

Door Mechanism Installation Compilation

|    |   |   | Vans  | Vans | Aerosport          | Aerosport         | PlaneAround      | PlaneAround                   | PlaneAround           |
|----|---|---|-------|------|--------------------|-------------------|------------------|-------------------------------|-----------------------|
|    |   | NOTES   | Page  | Step | Low Profile Handle | Door Handle Cover | 180 Door Latch   | Angled Pins and Delrin Guides | Strut Attach Brackets |
|    | <b>Remove door, inside handle, and UHMW pin blocks</b>                | Not required for new installation   |       |      |                    |                   | 1.0 - 1.2        |                               |                       |
| 1  | <b>Title Page</b>   |   | 45-01 |      |                    |                   |                  |                               |                       |
| 2  | <b>Low Profile Handle Overview - Aerosport</b>                        |   |       |      | Overview Drawing   |                   |                  |                               |                       |
| 3  | <b>180 Door Latch Overview - PlaneAround</b>                          |   |       |      |                    |                   | Overview Drawing |                               |                       |
| 4  | <b>Trim and Sand Door Shells</b>                                      |   | 45-02 |      |                    |                   |                  |                               |                       |
| 5  | <b>Cleco Doors to each other &amp; fuselage</b>                       |   | 45-03 | 1-3  |                    |                   |                  |                               |                       |
| 6  | <b>Install Gas Strut Doublers</b>                                     |   | 45-04 | 1-7  |                    |                   |                  |                               |                       |
| 7  | <b>Door Prep for Aerosport Handle</b>                                 | #30 holes used with clecos to assist in holding shells during bonding                               |       |      | 1                  |                   |                  |                               |                       |
| 8  | <b>Bond Door Shells together</b>                                      |   | 45-05 |      |                    |                   |                  |                               |                       |
| 9  | <b>Hinges to Fuselage</b>   |   | 45-06 | 1-3  |                    |                   |                  |                               |                       |
| 10 | <b>Hinges to Doors</b>  |   | 45-07 | 1-5  |                    |                   |                  |                               |                       |
| 11 | <b>Install Windows in Doors</b>                                       | I elected to do at same time as rear windows after doors were complete                              | 45-08 | 1-6  |                    |                   |                  |                               |                       |
| 12 | <b>Prep Inner &amp; Outer Vans Handles</b>                            | SKIP  | 45-09 | 1-4  |                    |                   |                  |                               |                       |
| 13 | <b>Prep Strike Plate area of Doors</b>                                |   |       |      | 2-6a (6b below)    |                   |                  |                               |                       |
| 14 | <b>Modify Vans handle parts (C-1007 and WD-1022)</b>                  |   |       |      | 7                  |                   |                  |                               |                       |
| 15 | <b>Directed to Vans 45-10</b>   |   |       |      | 8                  |                   |                  |                               |                       |
| 16 | <b>Vans Door Handle Mechanism</b>                                     |   | 45-10 | 1-4  |                    |                   |                  |                               |                       |
| 17 | <b>Cut C-Racks &amp; match-drill for Handle Mechanism (SKIP)</b>      | Skip. Handle rack is cut later (PlaneAround 180 #6)   | 45-11 | 1    |                    |                   |                  |                               |                       |
| 18 | <b>Match drill for Handle Mechanism (SKIP)</b>                        | Skip. Already done (PlaneAround 180 #1)   | 45-11 | 2-4  |                    |                   |                  |                               |                       |
| 19 | <b>Preparing the pushrods</b>   | Skip if new installation  |       |      |                    |                   | 1.0 - 1.2        |                               |                       |
| 20 | <b>Find 5-5/8" pushrod from kit</b>                                   |   |       |      |                    |                   | 1.3              |                               |                       |
| 21 | <b>Connect Aft Pushrod (Vans) to Mid Rack from kit</b>                | Ref Vans 45-14, Figure 3  |       |      |                    |                   | 1.4              |                               |                       |
| 22 | <b>Prep door and install Gearbox</b>                                  | Mid rack should be removed from Gearbox before installation   |       |      |                    |                   | 2.1 - 2.7        |                               |                       |
| 23 | <b>Directed to Vans 45-12 to temporarily install Vans UHMW blocks</b> | Must be done at this stage for new doors (in order to drill pin holes in fore and aft ends of door) |       |      |                    |                   | 4.0              |                               |                       |

|    |  |   | Vans  | Vans    | Aerosport          | Aerosport         | PlaneAround    | PlaneAround                   | PlaneAround           |
|----|--|---|-------|---------|--------------------|-------------------|----------------|-------------------------------|-----------------------|
|    |  | NOTES   | Page  | Step    | Low Profile Handle | Door Handle Cover | 180 Door Latch | Angled Pins and Delrin Guides | Strut Attach Brackets |
| 24 | Install Vans Door Pin Blocks   | Done temporarily in order to locate where match-drilling through door for block installation and door pins should be. PlaneAround Guides (aka blocks) installed later. Do not reinstall Vans blocks at end of step 4. | 45-12 | 1-5     |                    |                   |                |                               |                       |
| 25 | Remove Vans UHMW door pin blocks and expand holes in doors                                   |   |       |         |                    |                   | 4.1 - 4.2      |                               |                       |
| 26 | Install Aft Door Pushrod   |   |       |         |                    |                   | 3              |                               |                       |
| 27 | Directed to Vans Handle Installation (45-13) except to not cut racks per Vans instructions   |   |       |         |                    |                   | 5              |                               |                       |
| 28 | Assemble and Install Vans Inner Handle & Mechanism   | Stop before installing Vans outer roll pin.   | 45-13 | 1-2a, b |                    |                   |                |                               |                       |
| 29 | Assembly Latch Mechanism per Vans 45-13 with specific modifications. Do not install in door. | Install Inner Ring and longer roll pin instead in Vans 45-13, Step 2c   | 45-13 | 2c      | 9                  |                   |                |                               |                       |
| 30 | Countersink holes in Delrin block  | NA if new Delrin Block (it comes with countersunk holes)  |       |         | 10                 |                   |                |                               |                       |
| 31 | Handle Assembly into Delrin Spacer & E-Ring  |   |       |         | 11                 |                   |                |                               |                       |
| 32 | Cut racks per PlaneAround instructions   |   |       |         |                    |                   | 6              |                               |                       |
| 33 | Rack preparation   | Do not install LP4-3 at this time   |       |         |                    |                   | 6.1-6.2        |                               |                       |
| 34 | Push Rod preparation   |   |       |         |                    |                   | 7.0            |                               |                       |
| 35 | Slide Middle Pushrod toward Gearbox  |   |       |         |                    |                   | 7.1            |                               |                       |
| 36 | Drill hole for Middle Pushrod-Mid Rack Pin   |   |       |         |                    |                   | 7.2            |                               |                       |
| 37 | Connect Middle Pushrod to Mid Rack   | After connecting Middle Pushrod to Mid Rack, disconnect Middle Pushrod from Lower Handle Rack. Move middle pushrod out of the way of the handle clearance hole until after timing is complete.                        |       |         |                    |                   | 7.3            |                               |                       |
| 38 | Assemble and Install Vans Inner Handle & Mechanism   | Skip. Do not install at this time   | 45-13 | 3-5     |                    |                   |                |                               |                       |
| 39 | Drill and open clearance holes of the racks  |   |       |         | 6b                 |                   |                |                               |                       |
| 40 | Strike Plate and Lock  |   |       |         | 12                 |                   |                |                               |                       |
| 41 | Ensure Rack Ends Free & Fwd Pin installed  |   |       |         | 13                 |                   |                |                               |                       |
| 42 | Slide Aft Rack (aka Lower Rack) into Clearance hole  |   |       |         | 14                 |                   |                |                               |                       |
| 43 | Connect Forward Pushrod to Upper Handle Rack   |   |       |         |                    |                   | 7.4            |                               |                       |
| 44 | Place Handle in Pocket and place Upper and Lower Handle Racks as described by Aerosport      | Do not follow PlaneAround rack alignment instructions.  |       |         | 15                 |                   |                |                               |                       |
| 45 | Engage Forward (Upper) Rack  |   |       |         | 16                 |                   |                |                               |                       |

|    |  | NOTES                          | Vans  | Vans | Aerosport          | Aerosport         | PlaneAround    | PlaneAround                   | PlaneAround           |
|----|--|--------------------------------|-------|------|--------------------|-------------------|----------------|-------------------------------|-----------------------|
|    |  |                                | Page  | Step | Low Profile Handle | Door Handle Cover | 180 Door Latch | Angled Pins and Delrin Guides | Strut Attach Brackets |
| 46 | Pin into Lower Rack, test timing   |                                |       |      | 17                 |                   |                |                               |                       |
| 47 | Upper and Lower Rack Timing  | Skip. Done per Aerosport steps |       |      |                    |                   | 7.5            |                               |                       |
| 48 | Pushrod protrusion and deburring   |                                |       |      |                    |                   | 8              |                               |                       |
| 49 | Bolt Delrin Door Pin Blocks in place   |                                |       |      |                    |                   | 8.1            |                               |                       |
| 50 | Mark rack gears  |                                |       |      |                    |                   | 8.2            |                               |                       |
| 51 | Remove Door Pin Blocks, Handle Assembly, and Pushrods                        |                                |       |      |                    |                   | 8.3            |                               |                       |
| 52 | Install magnets into PlaneAround Pins  |                                |       |      |                    |                   |                | Para. 1 of 3                  |                       |
| 53 | Cut Pushrods for PlaneAround Angled Pins & Pushrod Adjustment                |                                |       |      |                    |                   | 8.4            | Para. 2 of 3                  |                       |
| 54 | Tap Pushrod ends   |                                | 45-14 | 1    |                    |                   | 8.5            | Para. 2 of 3                  |                       |
| 55 | Create two "pointers"  |                                | 45-14 | 2    |                    |                   |                |                               |                       |
| 56 | Test fit Aft Pin on the Pushrods and Install                                 |                                | 45-14 | 3    |                    |                   | 9.0            | Para. 2 of 3                  |                       |
| 57 | Install Middle Pushrod   |                                |       |      |                    |                   | 9.1            |                               |                       |
| 58 | Establish Fwd Pin orientation and install Fwd Pushrod                        |                                | 45-14 | 4    |                    |                   | 9.2            |                               |                       |
| 59 | Remount Door Handle Assembly   |                                |       |      |                    |                   | 9.3            |                               |                       |
| 60 | Reinstall Delrin pin blocks  |                                |       |      |                    |                   | 9.4            |                               |                       |
| 61 | Check Handle Attach pin hole   |                                |       |      | 18                 |                   |                |                               |                       |
| 62 | Insert Conical Spring  |                                |       |      | 19                 |                   |                |                               |                       |
| 63 | Pin Handle into place  |                                |       |      | 20                 |                   |                |                               |                       |
| 64 | Check Handle parallel to door  |                                |       |      | 21                 |                   |                |                               |                       |
| 65 | For thick doors: Install Outer Ring if not done earlier                      |                                |       |      | 22                 |                   |                |                               |                       |
| 66 | Insert Lock Cam  |                                |       |      | 23                 |                   |                |                               |                       |
| 67 | Install Door on Airplane   |                                | 45-14 | 5    |                    |                   | 9.5            |                               |                       |
| 68 | Install Vans Cabin Pin Blocks  | Skip                           | 45-15 | 1-3  |                    |                   |                |                               |                       |
| 69 | Sand and Install PlaneAround Cabin Pin Blocks                                |                                |       |      |                    |                   |                | Para. 3 of 3                  |                       |
| 70 | Install Cam  |                                |       |      |                    |                   | 10.0           |                               |                       |
| 71 | Finalize Cabin Block position and clamp Delrin block onto preferred location |                                |       |      |                    |                   | 10.1           |                               |                       |
| 72 | Temporarily install Cam  |                                |       |      |                    |                   | 10.2           |                               |                       |
| 73 | Mark Cam location  |                                |       |      |                    |                   | 10.3           |                               |                       |
| 74 | Permanently install Cam  |                                |       |      |                    |                   | 10.4           |                               |                       |
| 75 | Permanently mount block  |                                |       |      |                    |                   | 10.5           |                               |                       |

|    |  |   | Vans  | Vans | Aerosport          | Aerosport         | PlaneAround    | PlaneAround                   | PlaneAround           |
|----|--|---|-------|------|--------------------|-------------------|----------------|-------------------------------|-----------------------|
|    |  | NOTES                                     | Page  | Step | Low Profile Handle | Door Handle Cover | 180 Door Latch | Angled Pins and Delrin Guides | Strut Attach Brackets |
| 76 | Install Proximity Switches   |   |       |      |                    |                   | 10.6           |                               |                       |
| 77 | Vans Gas Strut Attach Brackets   | Skip                                      | 45-16 | 1-4  |                    |                   |                |                               |                       |
| 78 | PlaneAround Strut Attach Brackets  |   |       |      |                    |                   |                |                               | Para.1 of 1           |
| 79 | Vans Cabin Door Safety Latch   | Skip                                      | 45A   |      |                    |                   |                |                               |                       |
| 80 | Vans Strut Attach Brackets, Vans Door Seal, Vans Latch Pin Plates, Vans Door Struts, Paint |   | 45-17 | 1-2  |                    |                   |                |                               |                       |
| 81 | Door Seal.   | Skip Vans seal. Install other as desired. | 45-17 | 3    |                    |                   |                |                               |                       |
| 82 | Install Aerosport Interior Door Handle Cover   |   |       |      |                    | 1-6               |                |                               |                       |
| 83 | Vans Latch Pin Plates. Skip  |   | 45-17 | 4    |                    |                   |                |                               |                       |
| 84 | Attach Doors to Fuselage.  |   | 45-17 | 5    |                    |                   |                |                               |                       |
| 85 | Gas Struts   |   | 45-17 | 6    |                    |                   |                |                               |                       |
| 86 | Cabin Door Safety Latch  |   | 45-17 | 7    |                    |                   |                |                               |                       |