

TK-1 Citation Seat Track Tool Kit

The McFarlane Citation Seat Track Tool Kit includes tools and instructions to make installing the MCSK101 Citation Seat Track Kit easier. TK-1 includes:

- Routers, tooling and fixtures for removing the seat track cap and web from the top of the original seat track extrusion so that a McFarlane replacement seat track may be bolted on top.
- A router and fixture for modifying the original floorboards so that they will not interfere with the replacement seat tracks.
- Drill bits and duplicating straps useful for the MCSK101 installation.
- A vacuum to attach to the router fixtures to minimize metal chips in the cockpit.
- CherryMAX® type blind rivet pullers for reinstalling the floorboard support fairing.
- Zinc chromate and a paint brush for priming the bare metal areas during MCSK101 installation.

Before using the tool kit please do the following:

- Verify that the kit is complete and call McFarlane Aviation (1-800-544-8594) if anything is missing.
- Read the attached instructions and rental terms.

Contents:

1. Bag of drill bits:
 - a. #30 drill bit (2)
 - b. #27 drill bit (1)
 - c. #20 drill bit (1)
 - d. #19 drill bit (2)
 - e. #16 drill bit (1)
 - f. #11 drill bit (2)
 - g. #2 drill bit (1)
2. Bag of small parts:
 - a. Spare cut-off blades (2)
 - b. Spare ½" straight router bit (1)
 - c. Spare ball bearing trim router bit (1)
 - d. Piece of cutting wax (1)
 - e. Small c-clamps (6)
 - f. Small pieces of wood to protect floorboard when clamping (4)
 - g. Small pieces of sheet metal to protect flange while using the hack saw (2)
 - h. Paint brush (1)
3. Cut-off router with cut-off blade, arbor, fixture, and wrenches (1)
4. Surfacing router with ½" straight router bit, fixture, and wrenches (1)
5. Trim router with ball bearing trim router bit and wrenches (1)
6. Floorboard fixture (1)
7. Jab type hack saw (1)
8. Extra hack saw blade (1)
9. #30 duplicating strap (1)
10. #10 duplicating strap (1)
11. Vacuum with hose (1)
12. Jar of zinc chromate (1)
13. Blind rivet puller (1)

Instructions

Notice: Since McFarlane Aviation, Inc. does not have control of the use of the TK-1 tool kit, McFarlane cannot be responsible for damage to your aircraft or personal injury incurred while using this tool kit or following these instructions.

Remove the Top Portion (Seat Rail Cap) of the Original Seat Track Extrusion

Follow these steps when using the TK-1 tool kit to complete Step 6 of the MCSK101 Seat Track Repair Kit Instructions (Drawing 1SR060 Rev. B).

1. Identify the cut-off router included in the TK-1 tool kit. It is the large router (1-1/2 or 1-3/4 HP) with the saw tooth cut-off blade installed. Inspect the router for any sign of damage.
2. Verify that the router is adjusted so that when the router is sitting on a flat surface, there is approximately 1/16" clearance between the bottom of the cut-off blade arbor and the surface.
Caution: Proper adjustment and tightening of the router is critical. Failure to do so could result in damage to your aircraft structure.
3. Verify that the arbor, collet, and router height adjustment are all tight.
4. Apply some cutting wax to the cut-off blade and/or the seat rail to be cut.
5. Attach the vacuum to the router using the supplied hose, and turn on the vacuum.
6. Position the router so that the white router guide fixture straddles the seat rail cap but the cut-off blade does not engage the web.
7. Turn on the router and move the blade into the metal so that it begins to cut. Take care to keep the guides flat on the horizontal flange of the extrusion and up against the rail cap to avoid damaging the horizontal flange.
8. Carefully move the router along the length of the seat track to remove the top portion of the seat track. There may be a short segment near the front that cannot be cut-off with the router due to clearance problems. Use the jab type hack saw to finish cutting these short segments. Use the two supplied pieces of sheet metal to protect the horizontal flange when using the hack saw.
9. The seat rail cap should now be removed from the original seat track extrusion and a 1/16" to 1/8" high portion of the web should remain.
10. Identify the surfacing router included in the TK-1 tool kit. It is the small Porter Cable brand router with the 1/2" straight router bit and two parallel white plastic guides. Inspect the router for any signs of damage.
11. Verify that the collet is tight and then adjust the router height so that the router bit will just barely remove material from the remaining seat track web. Taking too large of a cut could damage the router bit. Verify that the router height adjustment is tight.
Caution: Proper adjustment and tightening of the router is critical. Failure to do so could result in damage to your aircraft structure.
12. Attach the vacuum to the router using the supplied hose, and turn on the vacuum.
13. Position the router so that the white router guide fixture straddles the remaining seat track web but the router bit does not yet engage the material.
14. Turn on the router and move it into the metal so that it begins to cut. Apply firm down pressure to ensure that the guides remain flat against the horizontal flange of the extrusion.
15. Carefully move the router along the length of the seat track to remove the web material.

16. Repeat steps 13 through 15 adjusting the router height each time until the remaining web is low enough so that the replacement seat track will sit on top of it without rocking.

Match Drill the Existing Floorboard Screw Holes and Floorboard Support Fairing Rivet Holes in the Replacement Seat Tracks

The #30 and #10 duplicating straps supplied with TK-1 may be used to complete Steps 10 and 11 of the MCSK101 Seat Track Repair Kit Instructions (Drawing 1SR060 Rev. B).

1. Sandwich both the original seat track extrusion and the replacement seat track with the duplicating strap.
2. Place the duplicating strap guide pin in the hole to be duplicated and drill the matching hole through the replacement seat track using the duplicating strap bushing as a guide.
3. For Step 10 use the #10 duplicating strap and a #11 drill bit. For Step 11, use the #30 duplicating strap and a #30 drill bit, then enlarge the holes using a #19 drill bit.

Trim the Floorboard Panels

Follow these steps when using the TK-1 tool kit to complete Step 20 of the MCSK101 Seat Track Repair Kit Instructions (Drawing 1SR060 Rev. B).

1. Mark the area that is to be trimmed on the floorboard panel.
2. Position the floorboard panel on top of the floorboard fixture supplied with the kit so that the area to be trimmed is centered in the cut-out area of the fixture. Make sure the floorboard panel lays flat on the fixture. It may be necessary to place the floorboard panel upside down to make it lay flat due to the nut plates protruding from the bottom of the panel.
3. Clamp the floorboard panel to the fixture on either side of the cut-out using the supplied c-clamps and the wood pads to prevent crushing the floorboard panel.
4. Identify the trim router included in the TK-1 tool kit. It is the small Porter Cable brand router with the ball bearing trim router bit installed. Inspect the router for any sign of damage.
5. Use the trim router to trim the floorboard panel. Ensure that the router bit's bearing follows the contour of the cut-out in the floorboard fixture and ensure that the router base stays flat against the surface of the floorboard panel.
6. Due to interference with the protruding nut plates, it may not be possible to completely trim the floorboard panel with the router. Use a hacksaw and file to finish trimming the floorboard panel to the contour of the floorboard fixture.
7. Repeat the above steps for each floorboard panel edge to be trimmed.

TK-1 Tool Kit Rental Terms

- A rental deposit equal to the retail price of the tool kit is required at the time of rental.
- Please check the tool kit for completeness as soon as you receive it. Immediately report any missing items to McFarlane.
- The deposit will be credited back to you when the complete tool kit is returned undamaged.
- If tool kit components are missing or abused, deductions will be taken from your deposit according to the attached schedule. No deduction will be taken for “consumable” items such as drill bits or router bits as long as they are returned.
- The complete tool kit must be shipped back to McFarlane no later than 30 days after the date that the kit was originally shipped from McFarlane. If you require use of the tool kit for more than 30 days please contact McFarlane to negotiate an acceptable arrangement.

Replacement Cost Schedule

Tools:

The following items must be returned undamaged. If the items are not returned or found to be damaged beyond normal wear and tear, the indicated cost will be deducted from your rental deposit.

- Small c-clamps (\$4.79 each)
- Cut-off router with arbor, fixture, and wrenches (\$862.67)
- Surfacing router with fixture and wrenches (\$273.86)
- Trim router with wrenches (\$131.46)
- Floorboard fixture (\$124.80)
- Jab type hack saw (\$5.57)
- #30 duplicating strap (\$11.70)
- #10 duplicating strap (\$11.70)
- Vacuum with hose (\$55.32)
- Blind rivet puller (\$35.94)

Consumable Items:

The following items must be returned with the kit, but no deduction will be charged against your deposit if they are damaged. If the items are not returned, the indicated cost will be deducted from your rental deposit.

- Small pieces of wood to protect floorboard when clamping (no charge but please return)
- Small pieces of sheet metal to protect flange while using the hack saw (no charge but please return)
- Hack saw blade (\$1.15)
- Jar of zinc chromate (\$8.77)
- Cut-off blades (\$20.54 each)
- 1/2" straight router bits (\$15.96 each)
- Ball bearing trim router bits (\$16.82 each)
- Drill bits (\$3.25 each)

Disposable Items:

Do not return the following items. No deduction will be charged against your rental deposit for these items.

- Paint brush
- Piece of cutting wax