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› [CTS Clutch Assembly Instruction Manual for Wacker Jumping Jack Rammers \(Models BS500, BS50-2i, BS600, BS60-2i, BS700, BS70-2i\)](#)

CTS BS500 BS50-2i BS600 BS60-2i BS700 BS70-2i

CTS Clutch Assembly Instruction Manual

For Wacker Jumping Jack Rammers: BS500, BS50-2i, BS600, BS60-2i, BS700, BS70-2i

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your CTS replacement centrifugal clutch assembly. This clutch is designed for use with Wacker Jumping Jack Rammers, specifically models BS500, BS50-2i, BS600, BS60-2i, BS700, and BS70-2i. Adhering to these instructions will help ensure the longevity and optimal performance of the clutch and your equipment.

The CTS clutch assembly is a high-quality aftermarket replacement for OEM Part Numbers 86430, 0086430, and 0157205.

2. SAFETY INFORMATION

Always prioritize safety when working with power equipment. Improper installation or maintenance can lead to serious injury or damage to the equipment.

- **Professional Installation Recommended:** Due to the critical nature of clutch components in power equipment, installation should ideally be performed by a qualified technician.
- **Disconnect Power:** Before attempting any installation, maintenance, or repair, ensure the Wacker Jumping Jack Rammer is completely shut off and disconnected from its power source (e.g., spark plug wire removed for gasoline engines).
- **Wear Protective Gear:** Always wear appropriate personal protective equipment (PPE), including safety glasses, gloves, and sturdy footwear.
- **Use Correct Tools:** Use only the specified tools for installation and removal to prevent damage to the clutch or rammer components.
- **Inspect Components:** Before installation, inspect all parts for damage or defects. Do not install damaged components.
- **Refer to Rammer Manual:** Always consult the original Wacker Jumping Jack Rammer owner's manual for specific safety warnings and procedures related to your model.

3. SETUP AND INSTALLATION

3.1 Unpacking and Inspection

- Carefully remove the CTS clutch assembly from its packaging.

- Inspect the clutch for any signs of shipping damage, such as bent components or cracks.
- Verify that all components are present and match the product description. The package should include one (1) clutch assembly.

3.2 Installation Procedure

The following steps outline a general installation process. Specific details may vary slightly depending on your Wacker Jumping Jack Rammer model. Always refer to your rammer's service manual for precise instructions.

1. **Prepare the Rammer:** Ensure the rammer is on a stable, level surface. Disconnect the spark plug wire to prevent accidental starting.
2. **Access the Clutch Area:** Remove any covers or components necessary to gain access to the existing clutch assembly. This typically involves removing the engine housing or specific access panels.
3. **Remove Old Clutch:** Using appropriate tools (e.g., clutch removal tool, spanner wrench), carefully unthread and remove the old clutch assembly from the crankshaft. Note the orientation of any washers or spacers.
4. **Clean Mounting Area:** Thoroughly clean the crankshaft and the clutch mounting area to remove any dirt, grease, or debris.
5. **Install New Clutch:** Thread the new CTS clutch assembly onto the crankshaft. Ensure it seats properly. Tighten the clutch to the manufacturer's specified torque using a torque wrench. Overtightening or undertightening can lead to premature failure.
6. **Reassemble:** Reinstall any covers or components that were removed to access the clutch. Ensure all fasteners are securely tightened.
7. **Reconnect Spark Plug:** Reconnect the spark plug wire.

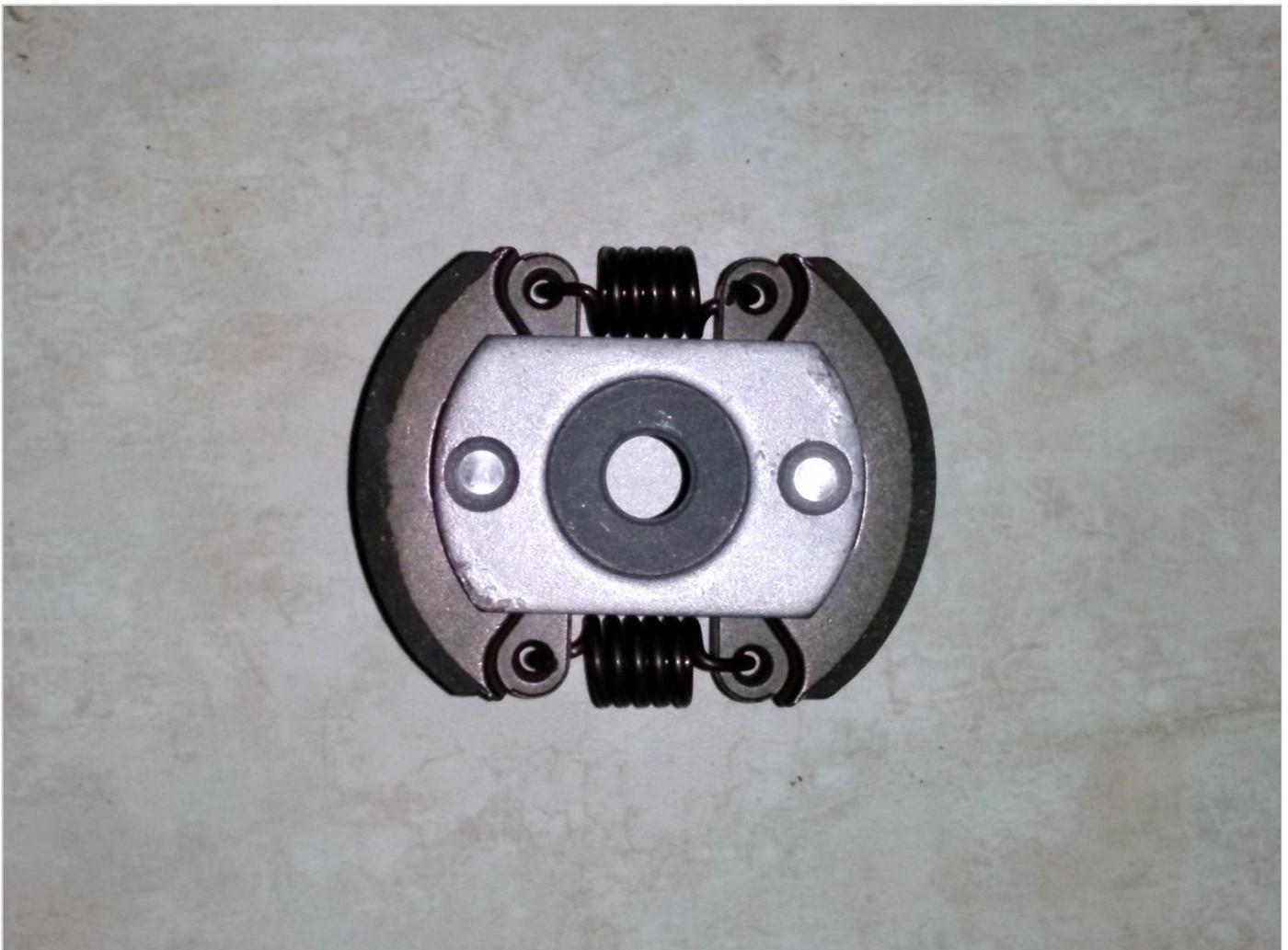


Image 1: Top view of the CTS Clutch Assembly, showing the two clutch shoes, springs, and central mounting hub.

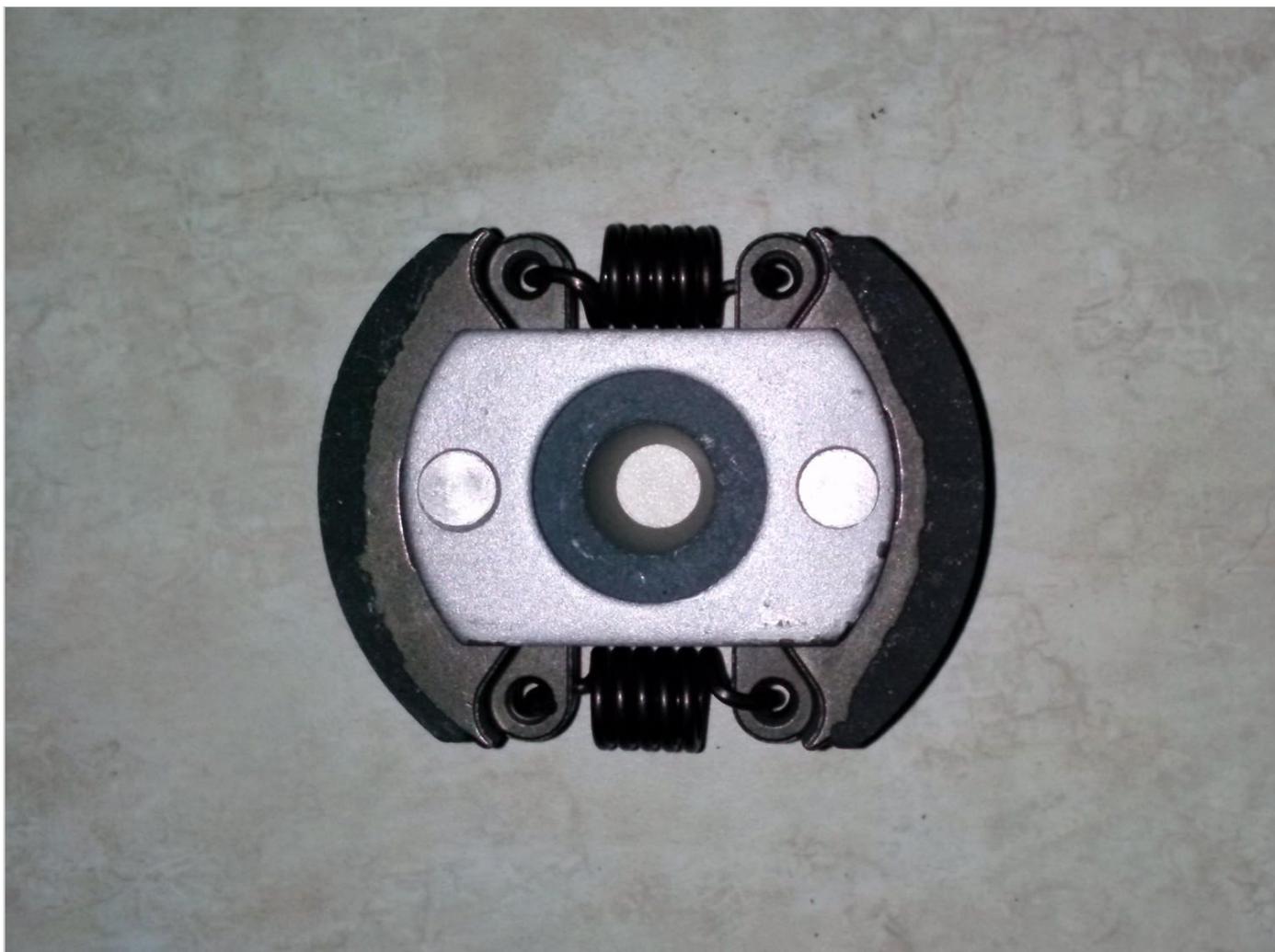


Image 2: Angled view of the CTS Clutch Assembly, highlighting the robust construction and spring mechanism.

4. OPERATING PRINCIPLES

The centrifugal clutch assembly is a vital component in your Wacker Jumping Jack Rammer, designed to engage the ramming mechanism only when the engine reaches a specific RPM. This allows the engine to start and idle without engaging the rammer, preventing unnecessary wear and providing operator control.

- **Engagement:** As the engine speed increases, centrifugal force causes the clutch shoes to expand outwards.
- **Power Transfer:** These shoes then make contact with the inner drum (not included with this assembly), transferring power from the engine to the ramming mechanism.
- **Disengagement:** When the engine speed decreases (e.g., at idle), the springs pull the clutch shoes back, disengaging them from the drum and stopping power transfer.

Proper operation relies on the clutch engaging smoothly and fully at the correct engine speed and disengaging completely at idle.

5. MAINTENANCE

Regular inspection and maintenance of the clutch assembly are crucial for reliable performance and to extend the life of your Wacker Jumping Jack Rammer.

- **Periodic Inspection:** Inspect the clutch shoes and springs for wear, cracks, or damage every 50-100 operating hours or annually, whichever comes first.
- **Check Spring Tension:** Ensure the springs are intact and provide adequate tension to hold the shoes in place at idle. Worn or stretched springs can cause premature engagement.

- **Examine Clutch Shoes:** Look for excessive wear on the friction material of the clutch shoes. If the friction material is thin, glazed, or damaged, the clutch assembly should be replaced.
- **Clean Clutch Area:** Keep the clutch and bell housing area free of dirt, dust, and oil. Accumulation of debris can hinder proper clutch operation and cause premature wear. Use compressed air to clean the area.
- **Lubrication:** The clutch assembly itself typically does not require lubrication. Avoid applying grease or oil to the clutch shoes or drum, as this will cause slippage and damage.

6. TROUBLESHOOTING

This section addresses common issues related to the clutch assembly. For more complex problems, consult a qualified service technician.

Symptom	Possible Cause	Solution
Clutch engages at idle (rammer moves when engine is idling).	Worn or stretched clutch springs; engine idle speed too high.	Inspect and replace clutch springs if necessary. Adjust engine idle speed according to the rammer's service manual.
Clutch slips (engine revs but rammer does not engage fully or lacks power).	Worn clutch shoes; oil/grease on clutch shoes or drum; incorrect clutch installation.	Inspect and replace clutch assembly if shoes are worn. Clean clutch area thoroughly. Reinstall clutch correctly, ensuring proper torque.
Excessive vibration or noise from clutch area.	Damaged clutch shoes or springs; loose clutch assembly; worn crankshaft bearing.	Inspect clutch shoes and springs for damage and replace if needed. Ensure clutch is securely tightened. If problem persists, inspect crankshaft and bearings.
Clutch does not engage at all.	Severely worn clutch shoes; broken springs; engine not reaching sufficient RPM.	Inspect and replace clutch assembly. Check engine RPM and carburetor settings.

7. SPECIFICATIONS

Key specifications for the CTS replacement centrifugal clutch assembly:

Feature	Detail
Brand	CTS
Model Compatibility	Wacker BS500, BS50-2i, BS600, BS60-2i, BS700, BS70-2i Jumping Jack Rammers
Replaces OEM Part Numbers	86430, 0086430, 0157205
Item Weight	Approximately 0.01 ounces (0.28 grams) - <i>Note: This weight may refer to packaging or a component, actual clutch weight will be higher.</i>
Material	Standard clutch assembly materials (metal, friction material)
Package Dimensions	Approximately 5.4 x 4.5 x 2.2 inches

8. WARRANTY AND SUPPORT

This CTS replacement clutch assembly is manufactured to high standards. For specific warranty information, please refer to the product's original purchase documentation or contact the seller directly. Keep your proof of purchase for any warranty claims.

For technical support or inquiries regarding this product, please contact your retailer or the CTS customer service department through the contact information provided at the time of purchase.



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