



TECHNICAL SERVICE INFORMATION BULLETIN

TSIB 24-03 Rev A		October 9, 2024
TO:	All Operators	
TITLE:	Checking Oil Level on MCI-006, MCI-016-01, MCI-024-01 and MCI-029-01 Type HVAC Compressors	
APPLICABILITY:	MCI coaches equipped with MCI-006, MCI-016-01, MCI-024-01 and MCI-029-01 type HVAC compressors	

The HVAC compressor manufacturer (Bitzer) has issued a Technical Bulletin (MB-0056) about checking the oil level inside the HVAC compressors. See this TB attached at the last page of this document. Ensure to follow the recommendations of the TB when checking the oil level in your HVAC compressor. Attach this entire TSIB 24-03 as a supplement to your Maintenance Manual and ensure it is followed (together with other recommendations detailed in the MM) when performing PM inspections.

Important:

1. Check the oil level of the HVAC compressor every 12,000 miles.
2. The HVAC compressor manufacturer has not approved of using any kind of additives (for example leak detection dye) in the compressor oil.
3. It is recommended to change HVAC compressor oil every 3 years or sooner if oil has darkened. A fresh compressor oil is clear color.
4. Ensure to keep records of the PM inspections and related repairs of the HVAC system. Record date and result of the inspection, what corrective action was taken (if any) and the name of the person who performed the work. These records must be attached when filing warranty claims on any components of the HVAC system.
5. Refer to Bitzer's helpful videos on YouTube (type "BITZER") about compressor maintenance and repair.

Details about the oil level inspection of the HVAC compressor on MCI coaches

Note: Follow all safety precautions of the MCI Maintenance Manual when working inside the engine compartment!

It is critical to ensure that the HVAC compressors are operated within the 5-degree inboard / outboard angle requirement. The HVAC compressor is mounted on a tilt table to enable the automatic belt tensioning. As the belt is stretching over time, the angle of the HVAC compressor will change. Refer to Figure 1.

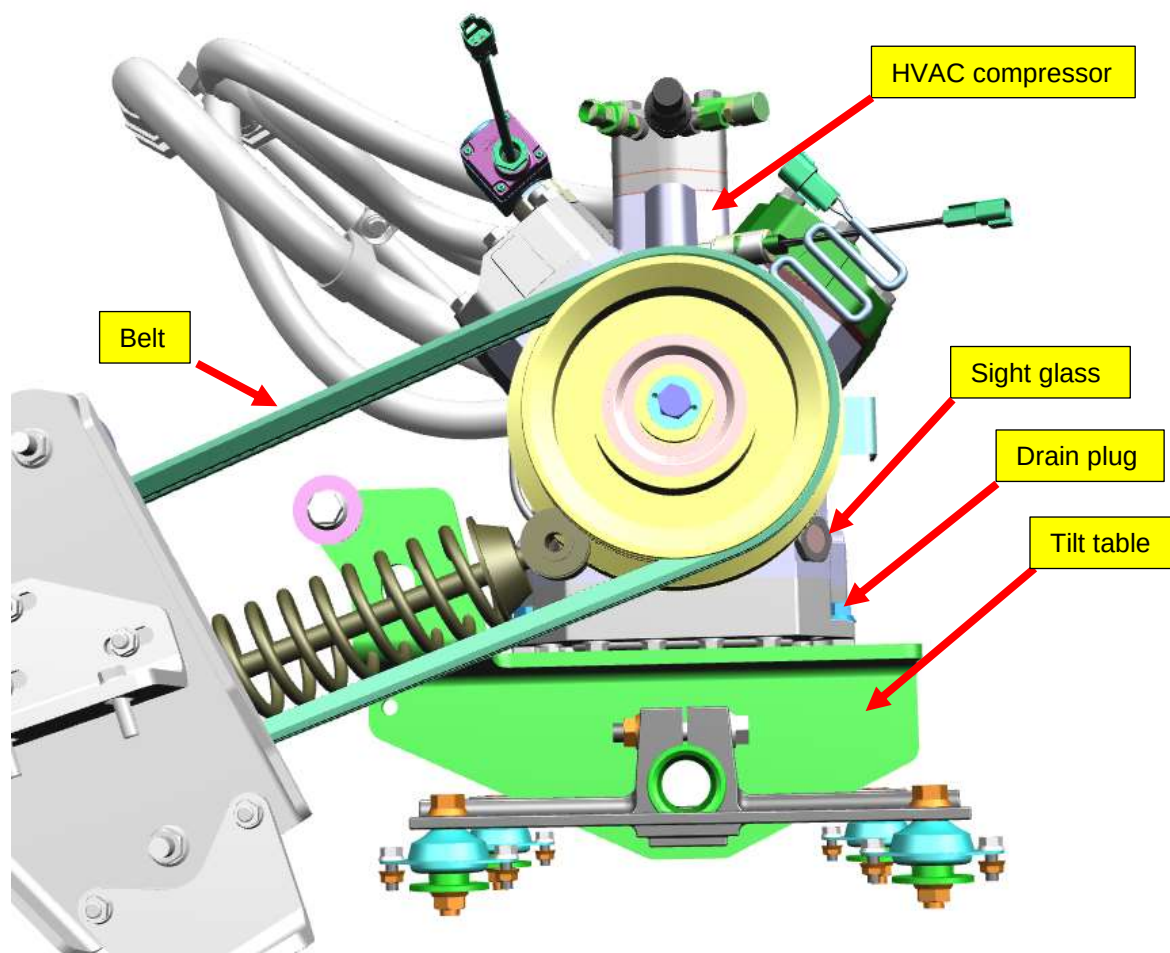


Figure 1: HVAC compressor mounted on a tilt table

When checking the oil level of the HVAC compressor, ensure the coach is parked on a leveled surface. Check the angle of the compressor to ensure it is operated within the 5-degree requirement. The compressor inboard / outboard angle should NOT exceed 5° inclination during operation. On a leveled HVAC compressor (0° inclination), the oil level must be between the min $\frac{1}{4}$ and $\frac{3}{4}$ of the sight glasses as shown on the decal. Refer to Figure 2 below.



Figure 2: Oil level decal on the HVAC compressor

On a tilted HVAC compressor (max 5° is allowed!) to ensure the oil level is correct, both sight glasses must be checked: depending on the angle of the HVAC compressor, the oil level may not be visible because it could be above the sight glass that is located at the lower side of the HVAC compressor. **To ensure the HVAC compressor has adequate amount of oil, the minimum oil level must be at bottom of the sight glass that is on the higher side of the HVAC compressor.** Refer to Figure 3 and the Bitzer's Technical Bulletin shown on the last page.

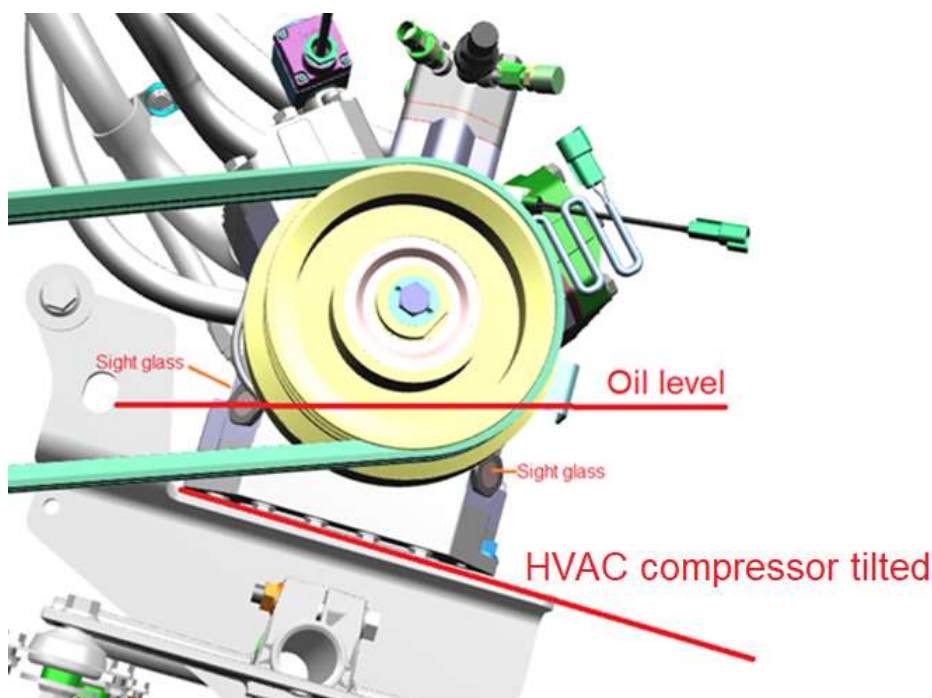


Figure 3: Locations of the two sight glasses and oil level on a tilted HVAC compressor

A new compressor oil is clear color that makes difficult to see the oil level. Use a flashlight and direct its light through the sight glass located on the opposite side to illuminate the interior of the HVAC compressor, ensuring the correct oil level is identified. Refer to Figure 4. Refill oil as required according to the MCI Maintenance Manual.



Figure 4: The oil pan of the HVAC compressor is illuminated through the opposite sight glass



Technical Bulletin (MB-0056)

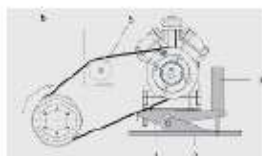
Checking Oil Level in Models MCI-006, MCI-016-01, MCI-024-01 and MCI-029-01

August 2024

BITZER Operating Instructions KB-540 contain the proper procedure for checking oil in BITZER compressor and can be found at www.BITZERUS.com. These instructions assume the compressor is level.

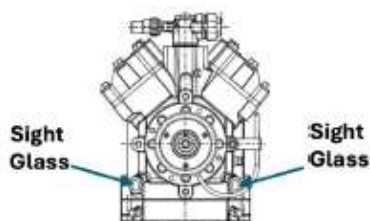


MCI 4 & 6 -cylinders air conditioning compressors referenced above are mounted on a "tilt table" for automatic belt tensioning. As the components in the system wear, they may cause the compressor to not be level.

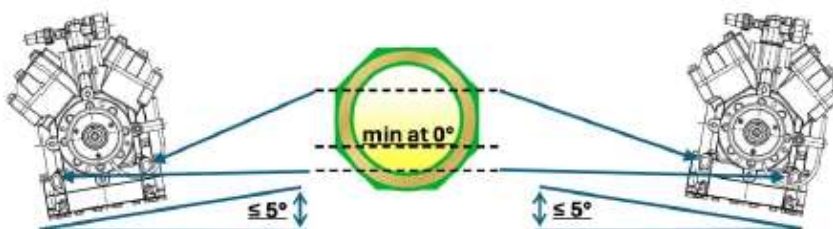


Tilt Table

The models above are identified by the model number on the serial plate and they have 2 oil drain ports on the front of the compressor below the 2 sight glasses.



The diagram below shows the minimum expected oil levels in the sight glass. This is assuming the starting oil level at 0° is at 1/4 of the sight glass.



If the compressor side-to-side tilt is greater than 5 degrees, repair the components needed to bring the compressors within 5 degrees or preferably to level.

For additional technical information and mounting instructions, please visit www.bitzerus.com to download BITZER bulletin KT-170-6



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