



**ZEE Systems, Inc.**

## ***SERVICE BULLETIN 78-001-1***

1.0 EFFECTIVITY: ZEE Systems, Inc. P/N SZ78-001-1/-1A/1B Evaporator Assembly installed as part of STC SA1734GL

2.0 PURPOSE: To modify the Evaporator Assembly (MCC) to use R-134a refrigerant. This is Modification B (MOD B).

2.1 Description of MOD B: This service bulletin gives instructions for modifying the SZ78-001-1B Evaporator Assembly. Assemblies manufactured after December 1997 will use E.P.A. accepted R-134a as the standard refrigerant. Assemblies manufactured after September 2006 will have MOD B incorporated during manufacture. This service bulletin should be accomplished at the same time as SB 83-001-2 and SB R134-06.

2.2 New aircraft Installation: Install equipment as original R-12 system. Refer to SB 83-001-2 and SB R134-06 for additional modification instructions to allow the use R-134a refrigerant for equipment installed under STC SA1734GL.

2.3 Modification of existing system: This modification consists of flushing the coil and replacing the Thermostatic Expansion Valve (TXV) in accordance with ZEE Systems, Inc. E.O. 78-001-2.

3.0 COMPLIANCE: Compliance is optional.

4.0 APPROVALS: This service bulletin contains no modification data that changes the fit, form or function of the original design and is considered a minor change to a Class III product and therefore does not require any additional approvals. There are no changes to the operating characteristics of the air conditioning equipment. There is no part number change.

5.0 WEIGHT AND BALANCE: No change.

6.0 ELECTRICAL LOAD DATA: No change.

7.0 SPECIAL TOOLS AND EQUIPMENT: Equipment used in Discharging and Charging the system.

Refrigerant Recovery/Recycle Equipment meeting SAE J1990 or J2209 specifications.	Commercially Available
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Manifold Gauge Set, with hoses R-134a compatible	Commercially Available
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Scale .1 lb. increments	Commercially Available
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Leak Detector	Commercially Available
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Vacuum Pump	Commercially Available
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Temperature Measuring Device	Commercially Available
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R-134a (HFC-134a) Refrigerant Sanden SP-20 or PAG-100 Oil Mopar P/N: 82300349	Commercially Available
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8.0 MANPOWER REQUIREMENTS:

8.1 New STC Installation: When incorporating this service bulletin during new manufacture no additional man hours are required over the original normal installation time.

8.2 Modification of existing system: No man hour estimates are available at this time. This upgrade will require the MCC Assembly P/N: SZ78-001 Evaporator be removed from the aircraft and returned to ZEE Systems, Inc. for modification. Allow for transport time to / from ZEE Systems, Inc. and reinstallation in the aircraft.

9.0 INSTRUCTIONS: The MCC must be removed from the aircraft and returned to ZEE Systems, Inc. for modification. Refer to STC information for removal and (re)installation instructions.

***CAUTION***

***SYSTEM IS UNDER PRESSURE. APPROPRIATE SAFETY MEASURES SHOULD BE TAKE WHEN SERVICING THIS EQUIPMENT. ONLY TRAINED PERSONNEL WITH SAFETY EQUIPMENT SHOULD PERFORM THESE DUTIES.***

***NOTE***

***IT IS UNLAWFUL TO RELEASE R-12 TO THE ATMOSPHERE. USE APPROVED RECOVERY/RECYCLE EQUIPMENT TO CAPTURE THE R-12. USE ONLY LAWFUL MEANS TO DISPOSE OF RECOVERED R-12. CHECK WITH LOCAL AGENCIES FOR APPROVED DISPOSAL PROCEDURES.***

***NOTE***

***CAP ALL LINES TO PREVENT CONTAMINANTS AND MOISTURE FROM ENTERING THE SYSTEM.***

***NOTE***

***USE A BACKUP WRENCH WHEN LOOSENING OR TIGHTENING FITTINGS. DO NOT OVER TIGHTEN.***

9.1 Recover the refrigerant from the system.

9.2 Disconnect and remove the Evaporator from the aircraft.

9.3 Modify the Evaporator in accordance with ZEE Systems, Inc. E.O. 78-001-2. This includes adding 3 oz. of PAG-100 oil to the coil prior to installation in the aircraft.

9.4 Install the modified Evaporator into the aircraft.

9.5 Service the system in accordance with ZEE Systems, Inc. SB R134-06.



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10.0 TESTING: Test the modified Evaporator in accordance with E.O. 78-001-2.

**NOTE**

***PAG OIL ABSORBS MOISTURE VERY QUICKLY. NEVER LEAVE THE SYSTEM OR OIL CONTAINER EXPOSED TO AIR FOR PROLONGED TIME. TIGHTLY RESEAL THE OIL CONTAINER AND SYSTEM AFTER EXPOSING THE OIL TO AIR. ANYTIME THE SYSTEM HAS BEEN OPENED EVACUATE AT A DEEP VACUUM FOR AT LEAST 1 (ONE) HOUR.***

10.2 The only field testing that may be required is to check for leaks. Before the Evaporator is reinstalled in the aircraft cap the suction fitting (No. 10 bulkhead fitting). Connect a bottle of dry nitrogen to the inlet on the TXV. Slowly introduce a static charge of 100 PSIG to the Evaporator. Check for leaks.

11.0 MAINTENANCE SCHEDULES:

EVERY 100 HRS	Check the inlet air filter. Clean filter with soap and water as necessary. Check coil fins. If debris covers the coil fins reducing air flow it may be necessary to remove the evaporator to clean the coil fins.
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12.0 IDENTIFICATION: After modification mark an 'X' in Block B of the MODIFICATION STATUS on the I.D. Plate.

13.0 RECORDS: Make appropriate log book entries.

14.0 REFERENCE MATERIAL: Refer to CMM SZ78, Evaporator Assembly for basic service instructions. Refer to Service Bulletin R134-06 for R-134a servicing instructions. Refer to ZEE Systems, Inc. E.O. 78-001-2. For online publications go to [www.zeeeco-zeesys.com](http://www.zeeeco-zeesys.com).

15.0 MATERIAL COST AND AVAILABILITY: Contact ZEE Systems, Inc. for pricing and availability. Cost will vary with the condition of the Evaporator to be modified.

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