

Tumble Dryer

OPL Electronic Control

Refer to Page 7 for Model Identification

Programming

Original Instructions

Keep These Instructions for Future Reference.

CAUTION: Read the instructions before using the machine.

(If this machine changes ownership, this manual must accompany machine.)



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WARNING

Machine installations must comply with minimum specifications and requirements stated in the applicable Installation Manual, any applicable municipal building codes, water supply requirements, electrical wiring regulations and any other relevant statutory regulations. Due to varied requirements and applicable local codes, this machine must be installed, adjusted, and serviced by qualified maintenance personnel familiar with applicable local codes and the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury, property damage, and/or equipment damage, and will void the warranty.

W820

NOTE: The **WARNINGS** and **IMPORTANT SAFETY INSTRUCTIONS** appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution, and care must be exercised when installing, maintaining, or operating the machine.

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

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Introduction

Model Identification

Information in this manual is applicable to these tumble dryer models:

	Gas			Steam/Thermal Oil		Electric	
25 Pound	BA025L	HK025R	PT025N	BH025S	NT025S	BH025E	LU025E
	BA025N	HT025L	PU025L	BT025S	NU025S	BH025F	NH025E
	BH025L	HT025N	PU025N	BU025S	PH025S	BT025E	NT025E
	BH025N	HT025R	SA025L	CT025S	PT025S	BT025F	NU025E
	BH025R	HU025L	SA025N	CU025S	PU025S	BU025E	PH025E
	BK025N	HU025N	SH025L	HH025S	SH025S	BU025F	PT025E
	BK025R	HU025R	SH025N	HT025S	ST025S	CT025E	PU025E
	BT025L	IT025L	SH025R	HU025S	SU025S	CU025E	SH025E
	BT025N	IT025N	SK025N	IT025S	UH025S	CT025F	SH025F
	BT025R	IT025R	SK025R	LT025S	UT025S	CU025F	ST025E
	BU025L	LA025L	ST025L	LU025S	UU025S	HH025E	ST025F
	BU025N	LA025N	ST025N	NH025S		HH025F	SU025E
	BU025R	LK025N	ST025R			HT025E	SU025F
	CA025L	LT025L	SU025L			HT025F	UH025E
	CA025N	LT025N	SU025N			HU025E	UH025F
	CK025N	LU025L	SU025R			HU025F	UT025E
	CK025R	LU025N	UA025L			IT025E	UT025F
	CT025L	NH025L	UA025N			IT025F	UU025E
	CT025N	NH025N	UH025L			LT025E	UU025F
	CT025R	NT025L	UH025N				
	CU025L	NT025N	UH025R				
	CU025N	NU025L	UK025N				
	CU025R	NU025N	UK025R				
	HA025L	PA025L	UT025L				
	HA025N	PA025N	UT025N				
	HH025L	PH025L	UT025R				
	HH025N	PH025N	UU025L				
	HH025R	PK025N	UU025N				
	HK025N	PT025L	UU025R				

Table continues...

	Gas			Steam/Thermal Oil		Electric	
30 Pound	BA030L	HK030R	PT030N	BH030S	NT030S	BH030E	LU030E
	BA030N	HT030D	PU030L	BT030S	NU030S	BH030F	NH030E
	BH030L	HT030L	PU030N	BU030S	PH030S	BT030E	NT030E
	BH030N	HT030N	SA030L	CT030S	PT030S	BT030F	NU030E
	BH030R	HT030R	SA030N	CU030S	PU030S	BU030E	PH030E
	BK030N	HU030L	SH030L	HH030S	SH030S	BU030F	PT030E
	BK030R	HU030N	SH030N	HT030S	ST030S	CT030E	PU030E
	BT030D	HU030R	SH030R	HU030S	SU030S	CT030F	SH030E
	BT030L	IT030L	SK030N	IT030S	UU030S	CU030E	SH030F
	BT030N	IT030N	SK030R	LT030S	UT030S	CU030F	ST030E
	BT030R	IT030R	ST030D	LU030S	UU030S	HH030E	ST030F
	BU030L	LA030L	ST030L	NH030S		HH030F	SU030E
	BU030N	LA030N	ST030N			HT030E	SU030F
	BU030R	LK030N	ST030R			HT030F	UH030E
	CA030L	LT030L	SU030L			HU030E	UH030F
	CA030N	LT030N	SU030N			HU030F	UT030E
	CK030N	LU030L	SU030R			IT030E	UT030F
	CK030R	LU030N	UA030L			IT030F	UU030E
	CT030L	NH030L	UA030N			LT030E	UU030F
	CT030N	NH030N	UH030L				
	CT030R	NT030L	UH030N				
	CU030L	NT030N	UH030R				
	CU030N	NU030L	UK030N				
	CU030R	NU030N	UK030R				
	HA030L	PA030L	UT030L				
	HA030N	PA030N	UT030N				
	HH030L	PH030L	UT030R				
	HH030N	PH030N	UU030L				
	HH030R	PK030N	UU030N				
	HK030N	PT030L	UU030R				

Table continues...

	Gas			Steam/Thermal Oil		Electric	
30 Pound Stacked	BAT30L	HKT30R	PTT30N	BHT30S	NTT30S	BHT30E	LUT30E
	BAT30N	HTT30D	PUT30L	BTT30S	NUT30S	BHT30F	NHT30E
	BHT30L	HTT30L	PUT30N	BUT30S	PHT30S	BTT30E	NTT30E
	BHT30N	HTT30N	SAT30L	CTT30S	PTT30S	BTT30F	NUT30E
	BHT30R	HTT30R	SAT30N	CUT30S	PUT30S	BUT30E	PHT30E
	BKT30N	HUT30L	SHT30L	HHT30S	SHT30S	BUT30F	PTT30E
	BKT30R	HUT30N	SHT30N	HTT30S	STT30S	CTT30E	PUT30E
	BTT30D	HUT30R	SHT30R	HUT30S	SUT30S	CTT30F	SHT30E
	BTT30L	ITT30L	SKT30N	ITT30S	UHT30S	CUT30E	SHT30F
	BTT30N	ITT30N	SKT30R	LTT30S	UTT30S	CUT30F	STT30E
	BTT30R	ITT30R	STT30D	LUT30S	UUT30S	HHT30E	STT30F
	BUT30L	LAT30L	STT30L	NHT30S		HHT30F	SUT30E
	BUT30N	LAT30N	STT30N			HTT30E	SUT30F
	BUT30R	LKT30N	STT30R			HTT30F	UHT30E
	CAT30L	LTT30L	SUT30L			HUT30E	UHT30F
	CAT30N	LTT30N	SUT30N			HUT30F	UTT30E
	CKT30N	LUT30L	SUT30R			ITT30E	UTT30F
	CKT30R	LUT30N	UAT30L			ITT30F	UUT30E
	CTT30L	NHT30L	UAT30N			LTT30E	UUT30F
	CTT30N	NHT30N	UHT30L				
	CTT30R	NTT30L	UHT30N				
	CUT30L	NTT30N	UHT30R				
	CUT30N	NUT30L	UKT30N				
	CUT30R	NUT30N	UKT30R				
	HAT30L	PAT30L	UTT30L				
	HAT30N	PAT30N	UTT30N				
	HHT30L	PHT30L	UTT30R				
	HHT30N	PHT30N	UUT30L				
	HHT30R	PKT30N	UUT30N				
	HKT30N	PTT30L	UUT30R				

Table continues...

	Gas			Steam/Thermal Oil		Electric	
35 Pound	BA035L	HK035R	PT035N	BH035S	NT035S	BH035E	LU035E
	BA035N	HT035L	PU035L	BT035S	NU035S	BH035F	NH035E
	BH035L	HT035N	PU035N	BU035S	PH035S	BT035E	NT035E
	BH035N	HT035R	SA035L	CT035S	PT035S	BT035F	NU035E
	BH035R	HU035L	SA035N	CU035S	PU035S	BU035E	PH035E
	BK035N	HU035N	SH035L	HH035S	SH035S	BU035F	PT035E
	BK035R	HU035R	SH035N	HT035S	ST035S	CT035E	PU035E
	BT035L	IT035L	SH035R	HU035S	SU035S	CT035F	SH035E
	BT035N	IT035N	SK035N	IT035S	UH035S	CU035E	SH035F
	BT035R	IT035R	SK030R	LT035S	UT035S	CU035F	ST035E
	BU035L	LA035L	ST035L	LU035S	UU035S	HH035E	ST035F
	BU035N	LA035N	ST035N	NH035S		HH035F	SU035E
	BU035R	LK035N	ST035R			HT035E	SU035F
	CA035L	LT035L	SU035L			HT035F	UH035E
	CA035N	LT035N	SU035N			HU035E	UH035F
	CK035N	LU035L	SU035R			HU035F	UT035E
	CK035R	LU035N	UA035L			IT035E	UT035F
	CT035L	NH035L	UA035N			IT035F	UU035E
	CT035N	NH035N	UH035L			LT035E	UU035F
	CT035R	NT035L	UH035N				
	CU035L	NT035N	UH035R				
	CU035N	NU035L	UK035N				
	CU035R	NU035N	UK035R				
	HA035L	PA035L	UT035L				
	HA035N	PA035N	UT035N				
	HH035L	PH035L	UT035R				
	HH035N	PH035N	UU035L				
	HH035R	PK035N	UU035N				
	HK035N	PT035L	UU035R				

Table continues...

	Gas			Steam/Thermal Oil	Electric
45 Pound Stacked	BAT45L	HTT45R	PUT45N	Not Applicable	Not Applicable
	BAT45N	HUT45L	SAT45L		
	BHT45L	HUT45N	SAT45N		
	BHT45N	HUT45R	SHT45L		
	BHT45R	ITT45L	SHT45N		
	BKT45N	ITT45N	SHT45R		
	BKT45R	ITT45R	SKT45N		
	BTT45D	LAT45L	SKT45R		
	BTT45L	LAT45N	STT45D		
	BTT45N	LKT45N	STT45L		
	BTT45R	LTT45L	STT45N		
	BUT45L	LTT45N	STT45R		
	BUT45N	LUT45L	SUT45L		
	BUT45R	LUT45N	SUT45N		
	CKT45N	NHT45L	SUT45R		
	CKT45R	NHT45N	UAT45L		
	CTT45L	NTT45L	UAT45N		
	CTT45N	NTT45N	UHT45L		
	CTT45R	NUT45L	UHT45N		
	HAT45L	NUT45N	UHT45R		
	HAT45N	PAT45L	UKT45N		
	HHT45L	PAT45N	UKT45R		
	HHT45N	PHT45L	UTT45L		
	HHT45R	PHT45N	UTT45N		
	HKT45N	PKT45N	UTT45R		
	HKT45R	PTT45L	UUT45L		
	HTT45D	PTT45N	UUT45N		
	HTT45L	PUT45L	UUT45R		
	HTT45N				

Table continues...

	Gas			Steam/Thermal Oil		Electric	
50 Pound	BA050L	HT050N	PT050L	BH050S	LU050T	BH050E	NT050E
	BA050N	HU050L	PT050N	BT050S	NH050S	BT050E	NU050E
	BH050L	HU050N	PU050L	BT050T	NT050S	BU050E	PH050E
	BH050N	IT050L	PU050N	BU050S	NU050S	CT050E	PT050E
	BK050N	IT050N	SA050L	BU050T	PH050S	CU050E	PU050E
	BT050D	LA050L	SA050N	CT050S	PT050S	HH050E	SH050E
	BT050L	LA050N	SH050L	CT050T	PT050T	HT050E	ST050E
	BT050N	LK050N	SH050N	CU050S	PU050S	HU050E	SU050E
	BU050L	LT050L	SK050N	CU050T	PU050T	IT050E	UH050E
	BU050N	LT050N	ST050D	HH050S	SH050S	LT050E	UT050E
	CA050L	LU050L	ST050L	HT050S	ST050S	LU050E	UU050E
	CA050N	LU050N	ST050N	HT050T	ST050T	NH050E	
	CK050N	NH050L	SU050L	HU050S	SU050S		
	CT050L	NH050N	SU050N	HU050T	SU050T		
	CT050N	NT050L	UA050L	IT050S	UH050S		
	CU050L	NT050N	UA050N	IT050T	UT050S		
	CU050N	NU050L	UH050L	LT050S	UT050T		
	HA050L	NU050N	UH050N	LT050T	UU050S		
	HA050N	PA050L	UK050N	LU050S	UU050T		
	HH050L	PA050N	UT050L				
	HH050N	PH050L	UT050N				
	HK050N	PH050N	UU050L				
	HT050D	PK050N	UU050N				
	HT050L						

Table continues...

	Gas			Steam/Thermal Oil	Electric	
55 Pound	BA055L	HK055R	PT055N	Not Applicable	BH055E	LU055E
	BA055N	HT055D	PU055L		BH055F	NH055E
	BH055L	HT055L	PU055N		BT055E	NT055E
	BH055N	HT055N	SA055L		BT055F	NU055E
	BH055R	HT055R	SA055N		BU055E	PH055E
	BK055N	HU055L	SH055L		BU055F	PT055E
	BK055R	HU055N	SH055N		CT055E	PU055E
	BT055D	HU055R	SH055R		CT055F	SH055E
	BT055L	IT055L	SK055N		CU055E	SH055F
	BT055N	IT055N	SK055R		CU055F	ST055E
	BT055R	IT055R	ST055D		HH055E	ST055F
	BU055L	LA055L	ST055L		HH055F	SU055E
	BU055N	LA055N	ST055N		HT055E	SU055F
	BU055R	LK055N	ST055R		HT055F	UH055E
	CA055L	LT055L	SU055L		HU055E	UH055F
	CA055N	LT055N	SU055N		HU055F	UT055E
	CK055N	LU055L	SU055R		IT055E	UT055F
	CK055R	LU055N	UA055L		IT055F	UU055E
	CT055L	NH055L	UA055N		LT055E	UU055F
	CT055N	NH055N	UH055L			
	CT055R	NT055L	UH055N			
	CU055L	NT055N	UH055R			
	CU055N	NU055L	UK055N			
	CU055R	NU055N	UK055R			
	HA055L	PA055L	UT055L			
	HA055N	PA055N	UT055N			
	HH055L	PH055L	UT055R			
	HH055N	PH055N	UU055L			
	HH055R	PK055N	UU055N			
	HK055N	PT055L	UU055R			

Table continues...

	Gas			Steam/Thermal Oil		Electric	
75 Pound	BA075L	HT075L	SA075L	BH075S	LU075T	BH075E	LU075E
	BA075N	HT075N	SA075N	BT075S	NH075S	BH075F	NH075E
	BH075L	HT075R	SH075L	BT075T	NT075S	BT075E	NT075E
	BH075N	HU075L	SH075N	BU075S	NU075S	BT075F	NU075E
	BH075R	HU075N	SH075R	BU075T	PH075S	BU075E	PH075E
	BK075N	HU075R	SK075N	CT075S	PT075S	BU075F	PT075E
	BK075R	IT075L	SK075R	CT075T	PT075T	CT075E	PU075E
	BT075D	IT075N	ST075D	CU075S	PU075S	CT075F	SH075E
	BT075L	IT075R	ST075L	CU075T	PU075T	CU075E	SH075F
	BT075N	LA075L	ST075N	HH075S	SH075S	CU075F	ST075E
	BT075R	LA075N	ST075R	HT075S	ST075S	HH075E	ST075F
	BU075L	LK075N	STF75L	HT075T	ST075T	HH075F	SU075E
	BU075N	LT075L	STF75N	HU075S	SU075S	HT075E	SU075F
	BU075R	LT075N	SU075L	HU075T	SU075T	HT075F	UH075E
	CA075L	LU075L	SU075N	IT075S	UH075S	HU075E	UH075F
	CA075N	LU075N	SU075R	IT075T	UT075S	HU075F	UT075E
	CK075N	NH075L	UA075L	LT075S	UT075T	IT075E	UT075F
	CK075R	NH075N	UA075N	LT075T	UU075S	IT075F	UU075E
	CT075L	NT075L	UH075L	LU075S	UU075T	LT075E	UU075F
	CT075N	NT075N	UH075N				
	CT075R	NU075L	UH075R				
	CU075L	NU075N	UK075N				
	CU075N	PA075L	UK075R				
	CU075R	PA075N	UT075L				
	HA075L	PH075L	UT075N				
	HA075N	PH075N	UT075R				
	HH075L	PK075N	UTF75L				
	HH075N	PT075L	UTF75N				
	HH075R	PT075N	UU075L				
	HK075N	PU075L	UU075N				
	HK075R	PU075N	UU075R				
	HT075D						

Table continues...

	Gas			Steam/Thermal Oil		Electric	
120 Pound	BA120L	HU120L	PT120L	BH120S	LU120T	BH120E	NT120E
	BA120N	HU120N	PT120N	BT120S	NH120S	BT120E	NU120E
	BH120L	IT120L	PU120L	BT120T	NT120S	BU120E	PH120E
	BH120N	IT120N	PU120N	BU120S	NU120S	CT120E	PT120E
	BK120N	LA120L	SA120L	BU120T	PH120S	CU120E	PU120E
	BT120L	LA120N	SA120N	CT120S	PT120S	HH120E	SH120E
	BT120N	LK120N	SH120L	CT120T	PT120T	HT120E	ST120E
	BU120L	LT120L	SH120N	CU120S	PU120S	HU120E	SU120E
	BU120N	LT120N	SK120N	CU120T	PU120T	IT120E	UH120S
	CA120L	LU120L	ST120L	HH120S	SH120S	LT120E	UT120E
	CA120N	LU120N	ST120N	HT120S	ST120S	LU120E	UU120E
	CK120N	NH120L	SU120L	HT120T	ST120T	NH120E	
	CT120L	NH120N	SU120N	HU120S	SU120S		
	CT120N	NT120L	UA120L	HU120T	SU120T		
	CU120L	NT120N	UA120N	IT120S	UH120S		
	CU120N	NU120L	UH120L	IT120T	UT120S		
	HA120L	NU120N	UH120N	LT120S	UT120T		
	HA120N	PA120L	UK120N	LT120T	UU120S		
	HH120L	PA120N	UT120L	LU120S	UU120T		
	HH120N	PH120L	UT120N				
	HK120N	PH120N	UU120L				
	HT120L	PK120N	UU120N				
	HT120N						

Table continues...

	Gas			Steam/Thermal Oil		Electric
170 Pound	BA170L	HU170L	PT170L	BH170S	LU170T	Not Applicable
	BA170N	HU170N	PT170N	BT170S	NH170S	
	BH170L	IT170L	PU170L	BT170T	NT170S	
	BH170N	IT170N	PU170N	BU170S	NU170S	
	BK170N	LA170L	SA170L	BU170T	PH170S	
	BT170L	LA170N	SA170N	CT170S	PT170S	
	BT170N	LK170N	SH170L	CT170T	PT170T	
	BU170L	LT170L	SH170N	CU170S	PU170S	
	BU170N	LT170N	SK170N	CU170T	PU170T	
	CA170L	LU170L	ST170L	HH170S	SH170S	
	CA170N	LU170N	ST170N	HT170S	ST170S	
	CK170N	NH170L	SU170L	HT170T	ST170T	
	CT170L	NH170N	SU170N	HU170S	SU170S	
	CT170N	NT170L	UA170L	HU170T	SU170T	
	CU170L	NT170N	UA170N	IT170S	UH170S	
	CU170N	NU170L	UH170L	IT170T	UT170S	
	HA170L	NU170N	UH170N	LT170S	UT170T	
	HA170N	PA170L	UK170N	LT170T	UU170S	
	HH170L	PA170N	UT170L	LU170S	UU170T	
	HH170N	PH170L	UT170N			
	HK170N	PH170N	UU170L			
	HT170L	PK170N	UU170N			
	HT170N					

Table continues...

	Gas			Steam/Thermal Oil		Electric
200 Pound	BA200L	HU200L	PT200L	BH200S	LU200T	Not Applicable
	BA200N	HU200N	PT200N	BT200S	NH200S	
	BH200L	IT200L	PU200L	BT200T	NT200S	
	BH200N	IT200N	PU200N	BU200S	NU200S	
	BT200L	LA200L	SA200L	BU200T	PH200S	
	BT200N	LA200N	SA200N	CT200S	PT200S	
	BU200L	LT200L	SH200L	CT200T	PT200T	
	BU200N	LT200N	SH200N	CU200S	PU200S	
	CA200L	LU200L	ST200L	CU200T	PU200T	
	CA200N	LU200N	ST200N	HH200S	SH200S	
	CT200L	NH200L	SU200L	HT200S	ST200S	
	CT200N	NH200N	SU200N	HT200T	ST200T	
	CU200L	NT200L	UA200L	HU200S	SU200S	
	CU200N	NT200N	UA200N	HU200T	SU200T	
	HA200L	NU200L	UH200L	IT200S	UH200S	
	HA200N	NU200N	UH200N	IT200T	UT200S	
	HH200L	PA200L	UT200L	LT200S	UT200T	
	HH200N	PA200N	UT200N	LT200T	UU200S	
	HT200L	PH200L	UU200L	LU200S	UU200T	
	HT200N	PH200N	UU200N			

Includes models with the following control suffixes:

EO – OPL electronic

RE – reversing OPL electronic

Nameplate Location

The nameplate is located on the back of the machine and is programmed in the control.

Preliminary Information

About the Control

This control is an advanced, programmable computer that lets the owner control most machine features by pressing a sequence of keypads.

The control allows the owner to program custom cycles, run diagnostic cycles, and retrieve audit and error information.

Tumble Dryers shipped from the factory have default cycles and other settings built in. The owner can change the default cycle or any cycle.

IMPORTANT: It is extremely important that the tumble dryer has a positive ground and that all mechanical and electrical connections are made before applying power to or operating the tumble dryer.

DIP Switch Configuration

Make sure DIP switches are configured properly for the machine. Refer to *Figure 1*.

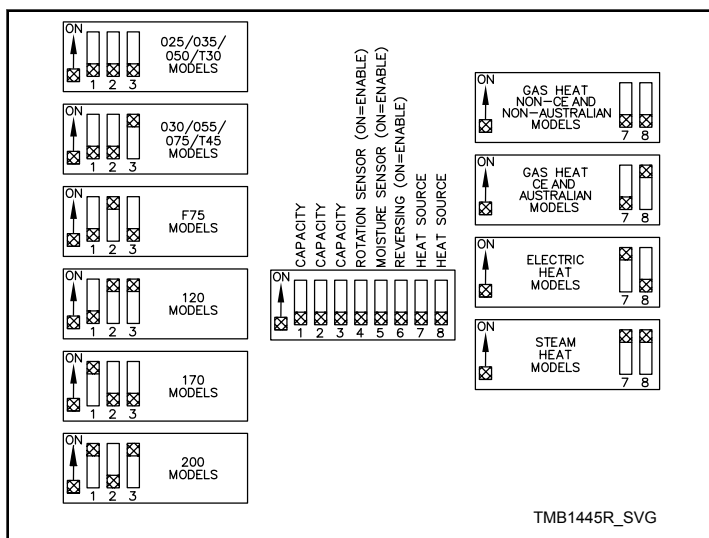


Figure 1

Power Failure Recovery

If a cycle is in progress when the power fails, and if the power outage lasts three or more seconds, the cycle is lost and cannot be resumed when power recovers. If the power outage lasts less than three seconds, the control will resume the cycle when the power recovers.

Communications

The control has the ability to communicate with a PDA and a laptop with an IrDA device running the control software. Devices

such as PDAs and laptops that are IrDA capable (able to transmit information to machine) that have been tested and approved for use with the software can be used as a tool for managing the machine.

Audit Information

The control collects and stores audit information, which can be accessed with a PDA or PC. Refer to the following list for some of the available audit information. Refer to **PC and PDA Application User Instructions**.

- End of Cycle to Loading Door Open Time
- End of Cycle to Start of Next Cycle Time
- Total Number of Machine Cycles
- Total Number of Operating Minutes
- Power Failure Audit Data

The PDA or PC can receive audit and program data from the control, and send programming data and diagnostic commands to the control. Refer to **PC and PDA Application User Instructions** for additional information.

Some of the above listed audit data is available manually. Refer to *How to Enter Audit Feature* section.

Restore to Factory Defaults

When the user resets to factory default, the control resets all of the default values. The control also resets Machine Cycles #1 through #30. The control will also reset the following to factory-defaults:

Default Global Settings

- Ignition Retries = 3
- Temperature Units = Fahrenheit (°F)
- High (H) Temperature = 190 (°F)
- Medium (M) Temperature = 160 (°F)
- Low (L) Temperature = 140 (°F)
- Very Low (VL) Temperature = 120 (°F)
- Cool Down Temperature = 100 (°F)
- Cool Down Time = 2 (minutes)
- Rapid Advance = Disabled
- Multi-Segment Cycles = Disabled
- Daylight Saving = Enabled
- Key Pad Audio = Enabled
- End of Cycle Audio = Enabled (5 seconds)

End of Cycle External Signal = Enabled (5 seconds)

Clean Lint Screen Reminder = Off

Display Limit Errors = Disabled

Manual Diagnostics = Enabled

*Manual Programming = Enabled

**Reverse Cylinder Rotate Time = 30 (seconds)

**Reverse Cylinder Stop Time = 6 (seconds)

**Advanced Reversing = Disabled

***Advanced Options for Moisture Dry = Disabled

***Display Moisture Sensor Error = Disabled

*If manual programming is disabled, programming changes to the control can only be made with an external communication device. Refer to **PC and PDA Application User Instructions**.

**Only available on units equipped with reversing feature.

***Only available on units equipped with moisture sensing feature.

Refer to Factory Defaults, Menu section for information on Restoring Factory Defaults.

Entering Program Mode

Press and hold Stop, then Back, then Up to enter the programming options.

Control Identification

Operational Keypad

The control includes five keypads. These functions are available to the operator and are intended to control and manage operation of the tumble dryer. Refer to *Figure 2*, *Figure 3*, *Figure 4*, *Figure 5*, *Figure 6*, *Figure 7*, *Figure 8* and *Table 1*.

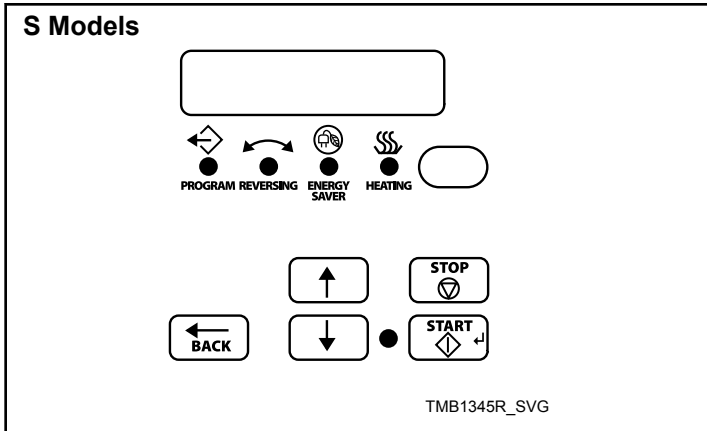


Figure 2

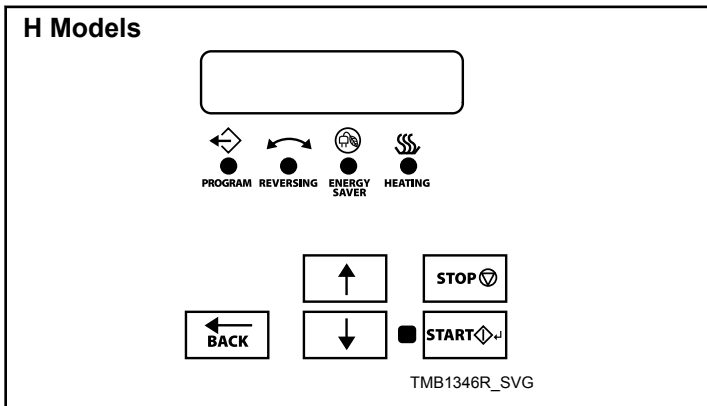


Figure 3

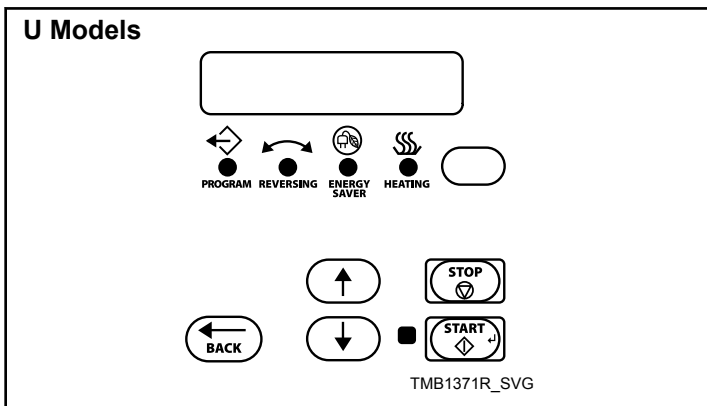


Figure 4

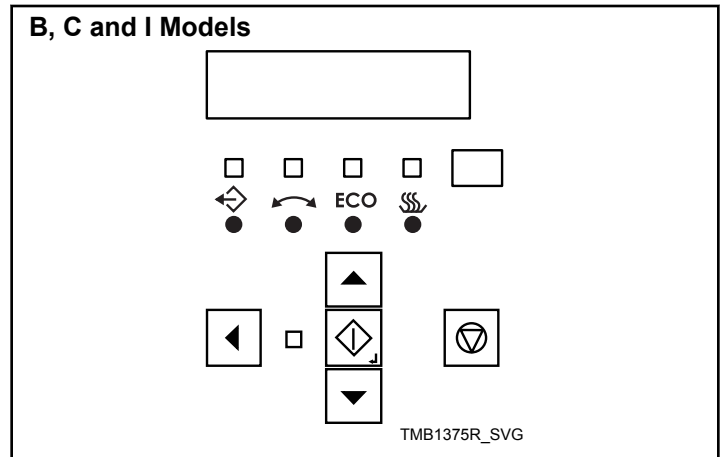


Figure 5

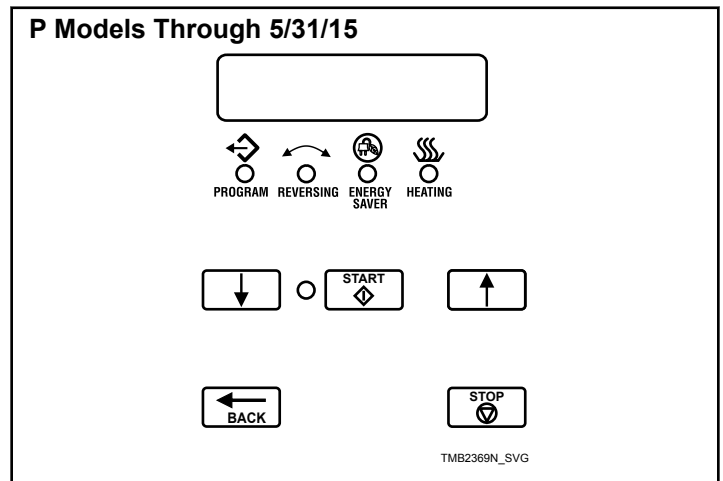


Figure 6

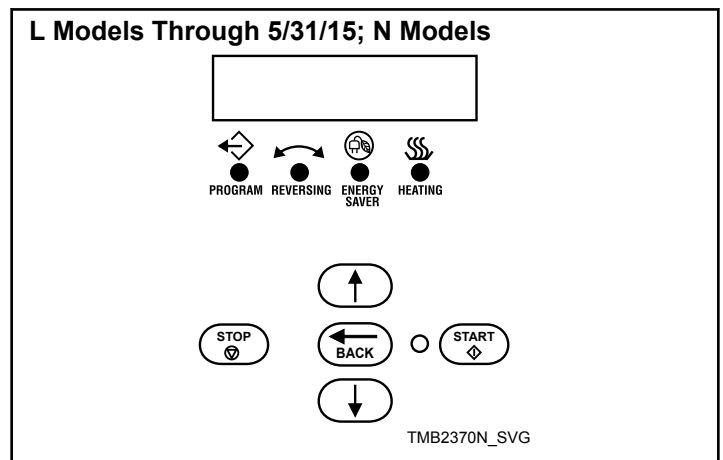
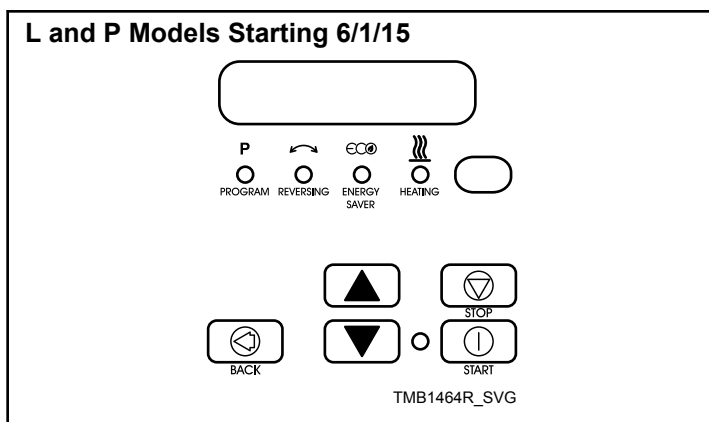


Figure 7



NOTE: The reversing feature is not available on all models.

Figure 8

Keypad		Description
UP ARROW	↑	Press to scroll through menu options and edit parameter values.
DOWN ARROW	↓	Press to scroll through menu options and edit parameter values.
BACK ARROW	←	Press to go to the list of parameters without saving the value when adjusting the value of a programming parameter. Also, press to go to the previous menu when the control displays a parameter, return to Idle Mode when the control displays the main menu or clear an error message from the display.
STOP	⏏	Press to pause a cycle while in Run Mode or abort a cycle if the control is in Pause Mode.
START	▶/▶	Press to start the selected cycle, select an option when in the menu or save a value when editing a parameter.

Status Indicator LED		Description
PROGRAM	◀▶	LED will light up if the control is in Manual Programming Mode or if a cycle is being modified.
REVERSING	↩	LED will light up when cylinder is reversing.
ENERGY SAVER	Ⓜ	LED will light up when a Moisture Dry or Auto Dry cycle is running.
HEATING	🔥	LED will light up when the machine is in the heat portion of the cycle.

Table 1

Operation Modes

General Modes of Operation

In each mode of operation, the user may press keypads or communicate with the control to change the displayed menu.

Power-up Mode

The control enters this mode at power-up. When power is applied to the tumble dryer, the control becomes active and will display its software version as **5HH** (HH is the version number) for one second. If the control was not powered down during a running cycle, it will enter the Idle Mode. After the control completes operation in the Power-up Mode it will enter Idle Mode.

Idle Mode

The control is ready for operation in Idle Mode. Control can display different menus depending on user input (keypad press, opening or closing the loading door, or PDA communication). If there is no user input for 10 minutes, display will turn off.

While in Idle Mode the control will display the active cycles. Anytime the control returns to Idle Mode after a cycle has been run, the control will display the last run cycle (except the first time the control is powered up it will show the first cycle).

Press the up arrow to increment the cycle number. Press the down arrow to decrease the cycle number. If the Start keypad is pressed and either the loading door or lint door is open the control will show *door* for five seconds or until door is closed.

If the control is in Idle Mode, Cycle Menu is displayed, loading and lint door closed, and the Start keypad is pressed, control will enter Run Mode.

Run Mode

The Control enters Run Mode during a cycle. Loading and lint doors are closed during Run Mode.

While in Run Mode, any programmed value can be changed for the currently running cycle. Press the Up or Down keypads to scroll through the displays. Press the Back keypad to select a parameter and press Up or Down to change the value. Once the cycle is complete, the control will go back to the original programmed parameters. Refer to the Tables below for each cycle type's displays.

Press Stop keypad to stop cycle and enter Pause Mode. Control enters Pause Mode if loading or lint door opens. Press Start to Rapid Advance.

Time Dry Cycle Display	6 Digit Display	Description
Display 1	HHH HH	Cycle Time Remaining in Minutes and Seconds (HH)
Display 2	[HH SP or [HH Cd	Cycle Number (HH) and Segment Number (Y) or Cycle Number (HH) and Segment Cooldown
Display 3	R HHHF or R HHHC	Actual Temperature
Display 4	P HHHF or P HHHC	Programmed Temperature

Table 2 continues...

Time Dry Cycle Display	6 Digit Display	Description
Display 5	SAUE	Custom Save Mode Display

Table 2

Moisture Dry Cycle Display	6 Digit Display	Description
Display 1	HH	Actual Moisture Level
Display 2	[HH SP or [HH Cd	Cycle Number (HH) and Segment Number (Y) or Cycle Number (HH) and Segment Cooldown
Display 3	R HHHF or R HHHC	Actual Temperature
Display 4	P HHHF or P HHHC	Programmed Temperature
Display 5	Pn[HH	Programmed Moisture Level
Display 6	SAUE	Custom Save Mode Display

Table 3

Auto Dry Cycle Display	6 Digit Display	Description
Display 1	HHH HH	Elapsed Time in Minutes and Seconds (HH)
Display 2	[HH SP or [HH Cd	Cycle Number (HH) and Segment Number (Y) or Cycle Number (HH) and Segment Cooldown
Display 3	R HHHF or R HHHC	Actual Temperature
Display 4	P HHHF or P HHHC	Programmed Temperature
Display 5	P HH	Programmed Target Level

Table 4

Rapid Advance Mode

If the Rapid Advance Option is enabled, the user can advance a running machine cycle by pressing the Start keypad. In a Time Dry cycle, pressing the Start keypad will decrease the remaining time by one minute. Pressing and holding the Start keypad will decrease the remaining time by four minutes per second until the end of the cycle.

In the Auto-Dry and Moisture Dry cycles, pressing the Start keypad will advance the cycle to the next enabled segment. Note that Auto-Dry cycles only have one programmable segment.

In the Cool Down segment, pressing the Start keypad will decrease the remaining time by one minute.

When the cycle is completed, the audit counter, Total Rapid Advance Cycles, is incremented rather than the Total Machine Cycles audit counter. If the Rapid Advance Option is disabled preventing a manual Rapid Advance, the user may still execute a Rapid Advance using the PDA or PC. Refer to **PC and PDA Application User Instructions** for additional information on using a PDA or PC to Rapid Advance a cycle.

Pause Mode

If Stop keypad is pressed or the loading or lint door is opened while in Run Mode, control enters Pause Mode.

If the door was opened to enter Pause Mode, the control will show **door** until the door is closed or Pause Mode is exited. If the door is closed, the control will show **PUSH** for one second followed by **START** for one second as well as flash the Start keypad LED one second on/one second off.

If the Stop keypad was pressed to enter Pause Mode and the loading door is closed, the control will show **PAUSE** until Pause Mode is exited.

Any time **PAUSE** is shown on the control, the Start keypad LED will flash one second on/one second off to prompt the user to restart the cycle.

Error Mode

This mode will be entered to display all fatal machine errors.

Communication Mode

This mode is entered whenever the control is communicating with a PDA. Refer to **PC and PDA Application User Instructions**.

Cool Down Mode

The control enters the Cool Down Mode after the heat segment of the cycle is completed or fatal error occurs. The control turns the heater off and for steam heated units turns the damper motor on. The cool down segment will end once the cool down temperature

has been reached or the programmed cool down time expires, whichever happens first.

End of Cycle Mode

The control enters End of Cycle Mode after the cool down segment is finished. The display will toggle between **Load** and **READY** for one second each until End of Cycle Mode is exited. If the door has not been opened or a keypad has not been pressed after two minutes, the machine will enter Extended Tumble Mode. This mode is exited when the door is opened or Stop keypad is pressed. The control will then return to Idle Mode.

Extended Tumble Mode

The Extended Tumble Mode has two portions. The Anti-Wrinkle Tumble is entered two minutes after the cycle has ended if the door is not opened. The cylinder will tumble for 30 seconds every two minutes for up to one hour.

If the door hasn't been opened and no keys have been pressed one hour after the Anti-Wrinkle Tumble has ended, the control increments the Anti-Wrinkle Time Exceeded audit counter and enters Delayed Tumble. The cylinder will tumble for two minutes every 60 minutes for up to 18 hours.

Reversing Mode (reversing models only)

Models equipped with the reversing feature will rotate in the forward direction, pause, rotate in the reverse direction and then pause for programmable times and segments of the cycle. Factory default reversing rotate time is 30 seconds and reversing stop time is 6 seconds for all cycles with reversing enabled.

Entering Diagnostic Mode From Idle Mode

When entered from the Idle Mode, the control will be running a test selected by the user via keypad presses or communication with a device.

Displaying Temperature Mode

The temperature can be displayed during an active cycle by pressing the up arrow or down arrow to scroll through the menu. Select A:(Temp Value) to see the actual or current temperature. Select P:(Temp Value) to see the programmed temperature.

Machine Cycle Definition and Operation

There are 30 machine cycles that can be selected and run. Machine cycles can be modified or made “unavailable” by manually editing them in Modify Cycle Menu or by using the PDA to download a modified machine cycle into the control. Machine cycles cannot be deleted, but can be made “unavailable” so that they are not visible from the Cycle Menu. New machine cycles cannot be created, but existing machine cycles that have been edited to be “unavailable” may be re-edited to be available again.

2. Press Start to start selected cycle.

NOTE: If door is not closed when the Start keypad is pressed, display will show *door*.

Machine Cycle Operation

When a cycle is run, the control runs the cycle segment by segment in a sequence. First the control examines the Cycle Type chosen to determine if it is a Time Dry, Auto-Dry or Moisture Dry (if equipped) cycle type. Then the first segment is examined to see if it is programmed to *on* or *off*. If the segment is programmed to *off*, control skips to the next segment.

At the start of some machine cycles, the control displays a Total Remaining Cycle time. This time is taken from the machine cycles as they are programmed. The Total Remaining Cycle Time begins to count down as soon as the cycle is started.

Time Dry Cycle

In this type of cycle, the control will regulate the temperature and time duration as programmed for the cycle chosen.

Auto Dry Cycle

If this type of cycle is selected, the control determines the cycle time based on the temperature and dryness level programmed for the cycle chosen.

Moisture Dry Cycle (if equipped)

In this type of cycle, the control checks the programmed material type, programmed target moisture content, programmed temperature and the data received from the moisture sensing system to achieve the desired results.

Rotation Sensor Equipped Machines

On machines equipped with a rotation sensor, the control monitors the rotation sensor to verify the cylinder is rotating. The control calculates the cylinder's RPM. If the RPM drops to zero while the cylinder is supposed to be rotating, the control will advance to the Cool Down segment of the cycle and an error message will be displayed.

To Start a Cycle

1. Press the Up or Down keypad to change cycles.

Entering the Manual Mode

For programming, testing, and retrieving information from the control, it is often necessary to enter the Manual Mode by following the steps below.

For an overview of entering the Manual Mode, refer to the flow-chart.

How to Enter the Manual Mode

1. Control must be in Idle Mode.
2. Press and hold the Stop keypad, then press and hold the Back keypad, then press the Up keypad.
3. The display will show **Prog**.
4. Press the Up or the Down keypad to scroll through the options until the desired option appears in the display.
5. Press the Start keypad to enter the displayed mode.
6. To exit, press the Back keypad. The control will revert back to Idle Mode.

Manual Programming can only be turned on or off with an external device. Refer to the appropriate instruction manual. Diagnos-

tics can be turned on and off using an external device by manual programming.

By default, Manual Programming is turned **on**.

The manual features available in each group are as follows (the menu displayed on the display in this mode is in parentheses).

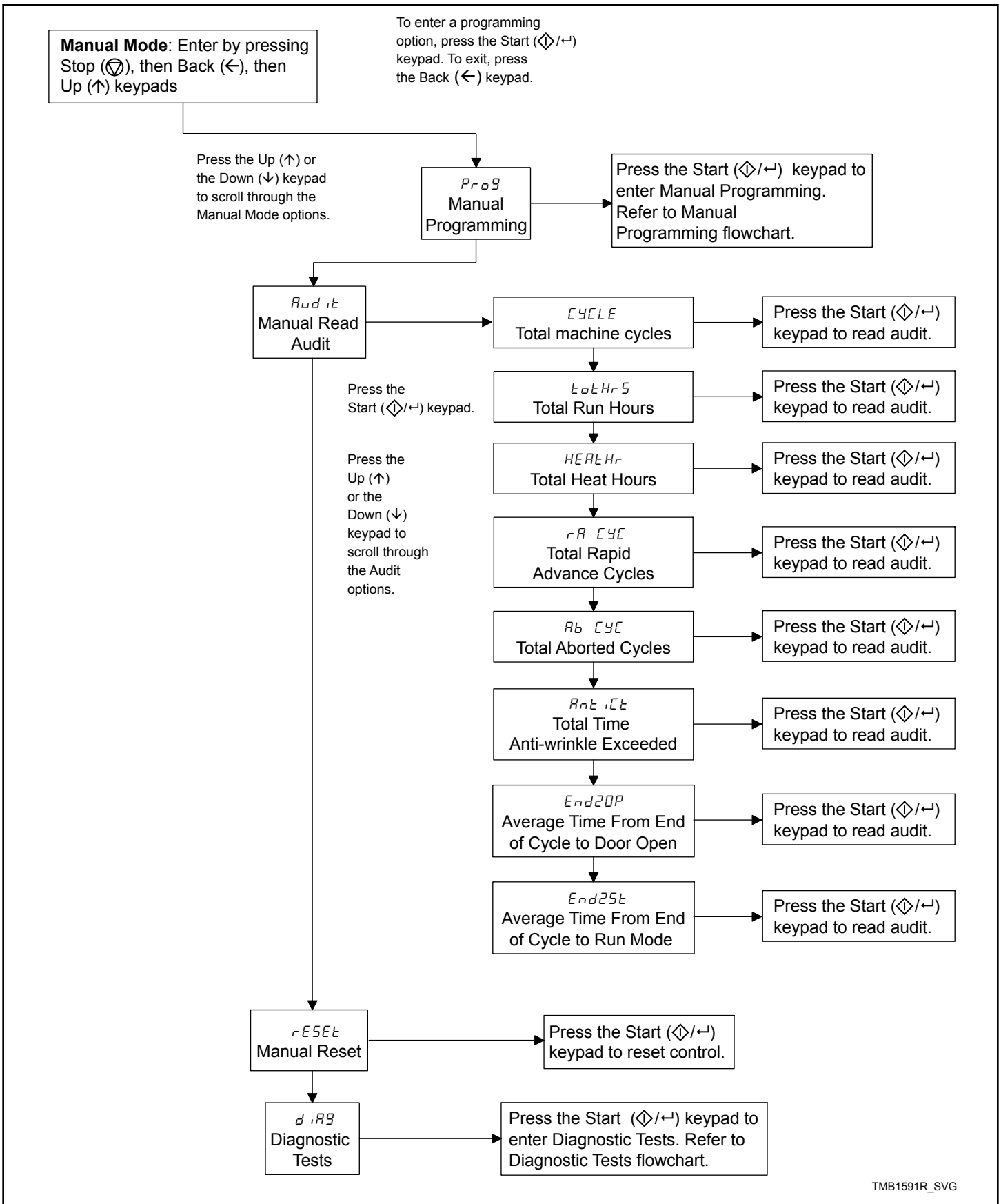
Manual Programming (**Prog**)

Manual Read Audit (**Read It**)

Manual Reset (**Reset**)

Diagnostic Tests (**Diag**)

If a manual parameter is turned off or unavailable (ex: trying to enter diagnostics while a cycle is running), the display will change from the selected feature to **OFF**, an audio signal will sound for one second and the features in the parameter cannot be entered. The display will then return to the selected feature.



TMB1591R_SVG

Figure 9

Programming Control

What Can Be Programmed?

This feature allows the owner to program cycle parameters and other features by using the keypads. The control must have the Manual Programming Mode enabled, which is the factory default. This mode can only be turned OFF and ON by using an external device. Refer to this section when programming the control.

For an overview of the programming organization, refer to the flowcharts on the following pages.

For more advanced users, a quick reference list of the options available through the programming mode is located below.

NOTE: The codes in the Option Display column of the Programmable Options List are what will show in the display when that option is selected.

How to Program a Cycle

1. Press the Up or Down keypad to scroll through the option list.
2. Press Start to select an option to program.
3. Press the Up or Down keypad to change the value of that option.
4. Press Start to save the change.

NOTE: Press the Back keypad to leave the option without saving any change.

5. After pressing Start, control will go to the next option in the list.
6. Press Back keypad to go to Idle Mode.

Programmable Options Available

Option Number	Option Display	Description	Default Value	Value Range
1	CYCLE-	Cycle Programming	-	-
a	CYCHH-	Cycle HH (HH represents cycles 1-30)	-	-
1	CHHE _n	Cycle HH Enable Disable	-	on/oFF
2	CHHE _{YP}	Cycle HH Type	-	tinE (Time Dry), Auto (Auto Dry), noiSt (Moisture Dry)
3	CHH _{nE}	Cycle HH Matieral Type	-	0 (Cotton), 1 (Blend), 2 (Bedding), 3 (Delicate), 4 (Synthetic), 5 (Wool)
4	CHHE _{PE}	Cycle HH Time Past Target (minutes)	-	0-15
5	CHHS 1-	Segment 1	-	CHHS11 (Segment 1 Enable/Disable), CHHS12 (Segment 1 Time), CHHS13 (Segment 1 Temperature), CHHS14 (Segment 1 Auto Dry Target Level), CHHS15 (Segment 1 Moisture Dry Target Moisture), CHHS16 (Segment 1 Reversing Enable/ Disable)
6	CHHS2-	Segment 2	-	CHHS21 (Segment 2 Enable/Disable), CHHS22 (Segment 2 Time), CHHS23 (Segment 2 Temperature), CHHS24 (Segment 2 Auto Dry Target Level), CHHS25 (Segment 2 Moisture Dry Target Moisture), CHHS26 (Segment 2 Reversing Enable/ Disable)

Table continues...

Option Number	Option Display	Description	Default Value	Value Range
7	<i>CHHS3-</i>	Segment 3	-	CHHS31 (Segment 3 Enable/Disable), CHHS32 (Segment 3 Time), CHHS33 (Segment 3 Temperature), CHHS34 (Segment 3 Auto Dry Target Level), CHHS35 (Segment 3 Moisture Dry Target Moisture), CHHS36 (Segment 3 Reversing Enable/ Disable)
8	<i>CHHS4-</i>	Segment 4	-	CHHS41 (Segment 4 Enable/Disable), CHHS42 (Segment 4 Time), CHHS43 (Segment 4 Temperature), CHHS44 (Segment 4 Auto Dry Target Level), CHHS45 (Segment 4 Moisture Dry Target Moisture), CHHS46 (Segment 4 Reversing Enable/ Disable)
9	<i>CHHS5-</i>	Segment 5	-	CHHS51 (Segment 5 Enable/Disable), CHHS52 (Segment 5 Time), CHHS53 (Segment 5 Temperature), CHHS54 (Segment 5 Auto Dry Target Level), CHHS55 (Segment 5 Moisture Dry Target Moisture), CHHS56 (Segment 5 Reversing Enable/ Disable)
10	<i>CHHCd-</i>	Cool Down	-	CHHCd1 (Cool Down Temperature), CHHCd2 (Cool Down Time), CHHCd3 (Cool Down Segment Reversing Enable/Disable)
11	<i>CHHr-</i>	Reversing	-	CHH r1 (Cycle Reversing Enable/Disable), CHH r2 (Cycle Reversing Rotate Time), CHH r3 (Cycle Reversing Stop Time)
2	<i>Cd-</i>	Global Cool Down	-	-
a	<i>Cd 1</i>	Cool Down Temperature	100°F [38°C]	70°-110°F [21°-43°C]
b	<i>Cd 2</i>	Cool Down Time (minutes)	2	1-15
3	<i>rEu-</i>	Global Reversing Parameters	-	-
a	<i>rEu 1</i>	Rotate Time (seconds)	3 (30)	3-9 (30-540 seconds)
b	<i>rEu 2</i>	Stop Time (seconds)	0 (6)	0-4 (6-10 seconds)
c	<i>rEu 3</i>	Advanced Reversing	0	0 (oFF), 1 (on)
4	<i>tEnP-</i>	Global Temperatures	-	-
a	<i>tEnP 1</i>	Global Very Low Temperature	100°F [38°C]	100°-120°F [38°-49°C]
b	<i>tEnP 2</i>	Global Low Temperature	120°F [49°C]	120°-140°F [49°-60°C](50, 75, 120, 170, 200 Pound Models), 105°-145°F [41°-63°C](25, 30, T30 Pound Models), 125°-155°F [52°-68°C](35, T45, 55 Pound Models)

Table continues...

Option Number	Option Display	Description	Default Value	Value Range
c	<i>tEnP 3</i>	Global Medium Temperature	140°F [60°C]	140°-160°F [60°-71°C](50, 75, 120, 170, 200 Pound Models), 135°-160°F [57°-71°C](25, 30, T30 Pound Models), 145°-165°F [63°-74°C](35, T45, 55 Pound Models)
d	<i>tEnP 4</i>	Global High Temperature	160°F [71°C]	160°-190°F [71°-88°C](35, T45, 55, 50, 75, 120, 170, 200 Pound Models), 155°-190°F [68°-88°C](25, 30, T30 Pound Models)
5	<i>Rud 10-</i>	Global Audio Signal	-	-
a	<i>Rud 1</i>	End of Cycle	1	0 (oFF), 1 (on)
b	<i>Rud 2</i>	End of Cycle Duration (seconds)	5	1-120
c	<i>Rud 3</i>	Keypad Feedback	1	0 (oFF), 1 (on)
6	<i>ES 19-</i>	External Signal	-	-
a	<i>ES 19 1</i>	External Signal End of Cycle	1	0 (oFF), 1 (on)
b	<i>ES 19 2</i>	External Signal End of Cycle Duration (seconds)	5	1-120
7	<i>nuLSE9</i>	Multi-Segment Cycles	0	1 (Enable), 0 (Disable)
8	<i>ndrYDP</i>	Advanced Moisture Dry Options	0	1 (Enable), 0 (Disable)
9	<i>Error -</i>	Error Displays	-	-
a	<i>Ed 15PL</i>	Display Limit Errors	0	1 (Enable), 0 (Disable)
b	<i>no 15t</i>	Display Moisture Sensor Error	1	1 (Enable), 0 (Disable)
10	<i>t FC</i>	Temperature	0	0 (Fahrenheit), 1 (Celsius)
11	<i>AI 9</i>	Auto Ignite Retry	3	0-255
12	<i>L int</i>	Clean Lint Reminder	0	0 (off)-255
13	<i>rtC -</i>	Real Time Clock	-	-
a	<i>rtC 1</i>	Minutes	-	0-59
b	<i>rtC 2</i>	Hours	-	0-23
c	<i>rtC 3</i>	Day	-	1-7
d	<i>rtC 4</i>	Date	-	1-31

Table continues...

Programming Control

Option Number	Option Display	Description	Default Value	Value Range
e	<i>r t C 5</i>	Month	-	1-12
f	<i>r t C 6</i>	Year	-	0-99
g	<i>r t C 7</i>	Daylight Savings	1	1 (Enable), 0 (Disable)
14	<i>r AP d E n</i>	Manual Rapid Advance	0	1 (Enable), 0 (Disable)
15	<i>d i A G E n</i>	Manual Diagnostics	1	1 (Enable), 0 (Disable)

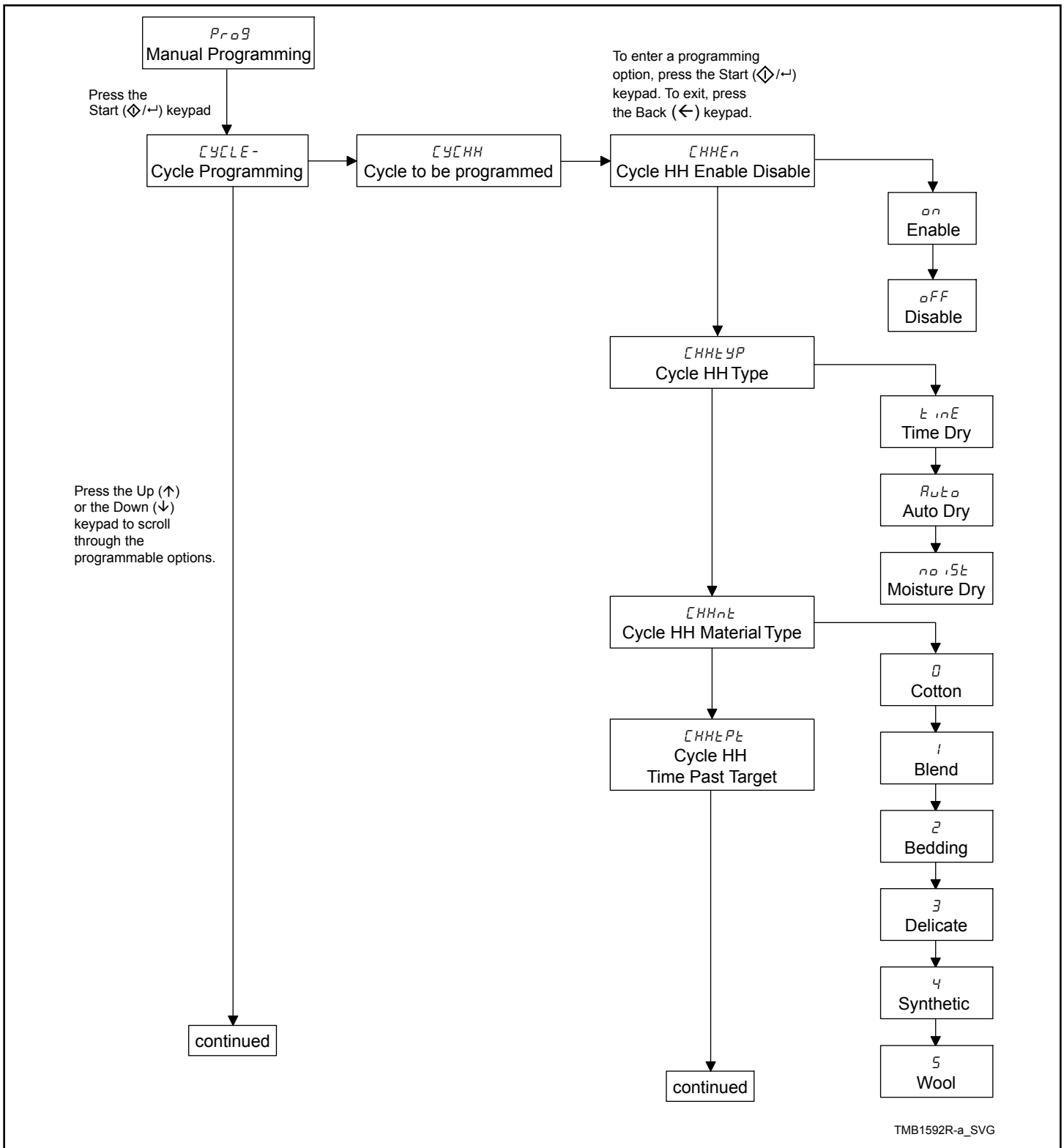


Figure 10

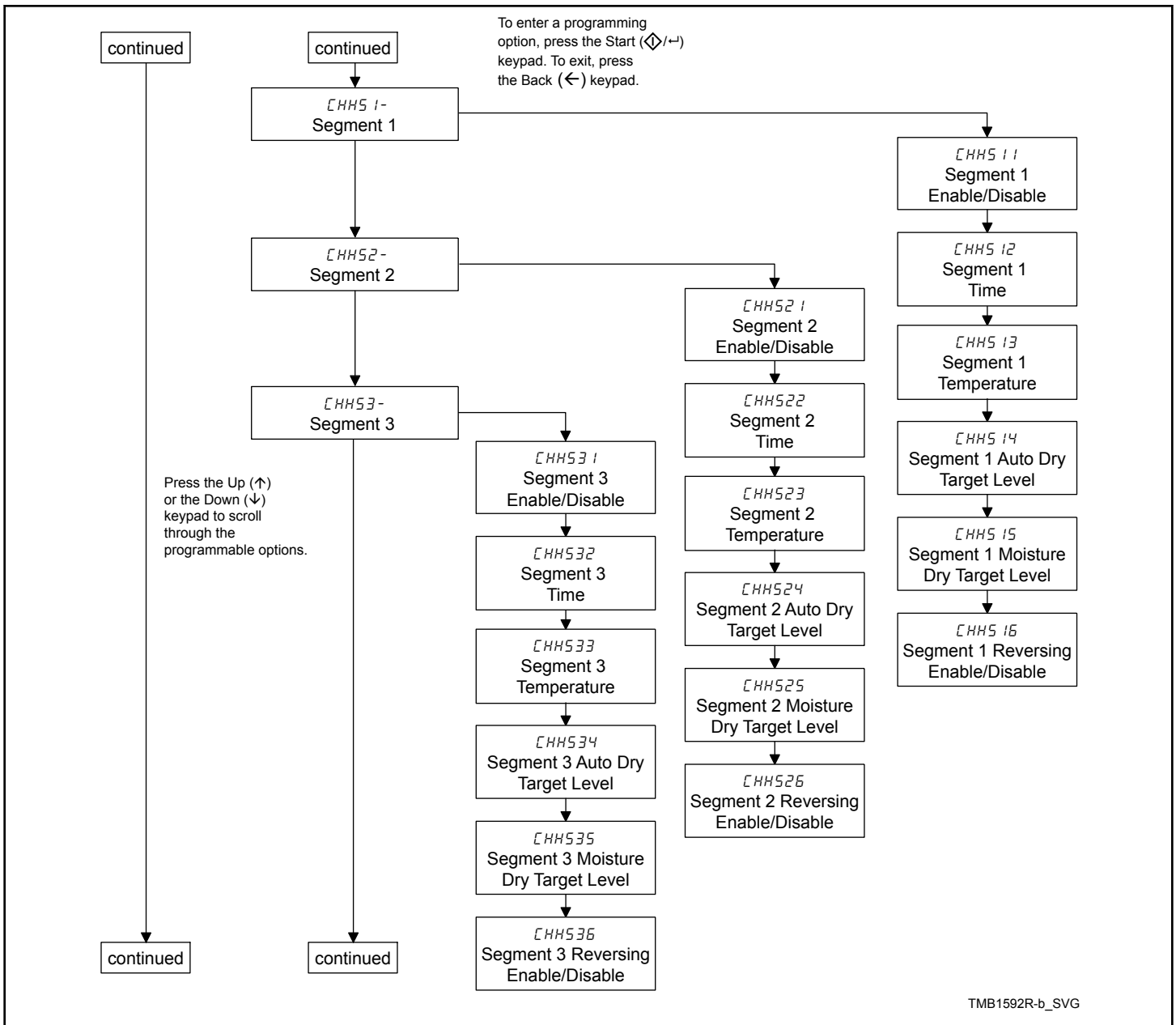


Figure 11

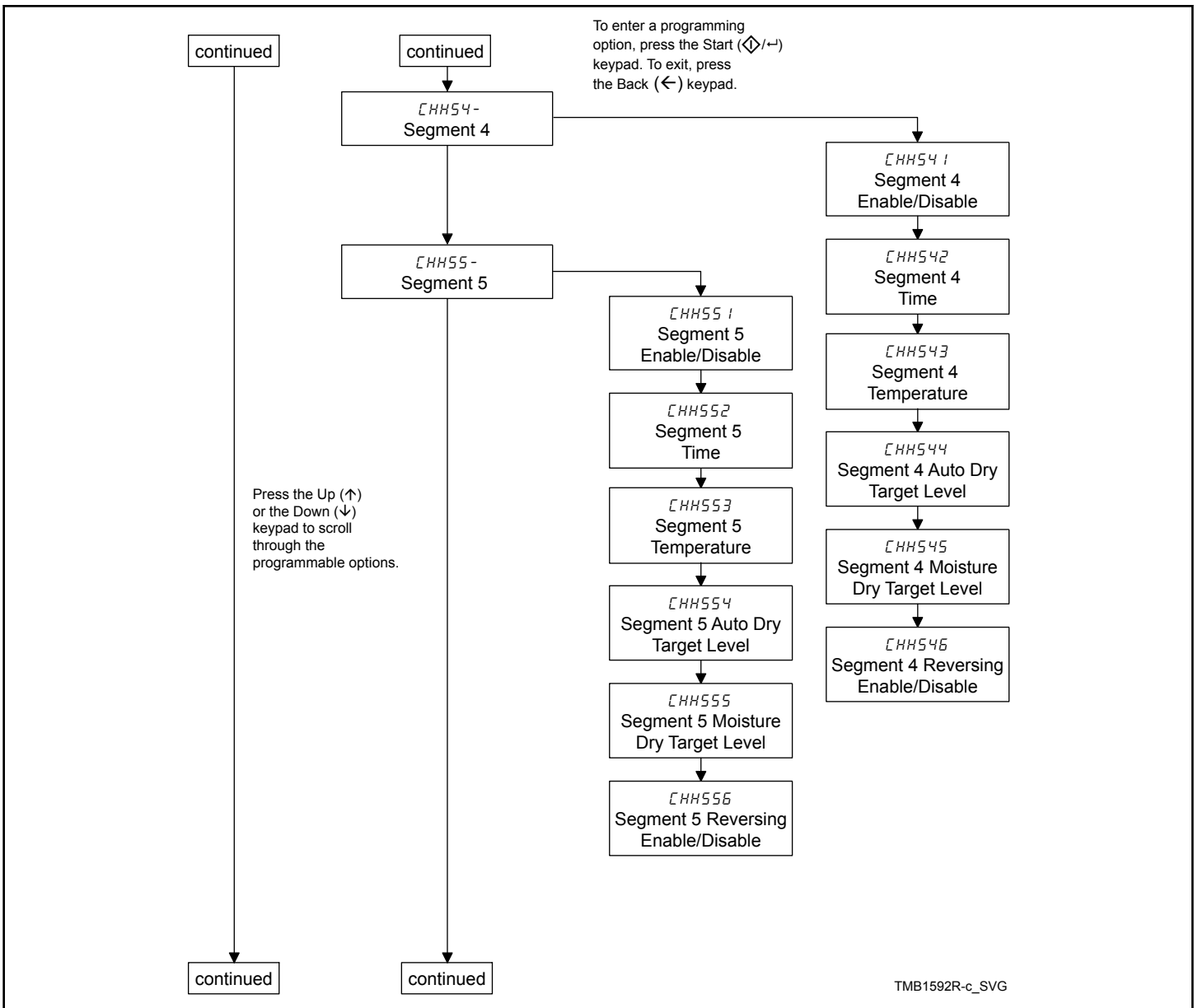


Figure 12

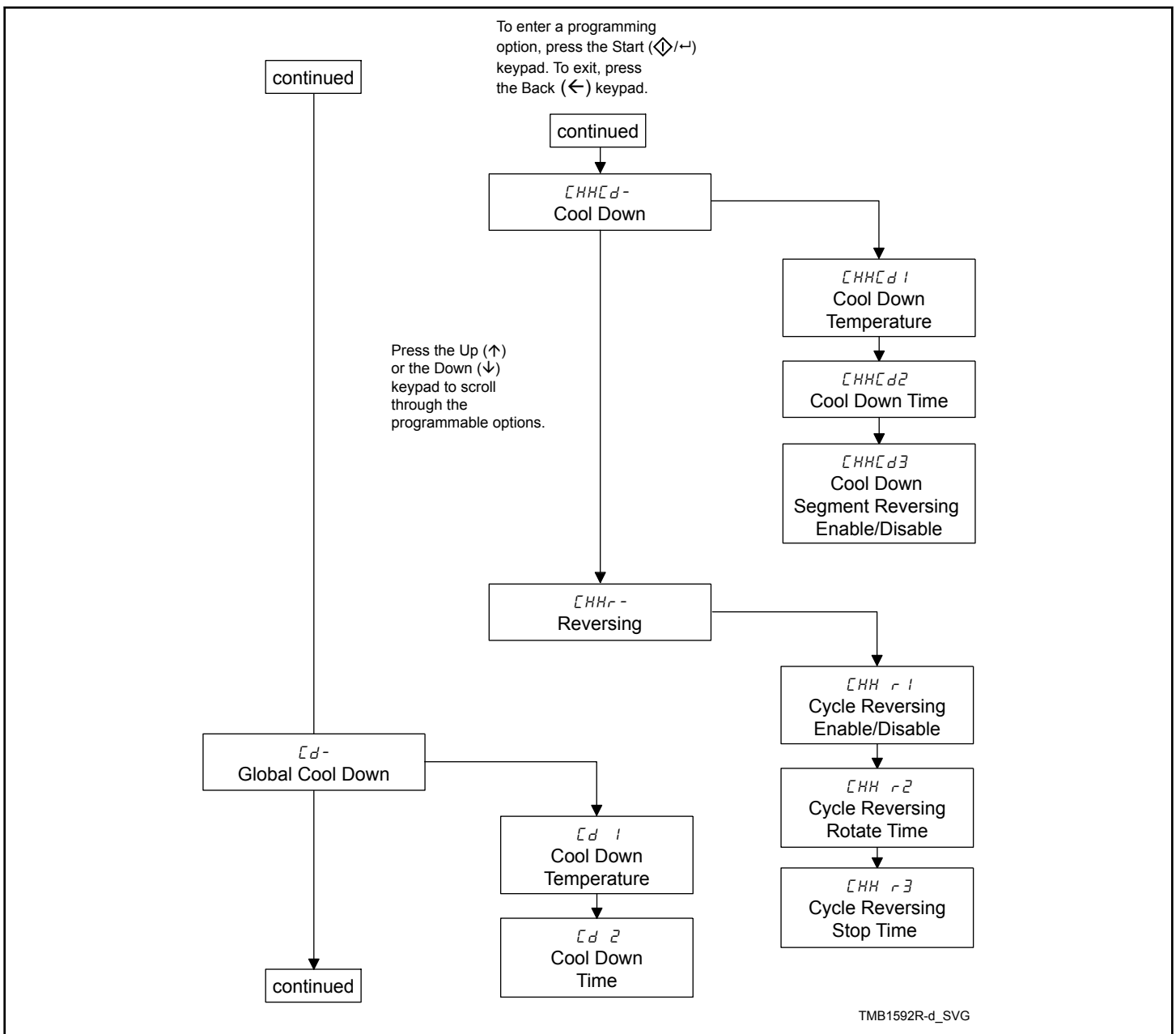


Figure 13

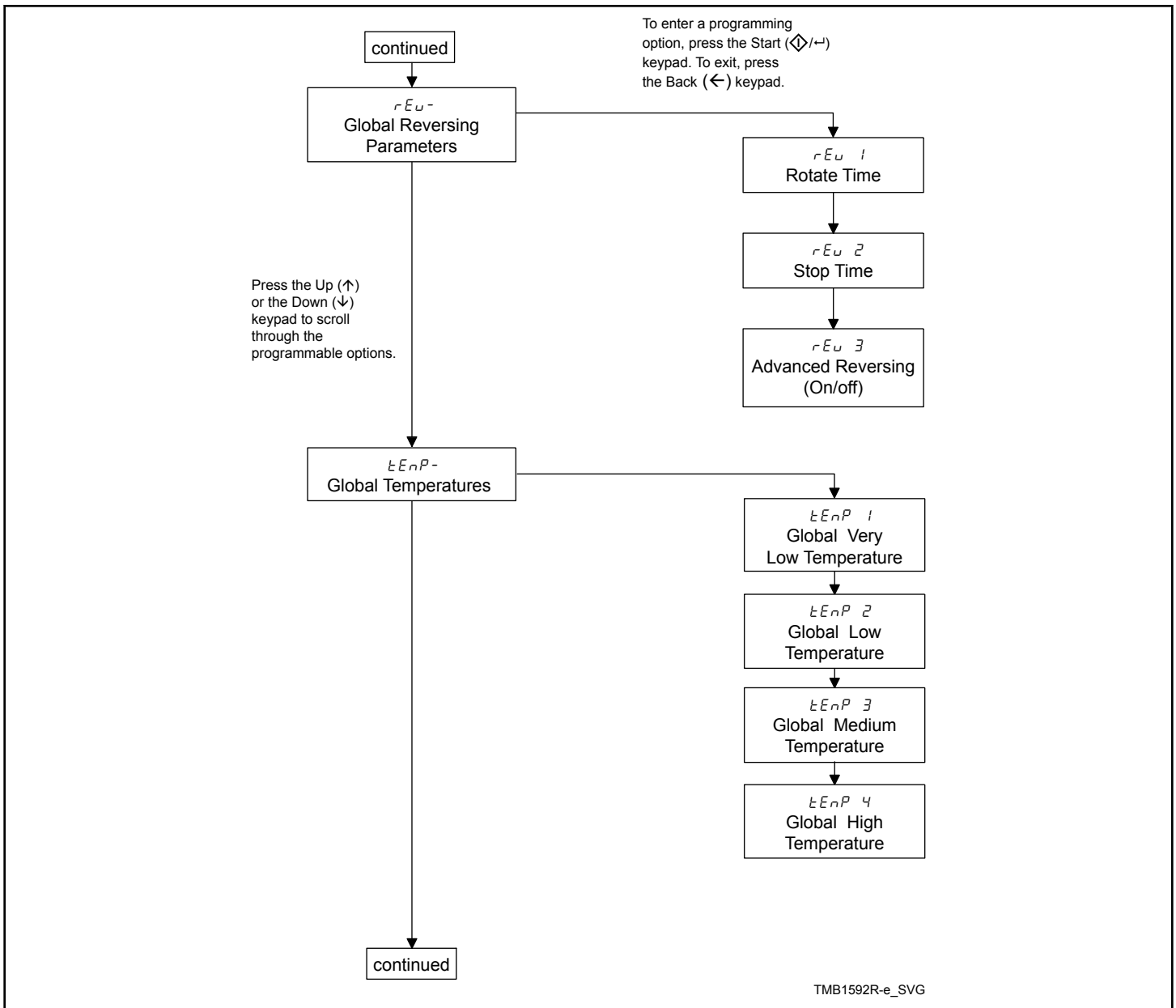


Figure 14

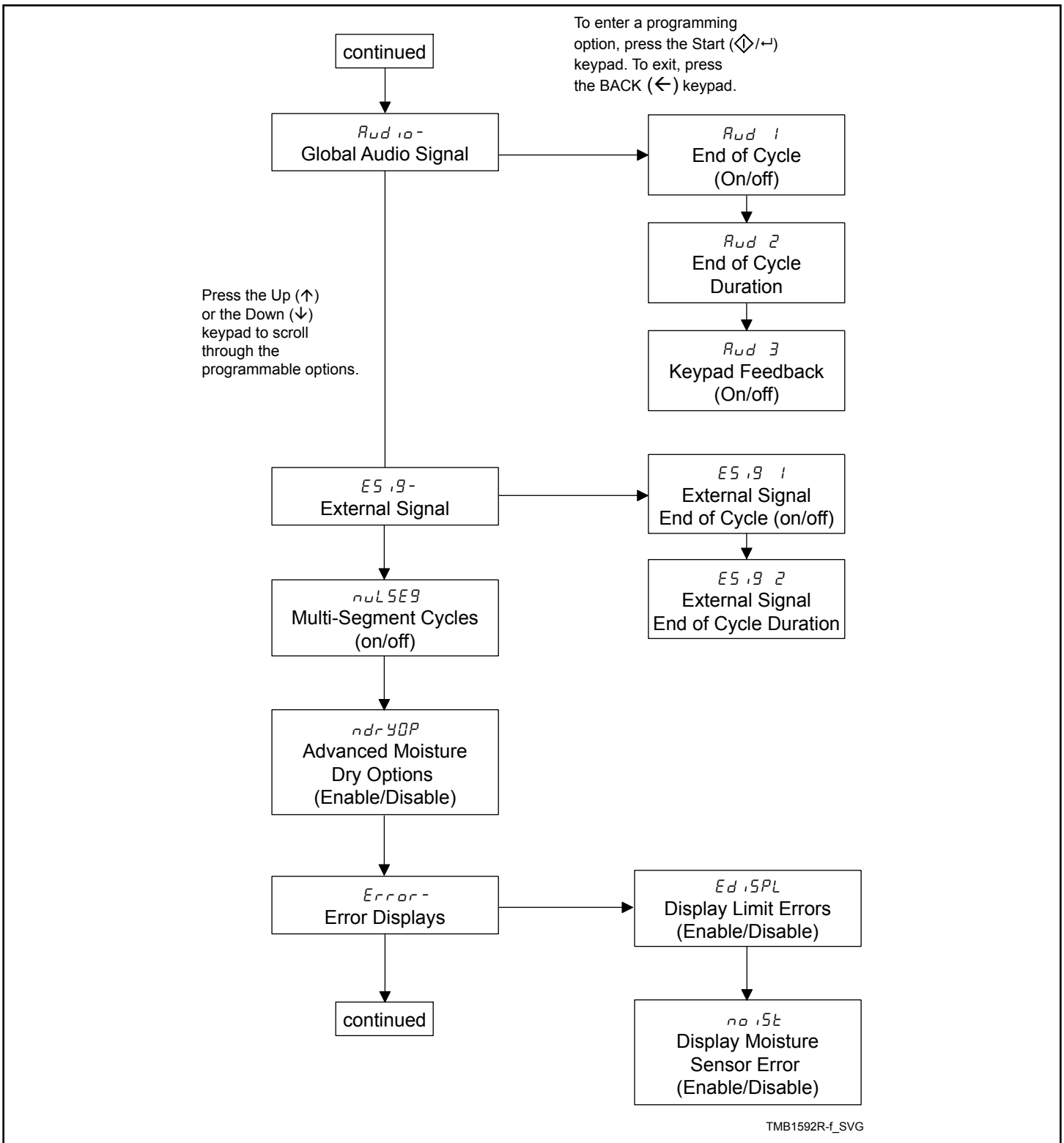


Figure 15

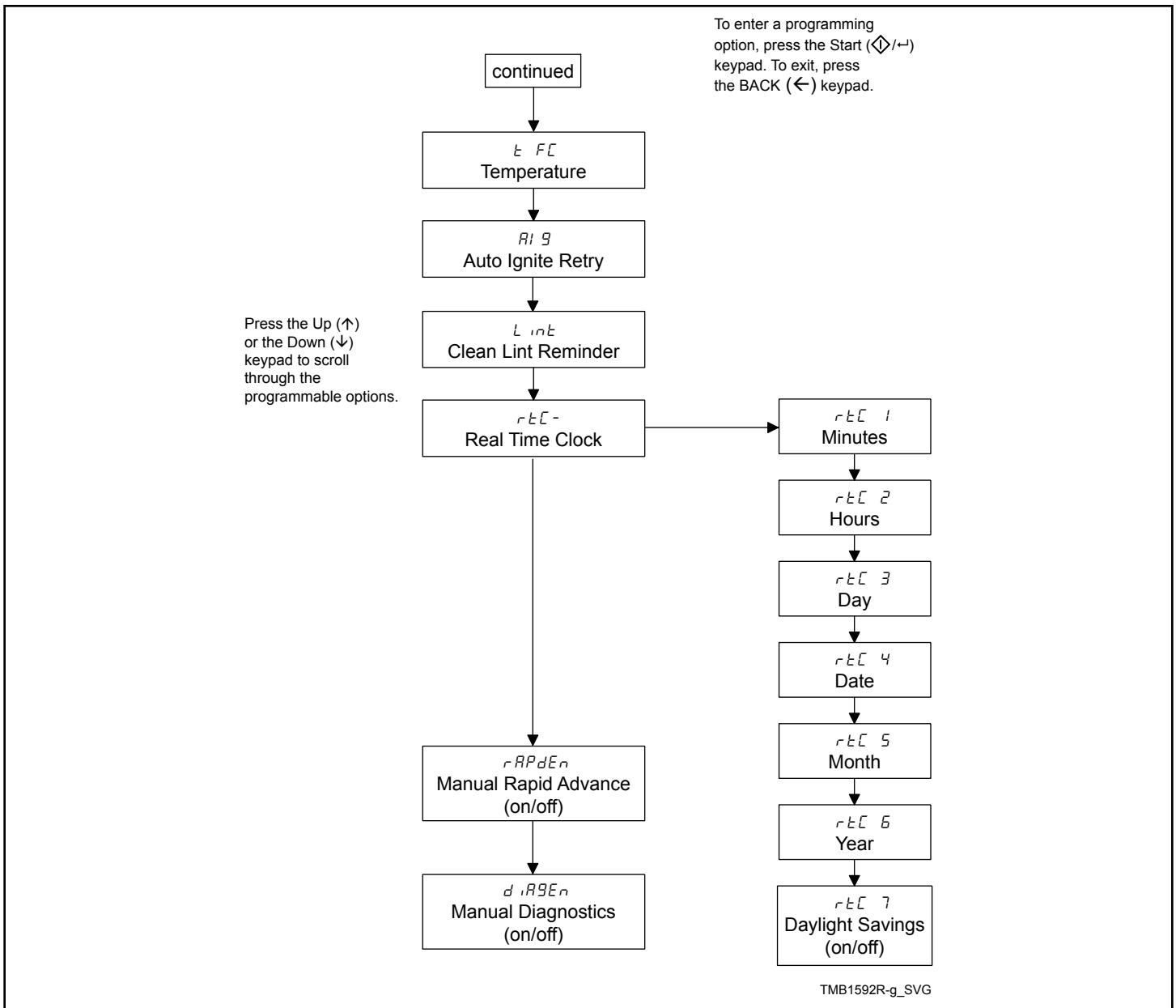


Figure 16

Collecting Audit Information

This feature allows the owner to retrieve audit information stored in the tumble dryer by pressing a sequence of pads on the control. For an explanation of the audit options available, refer to *Table 5*.

How to Enter Audit Feature

1. Control must be in Manual Mode to start. Refer to *How to Enter the Manual Mode*.
2. Press the Up or the Down keypad until **Audit** appears.
3. Press the Start keypad. **CYCLE** will appear.

If the procedure did not work, the control will return to the Idle Mode.

How to Read Audit Data

1. Use the Up or the Down keypad to scroll through various options until the desired option is shown in the display. Refer to *Table 5* for an explanation of the audit options available.

Audit Options List	
Display	Description
CYCLE	Total # of machine cycles
totHrs	Total # of run hours
HEAtHr	Total # of heat hours
RA CYC	Total # of rapid advance cycles
Ab CYC	Total # of aborted cycles
Anti Wr	Total # of times anti-wrinkle exceeded
End20P	Average time from end of cycle to door open (last 25 cycles)
End25t	Average time from end of cycle to run mode (last 25 cycles)

Table 5

2. Once the desired option appears in the display, press the Start keypad **once** to start the audit count.
3. Press the Start keypad again. The control will go to the next audit option in the Audit Options List.
4. To select other audit options, repeat steps 1 – 3.

How to Exit Audit Feature

Press the Back keypad until the control returns to Idle Mode.

Manual Reset

This feature allows the owner to reset the tumble dryer control's programming data to the factory default settings by pressing a sequence of pads on the control. For an explanation of the Factory Default Settings, refer to **Default Tumble Dryer Settings**.

1. Control must be in Manual Mode to start. Refer to *How to Enter the Manual Mode*.
2. Press the Up or the Down keypad until **rESEt** appears.
3. Press the Start keypad. The control will be blank until the programming is complete. Once the program has been reset, the control will revert back to the Manual Mode, displaying **d .R9**.

Custom Save

This feature allows the owner to save a current cycle. For time dry cycles, the custom save will reprogram the cycle time to the time that has elapsed in the current cycle. For moisture dry cycles, the custom save feature will save the current moisture level as the target moisture level for the current cycle.

1. While a cycle is running, press the Back and Start keypads.
2. Display will change to **SAUE** and Start keypad will flash.
3. Press the Start keypad.

Testing Machine and Electronic Control Functions

This feature allows the owner to run diagnostic tests on various tumble dryer operations without servicing the tumble dryer. The tests that are available are shown in *Table 6*.

For an overview of the manual diagnostic test feature, refer to the flowchart.

How to Enter Testing Feature

1. Enter Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the Up or the Down keypad until **d iR9** appears.
3. Press the Start keypad. Display will change to **d5oFt** indicating the control software version number test.

4. Press the Up or the Down keypad to scroll through the diagnostic test options.

How to Start Tests

To start a diagnostic test, refer to the quick reference chart below (*Table 6*). Press the Start keypad when the desired test is displayed. For detailed information on each test, read the appropriate description.

How to Exit Testing Feature

Press the Back keypad. The display will return to Idle Mode.

Diagnostic (Testing) Mode – Quick Reference Chart	
Test Number	Diagnostic Mode
d5oFt	Control Software Version
ddoor	Loading Door Status
dLint	Lint Door Status
dHEAt	Heater Interlock Test
FCDnHH	Fan Motor Contactor Status (HH represents input status, open DP or closed CL)
FnC5HH	Fan Motor Centrifugal Switch Status (HH represents input status, open DP or closed CL)
CRb HH	Cabinet High Limit Thermostat Status (HH represents input status, open DP or closed CL)
SL HH	Stove High Limit Thermostat 1 Status (HH represents input status, open DP or closed CL)
SL2 HH	Stove High Limit Thermostat 2 Status (HH represents input status, open DP or closed CL)
dd iP	DIP Switch Status
d iCnAL	ICM Alarm Status
d iCnr5	ICM Reset Test
dEALrn	External Alarm Test
ddrYon	Dryer On Temperature Test
dtHEr	Thermistor Temperature Test
dConF2	Machine Config #2 Display

Table 6 *continues...*

Diagnostic (Testing) Mode – Quick Reference Chart	
<i>dConF3</i>	Machine Config #3 Display
<i>dAF5</i>	Airflow Switch Test
<i>dFAn</i>	Fan Motor Test
<i>ddAnPr</i>	Damper Motor Test*
<i>drEuSE</i>	Reverse Motor Test*
<i>drAtAt</i>	Rotation Sensor Test*
<i>drnC 1</i>	Moisture Sensor Test (Shorted test jumper)* (orange jumper)
<i>drnC 2</i>	Moisture Sensor Test (Resistance test jumper)* (black jumper)
* = Test only shown if enabled by the DIP switch configuration.	

Table 6

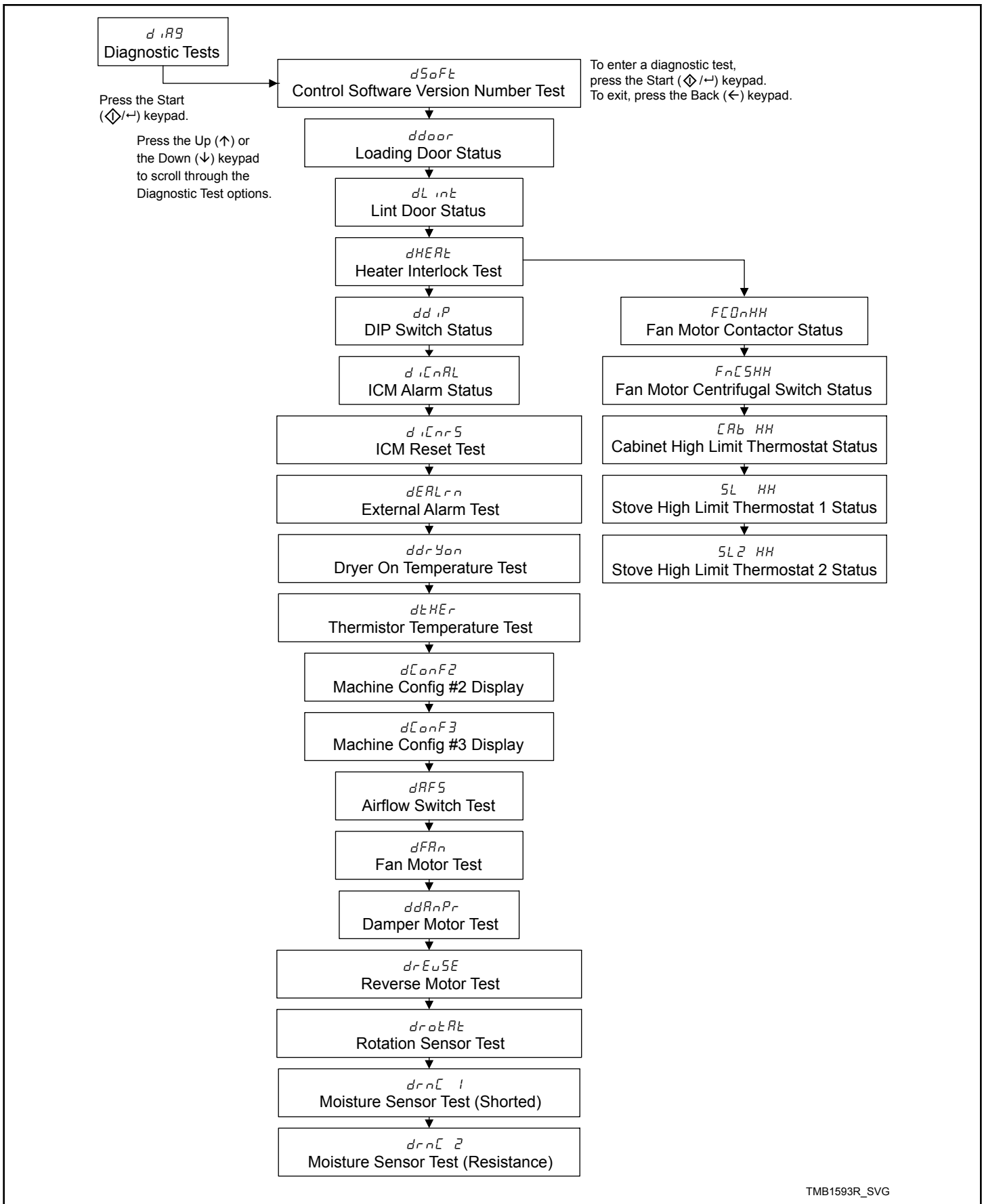


Figure 17

Diagnostic Test Descriptions

Control Software Version Number Test

This option displays the control software version number. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **5 HH** where **HH** is the software version number.

To exit the Software Version Number Test, press the Back keypad. The control will return to the testing mode.

Loading Door Test

This option tests the loading door switch. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **doorDP** when the loading door switch is open and **doorCL** when the loading door switch is closed.

The loading door switch has to be closed or open for at least one second for the control to register the switch as closed or open.

To exit the Loading Door Test, press the Back keypad. The control will return to the testing mode.

Lint Door Test

This option tests the lint door switch. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **LintDP** when the lint door switch is open and **LintCL** when the lint door switch is closed.

The lint door switch has to be closed or open for at least one second for the control to register the switch as closed or open.

NOTE: Loading door must be closed while testing lint door.

To exit the Lint Door Test, press the Back keypad. The control will return to the testing mode.

Heater Interlock Test

While this test is running, the control will show the status of the following inputs for two seconds each. The control will continue scrolling through the input status displays until the test is aborted.

To start test, the control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press Start. Refer to five sections below for more details on individual statuses.

NOTE: These switches are tested in sequence. If one switch is sensed open, the rest will be open as well. For example, if the fan motor contactor switch is open, all of the switches will be open.

To exit the test, press the Back keypad. The control will return to the testing mode.

Fan Motor Contactor Switch

The display will show **FCOnDP** if the switch is sensed open and **FCOnCL** if the switch is sensed closed.

Fan Motor Centrifugal Switch

The display will show **FnCSDP** if the switch is sensed open and **FnCSCCL** if the switch is sensed closed.

Cabinet High Limit Thermostat

The display will show **CAb DP** if sensed open for at least 1.5 seconds and **CAb CL** if sensed closed for at least one second.

Stove High Limit Thermostat 1

The display will show **SL DP** if sensed open for at least 1.5 seconds and **SL CL** if sensed closed for at least one second.

Stove High Limit Thermostat 2

The display will show **SL2 DP** if sensed open for at least 1.5 seconds and **SL2 CL** if sensed closed for at least one second.

Dip Switch Status

The control will show the displays in *Table 7* according to the DIP switch configuration. The control will show which switches are in the ON position.

DS8	DS7	DS6	DS5	DS4	DS3	DS2	DS1	Display
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	d5C000
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	d5C001
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	d5C002

Table 7 continues...

DS8	DS7	DS6	DS5	DS4	DS3	DS2	DS1	Display
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	d5C004
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	d5C008
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	d5C016
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	d5C032
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	d5C064
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	d5C128

Table 7

ICM Alarm Status

This option shows the status of the ICM (Ignition Control Module) Alarm.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **AL ON** if the alarm is active for at least one second or **AL OFF** if the alarm is not active for one second.

To exit the test, press the Back keypad. The control will return to the testing mode.

ICM Reset Test

The ICM Reset Test can be used to both activate the ICM alarm signal and reset the ICM alarm. When this test is started, the ICM reset will become active. If the reset signal is active for a long enough period of time (4 seconds) the ICM Lockout input will become active. To reset the ICM, stop the ICM Reset Test and then start the test again until the ICM Lockout input becomes inactive (4 seconds) and then stop the ICM Reset Test. If **RESET** shows on the display, ICM Reset output is active.

External Alarm Test

This option tests whether the external alarm is working.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **ALARM** and the external alarm will sound until the test is exited.

To exit this test, press the Back keypad. The control will return to the testing mode.

Tumble Dryer On Temperature Test

This option tests the temperature inside the cylinder while running a cycle.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **P HHHF** (Fahrenheit) or **P HHH C** (Celsius). Use the Up or the Down keypad to select desired temperature. Press the Start keypad to begin cycle. While the test is running the control will display the temperature estimated in the cylinder (**HHH F** or **HHH C**). Once the cylinder temperature stabilizes at the target temperature, the heater is turned off and there is a two minute cool down period. During cool down, the control will display the time remaining as **nn 55**.

NOTE: This test does not increment the Total # of Cycles audit counter.

To exit the test, press the Back keypad. The control will return to the testing mode.

Thermistor Temperature Test

This option displays the temperature sensed at the thermistor in 5°F [3°C] increments.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **HHHF** or **HHHC**. The **F** will show Fahrenheit, the **C** will show Celsius and the **HHH** will show degrees. If control senses a shorted thermistor, the display will show **SH**. If the control senses an open thermistor, the display will show **OP**.

To exit this test, press the Back keypad. The control will return to the testing mode.

Machine Configuration Display #2 Test

This option shows the machine configuration values for the machine type.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **C HHH**, with **HHH** the number corresponding to the machine capacity. Refer to *Table 8*.

Value	Description
2	25, 30 Pound Tumble Dryer
4	30, 45 Pound Stack Tumble Dryer
5	35 and 55 Pound Tumble Dryer
12	50, 75, F75, 120, 170 and 200 Pound Tumble Dryer

Table 8

To exit Machine Configuration Display #2 Test, press the Back keypad. The control will return to the testing mode.

Machine Configuration Display #3 Test

This option shows the machine configuration values for the machine capacity.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **d HHH**, with **HHH** representing the machine capacity. Refer to *Table 9*.

To exit Machine Configuration Display #3 Test, press the Back keypad. The control will return to the testing mode.

Value	Description
0	Tumble Dryer
17	25 Pound Tumble Dryer
18	30 Pound Tumble Dryer
19	30 Pound Stack Tumble Dryer
20	30 Pound Stack Tumble Dryer – Lower Pocket
21	30 Pound Stack Tumble Dryer – Upper Pocket
22	35 Pound Tumble Dryer
23	45 Pound Stack Tumble Dryer
24	45 Pound Stack Tumble Dryer – Lower Pocket

Table 9 continues...

Value	Description
25	45 Pound Stack Tumble Dryer – Upper Pocket
26	50 Pound Tumble Dryer
27	55 Pound Tumble Dryer
28	75, F75 Pound Tumble Dryer
29	120 Pound Tumble Dryer
30	170 Pound Tumble Dryer
31	200 Pound Tumble Dryer

Table 9

Airflow Switch Test

This option shows the current state of the airflow switch.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **AF DP** or **AF CL**, with **AF DP** being open and **AF CL** being closed.

Switch has to be closed for at least one second or open for at least one second for a valid change.

To exit Airflow Switch Test, press the Back keypad. The control will return to the testing mode.

Fan Motor Test

This option shows the fan motor running.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show **FAn** to indicate the fan motor is going to run.

The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Fan Motor Test, press the Back keypad. The control will return to the testing mode.

Damper Motor Test

This option shows the damper motor running.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show *dAnPEr* to indicate the damper motor is going to run.

The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Damper Motor Test, press the Back keypad. The control will return to the testing mode.

Reverse Motor Test

This option shows the reverse motor running.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show *rnoTOR* to indicate the reverse motor is going to run.

The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation

To exit Reverse Motor Test, press the Back keypad. The control will return to the testing mode.

Rotation Sensor Test

This option shows the RPM of the tumble dryer cylinder.

To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the Start keypad. The display will show *rPnHHH*. The display is updated every ten seconds. The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Rotation Sensor Test, press the Back keypad. The control will return to the testing mode.

Moisture Sensor Test (Shorted Test Jumper)

This step is skipped if the control is not configured for Moisture Sensing. When entering this test, the control will show *rnC 1* while flashing the Start LED one second on/one second off, allowing the user to short the cylinder to the baffle (orange jumper). When the Start key is pressed, this test step energizes the Fan Motor Contactor and Forward Motor Contactor and the control will show *HH*. The moisture sensor test is 30 seconds. During this 30 second period, the control is continually monitoring the moisture sensor input for the expected short circuit. If an intermittent signal or high resistance is sensed before the 30 seconds expire, the test is terminated and the control will show *DPEn*, indicating that the test has failed. At this time the user has the option to

press the Back keypad to return and run the test again. If the control ran the whole test reading the expected moisture sensor level and without an intermittent signal or high resistance, *PASS* will be shown. If either the loading or lint doors are opened during the test, the control will reset the test step and allow it to be run again. When the test is complete and result is displayed, the control sounds a 5 second audio signal. Press a key to advance to the next test step. If the Up or Down keypad is pressed while the test is in progress the control will toggle between displays *HH*, *rnC HH* and *5nrHHH*. If the display is left on *rnC HH* or *5nrHHH* for 5 seconds the control will revert to showing *rnC 1*.

Moisture Sensor Test (Resistance Test Jumper)

This step is skipped if the control is not configured for Moisture Sensing. When entering this test, the control will show *rnC 2* while flashing the Start key LED one second on/one second off, allowing the user to place the 510k Ohm resistor between the cylinder and the baffle (black jumper) which simulates an expected moisture sensor level. When the Start keypad is pressed, this step energizes the Fan Motor Contactor and Forward Motor Contactor and the control will show *HH*. The moisture sensor test is 30 seconds. During this 30 second period, the control is continually monitoring the moisture sensor input for the expected moisture sensor level. If an intermittent signal or unexpected resistance is sensed before the time expires, the test is terminated and the control will show *DPEn*, indicating that the test has failed. At this time, the user has the option to press the Back keypad to return and run the test again. If the control ran the test reading the expected moisture sensor level and without an intermittent signal or unexpected resistance, *PASS* will be shown. If either the loading or lint doors are opened during the test, the control will reset the test step and allow it to be run again. When the test is complete and result is displayed, the control sounds a 5 second audio signal. Press a key to advance to the next test step. If the Up or Down keypad is pressed while the test is in progress the control will toggle between *HH*, *rnC HH* and *5nrHHH*. If the display is left on *rnC HH* or *5nrHHH* for 5 seconds the control will revert to showing *rnC 2*.

Production Test Cycle

To Enter Production Test Cycle

1. Be certain control is in Idle Mode.
2. While pressing and holding the Down keypad with one hand, press the Back keypad with the other hand.
3. When the control enters the Production Test Cycle, it will first display *5 HH* with the *HH* showing the software version of the control.
4. The control will advance through the sequence of test steps whenever any keypad is pressed, with the exception of the Keypad Test. Refer to *Table 10* for all tests in the Production Test Cycle.

To Exit Production Test Cycle

The test will be exited when the time reaches **00** on the control in the 10 Minute Test Cycle. Otherwise, the control must be powered down to end the test.

Production Test Cycle Quick Reference Table		
Display	Test Mode	Comments
5 HH	Software Version	HH is the software version number.
CE HHH	Control Type	2, 3, 4, 5 or 6, depending on brand.
PRd	Keypad Test	When a key is pressed, the control will display the number assigned to the keypad. As each keypad is pressed, the control will display the number assigned to it in the last digit of the display until the next key is pressed (example, if Key 1 is pressed the control will show PRd 1). When all keypads have been pressed, the control will advance to next step after a one second delay.
doorOP or doorCL	Loading Door Test	The control will display the status of the loading door: doorOP if door is open or doorCL if door is closed.
L intOP or L intCL	Lint Door Test	The control will display the status of the lint door: L intOP if door is open or L intCL if door is closed. Loading door must be closed.
All LEDs and display segments will light	Show Entire Display Mode	The audio signal is turned off. Control will stay in this mode until any key is pressed.
C HH	Machine Configuration #2 Display	HH is the configuration byte value. The control will remain in this mode until any key is pressed.
-	DIP Switch Configuration	The control will show the sum of all switches in the On position. The control will remain in this mode until any key is pressed.
Degrees in 5°F [3°C] increments, 5H, oP	Thermistor Temperature Test	The temperature will be displayed in either Fahrenheit or Celsius, depending on machine's configuration (refer to <i>Programming Control</i>). If control senses a shorted thermistor, 5H will be displayed. If control senses an open thermistor, oP will be displayed.
-	Moisture Sensor 1 Test (Shorted)	Refer to <i>Diagnostic Test Descriptions</i> . Test step lasts for 15 seconds.
-	Moisture Sensor 2 Test (Resistance)	Refer to <i>Diagnostic Test Descriptions</i> . Test step lasts for 15 seconds.
nn 55	10 Minute Test Cycle	Determines if tumble dryer can function in a cycle for 10 minutes. Start pad will flash one second on and one second off. The Start pad can be used to decrease time remaining. If Start pad is not pressed within 4.25 minutes, the control will return to Idle Mode.

Table 10

NOTE: If power to the control is turned off before 10 Minute Test Cycle has ended, the cycle will be cleared from control.

Machine Errors

PDA Communications Error

These errors may occur during communications. When an error occurs, the display indicates the error message on the control for a few seconds. When a PDA communication error occurs, the audit counter Total Bad IR Communications is incremented, the hour, date, and year of the event are saved, and the error code is saved. An active machine cycle is not affected when there is an error during PDA communications.

Open Thermistor Error

Any time the control senses a temperature less than 0°F [-18°C] after the first three minutes of an active cycle, the control will go to Cool Down, display this error message, and then turn on the audio signal. The control will continue to display the error message until any of the keypads are pressed, the Cool Down portion of the cycle has ended, and the temperature reading is greater than 0°F [-18°C]. Press any keypad to stop audio signal. Once all three occur, the control will return to the Idle Mode.

Shorted Thermistor Error

Any time the control senses a temperature greater than 210 + 4°F [99°C + 16°C] during an active cycle, the control will enter the Cool Down portion of the cycle, display this error message, and turn on the audio signal. The control will continue to display the error message until any of the keypads are pressed, the Cool Down portion of the cycle has ended, and the temperature reading is less than 210°F [99°C]. Press any keypad to stop audio signal. Once all three occur, the control will return to the Idle Mode.

Stove and Cabinet Limit Errors

There are up to two Stove Limit thermostats and one Cabinet Limit thermostat on the machine. While the heat relay is on, if the stove temperature or cabinet temperature reaches the high temperature for the particular limit thermostat, the heater will turn off automatically and the control will continue the cycle with no heat until the limit thermostat resets. Once the control reaches the End of Cycle the control will display the appropriate error message, if programmed to do so, and sound the audio signal. The control will continue displaying the error message until the control returns to Idle mode.

NOTE: On some models the stove and cabinet limit thermostats need to be manually reset. The remainder of the cycle will be run with no heat. On these models, the thermostat(s) must be reset prior to cycling power or the control will return back to Error Mode.

Auto Ignition Retry (Gas Models Only)

If the Ignition Control Module (ICM) fails to ignite the gas valve the ICM will send an ICM Lockout Alarm to the control. When the control receives the ICM Lockout Alarm it will increment the ICM Lockout Alarm audit counter.

If the ICM needs to be manually reset, when the control receives the ICM Lockout Alarm it will display the Cycle Stopped Menu with text prompting the user to press the Start keypad to reset the ICM. The user can continue to reset the ICM until there are no more programmable retry attempts (factory default is 3) or the gas ignites. On machines equipped with an ICM that does not need to be manually reset, when the control receives the ICM Lockout Alarm it will turn the heat relay off for twenty (20) seconds and then turn it back on to try and ignite the gas. The control will continue to try and ignite the gas until there are no more programmable retry attempts (factory default is 3) or the gas ignites. If the ICM fails to ignite the gas on the last attempt the control will start the Cool Down portion of the cycle, display the heat error message and sound the audio signal. When the Cool Down portion of the cycle ends the control will continue to display the error message until power is cycled to the machine or a user presses the Back keypad.

Air Flow Switch Errors

The control will flag an Airflow Switch Error under several conditions. Airflow Switch Errors will be processed differently depending upon what state the machine was in when the error was detected.

Airflow Switch Sensed Closed While Not In Run Mode

If an airflow switch is sensed closed 30 seconds after entering Idle Mode, Pause Mode or End of Cycle Mode, the control will display an error message until power is cycled or the error clears. The cycle will not start and all user inputs will be ignored. If the error does clear, the control will go back to its previous mode of operation.

Airflow Switch Does Not Close After Cycle Started

If the airflow switch does not close within 5 seconds of the start/re-start of a cycle, the control will go to the Cool Down portion of the cycle, display an error message and sound the audio alarm. Once the Cool Down portion of the cycle ends, the control will continue to display the error message until the power is cycled to the machine or the Back keypad is pressed.

Airflow Switch Bounces During A Running Cycle

If the airflow switch is open for at least one second, the heat will be turned off and will remain off until the switch is observed closed for at least 5 seconds (it is flagged as an airflow switch bounce). If there are 5 airflow switch bounces within 5 minutes the control will go to the Cool Down portion of the cycle, display an error message and sound the audio signal. When the Cool Down portion of the cycle ends, the control will continue displaying the error message until power is cycled or a user presses the Back keypad.

Rotation Sensor Error

If the machine is equipped with a rotation sensor, the control will constantly monitor the input and calculate the cylinder's rpm. If the rpm drops to zero while the cylinder is supposed to be spinning, the control will go to the Cool Down portion of the cycle. The control will display an error message and sound the audio signal. Once the Cool Down portion ends, the control will continue to display the error message until power is cycled to the machine.

Fan Motor Contactor Error

If the control attempts to turn on the heater relay and the control does not sense that the Fan Motor Contactor is closed, the control will go to the Cool Down portion of the cycle, display an error message and turn on the audio signal. Once the Cool Down portion of the cycle ends, the control will continue displaying the error message until power is cycled or the Back keypad is pressed.

Fan Motor Centrifugal Switch Error

If the control attempts to turn on the fan motor and the fan motor contactor is sensed closed but the Fan Motor Centrifugal Switch fails to close, the control will go into the Cool Down portion of the cycle, display an error message and turn on the audio signal. Once the Cool Down portion of the cycle ends, the control will continue displaying the error message until power is cycled or the Back keypad is pressed.

DIP Switch/Harness Index Mismatch Error

On power up the control reads the Temperature Index Harness value and compares that with the value of switch 1, switch 2 and switch 3 on the DIP switch configuration. If the result is an invalid setup the control will not enter Idle mode and instead enter Error Mode. The control will ignore all user inputs and display an error message. The machine must be powered down and the correct temperature index harness must be installed and/or the DIP switch configuration must be corrected.

Moisture Sensor Error

When in Idle Mode, the control will begin to monitor the moisture sensor input. If the moisture sensor circuitry detects a load present signal read consistently (every second) for a ten minute period without user input, the control will declare a load sensed. If at any time during this sensing period, user input is detected or the control determines that there is no load present, it resets the load detected counter. After this ten minute period with a consistent load sensed, the control queues the "is dryer empty" (display *iS, drPEr, EnPEP* each for two seconds) prompting the user to answer whether the machine is currently empty, pressing the Up or Down keypads will toggle between yes and no. If the operator selects "no" (display *no*), the control returns to the Idle Mode display. If the operator selects "yes" (display *PE5*) the control will increment the Moisture Sensor Error counter and record the error in the queue of the last eight machine errors and display the Moisture Sensor Error (display *Eno iSt*), pressing the Back keypad will clear the error. The "is dryer empty" prompt will only appear once a day unless machine power is cycled.

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with *EI* refer to external device Infra-red communication errors. All other errors refer to machine errors.

Display	Description	Cause/Corrective Action
<i>EI 01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>EI 02</i>	Device Time-out	Communication failure. Re-aim external device and try again.
<i>EI 03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EI 05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EI 09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>EI 0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>EI 0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>EI 0E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EI 0F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>ESH</i>	Shorted Thermistor Error	Remove any lint build-up around thermistor. Inspect wires to the thermistor. If problem persists, replace thermistor.
<i>EoP</i>	Open Thermistor Error	Remove any lint build-up around thermistor. Inspect wires to the thermistor. If problem persists, replace thermistor.
<i>E RF1</i>	Airflow Switch Error (Switch Fails to Open At End of Cycle)	Inspect lint screen and ductwork. Once error is cleared, control will go back to previous mode of operation.
<i>E RF2</i>	Airflow Switch Error (Switch Does Not Close After Cycle Starts)	Inspect lint screen and ductwork. Cycle power to machine (power down, then power up) or push Back keypad.
<i>E RF</i>	Airflow Switch Error (Switch Bounces During Cycle)	Inspect lint screen and ductwork. Cycle power to machine (power down, then power up) or push Back keypad.
<i>E HEAL</i>	Machine Did Not Reach Expected Temperature.	The ignition control has power, but a flame was not sensed after the programmed amount of retries. Be sure that gas is turned on. If problem persists, troubleshoot the ignition circuit. (Igniter, Cable, Ignition Control Module.)
<i>E 5L</i>	Stove Limit 1 Error	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint build-up around the thermostat. If problem persists, replace thermostat.
<i>E 5L2</i>	Stove Limit 2 Error	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint build-up around the thermostat. If problem persists, replace thermostat.
<i>E CAB</i>	Cabinet Limit Error	Remove any lint build-up around thermostat. If problem persists, replace control or thermostat.

Table 11 *continues...*

Display	Description	Cause/Corrective Action
<i>E iLn</i>	ICM Lockout Alarm Active	Check that the gas is turned on and that the ignition circuit functions. Also check that the gas valve is operational.
<i>E rot</i>	Rotation Sensor Error	Check for broken or worn belts. Make sure machine is not over loaded and check if rotation sensor is working. If problem persists, replace rotation sensor or control.
<i>ESEtUP</i>	DIP Switch Configuration Size Mismatch Error	Check temperature index harness and dipswitch settings. If problem persists, replace temperature index harness or control.
<i>E FLn</i>	Fan Motor Contactor Error	Inspect wires to the fan motor contactor. Check signal to the output control. If problem persists, replace fan motor contactor.
<i>E FnCS</i>	Fan Motor Centrifugal Switch Error	Clean vents on the fan motor. Inspect wires to the fan motor centrifugal switch. If problem persists, replace fan motor.
<i>Eno iSt</i>	Moisture Sensor Error	Push Back keypad to clear the error.

Table 11

Communication Mode

This mode is entered whenever the control is communicating with a PDA. Refer to **PC and PDA Application User Instructions**.

Infra-red Communications

The Infra-red Communications feature allows the control to communicate with an external device. The control can be programmed and have its data read without using the keypad. It may also be used to start and stop various diagnostic tests.

How to Begin Communications with An External Device

The control will go blank and the display will show **-C-** until the communication is complete. The display will return to the previous mode. If an error occurs that terminates communication, the display will show the appropriate error code.

NOTE: The Infra-red Communications option must be turned on.

Cycle Charts

Standard Machine Cycles

Cycle No.	Cycle Name	Cycle Type	Material Type	Reversing	Temperature	Target Moisture or Time	Cool Down
1	Towels	Moisture Dry	Cotton	OFF	190°F [88°C]	1%	2 minutes/ 100°F [38°C]
2	Sheets Blend	Moisture Dry	Bedding	ON	160°F [71°C]	5%	2 minutes/ 100°F [38°C]
3	Sheets Cotton	Moisture Dry	Bedding	ON	190°F [88°C]	5%	2 minutes/ 100°F [38°C]
4	Sheets Blend Iron	Moisture Dry	Bedding	ON	160°F [71°C]	20%	2 minutes/ 100°F [38°C]
5	Sheets Cotton Iron	Moisture Dry	Bedding	ON	190°F [88°C]	20%	2 minutes/ 100°F [38°C]
6	Duvet Cotton	Moisture Dry	Bedding	ON	190°F [88°C]	5%	2 minutes/ 100°F [38°C]
7	Duvet Blend	Moisture Dry	Bedding	ON	160°F [71°C]	5%	2 minutes/ 100°F [38°C]
8	Napkins Synthetic	Moisture Dry	Synthetic	OFF	140°F [60°C]	3%	2 minutes/ 100°F [38°C]
9	Napkins Blend	Moisture Dry	Blend	OFF	160°F [71°C]	3%	2 minutes/ 100°F [38°C]
10	Napkins Synthetic Iron	Moisture Dry	Synthetic	OFF	140°F [60°C]	20%	2 minutes/ 100°F [38°C]
11	Napkins Blend Iron	Moisture Dry	Blend	OFF	160°F [71°C]	20%	2 minutes/ 100°F [38°C]
12	Napkins Cotton Iron	Moisture Dry	Cotton	OFF	190°F [88°C]	20%	2 minutes/ 100°F [38°C]

Table continues...

13	Uniform Perm Press	Moisture Dry	Synthetic	OFF	140°F [60°C]	5%	2 minutes/ 100°F [38°C]
14	Uniform Cotton	Moisture Dry	Cotton	OFF	190°F [88°C]	5%	2 minutes/ 100°F [38°C]
15	30 Minute High	Time Dry	n/a	OFF	190°F [88°C]	30 mi- nutes	2 minutes/ 100°F [38°C]
16	30 Minute Med	Time Dry	n/a	OFF	160°F [71°C]	30 mi- nutes	2 minutes/ 100°F [38°C]
17	30 Minute Low	Time Dry	n/a	OFF	140°F [60°C]	30 mi- nutes	2 minutes/ 100°F [38°C]
18	30 Minute No Heat	Time Dry	n/a	OFF	n/a	30 mi- nutes	2 minutes/ No Heat
19	15 Minute High	Time Dry	n/a	OFF	190°F [88°C]	15 mi- nutes	2 minutes/ 100°F [38°C]
20	15 Minute Med	Time Dry	n/a	OFF	160°F [71°C]	15 mi- nutes	2 minutes/ 100°F [38°C]
21	15 Minute Low	Time Dry	n/a	OFF	140°F [60°C]	15 mi- nutes	2 minutes/ 100°F [38°C]
22	15 Minute No Heat	Time Dry	n/a	OFF	n/a	15 mi- nutes	2 minutes/ No Heat
23	10 Minute High	Time Dry	n/a	OFF	190°F [88°C]	10 mi- nutes	2 minutes/ 100°F [38°C]
24	10 Minute Med	Time Dry	n/a	OFF	160°F [71°C]	10 mi- nutes	2 minutes/ 100°F [38°C]
25	10 Minute Low	Time Dry	n/a	OFF	140°F [60°C]	10 mi- nutes	2 minutes/ 100°F [38°C]
26	10 Minute No Heat	Time Dry	n/a	OFF	n/a	10 mi- nutes	2 minutes/ No Heat
27	5 Minute High	Time Dry	n/a	OFF	190°F [88°C]	5 minutes	2 minutes/ 100°F [38°C]

Table continues...

Cycle Charts

28	5 Minute Med	Time Dry	n/a	OFF	160°F [71°C]	5 minutes	2 minutes/ 100°F [38°C]
29	5 Minute Low	Time Dry	n/a	OFF	140°F [60°C]	5 minutes	2 minutes/ 100°F [38°C]
30	5 Minute No Heat	Time Dry	n/a	OFF	n/a	5 minutes	2 minutes/ No Heat

n/a = not applicable

- All cycles with reversing on rotate for 30 seconds and pause for 6 seconds.

- Cool down and reversing settings can be changed from what is pre-programmed from the factory.

- If machine does not have the moisture sensing option, the moisture sensing cycles in the table above are automatically changed to Auto-Dry cycle type with Dryness Level 0 (zero).

Wetclean Machine Cycles

The first 7 cycles for wetclean machines are listed below. Cycles 8-30 are the same as the table listed above.

Cycle No.	Cycle Name	Cycle Type	Material Type	Reversing	Temperature	Target Moisture or Time	Cool Down
1	Wet C - Wool	Moisture Dry	Wool	OFF	110°F [43°C]	5% + 10 minutes	1 minute/ 105°F [41°C]
2	Wet C - Silk	Moisture Dry	Delicate	OFF	105°F [41°C]	5% + 4 minutes	1 minute/ 105°F [41°C]
3	Wet C - All In One	Moisture Dry	Blend	OFF	115°F [46°C]	5% + 10 minutes	1 minute/ 105°F [41°C]
4	Wet C - Delicate 10%	Moisture Dry	Delicate	OFF	100°F [38°C]	10%	1 minute/ 100°F [38°C]
5	Wet C - Low Heat	Time Dry	n/a	OFF	100°F [38°C]	10 minutes	1 minute/ 100°F [38°C]
6	Wet C - Manual 5 Min	Time Dry	n/a	OFF	110°F [43°C]	5 minutes	1 minute/ 110°F [43°C]
7	Wet C - No Heat	Time Dry	n/a	OFF	n/a	10 minutes	0 minutes/ No Heat