

Warranty is a growing concern for all partners in the distribution of A/C Components. Because of the growing number of warranty questions, please study the following pictures to familiarize yourself with unsuitable warranty claims.

## Clutches



Clutch coil not properly secured to compressor

Locked up Clutch due to excessive heat caused by high system pressure or faulty coil connection causing rapid clutch cycling (**Frosted Appearance**)



**TECH TIP: A/C Clutch Function:** The clutch's function is to engage and disengage the compressor from the vehicle's accessory drive system. When the clutch is engaged, the proper voltage from the coil holds the front hub against the center rotor and turns the compressor to circulate the refrigerant. When the clutch is disengaged, the center rotor acts only as an accessory pulley and turns with the rpm of the engine. It doesn't affect the A/C System.

### To determine if an A/C clutch should be returned for Warranty Consideration:

1. What is the condition of the A/C System?
  - Check the gauge reading to verify that the system is charged and functioning correctly.
2. Examine the condition of the clutch. **Look for the following signs.**
  - \***Bearing Failure** – The most common request for warranty consideration is a failed bearing in a clutch assembly. Bearing failure is normally caused by a compressor that is slipping or locking up. The slipping will cause excess heat between the rubbing of two metals, front hub and the center rotor. The front hub can't rotate because the A/C system has a restriction or blockage which locks the compressor up and causes the hub to rub up against the center rotor. The center rotor continues to turn because it is driven by the belt on the accessory drive. The heat caused by the friction between the center rotor and front hub will melt the bearing seal and allow the bearing grease to escape. Without the grease to lubricate the bearing, the bearing will fail.
  - \***Frosted Appearance** - The front hub of the clutch assembly appears to have a frosted color or appearance caused by the rapid cycling of the compressor and clutch assembly. The extreme heat from the slipping will quickly cause the front hub to take on a discolored appearance. At this time, the clutch assembly should be checked as well as the A/C system. To check the clutch assembly: 1. Check for the right amount of voltage for proper engagement. 2. Check and see if the clutch is engaging and disengaging. 3. Check and see if the center rotor is acting as an accessory drive pulley when the clutch is disengaged. 4. Check the gap between the front hub and center rotor. If the clutch checks out to be in operating condition, check the remaining A/C components for failure.
  - \***Field Coil** – Extreme heat can cause the epoxy of the field coil to melt. The wiring or coil should be imbedded in the epoxy under normal circumstances.
  - \***Mounting Bolts** – The mounting bolts used to mount the field coil should be tightened to the OE specs. Failure to properly tighten these bolts can cause the flange holes to elongate. Eventually the field coil will begin to contact the center rotor and cause a clutch failure.
  - \***Keyway** – If the shaft key and keyway of the compressor are not lined up correctly during clutch installation, the center rotor will rub up against the field coil. The misalignment will create a rubbing effect on the inner part of the center rotor and the outer housing of the coil.
  - \***Grounding** – Double check the ground wire on the clutch assembly to insure proper installation.
  - \***Wiring** – Never replace a two wire clutch assembly with a single wire clutch assembly or vice versa.
  - \***Belt Tightness** – Check the tension on the belts for correct belt tension. Excess tightness will cause a clutch failure.

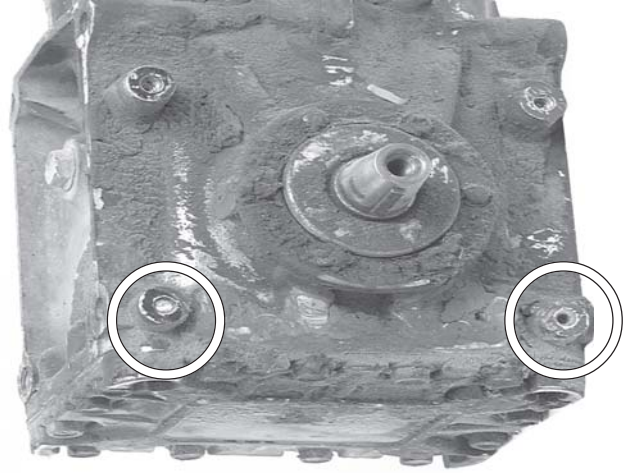
# WARRANTY

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## T/CCI / Tecumseh Compressors



Keyway not properly installed on compressor shaft.



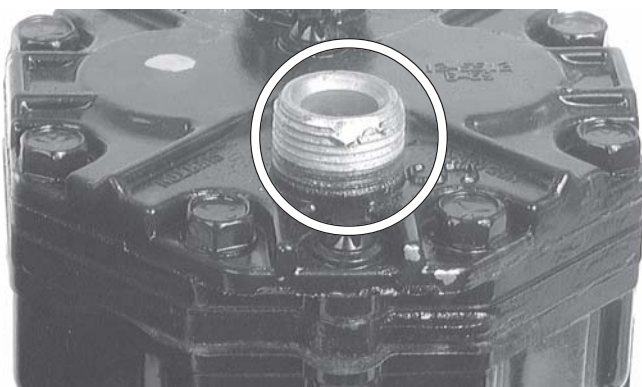
Stripped, broken or damaged clutch mounting threads.



Stripped Fitting due to overtightening service valve.



Dropped Compressor shown by the flat dent in threads.



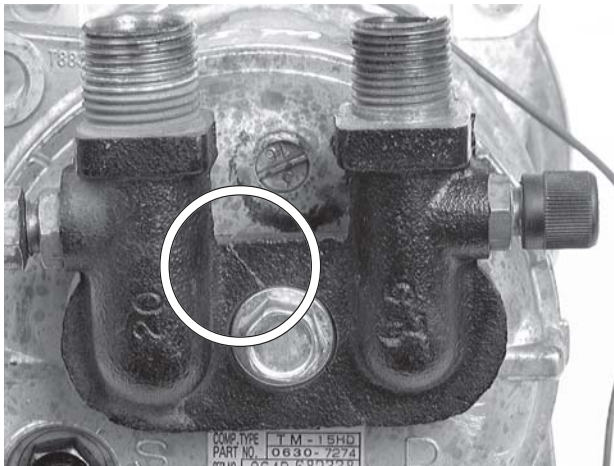
Dropped Compressor shown by flat dent in threads.



Oil leaking from center of shipping cap. Factory nitrogen charge may cause slight oil leak from center of cap while in box. Check oil level prior to installing compressor.

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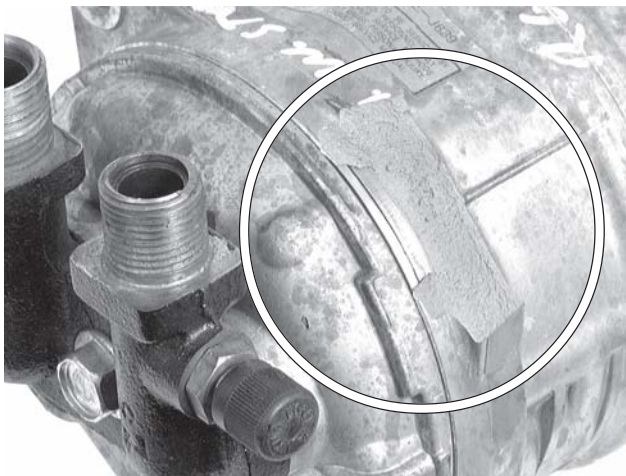
## Sanden / Seltec Compressors



Manifold cracked.



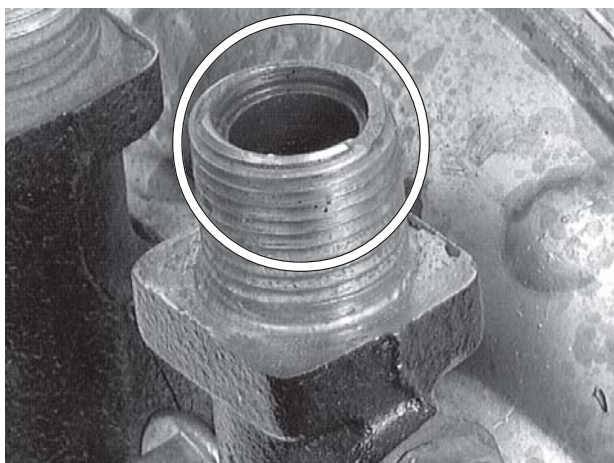
Retro-fitted to 134a, system not flushed.



Broken mounting ear.



Extreme heat build-up causing clutch failure, due to slipping, lack of lubrication or high system head pressure.



Stripped or damaged hose threads due to over-tightened fittings.

# WARRANTY

## COMPRESSOR LIMITED WARRANTY

AIRSOURCE warrants compressors to be free of defects in material and workmanship for 12 months from the date of sale to the first retail purchaser. This limited warranty covers the compressor only and **DOES NOT INCLUDE LABOR** of any kind, materials not furnished by the manufacturer/distributor, or any charges for such labor and/or materials. This compressor is to be installed by certified professional repair technician.

MEI Corporation or reseller assumes no liability for damage to the compressor or vehicle a/c systems resulting from improper installation operation.

**This limited warranty does not apply to compressors that have been:**

1. Altered outside the manufacturer's factory in any way that negatively affects the performance and/or function.
2. Subject to misuse, abuse, negligence, or operation conditions other than those for which the product was intended.
3. Physically or chemically damaged by refrigerants, gases, or other agents present in the system or in environment of the product.

**In addition, to receive the warranty a repair order\* must be provided which states that the following procedures were performed:**

1. Replaced the accumulator/receiver dryer.
2. Replaced the expansion device [orifice tube, expansion valve, or liquid line containing orifice tube].
3. Replaced hose assemblies containing mufflers [cannot be flushed].
4. Closed loop flushing of all components not being replaced.
5. Installed a filter kit on vehicles not being flushed.
6. Used only approved PAG or Ester Oil for R-134a compressor replacement. **Used only mineral oil for R-12 systems.**
7. Used only R-134a or R-12 refrigerants. **Blend or hydrocarbon refrigerants of any kind are unacceptable and will VOID ALL WARRANTIES.**

***\*Failure to provide this documentation will void your limited warranty.***

### FAILURE TO FOLLOW THESE STEPS WHEN INSTALLING COMPRESSOR WILL VOID YOUR WARRANTY.

- **MUST** clean A/C Systems with an approved flush, using an approved flushing method and flush.
- **MUST** replace filter drier or accumulator drier.
- **MUST** replace orifice tube or liquid line that contains orifice tube (if applicable).
  - Inspect/replace thermostatic expansion valves & cleans inlet screen (if applicable).
  - Check for proper airflow through cooling fins of condenser & radiator.
  - Check for proper fan clutch or electric fan operation.
  - Check compressor clutch air gap before installation (refer to OEM or manufacturer's specs).
- **MUST** add correct type & amount of refrigerant oil (refer to OEM or manufacturer's specs.)
  - After hose assemblies are attached, turn compressor shaft (not just the clutch pulley) minimum of 10 times to clear oil from compressor (a spanner wrench may be required).
  - Check compressor clutch electrical circuit for proper voltage (use either OEM or compressor manufacturer's specs).
  - Use **ONLY R12 or R134a refrigerant**. Blend or Hydrocarbon refrigerants of any kind are unacceptable and **VOIDS WARRANTY**.
  - Evacuate entire A/C System for minimum of 45 minutes if the temperature is above 80 degrees (60 minutes for Dual Air System or if temperature is below 80 degrees).

**NOTE: CHECK OIL PRIOR TO INSTALLATION OF COMPRESOR. SOME NEW AND REMANUFACTURED COMPRESSORS DO NOT CONTAIN OIL.**

**You MUST add oil per OEM or compressor manufacturer's recommendations.**

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Fill out all information, and fax to: 770-631-9315 Á

# A/C SYSTEM CONFIGURATION WORKSHEET

This worksheet will assist you in determining what components are required for proper installation of aftermarket A/C system for your vehicle.

YEAR:\_\_\_\_\_ TRUCK MAKE: & SERIES\_\_\_\_\_

ENGINE TYPE & MODEL:\_\_\_\_\_ VOLTS:\_\_\_\_\_

\* If Cummins 855, please specify what groove is open on accessory drive. Determine this by counting from face of block forward. \_\_\_\_\_

\* If Mack, specify if truck has charged air cooling. \_\_\_\_\_

\* If Mack E-6, specify if it is 2 valve head and of ***Bosch 6000*** or ***7100 injection***.

\* If Mack 675-676 or 685, specify BOSCH or UNITED TECHNOLOGY Fuel Injection System and ***STEEL*** or ***ALUMINUM*** timing cover. \_\_\_\_\_

**Steering:** (circle one)      STD      PWR      GEAR      BELT DRIVEN

**Brakes:** (circle one)      AIR      HYD      VAC

**System Type:** (circle one)      Roof      Wall      In-Dash      Headliner

We will return the fax to you with the requested information. Each part number will be placed by the part description listed below.

Compressor\_\_\_\_\_ Compressor Mounting Bracket\_\_\_\_\_ Condenser\_\_\_\_\_

Condenser Bracket\_\_\_\_\_ Hose & Fitting Kit\_\_\_\_\_ Evap Assy\_\_\_\_\_

Roof Unit\_\_\_\_\_

Distributor:\_\_\_\_\_ Salesman:\_\_\_\_\_

Fax Number\_\_\_\_\_ Phone Number:\_\_\_\_\_

