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Tuff Stuff 2123NA

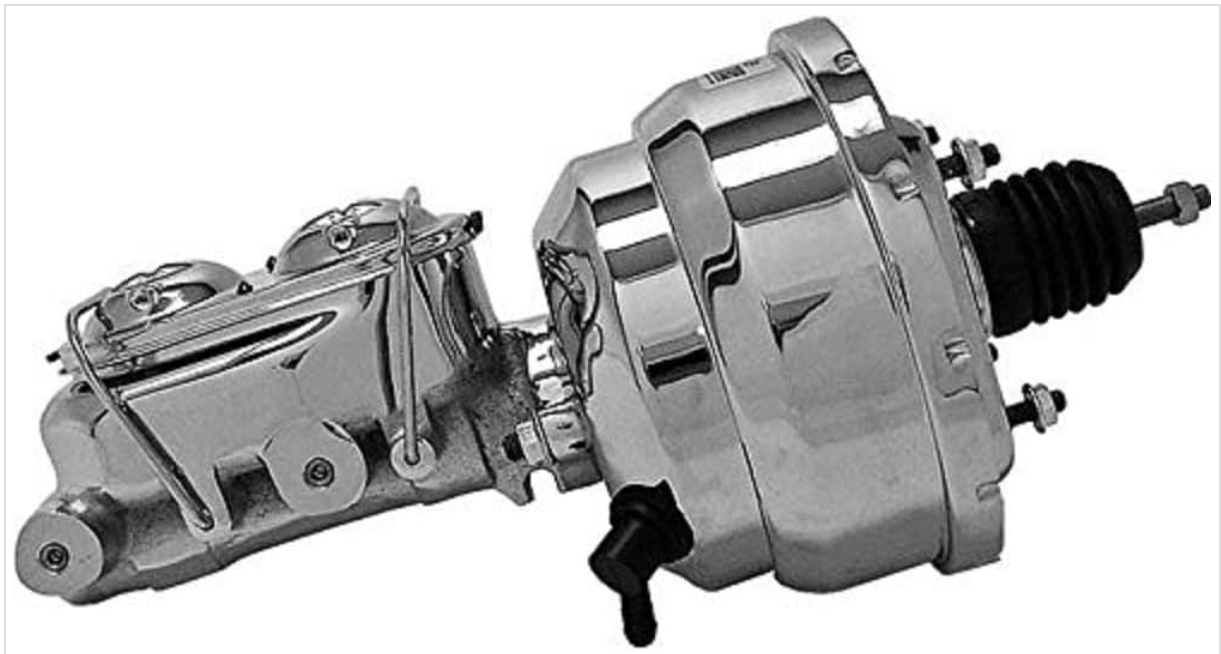
Tuff Stuff 2123NA 8-inch Dual Diaphragm Brake Booster and Master Cylinder Combo User Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Tuff Stuff 2123NA 8-inch Dual Diaphragm Brake Booster and Master Cylinder Combo. Please read these instructions thoroughly before beginning any work to ensure safe and correct usage. Retain this manual for future reference.

2. PRODUCT OVERVIEW

The Tuff Stuff 2123NA is an 8-inch dual diaphragm brake booster combined with a master cylinder, designed to enhance braking performance in compatible automotive applications. This unit provides increased stopping power and improved pedal feel.



This image displays the Tuff Stuff 2123NA 8-inch Dual Diaphragm Brake Booster and Master Cylinder Combo. The unit features a chrome finish on both the booster and the master cylinder, which are pre-assembled. The booster is a large, cylindrical component, and the master cylinder is attached to its side, featuring two fluid reservoirs with caps. A pushrod extends from the rear of the booster, covered by a black rubber boot.

3. SPECIFICATIONS

Manufacturer	Tuff Stuff
Brand	Tuff Stuff
Model Name	8IN BOOST-M/C
Item Model Number	2123NA
Manufacturer Part Number	2123NA
OEM Part Number	2123NA
Item Weight	18 pounds
Product Dimensions	20 x 11 x 9 inches
Exterior Finish	Machined
Position	Center

4. WHAT'S IN THE BOX

- 1 x 8-inch Dual Diaphragm Brake Booster and Master Cylinder Combo (Part Number: 2123NA)

5. SETUP AND INSTALLATION

Installation of brake system components requires specialized knowledge and tools. Incorrect installation can lead to brake failure, resulting in serious injury or death. It is highly recommended that this product be installed by a qualified automotive professional.

General Guidelines:

- **Safety First:** Always wear appropriate personal protective equipment, including safety glasses and gloves.
- **Vehicle Preparation:** Ensure the vehicle is securely supported on jack stands or a lift. Disconnect the battery.
- **Brake Fluid:** Use only new, clean brake fluid of the type specified by your vehicle manufacturer. Do not mix different types of brake fluid.
- **Bleeding the System:** After installation, the entire brake system must be thoroughly bled to remove all air. This is a critical step for proper brake function.
- **Torque Specifications:** All fasteners must be tightened to the vehicle manufacturer's specified torque values.
- **Vacuum Connection:** Ensure the brake booster receives adequate vacuum from the engine. Check for leaks in the vacuum line.
- **Pedal Adjustment:** The brake pedal pushrod may require adjustment to ensure proper pedal height and free play.

Refer to your vehicle's service manual for specific removal and installation procedures for brake boosters and master cylinders.

6. OPERATION

The dual diaphragm brake booster assists the driver in applying the brakes by using engine vacuum to multiply the force applied to the brake pedal. When the brake pedal is pressed, a valve in the booster opens, allowing atmospheric pressure to push on one side of the diaphragm while vacuum pulls on the other, thereby assisting the driver's effort. The master cylinder then converts this amplified force into hydraulic pressure, which is sent to the wheel brakes.

A properly functioning power brake system should provide a firm, consistent pedal feel and effective stopping power with moderate pedal effort.

7. MAINTENANCE

Regular inspection and maintenance of your vehicle's brake system are crucial for safety and performance. While the Tuff Stuff 2123NA is a durable component, periodic checks are recommended.

Maintenance Checks:

- **Brake Fluid Level:** Regularly check the brake fluid level in the master cylinder reservoirs. Top off with the correct type of fluid if low. A consistently low fluid level may indicate a leak and requires immediate investigation.
- **Brake Fluid Condition:** Brake fluid can absorb moisture over time, reducing its effectiveness. Consult your vehicle's service manual for recommended brake fluid flush intervals.
- **Vacuum Hoses:** Inspect all vacuum hoses connected to the brake booster for cracks, kinks, or loose connections. Ensure a strong, consistent vacuum supply.
- **Leaks:** Visually inspect the master cylinder, brake lines, and booster for any signs of brake fluid leaks.
- **Pedal Feel:** Note any changes in brake pedal feel, such as excessive sponginess, hardness, or a pedal that slowly sinks to the floor. These can indicate issues requiring attention.

8. TROUBLESHOOTING

If you experience issues with your brake system after installing the Tuff Stuff 2123NA, consider the following common troubleshooting steps. Always prioritize safety and consult a professional if you are unsure.

Common Issues and Potential Causes:

- **Hard Brake Pedal:** This often indicates a lack of power assist. Check the vacuum hose connection to the booster for leaks or disconnections. Ensure the engine is producing adequate vacuum.
- **Spongy Brake Pedal:** Typically caused by air in the hydraulic system. The brake system needs to be re-bled thoroughly.
- **Brake Pedal Sinks Slowly:** This could indicate an internal leak in the master cylinder or a leak elsewhere in the hydraulic system. Inspect for external leaks and consider master cylinder replacement if no external leaks are found.
- **Brakes Dragging:** The brake pedal pushrod may be adjusted too long, preventing the master cylinder from fully releasing pressure. Adjust the pushrod length according to vehicle specifications.
- **Fluid Leaks:** Inspect all connections, brake lines, and the master cylinder for visible leaks. Tighten connections or replace faulty components as necessary.

If troubleshooting does not resolve the issue, seek assistance from a certified automotive technician.

9. SAFETY INFORMATION

Working on vehicle brake systems can be hazardous. Adhere to all safety precautions to prevent injury or damage.

- Always wear appropriate personal protective equipment, including eye protection and gloves.
- Ensure the vehicle is stable and properly supported before working underneath it.
- Brake fluid is corrosive. Avoid contact with skin and painted surfaces. Clean up spills immediately.
- Never operate a vehicle with a compromised brake system. Test brakes thoroughly in a safe area after any service.
- Dispose of old brake fluid and components according to local environmental regulations.

10. WARRANTY INFORMATION

For specific warranty terms and conditions applicable to the Tuff Stuff 2123NA 8-inch Dual Diaphragm Brake Booster and Master Cylinder Combo, please refer to the warranty documentation included with your purchase or visit the official Tuff Stuff website. Warranty coverage typically addresses manufacturing defects under normal use and service.

11. SUPPORT

If you require technical assistance, have questions regarding installation, or need to report a product issue, please contact Tuff Stuff customer support through their official website or the contact information provided with your product documentation.