D’S Shannon Products, LTD

INSTALLATION MANUAL

DSP-IM97-1, Rev. C

STC No. SA01165CH

INSTALLATION DRAWINGS

AND

INSTRUCTIONS FOR

ENGINE COOLING BAFFLES


D’SHANNON PRODUCTS, LTD

# NUMERICAL DRAWING LIST CONTROL

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NOTE: ★ P/N 242016Z IS AN ALTERNATE AND ASSEMBLED USING EXHIBITING DUCTING.
GENERAL NOTES: COOLING SYSTEM (BAFFLES)

1. TORQUE ROCKER BOX COVER SCREWS BETWEEN 45 TO 55 IN/LB PER TCM SPECS. AFTERMARKET ROCKER BOX COVER GASKET INSTALLATIONS MAY REQUIRE SPECIAL TORQUE SPECS.

2. THROUGH EXPERIENCE, SUBSTANTIAL IMPROVEMENTS IN THE COOLING EFFICIENCY TO THE AFT CYLINDERS HAS BEEN NOTED BY SIMPLY ROTATING THE MAGNETOS UPWARDS AS FAR AS POSSIBLE WITHOUT INTERFERING WITH THE COWLING; AND ROUTING THE IGNITION HARNESSES AS HIGH AS POSSIBLE SO AS NOT TO IMPede AIRFLOW TO 1, 2, 3 AND 4 CYLINDERS OR THE OIL COOLER. RETIME THE MAGNETOS IF THEY ARE ROTATED. MAINTAIN A MINIMUM OF 1/4" CLEARANCE BETWEEN THE MAGNETO AND THE COWL.

3. FOR BEST RESULTS INSTALL THE COMPLETE BAFFLE KIT. IT IS PERMISSIBLE AND DOES NOT INVALIDATE THIS STC TO INSTALL THE FRONT BAFFLE, SIDE BAFFLE, REAR BAFFLE, OR INNER CYLINDER BAFFLE INDEPENDENT OF EACH OTHER, REPLACING THE BEECH FACTORY INSTALLED PIECES UNTIL SUCH TIME AS IT IS CONVENIENT TO INSTALL THE BALANCE OF THE BAFFLE KIT.

4. PRIOR TO COWLING INSTALLATION MAINTAIN A 1/8" CLEARANCE BETWEEN THE SEAL AND THE COWLING PLATES INSTALLED BY THIS KIT. ADDRESS ANY INTERFERENCE BETWEEN THE KIT AND THE AIRFRAME PRIOR TO RELEASING THE AIRCRAFT FOR FLIGHT.

5. TEFLOn TAPE MAY BE INSTALLED TO THE ADJACENT WEARING SURFACE TO MINIMIZE SEAL WEAR.

6. CYLINDER HEAD TEMPERATURE PROBE (CHT) IS TO BE LOCATED IN CYLINDER #2. MOVE THE PROBE TO #2 AS REQUIRED. ORIGINAL CHT PROBE IS NOT TO BE REPLACED BY AFTER-MARKET SINGLE OR MULTI-PROBE UNITS UNLESS THE UNIT IS CERTIFIED AS PRIMARY (MANY ARE NOT).

NOTE: THIS BAFFLE KIT WAS CAREFULLY MADE TO FIT THE MAJORITY OF BONANZA OR DEBONAIR AIRCRAFT CONFIGURED WITH A D-470-G, D-470-C, N ENGINE, EITHER ORIGINALLY OR THROUGH AN STC. VARIANCES IN TOOLING THE AIRCRAFT OR ENGINE OVER THE YEARS REQUIRES CARE IN HAND FITTING SOME PARTS; OCCASIONALLY ENLARGING FASTENER HOLES; AND PROVIDING THROUGh HOLES FOR EQUIPMENT PREVIOUSLY INSTALLED. SOMETIMES, LOOSE ASSEMBLY OF PORTIONS OF THE KIT AND THEN TIGHTENING IN PLACE WILL AID IN LINING UP PARTS AND WILL SPEED INSTALLATION. ANY MODIFICATIONS TO THE KIT SHOULD BE MADE IN ACCORDANCE WITH AC-43.13-1B. IF YOU HAVE ANY QUESTIONS ABOUT YOUR INSTALLATION, PLEASE CONTACT THE D'SHANNON FACTORY AT ONE OF THE TELEPHONE NUMBERS PROVIDED ON THE COVER OF THESE INSTRUCTIONS.
3. REMOVE THE PROPELLER FOR EASIER INSTALLATION OF THE BAFFLES IN THE FRONT OF THE ENGINE.

2. FOR A COMPLETE BAFFLE INSTALLATION REMOVE THE INTAKE PIPES ON BOTH SIDES AS A UNIT (ALL THREE CYLINDER’S WORTH ONLY NOT THE CROSS OVER PIPE IN FRONT OF THE ENGINE NOR THE BOTTOM "Y" TUBE) BE SURE TO COVER ALL ENDS OF EACH INTAKE PIPE REMOVED FROM THE ENGINE AND THE CROSS OVER PIPE AND THE "Y" PIPE.

1. WE RECOMMEND THE COMPLETE BAFFLE KIT INSTALLATION, HOWEVER IF THIS INSTALLATION IS TO BE INSTALLED ON AN ENGINE WHICH ALREADY HAS BEECH BAFFLES INSTALLED YOU MAY DELETE THE INSTALLATION OF THE FOUR INNER CYLINDERS BAFFLES.

THE BAFFLES DO HOWEVER HAVE TO BE INSTALLED CORRECTLY AND IT WILL BE UP TO THE INSTALLER TO CHECK AND CORRECT ANY EXISTING BAFFLING THAT MAY NOT BE INSTALLED CORRECTLY.
4. WHEN THE PROPELLER HAS BEEN REMOVED CAP THE END OF THE PROPELLER SHAFT.
   REMOVE THE STAPLES AROUND THE BAFFLE BELOW THE PROPELLER SHAFT AND THE BAFFLE
   THAT COVERS THE PROP GOVERNOR. REMOVE THE RUBBER IN ITS ENTIRETY.
   CLEAN OFF ANY RESIDUE AND ANY MATERIAL THAT COULD GET INTO AN OPEN ENGINE.

3. REMOVE THE PROPELLER FOR EASIER INSTALLATION OF THE BAFFLES IN THE
   FRONT OF THE ENGINE.
DOES NOT SHOW OLD BAFFLES.

1. REMOVE ALL OLD BAFFLING FROM THE ENGINE (IF APPLICABLE). USE THE UTMOST CARE TO AVOID DAMAGING ENGINE GASKETS IN THE NEXT STEPS. REMOVE THE PROP GOVERNOR, COVER THE PROP GOVERNOR PORTS SECURELY. IN ORDER TO REMOVE THE OLD BAFFLES AND INSTALL THE NEW ONES ON THE FIFTH AND SIXTH CYLINDER (IF APPLICABLE) IT WILL BE NECESSARY TO REMOVE SOME OF THE VALVE COVER SCREWS.
OPTION "A"
(TO BE USED WITH AN INSTALLED ENGINE)

7. ANOTHER OPTION IS TO "SCORE" BAFFLE AT BEND POINT WITH A SHARP CARPENTERS KNIFE. GENTLY ROCK BAFFLE BACK AND FORTH UNTIL IT BREAKS, ALLOWING BETTER ACCESS TO THE RIVETS. CAREFULLY GRIND RIVET HEADS WITH A RIGHT ANGLE DIE-GRINDER

4. COVER THE HOLES MADE WHILE REMOVING RIVETS WITH ALUMINUM TAPE. MAKE SURE THAT ANY NOSE AREA THAT WILL BE IN CONTACT WITH THE TAP IS FREE OF DUST, DIRT OR ANY OTHER CONTAMINATES.

3. TO REMOVE THE INSIDE SOLID RIVETS GAIN ACCESS THROUGH THE NOSE AIR ENTRANCE AS SHOWN.

2. TO REMOVE THE SOLID RIVETS SHOWN GAIN MORE SPACE FOR THE DRILL BY LIFTING THE NOSE FLANGE GENTLY.

1. REMOVE THE OLD SOLID RIVETS AND REPLACE WITH COUNTERSUNK RIVETS OF THE SAME SIZE.
**OPTION 'B'**

(TO BE USED IF THE ENGINE IS NOT INSTALLED)

1. **WARNING:** USING A CUTTING TOOL, REMOVE ALL SHARP EDGES AND BURRS. SMOOTH ALL THE EDGES WITH A FILE.

2. **WARNING:** CUT THE ORIGINAL BAFFLES AS CLOSE AS POSSIBLE TO THE NOSE SURFACE. WARNING: DO NOT DAMAGE THE NOSE SURFACE WHILE CUTTING OFF THE OLD BAFFLES.

**NOTES:**
NOTES:

1. INSTALL LOCKNUT ITEM 8 ON THE END OF ROD ITEM 5 AND HAND TIGHTEN. INSTALL ITEM 5 TO ITEM 1 AS SHOWN. REPEAT FOR ITEMS 2, 3, AND 6.

TOLERANCES:

X: 10 XXX: 01
XX: 03 XXXX: 001
ANGLES ±5% UNLESS STATED

D’SHEANNON PRODUCTS, LTD

DWG. No. DSP-IM97-1-7 REVISION A
SCALE: NONE DATE 03/02/16 SH 1 OF 5
EXCHANGE ORIGINAL FACTORY LINE SUPPORTS FOR ITEM 72.

REFERENCE SH. 5 OF 5 FOR CORRECT INSTALLATION OF THE INNER CYLINDER BAFFLES.

INSTALL SUPPORTS ITEM 4 ONTO THE RODS ITEM 5. REFERENCE SH. 3 OF 5 AND 4 OF 5.

FASTEN RODS ITEM 5 INTO PLATE NUTS BEFORE POSITIONING INNER CYLINDER BAFFLE ITEMS 1, 2, 3 AND 66 BETWEEN CYLINDERS.

A CATERPILLAR GROMMET IS FACTORY INSTALLED ON ITEM 3 AND 66 WHERE THE FUEL LINE PASSES THROUGH THE INNER CYLINDER BAFFLE. DO NOT PROCEED IF THE GROMMET IS MISSING. CALL CUSTOMER SUPPORT.
TIGHTEN LOCKNUT ITEM 7.

FASTEN LINE SUPPORTS ONTO THE INNER CYLINDER ROD CONNECTOR USING ITEM 6 AND 7 AND TIGHTEN AS SHOWN. FOR ADDITIONAL REFERENCE SEE SH. 4 OF 5.

TWIST AND BEND LEGS ON BOTH SIDES OF LINE SUPPORT APPROX. 20° AS INDICATED ON BUBBLE DRAWING.
TIGHTEN LOCKNUT ITEM 7.

FASTEN LINE SUPPORTS ONTO THE INNER CYLINDER ROD CONNECTOR USING ITEM 6 AND 7 AND TIGHTEN AS SHOWN. FOR ADDITIONAL REFERENCE SEE SH. 4 OF 5.
APPLY SILICONE SEALANT ITEM #3 TO GAPS BETWEEN ENGINE CASE AND AROUND THE AREA IN WHICH THE HOSE AND VENT LINE INTERCEPT. ALL INNER CYLINDER BAFFLES REQUIRE THAT ALL GAPS BETWEEN THE CASE AND THE INNER CYLINDER BAFFLE BE SEALED WITH SILICONE.

INSERT INNER CYLINDER BOTTOM BAFFLE FLANGE IN THE 13TH COOLING FIN SPACE AS SHOWN.

1. - CYLINDERS VIEWED UPSIDE DOWN

NOTES:
3. TORQUE ROCKER COVER TO 45 TO 55 IN/LB (PER TCM SPECS.) INSTALLATION OF AFTER-MARKET ROCKER COVER GASKETS MAY REQUIRE SPECIAL TORQUE SPECS.

2. ORIGINAL HARDWARE.

1. REMOVE THE ROCKER COVER SCREW AS SHOWN. INSTALL ITEM 9 ONTO THE #6 CYLINDER BEHIND THE PROP GOVERNOR. LINE UP ITEM 9 TIGHTLY AGAINST THE CYLINDER AND THE CYLINDER BARREL. REINSTALL THE PREVIOUSLY REMOVED ROCKER COVER SCREW.

NOTES:
5. INSTALL ITEM 10 onto studs. Lock prop governor, install nuts and lock washers and torque as per Beechcraft shop manual.

4. WASHER ITEM 71 is used to support bracket item 10 only if the governor has a recessed area where the bracket item 10 mounts. Install as shown.

3. INSTALL NEW SCREENED PROP GOVERNOR GASKET.

2. REMOVE PROP GOVERNOR COVER PRIOR TO INSTALLING THE PROP GOVERNOR.

1. ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT SHOP MANUAL).

NOTES:
INSTALL ITEM 11 USING ORIGINAL HARDWARE AND TIGHTEN PER BEECHCRAFT SHOP MANUAL.

ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT SHOP MANUAL).

ITEM 9 IS REFERENCED FROM DSP-IM97-1-9, SHEET 1.

ITEM 10 IS REFERENCED FROM DSP-IM97-1-10, SHEET 1.

INSTALLATION BAFFLE FRONT LEFT
INSTALL ITEM 12 AS SHOWN USING ITEM 14.
INSTALL ITEM 14 THROUGH ITEM 12 AND FASTEN TO BRACKET PLATE NUTS.
INSTALL ITEM 13 AS SHOWN USING ITEM 14.
INSTALL ITEM 15 USING ORIGINAL HARDWARE. TIGHTEN PER BEECHCRAFT SHOP MANUAL.

ORIGINAL HARDWARE (FOR TORQUE VALUES SEE BEECHCRAFT SHOP MANUAL).
INSTALL ITEM 16 USING ORIGINAL HARDWARE. TIGHTEN PER BEECHCRAFT SHOP MANUAL.

ORIGINAL HARDWARE (FOR TORQUE VALUES SEE BEECHCRAFT SHOP MANUAL).
INSTALL ITEM 17 USING ORIGINAL HARDWARE. TIGHTEN PER BEECHCRAFT SHOP MANUAL.

ORIGINAL HARDWARE (FOR TORQUE VALUES SEE BEECHCRAFT SHOP MANUAL).

REF. (2 PLACES)

1 4

15

16

17
INSTALL ITEM 19 INTO ITEM 15 AS SHOWN, USING ITEM 14 AND ORIGINAL HARDWARE. TIGHTEN PER BEECHCRAFT SHOP MANUAL.

ORIGINAL HARDWARE (FOR TORQUE VALUES SEE BEECHCRAFT SHOP MANUAL).
INSTALL ITEM 14 THROUGH ITEM 42, 19, AND 12 AS SHOWN.

INSTALL ITEM 20 ONTO ITEMS 19, 16, AND 17 AS SHOWN USING ITEM 14.

ITEM 12 IS REFERENCED FROM DSP-IM97-1-11.

NOTES:
MAKE SURE THAT THE GASKET BETWEEN THE MANIFOLD AND THE CYLINDER MATCH, THEY ARE NOT SYMMETRICAL.

NOTE 2 IS APPLICABLE FOR BOTH SIDES OF THE ENGINES.

ONE WAY TO INSTALL THE INTAKE MANIFOLD ASSEMBLY IS TO INSTALL THE HOSE ON THE BALANCE TUBE WITH THE INTAKE MANIFOLD ROTATED AT 90° OUTBOARD, AND PUSH THE MANIFOLD INTO THE HOSE ON THE BALANCE TUBE. ROTATE THE INTAKE MANIFOLD ASSEMBLY TO THE RIGHT SO YOU CAN RAISE THE MANIFOLD WITH THE GASKET IN THE CORRECT POSITION, INSTALL THE ORIGINAL BOLTS INTO THE WASHER, FOLLOWED BY THE LOCK WASHER, THEN TO THE MANIFOLD, AND FINALLY THROUGH THE GASKET INTO THE HEAD.

TURN THE BOLTS INTO THE HEAD BUT DO NOT TIGHTEN AT THIS TIME. REPOSITION THE HOSE THAT WAS PUSHED ONTO THE "Y" PIPE BY SLIDING IT BACK INTO THE INTAKE MANIFOLD PIPE. ROTATE ALL HOSE CLAMPS TO A POSITION THAT IS BEST SUITED TO CHECK THE TIGHTNESS OF THE HOSES IN THE AIRCRAFT, AND TO MAKE SURE THAT THE HOSES DO NOT TOUCH THE EXHAUST MANIFOLD. IMPORTANT: YOU NEED TO PAY ATTENTION TO THE DIRECTION OF THE HOSE CLAMPS SO THAT THEY DO NOT LAY AGAINST THE EXHAUST MANIFOLD. THE "Y" PIPE AND THE BALANCE TUBE NEED TO BE POSITIONED IN A MANNER THAT THEY DO NOT HIT THE STAINLESS STEEL MOUNT SHIELD.

RE-INSPECT FOR ANY FOREIGN OBJECTS OR ANY OTHER OBSTRUCTION INSIDE THE PIPES.

REPLACE ALL COVERS/CAPS FROM ALL ENDS OF INTAKE PIPES, BALANCE TUBE AND THE INDUCTION "Y" PIPE BEFORE REINSTALLING THE INDUCTION MANIFOLD.
NOTES:

1. ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT OR TCM SHOP MANUAL.)
INSTALL ITEM (21) USING THE ORIGINAL BOLTS, WASHERS AND LOCK WASHERS ONTO THE #2 CYLINDER'S INTAKE PIPE FLANGE AS SHOWN. TORQUE EACH PIPE FLANGE BOLT PREVIOUSLY REMOVED IN EVERY CYLINDER ON BOTH SIDES IN SEQUENCE. (FOR TORQUE VALUES SEE THE TCM SHOP MANUAL).

ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT OR TCM SHOP MANUAL).
INSERT FLANGE OF ITEM 21 IN THE SECOND COOLING FIN SPACE AS SHOWN.
INSTALL ITEM 69 ONTO ITEM 21 USING ITEM 27 AS SHOWN.

INSTALL ITEM 23 TO THE ROCKER COVER USING ORIGINAL HARDWARE AS SHOWN. TORQUE PER TCM SHOP MANUAL. FASTEN ITEM 23 TO ITEM 21 USING ITEM 27.

ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT OR TCM SHOP MANUAL).
1. INSTALL ITEM 26 BETWEEN ITEM 24 AND THE ENGINE USING ITEMS 31 AND 6 AND ORIGINAL HARDWARE AS SHOWN. SEE TCM SHOP MANUAL FOR TORQUE VALUES.

2. ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT OR TCM SHOP MANUAL).
INSTALL ITEM 23 ON ENGINE USING ORIGINAL ROCKER COVER HARDWARE AS GUIDE. SEE TCM SHOP MANUAL FOR TORQUE VALUES.

ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT OR TCM SHOP MANUAL).

ITEM 23 IS REFERENCED FROM DSP-IM97-1-15, SHEET 1.

ITEM 70 IS REFERENCED FROM DSP-IM97-1-15, SHEET 1.
ALIGN ITEM 29 AS SHOWN. USE ITEM 27 THROUGH ITEMS 28 AND 29 AND TIGHTEN. NOTE THAT TWO OF THE FASTENERS ARE ON THE FORWARD SIDE OF THE BAFFLE.
INSTALL ITEM 30 AS SHOWN USING ORIGINAL HARDWARE.

ORIGINAL HARDWARE. (FOR TORQUE VALUES SEE BEECHCRAFT OR TCM SHOP MANUAL).
ALIGN HOLES IN ITEM 30 WITH HOLES IN ITEM 28, FASTEN USING ITEMS 31 AND 6, THEN TIGHTEN.
2. SEE VIEW B-B ON SHEET 7 OF 7 FOR MILLENNIUM ENGINES ONLY.

1. SEE DETAIL "A" ON SHEETS 2, 3, 4, 5 AND 6 OF 7.

NOTES:

ITEM 23 IS REFERENCED FROM DSP-IM97-1-16, SHEET 1.

ITEM 24 IS REFERENCED FROM DSP-IM97-1-15, SHEET 1.
TO PIERCE, GO THROUGH TWO HOLES FROM ITEMS 33 AND 24 USING DRILL SIZE NO. 29 AND CLECO'S AS SHOWN.

CLECO.
WARN

REMOVE CLECS AND INSTALL ITEMS 32 AND 33 IN ITEMS 24 AND 28 USING ITEMS 34
AND TIGHTEN WITH ITEM 33 AS SHOWN.

DETAIL "A"
COMES FROM SHEET 1 OF 7
STEP 3
DETAIL "A"

COMES FROM SHEET 1 OF 8

STEP 4

FASTEN ITEM 27 THROUGH ITEMS 28 AND 33. TIGHTEN WITH ITEM 35.

TO PIERCE, GO THROUGH ONE HOLE FROM ITEM 24 TO ITEM 33 USING DRILL SIZE NO. 29.
**NOTES:**

- MAKE A SMALL HOLE APPROXIMATELY 1/4" AS SHOWN TO ALLOW WIRES TO BE PASSED THROUGH.
- FASTEN ITEM 27 THROUGH ITEMS 24 AND 33. TIGHTEN WITH ITEM 35.

**DETAIL "A"**

COMES FROM SHEET 1 OF 7

STEP 5
9. INSTALL ITEM 67 ONLY ON MILLENNIUM ENGINES. INSTALL ITEM 67 IN ITEM 28 USING CLECO. ONCE INSTALLED, PERFORM THE STEPS 1, 2, 3, 4 AND 5.

NOTE: CLECO.
REMOVE MAGNETO WIRE SUPPORTS FROM THE CYLINDERS AND INSTALL ITEM 36 USING ORIGINAL ROCKER COVER HARDWARE.

ORIGINAL HARDWARE. SEE BEECHCRAFT OR TCM SHOP MANUALS FOR TORQUE VALUES.
NOTES:

3 INSTALL ITEMS 37, 38 AND 39 USING ITEM 27 AS SHOWN ON SH. 2, 3 AND 4 OF 7.

CYLINDER #4 AND #2
CYLINDER #3 AND #1
TYP. INSTALLATION

INSTALLATION SIDE BAFFLES

D'SHANNON PRODUCTS, LTD

DRAWN BY: W.E.
ENGINEER: R.R.
CHECKED BY: L.L.

SCALE: NONE DATE 03/02/16 SH 2 OF 7
INSTALL ITEMS 37, 38 AND 39 USING ITEM 27 AS SHOWN ON SH. 2, 3 AND 4 OF 7.

CYLINDER #6 AND #4

INSTALLATION SIDE BAFFLES

D'SHANNON PRODUCTS, LTD

DRAWN BY W.E.

CHECKED BY L.L.

DWG. No. DSP-1M97-1-19 REVISION A

SCALE: NONE DATE 03/02/16 SH. 3 OF 7
NOTES:

3 INSTALL ITEMS 37, 38 AND 39 USING ITEM 27 AS SHOWN ON
SH. 2, 3 AND 4 OF 7.

INSTALLATION SIDE BAFFLES

D' SHAN NON PRODUCTS, LTD

DWG. No. DSP-1M97-1-19 REVISION A
SCALE: NONE DATE 03/02/16 SH 4 OF 7

3

27

(2 PLCS)

CYLINDER #5 AND #3

39

Continental

Continental
INSTALL ALL NEW AN931-4-7 ELASTIC GROMMETS, ITEM 43 ON THE MAGNETO WIRE SLOTS IN THE SUPPORT BRACKETS ITEMS 37, 38 AND 39.

NOTES:

INSTALLATION SIDE BAFFLES

TOLERANCES

D'SHANNON PRODUCTS, LTD

DRAWN BY: W.E. ENGINEER: C.R. CHECKED BY: L.L.

SCALE: NONE DATE 03/02/16 SHEET 5 OF 7

DWG. NO. DSP-1M97-1-19 REVISION A

ANGLES ±5% UNLESS STATED
9 USE SHEET 7 AS A GUIDE TO THE FINISHED INSTALLATION.

8 ALL REMAINING GAPS AND OPENINGS SHOULD BE SEALED WITH CLEAR G.E. SILICONE ITEM 63 (-65 TO +40°F) OR EQUIVALENT.

7 VERY IMPORTANT! TIGHTEN SNUGLY AND BACK-OFF 1/4 TURN TO ALLOW FOR EXPANSION

6 AS NOTED, THE LEFT-HAND IS ITEM 41, RIGHT-HAND IS ITEM 40, ATTACH SIDE BAFFLE ASSEMBLY TO SUPPORT BRACKETS USING ITEM 27 SCREWS THROUGH ITEM 42 AND ITEM 33.

NOTES:

ITEM 20 IS REFERENCED FROM DSP-IM97-1-16, SHEET 1.
ITEM 24 IS REFERENCED FROM DSP-IM97-1-15, SHEET 1.
ITEM 20 IS REFERENCED FROM DSP-IM97-1-12, SHEET 1.
ITEM 68 IS REFERENCED FROM DSP-IM97-1-12, SHEET 1.

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INSTALLATION GASKET FRONT

NOTES:

INSTALL ITEM 68 USING CLECOs.
4. REMOVE THE CLECOs AND REPLACE USING ITEM 14.

3. REMOVE THE CLECOs AND REPLACE USING ITEM 64.

2. PLACE ITEM 40 AND 47 AS SHOWN AND MARK THE HOLES, REMOVE ITEMS 18 AND 68, ON THE WORK BENCH DRILL FIVE PLACES WITH A NO. 2B DRILL BIT, ASSEMBLE THE ITEMS 65, 42 AND 35 AND INSTALL ON THE ENGINE.

NOTES:

ITEM 18 IS REFERENCED FROM DSP-IM97-1-12, SHEET 1.

D'SHANNON PRODUCTS, LTD

INSTALLATION GASKET FRONT

TOLERANCES

≤0.10 ≤0.01
≤0.05 ≤0.001

ANGLES ±5°

UNLESS STATED

SCALE: NONE DATE 05/15/10 SH 2 OF 6
INSTALL ITEM 46 AS SHOWN USING ITEMS 44, 45 AND 64.

ITEM 45 IS REFERENCED FROM DSP-IM97-1-12, SHEET 1.
INSTALL ITEM 50 AS SHOWN USING ITEMS 49 AND 64.

ITEM 19 IS REFERENCED FROM DSP-IM97-1-12, SHEET 1.
INSTALL ITEM 59 AS SHOWN USING ITEMS 52, 53 AND 64.

ITEM 12 IS REFERENCED FROM DSP-IM97-1-11, SHEET 1.
INSTALL ITEM 54 AS SHOWN USING ITEMS 55, 56, 57, 34 AND 64.

ITEM 13 IS REFERENCED FROM DSP-IM97-1-11, SHEET 1.
ITEM 11 IS REFERENCED FROM DSP-IM97-1-11, SHEET 1.
2. REMOVAL THE ORIGINAL GASKET ON BOTH SIDES OF COWLING.
1. SEE DETAIL "A" ON SHEET 2 OF 2

NOTES:
3. REMOVE ALL SHARP EDGES AND BURRS USING A CUTTING TOOL, THEN SMOOTH ALL EDGES WITH A FILE.

2. CUT OFF THE ORIGINAL GASKET RETAINERS. NOTE: TAKE CARE NOT TO DAMAGE THE RETAINER SURFACE.

1. REMOVE CLIPS AND GASKET. NOTE: DO NOT REMOVE RIVETS FROM RETAINERS.

1. INSTALL THE BEECH COWLING ON THE AIRCRAFT AND TIGHTEN FASTENERS.


3. APPLY SILICONE SEAL ITEM 63 TO FILL ANY GAPS IN THE MATING EDGES OF THE COWL AND AROUND THE STRINGERS AND THE FIBERGLASS MATING SURFACES.


NOTES:

REVISION RECORD

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D'SHANNON PRODUCTS, LTD

DRAWN BY: D.R. CHECKED BY: L.L.

SCALE: NONE

DWG. No. DSP-1M97-1-21
REV: A

SH 1 OF 3
58 REF.

DETAIL "A"

BACK VIEW
RIGHT COWLING


IF NECESSARY ADJUST GAPS FILED IF ADDITIONAL OR LESS STRUCTURE IS FOUND IN COWLING THAN IS STANDARD.

INSTALL THE ENTIRE FIBERGLASS COWLING INSERTS (F.C.I.) ITEMS 58 AND 59. THE COWLING PLATES FIT ALL UNMODIFIED BEECH COWLINGS.


CENTER THE F.C.I. ON TOP OF THE RIDGES AND RELIEVE WITH A FILE TO LOWER THE F.C.I. TO THE INSIDE SKIN OF THE COWL DOOR.

WHEN THE FIT IS SATISFACTORY FASTEN THE OUTER EDGES TO THE ORIGINAL BEECH COWL SUPPORT STRUCTURE WITH RIVETS ITEM 64.

APPLY SILICONE SEAL ITEM 63 TO FILL ANY AIR GAPS IN THE MATING EDGES OF THE COWL AND AROUND THE STRINGERS AND THE FIBERGLASS MATING SURFACES.

NOTES:

D'SHANNON PRODUCTS, LTD

DRAWN BY: D. B.
ENGINEER: J. R.
CHECKED BY: L. L.

TOLERANCES:
X ±0.01
Y ±0.03
Z ±0.001
ANGLES ±5
UNLESS STATED

SCALE: NONE
DATE: 03/02/16
SH 2 OF 3

INSTL BAFFLE COWLING PLATES

DWG. No. DSP-1M97-1-21 REVISION A

IF NECESSARY ADJUST GAPS FILED IF ADDITIONAL OR LESS STRUCTURE IS FOUND IN COWLNG THAN IS STANDARD.

INSTALL THE ENTIRE FIBERGLASS COWLNG INSERTS (F.C.I.) ITEMS 59 AND 59. THE COWLNG PLATES FIT ALL UNMODIFIED BEECH COWLINGS.


WHEN THE FIT IS SATISFACTORY FASTEN THE OUTER EDGES TO THE ORIGINAL BEECH COWL SUPPORT STRUCTURE WITH RIVETS ITEM 64.

APPLY SILICONE SEAL ITEM 63 TO FILL ANY AIR GAPS IN THE MATING EDGES OF THE COWL AND AROUND THE STRINGERS AND THE FIBERGLASS MATING SURFACES.
DIMENSION 7.75 AND VIEW ONLY FOR D’SHANNON PRODUCTS WET VACUUM PUMP STC’D SYSTEM

SEE SH 2 OF 2 FOR DETAILED COWLING HOSE HOLDER INSTALLATION.

ITEM 58 IS REFERENCED FROM DSP-IM97-1-21, SHEET 1.
ITEM 59 IS REFERENCED FROM DSP-IM97-1-21, SHEET 1.

D’SHANNON PRODUCTS, LTD

REV 03/02/16
**STEP 1**

Fuel Pump Blast Tube Installation

**STEP 2**

Apply Silicon Item 63 All Around

Fuel Pump Blast Tube to the Fuel Pump Shroud

Cowlung Ref.

**STEP 3**

Fuel Pump Shroud

To the Cowlung Hose Holder, Item 60 (See Detail "A" Above)

After Cutting Original Blast Tube to Length (Bemco Part No. BE709-6-31-6) Reinstall Original Clamp and Tighten

- Do not Stretch Bellows When Cutting and Installing Blast Tube -

Typical Installation of Pop Rivets (Once Item 60 is Installed)
WARNING

READ AND BE FAMILIAR WITH INSTRUCTIONS
BEFORE CUTTING HOLES AND INSTALLING FUEL PUMP BLAST TUBE

ITEM 61 ASSEMBLED USING EXISTING DUCT WHEN REQUIRED.

ITEM 58 IS REFERENCED FROM DSP-1M97-1-21, SHEET 1.
ITEM 59 IS REFERENCED FROM DSP-1M97-1-21, SHEET 1.

SEE SHEET 2 OF 2 FOR DETAILED AIR DISCHARGE TUBE ASSEMBLY INSTALLATION.
ALIGN THE DISCHARGE OF THE TUBE TO THE FINS ON PRESSURE PUMP, TUBE SHOULD NOT TOUCH DRY PRESSURE PUMP OR DRY VACUUM PUMP

ONLY FOR PRESSURE PUMP SYSTEM NOT FOR D'SHANNON PRODUCTS WET VACUUM PUMP STC'D SYSTEM

**STEP 1**

**STEP 2**

TO THE RIGHT OF REAR BAFFLE SEE DETAIL "A" ABOVE

**STEP 3**

AFTER CUTTING ORIGINAL BLAST TUBE TO LENGTH (BEMCO PART No. BE709-6-31-6) REINSTALL ORIGINAL CLAMP AND TIGHTEN

- DO NOT STRETCH BELLOWS WHEN CUTTING AND INSTALLING BLAST TUBE -

**VIEW A-A**

TYPICAL INSTALLATION OF POP RIVETS (ONCE ITEM 61 IS INSTALLED)
TIGHTEN AND TORQUE AS PER PROP MANUFACTURE’S TORQUE VALUES.
AND IF REQUIRED INSTALL SAFETY WIRE IN ACCORDANCE WITH AC-43.13.

REINSTALL THE PROPELLER AFTER INSTALLATION OF THE BAFFLES.
ASSURE THAT THE ENGINE HAS #1 CYLINDER ON COMPRESSION AND
#1 BLADE UP/ WHEN REQUIRED BY MANUFACTURER’S INSTRUCTIONS.

WARNING: REMOVE ANY RAG OR CAP FROM THE PROPELLER SHAFT IN THE
FRONT OF THE ENGINE.

NOTES: