

RETROFIT PROCEDURE FOR REPLACING R22 WITH RS-44b (R453A)



1. COLLECT BASELINE DATA BEFORE CONVERSION.

If possible, collect baseline data before conversion. Suction and discharge pressures can be converted to temperature levels using the R-22 pressure temperature conversion chart. Once the average evaporating and condensing temperatures have been determined, they can be compared to the same temperatures after conversion.

2. RECORD COMPRESSOR OIL LEVELS AND REFRIGERANT CHARGE.



RS-44b (R453A) is compatible with MO, AB and POE oils. **NOTE:** If POE oil is used to replace MO or AB oils in the system, it is recommended that o-ring seals be replaced before starting the system (not necessary in residential A/C or heat pump systems).

Note: In refrigeration systems where oil return is of concern (e.g., liquid receivers, long and complex pipelines, etc.) the replacement of up to 25% of the oil charge with a POE is recommended starting with an initial 10% followed by increments of 5% until the oil level stabilizes and returns to normal.

Note: Flooded systems using R22 can be retrofit with RS-45 (R434A) refrigerant.



3. RECOVER R-22 ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.



The EPA (Environmentally Protection Agency) has banned new and imported R22 in year 2020 in favor of zero ozone depleting, low GWP refrigerants, such as RS-44b.

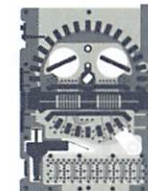
**GRAINGER #
857FK0**



4. EVACUATE SYSTEM AND CHARGE WITH RS-44b.

Charge up to 90% of original amount of R-22. Remove RS-44b refrigerant from the cylinder in liquid form.

5. START SYSTEM AND COMPARE THE BASELINE DATA.



For commercial systems, adjust thermostatic expansion valves and pressure controls. If necessary, adjust evaporator and/or condenser pressure regulator valves to maintain desired temperatures (not required for residential systems).

6. CHECK SYSTEM CHARGE. ADD MORE REFRIGERANT IF REQUIRED TO MATCH ORIGINAL CHARGE LEVELS.



Carefully monitor the oil level in the compressor and add more oil if required to maintain the correct level. If the oil level does not stabilize and is erratic, some of the oil should be removed from the system and replaced with POE.

7. INSPECT SYSTEM THOROUGHLY FOR LEAKS.



Once satisfied, attach the RS-44b system label, included in the box, to the exterior of the system. Completed! 😊

For technical info on all RS Refrigerant series, scan the QR Code:

ComStar International, Inc.
Tel | 800-328-0142 | Fax 718-353-5998 | Email service@comstarproducts.com
comstarproducts.com | replacementforr22.com

Environmentally safe, industrial strength chemical products

AVAILABLE THROUGH
GRAINGER
FOR THE ONES WHO GET IT DONE



RS-44b IS THE ONLY TRUE DROP IN REPLACEMENT FOR R22

- Ideal for A/C and refrigeration systems down to -20°F Evap Temp
- Lowest GWP at 1636 AR5
- Similar discharge pressure with R22
- Equal flow rate and cooling capacity with R22
- Lower discharge temperature
- No oil change required
- Compatible with mineral, AB & POE oils
- No component changes necessary
- Uses same service equipment
- Energy efficient
- Zero ozone depleting
- Non-flammable, non-toxic

Ask for RS-44b!



Major components of all RS Series products are made in the USA.

RS-44b Pressure/Temperature Comparison				
VALUES SHOWN:		PSIG	DENOTES HG"	
TEMPERATURE		RS-44b LIQUID BUBBLE PT.	RS-44b VAPOR DEW PT.	R-22
°C	°F	PSIG	PSIG	PSIG
-50	-58.0	9.1*	15.8*	11.4*
-48	-54.4	6.9*	14.1*	9.4*
-46	-50.8	4.6*	12.4*	7.2*
-44	-47.2	2.1*	10.5*	4.8*
-42	-43.6	0.3	8.4*	2.2*
-40	-40.0	1.8	6.1	0.3
-38	-36.4	3.4	3.6*	1.8
-36	-32.8	5.1	1.0*	3.4
-34	-29.2	6.9	0.9	5.1
-32	-25.6	8.9	2.5	6.9
-30	-22.0	11.0	4.2	8.9
-28	-18.4	3.2	6.0	11.0
-26	-14.8	15.6	7.9	13.2
-24	-11.2	18.2	10.0	15.6
-22	-7.6	20.9	12.2	18.1
-20	-4.0	23.8	14.6	20.8
-18	0.4	26.8	17.1	24.3
-16	3.2	30.0	19.8	26.7
-14	6.8	33.5	22.7	29.9
-12	10.4	37.1	25.7	33.3
-10	14.0	40.9	29.0	36.8
-8	17.6	45.0	32.4	40.6
-6	21.2	49.2	36.0	44.6
-4	24.8	53.7	39.9	48.7
-2	28.4	58.4	44.0	53.1
0	32.0	63.4	48.2	57.7
2	35.6	68.6	52.8	62.5
4	39.2	74.1	57.6	67.6
6	42.8	79.8	62.6	72.9
8	46.4	85.8	67.9	78.4
10	50.0	92.2	73.5	84.2
12	53.6	98.7	79.4	90.3
14	57.2	105.6	85.5	96.6
16	60.8	112.8	92.0	103.3
18	64.4	120.3	98.7	110.2
20	68.0	128.2	105.8	117.4
22	71.6	136.3	113.2	124.9
24	75.2	144.8	121.0	132.7
26	78.8	153.7	129.1	140.8
28	82.4	162.9	137.6	149.3
30	86.0	172.5	146.4	158.1
32	89.6	182.4	155.6	167.2
34	93.2	192.8	165.2	176.7
36	96.8	203.5	175.3	186.6
38	100.4	214.7	185.7	196.8
40	104.0	226.3	196.6	207.4
42	107.6	238.2	207.9	218.4
44	111.2	250.7	219.7	229.8
46	114.8	263.6	232.0	241.7
48	118.4	276.9	244.7	253.9
50	122.0	290.7	258.0	266.6
52	125.6	304.9	271.7	279.7
54	129.2	319.7	286.0	293.3
56	132.8	335.0	301.0	307.4
58	136.4	350.7	316.2	321.9
60	140.0	381.7	332.2	337.0



Replace R22

RS44b is the closest match to R22 on the market!



with RS-44b
GRAINGER #857FK0

The NEXT generation of R22 Replacement Refrigerants has arrived . . .

ComStar International, Inc.
20-47 128th Street, College Point, NY 11356 USA
1-800-328-0142

comstarproducts.com / replacementforr22.com