

<b>Work Instruction</b>		<b>WO No.</b>	
		<b>Date:</b>	
<b>Scope:</b>			
<b>Team Leader:</b>		<b>Plunger Lock Type:</b> Signal Branch EP	
<b>Activity:</b> Plunger Lock Assembly Like for Like Renewal (incorporating plunger lock contact box)			
<b>Reference:</b> PR S 40010, PR S 40011			
<b>Activity No.</b>	<b>Task No.</b>	<b>Work Description</b>	<b>Completed Name/Sign</b>
<b>APPARATUS INSPECTION &amp; PREPARATION</b>			
1	1A	Ensure the new plunger lock is of correct type and configuration in accordance with the specific design and compare to the existing plunger lock.	
2	2A	Confirm the Normal position of points.	
	2B	On the existing plunger lock, wire/null count the incoming terminals, including bridges and links and identify tail cable core numbers on the terminals and compare to specific circuit diagram.	
	2C	Document the disconnections on attached circuit diagram.	
	2D	Conduct an apparatus inspection of the condition of the existing plunger lock fixing arrangements, rodding and associated mechanical equipment. Prepare to replace as required.	
<b>SAFeworking &amp; DISCONNECTION FROM INTERLOCKING</b>			
3	3A	Ensure affected signalling apparatus is booked out of use in accordance with PR S 40008. Obtain authorisation for any temporary bridging in accordance with PR S 40002 as necessary.	
	3B	Disconnect the affected signalling apparatus and clip & lock points in accordance with PR S 40009 Disconnection of Signalling Apparatus.	
	3C	If applicable, apply temporary bridging in accordance with PR S 40002. Test bridging and any contacts remaining in circuit as functional.	
<b>DISCONNECTION, REMOVAL AND INSTALLATION</b>			
4	4A	Open links in location for plunger lock tail cable and turn-off air supply valve to the plunger lock (points air supply).	
	4B	Disconnect cable and air line in plunger lock, protect ends and withdraw clear.	
	4C	Remove plunger lock assembly and renew any defective fixing material, rodding, etc.	
5	5A	Install new plunger lock assembly. Lubricate as required.	
6	6A	Inspect the tail cable and air line for signs of damage. Conduct an insulation test of the tail cable and record on circuit diagram.	
	6B	Connect the cable in accordance with previously correlated circuit diagram. Ensure wiring is clear of moving parts. Connect the air line to the plunger lock and reopen the air valve.	
	6C	Ensure the installation is physically correct. Ensure all bolts and nuts are appropriately fastened. Ensure no air leaks.	
<b>APPARATUS ADJUSTMENT</b>			
7	7A	Adjust the plunger so it passes through the facing point lock notch in the stretcher bar and withdraws clear of the stretcher bar correctly and that the connection to the indication box is correct.  Adjust the plunger lock so it engages in the facing point lock plunger to the full depth of the notch and is located in the centre of the notch for both Normal and Reverse. Ensure full movement of plunger lock motor and lock dog.	
	7B	Adjust the plunger lock Normal contacts to be open until the lock is engaged in the notch by at least 2 mm.  Adjust the Reverse contacts to be open until the lock is clear of the plunger by 1mm.	

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<b>CERTIFICATION</b>			
8	8A	Wire count all terminals with incoming tail cable installation to circuit diagram ( <b>NB:</b> links to be counted as wire). Record on circuit diagram.	
9	9A	Close all associated terminal links in location and remove any temporary bridging (if applicable).	
10	10A	Conduct a Points Correspondence Test Normal - Operate points to the Normal position and open each contact in the Normal detection circuit in turn and ensure Normal detection is lost and restored. Remove and replace EOL (if applicable) and ensure Normal detection is lost and restored. Each contact# tested during the correspondence test shall be observed to “open” when the points are operated to the Reverse position. ( <i>#denotes not required for encapsulated contacts which are back-proved in the opposite position.</i> )	
	10B	Conduct a Points Correspondence Test Reverse - Operate the points to the Reverse position and open each contact in the Reverse detection circuit in turn and ensure Reverse detection is lost and restored. Remove and replace EOL (if applicable) and ensure Reverse detection is lost and restored. Each contact# tested during the correspondence test shall be observed to “open” when the points are operated to the Normal position. ( <i>#denotes not required for encapsulated contacts which are back-proved in the opposite position.</i> )	
	10C	Conduct an Out of Correspondence test of the following combinations and ensure no detection. <b>Note:</b> The following combinations only apply for an existing double-ended layout. A Signal Engineer shall be consulted if the layout consists of more than two ends.	
Out of correspondence test for existing double-ended layout	Operate points to Normal (both ends Normal)		
	A end hold Normal	Operate points lever Reverse	B end Reverse
	B end hold Reverse	Operate points lever Normal (ensure NWR is energised)	A end Normal
	Operate points to Reverse (both ends Reverse)		
	A end hold Reverse	Operate points lever Normal	B end Normal
	B end hold Normal	Operate points lever Reverse (ensure RWR is energised)	A end Reverse
11	11A	Certify the Facing Point Lock and Detection Normal & Reverse.	
12	12A	Arrange for the signaller to check the operation of the points, signals and indications associated with the apparatus. Ensure the plunger lock is secure.	
	12B	Complete the return and applicable point history card.	
	12C	Book affected signalling apparatus back into use.	
<p>I certify _____ points at _____                      location have been inspected and tested and are fit for service.</p> <p>_____</p> <p>Print Name _____ Position _____</p> <p>_____</p> <p>Signature _____ Date _____</p>			