

# PRE-INSTALLATION CHECKLIST: ENSURING SUCCESS WITH YOUR USED ENGINE AND TRANSMISSION





#### 1. Introduction

A checklist has been given in this document for inspecting and checking a used engine, pre installation. Each and every step ensures that the engine is installed in the most efficient way. Skipping any of the steps given here can result in premature failure. This document is for professional's and car enthusiasts who know there way around and engine.

So if you happen to be someone who doesn't know much about machines, leave this document in hands of a professional



# 2. Parts Received — Initial Inspection

Before anything else, inspect the used engine or transmission the moment it arrives.

#### **Checklist:**

- Confirm the part matches your order (engine code, transmission type, year, make, model).
- Check the shipping paperwork and engine tag numbers.
- Visually inspect for shipping damage or broken components.
- For proper documentation record the unwrapping of the product



- Check for any rust, crack or bent in any part of the engine, right after you have unwrapped the unit.
- Manually check the input and crankshaft by rotating it.
- Verify no missing sensors, bolts, or external components.

Do not move forward unless you are sure the unit is complete and correct.





### 3. Required Tools and Setup

Make sure your workspace is clean, level, and well-lit. You need a lift or hoist, hand tools, fluids, torque wrenches, and a service manual for the vehicle. Always disconnect the vehicle's battery before starting any removal or installation job.

#### **Minimum tools:**

- Full metric/SAE socket set
- Breaker bar
- Torque wrench (in lb-ft and Nm)
- Seal puller
- Engine hoist
- Drain pans
- Thread sealant
- RTV gasket maker (as per spec)
- Service manual for torque values and routing



## 4. Engine Pre-Installation Checklist

Used engines must be inspected thoroughly before installation, no matter where you bought them.

#### A. Replace All Wear Items

- Rear main seal Replace, even if it looks dry.
- Valve cover gaskets Replace to avoid leaks.
- Oil pan gasket Replace if accessible.
- Timing belt or chain Replace based on age/mileage of engine.
- Spark plugs Replace with correct spec.



#### **B. Fluids and Filters**

- Engine oil Drain any residual oil, replace with manufacturer-grade oil.
- Oil filter Always install a new filter.
- Coolant Flush block thoroughly. Do not assume old coolant is usable.
- Inspect oil pan for metal shavings –
   If you see any, do not install the engine

#### C. External Sensors and Wiring

- Swap your vehicle's original sensors to the replacement engine if compatibility differs.
- Inspect connectors and wiring harnesses. Repair damaged plugs.



#### D. Mounting and Fitment

- Test-fit engine mounts and brackets.
   Use only mounts that are in good shape.
- Check dowel pin alignment.
- Replace damaged studs or bolts.

## 5. Transmission Pre-Installation Checklist

Transmission issues usually come from missed steps during prep.

#### A. Visual Check

- Inspect the bellhousing for cracks or damage.
- Check for fluid leaks.
- Inspect output shaft seals.
- Verify torque converter or input shaft condition.



#### B. Internal Check (if applicable)

- Drain all old fluid. Look for debris or metal in the pan.
- Clean or replace the filter.
- Always refill with the correct transmission fluid grade.

#### C. Components to Replace

- Rear main seal (if not already done during engine prep).
- Front pump seal (for automatics).
- Shifter bushings.
- Transmission mount.

## D. Torque Converter Notes (Automatics)

• Ensure the torque converter is seated properly into the pump before install.



- Fill converter with fluid before installation.
- Confirm bolt alignment with flexplate.

#### E. Clutch System (Manuals)

- Always install a new clutch kit (disc, pressure plate, throwout bearing).
- Resurface or replace the flywheel.
- Bleed hydraulic lines if applicable.





# 6. Cooling System Preparation

Cooling issues kill engines fast. Do not skip this part.

- Flush radiator and heater core before connecting to new engine.
- Replace thermostat and radiator cap.
- Inspect radiator hoses and clamps.
- Verify radiator fan function.
- Check water pump (replace if age or mileage is unknown).





#### 7. Final Pre-Install Checks

Before dropping the engine and transmission in place, run through these points:

- Mounting hardware laid out and cleaned.
- All mating surfaces wiped down.
- Sensors transferred and plugged.
- New gaskets in place.
- Torque specs printed and ready.
- Battery disconnected.
- Fluids filled or ready to be filled postinstall.



# 8. Post-Installation First Start Procedure

The first start matters. Do not rush it.

- Recheck all fluid levels before starting.
- Prime the engine manually if possible.
- Crank engine without fuel or spark to build oil pressure (if vehicle allows).
- Once started, do not rev. Let idle and reach operating temp.
- Check for leaks under the vehicle.
- Verify fan operation and temperature stability.
- Confirm all gauges are working.



## 9. Transmission Shakedown (Automatics)

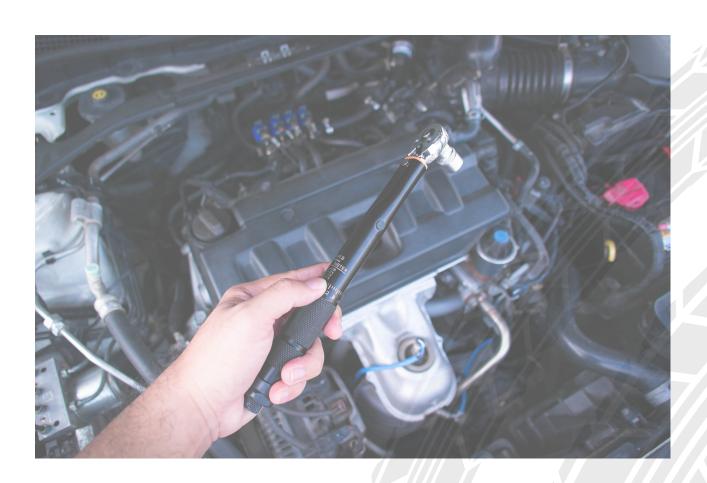
- Cycle through all gears with foot on brake.
- Listen for clunks, hesitation, or slipping.
- Take a short drive, checking for correct shift points.
- Recheck transmission fluid level while engine is running in park.





## 10. Final Torque & Recheck After 100 Miles

- Re-torque all mount bolts.
- Inspect for new leaks.
- Check engine and transmission fluid levels again.
- Scan for any codes or check lights.





# 11. Warranty and Documentation

- If your used engine or transmission includes a warranty, it typically requires:
- Proof of new oil, gaskets, and fluids.
- Photo documentation of install steps.
- Return of core (if applicable).
- Install done within the specified timeframe.
- Check all terms from the seller. At usedenginepart.com, all installations must follow this checklist for any warranty to stay valid.



#### 12. Conclusion

Prepping a used engine or transmission takes time, but skipping steps will cost more later. Always work clean, follow torque specs, and replace wear items before you install.

At usedenginepart.com, we inspect every unit, but what you do before the key turns is just as important. This checklist is here to make sure your job

lasts.

## **Free Shipping**





## Thank You



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