



Letter: **YS-003-2018**

TO: York Dealers

Subject: **Split system performance issue resolution for indoor coils installed in Horizontal right and down-flow applications.**

Product: CF/CM/60C, CF/CM60D, AP60C, AP60D, AE60C, AVC60C, RFCX60CP, RFCX60DP, RFCX60CE

Summary: This letter provides resolution to an air-conditioning issue related to the indoor coil Section when installed in down-flow or horizontal right applications.

Effective: This service letter is effective as of July 16, 2018

Expiration: This service letter will expire on July 15, 2021

Warranty: Final warranty claims referring to this service letter must be submitted no later than 90 days after the expiration date noted above.

During the last cooling season, we received reports of a specific air-conditioning system performance issue. The outdoor section appeared to be operating properly, but the indoor section was not. This issue occurs when a 5-ton air-conditioning unit is paired with a split system loose coil or air handling unit model shown above and applied in a horizontal right or down-flow position. On October 9, 2017, the Residential Product Management team issued a product letter advising not to use the above listed products in horizontal right or down-flow applications. The above mentioned product model numbers contain either the C*60C or C*60D Max-Alloy coil assembly.

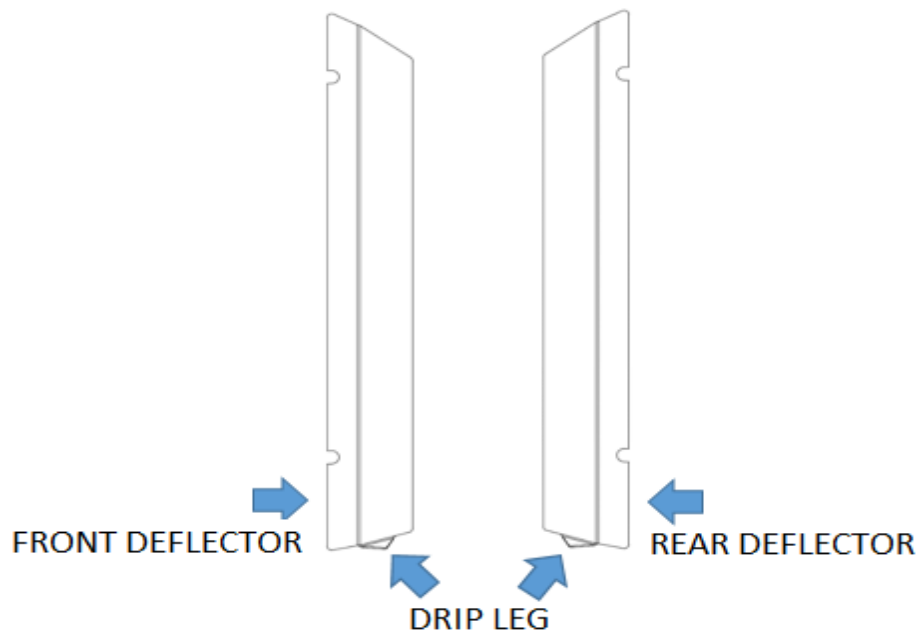
Design engineering evaluated the coil circuitry and found when the coil is installed in horizontal right or down-flow, the pattern of airflow through the coil results in performance that is not acceptable. When applied in these positions, inadequate suction superheat is achieved. When a TXV is being used as the metering device, it reacts accordingly and closes to raise suction superheat resulting in extremely low suction pressure and poor system performance.

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A new coil refrigeration circuit was designed and tested. The new design performed far greater than the original refrigerant circuit design in horizontal right and down-flow orientations. The improved coil performance resulted in much more condensation that must be managed. After many months of condensate management design and testing in all four coil orientations, a solution for condensate management was approved and this new coil design was released to manufacturing. Production of the new coil assembly is scheduled to start in August 2018.

As with all Max-Alloy aluminum “N” coils, the only orientation that required the installation of additional condensate management parts is horizontal right applications. A set of condensate deflectors are included with every air handling unit and CM model indoor coil. These parts are quickly and easily installed between the indoor coil primary drain pan and delta plates when a coil will be applied in the horizontal right orientation. Both the front and rear condensate deflectors were the same part. The new 60C and 60D coil design still use a set of condensate deflectors, but the design of the **60C** deflectors has been modified. With the redesigned **60C** coil there are separate front and rear condensate deflectors. The front and rear condensate deflectors must still be installed for horizontal right applications. The difference in the redesigned **60C** condensate deflectors is there is one part specifically for the rear of the coil and one part is specifically for the front of the coil. An image of the 60C condensate deflectors is shown below.

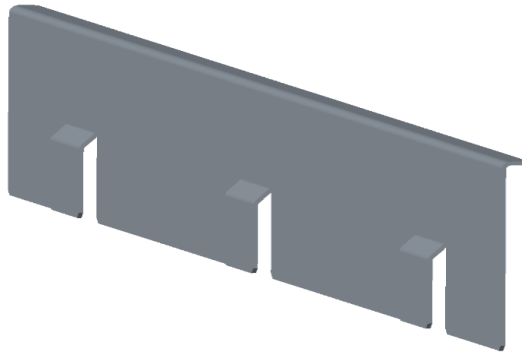


The new re-designed 60D coil will continue to use the same condensate deflectors as currently supplied with the 60D coil (CM60D) and air handlers containing the 60D coil (AP60D, RFCX60DP.)

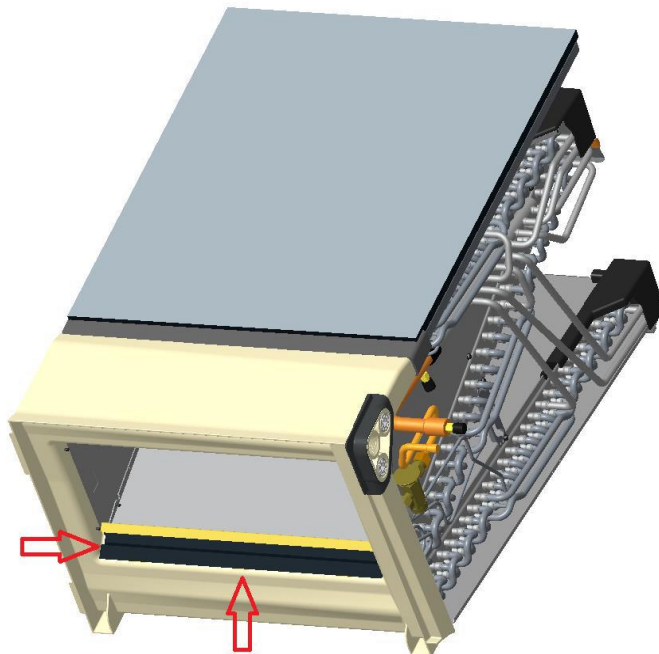
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In addition to these two condensate deflectors, there is also a “condensate shield” that will be **FACTORY INSTALLED** on the coil primary drain pan right hand side. An image of this new part is shown below.



This condensate shield is placed on the primary drain pan and is sealed to the coil drain pan with an adhesive backed gasket strip. An image of the coil assembly with this new factory installed part is shown below. The arrows point to the factory installed condensate shield.



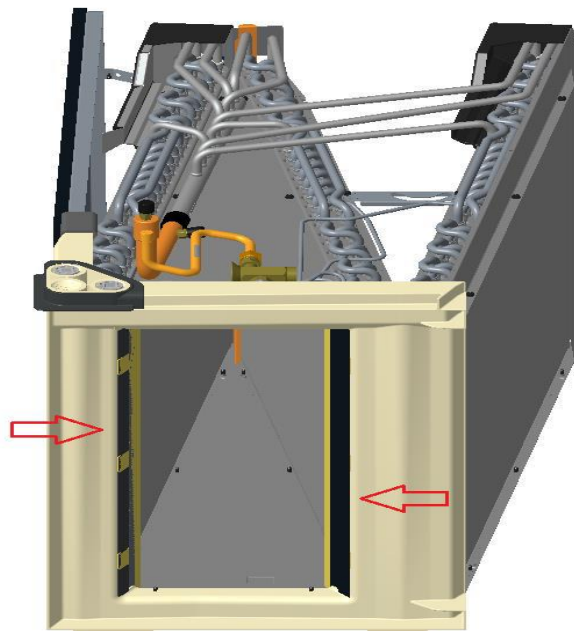
Remember that the front and rear condensate deflectors must still be installed for horizontal right applications. The only difference in the redesigned 60C condensate deflectors is that there is one part specifically for the rear of the coil and one part is specifically for the front of the coil. The new redesigned 60D coil will continue to use the same condensate deflectors as currently supplied.

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If the coil is to be applied in a down-flow orientation an additional condensate shield must be field installed onto the opposite side of the primary coil drain pan in a “mirror image” fashion from the image shown above. This part installation would take place while the coil is removed from the unit for down-flow conversion in air handling applications. For split system cased coil applications, the coil does not need to be removed from the coil cabinet to install the condensate shield. Simply rotate the coil cabinet so that the bottom of the coil primary drain pan can be accessed. The condensate shield can then be easily added to the bottom of the primary drain pan and sealed with the supplied adhesive backed gasket material. An image of both condensate shields installed on a coil for use in a down-flow application is shown below. The arrows point to the condensate shields. Note that the left side field installed condensate shield has not yet been sealed to the primary coil drain pan, therefore, the 3 shield attachment tabs are showing.

Source #1 service coils will be shipped with the two condensate shields one of which is FACTORY INSTALLED on the coil primary drain pan right hand side and the other with the loose parts kit. The loose parts kit also contains the re-designed condensate deflectors if the service part is the 60C model coil.



This indoor coil re-design has resulted in new air handling unit model numbers, new loose coil model numbers, and new S1 service coil part numbers. A listing of old to new equipment model and S1 service coil part numbers is shown below.

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Old Model No.	New Model No.	Description
AE60CBD21	AE60CBD22	5.0T 1PC AH STD ECM 21.0 AL TXV
AE60CX21	AE60CX22	5.0T 1PC AH STD ECM 21.0 AL FLEX
AP60CX21	AP60CX22	5.0T 1PC AH PSC 21.0 AL FLEX
AVC60CX21	AVC60CX22	5.0T 1PC AH VS ECM 21.0 AL FLEX
RFCX60CE20MP22	RFCX60CE20MP23	5.0T 1PC AH STD ECM 21.0 AL FLEX
RFCX60CP20MP22	RFCX60CP20MP23	5.0T 1PC AH PSC 21.0 AL FLEX

Old Model No.	New Model No.	Description
AP60DX22	AP60DX23	5.0T 1PC AH PSC 24.5 AL FLEX
RFCX60DP20MP23	RFCX60DP20MP24	5.0T 1PC AH PSC 24.5 AL FLEX

Old Model No.	New Model No.	Description
CF60CBDA1	CF60CBDA2	5.0T 21.0 COIL FULL AL TXV
CF60CXA1	CF60CXA2	5.0T 21.0 COIL FULL AL
CM60CBDA1	CM60CBDA2	5.0T 21.0 COIL MULTI AL TXV
CM60CBGA1	CM60CBGA2	5.0T 21.0 COIL MULTI AL TXV
CM60CXA1	CM60CXA2	5.0T 21.0 COIL MULTI AL
CU60CXA1	CU60CXA2	5.0T 21.0 UNCASED COIL FLEX AL

Old Model No.	New Model No.	Description
CF60DBDA1	CF60DBDA2	5.0T 24.5 COIL FULL AL TXV
CF60DXA1	CF60DXA2	5.0T 24.5 COIL FULL AL
CM60DBDA1	CM60DBDA2	5.0T 24.5 COIL MULTI AL TXV
CM60DXA1	CM60DXA2	5.0T 24.5 COIL MULTI AL
CU60DXA1	CU60DXA2	5.0T 24.5 UNCASED COIL FLEX AL

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Old Model No.	New Model No.		Description
S1-37339405003	S1-37339502001		COIL,W/DRAINPAN,(2R/28/21.0),ALU,UP,FLEX
S1-37339405601	S1-37339502002		COIL W/DRAINPAN (2R/28/21.0),ALU,HZ,FLEX

Old Model No.	New Model No.		Description
S1-37339405004	S1-37339502003		COIL,W/DRAINPAN,(2R/28/24.5),ALU,UP,FLEX
S1-37339405602	S1-37339502004		COIL W/DRAINPAN (2R/28/24.5),ALU,HZ,FLEX

If an installed piece of equipment experiences this specific performance issue, the coil **MUST** be replaced with the S1 service coil part number shown above. This YS letter will provide a service coil part, liquid line filter drier, and 4 hours labor toward indoor coil replacement. If you have any questions please contact your local Century Technical Service Advisor at 972-247-9675.