

Designed for NOW and the FUTURE.

R414a

- * **The Environment Friendly
R-12 Drop-In Replacement**
- * **No Expensive Retrofits**
- * **ASHRAE Rated A1/A1
Non Toxic - Non Flammable**
- * **Cooler - Safer - More Efficient
At All Temperature Ranges**
- * **Completely Compatible with
Most System's Components**

Description

R414b utilizes 4 refrigerant components which when blended together, the low and high pressure readings are similar to pressure normally seen in a R12 system.

R414b is a drop-in replacement not requiring system adjustments, oil changes, or retrofit procedures. Just complete your repair and replace the R12 with R414b (adjusting the amount of charge).

Advantages

Works in low, medium, and high temperature systems, therefore the service truck carries One Tank to replace all R12 applications.

Compatible with Mineral, Alkylbenzene and Polyolester, therefore no oil change required.

R414b increases capacity of R12 system by 8%
R134a system up to 15-20%
R500 system - no capacity change

Operating systems will have pressures and temperature very similar to R12 pressures and temperatures +/- 1 to 5%

Reduce ozone depletion to .034 or 97% less than R12

ASHRAE listed R414b ASHRAE listed A1/A1 completely Non Toxic/Non Flammable

UL Classified - Many OEM's are currently testing R414b as acceptable service fluid - CSA recognized

Charging systems is easier than ever. Refrigerant must leave the container as a liquid. If charging by weight scales, reduce the amount to 80% of name plate. If charging by charging cylinder, use the R12 scale and charge as if it was R12 (same volume). That volume will weigh 20% less. R414b should not be mixed with other refrigerants.

TXV systems charged with R414b may require a super heat adjustment after system stabilizes. If charging by sight glass, a clear sight glass will probably be over charged, a trace bubble is normal.

Recovery recycling procedure is the same as any other blended refrigerant. Do not mix in your cylinders.

After many tests, we have not found any major change in system performance with up to 50% leakage and 5 refills of the charge.

| Temperature Degree F | PSIG R12 | Bubble Point PSIG Sat Liquid | Dew Point PSIG Sat Vapour |
|----------------------|----------|------------------------------|---------------------------|
| -40 | -11.0 | -7.7 | -15.3 |
| -35 | -8.4 | -4.7 | -13.2 |
| -30 | -5.5 | -1.4 | -10.7 |
| -25 | -2.3 | 1.1 | -8.1 |
| -20 | 0.6 | 3.1 | -5.1 |
| -15 | 2.5 | 4.9 | -2.0 |
| -10 | 4.5 | 7.6 | 0.8 |
| -5 | 6.8 | 10.2 | 2.7 |
| 0 | 9.2 | 13.0 | 4.9 |
| 5 | 11.8 | 16.1 | 7.3 |
| 10 | 14.6 | 19.5 | 9.9 |
| 15 | 17.7 | 23.1 | 12.7 |
| 20 | 21.0 | 26.9 | 15.8 |
| 25 | 24.6 | 31.1 | 19.1 |
| 30 | 28.5 | 35.6 | 23.1 |
| 35 | 32.6 | 40.6 | 26.7 |
| 40 | 37.0 | 45.6 | 30.9 |
| 45 | 41.7 | 51.2 | 35.5 |
| 50 | 46.7 | 57.0 | 40.3 |
| 55 | 52.0 | 63.3 | 45.6 |
| 60 | 57.0 | 70.0 | 51.2 |
| 65 | 63.8 | 77.8 | 57.2 |
| 70 | 70.2 | 84.6 | 63.6 |
| 75 | 77.0 | 92.7 | 70.5 |
| 80 | 84.2 | 101.1 | 77.8 |
| 85 | 91.8 | 110.0 | 85.6 |
| 90 | 99.8 | 119.5 | 93.8 |
| 95 | 108.3 | 129.4 | 102.5 |
| 100 | 117.2 | 139.9 | 111.8 |
| 105 | 126.6 | 150.9 | 121.6 |
| 110 | 136.4 | 162.5 | 132.0 |
| 115 | 146.8 | 174.6 | 142.9 |
| 120 | 157.7 | 187.4 | 154.5 |
| 125 | 169.1 | 200.7 | 166.7 |
| 130 | 181.0 | 214.7 | 179.5 |
| 135 | 193.5 | 229.3 | 193.0 |
| 140 | 206.6 | 244.6 | 207.2 |

-28°F
268° F
72.42 lb/ft³

10
1.5%
.01%

1000 ppm

flammable as
formulated, and in worst case fractionation.

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