

2.8 kg

Vehicle selection

 JAGUAR JAGUAR DAIMLER	 Jeep JEEP	 KIA	 LAND ROVER	 LEXUS
 MG	 MAZDA	 Mercedes-Benz MERCEDES-BENZ		
 NISSAN	 OPEL VAUXHALL	 PEUGEOT		
	Australia			

AIR-NEX
R134a
AECS
BrainBee

TO AC
OR NOT
TO AC

AECS
AUTOMOTIVE EQUIPMENT & TRAINING
06 874 9077 | INFO@AECS.NET | AECS.NET



TO AC OR NOT TO AC

As an equipment and training provider AECS Ltd (est.1999) has been at the forefront of AC equipment, training, service, and repair.

We supply the automotive, commercial, agricultural, and off-highway vehicle industry with the equipment to do the best possible job in the most efficient way and with the least impact on the environment. We also train technicians and workshop owners across the country in the how-to. Making what appears to be a difficult job easy! How to charge, how to be efficient, how to be confident in what you are doing, be it on a traditional vehicle or on the most sophisticated EV with a 400V exposed terminal compressor heat pump system.



AECS TRAINING

RECENTLY COMPLETED
TRAINING: AIRCON SYSTEMS
(ECAC1-1)

We discuss the topic almost daily with people from across the industry and I am finding that many do not indulge into the easy and healthy returns that can be harvested from aircon work. They leave the spoils to contractors and "the guy down the road". It is in their words easier to get a contractor in and add a percentage. However, the **utter convenience and simplicity** of doing the work yourself when you are ready and not having to wait hours or sometimes days for the contractor to fit you in should not be underestimated.

Well, let's look at that! You might change your mind if you allow me to explain how profitable an aircon service can be.

The Process

AC work is EASY! Easier than even a straight lube and filter service, especially with the right equipment. Straight AC servicing can be done at the same time as the rest of the work gets done on a vehicle.

I will take you through a typical procedure with the Brainbee 9350 in a few large steps as if we were together in training and I'll endeavour to keep it short. We're going to use the fact that on this vehicle the condenser unit needs replacing because there is evidence of a leak between the cooling fins.

Please note: Brainbee 9350 is equipment that can be used for traditional AC systems on **cars, trucks, tractors, diggers**, and a whole lot more besides and if that doesn't tick every box for you it also comes ready to work on the High Voltage systems on hybrids and EVs.

To be able to work on these types of vehicles the machine absolutely must have a self-flushing function. The cost of doing this with the unsuitable or manual type equipment will run into thousands of \$\$\$\$\$. Brainbee 9350 can also be configured for R134a, R1234yf or R513a refrigerant.

Let's get into it...in a case where the condenser unit is to be removed/replaced, the following working procedure needs to be followed (I have indicated the difficulty grade in each step):

Pre-Inspection

Before any connection is made between the aircon equipment and vehicle, you should always use a stop leak detector kit. AC Stop Leak is proven to break AC equipment and should never be a permanent fix for AC leaks. A simple test can quickly show the presence of stop leak. This will save time, heartache, and money. We say, "always look up (at the flow gauge) before you hook up" (hook-up your aircon equipment).



In the stop leak test above you can see the ball is lifted and is holding steady in the flow gauge, showing stop leak is not present in this system. A positive test is indicated by a reduced or fully restricted flow. Clear and simple.

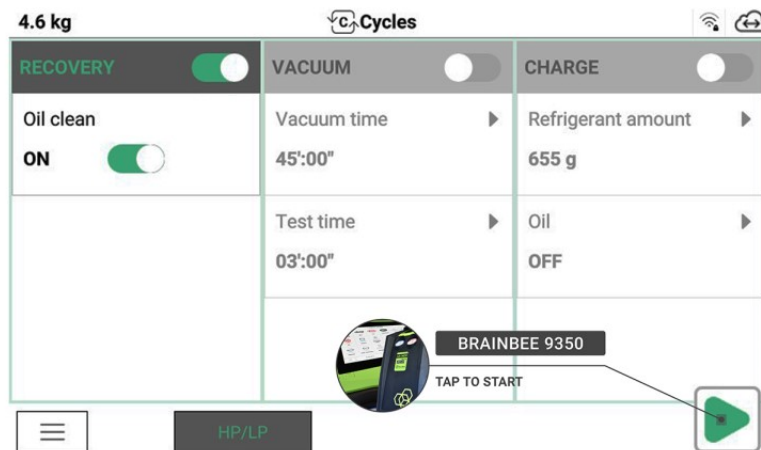
Step 1 - Connection

Hook up the 2 couplers to the service connectors on the vehicle (difficulty grade 3).



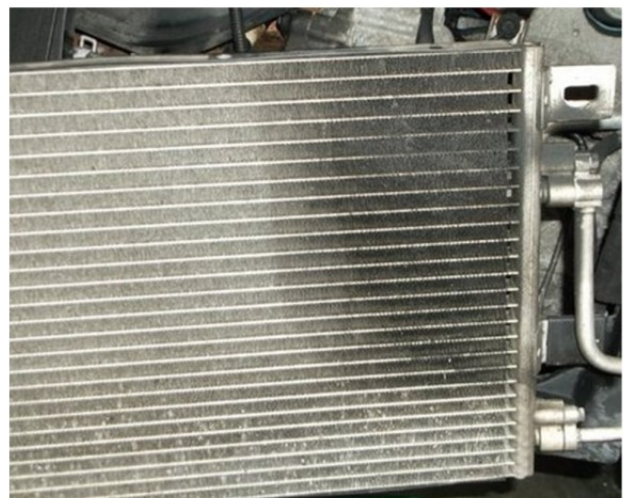
Step 2 - Recovery

Select on a touch screen “Recovery” and press the start button (difficulty grade 1). The machine will now clear the hoses and couplers and will proceed with recovery of the refrigerant. The refrigerant will be removed, filtered, dried and separated from any oil it may recover during the recovery process. The refrigerant is then placed in the onboard storage tank inside the machine ready to use again. The recovered refrigerant and waste oil are automatically weighed. This information will be added to the customer report generated at the end of the whole procedure.



Step 3 - Remove

Remove the condenser, tape up fittings (difficulty grade 8).



Step 4 - Replace

Place the new condenser back on its mounts. Remove the tape from the ends of the pipes, replace O-rings and refit pipes back onto the condenser. (difficulty grade 10).

4.2 kg

Vehicle selection

MODEL YEAR	ENGINE CODE	EQUIPMENT DETAILS
2010-13	EM61	
2013-18	EM57	
2013-18	EM57	<input checked="" type="checkbox"/> With heat pump (Denso ES27C compressor)

CAUTION REQUIRED WITH ELECTRIC VEHICLES



Step 5 - Recharge

Again, using the touch screen control select vacuum to clear the system of any water and then recharge the AC system with the correct amount of oil and refrigerant (difficulty grade 2).

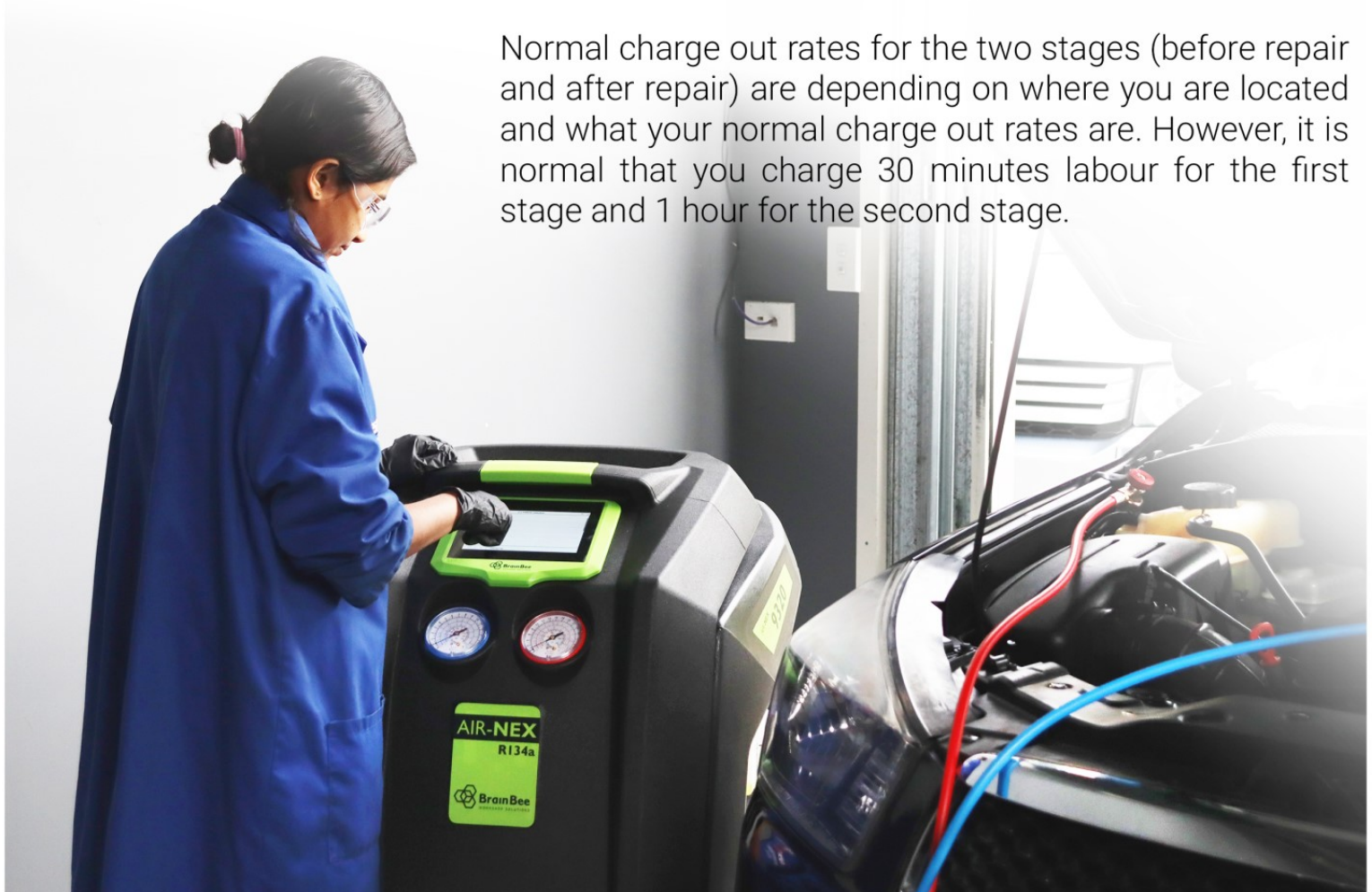
Job done.

Step 1 and 2 takes less than 5 minutes in actual hands-on labour. The machine will be connected to the car approximately 15 minutes that's it. Really, do you need to get a specialist in for that?

Step 5 takes less than 5 minutes in actual hands-on labour, but the machine will be connected to the car for up to 60 minutes.

Again, do you get a specialist in for that? What is he doing during for example the 45 minutes vacuum time, except charging you for him sitting around?

Normal charge out rates for the two stages (before repair and after repair) are depending on where you are located and what your normal charge out rates are. However, it is normal that you charge 30 minutes labour for the first stage and 1 hour for the second stage.





It is an industry standard to charge for the full refrigerant charge into the car in addition to any oil added to the car, even though a large portion of the refrigerant can be recycled.

With EV and Hybrid vehicles now requiring specific POE oils to prevent a potentially dangerous (and expensive) electrical leakage situation do you really want to leave this to an outsider.

The risk of contaminating an EV/Hybrid with PAG oil is enormous with old fashioned manual equipment.

The contractor will send his recovered refrigerant away for destruction (you hope), and at more than \$100 per kg for the new refrigerant that is simply unsustainable. With today's refined recovery/recycle equipment that problem is not an issue.

Have you changed your mind yet? We are not talking about anything complex, and it's something which is highly profitable.

In our AECS training you will get hands on experience with the best equipment you can find.

What are your thoughts? Let us know if you have any questions. Share with us at info@aece.net.

Thanks for reading, stay safe,
Team AECS

Launch BST360 - Battery Analyser

The Launch BST360, is a quick and easy to use battery, charging system and starting system analyser.

Bluetooth is connectable to any Launch android tablet, mobile phone, or tablet that you may wish to use. It can be installed on multiple devices, no complex registration is needed.

Are you doing vehicle inspections with a tablet at hand? Why not add a PDF report about the most troublesome part of the car? A comprehensive battery report is created in less than 30 seconds.

You can create a report when the car is in for just simple maintenance!

Tech details:

Connection method: Bluetooth

Applicable for: 6V/12V Lead acid, GEL and AGM battery systems.

Supported battery standards: CCA, BCI, CA, MCA, JIS, DIN, IEC, EN, SAE, GB.

Measurement capacity range: 30AH – 80 AH

Working temp: -10°C +60°C

No internal batteries required, tool powers up from car battery.



Introductory price: \$169.50 +gst

Normally: \$271.50 +gst

1 ON 1 TRAINING

This week we want to book you in for training wherever you are located. With our training experience and also our technical infrastructure for remote assistance, we have the setup to be able to do 1 on 1 training with you wherever you are.

Let's make this time productive as possible! You will need access to your equipment such as your aircon machine, brake tester, scope or scan tool and have a WiFi connection.

Why not use this downtime to upskill yourselves. Pricing will be \$125+gst for a one hour slot. Book yourself in with the link below. We do our best to fit in with your preferred time frame.

You can book here.



HANDS-ON & PRACTICAL TRAINING



IMPROVE SKILLS & KNOWLEDGE



LEARN FROM THE BEST IN THE INDUSTRY



AECS.. MAKING DIAGNOSTICS EASY



COMMERCIAL VEHICLE TEST LANE
STT45
BRAKE TEST | EURO-SYSTEM | 18T



STT45 Euro Test Lane/Brake Rollers are designed for all types of braking systems for commercial vehicles.

- 18 Ton axle load
- Star/delta/softstart and 4WD mode
- Max. 45 kN brake force per wheel
- 17KW 2 speed Nord motors
- High wear resistant corundum coated rollers 248mm diameter
- German built motors, sensors, and contactors



**STT RANGE...
BUILT TOUGH**

PRICE FROM: \$57,000 +GST
Work on building not included

CAR BRAKE TESTLANE
STT10e
BRAKE TEST | EURO-SYSTEM | 4T



STT10e is designed for motor vehicles and various types of braking systems and is accurate on wheel alignment, brake and suspension analysis

- 8kN per wheel brake force
- 4 Ton axle load
- 3KW straight drive auto lock ABM Motor
- Side slip with de-stressing plate
- 25hz Eusama suspension tester
- 4x4 testing
- German built motors, sensors, and contactors



PRICE FROM: \$20,500 +GST
Price includes installation - Work on building not included

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