



**UNITED
TECHNOLOGIES
CARRIER**

Commercial Division
Carrier Corporation

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DATE: 10/22/64
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SERVICE BULLETIN

SUBJECT:

19C NOSE CONE

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Installation, repair and service and equipment referenced in this Service Bulletin should be undertaken only by qualified persons. Carrier Corporation (1) makes no representations or warranties, expressed or implied, concerning the accuracy, completeness or right to use the information contained herein, and (2) disclaims all liability for injuries, damages, infringements and other losses which may arise on account of, or which may result from, the use or application of any information, method or apparatus disclosed herein.

PURPOSE: To transmit installation instructions for the new design 19C nose cone.

**MACHINES
AFFECTED:** All 19C machines with compressor serial number 40217 and higher, and on other designated 19C compressors that are being field re-worked to include the new design.

PROCEDURE: A copy of the attached instruction sheet is included with each packaged nose cone. The nose cone is assembled as shown, balanced and checked for run-out before shipment. The four (4) special set screws are included with the assembly. See sketch.

This new design nose cone has several improvements over the former design.

The new design can be installed on all 19C compressors presently in operation. The previous nose cone and its related parts are no longer available in Service Parts. When a replacement is necessary, the new design must be installed.

After installing the nose cone and reinstalling the compressor inlet venturi, check clearance between tips of guide vanes and nose cone with a feeler gauge. Minimum clearance between vane tips and cone is 1/16" in both the open and closed vane positions.

Compressor Size	Nose Cone Part No.	Outside Diameter Aluminum Cone
19C3, 4,	19C35-813	4.924/4.944
19C6, 7, 8, 5	19C65-813	5.510/5.490



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A. Preparation

1. Shut down machine and secure starter so compressor cannot be started.
2. Operate chilled water pump, (with condenser water pump shut off) until the refrigerant temperature reaches approximately 70°. This will prevent excessive condensation of moisture into machine while it is open. Shut off chilled water pump.
3. Break machine vacuum back to atmospheric pressure by admitting nitrogen or dry air through purge suction connection on top of condenser. Close this opening after machine pressure reaches atmospheric.
4. Remove suction elbow.
5. Remove inlet venturi. This will require the disconnecting of some copper tubing, and electrical wiring at the follow-up potentiometer and vane closed switch. On hydraulic vane operators, drain the oil from the cylinder or cap the openings when the copper tubing is disconnected.
6. Remove old nose cone, stud, stud locking nut, shaft nut and locking washer. DO NOT reuse any of these items.

NOTE: Shaft nut has left hand threads. Some studs have left hand and some have right hand threads.

B. Installing New Nose Cone

1. DO NOT disassemble nose cone. It has been carefully assembled, balanced and checked for runout.
2. Screw nose cone onto shaft threads (left hand). Tighten it securely by placing a drift pin at the holes provided and driving with a hammer.
3. Scribe a mark on the tapered nut and the face of the impeller hub so the nut can be retightened to the same position after removal.
4. Insert a long pointed center punch through the set screw holes and lightly mark the shaft for drilling.
5. Remove the nose cone and drill holes in the shaft at the points marked in "4" above. Use a 3/16" drill and drill these holes 1/8" deep.
6. With a fine three cornered file dress up the shaft threads around the two drilled holes.



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7. Reinstall the new nose cone and tighten it until the scribe marks on the tapered nut and the impeller hub line up. The drilled holes in the shaft should now line up with the set screw holes. This can be checked with a mirror and flashlight.
8. Four set screws are supplied. Use two in each hole. The first one should bottom in the drilled hole in the shaft and be tightened securely. The second one should be screwed in firmly against the top of the first one. With a punch upset a thread above the top set screw to prevent it from backing out.

C. Reassembly

1. When installing inlet venturi, replace the "O" ring gasket if it has been damaged. Permatex #2 can be used to hold the "O" ring in place during assembly.
2. Check clearance between nose cone and prewhirl vanes with the vanes in both the open and closed positions. Clearance should be approximately 1/16". It may be necessary to file some vanes to obtain proper clearance.
3. When installing suction elbow replace any damaged flexible coupling gaskets. Also where stay bolts are removed, it is very important that these be re-installed.
4. After reassembly, raise machine pressure to approximately 5 psig with nitrogen or dry air, and leak test all joints which were opened.
5. When machine is made leak tight, use purge to remove all air or nitrogen from machine.



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