

ACD

Course  
Introduction

# Kia Air Conditioning Diagnosis



SERVICE TRAINING

## **SAFETY**

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all motor vehicles as well as the personal safety of the individual doing the repair. There are numerous variations in procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. This manual cannot possibly anticipate all such variations and provide advice or caution to each. Accordingly, anyone who departs from the instruction provided in this manual must first establish that he compromises neither his personal safety nor the vehicle integrity by his choice of methods, tools, or parts. The following list contains general warnings that should always be followed while working on a vehicle.

- Always wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires underbody work.
- Be sure ignition switch is always off unless otherwise specified by a procedure.
- Set the parking brake when working on the vehicle.
- Operate the engine only in a well ventilated area.
- Keep clear of moving parts when engine is running
- To prevent serious burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.
- Do not smoke while working on a vehicle.

**WELCOME TO:****Kia Air Conditioning Diagnosis**

- Hands-on practice with Kia diagnostic tools.
- Review of available resources.

Course length is one day.

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**COURSE INTRODUCTION**

This course provides an opportunity for observed **hands-on practice** diagnosing the cause of Kia air conditioning complaints using various types of tests and diagnostic tools. In preparation to meet this goal, you will:

- Identify normal operation of a Kia air conditioning system.
- Learn to use the Kia 5-step diagnosis process to locate faults.
- Gain experience using an electronic (halogen) leak detector to help isolate faults.
- Gain experience using mechanical and pressure tests to isolate faults.

In addition, you will gain hands-on experience using an A/C recovery, recycling, and recharging station.

As an addendum to this course, you will be given the opportunity to use the ASE Refrigerant Recovery and Recycling Review and Quiz to obtain an ASE certification in that area.

The length of the course is one day.

**COURSE GOAL**

To provide Kia technicians with the skills and knowledge required to diagnose and repair a vehicle that has an air conditioning system malfunction.

**PREREQUISITES**

1. Successful completion of the Kia Product Familiarization course.
2. ASE A7, or equivalent, is highly recommended.

To provide Kia technicians with the skills and knowledge required to diagnose and repair a vehicle that has an air conditioning system malfunction.

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- Helps you focus your efforts in the areas that are of the most value to you.

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### 1. Student Learning Guide and Workbook:

- Explains theory
- Can be used for self-study

### 2. Guided Practice:

- Provides hands-on experience
- Helps develop troubleshooting skills

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## MODULAR FORMAT

As a Kia service professional, you understand the importance of staying current with today's complex automotive technology. The amount of training that a technician needs depends on factors like technical background, product knowledge and practical experience. To meet your needs, we have developed a **modular** training system to help you focus your efforts in the areas that are of the most value to you.

## TWO TYPES OF MODULES

### 1. Student Learning Guide and Workbook:

These modules explain subjects from basic concepts to the most complex technology we offer. Obtaining a working knowledge of any system or component is a prerequisite to effectively diagnose system malfunctions. These modules may also include classroom exercises that you will complete as a group.

### 2. Guided Practice:

These modules provide hands-on experience, building on the theory and diagnosis topics covered earlier.

These modules also help you develop troubleshooting skills and often involve the use of service manuals, ETM's, technical service bulletins, newsletters, and other resources as an integral approach to your overall diagnostic strategy.

## MODULE SYMBOLS

VIDEO	When you see this symbol, view the appropriate video segment for important concepts or procedures.
ACTIVITY	Activities support critical learning objectives. Performing these procedures will help you master the material.
REFERENCE	This symbol shows when you must refer to additional publications to complete the questions or module activity.
FEEDBACK	Most modules contain a Self-Test or an Instructor Sign-off to give you feedback on your strengths and weaknesses. Gauge your level of expertise by your ability to answer the questions and instructor's feedback. Review appropriate areas as needed.

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Several symbols have been designed to keep you on track as you complete each module. These symbols are shown in the illustration above.

### COURSE SCHEDULE

When you attend a modular training course, each module will be part of a structured learning plan illustrated in the **Course Activities Guide** that is on the next page.

After completing the required modules, you will take a **Final Test** to verify your understanding of the course subject areas that were covered in the course.

- Course Activities Guide
- Final Test

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<b>KIA AIR CONDITIONING DIAGNOSIS - COURSE ACTIVITY GUIDE</b>			
TIME	LOCATION	TYPE INST.	SUBJECT MATTER
8:00 - 8:30	Classroom	Discussion	Introductions & Course Goals
8.30 - 9:30	Classroom	Discussion/Video	Kia Air conditioning Systems
<b>9:30 - 9:45</b>	<b>Break</b>		
9:45 - 10:15	Classroom	Discussion/Video	Kia Air conditioning Systems (cont'd)
10:15 - 12:00 Techniques	Shop	Activity	Kia A/C System Diagnostic
<b>12:00 - 1:00 Lunch</b>			
1:00 - 1:30	Classroom	Review/Quiz	ASE Refrigerant Recovery & Recycling
1:30 - 2:30	Shop	Activity	Kia A/C System Servicing
<b>2:30 - 2:45</b>	<b>Break</b>		
2:45 - 4:00	Shop	Activity	Kia A/C System Servicing

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- **Take notes and make drawings**
- **Work as a team**
- **Learn from mistakes**
- **Ask questions**
- **Be an active participant**

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### GETTING THE MOST OUT OF THE COURSE

Use the course materials in any way that will help you remember the material. Make notes or drawings on these materials to help you remember details.

One of Kia's main goal is to provide as much individual instruction as possible. If you do not understand something in the classroom, ask your instructor to clarify the point.

During hands-on practice sessions, you will often be part of a working team. You will only learn from the experience if you **actively** participate.

This training course is an opportunity to learn advanced skills successfully in a controlled environment under the guidance of a trained Kia instructor. Have a good experience here, and return to your dealership with confidence in your own abilities as a trained Kia professional.

- Guided Practice = 65%
  - Final test = 25%
  - Class participation = 10%
- Total = 100%
- 80% required for course credit

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## COURSE CREDIT

Course credit will be granted by a Kia Service Training Instructor when all of the criteria for course completion has been met.

Because our technical training is performance-based, hands-on practice will make up **65%** of your course credit. Each Guided Practice module lists specific performance objectives that are the basis for scoring. The instructor will observe and evaluate your performance, coaching you when necessary.

Additional factors that may affect this score are safe and appropriate use of tools and equipment and following written and verbal instructions.

Each Guided Practice Module is assigned a relative “point” value, depending on the difficulty of the material.

**The final test**, administered by the instructor, makes up **25%** of your course credit.

The instructor will evaluate the degree to which you contribute to discussions, offer your experience, or simply ask questions about something you don’t understand. Participation also takes into account your professional conduct, and working with teammates during classroom and shop practice activities. This counts for **10%** of your course credit.

The sum of the above scores will determine your course achievement performance.

**A minimum score of 80% is required for course credit.**





