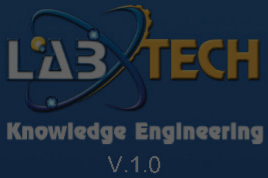




HVAC Residential by Labtech

REFERENCE SHEET - Launch Code AP54



Course Topic Area

Overview

See the course content list. Consist of Learning Element and Learning Objectives.

Operation Guide

Guide on how to use the application on-screen menu and features.

About

Company Profile.

Overview

Operation Guide

About



VACUUM AND EVACUATION (RECOVERY)



RECOVERY, RECYCLE, AND RECHARGING



SQUIRREL CAGE INDUCTION MOTORS, 1 PHASE



SQUIRREL CAGE INDUCTION MOTORS, 3 PHASE



TEMPERATURE CONTROL



DEFROST CONTROL



SEMI-HERMETIC COMPRESSOR



OPEN TYPE COMPRESSOR



1 / 2

Exit

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LAB TECH

RECOVERY, RECYCLING, RECHARGING

Background Theory

Background Theory

Content Area

Course Title
Learning Element Title



Recovery, Recycling and Recharging

Refrigerants and The Ozone Layer

The ozone layer is a fairly thin layer of the earth's upper atmosphere. It is approximately thirty-five miles above the ground. It is often called a screen or shield. The ozone layer is credited with protecting the earth from the damaging ultraviolet rays of the sun and assists in maintaining stable temperatures. The

LAB TECH

RECOVERY, RECYCLING, RECHARGING

Component Identification

Component

Component Area
DESCRIPTION

- Manifold Gauge
- Oil Separator
- Filter Drier
- Service Valves
- Recovery Machine
- Recovery Cylinder
- Refrigerant Weighing Scale



The manifold gauge is device that is used to control the flows of refrigerant when doing recovery, recycling and re-charging processes. It is also used to indicate pressure at certain location in the air-conditioning system as it operates. The manifold gauge comes with low pressure gauge and high pressure gauge which are always connected to the low side and high side ports regardless the manual valve position. Connection between the low side and high side ports to the middle ports are controlled by the respective manual valves. The manifold also comes with a set of refrigerant hoses. Blue color is used for the low side port. Yellow color used for the middle port and red color used for the high side port.

Assembly & Dis-assembly

Reposition



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The screenshot displays the HVAC Residential simulation interface. At the top, there are navigation tabs for "RECOVERY, RECYCLING, RECHARGING", "Technical Simulation", and "Formative Assessment". The "Technical Simulation" tab is active, showing a 3D model of an HVAC unit with the text "Simulation of how the system functions." To the left, there are control panels for "Tank Value" (Total Tank Weight: 10.5 Kg, Tare Weight: 7.5 Kg, Refrigerant: 3 Kg), "Color of Particles" (Refrigerant, Air / Moisture, Refrigerant Leak), and "Recovery Tank Capacity" (Water Capacity: 21.5 kg, Tare Weight: 7.5 kg, Specific Gravity: 1.066). A formula for Tank Capacity is also shown: $Tank\ Capacity = 0.8 \times WC \times SG + TW$. The "Formative Assessment" tab is also visible, showing a question: "_____ type refrigerant has higher ODP number than _____ refrigerant". The question options are: HFC, HCFC; HCFC, CFC; HFC, CFC; CFC, HFC. The interface includes "SUBMIT" and "SKIP" buttons. The text "Question Area" is visible in the bottom right corner of the question panel.