

# OEX<sup>®</sup> 2023 COURSES

## AUTOMOTIVE AIR CONDITIONING INDUSTRY TRAINING

Conducted by Grant Hand - Australasia's leading automotive trainer

Partners:



## 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 analyze 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 analyzing 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)
- Analyzing 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
- R1234yf 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)
- R1234yf 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)**

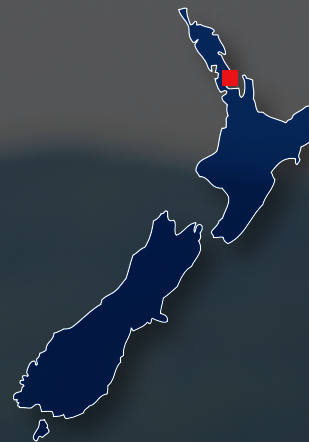
## CONTENT

- 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

# OEX<sup>®</sup> 2023 COURSES

## NORTH ISLAND

**Waipuna Hotel & Conference Centre**  
58 Waipuna Rd, Mt Wellington, Auckland  
<https://www.waipunahotel.co.nz>  
Ph (09) 526 3000



### Dates/Courses

Fundamentals of Automotive Air Conditioning .....	Saturday 23rd September
Fundamentals of Automotive Air Conditioning .....	Sunday 24th September
Analysis of Automotive Air Conditioning Systems .....	Monday 25th September
Earthmoving & Agricultural Air Conditioning Systems .....	Tuesday 26th September

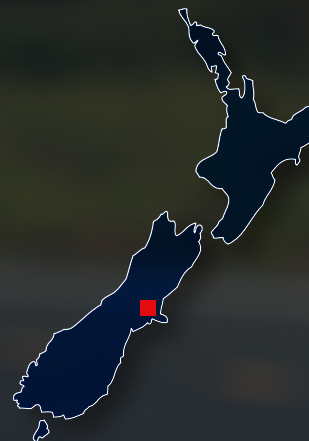
**Registration** From 7:30am

**Courses Start** 8:00am

**Finish** 5:00pm

## SOUTH ISLAND

**Sudima Christchurch Airport**  
550 Memorial Avenue, Christchurch  
[www.sudimahotels.com/locations/christchurch-airport/](http://www.sudimahotels.com/locations/christchurch-airport/)  
Ph (03) 358 3139



### Dates/Courses

Fundamentals of Automotive Air Conditioning .....	Friday 29th September
Fundamentals of Automotive Air Conditioning .....	Saturday 30th September
Analysis of Automotive Air Conditioning Systems .....	Sunday 1st October
Earthmoving & Agricultural Air Conditioning Systems .....	Monday 2nd October

**Registration** From 7:30am

**Courses Start** 8:00am

**Finish** 5:00pm

For more details please contact Ian Murie on 027 836 4822.  
For course bookings email the booking form to [rparker@gpcasiapac.com](mailto:rparker@gpcasiapac.com)

# Air Conditioning Training 2023

## Attendance/Remittance



### NORTH ISLAND (Waipuna Hotel & Conference Centre)

- I wish to attend the **Fundamentals of Automotive Air Conditioning** course  
**Saturday 23rd September** .....  \$595.00 + GST
- I wish to attend the **Fundamentals of Automotive Air Conditioning** course  
**Sunday 24th September** .....  \$595.00 + GST
- I wish to attend the **Analysis of Automotive Air Conditioning Systems** course  
**Monday 25th September** .....  \$595.00 + GST
- I wish to attend the **Earthmoving and Agricultural Air Conditioning Systems** course  
**Tuesday 26th September** .....  \$595.00 + GST

### SOUTH ISLAND (Sudima Christchurch Airport)

- I wish to attend the **Fundamentals of Automotive Air Conditioning** course  
**Friday 29th September** .....  \$595.00 + GST
- I wish to attend the **Fundamentals of Automotive Air Conditioning** course  
**Saturday 30th September** .....  \$595.00 + GST
- I wish to attend the **Analysis of Automotive Air Conditioning Systems** course  
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Please charge my account:

	Branch	Order Number
<input type="checkbox"/> Repco	.....	.....
<input type="checkbox"/> NAPA Auto Parts	.....	.....
<input type="checkbox"/> Sulco	.....	.....

OR please charge my credit card:

Credit Card Number	Expiry Date
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

Attendee Name .....	Ph No: .....
Attendee Name .....	Ph No: .....
Company Name .....	Ph No: .....
Email .....	
Address .....	

Any special dietary requirements? .....

- Registration opens at 7.30am and courses run from 8am to 5pm.
- Morning tea, lunch, and afternoon tea are supplied.
- Please note that, as advanced bookings on facilities and catering are required, no refunds can be made 10 business days prior to the course.

**For more details please contact Ian Murie on 027 836 4822.**  
**For course bookings email this form to [rparker@gpcasiapac.com](mailto:rparker@gpcasiapac.com)**