

## ATI 405722

# ATI Performance Products TH400 Direct Drum User Manual

Model: 405722

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the ATI Performance Products 405722 TH400 Direct Drum. This component is designed to enhance the performance and durability of TH400 automatic transmissions.

The ATI TH400 Direct Drum is constructed from treated T-6 aircraft aluminum, a material chosen for its superior strength and heat dissipation properties. This design eliminates the need for traditional steel bushings and sleeves, which can expand under high temperatures and potentially lead to transmission failure. By integrating Torrington bearings, the drum is engineered to significantly extend clutch life and contribute to lower elapsed times (ET) in performance applications.

**Safety Warning: Installation of performance automotive components should only be performed by qualified professionals. Improper installation can lead to serious injury or damage to the vehicle.**



Image 1.1: The ATI Performance Products TH400 Direct Drum (right) shown alongside a smaller, related component (left). Both parts are metallic and appear to be precision-machined for automotive transmission applications.

## 2. PRODUCT FEATURES

- Advanced Material:** Made of treated T-6 aircraft aluminum, designed for high strength and heat resistance.
- Enhanced Durability:** Eliminates the need for steel bushings and sleeves, preventing expansion and potential transmission failure.
- Optimized Performance:** Equipped with Torrington bearings for reduced friction and improved efficiency.
- Extended Clutch Life:** Engineered to triple the lifespan of clutches within the transmission.
- Improved ET:** Contributes to lower elapsed times in racing and performance applications.

## 3. PACKAGE CONTENTS

Upon opening the package, verify that the following item is present:

- 1 x ATI Performance TH400 Direct Drum (Model: 405722)

If any components are missing or damaged, please contact ATI Performance Products customer support immediately.

## 4. SPECIFICATIONS

Attribute	Detail
Manufacturer	ATI Performance Products
Brand	ATI
Model Number	405722
Item Weight	7.05 pounds
Product Dimensions	9.6 x 9.5 x 5.7 inches
Material	Treated T-6 Aircraft Aluminum
Bearing Type	Torrington Bearings
Clutch Capacity	6-Clutch (Alm.6-Clutch)

## 5. INSTALLATION (SETUP)

The ATI Performance Products TH400 Direct Drum is an internal component of an automatic transmission. Its installation requires specialized tools, knowledge, and experience in transmission assembly.

- Professional Installation Recommended:** Due to the complexity and precision required, it is strongly advised that this component be installed by a certified transmission specialist or a highly experienced automotive technician.
- Transmission Disassembly:** The transmission must be completely removed from the vehicle and disassembled to access the direct drum.
- Component Inspection:** Before installation, carefully inspect the new ATI Direct Drum for any signs of damage or manufacturing defects. Ensure all mating surfaces are clean and free of debris.
- Bearing and Clutch Pack Assembly:** Install the Torrington bearings and the 6-clutch pack according to the specific TH400 transmission build specifications and ATI's recommendations. Ensure proper clearance and lubrication.
- Reassembly:** Reassemble the transmission following the manufacturer's service manual, paying close attention to torque specifications and proper component alignment.

6. **Fluid Fill and Test:** After transmission reassembly and reinstallation in the vehicle, fill with the appropriate transmission fluid and perform initial operational checks as per the vehicle's service manual.

*Refer to your vehicle's specific service manual and any additional instructions provided by ATI Performance Products for detailed installation procedures.*

## 6. OPERATION

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The TH400 Direct Drum is a critical component within the automatic transmission, responsible for engaging specific gear ratios. In a TH400 transmission, the direct drum typically houses the clutches for second and third gear engagement.

The ATI Performance Products Direct Drum, with its aluminum construction and Torrington bearings, is designed to operate with reduced rotational mass and improved efficiency compared to stock components. This leads to quicker shifts, less parasitic drag, and enhanced power transfer, ultimately contributing to the "lowers ET" benefit in performance applications. The increased clutch capacity (6-clutch) and durable aluminum material ensure reliable power handling and extended service life under demanding conditions.

Proper operation relies on correct installation, adequate transmission fluid levels, and a healthy transmission system overall.

## 7. MAINTENANCE

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While the ATI TH400 Direct Drum itself is a durable, low-maintenance component once installed, its longevity and performance are directly tied to the overall health and maintenance of the transmission system.

- **Transmission Fluid:** Regularly check and maintain the transmission fluid at the recommended level and quality. Use only the type of fluid specified by the transmission manufacturer.
- **Fluid Changes:** Adhere to the transmission fluid change intervals recommended by the vehicle or transmission manufacturer, especially for high-performance or heavy-duty applications. Contaminated or degraded fluid can accelerate wear on internal components, including the direct drum's clutch pack.
- **Temperature Management:** Monitor transmission temperatures, particularly during aggressive driving or towing. Excessive heat is detrimental to transmission components and fluid. Consider an auxiliary transmission cooler if operating conditions warrant.
- **Professional Inspection:** Periodically have your transmission inspected by a qualified technician to identify and address any potential issues before they escalate.

## 8. TROUBLESHOOTING

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Issues related to the direct drum typically manifest as problems with gear engagement, slipping, or unusual noises. Since the direct drum is an internal component, troubleshooting often requires professional diagnosis.

- **Slipping in Second or Third Gear:** This could indicate worn clutches within the direct drum, low fluid pressure, or other internal transmission issues.
- **Delayed Engagement:** If there's a noticeable delay when shifting into drive or reverse, or between gears, it might point to fluid pressure problems, valve body issues, or internal component wear.
- **Unusual Noises (Whining, Clunking):** These sounds can signify mechanical failure within the transmission, including bearing wear or damaged gears/drums.
- **Overheating:** While not directly a drum issue, overheating transmission fluid can severely impact the performance and lifespan of all internal components, including the direct drum.

**Important: Do not attempt to disassemble your transmission without proper training and tools. Consult a**

professional transmission specialist for diagnosis and repair of internal transmission issues.

## 9. WARRANTY INFORMATION

Specific warranty terms for the ATI Performance Products 405722 TH400 Direct Drum are provided by ATI Performance Products. Please refer to the warranty documentation included with your purchase or visit the official ATI Performance Products website for the most current and detailed warranty policy.

Generally, warranties cover manufacturing defects and material flaws under normal use. Damage resulting from improper installation, misuse, abuse, or unauthorized modifications is typically not covered.

## 10. CUSTOMER SUPPORT

For technical assistance, product inquiries, or warranty claims, please contact ATI Performance Products directly.

### ATI Performance Products

*(Contact information such as phone number, email, or website URL would typically be provided here by the manufacturer.)*

Please have your product model number (405722) and purchase details ready when contacting support.

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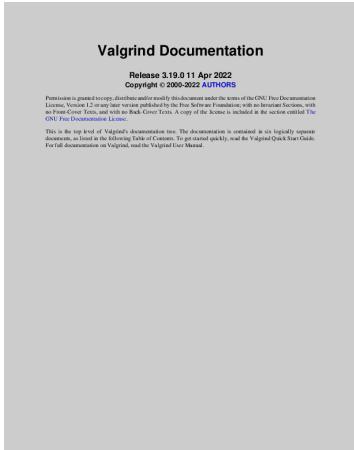
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