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› Automatic Transmission Valve Body Assembly User Manual

JYJJEJSB TF-80SC / AF40 / AWF21

Automatic Transmission Valve Body Assembly User Manual

Model: TF-80SC / AF40 / AWF21

1. PRODUCT OVERVIEW

This manual provides essential information for the TF-80SC / AF40 / AWF21 Automatic Transmission Valve Body Assembly. This component is a critical part of the automatic transmission system, responsible for controlling fluid pressure and directing hydraulic fluid to various clutches and bands to facilitate gear changes. It is designed for compatibility with specific Volvo and Infiniti vehicle models.

Key Features:

- High-quality construction ensuring durability and reliable performance.
- Direct replacement for original equipment, simplifying installation.
- Manufactured with precision for stable performance and accurate fluid control.
- Resistant to water, corrosion, and high temperatures for extended service life.
- Enhances driving experience through precise and smooth gear shifts.

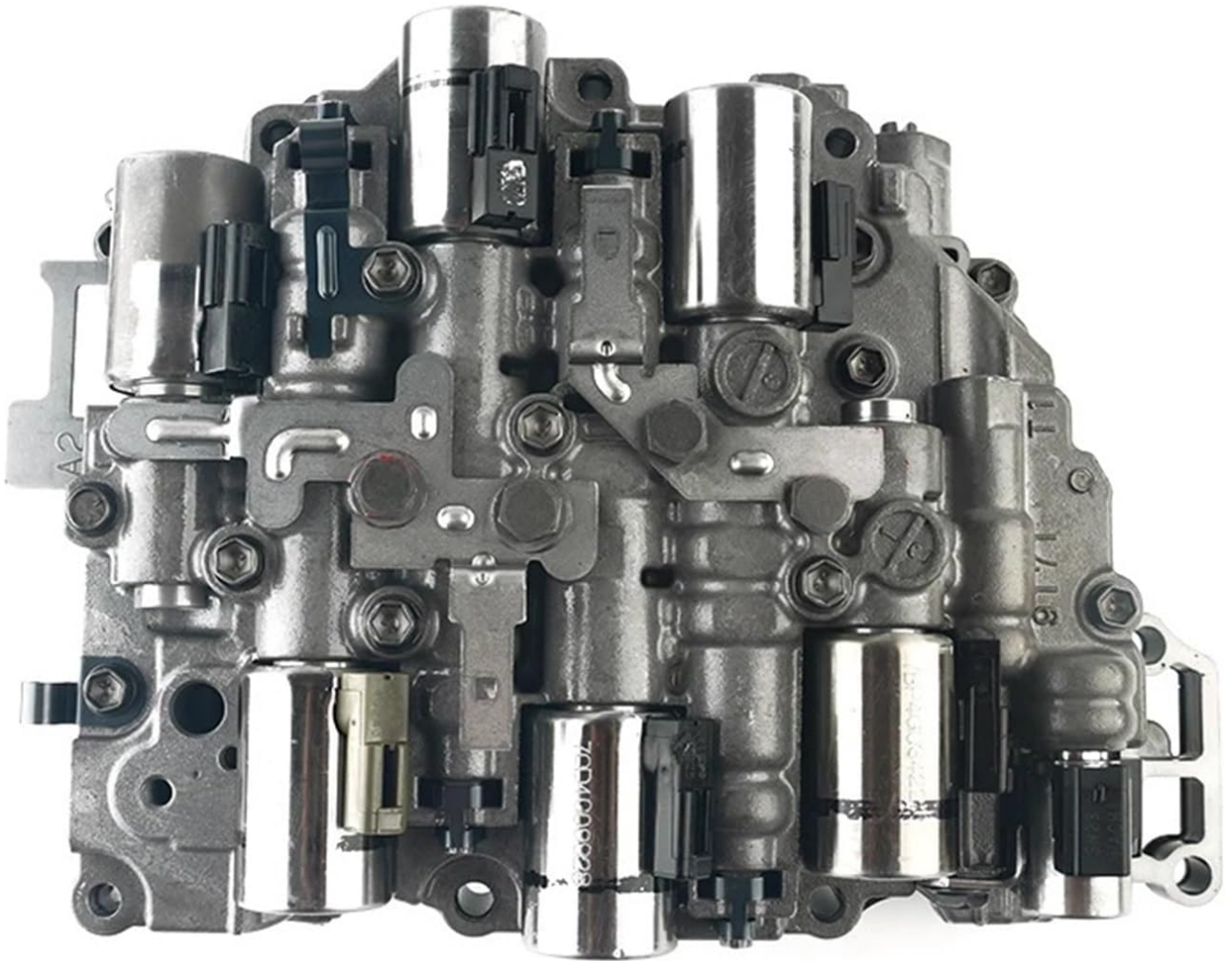


Figure 1: Front view of the valve body assembly, highlighting the main solenoids and hydraulic channels.

This image displays the primary view of the automatic transmission valve body, showcasing its complex network of internal components, including various solenoids and fluid pathways. This intricate design is crucial for precise hydraulic control within the transmission.

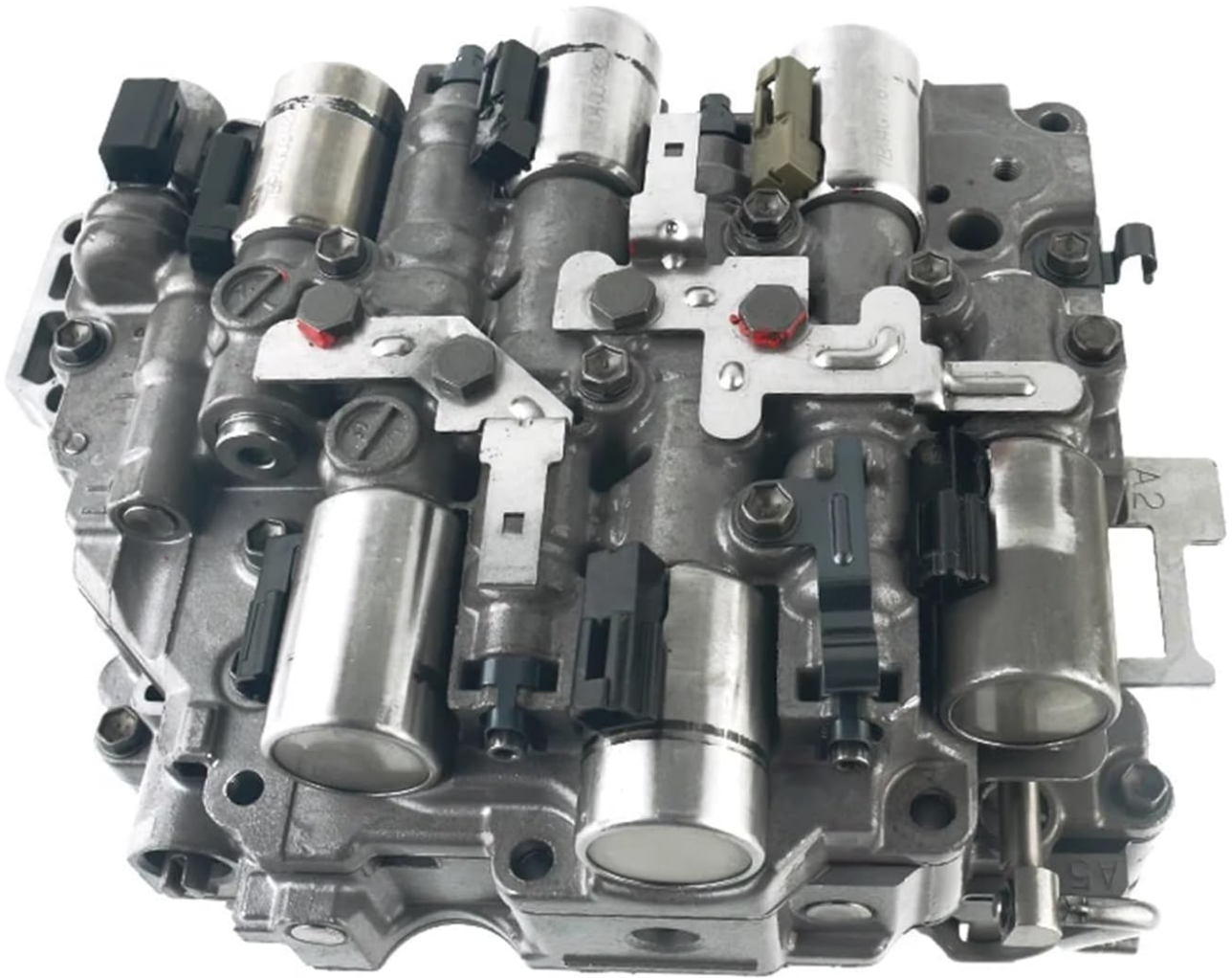


Figure 2: Angled perspective of the valve body, revealing additional solenoids and mounting points.

An angled view of the valve body assembly, providing a clearer look at the side profile and the various electrical connectors and mounting points necessary for integration into the transmission.

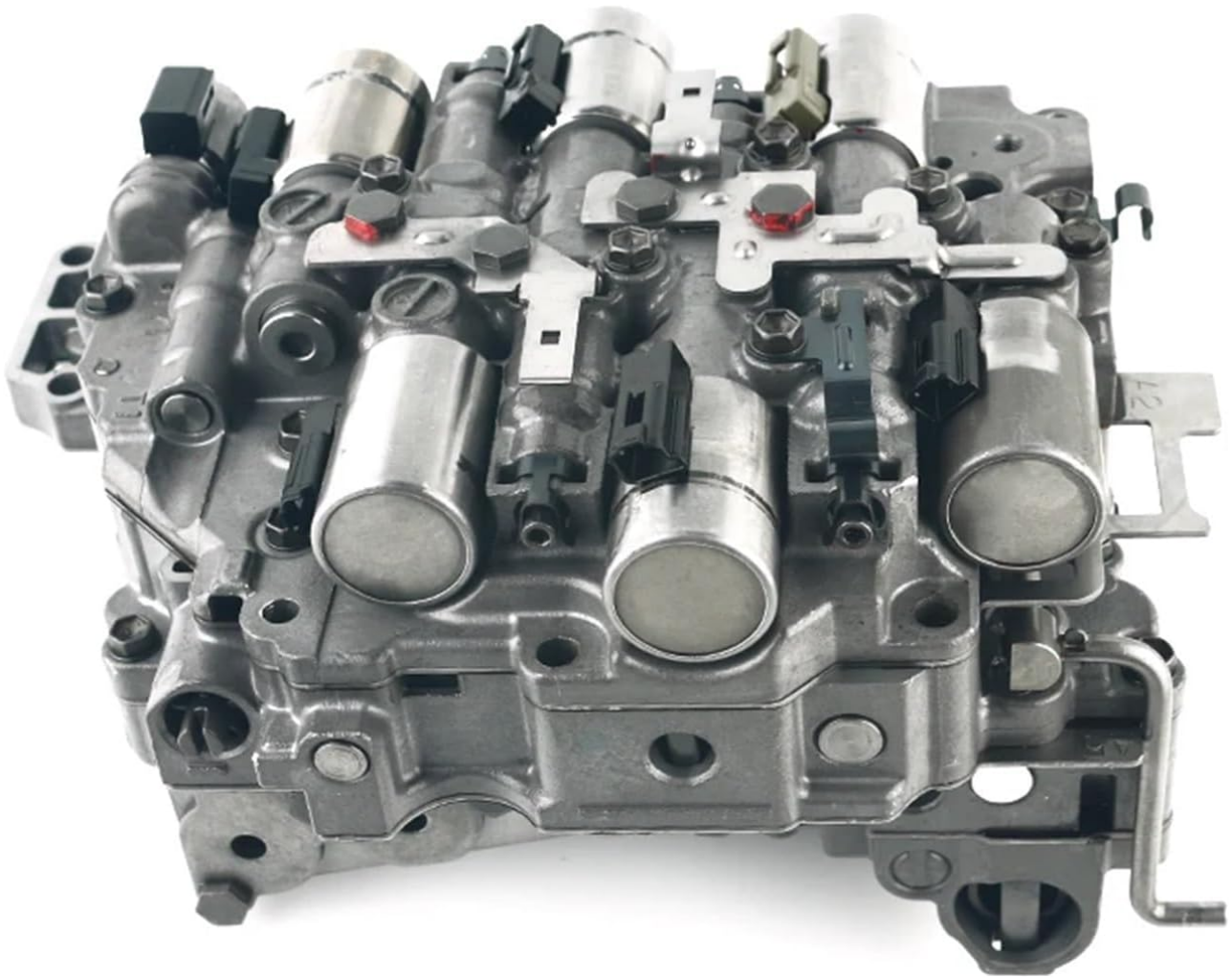


Figure 3: Detailed view of the solenoid arrangement on the valve body.

This image offers a closer look at the arrangement and types of solenoids present on the valve body, which are crucial for regulating fluid flow and pressure to enable gear changes.

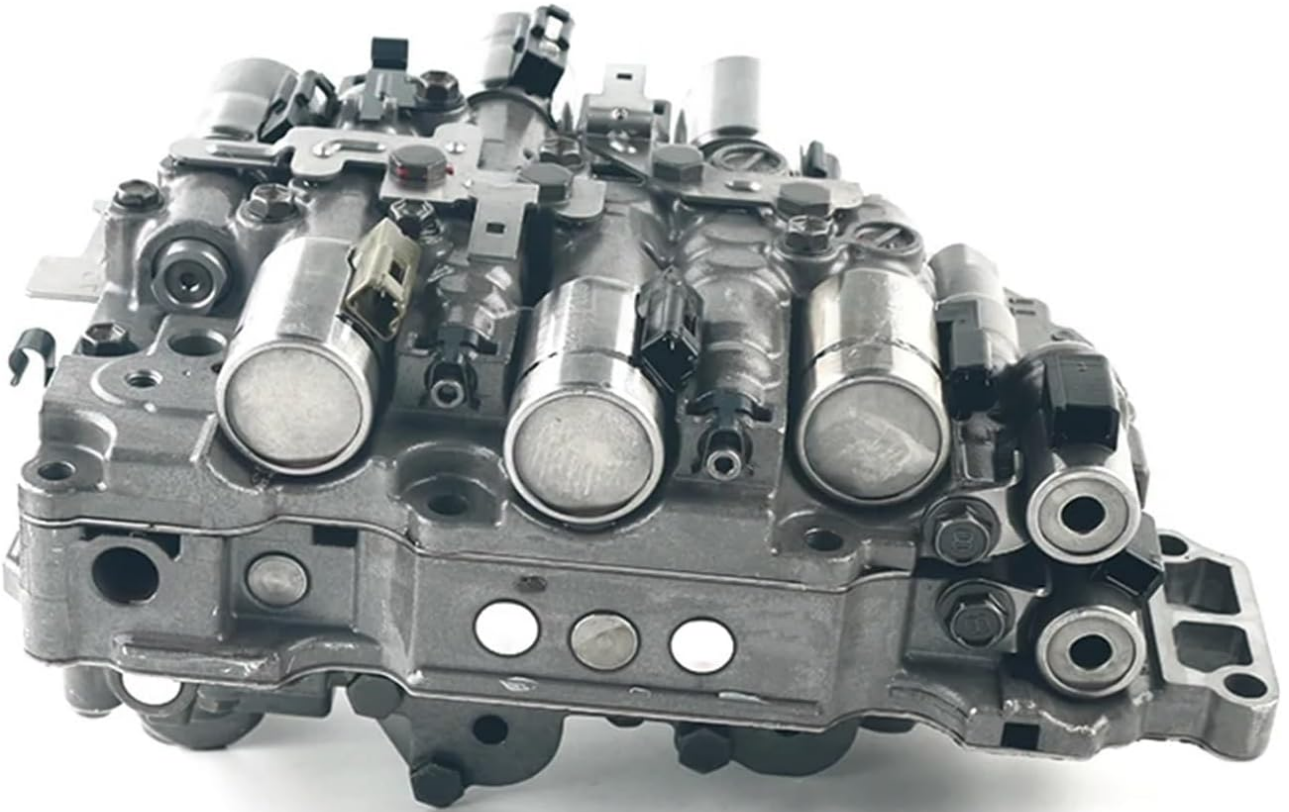


Figure 4: Underside view of the valve body, showing the fluid channels.

The underside of the valve body is shown here, illustrating the complex network of fluid channels and passages that distribute hydraulic pressure throughout the transmission for proper operation.

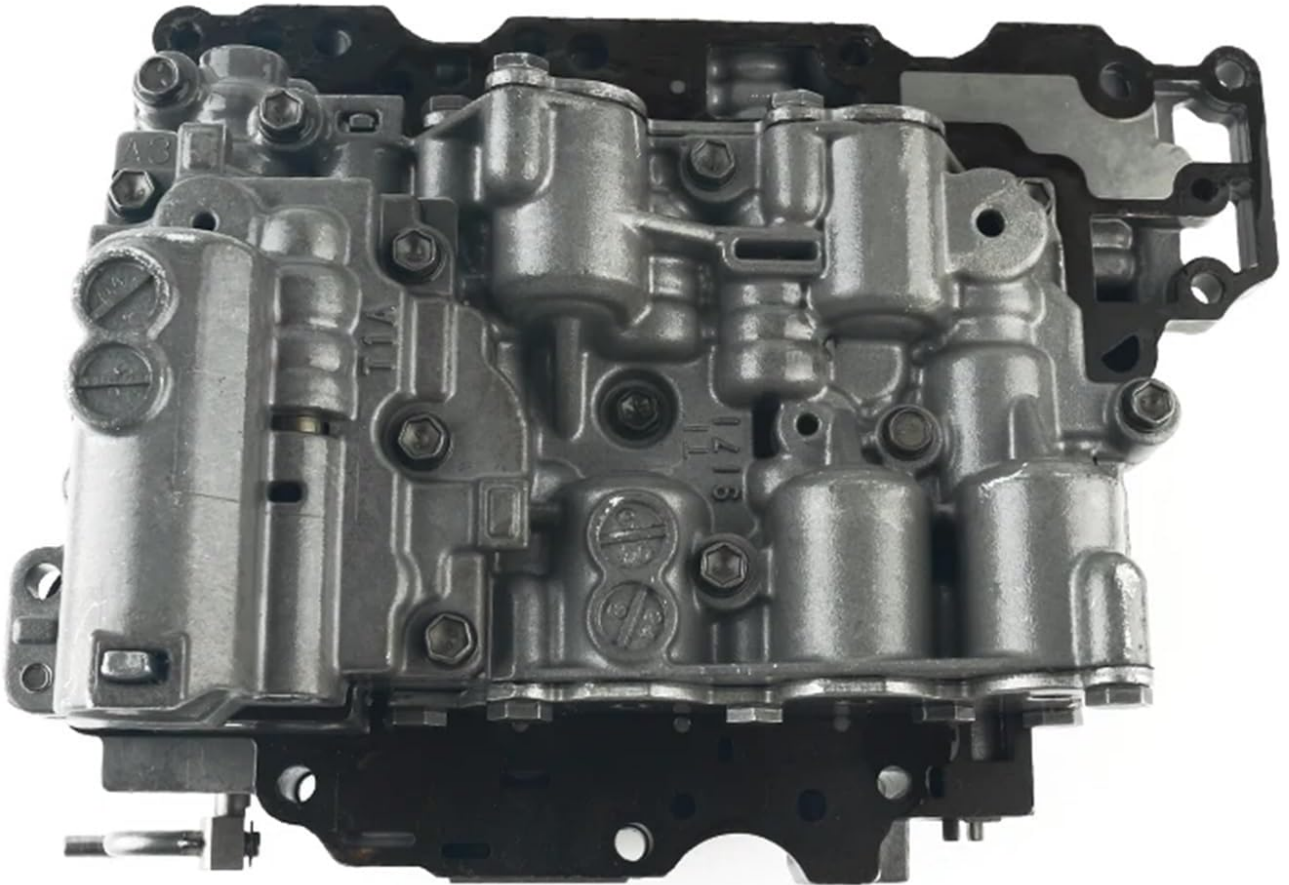


Figure 5: Side profile of the valve body, showing its overall dimensions and component density.

This side profile image provides a comprehensive view of the valve body's depth and the density of its integrated components, including various valves and sensors.

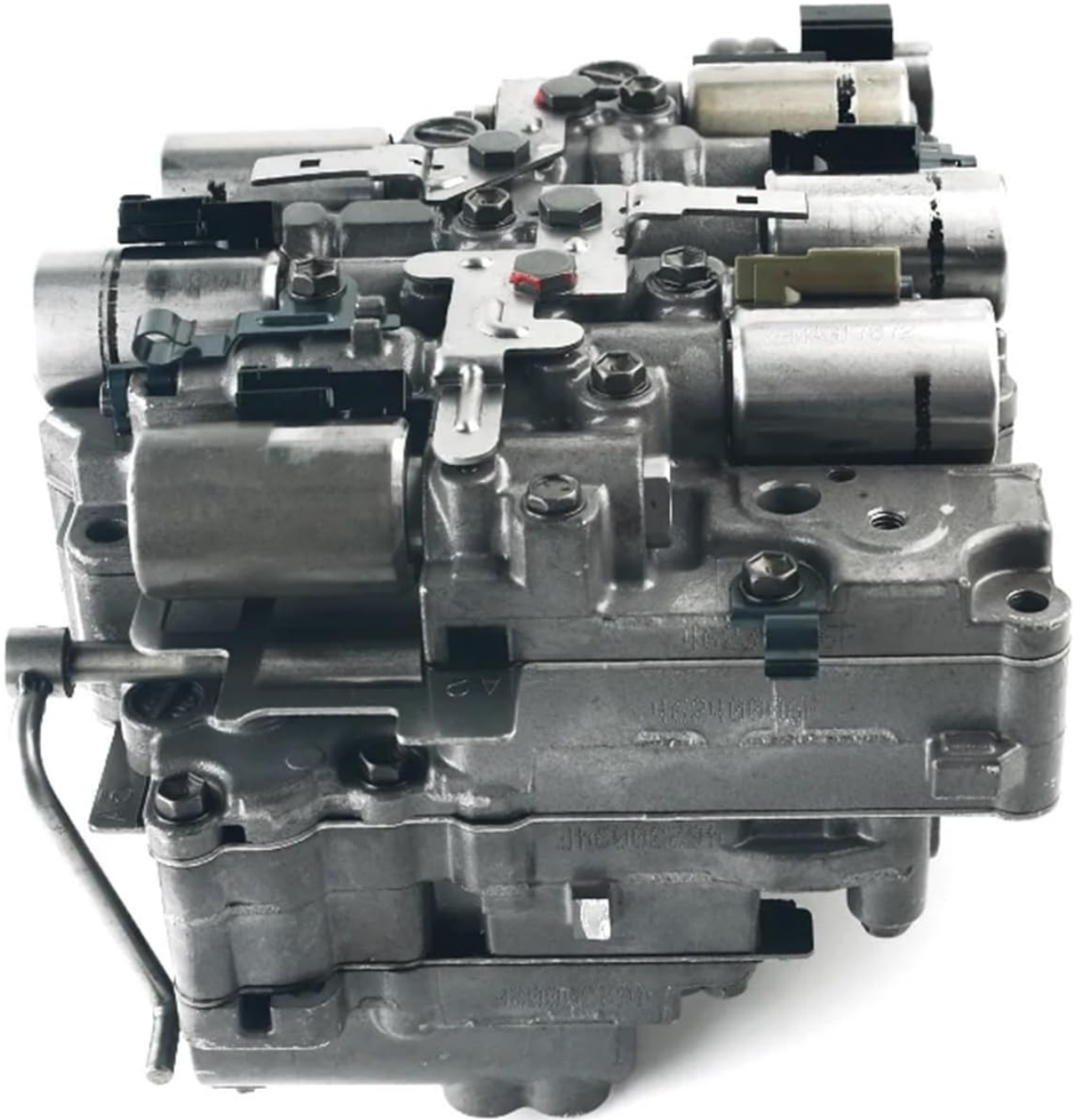


Figure 6: Rear angled view, showing the electrical connectors and mounting brackets.

A rear angled view of the valve body, illustrating the location of electrical connectors and specific mounting brackets designed for secure installation within the transmission housing.

2. SETUP AND INSTALLATION

The installation of an automatic transmission valve body assembly is a complex procedure that requires specialized tools, knowledge, and experience. It is highly recommended that this component be installed by a certified automotive technician or a professional transmission specialist.

General Installation Considerations:

- **Safety First:** Ensure the vehicle is properly secured on a lift or jack stands. Disconnect the battery before beginning any work.
- **Fluid Management:** Transmission fluid will need to be drained. Ensure proper disposal of old fluid.

- **Cleanliness:** Maintain a clean work environment to prevent contamination of the transmission system. Even small particles can cause significant damage.
- **Gaskets and Seals:** Always replace old gaskets and seals with new ones to ensure a proper, leak-free seal.
- **Torque Specifications:** Adhere strictly to the manufacturer's torque specifications for all bolts to prevent damage to the valve body or transmission case.
- **Electrical Connections:** Carefully connect all electrical harnesses and ensure they are securely latched.
- **Fluid Refill and Level Check:** After installation, refill the transmission with the correct type and amount of fluid as specified by the vehicle manufacturer. Perform a fluid level check according to the vehicle's service manual.
- **Adaptation/Learning Procedure:** Some vehicles may require a transmission adaptation or learning procedure after valve body replacement. Consult the vehicle's service manual or a diagnostic tool for specific instructions.

Note: Improper installation can lead to severe transmission damage and void product warranty. Always refer to the specific vehicle service manual for detailed, model-specific installation instructions.

3. OPERATING PRINCIPLES

The TF-80SC / AF40 / AWF21 Automatic Transmission Valve Body Assembly is the hydraulic control center of your vehicle's automatic transmission. It functions by directing transmission fluid under pressure to various components, such as clutch packs and brake bands, to engage and disengage gears.

How it Works:

1. **Input from Sensors:** The vehicle's Transmission Control Module (TCM) receives data from various sensors (e.g., vehicle speed, engine speed, throttle position, gear selector position).
2. **TCM Commands:** Based on this data, the TCM sends electrical signals to the solenoids located within the valve body.
3. **Solenoid Activation:** Solenoids open and close specific fluid passages, regulating the flow and pressure of transmission fluid.
4. **Hydraulic Control:** The controlled fluid pressure then activates or deactivates the appropriate clutch packs and bands, enabling smooth and precise gear changes.
5. **Pressure Regulation:** The valve body also contains pressure regulating valves that maintain optimal fluid pressure throughout the transmission system, crucial for efficient operation and component longevity.

Proper functioning of the valve body ensures smooth shifts, optimal fuel efficiency, and the overall longevity of the transmission.

4. MAINTENANCE

While the valve body itself is not typically a user-serviceable item, its longevity and performance are directly tied to the overall health and maintenance of the automatic transmission system.

Recommended Maintenance Practices:

- **Regular Transmission Fluid Checks:** Periodically check the transmission fluid level and condition according

to your vehicle's owner's manual. Low or contaminated fluid can severely impact valve body function.

- **Fluid and Filter Changes:** Adhere to the vehicle manufacturer's recommended intervals for transmission fluid and filter changes. Old, degraded fluid can lead to sludge buildup and restrict fluid passages within the valve body.
- **Use Correct Fluid Type:** Always use the exact type of transmission fluid specified by your vehicle manufacturer. Using incorrect fluid can cause damage to internal components, including the valve body.
- **Professional Inspections:** Have your transmission professionally inspected during routine vehicle maintenance. Early detection of issues can prevent more costly repairs.
- **Avoid Overheating:** Ensure your vehicle's cooling system is functioning correctly to prevent transmission overheating, which can damage transmission fluid and internal components.

Note: Any significant changes in transmission behavior (e.g., harsh shifts, slipping, delayed engagement) should prompt immediate professional inspection.

5. TROUBLESHOOTING

Issues related to the transmission valve body often manifest as problems with gear shifting or overall transmission performance. Due to the complexity of the component and the transmission system, troubleshooting should ideally be performed by a qualified technician.

Common Symptoms of Valve Body Issues:

Symptom	Possible Cause (Valve Body Related)	Recommended Action
Harsh or Delayed Shifts	Sticking valves, worn solenoids, clogged fluid passages.	Professional diagnostic scan for trouble codes; transmission fluid and filter check.
Slipping Gears	Low line pressure due to faulty pressure regulating valves or worn solenoids.	Immediate professional inspection to prevent further damage.
No Engagement (Drive/Reverse)	Severely stuck valves or completely failed solenoids.	Tow vehicle to a qualified transmission shop.
Check Engine Light / Transmission Warning Light	Electrical faults with solenoids, pressure sensor issues, or internal valve body failures.	Retrieve diagnostic trouble codes (DTCs) using an OBD-II scanner.

Important: Do not attempt to repair the valve body yourself unless you are a trained professional. Incorrect diagnosis or repair can lead to further damage to the transmission. Always consult a certified technician for diagnosis and repair of transmission issues.

6. SPECIFICATIONS

The following specifications pertain to the TF-80SC / AF40 / AWF21 Automatic Transmission Valve Body Assembly:

Brand: JYJJEJSB

Model Compatibility: TF-80SC, AF40, AWF21, TF80SC, AF40-6, TF80-SC

Compatible Vehicles: Volvo, Infiniti (specific models vary, verify fitment)

Item Weight: 1.76 ounces (approx. 50 grams)

Package Dimensions: 1.18 x 0.79 x 0.39 inches (approx. 3 x 2 x 1 cm)

Country of Origin: China

ASIN: B0DLTQ73HD

Manufacturer Part Number: xiaopeng898 shop (Note: This may refer to the seller's internal identifier)

Note: Always cross-reference these specifications with your vehicle's requirements to ensure proper fitment and compatibility.

7. WARRANTY AND SUPPORT

For information regarding product warranty, returns, or technical support, please contact the seller or manufacturer directly through the platform where the purchase was made. Ensure you have your purchase details, including the order number and product ASIN (B0DLTQ73HD), readily available when contacting support.

The manufacturer is JYJJEJSB. For specific inquiries, please refer to their official support channels if available, or contact the seller "xiaopeng898 shop" for assistance.