



R406A

TECHNICAL BULLETIN

	<h2 style="margin: 0;">R-134a Retrofits Kits</h2>	<h2 style="margin: 0;">82-39</h2>
	<p>MODEL V12 w/ Harrison All w/ Sanden Compressors</p>	<h2 style="margin: 0;">Amended</h2>
	DATE 6/94	<h2 style="margin: 0;">9/97</h2>

Remove and destroy Bulletin 82-39, Amended 1/96
 Replace with this Bulletin.
 Revisions are marked with a bar.

ISSUE:

Jaguar engineered kits are available which convert R-12 charged air conditioning refrigerant systems to HFC R-134a systems.

Should Jaguar owners wish to convert their R-12 systems at their own expense, retrofit kits are available as shown below. Retrofitting procedures are shown in the Technical Guide - Air Conditioning System - HFC Refrigerant Retrofit - part Number JTP 425 (supplied to dealers 6/94).

NOTE: The primary changes involve the replacement of the existing compressor lubricating oil with an oil compatible with both HFC R-134a refrigerant and with the residual R-12 lubricating oil. It is not possible to completely flush R-12 type lubricating oil from the refrigerant system prior to changing to Ester oil and R-134a. Additionally, it is necessary to replace the input shaft seal of the Sanden compressor with a seal compatible with the R-134a refrigerant and oil as described in the Technical Guide. Harrison compressors do not require replacement of the shaft seal.

PARTS NUMBERS, APPLICATIONS, REPAIR TIMES

<u>PART NUMBER</u>	<u>COMPRESSOR TYPE</u>	<u>FITS</u>	<u>VIN RANGE</u>	<u>REPAIR TIME</u>
JLM 11610	Sanden 510/709	XJ40 - 3.6/4.0 1988-93	507471 - 667587	3.10 hrs.
	Sanden 709	XJS 4.0 1993-94	179740 - 190527	3.35 hrs.
	Sanden 709	XJS 6.0 1994	188105 - 190527	3.45 hrs.
JLM 11611	Harrison	Ser. III XJ12 5.3 1979	300001 - on	3.10 hrs.
		XJS V12 1979-93	100001 - 188104	3.10 hrs.



Kit
JLM 11610

JAGUAR XJ40 (Pre-90MY) AIR-CONDITIONING R-134a RETROFIT

Applicability

Jaguar XJ40 models in the VIN range: 507471 to 593883 (Pre-90MY).

Note: Vehicles covered by this instruction are fitted with a Sanden 510 compressor.

Pre-fitting Requirements

Open the driver side door and the bonnet.

Fit protective wing covers.

Reclaiming R-12 from the Air-conditioning System

Note: The reclamation of R-12 **must** be carried out in accordance with the instructions detailed in the operating manual provided with the charging station.

Position the R-12 air-conditioning charging station close to the vehicle.

Undo and remove the protective caps from the high and low pressure charging ports on the vehicle.

Position the R-12 air-conditioning charging station high and low pressure hoses to the vehicle.

Connect the low pressure hose (BLUE) to the vehicle low pressure charging port (1, Fig. 1).

Connect the high pressure hose (RED) to the vehicle high pressure charging port (2, Fig. 1).

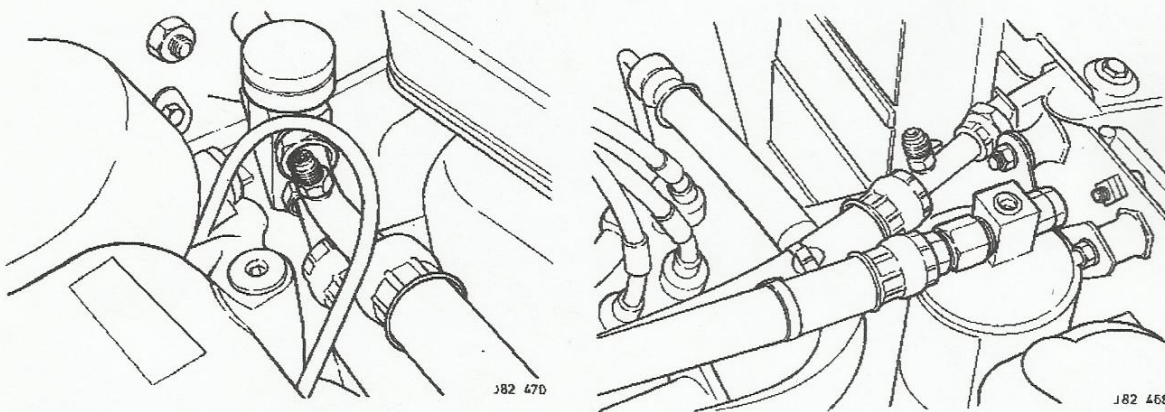


Fig. 1

From inside the vehicle, run the engine at idle speed for fifteen minutes with the air-conditioning controls set to manual, full cooling and high fan speed to establish the performance of the air-conditioning system. This operating condition also has the effect of collecting the majority of system mineral oil in the compressor.

Switch off the engine after fifteen minutes.

Disconnect the battery.

Switch the R-12 air-conditioning charging station to the recovery/reclaim mode.

Recover the R-12 refrigerant from the vehicle air-conditioning system.

Place suitable container under the charging station oil drain outlet and collect all oil recovered with the R-12 refrigerant during reclamation.

Isolate the R-12 air-conditioning charging station from the vehicle *in accordance with the instructions provided in the charging station operating manual.*

Removing the Air-conditioning System Compressor

Undo and remove the bolt securing the inlet and outlet port to the compressor.

Displace the expansion valve to compressor hose at the compressor and fit a suitable blanking plug to the open end of the hose.

Displace and remove the muffler from the compressor.

Remove the compressor port O-ring seals.

Fit a blanking plate to the rear of the compressor and secure in position with a bolt.

Place a suitable container beneath the muffler and reposition the muffler to allow oil to drain into the container.

Fit suitable blanking plugs to the muffler ports.

Cut and remove the tie straps securing the drive clutch coil harness.

Disconnect the drive clutch coil multi-plug connector.

Disconnect the compressor low pressure switch harness multi-plug.

Undo and remove the nut from the compressor pivot bolt (1, Fig. 2).

Raise the vehicle on ramps.

Slacken the trunnion nut and bolt (2, Fig. 2).

Undo and remove the nut and bolt securing the stabiling link (3, Fig. 2).

Slacken the nut and bolt securing the drive belt adjuster rod (4, Fig. 2).

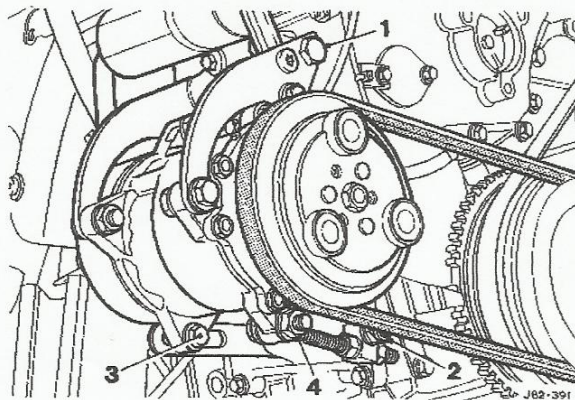


Fig. 2

Undo the adjuster nut.

Pivot the compressor to release the tension on the drive belt.

Remove the bolt securing the adjuster rod and remove the adjuster rod.

Remove the drive belt.

Pivot the compressor from the engine.

Displace and remove the pivot bolt assembly.

Displace and remove the compressor assembly and place on a clean workbench.

Draining the Compressor

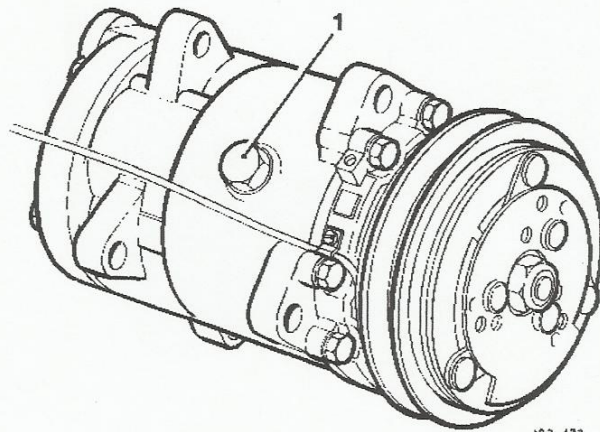
Place a suitable container on the workbench.

Undo and remove the bolt securing the blanking plate to the compressor.

Displace and remove the blanking plate.

Undo and remove the compressor sump plug (1, Fig. 3).

Tip the compressor and drain the oil into the container.



182 472

Fig. 3

Compressor Front Seal Renewal

The front seal on this type of compressor must be removed because it is not compatible with R-134a refrigerant. The new, R-134a compatible, seal from the kit must be fitted in its place.

Secure the compressor in a suitable vice, taking care not to damage the compressor.

Fit the clutch drive service tool JD146-1 (1, Fig. 4) to the compressor and tighten the tool securing bolts.

Fit the service tool JD146-2 (Fig. 4) to the compressor.

Fit the tommy bar (Fig. 4).

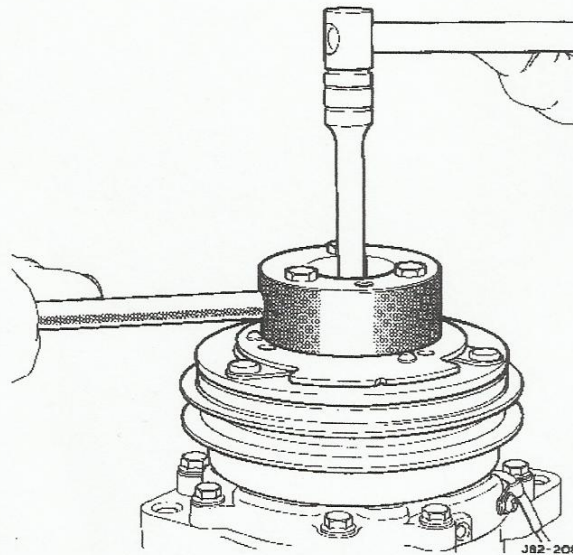


Fig. 4

Undo and remove the nut securing the clutch plate.

Fit the service tool JD146-3.

Tighten the tool centre bolt (Fig. 5) to remove the drive clutch front plate.

Undo and remove the bolts securing the service tool to the front plate.

Remove all service tools.

Place the clutch drive aside.

Displace and remove the Woodruff key from the compressor shaft.

Displace and remove the felt ring from the compressor.

Displace and remove the shims.

Displace and remove the seal seat retaining snap ring.

Fit tool JD147 (Fig. 6) to the seal seat.

Displace and remove the seal seat from the compressor.

Displace and remove the shaft seal O-ring.