





Improperly adjusted doors can cause injury and equipment damage.

- Inspect door operation daily using safety checklist on pages 4 and 5.
- Have door adjusted by a qualified Besam service technician as described on page 3.
- Safety devices should be in place and operational.

In the following manual, the word:

**Caution** means that injury or property damage can result from failure to follow instructions.

**Note!** Is used to indicate important steps to be followed or important differences in equipment.

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## Important Information

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### Important Notice!

To avoid bodily injury, material damage and malfunction of the product, the instructions contained in this manual must be strictly observed.

### Note!

Instructions, design, specifications and illustrations which are contained in this manual are not binding. Rights reserved for changes without previous notice.

### Environment

This operator may be equipped with batteries containing materials which are hazardous to the environment. Remove the batteries from the operator before it is scrapped. The batteries must be disposed of safely.

The purpose of this manual is to familiarize you with your automatic door system. It is essential that you know the system and that you recognize the importance of maintaining your door system in compliance with the industry standards for safety. **It is your responsibility, as owner and caretaker of the equipment, to inspect the operation of your door system on a daily basis to ensure that it is safe for use by visitors, customers and employees.**

This manual will provide you with a description of the operation and maintenance requirements of your door. It also provides instructions for the Daily Safety Check.

Should the door fail to operate as described in the Daily Safety Check, or at any other time for any other reason, **do not attempt to repair or adjust the door. Discontinue door operation immediately and secure door in a safe manner.** Then call a qualified Besam service technician. These technicians are trained to service your door in accordance with applicable industry safety standards.

### Service Availability

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Besam products are distributed through a nationwide network of Besam authorized distributors for sales, installation and service. Should you need service on your door system, call 1-866-Besam-US or visit [www.besam.com](http://www.besam.com) and select "Distributor Locator" to search for a local distributor.

### Compliance with Safety Standards

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Your door was designed to meet the latest operating and safety standards. In order to ensure the continued safe operation of your door, it is important that:

- Your door system be maintained in compliance with the standards of the industry.
- Proper decals and labels be applied and maintained on your doors. If decals are removed or cannot be read, request replacement decals when calling for service.
- Safety devices for all doors should be checked by an AAADM certified inspector annually and each time a door is serviced.

AAADM, the American Association of Automatic Door Manufacturers, has established a program to certify automatic door inspectors. Through this program, the inspectors check your door systems for compliance with the appropriate version of the American National Standards Institute Standard ANSI A156.10.

### What You Should Know

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Be sure that a Besam distributor has provided the following for each door:

1. Instruction on how to conduct the Daily Safety Check (by walk-through example).
2. Location of switches and instruction in their use.
3. Circuit breaker or power disconnect location for each door system.
4. Discussion of problems that could result from door being allowed to operate after a malfunction is observed.
5. Number to call for service or questions about your system if you are uncertain of any condition or situation.

**Note!** If there are any problems, discontinue door operation immediately and secure in a safe manner. Call your local Besam distributor for repair.

6. AAADM compliance certificate signed by an AAADM certified automatic door inspector.
7. Warranty information for each door.

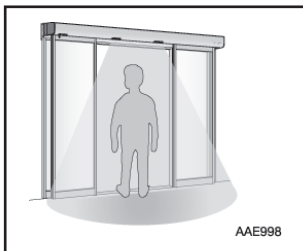
# Daily Safety Checklist

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Perform these safety checks *daily* on each automatic sliding door to insure your customers' safety and your own protection. Perform these tests while traffic is restricted from all detection and sensing zones.

## Motion Detector Actuation

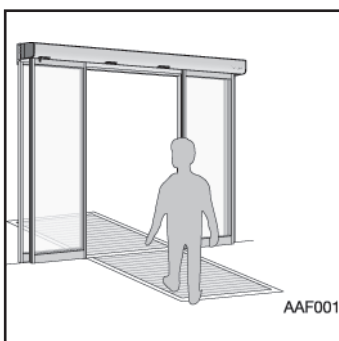
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1. Check electronic sensors by walking towards door opening at moderate speed. Door should start opening when you are about 5 ft (1.5 m) from the door, should slide open smoothly and stop without impact. Repeat on other side of opening. Move slowly through the door ( 6 in per second [15 cm/s]). The door should remain open (see figure AAE997).  
**Note!** If your door is set up for one-way traffic, the detector on the side not intended for use should be active until the door is within 6 inches (150 mm) of fully closed. The sensor should re-open the closing door if an object is detected a minimum of 24 inches (0.6 m) from the door.
2. Step out of the sensor zone. After a brief time delay (at least 1.5 seconds) the door should slide closed smoothly and should close fully without impact. Doors should be adjusted so they do not close faster than 1 foot per second (300 mm/s).
3. Observe traffic routing to door. Plan traffic routing so persons will approach the door straight on and not from an angle.
4. Walk parallel to the door face to check that the detection pattern is at least as wide as the door opening. This test should be performed about 2.5 feet (0.8 m) from the door face.
5. Open the door. Cover each doorway holding beam with your hand and stand motionless for several seconds (see figures AAE998 and AAE999). The door should remain open. Remove your hand and the door should close after the time delay expires. If other safety devices are being used, stand motionless in the door opening for 10 seconds. The door should not close.

## Floor Mat Actuation

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6. Step on the “opening” mat in several places. Door should slide open smoothly and stop without impact (see figure 4).
7. Step through the doorway onto the mat on the other side. Door should remain fully open without interruption.  
**Note!** If there is more than one mat on each side, each mat should be tested.
8. Check the mat molding and threshold. It should be complete and secured with all screws required.
9. Step off the mat. After a brief time delay (at least 1.5 seconds), the door should close slowly and smoothly without impact. Doors should be adjusted so they do not close faster than 1 foot per second (300 mm/s).

## General Safety



1. **Decals** – Door should have decals properly displayed. A set of **Caution Automatic Door** or **Arrow** decals should be applied to both sides of each sliding leaf. They are to be applied with arrows pointing up on a centerline of 58 in  $\pm$  5 in (147 cm  $\pm$  13 cm) to each moving leaf. If one-way traffic is to be used you should have a decal with an arrow on one side and DO NOT ENTER on the other side. There should also be decals include the statements: “AUTOMATIC DOOR” (in letters 0.5 in high, minimum) and “IN EMERGENCY – PUSH TO OPEN” (see figures)

2. **Closing Speed** – Horizontal doors must be adjusted within the following limits to comply with ANSI A156.10.

The closing time of the door must not be less than the minimum time as shown in the following table. This closing time is taken from a point one inch (25 mm) from full open to a point two inches (50 mm) from fully closed. Example: If a 30" door panel closes in 1.7 seconds, it is too fast and must be slowed down. If it closes in 3.0 seconds, it is in compliance.

Force to prevent the door from closing should not exceed 30 pounds. This should be checked at several points in the closing cycle by stopping the door and attaching a spring scale. The scale reading should not exceed 30 pounds, or if operator is equipped with a reverser, the door should reverse with a force not to exceed 30 pounds.

Maximum Closing Speed		—	1 Foot Per Second	
Nominal Door Opening			Minimum Closing Time	
Single Slide	Bi-Part			
	48"		2	Seconds
	60"		2.5	Seconds
36"	72"		3	Seconds
42"	84"		3.5	Seconds
48"	96"		4	Seconds

3. **Emergency Breakout** – Test by manually pushing door at lock area in direction of emergency exit. Release door. The door should either stop operation or spring to closed position. Make sure door panel or panels are properly re-latched.
4. **Housekeeping** – Be sure floor guides are kept clean and free of any debris which could prevent proper door slide.

Check the door area for tripping or slipping hazards.

Check all door panels for broken or cracked glass. There should be no bulletin boards, literature racks, merchandise displays or other attractions in the door area which could be hit by the door.

REGARDLESS OF WHICH ACTIVATING DEVICE IS USED, IF YOU HAVE A PROBLEM YOU CANNOT CORRECT, TURN OFF THE DOOR OPERATING EQUIPMENT AND CALL YOUR SERVICE REPRESENTATIVE.

To order a complimentary Daily Safety Check Video, please contact Besam's Marketing Department at 704-290-5520.

## Service Schedule

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Although Besam's automatic door equipment has earned a reputation for world-class quality and reliability, all mechanical devices need service, just like your automobile.

Your authorized Besam distributor can offer you a Planned Maintenance Agreement on the equipment you have just purchased. This agreement means the distributor will make planned maintenance calls to inspect, clean, lubricate, adjust, repair or replace worn components.

Frequency of maintenance visits will depend on factors such as traffic, climate, etc. Please ask your Besam distributor how often they recommend the following services:

1. Gaskets and Seals
2. Moldings and Thresholds
3. Pivots and Bottom Guide System
4. Locking Mechanisms
5. Door Control Operations
6. Condition of Door Frames
7. Opening and Closing Speeds/Time Delay
8. Function of Sensor

Periodic maintenance will increase the life and performance of your Besam automatic door. We suggest you contact your authorized Besam distributor to discuss a Planned Maintenance Agreement. Planned Maintenance Agreements differ between Besam distributors, and Besam has no control over the Agreement each distributor may offer.

### Limited Warranty

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Besam Entrance Solutions hereby warrants, subject to the provisions hereof, that the products and parts manufactured by Besam and its affiliates shall be free from defects in material and workmanship for a period of 1 year from the date of shipment from Besam's factory.

## Program Selectors and Functions

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The functions of the door are set with key program selectors:

- PS-5R, recessed in the cover, can be remote-controlled by PS-5M.
- PS-5M, flush or surface mounted, for central control of an optional number of operators. In setting “Auto” every connected operator are individually controlled by its own program selector.
- PSMB-5 (*mounting box only*) flush or surface mounted on the sidelite or on the wall close to the door.

Recessed in the Cover

PS-5R



Flush Mounted

PS-5M



Surface Mounted

PS-5M (PSMB-5)



### Program selector functions

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“Off”

The inner and outer activation units are disconnected. The door is locked if an electromechanical locking device has been installed. The door can be opened with an emergency push-button/key switch (if installed).

- ↑ -

“Exit”

Passage through doorway from inside only. The door is locked if an electromechanical locking device has been attached. The door can only be opened with the inner activation unit and with an emergency push-button/key switch (if installed).

- ↑ ↓ -

“Auto”

Two-way traffic, normal operation of the door. The door can be opened with the inner and outer activation units and with an emergency push-button/key switch (if installed).

- ↑ ↓ -

“Auto partial”

Two-way traffic. The door can be opened partially with the inner and outer activation units and with an emergency push-button/key switch (if installed).

- -

“Open”

The door is permanently held open.

“Reset”

**Set the program selector to “Auto”. Insert a narrow probe in the small hole on the program selector board and push. The operator makes a system test of the battery, electro-mechanical lock, watch dog relay and closed position. It also reads FS switch settings, CSW distance and Time Delay. After closing, the operator is reset and ready for normal operation again.**

# Door Locking Procedures

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## To Lock

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1. Stand clear of all opening detection fields and allow door(s) to close completely.
2. Turn door program selector to “off” position (see program selector functions).
3. For interior locking – door(s) can now be secured with lock mechanism.
4. For exterior locking – manually slide doors open, exit, close manually and secure with key.

## To Unlock

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1. Unlock door(s).
2. Manually slide door(s) open.
3. Turn program selector to desired function (see program selector functions).

## Emergency Function

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In the event of an emergency, the sliding doors are also capable of swinging into a breakout position by exerting force at the lock area of the door (see emergency decal).

There is a remote possibility that the sliding doors could be accidentally struck by carts and be put into this emergency mode. The operator's function is normally shut off whenever positioned in this mode and will require resetting of all door leaves to their proper position.

The resetting procedure is to grasp the sliding door at the lock end and slide it open slightly, swing door fully closed, align upper door latch and snap into position. Repeat procedure on all doors not in the fully-closed position. Doors' operation will be turned on automatically after a delay unless program selector is in “off” position.



# Troubleshooting

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## What's wrong

## Remedies

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### **The door does not open**

*–The motor does not start*

Change the setting of the program selector.  
If break-out unit PSB is installed, check that the door leaves and sidelites are completely closed.  
Check the main switch.

*–The motor starts but stops during opening*

Unlock the mechanical locks.  
Clean the floor guide.  
Check for objects jammed under the door.

### **The door does not close**

*–The motor does not start*

Change the setting of the program selector.  
If door has presence photocells, clean the protecting covers.  
If break-out unit PSB is installed, check that the door leaves and sidelites are completely closed.  
Check the main switch.

*–The motor starts but stops during closing*

Clean the floor guide.  
Check for objects jammed under the door.

### **The door moves slowly**

Prevent traffic using the door and allow it to do a complete opening and closing cycle with low speed.  
Reset the operator by setting the program selector to "Auto" and push a narrow probe in the small hole on the program selector. Allow the operator to control the closed position without interruption.

See page 11, 12 and 13 for identification and article numbers.

**Program selectors PS-5 and PS-5M** – see separate installation drawings.

**Electro-mechanical locking device LD** (locked without power), **LDP** (locked with power). See separate installation drawing.

**Manual unlocking device MOLD** – for manual unlocking of the electromechanical locking device LD.

**Micro switch kit LSK** – for indication of door or lock position.

**Electrical emergency unit EEU** – used if a door is required to be closed or opened by means of a battery unit in the event of power failure.

**Interlocking** – (typical to reduce energy losses and not for security reasons) used between two operators when the first operator must close before the other one can open. Impulses on the interlocked door will be stored and actuated when the interlocking is released (EXU-1 required).

**Convenience battery** – stand-by supply which gives normal opening impulse during short power failure (EXU-3 required).

**External error indication** – (EXU-1 required).

**Key switches KS-F** (flush) /**KS-S** (surface) – used to give opening impulses to the door (see separate installation drawing).

**Push button PB** – used to give opening impulses to the door (see separate installation drawing)

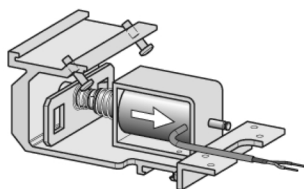
**Double carriage wheels DCW** – used for door weights over 100 kg (220 lb.) and for small door leaf widths.

Accessories Identification Cont.

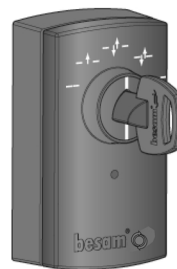
**Program selector PS-5R**  
**Always integrated in the cover or plank trim (std)**  
 See installation drawing 656037



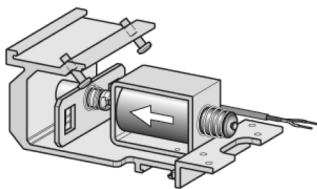
**Electromechanical lock LD**  
**Fail secure (Locked without power)**  
 Art. No. 550494  
 See installation drawing 656007



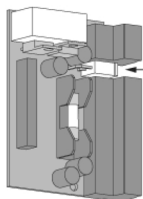
**Program selector PS-5M**  
 Art. No. 600139  
**Program selector PSMB-5**  
**(box only) Art. No. 600093**  
 See installation drawing 600037



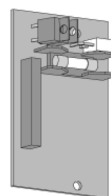
**Electromechanical lock LDP**  
**Fail safe (Locked with power)**  
 Art. No. 550516  
 See installation drawing 656007



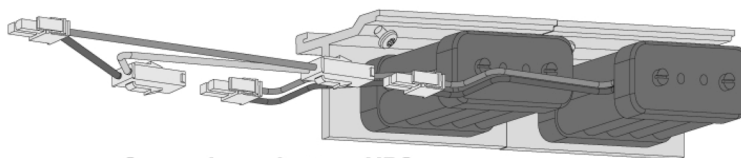
**Extension Unit EXU-1**  
 Art. No. 655952



**Extension Unit EXU-3**  
 Art. No. 655953

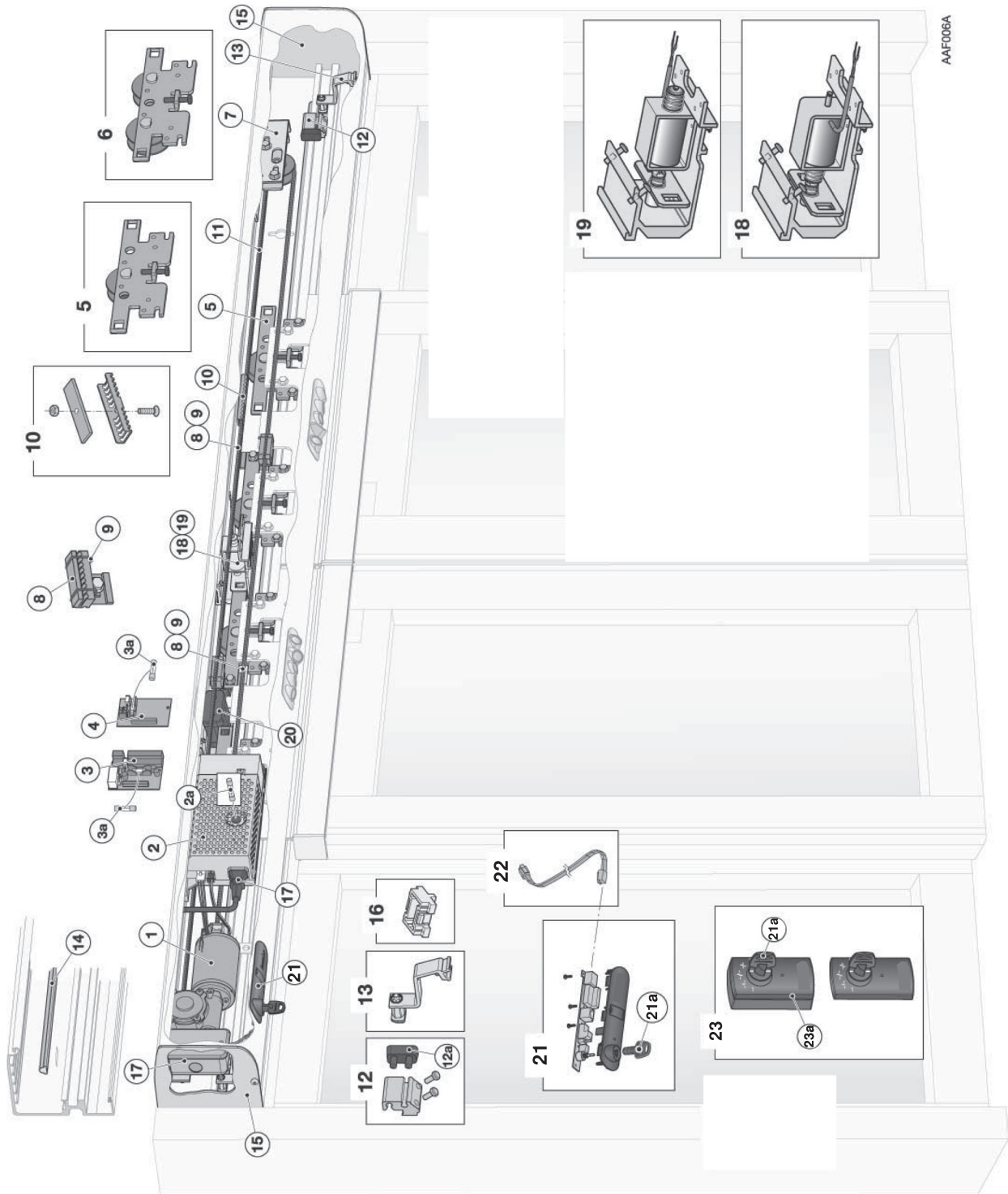


**Convenience battery UPS**  
 Art. No. 550473



AAE987A

# Replacement Parts List



AAF006A

Pos.	Part No.	Replaces	Description	Pos.	Part No.	Replaces	Description
1	33 550 476		Motor and gearbox	19	33 550 516		Lock LDP – fail safe (locked with power)
2	33 600 091		Control unit, standard	20	33 550 475		Battery complete, EEU
2a	33 715 307		Fuse 6.3 ATH slow, 120/230 V (EU)	21	33 600 092		Program selector PS-5
3	33 655 952		Extension unit kit EXU-1		33 600 135		Program selector PS-5R
3a	33 713 983		Fuse 10.0 AT slow, 120/230 V (EU)	21a	33 550 514		Spare key for PS-5/PS-5R/PS-5M
4	33 655 953		Extension unit kit EXU-3	22	33 655 905		Wiring harness PS, L=500 mm (19.7")
5	33 832 654		Carriage wheel fitting	23	33 600 139		Program selector PS-5M
6	33 550 488		Carriage double wheel, 1 pc	23a	33 600 093		Box for program selector PSMB-5
7	33 550 474		Idler assembly				
8	33 550 569		Belt fitting kit, 2 pcs				
9	33 550 599		Belt lock				
10	33 549 855		Belt joining clamp kit				
11	33 735 251		Tooth belt (GT5-15), state length				
12	33 550 461		Door stop, complete				
12a	33 830 176		Door stop rubber bumper				
13	33 550 463		Cover lock set, 1 pc				
14	33 701 596		Sliding track, L = 6100 mm (240")				
15	33 550 544		End plate				
16	33 550 467		Cable clip				
17	33 550 489		Mains connection harness, complete				
18	33 550 494		Lock LD – fail secure (locked without power)				

AAU013A







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