

Engine & Transmission Installation Guide

FAILURE TO FOLLOW THESE PROCEDURES MAY VOID YOUR WARRANTY AND WILL DECREASE THE LIFE OF THE ENGINE.

IT IS HIGHLY RECOMMENDED YOU USE AN ASE CERTIFIED MECHANIC SCHOOLED IN ENGINE INSTALLATION.

All engines sold as used must meet the following requirements to qualify for supplier warranty. There are no warranties extended by National Parts expressed or implied. Any and all warranties are extended by the supplier and are subject to the terms and conditions of that supplier. Used engines are understood to consist of a short block assembly and cylinder heads only. Any other parts left on the used engine at the time of sale are included for possible customer convenience only. Those items may be used at the customer's discretion but they are not covered by any warranty of any type. The installer should transfer all components from the original engine to this replacement engine. Any components known to be inoperable need to be replaced.

A. Checklist::

1. New water pump, timing belt, front and rear main seals on used and reconditioned engines must be installed.
2. Oil strainer and pick up screen must be cleaned or replaced prior to installation.
3. Thoroughly clean all units such as oil pan, timing cover, rocker arm covers, intake manifold and any other parts that may need cleaning before reassembling.
4. Replace oil filter and oil.
5. Replace all tune-up items such as plugs, cap, rotor, fuel and air filter, pcv valve, and other parts specific to the engine.
6. Check and adjust valves and timing to factory specifications.
7. Thermostat must be replaced.
8. Fuel lines should be checked for debris and flow.
9. Inspect wire harness for broken wires or insulation damage.
10. Always remember to prime oil pump and oil lines.
11. Change your oil and filter after the first 500 miles and every 3000 miles thereafter.
12. Catalytic converter must be inspected to make sure it is not clogged. A defective converter can cause damage to piston rings and internal bearings.
13. Check all cooling components such as hoses, freeze plugs, radiator and coolant. Radiator should be cleaned or replaced.
14. Blow out intake ports to remove any loose particles that may fall into cylinder head and cause damage.

B. Engine Start Up Procedure:

1. Remove all spark plugs.
2. Remove oil sending unit switch.
3. Crank the engine until oil comes out oil sending unit switch hole.
4. If oil won't come out, spray the oil sending unit switch hole with oil or penetrating lubricant to prevent dry start.
5. After oil comes out, replace oil sending unit switch and crank engine for 1 to 2 minutes, until oil pressure is normal
6. Replace spark plugs and then start engine; do not accelerate above idle until normal oil pressure is reached.

C. Important:

1. After starting, cylinder head must be retorqued and valves readjusted to manufacturer's specifications after the engine reaches normal operation temperature and once again at 500 miles.
2. Oil and oil filter must be changed before start up and again after 500 miles and every 3000 miles thereafter. Receipts for lubricants, filters and service may be required. Failure to perform these operations voids warranty.
3. Follow the periodic maintenance as set forth by manufacturer's specifications to keep your warranty in tact.

Transmission Requirements:

FAILURE TO DO THESE ITEMS MAY VOID YOUR WARRANTY AND WILL DECREASE THE LIFE OF THE TRANSMISSION.

IT IS HIGHLY RECOMMENDED YOU USE AN ASE CERTIFIED MECHANIC SCHOOLED IN TRANSMISSION INSTALLATION.

All transmissions sold as used must meet the following requirements to qualify for supplier warranties. There are no warranties extended by National Parts expressed or implied. Any and all warranties are extended by the supplier and are subject to the terms and conditions of that supplier.

1. Thoroughly clean all units such as oil pan and any other parts that need cleaning before assembly.
2. For an automatic transmission, you **MUST INSTALL A NEW OIL COOLER, NEW FILTER AND NEW OIL**
3. Replace fluid and check level for a standard transmission.
4. Replace front and rear seals.
5. Check all lines and linkage for damage or blockage.

6. Torque converter must be replaced; do not use the one shipped with the transmission unless purchased as a separate and supplier warranted item. If a torque converter was shipped with the transmission, it is only to protect it during shipping.