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This section is for the following models:

T5Z [A476];  
 T7Z [A477];  
 C60Z [A478];  
 C80Z [A479];  
 B60Z [A230];  
 W60Z [A231];  
 W65Z [A229];  
 B80Z [A233];  
 W80Z [A234];  
 W30-40ZA [B453];  
 W20-30ZR [B455];  
 W25-30-40ZC [B454]

## General



### WARNING

**DO NOT** operate a lift truck that needs repairs. If a repair is necessary, put a **DO NOT OPERATE** tag on the control handle. Remove the key from the key switch.



### WARNING

Before performing repairs or adjustments on the brake system, blocks must be placed under each side of the frame to raise the drive tire off the ground. The blocks must prevent the lift truck from falling and causing personal injury or property damage. See **Periodic Maintenance 8000 SRM 919, Periodic Maintenance**

**8000 SRM 1027, or Periodic Maintenance 8000 SRM 1032 - How To Put A Lift Truck On Blocks.**



### WARNING

Always disconnect and separate the battery connector so that the connector is completely free before performing any service or repairs. If the connector is not completely free, it can reconnect. Tag the connector: **DO NOT CONNECT.**

This section describes the electric brake and outlines the procedures for the maintenance, adjustment, and repair that may be required for servicing these lift trucks.

## Description

Motorized hand trucks have three methods of braking:

1. Regenerative (Neutral) braking
2. Controlled plugging
3. Application of the spring-applied, electrically released friction brake

**NOTE:** The preferred method of stopping the truck is:  
Regenerative (Neutral) braking  
or  
Controlled plugging

Regenerative (Neutral) braking applies a retarding force to the drive wheel through the traction motor, allowing the unit to slow to a gradual stop. It is applied by returning the speed/direction control to the **NEUTRAL** position or by placing the hand brake lever(s) in the first stage position (T5Z, T7Z, C60Z, and C80Z only).

Controlled plugging is reversing the speed/direction control while traveling, causing the unit to slow to a stop. Return the speed/direction control to the **NEUTRAL** position to remain stopped. If the speed/direction control is not returned to the **NEUTRAL** position, the lift truck will accelerate in the opposite direction. Controlled plugging should stop the truck within a few feet, depending on speed and load.

The brake is designed to hold the truck loaded to capacity on a 10% grade. The lift truck should be tested periodically to ensure that the brake is performing to the proper specifications. See Brake Check in this section for testing instructions. If the brake does not

release or fails to perform to the necessary requirements, the brake assembly must be repaired or replaced. Refer to Brake Assembly Repair in this section for procedures to repair or replace the brake.

**NOTE:** On models T5Z and T7Z, the brake must be capable of holding the lift truck and 2269.96 kg (5000 lb) (trailer plus load weight) on a 5% grade.

There are three brake types that have been used on the models covered by this section.

The first brake type is nonadjustable and was used on B60Z and W60Z models until October 2001. On these trucks, the brake may be identified by not having a torque-adjusting nut on top of the brake. See Brake Assembly Repair.

The second brake type is used on all models except B80Z, T7Z, and C80Z. This brake is adjustable for both torque and air gap. The brake may be identified by the torque-adjusting nut on top of the brake. See Brake Assembly Repair.

The third brake type is used on B80Z, T7Z, and C80Z models. This brake is adjustable for air gap only and does not have a torque-adjusting nut on top of the brake. See Brake Assembly Repair.

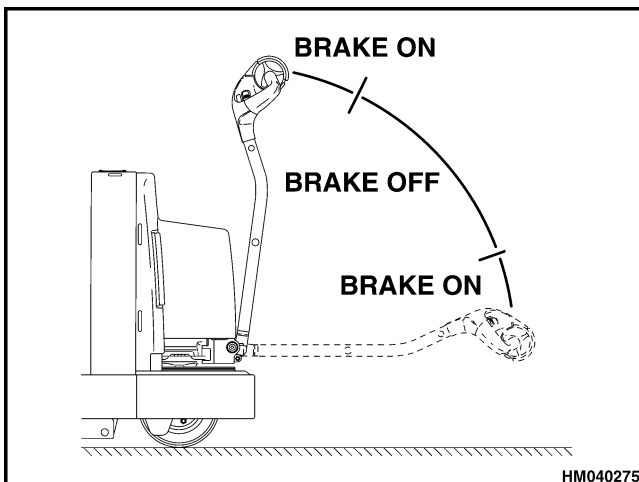
A spring-applied, electrically released friction brake is mounted to the drive motor. When the brake is applied, springs inside the brake assembly compress a rotating friction disk against two stationary plates.

When the brake is released, the brake coil will energize and pull the armature plate away from the friction disk, releasing the brake as the drive motor is activated.

On B60Z, B80Z, W60Z, W65Z, W80Z, W30-40ZA, W20-30ZR, and W25-30-40ZC, the brake is applied when the control handle arm is moved to the **BRAKE ON** position, when the truck is idle for periods of time, or if there is a traction fault.

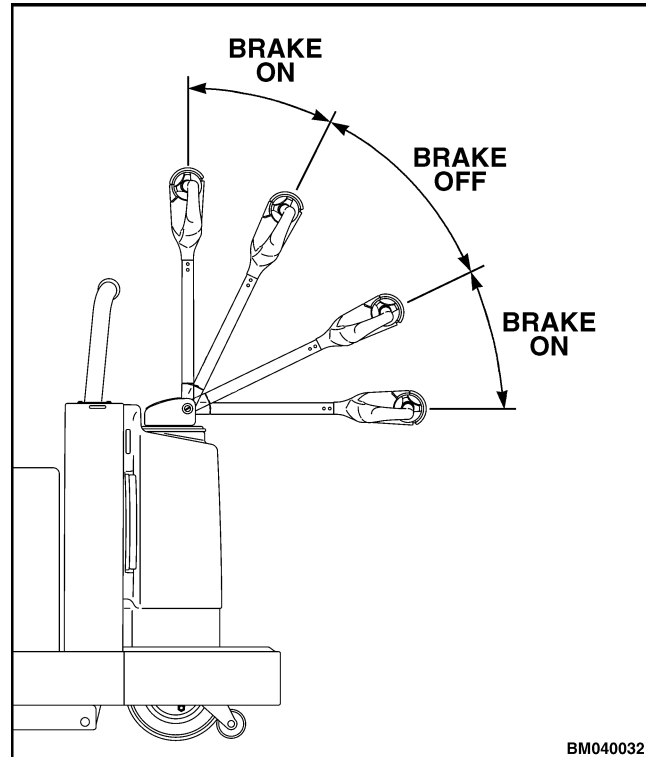
To release the brake:

1. Connect the battery.
2. Turn the key switch to the **ON** position.
3. Lower the control handle arm to the operating or **BRAKE OFF** position. Refer to Figure 1 or Figure 2.
4. Rotate direction/speed control (butterfly knobs) in the direction of travel.



**Figure 1. Brake Operation (W60Z, W65Z, W80Z, W30-40ZA, W20-30ZR, and W25-30-40ZC)**

The T5Z, T7Z, C60Z, and C80Z use a stationary control handle arm with two two-stage hand brake levers to apply the brake. Pulling either hand brake lever halfway back initiates regenerative braking. Pulling either hand brake all the way back de-energizes the brake coil and allows the spring-applied friction brake to apply. The parking brake is also applied whenever the parking brake switch is in the **ON** position.



**Figure 2. Brake Operation (B60Z and B80Z)**

To release the brake:

1. Connect the battery.
2. Turn the key switch to the **ON** position.
3. Turn the parking brake switch to the **OFF** position.

The friction brake is applied when the key switch is in the **OFF** position on **ALL** trucks.

The brake on some models may be overridden when it is necessary to move a truck that cannot be operated.

B60Z, B80Z, W60Z, W65Z, and W80Z models may come equipped with the brake override connectors integral to the truck main wiring harness. Locate the brake override connector on the main wiring harness near the point where the brake wiring harness and the main wiring harness join. Connect the brake wiring harness with the brake override connector. To release the brake, connect the battery and turn the key to the **ON** position. This will cause the brake to release and the truck can then be rolled to a suitable location for service.

If the brake connector cannot be located within the main harness, the brake may still be overridden using brake release adapter, part number 2045940 (must be purchased from the Parts Distribution

(More Content includes: Brake system, Capacities, and specifications, Frame, Hydraulic, System, Industrial battery, Main control, Valve, Mast repair, Fasteners, Schematics diagrams, Steering axle, Steering system, Wire harness repair And more)

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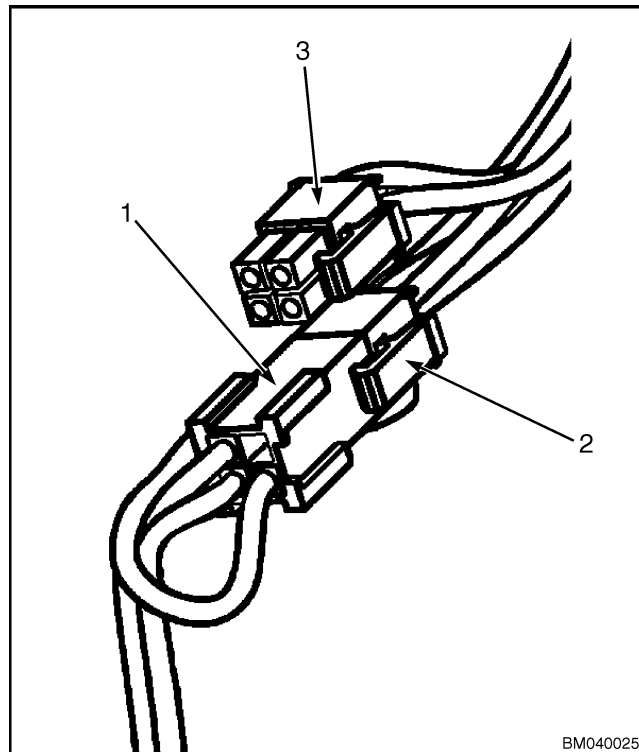
**Thank you very  
much.**

Center). Connect the adapter between the brake coil connector and the J1 connector on the main harness. To release the brake, connect the battery and turn the key to the **ON** position. This will cause the brake to release and the truck can then be rolled to a suitable location for service.

W30-40ZA, W20-30ZR, and W25-30-40ZC trucks are all equipped with the integral brake override connectors. Locate the brake override connector on the main wiring harness near the point where the brake wiring harness and the main wiring harness join. See Figure 3. Connect the brake wiring harness with the brake override connector. This will energize the brake causing it to release. The truck can then be rolled to a suitable location for service.

T5Z, T7Z, C60Z, and C80Z models have brakes that are directly connected to the battery circuit and do not require additional circuitry to release the brake. To release the brake on these models: Connect the battery, turn the key switch to the **ON** position, and turn the parking brake switch to the **OFF** position. This will cause the brake to release and the truck can then be rolled to a suitable location for service.

If the battery state of charge is too low, or if there is damage to the brake, MDU, or electrical system, then it may not be possible to move the lift truck before servicing the truck.



1. BRAKE WIRING HARNESS
2. MAIN WIRING HARNESS
3. BRAKE OVERRIDE CONNECTOR

*Figure 3. Integral Brake Override Connector*

## Special Precautions



### WARNING

Put blocks under each side of the truck under the drive unit frame. Position blocks on both sides of the load wheels. The blocks must prevent the lift truck from falling and causing personal injury or property damage.

The capacitor in the transistor controller can hold an electrical charge after the battery is disconnected. To prevent electrical shock and personal injury, discharge the capacitor before inspecting or repairing any component. Wear safety glasses. Make certain the battery has been disconnected. Discharge the capacitors in the controller by connecting a 200-ohm, 2-watt resistor across the controller's B+ and B- terminals with insulated jumper wires. **DO NOT** use a screwdriver to discharge the traction motor controller.

To avoid personal injury and prevent electrical shock, perform the following steps before performing any troubleshooting or adjustments, and connecting or disconnecting a handset or PC.



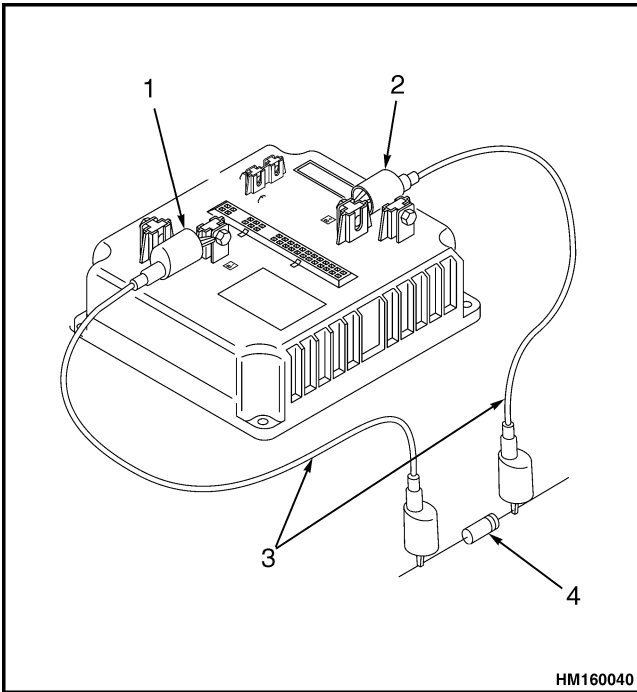
### CAUTION

To avoid controller damage, always disconnect the battery. Discharge the capacitor and never put power to the controller with any power wire disconnected. Never short any controller terminal or motor terminal to battery. Make sure to use proper procedures when servicing the controller.

1. Block the lift truck so the drive wheel is off the floor. See the **Periodic Maintenance** section for your truck, **Periodic Maintenance 8000 SRM 919**, **Periodic Maintenance 8000 SRM**

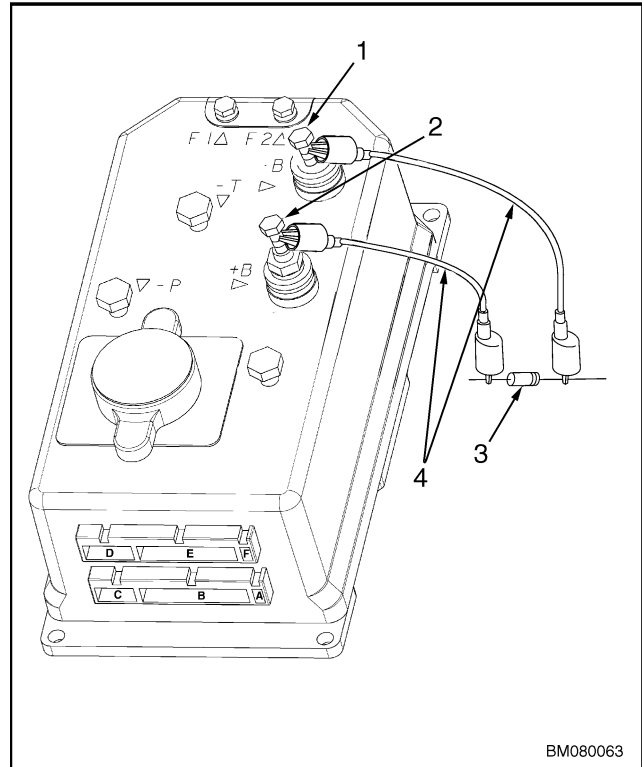
1027, or **Periodic Maintenance** 8000 SRM 1032 - How to Put a Lift Truck on Blocks.

2. Turn the key switch to the **OFF** position and disconnect the battery.
3. Discharge the capacitors in the controllers by connecting a 200-ohm, 2-watt resistor across the controller's B+ and B- terminals. See Figure 4 or Figure 5. **DO NOT** short across the motor controller terminals with a screwdriver or jumper wire. Remove the 200-ohm, 2-watt resistor before reconnecting the battery.



1. POSITIVE CONNECTION
2. NEGATIVE CONNECTION
3. INSULATED JUMPER WIRES
4. 200-OHM, 2-WATT RESISTOR

**Figure 4. Discharging Controller W60Z, W65Z, W80Z, B60Z, B80Z, T5Z, T7Z, C60Z, and C80Z**



1. NEGATIVE CONNECTION
2. POSITIVE CONNECTION
3. 200-OHM, 2-WATT RESISTOR
4. INSULATED JUMPER WIRES

**Figure 5. Discharging Controller W30/40ZA, W20/30ZR, and W25/30/40ZC**

## Brake Check

### HOLD ON GRADE TEST

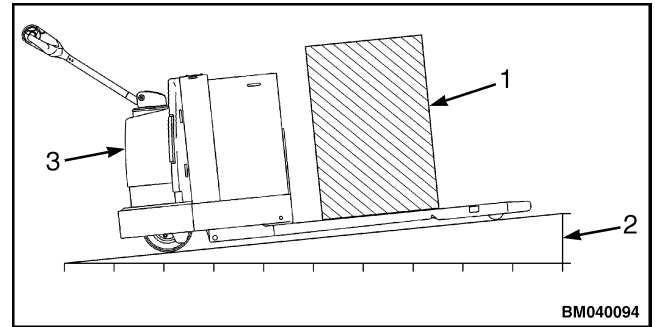


#### WARNING

**DO NOT stand below or ride on the lift truck when performing the hold on grade test.**

The brake should be checked for hold capacity every 2000 hours or yearly or any time substandard brake performance is suspected. Load a stable, full-capacity load on the forks and position the lift truck at the base of a 10-percent grade (1.0 m rise in 10.0 m (3 ft rise in 30 ft)) grade with the forks facing uphill. Standing to the side of the lift truck, slowly drive the lift truck up the grade and bring the lift truck to a stop using the directional controls (plugging). Move the control handle to the **BRAKE ON** position to apply the parking brake. See Figure 6. If the brake fails

to hold the lift truck on the grade, the brake assembly must be repaired or replaced. For instructions on repairing or replacing the brake, refer to Brake Assembly Repair in this section.



**Figure 6. Hold On Grade Test (Model B60Z Shown)**

## Brake Coil Check

Check for correct brake coil resistance. The brake coil can be checked with an ohmmeter. The coil resistance should be the value shown in Table 1.

**Table 1. Brake Coil Resistance**

Model Number	Resistance ( $\pm 10\%$ )
B80Z, T7Z, C80Z	10.7 ohms
W60Z, W80Z, B60Z, T5Z, C60Z, W30-40ZA, W20-30ZR, W25-30-40ZC	14.0 ohms
W65Z	4.0 ohms

## Brake Assembly Repair

### B60Z AND W60Z (UP TO 10/2001)

**NOTE:** This brake is nonadjustable.

#### Remove



#### WARNING

**Be careful when removing or installing snap rings. These snap rings can come loose during removal or installation with enough force to cause personal injury. Always use the correct snap ring pliers and wear eye and face protection during removal and installation.**

Some parts of the steering control handle must be disconnected to disassemble the brakes. For additional information about removal and installation of the steering control handle, see the section **Steering Mechanism** 1600 SRM 962.

Remove the drive unit compartment cover. Refer to the section **Master Drive Unit** 630 SRM 961.

Block drive tire front and rear so the truck cannot roll with the brake removed.

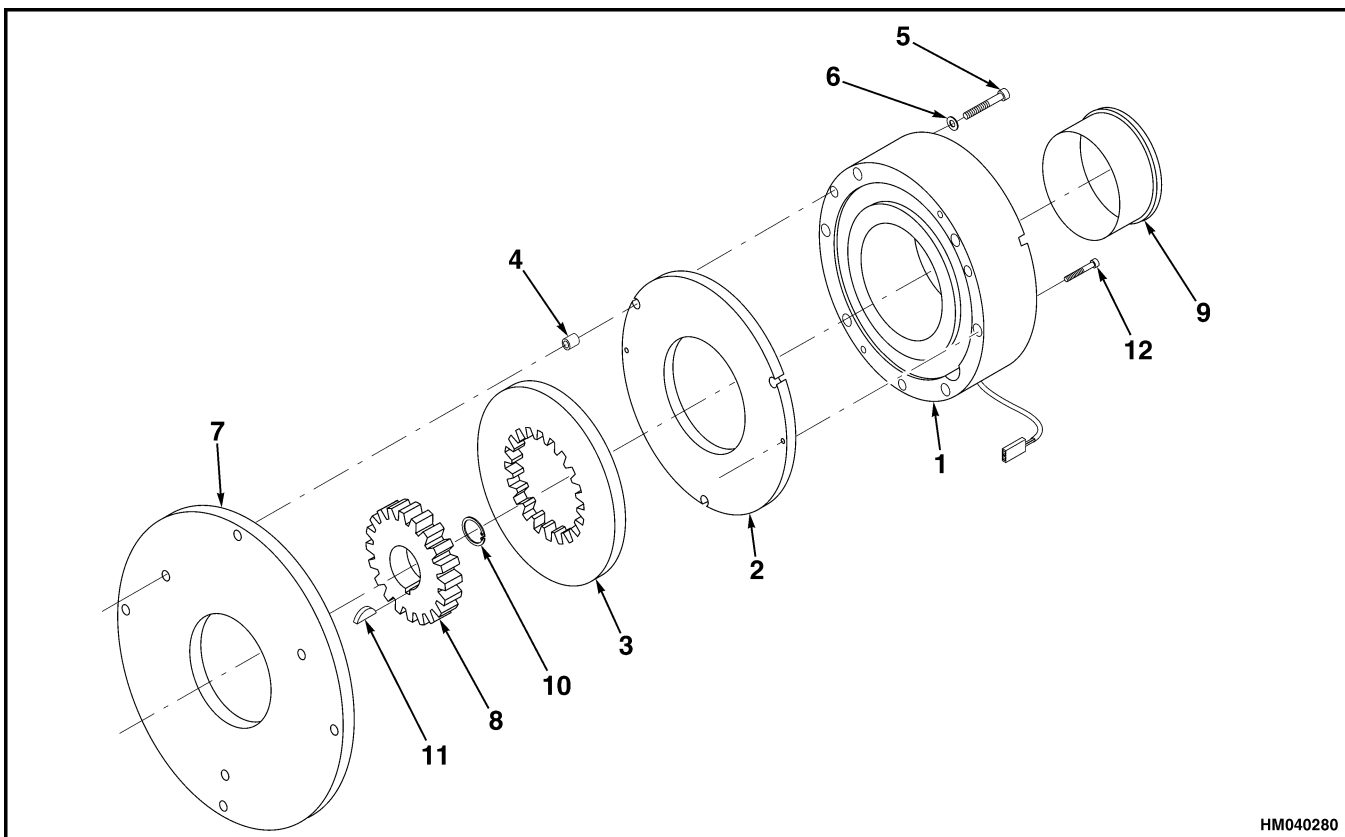
1. Carefully screw two socket head screws (HCE-503) into the two holes on top of the parking brake. This will secure the armature and springs

to the magnet body and allow the upper half of the brake to be removed safely. See Figure 7.

2. Unplug the Molex™ connector located at the brake assembly.
3. Loosen, but do not remove, the three capscrews that hold the magnet body to the adapter.
4. Remove the upper half of the brake. Special attention is required not to lose the spacer for each screw.
5. Remove the friction disk by carefully lifting on both sides at the same time. **DO NOT** use a

screwdriver or other metal pry bar, as this may damage the friction disk or scar the surface of the adapter. If you are only replacing the friction disk, no further disassembly is required.

6. Remove the four screws holding the adapter to the motor and remove the adapter.
7. Remove the snap ring from end of motor shaft.
8. Remove the splined hub and the Woodruff key. **DO NOT** lose the Woodruff key.



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- |                  |                              |
|------------------|------------------------------|
| 1. MAGNET BODY   | 7. ADAPTER                   |
| 2. ARMATURE      | 8. HUB                       |
| 3. FRICTION DISK | 9. PLUG                      |
| 4. SPACER        | 10. SNAP RING                |
| 5. SCREW         | 11. WOODRUFF KEY             |
| 6. LOCKWASHER    | 12. SCREW (MAINTENANCE ONLY) |

*Figure 7. Brake Assembly (Spacer Type) (Nonadjustable)*



## Install



### WARNING

Be careful when removing or installing snap rings. The snap rings can come loose during removal or installation with enough force to cause personal injury. Always use the correct snap ring pliers and wear eye and face protection during removal and installation.

1. Install the Woodruff key. Carefully align the Woodruff key with the groove in the motor shaft.
2. Install the splined hub on the motor shaft.
3. Install the snap ring on the end of the motor shaft.
4. Replace the adapter and tighten the four screws that hold it to the motor. Torque to 11 N•m (8 lbf ft).
5. Replace the friction disk by aligning it with the splined hub and sliding it down over the hub.
6. Replace the upper half of the brake and install lockwashers and capscrews.
7. Tighten the capscrews. Torque to 12 to 14 N•m (8.8 to 10.3 lbf ft).
8. Plug in the Molex™ connector.
9. Carefully remove the capscrews from the holes on top of the parking brake.
10. Check the brake switch at the control handle base for operation and to ensure that the wires are connected and that there is no obstruction of movement.
11. Remove the blocks. Connect the battery and test the operation of the lift truck prior to returning the lift truck to service.

**NOTE:** The brake must hold the lift truck with a maximum rated load on a 10 percent grade (0.305 m (1 ft) rise in 3.05 m (10 ft)).

The truck should operate without any drag when the handle is in the operating position.

Install the drive unit compartment cover. Refer to the section **Master Drive Unit** 630 SRM 961.

**B60Z AND W60Z (10/2001 AND UP), B80Z, T5Z, T7Z, C60Z, C80Z, W65Z, W80Z, W30/40ZA, W20/30ZR, AND W25/30/40ZC**

## Remove



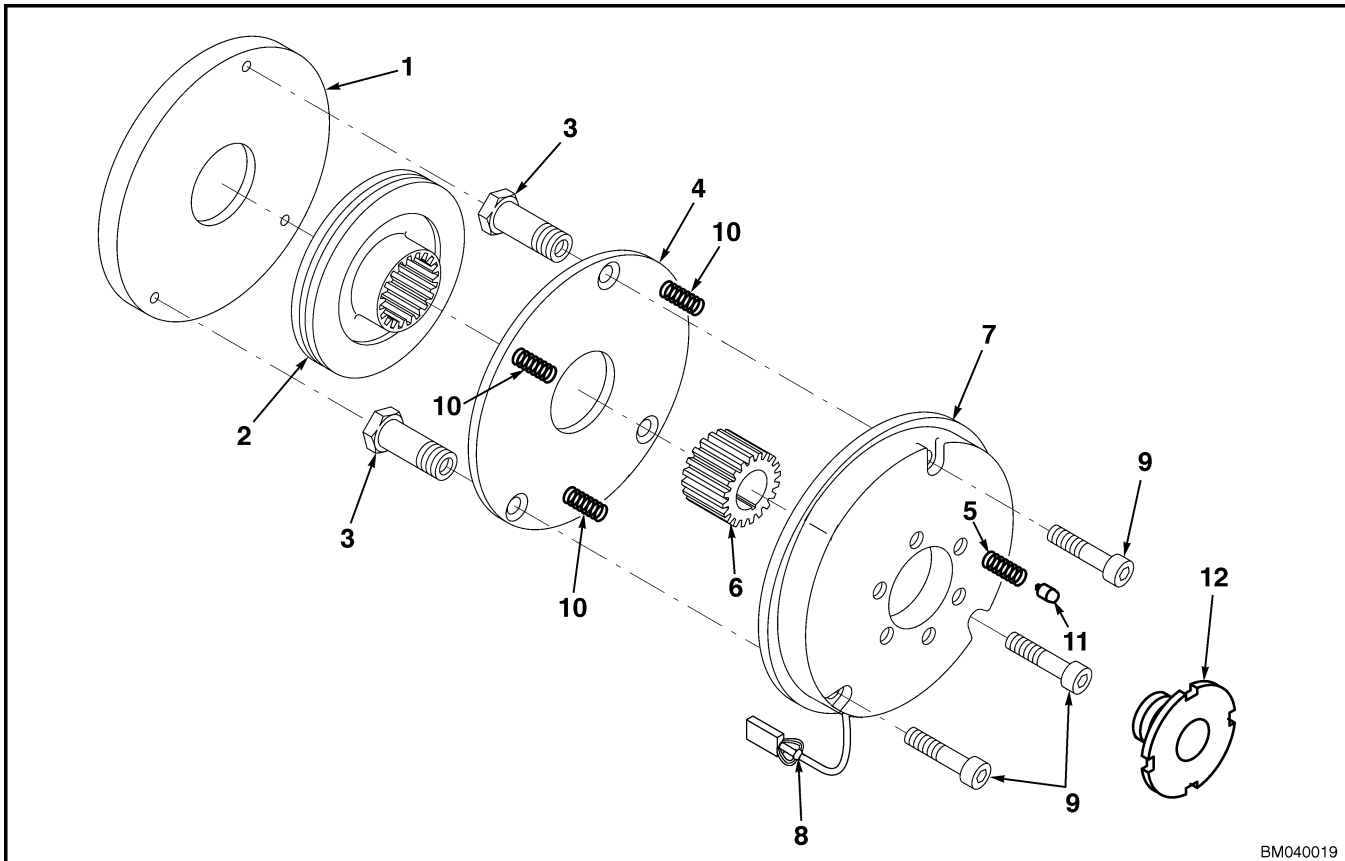
### WARNING

Be careful when removing or installing snap rings. These snap rings can come loose during removal or installation with enough force to cause personal injury. Always use the correct snap ring pliers and wear eye and face protection during removal and installation.

Some parts of the steering control handle must be disconnected to disassemble the brakes. For additional information about removal and installation of the steering control handle, see the section **Steering Mechanism** 1600 SRM 962 or **Steering Mechanism** 1600 SRM 1031.

For the following instructions, refer to Figure 8 or Figure 9.

1. Remove the drive unit compartment cover. Refer to the section **Master Drive Unit** 630 SRM 961.
2. Block drive tire front and rear so truck cannot roll with the brake removed.
3. Unplug the Molex™ connector at the brake.
4. Remove torque nut or plug. Remove the three capscrews that hold the brake to the motor.
5. Remove the upper half of the brake.
6. Remove the friction disk by carefully lifting on both sides at the same time. **DO NOT** use a screwdriver or other metal pry bar, as this may damage the friction disk or scar the surface of the adapter. If you are only replacing the friction disk, no further disassembly is required.
7. Remove the snap ring from end of motor shaft (not shown).
8. Remove the splined hub and the Woodruff key. **DO NOT** lose the Woodruff key.
9. Remove adapter plate.



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- |                                |                       |
|--------------------------------|-----------------------|
| 1. ADAPTER PLATE               | 7. MAGNET BODY        |
| 2. ROTOR/BRAKE LINING ASSEMBLY | 8. BRAKE COIL DIODE   |
| 3. ADJUSTMENT BOLT             | 9. SOCKET HEAD SCREWS |
| 4. PRESSURE PLATE              | 10. OUTER SPRING      |
| 5. INNER SPRING                | 11. TAPPET            |
| 6. SPLINED HUB                 | 12. TORQUE NUT        |

*Figure 8. Brake Assembly (With Torque Nut)*

**Install**

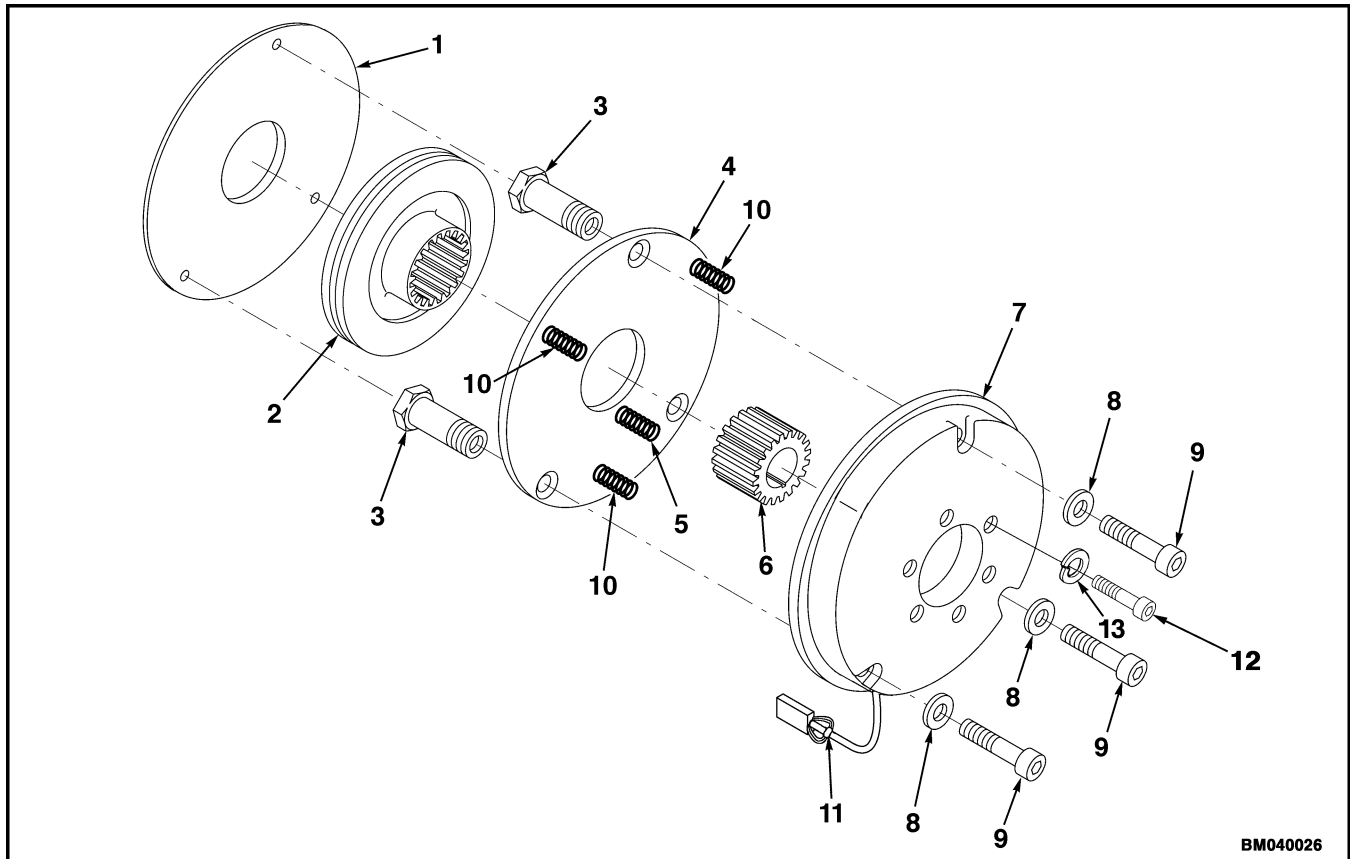
1. Install adapter plate and align holes with bolt holes on motor.
2. Install the splined hub and Woodruff key. Align the Woodruff key correctly.

**⚠ WARNING**

**Be careful when removing or installing snap rings. These snap rings can come loose during removal or installation with enough force**

**to cause personal injury. Always use the correct snap ring pliers and wear eye and face protection during removal and installation.**

3. Install the snap ring on the motor shaft (not shown).
4. Install the friction disk by aligning it with the splined hub and sliding it down over the hub.
5. Reposition the upper half of the brake.
6. Install the three screws that hold the brake to the motor.



- |                                |                           |
|--------------------------------|---------------------------|
| 1. ADAPTER PLATE               | 8. WASHER                 |
| 2. ROTOR/BRAKE LINING ASSEMBLY | 9. SOCKET HEAD SCREWS     |
| 3. ADJUSTMENT BOLT             | 10. OUTER SPRING          |
| 4. PRESSURE PLATE              | 11. BRAKE COIL DIODE      |
| 5. INNER SPRING                | 12. SOCKET HEAD CAPSCREWS |
| 6. SPLINED HUB                 | 13. LOCKWASHER            |
| 7. MAGNET BODY                 |                           |

**Figure 9. Brake Assembly (Without Torque Nut)**

7. Install torque nut and adjust brake. See Brake Assembly Adjustment in this section.
8. Tighten the screws to specification. See Table 2.
9. Plug in the Molex™ connector.
10. Remove the blocks. Connect the battery and test the operation of the lift truck prior to returning the lift truck to service.

**NOTE:** On T5Z and T7Z, the brake must be capable of holding the lift truck and 2267.96 kg (5000 lb) (trailer

plus load weight) on a 5 percent grade. All other models in this section must hold the lift truck with a maximum rated load on a 10 percent grade (0.305 m (1 ft) rise in 3.05 m (10 ft)).

The truck should operate without any drag when the handle is in the operating position.

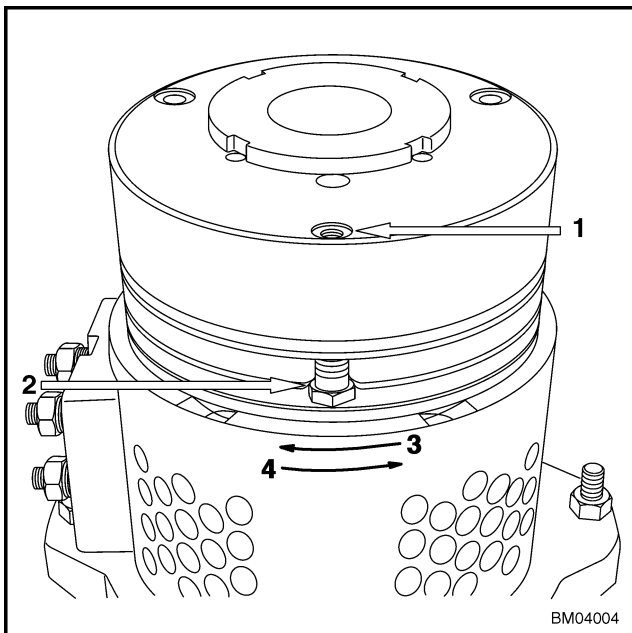
11. Install the drive unit compartment cover. Refer to the section **Master Drive Unit 630 SRM 961**.

## Brake Assembly Adjustment

### AIR GAP, ADJUST

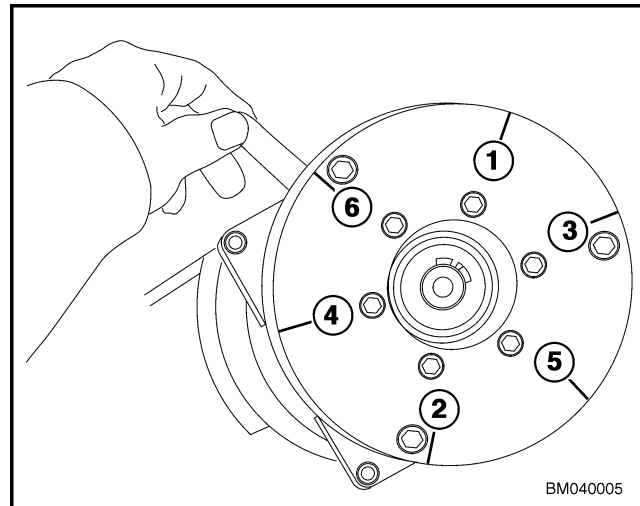
1. Turn the key switch to the **OFF** position and disconnect the battery.
2. Remove drive unit compartment covers.
3. Discharge the capacitors. See Special Precautions.
4. A diode must be installed to the wiring harness of the brake near the Molex™ connector. The diode is present on all models manufactured after July 2002, but must be installed on older models without the diode. Check for the presence of the diode and check for any visible damage to the diode before adjusting the brake. If the diode is missing or damaged, install a new diode using kit 1528430, available from the Parts Distribution Center.

Three outer socket head screws fasten the brake to the end head. There are adjustment bolts that thread into the magnet body, which allow for adjustment of the air gap. See Figure 10.



1. SOCKET HEAD SCREWS
2. ADJUSTMENT BOLT
3. INCREASE AIR GAP
4. DECREASE AIR GAP

**Figure 10. Mounting and Adjustment**



**Figure 11. Gap Check Locations**

5. Check the three outer socket head screws for appropriate torque to secure the brake to the motor. Tighten to correct torque, if required. See Table 2.
6. Check for correct air gap by measuring the distance between the bottom of the magnet body and the top of the pressure plate. The air gap should be checked at the six locations shown in Figure 11. The air gap specification varies, depending on the truck model. See Table 2.
7. If the air gap allows the maximum feeler gage to enter any of the six locations:
  - a. Loosen the socket head screw (1) at the desired location. See Figure 10.
  - b. Decrease gap (4) by tightening the associated adjustment bolt(s) (2).
  - c. Retighten the corresponding socket head screw (1).
  - d. Check again for correct air gap.
8. If the air gap is too tight for a minimum feeler gage to enter any of the six locations:
  - a. Loosen the socket head screw (1) at the desired location. See Figure 10.
  - b. Increase air gap (3) by turning the associated adjustment bolt(s) (2).

**Table 2. Adjustment Specifications**

Brake Model	Air Gap	Torque Nut	Bolt Torque	Min. Friction Disk Thickness
B60Z (Oct. 01 up to July 02)	0.3 mm (0.012 +0.002 in.)	Yes	12 to 14 N•m (8.85 to 10.33 lbf ft)	6.35 mm (0.250 in.)
B80Z, T7Z, C80Z	0.3 mm (0.012 +0.002 in.)	No	12 to 14 N•m (8.85 to 10.33 lbf ft)	6.35 mm (0.250 in.)
B60Z (July 02 and up), W60Z, W80Z, W30/40ZA, W20/30ZR, W25/30/40ZCT5Z, C60Z	0.3 mm (0.012 +0.002 in.)	Yes	5 to 6 N•m (3.69 to 4.43 lbf ft)	4.82 mm (0.190 in.)
W65Z	0.4 mm (0.016 +0.002 in.)	Yes	5 to 6 N•m (3.69 to 4.43 lbf ft)	6.35 mm (0.250 in.)

c. Retighten corresponding socket head screw (1).

d. Check again for correct air gap.

9. Examine for correct air gap of all six locations.

10. When finished, tighten socket head screws to appropriate torque. See Table 2.

**NOTE:** Adjustment of one screw may cause changes in adjustment of other screws.

**NOTE:** During brake operation, brake should engage and release with a solid, single-click noise. A double-clicking noise indicates that one side of the brake is releasing before the other.

11. Listen to verify brake releases and applies in one smooth operation.

### TORQUE NUT, ADJUST

Models W60Z and B60Z, built prior to October 2001, are equipped with nonadjustable brake assemblies which are not equipped with a torque adjustment nut and are not covered by this procedure.

Models W60Z and B60Z, built between October 2001 and July 2002, and all W80Z models, built prior to July 2002, use brake assembly part number 2044223.

Models W60Z, W80Z, B60Z, and all other models covered by this section, produced after July 2002, use brake assembly part number 2055944.

To determine the procedure that applies to your lift truck:

Locate the part number of the brake. The part number is located on a tag on the wiring harness of the brake assembly.

OR

Measure one of the tappets located under the torque-adjusting nut. See Figure 8.

To measure the tappets:

1. Remove torque-adjusting nut.
2. Remove one tappet using a magnet.
3. Measure body length of tappet. See Figure 13.
  - a. 12 mm (0.47 in.) = part number 2044223
  - b. 10 mm (0.39 in.) = part number 2055944
4. Install tappet as removed.
5. Install torque-adjusting nut using correct procedure for the brake.

## Adjust

**NOTE:** This procedure applies only to brake assemblies equipped with a torque nut. See Figure 8.

The torque nut applies pressure to the tappets and inner springs of the brake. The following procedures should be followed for proper torque nut adjustment.

1. Turn key switch to the **OFF** position and disconnect battery.
2. Block wheels to prevent movement of the truck and remove drive unit compartment covers.
3. Discharge the capacitors. See Special Precautions.

**W60Z, W80Z, and B60Z Equipped With Brake Assembly Part Number 2044223**

### CAUTION

**This device can only be adjusted or turned while the brake is de-energized.**

1. Turn torque nut clockwise to obtain 2.54 mm (0.1 in.) to 4.06 mm (0.16 in.) clearance from the top surface of the brake to the underside of the torque adjusting nut. See Figure 12.

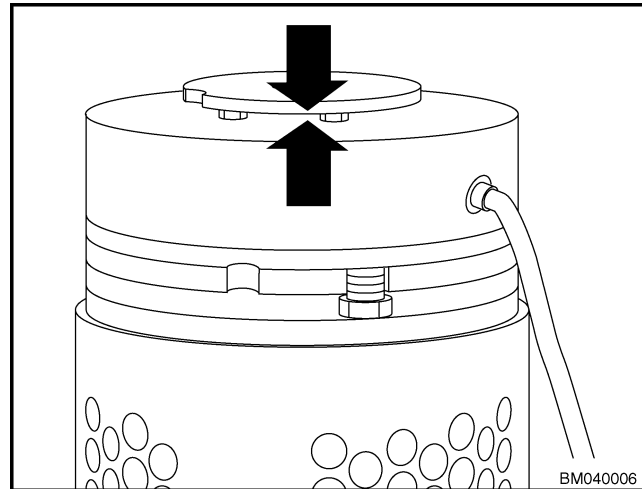
**W60Z, W80Z, B60Z, and All Other Models Covered by This Section Equipped With Brake Assembly Part Number 2055944**

### CAUTION

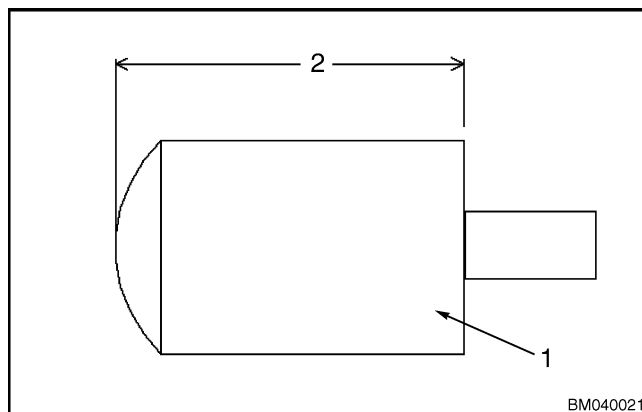
**This device can only be adjusted or turned while the brake is de-energized.**

1. Turn torque nut clockwise until flange of torque nut touches top surface of brake.
2. Verify that there is no gap between the top surface of the brake and the underside of the torque adjusting nut. See Figure 12.

3. Turn torque adjusting nut counterclockwise to the first click to lock the tappets.



**Figure 12. Torque Nut Check**



1. TAPPET
2. BODY LENGTH

**Figure 13. Measuring Tappet**

## Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
Brake will not release (ALL models, except T5Z, T7Z, C60Z, and C80Z).	Key switch is in <b>OFF</b> position.	Turn key switch to <b>ON</b> position.
	Handle is not in the <b>BRAKE RELEASE</b> position.	Move the handle to the <b>BRAKE RELEASE</b> position.
	Brake/Run Switch damaged.	Test/replace Brake/Run Switch.
	Battery is not connected.	Connect or clean battery connectors.
	Wiring and/or potential controller malfunction(s).	Refer to wiring diagrams.
	Excessive air gap.	Adjust air gap.
	Brake coil is defective.	Replace brake assembly or coil.
Brake is dragging.	Brake adjustment incorrect.	Verify proper adjustment.
Brake will not release (T5Z, T7Z, C60Z, and C80Z).	Key switch is in the <b>OFF</b> position.	Turn key switch to the <b>ON</b> position.
	Parking brake switch is in the <b>ON</b> position.	Turn parking brake switch to the <b>OFF</b> position.
	Battery is not connected.	Connect or clean battery connections.
	Wiring, Controller, or Control Handle Interface Module malfunction(s).	Refer to wiring diagrams.
	Excessive air gap.	Adjust air gap.
	Brake coil is defective.	Replace brake assembly or coil.
Brake will not apply (ALL models).	Brake override connector in place.	Disconnect override connector and connect to brake connector.





