are fitted with a safety cutout latch to allow the points to be switched from motor mode to hand mode.

The safety cutout latch:

- engages the manual operating handle, and
- breaks the motor drive circuit.

Manually operating the points

Competent Worker

1. Undo and remove the SL lock securing the safety cutout latch.
2. Turn the safety cutout latch to vertical.
3. Turn the manual operating handle a full turn until the stop is reached. You may first have to 'feel' the operating handle into place to engage the gearing correctly.



Operate points machines at crossovers in order from the trailing end to the facing end.

4. Make sure that the switch rail is hard against the stock rail.
5. Repeat steps 1 to 4 for all other point motors.
6. If necessary, clip and lock the facing points.
7. Check the position of the points at each points machine. Make sure that your changes set the correct route.
8. Get instructions from the Network Control Officer.

Returning to motor mode

Competent Worker

1. Turn the safety cutout latch to horizontal.
2. Replace the SL lock.
3. Ask the Network Control Officer to test the points.
4. Confirm with the Network Control Officer that the points operate correctly.
5. If the points do not operate correctly, get instructions from the Network Control Officer.

Related ARTC Network Procedures

ANPR 703	Working using absolute signal blocking
ANPR 707	Clipping points
ANPR 711	Lookouts
ANPR 721	Spoken and written communication
ANPR 740	Responding to faulty points

Effective Date

30 August 2020