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HD SUPPLY
FACILITIES MAINTENANCE

410A REFRIGERANT TRANSITION GUIDE

FOR PROPERTY MANAGERS

R-22 refrigerant is being phased out due to EPA regulations.

Use our resource guide to:

- Understand the changes
- Learn your options
- Determine your strategy

Replace - Retrofit - Repair
(see next page for details)

Learn more at

hdsuppliesolutions.com/hvac



REPLACE OR REPAIR?

OUR HVAC EVALUATION HELPS YOU DECIDE

Don't let lack of preparation force you into making a decision that's less than ideal for your budget and your residents. Use this form to rate the condition of the HVAC units on your property so you have an action plan in place.

Directions: Determine the type of units you have, assign a letter to each category, then tally up the results to make the best decision. Use one form per unit (make as many copies of this form as you need).

UNIT #: _____ DATE: _____

COOLING AND HEAT PUMPS

Age of equipment

- a) 16+ years
- b) 11-15 years
- c) 10 years or less

Estimated cost of service

- a) \$400+
- b) \$251-\$399
- c) \$250 or less

Repairs under warranty?

- a) No
- b) Yes

SEER of equipment?

- a) 8 or less
- b) 8-9
- c) 10-14

Refrigerant used

- a) R-22
- b) R-410A

Equipment condition?

- a) Poor
- b) Average
- c) Good

Number of previous repairs

- a) 3 or more
- b) 2
- c) 0-1

FURNACE, COILS, AND BOILERS

Age of equipment

- a) 16+ years
- b) 11-15 years
- c) 10 years or less

Estimated cost of service

- a) \$400+
- b) \$251-\$399
- c) \$250 or less

Repairs under warranty?

- a) No
- b) Yes

**AFUE
(Annual Fuel Utilization Efficiency)**

- a) 79 or less
- b) 80-84
- c) 85 or higher

Equipment condition?

- a) Poor
- b) Average
- c) Good

Number of previous repairs

- a) 3 or more
- b) 2
- c) 0-1

GAS/ELECTRIC PACKAGED UNITS

Age of equipment

- a) 16+ years
- b) 11-15 years
- c) 10 years or less

Estimated cost of service

- a) \$400+
- b) \$251-\$399
- c) \$250 or less

Repairs under warranty?

- a) No
- b) Yes

SEER of equipment?

- a) 8 or less
- b) 8-9
- c) 10-14

Refrigerant used

- a) R-22
- b) R-410A

**AFUE
(Annual Fuel Utilization Efficiency)**

- a) 79 or less
- b) 80-84
- c) 85 or higher

Equipment condition?

- a) Good
- b) Average
- c) Poor

Number of previous repairs

- a) 3 or more
- b) 2
- c) 0-1

IF YOU ANSWERED
MOSTLY A ...

REPLACE - repairs may be too frequent and too costly. Installing a new, more efficient R-410A system may help save money over time.

IF YOU ANSWERED
MOSTLY B ...

RETROFIT - your system is older, but still has usable life. Retrofitting units for alternative gas like MO99™ may be a cost-effective option.

IF YOU ANSWERED
MOSTLY C ...

REPAIR - making repairs to an existing R-22 system is a good option for now, but R-22 gas will only become more expensive and harder to find.

*Like it or not, R-22 refrigerant is going away. For now, you have the following choices regarding R-22 equipment — **REPLACE** the system, **RETROFIT** units with alternative gas, or **REPAIR** existing units. Each option has specific advantages and disadvantages to consider.*

REPLACE

Transitioning away from R-22 systems to new R-410A equipment (condenser and air handler) is the preferred solution.

Advantages

- No risk of R-22 refrigerant shortages
- 5-year industry standard warranty / if registered, 10-year warranty will cover replacement part cost
- Increased efficiencies mean reduced long-term cost to operate equipment
- R-410A refrigerant replacement cost is lower than R-22, for upfront cost savings

Disadvantages

- Higher upfront costs
- Additional training for maintenance staff

RETROFIT

Use M099™ as an alternative replacement refrigerant to save time and take the guesswork out of the compressor oil type. Works on mineral oil and POE oil compressors.

Advantages

- Reliable and cost-effective
- Works in existing R-22 systems
- No oil change needed

Disadvantages

- Slight loss of efficiency (6%-10%) versus R-22 in temperatures above 105°F
- Voids any remaining manufacturer's warranty in most cases

REPAIR

Repairing existing R-22 systems can be cost effective in some situations; however, refrigerant costs will continue to increase.

Advantages

- May be more cost-efficient in the short term
- No change in current operations
- No new training required

Disadvantages

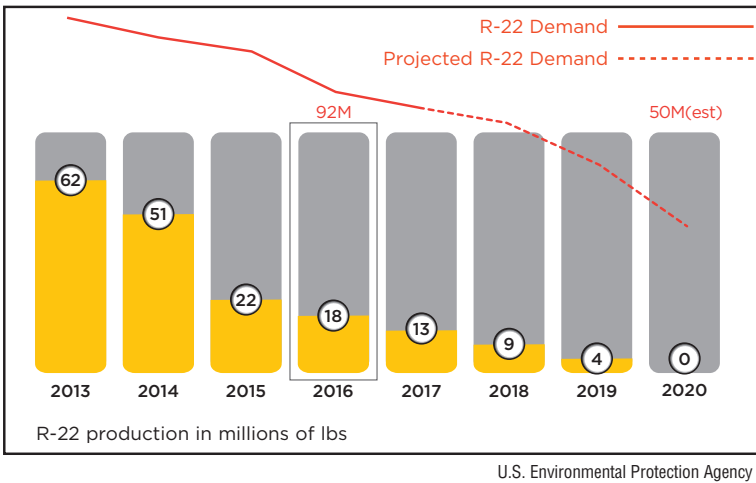
- R-22 refrigerant is available in very limited supply
- Cost of R-22 refrigerant is rising sharply
- Risk of longer system downtime on future repairs

R-22 IS BEING PHASED OUT

DUE TO EPA REGULATIONS

What the EPA Mandate Says

No new or imported R-22 gas will be allowed in the United States on or after January 1, 2020. As a result, R-22 production limits are rapidly dropping each year.



WHICH MEANS...

R-22 is Harder to Find

Current R-22 production satisfies only about 20% of the demand. Annual supply reductions will only make the situation worse.

THIS LEADS TO...

Huge Price Increases

Skyrocketing prices for R-22 increase repair costs and can lead to longer system downtimes, since R-22 gas will become more difficult to find.

THE END RESULT...

Hot, Angry Residents

Faulty AC units are profit killers, often leading to higher turnover, bad online reviews, and loss of revenue.

KNOW YOUR OPTIONS

DETERMINE YOUR STRATEGY

410A CONVERSION

Replace

Advantages

- No risk of refrigerant shortages
- Fewer repairs and less unplanned downtime
- Lower long-term costs
- Higher efficiency (SEER) ratings

Disadvantages

- Higher upfront costs
- R-410A training needed for maintenance staff

ALTERNATE REFRIGERANT

Retrofit

Advantages

- A reliable and cost-effective option
- Works in existing R-22 systems
- No oil change needed

Disadvantages

- Slight loss of efficiency (6%-10%) versus R-22 at temperatures above 105°F
- May void any remaining manufacturer's warranty

REPAIR

Repair

Advantages

- May be more cost efficient in the short term
- No change in current operations
- No new training needed

Disadvantages

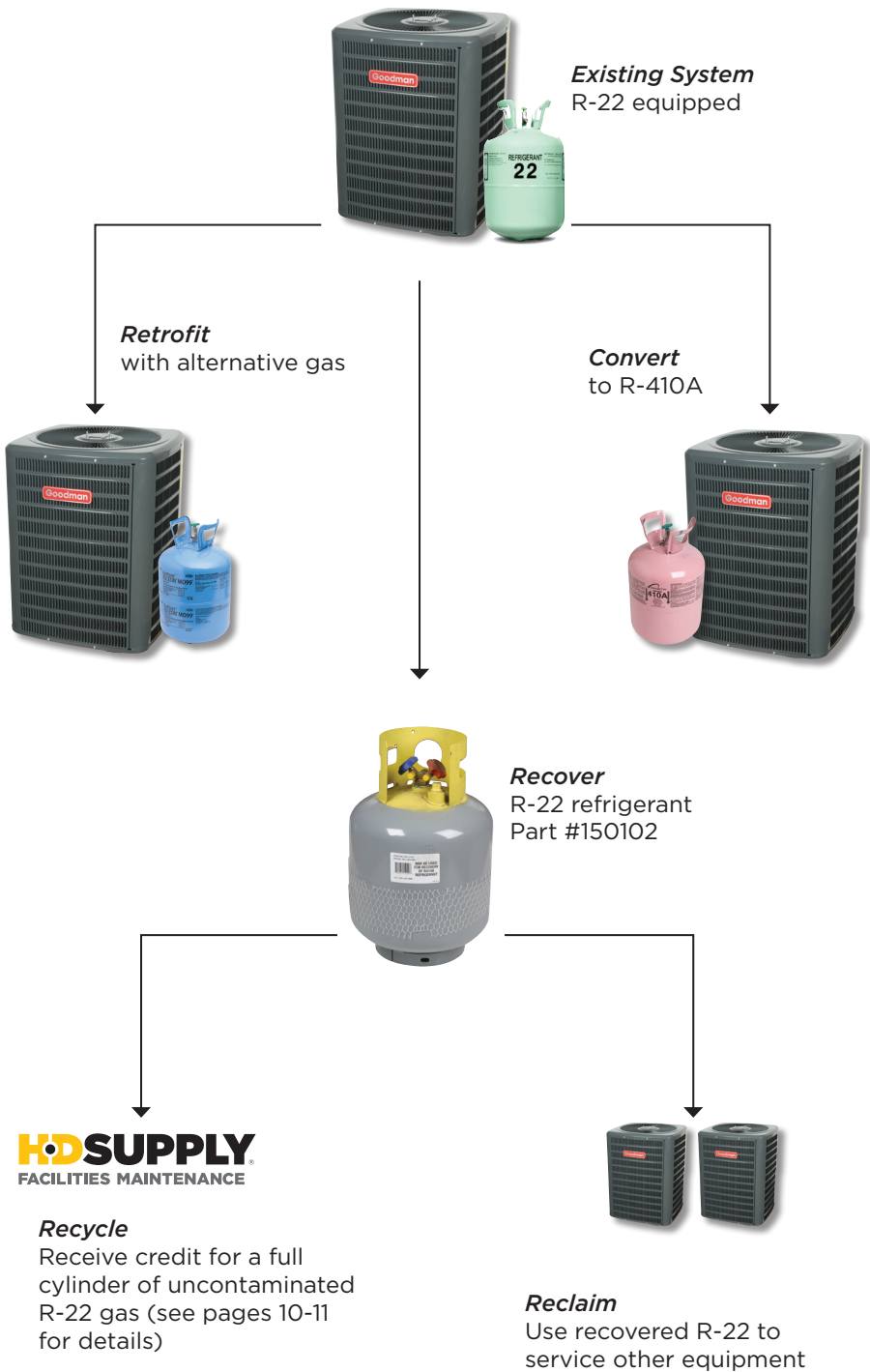
- The cost for R-22 refrigerant is rising and availability is limited
- R-22 gas cannot be produced or imported in the United States as of January 1, 2020
- Risk of extended downtime could impact resident retention

PLAN AND PREPARE

TRANSITION AWAY FROM R-22

Lower your exposure to R-22 by replacing older units with new R-410A systems, or drop an alternative refrigerant, like MO99™, in existing units. If your budget is limited, consider a combination of retrofits and new installations. It is perfectly legal and acceptable to reuse R-22 refrigerant recovered from units at your property.

Use the chart below to explore your options.



CONVERT TO 410A NOW

FOR LONG-TERM SAVINGS

Transitioning from R-22 to R-410A systems can help save you money over time. We offer a full line of quality HVAC systems from some of the industry's most recognized and trusted brands.



**An Economical
Solution**



**A Reliable
and Proven
Brand**



**2-Year Easy Assurance Limited
Replacement Warranty***

Standard 10-Year Warranty

*If the compressor or the coil fails due to a defect during the 2-year limited replacement warranty, a one-time replacement with a comparable unit will be provided by the manufacturer.

ADVANTAGES OF BUYING

FROM HD SUPPLY FACILITIES MAINTENANCE

Get all your HVAC equipment from a single source. HD Supply Facilities Maintenance has the right HVAC products and services to help you get the job done right and in a cost-effective way.

- Full line of brand-name HVAC systems and supplies
- Thousands of repair and replacement parts available
- FREE, next-day delivery on most orders to most areas
- Special pricing programs and rebates available
- Equipment installation services
- Training programs for our valued national accounts
- Gas exchange reward programs
- Special Help Line for installation questions, troubleshooting, and more: call **1-800-431-3302**



DON'T BE CAUGHT OFF GUARD

TRUST US FOR ALL YOUR HVAC NEEDS

We offer a wide selection of reliable, high-quality HVAC systems and also provide free expert advice in case you get stuck on a tough installation or repair job. Just call **1-800-431-3302** Monday-Friday 8 a.m. to 8 p.m. EST. It's like having an extra HVAC technician on your staff.



150102
50 Lb Refrigerant
Recovery Tank



194903
Prefilter for
Refrigerant Recovery



149933
Brass Charging
Manifold



149785
Inficon® Tek-Mate®
Electronic Refrigerant
Leak Detector -
Mfg #705-202-G1 - UL



149940
Refrigerant
Recovery System

HVAC INSTALLATION

MADE EASY AND WORRY-FREE

HD Supply Facilities Maintenance provides dependable HVAC installation services* you can trust. Work with us and receive:

- Dedicated support from our Installation Services team
- Installers that are licensed, insured, and background checked
- Single point of contact for ordering, scheduling, and product/labor management
- Fast, reliable installation of condensing units, furnaces, coils, and air handlers
- R-410A conversion installations
- 1-year installation warranty

Installation in Four Easy Steps

1. Contact your HD Supply Facilities Maintenance Sales Representative, call **1-866-455-4798**, or visit **hdsuppliesolutions.com/installations**
2. We consult with you, survey the site, and provide detailed product information
3. Receive a FREE, no-obligation quote
4. Accept the quote and schedule your installation

*Installation services in select markets only. Call 1-866-455-4798 for availability.

COMPARING MO99™

TO R-22 CAPACITY

Replacing R-22 with alternative refrigerants, or “drop-ins,” can be an easy and cost-effective option. However, as outdoor temperatures increase, alternative refrigerants typically lose 6%-10% in capacity relative to R-22. Remember, alternative refrigerants are best for condensers and heat pumps that are out of warranty.

Of all the “no oil change” products, MO99™ (R-438A) provides the closest capacity match to R-22. The chart below compares the capacity rates of MO99™, relative to R-22, at various temperatures.

ASHRE Number		R-22	ISCEON R-438A
	Market Name	Freon	MO99
Outdoor Temp	75°F	●	●
	95°F	●	●
	105°F	●	●
	125°F	●	●
	Oil Change Needed?	No	No
	Pros & Cons	High cost, best levels of efficiency Phaseout Underway	Medium cost, slight drop in efficiency at higher temperatures

NOTE: Use of alternative refrigerants voids all manufacturer warranties.

● = Best Choice 0-5% loss in efficiency relative to R-22.	● = Good Choice 6-10% loss in efficiency relative to R-22.
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Retrofit to MO99™ (R-438A) in Eight Easy Steps

1. Review retrofit guidelines at **hdsupplysolutions.com** and search **R-22 alternatives**
2. Check baseline performance of R-22
3. Recover R-22 from system
4. Replace filter drier
5. Replace refrigeration valve cores **(192201)**
6. Pull a vacuum on system—check for leaks and repair if found
7. Charge system with MO99™ to the proper superheat or subcool (charge as a liquid)
8. Label the system with an MO99™ sticker **(259798)**











Have more questions about MO99™?
Visit the **R-22 Alternative Refrigerants** section at **hdsupplysolutions.com/hvac**.

KEEP HVAC SYSTEMS

OPERATING AT PEAK PERFORMANCE

Help prevent HVAC problems before they start. Practicing routine maintenance can help improve performance, reduce the frequency of repairs, and extend the life of your existing HVAC equipment.

To avoid the risk of property damage, electrical shock, or personal injury, always disconnect the power supply to condenser units before conducting any routine maintenance or services.

1	Verify the correct size breaker and wiring.	
2	Clean and/or replace the contactor. (150605)	
3	Test, clean, and/or replace the capacitor(s). (150260)	
4	Clean the condenser coils. (907235)	
5	Trim all greenery and remove anything that blocks proper airflow around the condenser.	
6	Charge condenser to superheat or subcool specifications. (149933)	
7	Make sure lines are free of damage and close 90° bends.	
8	Find and repair any leaks. (149785, 149978)	
9	Insulate liquid line as appropriate. (192003)	
10	Remove any moisture or obstructions from system.	
11	Remove and replace factory-installed liquid line filter drier every time the system is opened. Install liquid filter/drier if none exists. (194890)	
12	Periodically test for acid and eliminate if present. (149653, 149990)	
13	Shield thermostat wire from any potential damage.	
14	Use air filters and replace as needed. Air filters available online.	
15	Clean evaporator coils as needed and drain lines. (150606)	
16	Clean condensate pan and drain lines. (235013, 907253)	

RECOVER R-22 REFRIGERANT

SAFELY AND EFFICIENTLY

Following these steps will help you maintain the purity of R-22 gas so you can re-use it in your system, or earn credit with the HD Supply Facilities Maintenance Reclamation Payback Program.

- 1** Label your empty recovery tank (**150102**) with the type of refrigerant you will be recovering (**259821 R-22, 259823 R-410A**).



- 2** Place your recovery cylinder on your charging scale (**149938**).



- 3** Attach your prefilter (**194903**) to the recovery machine (**149940**).



- 4** Connect your manifold and hoses (**149933**) to the system—red-liquid, blue-vapor, yellow-recovery machine (valves closed).

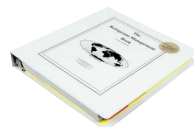


- 5** Connect a second yellow hose from the recovery system to the recovery tank. Open the liquid port on your manifold gauge, the valve on the recovery tank, and the valve on the recovery machine exhaust.

- 6** Make sure the recovery machine is set to “recover” and slowly open the inlet valve. Once all liquid has been recovered, open the suction port on your manifold gauge. Each recovery machine will vary, so make sure to consult the recovery machine’s instructions prior to use. (Recovering the liquid first will expedite the recovery process.)

- 7** Recovery is complete when the manifold gauge reads 0 PSI. Close both ports on your manifold and the inlet valve on the recovery machine. Turn the recovery machine off. Make sure to purge the recovery machine to the manufacturer’s specifications.

- 8** In your refrigerant management book (**140153**), record the amount of refrigerant recovered into the empty tank.



- 9** Disconnect hoses, clean hoses with nitrogen, and place recovery cylinder in a cool place away from direct sunlight.

- 10** When the recovery tank is 50-68 lbs, call HD Supply Facilities Maintenance at **1-800-431-3000** to order the reclamation service (**150202**).



Never mix refrigerants. Do not exceed cylinder capacity of 80% because overfilling of cylinders may cause them to burst. All technicians must be EPA-certified to handle R-22 refrigerant.

R-22 RECLAMATION PROGRAM

WE'LL PAY YOU FOR UNCONTAMINATED GAS

Call us when you have a full tank of recovered R-22 refrigerant. We will pick it up and credit your account for a full cylinder of uncontaminated gas*.

Here's How R-22 Reclamation Works

1. Be sure full cylinder meets the minimum pickup weight of 50 lbs. Move refrigerant from your 30 lb cylinder to a 50 lb cylinder to ensure proper cylinder weight.
2. Call **1-800-431-3000**, order part **150202**, and have your full recovery cylinder disconnected and ready for pickup.
3. An HD Supply Facilities Maintenance driver will pick up your full 50 lb cylinder of recovered R-22 gas and replace it with an empty certified 50 lb cylinder†.

To learn more, visit hdsupplysolutions.com/hvac.

**EARN A CREDIT
TO YOUR ACCOUNT**
based on the refrigerant purity level

**No Charges
for Cylinder
Recertification
& Burned-Out
Refrigerant**

Credit may take up to 90 days to process. Credit will be applied to your account and can be used toward a future order or refunded. If you need assistance or want a refund, contact your credit representative at 1-800-798-8888.

Proper Cylinder Weight Chart (Example)	
Cylinder Capacity	50 lbs
Empty Cylinder Weight	28 lbs
80% Full Weight	40 lbs
Total Weight	68 lbs
Minimum Pickup Weight	50 lbs

CHV069

*Only customers in dedicated delivery areas serviced by our trucks are eligible. Please call 1-800-431-3000 to check availability in your area.

†Tank level sensors will not be replaced. The exchange service is offered on a one-for-one swap basis only.



YOUR SINGLE SOURCE FOR HVAC EQUIPMENT AND SUPPORT

Whether you need quality HVAC systems, expert product advice, or are confused by new HVAC technologies and government regulations, we can help. Ask us about:

- New EPA requirements
- R-22 to R-410A system conversions
- Alternative refrigerants
- Basic system operation and repair
- Equipment installation
- Equipment specification requests, cut sheets, or schematics

To learn more, visit hdsuppliesolutions.com/hvac

All information provided in this brochure intended as guidance only.

Please consult with your HVAC professional and applicable laws to ensure full compliance.



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