



INSTALLATION OF AIR CONDITIONING COMPRESSORS

General information regarding legal requirements

Diagnosis and installation works on the air conditioning systems are only to be conducted by qualified personnel. Legal as well as statutory stipulations have to be observed at all times.

Information regarding industrial safety

The general safety instructions in dealing with air conditioning systems as well as any safety instructions of the motor vehicle manufacturers have to be observed. Smoking during the handling of cooling agents and while working on the air conditioning system is prohibited. Safety glasses and protective gloves have to be worn.

Determination and elimination of cause of failure

Before the new compressor is installed, the cause of the defect of the old compressor has to be determined. Furthermore, all possible causes of defect within the air conditioning system as well as the periphery have to be remedied prior to the repair. This should prevent a new failure of the air conditioning system due to still existing damages in the air conditioning system.

Information regarding de-installation

In order to prevent the further intrusion of dirt and water into the air conditioning system, the connecting lines of the compressor have to be closed off during the modification.

Rinsing

A defect compressor usually results in the contamination of the air conditioning system. Rinsing of the entire system is therefore mandatory. In order to prevent possible damage to the new compressor it is necessary to remove the entire cooling agent circuit in a method corresponding with the individual situation (previous damages) in order to remove foreign matter (metal, granulate). After the rinsing it must be ensured that no residue of the rinsing liquid remains in the system - drying with nitrogen is recommended.

Amount of oil in compressor

The instructions of the motor vehicle manufacturer have to be observed regarding the amount of oil and viscosity. The oil in the compressor has to be drained completely and subsequently refilled according to the specifications of the manufacturer. The compressor has to be turned 10 x by hand prior to the installation. This achieves the even distribution of the oil throughout the compressor.

Installation

The respective tightening torque specified by the motor vehicle manufacturers as well as for the compressor and all other components of the air conditioning system has to be observed. New seals have to be applied to opened systems connections. Installed drive belts have to be checked regarding their correct fit (pulleys). The drive belts have to be aligned with all components of the belt drive. The drying cartridge has to be replaced after every opening of the system.

Working with cooling agents

Prior to filling the air conditioning system with the cooling agent R134a (observe manufacturer instructions regarding fill quantity), the air conditioning system has to be evacuated. The air conditioning system has to be refilled via the high pressure side (red connection). This must be observed to prevent a hydraulic lock in the compressor.

Start-up of new compressor

After starting the motor (switching on air conditioning system) the motor has to run at least 2 minutes without interruption. Subsequently, the air conditioning system is switched on. The centre jets in the vehicle have to be opened and the temperature set to max. cooling capacity. During the first commissioning the new compressor has to be switched on and off several times to test the function of the magnetic clutch as well as its control sync circuit. In the process, also the system pressures of the operation of the compressor have to be checked.

