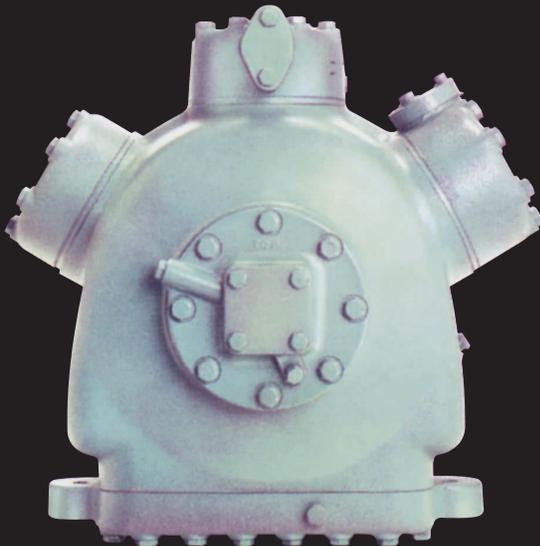




# FACTORY REMANUFACTURED COMPRESSORS

## WHEN IS A CARLYLE NOT A CARLYLE?

**When It's An Unauthorized Rebuild!**



**The Unauthorized Rebuilt  
Carlyle Compressor**

- **Not UL recognized**
- Repaired or partially rebuilt to original (old) specifications
- Components often used "as is"
- Critical parts reused or replaced with the imitation parts that may not meet rigid Carlyle specifications
- May have undergone limited run test (or none at all)
- May have limited warranty coverage



**The Carlyle Factory  
Remanufactured Compressor**

- **UL recognized**
- Completely remanufactured to current OEM specifications at Carlyle Stone Mountain Remanufacturing facility, utilizing genuine parts.
- All critical wearing components, rings, valves, and bearings replaced
- Cylinder walls rehone, crankshaft remachined and polished to ensure reliable performance
- Bores measured with highly sensitive air gauge
- Product quality routinely audited by authorized remanufacturers and Carlyle factory personnel
- All compressors are 100% run tested, under load
- Backed by Carrier Corporation service and warranty programs

# CARLYLE REMANUFACTURED COMPRESSORS GIVE GOOD AS NEW, IF NOT BETTER THAN NEW PERFORMANCE

## GOOD AS NEW

We can tell whether a Carlyle service compressor is remanufactured or completely brand-new because we can check the serial number against our manufacturing records.

But you can't tell the difference. The end-user of the air conditioning or refrigeration system you install it in can't, either. And, for that matter, it's difficult for our own shop foremen.

You can measure its performance. Tear it down. Check it with any gauges you like. These compressors are remanufactured to Carlyle's strict engineering standards. Others may repair or rebuild Carlyle compressors, but nobody else can make them as good as new.

## BETTER THAN WHEN NEW

Usually, a Carlyle remanufactured compressor performs even better than the unit it replaces did when new. When we remanufacture a 15- or 20-year old compressor, we build it to current engineering specifications. It gets our latest technical advances including extended voltage motors, improved efficiency and new, high-tech components. In fact, it gets every Carlyle technological improvement that is compatible with the original crankcase.

## UL RECOGNITION... AN INDUSTRY FIRST!

The Carlyle family of **Factory Remanufactured Compressors** was awarded U.L. recognition in 2001. U.L. recognition provides the assurance that a Carlyle **Factory Remanufactured Compressor** has been built to comply with internationally recognized standards and that any foreseeable risks of fire, electric shock or other safety hazard are substantially minimized.

U.L. recognition assures the safety of compressor construction, electrical connections and wiring, as well as motor construction. Underwriter's Laboratories measures the remanufactured compressor against its own guidelines which are based on the criteria established with Carlyle. U.L. reviews compliance to its standards by making unannounced audit visits to each Carlyle remanufacturing facility.

## TESTING 1•2•3•4

Before any compressor is released for painting and packaging, it has a few hurdles to jump.

- **Run-in and performance testing** - We operate the compressor under load and check for proper flow and current draw. Oil pump reversibility and valve leak back rates are also checked.
- **Pressure testing** - We pressure test the assembly using Carlyle's engineering specifications and procedures.
- **Leak testing** - After at least three hours of oven dehydration, we test for leaks at high and low side design pressures. Any leak exceeding 1/2 oz. in five years is cause for rejection.
- **Electrical testing** - We check the dielectric strength of the motor insulation at 1000 volts plus 2 times the nameplate voltage.

And then, there's our Audit Program. On an ongoing basis, a random selection of models is torn down at the remanufacturing facility. Each year we subject over 300 compressors to this Quality Audit Program.

## THE PRODUCTS

Our service compressor line includes:

- 06D, 06E and 06L semi-hermetics in capacities from two to 120 tons.
- 5F and 5H open drive compressors rated from 5 to 150 tons.
- Models for air conditioning and low/medium temperature refrigeration applications.
- All popular voltages - many with extended voltage. The 06E is available in a Multi Volt (208/230/460) model.
- Most models with unloading capability for improved part load performance.

All are available through Carlyle distributors nationwide. And all are sold with a one-year warranty. Optional 2nd through 5th year coverage is available for the 06D/06E semi-hermetics and 5F/5H open drive models.

## IMPROVING THE BREED

Progress is a two-way street at Carlyle. Yes, our remanufactured compressors get the benefit of our latest technological advances. But, our remanufacturing operation also plays a major role in stimulating those advances.

The Carlyle Stone Mountain Remanufacturing facility conducts extensive "post mortems" on compressors returned during their warranty period. Statistical records are kept on all other observed failures. Results are forwarded to compressor engineers in Syracuse where research is directed toward the problem areas that may be indicated.

## THE COMPETITION... YOUR REPUTATION

We won't deny it. You can buy cheaper replacement compressors from the rebuilder down the street. Rebuilt compressors may simply be repaired and repainted. Or they may be fairly well rebuilt.

But they won't be built to Carlyle quality by a Carlyle employee. A rebuilder doesn't know our latest quality standards or manufacturing processes. Their compressors don't carry the reassuring back-up of Carlyle service engineering. And they just might get you into trouble with your customer - you've heard the horror stories. **Only you know if you can afford to take the chance.**

## THE PRICELESS INGREDIENT

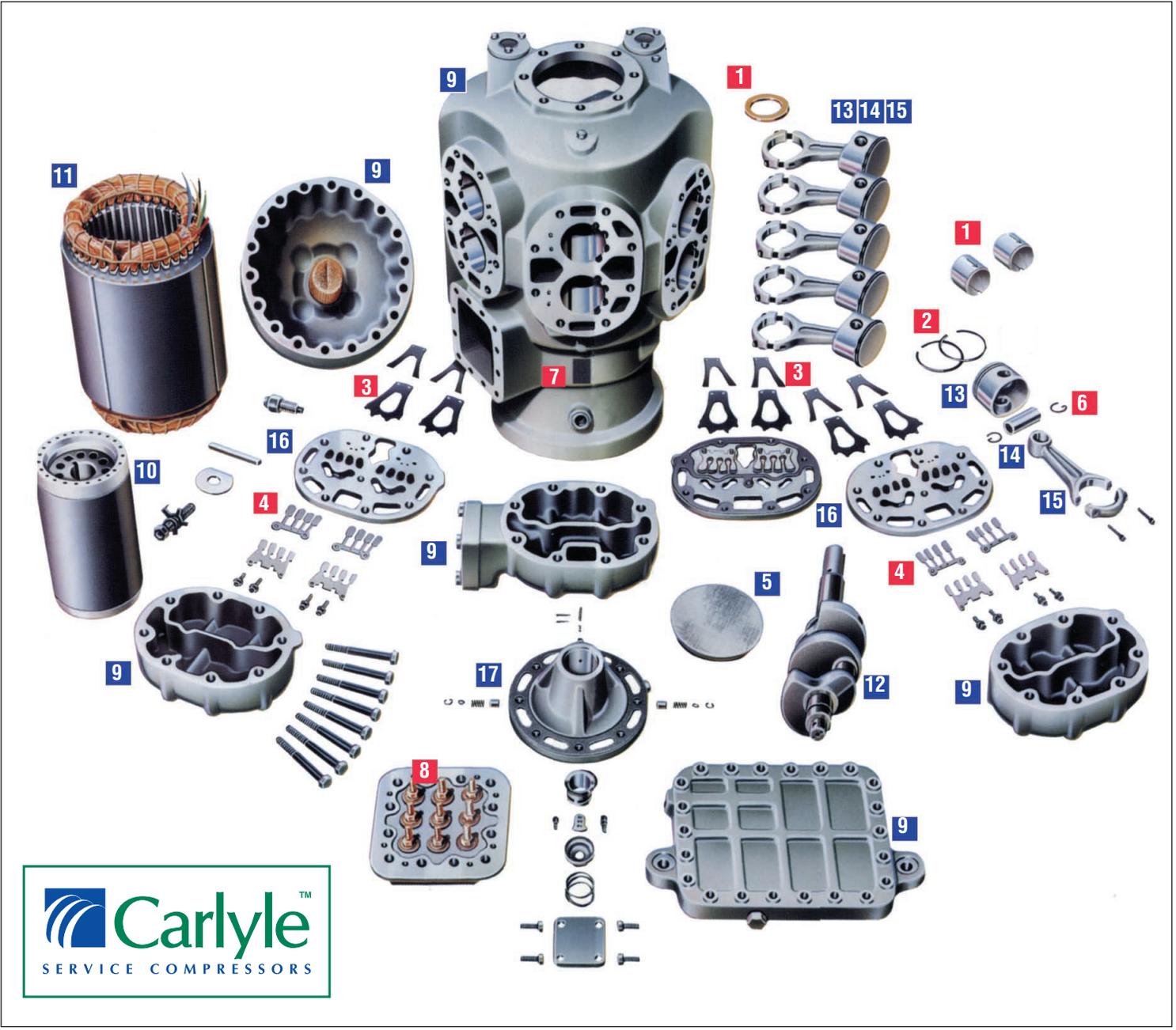
The fact that we'll throw away millions of parts this year hints at it. Parts that others might consider reusable. That we remanufacture 15- and 20-year old compressors to current specifications and offer them with an optional 2nd through 5th year service contract makes it clearer.

And that, in the interest of quality, we disassemble and evaluate over 300 freshly assembled compressors each year clinches it. The priceless ingredient in Carlyle remanufactured compressors is Carlyle's commitment to quality.

**SPECIFY A COMPRESSOR WITH A REPUTATION FOR QUALITY, DEPENDABILITY AND SAFETY...**

**THE CARLYLE FACTORY REMANUFACTURED COMPRESSOR - PROTECT YOUR REPUTATION!**

# REMANUFACTURED, NOT REBUILT!



We begin by tearing the compressor down to its smallest component parts and closely examining each of them. Any that appear damaged or broken are discarded immediately. Even if they're still perfectly serviceable, we throw out critical wearing parts. All gaskets fall into this category, as do the parts marked in red in the illustration: bearings #1 piston rings #2, suction and discharge valves #3 & #4, wrist pin snap rings #6, and, naturally, the nameplate #7. Electrical connections #8 are removed from the terminal plate and then reassembled per the latest engineering specifications using current insulation materials. Next, the crankcase and all parts are put through a special multi-stage cleaning process to remove all gums, varnishes, waxes, lint and passageway obstructions. The components marked in blue are subjected to precise measurement before being released to the production line. In all, 33 dimensional measurements are made on crankcase components #9, rotor and stator #10 & #11, crankshaft #12, pistons #13, wrist pins #14, connecting rods

and straps #15, valve plates #16, and the pump-end bearing head #17. All bores are measured with a highly sensitive air plug gauge. Surface finishes are evaluated with a profilometer and other dimensions measured with an assortment of special tools, ring gauges and dial gauges. Specifications for 11 measurements allow for no deviation whatever from the original drawing; 20 more allow deviation of 5/10,000" or less. Any part that cannot be brought up to specification is scrapped. Rotor and stator windings are checked for dimensions and tested for opens, shorts, insulation breakdown, resistance and surge. If they fail our strict standards, or if they are of an outdated design, they are rewound according to the latest Carlyle specifications. Only when the boring, honing, sleeving, grinding, polishing and rewinding are complete can the compressor be assembled on specially designed equipment. It is then tested.



**AVAILABLE AT YOUR  
AUTHORIZED  
CARLYLE  
DISTRIBUTOR**



Manufacturer reserves the right to discontinue, or change at any time, specifications or designs and prices without notice and without incurring obligations.

REPLACEMENT COMPONENTS DIVISION  
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