



BASIC COURSE FUNDAMENTALS OF AUTOMOTIVE AIR CONDITIONING

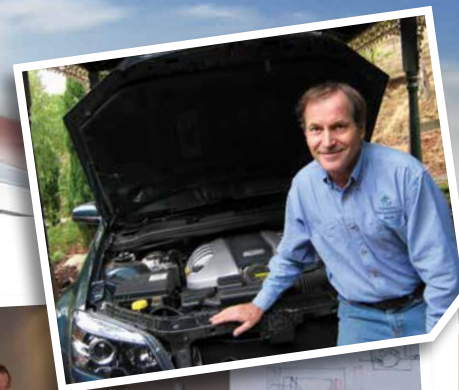
COURSE OUTLINE

This is a crucial course for all automotive technicians; whether you are new to the industry, or just haven't had the opportunity to undertake comprehensive system pressure/temperature diagnostic training before. With the large variation of systems currently on the market, gauge recognition alone can no longer be relied upon to analyse charge rates, or perform system diagnostics.

Duration = 8 hours (1 Day)

CONTENT

- Componentry and system layout
- Full pressure and temperature analysis of the system
- Reading and analysing gauges correctly (both pressure and temperature)
- Basic fault diagnosis of systems
- Full servicing procedures
- Servicing equipment, recommendations and guidelines
- Critical charging of systems (when the charge quantity is not known)
- Analysing charge rates by pressure / temperature analysis and pipe "feel"
- Overviews of system types – TX Valve, Expansion Tube, Variable Pumps and full Electronic Clutchless Systems
- Full training manuals are provided with this course
- 1234YF Systems



ADVANCED DIAGNOSTIC COURSE ANALYSIS OF AUTOMOTIVE AIR CONDITIONING SYSTEMS

COURSE OUTLINE

This course is an extension of the basic fundamentals course. It covers full diagnostic techniques for all automotive and air conditioning systems currently fitted to road vehicles.

This is an essential course for anybody involved in the service and repair of automotive air conditioning systems. Comprehensive diagnostic manuals are provided which will specifically address TX Valve, Expansion (Orifice) Tube Systems and Variable Displacement Compressors. This course also utilises a considerable amount of supervised practical and group work.

Duration = 8 hours (1 Day)

CONTENT

- A review of pressure and temperature analysis of systems
- Detailed operation of the cycling clutch thermostatic expansion valve system
- Detailed operation of the Expansion/Orifice Tube systems (There are three variations of the basic system)
- Detailed operation of mechanical Variable Displacement compressor systems
- Full diagnosis of all three systems including system (component) faults, charge analysis and performance analysis
- Special attention is given to the correct analysis of variable displacement compressor failures (a large number of compressors are replaced unnecessarily due to other system faults)
- 1234YF Systems

EARTHMOVING & AGRICULTURAL AIR CONDITIONING SYSTEMS

COURSE OUTLINE

This course is dedicated to the diagnosis and evaluation of mobile air-conditioning systems that are used in off-road applications. These systems are in many cases different from 'ordinary' automotive systems, as they can often suffer from pressure drops, flow restrictions, incorrect pipe sizing and / or poor design, that limit the capacity especially in high humidity conditions. In this course we specifically address diagnostic procedures, pressure / temperature analysis, performance evaluation, capacity and efficiency analysis.

You may have systems that lack performance, or that suffer from low capacity that you cannot repair without a component replacement / modification.

Duration = 8 hours (1 Day)

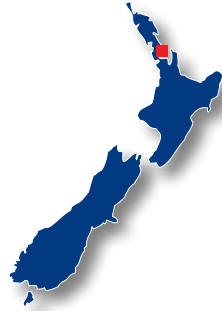
CONTENT

- A review of pressure / temperature analysis of systems
- Capacity, efficiency, performance evaluation and diagnosis
- Flow analysis, pressure drop analysis, hose sizing
- Gauge analysis to identify excessive pressure drops, incorrect hose size etc
- Data logging of performance
- Correct pump sizing
- TX Valve sizing, superheat and correct system matching
- Identifying condenser limitations, correct sizing, sub-cool and pressure analysis
- Identifying evaporator limitations, blockages, and flow analysis

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NORTH ISLAND

Waipuna Hotel & Conference Centre
58 Waipuna Road, Mt Wellington
Auckland
www.waipunahotel.co.nz
Ph (09) 526 3000



Dates/Courses

FUNDAMENTALS OF AUTOMOTIVE AIR CONDITIONING Fri 25th August

FUNDAMENTALS OF AUTOMOTIVE AIR CONDITIONING Sat 26th August

ANALYSIS OF AUTOMOTIVE AIR CONDITIONING SYSTEMS Sun 27th August

EARTHMOVING AND AGRICULTURAL AIR CONDITIONING SYSTEMS Mon 28th August

Registration From 7:30am | **Courses Start** 8:00am | **Finish** 5:00pm

SOUTH ISLAND

Chateau on the Park - Christchurch, a DoubleTree by Hilton
Corner Deans Ave & Kilmarnock Street, Riccarton
Christchurch
www.chateau-park.co.nz
Ph (03) 348 8999



Dates/Courses

FUNDAMENTALS OF AUTOMOTIVE AIR CONDITIONING Fri 1st September

ANALYSIS OF AUTOMOTIVE AIR CONDITIONING SYSTEMS Sat 2nd September

EARTHMOVING AND AGRICULTURAL AIR CONDITIONING SYSTEMS Sun 3rd September

Registration From 7:30am | **Courses Start** 8:00am | **Finish** 5:00pm

For more details please contact Paul Findlater on (09) 573 0680.
Alternatively, for course bookings free call 0800 445 889 or fax the attached Attendance/Remittance form to 0800 820 012 or email Auckland@ashdown-ingram.co.nz

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AUTOMOTIVE AIR CONDITIONING INDUSTRY TRAINING

2017



Conducted by Grant Hand - Australasia's leading automotive trainer