



Service Bulletin SB 2X-34-21

Issued: 24 Jul 2006

Models SR20 and SR22

ATA 34-10: Flight Environmental Data/Pitot-static Systems Alternate Static Valve Relocation

COMPLIANCE

Optional: Accomplishment of this Service Bulletin is at the owner's option.

EFFECTIVITY

Cirrus Design SR20 serial numbers 1005 through 1705.

Cirrus Design SR22 serial numbers 0002 through 2036, 2038 thru 2042.

APPROVAL

FAA approval has been obtained on all technical data in this Service Bulletin that affects type design.

PURPOSE

To provide for improved accessibility to the alternate static valve, this Service Bulletin provides for the relocation of the alternate static source valve.

DESCRIPTION

This Service Bulletin contains instructions for the relocation of the alternate static source valve.

WARRANTY INFORMATION

Part and labor costs for this Service Bulletin are at the owner's expense.

MANPOWER REQUIREMENTS

4.5 manhours.

OTHER PUBLICATIONS AFFECTED

SR20 Illustrated Parts Catalog (p/n 12138-001)

SR22 Illustrated Parts Catalog (p/n 13774-001)

SR20 Airplane Maintenance Manual (p/n 12137-001)

SR22 Airplane Maintenance Manual (p/n 13773-001)

WEIGHT AND BALANCE

N/A

Cirrus Design Corporation
4515 Taylor Circle
Duluth, Minnesota 55811
PH (218) 788-3000

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MATERIAL INFORMATION

The following parts are required to comply with this Service Bulletin. Parts can be obtained from an Authorized Cirrus Design Service Center or Parts Distributor.

Order kit 70163-001 to obtain the following parts.

Item No.	Description	P/N or Spec.	Supplier	Quantity
1	Trim, Alt Static Valve	21589-001	Cirrus Design	1
2	Cover Plate, Alt Static Source	17967-101	Cirrus Design	1
3	Graphic Overlay, Alt Static Source	18058-001	Cirrus Design	1
4	Cover Plate, Blank Trim	12655-002	Cirrus Design	1
5	Fitting, Vacuum Valve	17982-001	Cirrus Design	1
6	Clamp	AN742-8	Cirrus Design	1
7	Screw, Machine, #8-32	MS35214-41	Cirrus Design	1
8	Nut, Locking, #8	AN364-832A	Cirrus Design	1
9	Fitting, Nylon, Male Tube Connector .25 NPT	50388-001	Cirrus Design	1
10	Static Tube, Alt Static Valve, 7 inch	21686-119	Cirrus Design	1
11	Nylon Union Tee	50385-001	Cirrus Design	1
12	Static Tube, Alt Static Valve, 5.3 inch	21686-120	Cirrus Design	1
13	Fitting, Nylon, Female Tube Connector	50386-001	Cirrus Design	1
14	Nylon, Insert	50928-025	Cirrus Design	5
15	Plug	MS20913-1D	Cirrus Design	1
16	Spiral Wrap, Clear, 4 inch	50428-001	Cirrus Design	1
17	Graphic Overlay, Non-Alt Static Source	12389-002	Cirrus Design	1
18	Reclosable Fastener, Type 400, 1.5 inch	50494-001	Cirrus Design	2
19	Reclosable Fastener, Type 170, 1.5 inch	50494-002	Cirrus Design	2

ACCOMPLISHMENT INSTRUCTIONS

- A. Remove key from ignition.
- B. Set BAT 1, BAT 2, and AVIONICS switches to OFF positions.
- C. Acquire necessary tools, equipment, and supplies.

Description	P/N or Spec.	Supplier	Purpose
Drill bit	0.170 inch (0.432 cm)	Any Source	Drill



Description	P/N or Spec.	Supplier	Purpose
Composite Welder™ FS Methacrylate Adhesive	14160	Devcon Danvers, MA 01923 800-933-8266	Adhesion
Epoxy Adhesive (<i>alternate</i>)	5 Minute Epoxy		
Rotary Tool w/ Carbide Cutting Disc	-	Any Source	Cut
Permanent Marker	-	Any Source	Mark
Compass	-	Any Source	Mark
Isopropyl Alcohol	TT-I-735 grade A or B	Any Source	Cleaning
Cotton Cloth (clean and lint free)	-	Any Source	Cleaning
Sandpaper	80 to 120 grit	Any Source	Abrasion
Deburring Tool	-	Any Source	Deburr
Touch-N-Prep Pen	Alodine 1132	Henkel Surface Technologies Madison Heights, MI 48071 248-583-9300	Corrosion Protection
Utility Knife	-	Any Source	Trim

- D. Remove reclosable fasteners securing alt static source cover plate to console.
- E. Determine if hook or loop-type reclosable fastener is required to correspond with existing fastener material on console.
- F. Cut length of reclosable fastener (**item 18 or 19**) as required to replace corresponding fastener material.
- G. Install opposing reclosable fastener to blank trim cover plate (**item 4**) using existing plate as a template. Discard existing plate.
- H. Open circuit breaker panel. (Refer to AMM 24-50)
- I. Remove left mid console circuit breaker trim. (Refer to AMM 25-10)
- J. *Serials SR20-1307 & subs, Serials SR22-0002 thru 1643, 1645 & subs:* To facilitate accessibility at console, remove upper screws securing panel guard to console flange.
- K. Remove alternate static source valve. (Refer to AMM 34-10)
- L. Install non-alt static source graphic overlay.

1. On console flange, locate existing overlay depicting alternate static source valve knob orientation.

Note: It is permissible to cut and remove upper and lower sections of non-alt static source graphic overlay instead of creating seams at overlay pass-through holes for ALT AIR and PARK BRAKE.

2. Use utility knife to cut seams at upper and lower pass-through holes in non-alt static source graphic overlay (**item 17**).
3. Remove paper backing from non-alt static source graphic overlay (**item 17**).
4. Position and install graphic overlay (**item 17**) onto existing overlay so that depicted orientation on existing overlay is completely concealed. (Refer to AMM 11-30)

- M. Install cover plate graphic overlay.
1. Remove paper backing from alt static source graphic overlay (item 3).
 2. Position and install graphic overlay (item 3) to center of alt static source cover plate (item 2).
 3. Use utility knife to cut graphic overlay (item 3) at pass-through holes in cover plate. Trim excess graphic overlay as required.
- N. Modify installation area. (See Figure 01)
1. Remove both screws securing LED angle bracket to console.
 2. Position alt static source cover plate (item 2) between console and LED angle bracket at installation area.
 3. Install screws securing LED angle bracket and alt static source cover plate to console.
 4. Locate hole in alt static source cover plate positioned over surface of console assembly.
 5. Use 0.170 inch (0.432 cm) drill bit at existing hole in cover plate to drill through console assembly.
 6. Deburr drilled hole and solvent clean with isopropyl alcohol. (Refer to AMM 20-30)
 7. Apply alodine to drilled hole to prevent corrosion.
- O. Install alternate static source valve. (See Figure 01)
1. At inboard side of console, position clamp (item 6) to console at drilled hole location.
 2. Loosely install screw (item 7) and nut (item 8) securing clamp to cover plate and console.
 3. Install male tube connector (item 9) to alternate static source valve (item 5).
- Note:** Note orientation of knob prior to removal from alternate static source valve to facilitate re-installation.
4. From back-side of alternate static source valve knob, press insert out from knob to facilitate access to screw. Remove screw securing knob to alternate static source valve.
 5. Position replacement alternate static source valve to clamp with knob coupling oriented to pass-through hole in static source valve bracket.
 6. Position clamp over end of alternate static source valve. Tighten screw and nut securing clamp to static source valve bracket and console.
 7. Push knob onto knob coupling on alternate static source valve.
- Note:** Orientation of knob in vertical position indicates valve is in closed position, and horizontal position indicates valve is in open position.
8. Verify vertical/horizontal orientation of alternate static source valve knob corresponds with valve open/closed positions.
 9. Install screw securing knob to alternate static source valve. Slide insert into knob.
- P. Install and route alternate static source lines. (See Figure 01)
1. Remove connector from one of the side fittings of the union tee (item 11).
 2. Slide backside of connector over static line (item 12).
 3. Install nylon insert (item 14) into static line (item 12).
 4. Install static line (item 12) connector to side fitting of union tee (item 11).
 5. Remove connector from female fitting (item 13).
 6. Slide backside of connector over opposing end of static line (item 12).
 7. Install nylon insert (item 14) into static line (item 12).
 8. Install static line (item 12) connector to female fitting (item 13).
 9. Install plug (item 15) to female fitting (item 13).
 10. Remove connector from upper fitting of the union tee (item 11).

11. Slide backside of connector over static line (item 10).
 12. Install nylon insert (item 14) into static line (item 10).
 13. Install static line (item 10) connector to upper fitting of union tee (item 11).
 14. Remove fitting from end of male tube connector (item 9).
 15. Slide backside of fitting over opposing end of static line (item 10).
 16. Install nylon insert (item 14) into static line (item 10).
 17. To prevent chafing, install spiral wrap tubing (item 16) over static line (item 10).
 18. Install static line (item 10) connector to alternate static source valve (item 5).
 19. Remove remaining connector from side fitting of the union tee (item 11).
 20. Slide backside of connector over existing static line.
 21. Install nylon insert (item 14) into existing static line.
 22. Install static line connector to side fitting of union tee (item 11).
 23. Route static line terminated by plug downward.
 24. Perform Functional Test - Pitot System Leak Test. (Refer to AMM 34-10)
 25. Perform Functional Test - Static System Leak Test. (Refer to AMM 34-10)
 26. *Serials SR20-1307 & subs, Serials SR22-0002 thru 1643, 1645 & subs:* Install screws securing upper flange of panel guard to console flange.
- Q. Modify circuit breaker trim. (See Figure 02)
1. At inboard circuit breaker trim, measure 4.21 inches (10.69 cm) aft parallel to upper edge of circuit breaker panel cut-out and 1.0 inch (2.54 cm) up perpendicular to upper edge of circuit breaker panel cut-out, then mark.
 2. From previous mark, measure 2.88 inches (7.32 cm) aft parallel to upper edge of circuit breaker panel cut-out, then mark.
 3. From previous mark, measure 2.25 inches (5.72 cm) up perpendicular to upper edge of circuit breaker panel cut-out, then mark.
 4. From previous mark, measure 2.88 inches (7.32 cm) forward parallel to upper edge of circuit breaker panel cut-out, then mark.
 5. Using straight-edge, draw rectangle connecting previous marks.
 6. Center compass 1.44 inches (3.66 cm) from side and upper edges of rectangle, then mark arc intersecting upper edges of rectangle.
 7. Center compass 0.38 inch (0.97 cm) from lower corner edges of rectangle, then mark arc intersecting lower edges of rectangle. Repeat on opposite corner.
 8. Using rotary tool with carbide cutting disc, cut rounded D-shape defined by previous marks.
 9. Deburr cut-out hole and solvent clean with isopropyl alcohol. (Refer to AMM 20-30)
- R. Install alternate static valve trim.
1. Abrade faying surfaces with sandpaper. (Refer to AMM 51-20)
 2. Solvent clean abraded areas. (Refer to AMM 20-30)
 3. Follow manufacturer's instructions for mixing sealant.
 4. Apply sufficient quantity of adhesive to installation area around edges of cut-out to completely fill gap between faying surfaces.
 5. At inboard side of circuit breaker trim, position trim (item 1) to cut-out and firmly press to installation surface. Remove excess adhesive and allow to cure.
- S. Install left mid console circuit breaker trim. (Refer to AMM 25-10)
- T. Close and secure circuit breaker panel. (Refer to AMM 24-50)
- U. Position blank trim cover plate (item 4) and press firmly on trim in areas of reclosable fasteners.
- V. Complete airplane records by noting compliance with SB 2X-34-21 in Aircraft Logbook.

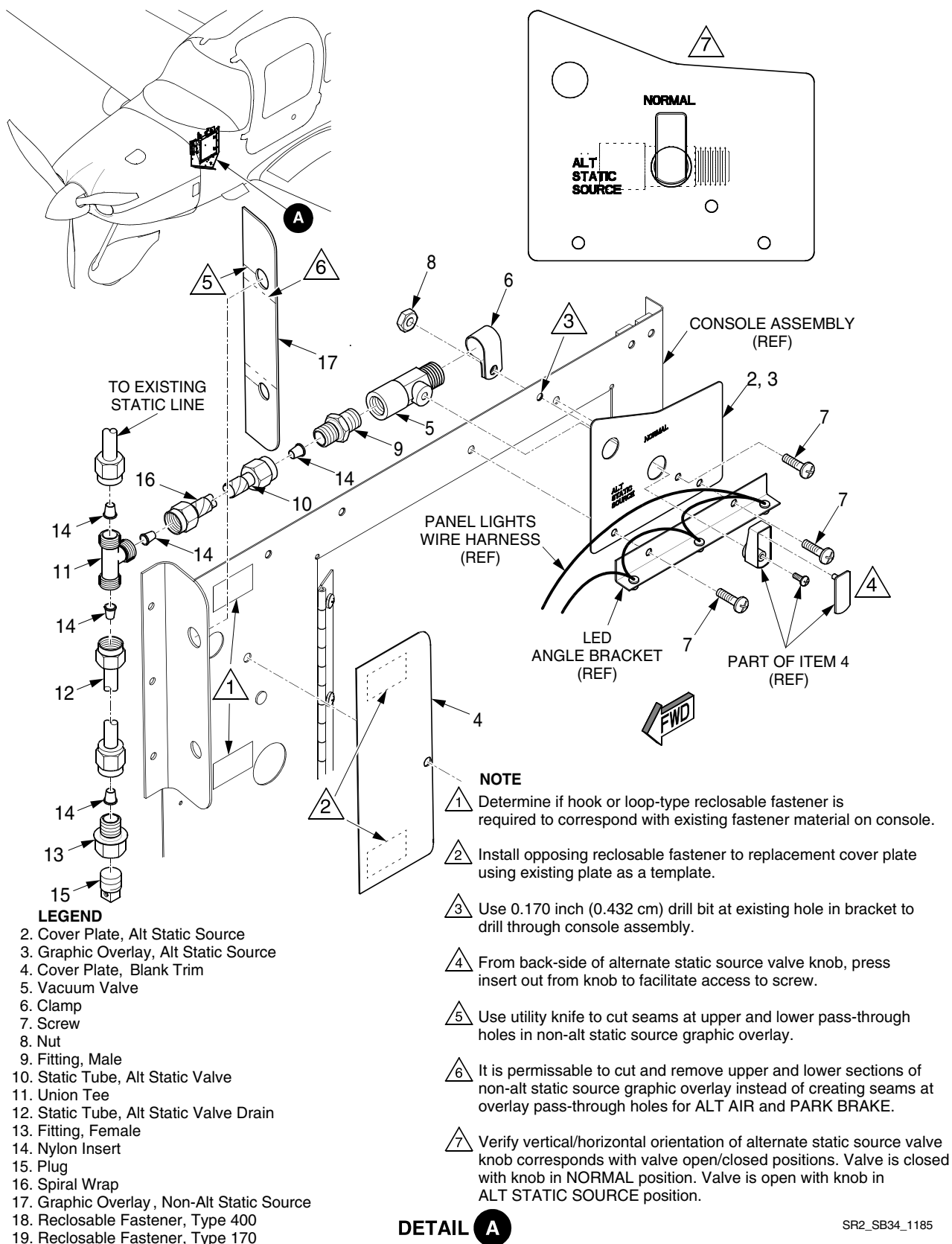
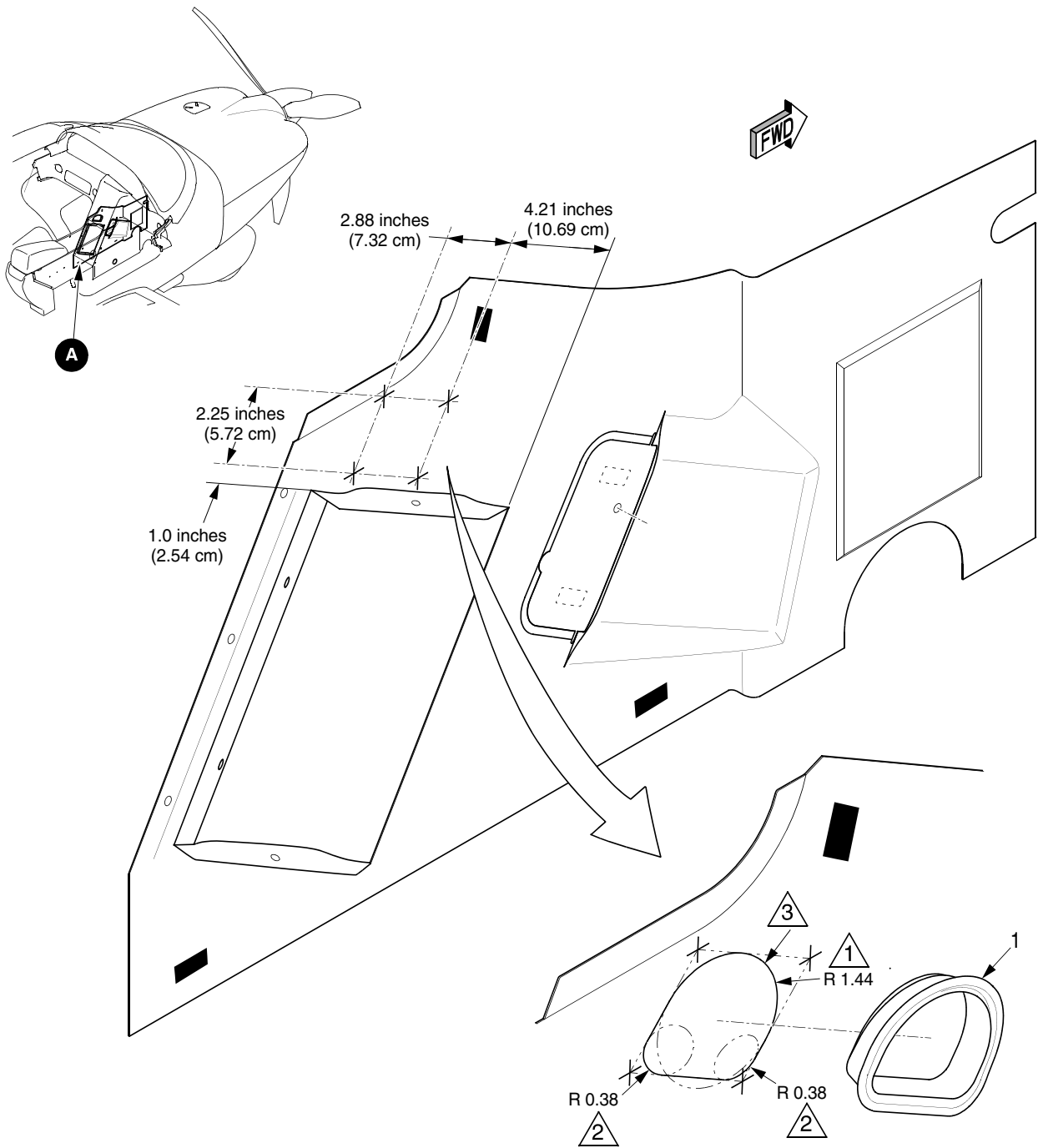


Figure 01 - Alternate Static Valve Relocation



NOTE

- 1 Center compass 1.44 inches (3.66 cm) from side and upper edges of rectangle, then mark arc intersecting upper edges of rectangle.
- 2 Center compass 0.38 inch (0.97 cm) from lower corner edges of rectangle, then mark arc intersecting lower edges of rectangle. Repeat on opposite corner.
- 3 Apply sufficient quantity of adhesive to installation area around edges of cut-out to completely fill gap between faying surfaces.

LEGEND
1. Trim

SR2_SB34_1186

Figure 02 - Circuit Breaker Panel Modification



Service Loop

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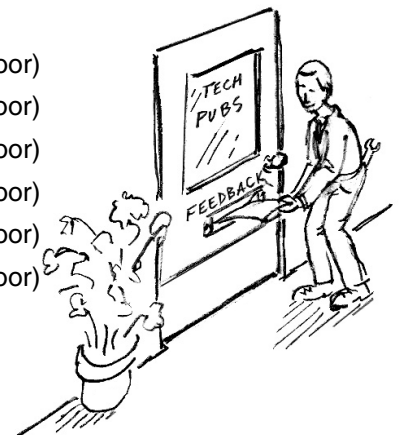
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