Type: Vanair® 125/160/185 Genair® PTO shaft driven air compressor for Ford® 4WD Super Duty. New and in current production.

Capacity: 125-185 CFM free air at up to 150 PSIG.

Compressor: Vanair® design oil flooded rotary screw air end with built-in proper directional gearing for Ford® automatic transmissions and a rear tapered shaft extending off the female rotor. No external to-the-compressor reversing gear box allowed. The compressor to have an integral rear mounted flange designed to have a generator directly mounted to it.

Input Speed: Air compressor shall produce 125 CFM at 1660 RPM input speed
160 CFM at 2085 RPM input speed
185 CFM at 2415 RPM input speed

Gear Ratio: Air compressor gear ratio shall be 2.71 to 1 to ensure lowest possible engine speed.

Generator: Vanair® model Genair® 6.6 kW capable of producing a continuous rating of 6.6 kW A/C power. Generator unit to be directly coupled to the tapered output shaft of the female rotor on the compressor unit. No belts, pulleys or tensioning devices allowed. Must be built in accordance with US Patent Number 5242278. Generator to be a weatherproof Totally Enclosed Fan Cooled (TEFC) type and be controlled with an AVR to produce 60 Hz at +/- 2%.

Generator Control: Remote mount control panel with on/off toggle switch and indicator light.

Single 120V System
Control panel to include (1) 30 AMP/120V GFCI circuit breaker, (2) 20 AMP/120V circuit breakers and (1) 50 AMP/120V incoming circuit breaker. Unit to be equipped with (2) 20 AMP/120V GFCI 3-prong conventional outlets and (1) 30 AMP/120V 3-prong twist lock outlet.

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Dual 120V/240V System
Control panel to include (1) 20 AMP/240V GFCI circuit breaker, (2) 20 AMP/120V circuit breakers and (1) 25 AMP/240V incoming circuit breaker. Unit to be equipped with (2) 20 AMP/120V GFCI 3-prong conventional outlets and (1) 20 AMP/240V 3-prong twist lock outlet.

Air Intake Filters: Separate two-stage, heavy duty, dry-type air filters shall be provided for air compressor.

Air Separation Tank: The patent pending Xero™ Tank has the ability through its blow down to depressurize in under 10 seconds, allowing for rapid air compressor re-engagement and eliminating oil carry over.The tank shall be ASME code approved rated at a 250 PSIG maximum relief pressure. It shall be equipped with a tank mounted O-Ring sealed manifold containing an integrated; minimum pressure valve, blow down valve, pressure regulator, provisions for dual pressure regulator, pressure transducer, provisions for redundant pressure transducer, Resistance Temperature Detector (RTD), and ASME air pressure relief valve. The receiver shall be equipped with a fill cap and easily readable sight glass. The unit shall be equipped with a tank mounted O-ring sealed oil filter head assembly with an integrated; thermostatic valve, RTD and a 10 micron full flow spin-on replaceable oil filter canister with built in bypass protection.

Receiver tank manifold assemblies to contain JIC and SAE-O-Ring fittings for all hose connections. Receiver tank to have provisions for in-tank engine coolant oil heater. Receiver tank (In.): 10.30D x 22.5L

Transducer and RTD Dual Redundancy System:

Patent-Pending Vanair® FailSafe™ Dual Redundancy System 2X Technology with redundant transducers and RTD with automatic seamless switching to maintain extremely high levels functional integrity and availability.

_____(With/Without) Optional Remote Patent-Pending Vanair® FailSafe™ Dual Redundancy System in a protected NEMA box.

_____(With/Without) Optional Optical Oil Level Sensor

_____(With/Without) Patented ThermalGuard® weather protection kit for cold weather/moisture elimination

_____(With/Without) Optional Dual Pressure Regulators

Air/Fluid Separator:

UltraLife™ Separator element to be located internally in air separation tank. Separator shall be constructed with metallic end cap with mechanical grounding strap and staples. Vanair® separator shall provide for enhanced air quality, reduced operating and maintenance cost and optimized compressor performance with 6000 hour separator life.

Instrument Panel:

The V-TEC II™ system consists of an all-in-one I/O and LCD module. The module receives sensor information and modulates infinitely variable engine speed based on air demand. The module also presents system information including system hours, service intervals, air pressure, and oil temperature. The V-TEC II™ is IP66/67 weatherproof rated and features a 3.5 inch LCD display panel that is viewable in low and bright light conditions with 5 navigation buttons.

V-TEC II™ System is equipped with torque-management technology providing soft-start PTO engagement which eliminates high torque spikes at start-up.

The Vanair® V-TEC II™ Speed Control system utilizes a micro-processor in conjunction with solid state electronics and is designed with a chassis-specific plug and play wiring harness. Wiring harnesses shall be built in accordance with IPC WHMA-A-620C standards and use weatherproof connections and woven loom material. Harness to utilize sealed buss block design for all power and ground circuits eliminating all butt connections and splices.
The V-TEC II™ controller is pre-programmed to specific applications based on engine, transmission, PTO gear ratio, and Vanair® Underdeck model.

PTO will disengage in case of high compressor temperature, over pressurization, over speed, under speed, and failure to set parking brake.

The Vanair® V-TEC II™ presents troubleshooting information on the display to eliminate the need for external connections to a laptop and additional software.

The V-TEC II™ Controller logs faults and fault conditions for easy troubleshooting diagnostics.

Cooling System: Compressor air-to-oil cooling system shall allow rated air delivery and pressure operation continuously in 125° F ambient temperatures. Fan assembly to be solid-state brushless design with integral thermal protection. Cooler to be mounted in a powder coated sheet metal enclosure with a fan assembly and utilize SAE O–ring fittings (No ABS plastic shrouding). When using the V-TEC II™, a fan temp switch is not used. The RTD, thermal valve and V-TEC II™, control the compressor cooling. A dual cooler shall be provided for 185 and 200 CFM at 150/200 PSI.

Controls: Pneumatic inlet control valve shall be integrated into compressor system and automatically modulate output from 0 to 100% in response to air demand.

General: The compressor shall be manufactured in an ISO 9001 certified quality system.

Warranty: The air end is warranted for life when adhering to the prescribed maintenance schedule. This warranty does not cover damage caused by accident, misuse, or negligence. If the compressor unit is disassembled the warranty is void. All other parts including the compressor unit shaft seal are warranted for twelve months subject to the same conditions.

Service Centers: The air compressor manufacturer MUST have factory authorized service centers located in each state of the United States of America and Canadian provinces.

Installation: Systems must be installed by a factory authorized installation center.

Options:
Service/Control Line Moisture Separators
Filter/Lubricator/Regulator (FLR)
Air Hoses, Hose Reels and fittings
OSHA Safety Valve (Velocity Fuse)
Tool Oiler/Lubricator
Biodegradable Vanguard Green™ Synthetic Oil