HVAC MAINTENANCE

As your service team gears up for annual maintenance inspections, here are a few pointers to keep in mind when evaluating the HVAC systems in heavy-duty vehicles:

1) Verify that the service valves (charge ports) have caps. The cap is the primary seal and should always be tightly installed to prevent refrigerant leaks. If all the service caps are in place but are still registering leaks, it may be time to replace them.

2) Mind the gap. A compressor clutch air gap that is too large could cause slippage, clutch overheating or poor compressor operation. Measure the clutch air gap with a feeler gauge – it should be 0.4 – 0.8 mm (0.016 – 0.031”). You can check the required specifications for your particular type of compressor clutch in the manufacturer catalog for a precise recommendation.

3) Ensure the water valve opens and fully closes. A water valve that does not fully shut off coolant flow will show up later as a poor A/C cooling, as a small coolant leak through the water valve can cause the A/C system to blow warm air.

4) Clean the fresh and recirc filters. Plugged filters will reduce airflow and air quality, impacting cooling and heating performance. Additionally, in cold weather a plugged filter will affect fresh air intake and make de-misting the windscreen more difficult. Filters should be cleaned at least every 30,000 miles if not more often.

5) Check the amount of compressor oil. It is important to carefully manage the amount of oil in a system by recording how much oil is removed during refrigerant recovery or component replacement. A good rule of thumb to follow is, when replacing a failed compressor, measure the amount of oil in it. Some oil may need to be removed from the replacement compressor so the system does not end up with too much oil. However, remember, if the system is flushed before a new compressor is installed, the system will require a full oil charge.