Track Work Instruction 2P014

How to use sidearms and rollers

Introduction

This Track Work Instruction covers how to use sidearms and rollers.

See also separate instructions:

TWI 2P015 How to carry out stressing

CWR on rollers and supported with sidearms

Competence

You must be competent to carry out this work.
See TWI 2G086 - Competence requirements.

Risks

If you are releasing the fastenings of CWR on a curve, then you **must** use the correct sidearms. If you don't, then it is likely that the rail will jump out of its housings. If this happens then bystanders could be seriously injured .

Tools and Equipment

Side support arm rollers - the type you need will depend on the type of track fastening.
Rollers
Panpullers - or other specific tool for removing and replacing the rail fastenings.
Pad scrapers
Panlifters for Pandrol track
Bars
Jacks
Shovels
Forks
Bags/sacks for scrap removal

Track Work Instruction 2P014

How to use sidearms and rollers

Materials and Spares

Spare pads, insulators and fastenings to replace any that are lost or damaged.

A roller - there are several patterns available.

Method

When you are stressing track you must use rollers to support the rail in order to allow the rail to move lengthways.

When you are stressing curved track you must also use side support arms in order to stop the rail moving sideways.

Before you start

Make sure you have the correct side support arms. There are many types of sidearms depending on the type of track fastenings involved. Check for types available.

There are several patterns of roller for use under the rail.

Make sure that you have the correct number of rollers and sidearms - check before you go to site.

Check that all the rollers and sidearms are in good condition. Do not use any that are rusted solid or are bent or broken.

Check the site to see if you need to move any ballast in order to insert the rollers and/or side support arms.

A sidearm for Pandrol track. Make sure you have the correct type

Placing the Side support arms and rollers

Lay out your rollers and side support arms (if they are needed) throughout the site at the required spacing.

Where side support arms are required, remove the rail fastenings **from those sleepers only**.

Insert the side support arms on the inside of the curve.

Note! Only remove the intermediate rail fastenings (the ones between the side support arms) **after** the side support arms are in place.

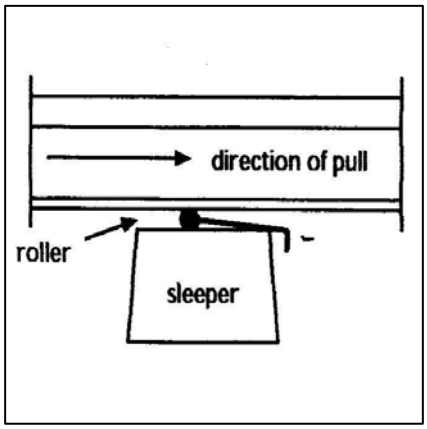
Note! When you are unclipping the rail, make sure that you set aside the fastenings and insulators carefully – looking for these afterwards, in the dark, can seriously delay completing the work.

Lift the rail and remove the pads.

Track Work Instruction 2P014

How to use sidearms and rollers

Method continued



Note! Take care that everyone is aware of the commands and instructions during this operation. It is easy to trap fingers if anyone is not paying attention when the rail is lowered!

Work through the site jacking up the rail just enough to place rollers on the sleepers (at least one roller every 12 sleepers).

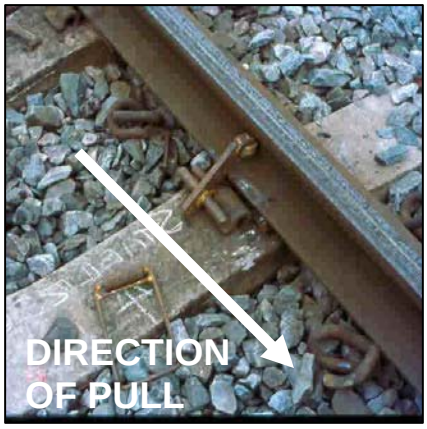
The roller handle must point towards the direction the rail will be pulled i.e. **towards the tensors! See diagram.**

If you are stressing both rails on a line and inserting rollers to both rails at the same time, then they should be **staggered** i.e. with only one roller per sleeper.

Note!

Don't put a sidearm and a roller on the same sleeper.

Don't put two sidearms on the same sleeper.



Note! The side support arm on Pandrol fastenings must be inserted on the opposite side to the pulling point i.e. on the farthest side from the tensors; so that the movement of the rail does not pull it out of the housing.

When jacking rail out of baseplated sleepers, make sure that the sleepers do not lift and that the rail is actually free to move.

Re-fastening the rails

Wait until instructed to commence re-fastening the track.

Remove the rollers.

Replace (or renew if necessary) all the pads.

Replace (or renew if necessary) all the insulators.

Before removing the side support arms, replace the fastenings in between. This is to ensure that the rail does not 'jump' out of its seating.

Remove the side support arms, replace or renew the insulators and then replace the fastening.

Site Clearance

Bag up any scrap track fittings.

Track Work Instruction 2P014

How to use sidearms and rollers

Method continued

Collect and count in all rollers and side support arms.

Collect all tools.

Before you leave the site

Walk right through the site and make sure that all pads and insulators have been replaced and that the track has been completely and correctly fastened down.

Problem solving

What if the rail comes out of its seating on curved track?

Make sure the rail tensors are released and there is no pull being applied to the rail.

Depending on the length of rail, it may be necessary to make an extra cut in the rail to allow the rail to be barred back in to the seating.

To bar the rail back in to its seating, start at the fixed end and work towards the pulling point. Ensure sufficient side support arms are inserted as you proceed – fit extras if needed!

What if, having cut in to the rail and the rail fastenings have been, or are being removed, the rail jumps out of its seating?

This indicates that the original rail was fastened down at a temperature above the normal stress free temperature.

The rail is releasing compressive forces i.e. there is ‘too much’ rail.

In this case, splay the rails and once the movement has finished, cut off the excess rail ready for re-stressing. Then bar the rail back in to its seating.

What do you do if the fastenings are obsolete (e.g. BJB) and no side support arms are available.

Seek advice. Do not improvise a solution.