



TRANZALPINE SPLIT BANKER PROCESS

JOB AID

Version 7

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803 PROCESS ARTHUR'S PASS

1.	The Banker locomotives must be at Arthur's Pass and set up as follows before the arrival of 803:
a.	Two Uphill Banker Locomotives standing in the East back-shunt.

DOWNHILL PROCESS – 803 LEAD LOCOMOTIVES

1.	803 to pull into the Arthur's Pass Platform:
a.	Train Manager to "call down" 803 for placement of the AKS/AKL
b.	If required due to length of train - 803 on receipt of a proceed Indication on 4LA and 4LE will pull forward past 4LA and stop under the direction of the Train Manager
c.	The Christchurch LE when 803 has been berthed at Arthur's Pass platform will: • Inform the Train Manager that brakes have been applied. • Assist the Banker LE with the CABA gear. • Advise the Banker LE the passenger count.
d.	The Christchurch LE must remain on the platform and perform a "roll by" as 803 departs.

UPHILL BANKER PROCESS – 803 TRAIL LOCOMOTIVES

1.	Uphill Bankers to proceed from east back-shunt and stop short of 803.
a.	Uphill Banker LE must be in the leading cab in direction of travel.
2.	After Train Manager confirms the passenger car doors are closed (passengers have re- boarded)
a.	Uphill Bankers to be attached to the rear of 803 and brake setup procedure as follows: i. Uphill banker locomotive • Automatic brake placed in handle off position and cut out, MU2A set to Lead/Dead and Independent released. ii. The banker locomotive attached to the passenger car. • Automatic brake placed in handle off position and cut out, MU2A set to trail 26 and Independent Brake handle to release position. • Rail Operator must not drop taps on Banker Locomotive until the Uphill Banker LE confirms the MU2A of the Uphill Banker is in Lead/Dead.
b.	Rail Operator and Uphill Banker LE to confirm brakes operational on rear passenger vehicle and uphill banker locomotives. i. Rail Operator requests brakes blown down (below 100 kPa) ii. Brakes applied and confirmed as applied. iii. Brakes released and confirmed as released. iv. Rail Operator to confirm brakes operational on last passenger vehicle. v. Banker LE to confirm brakes operational on both uphill locomotives. vi. Rail Operator confirms brake test complete and confirms last vehicle number. vii. All staff board the train through the AKC side door.
3.	After confirmation of Train “Right of Way” given from the Train Manager, 803 to proceed to Otira.
a.	Once the roll-by has been completed the Train Manager is to confirm with 803 Banker LE that the emergency brake override function has been activated and all crew members are going to channel 7 before entering tunnel.
b.	On transiting through the Otira tunnel the following apply: i. Maximum speed 30 km/h. ii. Maximum Dynamic Brake setting N4. iii. Maintaining Braking releasing speed 20 km/h. iv. Serial braking should Dynamic fail releasing speed 15 km/h.
4.	Location of drivers (NOTE this applies to both 803 and 804):
a.	Banker LE drives the train through the tunnel
b.	Two Banker LEs or Banker LE/Rail Operator transit through the tunnel in the AKC closest to the trailing banker locomotives.
c.	Both Banker LEs or Banker LE/Rail Operator go to ground in the event of an incident and must go to the trail locomotive to don CABA.

5.	On arrival at Otira
a.	Stop short of 4L signal.
b.	Apply independent brake fully. i. Immediately move the Automatic Train Brake handle to the full-service position. ii. Advise TM that brakes have been applied. iii. CABA gear placed in rear locomotive of 803. iv. Banker LE to remain down the west end until 803 departs and perform a roll-by.
c.	Uphill banker's cut-off 803 with assistance from the Rail Operator and move to east back-shunt
d.	803 brake test applied to rear vehicle. i. Train Manager requests brakes blown down (below 100 kPa) ii. Brakes applied and confirmed as applied. iii. Brakes released and confirmed as released. iv. Train Manager to confirm brake test completed and last vehicle number.

804 PROCESS OTIRA

1.	Banker locomotives set up as follows before the arrival of 804.
a.	One Downhill Banker locomotive standing in the west back-shunt.
2.	804 to be called onto the platform by Train Manager.
a.	Channel 1 is to be used for communication.
b.	Apply Independent brake fully.
c.	Position Automatic brake to a 70 kPa reduction
d.	Positions: i. Banker LE to move to Lead Uphill train locomotive. ii. Rail Operator to be at the rear of the train.
3.	If required due to length – 804 on receipt of a proceed indication on 8RA will pull forward past 8RA and stop under the direction of the Train Manager to clear 4L in the rear for the Downhill bankers to obtain a light from the west back-shunt.
a.	LE of 804 to get a proceed indication on 8RA and 8RL signal.
b.	Train Manager to “call down” 804 to clear 4L signal.
c.	The same process and brake set up as in instruction No.2 above will apply.
d.	The Greymouth LE must advise the Banker LE: • The passenger count. • Confirm Train Control has been advised of the count.
e.	The Greymouth LE must remain on the platform at Otira and perform a roll-by as 804 departs.
f.	Once the roll-by has been completed the Train Manager is to confirm with 804 Banker LE that the emergency brake override function has been activated and all crew members are going to channel 7 before entering the tunnel.
4.	Downhill banker to proceed from west back-shunt and stop short of 804.
a.	Downhill Banker to be attached to the rear of 804 and brake setup procedure as follows: i. Downhill locomotive: • Automatic brake placed in handle off position and cut out, • MU2A set to Lead/Dead and Independent released. ii. The banker locomotive attached directly to the passenger car. • Automatic brake placed in handle off position and cut out, • MU2A set to trail 26 and independent brake handle placed in released position. • Rail Operator must not drop taps on Banker Locomotive until Banker LE confirms the MU2A of the Downhill Banker is in Lead/Dead. Banker LE 804 (in uphill train locomotive) must confirm that the Rail Operator and Banker LE are clear at the rear before beginning the blow down and brake test.

b.	Rail Operator and Downhill Banker LE to confirm brakes operational on rear passenger vehicle and Downhill banker locomotives. i. Rail Operator requests brakes blown down (below 100 KPa) ii. Brakes applied and confirmed as applied. iii. Brakes released and confirmed as released. iv. Rail Operator to confirm brakes operational on last passenger vehicle. v. Banker LE to confirm brakes operational on downhill locomotive. vi. Rail Operator confirms brake test complete and confirms last vehicle number. vii. All staff board the train through the AKC side door.
5.	After confirmation of Train “Right of Way” given from the Train Manager, 804 to proceed to Arthur’s Pass.
6.	On arrival in Arthur’s Pass
a.	Stop on the river main under the direction of the Train Manager for placement of the AKS/AKL cars.
b.	Apply independent brake fully.
7.	Uphill locomotives
a.	804 LE to move to 804 lead locomotive. i. Banker LE must perform a roll-by when 804 departs Arthur’s Pass
b.	After Train Manager confirms the passenger car doors are closed (passengers re- boarded) i. Rail Operator will cut Downhill banker locomotives off.
c.	804 brake test applied to rear vehicle. i. Train Manager requests brakes blown down (below 100 KPa) ii. Brakes applied and confirmed as applied. iii. Brakes released and confirmed as released. iv. Train Manager to confirm brake test complete and last vehicle number. After the departure of 804 the bankers will recouple if there are bankers in the yard, or the single downhill banker locomotive can proceed back to Otira.
NOTE: Once the consist for 803 and 804 to depart Otira and Arthur’s Pass is complete (i.e., all locomotives are attached or detached) then a full blow down must be completed to ensure the brake system is set up correctly and the brake system is balanced through the train.	

BRAKING RESTRICTIONS – 804 BERTHING ARTHUR’S PASS

1.	Stopping using air brake only with No Bankers on the head
a.	Exit tunnel at 20 km/h and maintain until the East end of bridge 49.
b.	Reduce throttle to notch 1 and when both train engines are off the bridge make a minimum reduction of the automatic brake and bleed off the independent.
c.	Any further brake applications the independent must not be bled off.
d.	Regulate speed by increasing or decreasing brake applications and if necessary to advance the throttle, notch 2 is the maximum.
e.	Stop at East end of the platform and place the automatic brake into full service.
f.	Advise Train Manager that the brakes are on and they may then release the doors.

1.	When due to 804 locomotive failure, bankers are required on the head
a.	Exit the tunnel at 20 km/h and maintain that until reaching the East end of bridge 49.
b.	Throttle must be reduced to idle.
c.	Wait 10 seconds and place the Dynamic brake in set up. • Speed will drop slightly but increase once most of the train is off the bridge
d.	Use Dynamic brake to slow the train as needed and stop at the East end of the platform using a combination of Dynamic, Independent and Automatic brakes.
e.	Automatic brake to full service once stopped.
f.	Advise Train Manager that the brakes are on, and they may then release the doors.
Keeping the speed at 20 km/h or below will let the carriages and Downhill Bankers come in behind the Uphill engines smoothly. This method could also be used when Bankers are not on the head of the train.	

LOCOMOTIVE ENGINEER DUTIES

803 Arthur's Pass	
Banker LE	• Must be at Arthur's Pass for the arrival of 803 • Responsible for setting up locomotive brakes in lead operation and conducting Motive Power Unit and Intermediate brake tests (and full blow down after uphill banker locomotives have been attached to rear of 803)
Christchurch LE	• To remain in 803 lead locomotive until 803 has been pulled up to the platform for passenger egress. • Must assist with the train brake test upon coupling bankers. • Must pass the train work order on to the Banker LE and advise the Banker LE: ○ The passenger count ○ Confirm Train Control has been advised of the count.

803 Otira	
Greymouth LE	• Move to 803 lead locomotive • Responsible for conducting intermediate brake test and blow down.
Banker LE	• Must complete roll-by at Otira.

804 Otira	
Banker LE	• MUST be at Otira for the arrival of 804. • Responsible for setting up locomotive brakes in lead operation and conducting Motive Power Unit and Intermediate brake tests (including blow down after downhill bankers have been attached to the rear of the train) • Banker LE will change over with Greymouth LE at Otira.
Greymouth LE	• To crew change with Banker LE • Must pass the train work order on to the Banker LE and advise the Banker LE: ○ The passenger count. ○ Confirm Train Control has been advised of the count.

804 Arthur's Pass	
Christchurch LE	• Move to 804 Lead locomotive • Responsible for conducting Intermediate brake test and full blow down. • Assist with uncoupling the uphill banker. • Once the Bankers are uncoupled, the LE must confirm with the Train Manager that brakes are applied and that the doors can be opened.

BANKER LOCOMOTIVE ENGINEER DUTIES

803 Arthur's Pass	
Banker locomotives must be at Arthur's Pass and set up in their respective locations (one in east back-shunt before the arrival of 803.	
Banker LE No.2	- To drive Uphill banker locomotives to stop short rear of 803. - Responsible for setting up locomotives to run trail operation. - Responsible for conducting brake test on both uphill locomotives.
Rail Operator	To assist with brake test on uphill locomotive.

803 Otira	
Banker LE No.1	Responsible for performing a roll-by as 803 departs Otira
Banker LE No.2	- To move to uphill banker locomotive. - Responsible for setting up brake to lead operation. - Responsible for driving locomotive out short from 803.
Rail Operator	Is responsible for uncoupling Uphill banker locomotives.

804 Otira	
Banker locomotives must be at their respective locations (one in the west back-shunt) before the arrival of 804.	
Rail Operator	- To pilot bankers on to 804 - Responsible for coupling up locomotives, coupling up brake pipes and connect jumper cable. - Responsible for conducting independent brake test on locomotives.
Banker LE No.1	- To drive 804 train locomotives - Responsible for conducting brake test on both downhill locomotives with Rail Operator.
Banker LE No.2	- To drive downhill locomotive from west back-shunt to stop short of rear of 804. - Responsible for setting up locomotive brakes for trail operation. - Responsible for conducting brake test on both downhill locomotives.

804 Arthur's Pass	
Banker LE No.1	• Responsible for driving the Uphill Banker into the East Back Shunt after uncoupling. • Responsible for performing a roll-by on 804 as it departs Arthur's Pass
Banker LE No.2	• To move to downhill banker locomotive. ○ Responsible for setting brakes for lead operation. ○ Responsible for driving banker locomotives out short from rear of 804.
Rail Operator	• Is responsible for uncoupling Downhill banker locomotive.

NOTE: Banker Locomotive Engineers and Rail Operators trained in CABA are responsible for going to ground in the event of an incident in the tunnel

TRAIN MANAGER DUTIES

803 Arthur's Pass	
Train Manager	Is responsible for: • Communicate to Rail Operator when safe to shunt. • Once doors are closed gives ROW to 803 Locomotive Engineer • To confirm with 803 Banker LE that the emergency brake override function has been activated before entering tunnel (if communication with the Banker LE cannot be made on channel 1, Channel 4 is to be used.)

803 Otira	
Train Manager	To move to rear of train and is responsible for: • Conducting Intermediate brake test after confirmation from 803 Locomotive Engineer that the blow down has been completed and confirming brakes operational on last passenger vehicle and confirming last vehicle number.

804 Otira	
Train Manager	To move to rear of train and is responsible for: • Calling train to a stop • Communicate to Rail Operator when safe to shunt. • Once doors are closed gives ROW to 804 Locomotive Engineer • To confirm with 804 Banker LE that the emergency brake override function has been activated before entering tunnel.

804 Arthur's Pass	
Train Manager	To move to rear of train and is responsible for: • Conducting Intermediate brake test after confirmation from 804 Locomotive Engineer that the blow down has been completed, and • Confirming brakes operational on last vehicle and confirming last vehicle number.