Subject: Otis 15 AT / ATL Machine Sheave Bolts

Sent to: All Contractors & Owners

1. INTRODUCTION & ALERT

Otis Elevator Company has issued a letter requiring inspection and possible maintenance of sheave bolts on the 15AT and 15ATL Machines.

An incident involving the failure of the bolts, which secure the drive sheave to machine shaft, has prompted the release of this safety alert.

2. INSTRUCTIONS

2.1. Per the manufacturers recommendations, the bolts, which secure the sheave to the shaft, must be checked for proper torque. Contractors are required to follow the prescribed checks as outlined in the Otis Elevator Company letter referenced Subject: 15ATL Machine Sheave Bolts, dated March 1, 2004. (Attached)

2.2. Bolt torque must be between 165 ft-lbs and 185 ft-lbs. Bolts torqued to values above or below these settings must be replaced.

Notes:

a) Bolts found to be under torque shall be replaced. The concern is the length of time the bolts have been loose and the potential that the bolts have started to fatigue. Replacing the bolts ensures that this potential problem is resolved.

b) Wire binding should be found on all existing machines.

c) In order to check the torque the wire binding must be removed.

d) If the wire is missing confirm that the bolt torque is correct. If correct the wire binding must be reinstalled.

e) Lock washers should exist on all existing bolts. If the lock washers do not exist, Otis recommends following the Otis corrective instruction bulletin, ie., install the lock washers, new bolts, torquing and wire binding.

f) As the issue is related to bolt torque, Otis advises that this is a one time check.

2.3. The bolts, washers and wire are available for purchase through Unitec (Phone # 1-800-328-7840). The part numbers are as follows:

- Bolts ISO4017M16x35-8.8B (3 required)
- Lock Washer VP-904985 (3 required)
- Wire VP-912890 (in a 250' roll)
2.4. Contractors are advised to carry out these inspections during their next maintenance visit. It is expected that these inspections will be completed (and recorded per 2.5) no later than September 1, 2004.

2.5. Contractors who service installations with 15AT/ATL machines and have completed the requirements of the Otis bulletin are required to put a note in the log book indicating; **Verified per DR 190/04**, and shall include the date and mechanics name.

_Roland Hadaller,  
Engineering Manager  
EDAD PROGRAM_

_Cy Gray  
Operations Manager  
EDAD PROGRAM_

This Safety Alert has been developed in consultation with the Otis Elevator Company & the TSSA Elevating Devices Advisory Council.
Date: March 1, 2004

To: Richard Kaczmarczyk: Otis-Canada
    Doug Tripp: Otis-Canada

From: Douglas LaBrecque,
      Otis Service Center
      Otis Elevator Company-North American Operations

Subject: 15ATL Machine Sheave Bolts

Cc: Ed Minich, (President Otis Canada, Inc.)

Otis Elevator Company is publishing this corrective instruction for all 15 AT and 15ATL machines. Otis has experienced a failure of the bolts for the sheave attachment to the shaft on a 15ATL traction unit in Alberta. We have checked other 15AT/15ATL machines, and have found the bolts not set to the correct torque. Therefore we recommend performing the following check on all units.

1. Remove the unit from Service.
2. Check that the bolts are torqued to 175 ft-lbs (± 10ft-lbs)
3. If the torque is correct, go to step # 7.
4. If not at this setting, replace the three (3) bolts with M16, grade 8.8 hex head bolts and three (3) lock washers.
5. Torque the new bolts to 175 ft-lbs (± 10ft-lbs).
6. Drill the bolt heads and secure with wire (5lbs gage).
7. If all else is okay with the unit, return the car to service.

As part of this procedure it is recommended that you also inspect the machine, sheave, ropes and other attachments.

Douglas B. LaBrecque
Manager, Service Engineering NSA
Mr. Roland Hadaller  
Chief Engineer  
Technical Standards & Safety Authority  
Clarica Centre West Tower  
3300 Bloor St. W., 4th Floor  
Toronto, Ontario  
M8X 2X4

Subject: 15ATL/15AT Machine Bolts

Dear Mr. Hadaller;

Recently a 15ATL machine in Edmonton, Alberta, maintained by Otis Canada, Inc., suffered a failure in the bolts that fasten the drive sheave to the shaft. Subsequent investigations indicated that the bolts on this unit were not set at the correct torque.

Otis is undertaking to check the torque of the drive sheave bolts on all 15ATL and 15AT machines covered by an Otis preventative maintenance contract. We will follow the steps outlined in the attached directive from our Service Engineering Manager, dated March 1, 2004.

We recommend that you notify other elevator maintenance contractors and building owners, of this issue and of the recommended corrective action to be taken.

If you require any additional information please do not hesitate to contact my office at (905) 849-2620.

Yours truly,

[Signature]

Richard Kaczmarczyk, P. Eng.  
Regional Sales Manager – Service  
Northern Region

Attach.