



नाम

Name : _____

अनुक्रमांक

Roll No : _____

पाठ्यक्रम

Course : _____

दिनांक

Date : _____

प्राप्तांक

Marks Awarded : _____

अनुदेशक के आदयक्षर

Instructor Initial : _____

ADJUSTMENT OF FACING POINT LOCK AND LOCK BAR

A lock bar is an angle iron 12810mm. (42') long, connected in series with the FPL plunger. A lock bar ensures that a point cannot be unlocked as long as a vehicle is standing over the point. The roding transmission from the lock bar lever in the cabin terminates at the 300mm. (12") arm of the adjustable crank. From the adjusting sleeve of this crank, lock bar operating rod (throw rod) is connected to a lock bar crank provided inside the track. This crank is fitted on a sleeper and the sleeper itself is prevented from moving by anchoring it to the rails on either side by means of tie strap. A bar driving rod connects this horizontal lock bar crank to the far end of the lock bar. From the rear end of the lock bar, another bar driving rod is connected to either a radial guide or a rocker shaft. A lock plunger-driving rod connects the radial guide or rocker shaft to the FPL plunger. The lock bar is supported and worked off lock bar clips connected to its at intervals. Lock bar stops are also provided to limit the depth of the lock bar below rail level.

To adjust the lock bar and FPL , the following procedure may be adopted:

1. Measure the stroke reaching the 300mm. (12") arm of the adjustable crank, say 'X'.
2. The stroke required to operate the lock bar being 200mm. (12") and the fixed arm of adj. crank being 300mm. (12"), the length of adjustable arm, say 'Y' can be calculated thus:

$$Y = \frac{12 \times 8}{X} \quad \text{or} \quad Y = \frac{12 \times 200}{X}$$

X

X

3. The lock bar lever is kept in mid-position (the Adj. Arm in the Adj. Crank should be parallel to track), the lock bar is kept in mid-position (i.e., the lock bar is more or less in level with the rail and all clips are vertical), and the required length of the throw rod is connected from the adjusting sleeve of the crank to the lock bar horizontal crank (i.e., the crank located inside the track).
4. The lock bar lever is operated from 'N' to 'R' and vice-versa. It should be ensured that the lock bar is resting on its stops in 'N' as well as 'R' position.
5. If it rests, in one position, but not in the other, the stroke can be balanced by means of the point adjusting screw provided in the lock bar throw rod. If the lock bar does not rest, on its stops in both positions, or if it forcibly rests on stops in both positions making latching of the

lever difficult, the stroke should be increased or decreased respectively by lengthening or shortening the length of the adjustable crank arm.

6. Keep the lock bar lever in 'N' position. Place the FPL plunger such that its end is 12mm. ($\frac{1}{2}$ ") away from the nearest split lock stretcher. Connect up the required length of the plunger-driving rod, from the plunger to the rocker shaft or radial guide.
7. Operate the lock bar from 'N' to 'R' and ensure that the plunger locks the points correctly in both 'N' and 'R' positions.

NOTE: When the plunger enters the notches in the split lock stretchers, the clearance on either side of the plunger should be equal. This will not only ensure minimum frictions, but will also prevent the point from failing the obstructing test. The edges of the plunger and notches should be square ended and not rounded off. This will prevent the plunger from forcing its way into the notches in case the point is gaping by a small amount. The facing point lock should be securely fixed to the sleepers by means of its holding down bolts, to prevent the FPL from shifting laterally and causing a failure. The FPL used for a point may be either with or without a cross-slide. The FPL with the cross slide is the one standardised to Drawing No.SA.3297, while that without a cross slide is to Drawing No.SA.3291/M.

OBSTRUCTION TEST:

Place a 3mm. ($\frac{1}{8}$ ") obstruction test piece at 150mm. (6") from the toe of switch between closed switch and stock rail. Operate the lock bar lever and observe that:

- i) The FPL plunger gets obstructed by the split lock stretcher.
- ii) The lock bar lever cannot be latched in 'R' position.

At the unit detector, pull the relevant signal slide and ensure that it gets obstructed by the closed switch point slide.

1. Measure the stroke at lever tail.
2. Measure the stroke reaching at the 300mm. (12") arm of adjustable crank.
3. Operate the rodding alone and see how the lever works.
4. Loss of stroke in transmission and reasons for loss of stroke.
5. Note what size of crank is used to connect the lock bar driving rod.
6. The stroke reaching the (12") 300mm. arm of adjustable crank being _____ the sleeve will be required to be set at _____ to operate the lock bar.
7. Note how many lock bar clips are used to fix the lock bar.
8. State the lock plunger driving arrangement.
9. State how the sleepers on which cranks and other gadgets are fixed are held securely.
10. Operate the lock bar by a tommy bar to mid-position and check regarding –
 - a) Level of lock bar.
 - b) Alignment of links.

11. Operate the lock bar to normal and reverse by tommy bar and note the depth of the lock bar below rail level.
12. Is the lock bar resting on stops in normal & reverse positions?
13. How many stops have been provided?
14. Stroke of lock bar when it is moved from normal to reverse or reverse to normal.
15. Is the movement of links obstructed by any sleepers?
16. Is the lock bar obstructed by any dog spike or other P.Way fixtures?
17. Does the lock bar lean away from the rail.

18. State the procedure you adopted for connecting lock bar to lever.

19. State the procedure you adopted for connecting lock plunger to lock bar.

20. What type of facing point lock is fitted (SA:3297 or SA:3291/M).
21. Size of lock plunger.
22. Size of notches in split lock stretcher bar.
23. Whether the clearance on either side of plunger is equal.
24. Whether holding down bolts of facing point lock are fully tightened.
25. Whether edges of notches or lock plunger are rounded off.

26. How the obstruction tests were carried out?

Date;

Signature of trainee

FORM NO S&T/DN Para No. 11.41 FORM NO S&T/DN RAILWAY Signal & Telecommunication Department <u>Disconnection Notice</u>	FORM NO S&T/DN RAILWAY Signal & Telecommunication Department <u>Reconnection Notice</u>	FORM NO S&T/DN RAILWAY Signal & Telecommunication Department <u>Acknowledgement of Disconnection Notice</u>
<p>No Notice to Trans mission Staff for disconnecting Signalling Gear Division/District at The Station Master or Cabinman on duty at Station/Cabin Please refer to the following Gear will be disconnected on at hrs.</p> <p>Date Signature Designation</p>	<p>No Notice for reconnecting Signalling Gear already Disconnected Division/District To The Station Master or Cabinman on duty at Station/Cabin Please refer to the disconnected gear referred to in Notice No. has since been reconnected on at hrs.</p> <p>Date Signature Designation</p>	<p>No To The Station Master or Cabinman on duty at Station/Cabin For disconnecting the following gear * on at hrs. MSM/MSM/ES/E(Sig) Notice about disconnection received at hrs. on 20 SM/Cabinman Disconnection allowed/not allowed at hrs. on 20 SM/Cabinman Disconnection will be allowed at hrs. on 20 SM/Cabinman Reconnected at hrs. on 20 MSM/MSM/ES/E(Sig) Notice about reconnecting received at hrs. on 20 SM/Cabinman</p>

* Fill in details of Gear to be disconnected, ** Reasons for not allowing disconnection to be recorded