CAR A/C SYSTEM DIAGNOSIS TABLE

LOW SIDE GAUGE (SUCTION)	LOW SIDE GAUGE (SUCTION)	POSSIBLE CAUSE	NOTES / CHECK LIST
High	High	Over-charged with Refrigerant	
		Condenser malfunction (restriction)	Partial or total internal blockage
		Inadequate air-flow	Clogged condenser finning; electric fan not operating or reversed; viscous fan not operating correctly; obstruction - insect screen, bull-bar, spotlights, oil cooler
		TX valve stuck open	Rare, and normally does not produce very high pressures
		Restriction in high side	Only if restriction is between discharge port and receiver-drier inlet. Restrictions after the inlet will cause low pressures on both sides.
		Excessive air and/or moisture	Also indicated by excessive bubbles in sight glass (use as guide with R134a)
High	Low	Compressor malfunction	Leakage between suction and discharge valves/cylinders
High	Slightly low to normal	POA/STV/EPR malfunction	POA/STV/EPR stuck closed, or blocked
Normal to slightly high	Normal to slightly high	Small amount of air and/or moisture	
Normal	Normal	Excessive moisture in system; faulty or maladjusted thermostat	May exhibit tiny bubbles may fluctuate (low-normal-high) on low side gauge
Normal	Low - normal	Partial restriction in high side between receiver-drier pick-up tube and evaporator outlet; partial restriction in TX valve or evaporator	
Normal	Low - normal	Low refrigerant charge; restriction on high side	TX valve blocked; TX valve stuck closed; blockage in evaporator coil, or restriction in receiver - drier

PLEASE NOTE: Ambient temperature, system type and refrigerant type must be taken into account when assessing whether gauge readings are high or low. Systems with evaporator controls (poast/stv/epr) will normally show a low-side reading of about 200 kpa (30psi) regardless of ambient temperature.

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1800 15 15 15!

A: 376 South Road, Richmond SA 5033
W: www.highgateair.com.au

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