

SERVICE BULLETIN



SR – 084

DATE: January 20, 2022
TO: All Service and Parts Managers
SUBJECT: Rotary Compressors Require Hard Start Kit when Paired with Indoor TXV

All outdoor equipment utilizing a rotary compressor when matched with a TXV equipped indoor coil are **REQUIRED** to have a hard start kit installed per the Installation Instructions. Shown below are the manufacturer approved hard start kits. The appropriate hard start kit can be found in the accessories section of the Spec Sheet of the outdoor equipment. Operating the unit without the proper Hard Start Kit can cause damage to or failure of the unit. Such damage or failure is not covered under the unit's warranty.

Part #
CSR-U-1
CSR-U-2
CSR-U-3



Hard Start Kit Part #'s

Part #	Description
CSR-U-1	Hard-start Kit
CSR-U-2	Hard-start Kit
CSR-U-3	Hard-start Kit

Notice Shown in IO's



NOTICE: Any unit with a rotary or scroll compressor and a line set length over 79' would require a hard start kit.

In this example, the GSX14018, 024 and 030 have rotary compressors. If the Evaporator coil has a Thermal Expansion Valve (TXV or TEV) metering device, the outdoor unit must have a factory installed or field installed hard start kit.

If compressor type is unknown, please refer to one of the discovery options below.

1. Review the equipment Spec Sheets shown in the example below
2. Call your Distributor or Customer Service Representative
3. Call Goodman Tech Support at **888-593-9988**

If you have questions regarding this bulletin, please contact TechServices@goodmanmfg.com

	GSX14 0181M*	GSX14 0191K*	GSX14 0241L*	GSX14 0251L*	GSX14 0301K*	GSX14 0301N*	GSX14 0311K*
CAPACITIES							
Max Cooling (BTU/h)	18,000	18,000	24,000	24,000	30,000	30,000	30,000
SEER/EER	14 / 11.5	14 / 12.2	14 / 12	14 / 12.2	14/12.0	14/11.5	14 / 12.2
Decibels	75	71	74	71	72	73	72
COMPRESSOR							
RLA	6.0	9.0	7.7	13.5	12.8	11.1	12.8
LRA	31.5	47.5	31.0	58.3	64	56	67.8
Type	Rotary	Scroll	Rotary	Scroll	Scroll	Rotary	Scroll

The specification sheets accessories section, located at the end of the spec sheet file, will tell you which units have factory installed hard start kits and which ones don't.

The GSXN3N1810A* will require a field installed hard start kit if you used with an evaporator coil with a TXV.

		ACCESSORIES						
MODEL #	DESCRIPTION	GSXN3 N1810A*	GSXN3 N2410A*	GSXN3 N3010A*	GSXN3 N3610A*	GSXN3 N4210A*	GSXN3 N4810A*	GSXN3 N6010A*
ABK-20	Anchor Bracket Kit ^	X			X	X	X	X
ASC-01	Anti-Short Cycle Kit	X			X	X	X	X
	Factory Installed Hard-start Kit		X	X				
CSR-U-1	Hard-start Kit	X			X			
CSR-U-2	Hard-start Kit				X	X	X	X
CSR-U-3	Hard-start Kit						X	X
FSK01A ¹	Freeze Protection Kit	X	X	X	X	X	X	X

List of Goodman/Amana Condensers (AC and HP) With or Without Hard Start Kits Factory Installed 2024

All Outdoor Condensers utilizing a rotary Compressor when Match with a TXV Equipped indoor coil are **REQUIRED** to have a hard start kit installed per the Installation Instructions

Model Numbers	Compressor MFG	Compressor Type	Hard-start Kit Factory Installed	
ASXN3N1810AA	Rechi	Rotary	No	AC
ASXN3N2410AA	Rechi	Rotary	Yes	AC
ASXN3N3010AA	Panasonic	Rotary	Yes	AC
ASXN401810AA	Rechi	Rotary	Yes	AC
ASXN402410AA	Rechi	Rotary	Yes	AC
ASXN403010AA	Rechi	Rotary	Yes	AC
ASXC70**10AA		Scrolls - all		AC
ASZN401810AA	Rechi	Rotary	Yes	HP
ASZN402410AA	Rechi	Rotary	Yes	HP
ASZC70**10AA		Scrolls - all		HP
G SXN3N1810AA	Rechi	Rotary	No	AC
G SXN3N2410AA	Rechi	Rotary	Yes	AC
G SXN3N3010AA	Panasonic	Rotary	Yes	AC
G SXN401810AA	Rechi	Rotary	Yes	AC
G SXN402410AA	Rechi	Rotary	Yes	AC
G SXN403010AA	Panasonic	Rotary	Yes	AC

Model Numbers	Compressor MFG	Compressor Type	Hard-start Kit Factory Installed	
GSXC70**10AA		Scrolls - all		AC
GSZB401810AA	Rechi	Rotary	Yes	HP
GSZB402410AA	Rechi	Rotary	Yes	HP
GSZC70**10AA		Scrolls - all		HP
V SXN3N1810AA	Rechi	Rotary	No	AC
V SXN3N2410AA	Rechi	Rotary	Yes	AC
V SXN3N3010AA	Panasonic	Rotary	Yes	AC



Rotary



Reciprocating



Scroll

CONTROL BOX

Potential
Relay

Start Capacitor

COLOR CODE

- BK-----BLACK
- BL-----BLUE
- BL/PK----BLUE/PINK STRIPE
- BR-----BROWN
- OR-----ORANGE
- PU-----PURPLE
- RD-----RED
- WH-----WHITE
- YL-----YELLOW

SWITCH (PRESS.)



SWITCH (TEMP)

WIRING CODE

FACTORY WIRING

- HIGH VOLTAGE 
- LOW VOLTAGE 
- OPTIONAL HIGH VOLTAGE 

FIELD WIRING

- HIGH VOLTAGE 
- LOW VOLTAGE 

COMPONENT CODE

- C ----- CONTACTOR
- CM ----- OUTDOOR FAN MOTOR
- COMP ----- COMPRESSOR
- HPS ----- HIGH PRESSURE SWITCH
- IO ----- INTERNAL OVERLOAD
- LXJB ----- LOW VOLTAGE JUNCTION BOX
- RCCF ----- RUN CAPACITOR FOR COMPRESSOR & FA
- SA ----- START ASSIST
- SC ----- START CAPACITOR FOR COMPRESSOR (OPTIONAL)
- SR ----- START RELAY FOR COMPRESSOR (OPTIONAL)

CONTROLS SHOWN WITH THERMOSTAT IN 'OFF' POSITION.

