



PACIFIC CONVEYORS LTD

MAINTENANCE MANUAL for:

MODEL 650SB SCANNER FEEDER CONVEYORS

Supplied to:

The design of this conveyor has not substantially changed over the years, but some components have become obsolete or unavailable. Alternate components have been substituted.

When requesting replacement parts, please let us have the serial number if available, and as much of the provenance as is known. (Year and original location)



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PACIFIC CONVEYORS LTD.

UNIT 101, 7088 VENTURE STREET, DELTA, B.C. V4G 1H5
TELEPHONE (604)-940-1840 E Mail pacco@telus.net

***engineered material
handling systems***

SECTION 1.

- i. Introduction
- ii. General Description
- iii. Description of Operation

INTRODUCTION

The equipment you have purchased from PACIFIC CONVEYORS LTD. will give you many years of service if properly operated and carefully maintained.

This manual is intended to provide suitable instructions for the safe operation and effective maintenance of the equipment.

We therefore recommend that a copy of this manual be made available to all personnel responsible for operation and maintenance of the conveyer system.

We recommend that a planned maintenance program be set up which reflects frequency of use and availability of scheduled downtime in your operation. The following material contains sample log sheets - which may be kept for each component of your conveyer system.

GENERAL DESCRIPTION

Equipment consists of one stainless clad powered incline baggage conveyor located at the end of the security check-in counters system, feeding the scanner or the roller conveyors preceding it. The purpose of this conveyor is to relieve passengers of the task of lifting heavy baggage directly onto the rollers.

DESCRIPTION OF OPERATION

The belt is powered up by CATSA personnel operating the scanner. There are a number of control options, available, but as shipped, this conveyor is manually controlled by the scanner operator using a pedal switch..

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SAFETY INSTRUCTIONS

Conveyors are essential in today's travel industry, but they can be dangerous. A conveyor contains many moving parts including shafts, pulleys, rollers and belting. Any moving part is a potential source of danger to a careless or untrained operator.

Everyone coming in contact with the conveyor should be aware of the following.

1. **Do Not** operate conveyor with protective guards removed. (i.e. chain guards, belt guards, snub roller guards etc.)
2. **Do Not** walk, ride, or climb on conveyor. Do not touch moving parts of conveyor.
3. **Do Not** wear loose clothing or uncovered hair around conveyor.
4. **Do Not** work near conveyor without knowing how and where to shut the power "OFF"
5. **Do Not** remove jammed product with conveyor running.
6. **Do Not** replace parts or perform maintenance on conveyor or moving components without first shutting "OFF" power to the conveyor. (Consult plant and local lock-out standards)
7. **To prevent electrical shock**, conveyor must be grounded and have proper electrical connections in accordance with Federal, Provincial and Local codes.

It is the responsibility of the user of the conveyor to comply with safety standards including Federal, Provincial and Local codes or regulations. Placement of guards and other safety equipment in accordance with safety standards is dependent upon the area and use to which the conveyor system is put. A safety study should be made of the conveyor application and guards should be installed wherever appropriate.

Violation of the above safety rules hereby removes all product liability claims from Pacific Conveyors Ltd.

GENERAL INSTALLATION

INSPECTING SHIPMENT. Check the quantity of items received against the bill of lading. Ensure that all the material has been received. Examine the condition of the equipment to determine if any damage has occurred in shipment. Damage should be reported immediately to the vendor and to the carrier. Obtain a signed damage report from the carrier agent and send a copy to the vendor. Do not repair any damage before obtaining the report.

STEP #1, CENTERLINES Move the conveyor to the area of installation. Snap a chalk line on the floor along the conveyors' centre line. All installers of equipment preceding and following this conveyor should use this as a base line.

STEP #2, ASSEMBLY Install conveyor in its proper location.

STEP #3, LEVELLING The conveyor is equipped with concealed levelling screws. Raise the discharge end roll of the conveyor to align with the adjacent equipment. Level the conveyor across both its width and length. The belt and packages may run off to one side if this is not done.

STEP #4, START-UP Standard conveyor is equipped with a three-prong plug to be used with a standard 115 volt 15 amp single phase circuit. Plug in the conveyor. Turn the control panel switch to ON (an amber light illuminates). The conveyor may now be operated using the footswitch.

Notes to operators.

- i. The conveyor is equipped with a speed controller and may be operated slower than design speed but will function best at maximum speed.
- ii. Motors driven by single phase circuits are powered up by a capacitor start. This results in a short delay in start-up when the footswitch is pressed.

MAINTENANCE

WARNING

Make no adjustments on the conveyor while it is in motion

BEFORE MAINTENANCE.

1. Since maintenance functions are generally to be performed while the conveyor is off, the control panel switch should be in the OFF position and the power should be unplugged. Observe plant lockout procedures at all times.
2. Certain inspection and maintenance procedures (such as belt tracking) are best performed with cladding removed and the conveyor running. This work should only be performed by experienced maintenance personnel.

DURING THE MAINTENANCE.

1. Do not wear loose clothing. Secure long hair with a hair net or hard hat when performing maintenance on an operating system.
2. Be alert to hazardous conditions such as sharp edges, pinch points and protruding parts.
3. The key to efficient operation is good housekeeping. Clean up spilled lubricants, and dropped tools and fasteners as completely and promptly as possible. Failure to do so may result in product contamination or damaged equipment when the conveyor is turned back on. Objects jammed in moving mechanisms should be removed only with the conveyor locked out.

AFTER MAINTENANCE

1. Do a walk-around of the conveyor. Make sure all guards are in place, and tools and equipment have been removed from the area
2. Make certain all personnel are clear of the conveyor, and are aware that the conveyor is about to be started.
3. Only authorised personnel should be permitted to start the conveyor following maintenance or an emergency shut down.

SCHEDULED MAINTENANCE AND LUBRICATION

ITEM	FREQUENCY	SERVICE
Gearmotors	<ol style="list-style-type: none"> 1. 100 hours. 2. 1000 hours. 3. 2000 hours. 	<ol style="list-style-type: none"> 1. Change oil. 2. Check oil level. Add if necessary. 3. Change oil.
Conveyor belts	<ol style="list-style-type: none"> 1. 1000 hours. 	<ol style="list-style-type: none"> 1. Check tension and tracking. Adjust take-up as necessary. 1a. Check for abnormal wearing. 1b. Check lacing connection. 1c. Check pulley assemblies to ensure proper alignment.
Pillow -block & flange bearings	<ol style="list-style-type: none"> 1. 12 months 2. 6 months* 3. 6 weeks** 	<ol style="list-style-type: none"> 1. Clean and grease For dirty conditions* For extreme moisture conditions**
Gravity Rollers	<ol style="list-style-type: none"> 1. 6 months. 	<ol style="list-style-type: none"> 1. Make sure all roller and wheels turn freely. Replace any that are dented, warped, binding, etc.

MAINTENANCE RECORD SHEET

Proper and regular maintenance procedures are extremely important in maintaining trouble free service in a conveyor system. The conveyor should be thoroughly inspected and checked at regular intervals, see maintenance inspection chart on page 4. Following the recommended inspection procedures should help in preventing possible failures or breakdowns.

Shown below is a maintenance record sheet that is designed to aid in keeping a positive record of any inspections, repairs, or malfunctions that have occurred within the system.

CONVEYOR NO.	MECHANICS INITIALS	DATE OF INSPECTION	RESULT OF INSPECTION	CAUSE OF TROUBLE	PARTS REPAIRED OR REPLACED

TROUBLE SHOOTING

GEARMOTORS

TROUBLE	PROBABLE CAUSE	REMEDY
1. Running excessively hot, repeated stalling or hard to start.	<ul style="list-style-type: none"> A. Drag on conveyor B. Lack of lubricant C. Frozen sprocket D. Frozen roller E. Overload F. Electrical 	<ul style="list-style-type: none"> A. Inspect entire conveyor for obstruction causing drag on chain. B. Check oil level in gear case, be sure vent plug is open. C. Check and inspect all sprockets and bearings. Replace any, which are frozen or difficult to rotate. D. Check all rollers for rotation. E. Remove causes and/or increase motor HP. F. Check wiring and circuits. Take ampere reading. Replace motor if necessary.
2. Excessive noise	<ul style="list-style-type: none"> A. Lack of lubrication B. Damage gears C. Faulty bearings 	<ul style="list-style-type: none"> A. Check oil level in gear case. B. Replace unit. C. Replace bearings.

BELT CONVEYORS

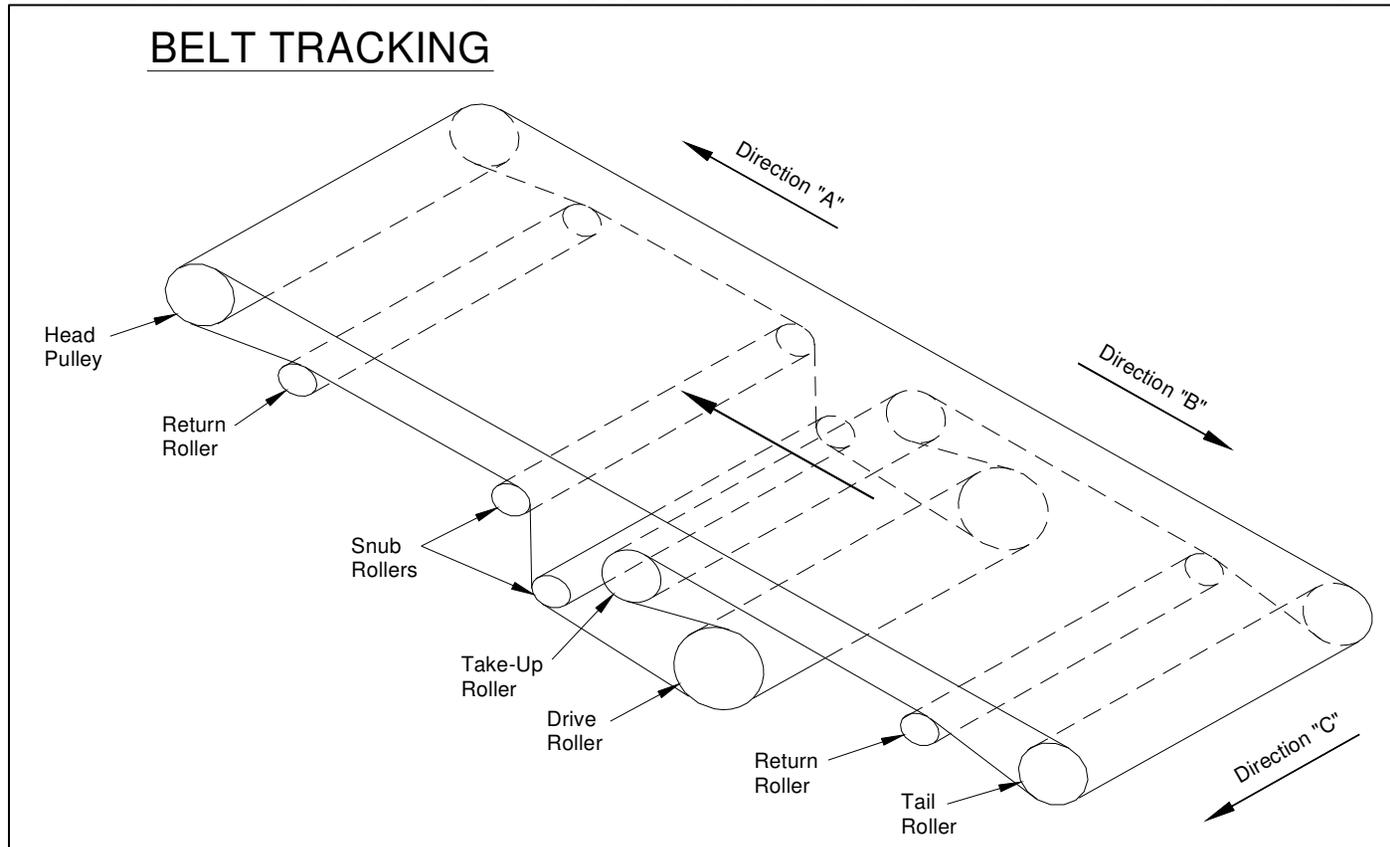
TROUBLE	PROBABLE CAUSE	REMEDY
1. Belts do not start	<ul style="list-style-type: none"> A. No Power B. Faulty foot switch C. Faulty capacitor 	<ul style="list-style-type: none"> A. Check power on at panel B. Check and replace foot switch C. Check and replace capacitor or phase inverter
2. Belt does not track	<ul style="list-style-type: none"> A. Pulleys are not square with conveyor frame B. Belt lacing is not square 	<ul style="list-style-type: none"> A. Square pulley with conveyor frame. Be sure conveyor frame is square and level. Adjust snub idlers. B. Check squareness of belt lacing. Cut and relace if necessary.
2. Drive or end pulleys making noise	<ul style="list-style-type: none"> A. Bearings could be dry B. Bearings could be worn out 	<ul style="list-style-type: none"> A. Grease bearings with grease gun through grease fittings. B. Replace bearings.
3. Rollers making noise	<ul style="list-style-type: none"> A. Bearings could be dry B. Bearings could be worn out 	<ul style="list-style-type: none"> A. Lubricate bearings with approved lubricant, wipe away excess lubricant. B. Replace bearings if possible, or complete roller.

TROUBLE SHOOTING

DRIVE CHAIN, CONVEYING CHAIN, SPROCKETS

TROUBLE	PROBABLE CAUSE	REMEDY
1. Abnormal wear	<ul style="list-style-type: none"> A. Excessive chain tension B. Sprockets misaligned C. Chain not adequately lubricated D. Damaged sprocket or chain E. Misalignment of chain guard F. Dirty chain 	<ul style="list-style-type: none"> A. Reduce chain tension. B. Realign with straight edge across sprocket faces. C. Lubricate chain with approved lubricant, wipe away excess lubricant. D. Replaces damaged components. E. Remove or adjust as appropriate. F. Clean thoroughly and lubricate with approved lubricant.
2. Excessive noise	<ul style="list-style-type: none"> A. Insufficient chain tension B. Chain not adequately lubricated C. Sprockets misaligned 	<ul style="list-style-type: none"> C. Adjust chain tension. D. Lubricate chain with approved lubricant, wipe away excess lubricant. E. Realign with straight edge across sprocket faces.
3. Pulsating chain	<ul style="list-style-type: none"> A. Insufficient chain tension B. Misalignment of chain guard C. Overload 	<ul style="list-style-type: none"> A. Adjust chain tension. B. Remove or adjust as appropriate. C. Inspect for obstruction to or drag on conveyor.
4. Broken chain	<ul style="list-style-type: none"> A. Frozen bearing or sprocket shaft. B. Worn or damaged chain C. Obstructed or jam 	<ul style="list-style-type: none"> A. Inspect for damaged bearings, replace if necessary. Replace chain links as required. B. Replace chain as required. C. Remove obstruction to clear jam.
5. Sprocket loose on shaft	<ul style="list-style-type: none"> A. Loose setscrews. B. Worn or damaged key 	<ul style="list-style-type: none"> A. Realign sprockets with straight edge and tighten setscrews. B. Replace with new key.
6. Excessive slack	<ul style="list-style-type: none"> A. Normal wear. 	<ul style="list-style-type: none"> A. Expect rapid chain growth in first two weeks of operation. Adjust chain tension.

PACIFIC CONVEYORS LTD MODEL 650SB "Trackmaster" SLIDER BED BELT CONVEYORS



- A. Shifting return rollers in **Direction "B"** will cause the belt to move in **Direction "C"** and vice versa.
- B. Shifting head pulley in **Direction "A"** will cause the belt to move in **Direction "C"** and vice versa.
- C. Shifting take-up pulley in **Direction "A"** will increase belt tension. Adjust both sides equally.
- D. **Take-up pulley should not be used for belt tracking.**
- E. **Drive pulley must not be used for belt tracking.**
- F. As a last resort, moving the tail pulley in the **Direction "B"** will cause the belt to move in **Direction "C"**, moving head pulley in **Direction "A"** will cause the belt to move in **Direction "C"**.

ORDERING REPLACEMENT PARTS

Replacement parts are available from the inventories of **Pacific Conveyors Ltd.** and their local suppliers.

Pacific Conveyors recommend very highly that any components regarded as crucial to system operation, which are not readily available from local stock, be carried by the purchaser. A list of these components is presented in this manual.

In requesting parts, maintenance or warrantee assistance, please quote the project number on cover page of this manual.

Pacific Conveyors Project #

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SECTION 3**MECHANICAL EQUIPMENT SCHEDULE**

- i. Mechanical Components
- ii Recommended Spare Parts

SECTION 3 MECHANICAL EQUIPMENT SCHEDULE

[Pacific Conveyors Ltd. MODEL SB650 conveyors are engineered to start fully loaded, and to handle a load of 60 Kg per Meter of length, with a minimum service factor of 1.38]

Belt Conveyor 1.	MODEL SB650 "Trackmaster"
	Counter Conveyor, Length 3249 mm (6' 0")
End rolls	Lynx MODEL "BT" Style C Diameter 114 mm Face width 660 mm, dual crowned Internarel bearings for 1.00" (25 mm) shaft
Take up	Lynx MODEL "BT" Style C Diameter 114 mm Face width 635 mm, dual crowned Internal bearings for 1.00" (25 mm) shaft
Drive roll	Lynx MODEL "BT" Style B Diameter 152 mm Face width 660 mm, dual crowned Keyed bushings for 1.00" (50 mm) shaft Vulcanised friction lagging 6 mm thick
	Bearings SBFL205-100
Snub rolls	Lynx MODEL "BT" Style C Diameter 76 mm Face width 660 mm, dual crowned Internal bearings for 1.00" (25 mm) shaft
Belt	Habasit Trackmate Type NSL-11ESBV Flame retardant to DIN 22103, ISO 340 Width 647 mm Length 4700 mm Mild steel clipper lacing
Motor	Iron Horse MTRP50-3DB18 1725 rpm @ 60 hz, 1/2 HP (.38 kW) FLA 1.9 amps
Gearbox	Automation Direct MODEL WG175-020-D
Sprockets	40B18 x 7/8 (on gearbox) 40B 32 x 1" (on driven shaft)
Chain	#40 premium rivetted Length 40" (80 pitches including con link)
Controller	KB Electronics MODEL KBMA
Foot switch	SSC Control Company Model S100-1501

SECTION 3**MECHANICAL EQUIPMENT SCHEDULE**

continued

Recommended Spare Parts

Prices are quoted as of September 2, 2017, and remain in effect for 90 days.
 Prices are FOB Pacific Conveyors Ltd facilities, Delta, B.C.

1	Discharge End Roll	BT5-26C-typeC-1.00" bore Complete with shaft	\$ 298.00 ea
1	Feed End Roll	BT5-26C-typeC-1.00" bore Complete with shaft	\$ 29800 ea
1	Drive Roll	BT6-25B-typeB-1.00" bore 6 mm friction lagging	\$ 530.00 ea
1	Drive Shaft	1.00" diameter CR, keyed for drive roll and drive sprocket	\$ 139.00 ea
1	Snub Roll	BT3-26C-typeC-1.00" bore Complete with shaft	\$ 196.42 ea
2	Drive roll bearing unit	SBFL 205-100D	\$ 32.22 ea
2	End roll bearing	UELS 205-100D	\$ 42.47 ea
2	Snub roll bearing	UELS 205-100D	\$ 42.47 ea
1	Speed reducer	IH WG-175-020-D	\$ 385.00 ea
1	Motor	T/T BLA504D-C	\$ 240.00 ea
1	Belt, c/w lacing	NSL-11ESBV-645W-4700	\$ 710.00 ea
1	Motor controller	KB Electronics Model KBMA-24D	\$ 396.00 ea
1	Foot switch	SSC Model S100-1501	\$ 74.00 ea

PACIFIC CONVEYORS LTD.

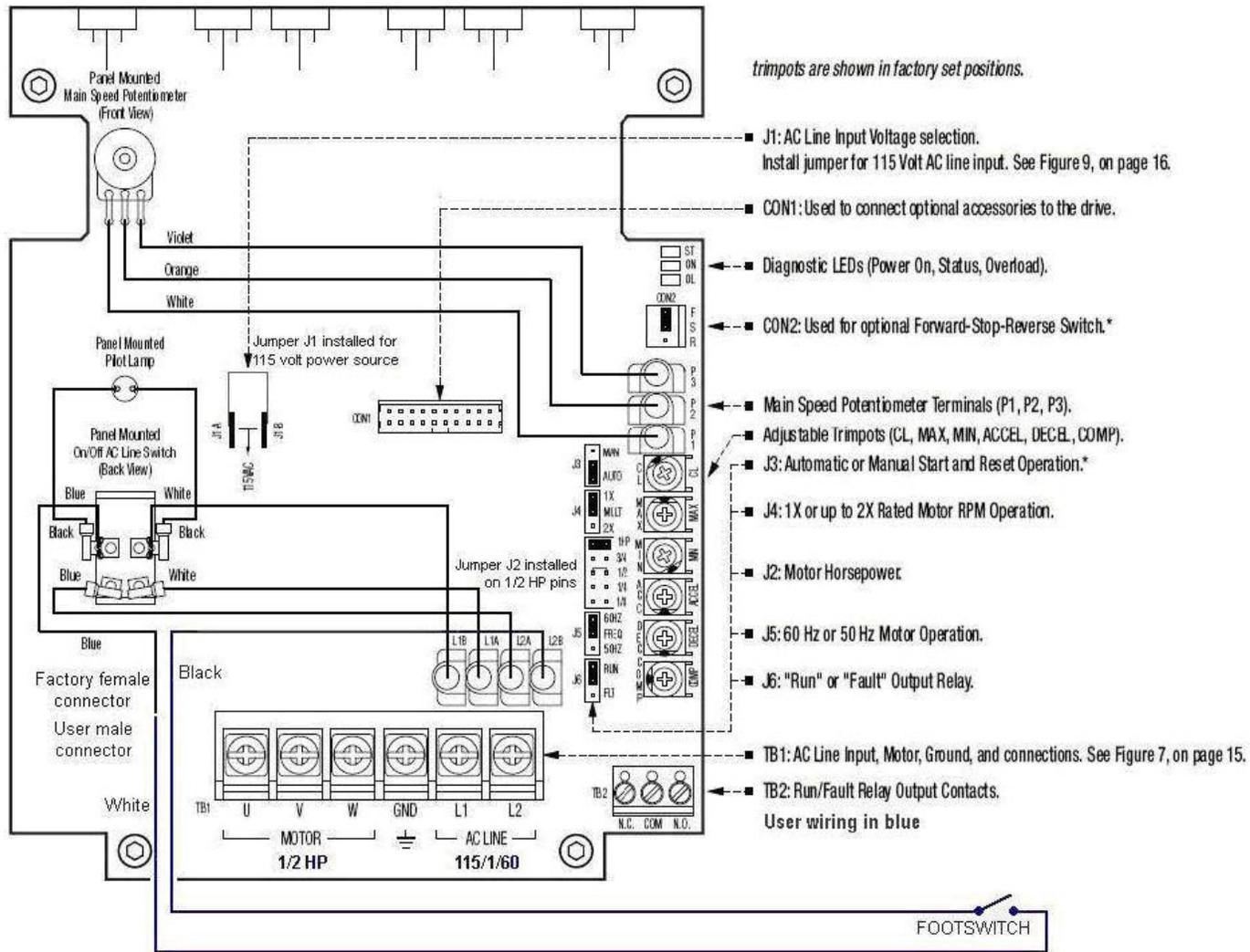
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SECTION 4

ELECTRICAL SCHEMATIC

MODEL 650SB SCANNER FEEDER Controller Schematic



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SECTION 5**DOCUMENTATION**

- i. Performance testing results
- ii Flame retardant compliance
- iii Warranty

PACIFIC CONVEYORS LTD.
MODEL 650SB BAGGAGE LOADING CONVEYORS
 Supplied to:

PERFORMANCE TESTING RESULTS

	Scanner feeder conveyor					
Check Motor Nameplate	230/3/60	✓				
	1/2 hp	✓				
	1750 rpm	✓				
	2.0 fla	✓				
Check Motor Operation	Quiet	✓				
	Cool	✓				
	Start-up Current	n/a*				
	Running Current	0.8 a				
Check Gearbox	Size 175	✓				
	Ratio 20:1	✓				
	Oil level	✓				
	Breather plug	✓				
Check Gearbox Operation	Quiet	✓				
	Cool	✓				
Check Conveyor appearance	Belt/lacing	✓				
	Trim	✓				
	Safety Covers	✓				
Check Conveyor Operation	Smooth	✓				
	Quiet	✓				
	Speed 0.43 mps	0.4				
Check Electrical Controls	Start/Stop	✓				
	Reset	auto				

* variable frequency drives ramp to full speed and do not show current surge on start-up.

Tested by _____
 Date

Witnessed _____



Bundesanstalt für
Materialforschung
und -prüfung

D-12200 Berlin
Telefon: 0 30/81 04-0
Telefax: 0 30/8 11 20 29

TEST REPORT (ENGLISH VERSION)

Flame retardation

Reference	IV.23/1623/99
Copy	1 of 2
Customer	Habasit AG Römerstraße 1 CH-4153 Reinach-Basel
Application of	1999-08-04
Sign	Christian Moser/mo
Received at	1999-08-09
Testing Material of the Application	2 samples of a conveyor belt, black, with the following structure: top layer of black coating, textile interlining, black center zone, textile ply; with a size of about 200 mm x 300 mm; characterized as: "NHM-8ESBV".
Received at	1999-08-09
Date of Testing	1999-08-12
Region of Testing	BAM
Test according	ISO 340

This test report consists of page 1 to 2.

The testing material will be kept for 3 months.

Test certificates are only allowed to be published in complete wording. For changed reproductions and extractions there has to exist a previous revokely consent from the BAM. Test results relate only to the tested materials. The BAM had no influence on choice of the test material.

Sicherheit und Zuverlässigkeit in Chemie- und Materialtechnik

PRÜFBERICHT



**Flame Retardation - Belting test results
Habasit NHM-8ESBV Certified to ISO 340**



Serving Canada - Coast to Coast

PACIFIC CONVEYORS LTD.

Unit 101-7088, Venture Street, Delta, B.C. V4G 1H5

Telephone (604)-940-1868 E Mail pacco@telus.net

Quality, Service and Reliability since 1997

WARRANTY

Pacific Conveyors Ltd. warrants that the design, workmanship, materials and components used in the manufacture of its products are of good quality

Pacific Conveyors Ltd, will replace at no cost FOB FACTORY, any part proving defective in materials or workmanship for a period of one year or 2000 hours of operation, such defects to be verified by Pacific Conveyors Ltd. inspection.

Unless express agreement is made by Pacific Conveyors Ltd, the purchaser shall bear the expense of installation, and Pacific Conveyors Ltd. liability is extended only to furnishing said parts or components. Pacific Conveyors Ltd. is not liable for consequential damages, such as delays or expenses or loss of profit incurred by failure of said part or parts.

Failures due to abuse, incorrect installation or adjustment, or lack of maintenance, are not covered by Pacific Conveyors' warranty.

Unless equipment is specifically designed and warranted for special duty applications, operation under impact, or corrosive, abrasive or damp conditions may void this warranty.

Unauthorised returns, modifications, or tampering invalidate this warranty.

Original equipment manufacturer or component supplier warranty may apply where Pacific Conveyors Ltd. warranty has been voided or expired. In such cases the longer warranty may apply.

The foregoing warranty cannot be changed except by written authorization signed by an authorised representative of Pacific Conveyors Ltd.

Customer/Purchase Order	
MODEL/Serial Number	
Shipping/Commission date	
Clarifications and exceptions requested by customer	
Approved by:	
<u>PACIFIC CONVEYORS LTD</u>	Authorised Representative

