

Gm Turbo 350 Transmissions How To Rebuild And Modify

GM Turbo 350 Transmissions: How to Rebuild and Modify

The GM Turbo 350 transmission, a legendary three-speed automatic, holds a special place in automotive history. Its robust design and relatively simple construction made it a popular choice for countless muscle cars and trucks, resulting in a large aftermarket support system. This article delves into the intricacies of **GM Turbo 350 transmission rebuilds** and modifications, offering a comprehensive guide for both novice and experienced mechanics. We'll cover everything from basic disassembly and inspection to advanced upgrades for increased performance and reliability. We'll also explore key aspects like **Turbo 350 shift kit installation**, **Turbo 350 rebuild parts**, and choosing the right **Turbo 350 transmission fluid**.

Understanding the GM Turbo 350: A Deep Dive

Before embarking on a rebuild or modification, a solid understanding of the Turbo 350's internal workings is crucial. This transmission, initially introduced in 1969, uses a planetary gearset system with a series of clutches and bands to achieve its three forward gears and a reverse gear. Its simplicity is both a strength and

a potential weakness. While relatively easy to work on, it's also susceptible to wear and tear, especially under high-performance conditions. Key components to familiarize yourself with include:

- **Planetary Gearset:** The heart of the transmission, responsible for gear ratio changes.
- **Clutches and Bands:** These engage and disengage to select different gears. Wear on these is a common cause of slipping or delayed shifts.
- **Valve Body:** Controls fluid flow within the transmission, dictating shift points and firmness. Modifications to the valve body are key to performance upgrades.
- **Pump:** Supplies hydraulic pressure to operate the clutches and bands. A worn pump can lead to low line pressure and transmission failure.
- **Torque Converter:** Connects the engine to the transmission, acting as a fluid coupling to smooth out power delivery.

Rebuilding Your GM Turbo 350: A Step-by-Step Guide

Rebuilding a GM Turbo 350 is a challenging but rewarding project. It demands patience, precision, and the right tools. Here's a simplified overview:

1. **Disassembly:** Carefully remove the transmission from the vehicle and then systematically disassemble the unit. Take detailed photos and notes throughout the process to aid in reassembly. Properly label and organize all parts to avoid confusion.
2. **Inspection and Cleaning:** Thoroughly inspect each component for wear, damage, or corrosion. Replace any worn or damaged parts, including seals, gaskets, clutches, and bands. Clean all parts with a suitable solvent to remove debris and old fluid.

3. **Reassembly:** Carefully reassemble the transmission, following the reverse order of disassembly. Pay close attention to proper clearances and torque specifications. Consult a reputable rebuild manual for specific instructions.

4. **Fluid Fill and Testing:** Once reassembled, fill the transmission with the correct type and quantity of transmission fluid. (Refer to your manual for specific specifications regarding **Turbo 350 transmission fluid**.) Run the transmission on a test bench or in the vehicle to check for proper operation.

Modifying Your GM Turbo 350 for Enhanced Performance

Modifying a GM Turbo 350 can dramatically improve its performance and longevity, especially when paired with a high-powered engine. Common modifications include:

- **Shift Kit Installation:** A shift kit modifies the valve body to adjust shift firmness and timing. This results in quicker, crisper shifts and improved performance. Installing a **Turbo 350 shift kit** is a relatively straightforward modification that yields noticeable results.
- **High-Performance Clutches and Bands:** Upgrading to high-performance clutches and bands improves shift firmness, prevents slippage, and enhances overall durability under high-torque conditions. Consider the type of driving you do when selecting **Turbo 350 rebuild parts**.
- **High-Volume Pump:** A high-volume pump increases hydraulic pressure, which is essential for improved shift quality and responsiveness, especially in high-performance applications.
- **Cooler Upgrades:** Adding an auxiliary transmission cooler is vital for preventing overheating, especially when using the transmission under heavy loads.

Choosing the Right Parts and Tools: Essential Considerations for Success

The success of any rebuild or modification hinges on using high-quality parts and tools. Investing in a reputable rebuild kit containing all the necessary seals, gaskets, and friction components is essential. Similarly, having the right tools, including specialized transmission wrenches and sockets, will simplify the process and minimize the risk of damage. Sourcing **Turbo 350 rebuild parts** from a trustworthy supplier ensures compatibility and reliability.

Conclusion

Rebuilding and modifying a GM Turbo 350 transmission presents a unique blend of mechanical challenge and rewarding accomplishment. By carefully following the steps outlined above, understanding the nuances of the transmission's internal workings, and selecting high-quality parts, you can extend the life and enhance the performance of this iconic transmission. Remember that proper planning, meticulous attention to detail, and access to comprehensive resources are paramount for success.

FAQ

Q1: What are the common signs of a failing GM Turbo 350 transmission?

A1: Common signs include slipping gears, delayed shifting, harsh shifting, whining noises, low fluid levels, and fluid leaks. A thorough inspection is always recommended.

Q2: How often should I change the transmission fluid in my Turbo 350?

A2: The recommended fluid change interval depends on driving conditions and usage. However, a good rule of thumb is to change the fluid every 30,000-50,000 miles or as recommended in your vehicle's owner's manual. Using the correct **Turbo 350 transmission fluid** is crucial.

Q3: Can I rebuild my Turbo 350 myself?

A3: Yes, you can, but it requires mechanical aptitude, patience, and access to proper tools and resources. If you lack experience, seeking professional assistance is recommended.

Q4: What are the benefits of a Turbo 350 shift kit?

A4: A shift kit improves shift firmness, reduces shift times, and helps prevent slippage under high-load conditions. It's a popular modification for performance applications.

Q5: How much does it cost to rebuild a GM Turbo 350?

A5: The cost varies depending on parts, labor, and the extent of the rebuild. A complete rebuild can range from several hundred to over a thousand dollars.

Q6: What type of transmission fluid is best for a GM Turbo 350?

A6: Consult your vehicle's owner's manual for the specific recommendation. Typically, a Dexron-compatible automatic transmission fluid is used.

Q7: Where can I find a reliable resource for Turbo 350 rebuild parts?

A7: Many reputable online retailers and auto parts stores specialize in transmission parts. Check reviews and choose a supplier with a strong reputation.

Q8: Is it necessary to use a transmission jack when removing and installing a Turbo 350?

A8: Yes, using a transmission jack is highly recommended for safety and to prevent damage to the transmission and vehicle. Improper handling can cause serious injury.

GM Turbo 350 Transmissions: A Deep Dive into Rebuilding and Modification

The GM Turbo 350 transmission, a renowned three-speed automatic, holds a special place in automotive history. Its robustness and relatively simple construction have made it a popular choice for hobbyists and builders alike for decades. This article will explore the intricacies of rebuilding and modifying this powerhouse transmission, providing you with the understanding and skills to tackle the task successfully.

Understanding the Turbo 350's Anatomy:

Before embarking on a rebuild or modification project, a thorough understanding of the transmission's inward workings is crucial. The Turbo 350 consists of several key parts, each playing a critical role in its performance. These include:

- **Clutch Packs:** These groups of friction and steel plates engage to transfer force between the input and output shafts. Proper adjustment and maintenance of these packs are crucial for seamless shifting.
- **Planetary Gearset:** This system of gears and sun gears allows for the three forward speeds and

reverse. Damage in this area can considerably affect transmission performance.

- **Valve Body:** This sophisticated assembly regulates the hydraulic movement that shifts the gears. It contains numerous valves, passages, and springs that require precise calibration.
- **Pump:** The pump provides the hydraulic pressure required for the transmission to operate. A damaged pump can lead to unpredictable shifting and decreased performance.

Rebuilding the Turbo 350:

Rebuilding a Turbo 350 is a difficult but fulfilling project. It needs patience, meticulousness, and the appropriate tools and apparatus. The process generally involves the following phases:

1. **Disassembly:** Thoroughly disassemble the transmission, labeling each part to ensure proper reassembly. Photographing the disassembly procedure is highly suggested.
2. **Inspection and Cleaning:** Inspect each component for damage. Exchange any damaged parts. Thoroughly clean all components with a suitable cleaner.
3. **Reassembly:** Carefully reassemble the transmission, observing the proper order. Pay strict attention to calibration of important components.
4. **Testing:** Once reassembled, fully test the transmission to ensure accurate performance.

Modifying the Turbo 350:

Modifying a Turbo 350 can boost its capacity and durability. Common modifications include:

- **High-Performance Clutch Packs:** Replacing the clutch packs with heavy-duty units can manage increased force.
- **Shift Kits:** These kits change the valve body to enhance shifting behavior, providing sharper shifts.
- **High-Stall Torque Converter:** A higher-stall torque converter will allow for increased engine speed before the transmission engages, improving launch.
- **Hardened Input Shaft:** For high-horsepower applications, a hardened input shaft can avoid failure.

Practical Benefits and Implementation Strategies:

Rebuilding and modifying a Turbo 350 offers several benefits:

- **Cost Savings:** Rebuilding is often substantially less pricey than buying a new transmission.
- **Improved Reliability:** A rebuilt transmission, especially one with upgrades, can be more reliable than an older, damaged unit.
- **Performance Enhancement:** Modifications can substantially enhance the transmission's capacity.

Before attempting a rebuild or modification, it's essential to have the essential tools, skills, and dedication. Consulting repair manuals and obtaining advice from knowledgeable professionals is highly suggested.

Conclusion:

The GM Turbo 350 transmission represents a significant component of automotive history. Understanding its functioning and the procedures involved in rebuilding and modification allows hobbyists to revive its capability or even improve it for heavy-duty applications. Remember, precision and a comprehensive understanding of the system are essential to a successful rebuild or upgrade.

Frequently Asked Questions (FAQs):

Q1: What tools are needed to rebuild a Turbo 350?

A1: You'll need a thorough set of transmission tools, including a transmission jack, various sockets and wrenches, a torque wrench, and specialized tools for removing and installing clutches and seals. A good quality shop manual is also essential.

Q2: How much does it cost to rebuild a Turbo 350?

A2: The cost varies depending on the degree of work needed and the cost of parts. Expect to pay several hundred to several thousand euros, depending on the complexity of the undertaking.

Q3: Can I rebuild a Turbo 350 myself?

A3: Yes, you can, but it requires dedication, precision, and the right tools. If you lack skill, it's best to seek help from a skilled mechanic.

Q4: What are the signs that my Turbo 350 needs rebuilding?

A4: Signs include erratic gears, hard shifting, noises (clicking), leaks, and inability to shift into particular gears.

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