Best Practices for Mobile A/C Refrigerant System Service

Note: Refer to the vehicle manufacturer or aftermarket issued service information, the applicable SAE standards, and tool and equipment instruction manuals for the procedures necessary to perform the operations below.

Operation	Initials
No "Top-Off" Or Recharging Of System With Known Leak(s)	
Perform Visual Inspection	
Identify Refrigerant Before Performing Any Other Service Operation	
Use Electronic Leak Detectors In Accordance With SAE J1628	
Use Leak Detection Dye In Accordance With SAE 2298	
Perform Engine Preheat Before Refrigerant Recovery	
Perform Refrigerant Recovery In Accordance With SAE J2211	
Perform Proper System Evacuation Procedures	
Charge Systems (By Weight) To Manufacturer's Specification	
Recover All Refrigerant From Containers Before Disposal	
Properly Dispose Of Empty Refrigerant Containers	
Properly Perform Hose Repair/Construction	
System Service Port Caps Intact And In Place	
Use Recovery/Recycling/Recharge Equipment In Accordance With SAE J2211, And The Equipment Manufacturer's Instructions	
Properly Maintain Refrigerant System Service Equipment (Refer To Climate Protection Pledge Equipment Maintenance Checklist)	

Mobile A/C System Refrigerant System Service Equipment Maintenance

Unless otherwise noted, and if applicable, perform the following in accordance with the equipment manufacturer's recommended intervals.

Recovery/Recycling/Recharge Machines	
Operation	*Date Performed*
Register With EPA Regional Office	
Purge Air From Refrigerant Tank	
Check/Calibrate Scale	
Verify Gauge Accuracy	
Check/Replace Hose Seals	
Check/Repair Power Cord	
Check Inflation Pressure Of Tires	
Change Vacuum Pump Oil	
Replace Filters/Driers	
Electronic Leak Detectors	
Calibrate	
Check/Change Batteries	
Check/Change Filters	
Vacuum Pumps	
Change Oil	
Check/Repair Power Cord	
Manifold Gauges	
Verify Accuracy	
Check/Replace Hose Seals	
Refrigerant Identifiers	
Change Filter When It "Shows Red"	
Check/Repair Power Cord	
Temperature Measuring Devices	
Verify Accuracy	

Best Practices for Field Repair and Assembly of Mobile A/C System Hoses

Following the steps below should result in the proper repair and assembly of mobile A/C system hoses.

When Repairing Or Constructing Mobile A/C System Hose Assemblies	✔
Read, Understand And Adhere To Operating Instructions For The Equipment Being Used	
Maintain Equipment In Accordance With Its Manufacturer's Recommendations	
Use Proper Hose And Fittings For The Application	
Make Sure Hose And Fittings Are Compatible	
Make Sure Equipment Is Compatible With Hose And Fittings	
Make Straight Cuts On Hose Ends	

Best Practices for Mobile A/C System Leak Detection

Following the steps below should result in accurate mobile A/C system leak detection.

When Using An Electronic Leak Detector	✔
Make Sure Leak Detector Meets SAE J1627 Or SAE J2791 Specification	
Read, Understand And Adhere to Operating Instructions For The Leak Detector Being Used	
Use Appropriate Setting(s) On Leak Detector (Refer To Instruction Manual)	
Make Sure A/C System Contains At Least 50 psi Static Refrigerant Pressure @59 Degrees F	
Keep Drafts In Vicinity Of Suspected Leak Sites To A Minimum	
A/C System And Compressor May Not Be Operating During Leak Check	
Move Probe Tip No Faster Than One To Two Inches Per Second	
Probe Over Entire A/C System – Pay Special Attention To Connections, Service Ports, etc.	
Hold Probe Tip More Than One-Quarter Inch From Suspected Leak Sites	
Pass Probe Tip Underneath Suspected Leak Sites	
Do Not Expose Probe Tip To Dirt	
Do Not Immerse Probe Tip In Liquid	
Use Only Dry Cloth To Clean At Suspected Leak Sites	
Use Compressed Air To Blow Fumes Away From Suspected Leak Site(s), Then Recheck	
Follow Tool Manufacturer's Instructions For Finding Suspected Evaporator Leaks	
When Using A UV Dye Leak Detection System	
Make Sure Dye Meets SAE J2297 Specification	
Make Sure Dye Is Compatible With A/C System's Oil	
Read, Understand And Adhere To Operating Instructions For The Detection System Being Used	
Make Sure Lamp Being Used Is Compatible With Dye Being Used	
Inject Dye In Accordance With The Dye Kit's Manufacturer's Instructions	
Wear Yellow Glasses That Came In UV Dye Kit	
System Must Contain Full Refrigerant Charge To Properly Distribute Dye	
Visually Trace Over Entire A/C System	
Be Patient – Slow Leaks May Take A While To Appear	

Best Practices for Charging Mobile A/C Systems

Following the steps below should result in accurately charged mobile A/C systems.

When Recharging a Mobile A/C System	✔
All Technicians Performing Recharge Must Be Section 609 Certified	
Read, Understand And Adhere To The Recharge Equipment's Operating Instructions	
Maintain Recharge Equipment In Accordance With Its Manufacturer's Recommendations	
Only Use Vehicle Manufacturer Approved Refrigerant	
Make Sure Refrigerant Is Pure (Contains No Air/Is Not Mixed With Other Refrigerants)	
Make Sure Recharge Equipment Is Set To Deliver The Proper Amount Of Refrigerant	
Make Sure System Has Been Evacuated (Deep Vacuum) Before Beginning Recharge	
Do Not Bump, Jiggle Or Otherwise Disturb Recharge Machine During Recharge Process	

Best Practices for Refrigerant Recovery from Mobile A/C Systems

Following the steps below should result in the most complete refrigerant recovery possible.

Before/When Recovering Refrigerant from Mobile A/C Systems	✔
All Technicians Performing Refrigerant Recovery Must Be Section 609 Certified	
Read, Understand And Adhere To Operating Instructions For The Recovery Machine Being Used	
Maintain Recovery Equipment In Accordance With Its Manufacturer's Recommendations	
Perform Visual Inspection Of A/C System (To Spot Obvious Leak Sites)	
Empty Recovery Machine's Recovered Oil Reservoir Of Any Previously Recovered Oil	
Make Sure A/C System Contains Pressure	
Use A Refrigerant Identifier To Identify The Refrigerant In The System	
Run Engine Before Recovery/Perform A/C System Preheat Procedure	
Do Not Bump, Jiggle Or Otherwise Disturb Recovery Machine During Recovery Process	
Do Not Overfill The Recovery Machine's Refrigerant Tank	
With A/C System In Vacuum, Pause Recovery For Five Minutes/Check For Pressure Rise	
If Pressure Rises Above Vacuum, Continue Recovery Until Vacuum Will Hold for Two Minutes	
If Necessary, Recover Refrigerant From Recovery Machine's Hoses	
Note Amount Of Refrigerant Recovered From System (And Machine's Hoses, If Applicable)	
Check Recovery Machine's Recovered Oil Reservoir – Note If Oil Was Removed From System	
Purge Air From Recovered Refrigerant When And If Appropriate	