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*It Can Be Done
 With*



CHARGE AIR COOLER TEST SET

The Fastest, Safest Way To Test Charge Air Coolers!



Rugged Components Make Testing Easier!

Testing Charge Air Coolers and other large heat exchangers can be both time consuming and risky if you don't have Johnson's Charge Air Cooler Test Set.

Our set includes: Extra-heavy-duty test plugs with cast handles (adaptable to fit six different sizes, with 2-1/2" up to 4" rubbers), a unique tester that features an air stem, 2-1/2" gauge, and a 35# pressure relief valve, plus, a pair of safety clamps for operator protection during testing. All this equipment is packed in a rugged, plastic dry box. Johnson's CAC Test Set is a must for every professional radiator shop. Call Johnson today to order!

Part No. 351-CAS: What's Included In The Kit

Quantity	Part No.	Component Description
1 each	351-09C	2-1/2" Closed Test Plug
1 each	352-09C	2-1/2" Open Stem Test Plug
1 each	351-12C	3-1/4" Closed Test Plug
1 each	352-12C	3-1/4" Open Stem Test Plug
2 each	351-10R	2-3/4" Rubbers Only
2 each	351-11R	3" Rubbers Only
2 each	351-13R	3-1/2" Rubbers Only
2 each	351-14R	4" Rubbers Only
1 each	351-29	CAC 35# Tester With Gauge
2 each	356-51	CAC Safety Plug Clamps
1 each	351-30	Rugged Plastic Case



JOHNSON'S CHARGE AIR COOLER TEST SET

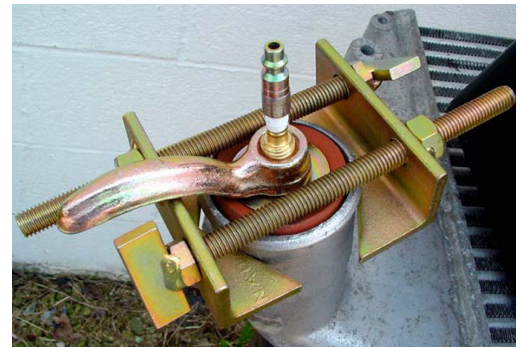
DIRECTIONS FOR PROPER USAGE

OEM SERVICE BLEED RATE SPECIFICATIONS

Caterpillar	5 PSI within 15 seconds @ 30 PSI
Cummins (ISB, ISC, N14)	7 PSI within 15 seconds @ 30 PSI
Cummins (ISX, M11)	5 PSI within 15 seconds @ 30 PSI
Detroit Diesel	5 PSI within 15 seconds @ 25 PSI
International	5 PSI within 15 seconds @ 30 PSI
Mack Truck	5 PSI within 15 seconds @ 30 PSI
Volvo Trucks	7 PSI within 15 seconds @ 30 PSI

Johnson's CAC Test Set may be used to test the pressure drop of all known sizes of Charge Air Coolers. Some of the components in this set, such as the plugs and clamps may also be used when testing other heavy-duty heat exchangers if they have cast aluminum or steel tanks with beads around the outer edges of the inlets and outlets.

According to most OEM Specifications, Charge Air Coolers (CAC) that show a pressure drop greater than 5 PSI within 15 seconds when pressurized at 30 PSI, should be replaced. Johnson's CAC Test Set provides you with the tools to safely and effectively determine whether any CAC passes or fails the manufacturer's specifications.



USING HIGH AIR PRESSURE AND LARGE TEST PLUGS MAY PRODUCE DANGEROUS RESULTS! **Please read and follow these instructions.**





Inspect the inside of the opening and the test plug rubber, to make sure both of these surfaces are clean and dry. Test plugs should be installed flush with the opening and tightened firmly by hand.

Install Johnson's Test Plug Clamp, positioning it over the handle so the notched portion of the clamp engages the outside of the inlet/outlet just behind the bead. Tighten the long bolts equally and check again to make sure that the notched portion of the clamp is engaged behind the bead at four points. Do not over tighten! Repeat for second inlet/outlet.

Position the CAC unit so the open stem is pointing up. Next, connect the brass tester at the quick disconnect side. This Tester is equipped with a pop-off safety valve that has been preset to 35 PSI maximum pressure. Do NOT change this setting or tamper with this device in any manner. Keep this safety valve clean and dry. Check it occasionally to make sure that it releases pressure at the 35 PSI setting. Replacement safety valves and other parts are available if needed.

After checking to make sure everything is properly secured, introduce air through the air stem using a common tire chuck. Allow the cooler to pressurize to the OEM Service Bleed Rate Specifications shown in the table below. Once the proper air pressure has been reached, STOP THE AIRFLOW and watch the gauge for the time indicated. If more than the prescribed pressure drop occurs, the cooler does not meet engine manufacturers specifications and should be replaced or repaired.

When finished testing each CAC, return all parts to the plastic case to keep them clean and dry.

-  **NEVER TEST A CHARGE AIR COOLER BEFORE ALL PLUGS AND CLAMPS ARE PROPERLY INSTALLED!**
-  **NEVER TEST A CHARGE AIR COOLER USING MORE THAN 30 PSI OF AIR PRESSURE!**
-  **NEVER DIRECT A LOADED PLUG IN THE DIRECTION OF COWORKERS, THE PUBLIC, OR AT YOURSELF! REMEMBER, "PLUGS DON'T GET HARMED, PEOPLE DO!"**
-  **ONCE THE TEST HAS BEEN COMPLETED, REDUCE THE AIR PRESSURE WITHIN THE CAC BY DEPRESSING THE VALVE STEM. NEVER REMOVE THE CLAMPS OR TEST PLUGS BEFORE ALL THE PRESSURE IS RELEASED FROM THE CAC.**