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## Flangers

Sacramento Division Snow Service

Southern Pacific Transportation Company

## This Guide

This guide is intended for use by enginemen and trainmen who are unfamiliar with snow service operations on the Sacramento Division, and for use by experienced enginemen and trainmen as a ready reference.

## Preparation

While you will not be the only ones fighting the storm, at times it will certainly feel that way. You should be able to rely on yourself and your equipment as the only resource. A thorough examination of your equipment is called for before departing Roseville. It may be hours or days before additional supplies or any repairs can be afforded once you are under way.

## When to Flange

Drop the blade and begin flanging as soon as snow depth warrants. Raise the blade at the obstruction flags which may indicate switches, motor car setoffs, road crossings or other obstructions which may foul a lowered blade. Raise the blade in tunnels and sheds to avoid breaking the blade on any ice that has built up between the rails.

Raise the blade also when necessary to change direction of throw as controlled by the employee riding in the flanger. Do not lower the blade again after changing the direction of throw until the employee in the flanger reports that he is clear of the blade mechanism and ready for you to commence flanging. Be certain you are acting on his okay and not some other radio transmission.

Should the breakaway blade become detached from the flanger, locate and recover the blade if possible. Especially search any switches and/or crossovers in which the blade may have become lodged to eliminate hazard to other trains or equipment using the track.

## Direction to Throw Snow

Normally snow is thrown away from the mountain side of the track to the river side.

## Eastward Direction of Movement

Alta to Emigrant Gap Balloon  
Emigrant Gap Balloon to Switch 9

Throw right  
Throw right

Switch 9 to Soda Springs crossing	Throw left
Soda Springs crossing to *Tunnel (including siding)	Throw right
*Tunnel to Highway 89 South overcrossing	Throw left
Highway 89 South overcrossing to Truckee	Throw right

#### Westward Direction of Movement

Truckee to Highway 89 South overcrossing	Throw left
Highway 89 South overcrossing to *Tunnel	Throw right
*Tunnel to Soda Springs crossing (including siding)	Throw left
Soda Springs crossing to Switch 9	Throw right
Switch 9 to Emigrant Gap Balloon	Throw left
Emigrant Gap Balloon to Alta	Throw left

\*Tunnel 6 on No. 1 Track; Tunnel 41 on No. 2 Track

#### Direction Around Balloon Tracks

With the engineer sitting on the right side of the engine, a clockwise move around the balloon tracks allows him to have a less obstructed view out of his window. Govern speed around the balloon tracks as they are neither patrolled as the main tracks are, nor are they in as good a condition. The two truck crossings on the Truckee Balloon are especially soggy and should be taken at a crawl.

#### Back-up Movements

Extreme care must be taken whenever you want to back-up in a flanger. If you think of the flanger's blade as a straight-edge razor, in the forward movement it slices of a couple inches of snow. But in a reverse movement the blade rides up and over the snow. It doesn't take much snow and a reverse movement to raise the flanger right off the rail. So, (1) never place yourself in a situation where you may have to back-up, and (2) never store your equipment "headed-in" during storm or possible storm conditions. Either of these precautions may prevent a lot of digging out.

#### Flanger Equipment Checklist

##### Outside Equipment Locker

- 12-tapered bolts
- 12-bolts
- 12-spikes
- 1-E50 knuckle
- 4-blades: 1 each RB, RF, LB, LF

##### Inside Equipment Locker

- 2-hammers
- 1-impact wrench
- 1-spare cable
- 2-rolls masking tape
- 2-adjustable wrenches
  - miscellaneous spare bulbs
- 2-wrenches, open end with tapered handle
- 1-drop light (plug compatible with outlet)
- 1-case fusees
- 2-red flags
- 24-tie wraps
  - paper towels
  - paper cups

#### Inside Flanger

- 2-switch brooms
- 1-spare MU cable
- 1-pinch bar
- 1-spike maul
- 1-fire extinguisher
- 1-stretcher
- 2-snow shovels
- 1-spike puller
- 1-rail bolt wrench
- 1-pick
  - paper towels
  - paper cups
  - drinking water
  - bonding wire
  - drop cloth
  - first aid kit, stocked
  - flagging equipment holder, stocked

#### Pre-departure Checklist

Outbound: WD-40 locks and doors; supply masking tape, tie wraps, drop cloth, impact wrench; check inventory; inspect blades and chains.

With Engine Attached: Check lights, radio, blade control. Check impact wrench by tightening bolts on breakaway blades. Have ice-breaker raised and in place.

#### Sacramento Division Snow Service Miles

Eastward (No. 2 Track)

Roseville-Truckee	99.0
Roseville-Norden	84.4
Roseville-Emigrant Gap	64.2
Colfax-Truckee	63.9
Colfax-Norden	49.3
Gold Run-Truckee	53.3
Gold Run-Emigrant Gap	18.5
Emigrant Gap-Norden	20.2
Emigrant Gap-Truckee	34.8
Norden-Truckee	14.6
Truckee-Floriston	14.4
Truckee-Sparks	38.2

Westward (No. 1 Track)

Truckee-Roseville	101.0
Norden-Roseville	84.8
Emigrant Gap-Roseville	64.6
Truckee-Colfax	65.3
Norden-Colfax	49.4
Truckee-Gold Run	54.8
Emigrant Gap-Gold Run	18.6
Norden-Emigrant Gap	20.3
Truckee-Emigrant Gap	36.2
Truckee-Norden	15.9
Floriston-Truckee	14.3
Sparks-Truckee	37.9

Sidings

Gold Run-East	1.19
Gold Run-West	.88
Truckee Balloon Track	1.20
Emigrant Gap around balloon to Emigrant Gap	5.64