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**Read the
separate
safety
manual
before
installing,
operating,
or servicing**

Technical Reference

Dryer-Loading Shuttle

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MATCAXXXAE/18103A

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PELLERIN MILNOR CORPORATION LIMITED STANDARD WARRANTY

We warrant to the original purchaser that MILNOR machines including electronic hardware/software (hereafter referred to as "equipment"), will be free from defects in material and workmanship for a period of one year from the date of shipment (unless the time period is specifically extended for certain parts pursuant to a specific MILNOR published extended warranty) from our factory with no operating hour limitation. This warranty is contingent upon the equipment being installed, operated and serviced as specified in the operating manual supplied with the equipment, and operated under normal conditions by competent operators.

Providing we receive written notification of a warranted defect within 30 days of its discovery, we will at our option repair or replace the defective part or parts, FOB our factory. We retain the right to require inspection of the parts claimed defective in our factory prior to repairing or replacing same. We will not be responsible, or in any way liable, for unauthorized repairs or service to our equipment, and this warranty shall be void if the equipment is tampered with, modified, or abused, used for purposes not intended in the design and construction of the machine, or is repaired or altered in any way without MILNOR's written consent.

Parts damaged by exposure to weather, to aggressive water, or to chemical attack are not covered by this warranty. For parts which require routine replacement due to normal wear such as gaskets, contact points, brake and clutch linings, belts, hoses, and similar parts the warranty time period is 90 days.

We reserve the right to make changes in the design and/or construction of our equipment (including purchased components) without obligation to change any equipment previously supplied.

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THE PROVISIONS ON THIS PAGE REPRESENT THE ONLY WARRANTY FROM MILNOR AND NO OTHER WARRANTY OR CONDITIONS, STATUTORY OR OTHERWISE, SHALL BE IMPLIED.

WE NEITHER ASSUME, NOR AUTHORIZE ANY EMPLOYEE OR OTHER PERSON TO ASSUME FOR US, ANY OTHER RESPONSIBILITY AND/OR LIABILITY IN CONNECTION WITH THE SALE OR FURNISHING OF OUR EQUIPMENT TO ANY BUYER.

How to Get the Necessary Repair Components



This document uses Simplified Technical English.

Learn more at <http://www.asd-ste100.org>.

You can get components to repair your machine from the approved supplier where you got this machine. Your supplier will usually have the necessary components in stock. You can also get components from the Milnor® factory.

Tell the supplier the machine model and serial number and this data for each necessary component:

- The component number from this manual
- The component name if known
- The necessary quantity
- The necessary transportation requirements
- If the component is an electrical component, give the schematic number if known.
- If the component is a motor or an electrical control, give the nameplate data from the used component.

To write to the Milnor factory:

Pellerin Milnor Corporation
Post Office Box 400
Kenner, LA 70063-0400
UNITED STATES

Telephone: 504-467-2787
Fax: 504-469-9777
Email: parts@milnor.com

— End of BIUUUD19 —

Trademarks

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These words are trademarks of Pellerin Milnor Corporation and other entities:

Table 1 Trademarks

AutoSpot™	GreenTurn™	Milnor®	PulseFlow®
CBW®	GreenFlex™	MilMetrix®	PurePulse®
Drynet™	Hydro-cushion™	MilTouch™	Ram Command™
E-P Express®	Linear Costa Master™	MilTouch-EX™	RecircONE®
E-P OneTouch®	Linear Costo™	Miltrac™	RinSave®
E-P Plus®	Mentor®	MultiTrac™	SmoothCoil™
Gear Guardian®	Mildata®	PBW™	Staph Guard®

End of document: BNUUUU02

Operating

1

NORMAL OPERATION—DRYER-LOADER

Once the dryer loader is energized, it works with a stand-alone dryer to elevate and deliver goods to the dryer door when the dryer is ready to be loaded. In automatic mode, the dryer loader moves goods from the conveyor load-end to the dryer without any operator intervention.

Start the Operating Day

Be Safe—Comply with all safety instructions in this manual and on the machine.

Verify Switch Positions—After ensuring the belt is retracted (if extending model) and at load level, set the *Automatic/Manual switches to automatic*

Energize the Machine—Turn the *Master switch* at the belt controller to *on*. Press the *Start button*.

Enter Cake Data—Enter dry code data using the remote formula station.

Monitor Normal Operation

Automatic Loading

When the goods block the load-end photo-eye on a single-load shuttle, the belt moves forward until the discharge-end photo-eye blocks. When the goods block the load-end photo-eye on a multi-load shuttle, the belt moves forward until the load-end photo-eye clears. The *Belt Loaded light* illuminates when the discharge-end photo-eye blocks. Then, the belt elevates to discharge level. The *Belt at Discharge Level light* illuminates. Terminal block TBA+ signals the allied dryer that the shuttle is ready to discharge a load. The belt runs forward. When the discharge-end photo-eye clears, the belt runs until relay CDD1 times out (approximately 16 seconds). The belt retracts (if extending model). The belt lowers to load level, and the *Belt at Load Level light* illuminates. Terminal TBA6 signals the dryer that the discharge is complete. The dryer door closes, and the dry cycle begins.

Manual Loading

To manually load the shuttle, set the *Automatic/Manual switch* on the relay logic control box at *manual* before loading the shuttle. Lower the shuttle to load level. The *Load Level light* illuminates. Load the shuttle. Press the *Belt Loaded button* when the belt is loaded. Other functions should occur as explained in “Automatic Loading.”

MANUAL OPERATION—DRYER-LOADERS

Once the dryer loader is energized, it works with a stand-alone dryer to elevate and deliver goods to the dryer door when the dryer is ready to be loaded. In automatic mode, the dryer loader moves goods from the conveyor load-end to the dryer without any operator intervention.

Start the Operating Day

Be Safe—Comply with all safety instructions in this manual and on the machine.

Verify Switch Positions—After ensuring the belt is retracted (if extending model) and at load level, set the *Automatic/Manual switch* to *manual*.

Energize the Machine—Turn the *Master switch* at the belt controller to *on*. Press the *Start button*.

Enter Cake Data—Enter dry code data using the remote formula station.

Operate the Machine Manually

On a single load model, move goods forward by pressing the bump switches at the load end of the conveyor or by holding the *Belt Forward/Reverse switch* at *forward*. Reverse the goods by holding the *Belt Forward/Reverse switch* at *reverse*. On a multi-load model, the belt moves forward until the load-end photo-eye clears. The *Belt at Load Level light* remains on throughout the loading process.

NOTE: On a single load model, the load-end photo-eye is not used in manual operation. The belt cannot move forward if the discharge-end photo-eye is blocked.

Press the *Belt Loaded button* when belt is loaded. The *Belt Loaded light* illuminates. Hold the *Elevate/Lower Belt switch* to *elevate* to raise the belt to discharge level. The *Belt at Discharge Level light* illuminates. Press the *Dryer is Loading button* to open the dryer door and begin rotating basket. Once the dryer door opens, hold the *Extend Belt button* until the belt is fully extended. Hold the *Run Belt button* until the goods are discharged. Hold the *Retract Belt button* until the belt is fully retracted. Press the *Dryer is Loaded switch* to close the load door and start the dryer cycle. Hold the *Elevate/Lower Belt switch* at *lower* until the belt is at load level. The *Belt at Load Level light* illuminates again.

Troubleshooting

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TROUBLESHOOTING A DRYER-LOADER

For the following malfunctions, check voltage at the coils of contactors indicated, then check the coils of the relays indicated (see the schematic manual).

⚠ DANGER ⚠



SHOCK HAZARD—Contact with high voltage electricity while checking voltage (or any other time) can kill or seriously injure you. High voltage electricity is present at various locations on this machine whenever external power is supplied.

- If the belt does not run forward, check CSB1F and CRB1F.
- If the belt does not run in reverse, check CSB1R and CRB1R.
- If the belt does not elevate, check CSXSU and CRXSU.
- If the belt does not lower, check CSXSD and CRXSD.

Please direct any questions about other malfunctions to your dealer service representative.

Supplemental Information

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CONNECTING A DRYER-LOADER TO A DRYER

Termination Locations

TBH is located in the left panel of the dryer. TBA and TBB are located in the Belt Controller Logic Box.

Internal Dryer Connection

Connection	Function
TBHF to TBHP	Series load door open and discharge door closed

Connections Between the Dryer to Belt Controller Logic Box

CABLE 1				
Festoon Color	Type of Wire	Belt Controller	Dryer	Function
	14AWG Ground	TBA2	Ground Buss Bar	
Red/Black	18AWG	TBB1	TBHH	24VAC
Red	18AWG	TBB2	TBHJ	Load door open
Blue/Black	18AWG	TBB3	TBHQ	Load door closed
Brown	18AWG	TBA7	TBHD	Belt loaded
Orange	18AWG	TBA8	TBHG	Dryer loaded
Black	18AWG	TBB8	TBX1	120VAC
Blue	18AWG	TB2G	TBHC	2G

CABLE 2				
Festoon Color	Type of Wire	Belt Controller	Dryer	Function
Blue/Black	18AWG	WCX07	TBX6	New customer
Yellow	18AWG	WCX06	TBX5	Little load
Orange	18AWG	WCX04	TBX1	Drycode input 0
Brown	18AWG	WCX03	TBX2	Drycode input 1
Blue	18AWG	WCX02	TBX3	Drycode input 2
Black	18AWG	WCX01	TBX4	Drycode input 3
Red	18AWG	WCX05	TBX7	Ground
	18AWG	Ground Buss bar	Ground Buss bar	Ground

Connections Between Belt Controller Box and Belt Contactor Box

Type of Wire	Belt controller	Belt Motor Box	Function
18AWG	TBB4	TBC1	Belt forward
18AWG	TBB5	TBC2	Belt reverse
14AWG	TBA2	TBC4	Ground
18AWG	TBA3	TBD1	3-wire
18AWG	TBA4	TBD2	3-wire
18AWG	TBA1	TBD6	24 volt fuse

Connections Between the Dryer Controller and the Dryer

Festoon 2 Color	Dryer Controller	Dryer	Function
Black	WCS01	WCS01	Control Signals
Blue	WCS02	WCS02	Control Signals
Brown	WCS03	WCS03	Control Signals
Orange	WCS04	WCS04	Control Signals
Red	WCS05	WCS05	Control Signals
Yellow	WCS06	WCS06	Control Signals
Blue/Black	WCS07	WCS07	Control Signals
Red/Black	WCS09	WCS09	Control Signals

Three-Phase Power Connections

Run the three-phase power in a separate cable. Three 12 AWG and one 12 AWG ground to the Belt Controller Logic Box.

Festoon 3 Color	Dryer-Loader Controller	Dryer	Function
Red	TBMA	3-phase power	L1
Black	TBMB	3-phase power	L2
Blue	TBMC	3-phase power	L3
Orange	Ground	3-phase power	Ground lug