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NEXT LEVEL KNOWLEDGE.

INSTALLATION BEST PRACTICES

Turbos

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FREE TECH HOTLINE
800.228.9672
M-F 5:30 am-5:00 pm · S-S 6:00 am-2:30 pm (PT)
ASE Certified Bilingual Technicians Are Available

REDUCE RETURNS WITH MPA'S

CALL BEFORE YOU RETURN PROGRAM

ASE Certified Bilingual Technicians are available to help answer installation and product questions 7 days a week. In addition to product knowledge, our team can help walk you through the installation process, help verify application information, and provide tips and guidance to help get the vehicle back on the road.

INSTALLATION BEST PRACTICES

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VEHICLE PREPARATION

- ✓ **REFER TO VEHICLE SERVICE INFORMATION FOR ANY SPECIAL TESTING, REMOVAL, OR INSTALLATION PROCEDURES**

  A) CHECK FOR ANY RELATED TECHNICAL SERVICE BULLETINS

  B) CHECK FOR AND ADDRESS ANY TURBOCHARGER RELATED DIAGNOSTIC TROUBLE CODES AND/OR WARNING LIGHTS ON THE INSTRUMENT PANEL

  C) REFER TO ANY WARNING TAGS OR TECHNICAL BULLETINS INCLUDED IN THE BOX WITH THE REPLACEMENT TURBOCHARGER

- ✓ **OBTAIN ALL VEHICLE INFORMATION TO ENSURE CORRECT PART APPLICATION**

  A) MAKE, YEAR, MODEL, ENGINE, TURBOCHARGER SYSTEM DETAILS, ETC.

- ✓ **RUN A THOROUGH ENGINE SYSTEMS DIAGNOSTIC CHECK**

  A) IN ADDITION, A TURBOCHARGER DIAGNOSTIC CHART CAN BE USEFUL IN DETERMINING THE ROOT CAUSE OF TURBOCHARGER SYSTEM PROBLEMS BY SYMPTOM

  B) INSPECT THE VEHICLE PCV SYSTEM. REPAIR AS NECESSARY

- ✓ **CHANGE THE VEHICLE ENGINE OIL, OIL FILTER, AIR FILTER AND FUEL FILTER (IF EQUIPPED)**

NOTE: DO NOT ATTEMPT TO CHANGE ANY OF THE SETTINGS OR CALIBRATIONS OF THE TURBO. DAMAGE MAY OCCUR TO THE TURBO AND/OR ENGINE. IF VNT/VGT TURBO EQUIPPED, DO NOT ATTEMPT TO MOVE THE ELECTRIC ACTUATOR ROD MANUALLY BY HAND OR WITH A TOOL. DAMAGE TO THE TURBO WILL RESULT

Turbo Removal

- ✓ DISCONNECT AIR INLET AND OUTLET HOSES ON THE COMPRESSOR SIDE OF THE TURBO. INSPECT ENTIRE BREATHER SYSTEM INCLUDING INTERCOOLER FOR WEAR AND CONTAMINATES. REPLACE AND/OR CLEAN AS NECESSARY. CAP AIR INLET AND OUTLET HOSE ENDS TO PREVENT DEBRIS FROM ENTERING SYSTEM WHILE REPLACING TURBO
- ✓ DISCONNECT EXHAUST DOWN PIPE ON THE TURBINE SIDE OF THE TURBO. INSPECT FOR WEAR AND CONTAMINATES. REPLACE AND/OR CLEAN AS NECESSARY. DISCARD OLD GASKET. NOTE: IF DIESEL EQUIPPED AND ENGINE OIL HAS CONTAMINATED THE EXHAUST SYSTEM, THE EXHAUST AFTER TREATMENT SYSTEM (DOC/DPF FILTER SYSTEM) MUST BE CLEANED
- ✓ DISCONNECT TURBO OIL FEED AND DRAIN LINES. DRAIN COOLANT AND REMOVE COOLANT LINES (IF APPLICABLE). INSPECT ALL LINES FOR WEAR. REPLACE AS NECESSARY. DISCARD OLD O-RINGS/GASKETS AND INLET LINE
- ✓ DEPENDING ON APPLICATION, DISCONNECT THE WASTEGATE ACTUATOR CONTROL VALVE HOSE OR ELECTRICAL CONNECTOR
- ✓ REMOVE TURBO MOUNTING HARDWARE AND CAREFULLY REMOVE TURBO FROM ENGINE. INSPECT EXHAUST MANIFOLD FOR WEAR/CRACKING. REPLACE AS NECESSARY. DISCARD OLD GASKET
- ✓ CLOSELY INSPECT THE OLD TURBO TO HELP DETERMINE THE ROOT CAUSE OF FAILURE

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Turbo Installation

- ✓ CAREFULLY POSITION THE TURBO ONTO EXHAUST MANIFOLD USING THE CORRECT NEW GASKET. DO NOT USE LIQUID GASKET MAKER OR SEALANTS
- ✓ USE HIGH TEMPERATURE ANTI-SEIZE COMPOUND ON ALL THREADED HARDWARE. TORQUE ALL TURBO MOUNTING HARDWARE TO THE CORRECT SPECIFICATIONS
- ✓ RECONNECT TURBINE SIDE EXHAUST DOWN PIPE USING THE CORRECT NEW GASKET
- ✓ INJECT NEW ENGINE OIL INTO THE OIL INLET PORT OF THE TURBO WITH THE SYRINGE PROVIDED OR OTHER SUITABLE METHOD. SPIN THE COMPRESSOR WHEEL BY HAND. IT SHOULD SPIN FREELY. SLIGHT UP AND DOWN MOVEMENT IS NORMAL
- ✓ UNCAP AND RECONNECT COMPRESSOR SIDE AIR INLET AND OUTLET HOSES ENSURING AN AIRTIGHT FIT
- ✓ DEPENDING ON APPLICATION, RECONNECT WASTEGATE ACTUATOR CONTROL VALVE HOSE OR ELECTRICAL CONNECTOR
- ✓ REPLACE TURBO OIL FEED LINE WITH A NEW ONE. CONNECT THE OIL FEED LINE AND COOLANT LINES (IF APPLICABLE) USING CORRECT NEW GASKETS/O-RINGS. FILL ENGINE OIL AND COOLANT (IF APPLICABLE) TO PROPER LEVELS. NOTE: MAKE SURE OIL FEED LINE, OIL DRAIN LINE AND COOLANT LINES (IF APPLICABLE) ARE ROUTED PROPERLY. THIS ENSURES UNRESTRICTED OIL FLOW, COOLANT FLOW AND PREVENTS DAMAGE CAUSED BY EXCESSIVE HEAT IF LOCATED TOO CLOSE TO EXHAUST SYSTEM
- ✓ BEFORE CONNECTING THE OIL DRAIN LINE, PUT A CATCH PAN UNDER THE TURBO. DISABLE THE ENGINE FROM STARTING AND CRANK FOR 15 SECONDS. LOOK FOR OIL FLOWING OUT OF THE TURBO OIL OUTLET FITTING. REPEAT IF NECESSARY. THIS WILL PRIME THE OIL FEED LINE AND AVOID LACK OF TURBO BEARING LUBRICATION. NOTE: TO AVOID STARTER MOTOR DAMAGE, DO NOT CRANK ENGINE FOR MORE THAN 15 SECONDS AT A TIME WITHOUT LETTING THE STARTER REST IN BETWEEN CRANK CYCLES
- ✓ CONNECT THE OIL DRAIN LINE AND ENABLE ENGINE TO START. LET ENGINE IDLE FOR A MINIMUM OF THREE MINUTES AND INSPECT FOR OIL, AIR AND FUEL LEAKS. IF VNT/VGT TURBO EQUIPPED, ENSURE ELECTRIC ACTUATOR OPERATES CORRECTLY. NOTE: IT IS NORMAL FOR THE ELECTRIC ACTUATOR TO HAVE MOVEMENT AT KEY ON AND ENGINE RUNNING. IF NO MOVEMENT IS DETECTED, TURN OFF ENGINE IMMEDIATELY AND CORRECT THE ISSUE
- ✓ AFTER COMPLETING ALL THE POST TURBO INSTALLATION INSPECTIONS, TURN OFF ENGINE AND ALLOW TO COOL. CHECK ENGINE OIL AND COOLANT LEVELS (IF APPLICABLE). FILL AS NEEDED. TEST DRIVE VEHICLE TO VERIFY PROPER TURBO AND ENGINE PERFORMANCE