# SERVICE LETTER



## AIR–CONDITIONING SYSTEM MAINTENANCE

**MODELS AFFECTED:** All MD900 helicopters.

This Service Letter is issued to make sure owners and operators correctly maintain the air–conditioning system. There has been a wide range of "times between failure" for refrigerant compressor assembly 900P3250303–105.

To make sure the air–conditioning system is correctly maintained and to keep the designed level of reliability, operators must follow the instructions for the maintenance, removal/replacement, and servicing of the compressor assembly.

**CAUTION** Failure to follow the instructions in Rotorcraft Maintenance Manual CSP–900RMM–2 (ref. Section 12–00–00 and Section 21–50–00) can have an effect on the warranty.

(1). Make sure the personnel that maintain and service the air–conditioning system have the necessary education and experience. The air–conditioning system has complex and specialized components that require specific knowledge.

(2). The receiver dehydrator must be replaced each time the air–conditioning system is opened.

(3). When the air–conditioning system is charged or evacuated, use the refrigerant recovery and recycling station (T701) (ref. Section 12–00–00, Air–Conditioning System Charging/Evacuation).

(4). Measure the refrigerant oil quantity removed during evacuation.

(5). Use only approved refrigerant oil (ref. CSP–SPM) in the air–conditioning system:

(a). Use Daphne Hermetic Oil 150CX [daphne hermetic oil (C116)] for R12 refrigerant systems.

(b). Use RG20, RS20, or Daphne Hermetic Oil PR [daphne hermetic oil (C117)] for R–134A refrigerant systems.

**CAUTION** Do not over–service the air–conditioning system with R12 refrigerant (C806) or R–134A refrigerant (C815). MDHI recommends the air–conditioning system be serviced with **0.5 lb (0.23 kg)** less than recommended by the RMM of R12 refrigerant (C806) or R–134A refrigerant (C815) for the first maintenance operational check.

(6). Follow the instructions in CSP–900RMM–2 (ref. Section 12–00–00 and Section 21–50–00).

(7). There is a window at the top of the receiver dehydrator and on later systems a sight glass in the refrigerant line near the servicing parts, that is used to make sure the air–conditioning system is serviced correctly. Follow the procedures in the applicable Rotorcraft Flight Manual and CSP–900RMM–2 to start the right engine and operate the air–conditioning system.

(a). Monitor the window (or the tubes near the evaporator) for bubbles.

(b). Slowly add R12 refrigerant (C806) or R–134A refrigerant (C815) until all bubbles are removed.

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(c). Do not add more than the total quantity of R12 refrigerant (C806) or R-134A refrigerant (C815) shown in CSP-900RMM-2 for the applicable system.

**CAUTION** Be careful when you install or remove the compressor assembly on/from the engine drive pad. Do not apply a load or allow a shock or impact on the splined drive shaft. This can damage the shear pin and cause an early shear pin failure.

(8). After installation of the compressor assembly (ref. Section 21-50-00), you also must internally clean the condenser, evaporator, and all hoses and tubes; and replace the receiver dehydrator.

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.