Refrigerant Installation / Charging Guide

Installation Video: www.redtek.com

A) RETROFITTING AIR CONDITION SYSTEM

1) Locate the Low and High Side Service Ports of the vehicle's air conditioner and remove the protective caps. The Low Side Service Port is located between the evaporator and the compressor on the large diameter hose. The High Side Service Port is located between the compressor and the condenser or between the condenser and the orifice tube/expansion valve on the smaller diameter hose.
2) Screw the longest metal retrofit valve onto the Low Side Service Port. Do not connect to the high side service port as the pressure may result in serious injury. Do not over-tighten fitting.
3) Locate the High Side Service Port and screw one of the shorter metal valves on the High Side Service Port. Discard the other fitting, as it is only applicable to other vehicles.

B) CHARGING PROCEDURE

Follow all refrigerant regulations and safety precautions before initiating charging process. Repairs should be carried out PRIOR to charging the a/c system. DO NOT VENT REFRIGERANTS TO ATMOSPHERE.

1) Before installing Can Tap Assembly make sure valve is fully turned counter clockwise until it stops in order to withdraw piercing assembly.
2) Screw the Can Tap Valve onto the threaded valve of the RED TEK® can.
3) Thread High Pressure Hose onto Can Tap Valve.
4) Locate Low Side Service Port and attach the Hose to the Low Side Service Port by pulling back the quick couple sleeve and then pushing the fitting onto the low side service port and then pushing the sleeve forward to lock into position. Make sure coupler is fully secured.
5) Start the engine and place the A/C on maximum setting.
6) Turn can tap valve handle clockwise allowing piercing needle to puncture the refrigerant can. Invert the can. (Turn upside down). Make sure can is inverted through entire charging process. YOU ARE NOW READY TO CHARGE.
7) Slowly turn can tap valve counter clockwise until you feel and hear refrigerant leaving the can.
8) Continue with charging process as determined by the RED TEK® 12a conversion chart (Approximately 33% by weight of original refrigerant) and proper cooling is achieved.
9) After each can has been emptied into the A/C system, close valve by turning valve handle clockwise until valve is fully closed.
10) Remove quick coupler from low side fitting by pulling sleeve back once more. Do not remove can tap if there is remaining RED TEK® 12a inside can. Store unused RED TEK® 12a refrigerant in a well ventilated place away from open flames.
11) Remove charging valve and hose from can if empty and discard properly.
12) Press the A/C Oil Analyzer on the Low Side Service Port to determine proper oil level and the condition of the oil. Follow recommendations on the A/C Oil Analyzer chart.
13) Screw dust caps on service ports; Blue on Low Side, Red on High Side.
14) Apply RED TEK® refrigerant identification tags in a highly visible area near charging port.

RED TEK®12a REFRIGERANTS

Equivalent Weight Installation Chart

RED TEK® 12a Ounces	Grams	HFC 134a Ounces	Grams	CFC 12 Ounces	Grams
3 oz	85	8.0 oz	227	9.0 oz	255
6 oz	170	16 oz	454	18 oz	510
9 oz	255	24 oz	680	27 oz	765
12 oz	340	32 oz	907	36 oz	1,020
15 oz	425	40 oz	1,134	45 oz	1,276
18 oz	510	48 oz	1,361	54 oz	1,531
21 oz	595	56 oz	1,588	63 oz	1,786
24 oz	680	64 oz	1,814	72 oz	2,041
NOTE:					
When Installing LeakStop	DEDUCT 85 g/3oz				

REFRIGERANT TECHNICAL/PHYSICAL PROPERTIES

Degree of fit when changing to RED TEK 12a Refrigerant from:

Component Compatibility:	R12	12a	R134a
Replacement recommended when changing from R-12 or R-134a to RED TEK 12a:			
Seals:	No		No
"O" rings	No		No
Filter-Drier:	No		No
Hoses:	No		No
Mineral Oils:	No		No
Polyester oils:	No		No
Polyalpha Olefine oils:	No		No
Allowable Design Pressures: (R12 system-1638kPa @ 63Deg. C) **Condensing Pressure: kPa**			
@ 20 Deg. C	569	547	572
@ 40 Deg. C	963	922	1016
@ 60 Deg. C	1534	1461	1682
@ 80 Deg. C	2331	2202	2633
(Calculated using REF PROP 5.0)			
Critical temperature: Deg. C	112.0	115.4	101.1
Critical pressure: kPa	4180	4000	4067
Energy consumption relative to R12=1.0	1.0	0.86	1.0
Environmental:			
Ozone Depleting Potential:	1.0	Zero	Zero
Global Warming Potential: (CO2 = 100 year)	8500	< 8	1300
Molecular Size:	medium	large	small
Molecular Weight: kg/kmol:	120.9	52.0	102.0
Atmospheric Life (Years):	130	< 1	16
Propensity to leak:	Medium	Low	High
Boiling Point Temperature: Deg. C	-29.8	-32.5	-26.1
Toxicity when burnt:	High	No	High
Flammable Range@:	N/A	2-10%in air @ 1 bar	7% in air @ 2 bar
Flammable @ atmospheric conditions:			
Refrigerant plus oil mixture	Yes	Yes	Yes
Refrigerant Only	No	Yes	No
Auto Ignition Temperature	N/A	>1585F	>1369 F

HOW DOES RED TEK COMPARE?

Properties	R12	R134a	RED TEK
Atmospheric Life	130 years	16 year	<1 year
G.W.P	3650	600	4
O.D.P	1.0	zero	zero
Thermal Performance	0	-8%	+12 to 32%
Oils	Mineral	Synthetic	Both
Retrofit Req'd	Yes	Yes	No
Corrosive	Yes	Yes	No
Toxic Thermal Decomp.	Phosgene Gas	Hydrogen Fluoride Gas	None
Long Term Health Risks	None	Unknown	None
Leak Detection	Halide	Halide	Hydrocarbon
Boiling Point (F)	-21	-15	-30
Auto Ignite Temp.0 psi	n/a	1411	1585
Auto Ignite Temp 5.5 psi	n/a	368	1585

KITS

RED TEK® Refrigerant Recharge Kit #313

Convenient package contains everything needed to properly charge an A/C system quickly and accurately. Kit includes:

- 2 cans RED TEK 12a Refrigerant
- 1 can RED TEK LeakStop
- 1 High side fitting
- 1 Low side fitting
- 1 High side HD/AG fitting
- 1 Installation hose kit
- Packaged 6/case
- Conversion charts
- Installation instructions
- Decals
- A/C Oil Analyzer

ProSeal™ A/C Leak Repair Kit™ #314

ProSeal™ A/C repair kit contains everything needed to properly seal leaks quickly and efficiently. Kit includes:

- 1 can ProSeal
- 1 installation kit
- 1 low side fitting
- Installation instructions
- Packaged 6/case

A/C COMPONENTS

- Compressors
- Driers
- Evaporators
- Condensers
- Expansion Valves
- Orifice Tubes

RED TEK 12a Questions & Answers

Q. Is RED TEK Refrigerant right for me?
A. RED TEK is a high performance, ultra efficient refrigerant engineered for customers demanding an environmental save, lower cost "recharge" and retrofit option. RED TEK is designed as a direct drop in replacement for R134a and R-12 substitutes. RED TEK refrigerants do not repair damaged or improper working a/c compressors and components.

Q. Do I need a license to use RED TEK Refrigerants?
A. No. RED TEK Refrigerants are non ozone depleting and non global warming refrigerants. However, certified personnel may be required to evacuate or reclaim any ozone depleting or global warming refrigerant in the a/c system.

Q. Do I need to retrofit my a/c system when using RED TEK?
A. No. RED TEK is compatible with existing a/c oils, seals, and components.

Q. Is RED TEK really environmentally safe?
A. Yes. RED TEK refrigerants are non-toxic, non-ozone depleting and non-global warming refrigerants.

Q. How can RED TEK save me money?
A. RED TEK is designed to operate at lower "head pressures" compared to R134a. Lower "head pressures" can extend the life of expensive a/c equipment and components. RED TEK refrigerants are up to 40% more efficient than R-134a refrigerant. Some customers have reported up to 1 mpg fuel savings.

Q. Do I need to evacuate my a/c system prior to using RED TEK?
A. All a/c systems containing any ozone depleting or global warming refrigerant such as R134a or R-12 that can potentially harm our environment must be properly evacuated by certified personnel before using RED TEK. However, if the refrigerant in the a/c system has leaked out or empty, evacuation of refrigerant from a/c system is not necessary.

Q. Are RED TEK refrigerants corrosive to my a/c system?
A. No. RED TEK refrigerants are non-corrosive, non-caustic and do not form acids in combination with system moisture.

Q. Are RED TEK refrigerants flammable?
A. Refrigerants operating in an a/c system are potentially flammable because they are under pressure and mixed with oils. RED TEK is flammable at 2-10% in air @ 1 bar compared to R-134a at 7% in air @ 2 bar. Also, RED TEK has a higher autoignition point (>1585 °F) compared to R-134a (>1369 °F). Hydrocarbon refrigerants such as RED TEK have been assessed for safety by qualified safety consulting engineers and have been determined low risk and acceptable for use in automotive a/c systems.

Q. Is RED TEK 12a compatible with the new flammable R-152a refrigerant?
A. Yes. RED TEK is compatible with flammable R-152a and alkabenzene lubricants.

Note: *Follow all regulations for your area.*

RED TEK®
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www.redtek.com
P. O. Box 1114 Alcoa, TN 37701

RED TEK®

NO LICENSE NO RETROFITTING

Replaces R-134a

Replaces R-12 substitutes

Colder vent temperatures

25%-40% lower head pressures

Environmentally friendly

Safety evaluated

REFRIGERANT

RED TEK 12a

- Designed as direct replacement for R-134a and R-12 substitutes
- Non-Toxic, non ozone depleting, low global warming
- Lower system head pressures
- Fully compatibles with existing oils, seals, and components

Product	Item#	CasePack
15 oz equiv (425 g equiv)	321	12
18 oz equiv (510 g equiv)	301	12
36 lb equiv (16.3 kg equiv)	302	1
60 lb equiv (27.2 kg equiv)	303	1
1,200 lb equiv	304	1

RED TEK 22a

- Designed as direct replacement for R-22
- Non-Toxic, non ozone depleting, low global warming
- Lower system head pressures
- Fully compatibles with existing oils, seals, and components

Product	Item#	CasePack
20 oz. equiv (567 g equiv)	305	12
30 lb equiv (13.6 kg equiv)	306	1
50 lb equiv (22.7 kg equiv)	307	1
1,000 lb equiv	308	1

RED TEK 502a

- Designed as direct replacement for R-502
- Non-Toxic, non ozone depleting, low global warming
- Lower system head pressures
- Fully compatibles with existing oils, seals, and components

Product	Item#	CasePack
30 lb equiv (13.6 kg equiv)	310	1
50 lb equiv (22.7 kg equiv)	311	1
1,000 lb equiv	312	1

NO LEAKS

LeakStop A/C Seal Repair

- Repair & conditions O-ring seals
- Works instantly
- Helps prevent winter loss

Product	Item#	CasePack
LeakStop .5 oz (14 g)	431	24
LeakStop 4 oz (114 g)	401	12
LeakStop 8 oz (227 g)	407	12
LeakStop 55 gal (208 l)	413	1

ProSeal Advanced A/C Leak Treatment

- Repairs leaks in condensers, evaporators, accumulators and metal lines
- Improves A/C efficiency
- Prevents future leaks
- Seals multiple leaks

Product	Item#	CasePack
ProSeal .5 oz (14 g)	432	24
ProSeal 4 oz (114 g)	402	12
ProSeal 8 oz (227 g)	408	12
ProSeal 5 gal (19 l)	414	1
ProSeal 55 gal (208 l)	415	1

A/C Leak Detection Dye

- Pinpoints exact source of refrigerant leak
- Universal dye is compatible with all refrigerants and lubricants
- Solvent-free, so dye does not impair lubricant properties

Product	Item#	CasePack
DyeCharge .5 oz (14 g)	435	24
DyeCharge 4 oz (114 g)	405	12
DyeCharge 8 oz (227 g)	411	12
DyeCharge 5 gal (19 l)	420	1
DyeCharge 55 gal (208 l)	421	1

TUNE UP

Air32° Performance Enhancer

- Significantly reduces system wear
- Boosts cooling efficiency
- Quiets noisy compressors
- Reduces friction
- Improves cool down time

Product	Item#	CasePack
Air32 .5 oz (14 g)	436	24
Air32 4 oz (114 g)	406	12
Air32 8 oz (227 g)	412	12
Air32 5 Gal (19 l)	422	1
Air32 55 Gal (208 l)	423	1

Dry32° A/C Dehydration Treatment

- Decontaminates system
- Improves cooling
- Prevents corrosion during extended winter shut down period
- Removes system Moisture

Product	Item#	CasePack
Dry32 .5 oz (14 g)	433	24
Dry32 4 oz (114 g)	403	12
Dry32 8 oz (227 g)	409	12
Dry32 5 gal (19 l)	416	1
Dry32 55 gal (208 l)	417	1

OilCharge Universal Refrigeration Oil

- Eliminates carrying different grades or viscosities of a/c lubricants
- Increases Compressor life
- Universal lubricant

Product	Item#	CasePack
OilCharge 4 oz (114 g)	404	12
OilCharge 2 oz (57 g)	434	24
OilCharge 8 oz (227 g)	410	12
OilCharge 5 gal (19 l)	418	1
OilCharge 55 gal (208 l)	419	1

SERVICE

RED TEK Installation Hose & Can Tap

- R-12 1/4" Hose & Can Tap (kit) #501
- R-134a 1/4" Hose & Can Tap (kit) #502
- Can Tap- Top Piercing Assembly #508
- R-12 1/4" Installation Hose #511
- R-134a 1/4" Installation Hose #512
- Packaged 12/case

Low Side Gauge Recharge and Measuring Kit #602

- Measure and charge in one step
- Saves time and money
- Calibrated and color coded for easy use
- Packaged 6/case

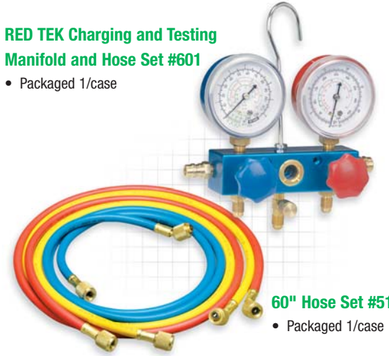
Fittings

- Low Side -#503
- High Side - #504
- High Side, AG/HD- #505
- G.M. High Flow -#506
- Cylinder Adapter- #507 (R-12 to R-134a)
- Cylinder Adapter -#514 (R134a to R-12)
- Packaged 24/case

A/C TOOLS

RED TEK Charging and Testing Manifold and Hose Set #601

- Packaged 1/case

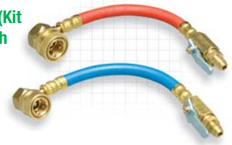


60" Hose Set #510

- Packaged 1/case

Manifold Conversion Kit (Kit contains 1 low and 1 high side coupler) #603

- Packaged 12/case



Electronic Charging Scale #607

- Packaged 1/case

RED TEK Vacuum Pump #608

- 2cfm
- 1/3 HP
- 110v/60HZ
- Packaged 1/case