Midnight Express

Assemble a snowy departure platform and a locomotive with a hand-cranked picture window. Twenty pictures in the window tell one story: a present falls off Santa's sleigh, crosses the snowy forest, rides the train to a village and is opened under the tree on Christmas Eve.



In the box

Check the parts on the next two pages. Keep the picture flaps in order and set the numbered loading stand aside for step 1.

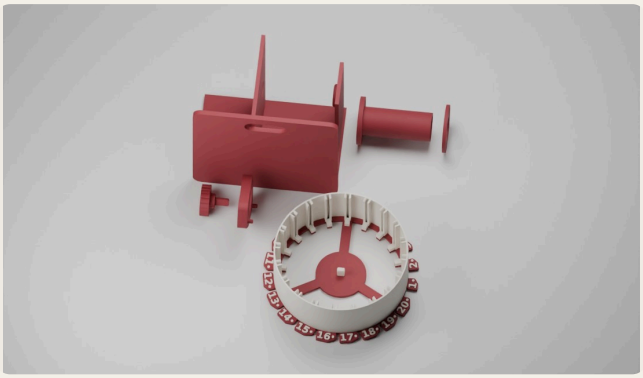
Tool you'll need

A 2.5 mm hex key for the boiler and handwheel screws.

BEFORE YOU BUILD

What is in the box

61 pieces, including the loading stand, plus 8 metal fasteners. The parts are shown at different scales to help you identify them.



Picture mechanism · 6

Chassis, spool A, spool B, ratchet axle, pawl bracket and numbered loading stand.



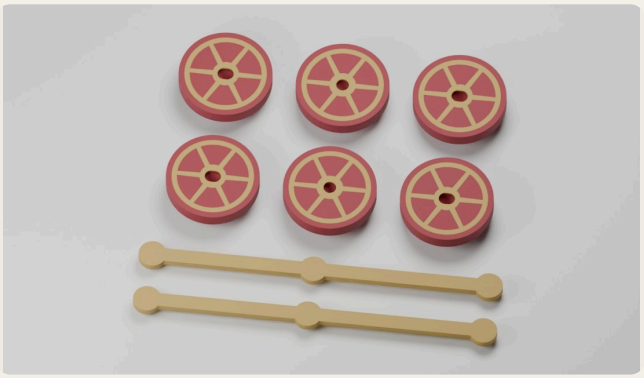
Picture flaps · 20

Twenty two-sided picture flaps, packed in loading order. See the final page for the sequence.



Locomotive body · 9

Deck, cab, roof, roof snow cap, boiler, smokebox, headlamp, chimney and cowcatcher.

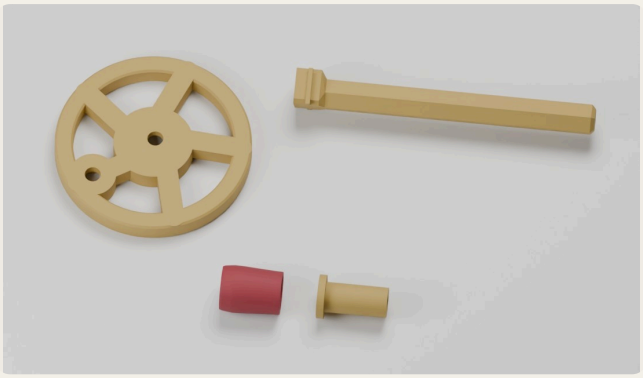


Wheels and rods · 8

Six wheels and two gold connecting rods.

BEFORE YOU BUILD

Handwheel, station and fasteners



Handwheel · 4

Spoked wheel, keyed shaft, rotating grip and flanged bushing.



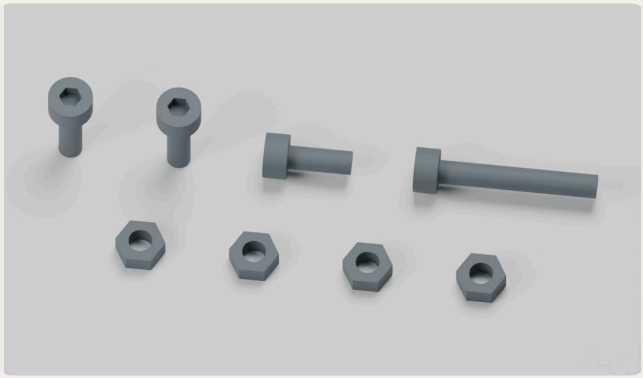
Station base · 3

Snow base, track and platform.



Station details · 11

North Pole sign, railway signal, lantern, bench, trolley, suitcase, two parcels, lower trunk, upper trunk and mail sack.

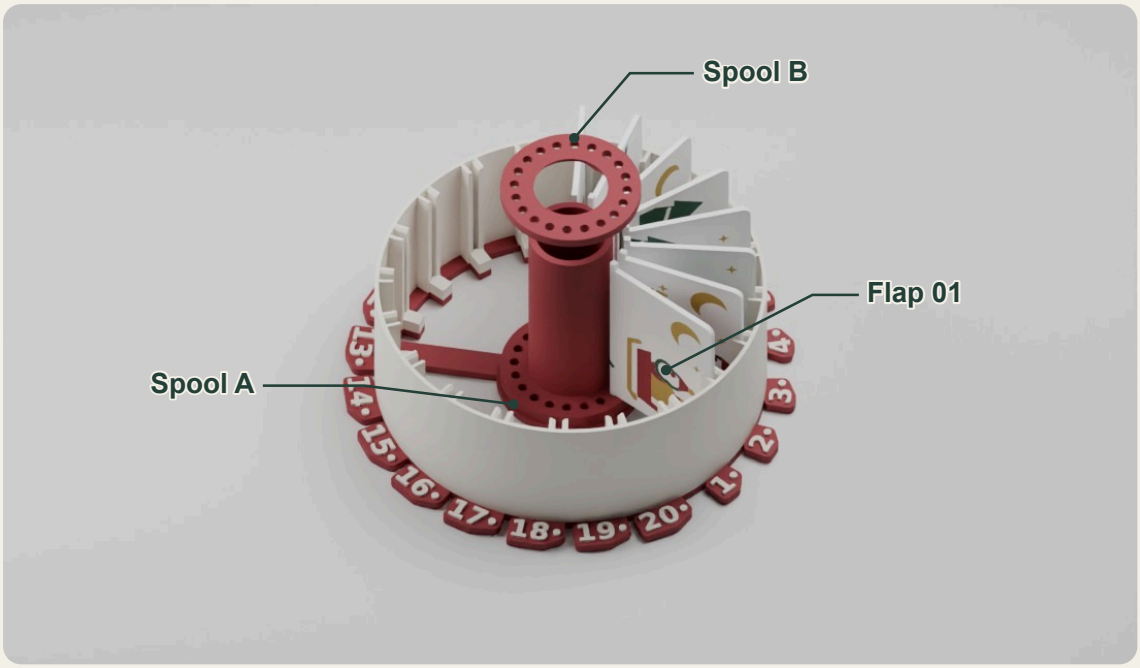


Fasteners · 8

Two M3 × 10 mm screws for the boiler. One M3 × 8 mm and one M3 × 20 mm screw for the handwheel. Four M3 full hex nuts.

BUILD

Assemble



Spool A sits on the keyed pin inside the numbered ring. Spool B comes down over the upper tabs. Eight flaps are shown so the open grooves remain visible.

1

Load the twenty flaps

Place spool A disc-down over the loading stand’s keyed pin.

Use the order on the final page to identify the flaps. Drop flap 01 into the groove just right of the raised 1, with the Santa sets off picture (Santa's sleigh over the rooftops) facing the 1 and its lower tab in spool A. Repeat for flaps 02–20.

Align the flats and lower spool B over the tube, lip up. Its funnelled holes guide all twenty upper tabs into place. Press until the lip stops on the end of the tube, then lift the drum off the stand.

Check Each flap should swing freely between the discs.

MECHANISM

Assemble the chassis



Approach from the open side. The far disc, B, goes onto the round stub before A lines up with the divider.

2

Seat the drum

Tilt the loaded drum into the chassis from its open side, spool B end first.

Slide B’s tube over the round stub on the far wall. The wall can flex slightly as the drum seats.

Align spool A with the large round hole in the divider wall.

Check Turn the drum by hand. The tabs should stay seated as the flaps fall.



The axle (left) passes through the pawl bracket (middle) into spool A. The bracket’s pegs locate in the divider.

3

Fit the axle and pawl

Push the keyed axle into the pawl bracket, turning it until the teeth slip past the pawl.

Align the D-shaped axle tip with spool A. Feed it through the divider’s large hole into spool A, then press the bracket’s two pegs into the two small divider holes.

Check The bracket sits flat. The axle clicks forward as the top of the drum moves toward the picture window.

Build the running gear



The chassis slides into the open back of the detached cab.

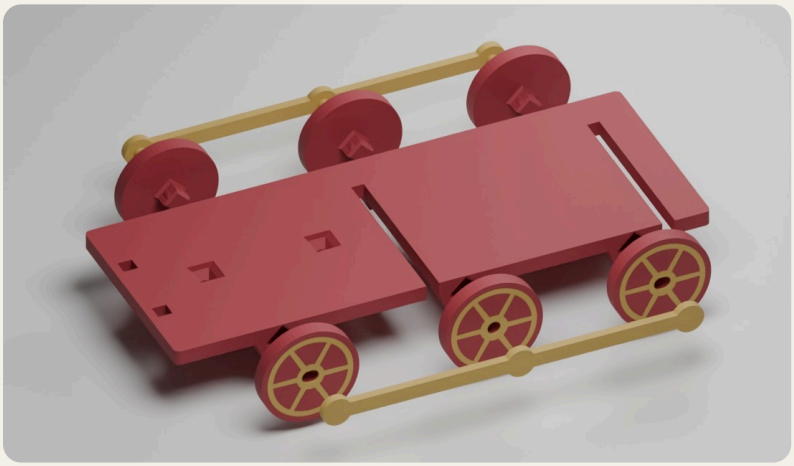
4

Slide the chassis into the cab

Keep the cab off the locomotive deck. Slide the complete chassis into the open back of the cab, with the flaps facing the picture window.

Press it past the retaining ridge in the cab floor.

Check The pictures sit behind the window. The finger slot stays accessible from the open back.



Seat the wheels in the deck sockets before fitting the gold rods. The diamond pegs hold the wheels in a fixed position.

5

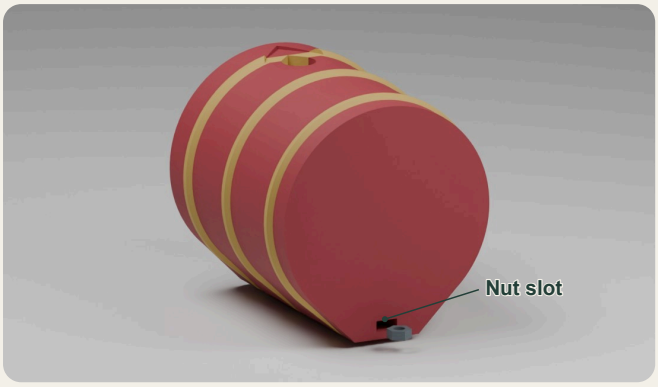
Fit the wheels and rods

Line up each diamond peg with its deck socket. Support the deck near the socket and press the wheel straight in with your thumbs. If it binds, pull it out and check alignment before trying again.

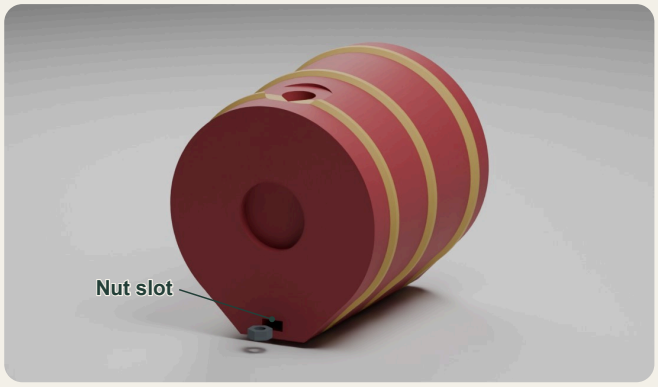
Once all six wheels are fully seated, line up each gold rod with its three hubs. Seat the middle peg first, then guide the outer pegs in. Stop if the rod bows or needs force.

Check Each wheel sits square to the deck and each rod lies flat across three hubs.

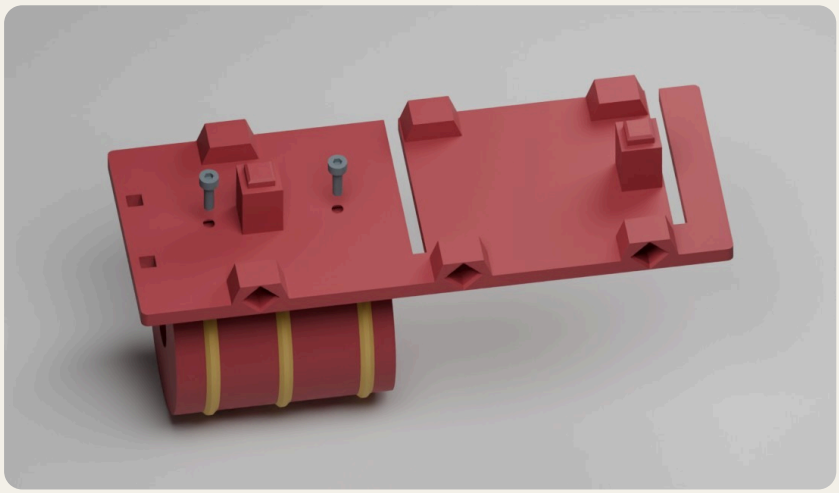
Attach the boiler to the deck



Rear nut channel at the cab end.



Front nut channel at the smokebox end.



Underside view. Both screws pass through the deck into the nuts.

6

Fasten the boiler

Slide one M3 nut along the flat floor of the rectangular slot at each end of the boiler. Push each nut to the stop so its hole lines up with the screw hole.

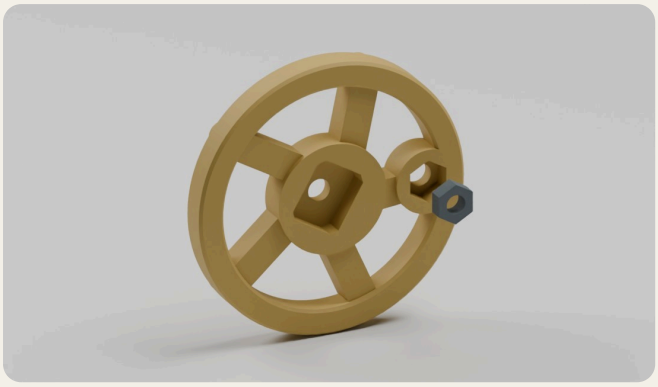
Lower the boiler onto the deck so its locating keys drop into their recesses. Rest the deck level on two blocks, with both screw holes accessible from below.

Start both M3 screws from below by hand, then tighten them gently with the hex key until the boiler sits flush.

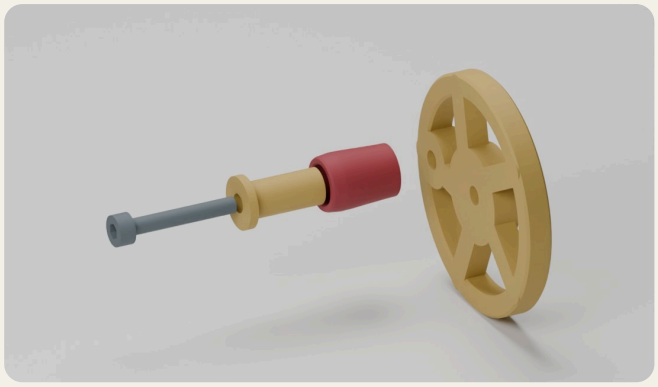
Check The boiler sits flat and both screw heads rest against the underside of the deck.

PICTURE MECHANISM

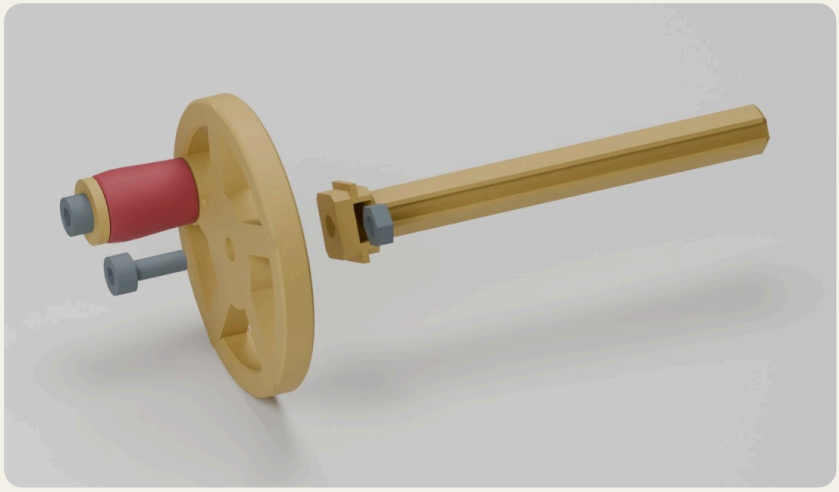
Assemble the handwheel



Rear view of the wheel. The grip nut enters the pocket behind the grip mount.



Front view. The M3 × 20 mm screw passes through the flanged bushing in the grip.



The nut drops into the shaft slot. The M3 × 8 mm screw holds the wheel on the keyed shaft.

7

Fasten the grip and wheel

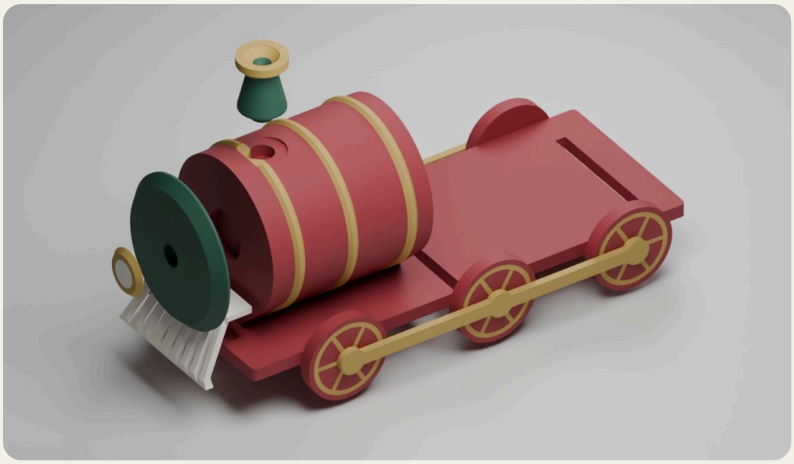
Seat an M3 nut in the pocket on the back of the spoked wheel, behind the off-centre grip mount.

Slide the bushing through the grip, leaving its wide flange at the outer end. Bring the grip and bushing to the wheel, pass the M3 × 20 mm screw through the bushing and gently snug it with the hex key. The screw head should sit against the bushing flange.

Hold the shaft with its open nut slot facing up and drop in the second M3 nut. Seat the wheel’s rear socket on the shaft key, then gently snug the M3 × 8 mm screw through the hub.

Check The grip spins freely after the screw is snug. If it binds, remove the grip screw and check that the flange faces outward and the bushing sits flat against the wheel. Reassemble and check again.

Finish the locomotive



The smokebox and lamp approach from the front. The chimney and cowcatcher lower into their matching seats.

8

Fit the front details

Support the boiler near its nose. Push the smokebox straight into the round opening until its rim meets the boiler. Press the headlamp by its gold rim until it sits against the smokebox.

Hold the chimney near its base and lower it into the opening on top of the boiler. Press until its base meets the seat.

Line up both cowcatcher pegs with the deck’s nose sockets. Support the deck and press straight down on the cowcatcher’s solid top plate. If any part binds, check alignment.

Check The smokebox, lamp and chimney sit flush, and the cowcatcher’s top plate rests flat on the deck.



The burgundy roof goes below the snow cap. The handwheel’s keyed shaft enters through the round opening at the rear of the cab.

9

Seat the cab and fit the handwheel

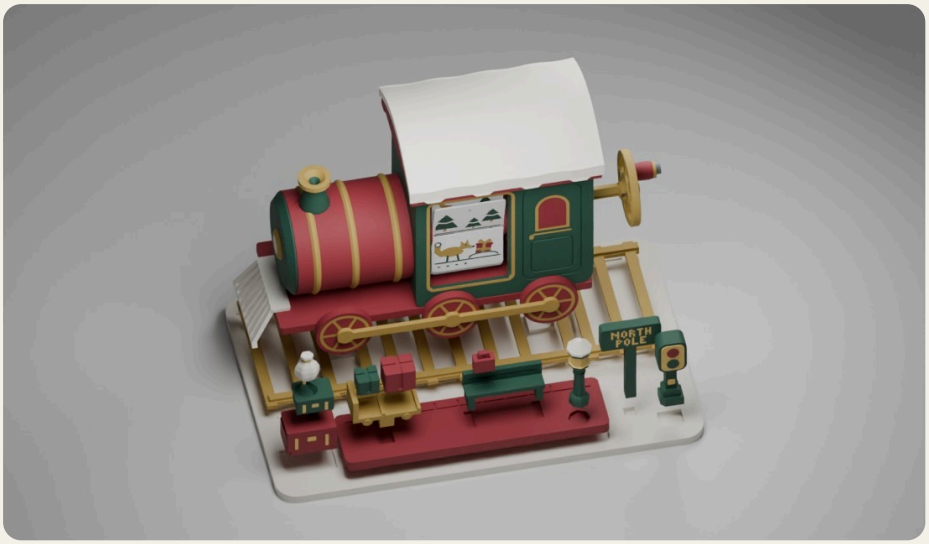
Lower the cab onto the deck’s two locator keys. Fit the burgundy roof over the cab, then the cream snow cap over the roof.

Slide the handwheel shaft through the round opening at the back of the cab. Turn the wheel to align the groove in the shaft’s hex tip with the rib in the axle socket, then push the shaft fully into the socket.

Check Turn the handwheel in the direction that moves the top of the drum toward the picture window. Stop if the ratchet resists.

DEPARTURE PLATFORM

Seat the station parts



The station parts are lifted above their installed positions. The train’s two feet locate in the raised sockets between the rails.

10 Set the departure platform

Drop the track and platform into the matching base recesses. Lower the locomotive’s two support feet into the raised sockets in the base.

Seat the sign, signal and lower trunk in their matching base pockets. Lower the green trunk onto the lower trunk’s keyed seat, then seat the mail sack on top. Seat the lantern, bench and trolley in the platform recesses.

Lower the suitcase into the bench recess. Seat the smaller parcel in the bay by the trolley’s raised handle and the larger parcel in the other bay.

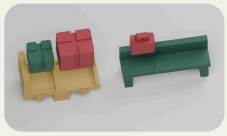
Check The locomotive stays seated while you turn through all twenty pictures, one click at a time.

Fitted places

Track	Rail-and-tie recess in the snow base
Platform	Long rounded recess beside the track
Locomotive	Two raised square sockets between the rails
North Pole sign	Square pocket in the snow next to the railway signal
Lower trunk	Shaped pocket at the locomotive-front end of the platform
Upper trunk	Keyed seat in the lower trunk lid
Mail sack	Keyed seat in the upper trunk lid
Railway signal	Matching shaped pocket in the snow next to the sign
Lantern	Small round recess at the sign end of the platform
Bench	Two foot recesses in the middle of the platform
Trolley	Rectangular pocket at the luggage end of the platform
Large parcel	Wider recess in the trolley, away from the handle
Small parcel	Narrower recess by the trolley’s raised handle
Suitcase	Shallow recess at the luggage end of the bench seat



Stack the lower trunk, upper trunk and mail sack.



Lower the suitcase and parcels into their recesses.

OPERATION

The twenty pictures



1. Santa sets off
2. A bump
3. Falling
4. In the snowdrift
5. A fox finds it
6. Pushed along
7. The robin tugs
8. Alone under the moon
9. Over the frozen river
10. By the tracks
11. The signal turns green
12. Into the mail sack
13. On the luggage rack
14. Past the village
15. The station
16. On the doorstep
17. The door opens
18. Under the tree
19. A little train
20. Santa flies on

If something is off

Picture halves mismatch	Check that each flap is in the position shown in the picture sequence, with its picture top facing the matching stand number. Reload the drum if the cards ran in the opposite direction.
A flap hangs or drops out	Check both tabs are in their sockets and spool B is seated against the end of the tube. Check that each card swings freely before refitting the chassis.
The handwheel turns without moving the drum	Line up the shaft's groove with the socket's rib and fully seat the shaft. Check the axle's D tip is engaged in spool A.
The axle turns backwards	Check that both bracket pegs are seated and that the pawl engages the ratchet.
The chassis needs service	Pull the handwheel out by its hub, lift off the snow cap and roof, and lift the cab clear of the deck keys. Set the cab on a work surface, then pull the chassis out using its finger slot.

If a piece is missing, damaged or still will not fit after you check its alignment, contact filamenting.com for a replacement.