

## Valeo 814394

# Valeo 814394 Condenser User Manual for Hyundai Elantra (2011-2013)

## INTRODUCTION

This manual provides essential information regarding the Valeo 814394 AC Condenser, designed for Hyundai Elantra models manufactured between 2011 and 2013. It covers product features, installation considerations, maintenance, troubleshooting, and technical specifications to ensure proper understanding and use of the component within your vehicle's air conditioning system.

## PRODUCT OVERVIEW

The Valeo 814394 Condenser is a critical component of your vehicle's air conditioning system, responsible for dissipating heat from the refrigerant. It is engineered to meet OEM specifications for a precise fit and reliable performance.

### Key Features:

- **Maximum Heat Dissipation:** Engineered for efficient cooling and rapid heat transfer, optimizing A/C system performance.
- **High-Quality Construction:** Manufactured with lightweight aluminum and corrosion-resistant coatings for enhanced durability.
- **OEM-Fitment & Reliability:** Designed to match original equipment specifications for accurate fitment and consistent cooling.
- **Leak-Resistant Design:** Features precision-welded connections and durable tubing to prevent refrigerant leaks and pressure loss.
- **Easy Installation & Compatibility:** Direct-fit design facilitates a smooth replacement process without modifications.

### What's in the Box:

- (1) Valeo 814394 Condenser

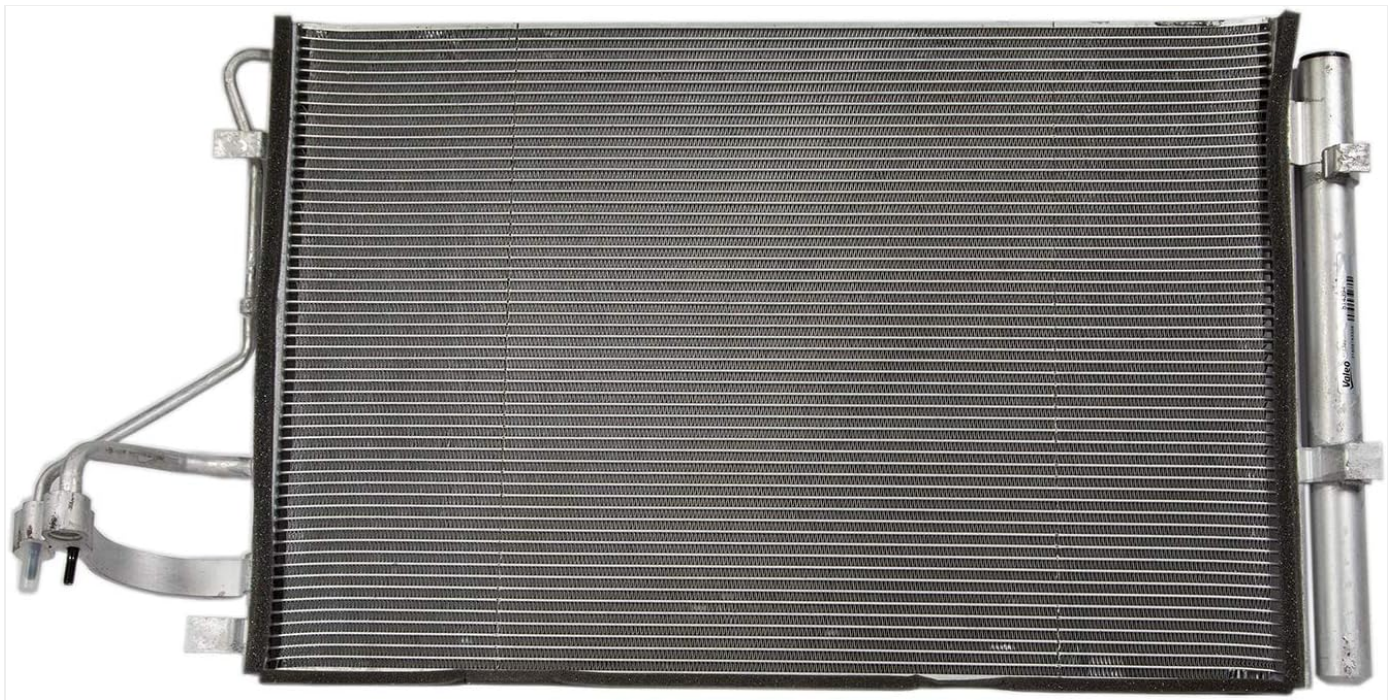


Figure 1: Front view of the Valeo 814394 AC Condenser. This image shows the primary cooling fins and inlet/outlet connections.

## INSTALLATION AND SETUP

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Installation of an automotive AC condenser requires specialized tools and knowledge of automotive air conditioning systems. It is strongly recommended that installation be performed by a certified automotive technician to ensure proper function, prevent damage to the component or vehicle, and comply with refrigerant handling regulations.

### General Considerations for Professional Installation:

- **Safety First:** Ensure the vehicle is off, cool, and properly supported. Disconnect the battery.
- **Refrigerant Recovery:** The existing refrigerant must be safely recovered by a certified technician using appropriate equipment before disconnecting any AC lines.
- **Component Removal:** Carefully remove the old condenser, noting the routing of lines and mounting points.
- **New Condenser Installation:** Install the new Valeo 814394 condenser, ensuring all connections are clean and new O-rings are used. Torque specifications for fittings must be followed.
- **System Evacuation:** After installation, the AC system must be evacuated to remove air and moisture.
- **Refrigerant Recharge:** Recharge the system with the correct type and amount of refrigerant and lubricating oil as specified by the vehicle manufacturer.
- **Leak Detection:** Perform a thorough leak check to ensure all connections are sealed.





Figure 2: Side view of the Valeo 814394 AC Condenser, highlighting the mounting brackets and connection points.

## OPERATING PRINCIPLES

The condenser is a heat exchanger that plays a vital role in the vehicle's air conditioning cycle. After the compressor pressurizes and heats the refrigerant, it flows into the condenser. Here, the hot, high-pressure gaseous refrigerant releases its heat to the cooler ambient air passing over the condenser fins. As it cools, the refrigerant condenses into a high-pressure liquid, which then moves to the expansion valve and evaporator to continue the cooling process.

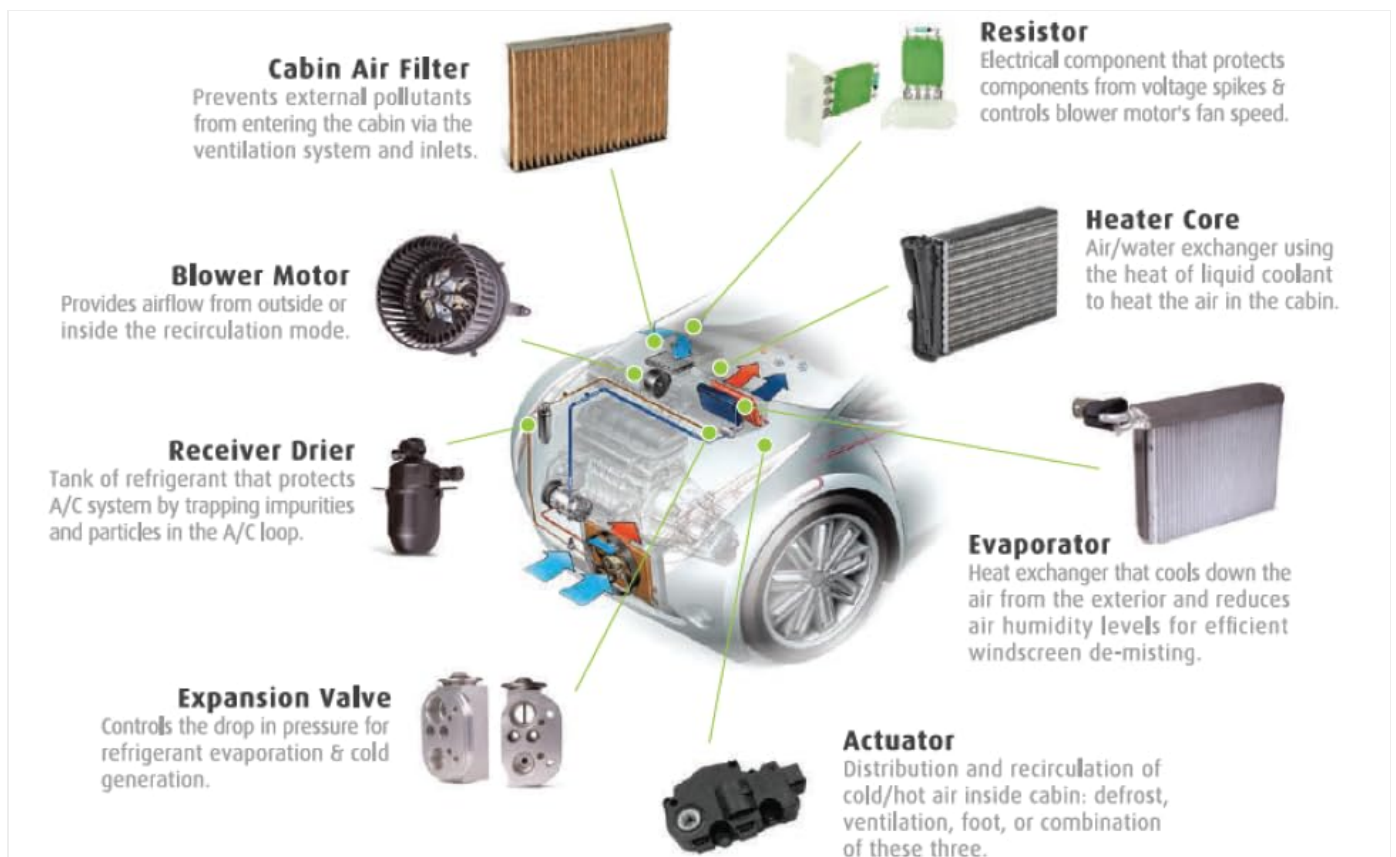


Figure 3: Diagram illustrating the various components of an automotive air conditioning system, including the condenser's position and function within the cooling cycle.

## Maintenance

Proper maintenance of your vehicle's AC system, including the condenser, can extend its lifespan and ensure optimal performance. While the condenser itself requires minimal direct maintenance, regular checks of the overall system are beneficial.

### Recommended Maintenance Practices:

- **Keep Fins Clean:** Periodically inspect the condenser fins (visible through the front grille) for debris such as leaves, insects, or dirt. Gently clean them with a soft brush or low-pressure water spray to ensure unrestricted airflow. Avoid high-pressure washers, which can bend the delicate fins.
- **Check for Damage:** Inspect the condenser for any signs of physical damage, such as bent fins, dents, or corrosion, which can impair its efficiency.
- **System Performance Check:** Have your AC system professionally checked annually, especially before warm weather. This includes checking refrigerant levels and overall system integrity.
- **Address Leaks Promptly:** If you suspect a refrigerant leak (e.g., reduced cooling performance), have it diagnosed and repaired by a professional immediately.

## Troubleshooting

If your vehicle's air conditioning system is not performing as expected, the condenser may be a contributing factor. However, many AC issues can stem from other components. Professional diagnosis is always recommended.

### Common Symptoms and Potential Condenser-Related Causes:

- **Poor Cooling Performance:**
  - *Clogged or Damaged Fins:* Restricted airflow over the condenser reduces its ability to dissipate heat.
  - *Internal Blockage:* Debris within the AC system can restrict refrigerant flow through the condenser.
- **Refrigerant Leaks:**
  - *Physical Damage:* Punctures from road debris or corrosion can create leaks in the condenser tubing.
  - *Faulty Connections:* Improperly sealed fittings during installation can lead to leaks.
- **Compressor Overheating/Failure:**
  - *Inefficient Heat Dissipation:* A compromised condenser can cause high head pressure in the system, overworking the compressor.

If you experience any of these symptoms, consult a qualified automotive technician for a thorough inspection and repair.

## Specifications

The following table details the technical specifications for the Valeo 814394 Condenser:

Specification	Detail
Manufacturer	Valeo
Model Number	814394
Compatible Vehicles	Hyundai Elantra (2011-2013)
Item Weight	4.84 pounds (2.2 Kilograms)

Specification	Detail
Product Dimensions	11.72 x 7.94 x 3.78 inches
Material	Aluminum (with corrosion-resistant coatings)
OEM Part Number	976063X000; 3967; HY3030146
Voltage	12 Volts (System)
Wattage	85 KW (System)
Color	Gray

## WARRANTY AND SUPPORT

For specific warranty terms and conditions related to the Valeo 814394 Condenser, please refer to the documentation provided with your purchase or contact Valeo directly. Warranty coverage typically addresses manufacturing defects and material flaws under normal operating conditions.

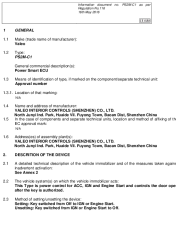

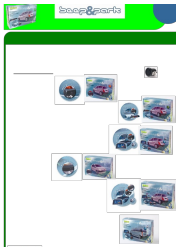
For technical support or inquiries, please contact Valeo customer service through their official website or the retailer from whom the product was purchased.

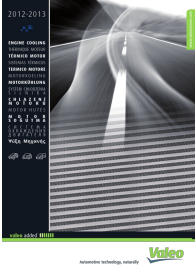
**Manufacturer:** Valeo

**Model:** 814394



### Related Documents - 814394

	<p><a href="#">Valeo PS2M-C1 Power Smart ECU Technical Specification and User Information</a></p> <p>Technical documentation for the Valeo PS2M-C1 Power Smart ECU (PEPS), detailing its functionality as a passive entry and passive start system, manufacturer information, and regulatory compliance statements.</p>
	<p><a href="#">Valeo HFM2 Keyless Entry and Start System Owner's Manual</a></p> <p>Comprehensive owner's manual excerpt for the Valeo HFM2 system, detailing keyless entry, remote control functions, locking/unlocking procedures, alarm system operation, and engine starting/stopping for vehicles.</p>
	<p><a href="#">Valeo beep&amp;park Parking Assistance System User Guide</a></p> <p>Comprehensive user guide for the Valeo beep&amp;park parking assistance system, detailing product descriptions, kit configurations, utilization, alert activation, sensor diagnostics, and recommendations for safe and effective use.</p>



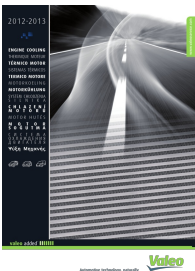
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