

ENGINEERING POLICY

Tecumseh Compressor Company
Compressor Group



Tecumseh

Engineering Policy On: **AJ Room Cooler Compressor Application
to PTAC and Water to Air Heat Pumps**

EP-7

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Tecumseh's model AJ room cooler compressors enjoy an enviable record of service with major manufacturers of window air conditioners.

In recent years there has been a growing tendency within the industry for some manufacturers to apply these popular room cooler compressors to systems having markedly different operating characteristics from those normally associated with room coolers.

AJ compressors are now being utilized in package terminal air conditioners and water to air heat pump systems, which inherently induce, accelerated compressor on-off cycle rates far in excess of the original design parameters of this room cooler compressor. This excessive cycle rate may be sufficient to exceed the design life of the AJ compressor's internal mounting springs.

To diminish the possibility of mounting spring damage in this type system, the larger AJ models (AJ5517E and AJ8520E) have heavier internal mounting springs as standard. The smaller AJ compressor model AJ5515F is to be ordered with heavier springs on optional bill of material when the compressor is to be applied to high cycle rate systems. The new bills of material are:

<u>Model</u>	<u>Basic B/M (Special)</u>
AJ5515F (230/208)	AJ666FT-
AJ5515F (265)	AJ666JB-
AJ5515F (240/220-50)	AJ666JT-

EXTERNAL MOUNTING - In addition, in lieu of standard rubber mounting grommets, all AJ compressors applied to high cycle rate systems are to be mounted with special external mounting springs. These will serve the two-fold purpose of:

1. Absorbing energy of abnormally high number of compressor stops
2. Attenuating sound energy which may result from heavier internal springs

SPRING MOUNTING KIT - To accomplish the external spring mounting of AJ's, Tecumseh has developed a kit which includes the various pieces as needed to fit the standard AJ foot design. The OEM will have to evaluate his connecting tubing configuration to assure proper ship ability and operation.

NOTE: AJ5513F, AJ5518E and AJ5519E compressors are to be excluded from high cycle rate applications and AK8515E, AB5519F or G models substituted instead.

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SUMMARY - AJ's IN SUBJECT APPLICATIONS

<u>Model</u>	<u>Internal Springs</u>	<u>External Springs</u>
AJ5515F	Use new B/M with heavier internal springs	*Use Mounting Parts
AJ5516E	Use regular B/M	*Use Mounting Parts
AJ8516E	Use regular B/M	*Use Mounting Parts
AJ5517E	Use regular B/M	*Use Mounting Parts
AJ8520E	Use regular B/M	*Use Mounting Parts
AJ5513F	Use AK equivalent (AK8515E)	
AJ5518E	Use AB equivalent (AB5519F or G)	
AJ5519E	Use AB equivalent (AB5519F or G)	

*The parts in the MP100-34 (3 leg) and MP100-35 (4 leg) are:

Spring	TP#54006
Retainer Washer	41353
Rubber Grommet	70153-1
Rubber Washer	3910

In addition, please be reminded that the minimum allowable E_T for all AJ's is +32°F.