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Tetra Cardboard Packer 70
670272-060V (MED infeed)

Issue 9603 Doc No. EM-585301-1

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Tetra Cardboard Packer 70
670272-060V (MED infeed)

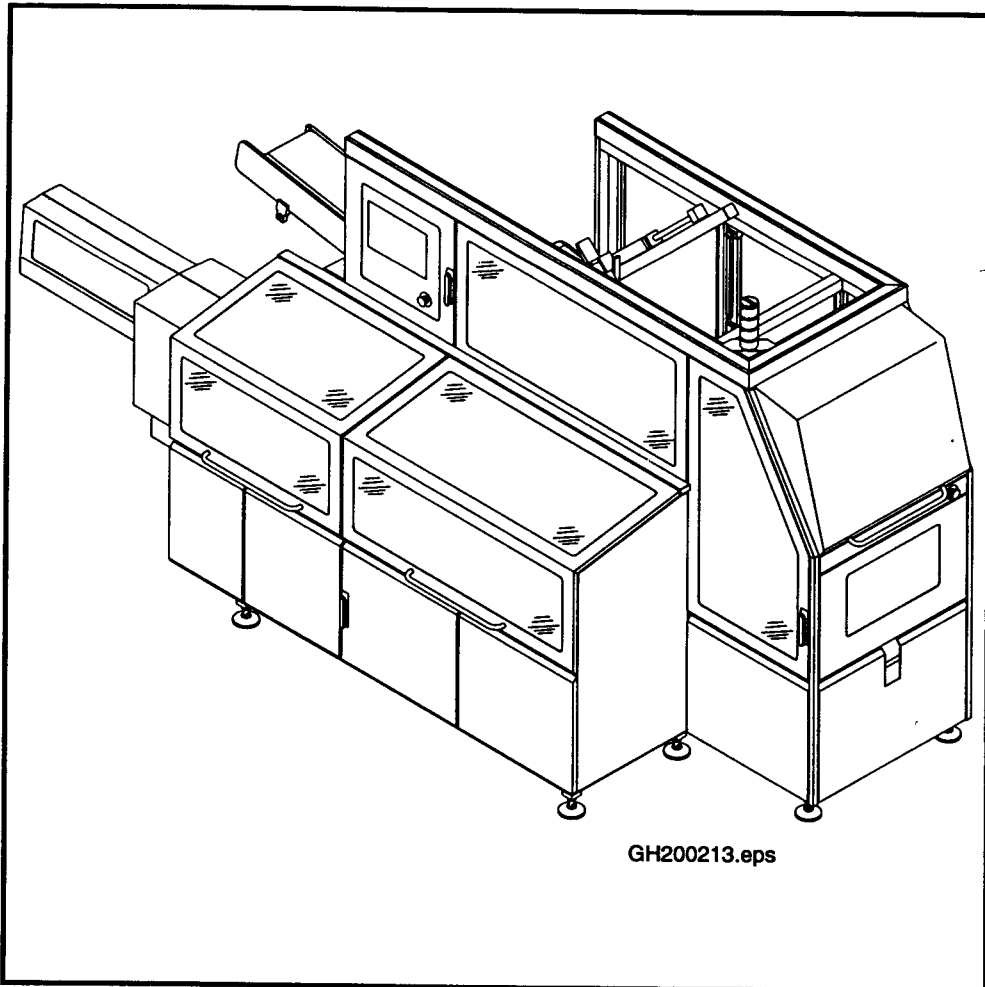
Issue 9603 Doc No. EM-585301-1

EM

Electrical Manual

Tetra Cardboard Packer 70

670272-060V (MED infeed)



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 **Tetra Pak**

Doc No EM-585301-1

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This document is valid for:

Series No/ Machine No

Sign.

Electrical Manual

BE 679199-060V

Tetra Cardboard Packer 70

MED infeed

670272-060V

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Issue 9603

Tetra Pak
Tetra Pak Distribution AB

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1. Introduction

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DANGER!

General

To ensure maximum safety, **always read the chapter “Safety Precautions”(2)** before doing any work on the machine or making any adjustments.

Document information

About this Manual (EM)

The purpose of the Electrical Manual is to provide service technicians and electricians with all information on **the electrical equipment required for service and maintenance.**

It is important that you:

- keep the manual for the life of the equipment
- pass the manual on to any subsequent holder or user of the equipment

Document references

The documentation for this machine includes this document and the following parts below:

- Installation manual (IM) to provide the installation technicians with information on the on-site installation process.
- Operation Manual (OM) to provide the operator with information on how to handle and operate the machine before, during, and after the production.
- Maintenance Manual (MM) to provide technicians with information on how to perform service and maintenance.
- Spare Parts Catalogue (SPC)

Design modifications

The directives in this document are in accordance with the design and construction of the machine at the time it was delivered from Tetra Pak machine production facility.

Document producer

This document has been produced by:

Tetra Pak Distribution AB
Technical Publications
Ruben Rausings gata
S-221 86 LUND
SWEDEN

Further copies

Additional copies can be ordered from nearest Tetra Pak service station. When ordering technical publications, always quote the **document number** printed on the front cover of the document concerned.

Number of pages

All chapters have a front page to indicate the chapters beginning, followed by a table of contents (always the second page). To make sure that you have received a complete document, please check that the contents matches the table of contents for each chapter.

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Machine introduction

Intended use of this Tetra Pak equipment

To place Tetra Brik packages or other packages approved by Tetra Pak Distribution AB into units made of corrugated cardboards.

Service

In case of problems when operating the machine, contact the nearest Tetra Pak service station.

Manufacturer

This Tetra Pak equipment is produced by:

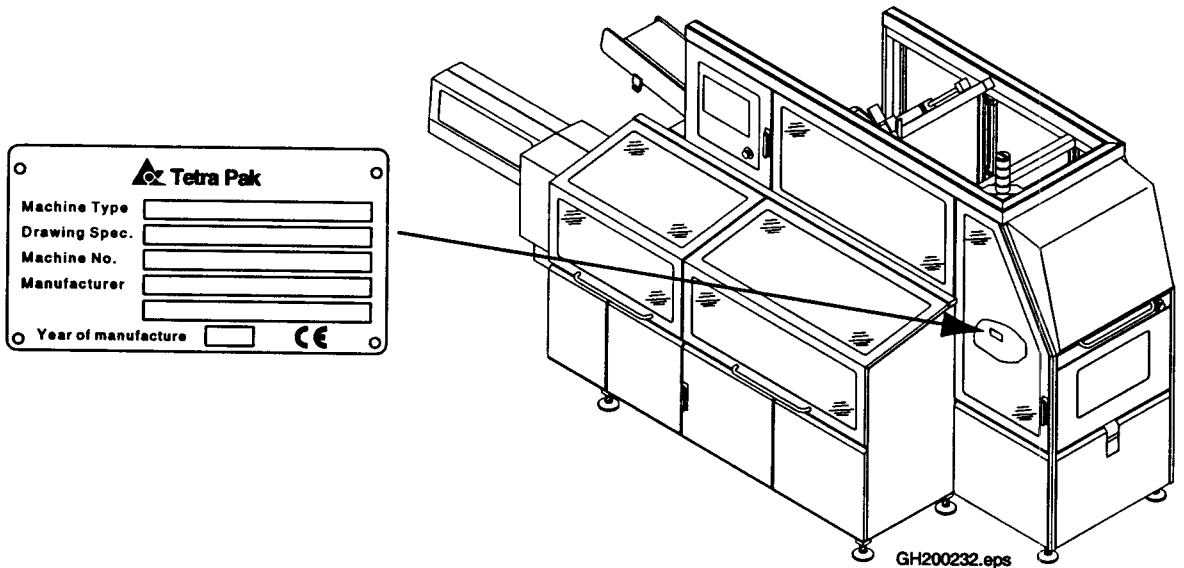
Tetra Pak Distribution AB
Ruben Rausings gata
221 86 LUND
SWEDEN

Machine identification

Machine sign

The sign below is the type of machine sign attached to the machine frame. It carries data needed when contacting Tetra Pak concerning this particular machine.

The machine sign is marked with a CE-symbol. It means that the machine complies with the basic health and safety regulations of the European Economic Area (EEA).



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Location machine sign

How to use EM

General

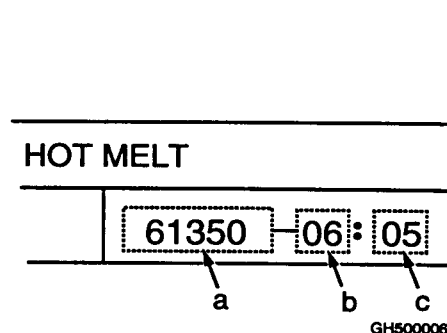
How to use EM is an explanation of how to find your way through the chapters **Component Location**, **Circuit Diagram**, **Connection Diagram**, **Mains Connection Diagram** and **Program Documents** in the EM.

Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles. Enclosed find some examples of how to use EM.

Drawing identification

The identity of the drawings in above mentioned chapters consists of a:

- main number (a)
- sheet number (b)
- version number (c)



The sheet number (b) is the consecutive numbering of the parts (sheets) which belong to the main number (a) and is used as a reference in the diagrams.

- | | |
|-------------|--|
| Sheet 02 | is a position summary in the chapter Circuit diagrams , where all electrical components used in drawings are listed as a position and with a cross reference. |
| Sheet 05-88 | in the Circuit Diagrams are drawings. |
| Sheet 89 | in the Circuit Diagrams is the earth summary. |
| Sheet 90 | in the Circuit Diagrams shows the connection of the lines. |
| Sheet 91 | in the Circuit Diagrams shows the terminal summary. |
| Sheet 99 | in the Circuit Diagrams is the alteration messages. |

Chapter orientation

The second page in each chapter is always a table of contents, listing all the documents included in the chapter.

In the **Mains Connection Diagrams** the second connection diagram shows;

- how the equipment should be connected to the local supply
- dimension of the connection cable
- connection of the matching transformer (when used)

Caution! Concerning the dimension of the connection cable always consider the local regulations.

The PLC-listing in the section **Program Documents** consists of Ladder diagram, Cross reference list, Configuration and in some cases Variant depending document.

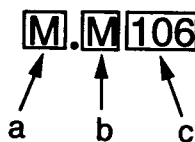
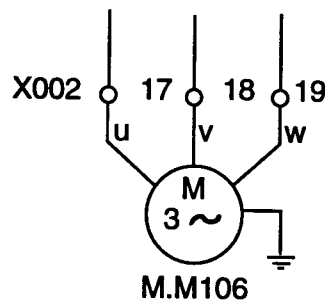
Machine Deviation is a chapter reserved for those cases which the machine for some reason is delivered in a design that deviates from the basic design. This is used on the condition that the deviations are not deviations that would be accounted under the headings “Rebuilding kit” or “Option”.

Numbering system for components

The position number is divided in three parts.

- prefix
- function designation
- running number

See example below



GH500009

- a) Prefix
- b) Function designation
- c) Running number

Prefix (a)

The prefix (a) is showing the location of the component.

- Position numbers without prefix indicates that the component is mounted in the electrical cabinet.
- The prefix **M** indicates that the component is mounted on the machine.
- The prefix **P** indicates that the component is mounted on a separate control panel.

Function designation (b)

The function designation (b) are indicated according to international standard.

Running number (c)

The electrical components are numbered in a consecutive illogical order.

How to trace a Cable

Example: How to trace cable No. 5

- Go to chapter 6, **Connection Diagrams**
- In the **Connection Diagrams** find cable No 5
- Note the component connected to the cable (M.M005)
- Go to chapter 5, **Circuit Diagram**
- Go to the **Position summary** (first sheet(s) in the **Circuit Diagram**)

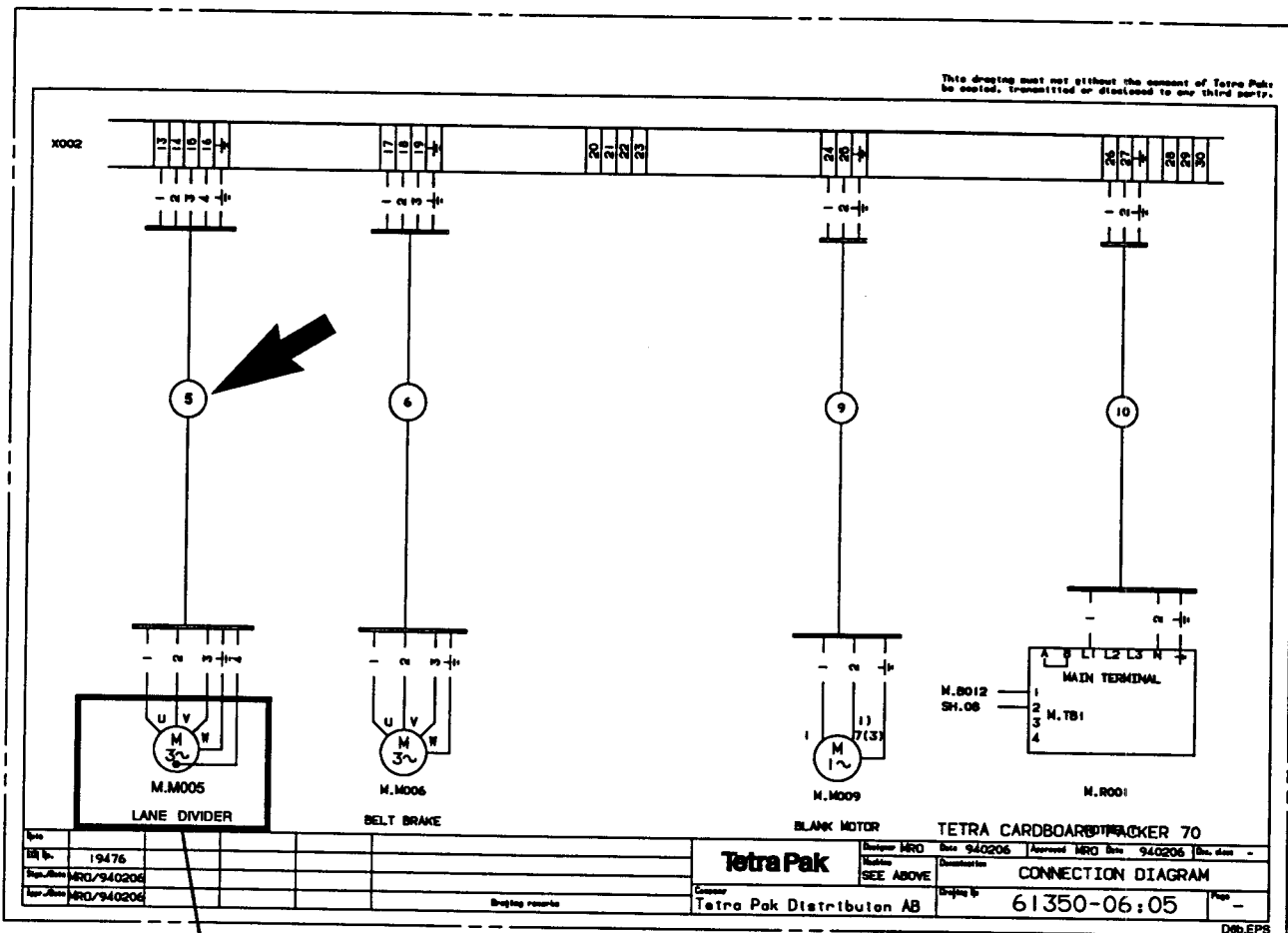
The sheet No. is located opposite the component No (pos M.M005). This tells you on which sheet in the **Circuit Diagram** the connection is shown.

- Go to sheet 06 in the **Circuit Diagram**
- Find the component (M.M005)
- If the component, as in this example, is controlled by a separate component (K005), the sheet reference for this component (sheet 22) is found in the **Circuit Diagram**.

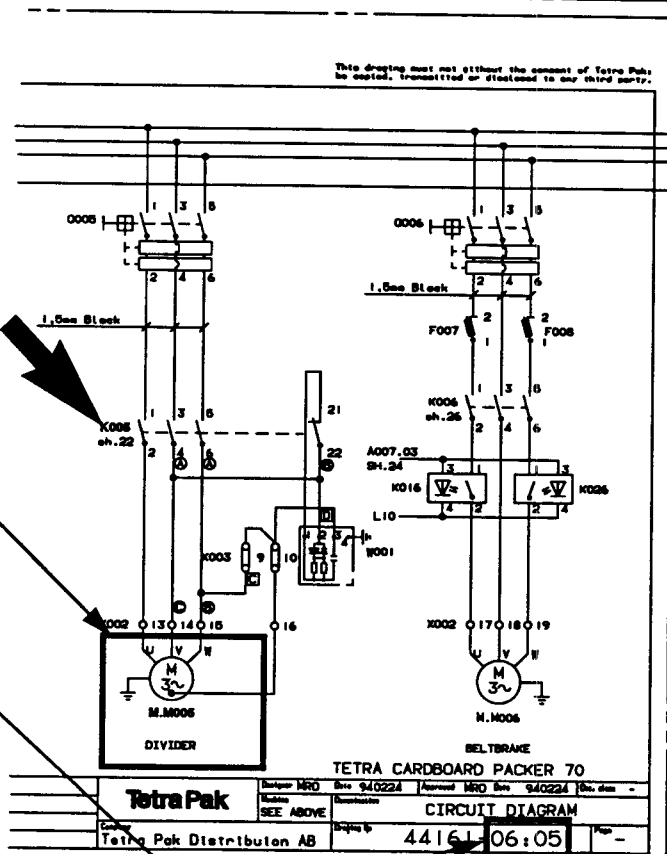
Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.

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Pos	Sheet	Pos	Sheet
M.B018	17	M.B050	20
M.B019	17	M.B051	20
M.B020	16	M.B052	20
M.B021	16		
M.B022	16		
M.B023	16	M.B200	19
M.B024	16	M.B901	13
		M.B902	13
M.B030	18		
M.B031	18	M.H001	26
M.B033	18		
M.B034	18	M.M001	05
		M.M002	05
M.B036	18	M.M003	05
		M.M004	06
		M.M005	06
M.B040	19	M.M006	06
M.B041	19		
M.B042	19		
M.B043	19	M.M009	08
Position summary			
Packer 70	44161-02:05	Page :	1
		Cont:	2



(Cont'd)

- Go to sheet 22 in the **Circuit Diagram**
- Find the controlling component (K005)

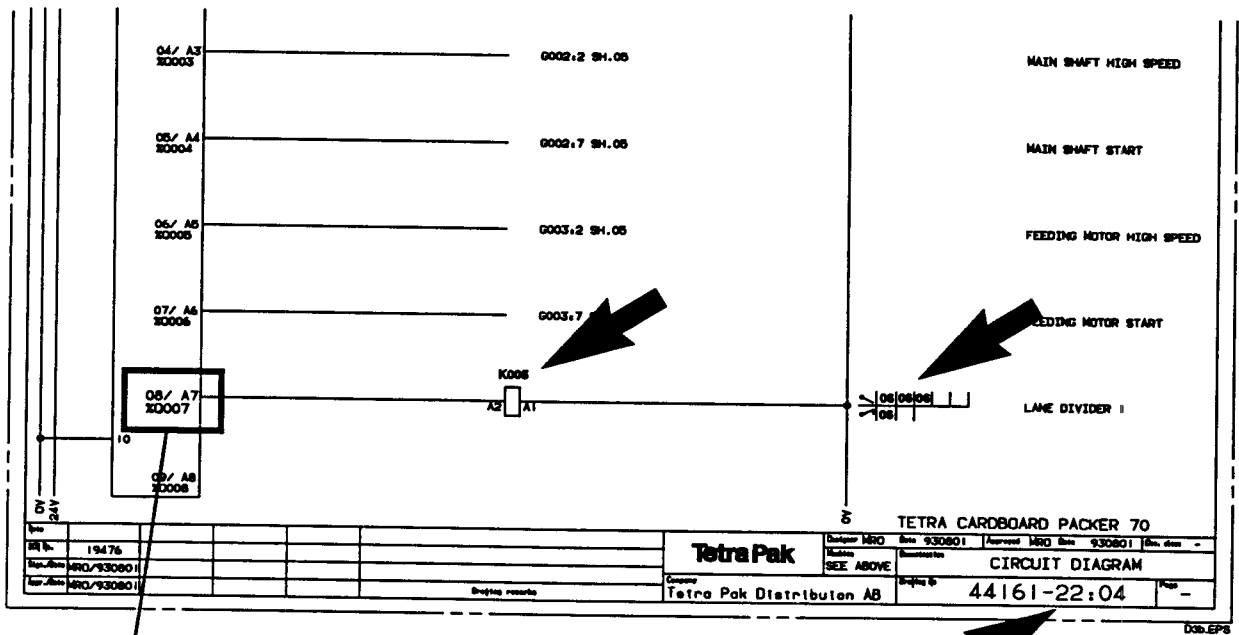
06 is a reference back to sheet 06.

The output (%Q0007) is a reference to the PLC-listing in the chapter **Program Documents**.

- Go to chapter 8, **Program Documents** to see the use in the program
- Go to the cross reference list at the end of the PLC-listing and find the output(%Q0007)
- Note the rung No. in which the output is used (e.g rung198)
- Go to the PLC-listing and find rung 198.

Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.

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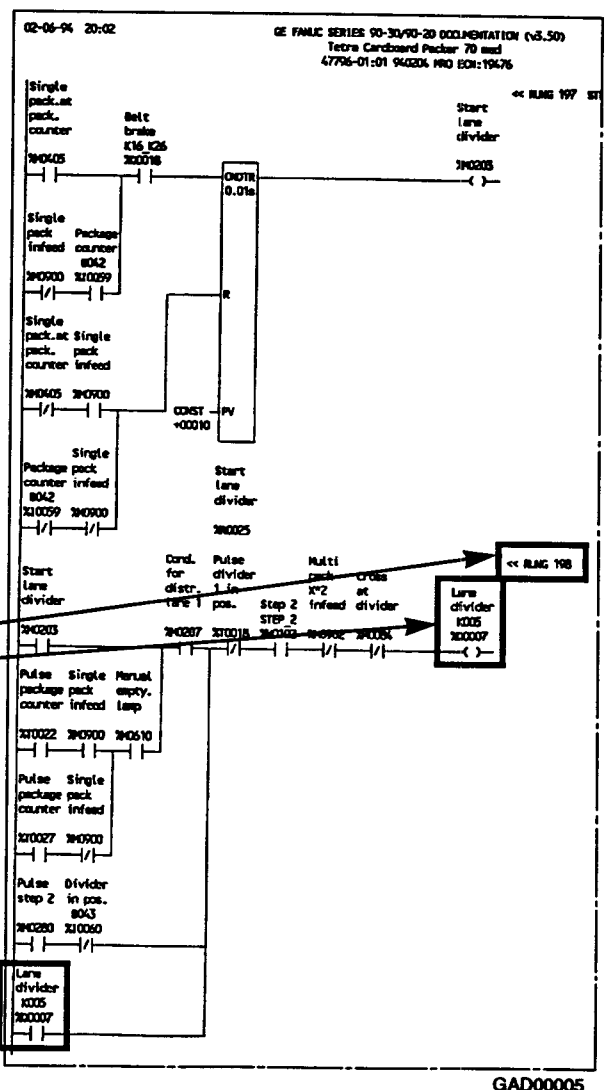


03-04-94 15:06 GE FAULC SERIES 90-30/90-20 DOCUMENTATION (v3.50)
Tetra Cardboard Packer 70 mod
47796-01:01 940204 MRO EOH:19476

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
310059	8042	-1/- 325 Package counter -1 (- 175, 177, 197 -3/- 197
310060	8043	Divider in pos. -1 (- 20, 192 -1/- 198
310062	8200	Pack. on single conv. -1/- 140
310065	8050	WA flap upper pos. -1 (- 273
310066	8051	WA flap lower pos. -1 (- 270
310067	8052	WA squeeze upper pos. -1 (- 273 -1/- 272

OUTPUT (X0) CROSS REFERENCES

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
300001	K002	Main shaft motor - (-) 138
300002	K003	Feeding motor - (-) 138
300003	G002_2	Main shaft high speed -1 (- 240, 250 - (-) 248
300004	G002_7	Main shaft start -1 (- 237, 233, 290, 334, 335 -1/- 241, 289 - (-) 248
300005	G003_2	Feeding motor high speed - (-) 251
300006	G003_7	Feeding motor start -1 (- 132, 237, 250, 251, 321 -1/- 230, 232 - (-) 250
300007	K005	Lane divider -1 (- 193, 198 -1/- 199 - (-) 198
300009	Y000	Pressu. - (-) 134
300013	Y006	Folding support down - (-) 239
300014	Y004	Infeed stop out - (-) 219
300015	Y005	Flap up - (-) 237
300016	Y006	Brake lane 1 -1 (- 142, 206, 209, 216, 217, 218 -1/- 225 - (-) 216
300017	K006	Belt brake - (-) 135
300018	K16_K26	Belt brake -1 (- 154, 167, 180, 183, 185, 186, 190, 197, 201 -1/- 187, 188, 200 - (-) 190
300019	K004	Servo motor cusher -1 (- 222, 223 -1/- 221 - (-) 222



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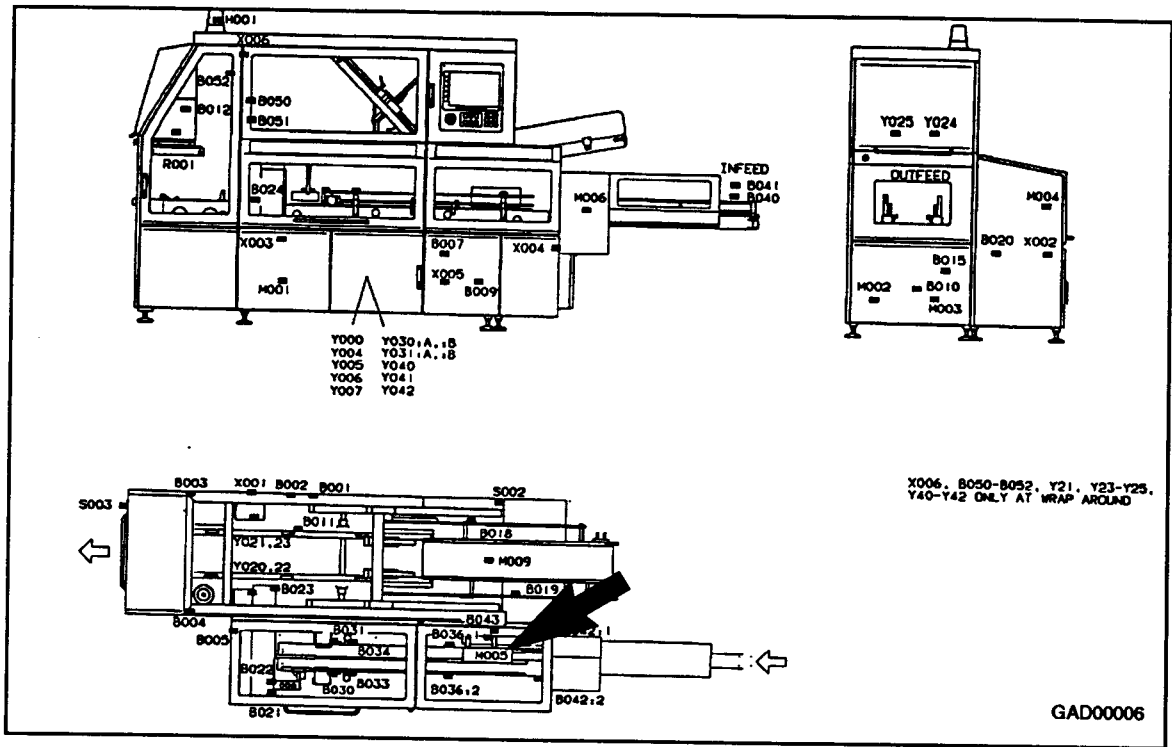
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The prefix **M** on the component connected to cable No.5 (**M.M005**), indicates that the component is mounted on the machine.

- Go to chapter 4, **Component Location**, to find the position of the component (**M005**)

Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.



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How to trace a component

Example: How to trace sensor B011

- Go to chapter 5, **Circuit Diagrams**
- Go to the **Position Summary** (first sheet(s)) in the **Circuit Diagrams**

The sheet No. (sheet 17) is located opposite the component No (pos M.B011). This tells you on which sheet in the **Circuit Diagram** the connection is shown.

- Go to sheet 17 in the **Circuit Diagram**
- Find the component (M.B011)
- Note the connections (X004, 21-23)
- Go to chapter 6, **Connection Diagrams**
- Find the connection (X004 21-23)

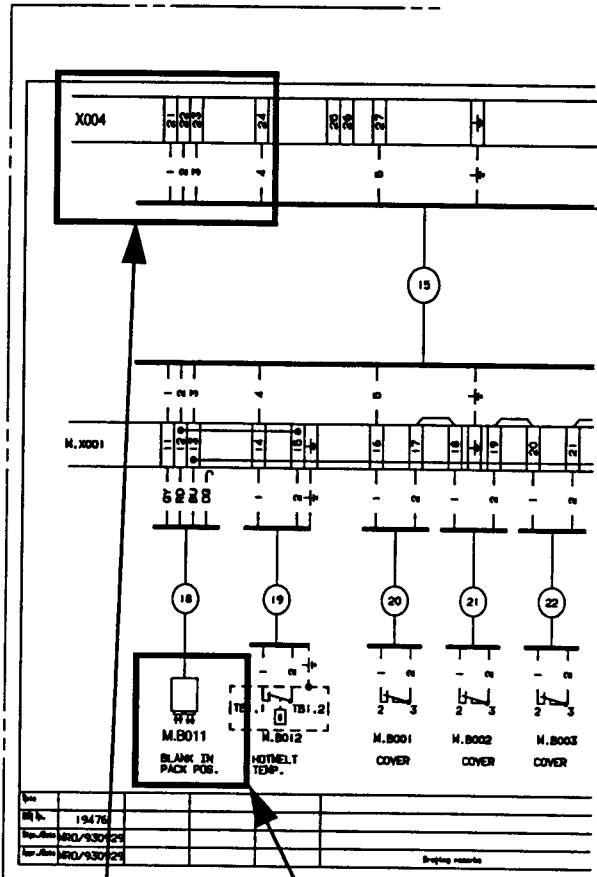
The **Connection Diagram** shows how the sensor is connected (e.g. via a connection box).

The input (%I0042) is a reference to the PLC-listing in the section **Program Documents**.

Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.

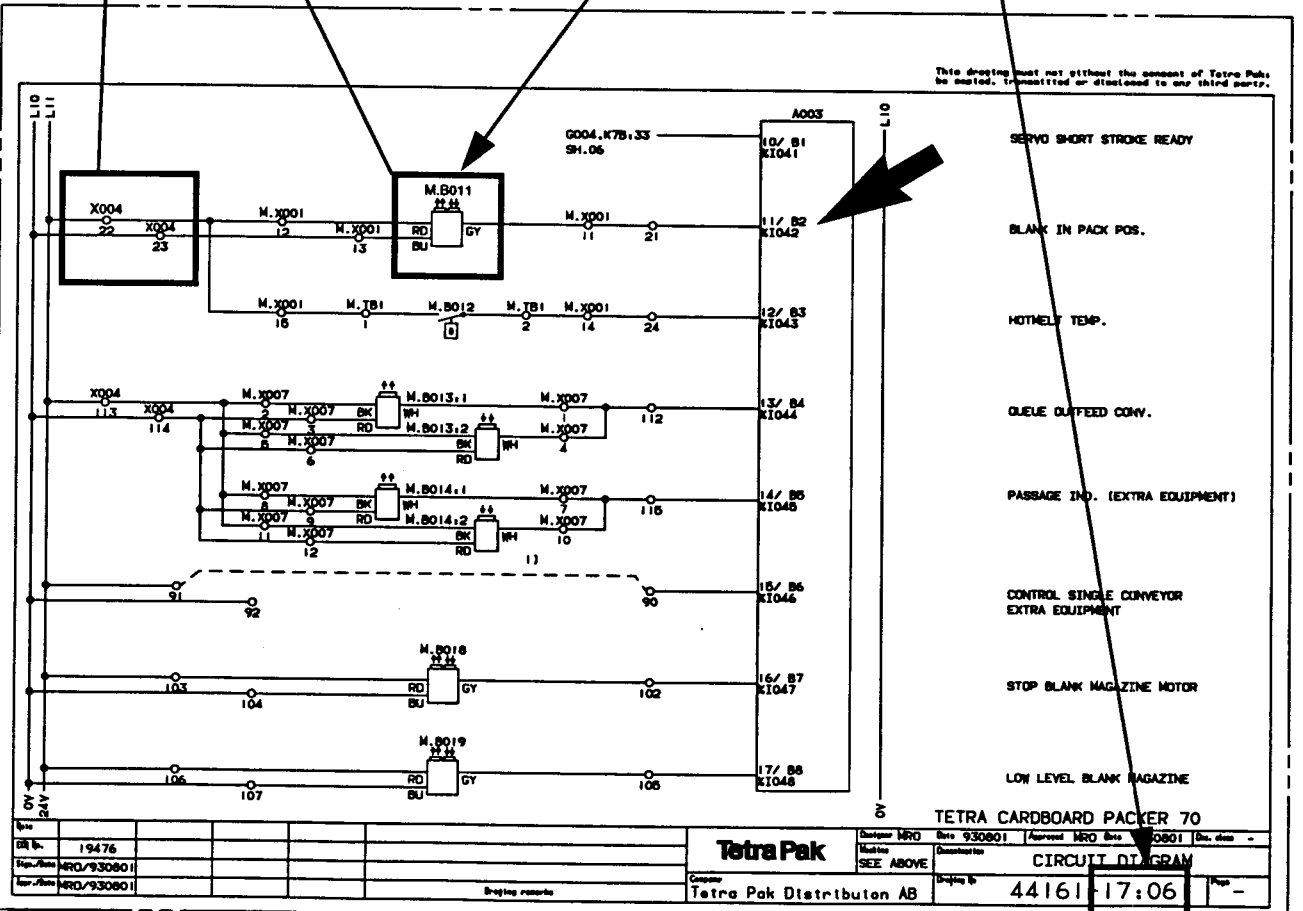
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Pos	Sheet	Pos	Sheet	Pc
X007	08			
Z001	10	M.B018	17	M.
		M.B019	17	M.
		M.B020	16	M.
		M.B021	16	
		M.B022	16	
		M.B023	16	M.
M.B001	10	M.B024	16	M.
M.B002	10			M.
M.B003	10			
M.B004	10	M.B030	18	
M.B005	10	M.B031	18	M.
M.B007	13	M.B033	18	
M.B008	10	M.B034	18	M.
M.B009	14			M.
M.B010	15	M.B036	18	M.
M.B011	17			M.
M.B012	17			M.
M.B013	17	M.B040	19	M.
M.B014	17	M.B041	19	
M.B015	18	M.B042	19	
		M.B043	19	M.
Description:		Position summary		
Tetra Cardboard Packer 70		44161-02:05		

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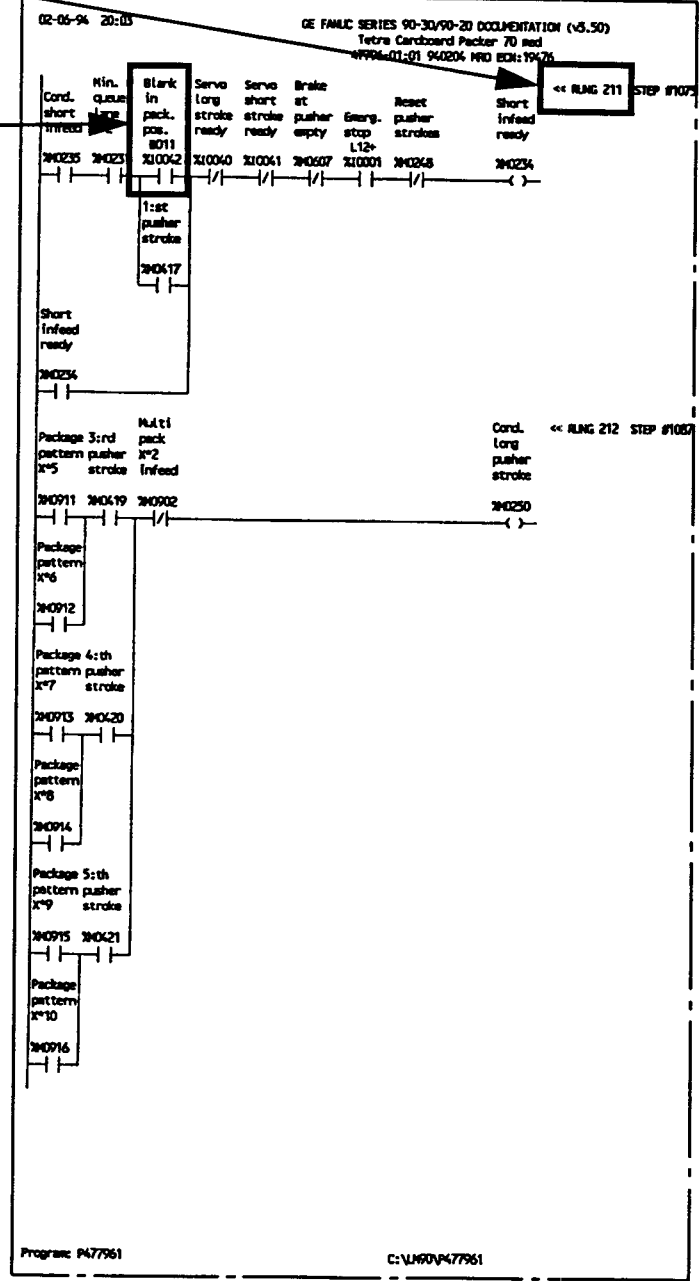
- Go to chapter 8, **Program documents** to see the use in the program
- Go to the cross reference list at the end of the PLC-listing and find the input (%I0042)
- Note the rung No's. in which the inputs are used (e.g. rung 211)
- Go to the PLC-listing and find rung 211

Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.

03-04-94 15:05 GE FAMILY SERIES 90-30/90-20 DOCUMENTATION (v3.50)
Tetra Cardboard Packer 70 mod
47796-01:01 940204 MRO ECH:19476

REF.	NICO/MWE	REF. DESCRIPTION / CROSS REFERENCES
		-1/I- 34
XI0029		Gray code Feeding motor -1 I- 33 -1/I- 33
XI0030		Gray code Feeding motor -1 I- 32 -1/I- 32
XI0031		Gray code Feeding motor -1 I- 31 -1/I- 31
XI0032		Gray code Feeding motor -1 I- 30
XI0033	8020	Flap upper pos. -1 I- 248,250 -1/I- 226,232
XI0035	8022	Pusher zero pos. -1 I- 215,229
XI0036	8023	Pusher and limit pos. -1 I- 317
XI0037	8024	Endstop inner pos. -1 I- 225
XI0038		Servo synchr. home pos. -1 I- 26,203,219,226,232,237 -1/I- 316
XI0039		Servo alarm -1 I- 210,317,352
XI0040		Servo long stroke ready -1 I- 228,234,265,287,390,391 -1/I- 207,211
XI0041		Servo short stroke ready -1 I- 229,287 -1/I- 211
XI0042	8011	Blank in pack. pos. -1 I- 211,231,257,360 -1/I- 233,258,289,363
XI0043	8012	Blank in pack. -1 I- 23,132,267 -1/I- 267,349,351
XI0044	8013	Queue on offfeed conv. -1 I- 294,345
XI0045	8014	Passage indic. (extra equip.) -1 I- 294 -1/I- 293
XI0046		Control single conv. -1 I- 140
XI0047	8018	Stop blank msgz. motor -1 I- 255 -1/I- 256
XI0048	8019	Low level blank msgz. -1 I- 334,338 -1/I- 334
XI0049	8030	Min. queue lane 1 -1 I- 148,232 -1/I- 150,201,286,287
XI0050	8031	Min. queue lane 2 -1 I- 163,202 -1/I- 165,201,286,287
XI0052	8033	Max queue lane 1 -1 I- 200 -1/I- 145
XI0053	8034	Max queue lane 2 -1 I- 200 -1/I- 160
XI0055	8036	Cross guard wide conv. -1 I- 329 -1/I- 332
XI0056	8015	Torque limiter Feeding motor -1/I- 322,324
XI0057	8040	Min. queue into brake -1 I- 173,325 -1/I- 278
XI0058	8041	Fallen package

Program: P477961 C:\M60V\477961



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Supply/line voltage

Supply voltage/Line Connection order

The supply voltage in the electrical cabinet is named:

- L1-L9: Power voltage
- L10-LXX: Control voltage

L10 is reserved for 0V, control voltage.

L11 is reserved for 24V, control voltage.

Line Summary (sheet 90) in the **Circuit Diagrams** (chapter 5), shows the line connection order with a cross reference to the valid circuit diagram for each connection (See example next side).

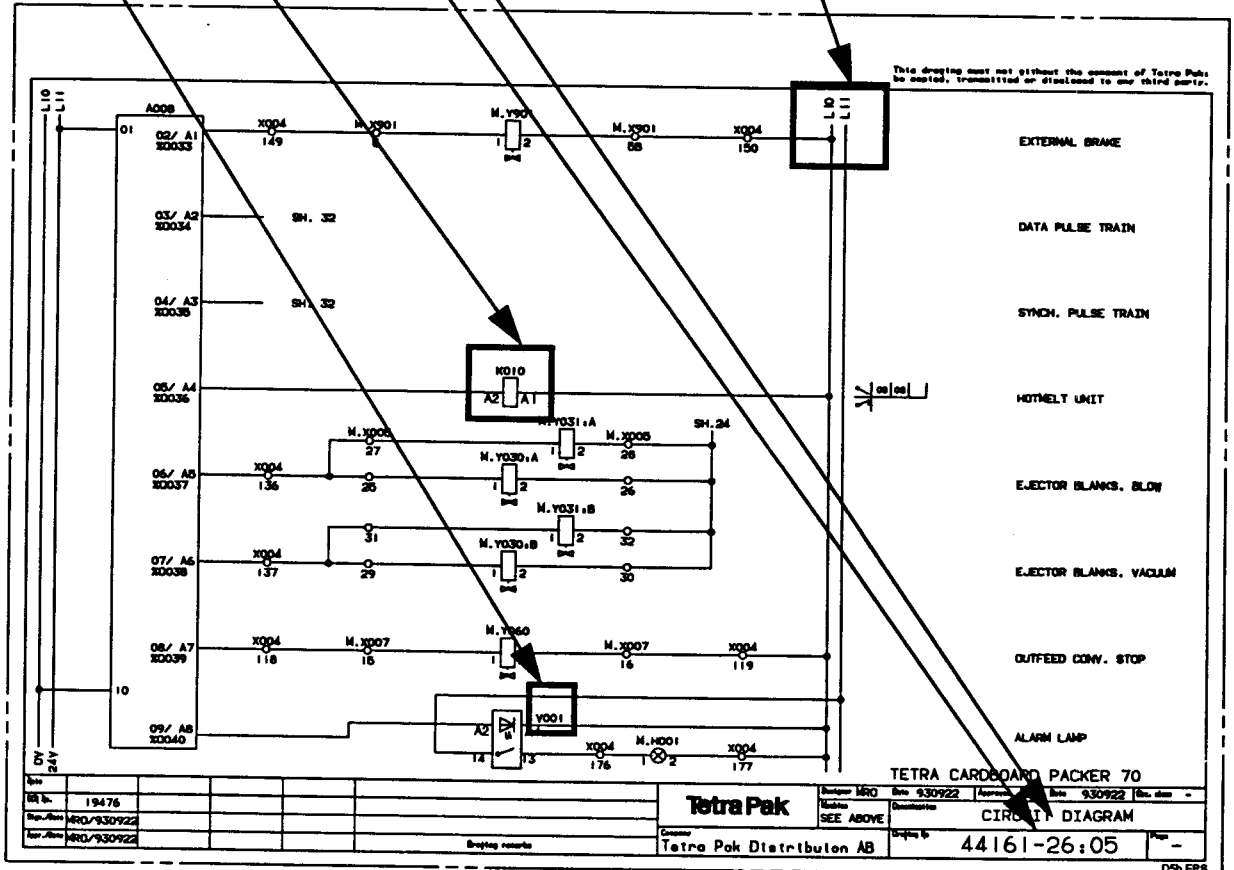
Note! All the examples in “How to use EM” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.

Line	Contact	Sheet	Area	Colour	Line	Contact	Sheet	Area	Colour
L10	XL10	8	0.75mm2	BU	L10	XL10	15		
	A006	10				X004	2	14	
	A006	20				X004	12	15	
	XL10	9			X004	23	17		
	A007	10			X004	31	25		
	A007	20			X004	64	27		
					X004	65	34		
	XL10	10							
	A008	10			XL10	16			
	A008	20			X004	68	16		
					X004	81	18		
	XL10	11			X004	92	17		
	A009	10			X004	95	18		
					X004	98	19		
	XL10	12			X004	101	19		
	G002	11							
	G003	11	05		XL10	17			
	P001	-	25		X004	104	17		
					X004	107	17		
	XL10	13			X004	114	17		
	K001	A1			X004	119	26		
	K002	A1	25		X004	122	23		
	K003	A1	22		X004	147	13		
	K004	A1	24						
	K005	A1	22		XL10	18			
	K006	A1	24		X004	190	26		
	V001	A1	26		X004	153	19		
					X004	164	20		
	XL10	14			X004	171	26		
	X006	A1	26						
	X010	A1	26						
	G004	A1	06						

Intro. AM	19476	Date	940224	MRO	Description:	Line summary
Am No						
Date					Tetra Cardboard Packer 70	44161-90:05
Sign				Drawing remarks		Page: 2 Cont: 3

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How to trace a terminal

Example: Connection in Connection box M.X005, terminal 11-12

- Go to chapter 6, **Connection Diagrams**
- Find the connection box (M.X005 terminal block 11-12)
- Note the component connected (M.Y004)
- Go to chapter 5, **Circuit Diagrams**
- Go to the **position Summary** (first sheet(s) in the **Circuit Diagrams**)

The sheet No. (sheet 23) is located opposite the component No (Pos M.Y004). This tells you on which sheet in the **Circuit Diagrams** the connection is shown.

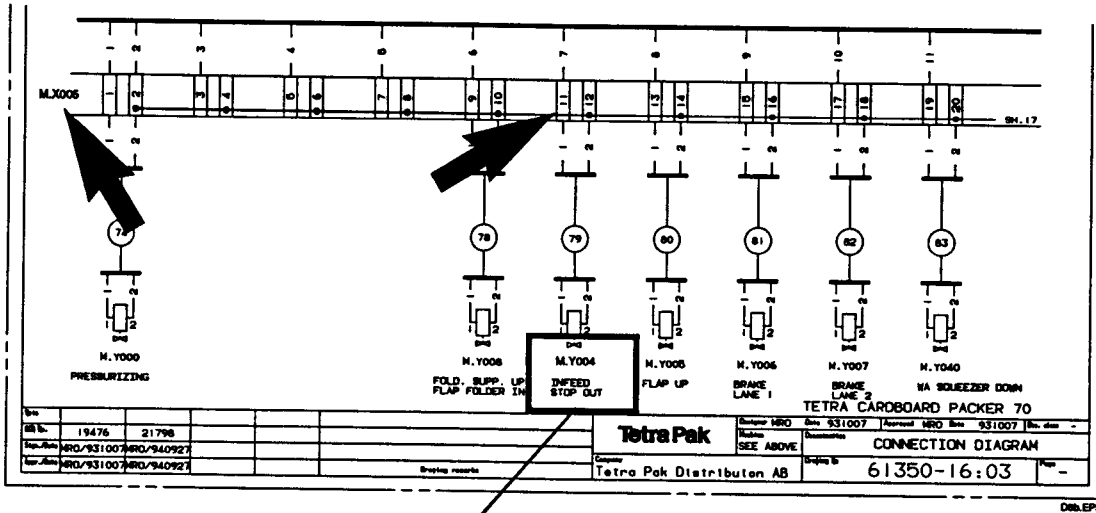
- Go to sheet 23 in **Circuit Diagrams**
- Find the component (M.Y004)

The output (%Q0014) is a reference to the PLC-listing in chapter **Program Documents**.

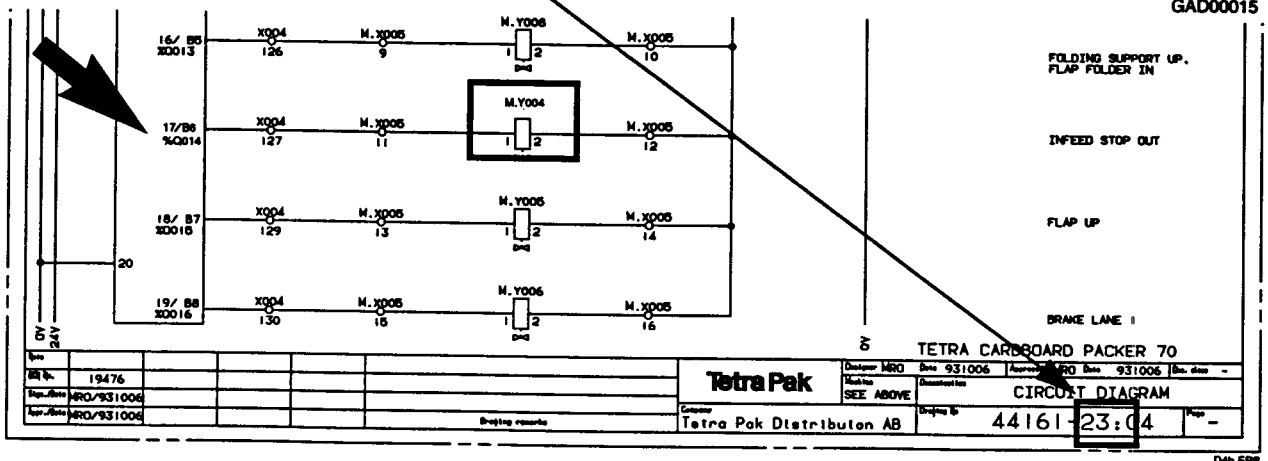
Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.

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Pos	Sheet	Pos	Sheet	Pos	Sheet	Pos	Sheet	Pos	Sheet	Pos	Sheet
		M.Y020	25			P.H001	32	P.H025	34		
		M.Y021	25	M.Y060	26	P.H002	32	P.H026	34	P.S01H	12
M.R001	08	M.Y022	28			P.H003	32	P.H027	34	P.S02H	12
		M.Y023	28					P.H028	34	P.S03H	12
		M.Y024	28	M.Y901	26	P.H006	33	P.H029	27	P.S04H	12
		M.Y025	28			P.H007	33	P.H030	27		
M.S002	10					P.H008	33	P.H031	27		
M.S003	10					P.H009	33	P.H032	27	P.S07H	12
		M.Y030:A	26			P.H010	33	P.H033	27	P.S08H	13
		M.Y030:B	26			P.H011	33	P.H034	27	P.S09H	13
M.Y000	23	M.Y031:A	26					P.H035	27	P.S10H	13
		M.Y031:B	26								
		M.Y040	28			P.H014	32	P.H01S	33		
M.Y004	23	M.Y041	28			P.H015	32	P.H02S	33		
M.Y005	23	M.Y042	28	P.A021	12	P.H016	32	P.H03S	33		
M.Y006	23			P.A022	32	P.H017	32	P.H04S	33		
M.Y007	24					P.H018	32				
M.Y008	23					P.H019	32				
						P.H020	34				
						P.H021	34	P.S001	10		
						P.H022	34				
						P.H023	34				
						P.H024	34				
Intro.d.AM	19476	Date	940224	MRO		Description:		Position summary			
Am No						Tetra Cardboard packer 70		44161-02:05	Page:	2	
Date									Cont:	-	
Sign				Drawing remarks							

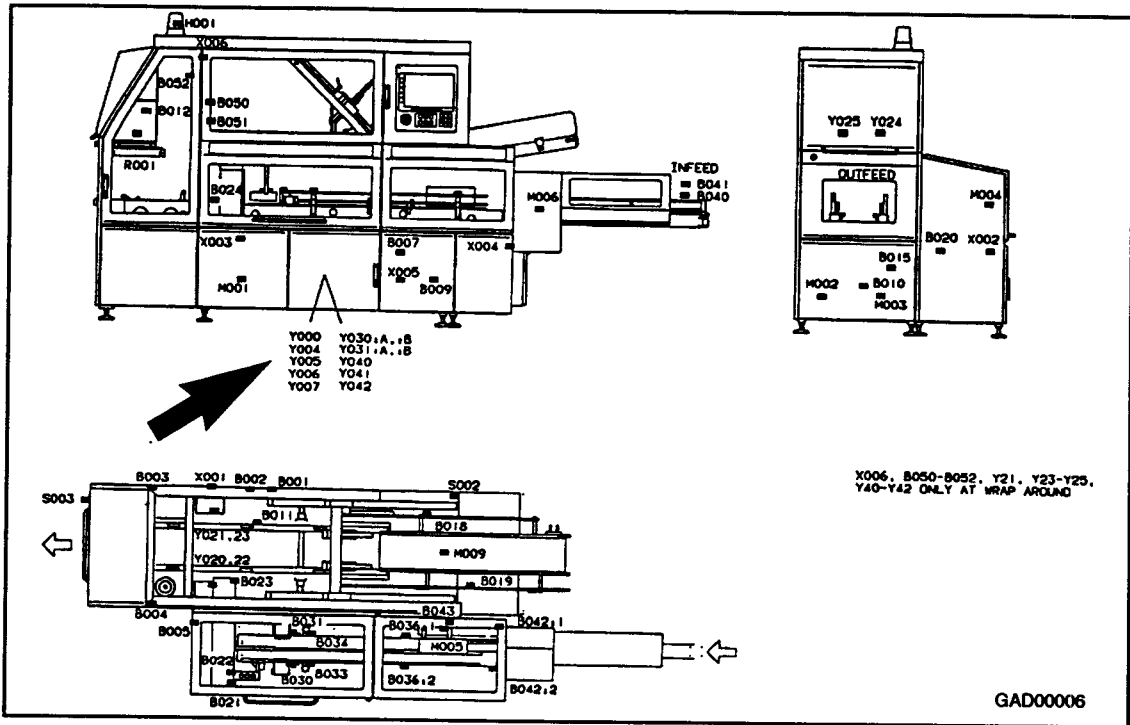


(Cont'd)

The prefix M indicates that the component is mounted on the machine.

- Go to chapter 4, **Component Location**, to find the position of the component (Y004) on the machine
- Go to chapter 8, **Program Documents** to see the use in the program
- Go to cross reference list at the end of PLC-listing and find the output (%Q0014)

Note! All the examples in “**How to use EM**” are composed only to demonstrate, and have nothing to do with the distribution equipment this EM handles.



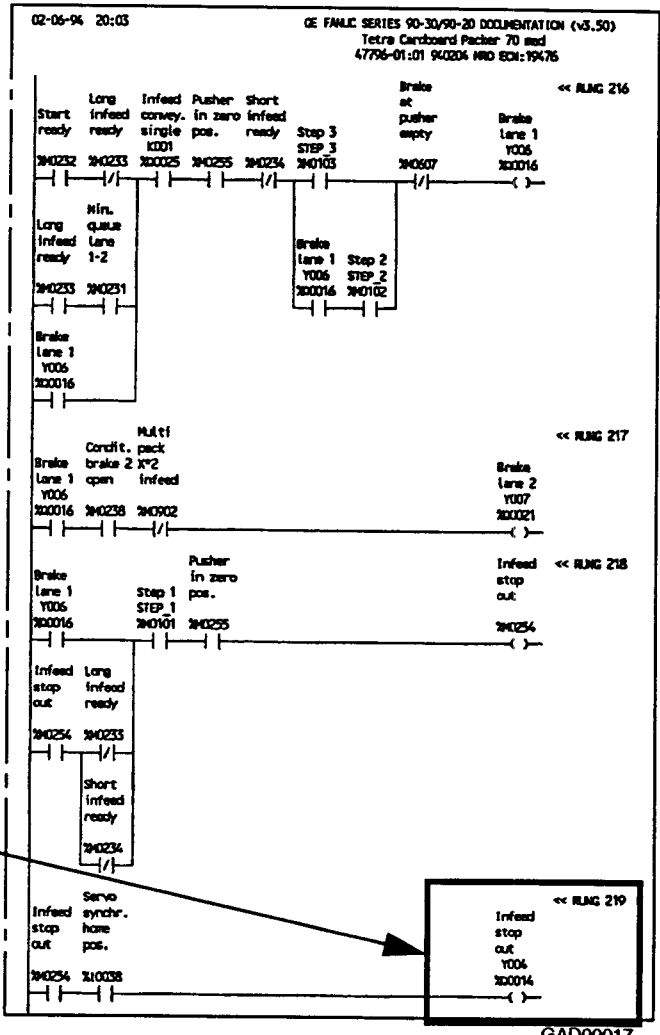
03-04-94 15:06 DE FAULC SERIES 90-30/90-20 DOCUMENTATION (v3.50)
Tetra Cardboard Packer 70 med
47796-01:01 940204 MID EDC:19476

REF.	MICROSW	REF. DESCRIPTION / CROSS REFERENCES
300099	B042	-1/- 325 Package counter -1 (- 175,177,197 -1/- 197
300060	B043	-1/- 197 Divider in pos. -1 (- 26,192 -1/- 198
300062	B000	-1/- 140 Pack. on single conv.
300065	B050	-1/- 275 WA flap upper pos.
300066	B051	-1/- 270 WA flap lower pos.
300067	B052	-1/- 275 WA squeeze. upper pos. -1/- 272

OUTPUT (30) CROSS REFERENCES

REF.	MICROSW	REF. DESCRIPTION / CROSS REFERENCES
300001	K002	Main shaft motor - (-) 138
300002	K005	Feeding motor - (-) 138
300003	G002_2	Main shaft high speed - (-) 248,250 - (-) 248
300006	G002_7	Main shaft start -1 (- 237,253,290,334,335 -1/- 261,269 - (-) 248
300005	G005_2	Feeding motor high speed - (-) 251
300006	G005_7	Feeding motor start -1 (- 132,257,250,251,321 -1/- 230,232 - (-) 250
300007	K005	Lane divider -1 (- 195,198 -1/- 189 - (-) 198
300009	Y000	Pressu. - (-) 134
300013	Y008	Folding support down - (-) 220
300014	Y004	Infeed stop out - (-) 219
300015	Y005	Flap up - (-) 237
300016	Y006	Brake lane 1 -1 (- 142,206,209,216,217,218 -1/- 225 - (-) 216
300017	K006	Belt brake - (-) 135
300018	K16_126	Belt brake -1 (- 154,167,180,183,185,185,190,197,281 -1/- 187,188,280 - (-) 190
300019	K004	Serve motor pusher -1 (- 222,225 -1/- 221 - (-) 222

GAD00004

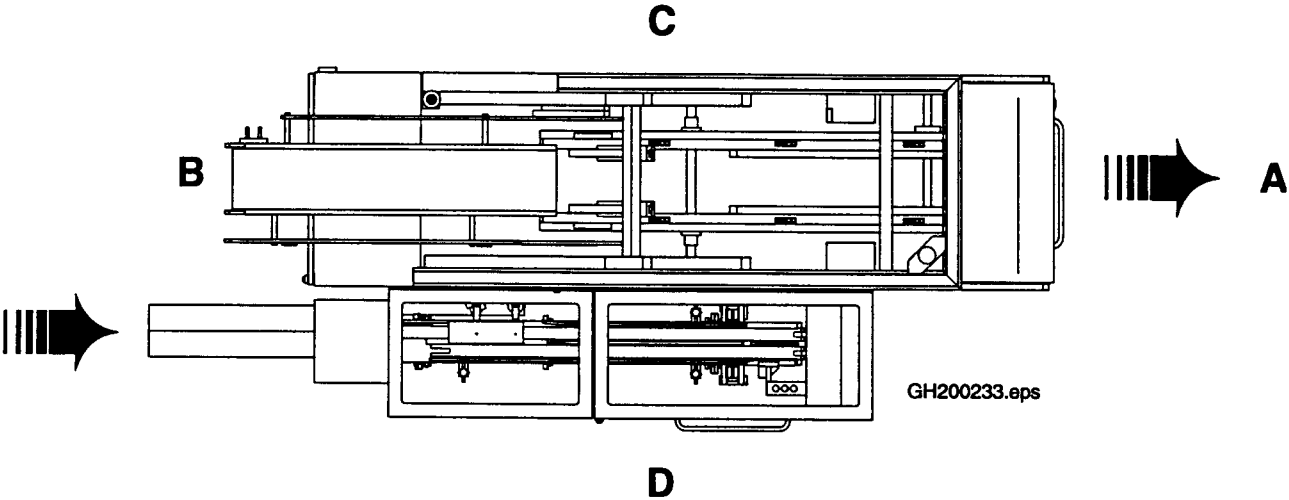


GAD00017

1.0 TH4600019.en

Machine orientation

General

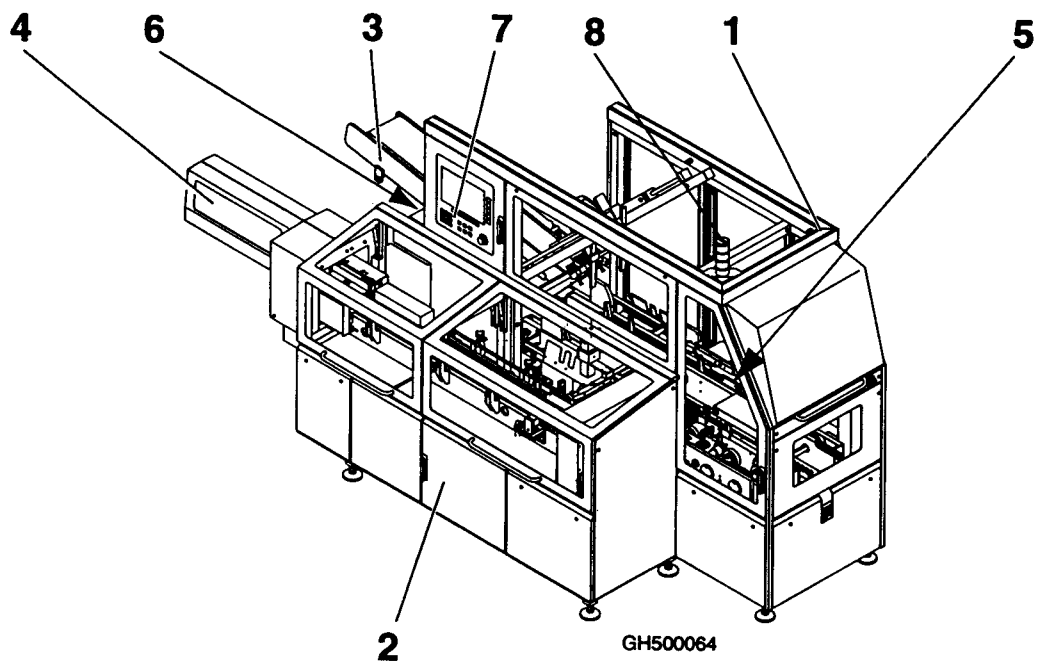


- A. Front
- B. Rear
- C. Left side
- D. Right side

1.0 TH400019.en

Main section location

1	Base Unit	B-670294-040V
2	Infeed Unit	B-670292-040V
3	Magazine Unit	B-670293-040V
4	Regular Accessories	B-670290-040V
5	Wrap Around Unit	B-670375-040V
6	Electrical Cabinet	CE-41988-060V
7	Panel	CE- 41989-050V
8	Warning Lamp	C-581689-010V



1.0 TH400019.en

Other items

Abbreviations and terminology

Words	Explanation
control voltage	voltage used to control the machine
operating voltage	Main supply (the voltage that makes the machine work)

2. Safety Precautions

2.1TH400020.en

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Hearing Protection	2-3
Requirements on personnel	2-4
General	2-4
Requirements on personnel	2-5
Warning Signs	2-6
Emergency stop buttons	2-7
Location of emergency stop buttons	2-7
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General

To ensure maximum safety always read this section carefully before doing any work on the machine or making any adjustments.

Tetra Pak will not accept any responsibility in case of injuries and damages caused by incorrect use of the machine.

Use of hazard information

Hazard information in this document has the following significance:



DANGER!

Failure to observe this information results in immediate danger of life!



WARNING!

Failure to observe this information can result in personal injury!

Caution!

Failure to observe this information can result in damage or destruction of equipment!

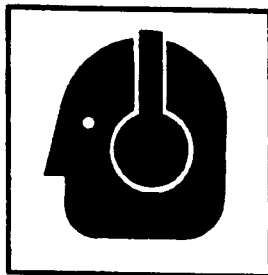
Hearing protection



WARNING!

Risk of impaired hearing! Use hearing protection to minimize the risk of impaired hearing.

Always wear hearing protection while the machine is running.



GAD00051

2. Safety Precautions

Requirements on personnel

General

All personnel must regard all electrical equipment as live.



DANGER!

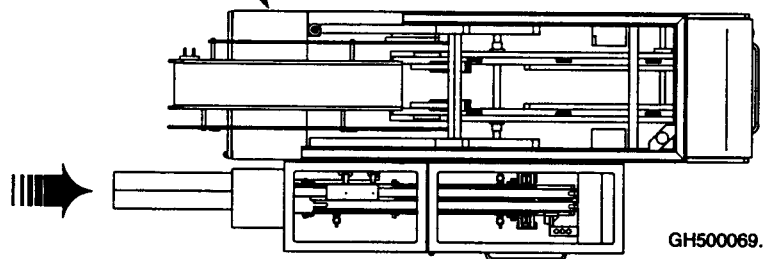
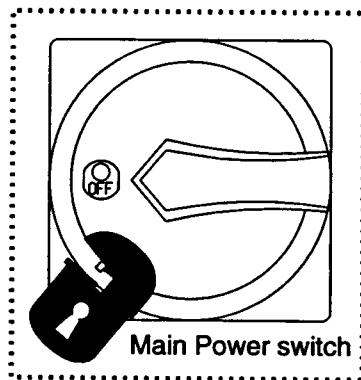
Before carrying out maintenance and repair, switch off Main Power switch and lock it (see below).



DANGER!

Risk of electrical shock!

Frequency converter G022 and G023 and the servo control unit G024 (located in the electrical cabinet) remain charged to dangerous voltages even when the Main switch is OFF. Discharge time approx. 5 minutes. Risk of electrical shock that may cause injury or death.



2.1TH400020.en

Requirements on personnel

Electricians should be certified according to local regulations with experience of similar types of installations. Proven skills in reading and working from drawings and cable lists. Knowledge of local safety regulations for power and automation. Work with the electrical equipment must be performed by **skilled or instructed technicians only**. According to EN 60204.3,55 skilled person:

- *An individual with technical knowledge or sufficient experience to enable that individual to avoid hazards which electricity can create.*

The use of a key or tool is necessary for access by skilled or instructed persons to carry out operations for which it may not be appropriate to disconnect the equipment. The supply disconnecting mains may be operated as needed while the door is open.

Examples of such operations are:

- resetting of protective devices;
- adjustment of device settings (e.g. preset timers); and
- fault finding and diagnostic testing

The work is to be carried out in such a way that there will be no risk of personnel injury.

During maintenance or service work, the technicians is responsible not for the machine only, but for the personnel in the vicinity of the machine as well!

It is also the responsibility of the technician to assure that the machine safety devices are fully operational before he finishes the maintenance or service work.



WARNING!

If the Safety Precautions are not followed, there is risk of personal injury.

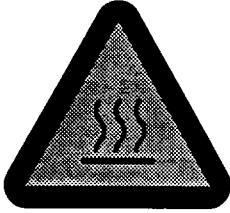
2. Safety Precautions

Warning Signs



Enclosures which do not clearly show that they contain electrical devices are marked with a black lightning flash on a yellow background within a black triangle.

Failure to observe may result in danger to your life!



Hot surfaces are marked with this sign. The temperature may exceed 60°C.

Failure to observe may result in injuries caused by burning!



This sign indicates entrapped heat in the area where the sign is placed. The temperature may exceed 60° C.

Failure to observe may result in injuries caused by burning!



Never flush water or any other liquid towards an area with this sign!

Failure to observe may result in danger to your life!



Entrapped compressed air!

Failure to observe may result in injuries caused by moving parts.

Emergency stop buttons



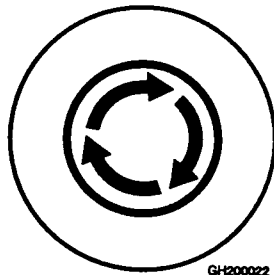
WARNING!

When there is risk of personnel injury or machine damage, the machine must be stopped immediately by pushing one of the four emergency stop buttons.

The exact location of the emergency stop buttons must be known so that the machine can be stopped immediately (see below).

Emergency stop should only be used in above mentioned cases. To stop production in the normal way, see **Stop**-section in the OM book.

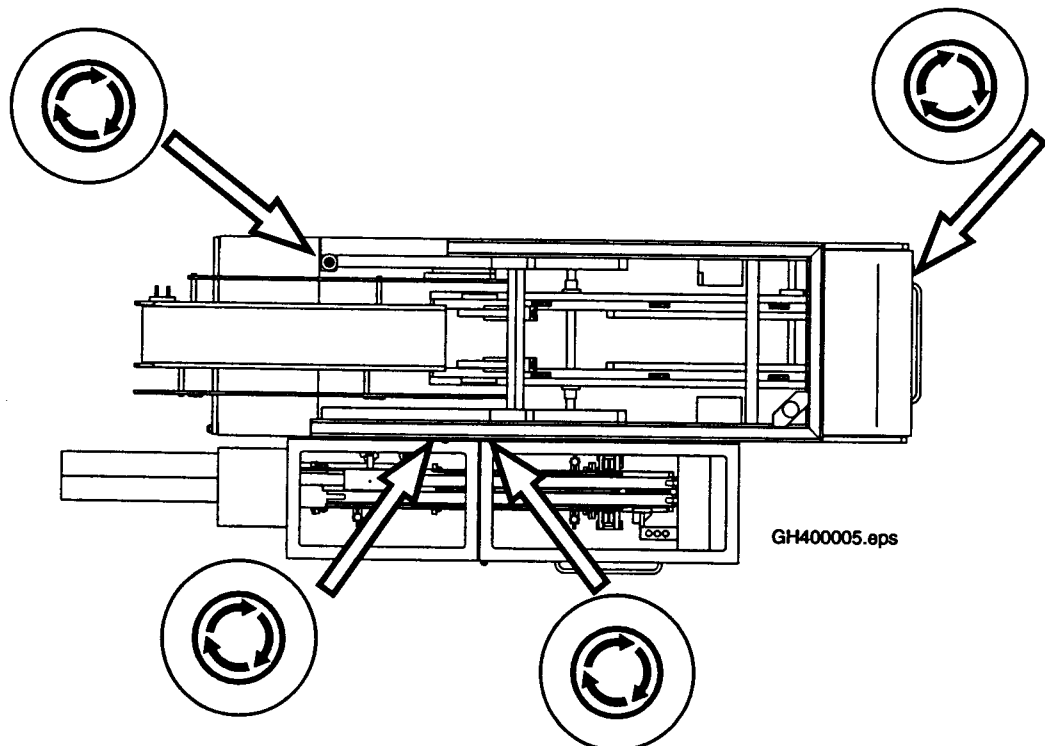
Note! Emergency stops do not cut the “Main Power Switch” off.



GH200022

Emergency stop button

Location of emergency stop buttons



GH400005.eps

2. Safety Precautions

Doors and Covers



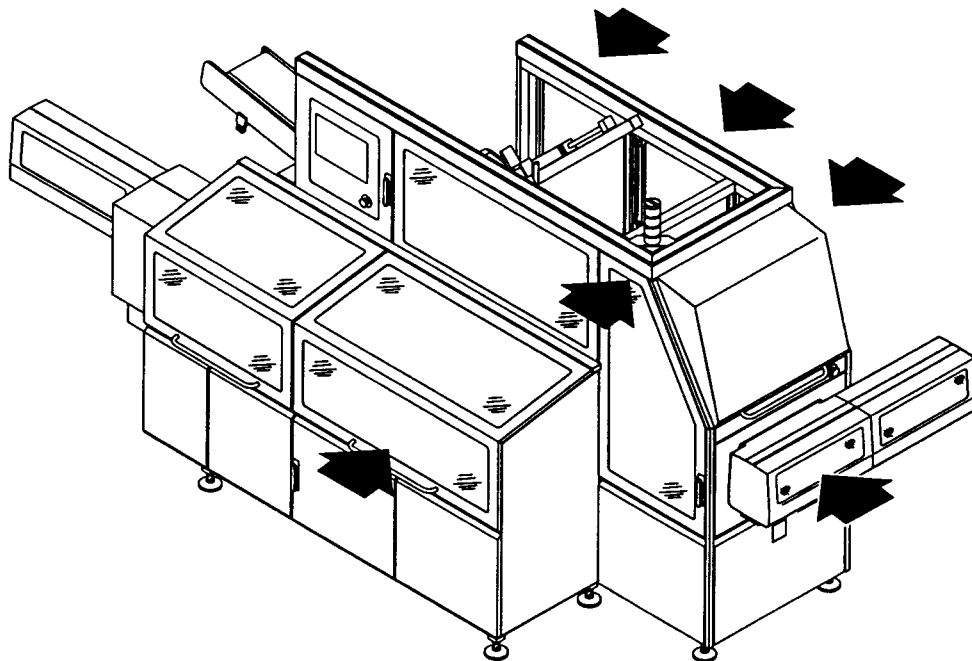
WARNING!

Moving parts and hot surfaces can cause serious injuries. Never run the machine if any safety switch is non-operational or any cover is not fitted.

Doors

All doors leading to risk areas are fitted with safety switches. These switches are part of the security system and **must under no circumstances be by passed, bridged, or in any other way put out of working order.**

If any one of these doors are opened under operation, the machine will stop immediately. Never use this as a method to stop the machine. The machine may perform a reciprocating movement during the first few seconds after a stop; also some machine parts may still be hot.



GH100140.eps

Doors with safety switches

2.1TH400020.en

Covers

All covers are screwed on to the machine. Check always before start that the covers are reassembled on to the machine.

Electrical Cabinet Restrictions



Risk of electrical shock!

The voltage is 400V inside the electrical cabinet.
This can cause electrical shock or serious injury.
In case of accident, immediately call for medical attention.

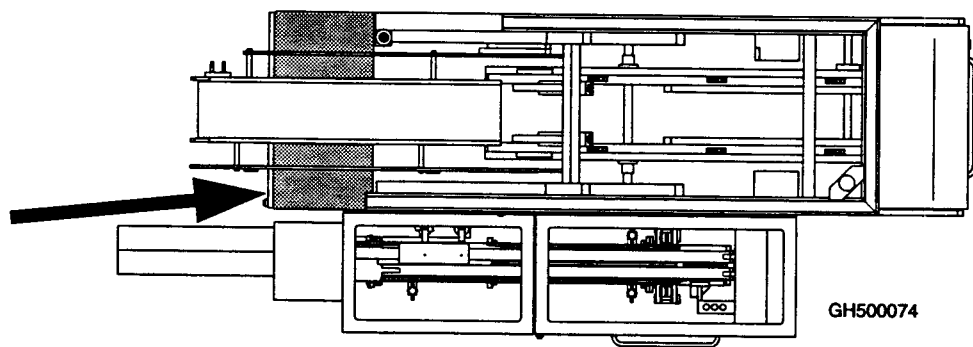
Risk of electrical shock!

Frequency converter G022 and G023 and the servo control unit G024 (located in the electrical cabinet) remain charged to dangerous voltages even when the Main switch is OFF. Discharge time approx. 5 minutes. Risk of electrical shock that may cause injury or death.

Work inside the electrical cabinet must be performed by skilled or instructed persons only (see "Requirements on personnel", page 2-4 and 2-5)

Caution! Always make sure that the electrical cabinet door are locked after performing any type of work in it.

Location



2. Safety Precautions

Hot melt equipment



DANGER!

There is high voltage inside the hot melt unit. Risk of electrical shock that may cause injury or death.



WARNING!

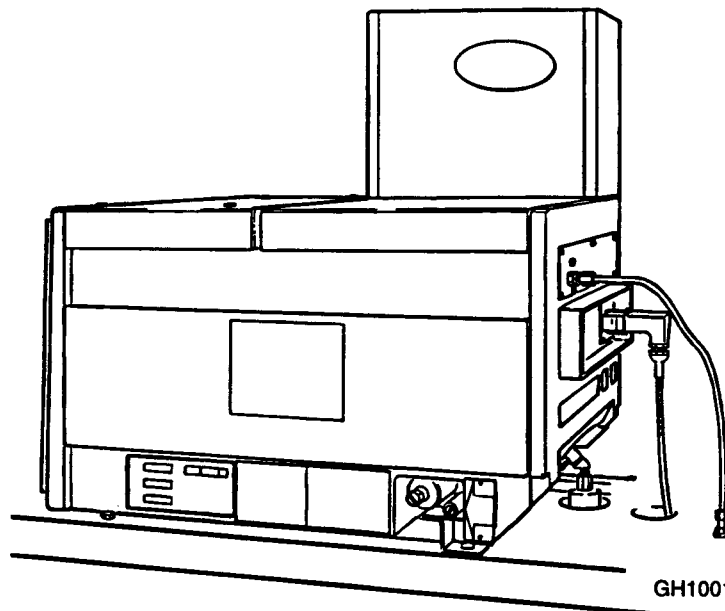
Always wear safety glasses, protective gloves, and other protective clothing to avoid injuries caused by splashing hot melt material.

All service work on the hot melt unit must be carried out by authorized personnel.

Note! Always refer to the documentation provided from Nordson Corporation before doing any kind of work on the hot melt equipment. The Nordson Series 3000 Technical Manual is included at delivery from Tetra Pak

Failure to relieve any remaining air or liquid (adhesive) pressure may cause serious injuries through burning when the hot melt filter is detached or flushed.

Never remove any part or component until air and electric power have been disconnected and the pressure of the hot melt in the system has been relieved.



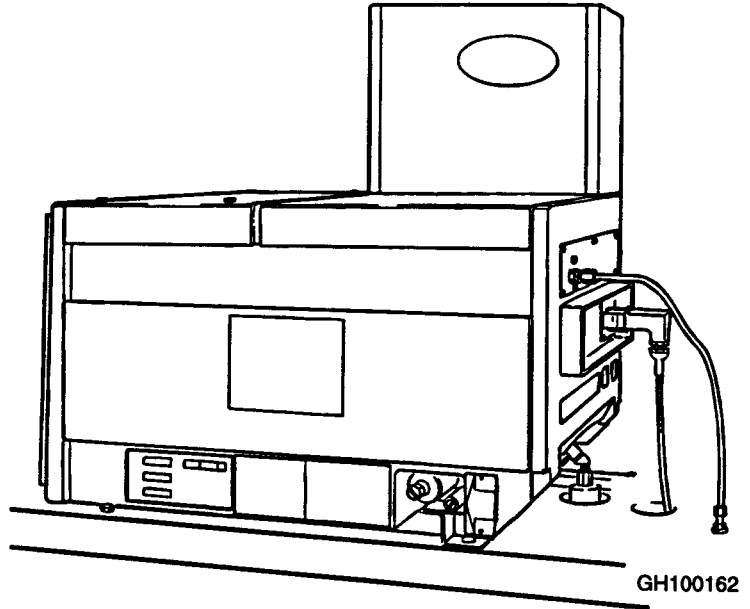
2.1TH400020.en

! WARNING! Hot melt unit

Risk of burning! During heating and production the hot melt unit gets hot.
Do not touch the unit!



GH200212.epa



GH100162

2. Safety Precautions

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2.1TH400020.en

3. Electrical System Description

2.1TH400021.en

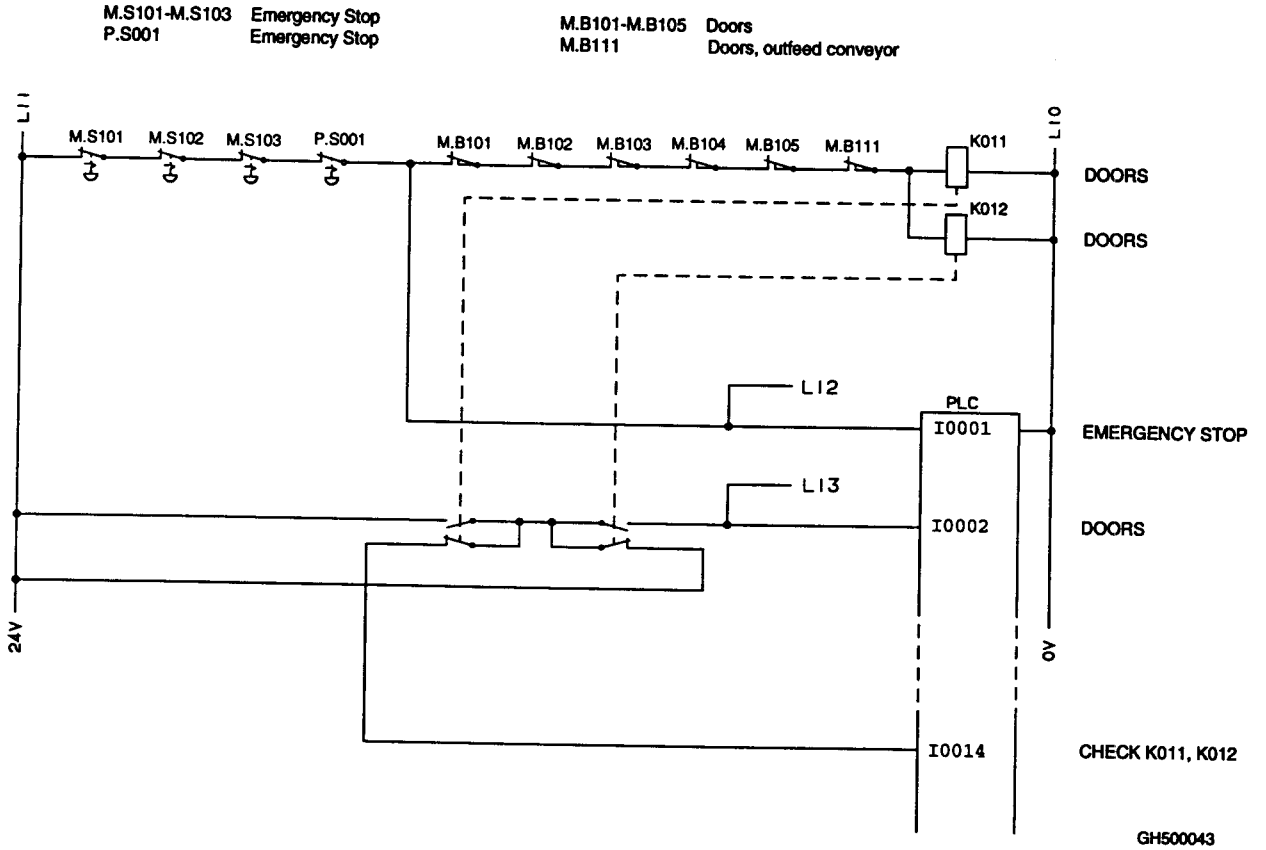
3. Electrical System Description

Table of contents

Safety System 3-3

2.1TH40021.en

Safety System



2.1TH400021.en

GH500043

3. Electrical System Description

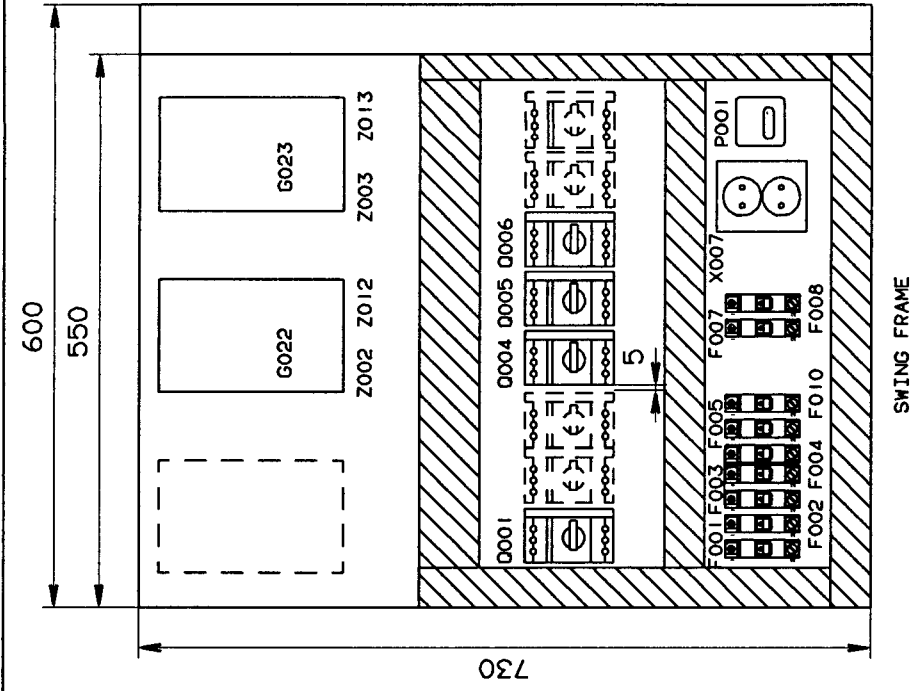
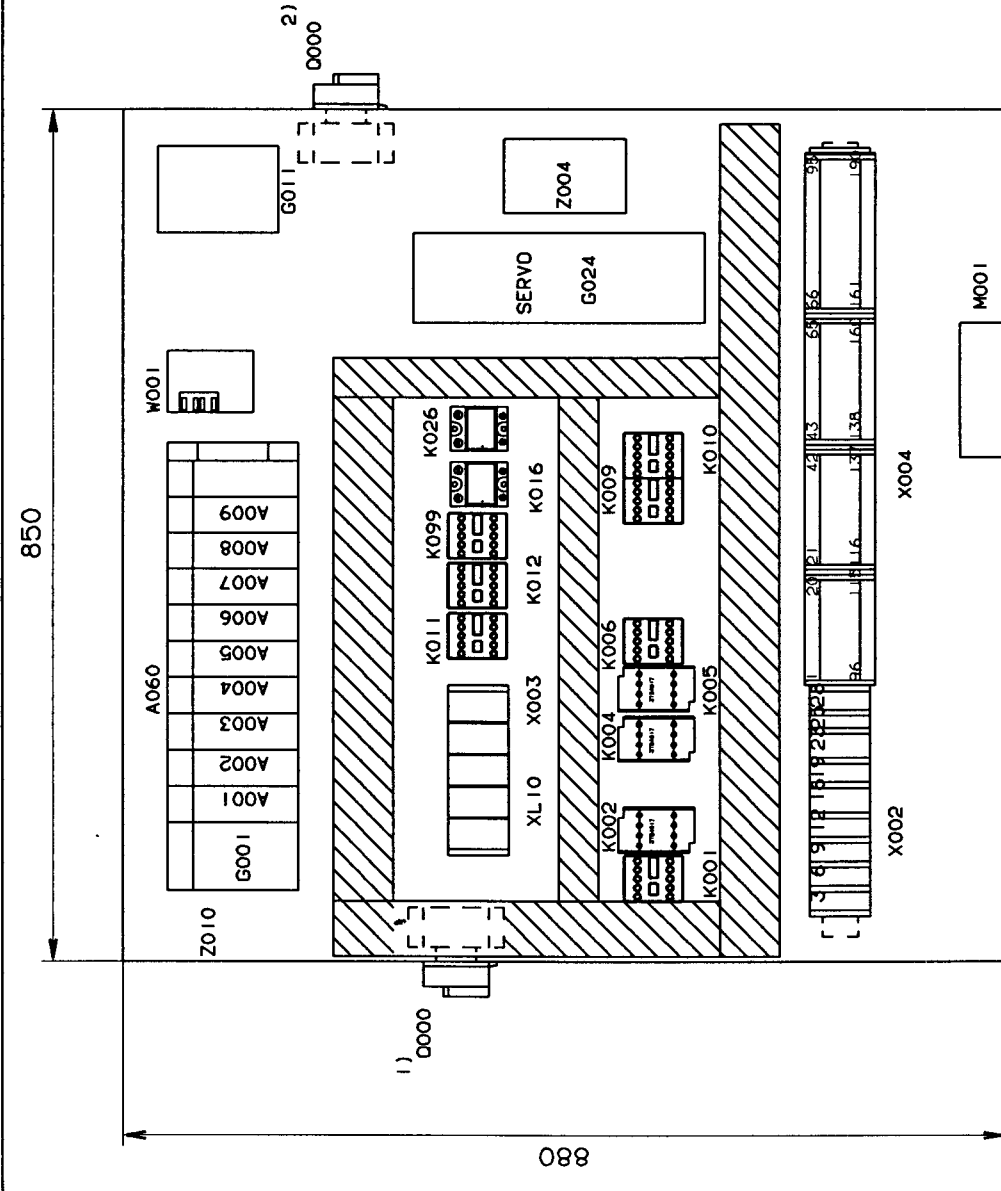
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2.1TH400021.en

4. Component Location

2.1Th400022.en

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.



ELECTRICAL CABINET WITHOUT DOOR, WITHOUT SWING FRAME

TETRA CARDBOARD PACKER 70

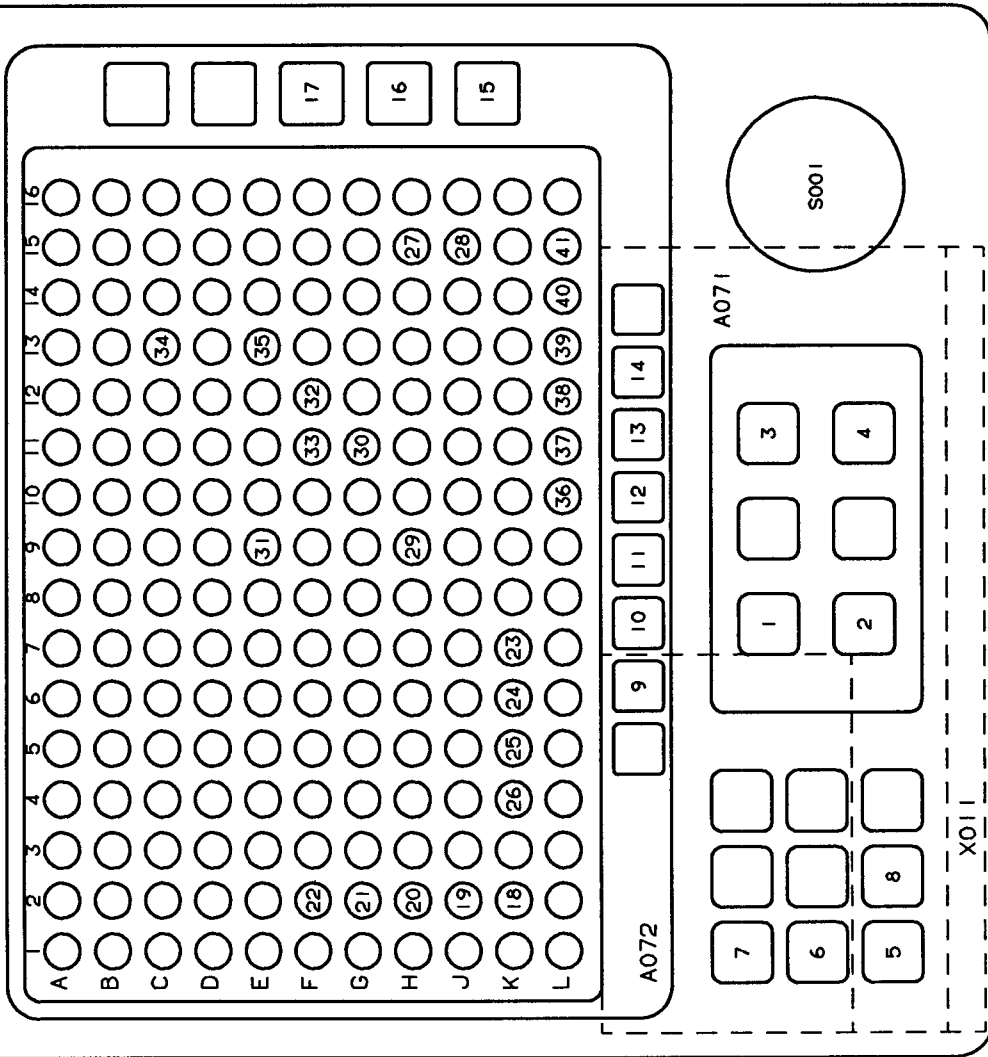
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Sign./Date	MRO/951024	Mechanics	SEE ABOVE	Designation	MOUNTING DRAWING				
App./Date	MRO/951024	Company	Tetra Pak Distributor AB			Drawing No.	52496-05:17		
								Page -	

- 1) WHEN NOT LEFT Z-INFEED
- 2) AT LEFT Z-INFEED

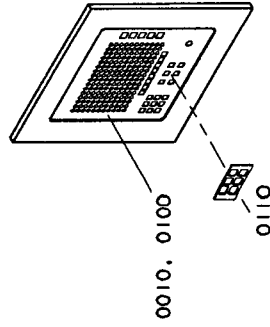
Drawing remarks

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TETRA CARDBOARD PACKER 70



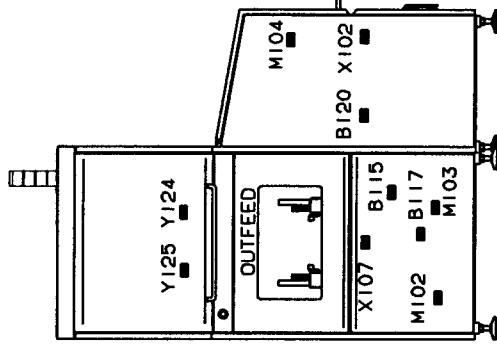
A071	
1	S01H STEP UP
2	S02H STEP DOWN
3	S03H RESET/ LAMP TEST
4	S04H MAN. EMPTYING
5	S07H SELECT PP LENGTH
6	S08H SELECT INFEEED PACKAGE
7	S09H SELECT CARDBOARD TYPE
8	S10H SELECT PP WIDTH
9	H010 ALARM SERVO
10	H006 ALARM EMERGENCY STOP
11	H007 ALARM COVER
12	H008 ALARM MOTOR PROTECTION
13	H009 ALARM AIR PRESSURE
14	H011 ALARM FREQUENCY CONTROL
15	H001 STEP 1
16	H002 STEP 2
17	H002 STEP 3
18	H014 TRAY
19	H015 WA MEETING FLAP
20	H016 TRAY OF
21	H017 WA INSIDE FLAP
22	H018 WA SIDE FLAP
23	H019 SINGLE PACK. INFEEED
24	H020 (X*1) INFEEED
25	H021 SPARE
26	H022 SPARE
27	H024 PP WIDTH, NARROW
28	H025 PP WIDTH, WIDE
29	H027 ALARM FALLEN PACKAGE
30	H028 ALARM CRUSH AFTER DIVIDER
31	H029 ALARM BLANK MAGAZINE
32	H030 ALARM CRUSH IN PUSHER
33	H031 ALARM NO BLANK IN PACK POS.
34	H032 ALARM HOTMELT UNIT
35	H033 ALARM QUEUE OUTFEED
36	H035 PACKAGE PATTERN X*5
37	H036 PACKAGE PATTERN X*6
38	H037 PACKAGE PATTERN X*7
39	H038 PACKAGE PATTERN X*8
40	H039 PACKAGE PATTERN X*9
41	H040 PACKAGE PATTERN X*10



TETRA CARDBOARD PACKER 70

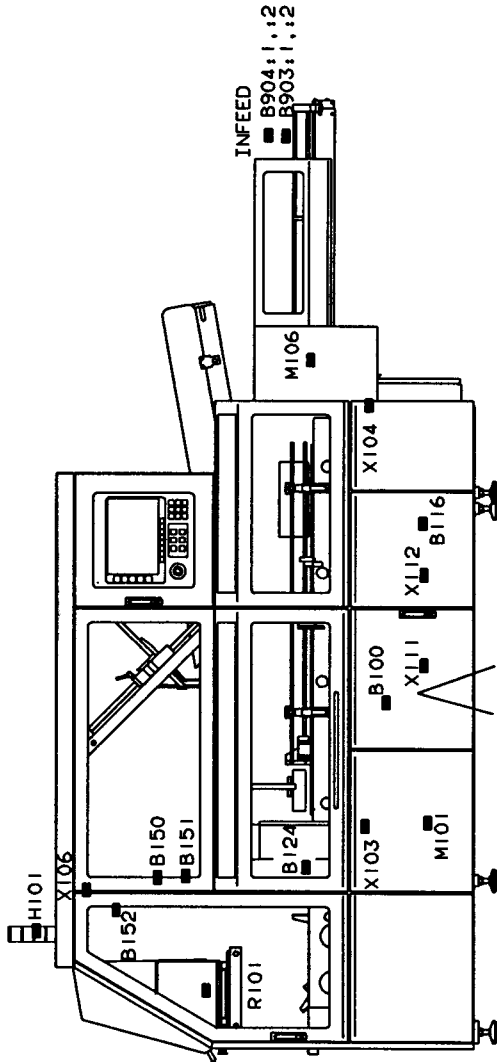
Notes	1) MARK OUT THE PACKAGE PATTERN WHICH THE MACHINE IS DELIVERED FOR.	Designer MRO	Date	951030	Approved MRO	Date	951030	Dr. class	-
ECH No.	23134	Mechanics	SEE ABOVE		Description		MOUNTING DRAWING		
Sign./Date	MRO/951030	Company		Drawing No		52496-08:17			
Apr./Date	MRO/951030	Tetra Pak Distributor AB		Page		-			

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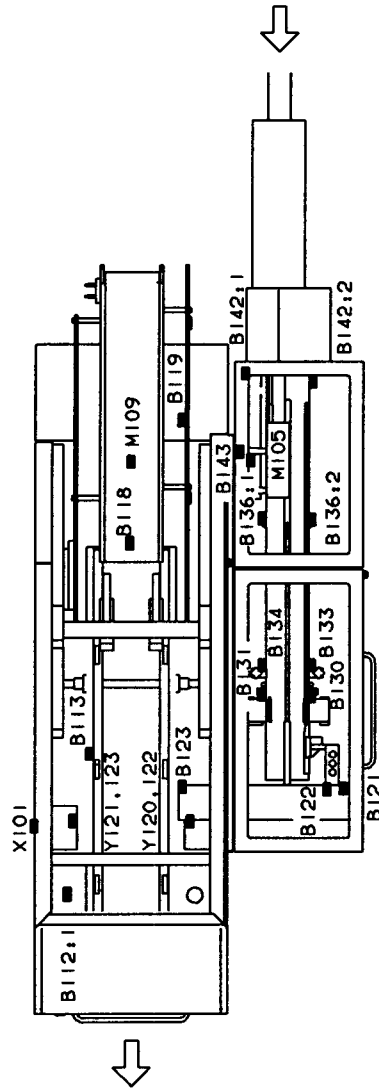
X106, B150-B152, Y122-Y125,
Y140-Y141 ONLY AT WRAP AROUND
B901:1,2; B902:1,2; Y901, X901, Y160,
B908:1,2; Y908 EXTRA EQUIPMENT

B902:1,2 Y901 X901
B901:1,2



Y100 Y130:A,B
Y104 Y131:A,B
Y105 Y140
Y106 Y141
Y107 Y141
Y108 Y160

B908:1
B908:2
Y908



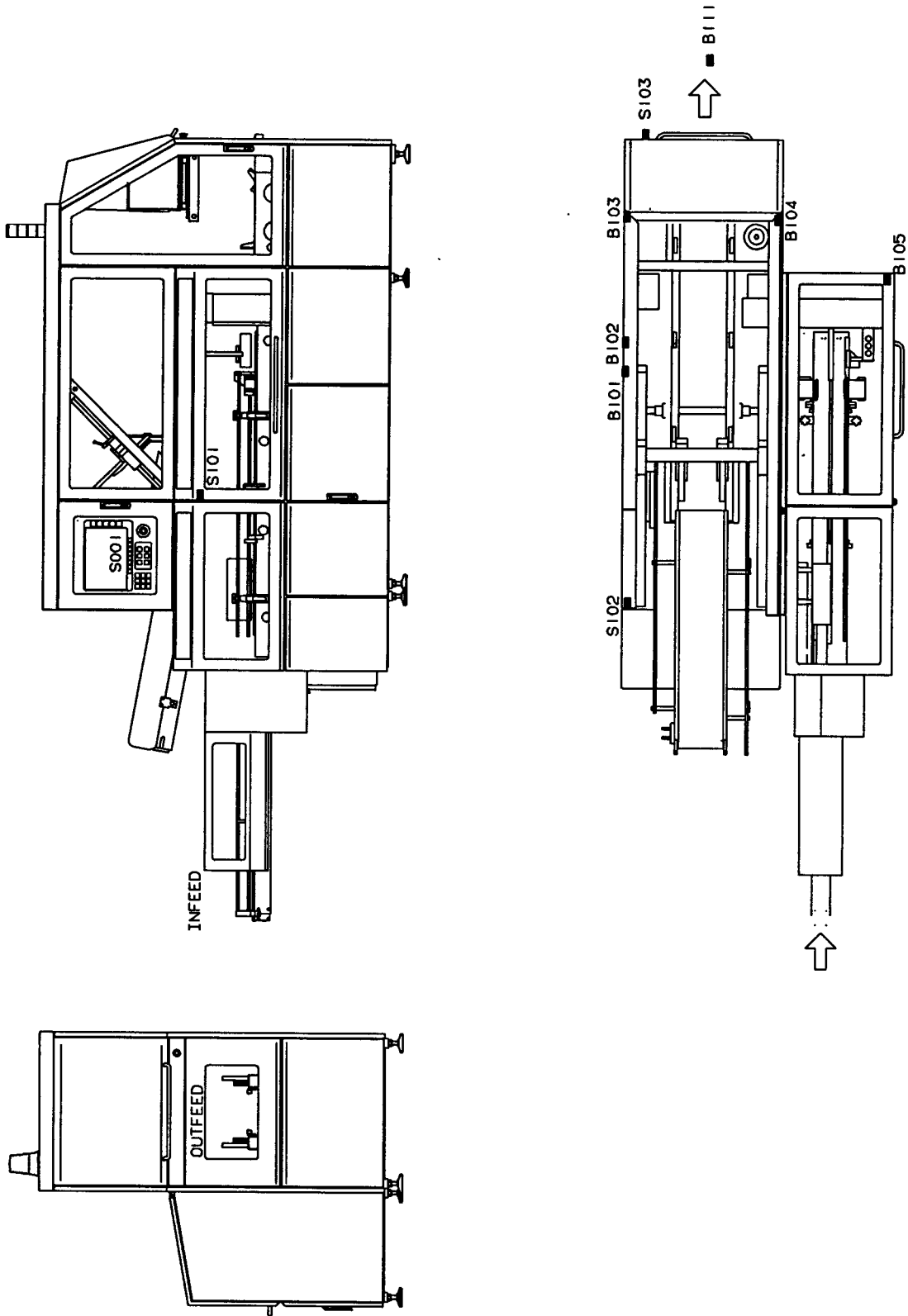
B112:2

LEFT Z-INFEED, MED

TETRA CARDBOARD PACKER 70

Notes		Designer: MRO	Date: 950926	Approved: MRO	Date: 950926	Doc. class: -
Ctrl No.	23134	Machine	SEE ABOVE			
Sign./Date	MRO/950926	Destination	MOUNTING DRAWING			
Appr./Date	MRO/950926	Drawing No.	52496-21:06			
Drawing remarks		Company	Tetra Pak Distributon AB			
		Page	-			

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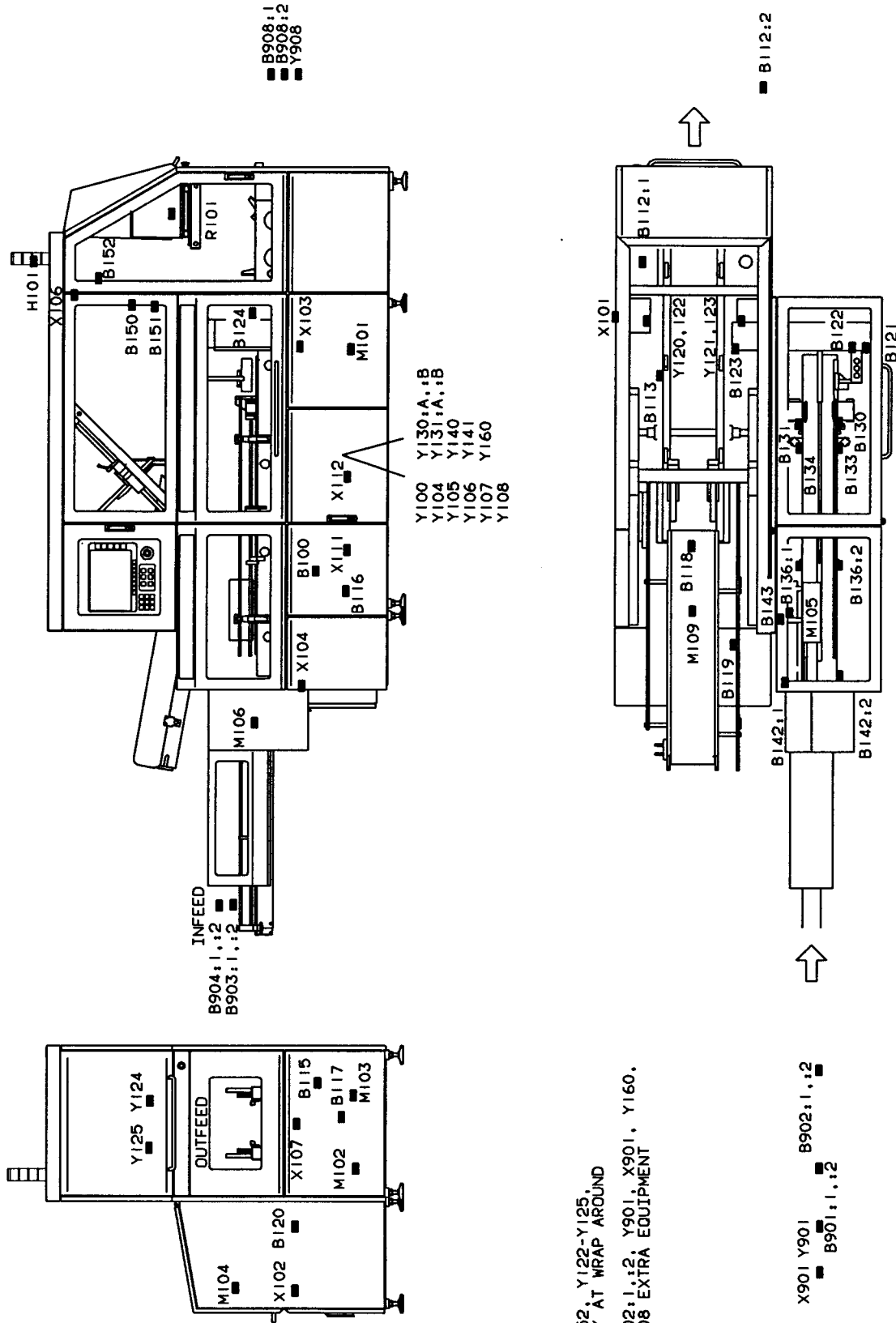


RIGHT Z-INFEED, MED

TETRA CARDBOARD PACKER 70

Notes									
ECR No.	21817								
Sign./Date	MRO/950413								
Appr./Date	MRO/950413								
Tetra Pak		Designer MRO	Date 950413	Approved MRO	Date 950413	Dr. class	-		
Company Tetra Pak Distributor AB		Machines SEE ABOVE		Denomination MOUNTING DRAWING					
		Drawing No.		52496-25:02		Page -			

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X106, B150-B152, Y122-Y125,
Y140-Y141 ONLY AT WRAP AROUND
B901:1,2, B902:1,2, Y901, X901, Y160,
B908:1,2, Y908 EXTRA EQUIPMENT

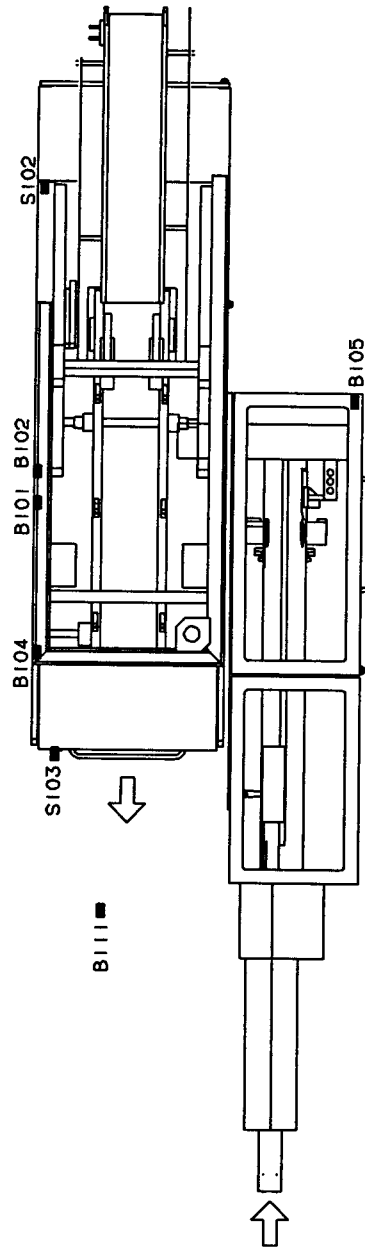
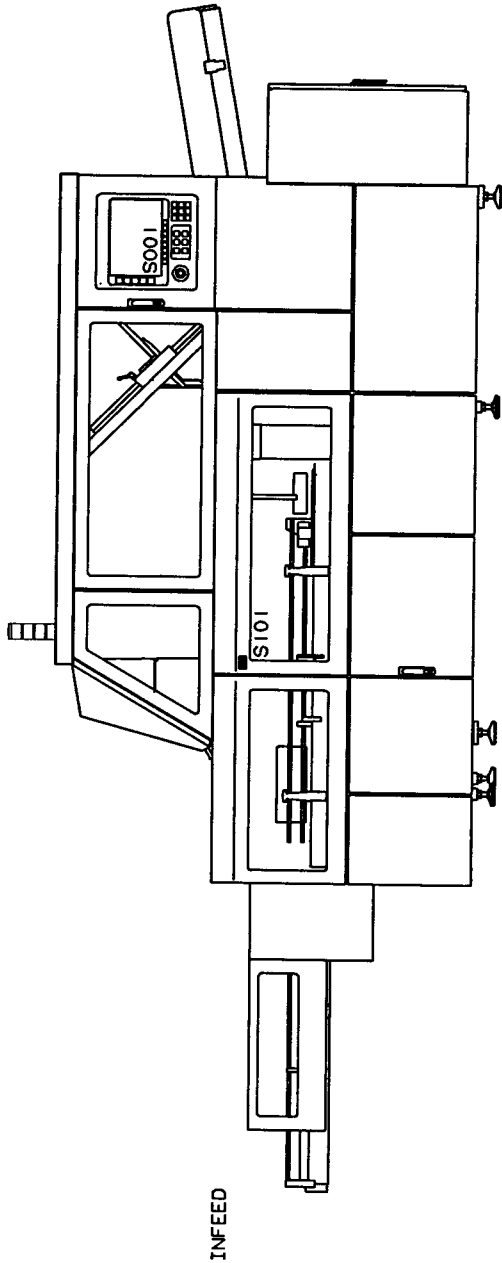
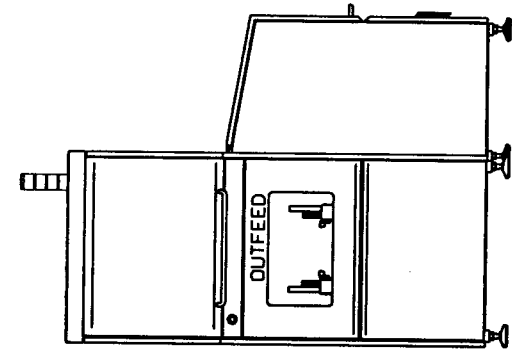
X901 Y901
■ B902:1,2
■ B901:1,2

RIGHT Z-INFEED, MED

TETRA CARDBOARD PACKER 70

Net				Designer MRO	Date	950926	Approved MRO	Date	950926	Doc. class	-
ECN No.	23134			Machine	SEE ABOVE			Destination	MOUNTING DRAWING		
Sign./Date	MRO/950926			Company		Tetra Pak Distribubton AB		Drawing No.	52496-26:06		
Appr./Date	MRO/950926			Drawing remarks				Page		-	

This drawing must not, without the consent of Tetra Pak, be copied, transmitted or disclosed to any third party.

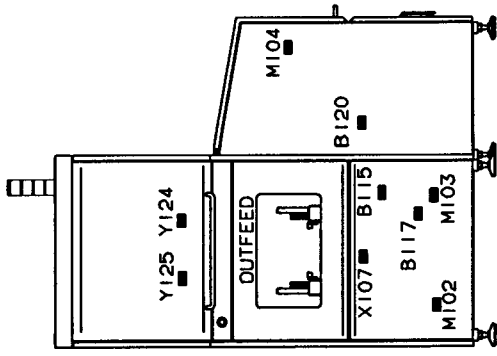


LEFT U-INFEED, MED

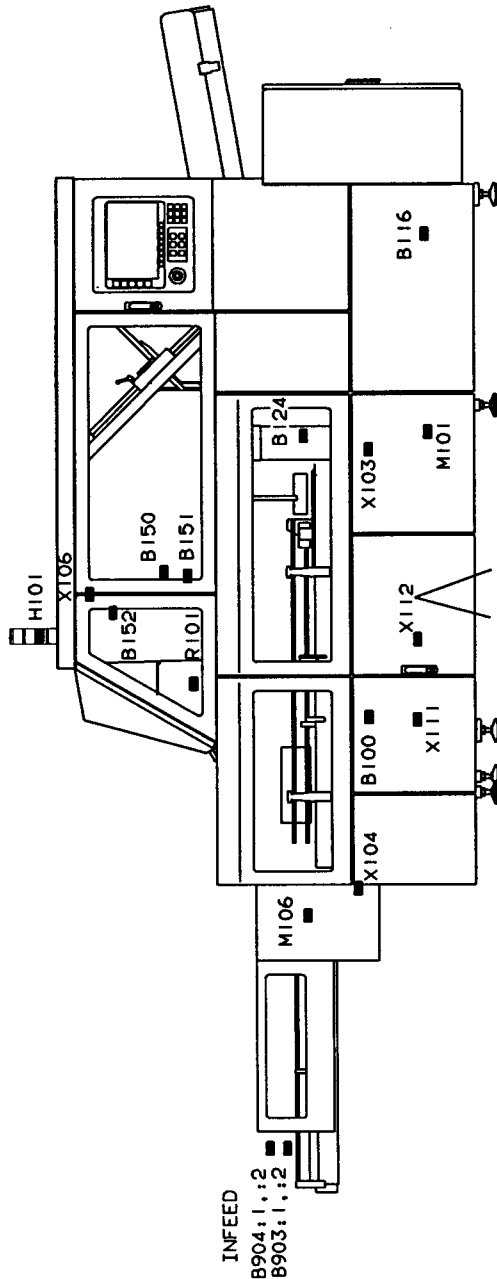
TETRA CARDBOARD PACKER 70

Designer MRD Machine SEE ABOVE	Date 950413	Approved MRO Date 950413	Destination MOUNTING DRAWING	Dr. class -
Company Tetra Pak Distributor AB				Drawing No 52496-30:02
Note				Page -
ECN No. 21817	Sign./Date MRO/950413	Drawing remarks		
Appr./Date MRO/950413				

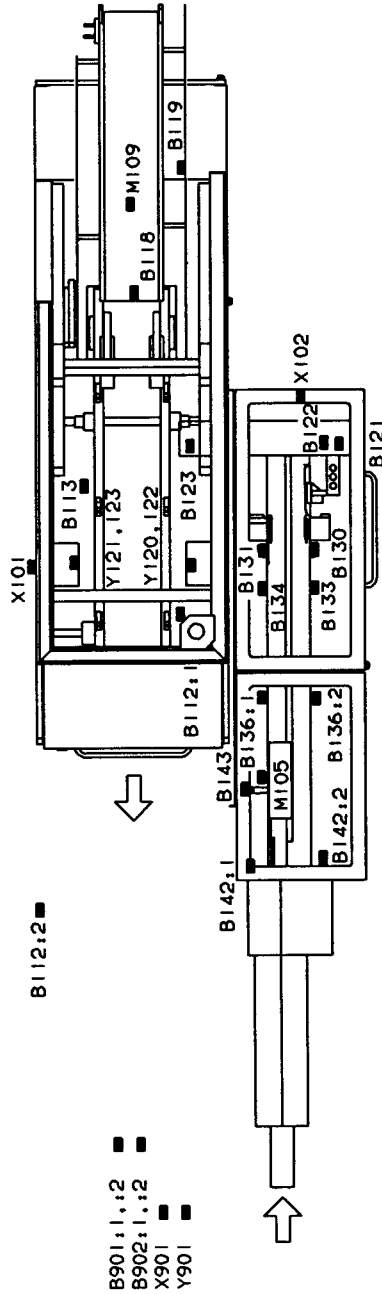
This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.



X106, B150-B152, Y122-Y125,
Y140-Y141 ONLY AT WRAP AROUND
B901:1,2, B902:1,2, Y901, X901,
Y160, EXTRA EQUIPMENT



Y100 Y130:A,B
Y104 Y131:A,B
Y105 Y140
Y106 Y141
Y107 Y160
Y108



LEFT U-INFEED, MED

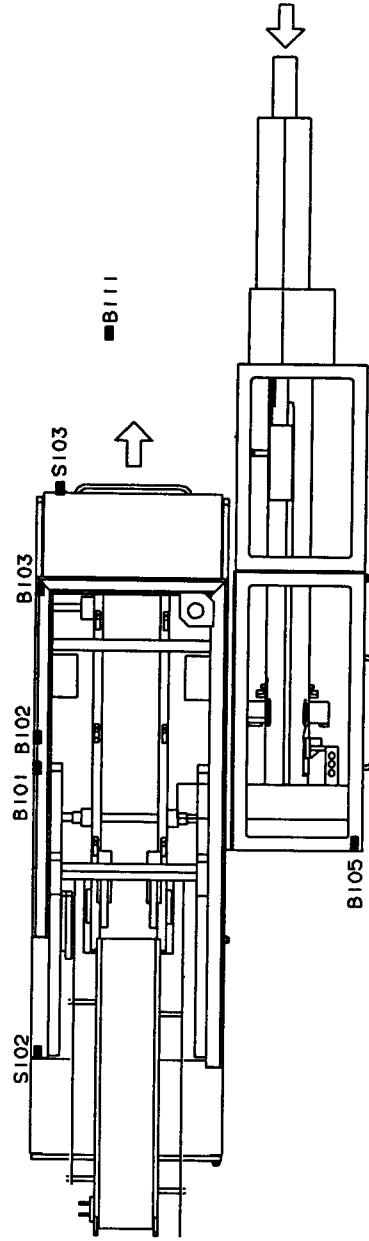
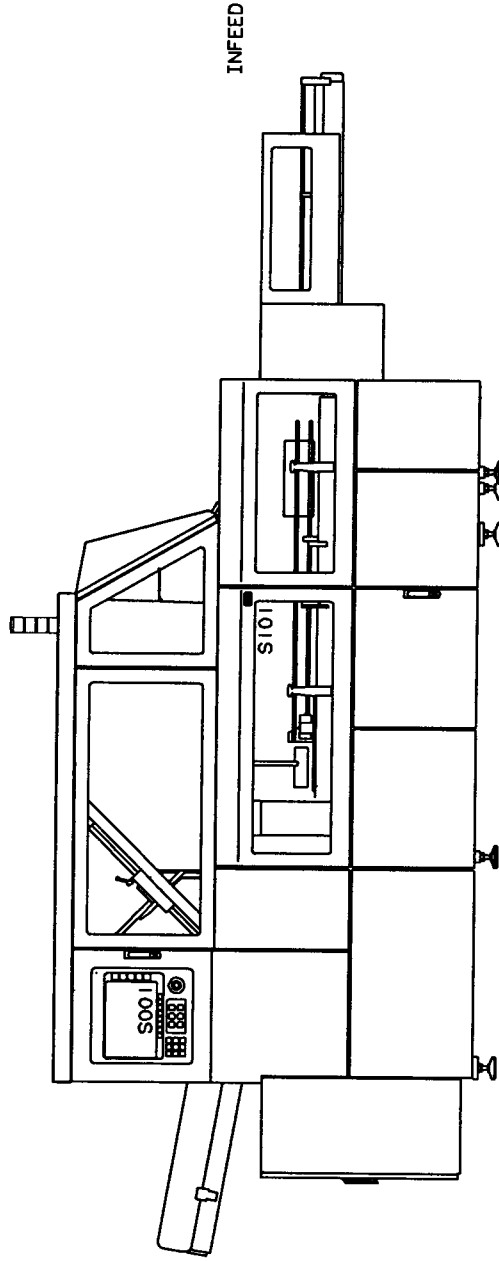
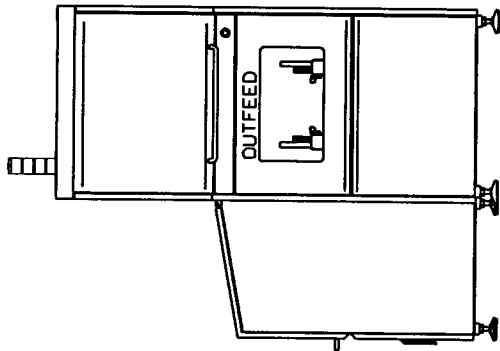
TETRA CARDBOARD PACKER 70

File		Designer MRO	Date 950926	Approved MRO	Date 950926	Dr. class	-	
ECN No.	23134	Machine	SEE ABOVE	Destination	MOUNTING DRAWING			
Sign./Date	MRO/950926	Company	Tetra Pak Distributon AB					
Appr./Date	MRO/950926	Drawing No.	52496-31:06					
							Page	-

Tetra Pak

Drawing remarks

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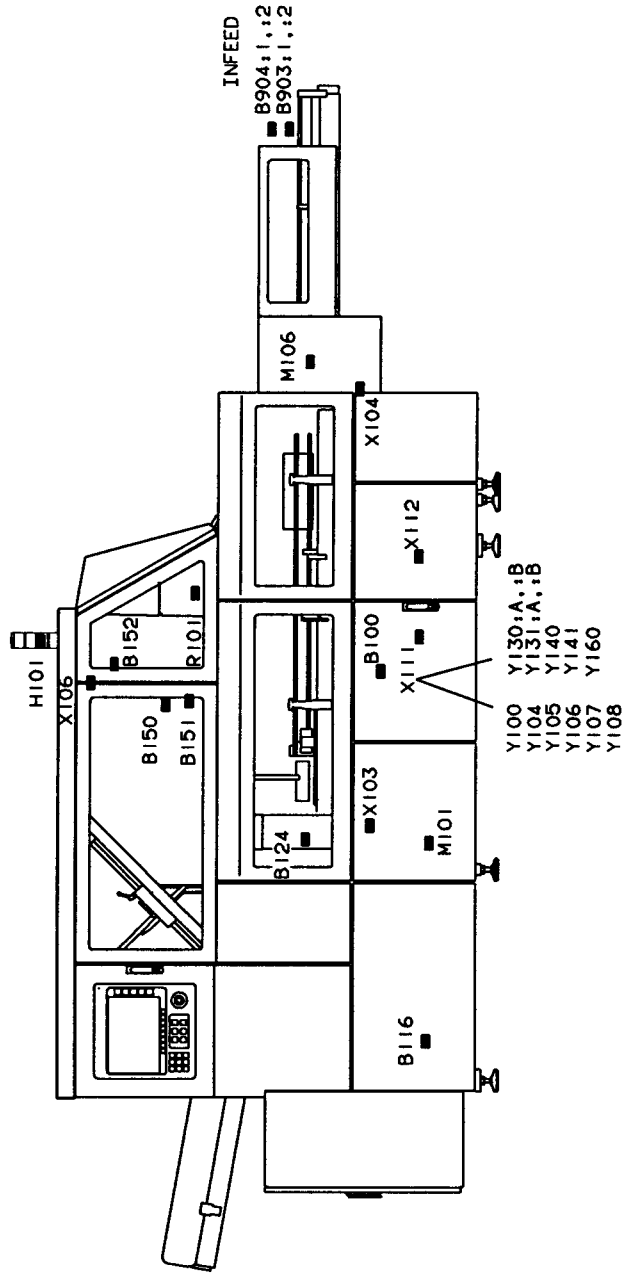
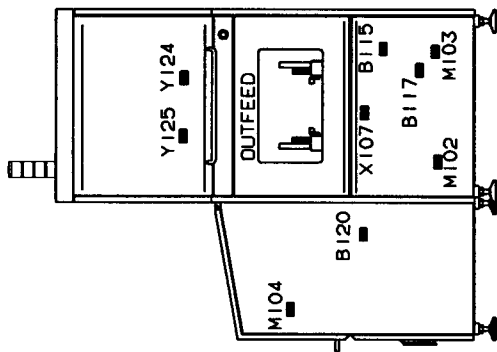


RIGHT U-INFEED, MED

TETRA CARDBOARD PACKER 70

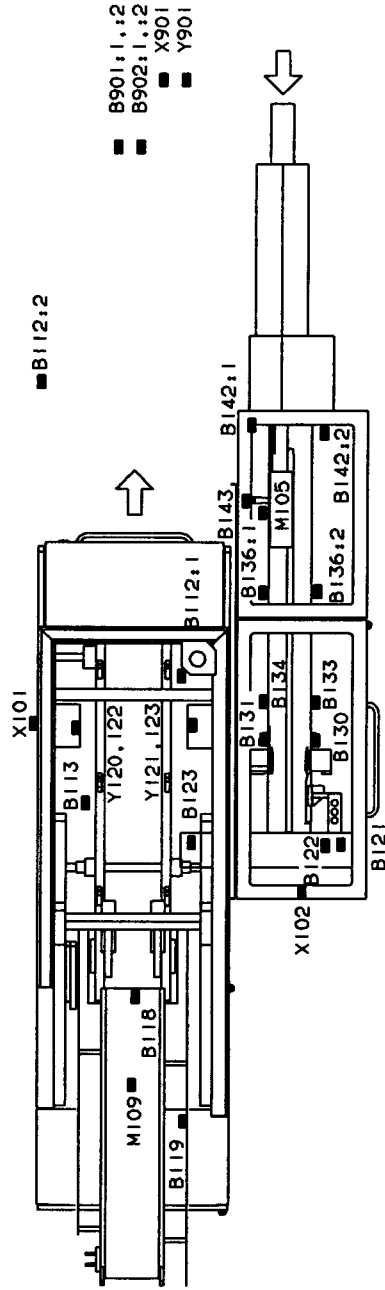
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Sign./Date	MRD/950413								
Appr./Date	MRD/950413								
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Machine		SEE ABOVE		Destination		MOUNTING DRAWING			
Company		Tetra Pak Distribution AB		Drawing No.		52496-35:02			
Drawing remarks				Page		-			

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- Y100 Y130:A;B
- Y104 Y131:A;B
- Y105 Y140
- Y106 Y141
- Y107 Y160
- Y108

X106, B150-B152, Y122-Y125,
Y140-Y141 ONLY AT WRAP AROUND
B901:1;2, B902:1;2; Y901, X901,
Y160, EXTRA EQUIPMENT



RIGHT U-INFEED, MED

TETRA CARDBOARD PACKER 70

Notes	ECM No.	23134	Designer MRD	Date	950926	Approved MRD	Date	950926	Dis. client	-
Sign./Date	MRD/950926		Machina	SEE ABOVE		Destination			MOUNTING DRAWING	
Appr./Date	MRD/950926		Company	Tetra Pak Distribution AB		Drawing No	52496-36:06		Page -	

Drawing remarks

5. Circuit Diagrams

2.1TH400023.en

5. Circuit Diagrams

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ECN No 23134

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Circuit Diagrams	-05:07	
.....	-06:14	
.....	07:02	
.....	-08:07	
.....	-10:18	
.....	-12:16	
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.....	37:01	
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Earth Summary	-89:11	
Line Summary	-90:21	page 1-4
Terminal Summary.....	91:21	page 1-4
Alteration Message	99:06	

2.1TH400023.en

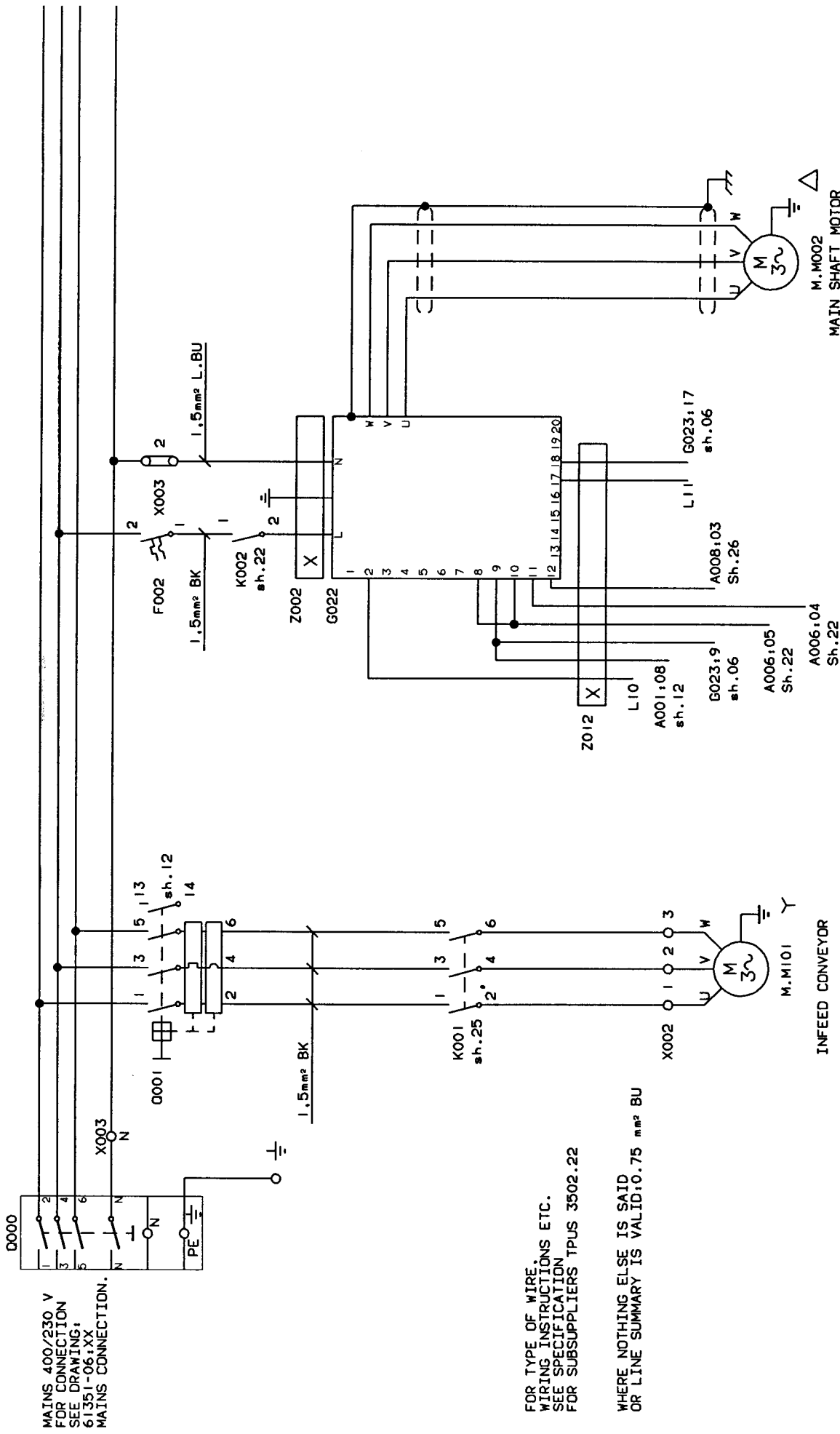
This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.

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A002	14	M.B115	18	M.B151	20	G001	08	P.H018	32	M.H101	27			
A003	16	M.B116	14	M.B152	20	G011	10	P.H019	33					
A004	18	M.B117	15	M.B200	19	G022	05	P.H020	33					
A005	20	M.B118	17	M.B901	20	G023	06	P.H021	33	P.H01S	34			
A006	22	M.B119	16	M.B902	20	G024	07, 39	P.H022	33	P.H02S	34			
A007	24	M.B120	17	M.B903	19			P.H023	33	P.H03S	34			
A008	26	M.B121	16	M.B904	19			P.H024	33	P.H04S	34			
A009	28	M.B122	16					P.H025	33	P.H05S	34			
A060	08	M.B123	16	M.B908	17					P.H06S	34			
P.A071	12	M.B124	16			P.H001	32	P.H027	35					
P.A072	32					P.H002	32	P.H028	35					
						P.H003	32	P.H029	35	K001	25			
		M.B130	18	F001	08			P.H030	35	K002	22			
		M.B131	18	F002	05	P.H006	34	P.H031	35	K004	24			
M.B100	12			F003	06	P.H007	34	P.H032	35	K005	22			
M.B101	10	M.B133	18	F004	08	P.H008	34	P.H033	35	K006	24			
M.B102	10	M.B134	18	F005	08	P.H009	34							
M.B103	10					P.H010	34	P.H035	36	K009	25			
M.B104	10	M.B136	18	F007	06	P.H011	34	P.H036	36	K010	26			
M.B105	10			F008	06			P.H037	36	K011	10			
		M.B142	19			P.H014	32	P.H038	36	K012	10			
M.B111	10	M.B143	19	F010	10	P.H015	32	P.H039	36					
M.B112	17					P.H016	32	P.H040	36	K016	06			
Machine:	Tetra Cardboard Packer 70 MED												Circuit diagram position summary	
ECN No.	23134												Tetra Pak Distribution AB	
Sign./Date	MRO/951024												44161-02:21	
Appr./Date	MRO/951024	Drawing remarks											Page: 1 Cont.: 2	

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K026	06	Q005	06										
		Q006	06	W001	06	M.Y140	28						
K099	27					M.Y141	28						
				X007	08								
		M.R101	08			M.Y160	23						
M001	08												
						M.Y901	26						
M.M101	05	P.S001	10	M.Y100	23	M.Y908	25						
M.M102	05			M.Y104	23								
M.M103	06	M.S101	10	M.Y105	23								
M.M104	07	M.S102	10	M.Y106	23								
M.M105	06	M.S103	10	M.Y107	23	Z002	05						
M.M106	06			M.Y108	23	Z003	06						
						Z004	07						
						Z010	08						
M.M109	08	P.S01H	12	M.Y120	25	Z012	05						
		P.S02H	12	M.Y121	25	Z013	06						
		P.S03H	12	M.Y122	28								
P001	25	P.S04H	12	M.Y123	28								
				M.Y124	28								
				M.Y125	28								
		P.S07H	13										
Q000	05	P.S08H	13	M.Y130:A	26								
Q001	05	P.S09H	13	M.Y130:B	26								
		P.S10H	13	M.Y131:A	26								
Q004	07			M.Y131:B	26								
Machine: Tetra Cardboard Packer 70 MED													
ECN No.	23134												
Sign./Date	MRO/951024												
Appr./Date	MRO/951024												
										TETRA PAK		Circuit diagram position summary	
										Tetra Pak Distribution AB		44161-02:21	
										Drawing remarks		Page: 2 Cont.: -	

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MAINS 400/230 V
FOR CONNECTION
SEE DRAWING:
61351-06:XX
MAINS CONNECTION.

FOR TYPE OF WIRE,
WIRING INSTRUCTIONS ETC.
SEE SPECIFICATION
FOR SUBSUPPLIERS TPUS 3502.22

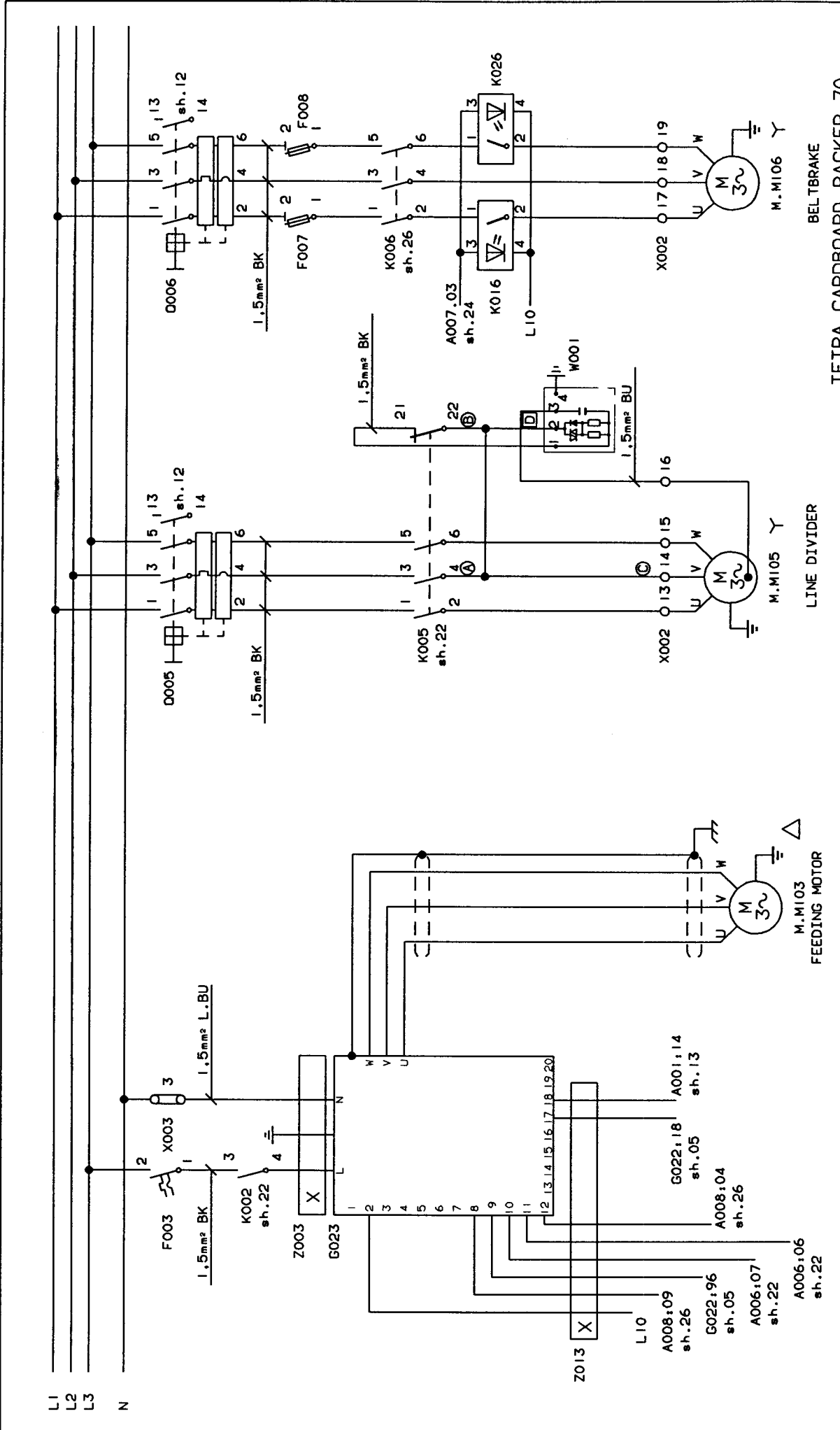
WHERE NOTHING ELSE IS SAID
OR LINE SUMMARY IS VALID: 0.75 mm² BU

MAIN SHAFT MOTOR
TETRA CARDBOARD PACKER 70

INFEED CONVEYOR

Notes					
EDN No.	23134				
Sign./Date	MRO/951023				
Appr./Date	MRO/951023				
Tetra Pak		Designer MRO	Date 951023	Approved MRO	Date 951023
		SEE ABOVE		CIRCUIT DIAGRAM	
		Tetra Pak Distribution AB		Drawing No	44161-05:07
				Page	-

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BELT BRAKE
TETRA CARDBOARD PACKER 70

LINE DIVIDER

FEEDING MOTOR

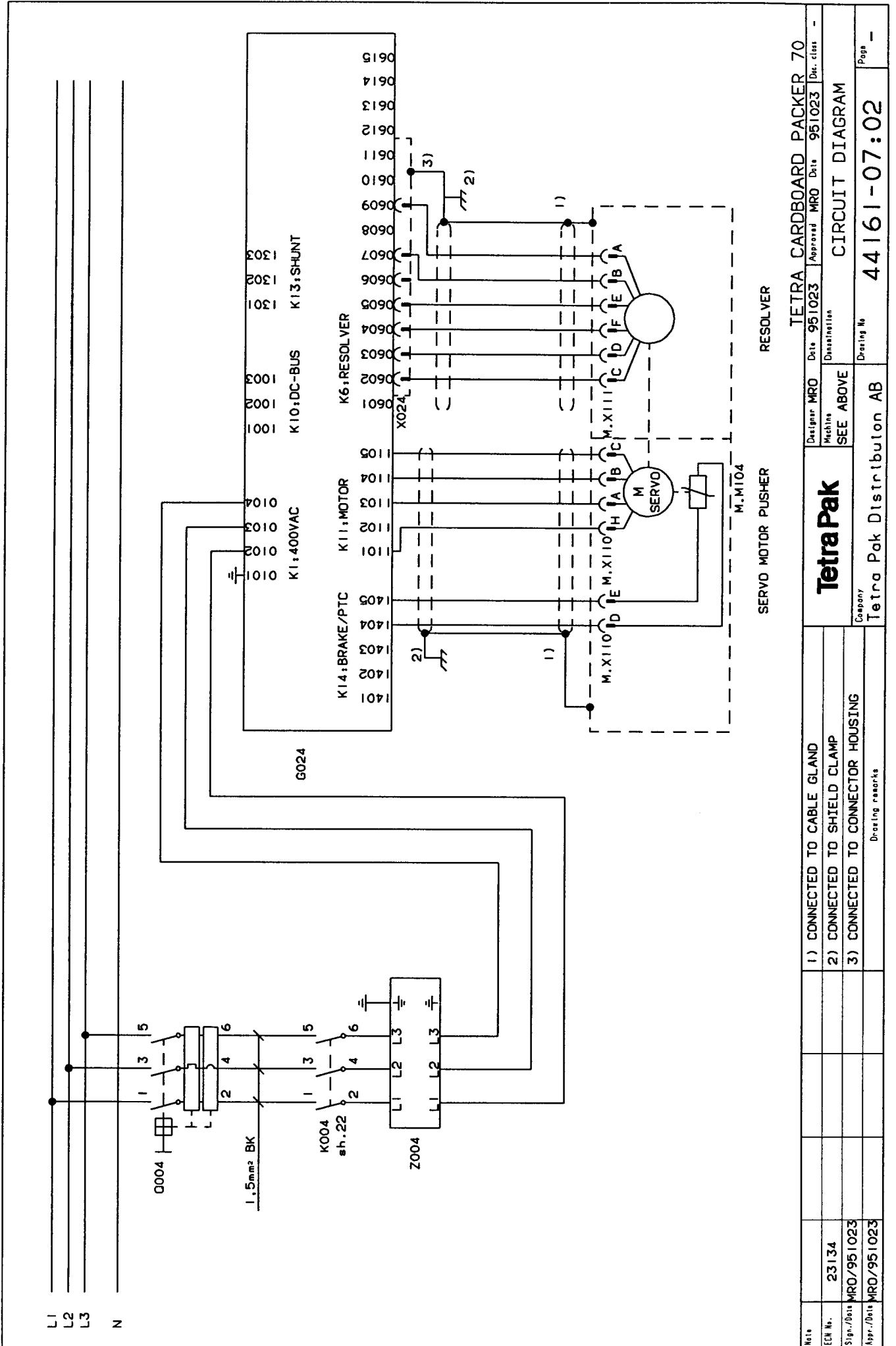
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Machine	SEE ABOVE		Destination	CIRCUIT DIAGRAM				
Company	Tetra Pak Distributor AB		Drawing No	44161-06:14				
Page	-							

Tetra Pak

Drawing resources

Note	
EOM No.	23134
Sign./Date	MRO/951027
Appr./Date	MRO/951027

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Note				
ECR No.	23134			
Sign./Date	MRO/951023			
Apr./Date	MRO/951023			

Company
Tetra Pak Distribution AB

SEE ABOVE
Machine

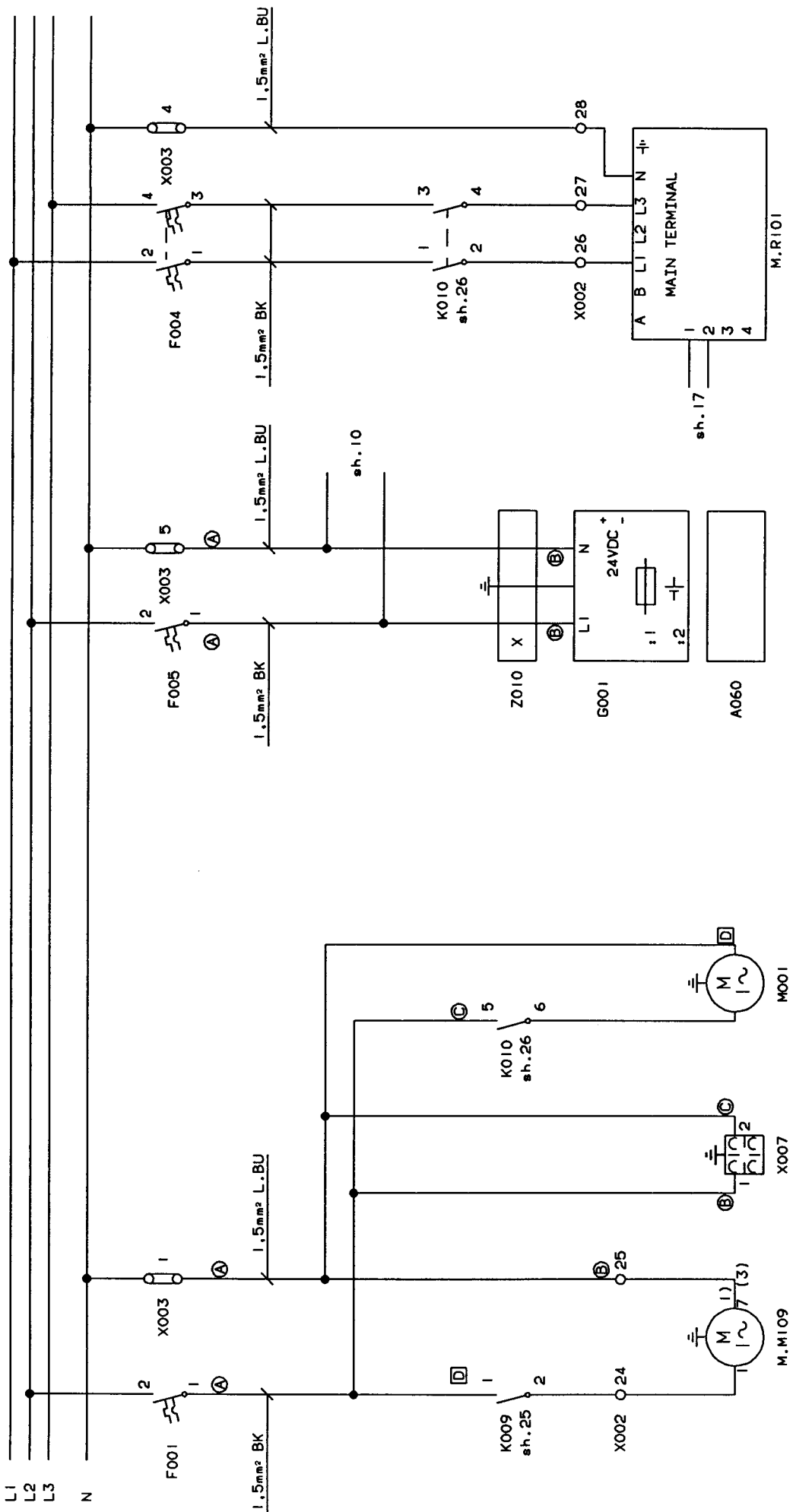
Designer MRO Date 951023
Destination
CIRCUIT DIAGRAM

Approved MRO Date 951023
Dr. class -
Drawing No 44161-07:02
Page -

SERVO MOTOR PUSHER RESOLVER

TETRA CARDBOARD PACKER 70

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POWER PLC
RACK WITH PLC

BLANK MOTOR WALL SOCKET FAN IN CABINET

HOTMELT UNIT

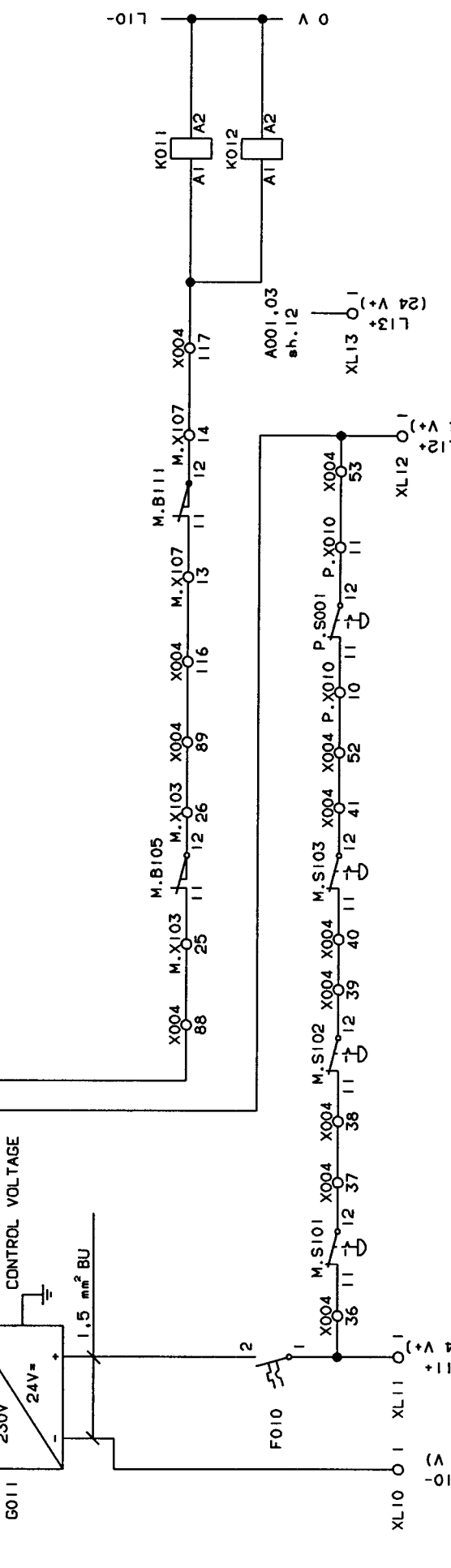
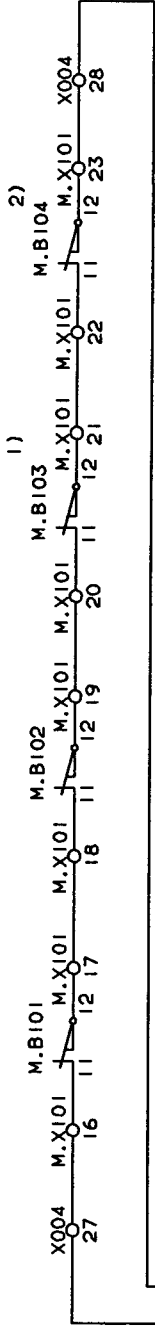
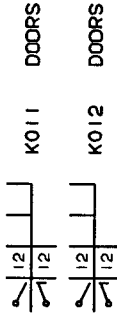
TETRA CARDBOARD PACKER 70

Notes					
EDN No.	23134	Designer MRO	Date 950823	Approved MRO	Date 950823
Sign./Date	MRO/950823	Working	SEE ABOVE	Destination	CIRCUIT DIAGRAM
Appr./Date	MRO/950823	Case No.	Tetra Pak Distribution AB	Drawing No.	44161-08:07
					Page -

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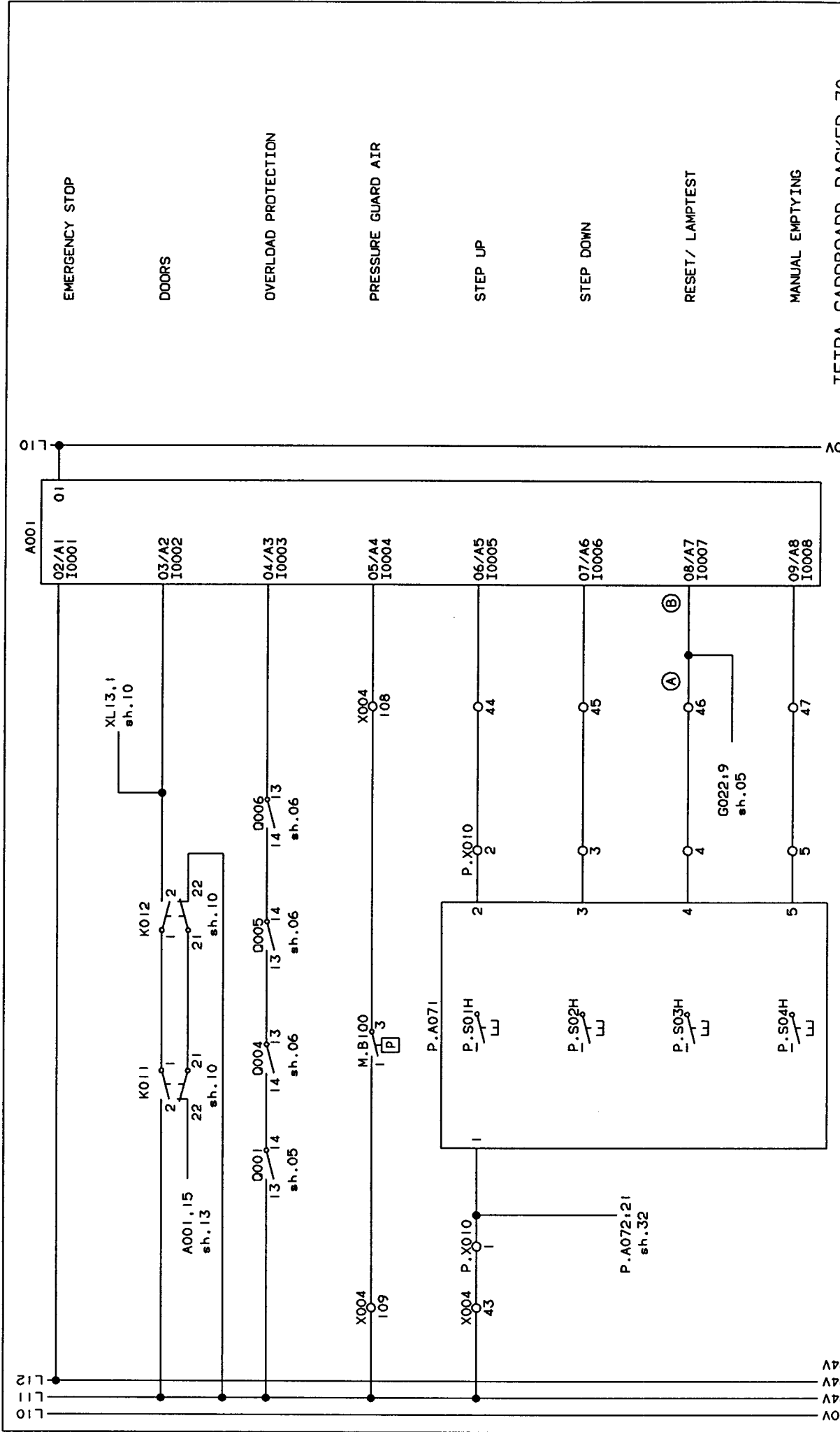
- P.S001 EMERGENCY STOP
- M.S101-M.S103 DOORS, BASE MACHINE
- M.B101-M.B104 DOORS, INFEEED
- M.B105 DOOR, OUTFEED CONVEYOR
- M.B111



Tetra Pak		SEE ABOVE		SEE ABOVE	
Machinery		Machine		Machinery	
Design No.		MRO/950823		MRO/950823	
Sign./Date		MRD/950823		MRD/950823	
Appr./Date		MRD/950823		MRD/950823	
Notes		1) NOT USED AT LEFT U-INFEEED		2) NOT USED AT RIGHT U-INFEEED	
Ech. No.		23134		23134	
Drawing remarks		Tetra Pak Distributon AB		Tetra Pak Distributon AB	
Company		Tetra Pak Distributon AB		Tetra Pak Distributon AB	
Designing No.		44161-10:18		44161-10:18	
Approved MRO		950823		950823	
Date					
Destination		CIRCUIT DIAGRAM		CIRCUIT DIAGRAM	
Dr. class					
Page					

TETRA CARDBOARD PACKER 70

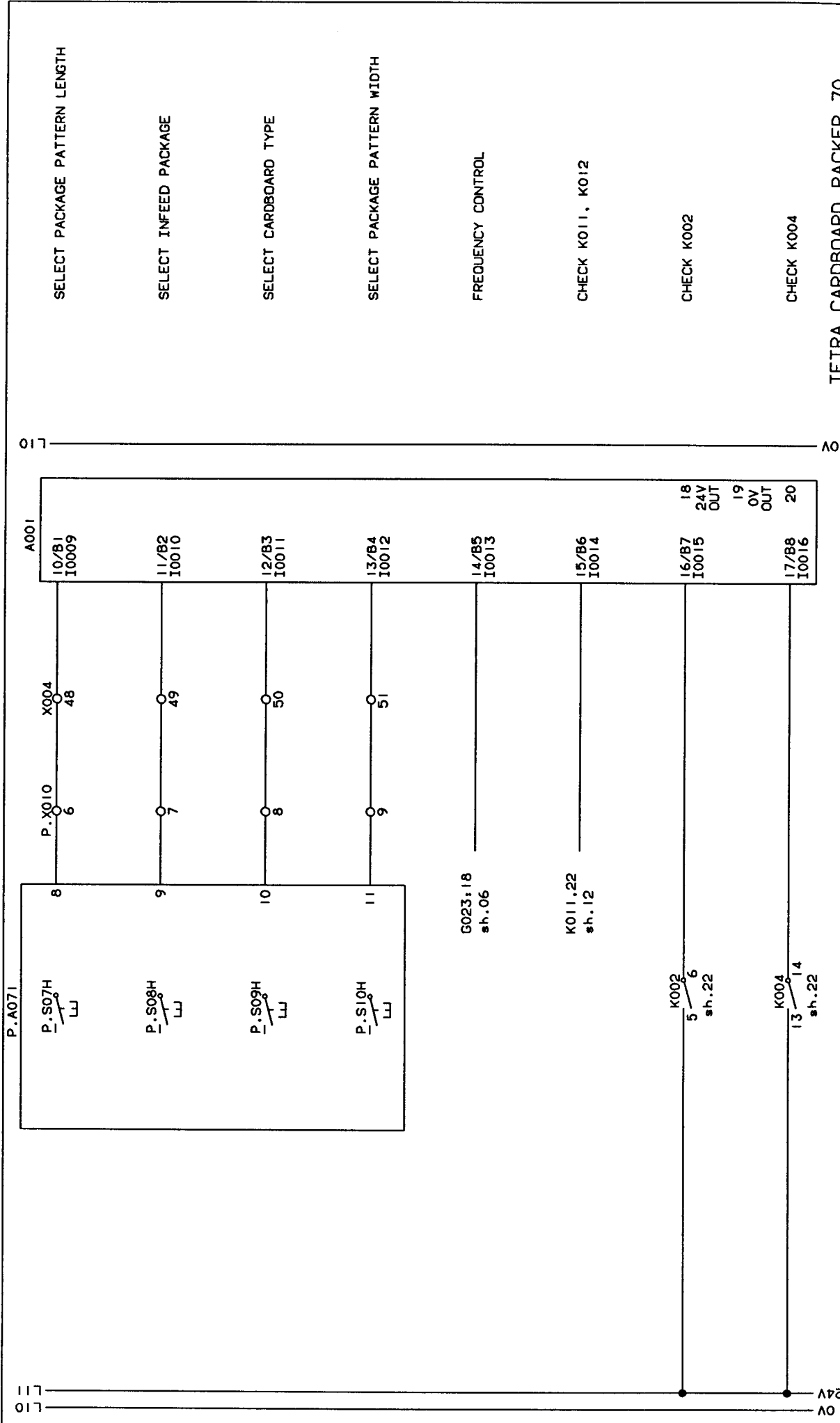
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TETRA CARDBOARD PACKER 70

Designer MRO	Date	951023	Approved MRO	Date	951023	Doc. class	-
Machine	SEE ABOVE			Destination	CIRCUIT DIAGRAM		
Company	Tetra Pak Distribublon AB			Drawing No.	44161-12:16		
Page	-						
Rev.							
ECN No.	23134						
Sign./Date	MRO/951023						
App./Date	MRO/951023						

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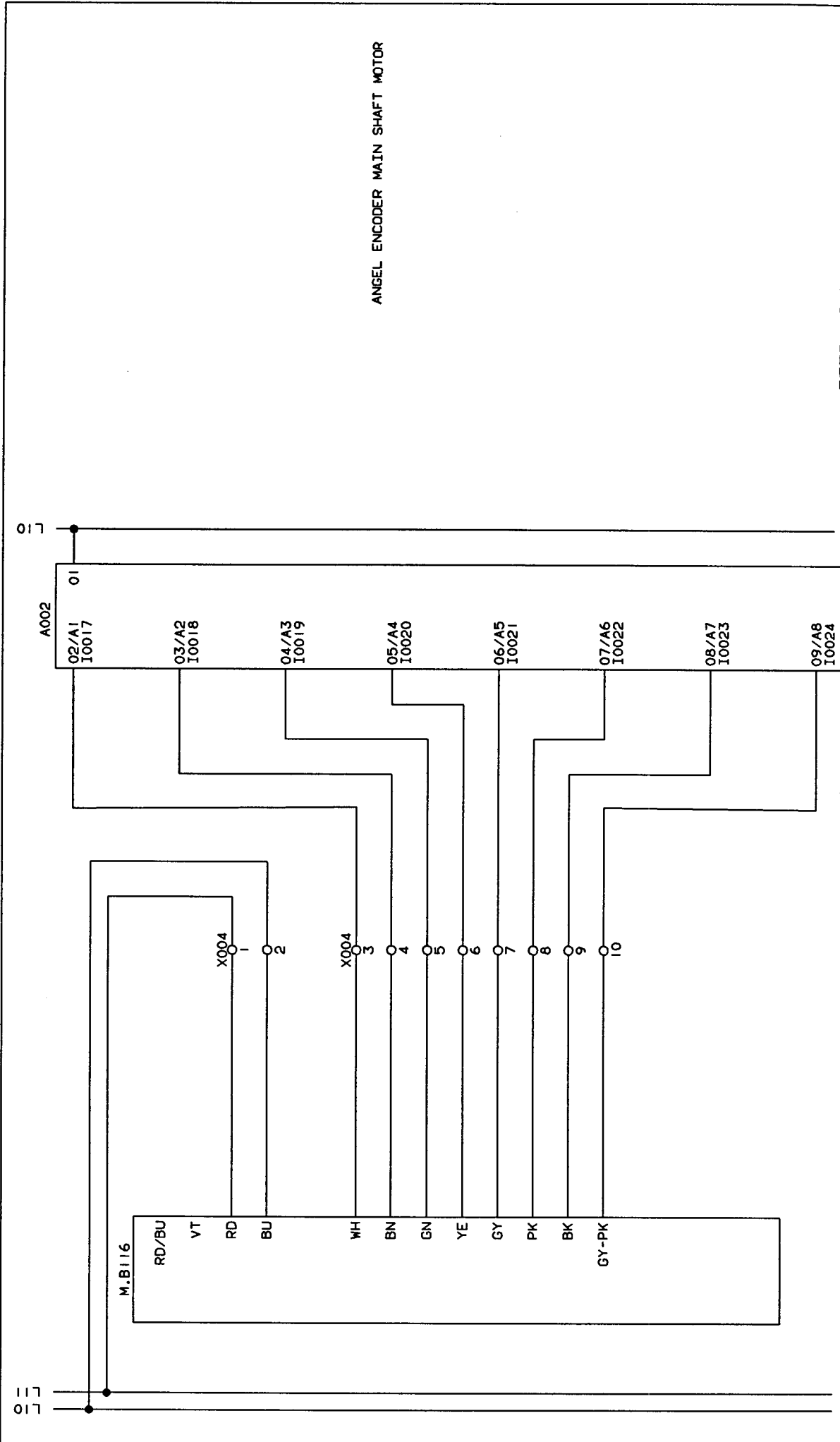


TETRA CARDBOARD PACKER 70

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Meching			Destination				CIRCUIT DIAGRAM
SEE ABOVE			Drawing No				44161-13:16
Company			Drawing remarks				Page
Tetra Pak Distribution AB							-

Tetra Pak

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TETRA CARDBOARD PACKER 70

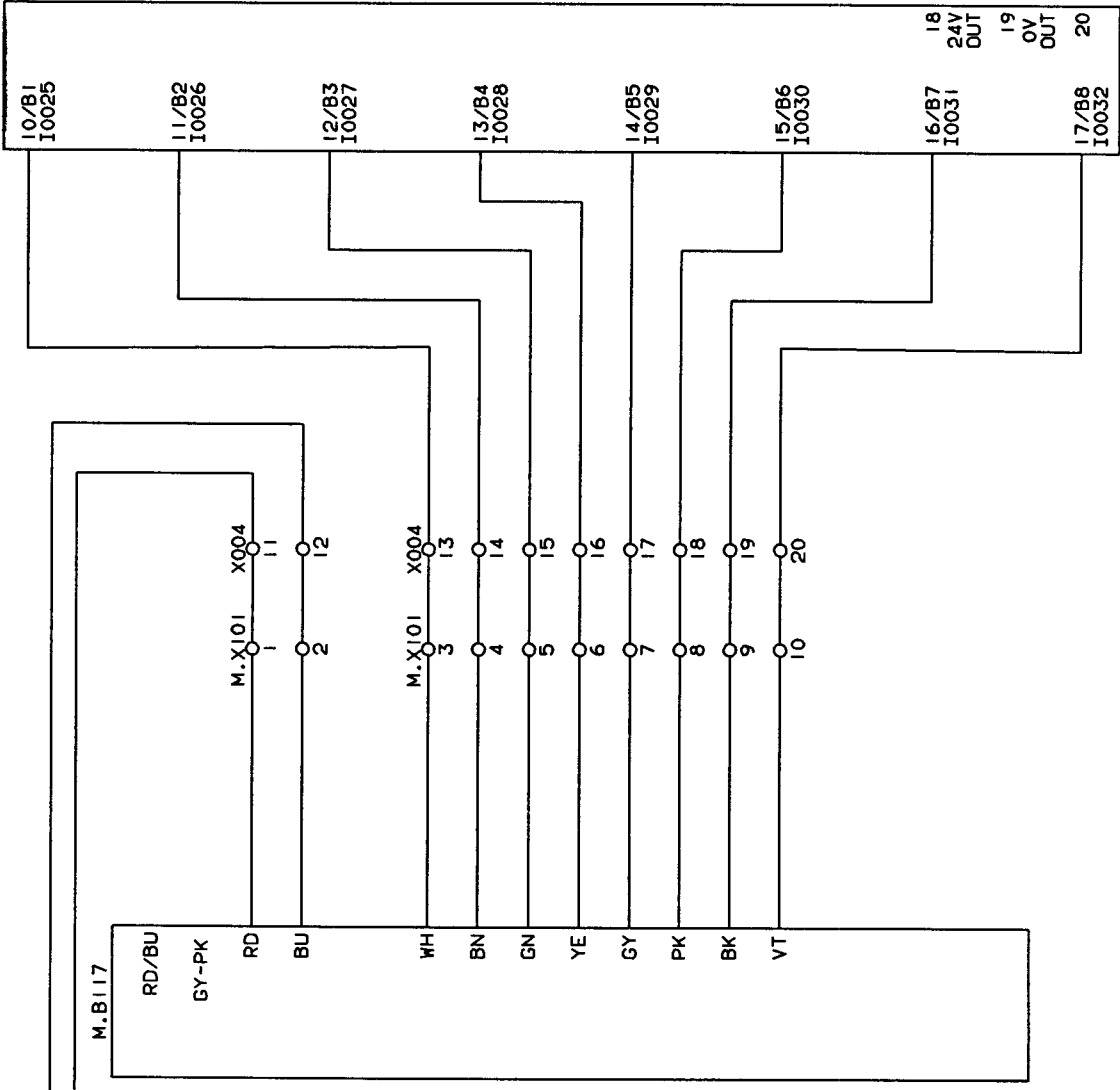
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Sign./Date	MRD/950118		Machine	SEE ABOVE	Destination	CIRCUIT DIAGRAM			Page	-		
Appr./Date	MRD/950118		Company	Tetra Pak Distribution AB							Drawing No	44161-14:04

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ANGEL ENCODER FEEDING MOTOR

017

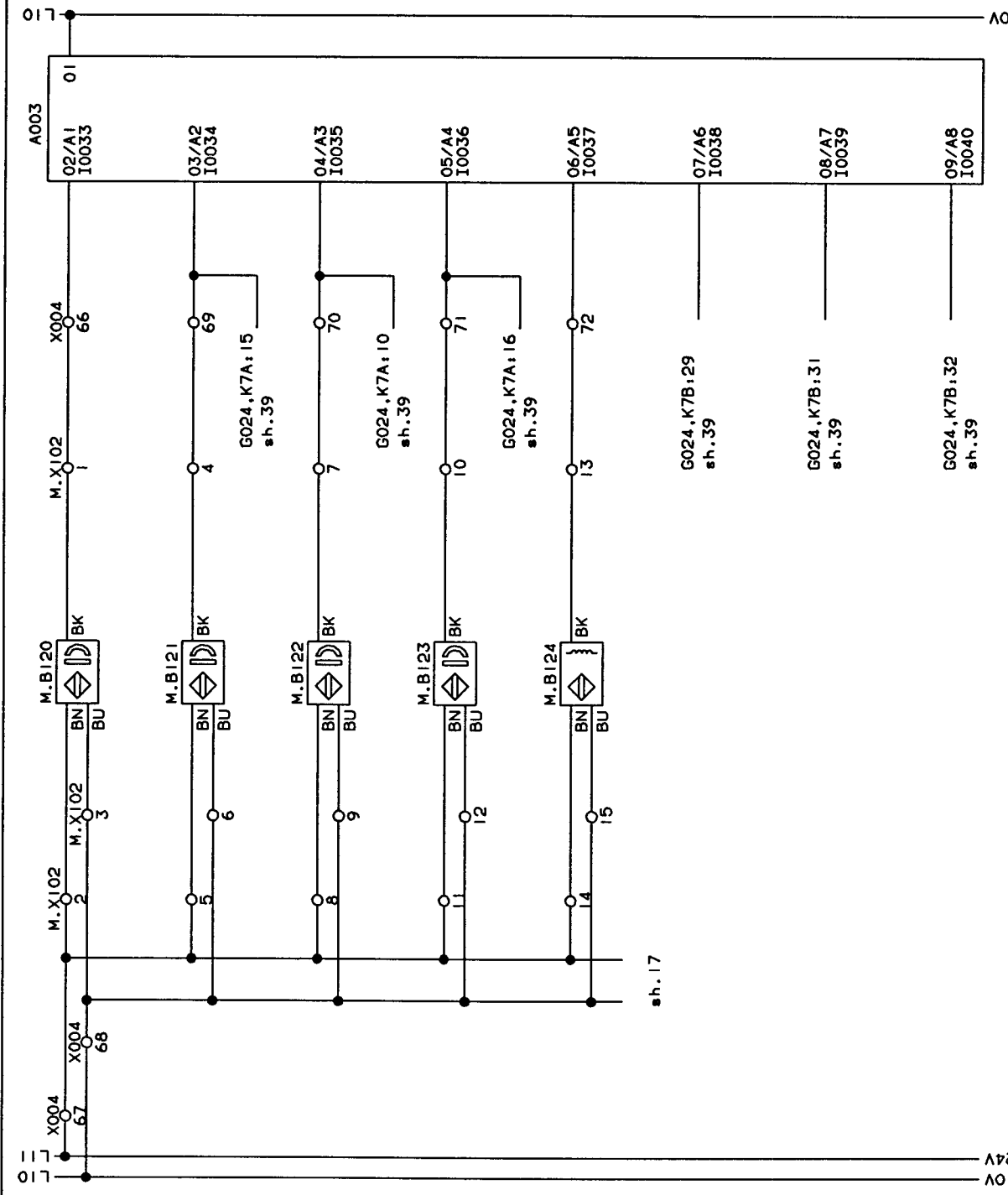
017



TETRA CARDBOARD PACKER 70

Notes							
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Sign./Date	MRO/950118						
Appr./Date	MRO/950118						
Designer MRO	Date 950118	Approved MRO	Date 950118	Dr. clas	-		
Machine	SEE ABOVE	Destination	CIRCUIT DIAGRAM				
Company	Tetra Pak Distribution AB		Drawing No	44161-15:05		Page	-

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TETRA CARDBOARD PACKER 70

Designer MRO	Date 950925	Approved MRO	Date 950925	Det. class	-
Machine	SEE ABOVE	Destination	CIRCUIT DIAGRAM		
Drawing No	44161-16:13				
Company	Tetra Pak Distribubton AB				
Notes					
ECN No.	23134				
Sign./Date	MRO/950925				
Appr./Date	MRO/950925				

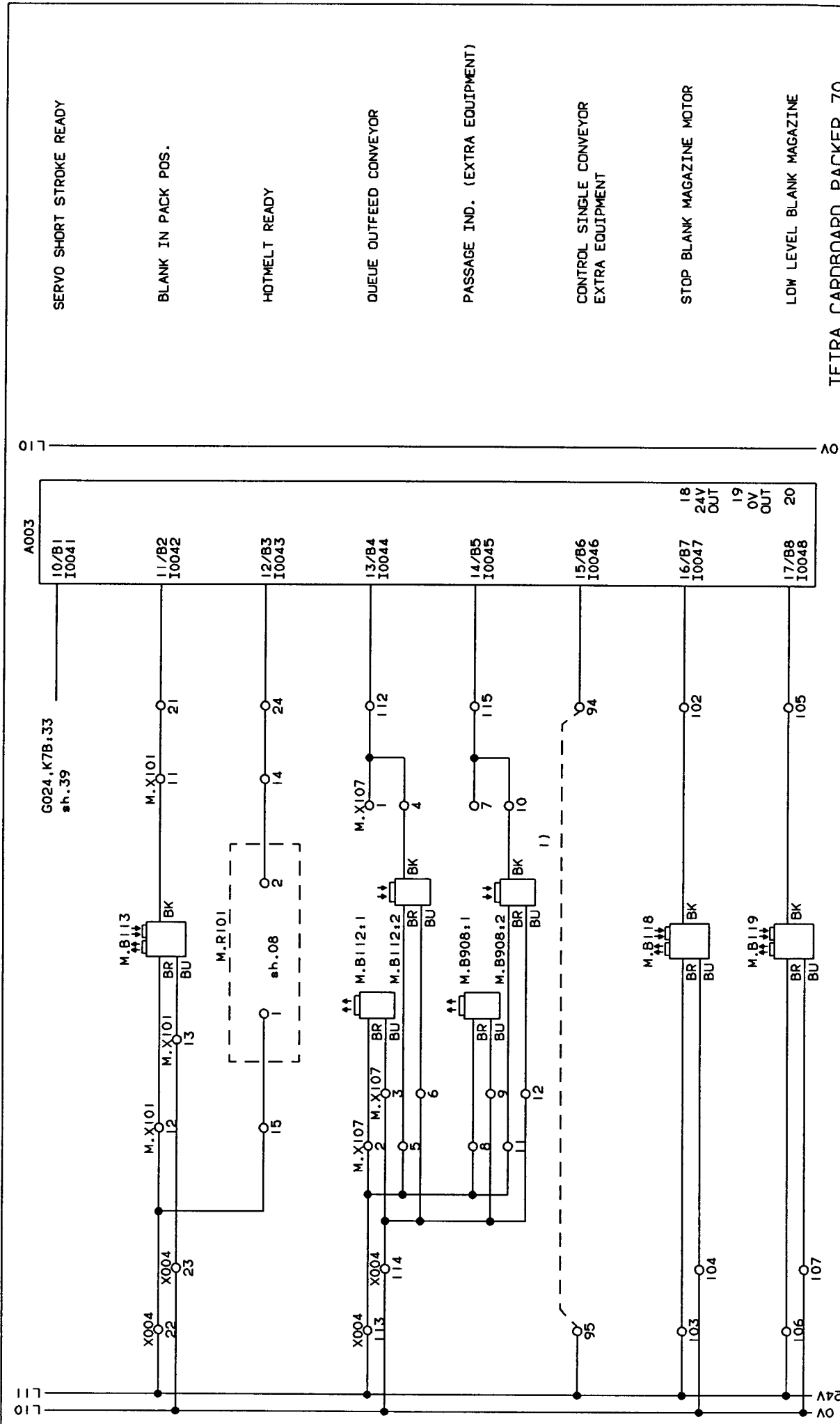
Drawing remarks

Company

SEE ABOVE

Pages

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SERVO SHORT STROKE READY

BLANK IN PACK POS.

HOTMELT READY

QUEUE OUTFEED CONVEYOR

PASSAGE IND. (EXTRA EQUIPMENT)

CONTROL SINGLE CONVEYOR
EXTRA EQUIPMENT

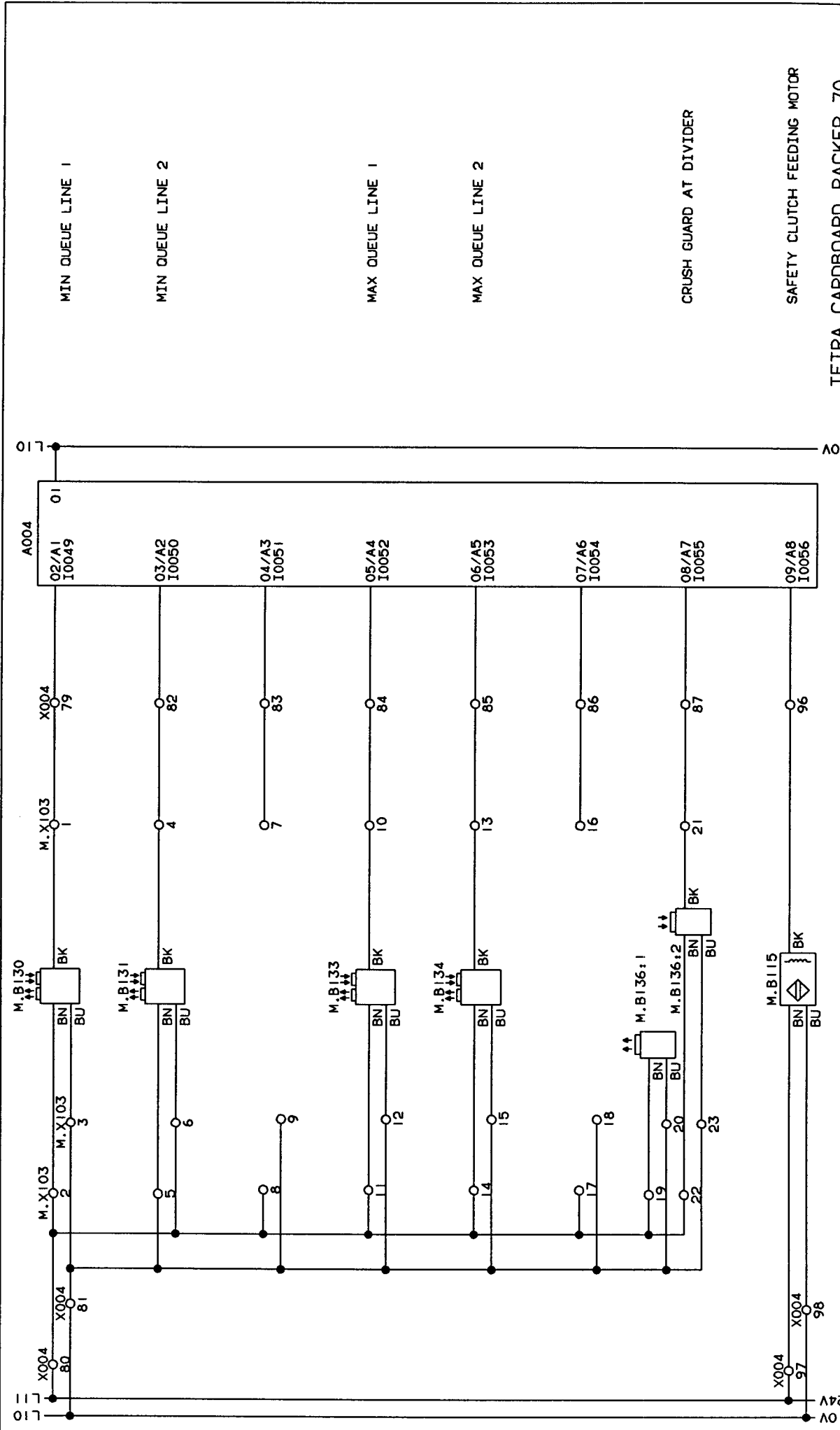
STOP BLANK MAGAZINE MOTOR

LOW LEVEL BLANK MAGAZINE

TETRA CARDBOARD PACKER 70

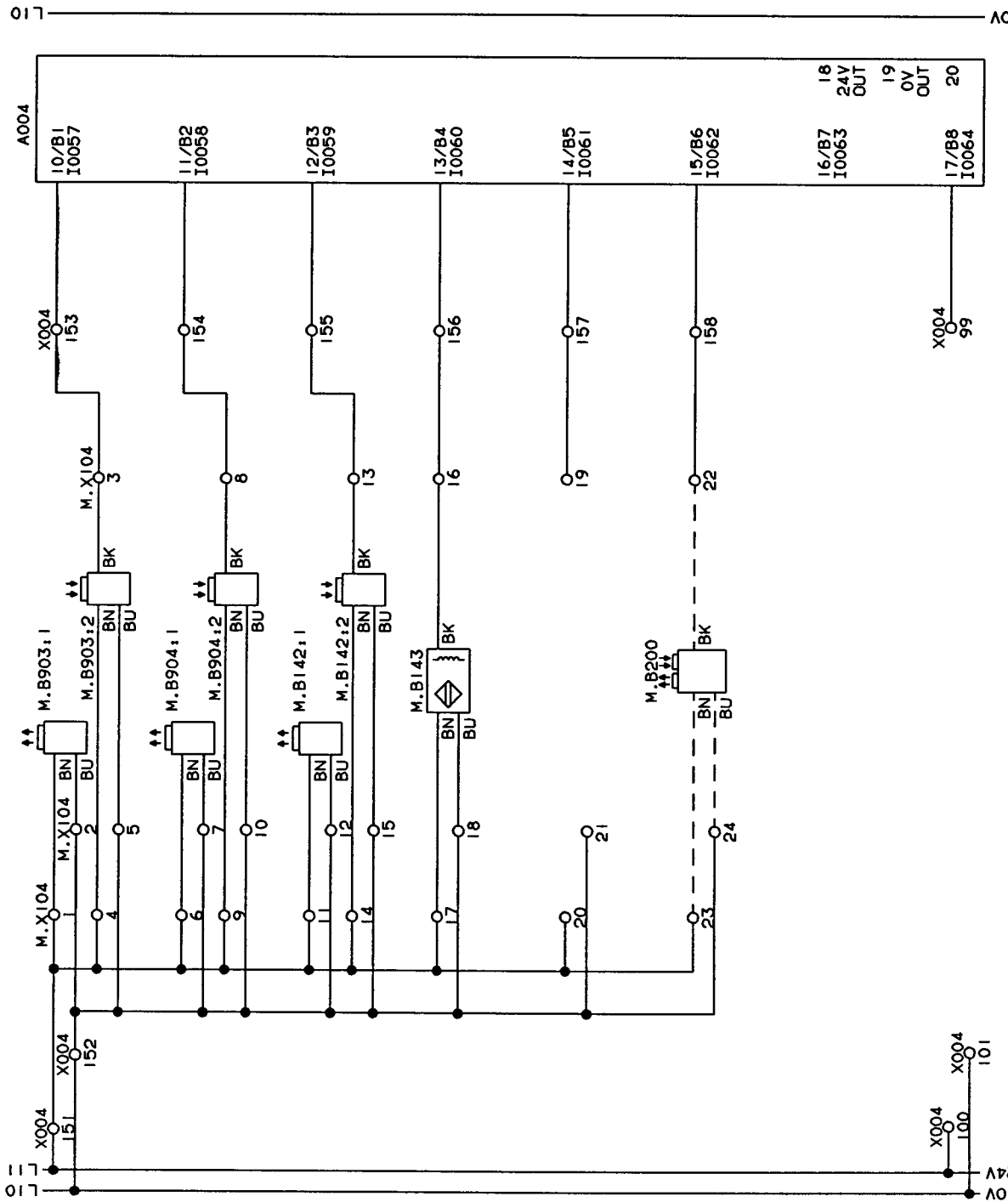
Notes	1) USED TO STOP INF.CONV. AT ALARM OR NO PACKAGES.	Designer: MRO	Date: 950823	Approved MRO Date: 950823	Doc. class: -
ENR No.	23134	Mechanics	SEE ABOVE		
Sign./Date	MRO/950823	Denomination: CIRCUIT DIAGRAM			
Appr./Date	MRO/950823	Drawing No: 44161-17:15			
Company: Tetra Pak Distributor AB		Page: -			

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Tetra Pak Company Tetra Pak Distribution AB		Designer MRD SEE ABOVE	Date 950823 Approved MRD Date 950823	Destination CIRCUIT DIAGRAM	Dr. class - -
No. 23134	Sign./Date MRD/950823	Drawing No. 44161-18:10	Drawing No. 44161-18:10	Page -	Page -

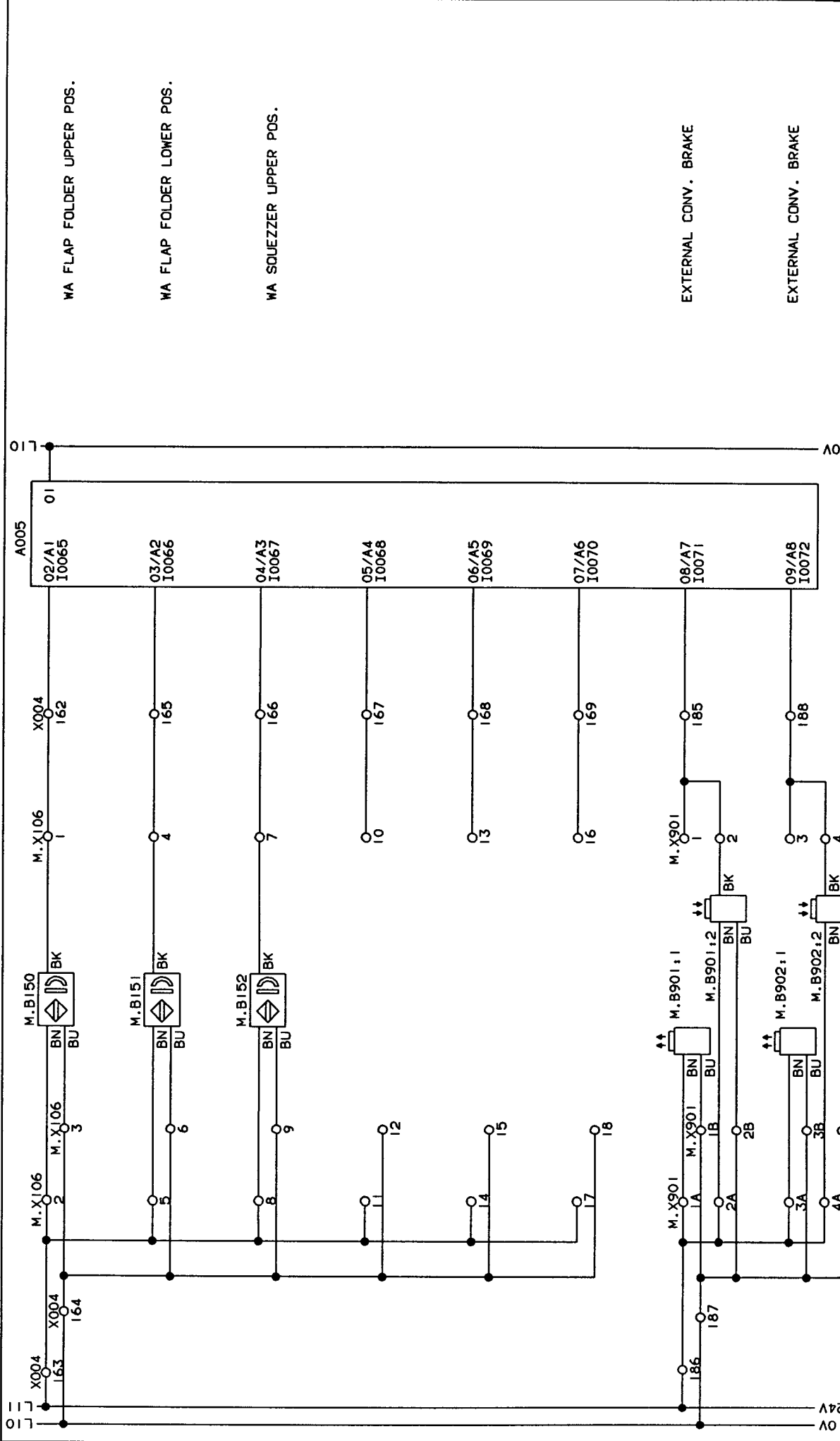
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TETRA CARDBOARD PACKER 70

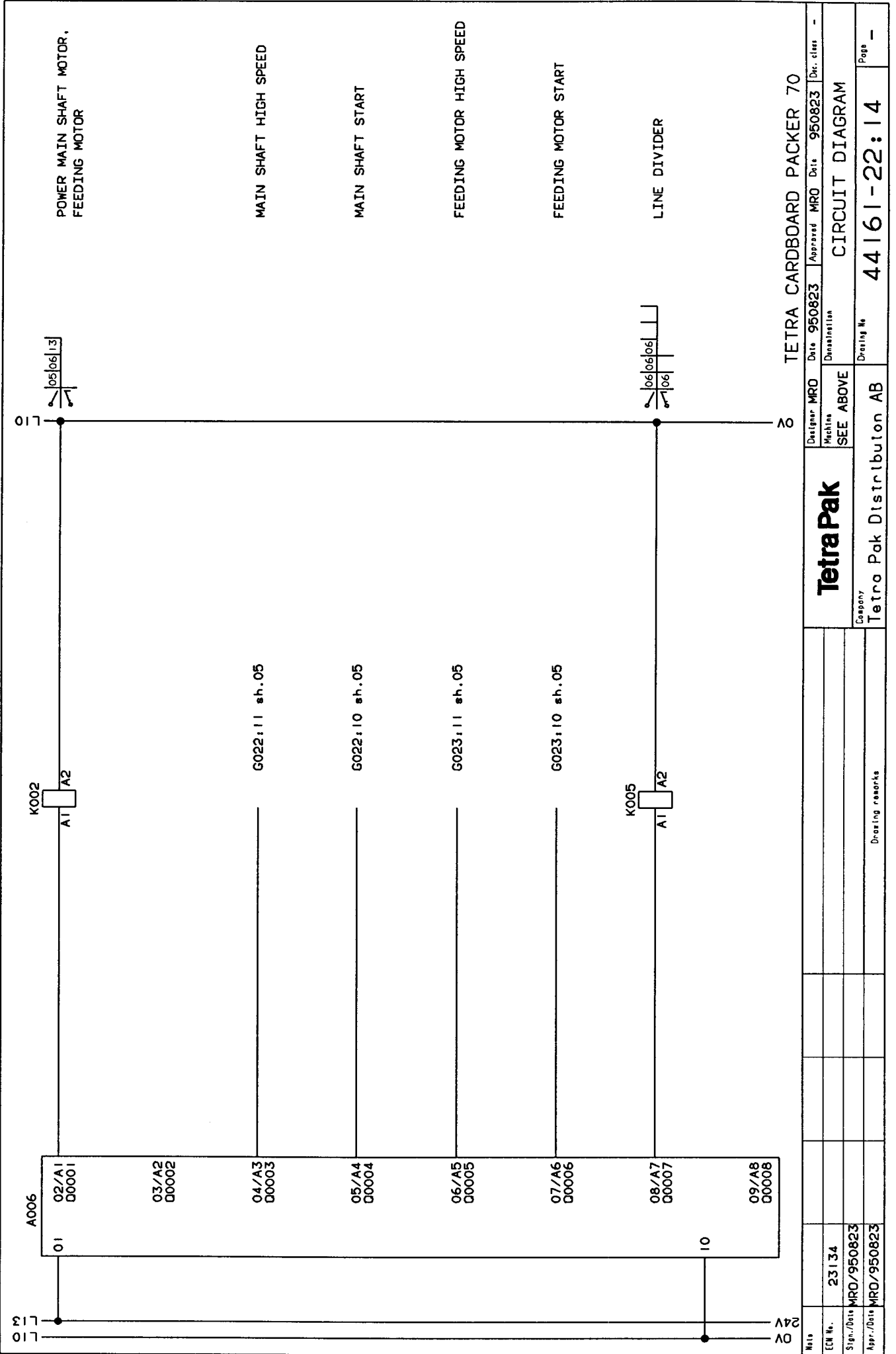
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Sign./Date	MRD/951023	Machine	SEE ABOVE	Destination	CIRCUIT DIAGRAM
Appr./Date	MRD/951023	Drawing No	44161-19:13	Doc. class	-
Company		Tetra Pak Distributor AB			
Drawing remarks					
Page		-			

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Tetra Pak Designer MRO Date 950823 Approved MRO Date 950823 Machine SEE ABOVE Destination Drawing No. 44161-20:06 Company Tetra Pak Distribution AB Page -		Dis. client - CIRCUIT DIAGRAM Page -
Title ECM No. 23134 Sign./Date MRO/950823 Appr./Date MRO/950823	Drawing remarks	TETRA CARDBOARD PACKER 70

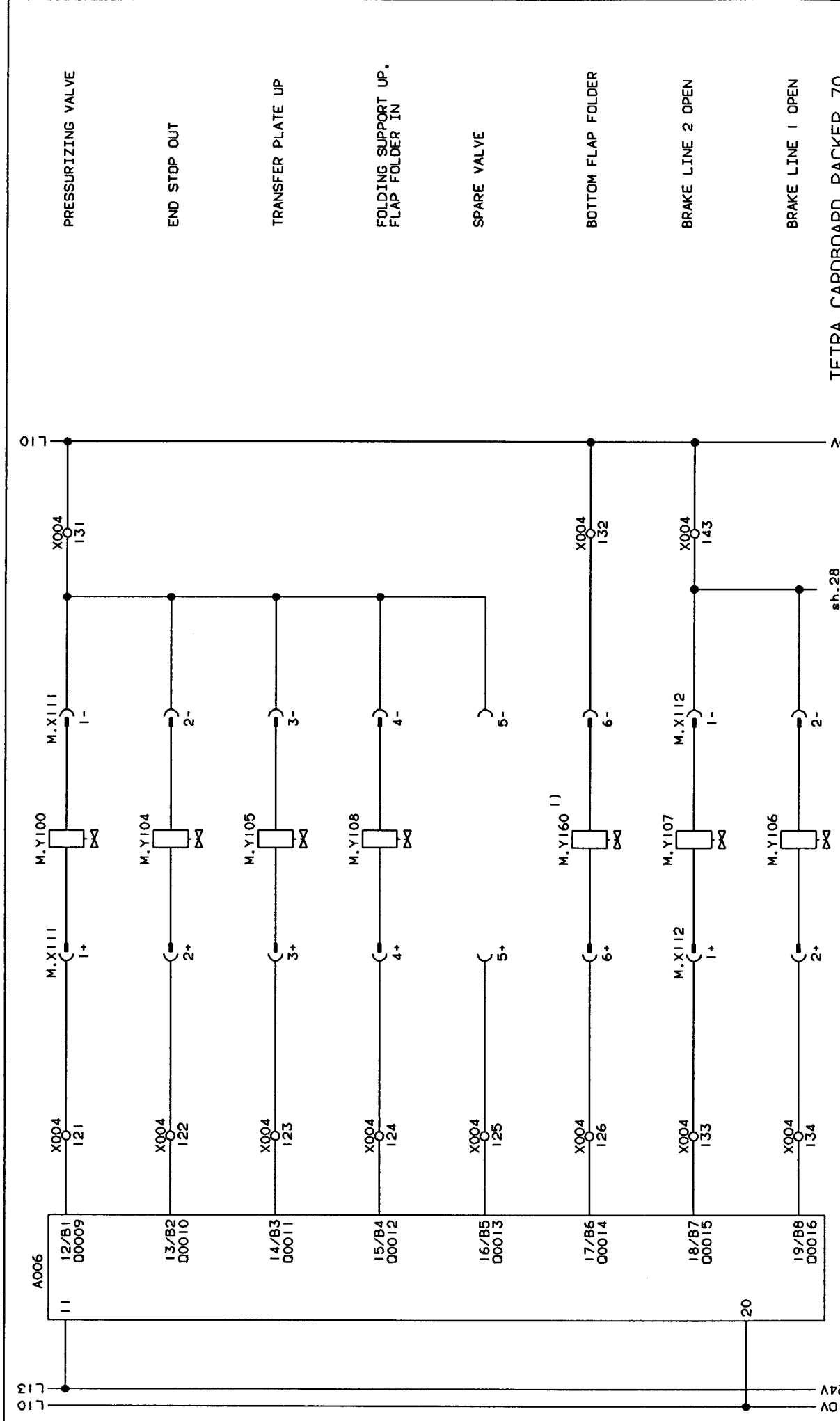
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TETRA CARDBOARD PACKER 70

Designer MRO	Date 950823	Approved MRO	Date 950823	Dr. class	-
Machina	SEE ABOVE	Dissemination	CIRCUIT DIAGRAM		
Company	Tetra Pak Distribution AB		Drawing No	44161-22:14	
Page	-				

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sh.28

TETRA CARDBOARD PACKER 70

11	12/B1 00009	X004 121	M.X.111 1+	M.Y.100	M.X.111 1-	X004 131	L10
12	13/B2 00010	X004 122	M.X.111 2+	M.Y.104	M.X.111 2-		
13	14/B3 00011	X004 123	M.X.111 3+	M.Y.105	M.X.111 3-		
14	15/B4 00012	X004 124	M.X.111 4+	M.Y.108	M.X.111 4-		
15	16/B5 00013	X004 125	M.X.111 5+		M.X.111 5-		
16	17/B6 00014	X004 126	M.X.112 6+	M.Y.160 1)	M.X.112 6-	X004 132	
17	18/B7 00015	X004 133	M.X.112 1+	M.Y.107	M.X.112 1-	X004 143	
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19							
20							

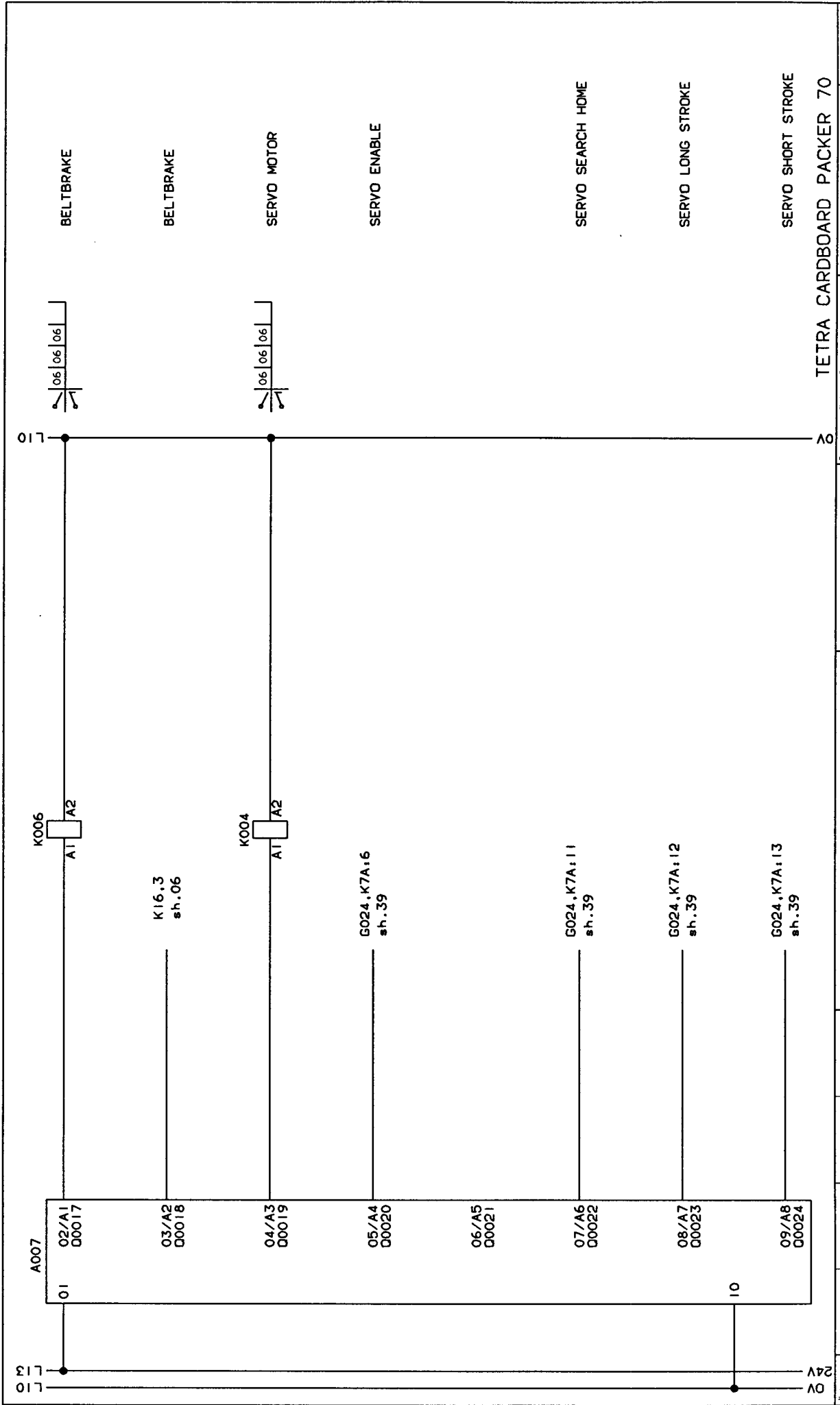
1) EXTRA EQUIPMENT

Tetra Pak

Designer: MRO
Date: 951025
Machine: SEE ABOVE
Company: Tetra Pak Distribubuton AB

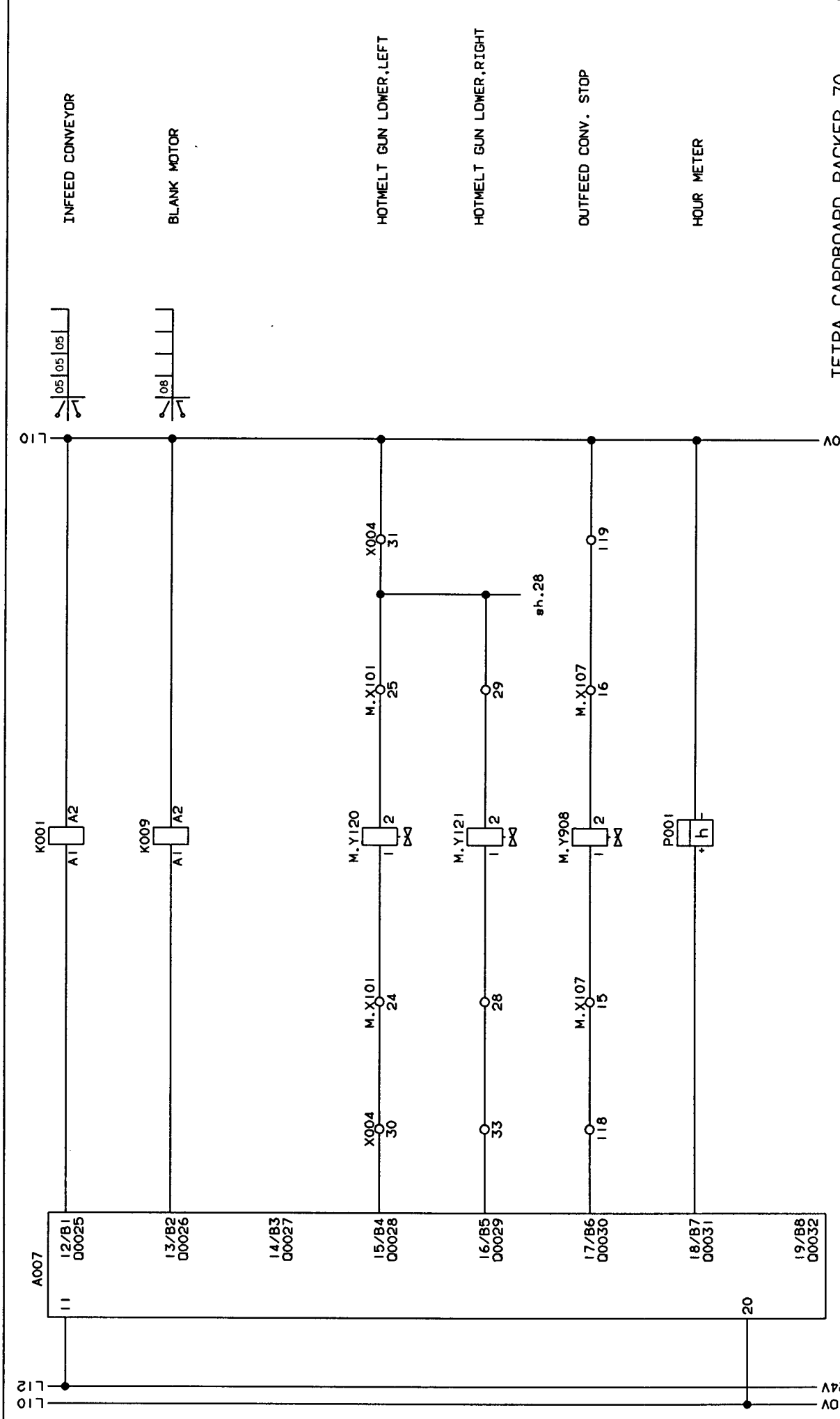
Approved MRO Date: 951025
Designation: CIRCUIT DIAGRAM
Drawing No: 44161-23:16
Page: -

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Tetra Pak Tetra Pak Distributor AB		Designer MRO SEE ABOVE	Date 950925	Destination 950925	Dec. class -
Drawing No 44161-24:17		Approved MRO 950925			
Company Tetra Pak Distributor AB		Destination 950925			
Drawing No 44161-24:17		Dec. class -			

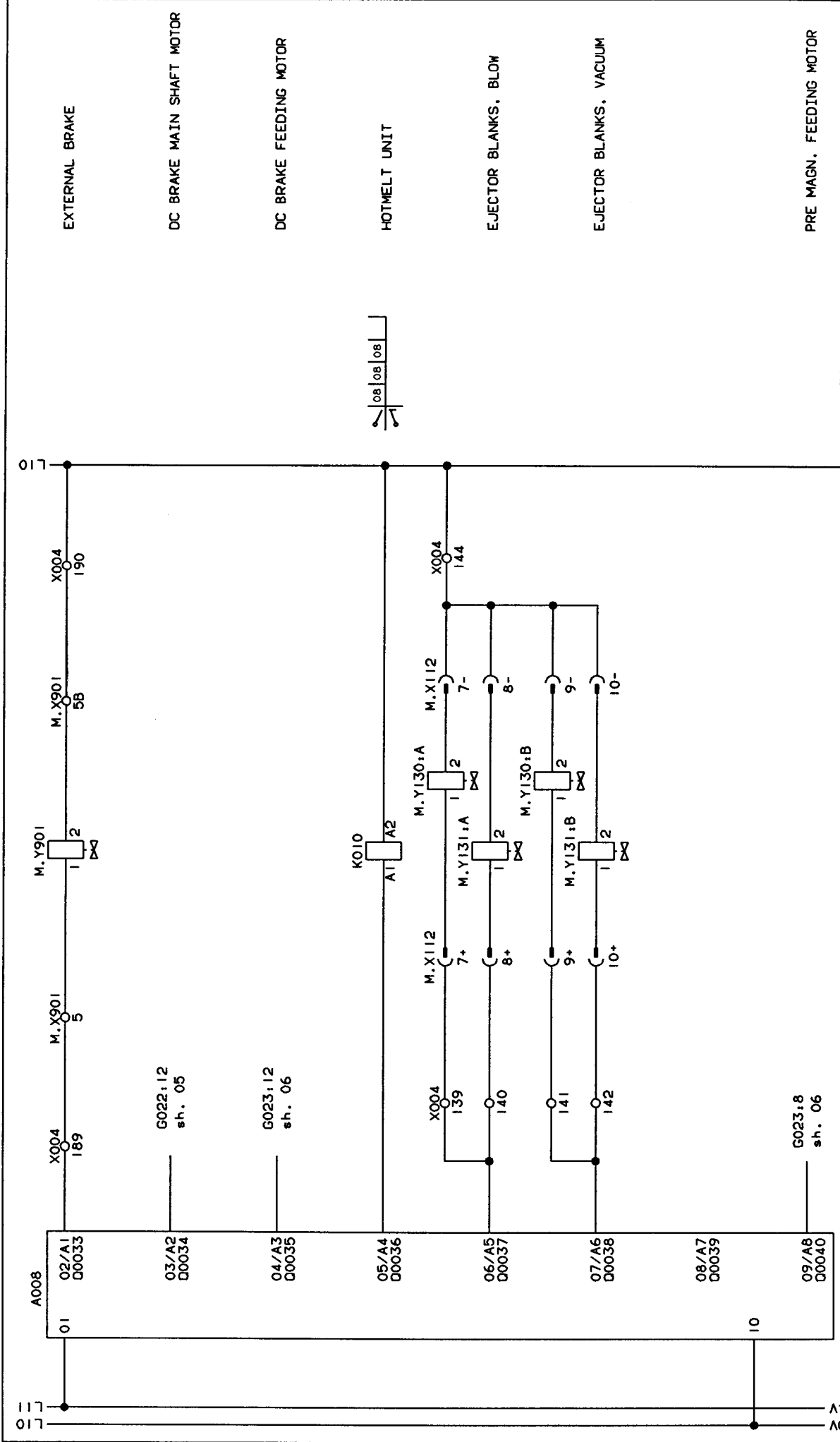
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TETRA CARDBOARD PACKER 70

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Machina	SEE ABOVE	Destination	CIRCUIT DIAGRAM			
Company	Tetra Pak Distribution AB				Drawing No	44161-25:10
Pages						-

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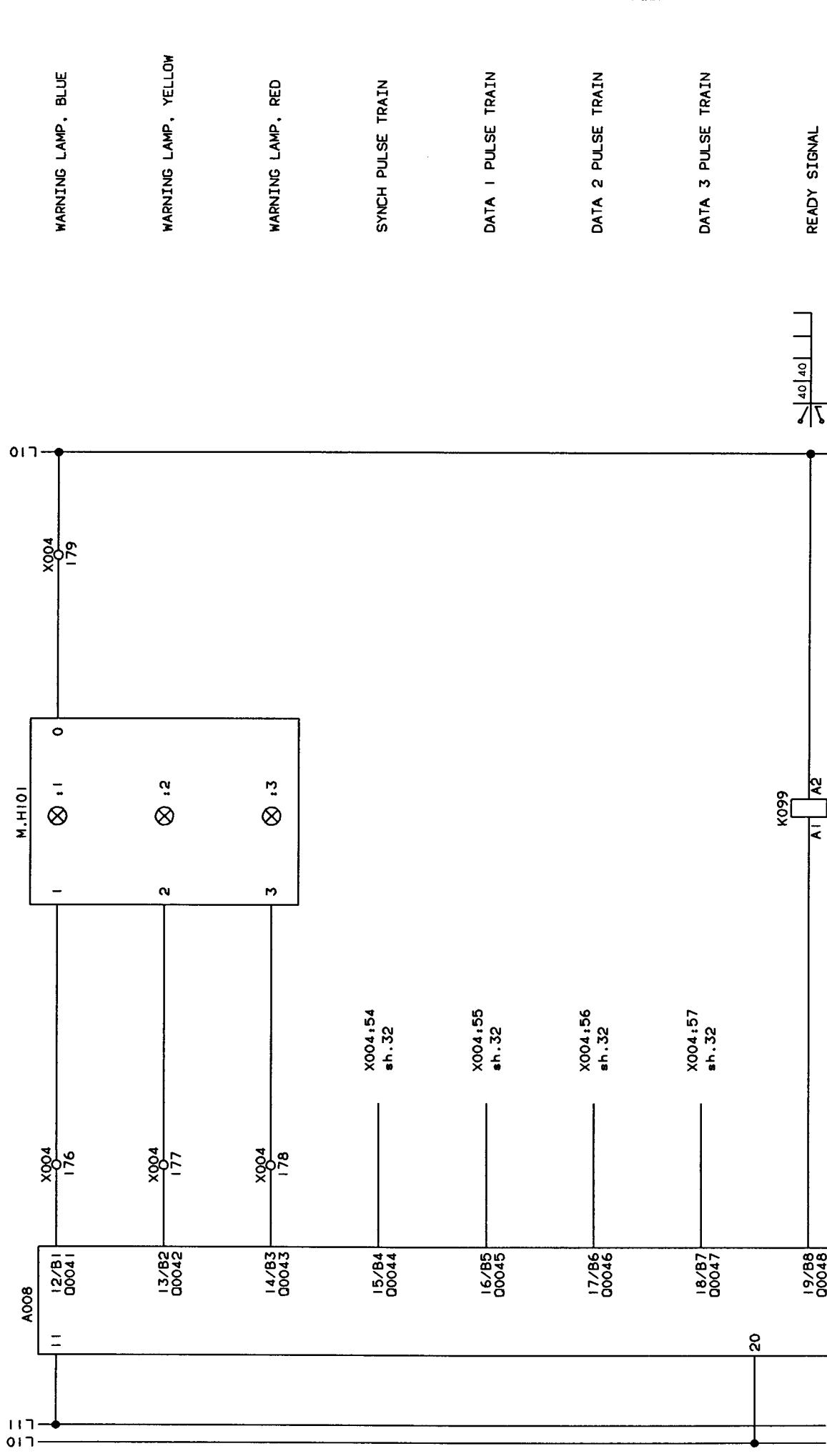


TETRA CARDBOARD PACKER 70

PRE MAGN. FEEDING MOTOR

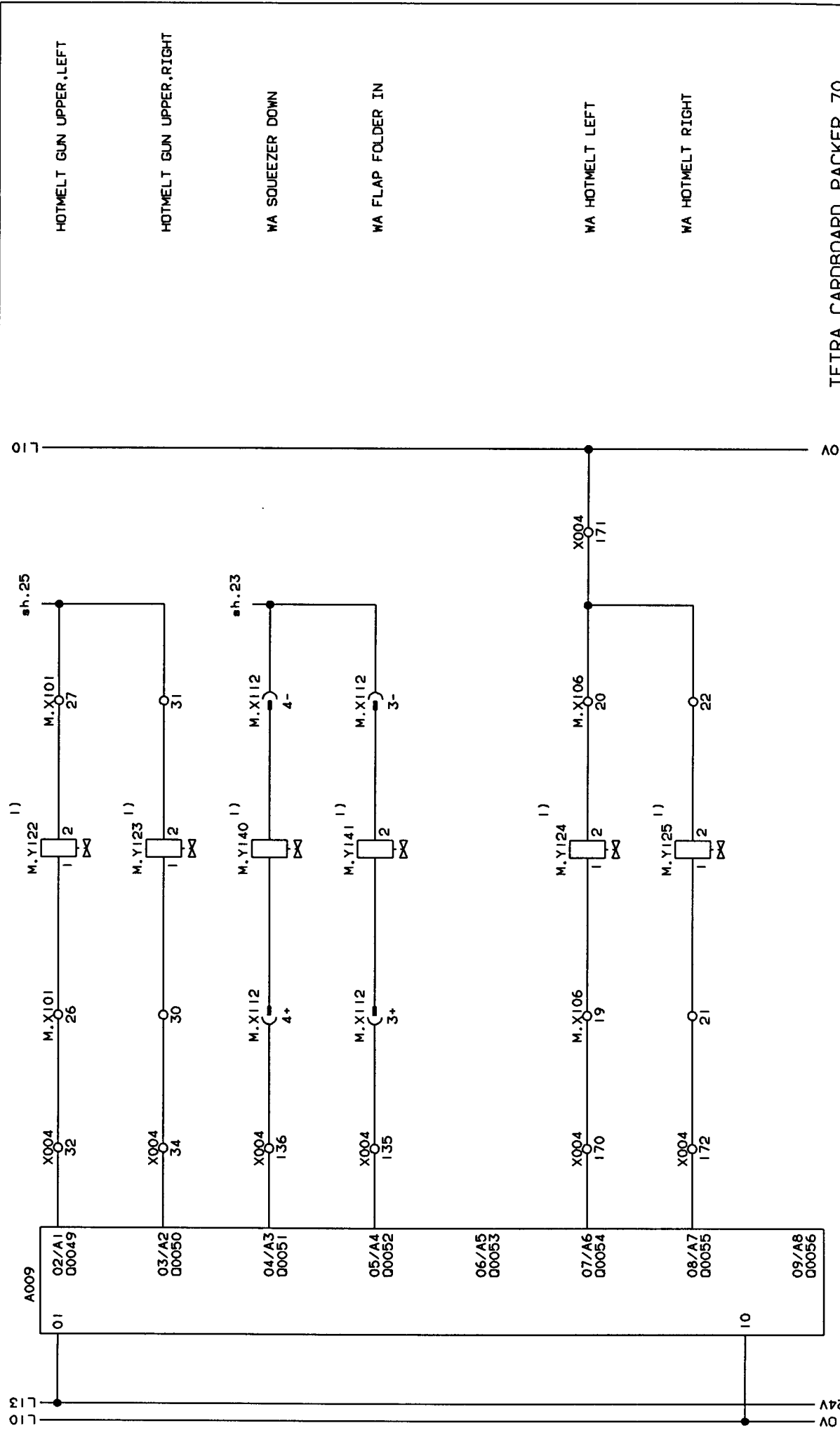
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Mechanic	SEE ABOVE	Distinction	CIRCUIT DIAGRAM		
Company	Tetra Pak Distribution AB		Drawing No	44161-26:13	
Page	-				

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Tetra Pak Tetra Pak Distributor AB		Designer MRO SEE ABOVE	Date 951024	Approved MRO 951024	Det. class -
		Machine SEE ABOVE	Destination TETRA CARDBOARD PACKER 70		
		Drawing No 44161-27:06			Page -
No 23134	ECR No. MRO/951024				
Sign./Date MRO/951024					
Appr./Date MRO/951024					
Drawing remarks					

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TETRA CARDBOARD PACKER 70

01	02/A1 00049	X004 32	M.X101 26	M.Y122 1 2	M.X101 27	sh.25	HOTMELT GUN UPPER, LEFT
03/A2 00050	X004 34	M.X101 30	M.Y123 1 2	M.X101 31	sh.23	HOTMELT GUN UPPER, RIGHT	
04/A3 00051	X004 136	M.X112 4+	M.Y140 1 2	M.X112 4-	WA SQUEEZER DOWN		
05/A4 00052	X004 135	M.X112 3+	M.Y141 1 2	M.X112 3-	WA FLAP FOLDER IN		
06/A5 00053	X004 170	M.X106 19	M.Y124 1 2	M.X106 20	WA HOTMELT LEFT		
07/A6 00054	X004 172	M.X106 21	M.Y125 1 2	M.X106 22	WA HOTMELT RIGHT		
08/A7 00055	X004 171	M.X106 171					
09/A8 00056							
10							

Designer MRO Date 950316 Approved MRO Date 950316 Dec. class -
 Machine SEE ABOVE Description CIRCUIT DIAGRAM
 Drawing No. 44161-28:05 Page -

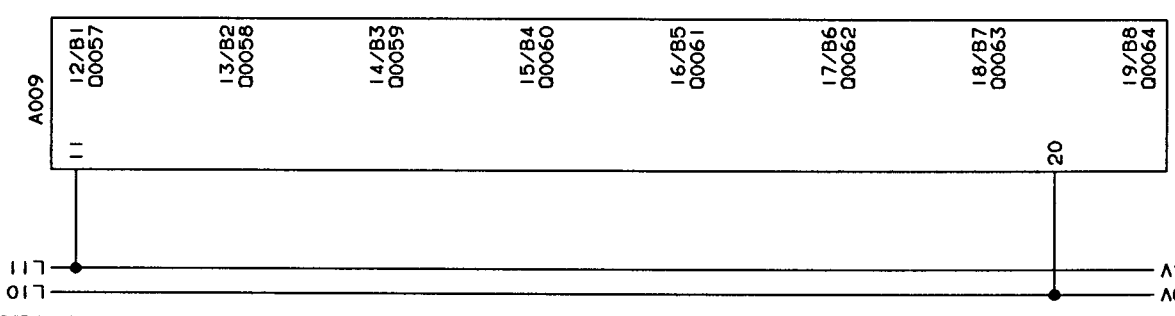
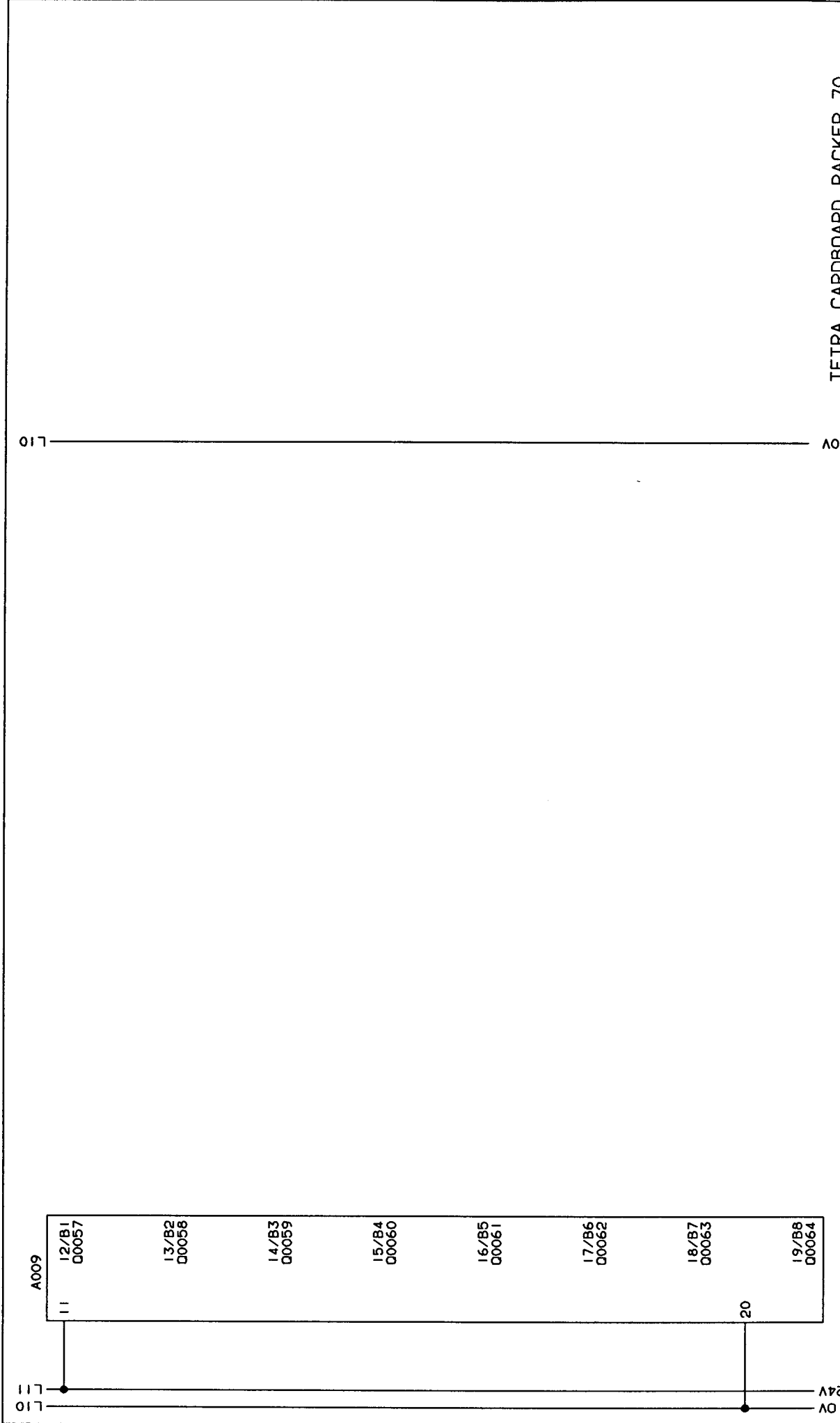
1) ONLY CONNECTED AT WRAP AROUND

Tetra Pak
 Tetra Pak Distributor AB

Notes: Drawing remarks

Rev. 21817
 Sign./Date MRO/950316
 App./Date MRO/950316

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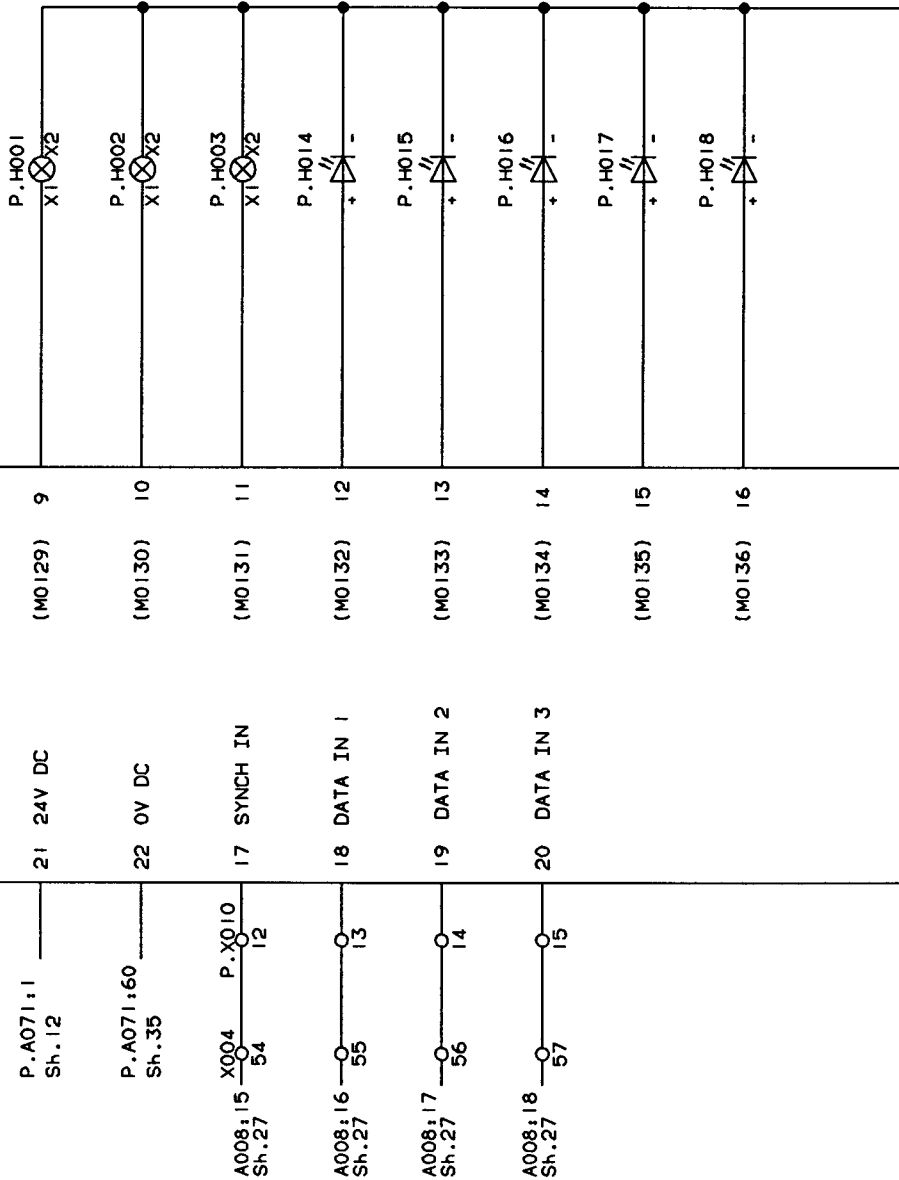
TETRA CARDBOARD PACKER 70

Designer MRD	Date	950830	Approved MRD	Date	950830	Doc. class	-
Mechine		SEE ABOVE		Destination		CIRCUIT DIAGRAM	
Company		Tetra Pak Distribution AB		Drawing No		44161-29:03	
Notes				Drawing remarks			
Eck No.	23134						
Sign./Date	MRO/950830						
Appr./Date	MRO/950830						
				Page		-	

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017

P.A072



P.A071:59
Sh.33

STEP 1

STEP 2

STEP 3

TRAY

WRAP AROUND
MEETING FLAP (WAMF)

TRAY OF

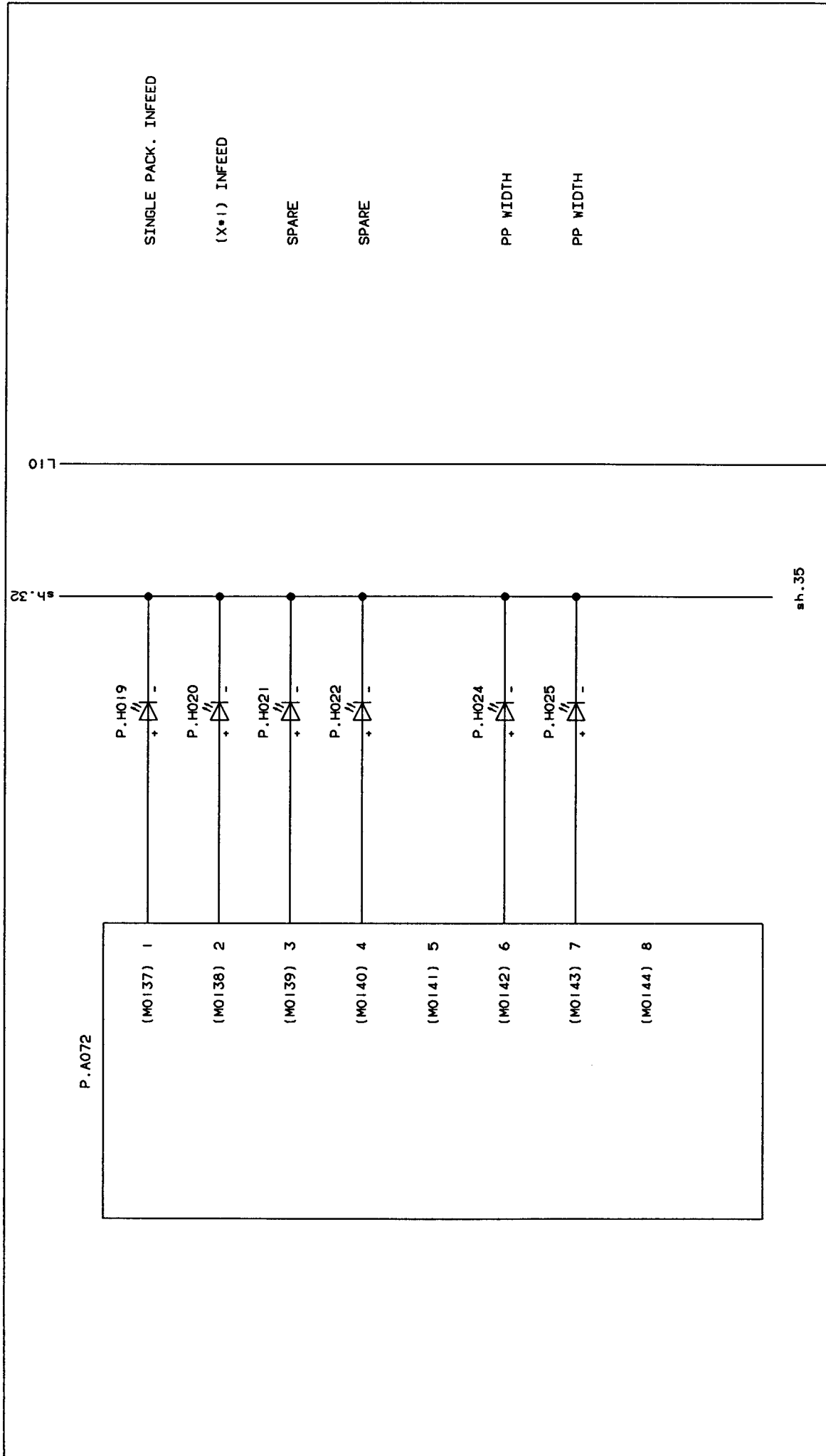
WRAP AROUND
INSIDE FLAP (WAIF)

WRAP AROUND
SIDE FLAP (WASF)

30

Tetra Pak		Designer: MRO	Date: 951023	Approved: MRO	Date: 951023	Dr. class: -
Tetra Pak Distribublon AB		SEE ABOVE		Denomination: CIRCUIT DIAGRAM		Page: -
Dressing reasons:		Dressing No: 44161-32:10		Dressing No: 44161-32:10		Page: -
ECN No.	23134					
Sign./Date	MRO/951023					
Appr./Date	MRO/951023					

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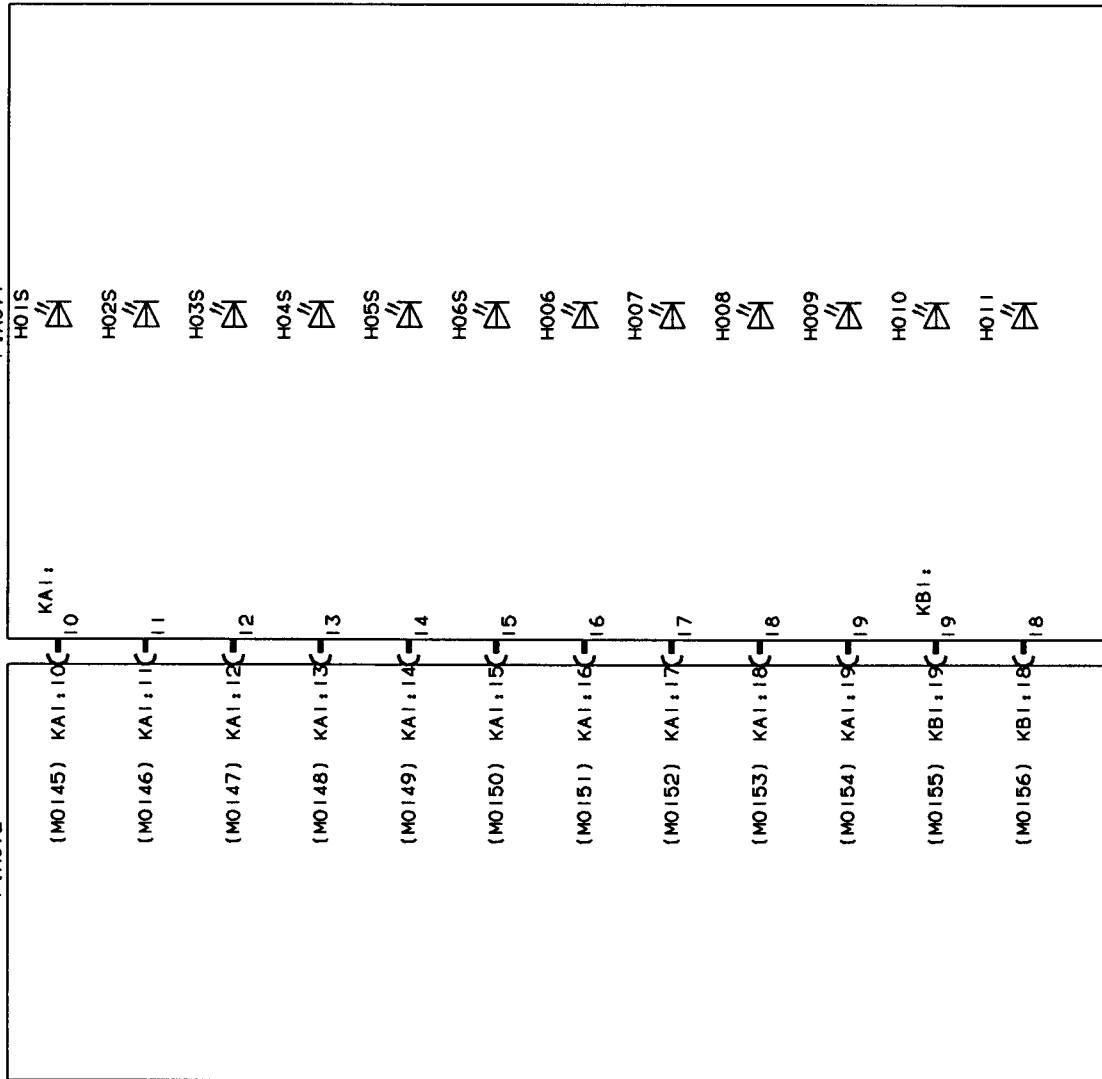
Tetra Pak Tetra Pak Distributor AB		Designer MRO Machine SEE ABOVE	Date 951030 Destination	Approved MRO Date 951030 [Det. class -]
Title ECN No. 23134 Sign./Date MRO/951030 Appr./Date MRO/951030	Drawing remarks	DESTINATION 44161-33:08	DESTINATION 44161-33:08	Page -

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OV 24V
L11
L10

P-A072

P-A071



STEP UP

STEP DOWN

RESET /LAMPTEST

MANUAL EMPTYING

SPARE

SPARE

ALARM EMERGENCY STOP

ALARM DOORS

ALARM MOTOR PROTECTION

ALARM AIR PRESSURE

ALARM SERVO

ALARM FREQUENCY CONTROL

OV 24V

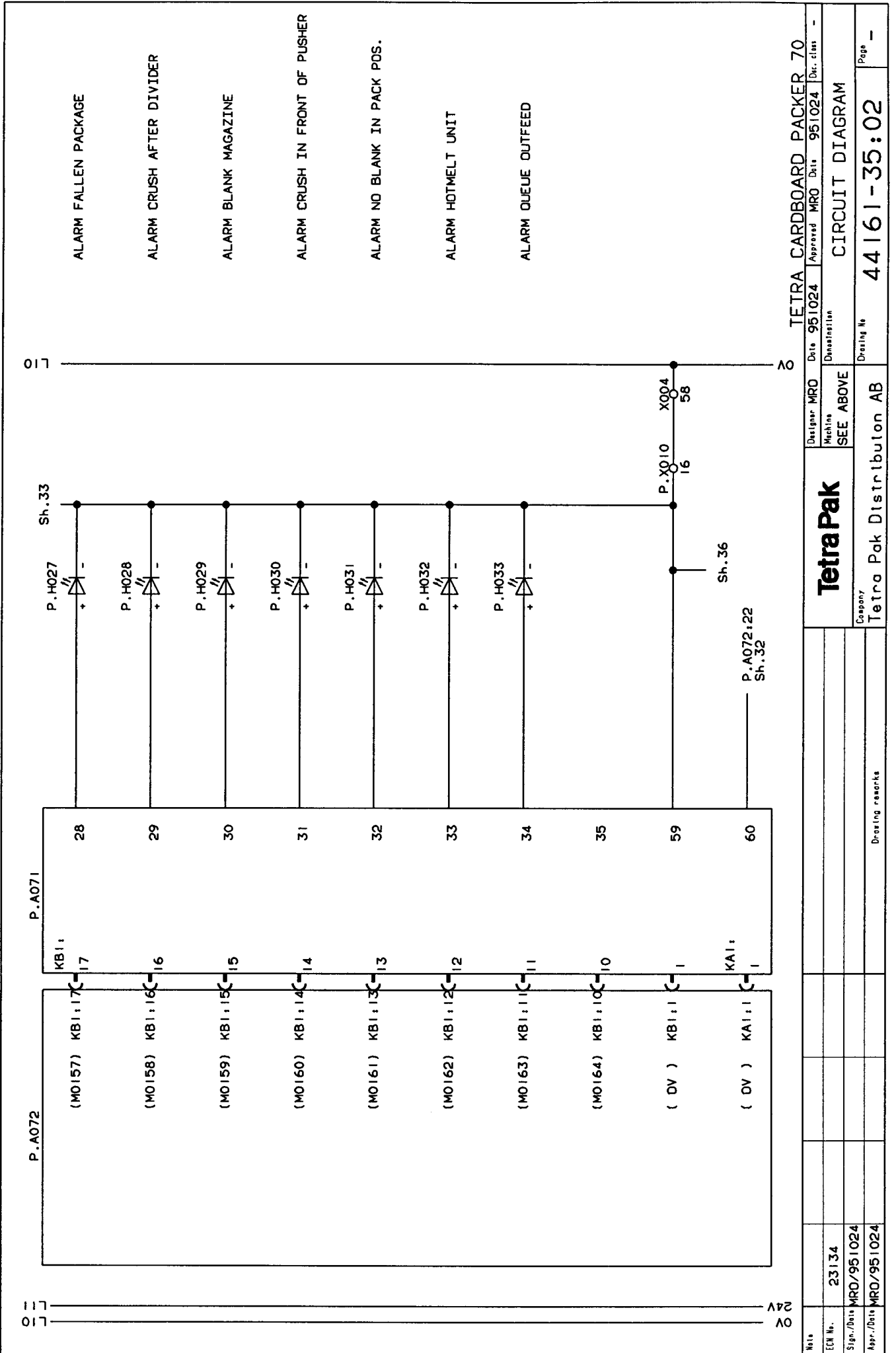
017

02

File	
ECN No.	23134
Sign./Date	MRO/951024
Appr./Date	MRO/951024

Tetra Pak Company Tetra Pak Distribution AB		Designer MRO	Date 951024	TETRA CARDBOARD PACKER 70	
		Mechanic SEE ABOVE	Denominator	Approved MRO	Date 951024
Drawing remarks 44161-34:09		Denominator CIRCUIT DIAGRAM		Drawing No. 44161-34:09 Page -	

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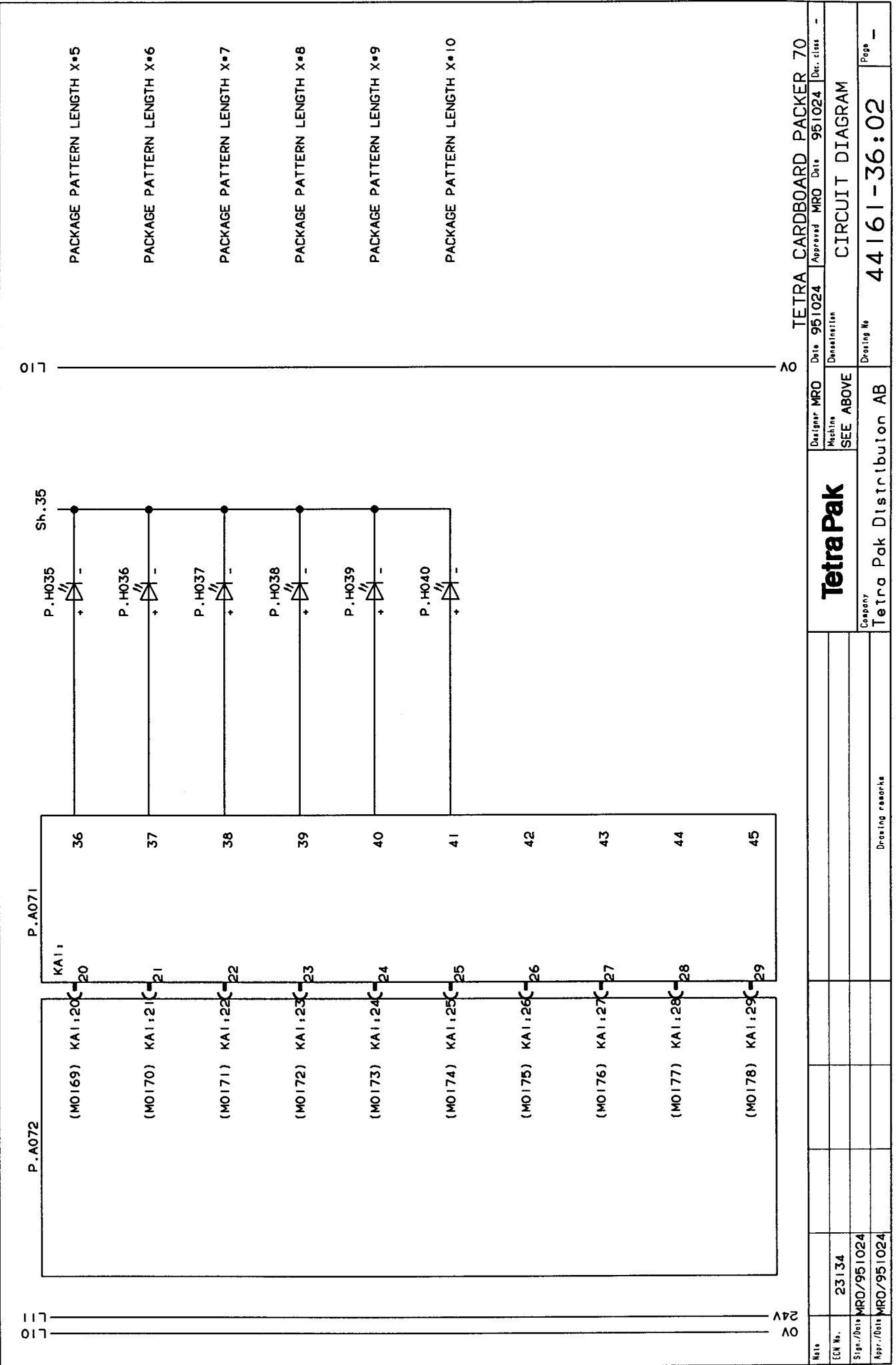


TETRA CARDBOARD PACKER 70
 Approved MRO Date 951024
 Destination CIRCUIT DIAGRAM
 Drawing No 44161-35:02
 Page -

Tetra Pak
 Designer MRO Date 951024
 Maching SEE ABOVE
 Company Tetra Pak Distribution AB
 Drawing remarks

Notes	
ECN No.	23134
Sign./Date	MRO/951024
Appr./Date	MRO/951024

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Designer MRO Date 951024 Approved MRO Date 951024 Det. class -
 Machine SEE ABOVE Description CIRCUIT DIAGRAM
 Company Tetra Pak Distributor AB Drawing No 44161-36:02 Page --
 Drawing remarks

Tetra Pak

TETRA CARDBOARD PACKER 70

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OV

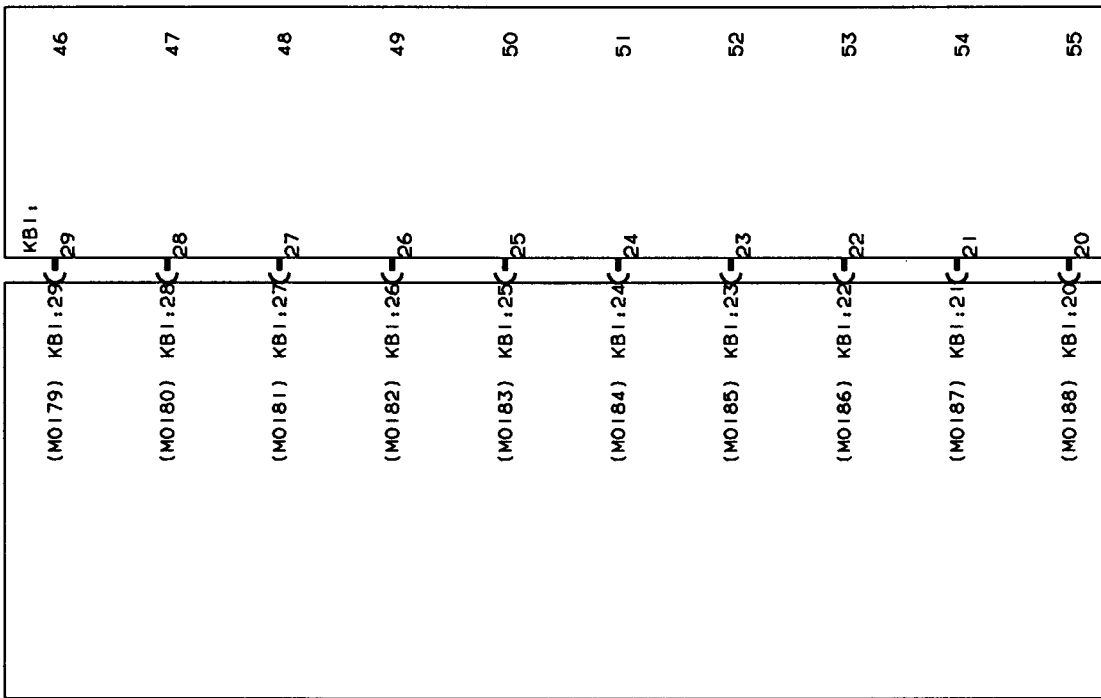
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P.A071

P.A072



L10
L11
24V
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Notes	ECN No.	23134	Designer MRD	Date	951024	Approved MRD	Date	951024	Dr. user	-
Sign./Date	MRD/951024		Machine	SEE ABOVE						
Appr./Date	MRD/951024		Tetra Pak			Tetra Pak Distribution AB				
Drawing records			Tetra Pak Distribution AB							
Drawing No			44161-37:01							
Page			-							

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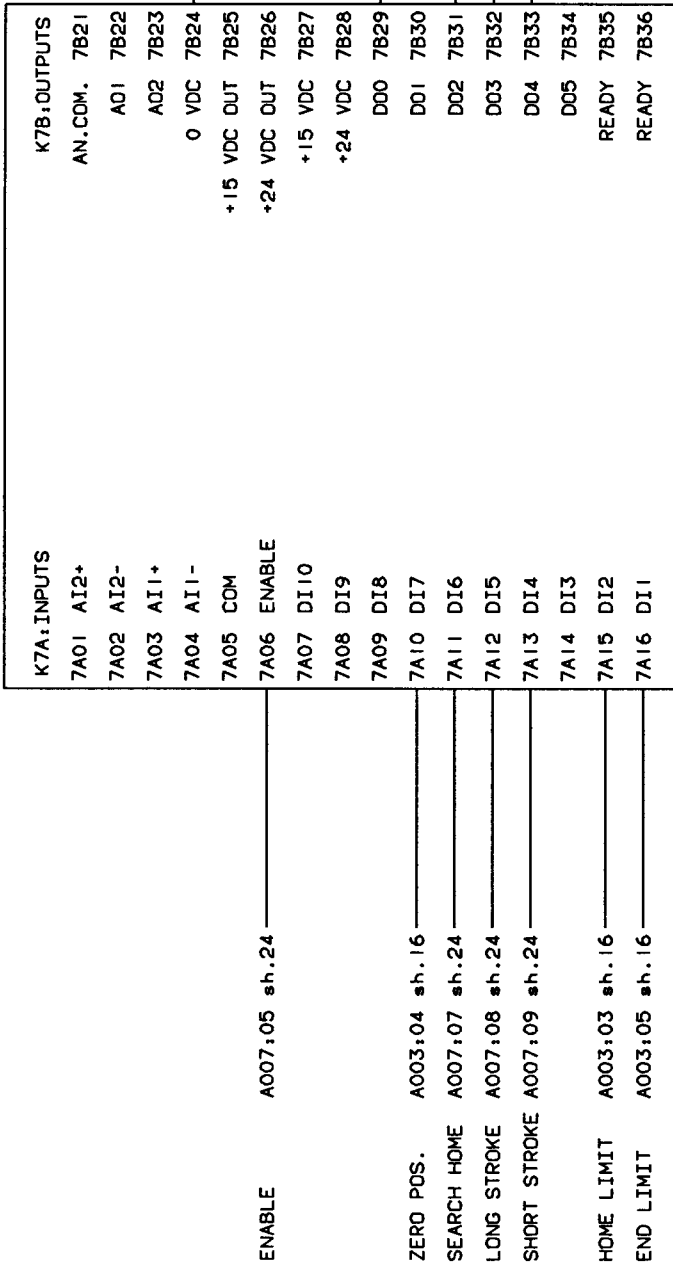
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G024



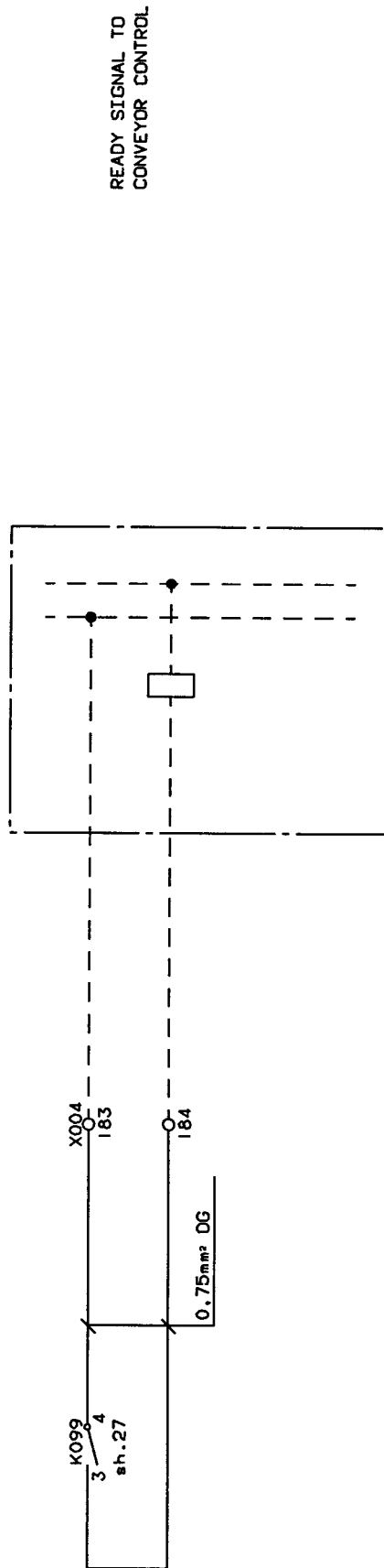
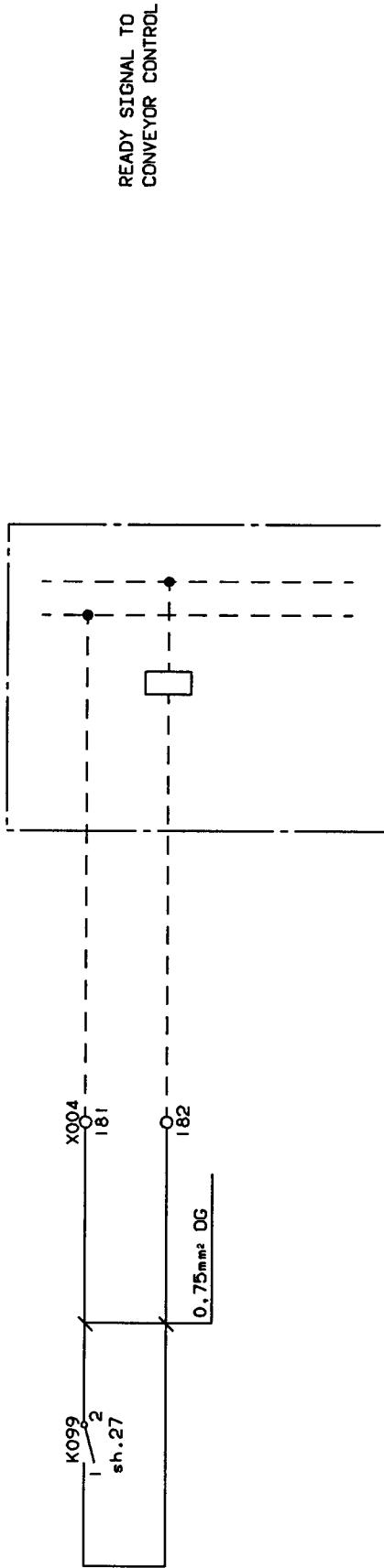
SERVO CONTROL UNIT

Notes		Date		Date		Date		Date			
Ecn No.		23134		MRO/950830		MRO/950830		MRO/950830			
Sign./Date		MRO/950830		MRO/950830		MRO/950830		MRO/950830			
Appr./Date		MRO/950830		MRO/950830		MRO/950830		MRO/950830			
Company				Designer MRO				Date			
Tetra Pak				SEE ABOVE				950830			
Tetra Pak Distributor AB				Machins				950830			
				Description				950830			
				Drawing No				44161-39:01			
				Page				-			

TETRA CARDBOARD PACKER 70

CIRCUIT DIAGRAM

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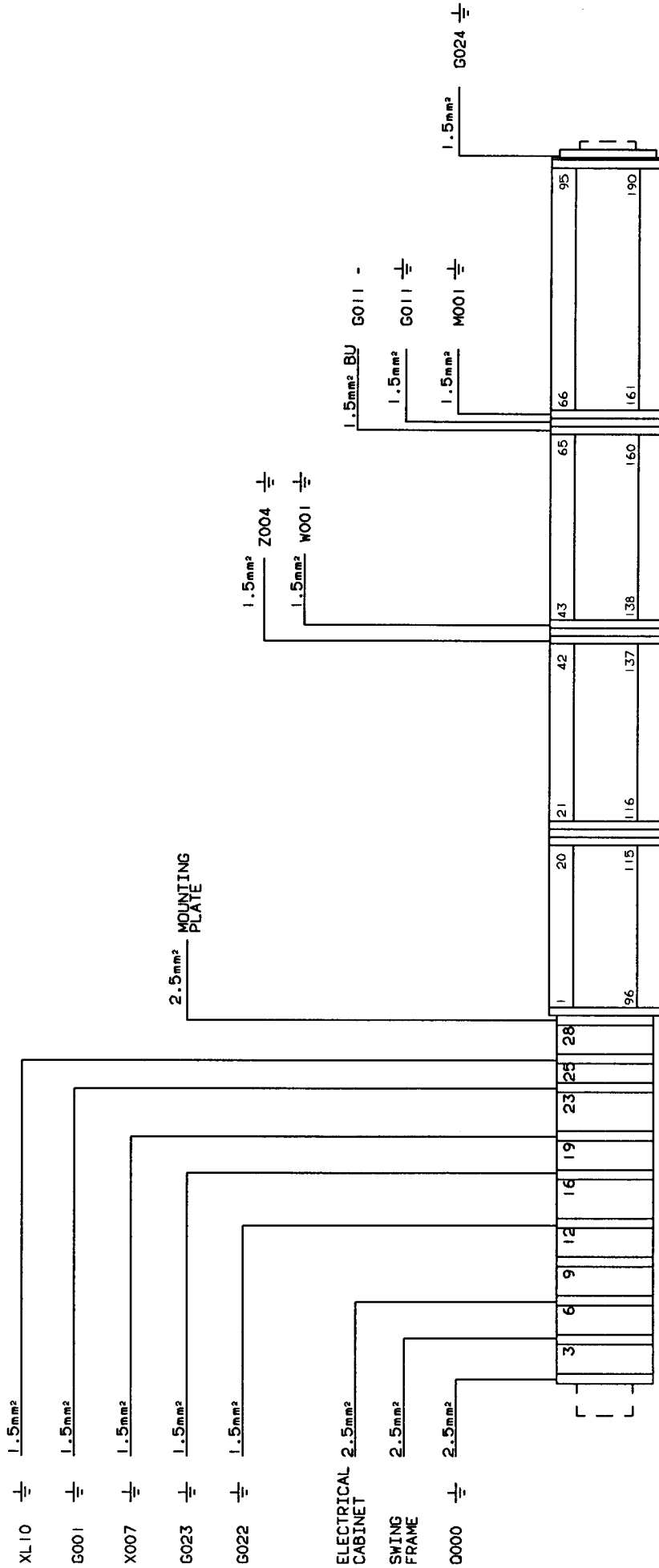


TETRA CARDBOARD PACKER 70

			Date 950316	Approved MRO Date 950316	Des. class -
Tetra Pak			Destination		CIRCUIT DIAGRAM
			Designer MRO SEE ABOVE		Drawing No 44161-40:01
			Machine		Page -
			Company Tetra Pak Distribution AB		
Drawing remarks					

Date		ECH No.	21817	Sign./Date	MRO/950316
Appr./Date					MRO/950316

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X004

X002

IF NOTHING ELSE IS SAID:
CONDUCTOR COLOUR GNYE

TETRA CARDBOARD PACKER 70

Notes	Designer MRO	Date	950925	Approved MRO	Date	950925	Dir. class	-
ECN No.	23134	Machine		SEE ABOVE		Destination		
Sign./Date	MRO/950925	Company		Tetra Pak Distribution AB		Drawing No		
Appr./Date	MRO/950925	Drawing No		44161-89:11		Page		
				EARTH SUMMARY				-

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Line	Contact	Sheet	Area	Colour	Line	Contact	Sheet	Area	Colour	
L1	Q000	2	2.5mm2	BK	L10	XL10	05	1.5mm2	BU	
	Q001	1				G011	10			
	Q004	1				X004	10			
	Q005	1								
	Q006	1								
	F004	2								
L2	Q000	4	2.5mm2	BK	L10	XL10	05	0.75mm2	BU	
	Q001	3				A001	12			
	Q004	3								
	Q005	3				XL10	14			
	Q006	3				A002	1			
	F001	2								
	F002	2				XL10	5			
	F005	2				A003	16			
L3	Q000	6	2.5mm2	BK	L10	XL10	05	1.5mm2	BU	
	Q001	5				A004	18			
	Q004	5								
	Q005	5				XL10	20			
	Q006	5				A005	1			
	F003	2								
	F004	4				XL10	8			
						A006	22			
						A006	23			
	N	Q000				N	2.5mm2			L.BU
X003 *		N (RAIL)	A007	24						
			A007	25						

*) Do not use end sleeve

Machine: Tetra Cardboard Packer 70 MED

ECN No. 23134

Sign./Date MRO/951026

Appr./Date MRO/951026

TETRA PAK

Circuit diagram line summary

44161-90:21

Page: 1
Cont.: 2

Tetra Pak Distribution AB

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Line	Contact	Sheet	Area	Colour	Line	Contact	Sheet	Area	Colour
L10	XL10	10				XL10	15		
	A008	10				X004	2		
	A008	20				X004	12		
	XL10	11				X004	23		
	A009	10				X004	31		
	A009	20				X004	58		
	XL10	12				XL10	16		
	G022	2				X004	68		
	G023	2				X004	81		
	P001	-				X004	98		
	XL10	13				X004	101		
	K001	A2				XL10	17		
	K002	A2				X004	104		
	K004	A2				X004	107		
	K005	A2				X004	114		
	K006	A2				X004	119		
	XL10	14				X004	131		
	K009	A2				X004	132		
	K010	A2				X004	143		
	K011	A2				X004	144		
K012	A2								
K099	A2								
G024,K7	24								
		26							
		27							
		28							
		29							
		05							
		06							
		25							
		25							
		22							
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		26							
		10							
		10							
		27							
		39							
Machine: Tetra Cardboard Packer 70 MED						TETRA PAK			
ECN No.	23134					Circuit diagram line summary			
Sign./Date	MRO/951026					Page: 2			
Appr./Date	MRO/951026					Cont.: 3			
						44161-90:21			

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Line	Contact	Sheet	Area	Colour	Line	Contact	Sheet	Area	Colour
L12	XL12	1	0.75mm2	BU	L13	XL13	1	0.75mm2	BU
	X004	27				K012	2		
	X004	53				A001	3		
	XL12	2				XL13	2		
	A001	2				XL13	3		
	XL12	3				A006	1		
	A007	11				A006	11		
	XL12	4				XL13	4		
						A007	1		
						XL13	5		
						A009	1		
							22		
			23						
			24						
			28						
TETRA PAK									
Circuit diagram line summary									
Machine: Tetra Cardboard Packer 70 MED								Page: 4	
ECN No. 23134								Cont.: -	
Sign./Date MRO/951026								44161-90:21	
Appr./Date MRO/951026								Tetra Pak Distribution AB	

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Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet		
X002, 1	05	X002, 25	08	X004, 14	15	X004, 38	10	X004, 62	18	X004, 86	18		
2	05	26	08	15	15	39	10	63	18	87	18		
3	05	27	08	16	15	40	10	64	10	88	10		
4		28	08	17	15	41	10	65	10	89	10		
5				18	15	42		66	16	90			
6		X003, 1	08	19	15	43	12	67	16	91			
7		2	05	20	15	44	12	68	16	92			
8		3	06	21	17	45	12	69	16	93			
9		4	08	22	17	46	12	70	16	94	17		
10		5	08	23	17	47	12	71	16	95	17		
11				24	17	48	13	72	16	96	18		
12		X004, 1	14	25		49	13	73		97	18		
13	06	2	14	26		50	13	74		98	18		
14	06	3	14	27	10	51	13	75		99	19		
15	06	4	14	28	10	52	10	76		100	19		
16	06	5	14	29		53	10	77		101	19		
17	06	6	14	30	25	54	32	78		102	17		
18	06	7	14	31	25	55	32	79	18	103	17		
19	06	8	14	32	28	56	32	80	18	104	17		
20		9	14	33	25	57	32	81	18	105	17		
21		10	14	34	28	58	35	82	18	106	17		
22		11	15	35		59		83	18	107	17		
23		12	15	36	10	60		84	18	108	12		
24	08	13	15	37	10	61		85	18	109	12		
Machine: Tetra Cardboard Packer 70 MED													
ECN No.	23134												
Sign./Date	MRO/951026												
Appr./Date	MRO/951026												
Terminal						Terminal						Terminal	
TETRA PAK						TETRA PAK						Circuit diagram terminal summary	
Tetra Pak Distribution AB						Tetra Pak Distribution AB						44161-91:21	
Drawing remarks												Page: 1 Cont.: 2	

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Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet
X004, 110		X004, 134	23	X004, 158	19	X004, 182	40	P.X010, 1	12	M.X101, 1	15
111		135	28	159		183	40	2	12	2	15
112	17	136	28	160		184	40	3	12	3	15
113	17	137		161		185	20	4	12	4	15
114	17	138		162	20	186	20	5	12	5	15
115	17	139	26	163	20	187	20	6	13	6	15
116	10	140	26	164	20	188	20	7	13	7	15
117	10	141	26	165	20	189	26	8	13	8	15
118	25	142	26	166	20	190	26	9	13	9	15
119	25	143	23	167	20			10	10	10	15
120		144	26	168	20			11	10	11	17
121	23	145		169	20			12	32	12	17
122	23	146		170	28			13	32	13	17
123	23	147		171	28			14	32	14	17
124	23	148		172	28			15	32	15	17
125	23	149		173				16	35	16	10
126	23	150		174						17	10
127		151	19	175						18	10
128		152	19	176	27					19	10
129		153	19	177	27					20	10
130		154	19	178	27					21	10
131	23	155	19	179	27					22	10
132	23	156	19	180						23	10
133	23	157	19	181	40					24	25

Machine: Tetra Cardboard Packer 70 MED		TETRA PAK		Circuit diagram terminal summary	
ECN No.	23134				
Sign./Date	MRO/951026	Tetra Pak Distribution AB		44161-91:21	
Appr./Date	MRO/951026	Drawing remarks		Page: 2 Cont.: 3	

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Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet
M.X101, 25	25	M.X102, 17	17	M.X103, 1	18	M.X103, 25	25	M.X104, 22	22	M.X106, 13	20	M.X106, 13	20
26	28	18		2	18	26	26	23	19	14	20	14	20
27	28	19		3	18			24	19	15	20	15	20
28	25	20		4	18	M.X104, 1	19	25		16	20	16	20
29	25	21		5	18	2	19	26		17	20	17	20
30	28	22		6	18	3	19	27		18	20	18	20
31	28	23		7	18	4	19	28		19	28	19	28
		24		8	18	5	19	29		20	28	20	28
M.X102, 1	16	25		9	18	6	19	30		21	28	21	28
2	16	26		10	18	7	19	31		22	28	22	28
3	16	27		11	18	8	19	32					
4	16	28		12	18	9	19			M.X107, 1	17	M.X107, 1	17
5	16	29		13	18	10	19						
6	16	30		14	18	11	19	M.X106, 1	20				
7	16			15	18	12	19	2	20				
8	16			16	18	13	19	3	20				
9	16			17	18	14	19	4	20				
10	16			18	18	15	19	5	20				
11	16			19	18	16	19	6	20				
12	16			20	18	17	19	7	20				
13	16			21	18	18	19	8	20				
14	16			22	18	19	19	9	20				
15	16			23	18	20	19	10	20				
16				24		21	19	11	20				
								12	20				
								13	20				
								10					
Machine: Tetra Cardboard Packer 70 MED												Circuit diagram terminal summary	
ECN No.	23134											TETRA PAK	
Sign./Date	MRO/951026											Tetra Pak Distribution AB	
Aprr./Date	MRO/951026											44161-91:21	
Drawing remarks												Page: 3	Cont.: 4

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Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet	Terminal	Sheet
M.X107, 14	10	M.X112, 1+	23	M.X901, 1	20						
15	25	1-	23	1A	20						
16	25	2+	23	1B	20						
		2-	23	2	20						
M.X111, 1+	23	3+	28	2A	20						
1-	23	3-	28	2B	20						
2+	23	4+	28	3	20						
2-	23	4-	28	3A	20						
3+	23	5+		3B	20						
3-	23	5-		4	20						
4+	23	6+		4A	20						
4-	23	6-		4B	20						
5+	23	7+	26	5	26						
5-	23	7-	26	5A							
6+	23	8+	26	5B	26						
6-	23	8-	26								
7+		9+	26								
7-		9-	26								
8+		10+	26								
8-		10-	26								
9+											
9-											
10+											
10-											
Tetra Cardboard Packer 70 MED											
Machine:	Tetra Cardboard Packer 70 MED										
ECN No.	23134										
Sign./Date	MRO/951026										
Appr./Date	MRO/951026										
						TETRA PAK					
						Circuit diagram terminal summary					
						Tetra Pak Distribution AB					
						44161-91:21					
						Page: 4					
						Cont.: -					
Drawing remarks											

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ECN NO. TEXT

17814 ■ DOCUMENTATION RELEASED BE-679199-010V

19476 ■ DOCUMENTATION RELEASED FOR MIN INFEED, MID INFEED AND MAX INFEED.
 WA INSIDE FLAP, WA MEETING FLAP AND WA OVER FLAP RELEASED
 BE-679199-020V

20210 ■ DOCUMENTATION FOR L-INFEED RELEASED
 DOCUMENTATION FOR 125ML, MAX INFEED RELEASED
 DOCUMENTATION FOR 200ML SLIM, MAX INFEED RELEASED

20903 ■ VARIANT FOR MED INFEED, BE-679199-010V RELEASED

20914 ■ CONTACTORS (K011 AND K012) INTRODUCED FOR L13 IN ALL VARIANTS.
 ALL PROGRAMMES CHANGED. BE-679199-030V RELEASED

21798 ■ CONTACTORS K011 AND K012 INTRODUCED IN 020V,
 020V AND 030V;
 NEW FUNCTION "FLAP FOLDER" INTRODUCED, NEW EMERGENCY STOP FOR MED INFEED.
 PROGRAMME CHANGES FOR WA STATION, NEW EPROM FOR SERVO-PUSHER VOLUMES C=500S

20915 ■ BE-679199-040V RELEASED
 NEW EMERGENCY STOP FOR MAX- AND L-INFEED
 MINICONTACTORS INTRODUCED, U-INFEED INTRODUCED FOR MAX-INFEED
 VOLTAGE SUPPLY ONLY 400/230V (380/220V)

21817 ■ BE-679199-050V RELEASED
 CE MARKING;
 NEW MECMAN VALVE RAMPS, NEW WARNING LAMP, EARTHING OF EM.STOP, HOTMELT GUNS, MACHINE BODY
 SUPERVISION OF FREQ.- AND SERVO CONTACTORS, SLOW SPEED OF MAIN SHAFT
 NEW FUNCTION NUMBERS AND CABLE NUMBERS,
 STANDARD ADDRESSES BOTH HARDWARE AND SOFTWARE
 NEW DRAWING FRAME FOR ALL DOCUMENTATION
 MULTI INFEED, 0-SERIE RELEASED

23134 ■ BE-679199-060V RELEASED
 CE MARKING ACCORDING TO EMC DIRECTIVE
 NEW PHOTOCELLS, NEW POWER SUPPLY, NEW FREQUENCY CONVERTERS
 NEW MULTIPLEX BOARD, NEW PUSHBUTTON BOARD.
 NEW MOTORPROTECTIONS, FAN MOVED TO EL CABINET BOTTOM
 YELLOW CHROMATED PLATES IN EL.CABINET
 EMC CORRECT CONNECTION OF SHIELDED CABLES

ECN NO. TEXT

24437 ■ CORRECTIONS OF DOCUMENTATION FOR
 MULTI INFEED 060V
 CORRECTIONS OF PROGRAMS FOR
 ALL INFEED TYPES 060V

TETRA CARDBOARD PACKER 70

Design MRO	Date	950823	Approved MRO	Date	950823	Dis. date	-
Notes	SEE ABOVE			Quantity	CIRCUIT DIAGRAM		
Company	Tetra Pak Distributon AB			Drawing No.	44161-99:06		
Page				Page -			

Drawing records

6. Connection Diagrams

2.1TH400024.en

6. Connection Diagrams

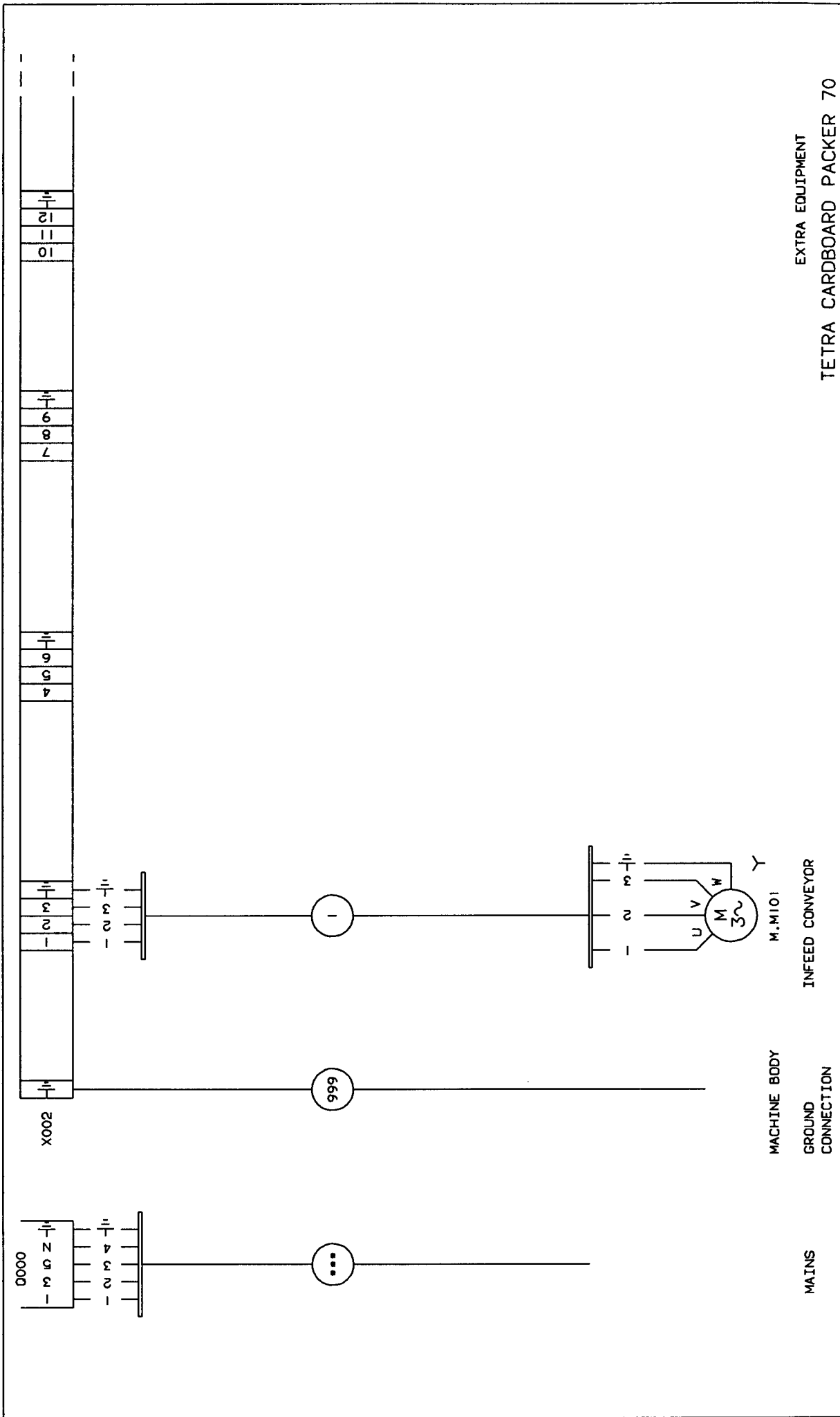
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CE-list 42157-050V Electrical document
ECN No 23134

Connection Diagrams	61350-05:10
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	-14:06
	-15:05
	-16:15
	-17:09
	-19:14
	-20:05
	-21:03
	-22:02

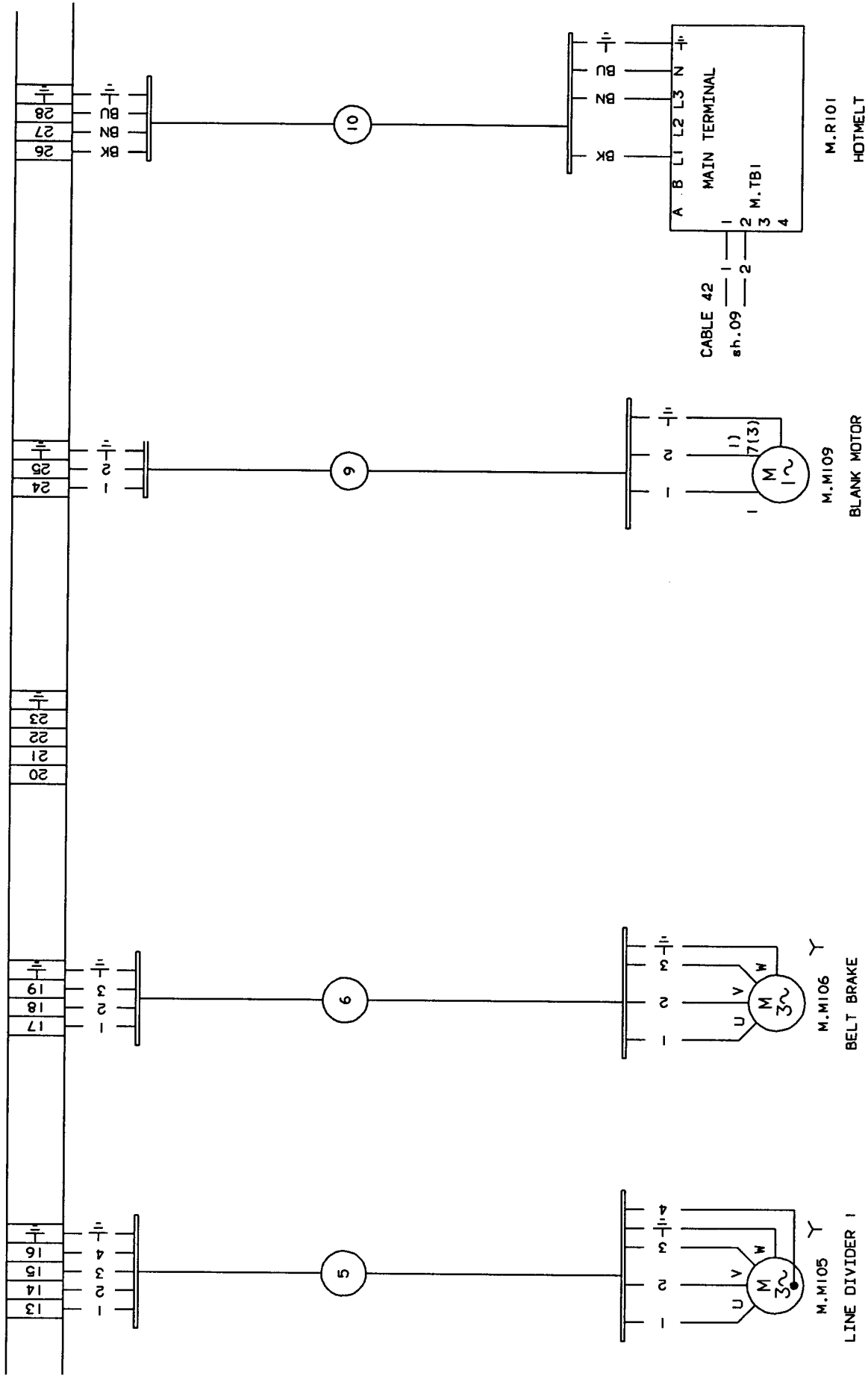
2.1TH400024.en

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Tetra Pak Tetra Pak Distributor AB		Designer MRO SEE ABOVE	Date 950924	Approved MRO Date 950924	Doc. class -
No.	ECU No. 23134	Sign./Date MRD/950924	Description CONNECTION DIAGRAM	Drawing No. 61350-05:10	Page -
Mains	Machine Body GROUND CONNECTION	Infeed Conveyor M.M101	EXTRA EQUIPMENT TETRA CARDBOARD PACKER 70		

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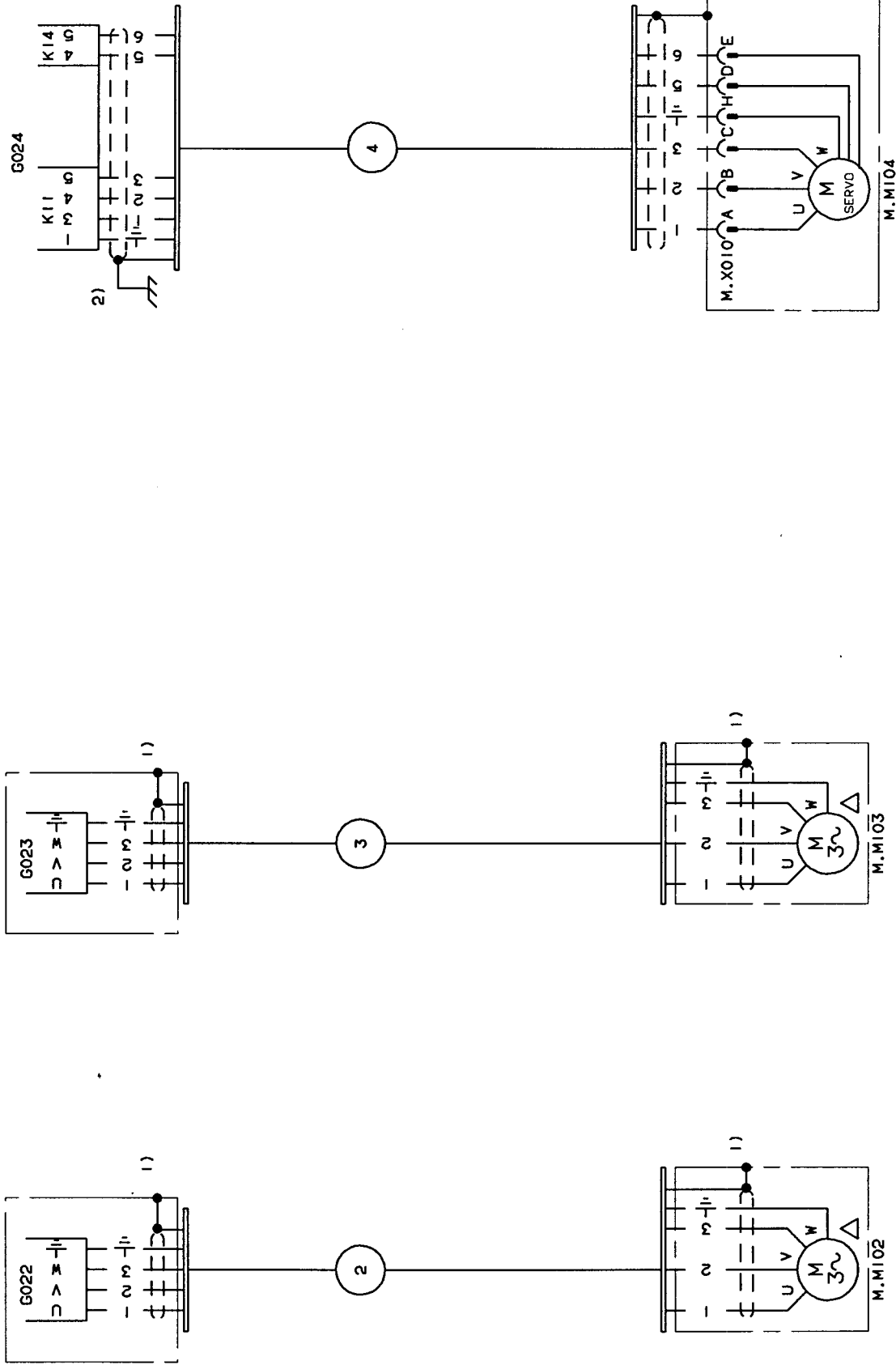


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13		14		15		16		17		18		19		20		21		22	
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11		12		13		14		15		16		17		18		19		20	
21		22		23		24		25		26		27		28		29		30	
31		32		33		34		35		36		37		38		39		40	

Tetra Pak		M.1105		M.1106		M.1109		MAIN TERMINAL	
Tetra Pak Distribution AB		LINE DIVIDER 1		BELT BRAKE		BLANK MOTOR		HOTMELT	
Company		M.1105		M.1106		M.1109		M.1101	
Dressing remarks		1) AT LEFT INFEEED (AT RIGHT INFEEED)		1) 2) 7(3)		1) 2)		A B L1 L2 L3 N	
Designing No		21817		MRO/950118		MRO/950118		CABLE 42 sh.09	
Date		MRO/950118		MRO/950118		MRO/950214		M.T.B.I	
Approved		MRO/950118		MRO/950118		MRO/950214		2 3 4	
Machine		MRO/950118		MRO/950118		MRO/950214		1 2	
Destination		MRO/950118		MRO/950118		MRO/950214		1 2	
Designing No		MRO/950118		MRO/950118		MRO/950214		1 2	
Date		MRO/950118		MRO/950118		MRO/950214		1 2	
Approved		MRO/950118		MRO/950118		MRO/950214		1 2	
Machine		MRO/950118		MRO/950118		MRO/950214		1 2	
Destination		MRO/950118		MRO/950118		MRO/950214		1 2	
Designing No		MRO/950118		MRO/950118		MRO/950214		1 2	
Date		MRO/950118		MRO/950118		MRO/950214		1 2	
Approved		MRO/950118		MRO/950118		MRO/950214		1 2	

TETRA CARDBOARD PACKER 70
 Approved MRO Date 950214 [Dir. class -]
 CONNECTION DIAGRAM
 Designing No 61350-06:11
 Page -

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Tetra Pak
 Tetra Pak Distribution AB
 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
 Drawing No 61350-07:03
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Tetra Pak
 Tetra Pak Distribution AB
 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
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Tetra Pak
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 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
 Drawing No 61350-07:03
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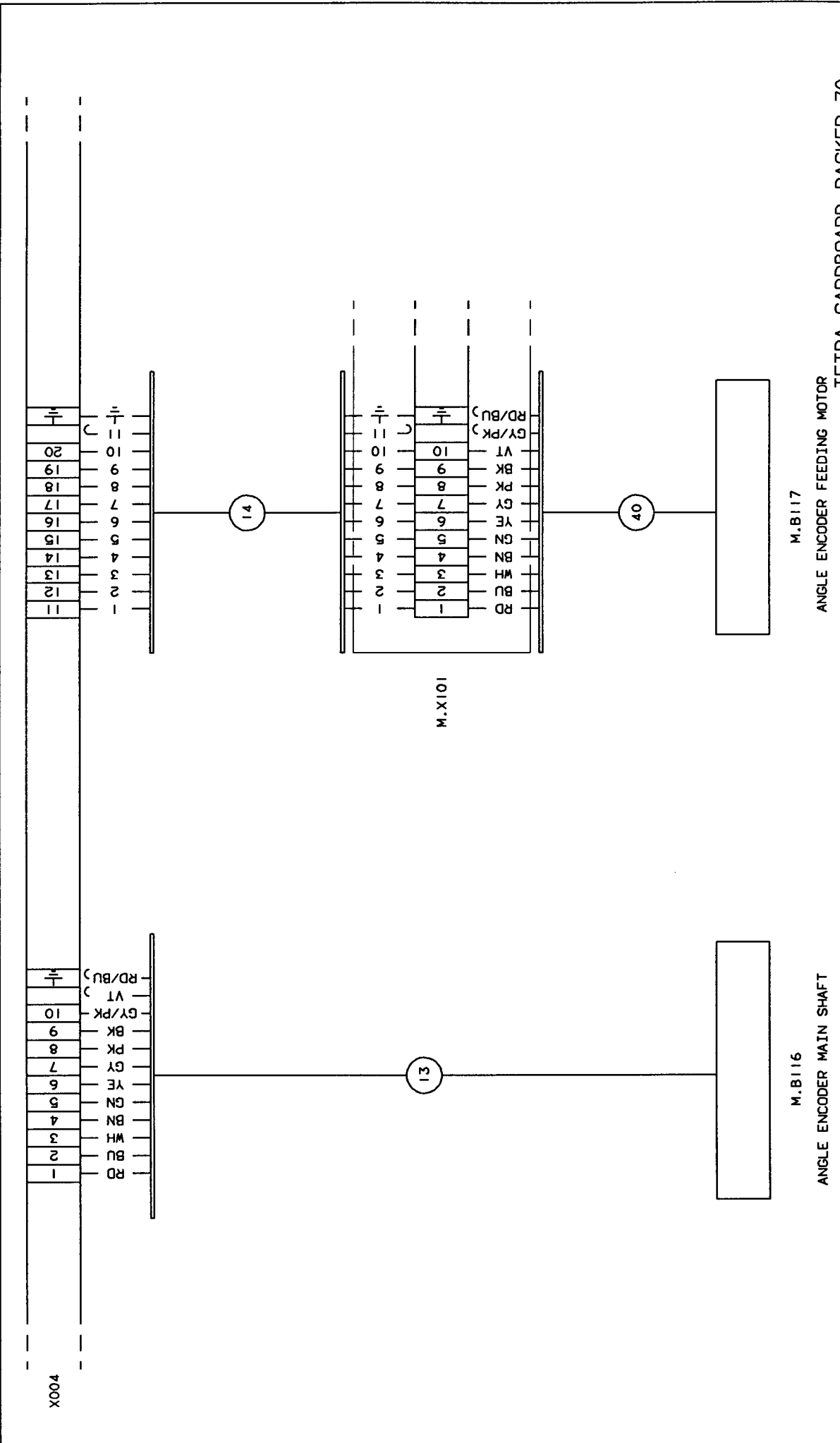
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 Tetra Pak Distribution AB
 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
 Drawing No 61350-07:03
 Page -

Tetra Pak
 Tetra Pak Distribution AB
 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
 Drawing No 61350-07:03
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Tetra Pak
 Tetra Pak Distribution AB
 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
 Drawing No 61350-07:03
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Tetra Pak
 Tetra Pak Distribution AB
 Designer MRO SEE ABOVE
 Date 951024
 Approved MRO Date 951024
 Destination CONNECTION DIAGRAM
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M.B116

ANGLE ENCODER MAIN SHAFT

M.B117

ANGLE ENCODER FEEDING MOTOR

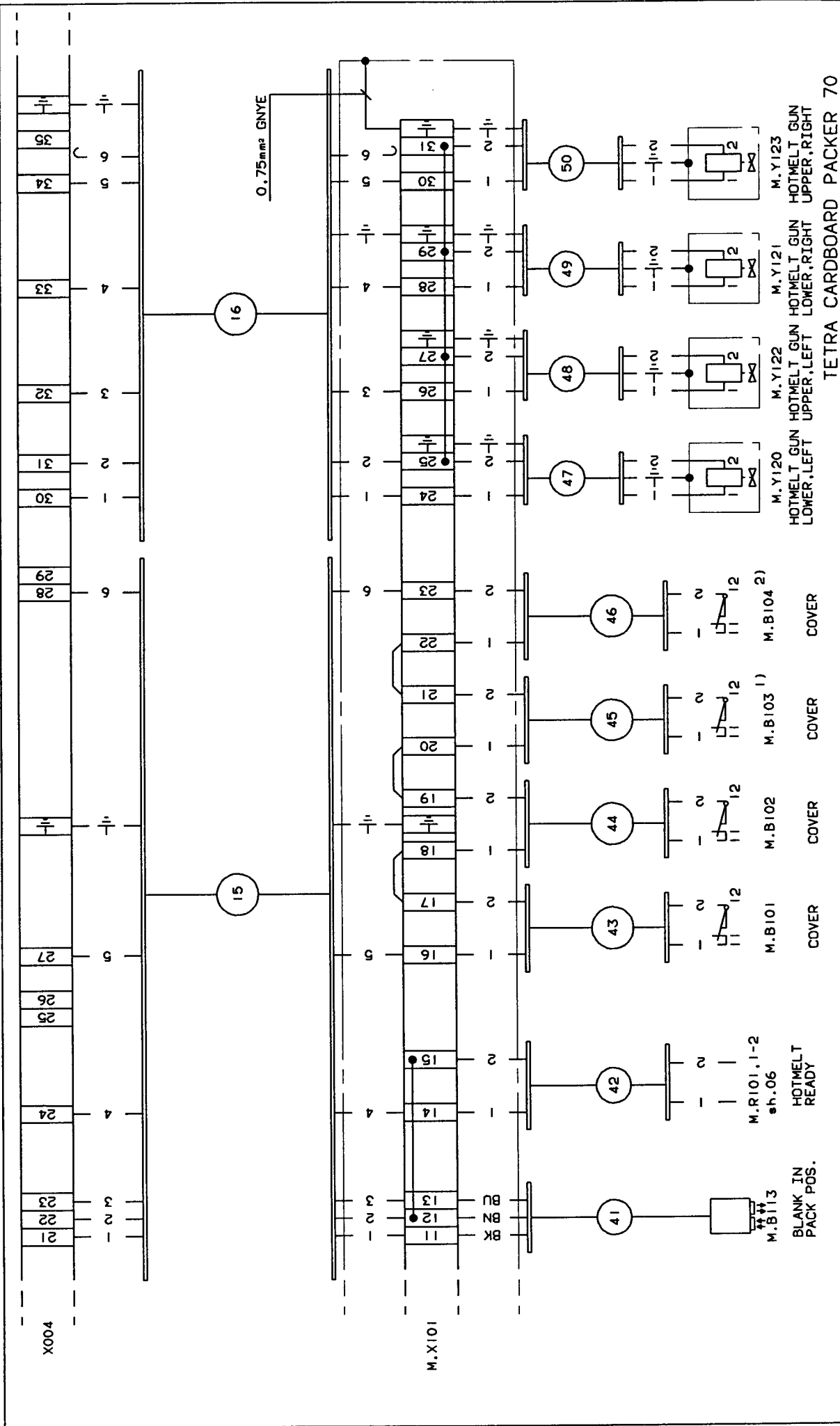
TETRA CARDBOARD PACKER 70

Part No.	23134	Designer MRO	Date	950926	Approved MRO	Date	950926	Dir. class	-	
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Sign./Date	MRO/950926	Company	Tetra Pak Distribution AB							
Appr./Date	MRO/950926	Drawing No.	61350-08:05							
								Page		-

Tetra Pak

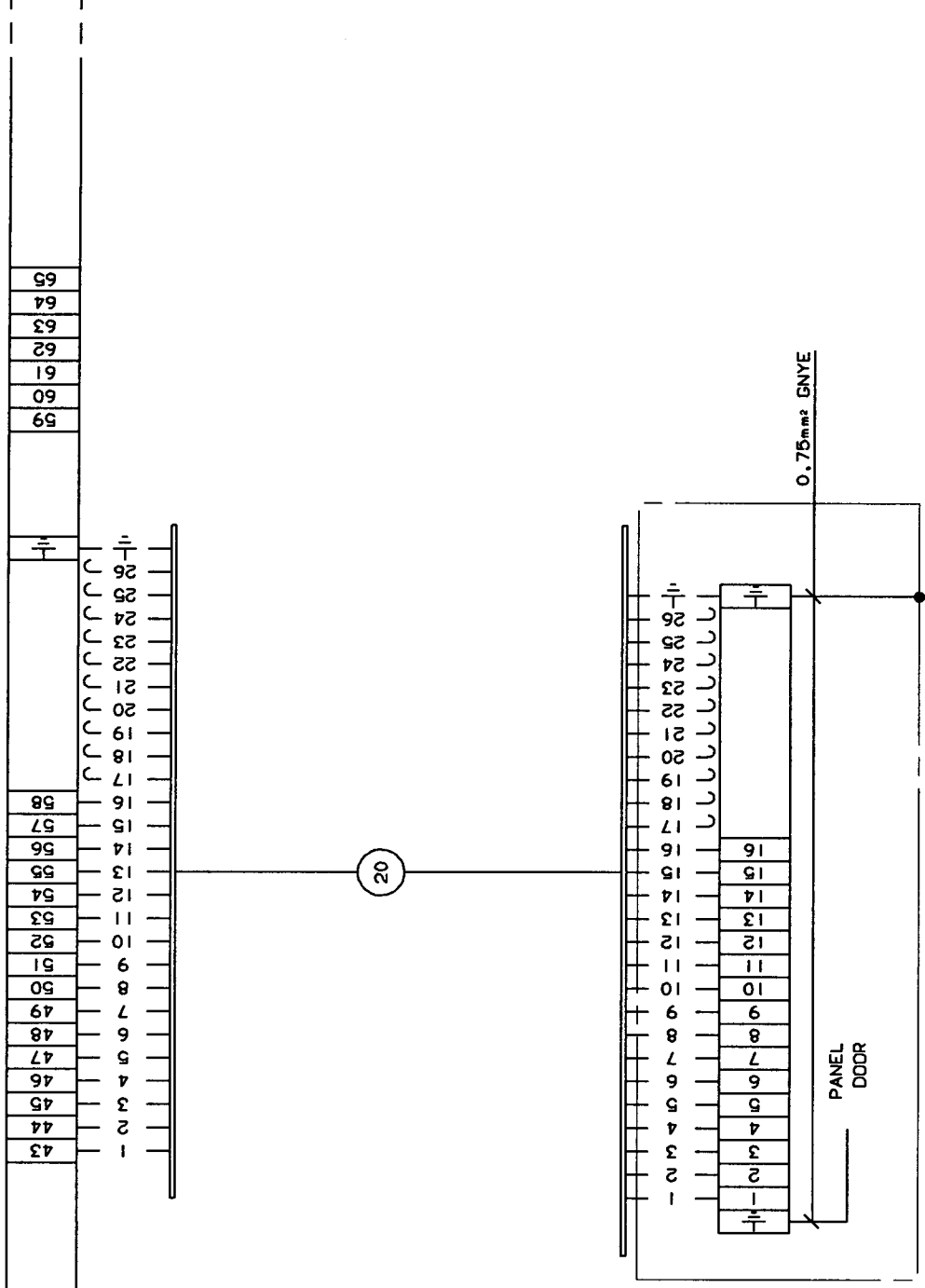
Drawing remarks

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<p>Tetra Pak</p> <p>Tetra Pak Distributor AB</p>		<p>Designer: MRD</p> <p>Date: 950924</p> <p>Approved: MRD</p> <p>Date: 950924</p> <p>Doc. class: -</p>
<p>Machine: SEE ABOVE</p> <p>Denomination: CONNECTION DIAGRAM</p>		<p>Drawing No: 61350-09:06</p> <p>Page: -</p>
<p>No:</p>	<p>23134</p>	<p>1) NOT USED AT LEFT U-INFEED</p> <p>2) NOT USED AT RIGHT U-INFEED</p>
<p>Sign./Date:</p>	<p>MRO/950924</p>	<p>Drawing remarks:</p>
<p>Appr./Date:</p>	<p>MRO/950924</p>	<p>Blank in pack pos.</p> <p>Hotmelt ready</p> <p>Hotmelt gun lower, left</p> <p>Hotmelt gun upper, left</p> <p>Hotmelt gun lower, right</p> <p>Hotmelt gun upper, right</p> <p>Cover</p> <p>Cover</p> <p>Cover</p> <p>Cover</p> <p>Cover</p> <p>Cover</p> <p>Hotmelt ready</p> <p>Blank in pack pos.</p>

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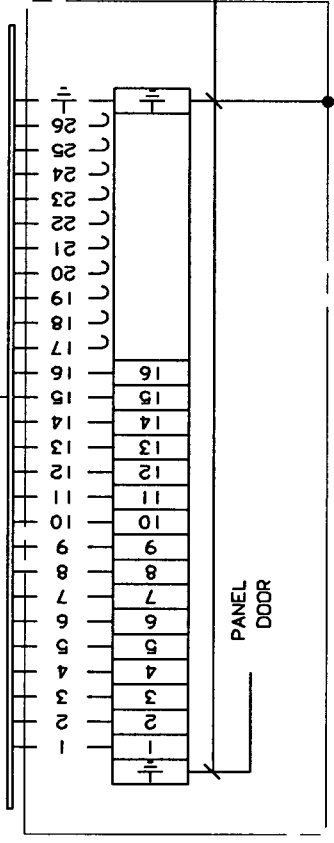
CONTROL PANEL

FOR INTERNAL CONNECTIONS SEE CIRCUIT DIAGRAM 44161

X004

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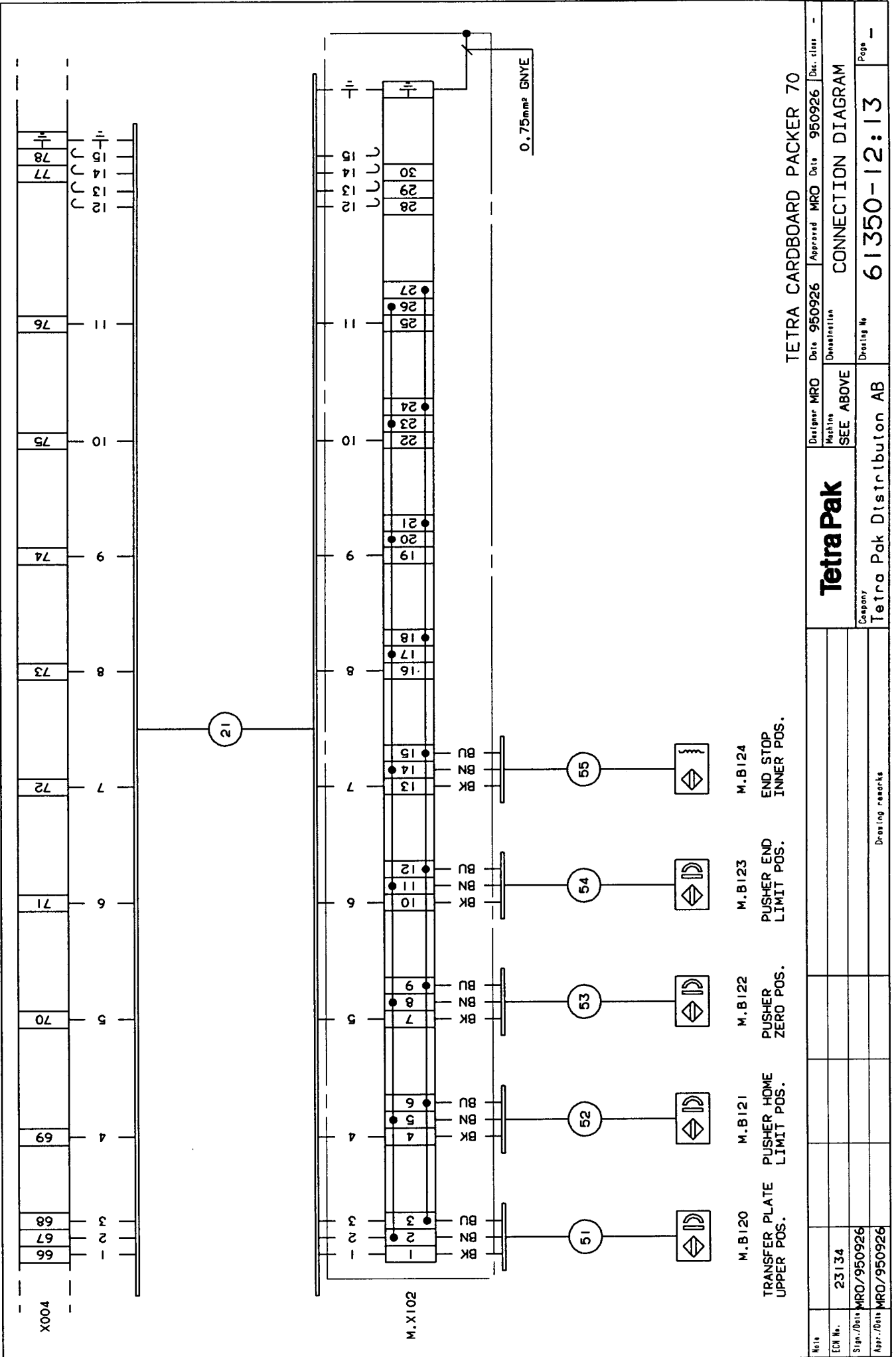
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TETRA CARDBOARD PACKER 70

Notes		Designer	MRO	Date	950924	Approved	MRO	Date	950924	Dr. class	-	
ECN No.	23134	Machine	SEE ABOVE	Designation								CONNECTION DIAGRAM
Sign./Date	MRO/950924	Company									Tetra Pak Distribution AB	
Appr./Date	MRO/950924	Drawing No									61350-11:06	
											Page	-

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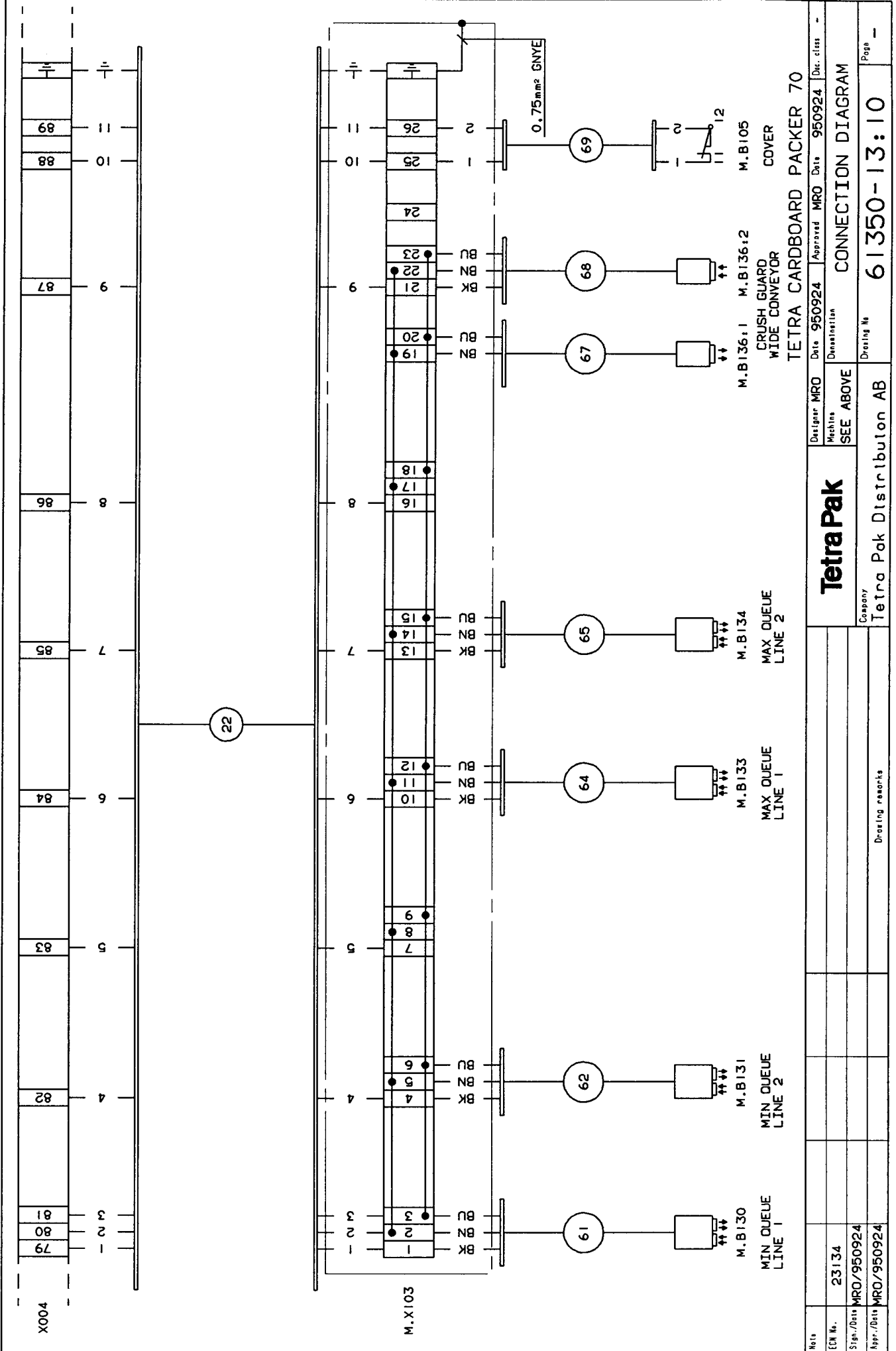
TETRA CARDBOARD PACKER 70

Notes	Designer MRO	Date	950926	Approved MRO	Date	950926	Doc. class	-
ECN No.	Machine	SEE ABOVE		Destination		CONNECTION DIAGRAM		
Sign./Date	MRO/950926		Drawing No.		61350-12:13			
Appr./Date	MRO/950926		Company		Tetra Pak Distributor AB			
<p>Tetra Pak</p> <p>Tetra Pak Distributor AB</p>								

M.B120 TRANSFER PLATE UPPER POS.
 M.B121 PUSHER HOME LIMIT POS.
 M.B122 PUSHER ZERO POS.
 M.B123 PUSHER END LIMIT POS.
 M.B124 END STOP INNER POS.

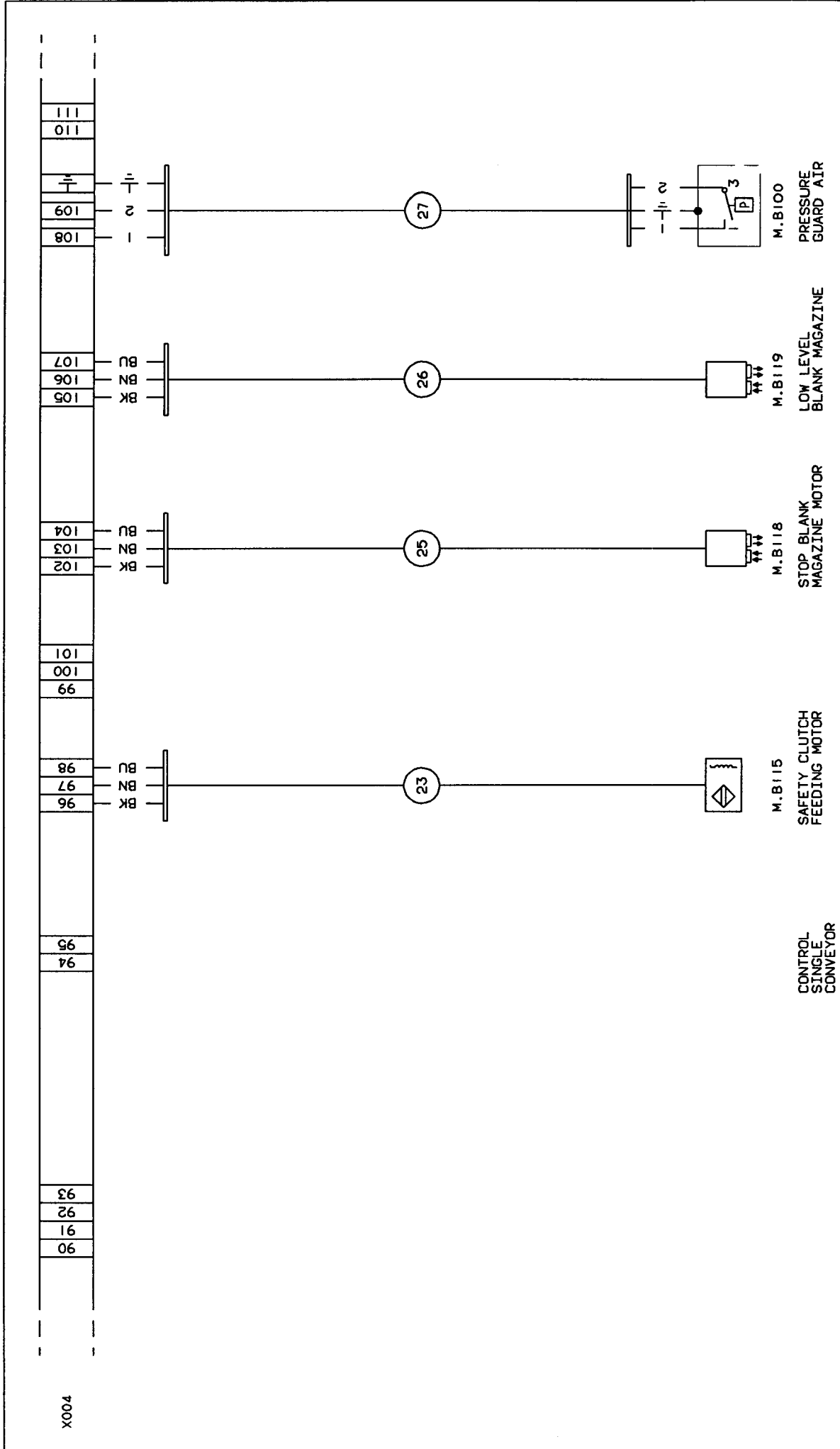
Drawing remarks

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Tetra Pak		Designer: MRO	Date: 950924	Approved: MRO	Date: 950924	Doc. class: -
Tetra Pak Distributor AB		Mechanics: SEE ABOVE	Denomination: CONNECTION DIAGRAM			
Drawing No: 61350-13:10		Page: -				
Notes:	ECN No.: 23134	Drawing resource:				
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Appr./Date: MRO/950924						

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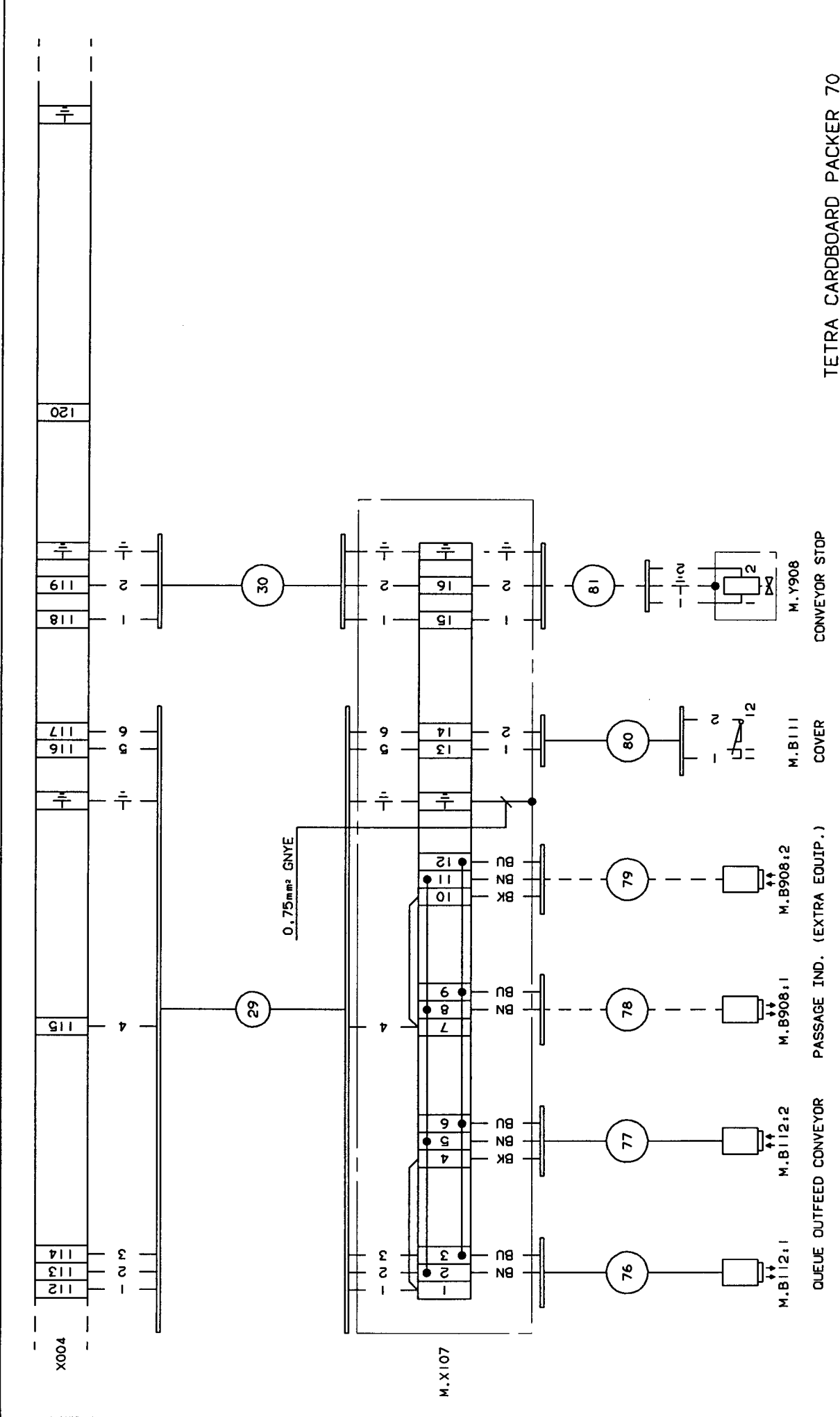
X004

TETRA CARDBOARD PACKER 70

Notes			
ECN No.	23134	Designer MRO	Date 950924
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Appr./Date	MRO/950924	Destination	CONNECTION DIAGRAM
		Approved MRO	Date 950924
		Dras ing No	61350-14:06
		Page	-

Company
Tetra Pak Distribution AB

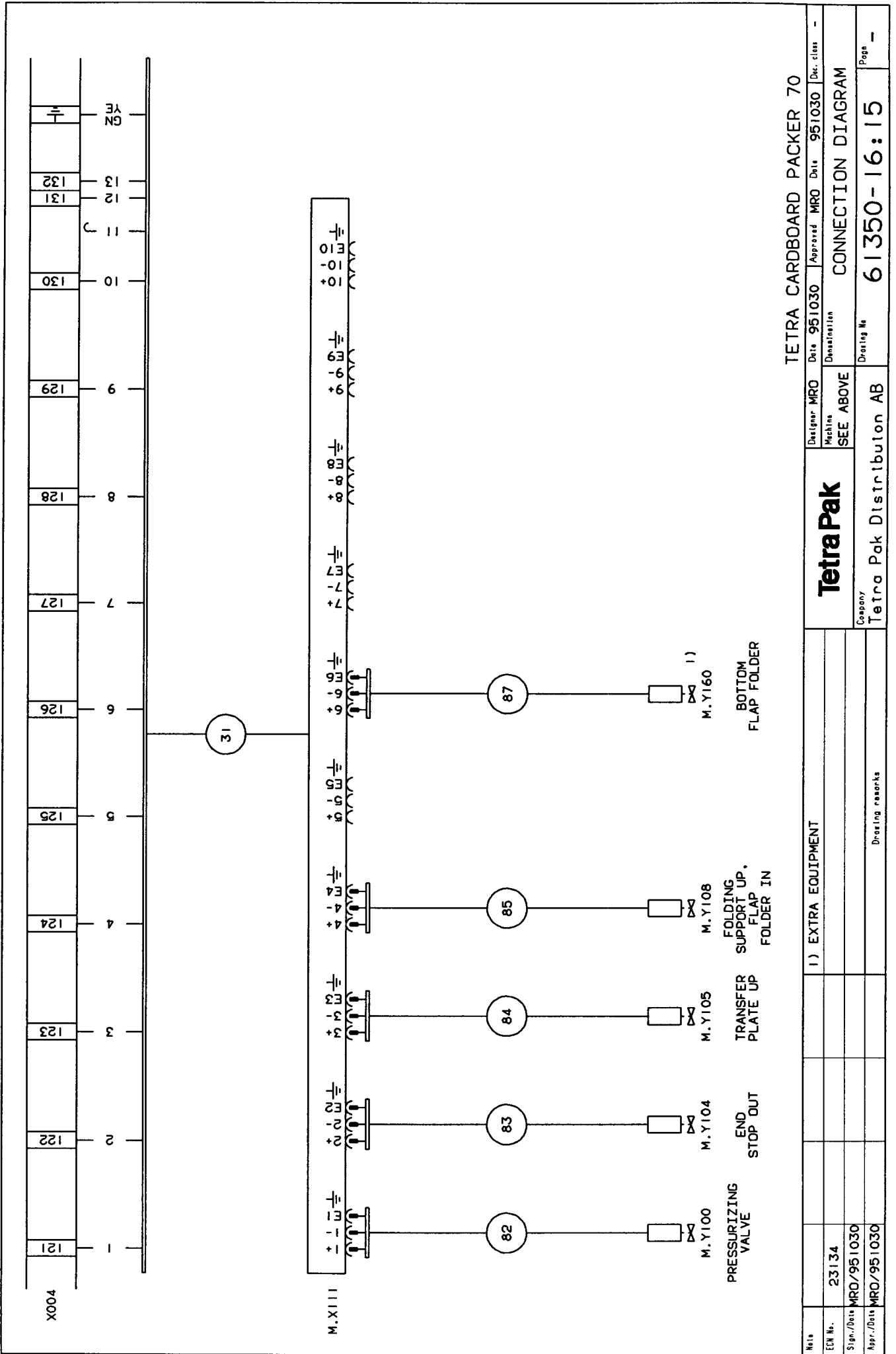
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TETRA CARDBOARD PACKER 70

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Sign./Date	MRD/950924	Machine	SEE ABOVE			Destination	CONNECTION DIAGRAM		
Appr./Date	MRD/950924	Company		Tetra Pak Distribution AB		Drawing No	61350-15:05		
Notes		Draughtsman		Draughtsman		Page		-	

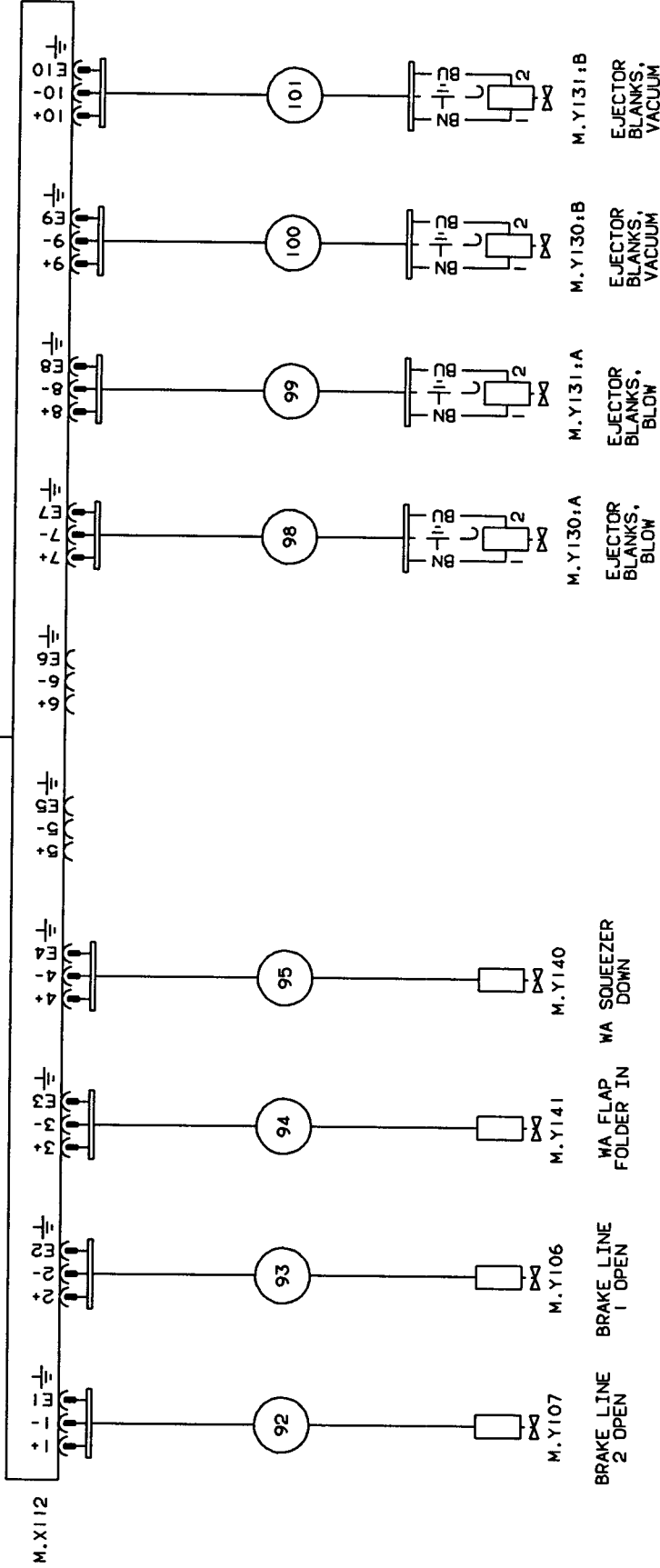
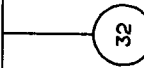
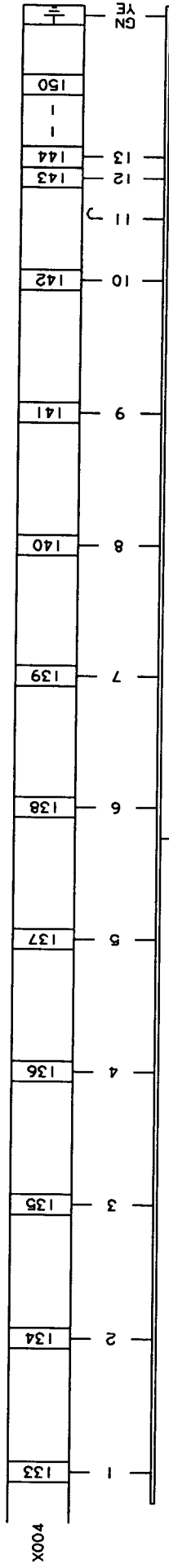
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TETRA CARDBOARD PACKER 70

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Machine	SEE ABOVE		Designation	CONNECTION DIAGRAM	
Company	Tetra Pak Distribution AB		Drawing No	61350-16:15	
Notes			1) EXTRA EQUIPMENT		
EDN No.	23134				
Sign./Date	MRD/951030				
Appr./Date	MRD/951030				

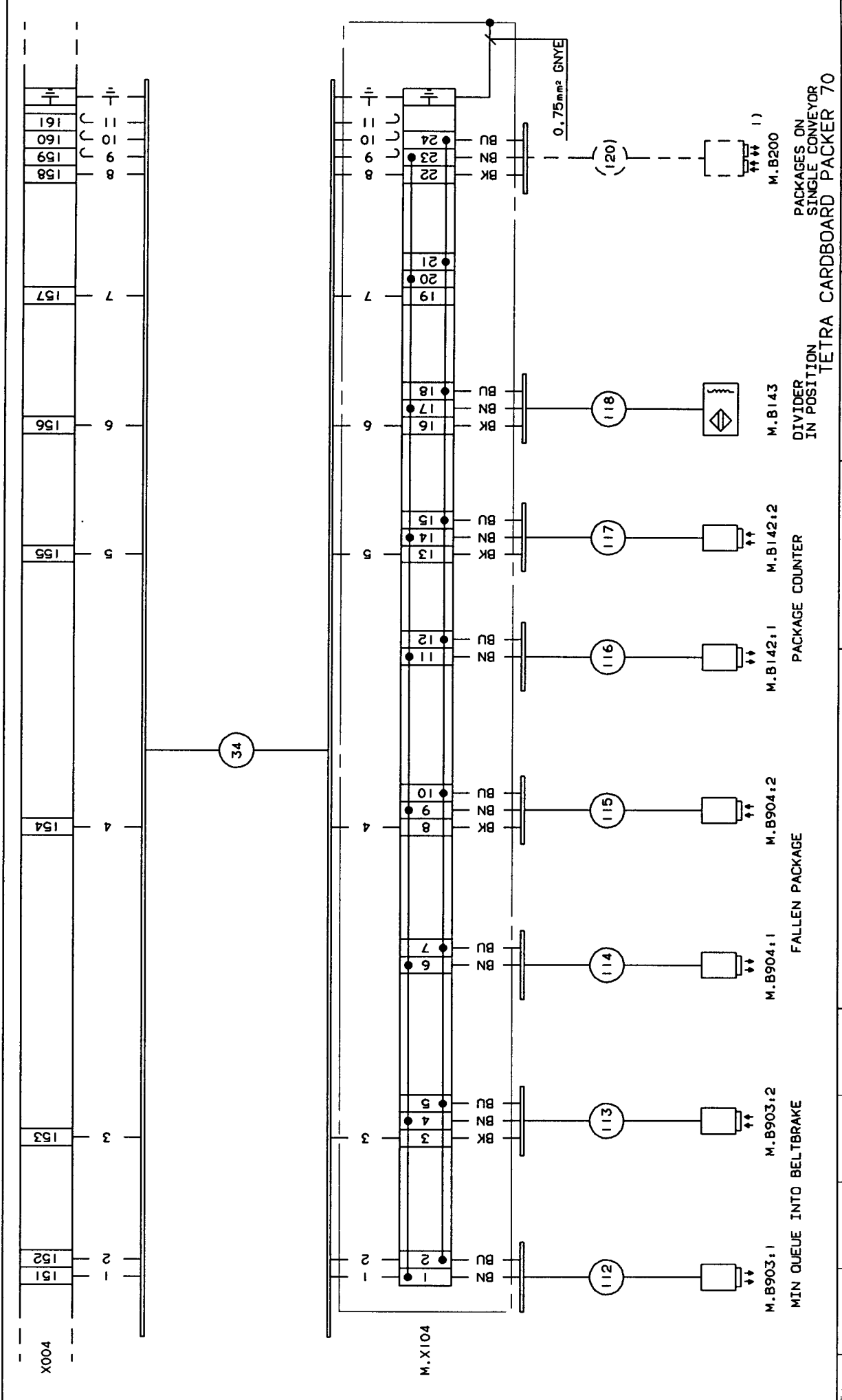
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TETRA CARDBOARD PACKER 70

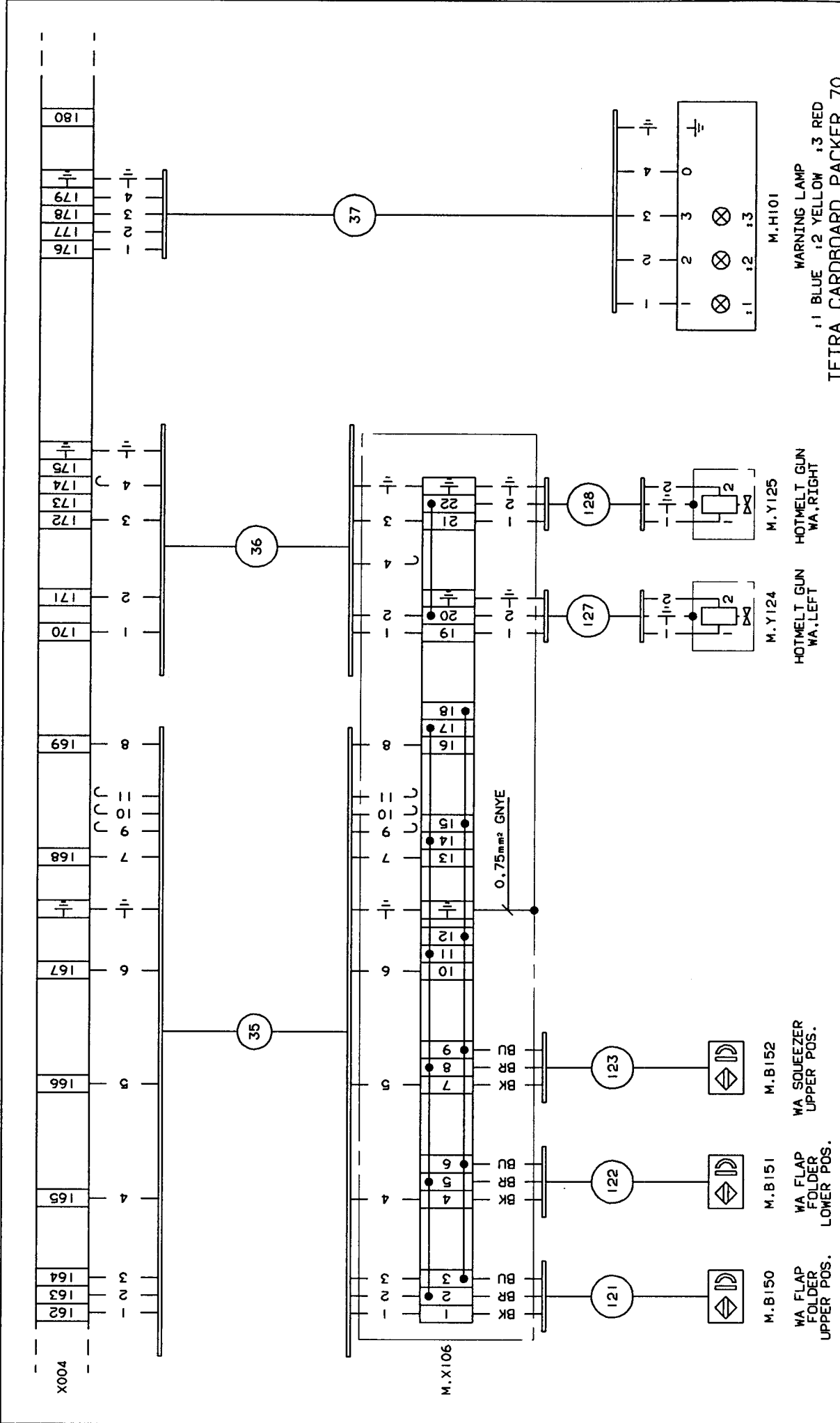
File	21817	Designer MRO	Date 950215	Approved MRO	Date 950215	Doc. class	-
ECN No.		Machine	SEE ABOVE	Destination	CONNECTION DIAGRAM		
Sign./Date	MRO/950118	Company	Tetra Pak Distribution AB		Drawing No.	61350-17:09	
Appr./Date	MRO/950118	Drawing remarks					

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Tetra Pak Company: Tetra Pak Distribution AB		Designer MRO: M.B143 Date: 950924 Approved MRO: M.B142:2 Date: 950924 Dis. class: -
Machine: SEE ABOVE Drawing No: 61350-19:14		Title: CONNECTION DIAGRAM
Notes: 1) USED TO STOP INFEEED CONV. WHEN NO PACKAGES.		Page: -
ECM No.: 23134	Sign./Date: MRO/950924	Drawing remarks:
Appr./Date: MRO/950924	Drawing remarks:	Page: -

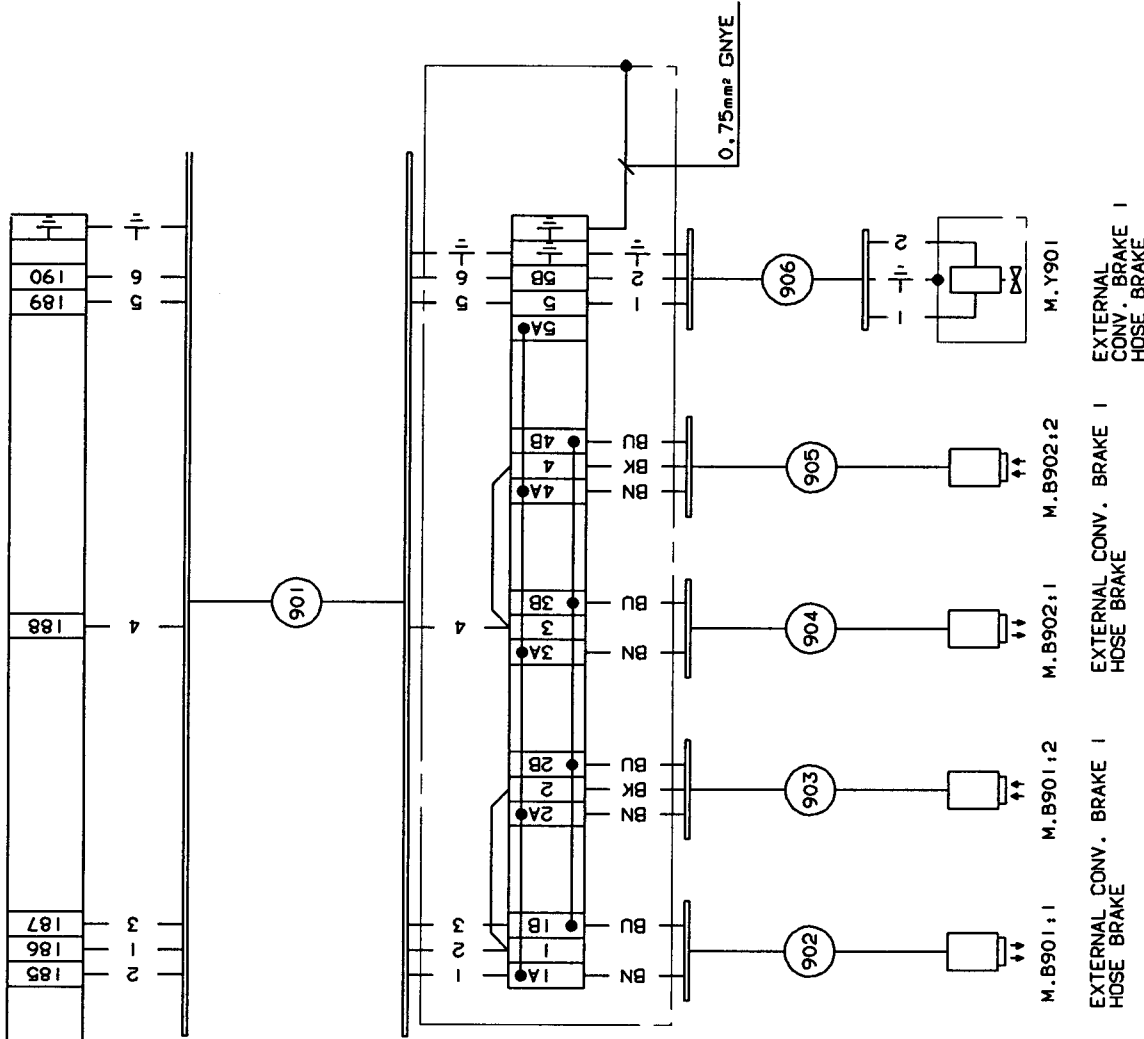
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Designer	MRO	Date	951024	Approved	MRO	Date	951024	Doc. class	-
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Case No.	Tetra Pak Distribution AB							Drawing No.	61350-20:05
Page	-								

Drawing remarks

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TETRA CARDBOARD PACKER 70

Notes	ECN No.	23134	Designer MRD	Date	950924	Approved MRD	Date	950924	Dist. class	-
Sign./Date	MRO/950924		Machining		SEE ABOVE	Destination			CONNECTION DIAGRAM	
Appr./Date	MRO/950924		Company		Tetra Pak Distribution AB	Drawing No			Page -	
									61350-21:03	

EXTERNAL CONV. BRAKE I
HOSE BRAKE

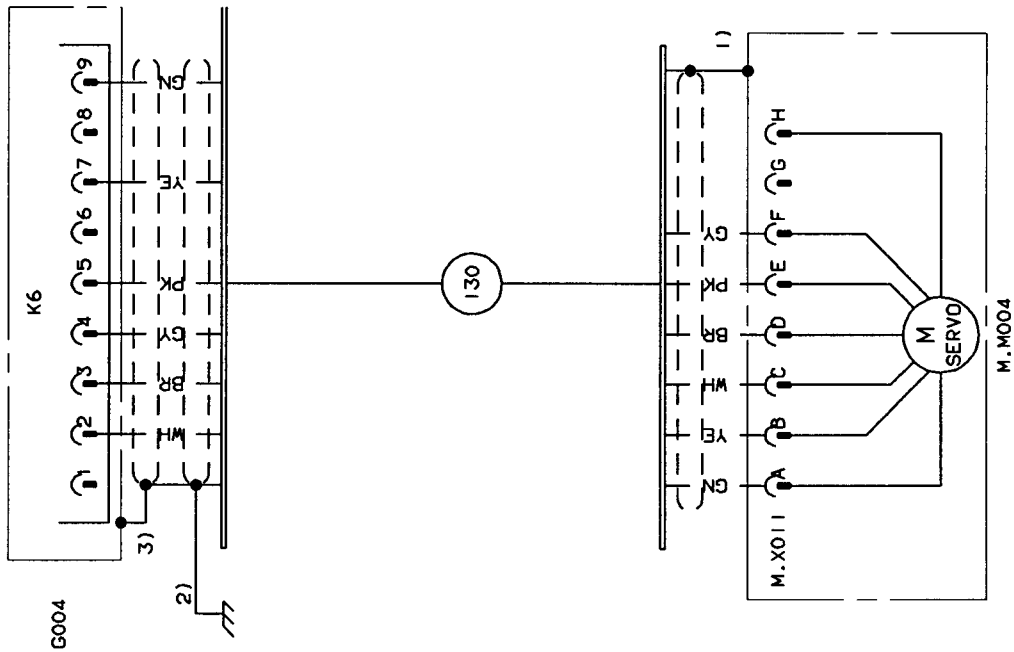
EXTERNAL CONV. BRAKE I
HOSE BRAKE

EXTERNAL CONV. BRAKE I
HOSE BRAKE

READY SIGNAL

READY SIGNAL

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SERVO MOTOR RESOLVER

TETRA CARDBOARD PACKER 70

Notes		Designer MRD		Date 951024		Approved MRD		Date 951024		Des. class	
ECM No. 23134		Machine		SEE ABOVE		Destination		CONNECTION DIAGRAM		-	
Sign./Date MRD/951024		Company		Tetra Pak Distribution AB		Drawing No.		61350-22:02		Page	
Appr./Date MRD/951024										-	

7. Mains Connection Diagrams

2.1TH400025 en

7. Mains Connection Diagram

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CE-list 42157-050V Electrical document
ECN No 23134

Mains Connection Direction.61351-05:09
.....-06:03
Fuse Panel Label583849

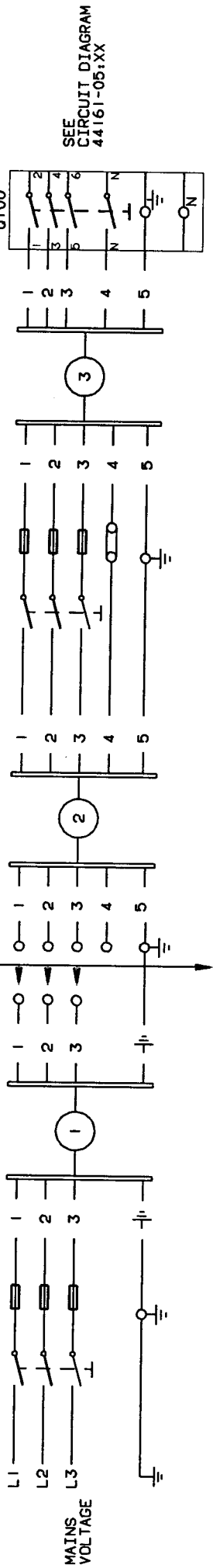
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FIG. 1

MATCHING TRANSFORMER

90245-0022



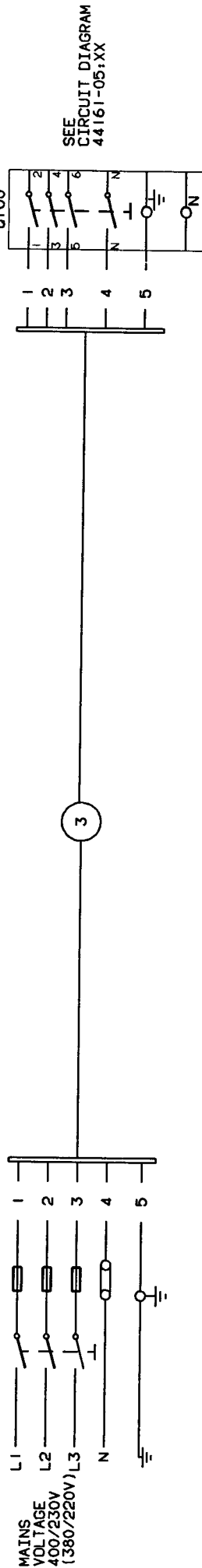
CUSTOMER'S FUSE BOX
F1 20 AT

CONNECTION ACCORDING
TO DIAGRAM
61351-06.03

CUSTOMER'S FUSE BOX
F2 16 AT

MAIN SWITCH

FIG. 2



CUSTOMER'S FUSE BOX
F2 16 AT

MAIN SWITCH

ATTENTION PROTECTIVE GROUNDING TO BE CARRIED OUT
ACCORDING TO EXISTING REGULATIONS

Tetra Pak		Designer MRO	Date 950404	Approved MRO	Date 950404	Dr. class	-
Tetra Pak Distribublon AB		Machine	SEE ABOVE	Destination	CONNECTION DIAGRAM		
Dressing remarks		Dressing Nr		61351-05:09		Page -	
Note							
ECN Nr.	21817						
Sign./Date	MRO/950404						
Appr./Date	MRO/950404						

TETRA CARDBOARD PACKER 70

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MAIN VOLTAGE (V)	CONN. ACC. TO FIG. NO.	AREA (MM ²) TO CABLE NO.			PRIMARY CONN. ON MATCHING TRANSFORMER			SECONDARY CONN. ON MATCHING TRANSFORMER
		(FKKJ)	(FKKJ)	(FKKJ)	MAINS	TAP	CONNECT	
200/115 3*200	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU1 IV1 IW1	IU1-IU4 IV1-IV4 IW1-IW4	<p>MATCHING TRANSFORMER 90245-0022</p> <p>PHASE L1 2U PHASE L2 2V PHASE L3 2W NEUTRAL N EARTH IPE</p>
220/127 3*220	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3 N	IU2 IV2 IW2 N	IU2-IU5 IV2-IV5 IW2-IW5 W3-W4	
240/140 3*240	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU3 IV3 IW3	IU3-IU6 IV3-IV6 IW3-IW6 W3-W4	
400/230V (380/220V) 3*400 (3*380)	2			4X2,5+2,5	L1 L2 L3	IPE		
415/240 3*415	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU5 IV5 IW5	IU1-U4 IV1-V4 IW1-W4	
440/254 3*440	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU5 IV5 IW5	IU2-U4 IV2-V4 IW2-W4	
480/277 3*480	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU6 IV6 IW6 N	IU3-U4 IV3-V4 IW3-W4	
500/289 3*500	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU7 IV7 IW7	IU3-U4 IV3-V4 IW3-W4	
550/318 3*550	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU8 IV8 IW8	IU3-U4 IV3-V4 IW3-W4	
600/347 3*600	1	3X4+4	4X4+4	4X2,5+2,5	L1 L2 L3	IU9 IV9 IW9	IU3-U4 IV3-V4 IW3-W4	

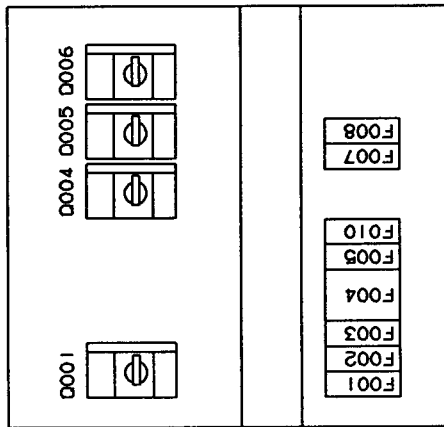
TETRA CARDBOARD PACKER 70

Designer MRO	Date 950404	Approved MRO	Date 950404	Doc. class	-
Mechine	SEE ABOVE		Destination	CONNECTION DIAGRAM	
Case No	Tetra Pak Distribution AB		Drawing No	61351-06:03	
Notes			Drawing remarks		
Edn No.	21817				
Sign./Date	MRO/950404				
Appr./Date	MRO/950404				

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.

583849

POS	FUNCTION	SETTINGS
0001	INFEED CONV.	1,2 A
0004	SERVO PUSHER	3,5 A
0005	LANE DIVIDER I	0,44A
0006	BELT BRAKE	0,8 A



POS	FUNCTION
F001	WALL SOCKET, FAN, BLANK MOTOR 6A
F002	FREQ. CONTROL MAIN SHAFT 10A
F003	FREQ. CONTROL FEEDING MOTOR 10A
F004	HOTMELT UNIT 10A
F005	POWER PLC, POWER 24V 6A
F007	SOLID STATE K016 10A
F008	SOLID STATE K026 10A
F010	CONTROL VOLTAGE 6A

TETRA CARDBOARD PACKER 70

TETRA CARDBOARD PACKER 70

Rev		Designer, MRO	Date	951024	Approved MRO	Date	951024	Doc. class	-
ECN No.	23134	Machine	SEE ABOVE						
Sign./Date	MRO/951024	Denomination	FUSE PANEL LABEL						
Appr./Date	MRO/951024	Drawing No	583849						
BLACK LETTERS ON WHITE 115g PAPER		Company	Tetra Pak Distribublon AB						
PLASTIC EMBEDDED									
SHINY SURFACE									
Drawing remarks									

8. Program Documents

2.1TH400026.en

8. Program Documents

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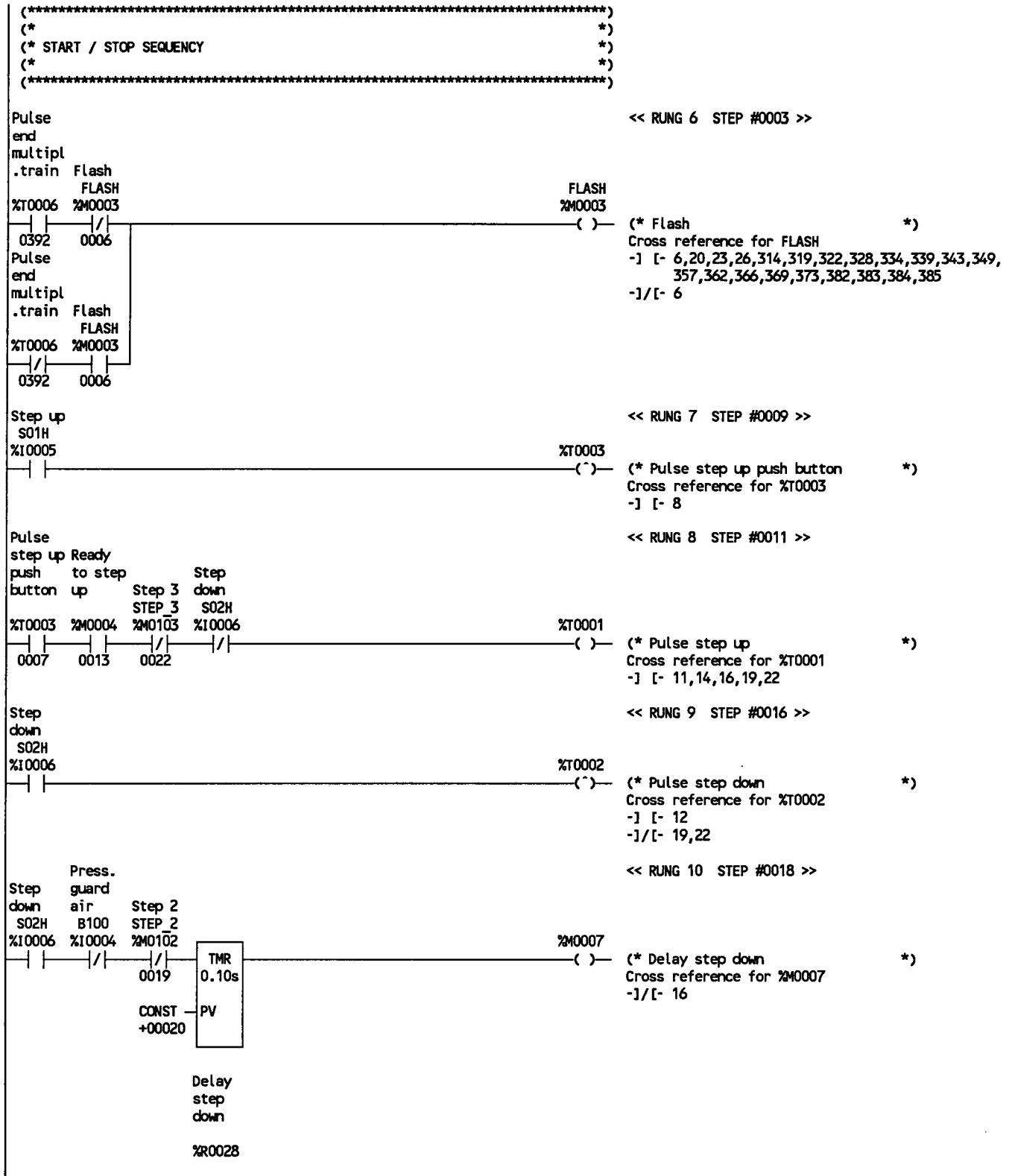
**CE-list 42157-050V Electrical document
ECN No 23134**

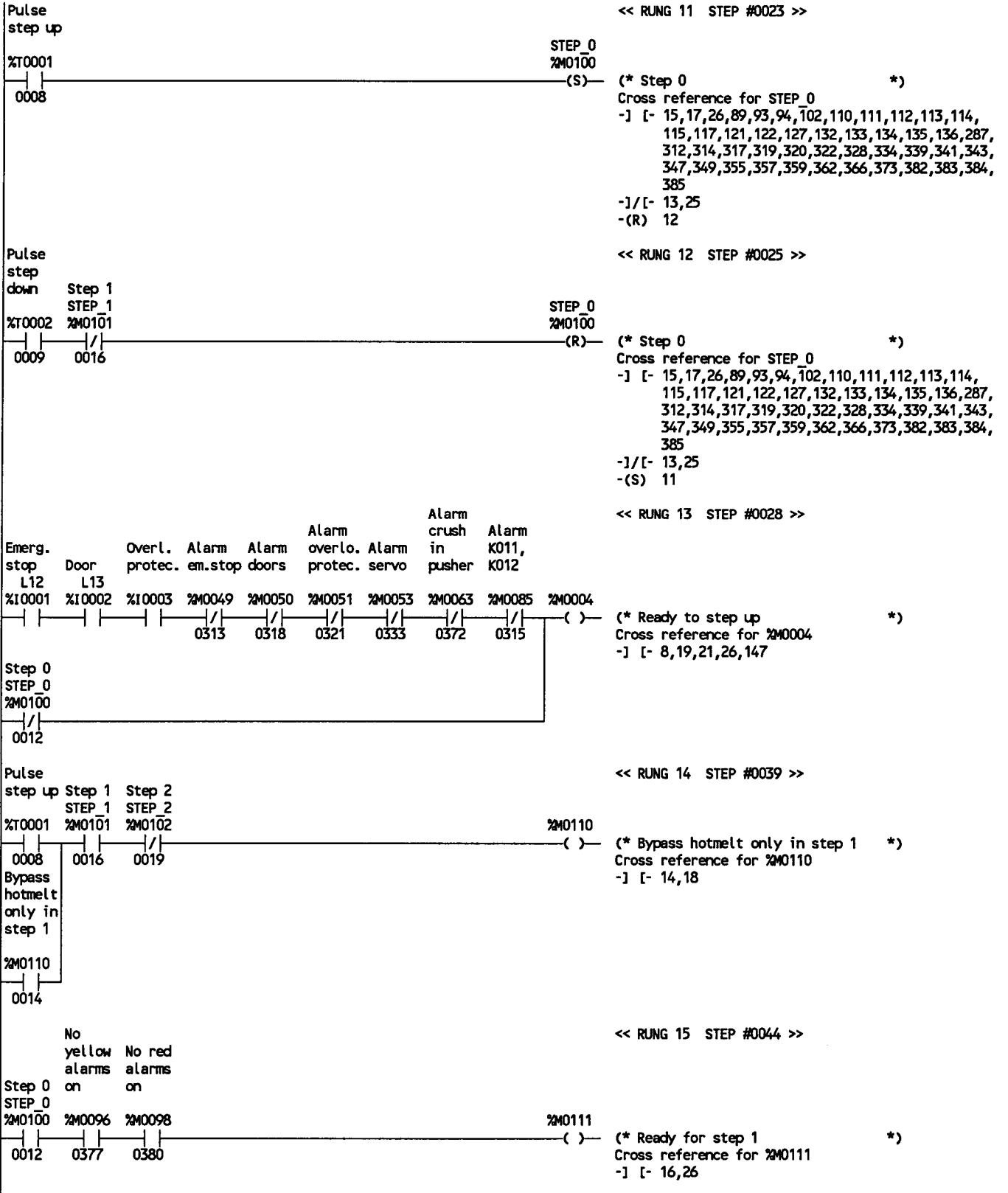
Ladder diagram	47796-01:05	page 1-118
Cross reference list	-01:05	page 119-144
Configuration	-01:05	page 145-149
Variant depending document	-03:05	page 1-4

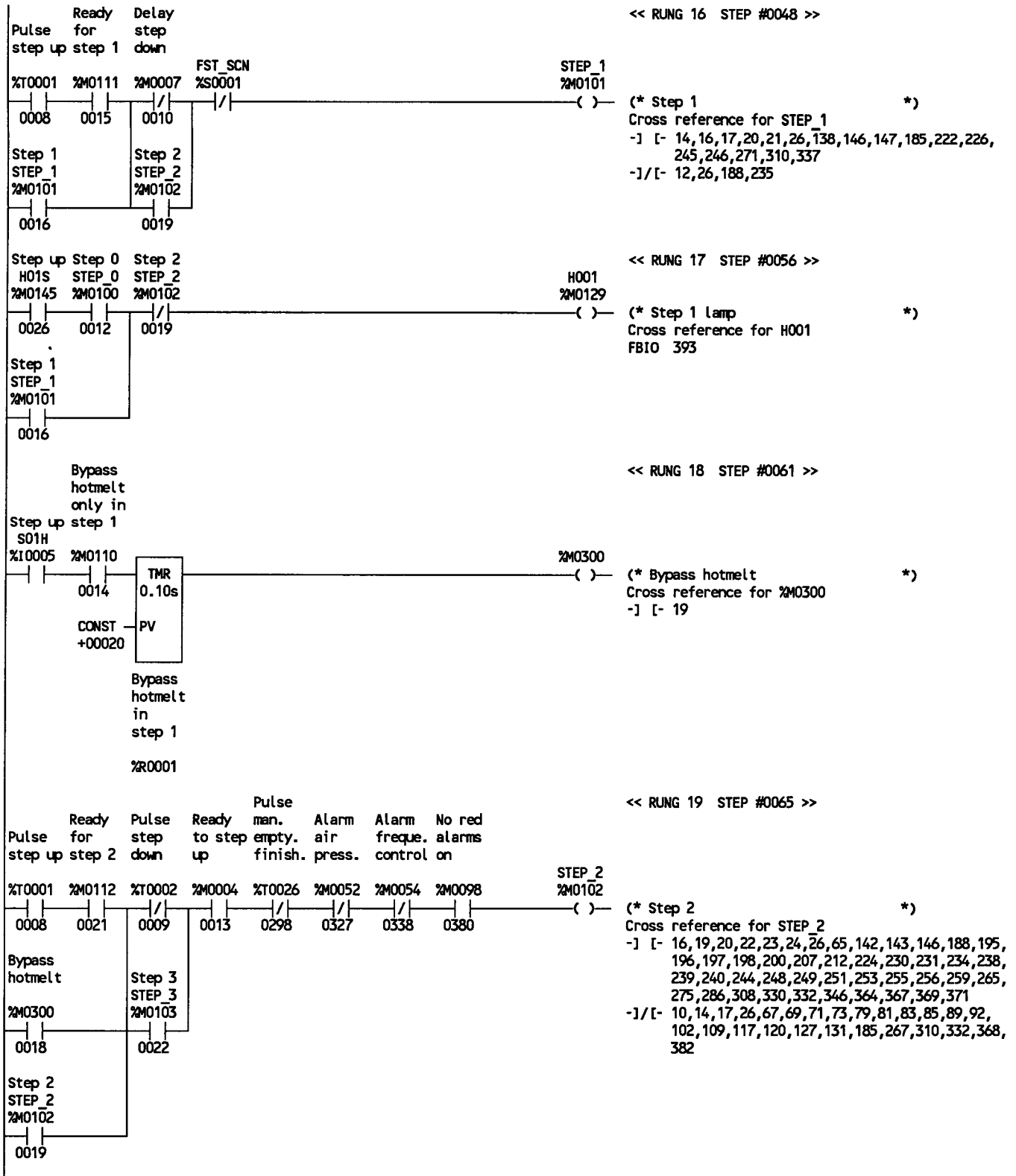
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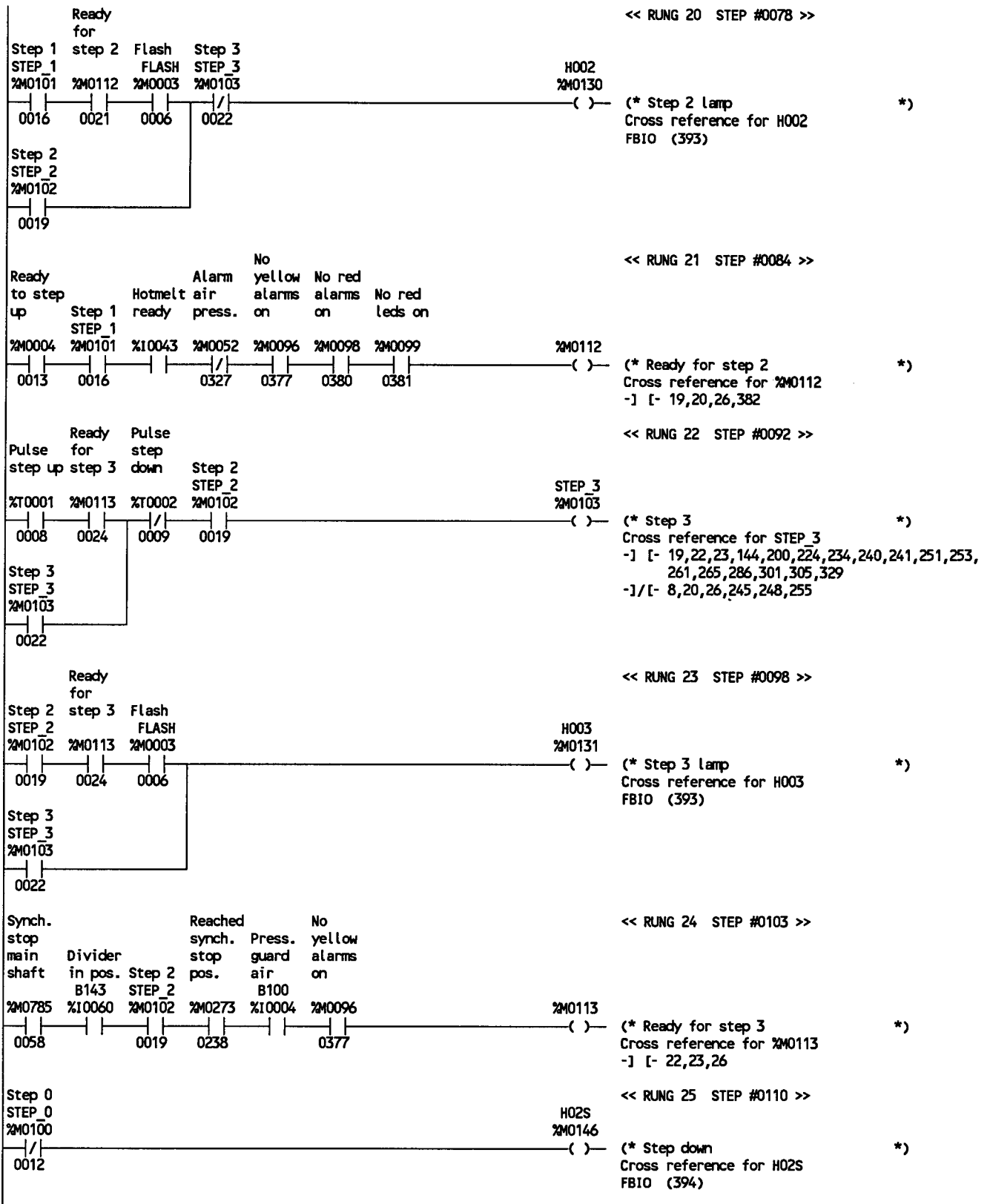
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[ START OF LD PROGRAM P477965 ] (* Tetra Cardb. Packer 70 MED *)
[ VARIABLE DECLARATIONS ]
[ BLOCK DECLARATIONS ]
[ START OF PROGRAM LOGIC ]

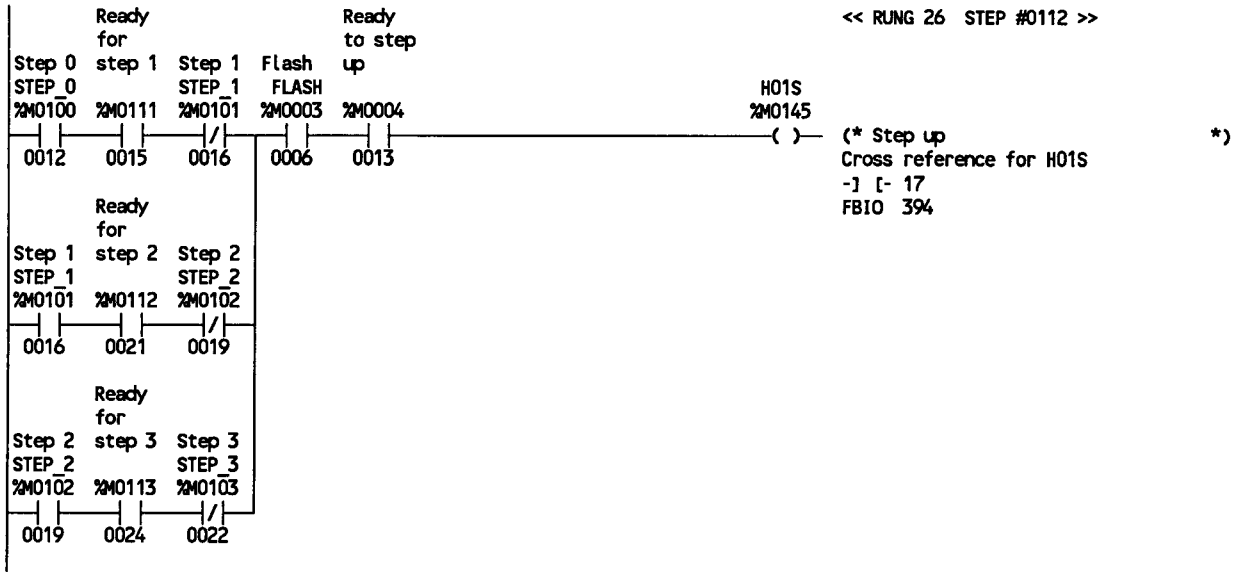
(*****)
(* Tetra Cardboard Packer 70 MED *)
(* 47796-01:05 951105 MRO ECN:23134 *)
(* 960214 MRO ECN:24437 *)
(*)
(* rung 5 START/ STOP SEQUENCY *)
(* rung 27 GRAY CODE CONVERTER *)
(* rung 66 MACHINE ADAPTION *)
(* rung 86 INFEED CHOICE *)
(* rung 95 PACKAGE PATTERN CHOICE *)
(* rung 116 PUSHER WIDTH CHOICE *)
(* rung 123 CARDBOARD CHOICE *)
(* rung 137 HOTMELT *)
(* rung 141 PRESSURIZING *)
(* rung 145 INFEED CONVEYORS, POWER MAIN SHAFT AND FEEDING MOTOR *)
(* rung 150 COUNTING FREE SPACE IN LINES *)
(* rung 180 BELTBRAKE, LINE DIVIDER *)
(* rung 208 BRAKE AT PUSHER *)
(* rung 228 SERVO MOTOR PUSHER *)
(* rung 247 MAIN SHAFT MOTOR, FEEDING MOTOR *)
(* rung 260 BLANK MOTOR *)
(* rung 272 WRAP AROUND *)
(* rung 283 MANUAL EMPTYING *)
(* rung 299 OUTFEED STOP, PASSAGE INDICATION *)
(* rung 304 COMMUNICATION WITH OTHER EQUIPMENT *)
(* rung 306 EXTERNAL BRAKE *)
(* rung 311 ALARM *)
(* rung 388 MULTIPLEX BOARD *)
(*****)
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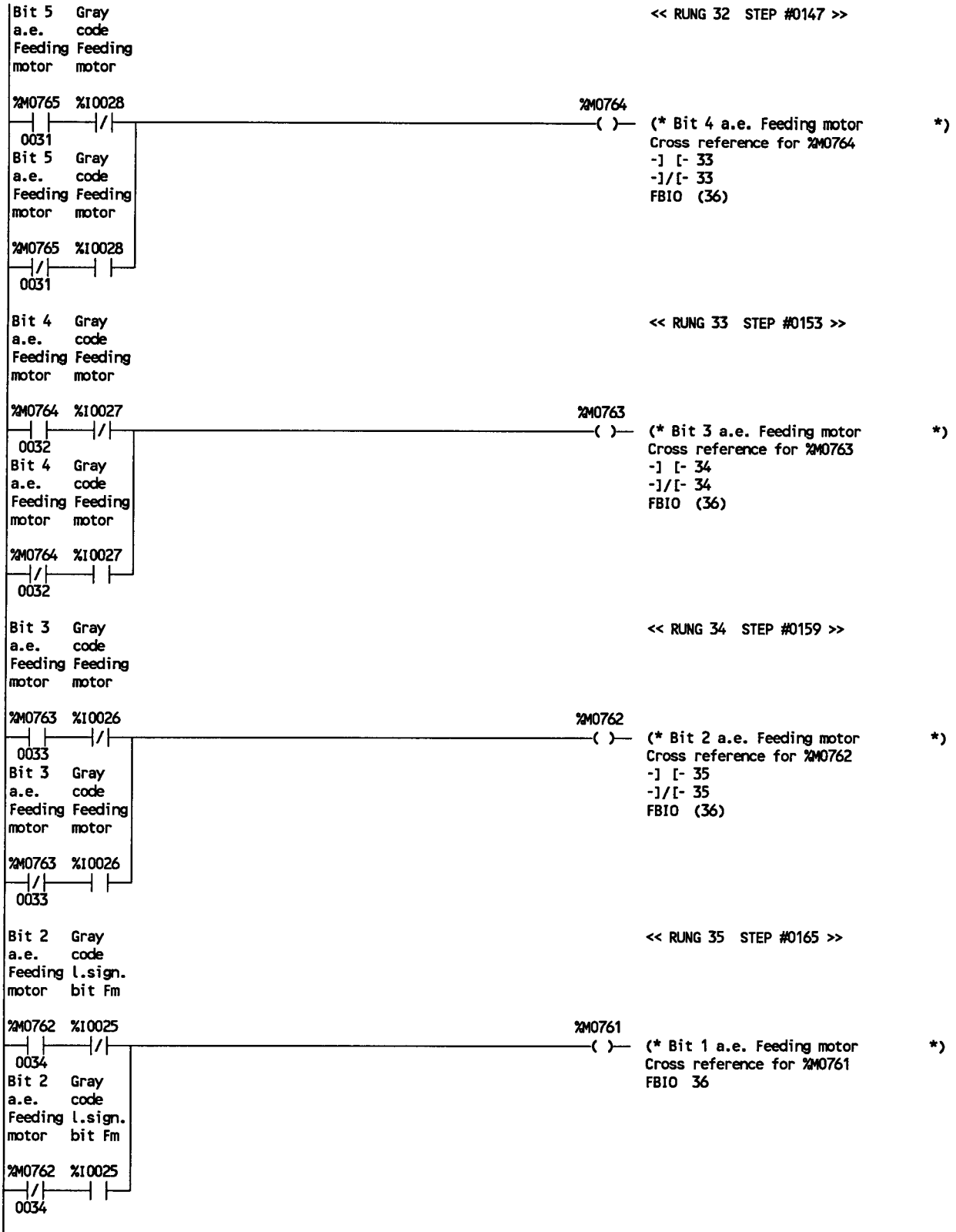



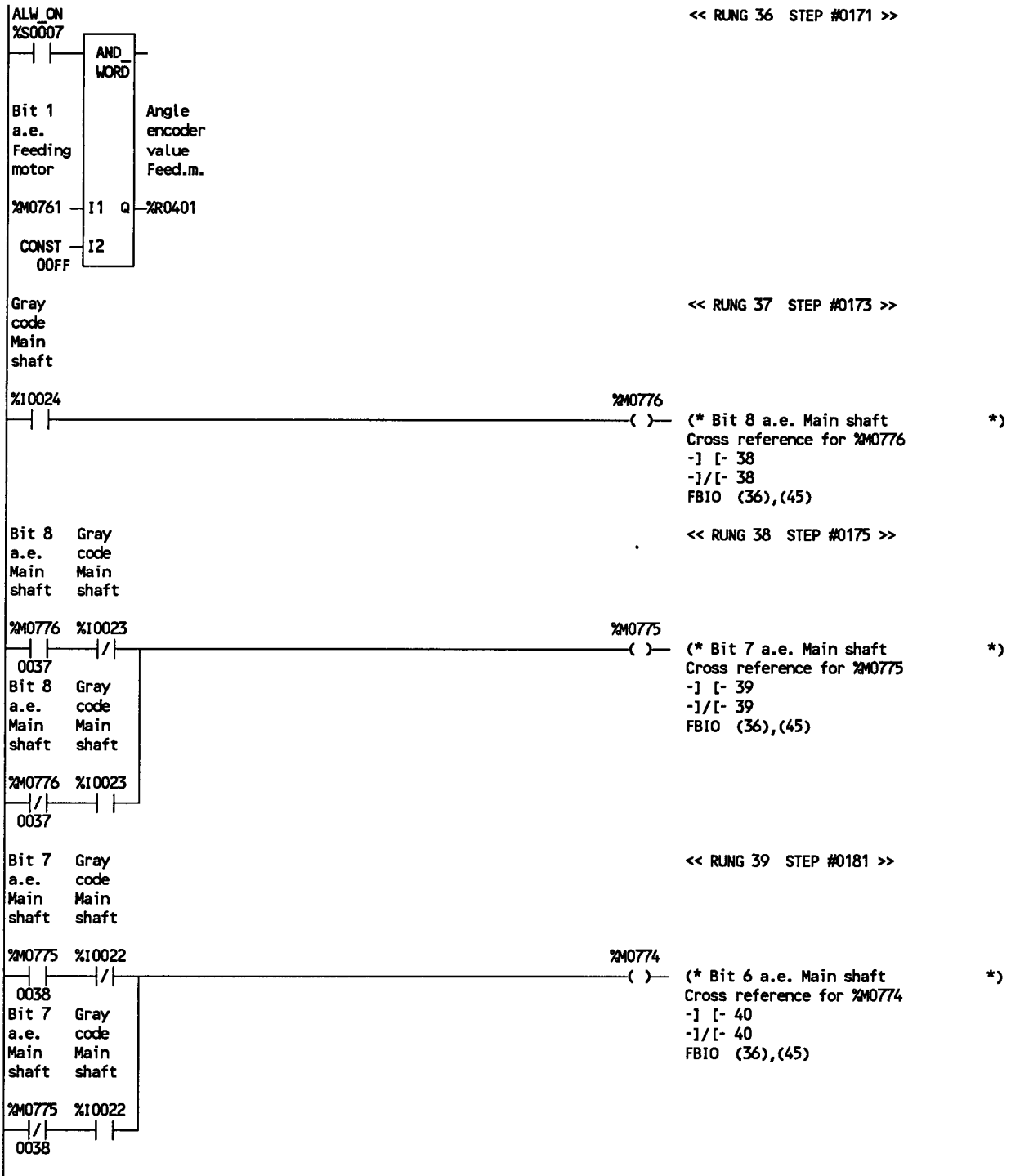


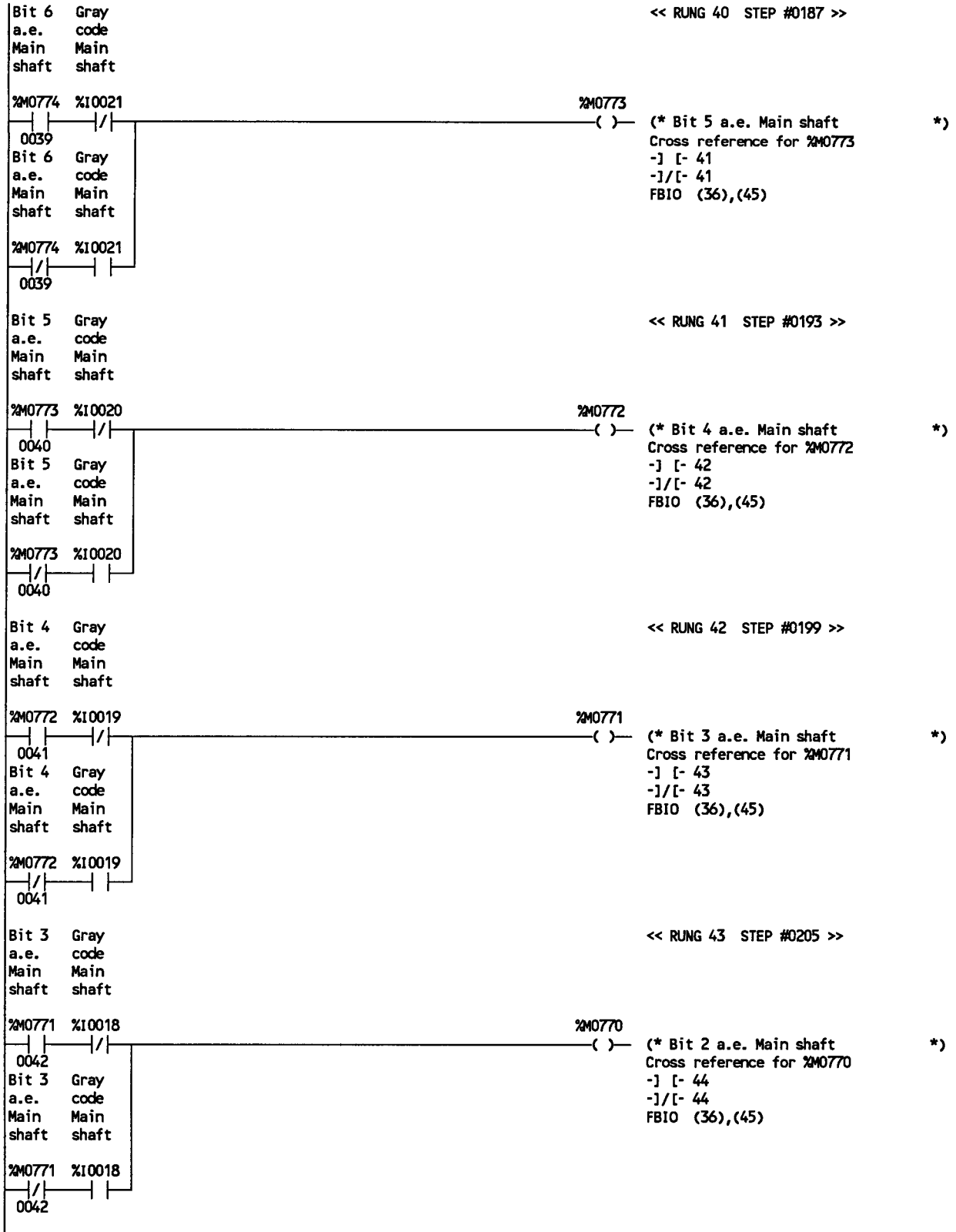


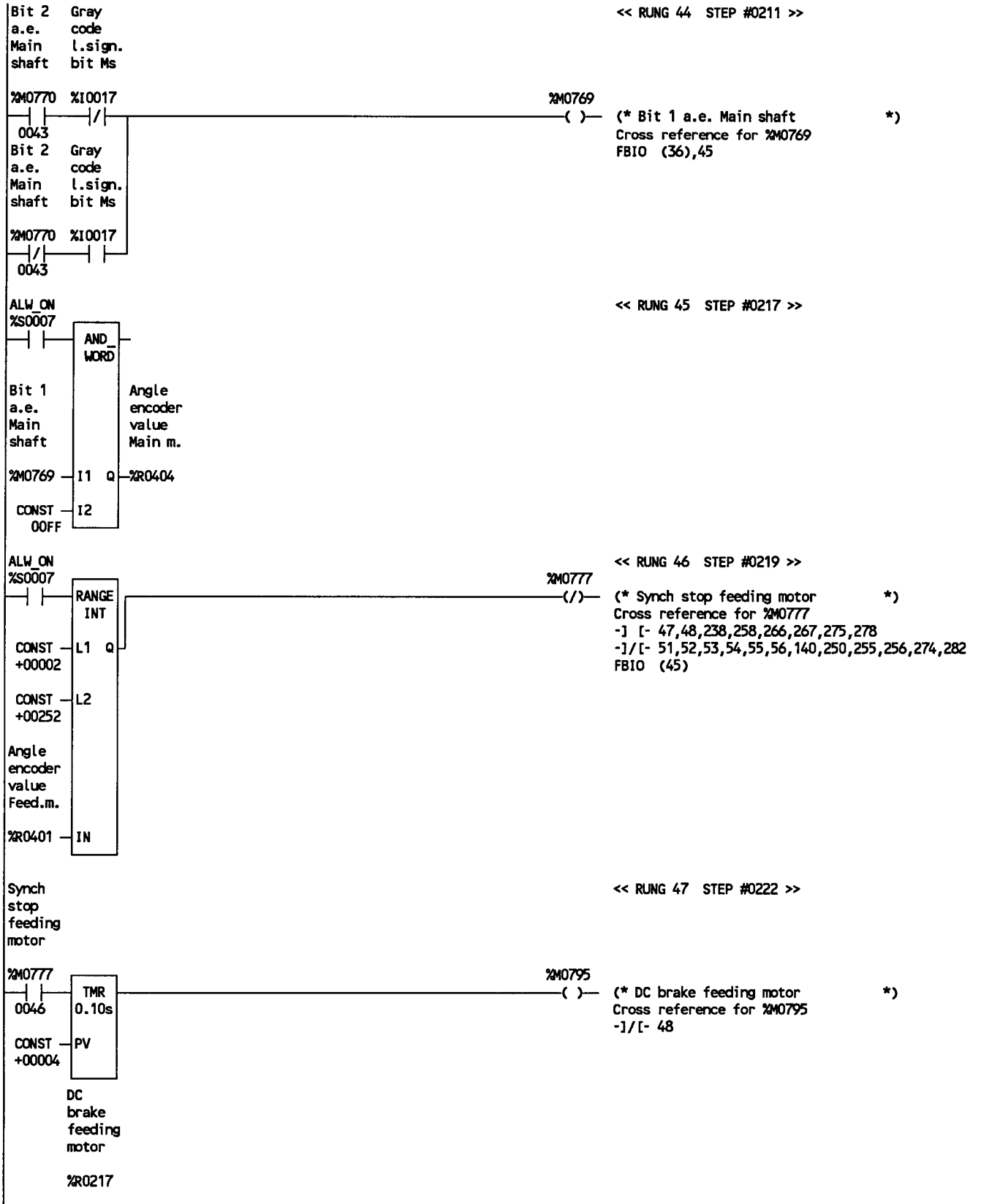


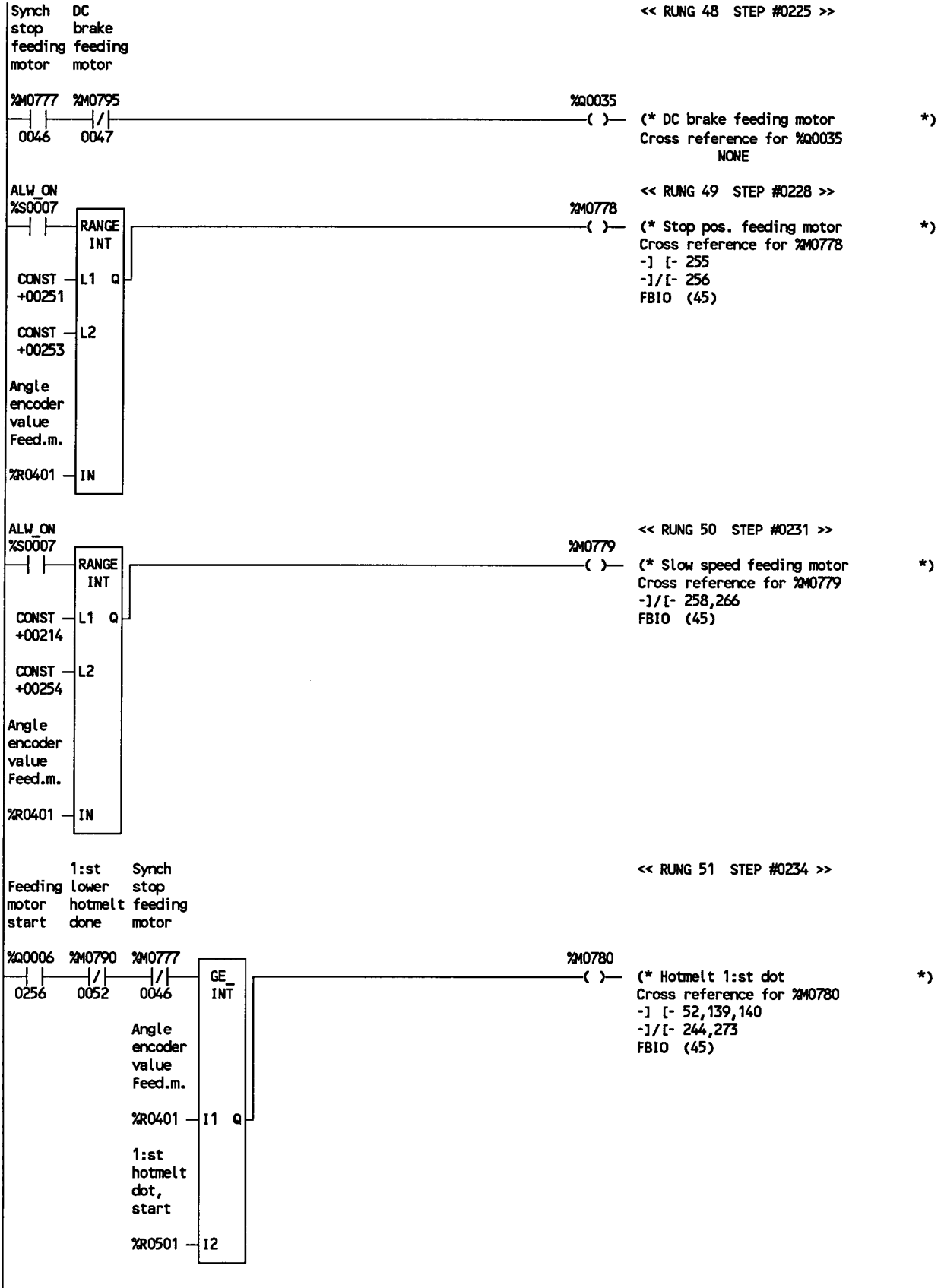


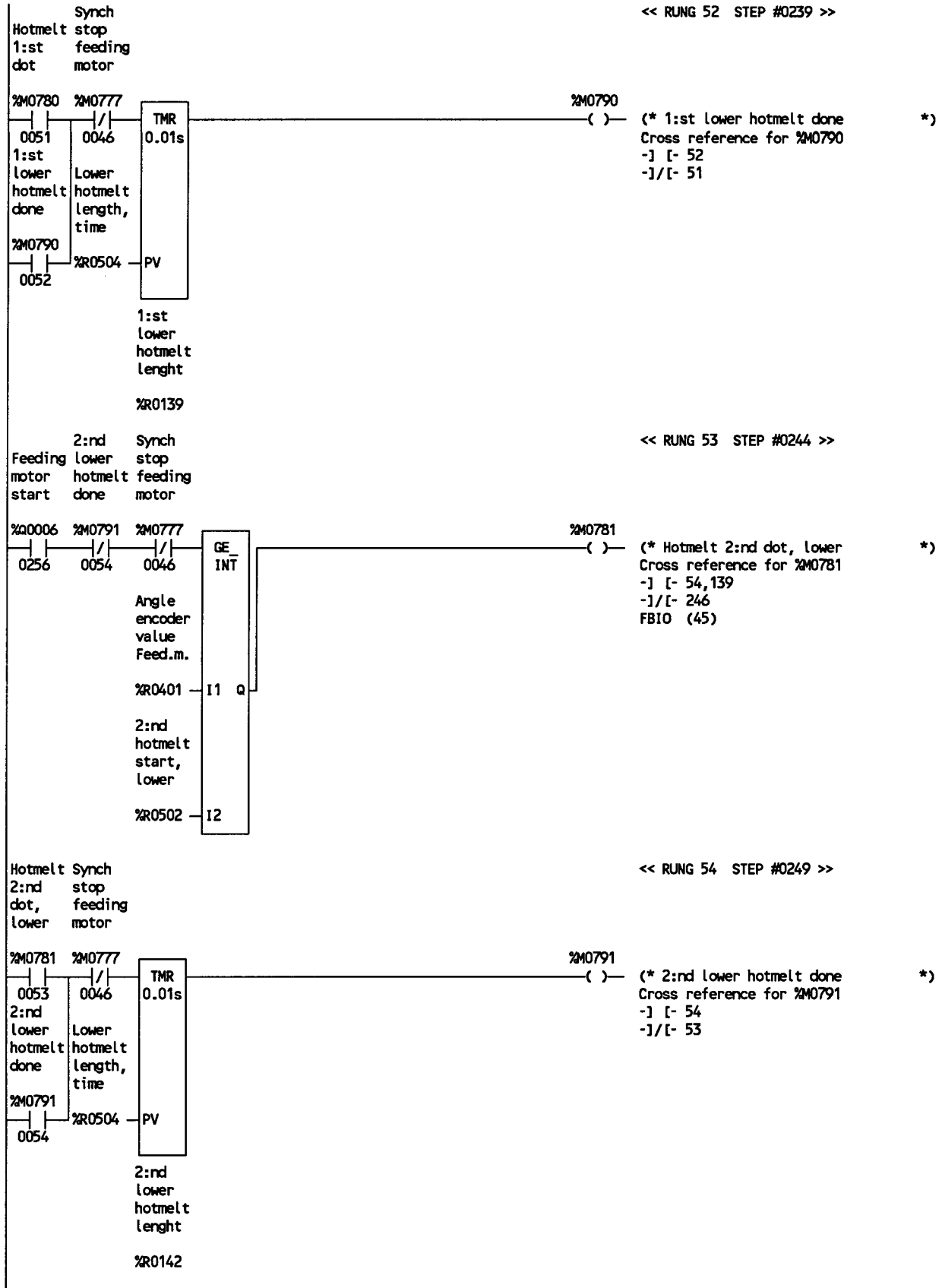


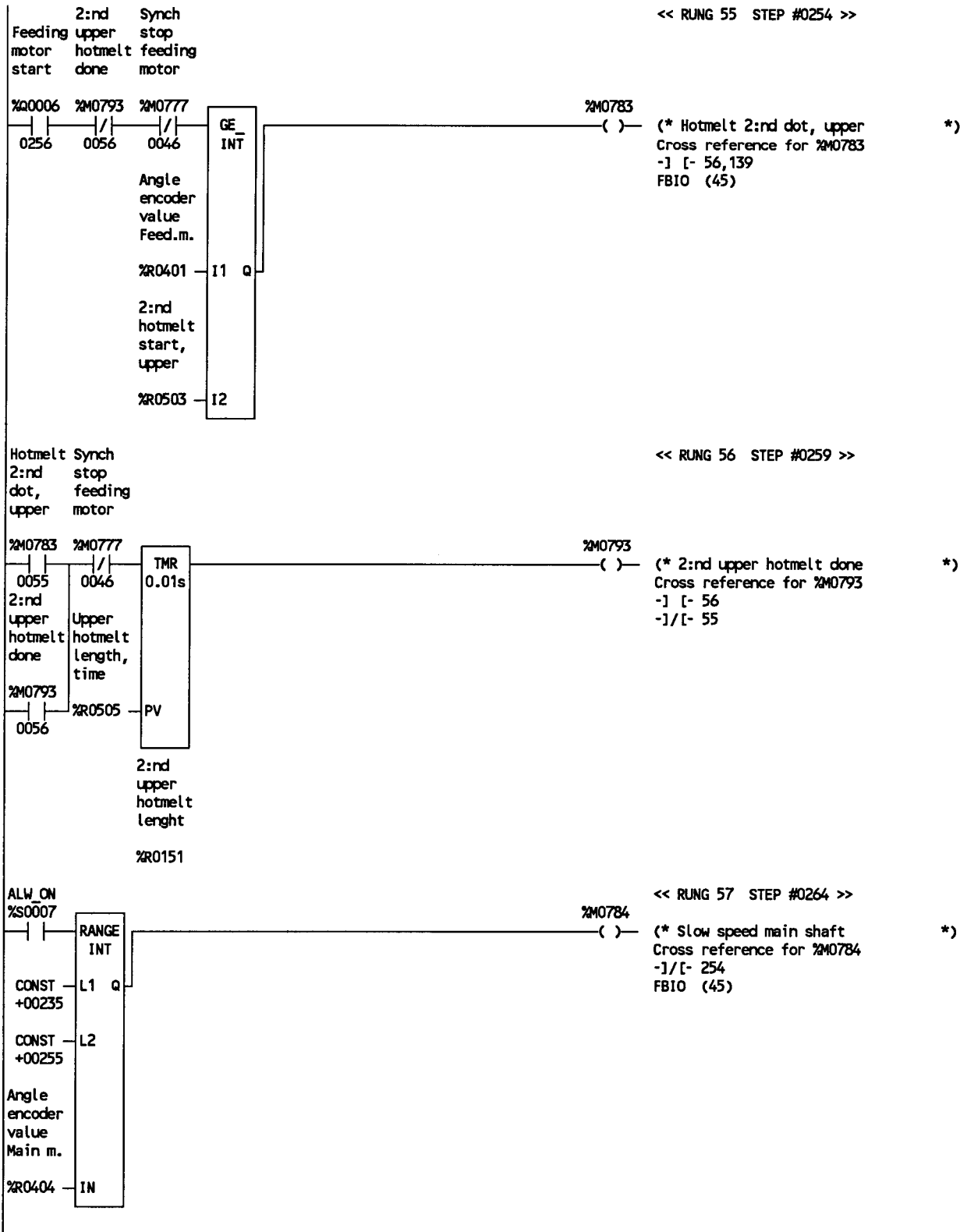


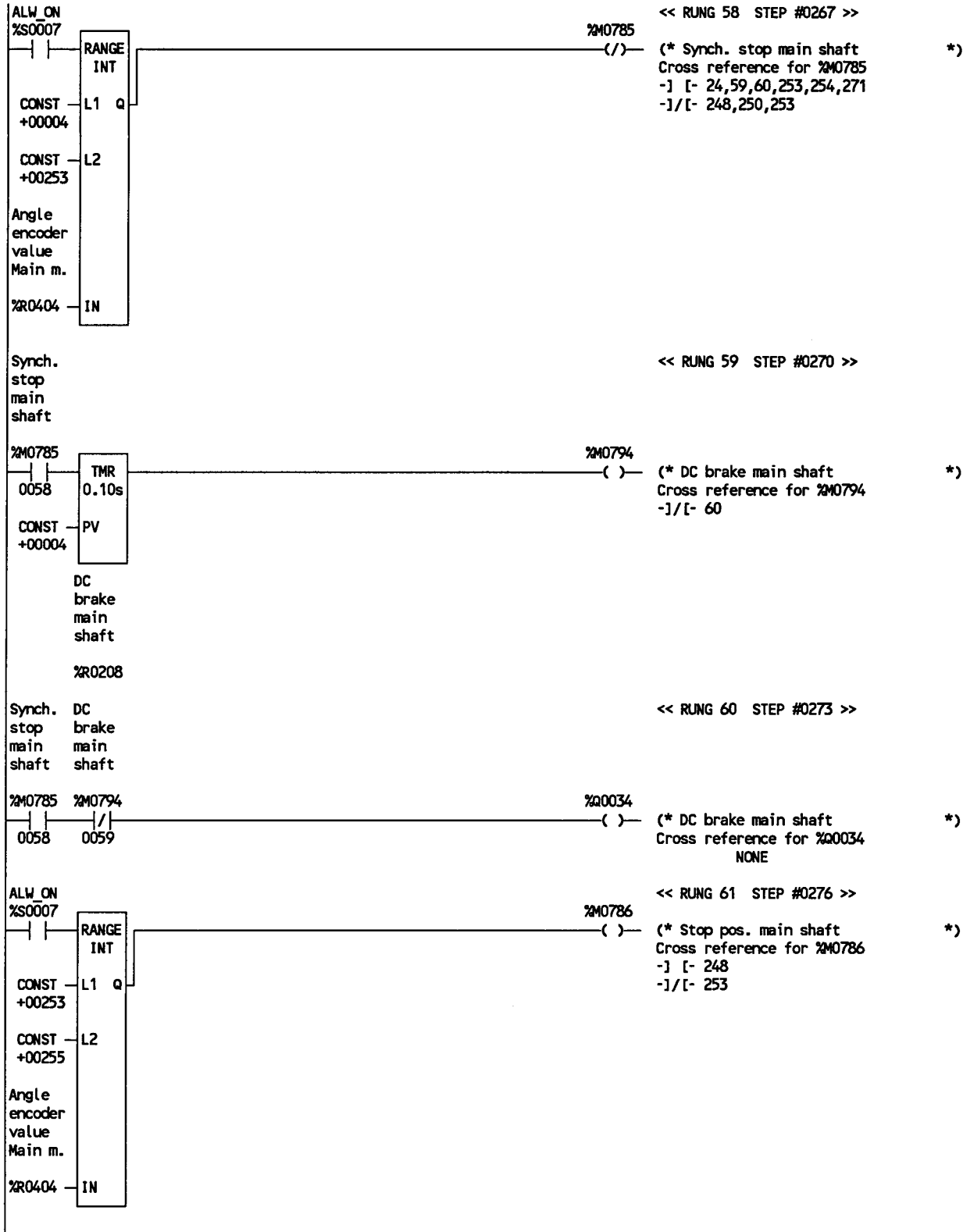


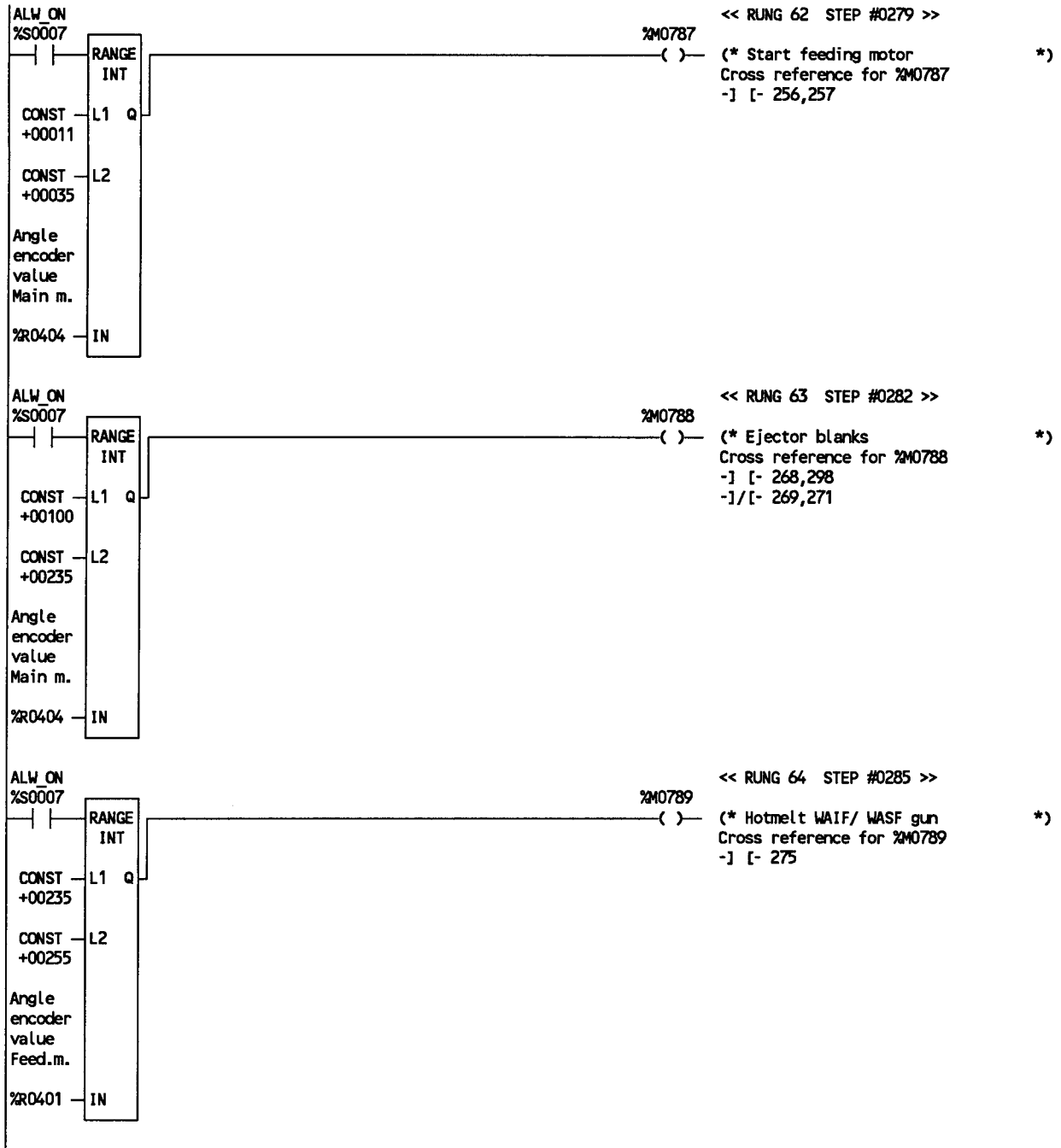


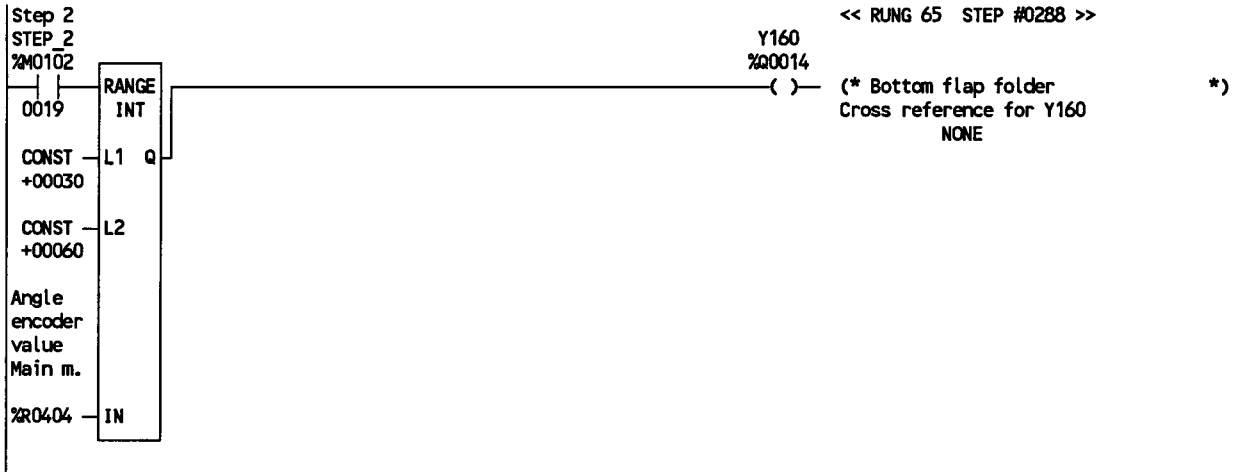


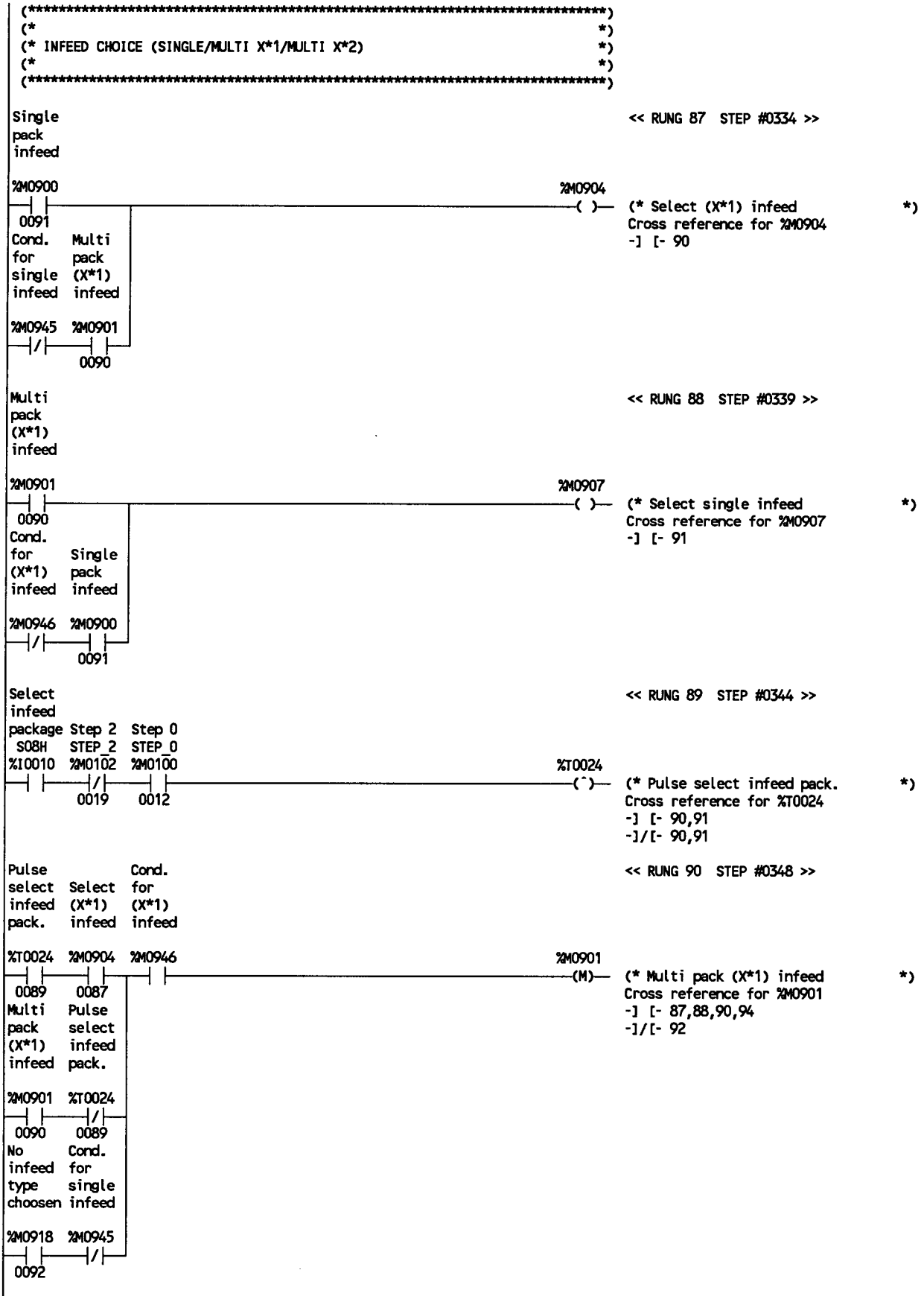


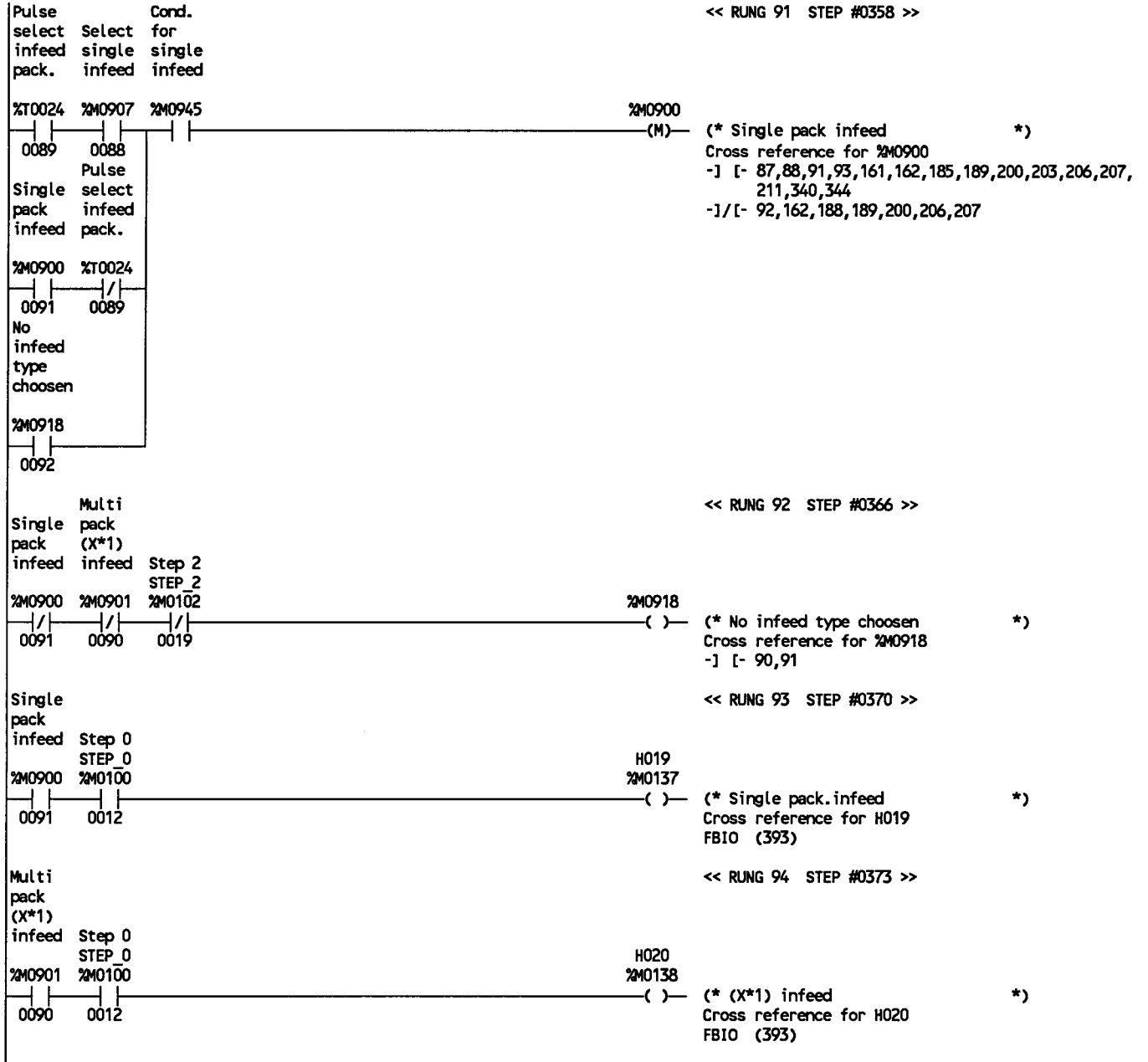


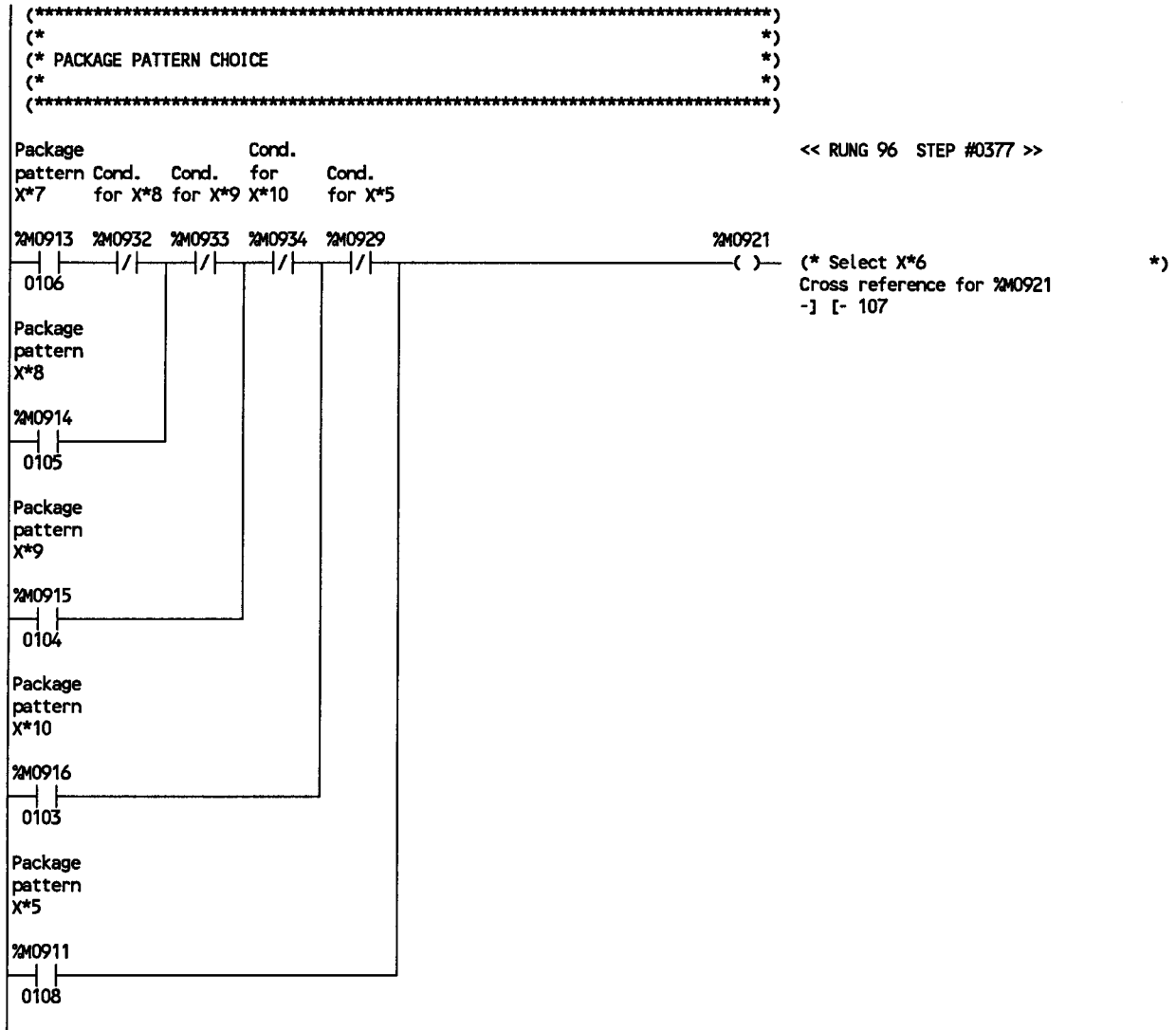


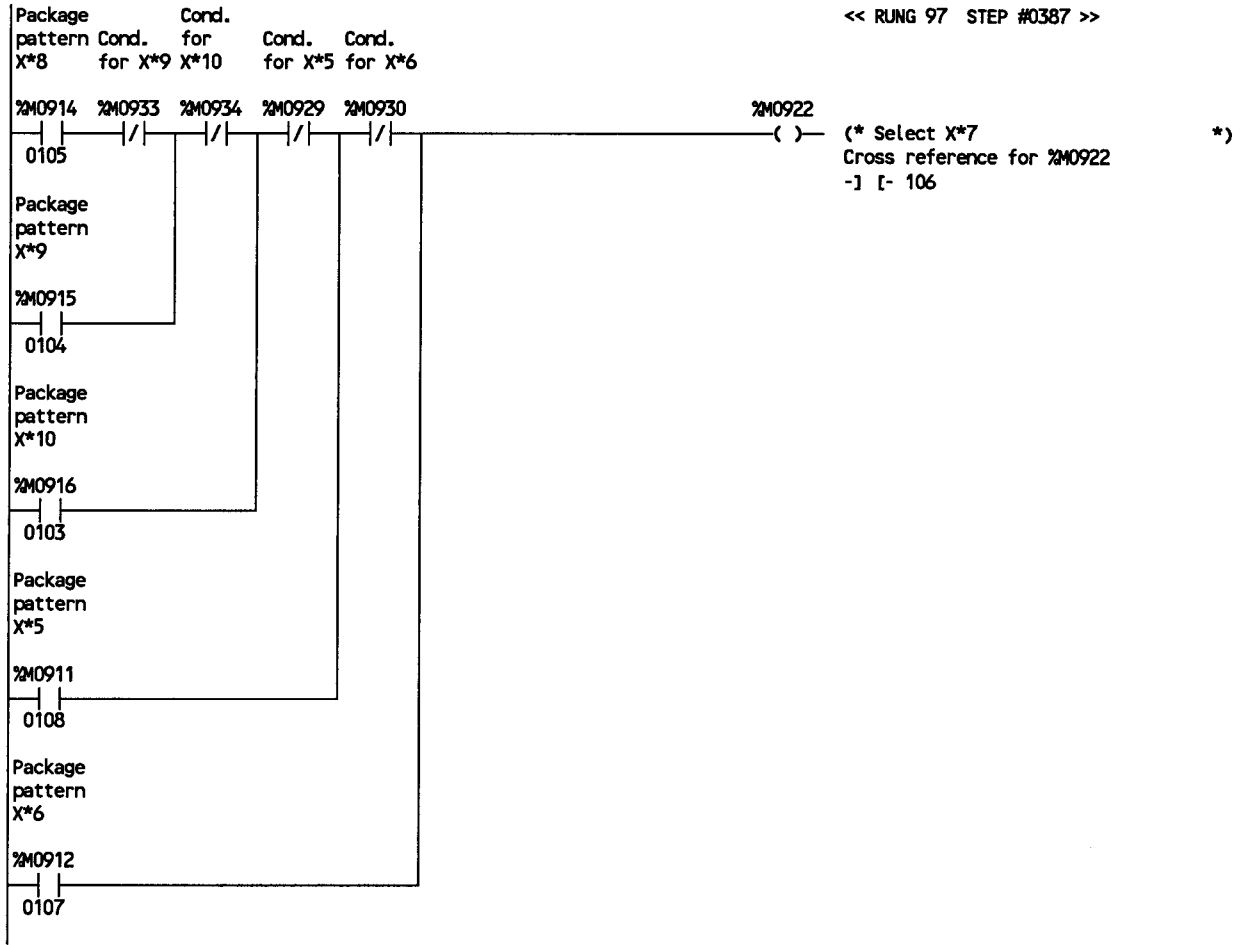


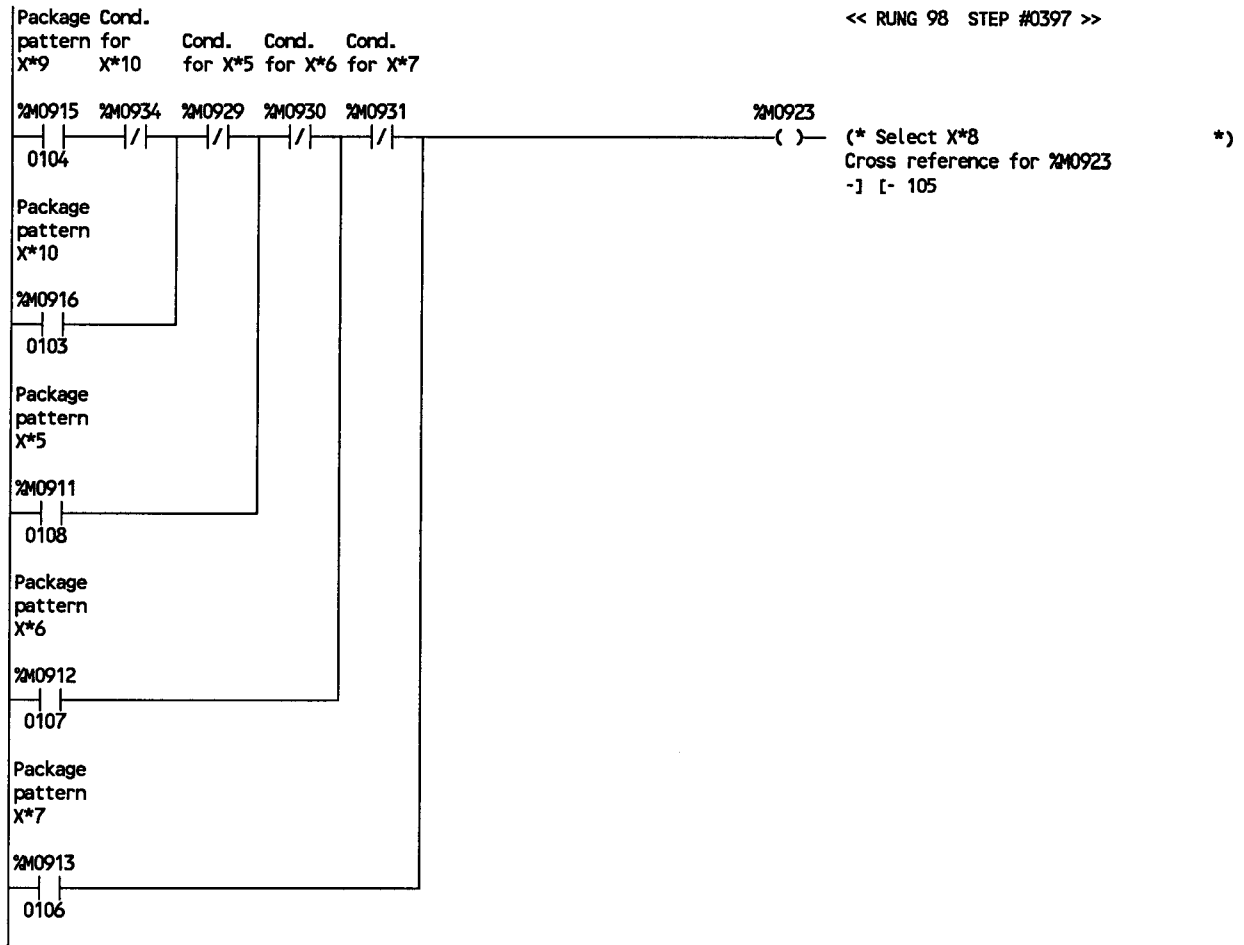






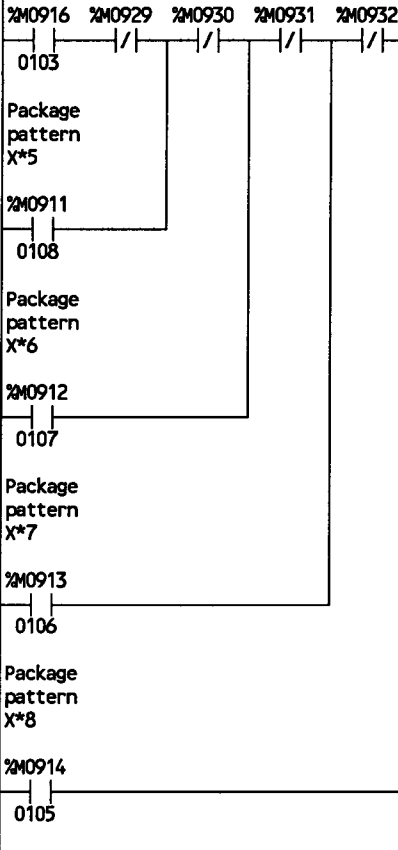






<< RUNG 99 STEP #0407 >>

Package
pattern Cond. Cond. Cond. Cond.
X*10 for X*5 for X*6 for X*7 for X*8

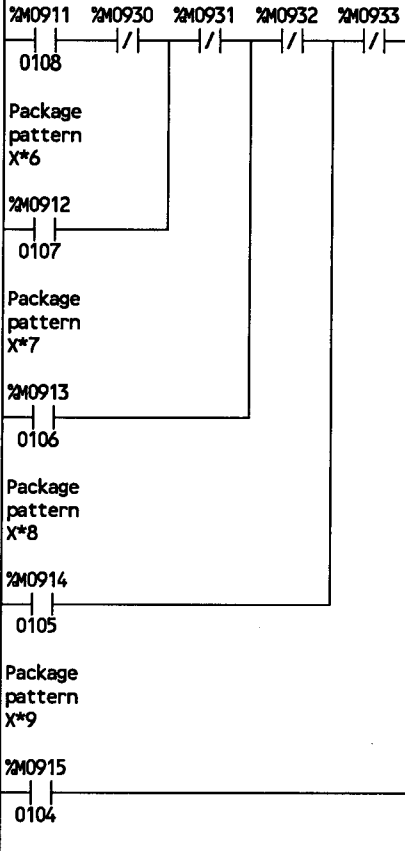


() (* Select X*9
Cross reference for %M0924
-] [- 104

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<< RUNG 100 STEP #0417 >>

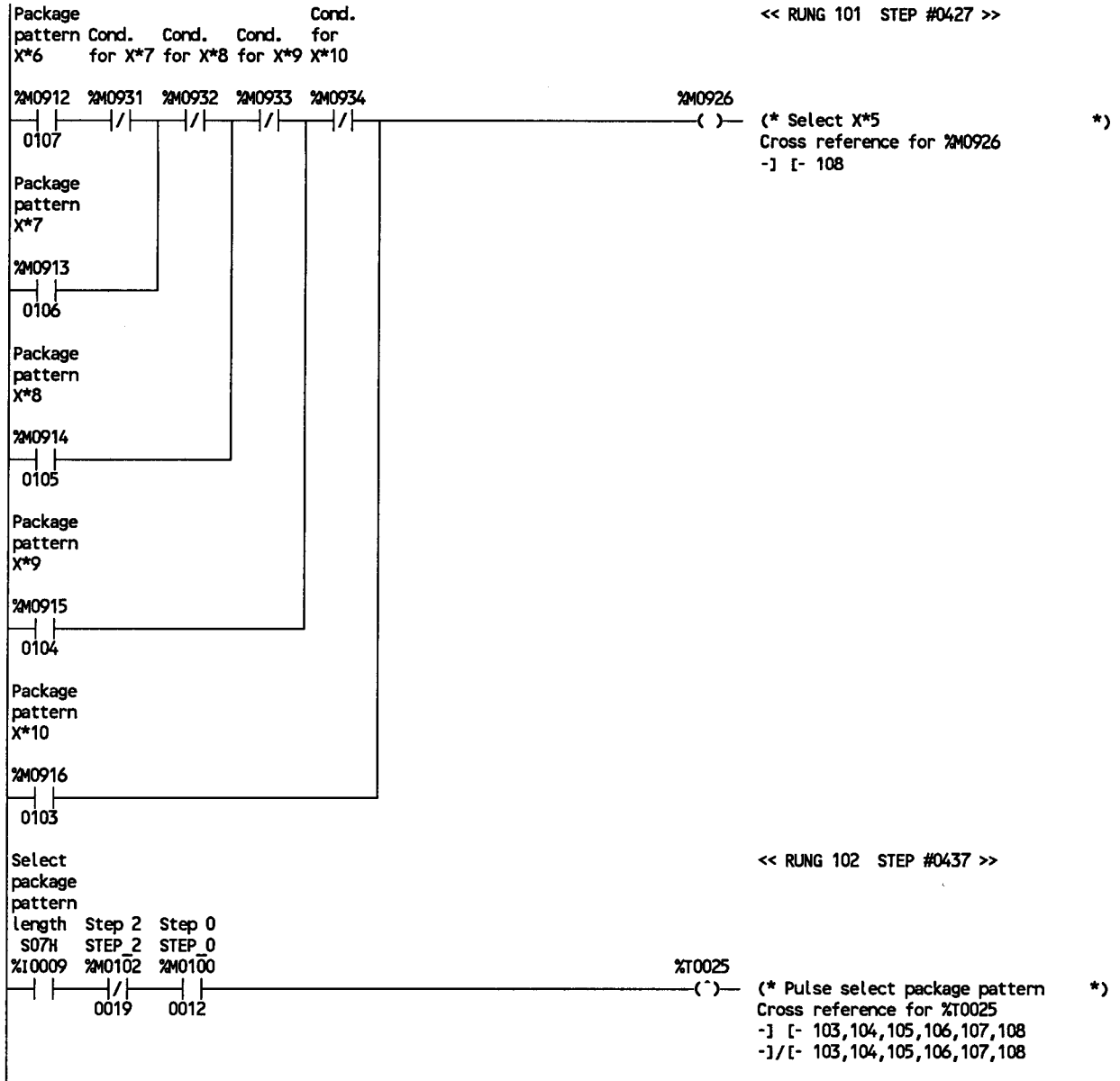
Package
pattern Cond. Cond. Cond. Cond.
X*5 for X*6 for X*7 for X*8 for X*9

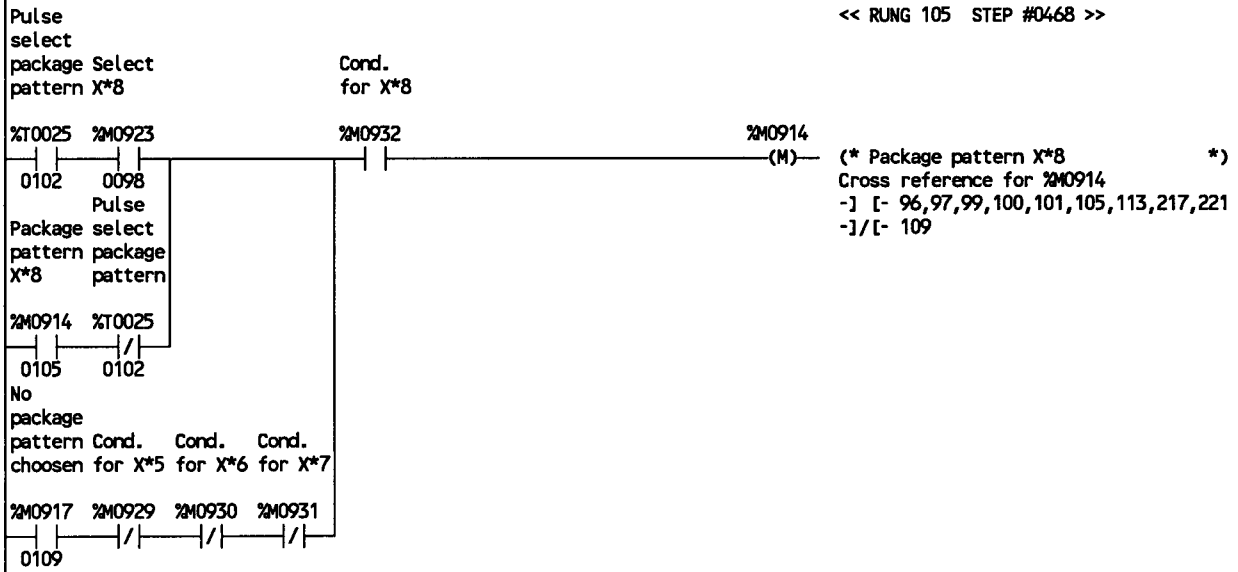
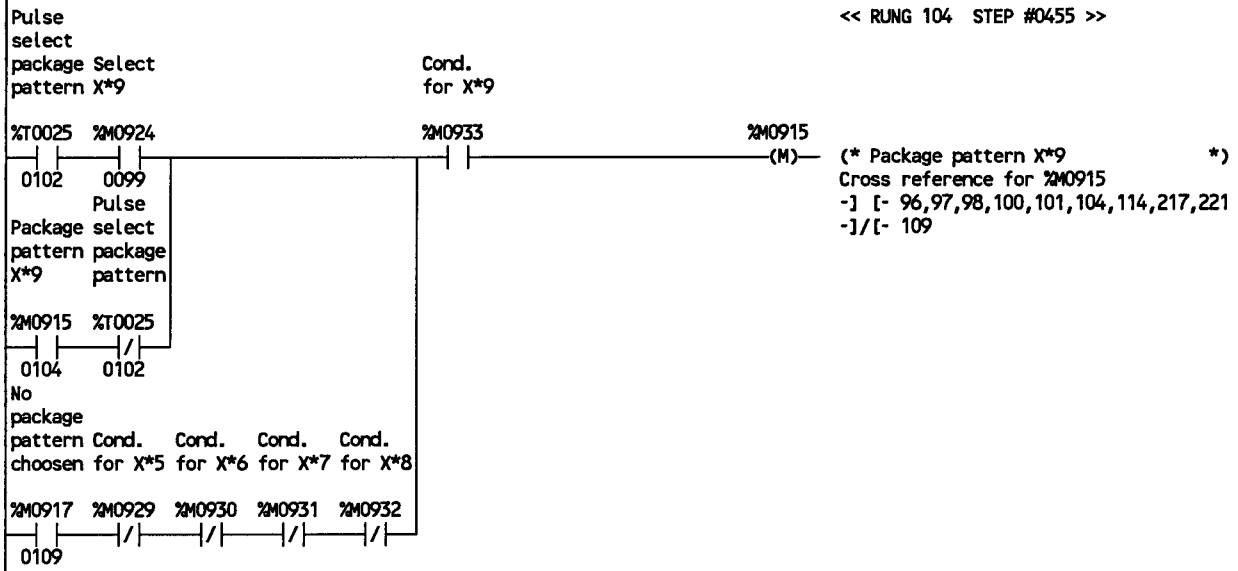
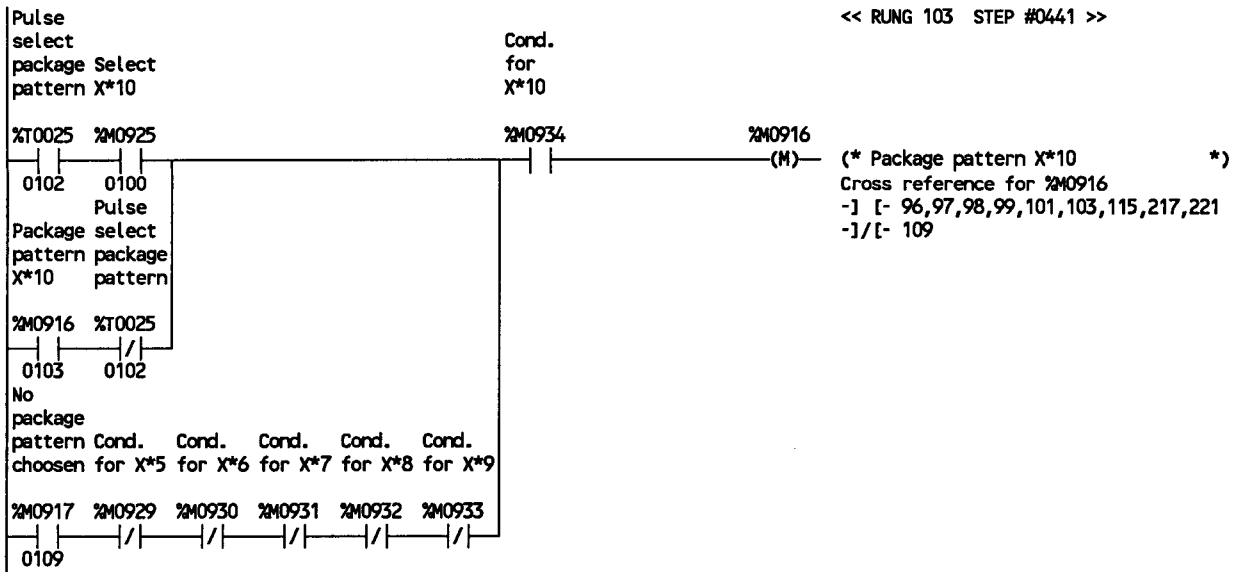


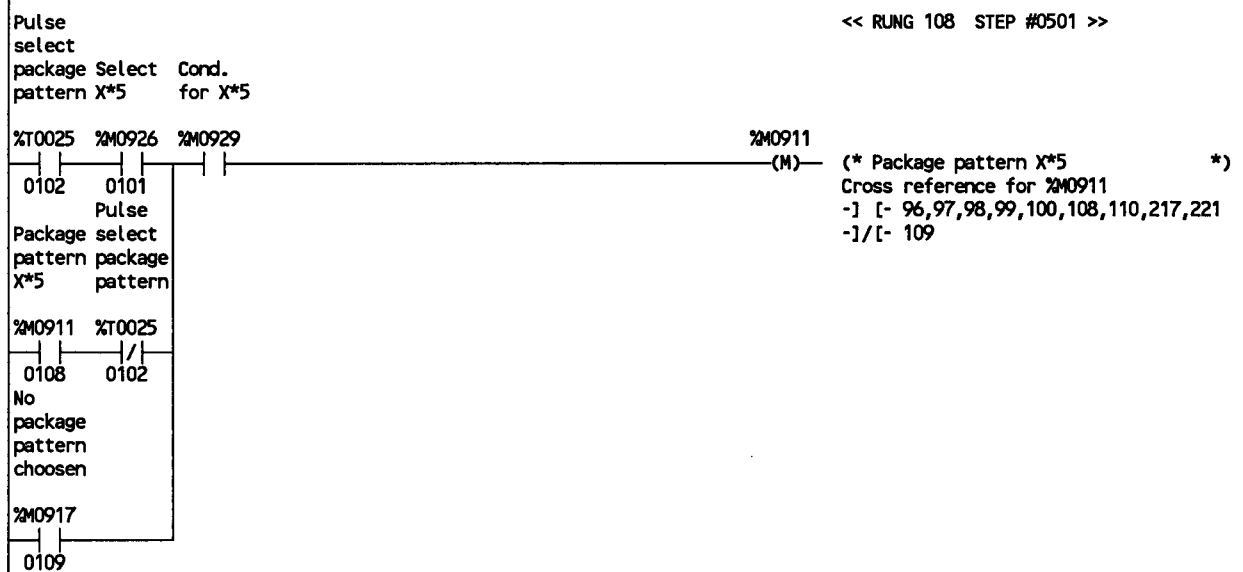
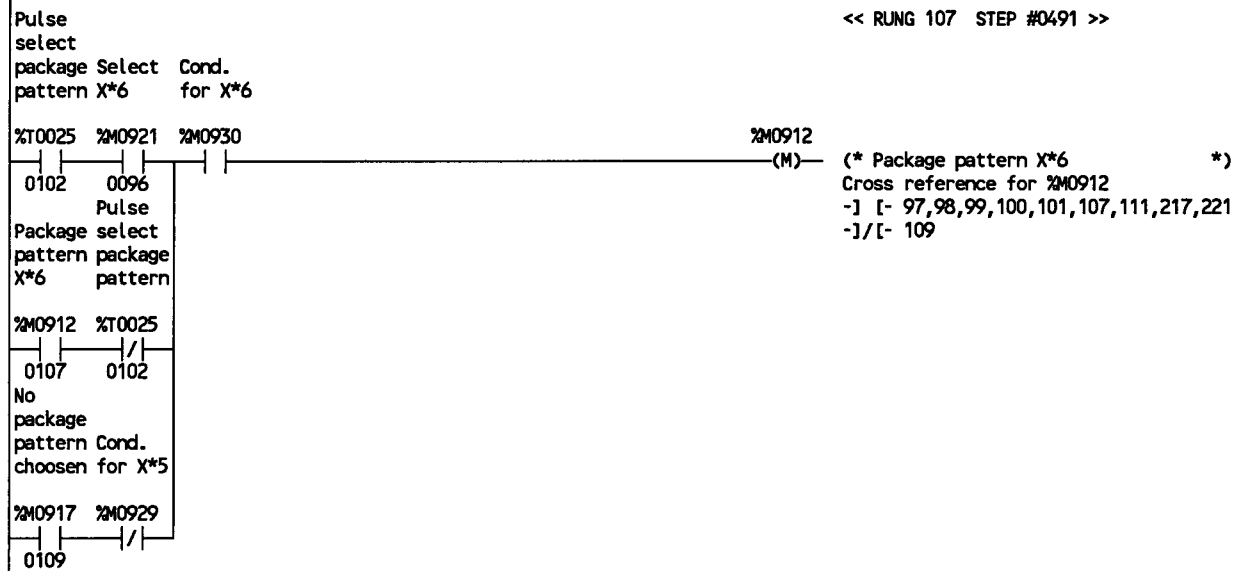
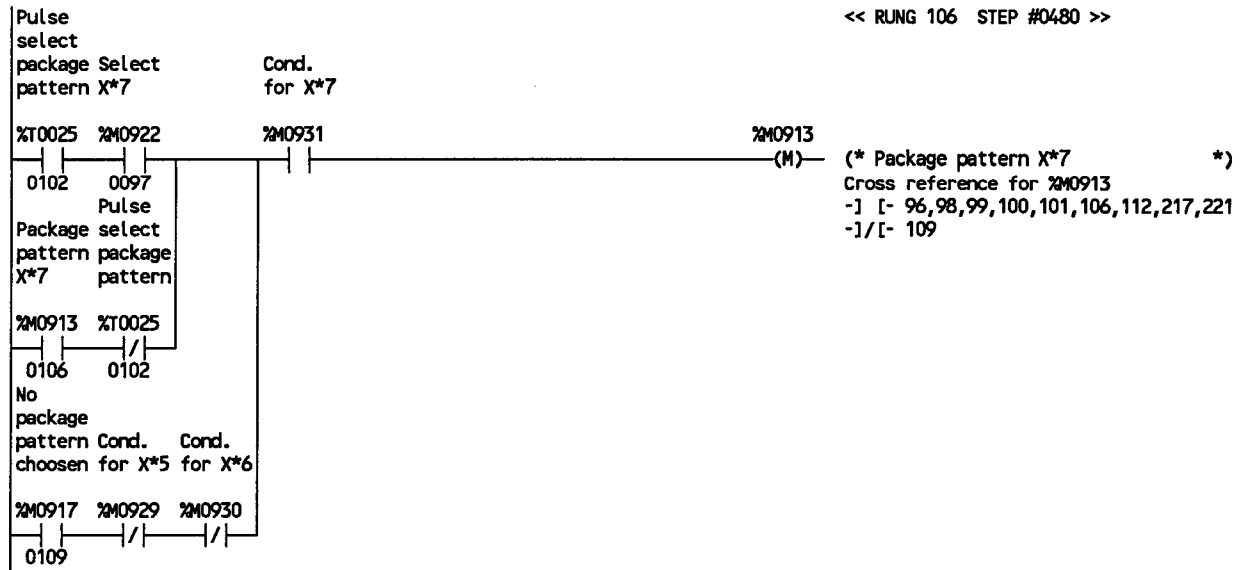
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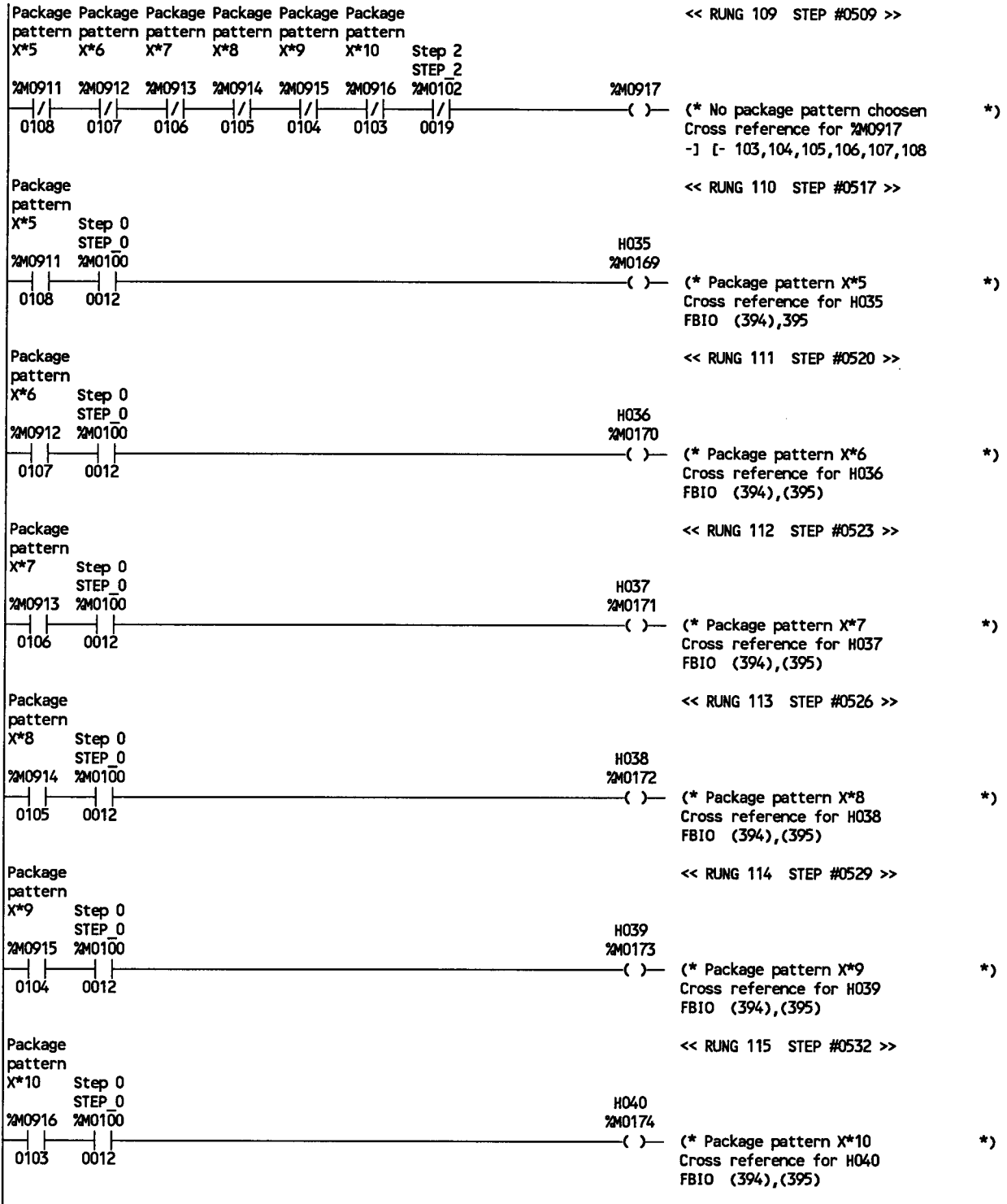
(* Select X*10
Cross reference for %M0925
-] [- 103

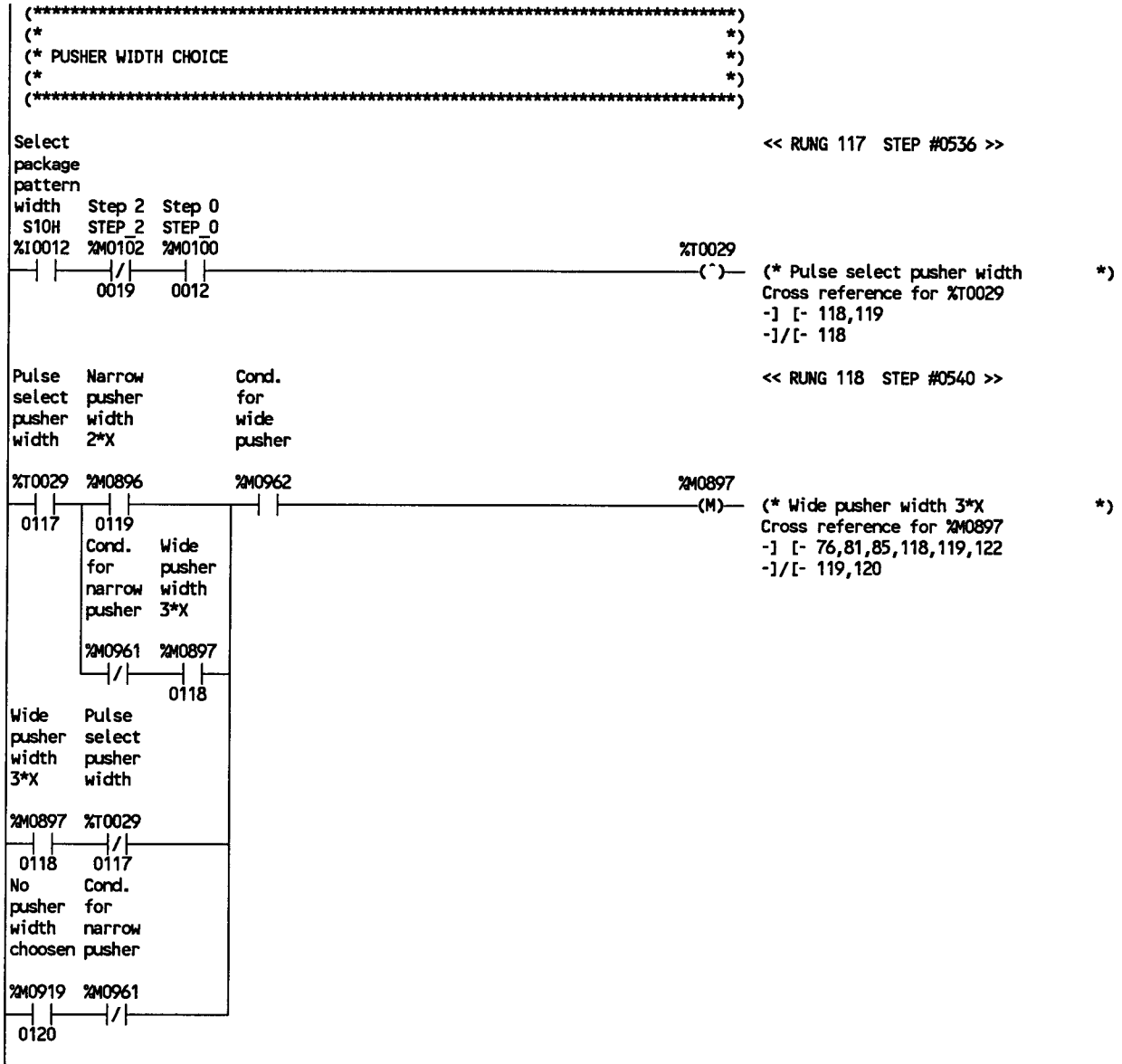
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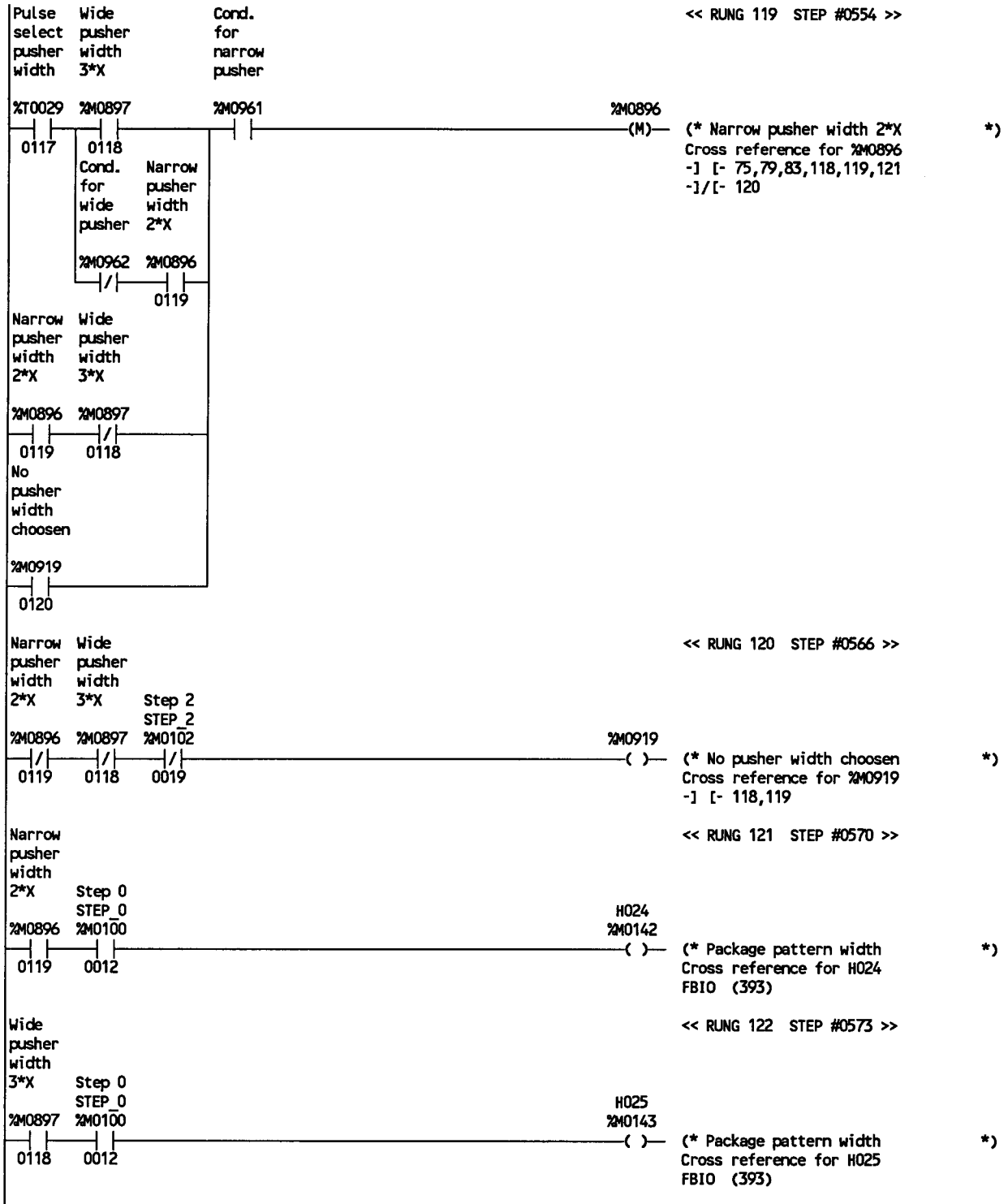


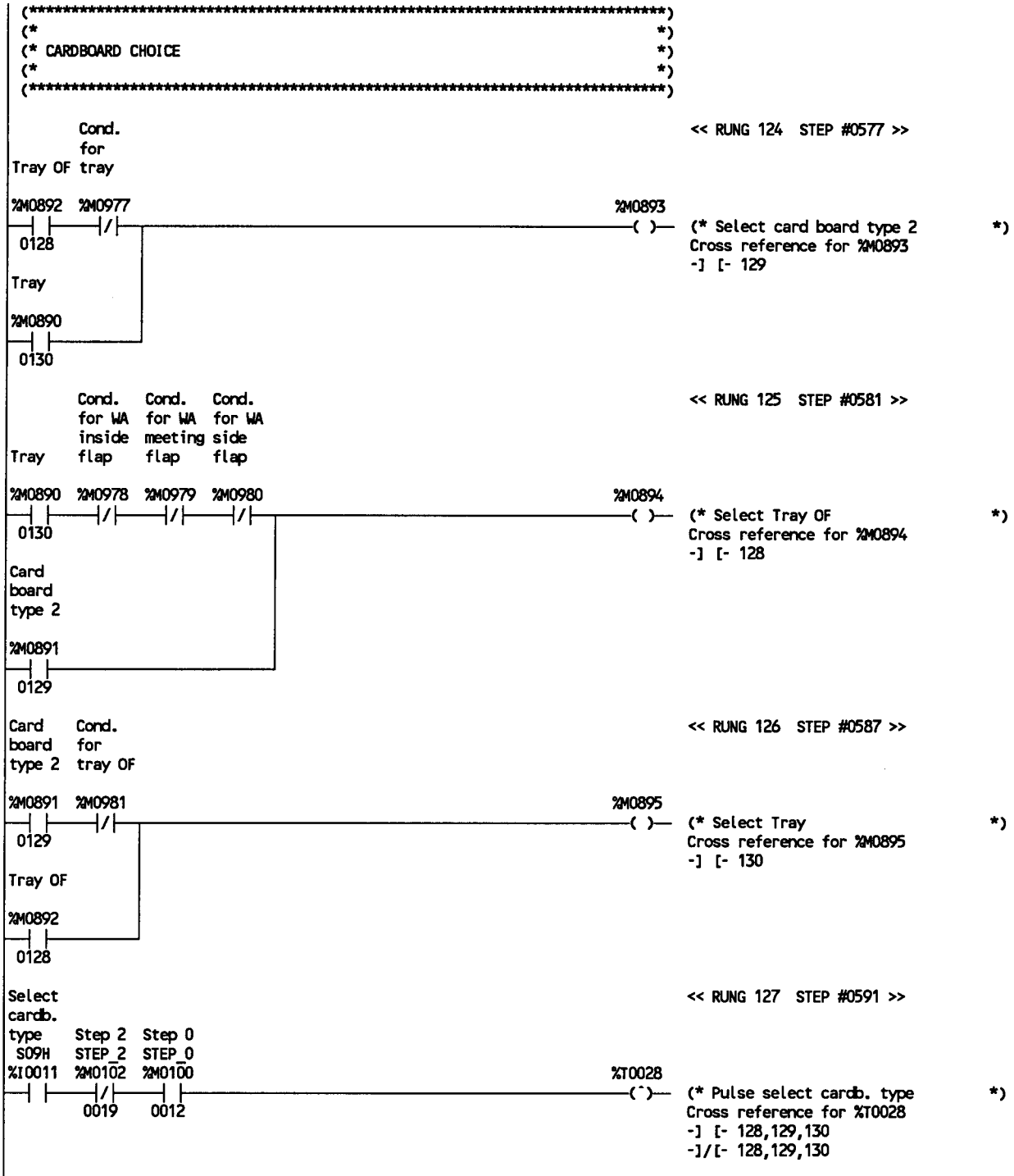


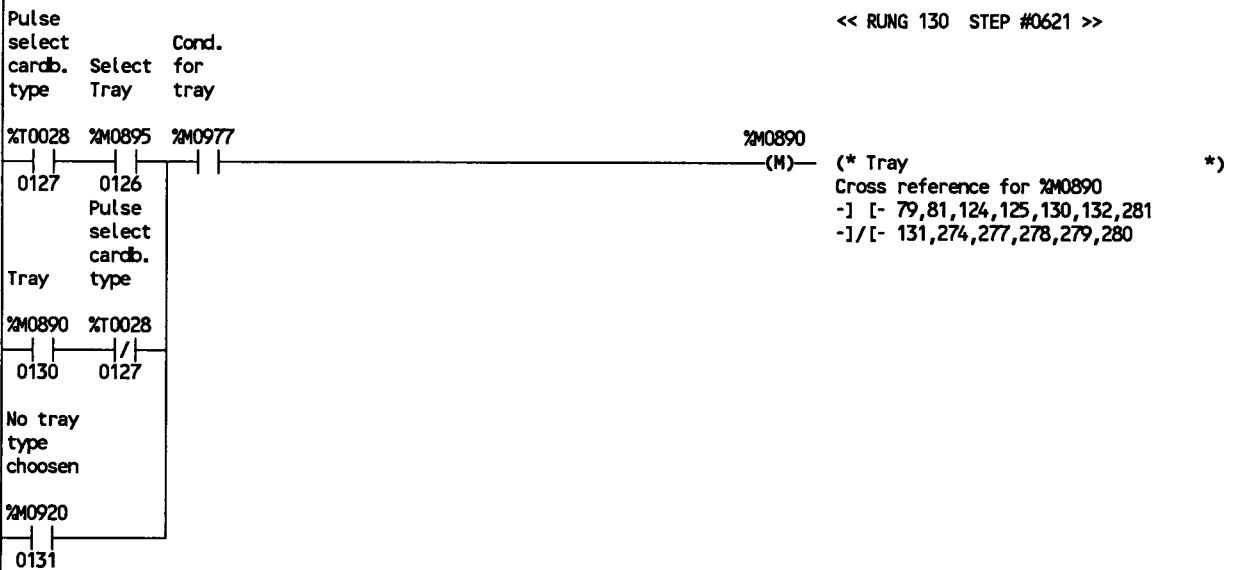
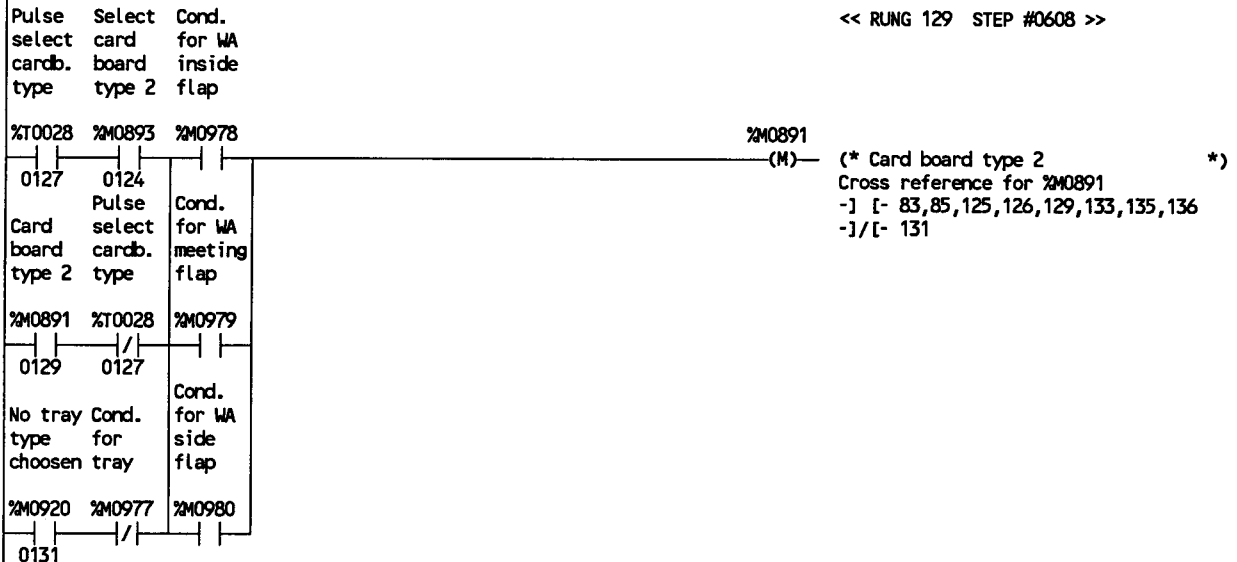
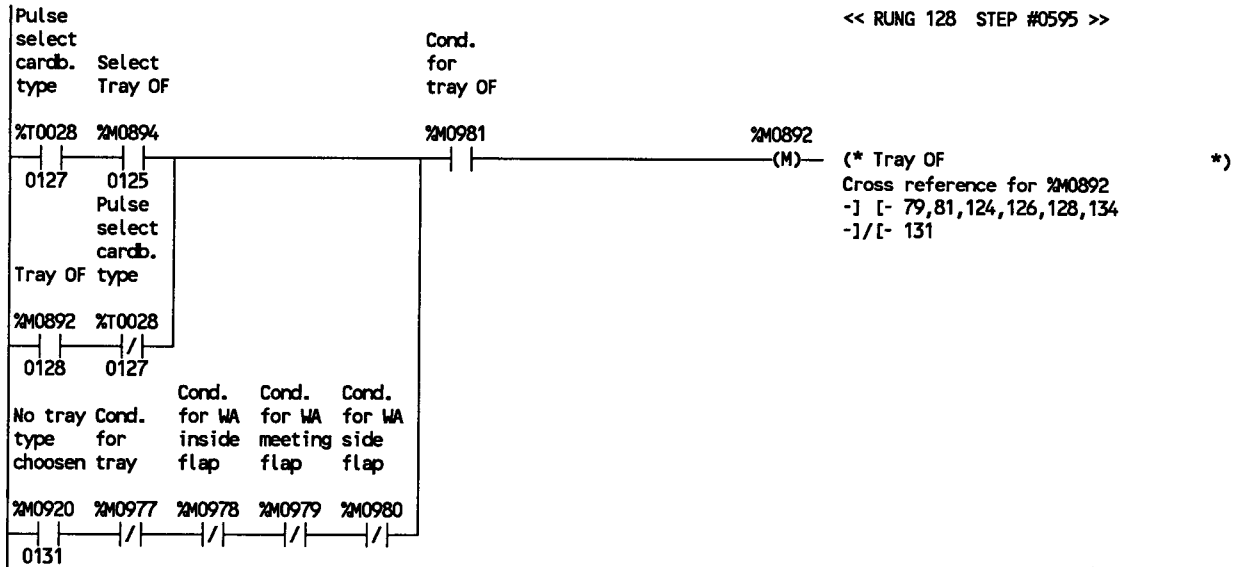


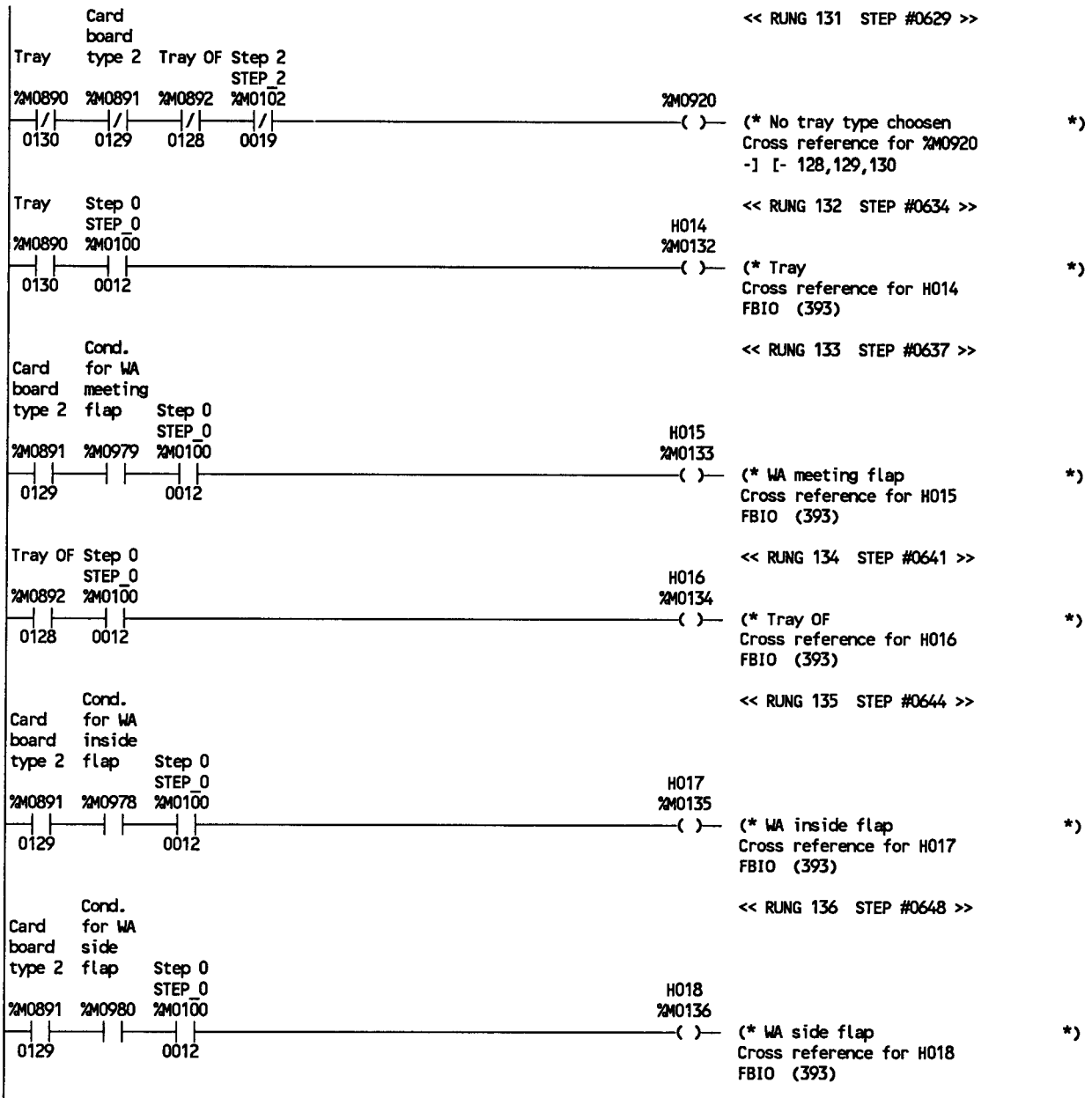


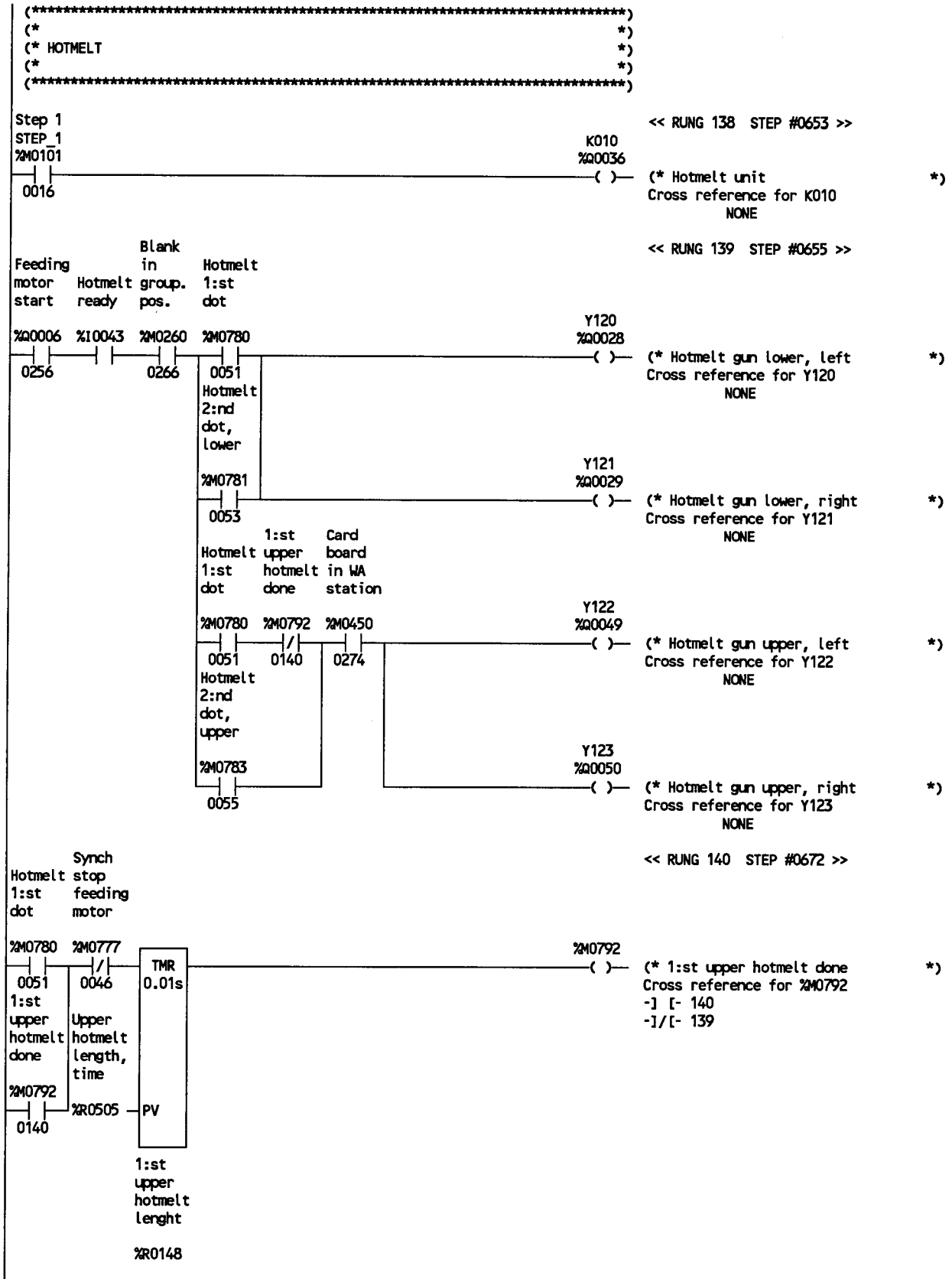


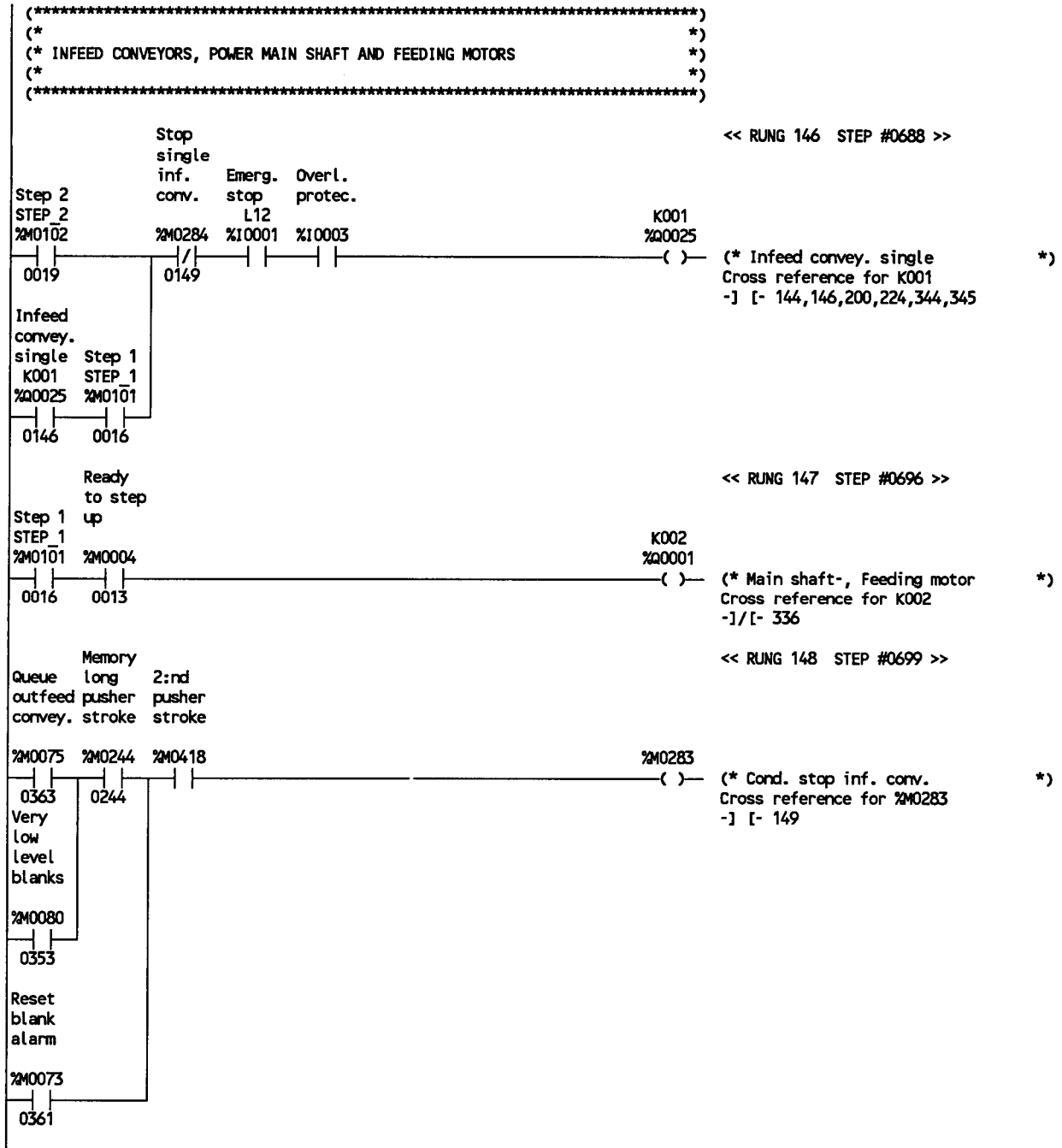




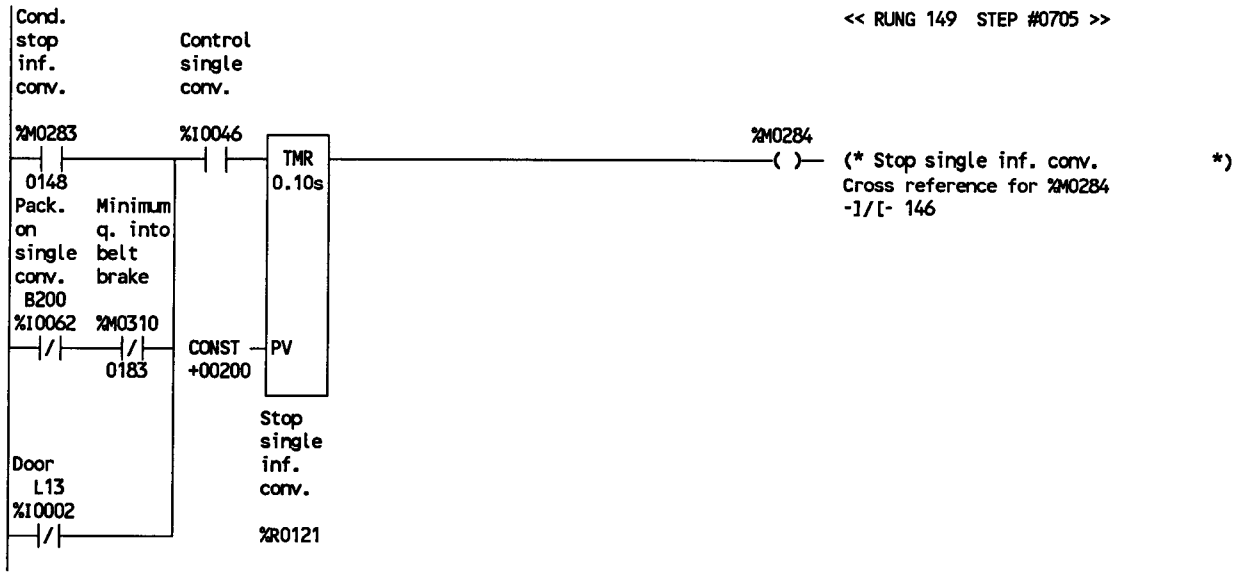


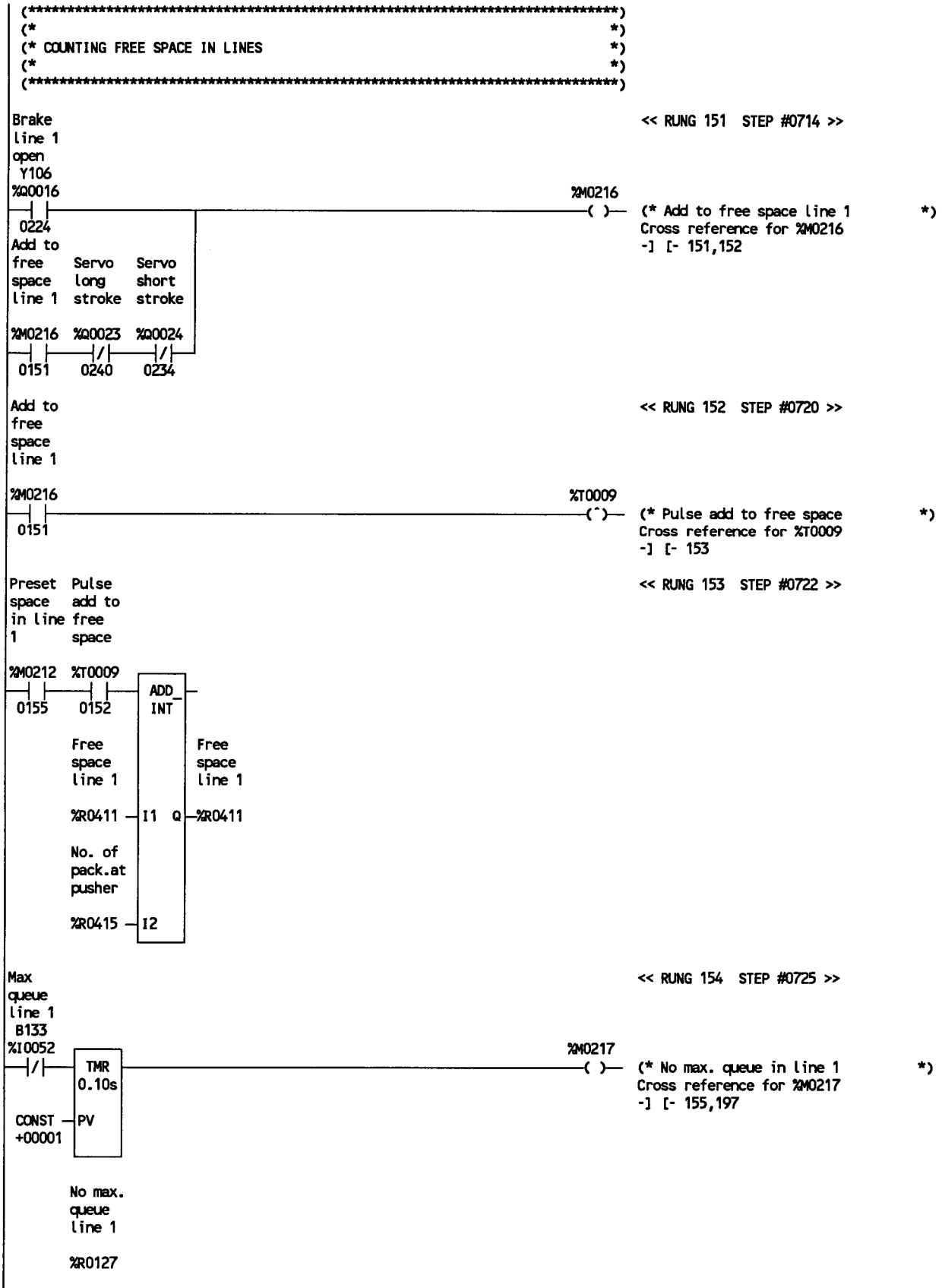


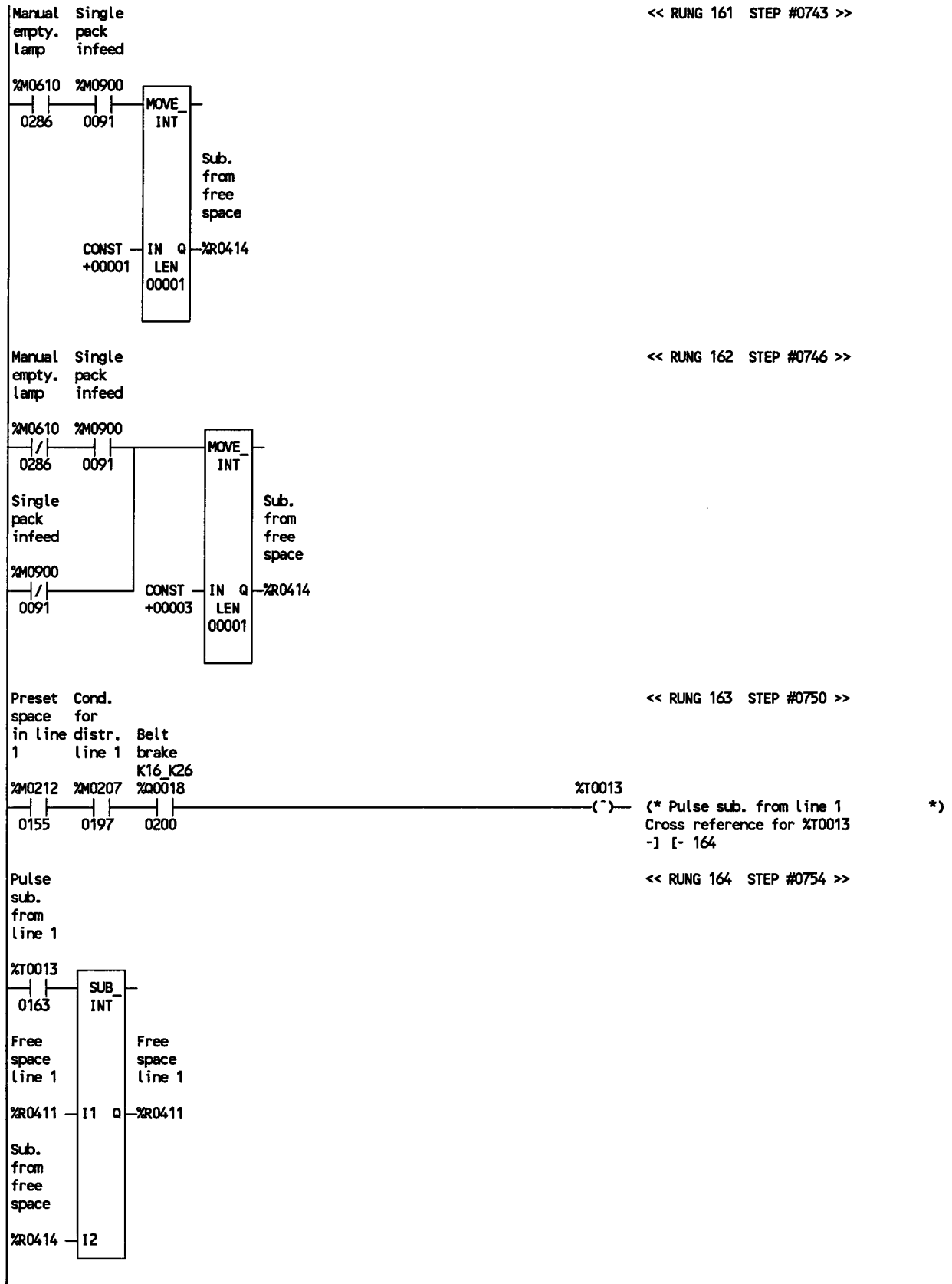


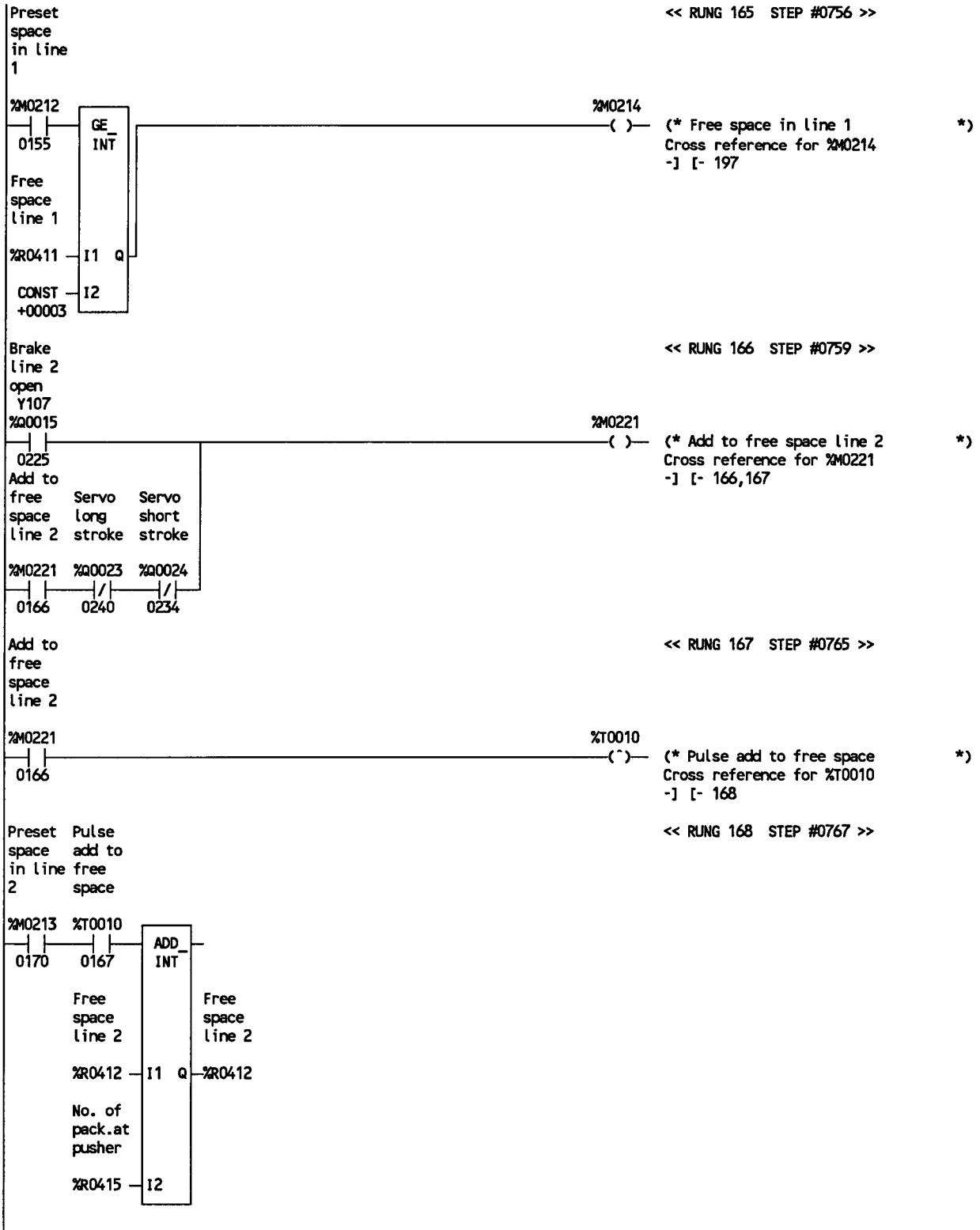


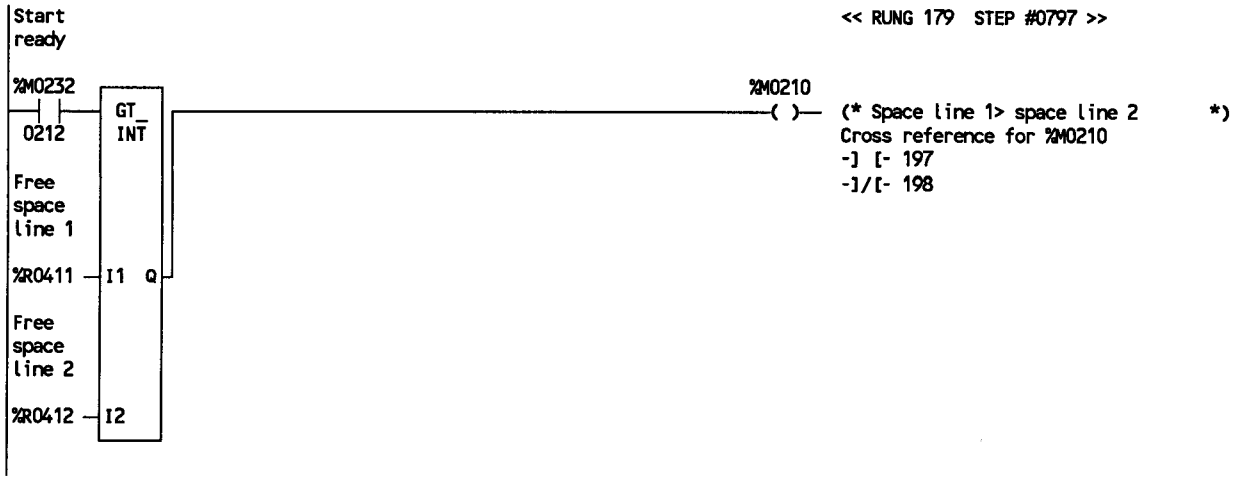
<< RUNG 149 STEP #0705 >>









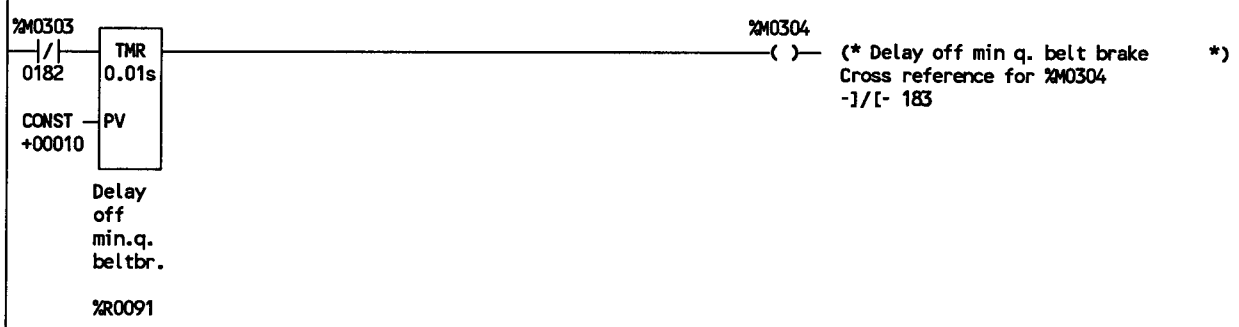



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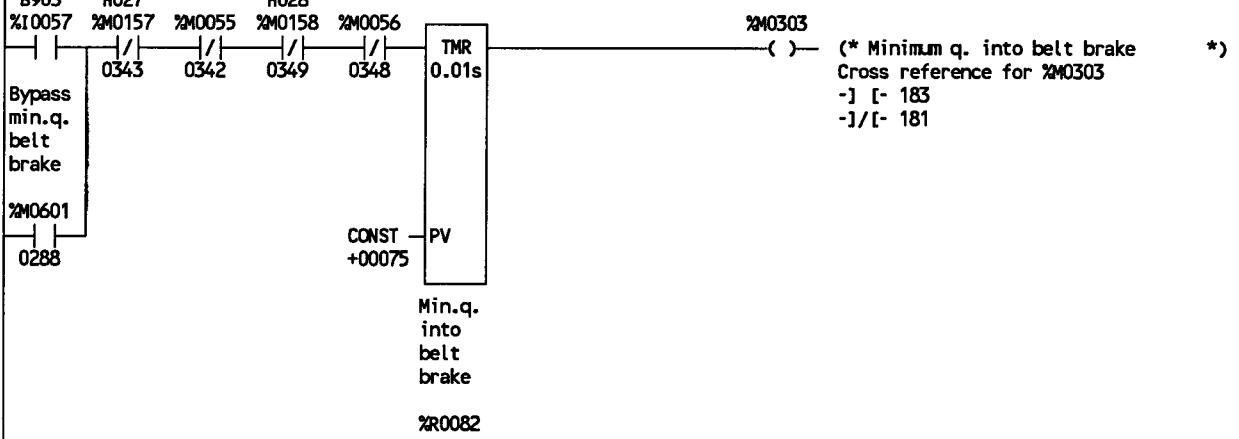
(*****)
(*                                           *)
(* BELT BRAKE, LINE DIVIDER                 *)
(*                                           *)
(*****)

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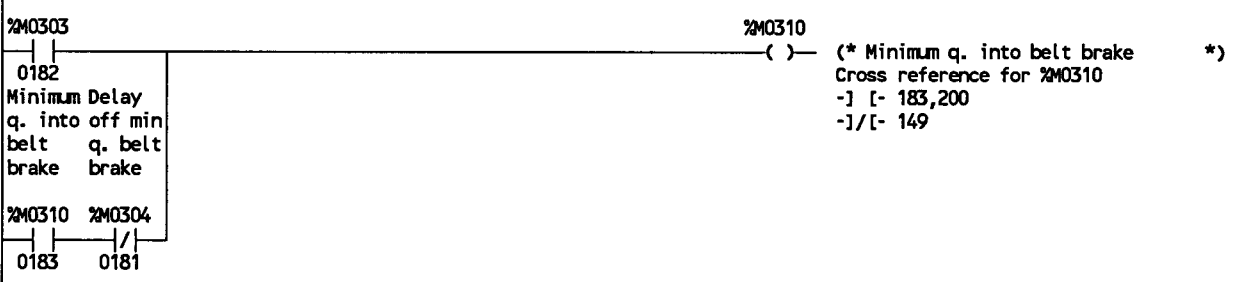
Minimum q. into belt brake << RUNG 181 STEP #0801 >>



Min. queue into brake B903 Alarm fallen package H027 Alarm fallen package H028 Alarm crush after div. H028 Alarm crush guard << RUNG 182 STEP #0804 >>

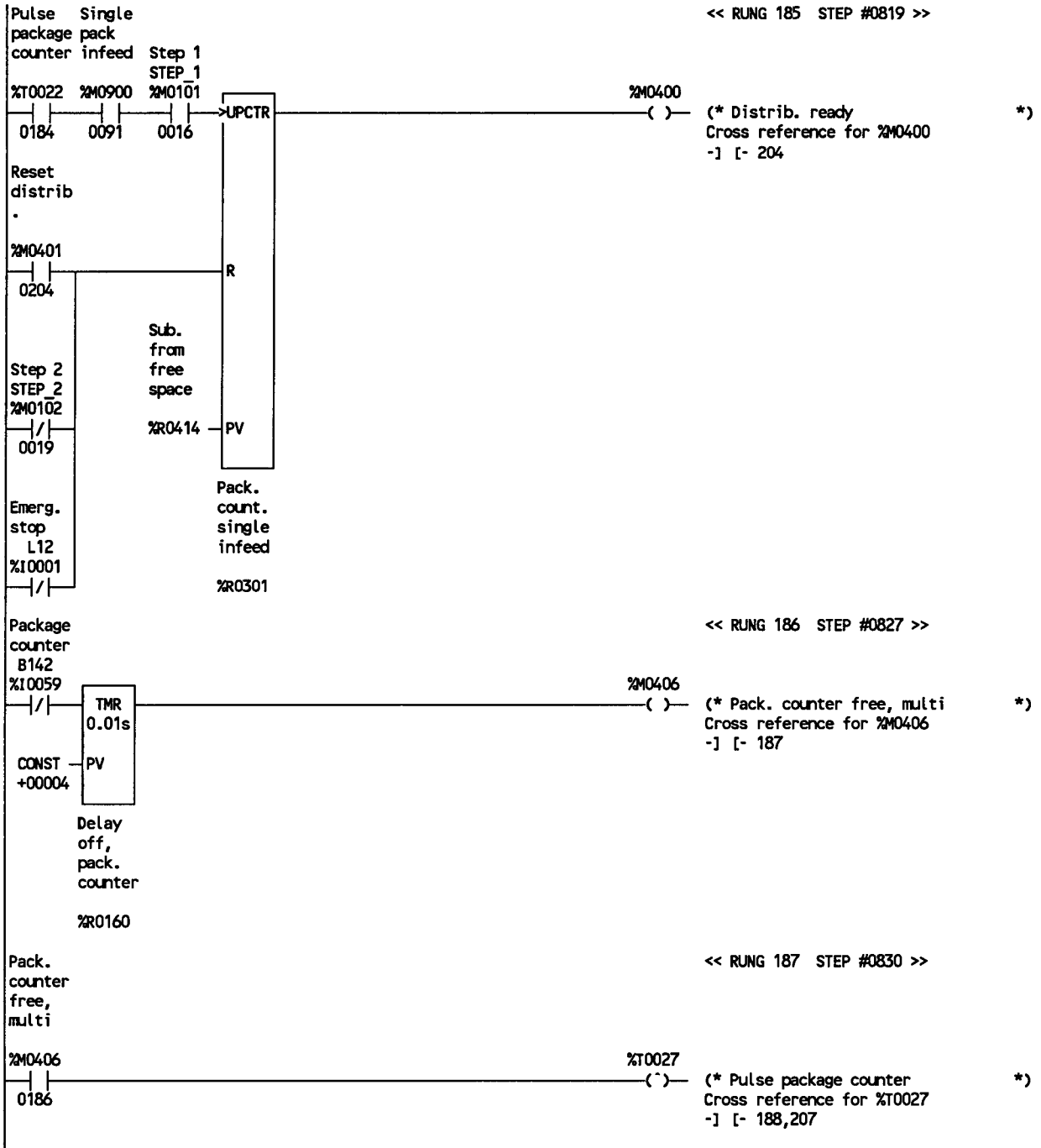


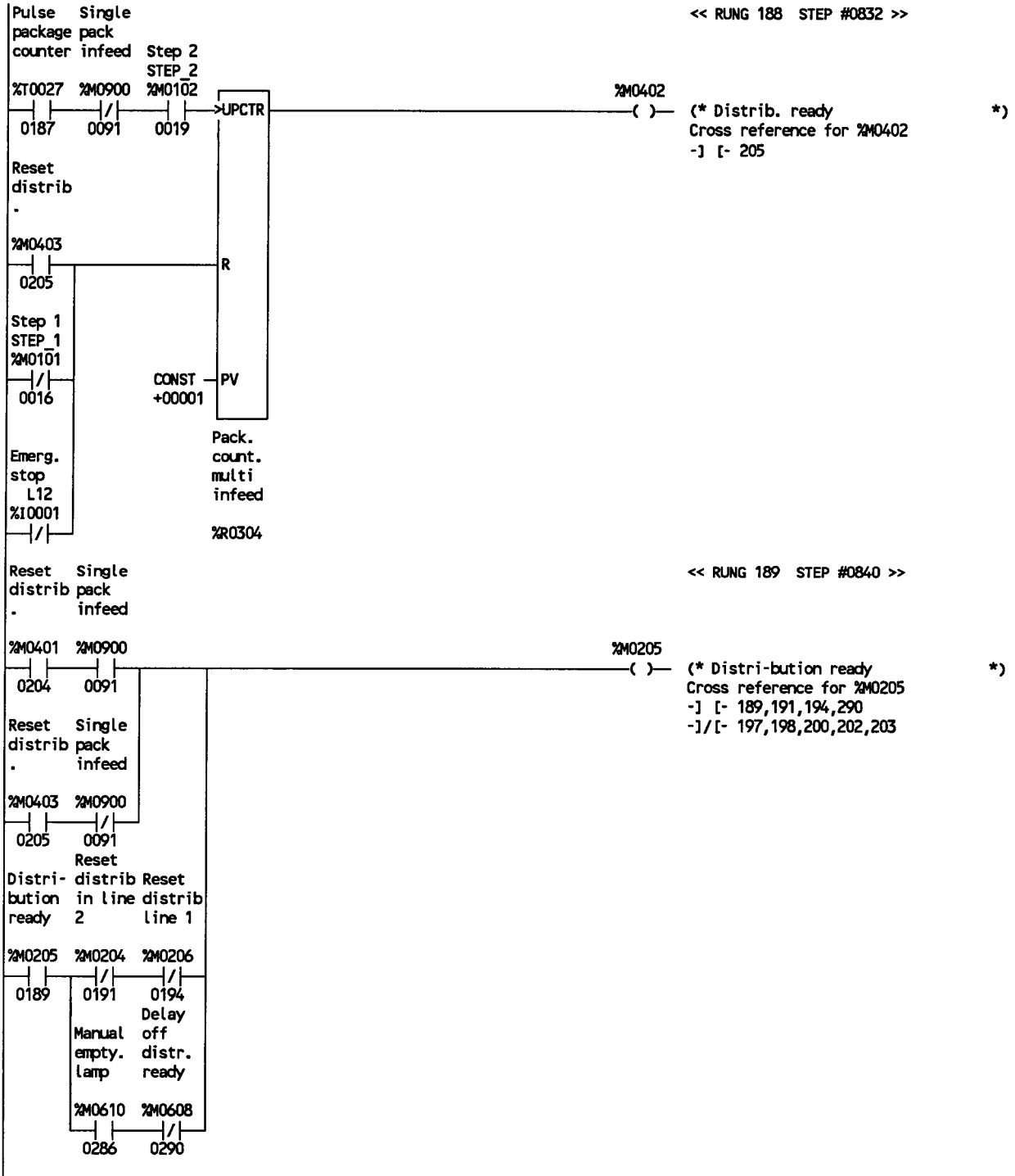
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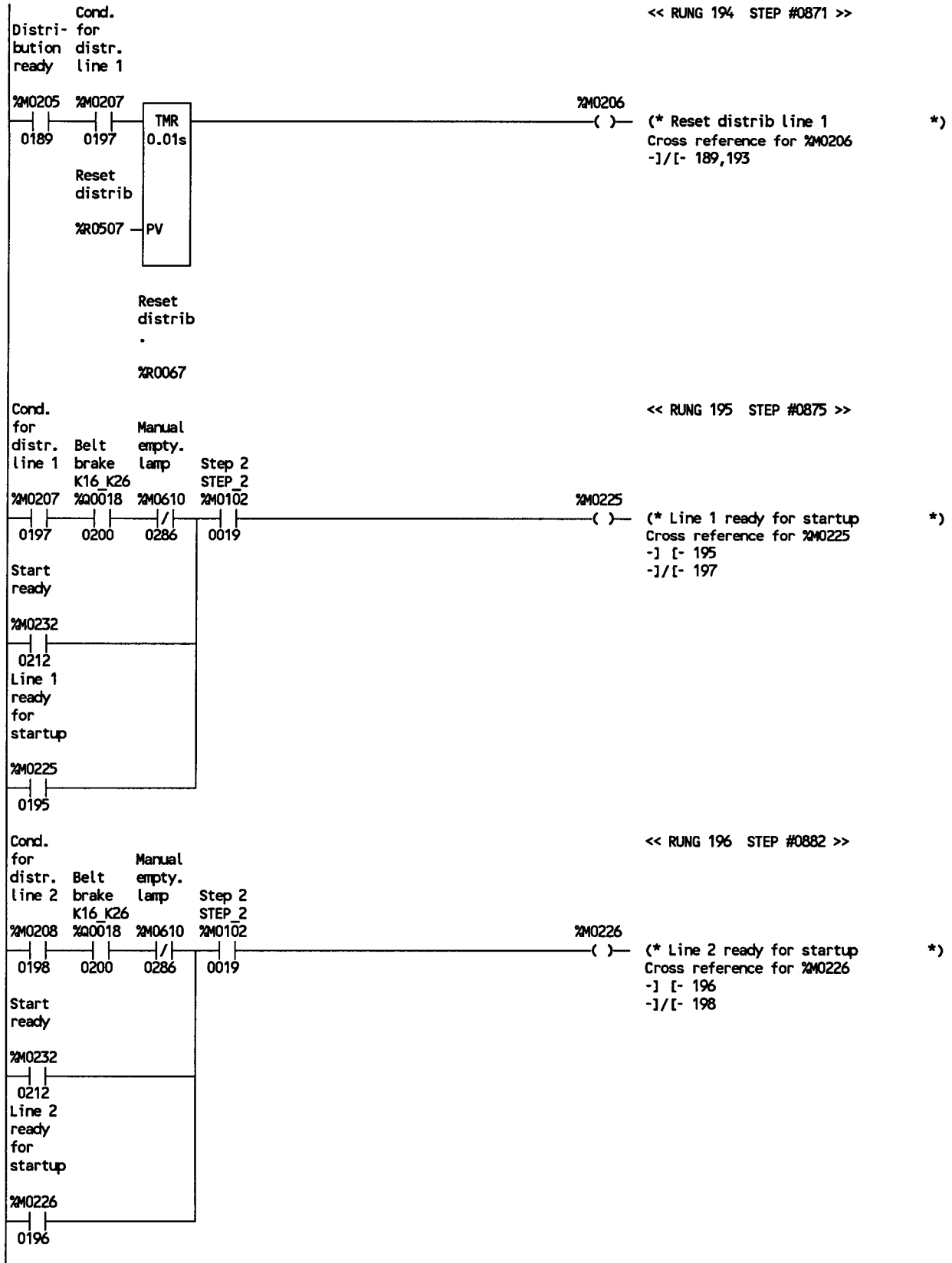


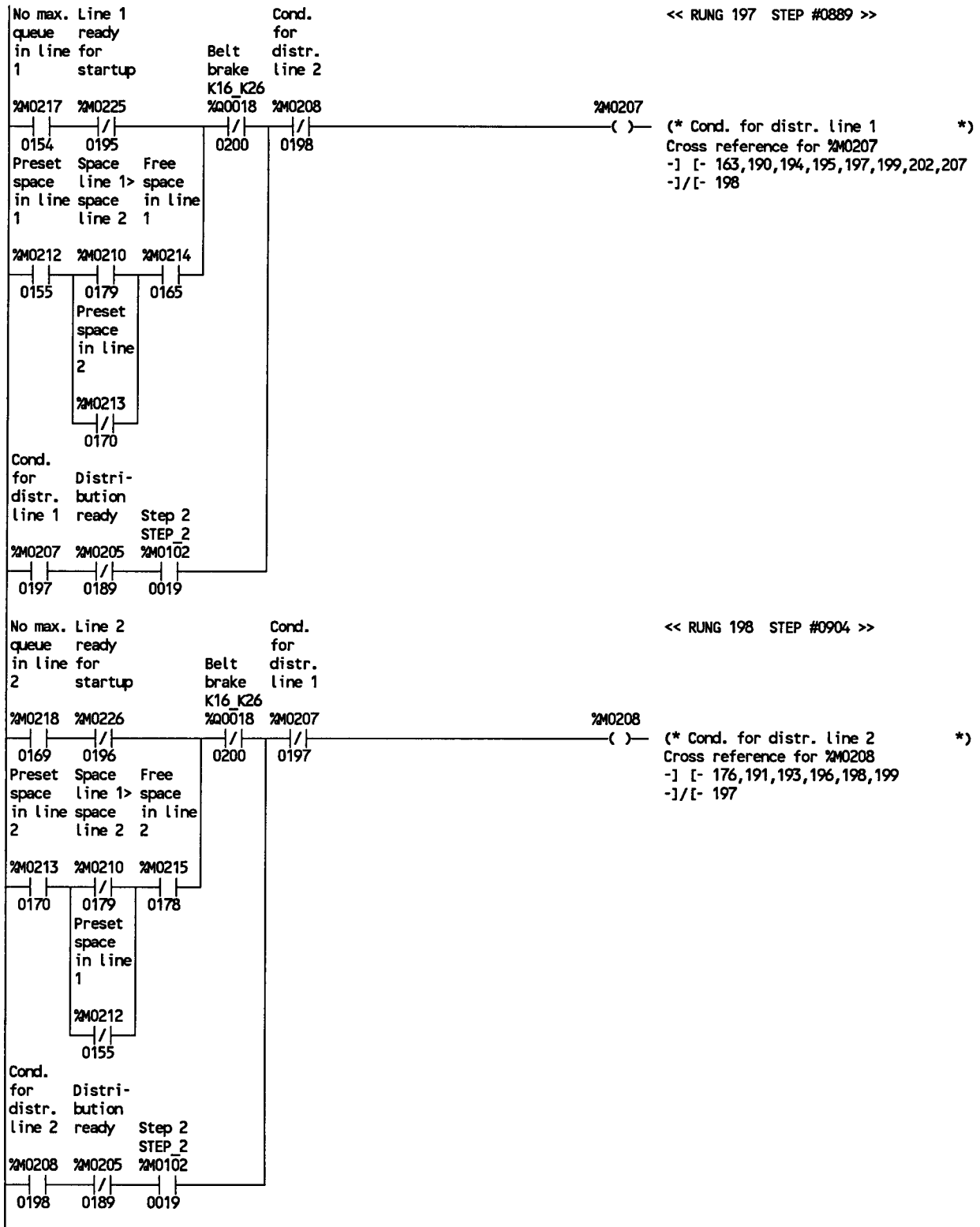
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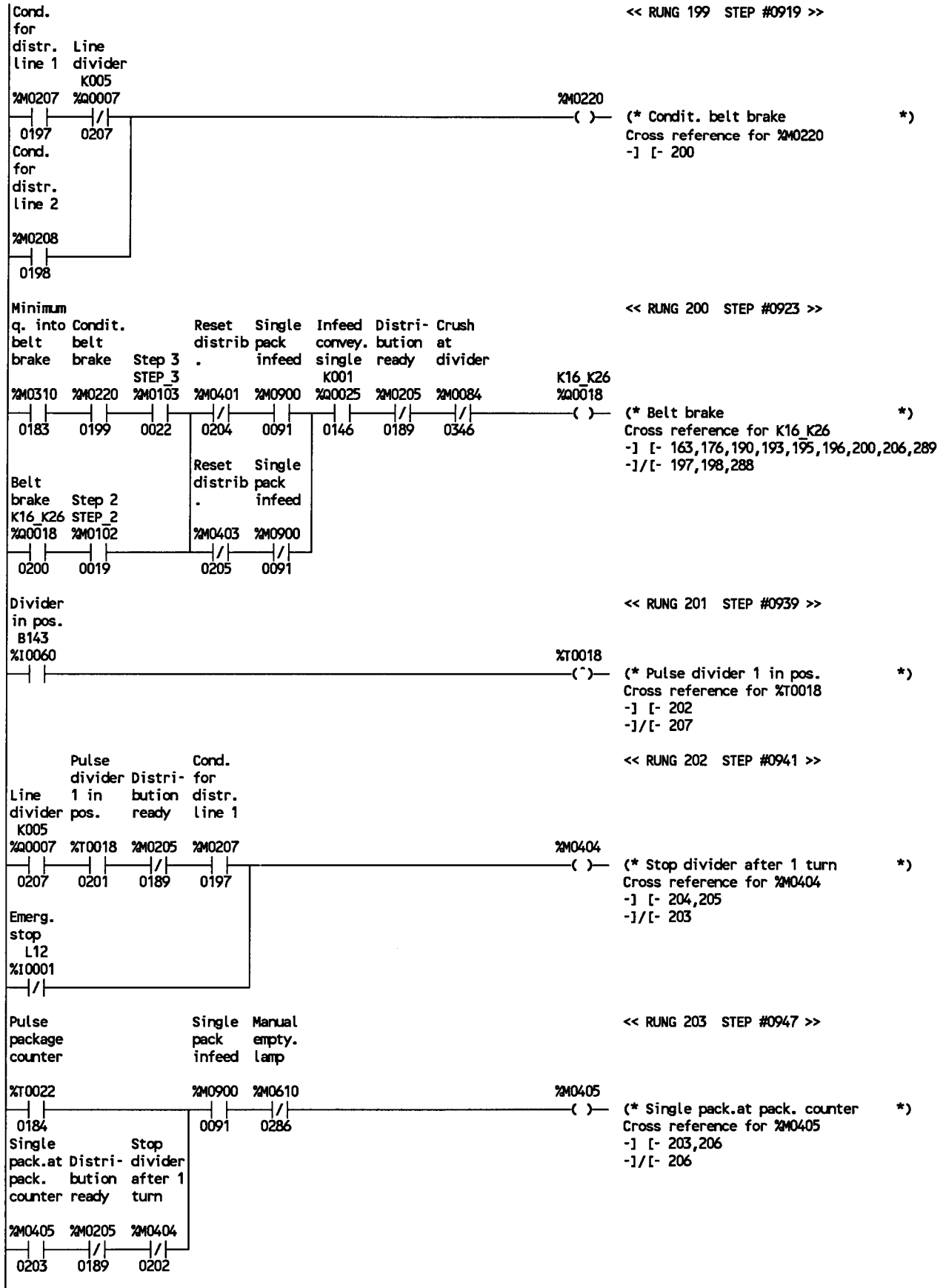


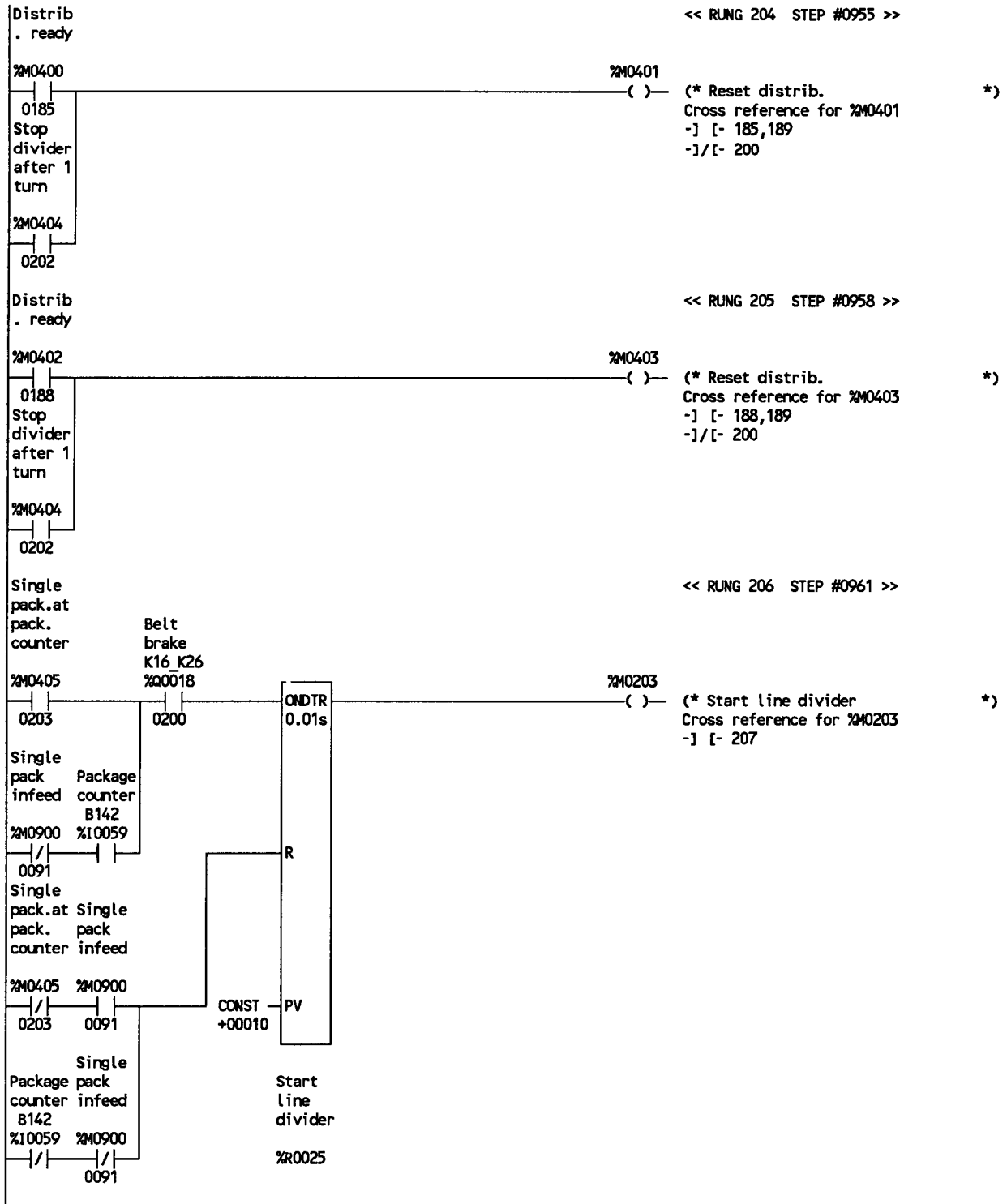


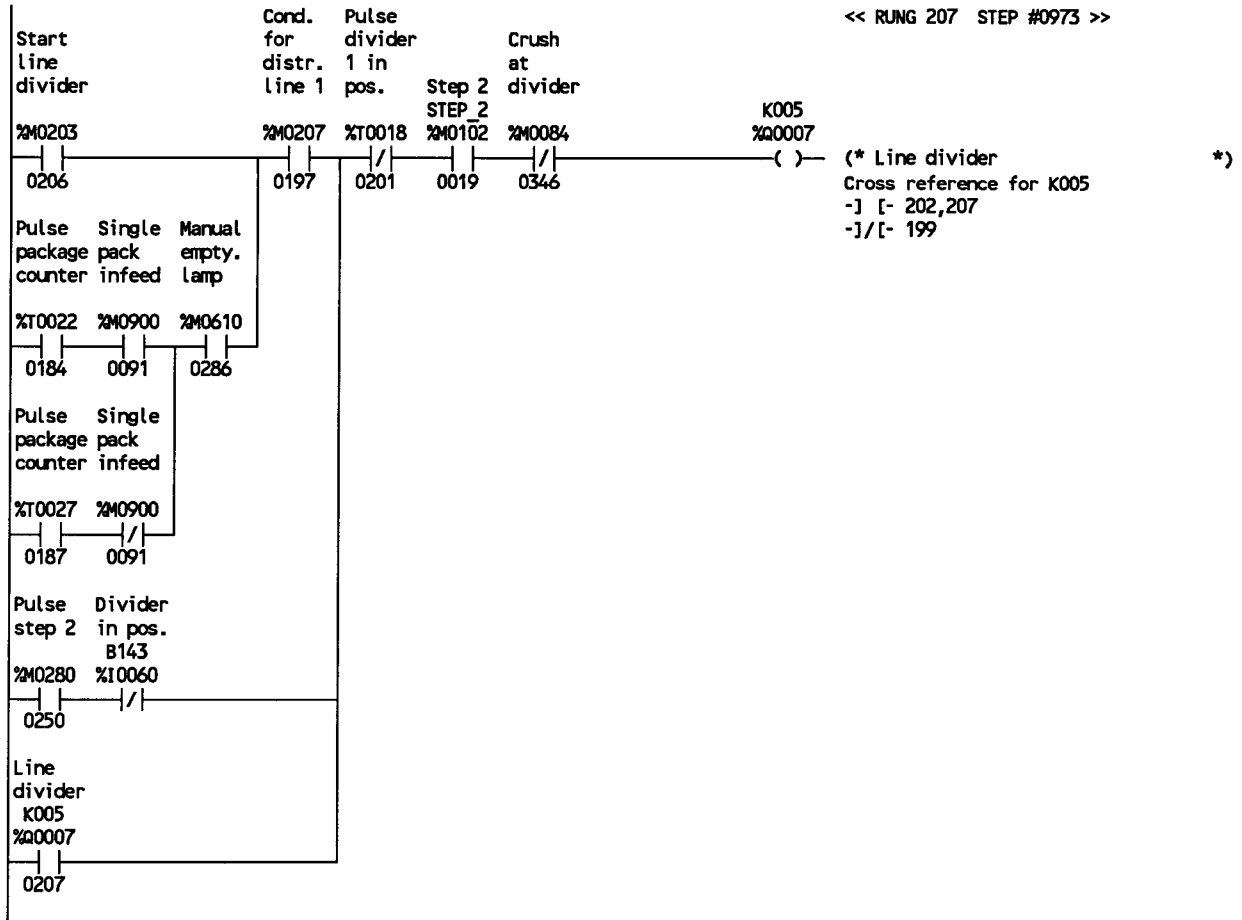


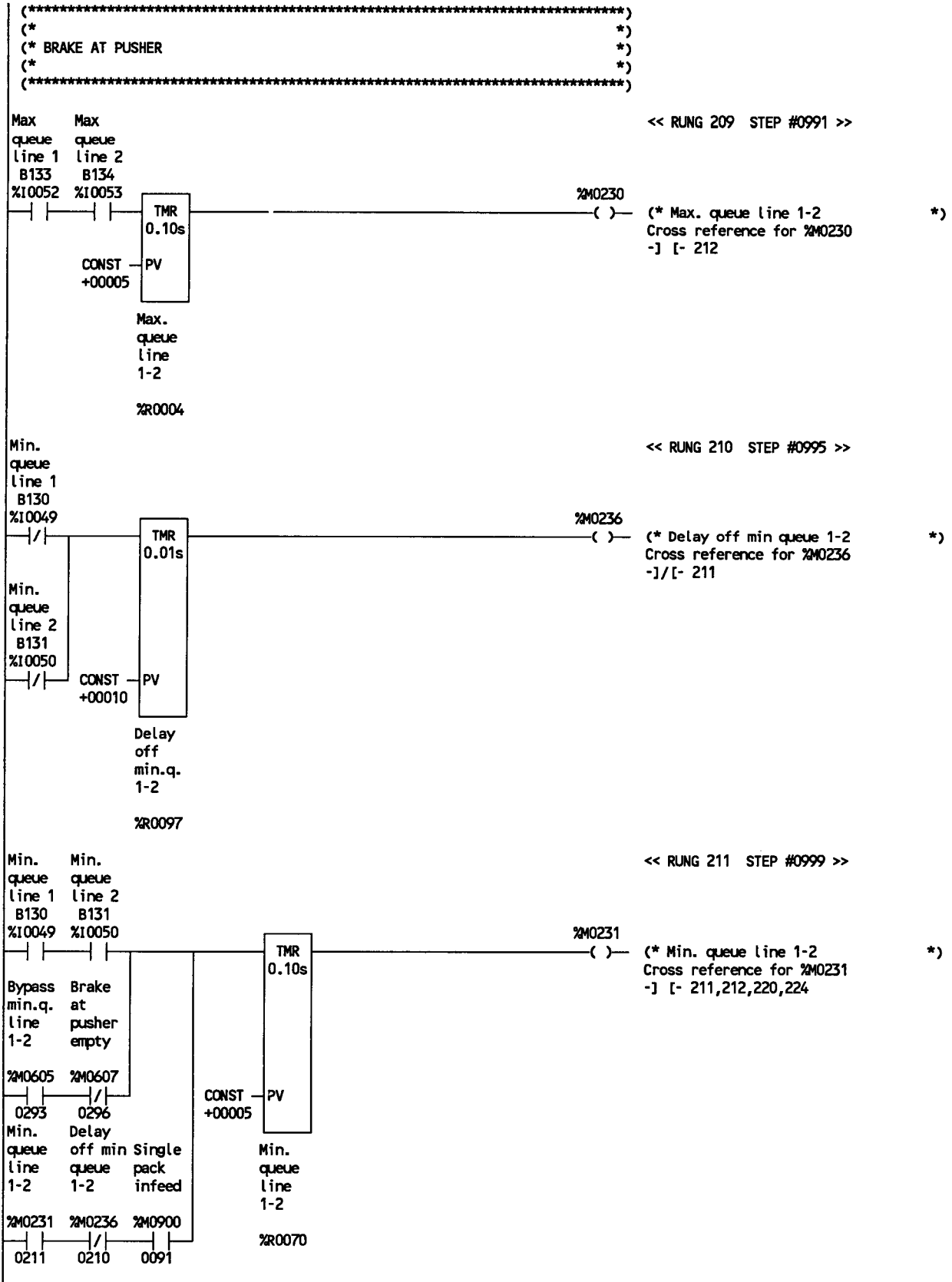


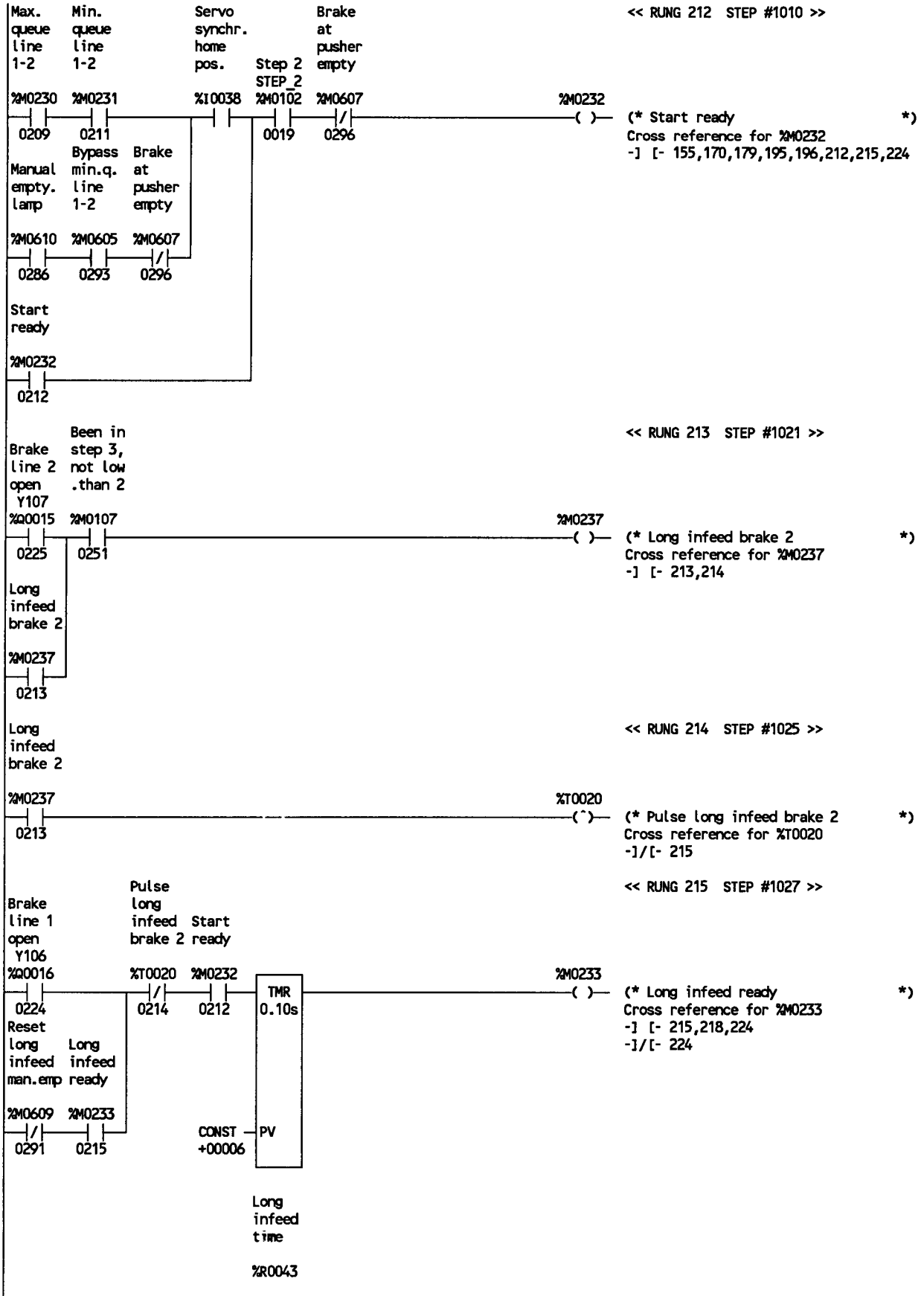


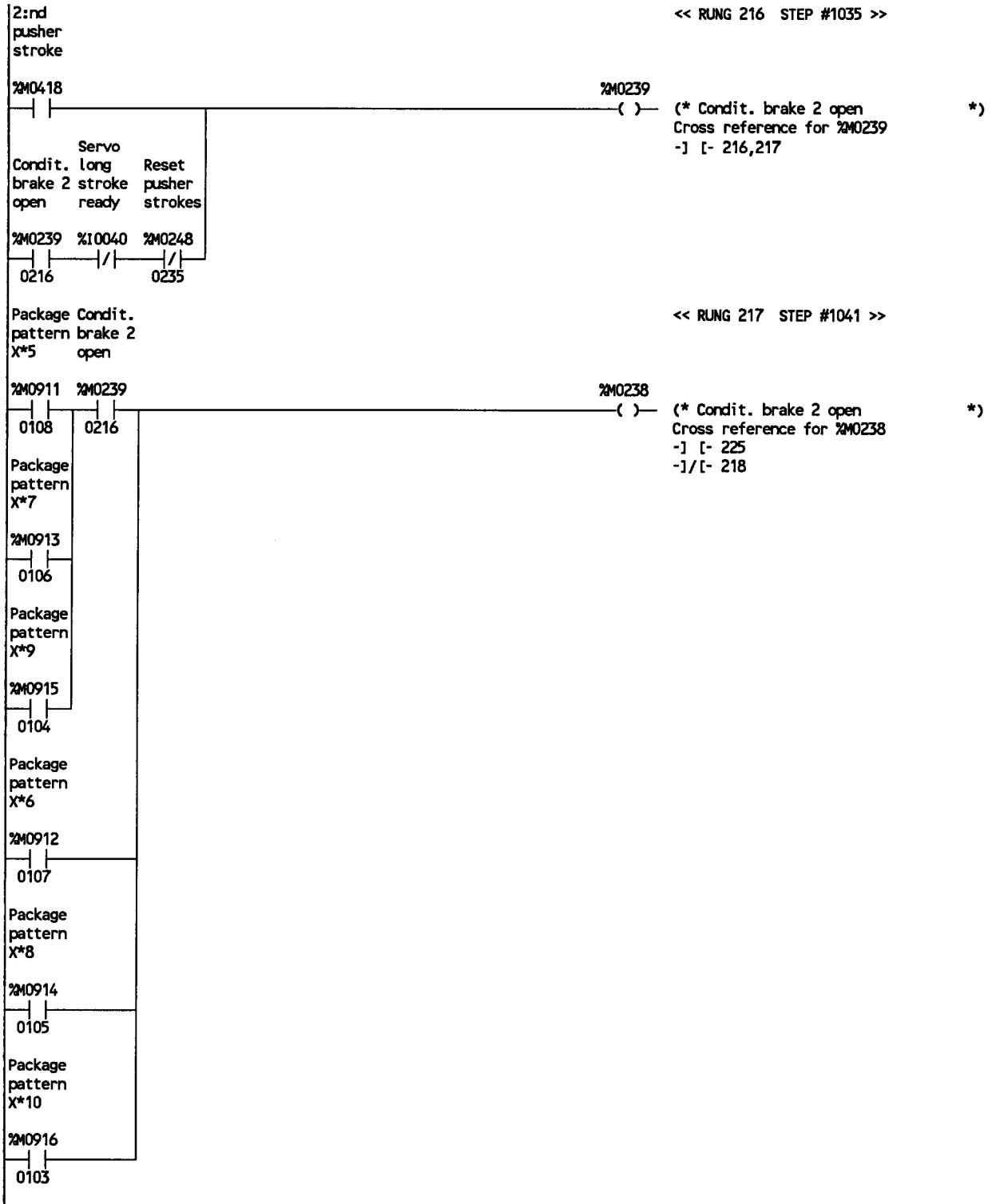


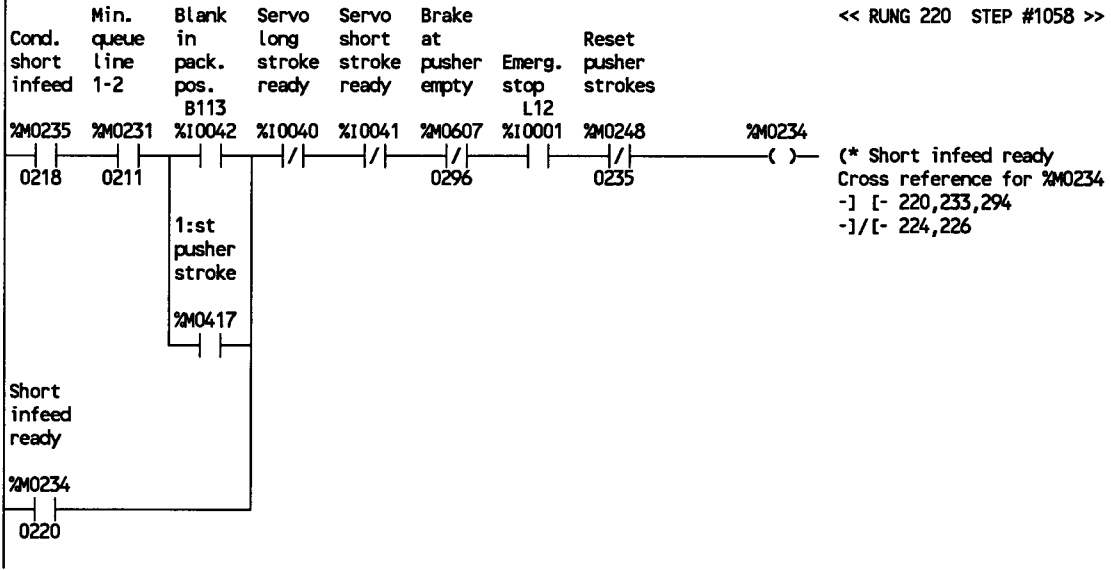
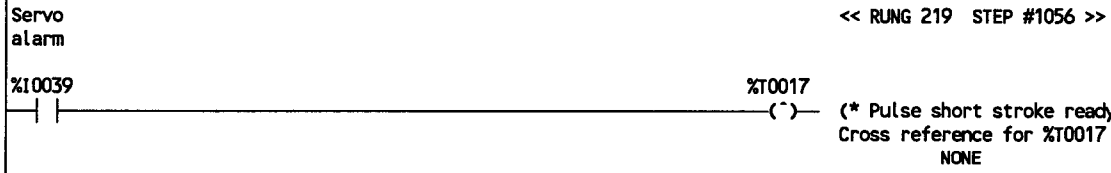
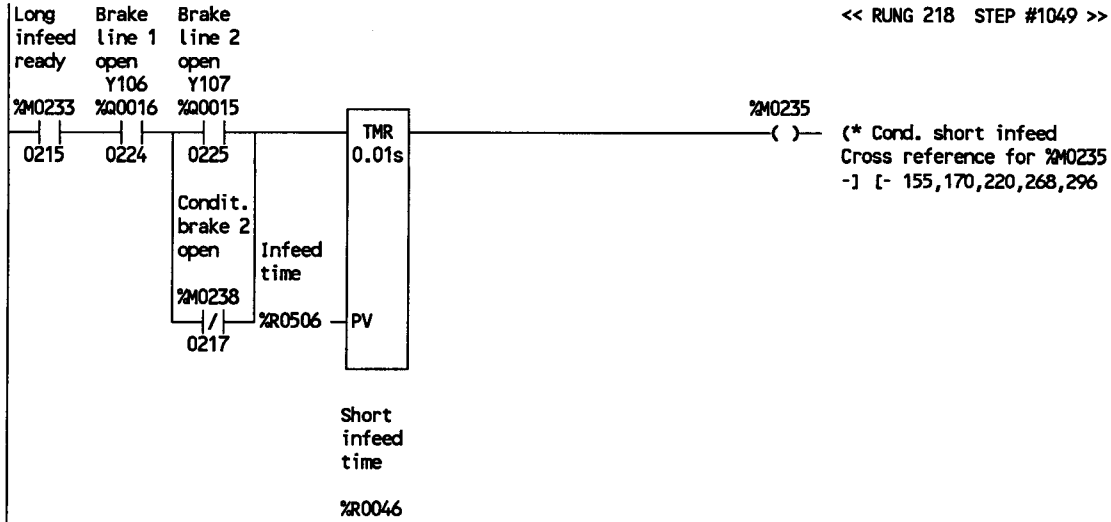


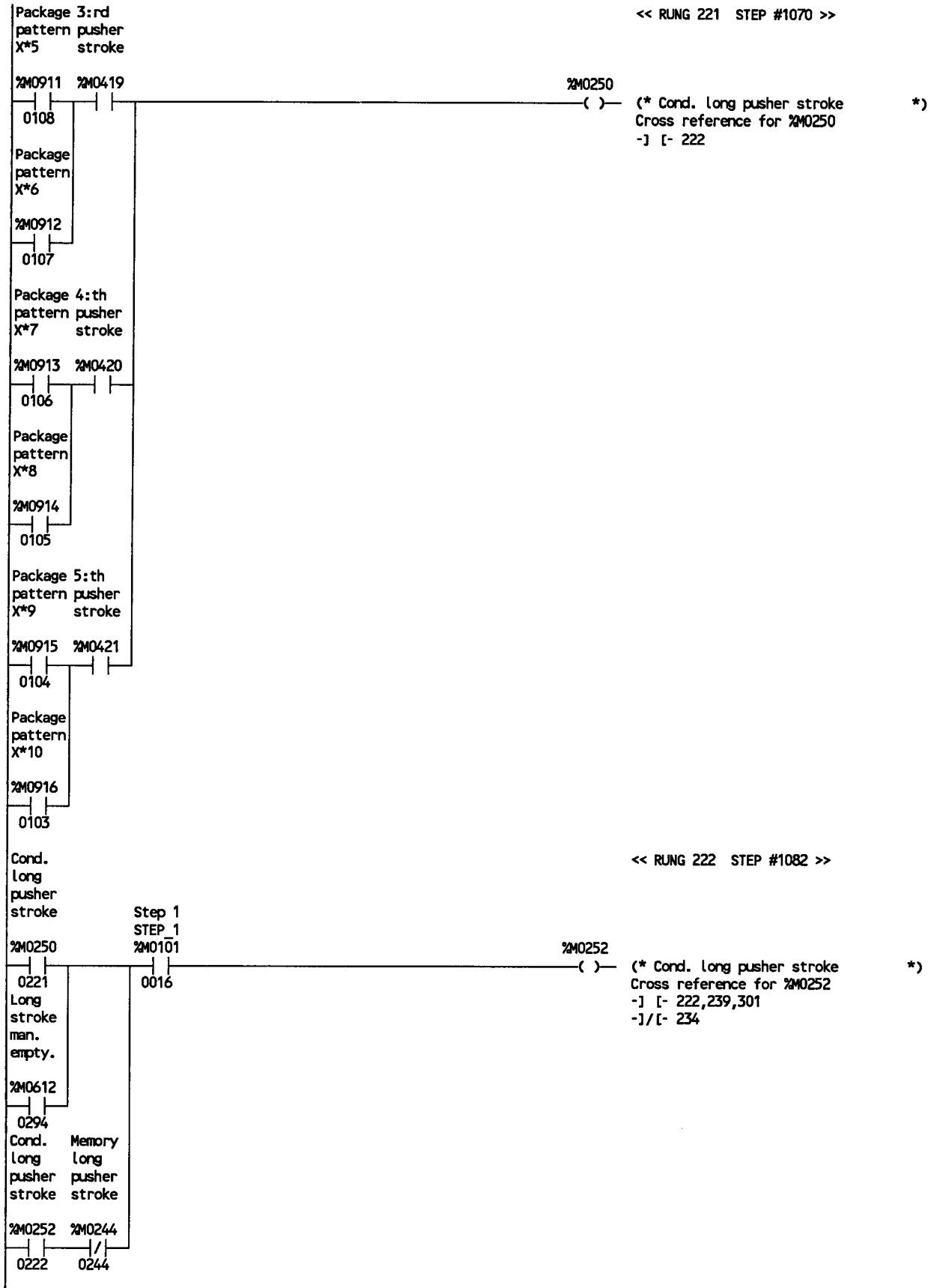


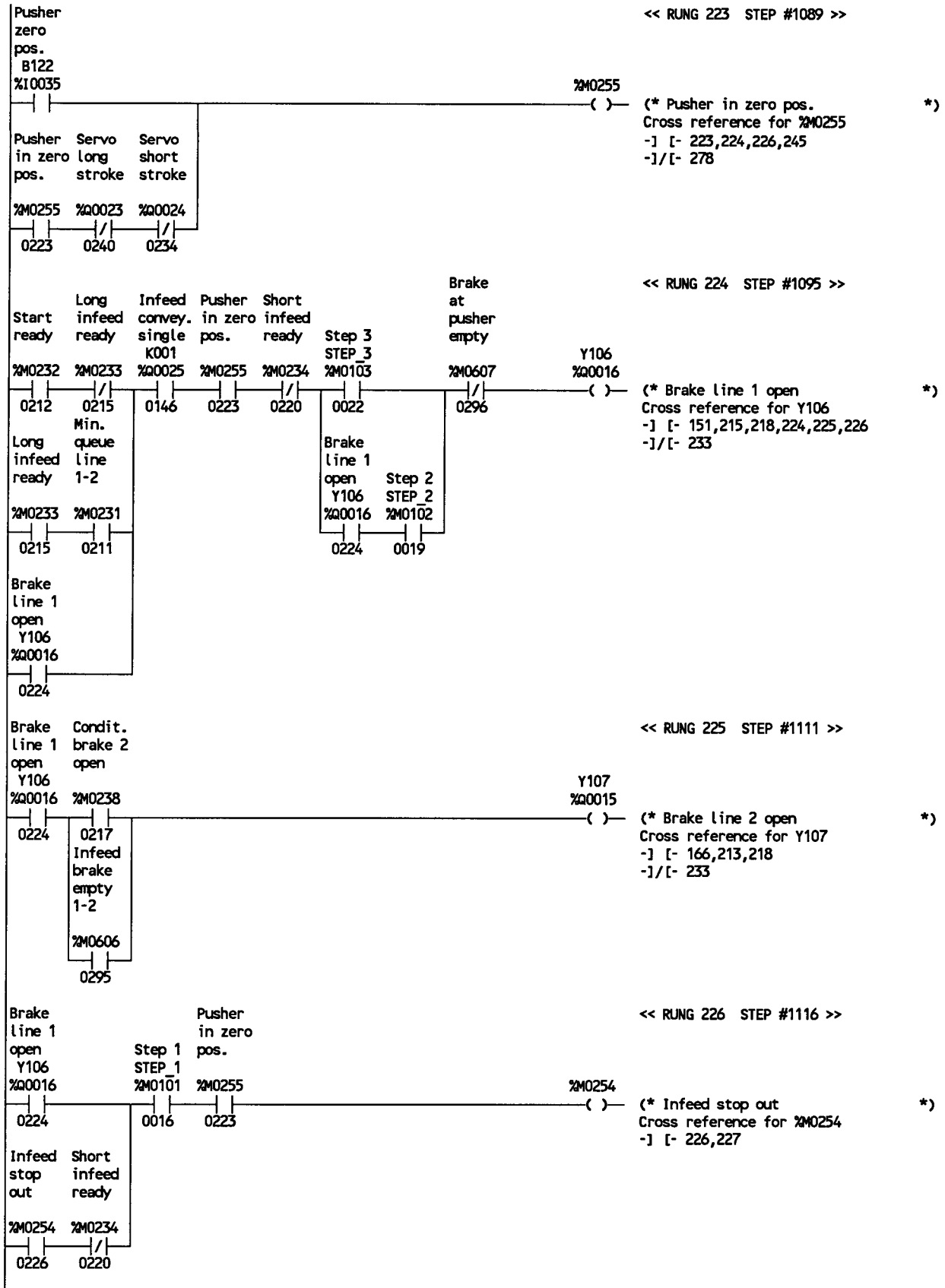




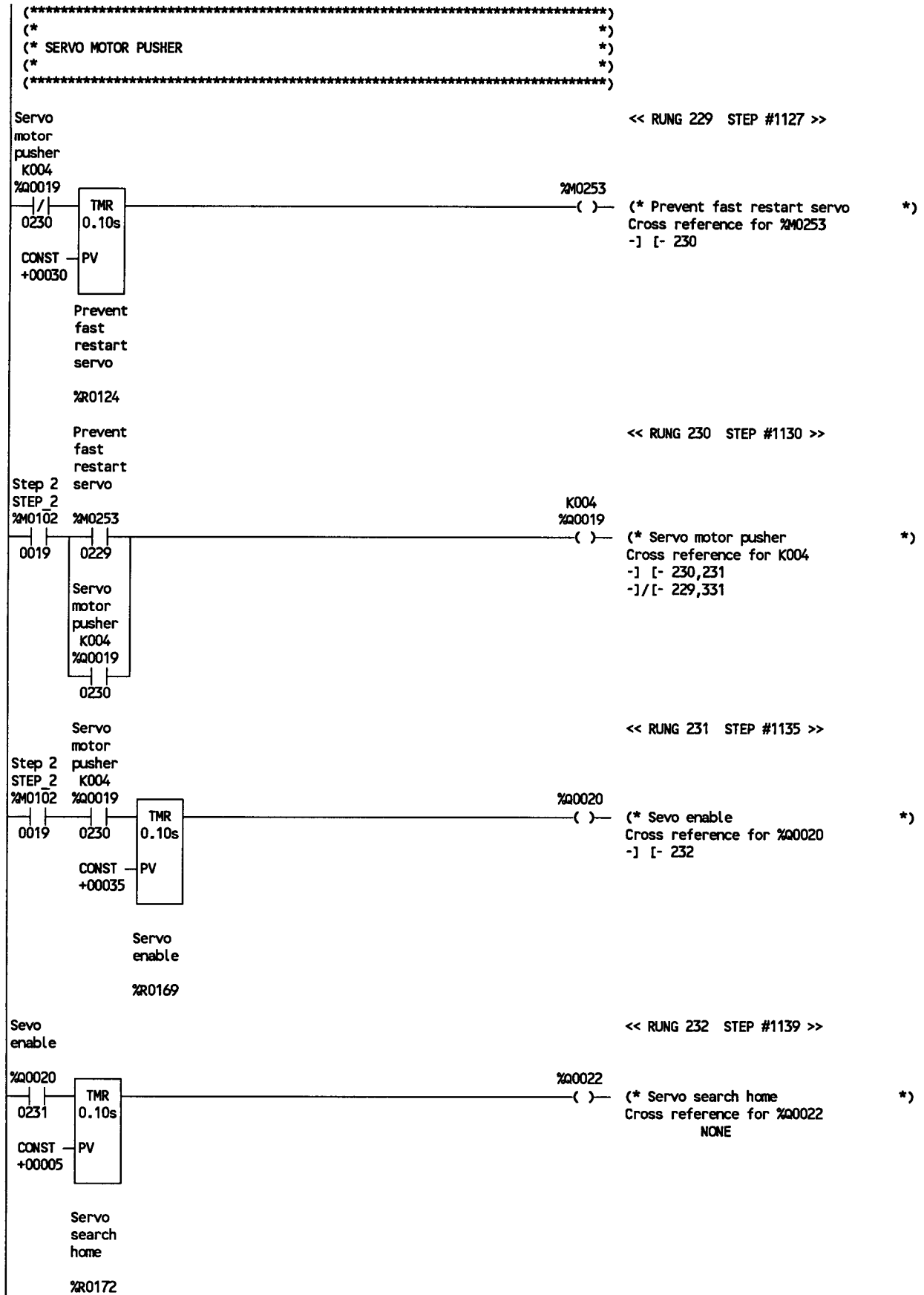


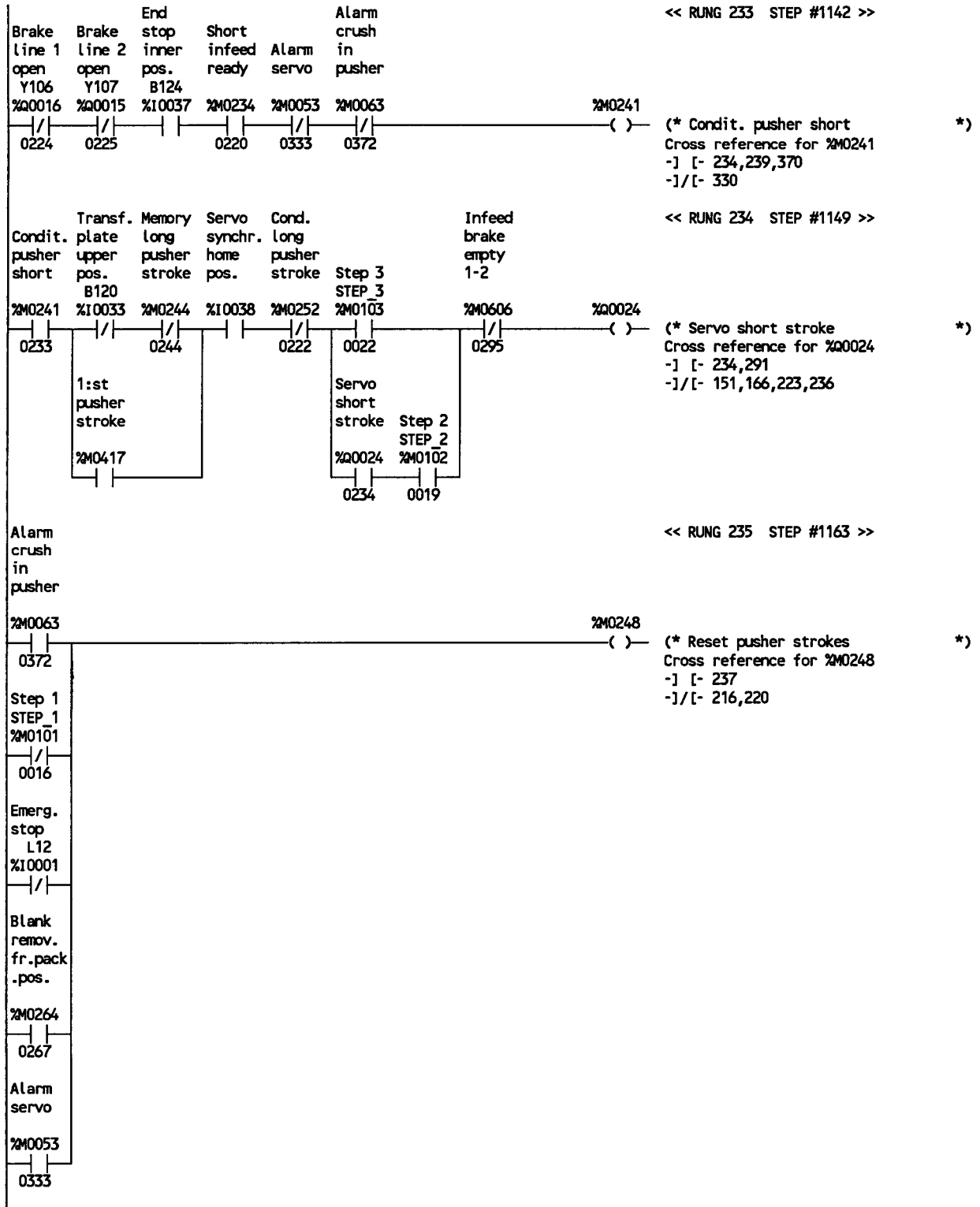


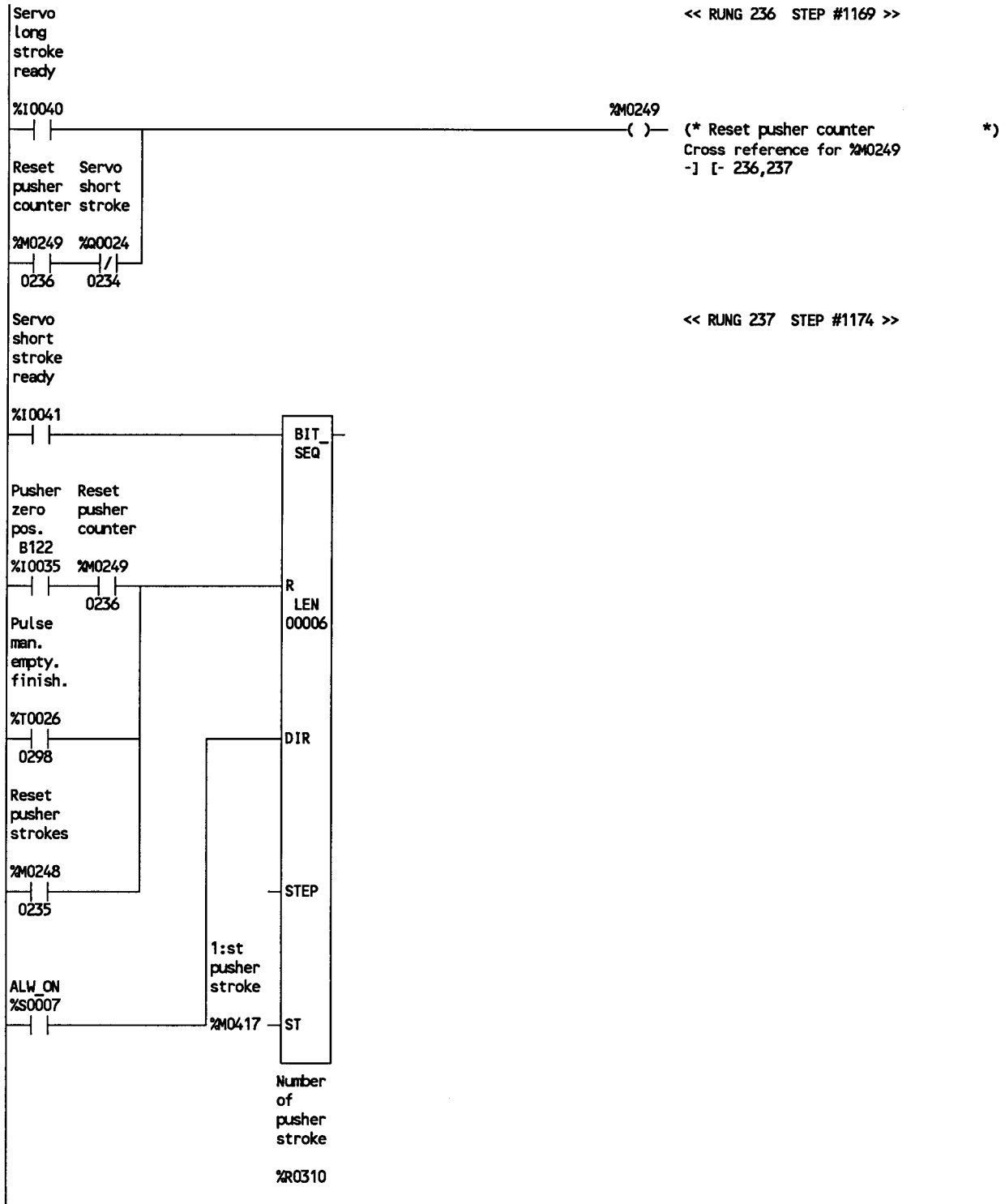


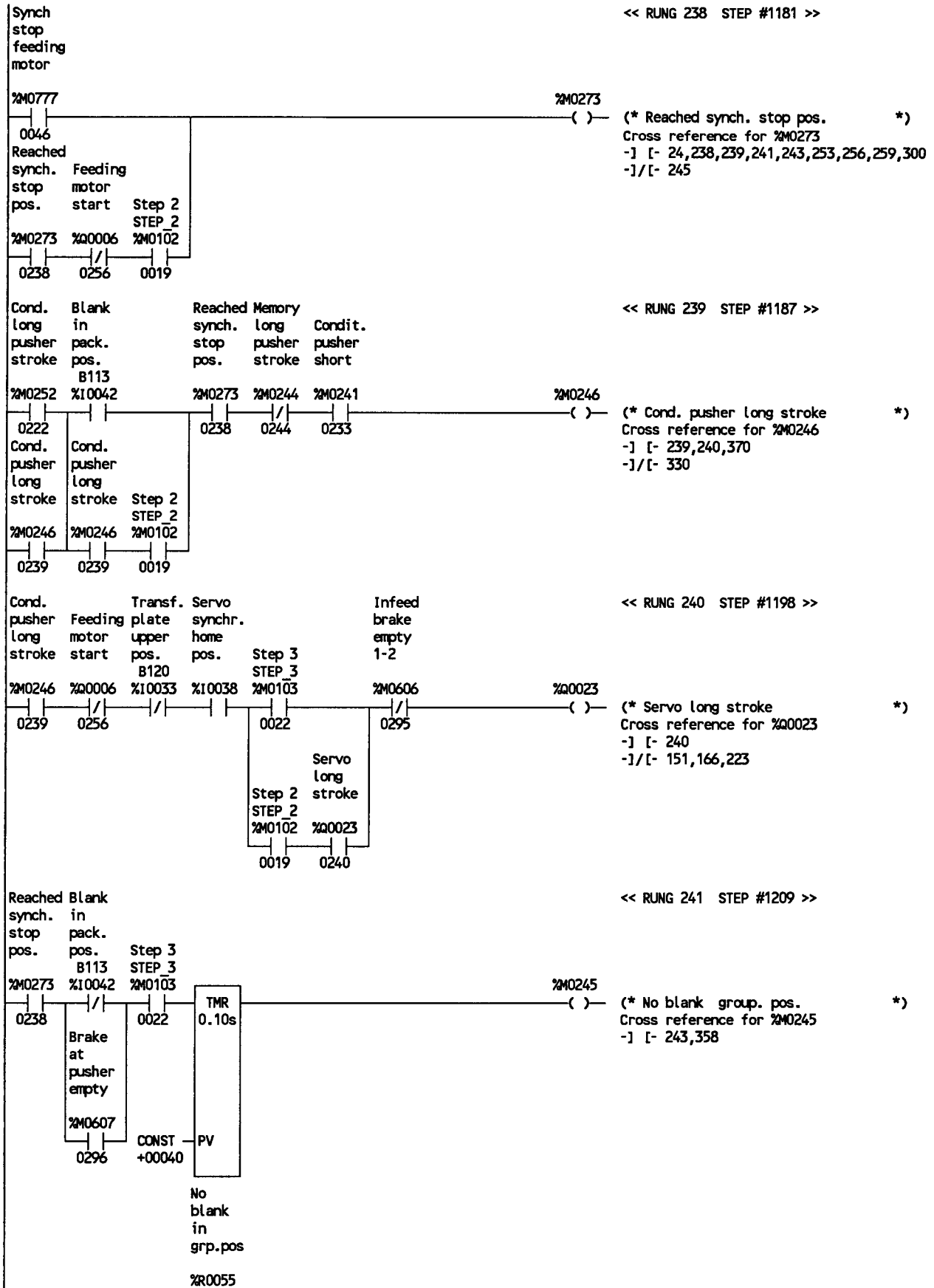


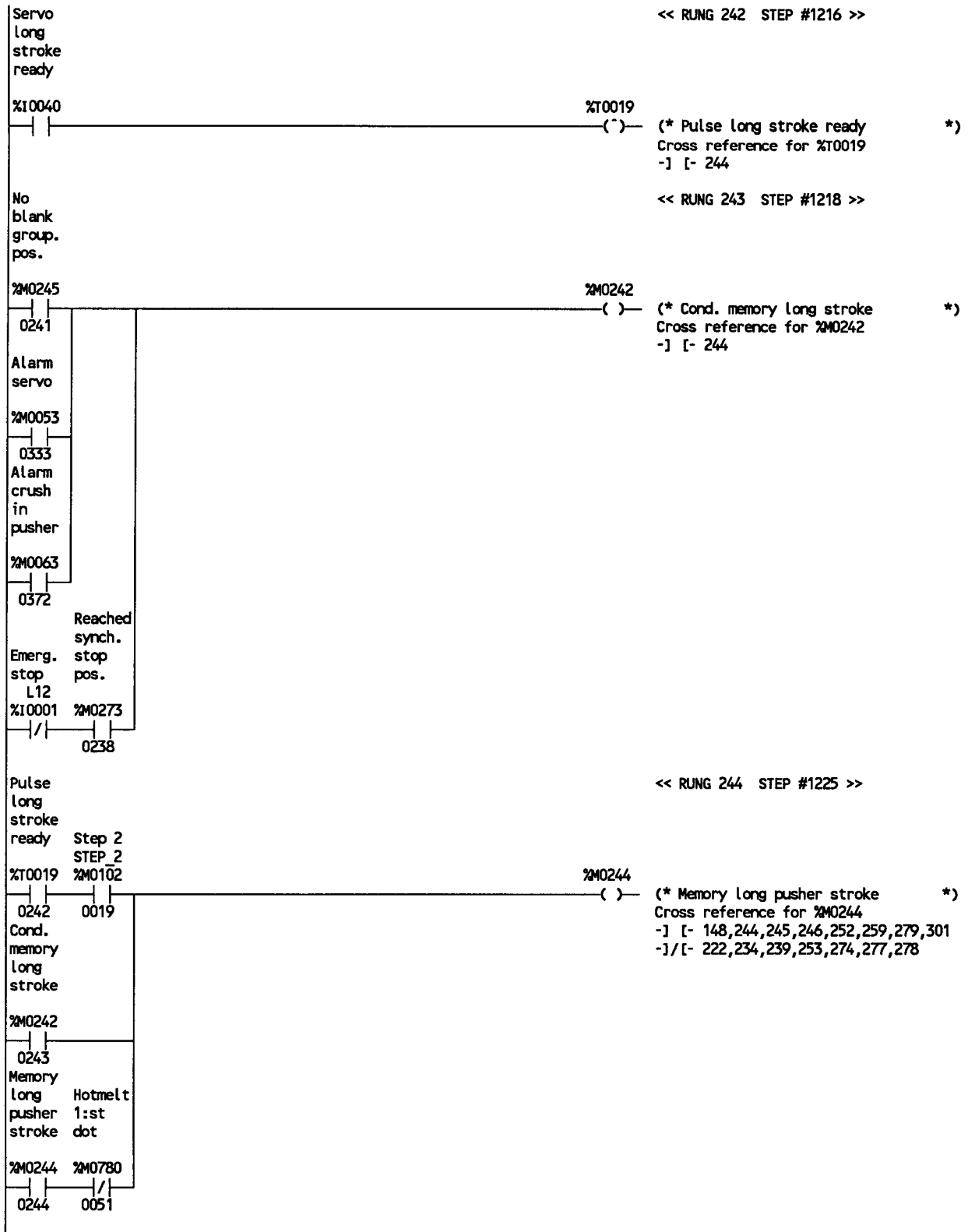


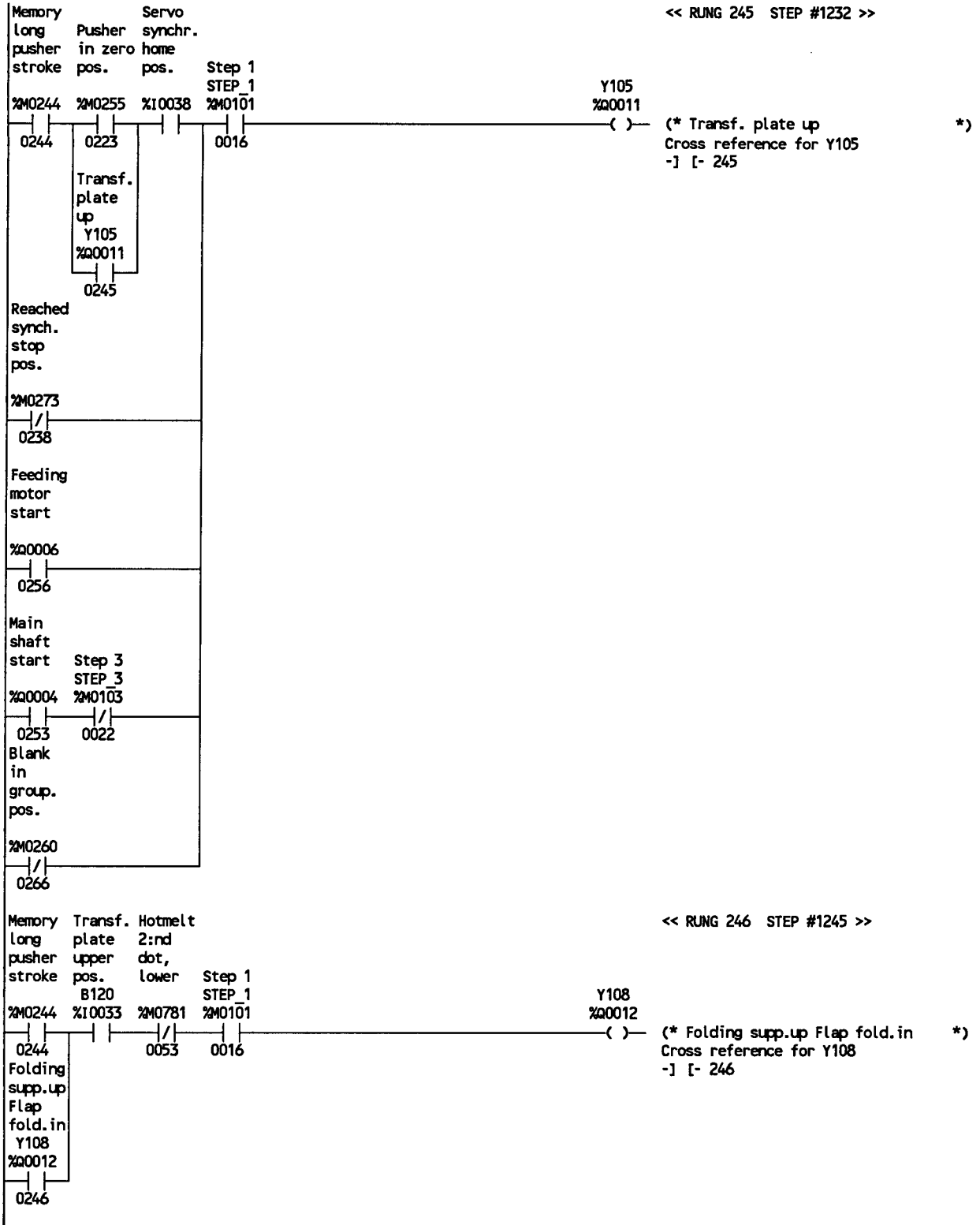


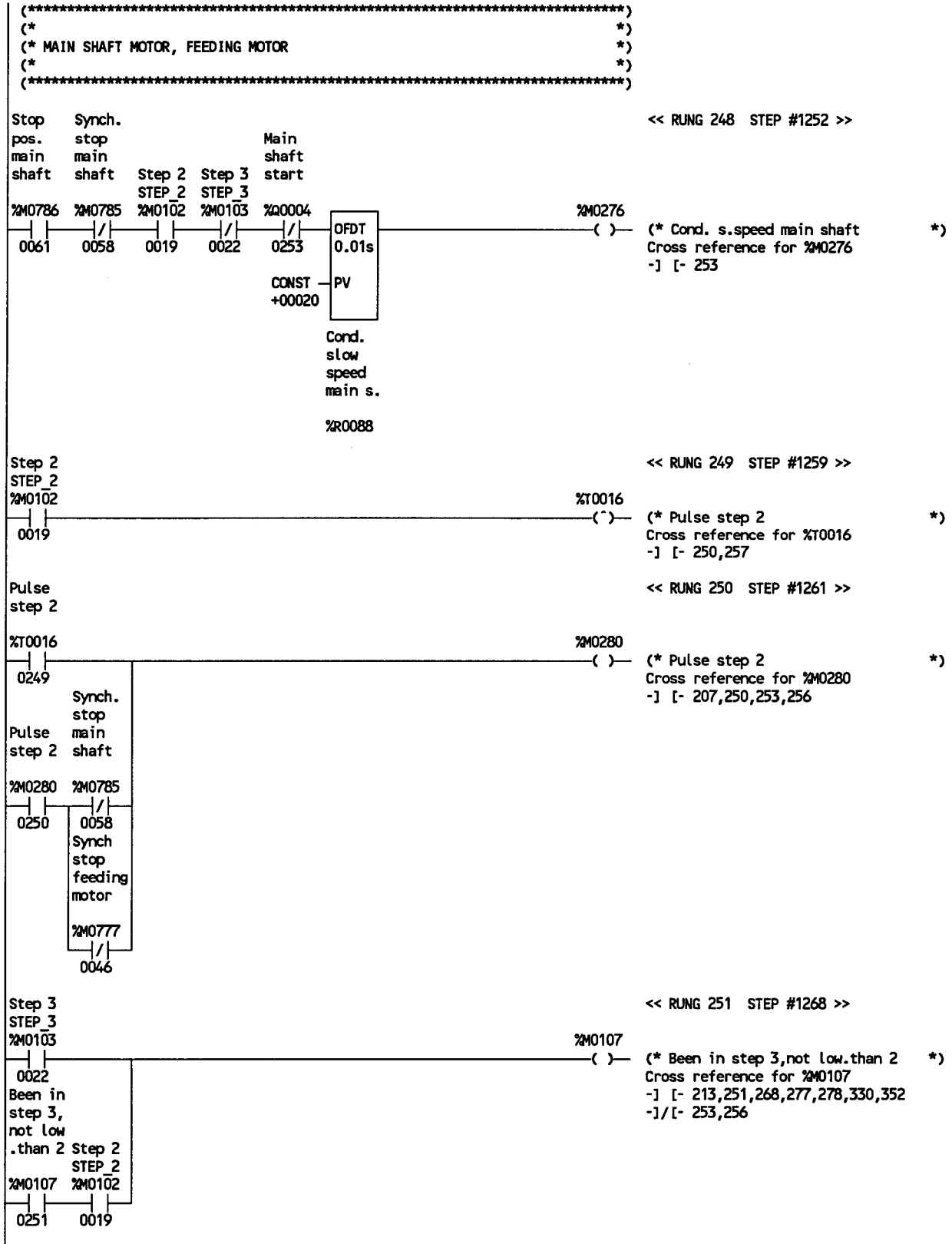


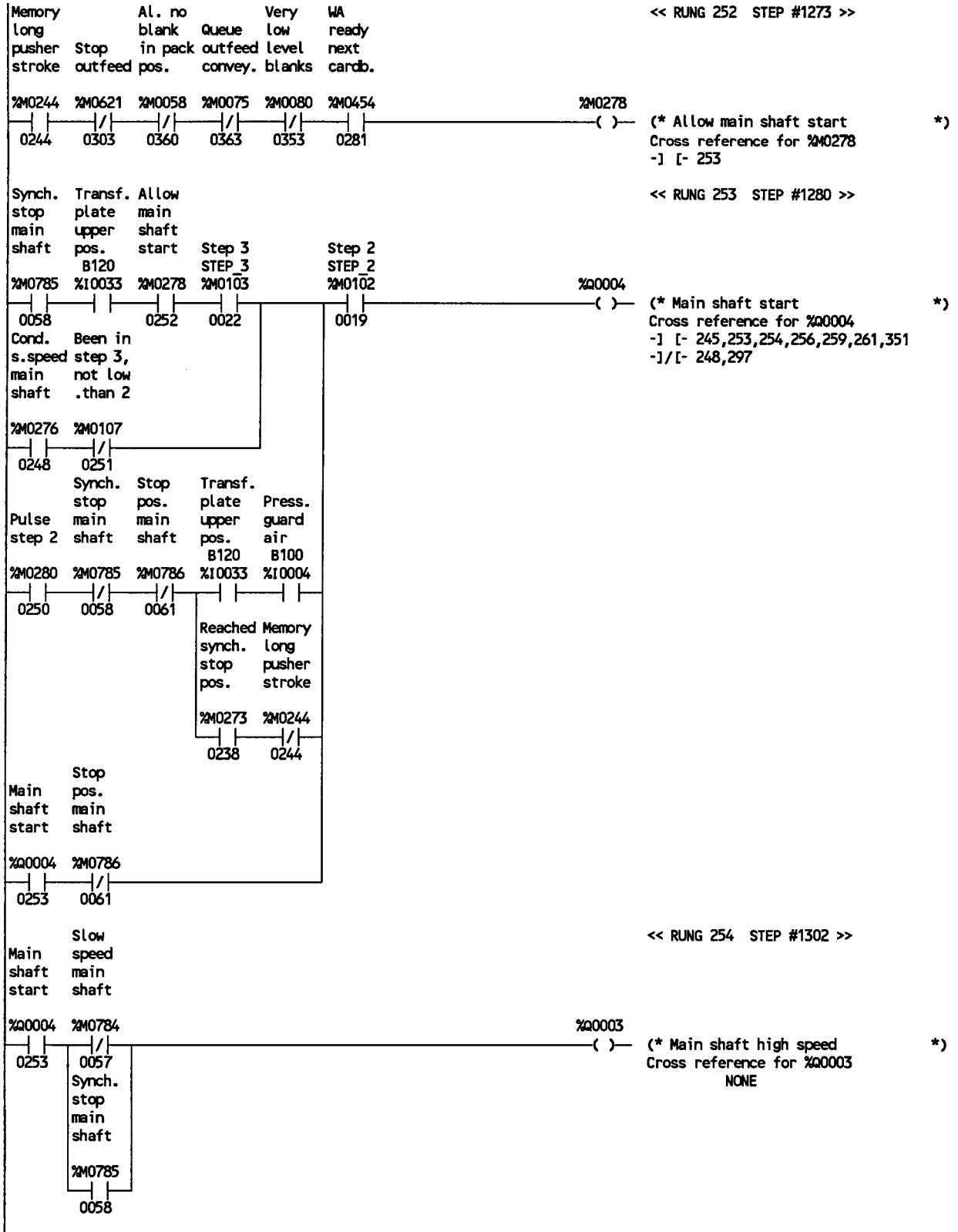


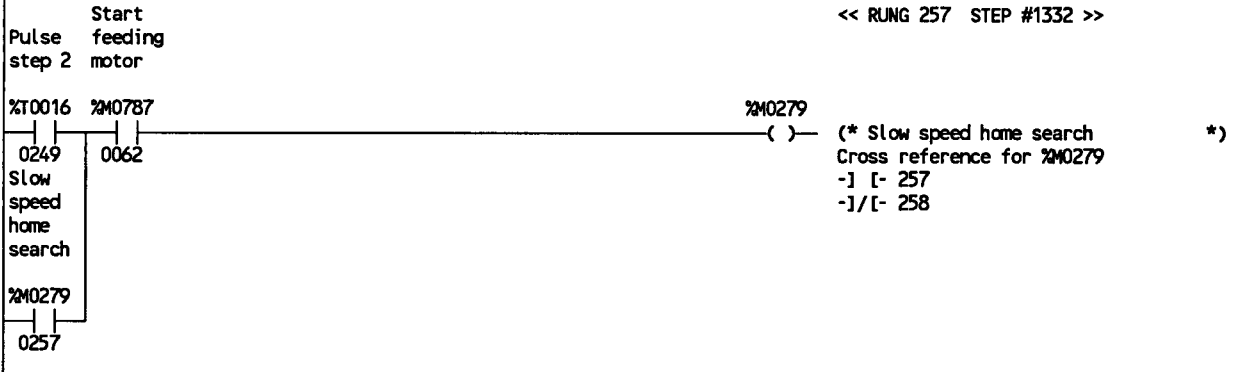
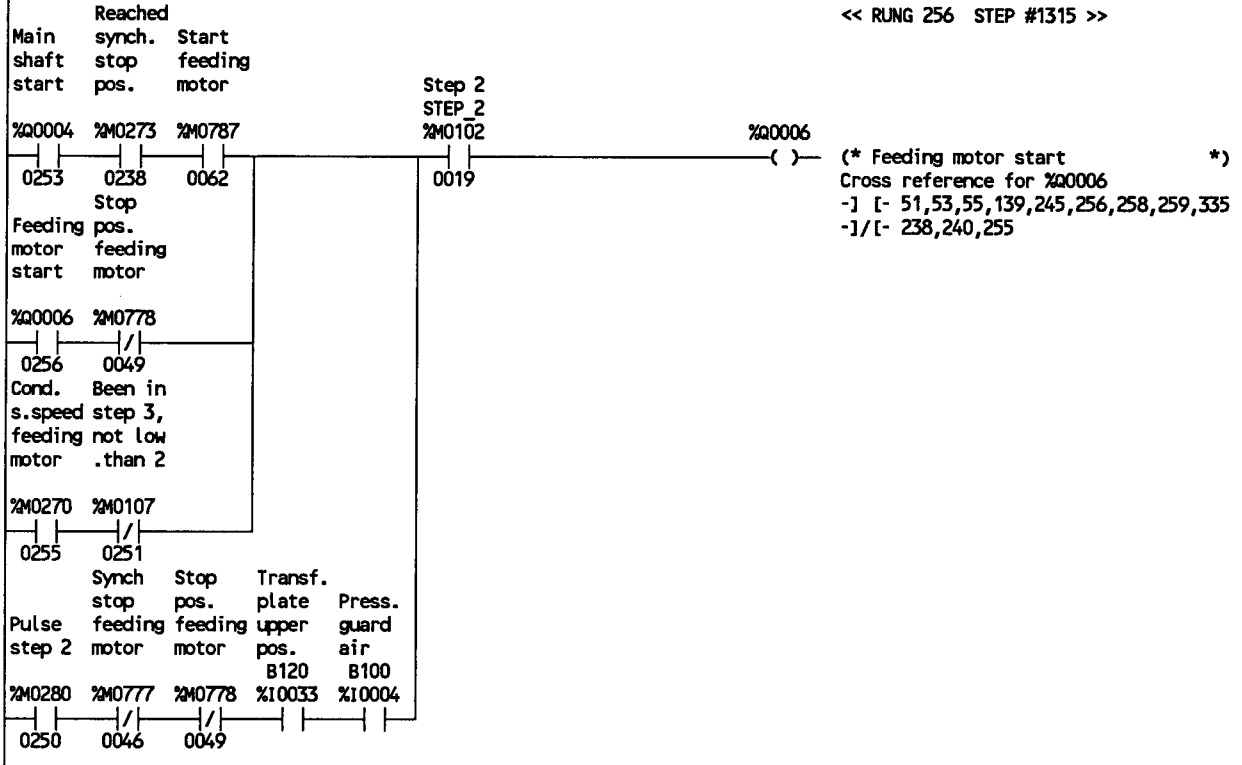
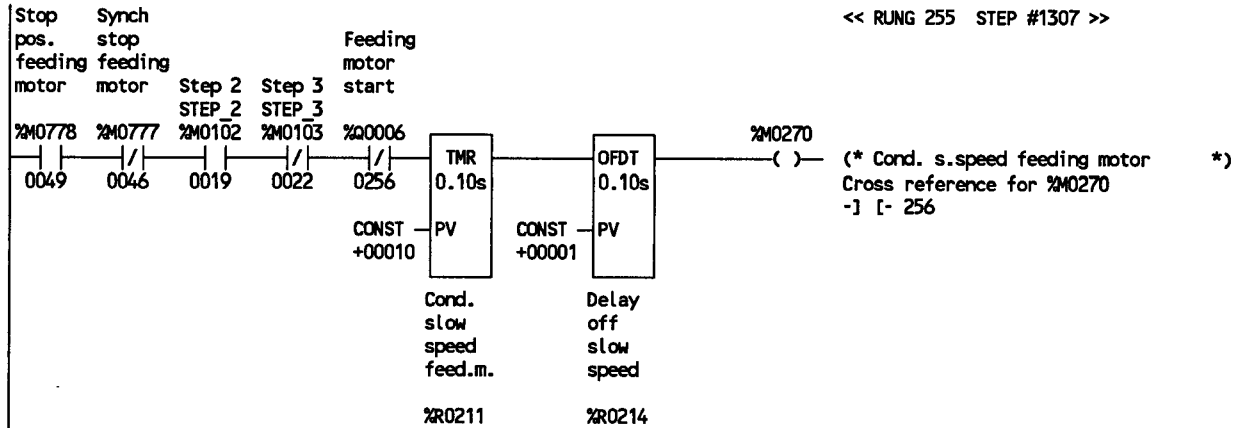


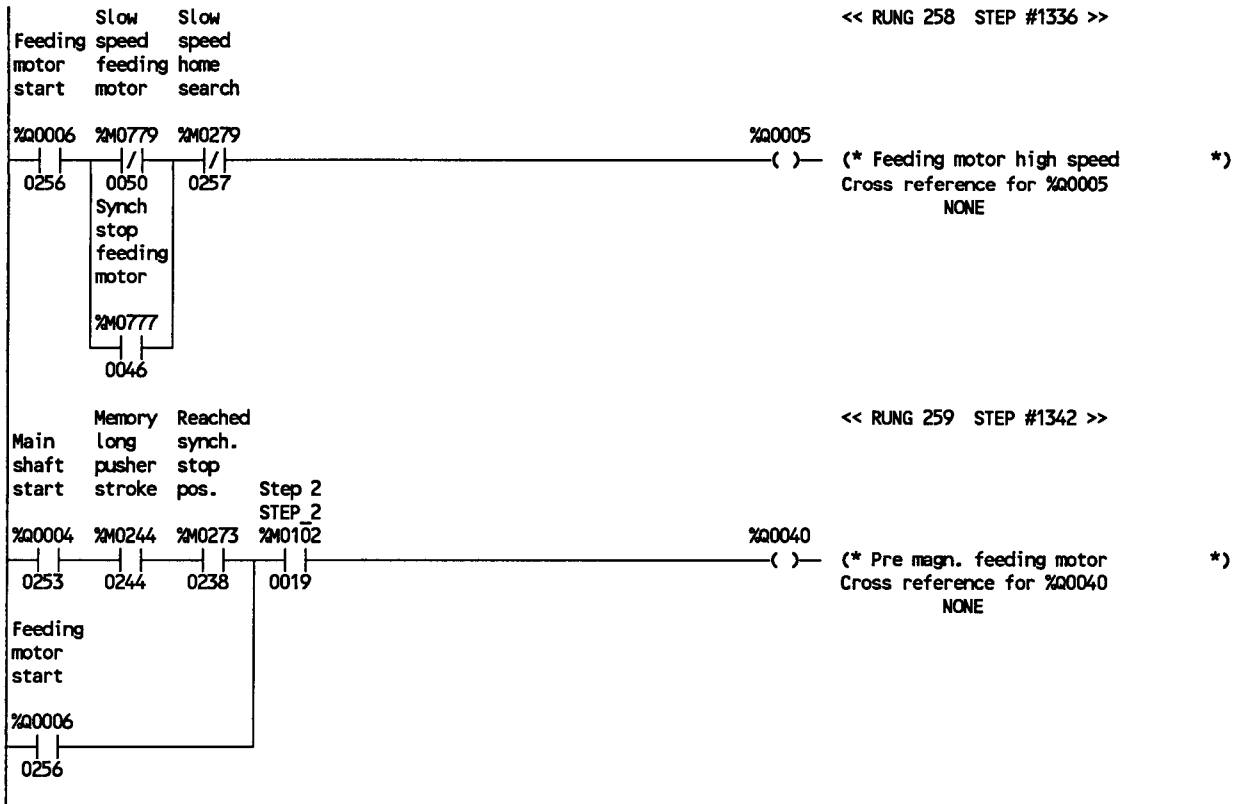


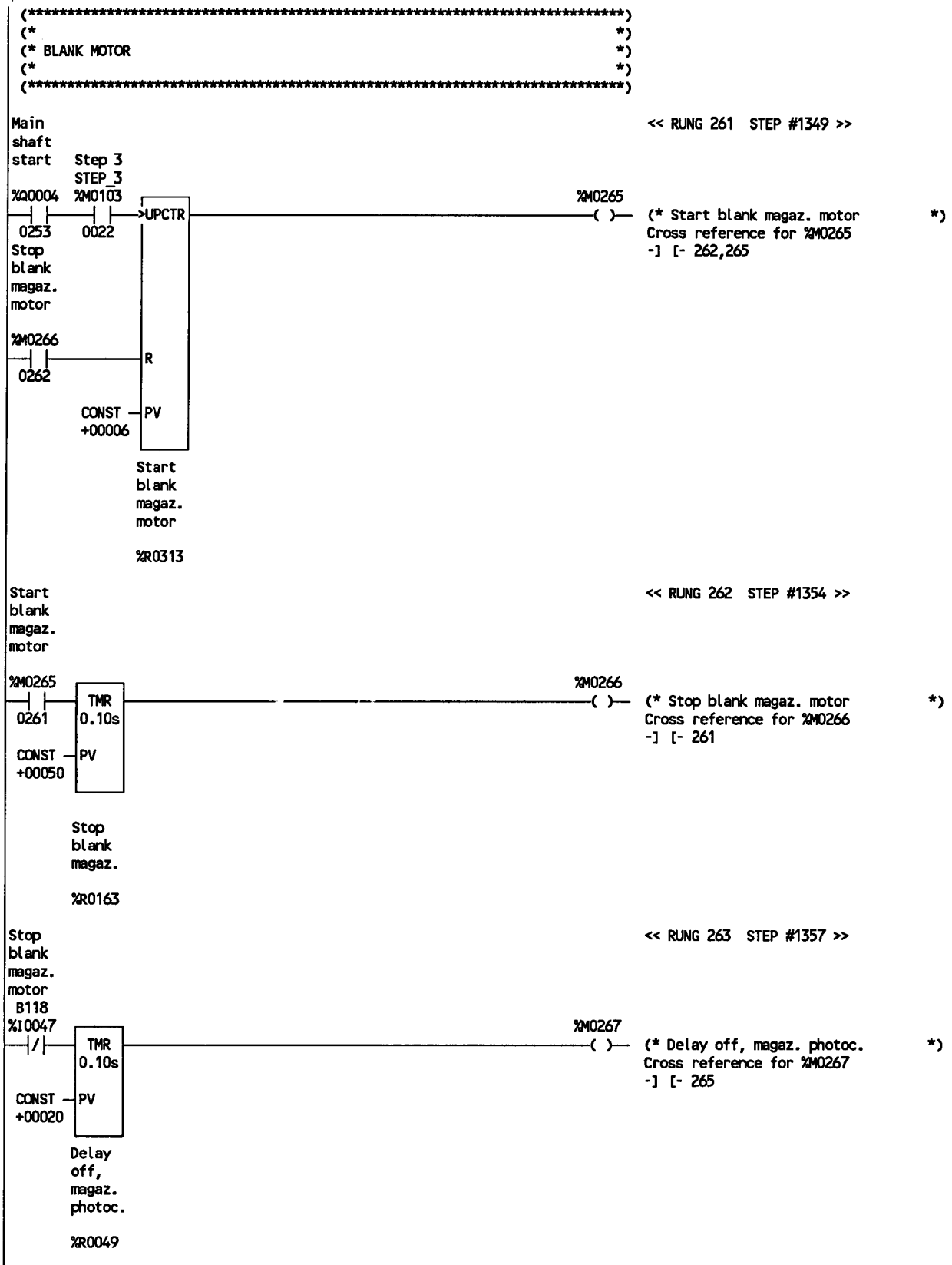


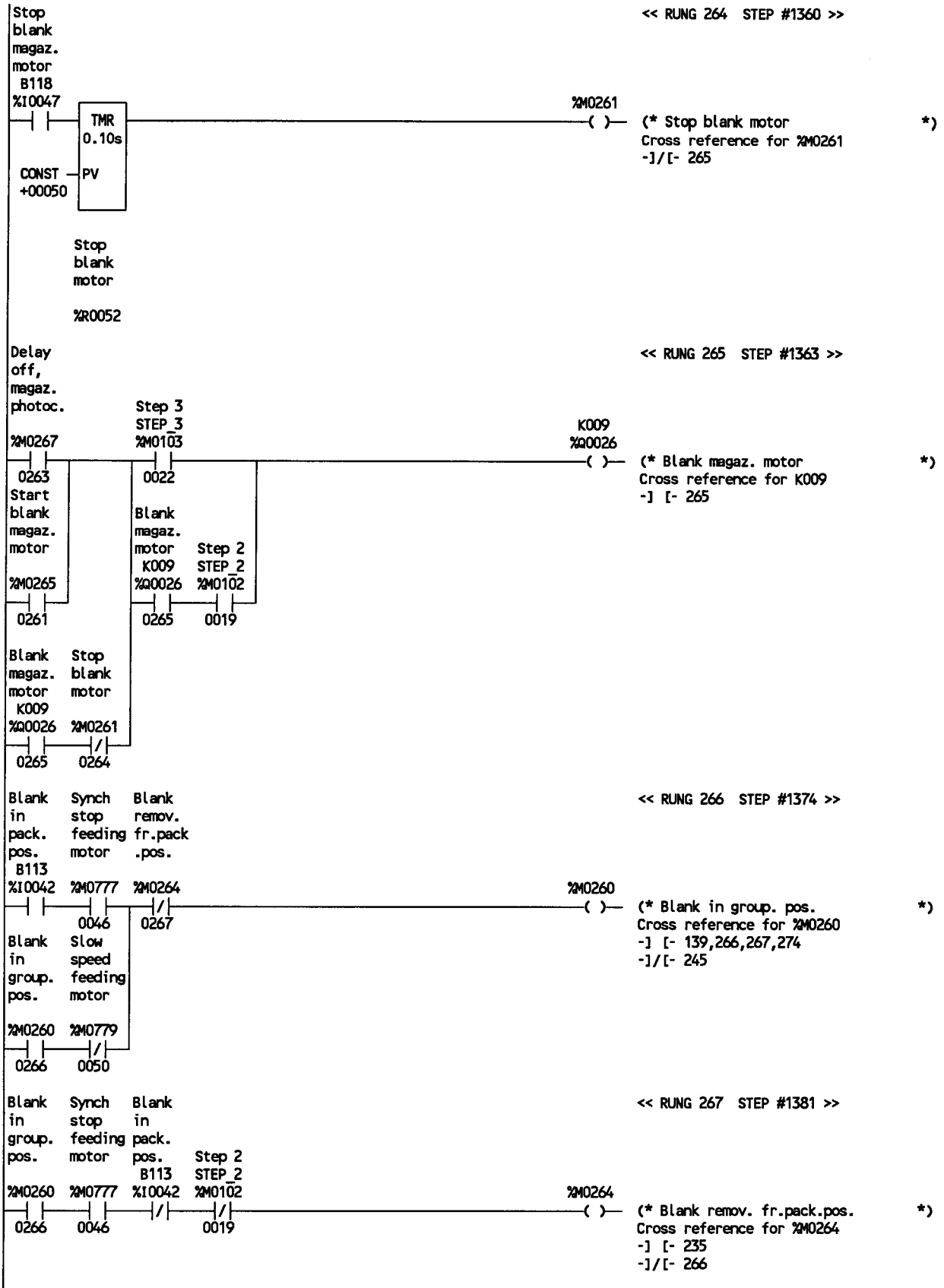


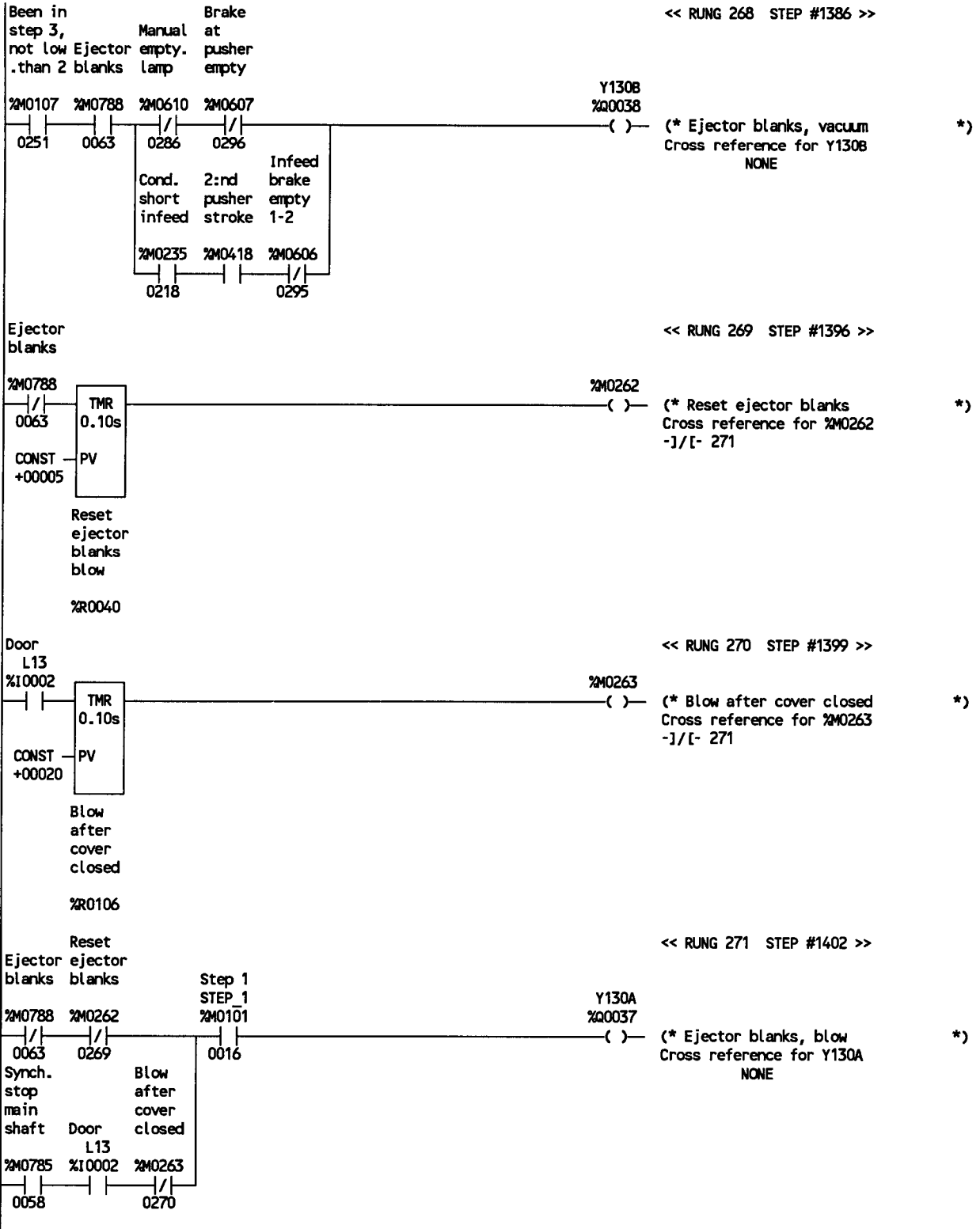


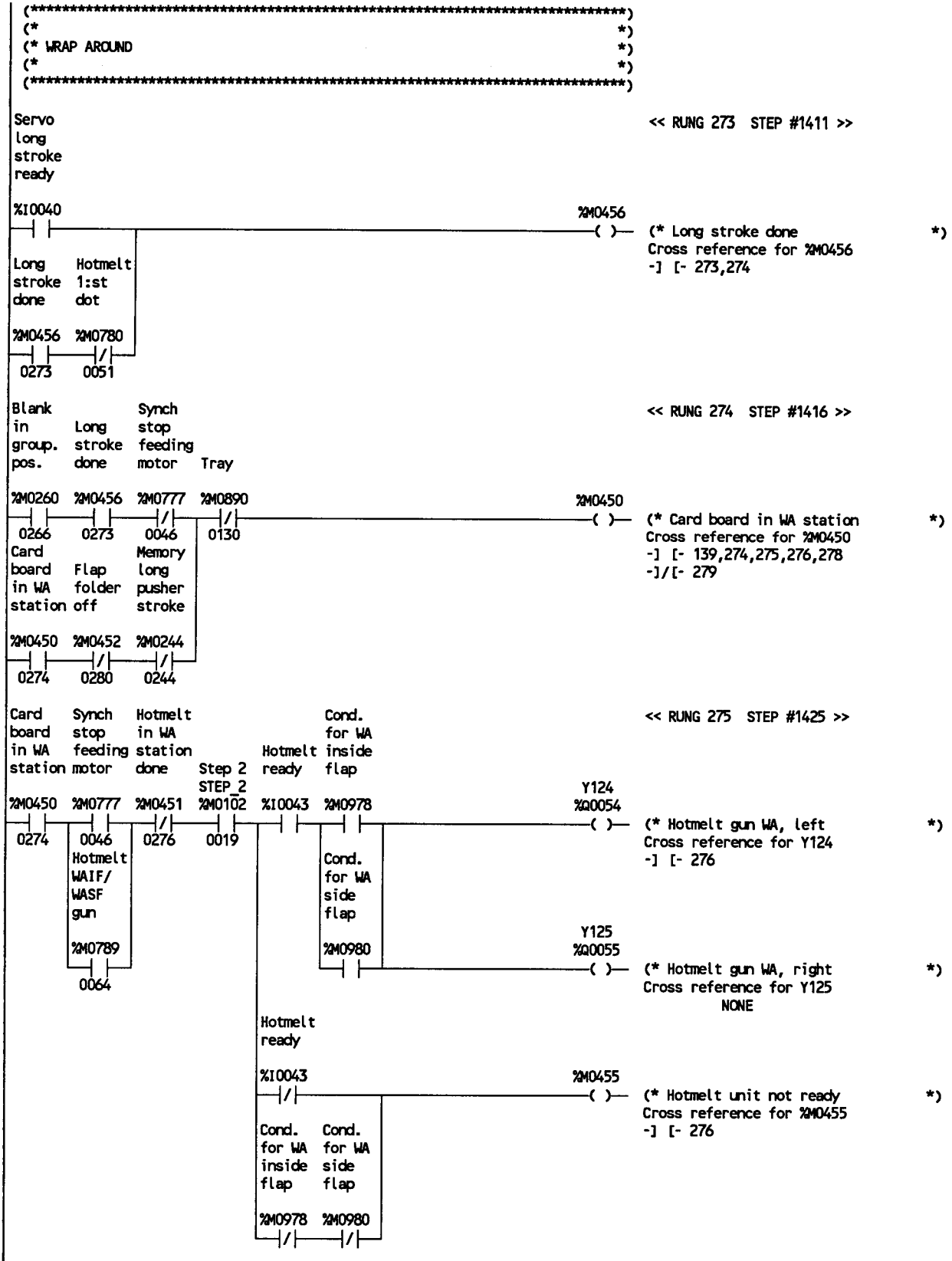


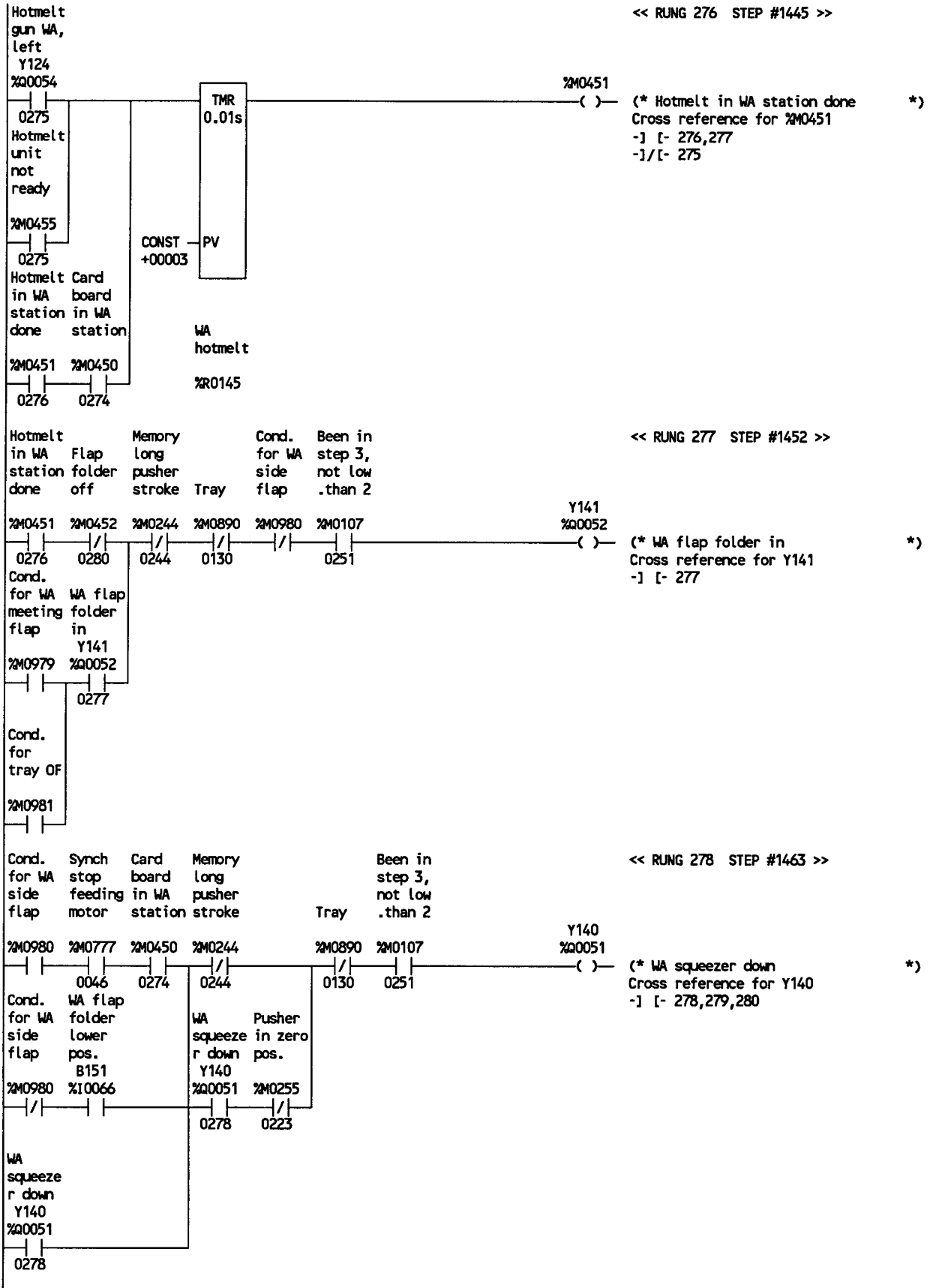


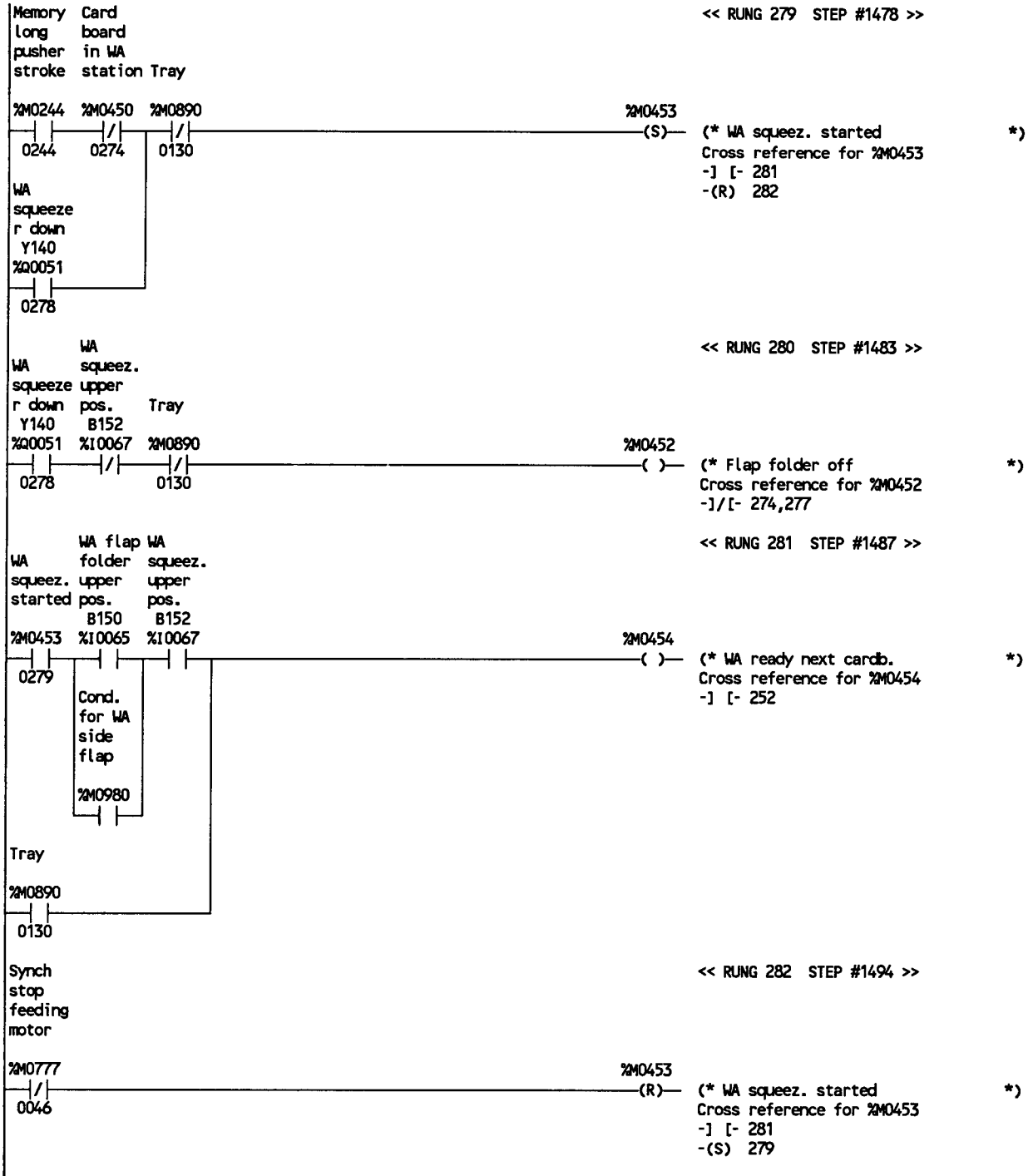


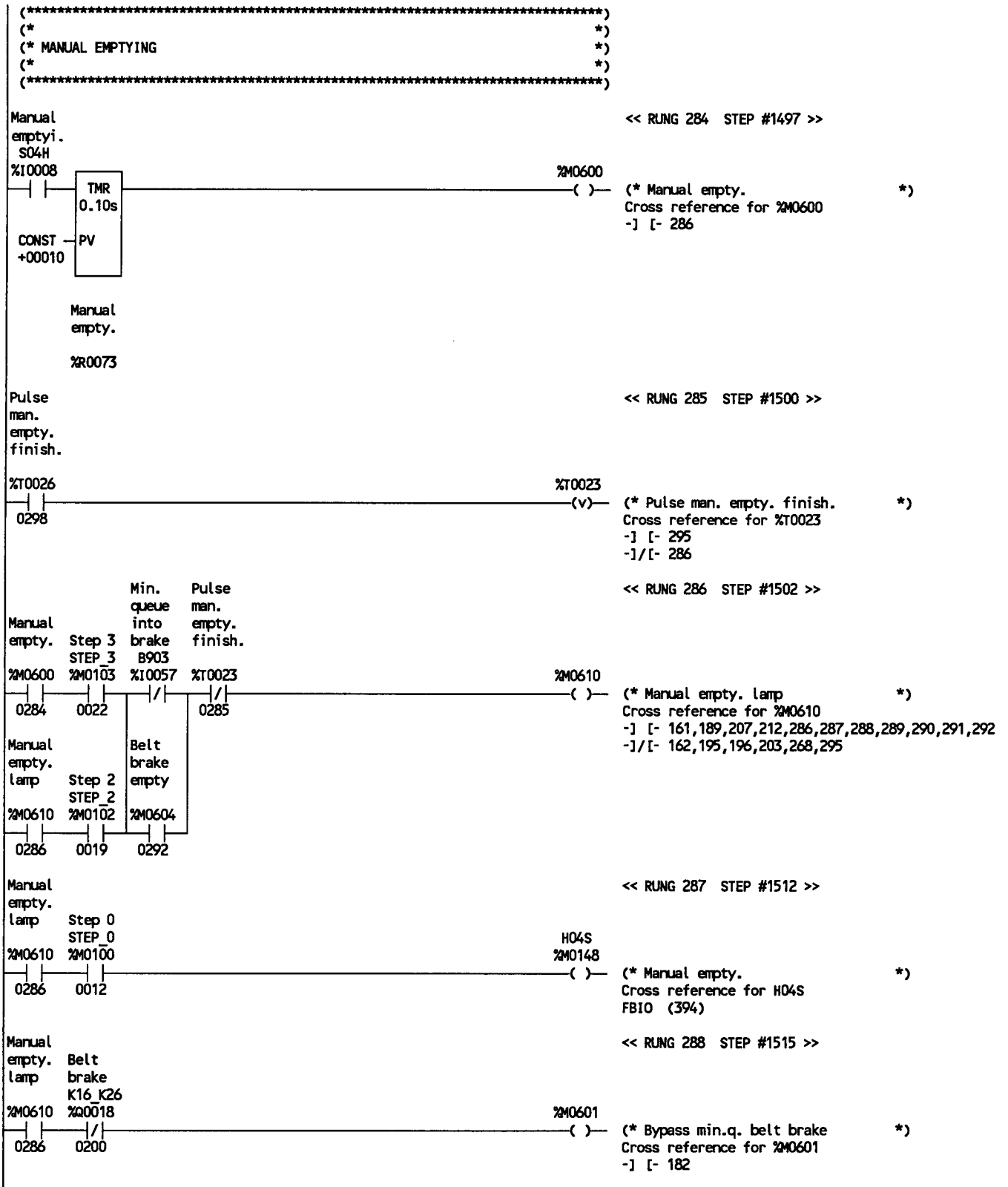


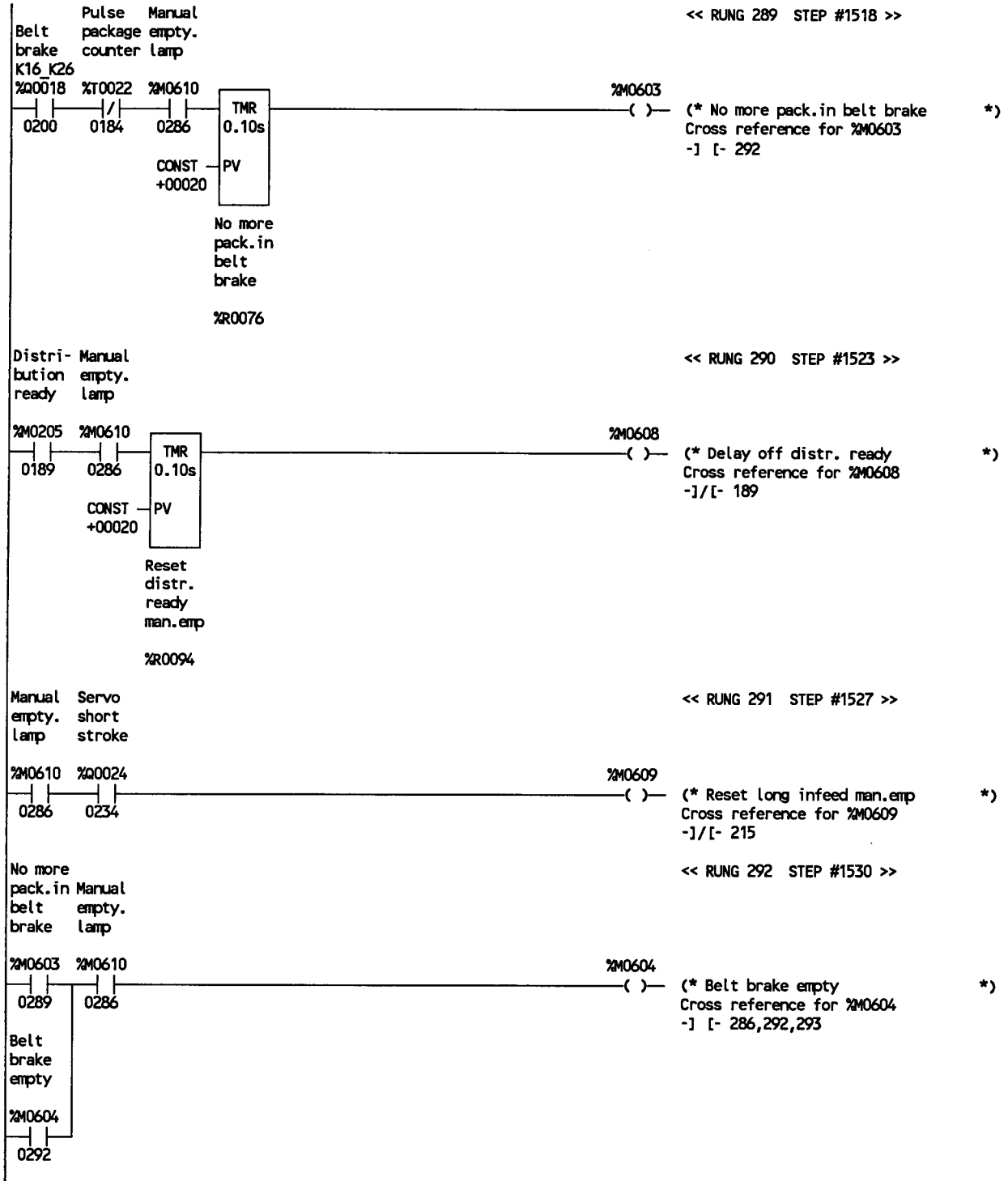


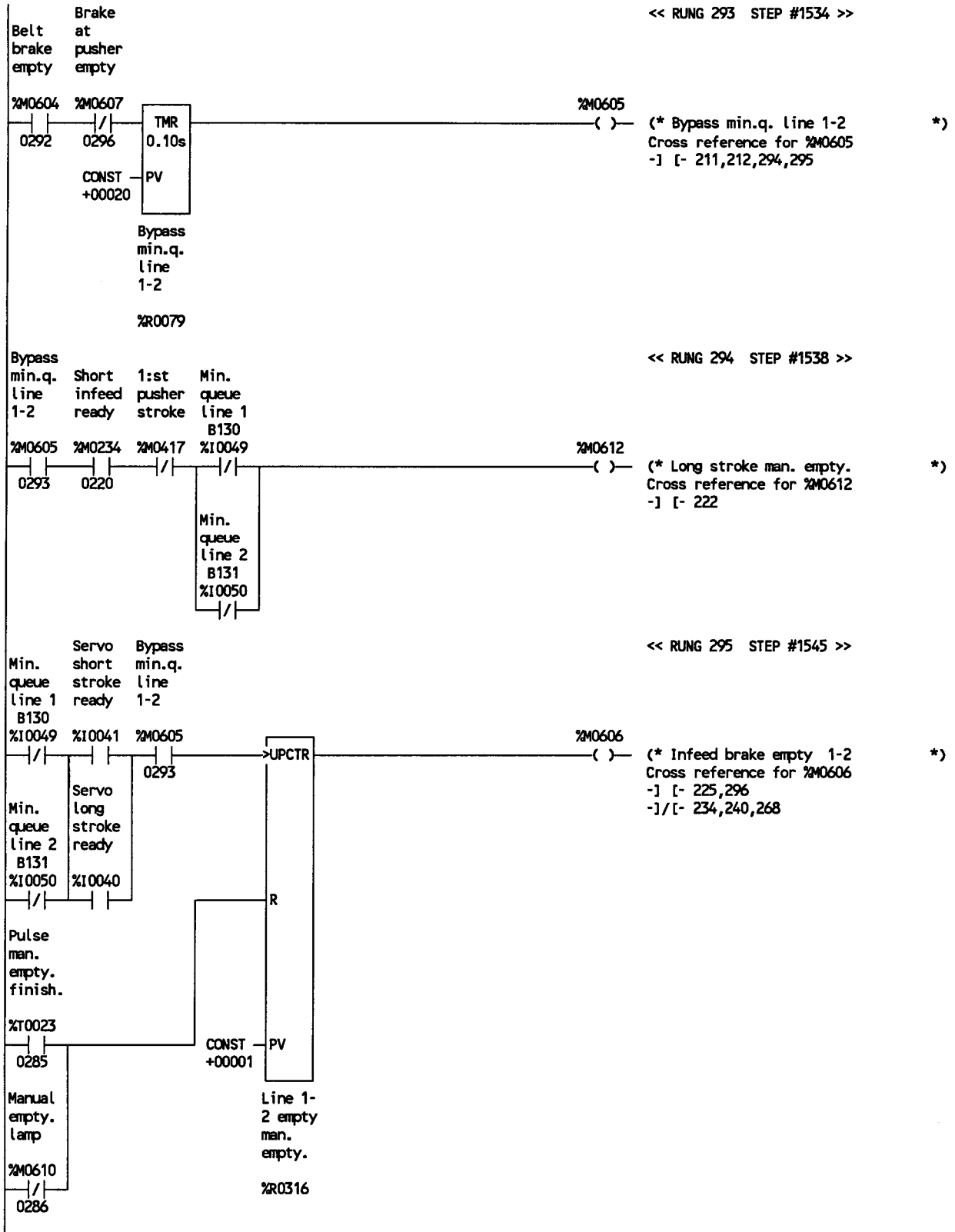


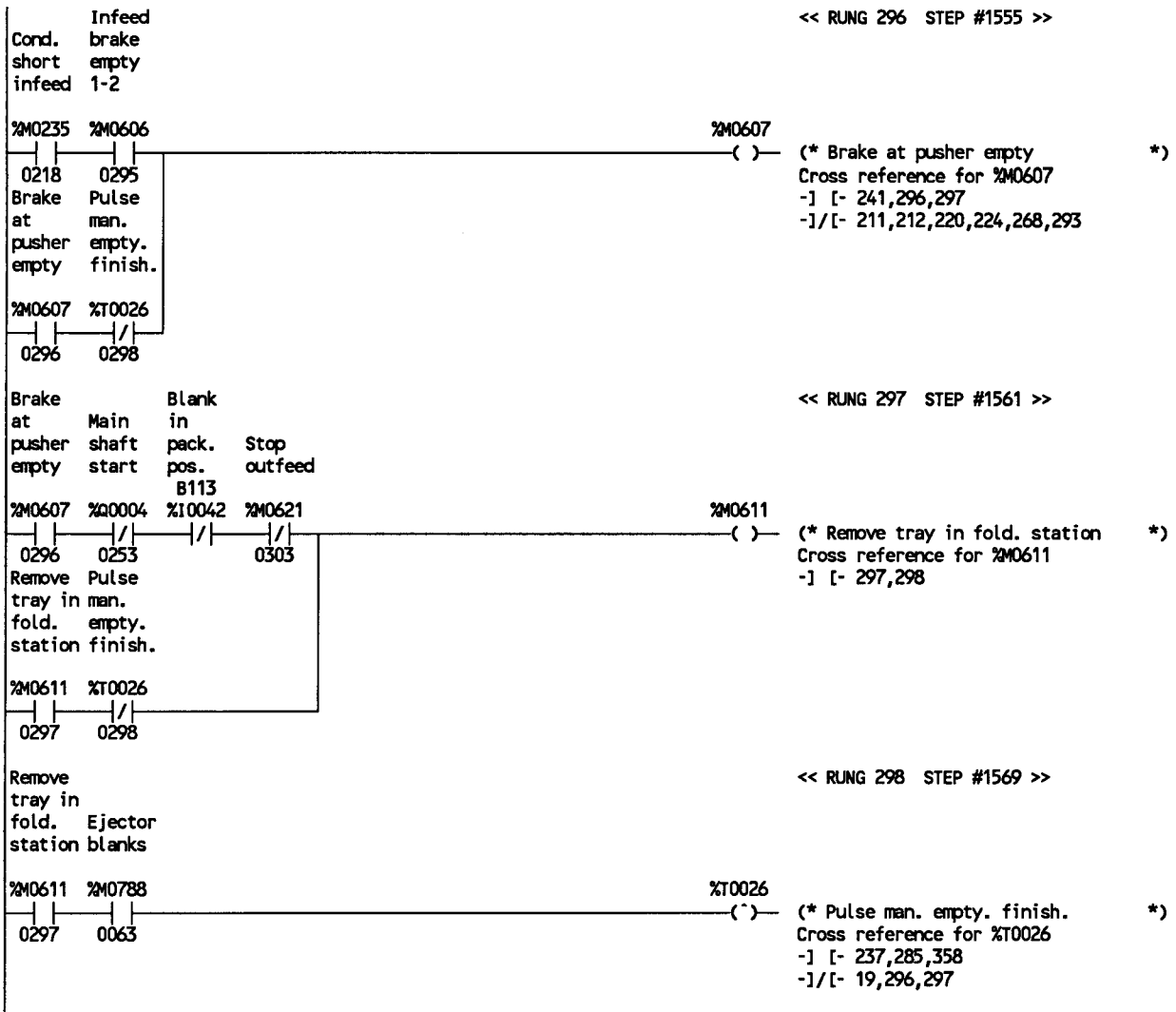


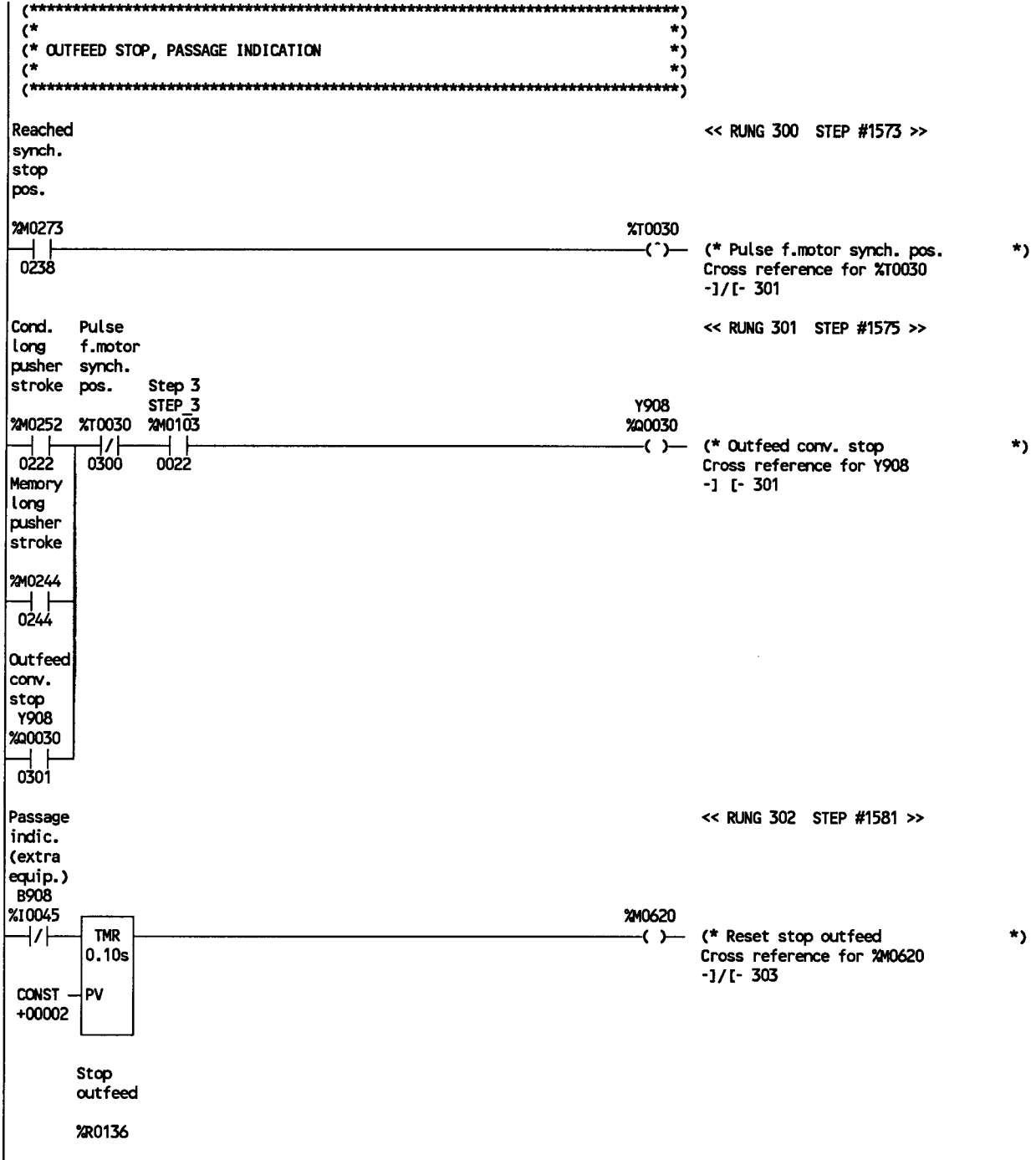


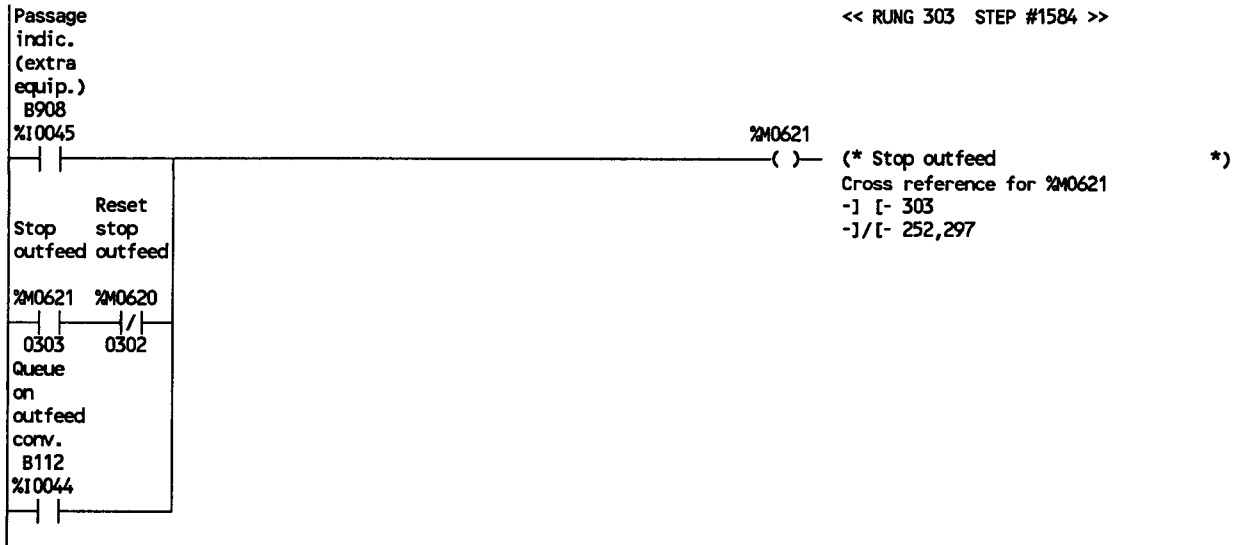


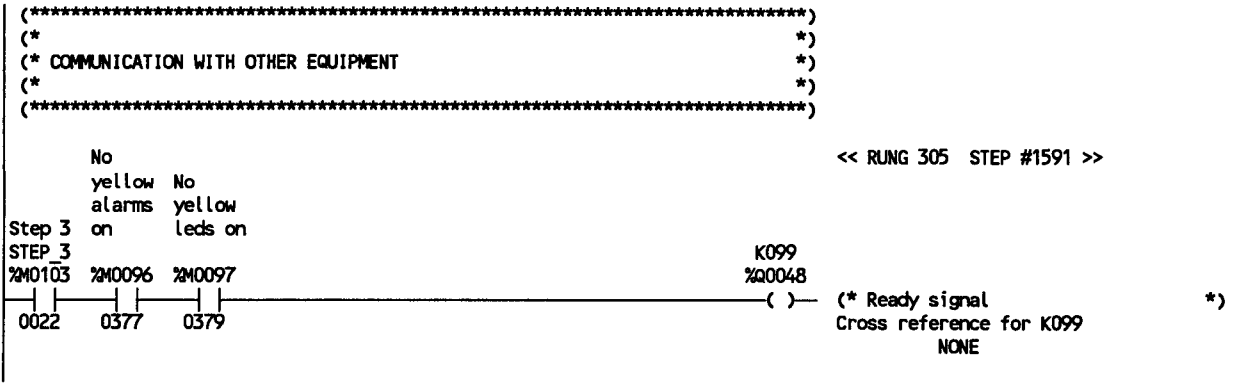




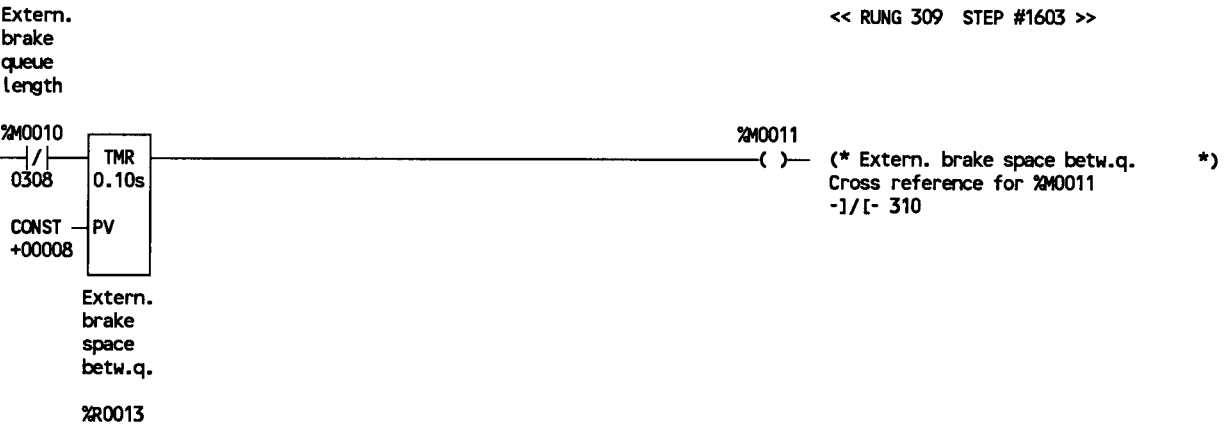
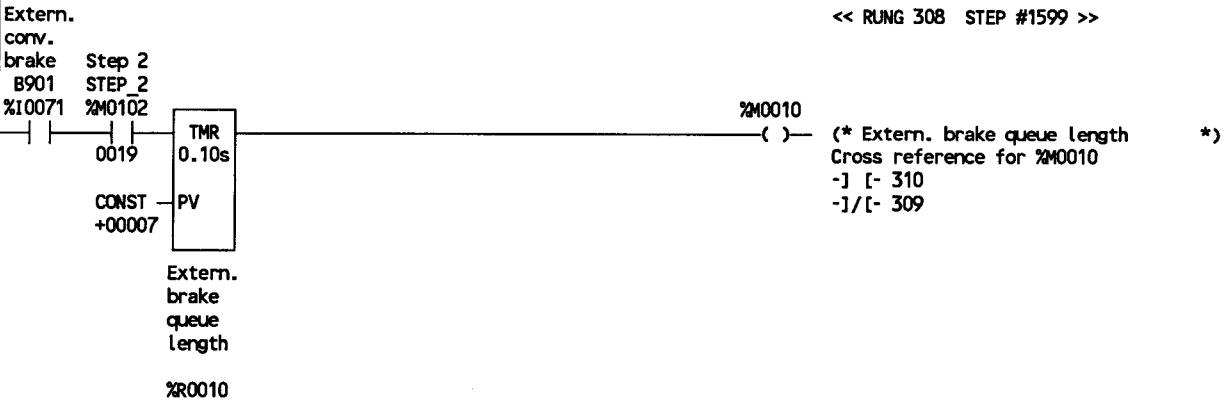
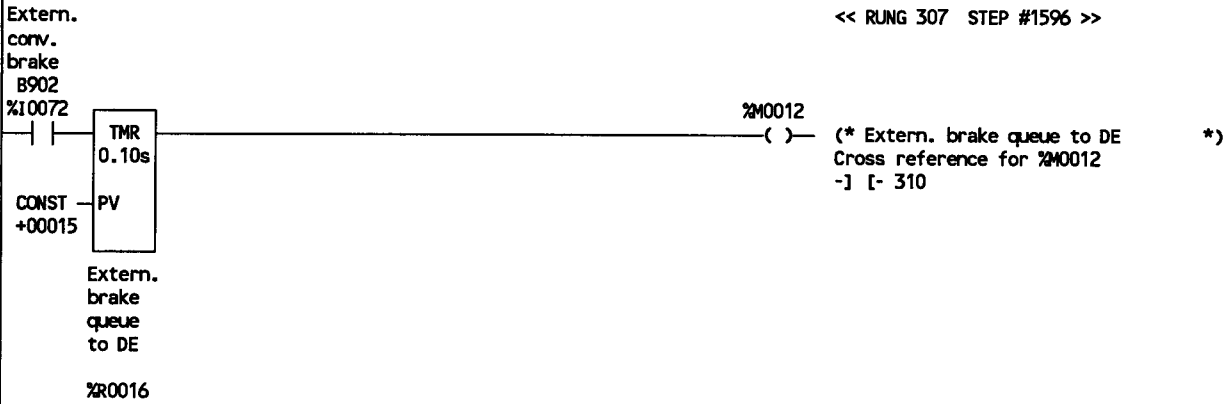








(*****)
(*
(* EXTERNAL BRAKE
(*
(*****)



<< RUNG 310 STEP #1606 >>

Extern.
brake
queue
to DE

%M0012

0307

Step 1 Step 2
STEP_1 STEP_2
%M0101 %M0102

0016 0019

Extern.
brake
queue
length

%M0010

0308

Extern.
brake
space
betw.q.

%M0011

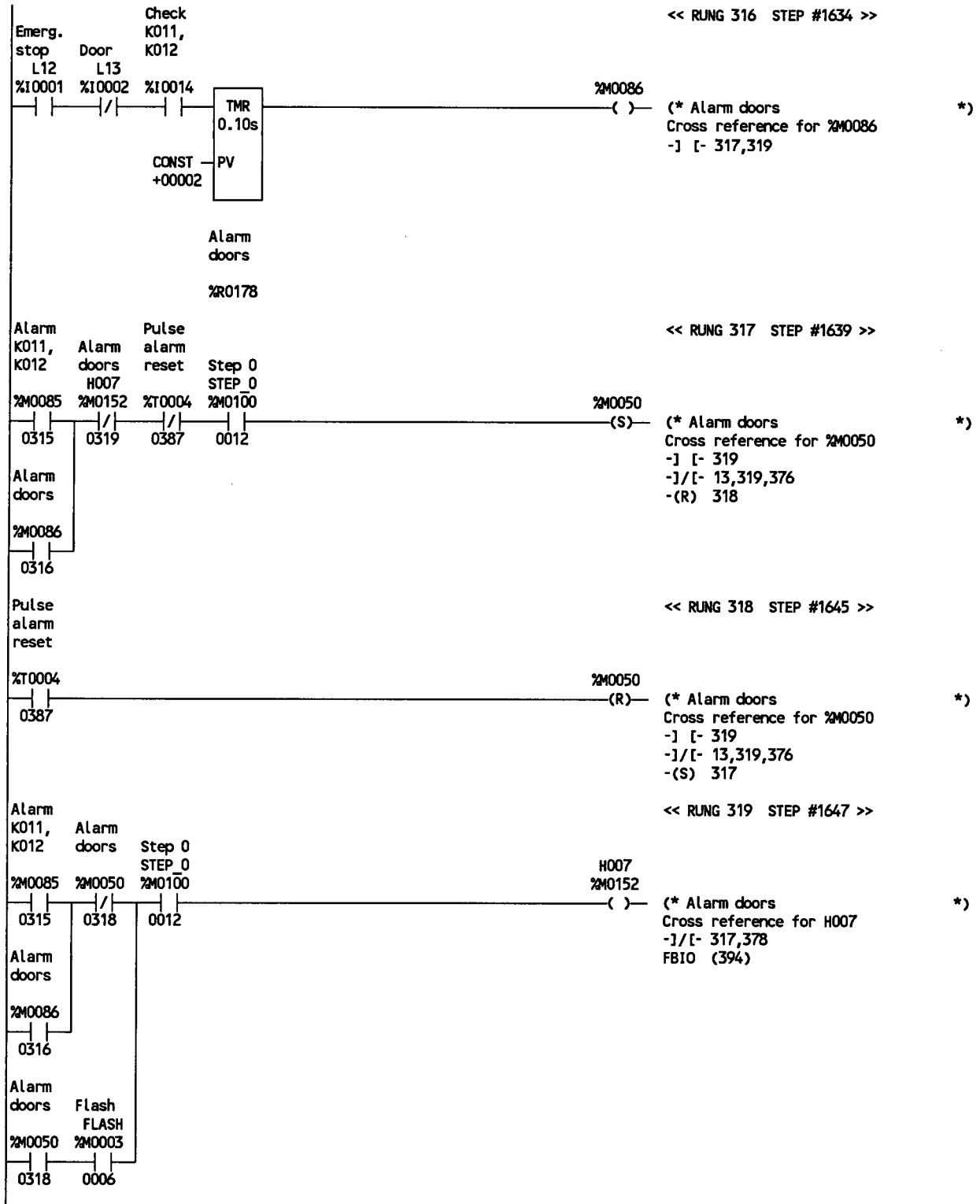
0309

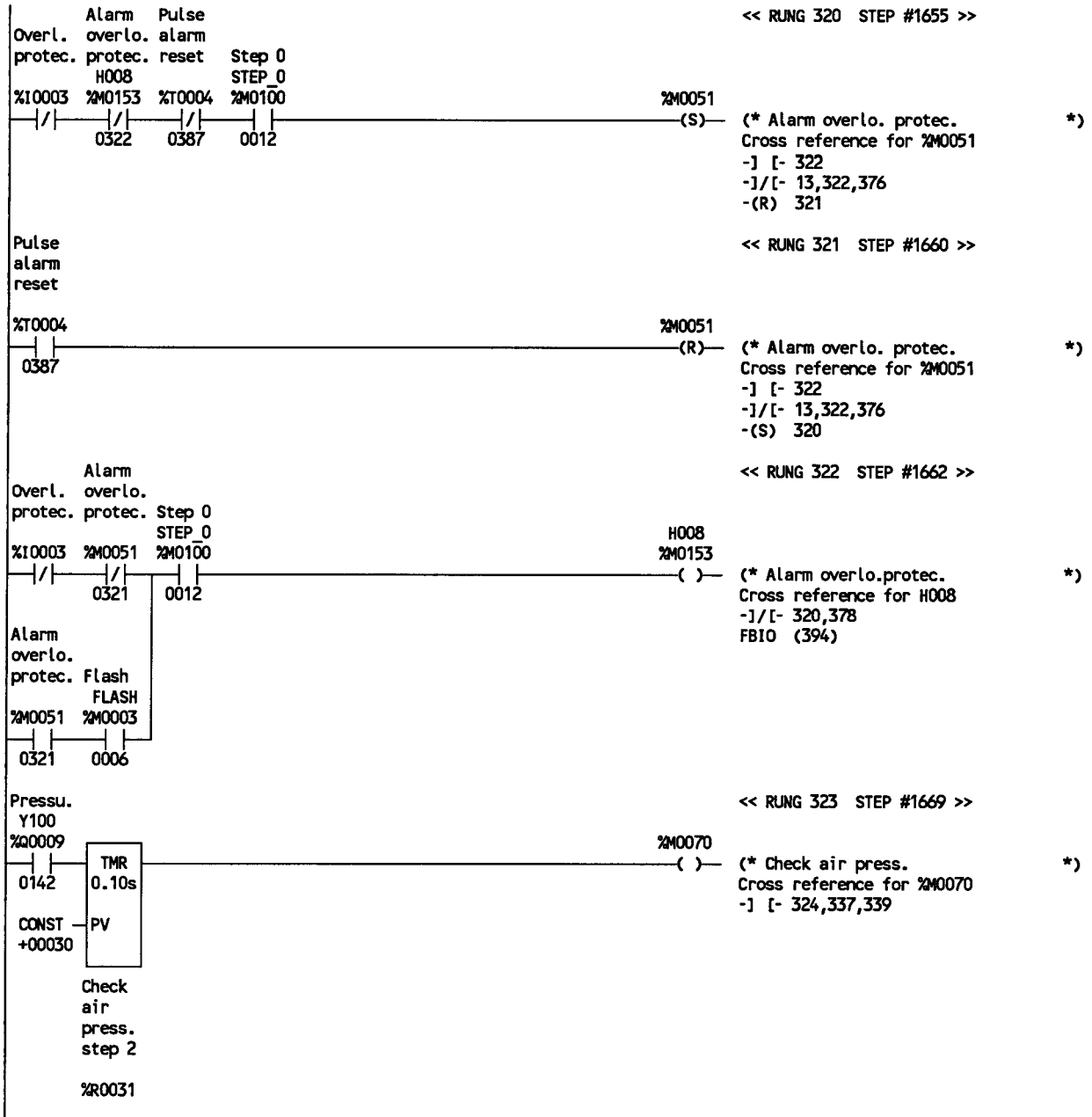
Y901
%Q0033

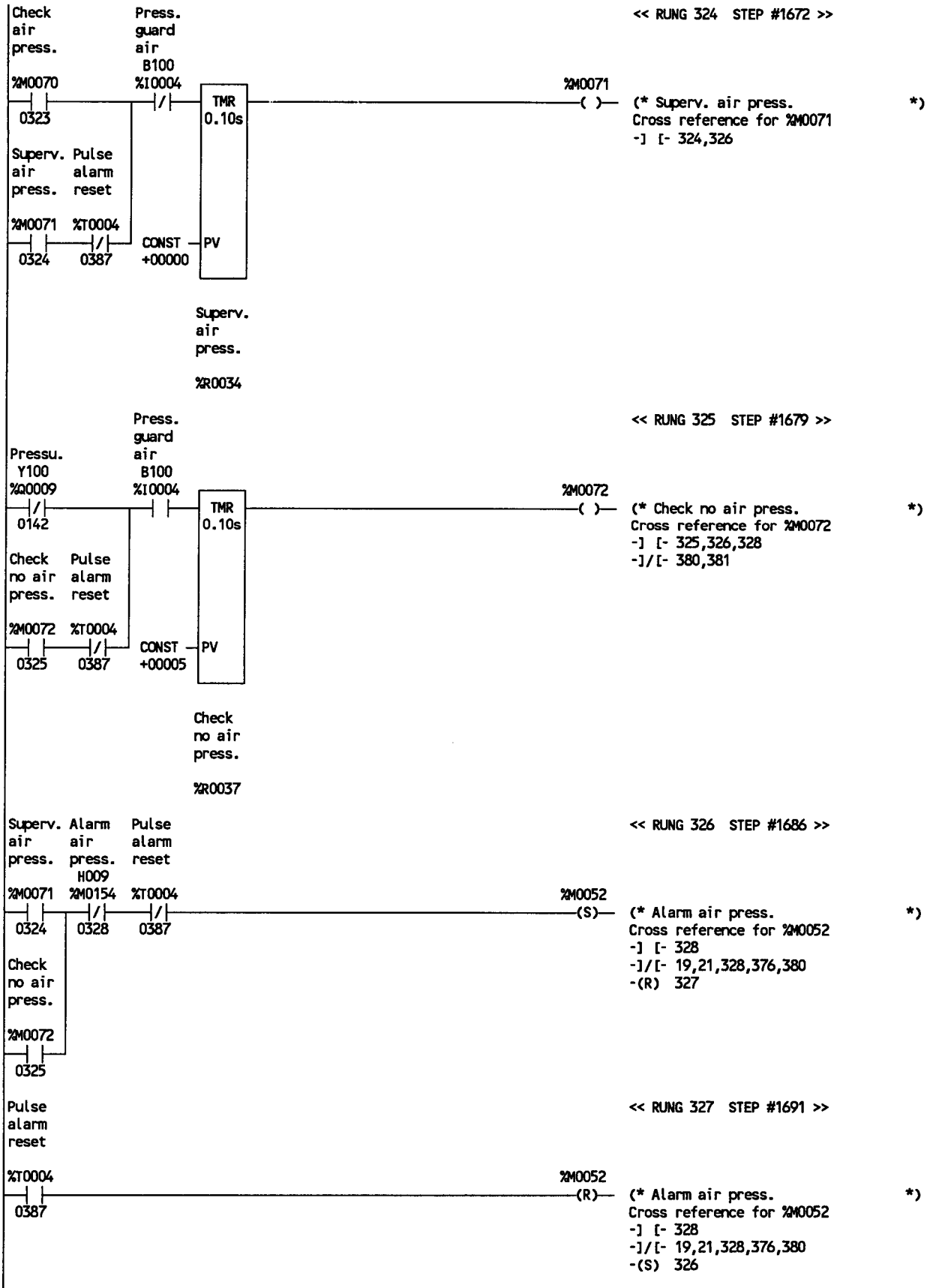
()

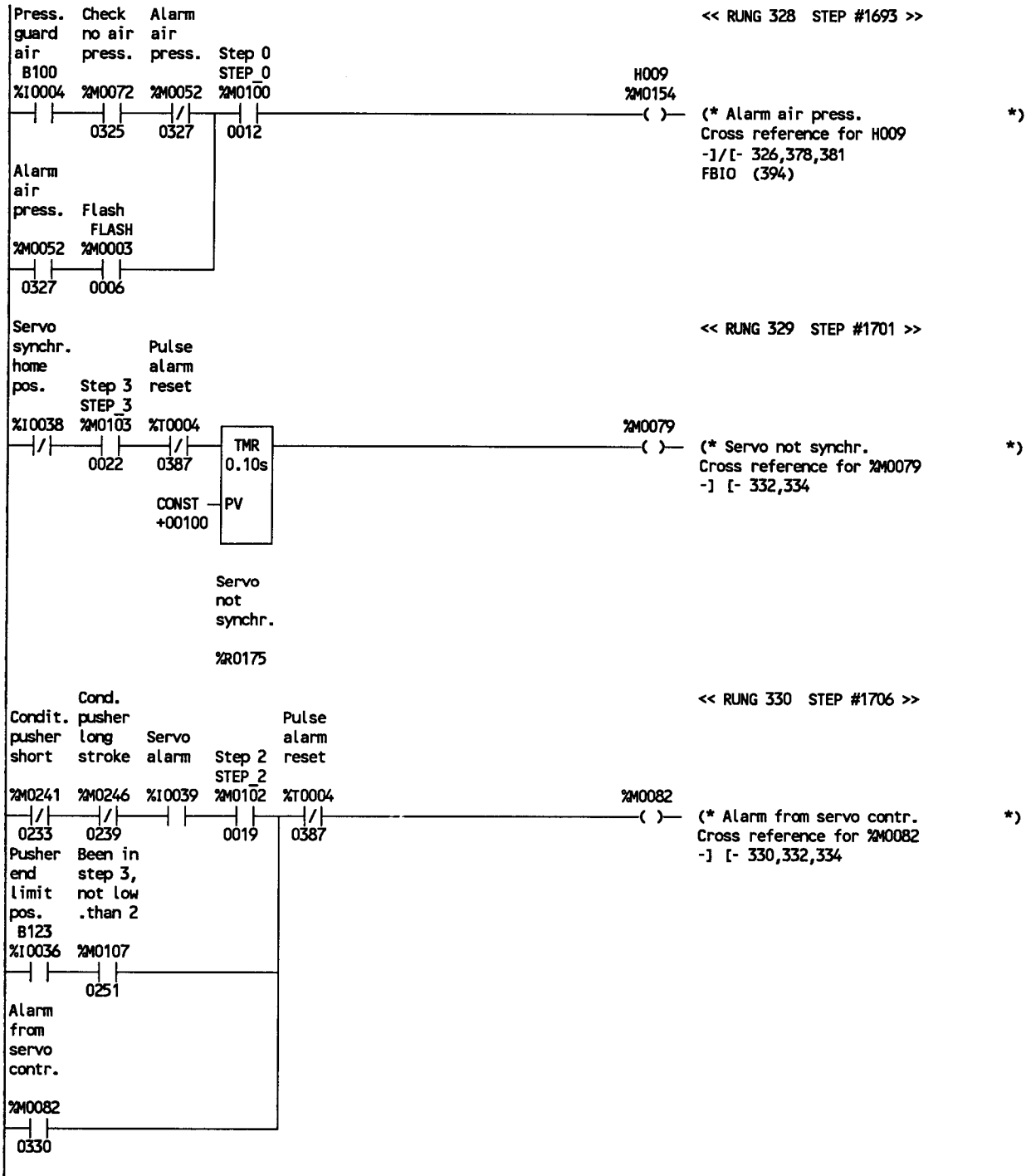
(* Extern. brake
Cross reference for Y901
NONE

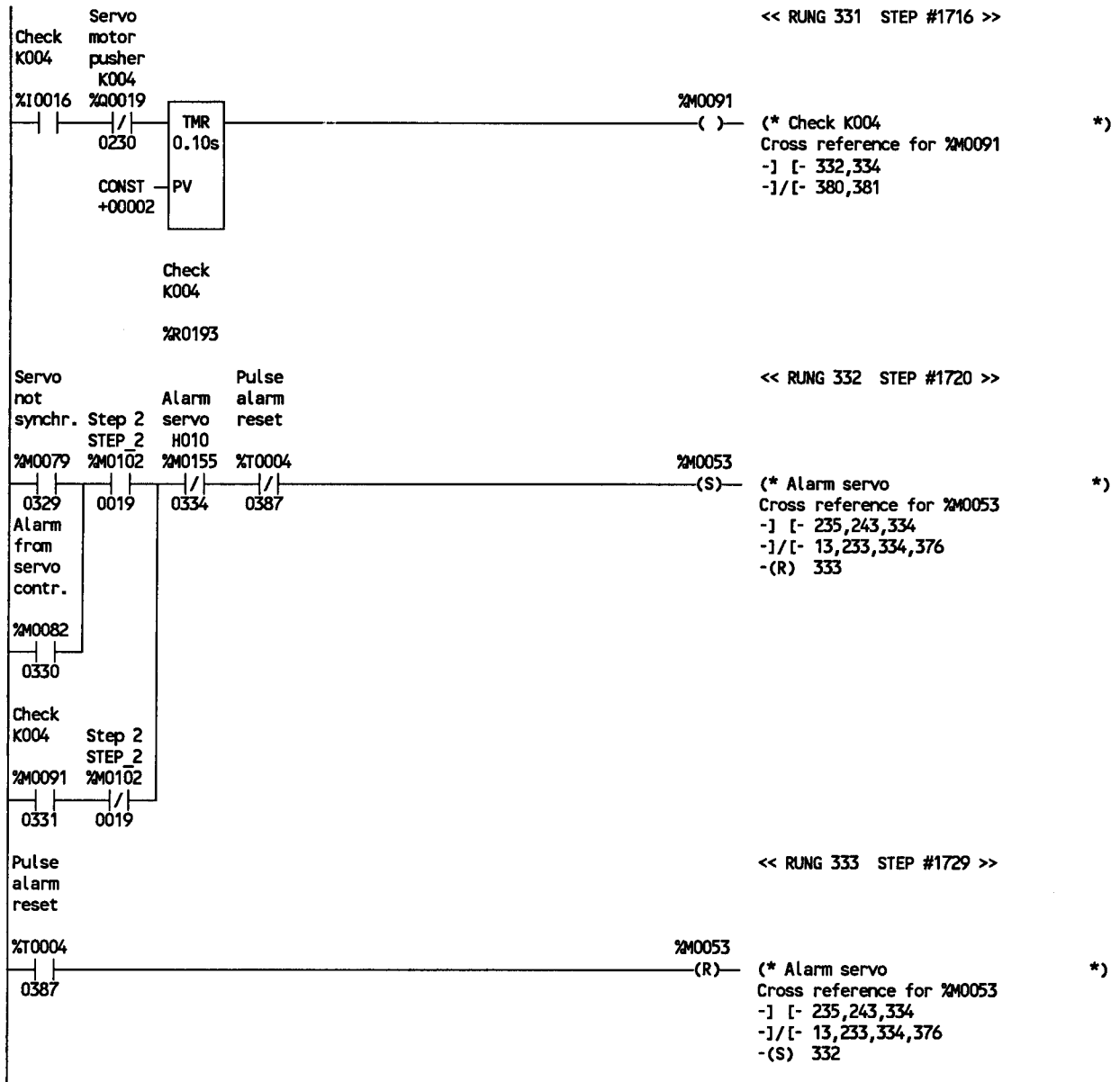
*)

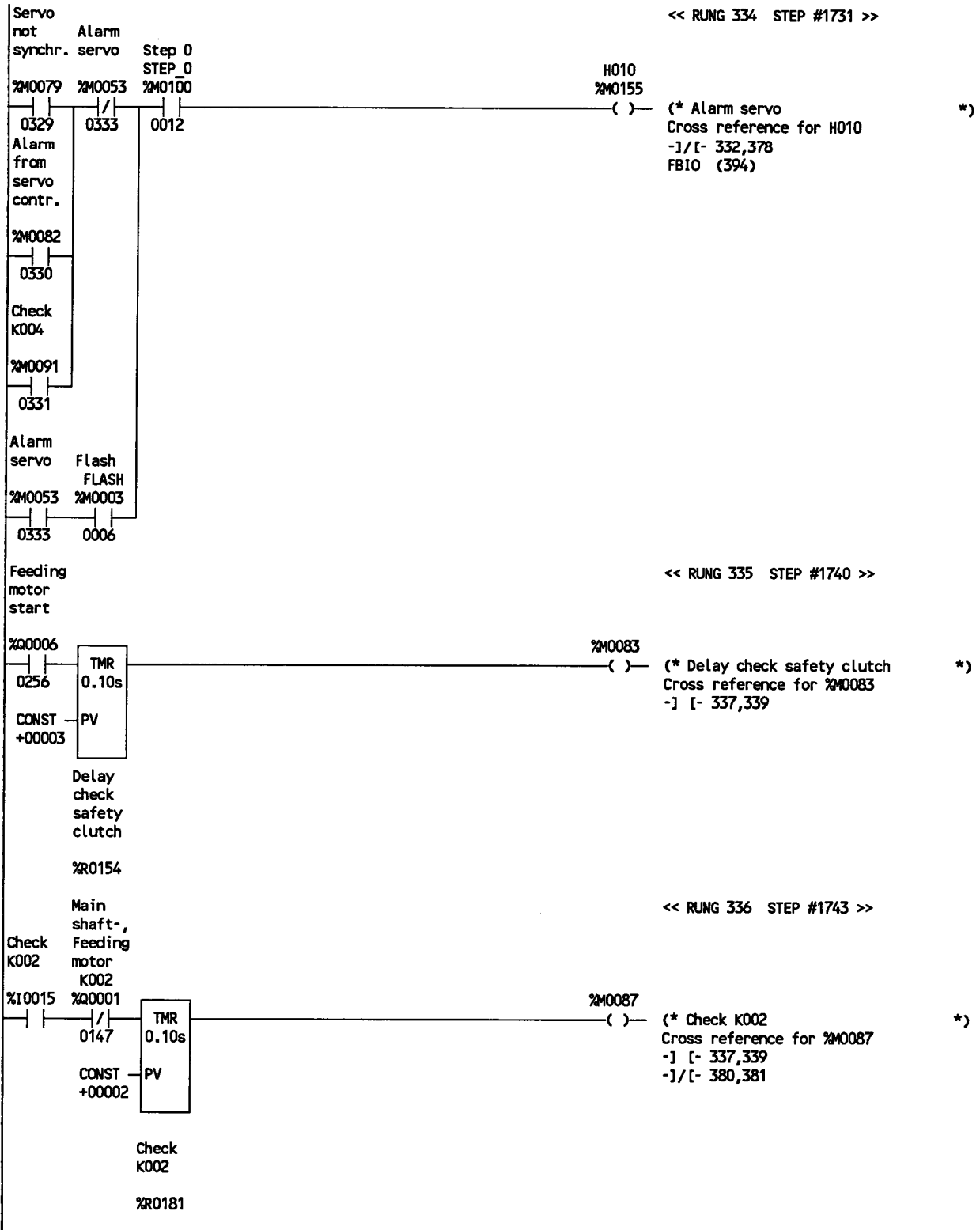


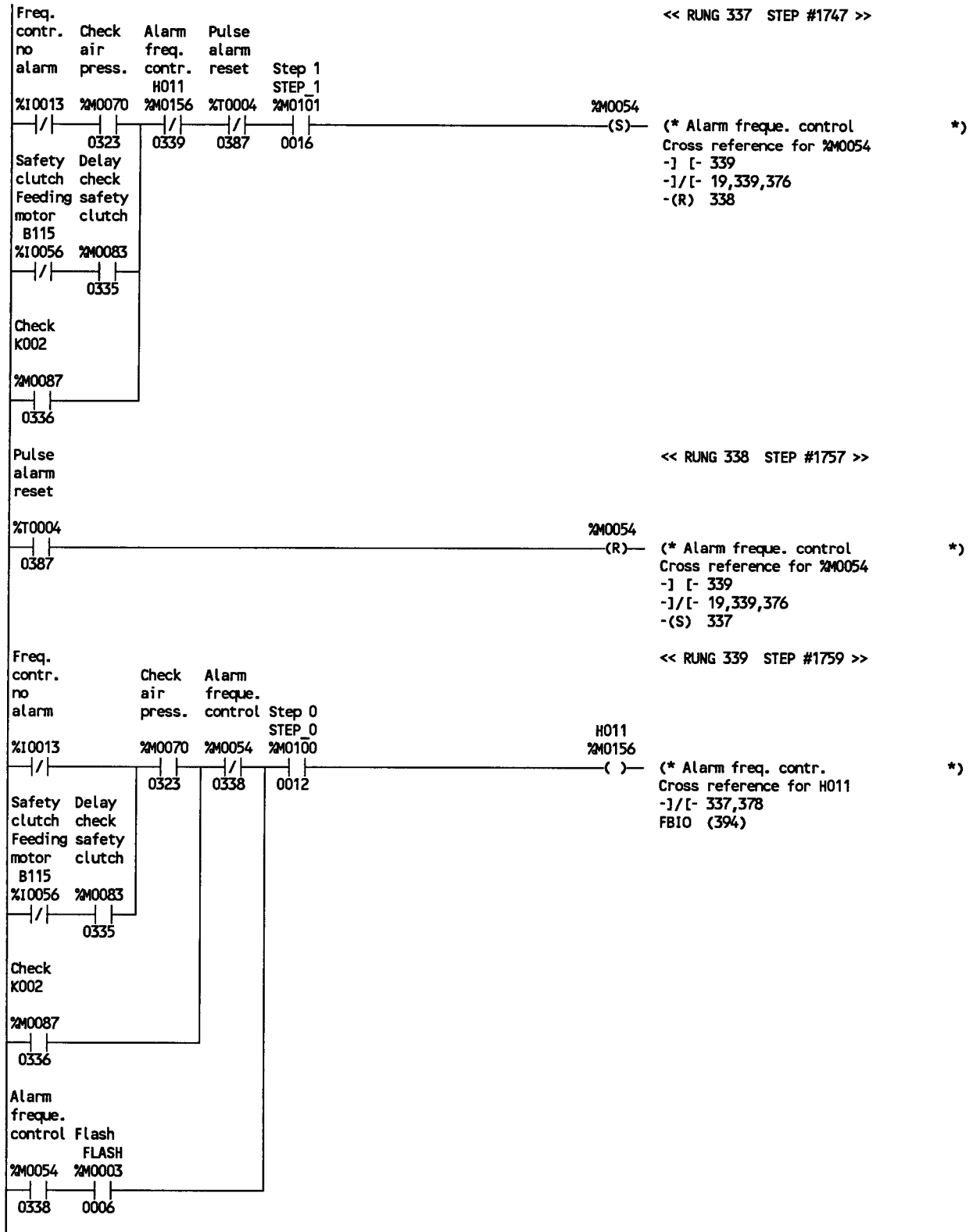


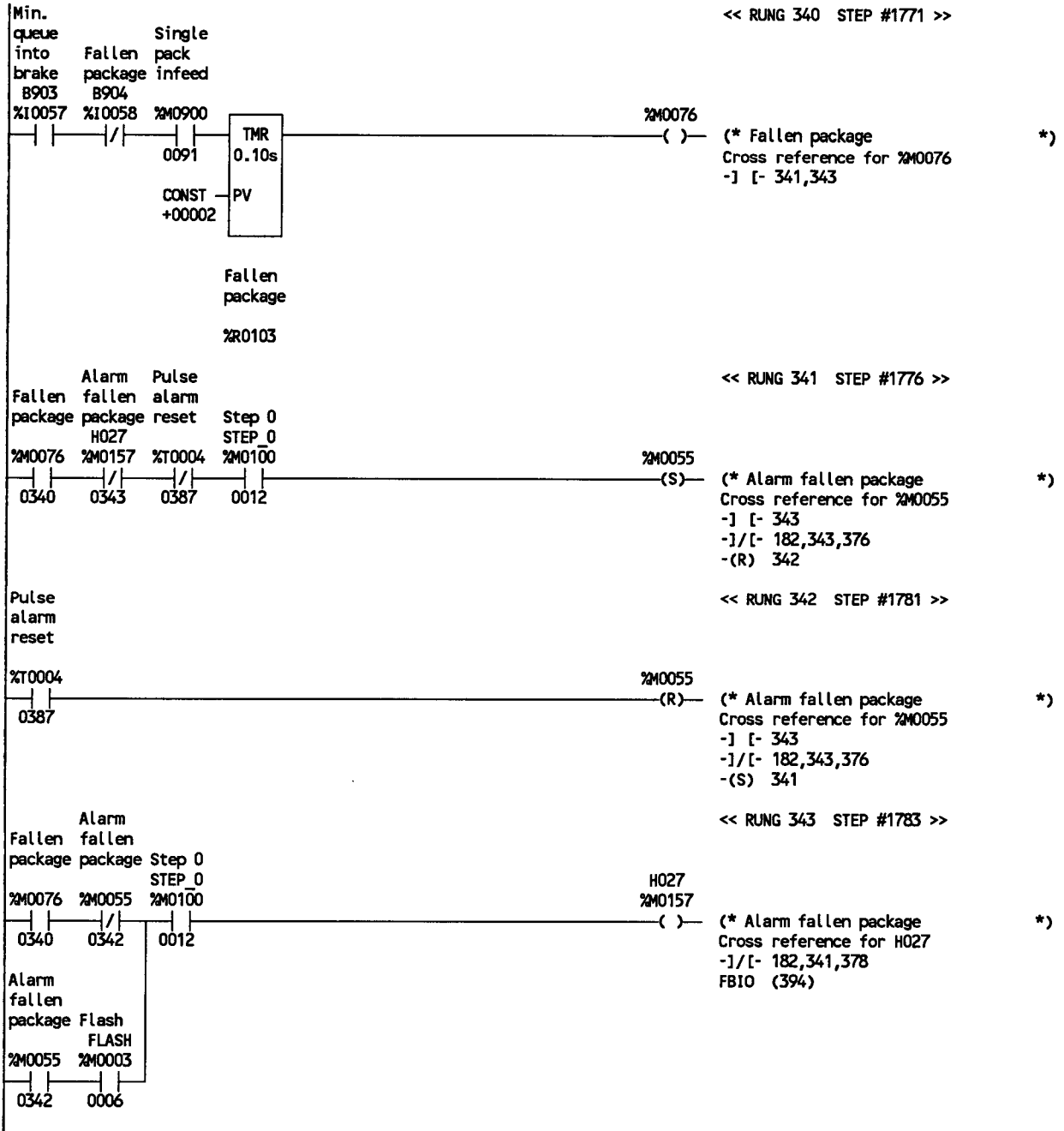


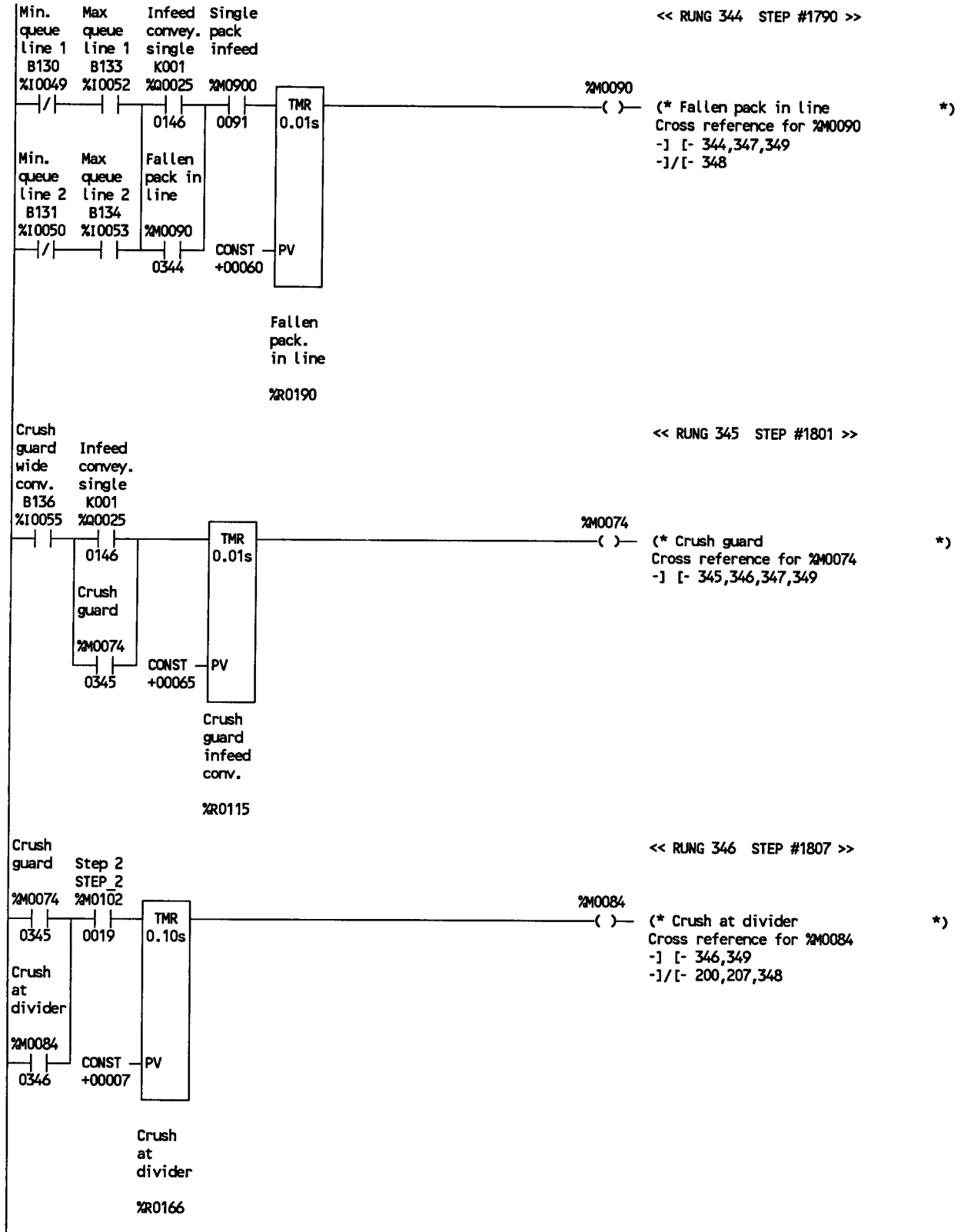


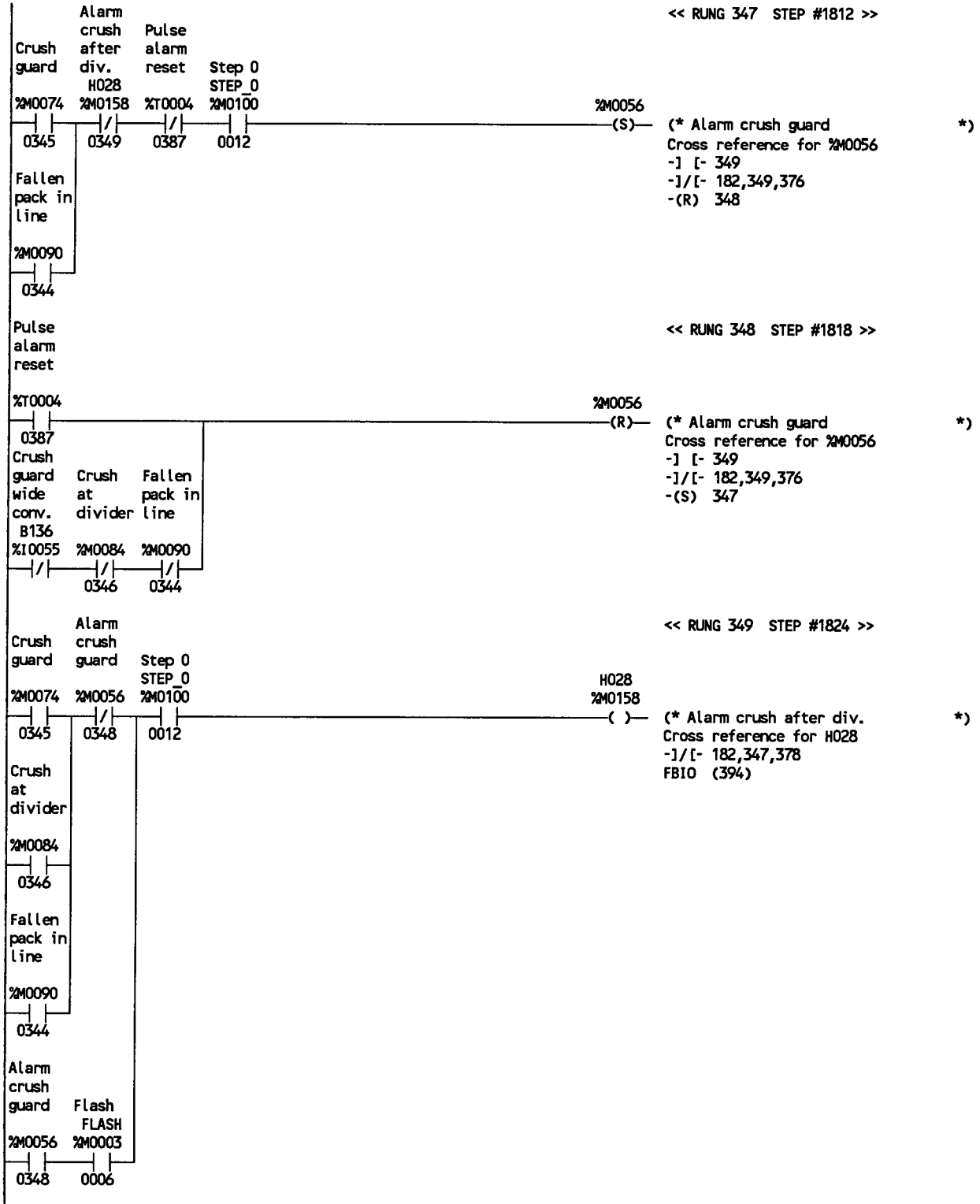


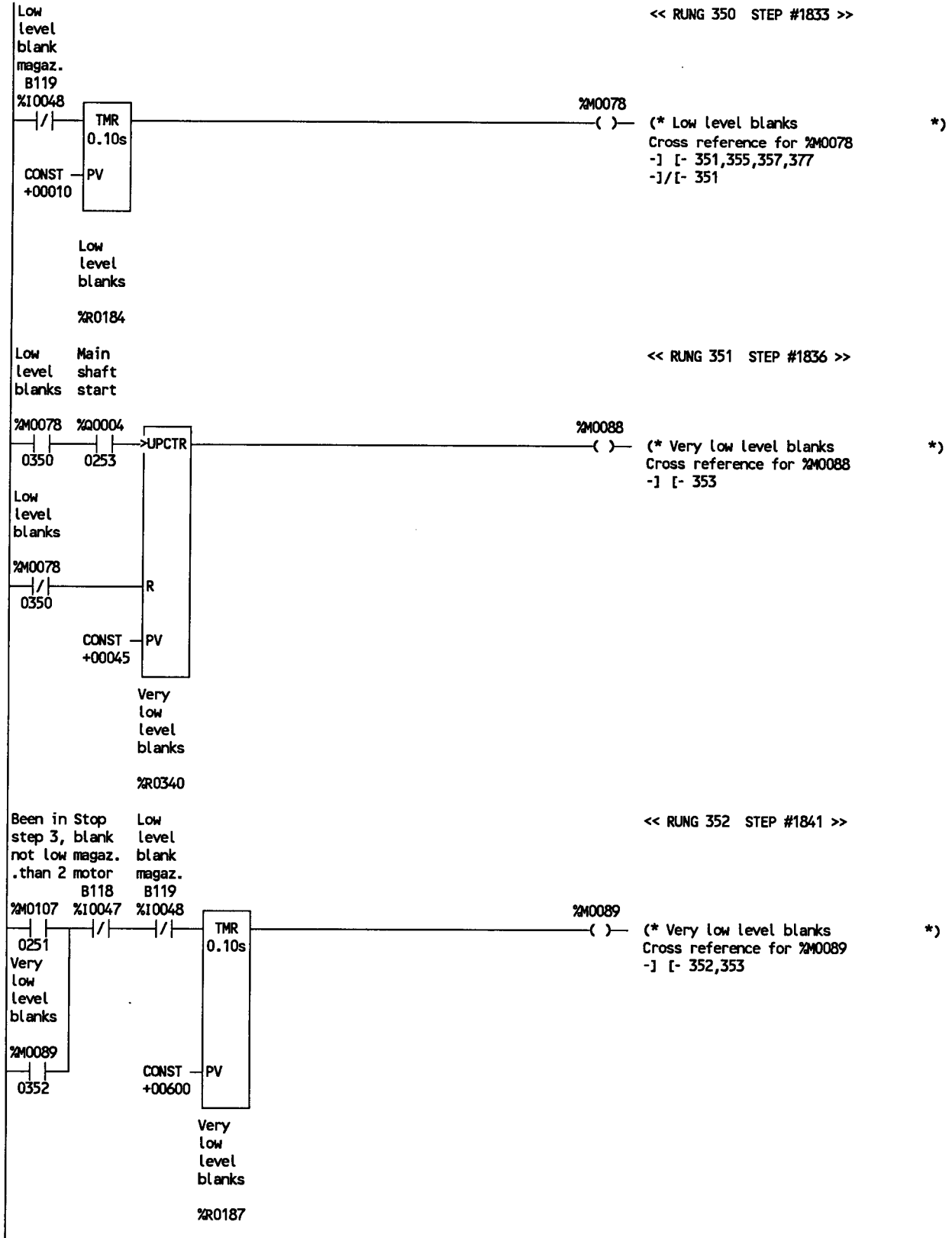


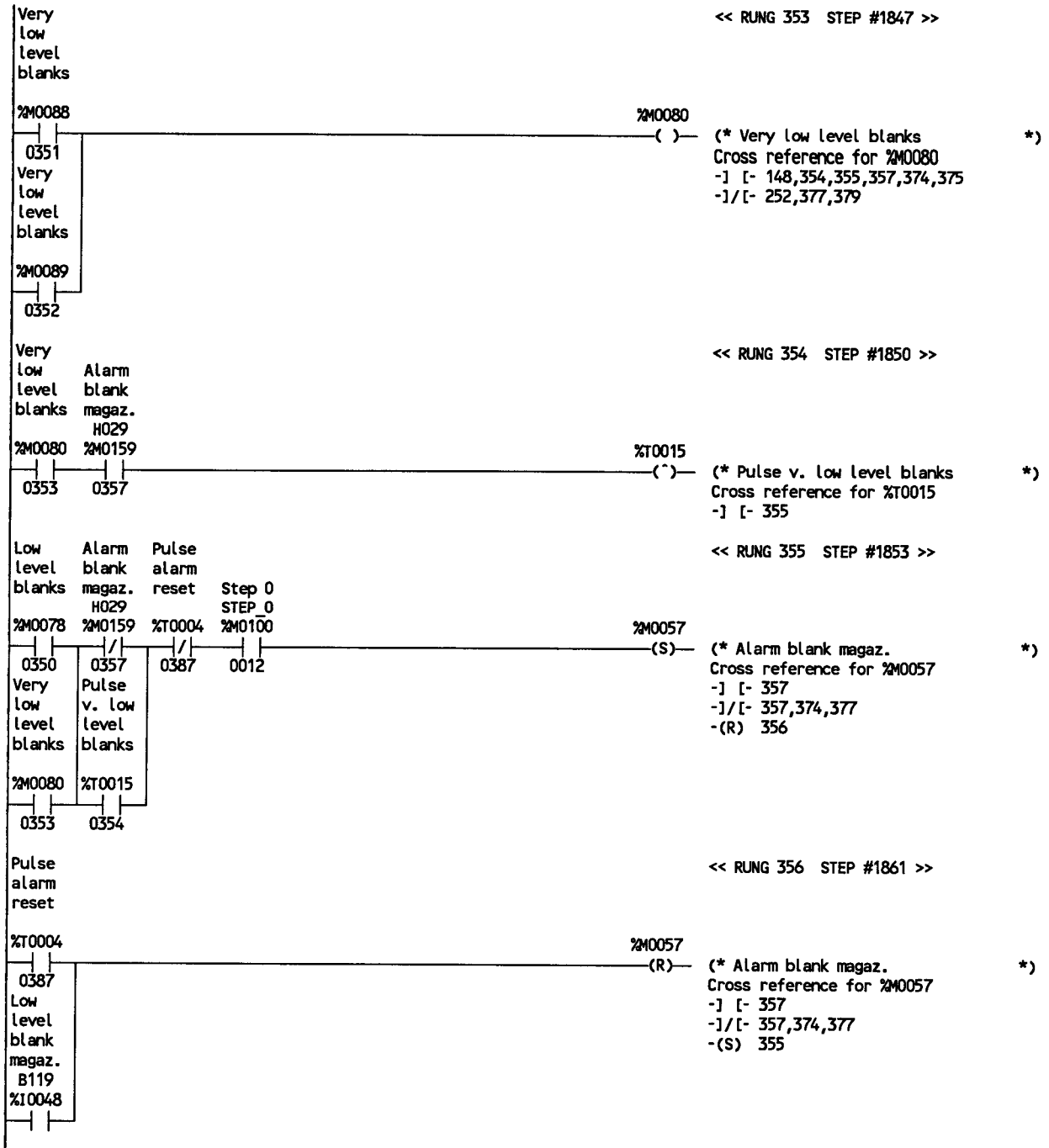


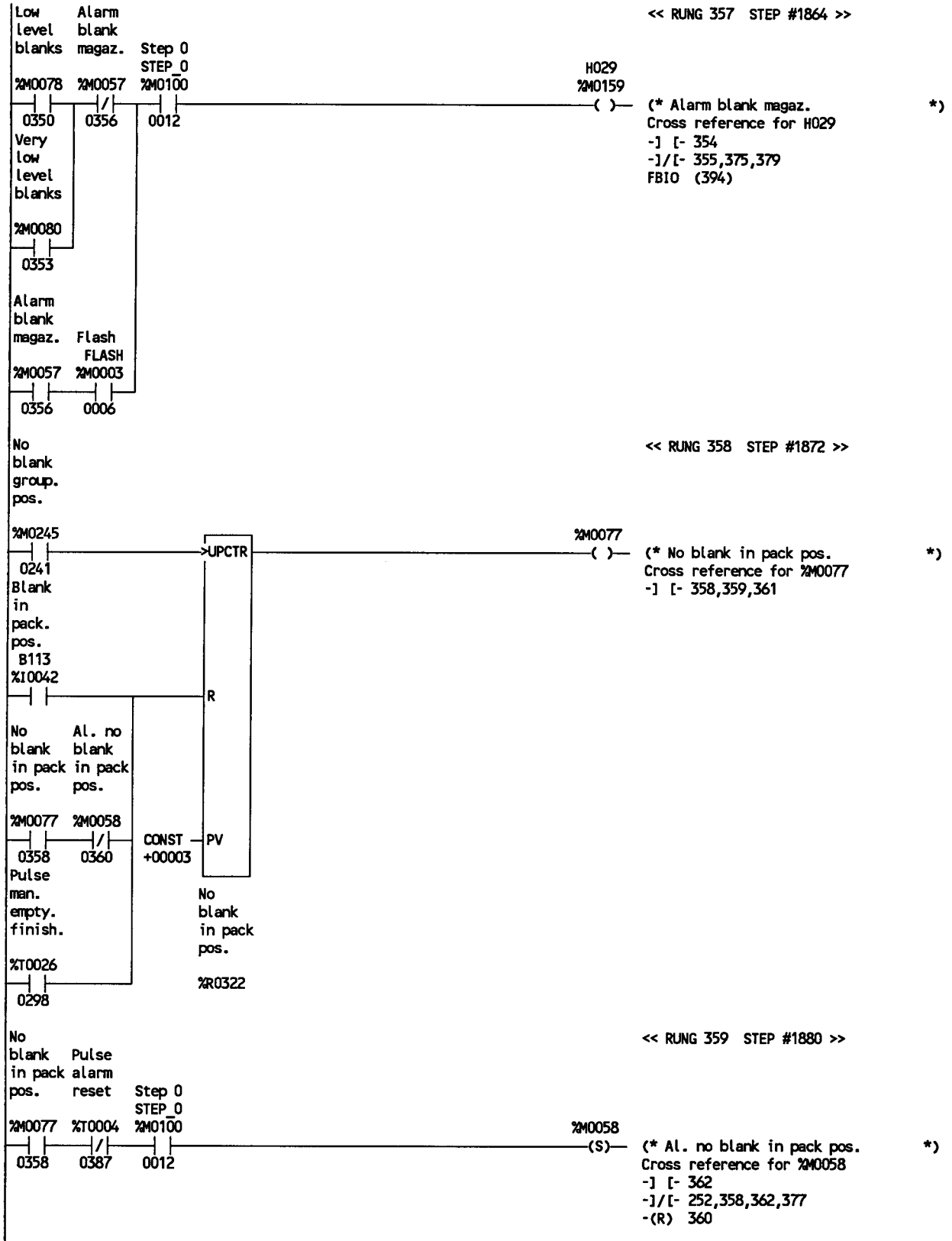


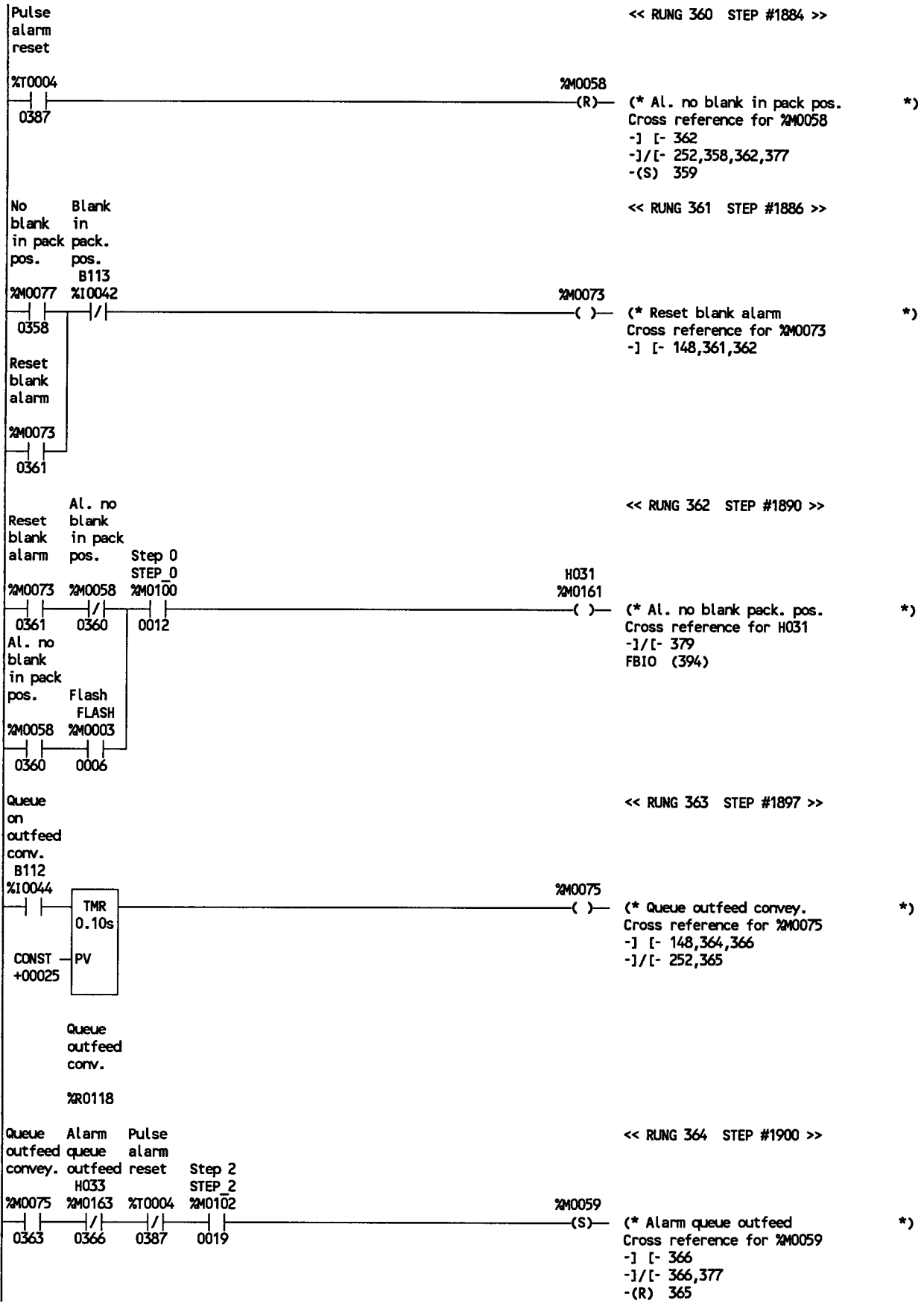


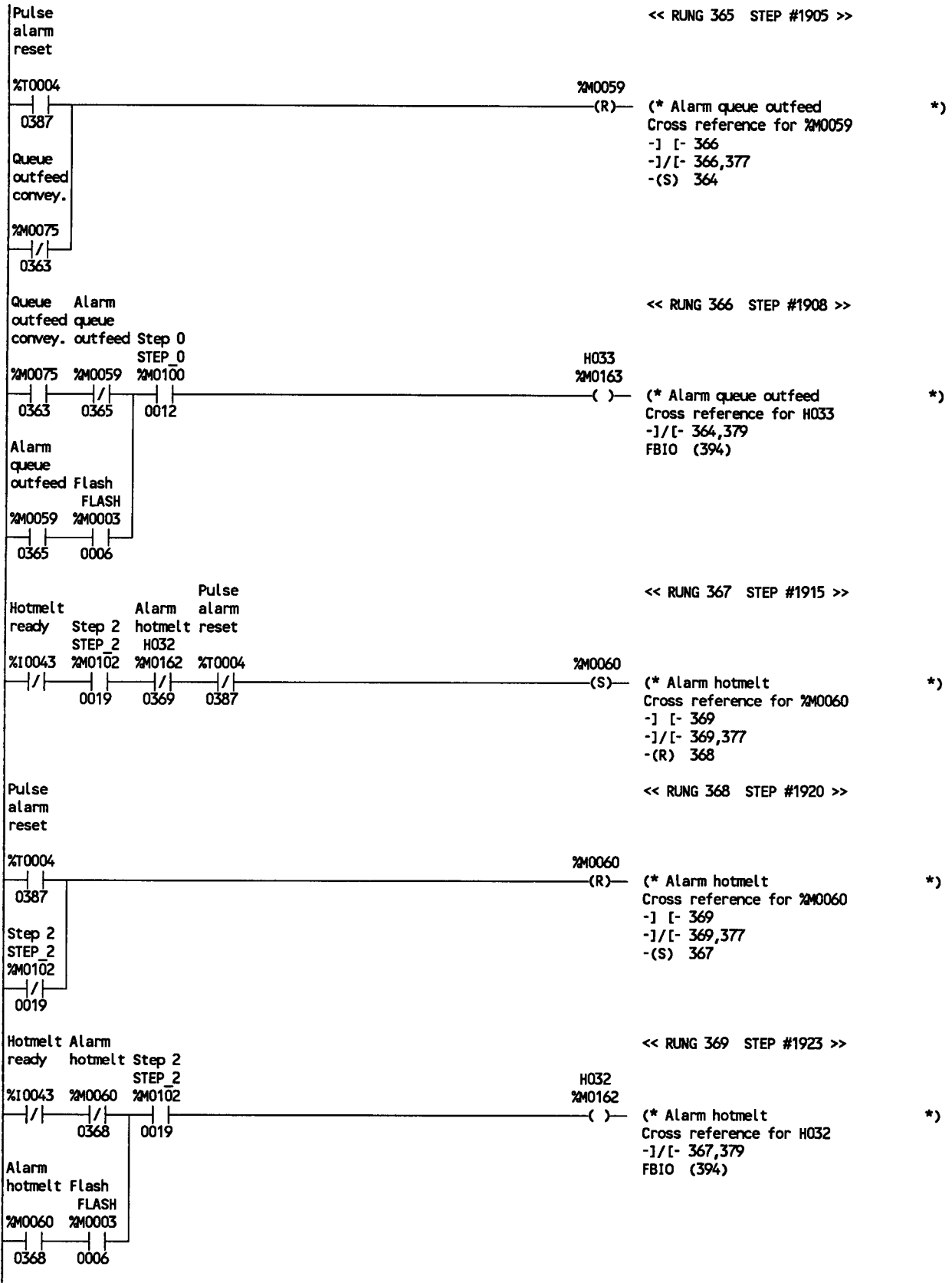


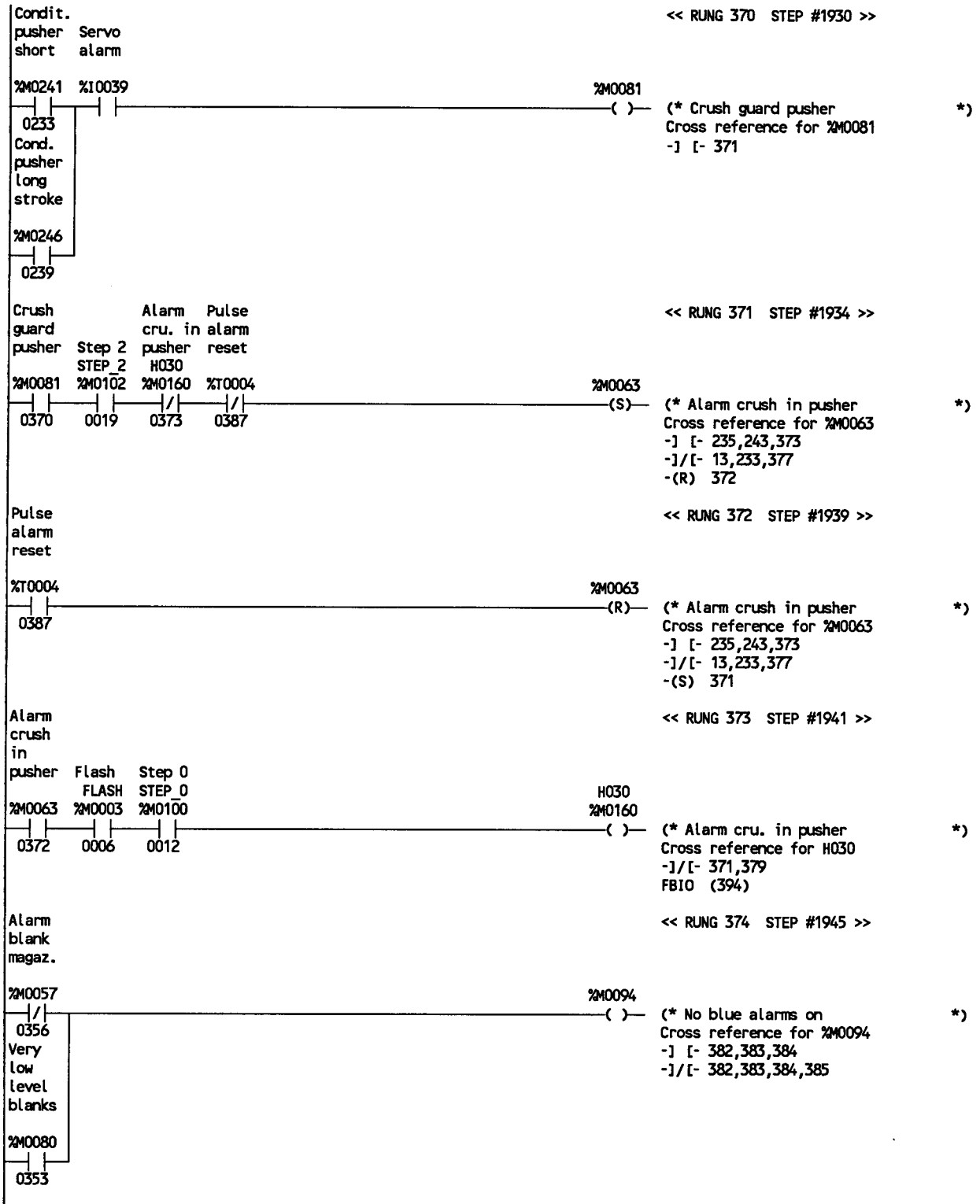


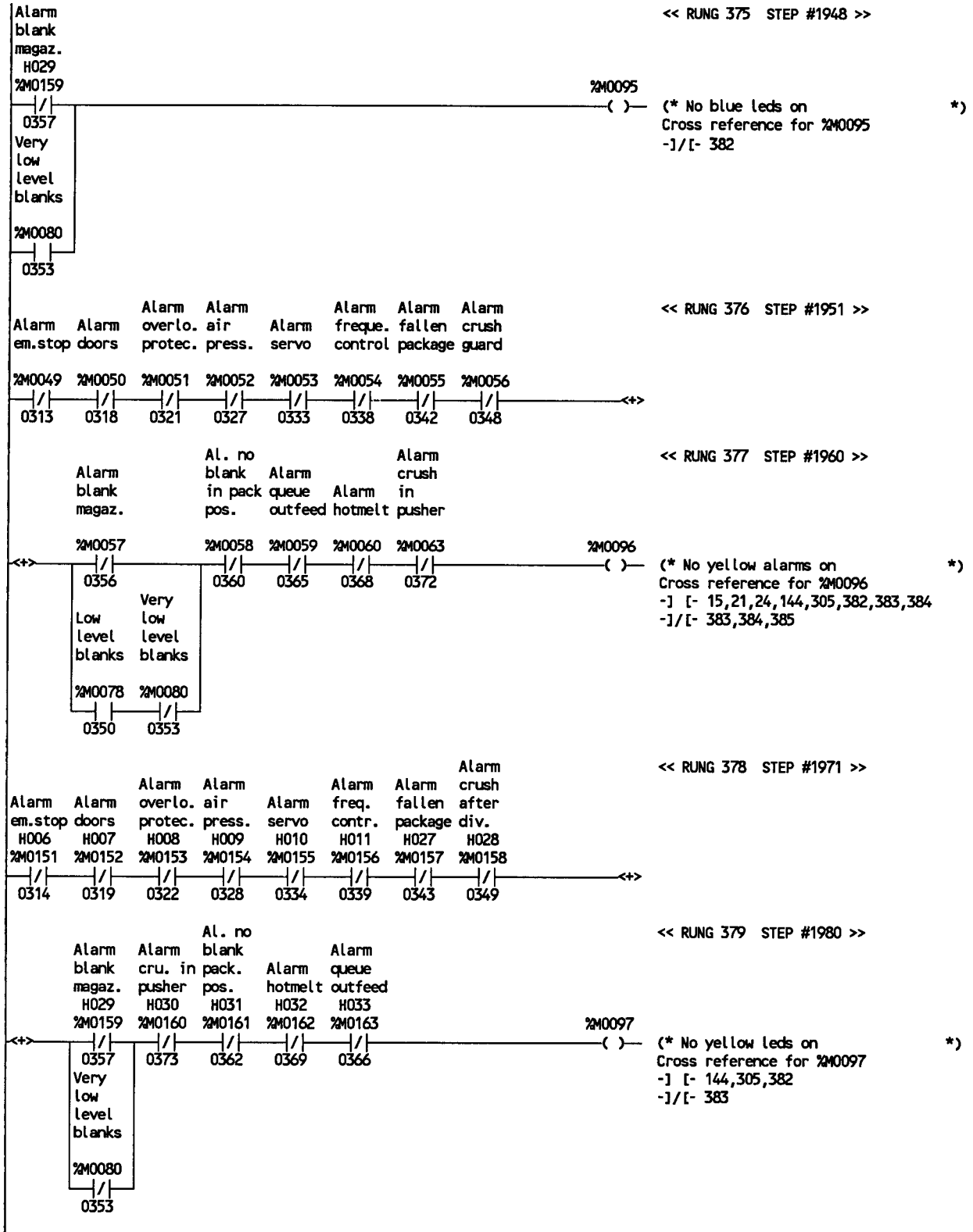


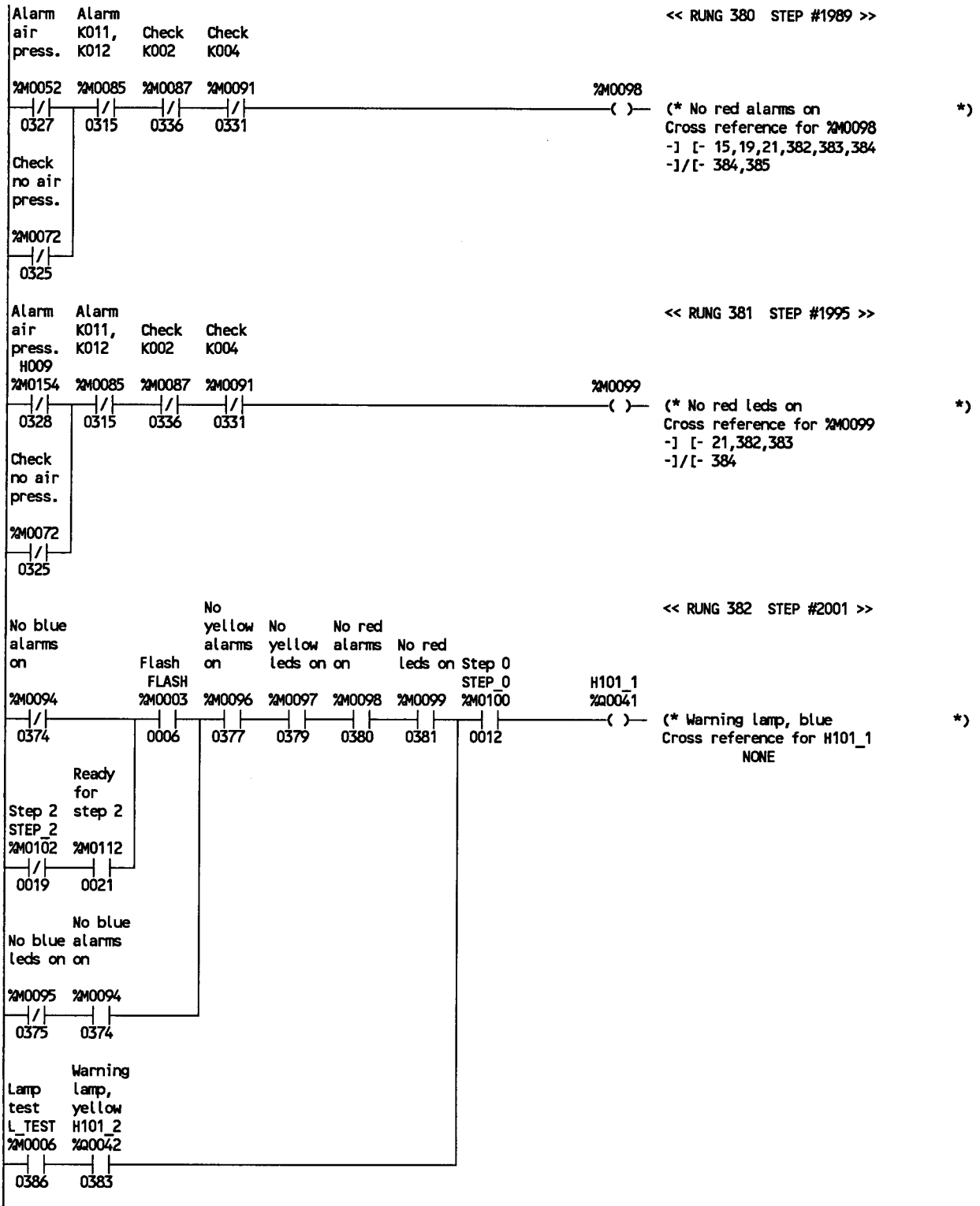


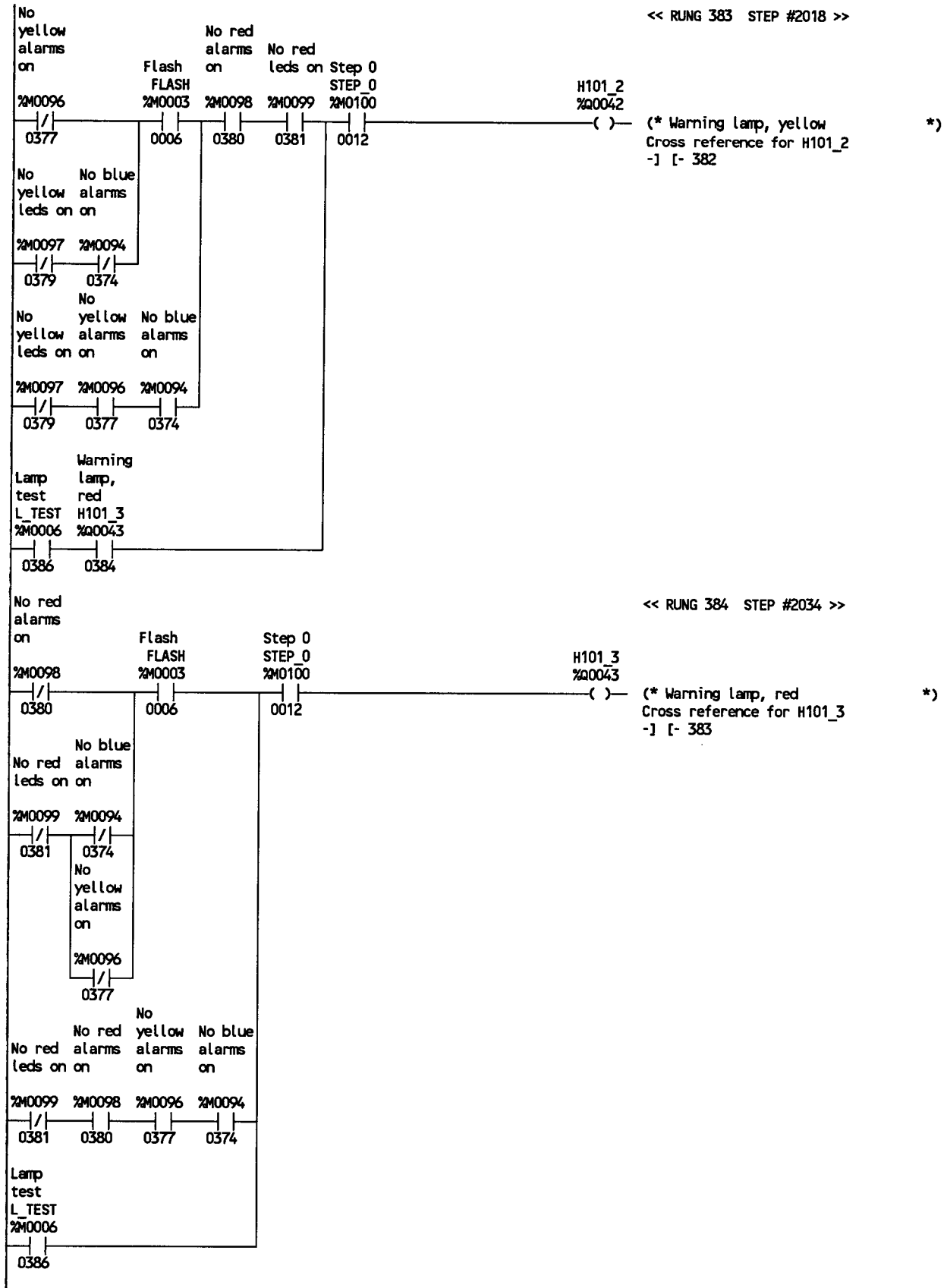


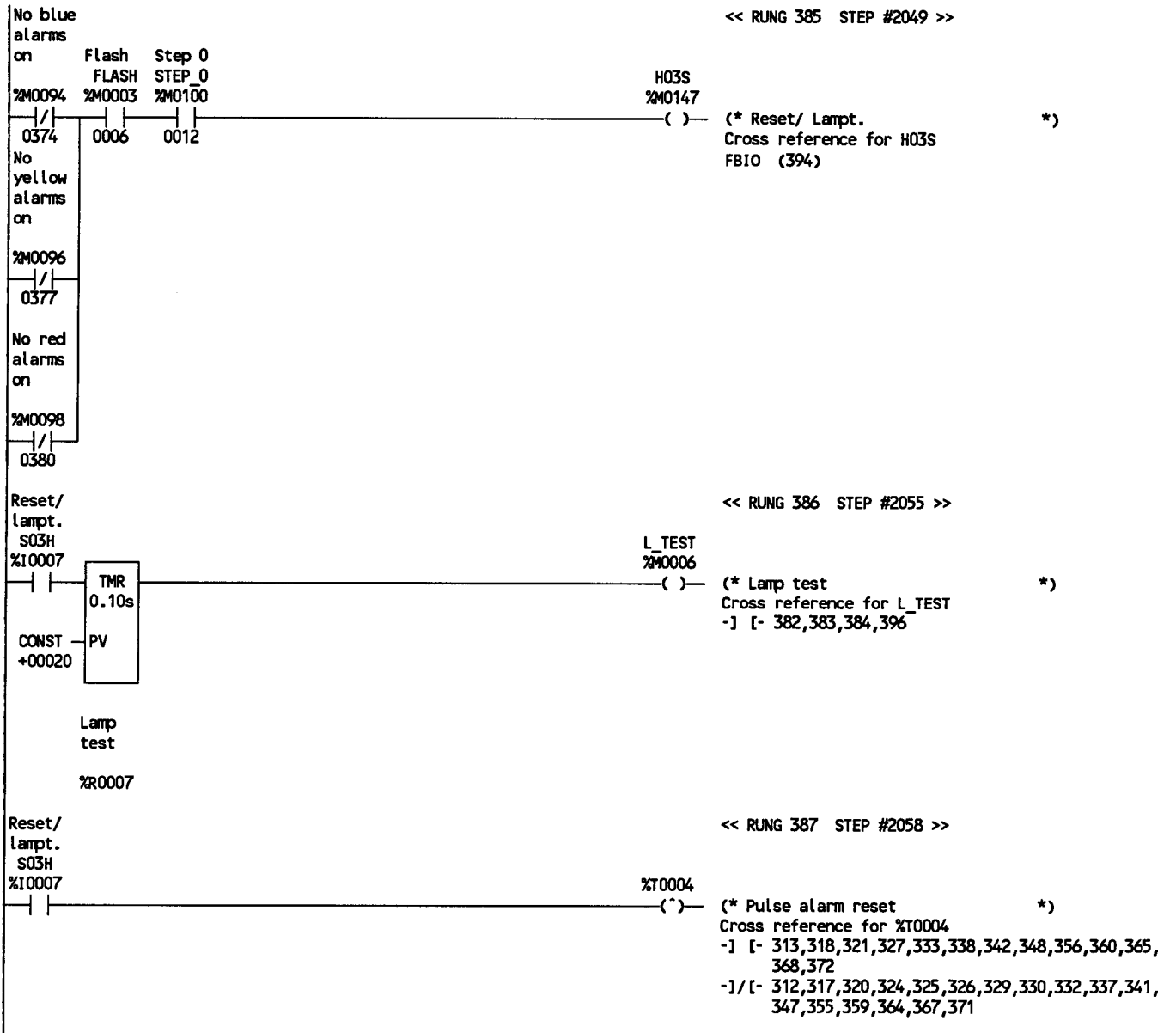


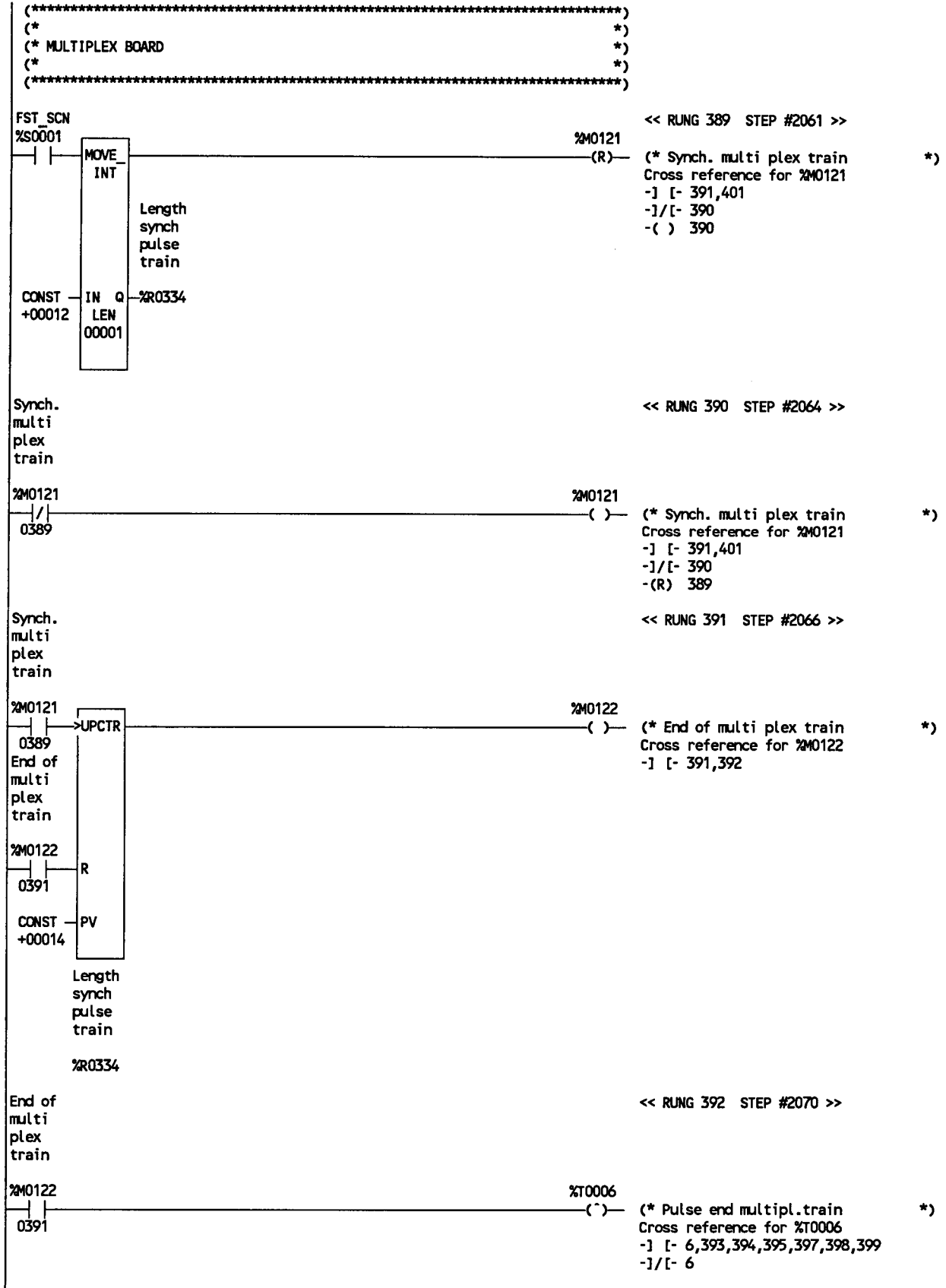




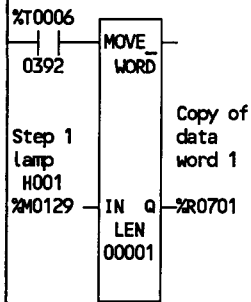




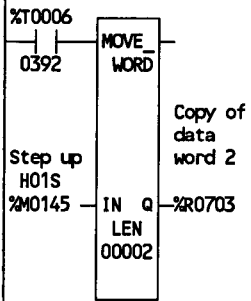




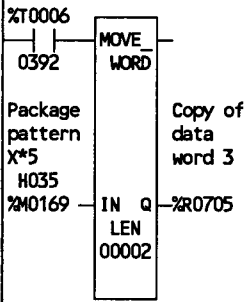
Pulse end multipl .train << RUNG 393 STEP #2072 >>



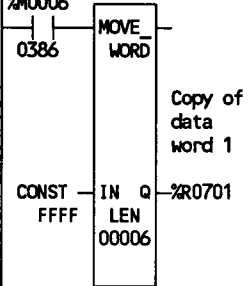
Pulse end multipl .train << RUNG 394 STEP #2074 >>



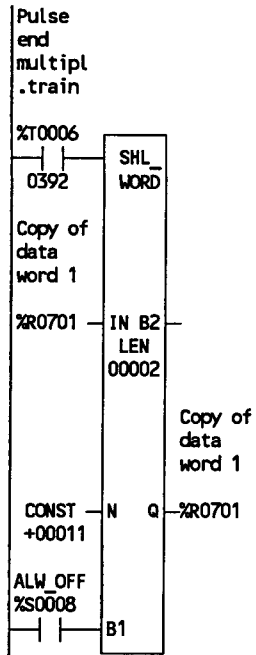
Pulse end multipl .train << RUNG 395 STEP #2076 >>



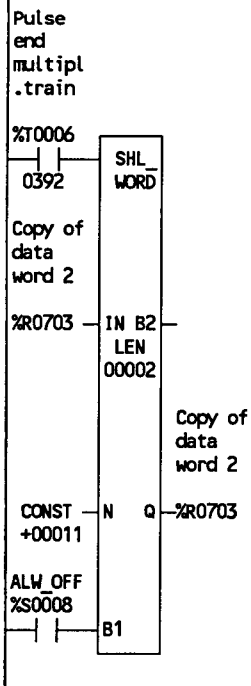
Lamp test L_TEST %M0006 << RUNG 396 STEP #2078 >>

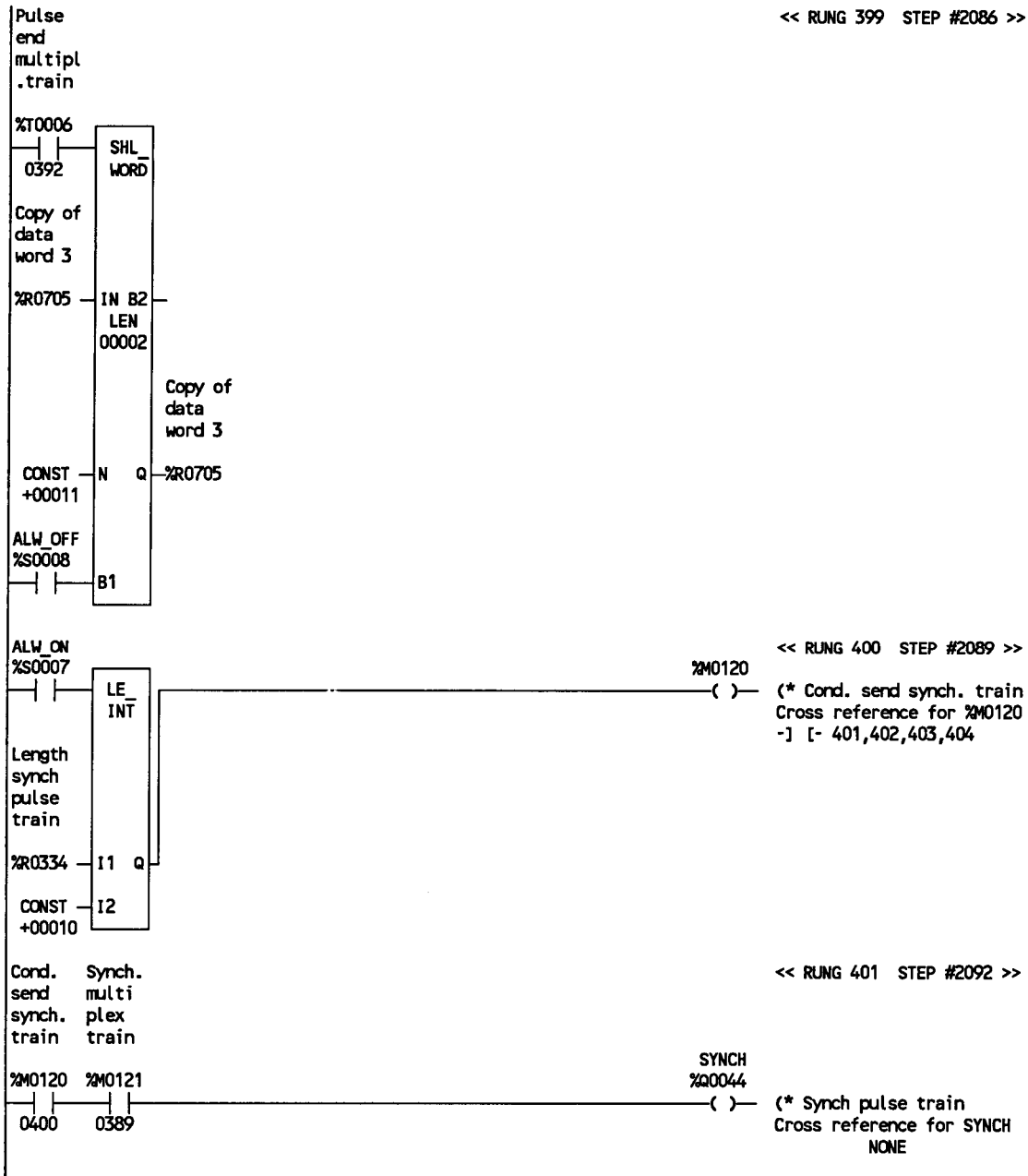


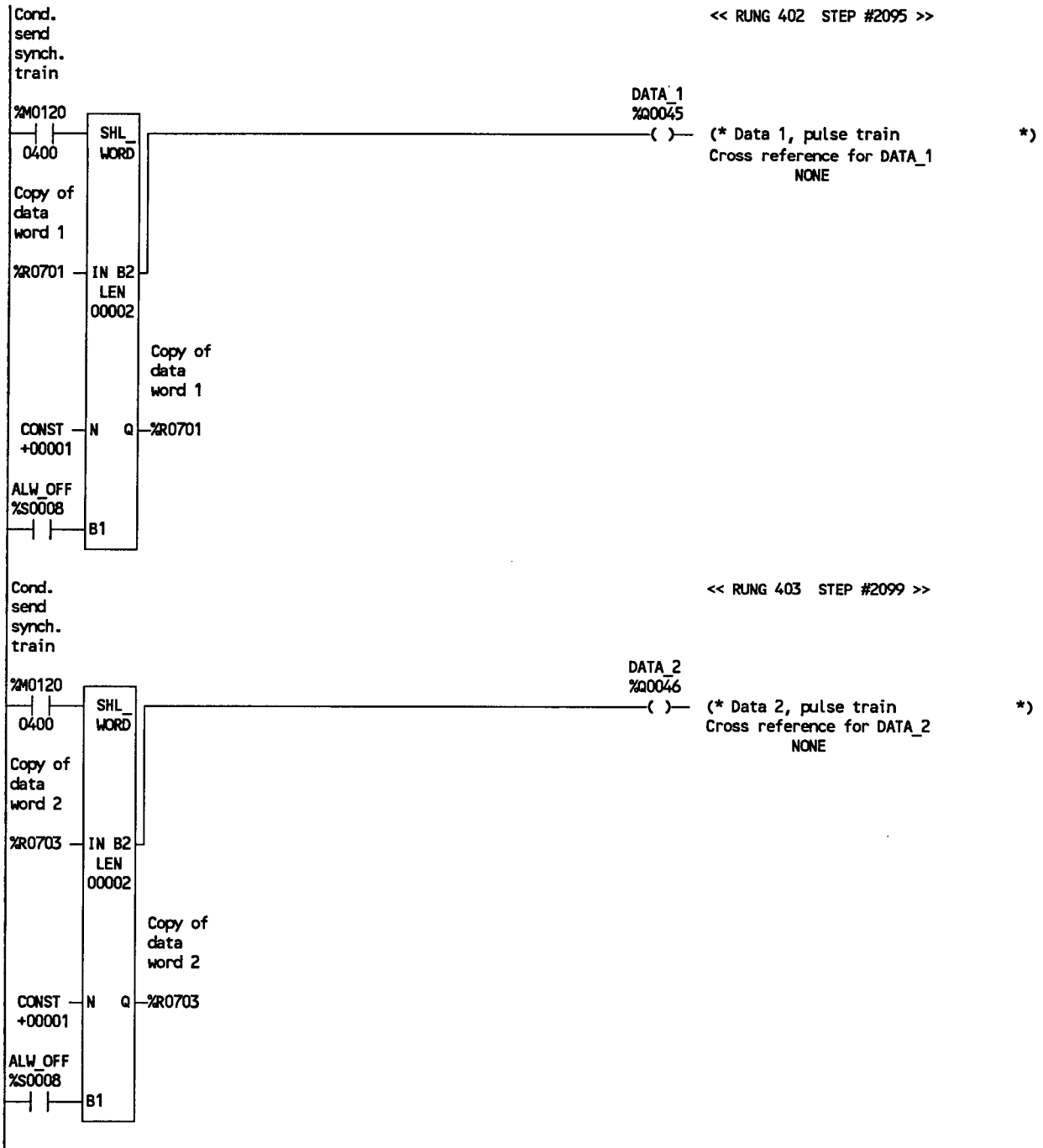
<< RUNG 397 STEP #2080 >>



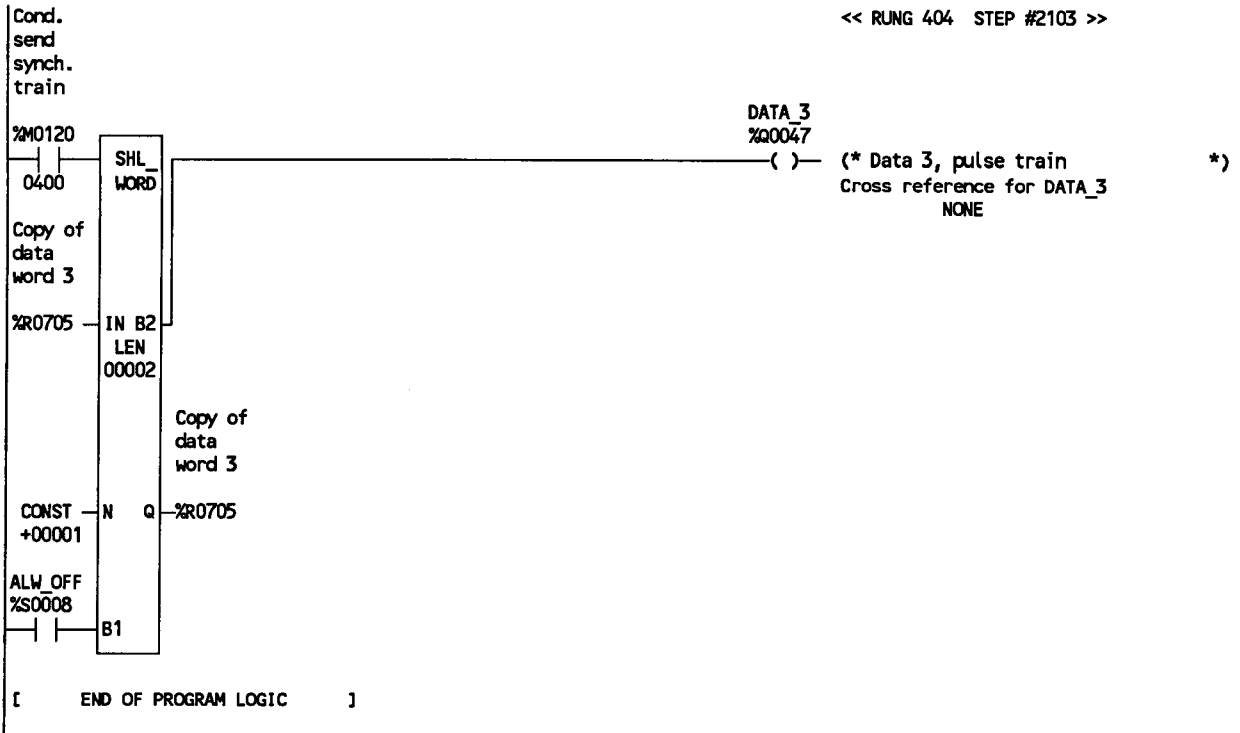
<< RUNG 398 STEP #2083 >>







<< RUNG 404 STEP #2103 >>



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===== INPUT (%I) CROSS REFERENCES		
REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%I0001	L12	Emerg. stop -] [- 13,146,220,315,316 -]/[- 185,188,202,235,243,312,314
%I0002	L13	Door -] [- 13,270,271 -]/[- 149,315,316
%I0003		Overl. protec. -] [- 13,146 -]/[- 320,322
%I0004	B100	Press. guard air -] [- 24,253,256,325,328 -]/[- 10,324
%I0005	S01H	Step up -] [- 7,18
%I0006	S02H	Step down -] [- 9,10 -]/[- 8
%I0007	S03H	Reset/ lampt. -] [- 386,387
%I0008	S04H	Manual emptyi. -] [- 284
%I0009	S07H	Select package pattern length -] [- 102
%I0010	S08H	Select infeed package -] [- 89
%I0011	S09H	Select cardb. type -] [- 127
%I0012	S10H	Select package pattern width -] [- 117
%I0013		Freq. contr. no alarm -]/[- 337,339
%I0014		Check K011, K012 -] [- 316 -]/[- 315
%I0015		Check K002 -] [- 336
%I0016		Check K004 -] [- 331
%I0017		Gray code l.sign.bit Ms -] [- 44 -]/[- 44
%I0018		Gray code Main shaft -] [- 43 -]/[- 43
%I0019		Gray code Main shaft -] [- 42 -]/[- 42
%I0020		Gray code Main shaft -] [- 41 -]/[- 41
%I0021		Gray code Main shaft -] [- 40 -]/[- 40
%I0022		Gray code Main shaft -] [- 39 -]/[- 39
%I0023		Gray code Main shaft -] [- 38 -]/[- 38
%I0024		Gray code Main shaft -] [- 37
%I0025		Gray code l.sign.bit Fm -] [- 35 -]/[- 35
%I0026		Gray code Feeding motor -] [- 34 -]/[- 34
%I0027		Gray code Feeding motor -] [- 33

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%10028		-]/[- 33 Gray code Feeding motor -] [- 32
%10029		-]/[- 32 Gray code Feeding motor -] [- 31 -]/[- 31
%10030		Gray code Feeding motor -] [- 30 -]/[- 30
%10031		Gray code Feeding motor -] [- 29 -]/[- 29
%10032		Gray code Feeding motor -] [- 28
%10033	B120	Transf. plate upper pos. -] [- 246,253,256 -]/[- 234,240
%10035	B122	Pusher zero pos. -] [- 223,237
%10036	B123	Pusher end limit pos. -] [- 330
%10037	B124	End stop inner pos. -] [- 233
%10038		Servo synchr. home pos. -] [- 212,227,234,240,245 -]/[- 329
%10039		Servo alarm -] [- 219,330,370
%10040		Servo long stroke ready -] [- 236,242,273,295 -]/[- 216,220
%10041		Servo short stroke ready -] [- 237,295 -]/[- 220
%10042	B113	Blank in pack. pos. -] [- 220,239,266,358 -]/[- 241,267,297,361
%10043		Hotmelt ready -] [- 21,139,275 -]/[- 275,367,369
%10044	B112	Queue on outfeed conv. -] [- 303,363
%10045	B908	Passage indic. (extra equip.) -] [- 303 -]/[- 302
%10046		Control single conv. -] [- 149
%10047	B118	Stop blank magaz. motor -] [- 264 -]/[- 263,352
%10048	B119	Low level blank magaz. -] [- 356 -]/[- 350,352
%10049	B130	Min. queue line 1 -] [- 157,211 -]/[- 159,210,294,295,344
%10050	B131	Min. queue line 2 -] [- 172,211 -]/[- 174,210,294,295,344
%10052	B133	Max queue line 1 -] [- 209,344 -]/[- 154
%10053	B134	Max queue line 2 -] [- 209,344 -]/[- 169
%10055	B136	Crush guard wide conv. -] [- 345 -]/[- 348
%10056	B115	Safety clutch Feeding motor -]/[- 337,339
%10057	B903	Min. queue into brake

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%10058	B904	-] [- 182,340 -]/[- 286 Fallen package
%10059	B142	-]/[- 340 Package counter
%10060	B143	-] [- 184,206 -]/[- 186,206 Divider in pos.
%10062	B200	-] [- 24,201 -]/[- 207 Pack. on single conv.
%10065	B150	-]/[- 149 WA flap folder upper pos.
%10066	B151	-] [- 281 WA flap folder lower pos.
%10067	B152	-] [- 278 WA squeez. upper pos.
%10071	B901	-] [- 281 -]/[- 280 Extern. conv. brake
%10072	B902	-] [- 308 Extern. conv. brake -] [- 307

===== OUTPUT (%Q) CROSS REFERENCES

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%Q0001	K002	Main shaft-, Feeding motor -]/[- 336 -() 147
%Q0003		Main shaft high speed -() 254
%Q0004		Main shaft start -] [- 245,253,254,256,259,261,351 -]/[- 248,297 -() 253
%Q0005		Feeding motor high speed -() 258
%Q0006		Feeding motor start -] [- 51,53,55,139,245,256,258,259,335 -]/[- 238,240,255 -() 256
%Q0007	K005	Line divider -] [- 202,207 -]/[- 199 -() 207
%Q0009	Y100	Pressu. -] [- 323 -]/[- 325 -() 142
%Q0010	Y104	End stop out -() 227
%Q0011	Y105	Transf. plate up -] [- 245 -() 245
%Q0012	Y108	Folding supp.up Flap fold.in -] [- 246 -() 246
%Q0014	Y160	Bottom flap folder -() 65
%Q0015	Y107	Brake line 2 open -] [- 166,213,218 -]/[- 233 -() 225
%Q0016	Y106	Brake line 1 open -] [- 151,215,218,224,225,226 -]/[- 233 -() 224
%Q0017	K006	Belt brake -() 143

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%Q0018	K16_K26	Belt brake -] [- 163,176,190,193,195,196,200,206,289 -]/[- 197,198,288 -() 200
%Q0019	K004	Servo motor pusher -] [- 230,231 -]/[- 229,331 -() 230
%Q0020		Sevo enable -] [- 232 -() 231
%Q0022		Servo search home -() 232
%Q0023		Servo long stroke -] [- 240 -]/[- 151,166,223 -() 240
%Q0024		Servo short stroke -] [- 234,291 -]/[- 151,166,223,236 -() 234
%Q0025	K001	Infeed convey. single -] [- 144,146,200,224,344,345 -() 146
%Q0026	K009	Blank magaz. motor -] [- 265 -() 265
%Q0028	Y120	Hotmelt gun lower, left -() 139
%Q0029	Y121	Hotmelt gun lower, right -() 139
%Q0030	Y908	Outfeed conv. stop -] [- 301 -() 301
%Q0031	P001	Hour meter -() 144
%Q0033	Y901	Extern. brake -() 310
%Q0034		DC brake main shaft -() 60
%Q0035		DC brake feeding motor -() 48
%Q0036	K010	Hotmelt unit -() 138
%Q0037	Y130A	Ejector blanks, blow -() 271
%Q0038	Y130B	Ejector blanks, vacuum -() 268
%Q0040		Pre magn. feeding motor -() 259
%Q0041	H101_1	Warning lamp, blue -() 382
%Q0042	H101_2	Warning lamp, yellow -] [- 382 -() 383
%Q0043	H101_3	Warning lamp, red -] [- 383 -() 384
%Q0044	SYNCH	Synch pulse train -() 401
%Q0045	DATA_1	Data 1, pulse train -() 402
%Q0046	DATA_2	Data 2, pulse train -() 403
%Q0047	DATA_3	Data 3, pulse train -() 404
%Q0048	K099	Ready signal -() 305
%Q0049	Y122	Hotmelt gun upper, left -() 139
%Q0050	Y123	Hotmelt gun upper, right -() 139

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%Q0051	Y140	WA squeezer down -] [- 278,279,280 -() 278
%Q0052	Y141	WA flap folder in -] [- 277 -() 277
%Q0054	Y124	Hotmelt gun WA, left -] [- 276 -() 275
%Q0055	Y125	Hotmelt gun WA, right -] [- 275 -() 275

===== INTERNAL (%M) CROSS REFERENCES

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%M0003	FLASH	Flash -] [- 6,20,23,26,314,319,322,328,334,339,343,349,357,362,366,369,373,382,383,384,385 -] / [- 6 -() 6
%M0004		Ready to step up -] [- 8,19,21,26,147 -() 13
%M0006	L_TEST	Lamp test -] [- 382,383,384,396 -() 386
%M0007		Delay step down -] / [- 16 -() 10
%M0010		Extern. brake queue length -] [- 310 -] / [- 309 -() 308
%M0011		Extern. brake space betw.q. -] / [- 310 -() 309
%M0012		Extern. brake queue to DE -] [- 310 -() 307
%M0049		Alarm em.stop -] [- 314 -] / [- 13,314,376 -(S) 312 -(R) 313
%M0050		Alarm doors -] [- 319 -] / [- 13,319,376 -(S) 317 -(R) 318
%M0051		Alarm overlo. protec. -] [- 322 -] / [- 13,322,376 -(S) 320 -(R) 321
%M0052		Alarm air press. -] [- 328 -] / [- 19,21,328,376,380 -(S) 326 -(R) 327
%M0053		Alarm servo -] [- 235,243,334 -] / [- 13,233,334,376 -(S) 332 -(R) 333
%M0054		Alarm freque. control -] [- 339 -] / [- 19,339,376 -(S) 337 -(R) 338
%M0055		Alarm fallen package -] [- 343

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
		-1/[- 182,343,376
		-(S) 341
		-(R) 342
%M0056		Alarm crush guard
		-] [- 349
		-1/[- 182,349,376
		-(S) 347
		-(R) 348
%M0057		Alarm blank magaz.
		-] [- 357
		-1/[- 357,374,377
		-(S) 355
		-(R) 356
%M0058		AL. no blank in pack pos.
		-] [- 362
		-1/[- 252,358,362,377
		-(S) 359
		-(R) 360
%M0059		Alarm queue outfeed
		-] [- 366
		-1/[- 366,377
		-(S) 364
		-(R) 365
%M0060		Alarm hotmelt
		-] [- 369
		-1/[- 369,377
		-(S) 367
		-(R) 368
%M0063		Alarm crush in pusher
		-] [- 235,243,373
		-1/[- 13,233,377
		-(S) 371
		-(R) 372
%M0070		Check air press.
		-] [- 324,337,339
		-() 323
%M0071		Superv. air press.
		-] [- 324,326
		-() 324
%M0072		Check no air press.
		-] [- 325,326,328
		-1/[- 380,381
		-() 325
%M0073		Reset blank alarm
		-] [- 148,361,362
		-() 361
%M0074		Crush guard
		-] [- 345,346,347,349
		-() 345
%M0075		Queue outfeed convey.
		-] [- 148,364,366
		-1/[- 252,365
		-() 363
%M0076		Fallen package
		-] [- 341,343
		-() 340
%M0077		No blank in pack pos.
		-] [- 358,359,361
		-() 358
%M0078		Low level blanks
		-] [- 351,355,357,377
		-1/[- 351
		-() 350
%M0079		Servo not synchr.
		-] [- 332,334
		-() 329
%M0080		Very low level blanks
		-] [- 148,354,355,357,374,375
		-1/[- 252,377,379
		-() 353
%M0081		Crush guard pusher
		-] [- 371

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		-() 370
%M0082		Alarm from servo contr. -] [- 330,332,334 -() 330
%M0083		Delay check safety clutch -] [- 337,339 -() 335
%M0084		Crush at divider -] [- 346,349 -]/[- 200,207,348 -() 346
%M0085		Alarm K011, K012 -] [- 315,317,319 -]/[- 13,380,381 -() 315
%M0086		Alarm doors -] [- 317,319 -() 316
%M0087		Check K002 -] [- 337,339 -]/[- 380,381 -() 336
%M0088		Very low level blanks -] [- 353 -() 351
%M0089		Very low level blanks -] [- 352,353 -() 352
%M0090		Fallen pack in line -] [- 344,347,349 -]/[- 348 -() 344
%M0091		Check K004 -] [- 332,334 -]/[- 380,381 -() 331
%M0094		No blue alarms on -] [- 382,383,384 -]/[- 382,383,384,385 -() 374
%M0095		No blue leds on -]/[- 382 -() 375
%M0096		No yellow alarms on -] [- 15,21,24,144,305,382,383,384 -]/[- 383,384,385 -() 377
%M0097		No yellow leds on -] [- 144,305,382 -]/[- 383 -() 379
%M0098		No red alarms on -] [- 15,19,21,382,383,384 -]/[- 384,385 -() 380
%M0099		No red leds on -] [- 21,382,383 -]/[- 384 -() 381
%M0100	STEP_0	Step 0 -] [- 15,17,26,89,93,94,102,110,111,112,113,114,115,117,121,122,127,132,133,134,135,136,287,312,314,317,319,320,322,328,334,339,341,343,347,349,355,357,359,362,366,373,382,383,384,385 -]/[- 13,25 -(S) 11 -(R) 12
%M0101	STEP_1	Step 1 -] [- 14,16,17,20,21,26,138,146,147,185,222,226,245,246,271,310,337 -]/[- 12,26,188,235 -() 16
%M0102	STEP_2	Step 2 -] [- 16,19,20,22,23,24,26,65,142,143,146,188,195,196,197,198,200,207,212,224,230,231,234,238,239,240,244,248,249,251,253,255,256,259,265,275,286,308,330,332,346,364,367,369,371

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
		-J/[- 10,14,17,26,67,69,71,73,79,81,83,85,89,92,102,109,117,120,127,131,185,267,310,332,368,382 -() 19
%M0103	STEP_3	Step 3 -J [- 19,22,23,144,200,224,234,240,241,251,253,261,265,286,301,305,329 -J/[- 8,20,26,245,248,255 -() 22
%M0107		Been in step 3,not low.than 2 -J [- 213,251,268,277,278,330,352 -J/[- 253,256 -() 251
%M0110		Bypass hotmelt only in step 1 -J [- 14,18 -() 14
%M0111		Ready for step 1 -J [- 16,26 -() 15
%M0112		Ready for step 2 -J [- 19,20,26,382 -() 21
%M0113		Ready for step 3 -J [- 22,23,26 -() 24
%M0120		Cond. send synch. train -J [- 401,402,403,404 -() 400
%M0121		Synch. multi plex train -J [- 391,401 -J/[- 390 -() 390 -(R) 389
%M0122		End of multi plex train -J [- 391,392 -() 391
%M0129	H001	Step 1 lamp -() 17 FBIO 393
%M0130	H002	Step 2 lamp -() 20 FBIO (393)
%M0131	H003	Step 3 lamp -() 23 FBIO (393)
%M0132	H014	Tray -() 132 FBIO (393)
%M0133	H015	WA meeting flap -() 133 FBIO (393)
%M0134	H016	Tray OF -() 134 FBIO (393)
%M0135	H017	WA inside flap -() 135 FBIO (393)
%M0136	H018	WA side flap -() 136 FBIO (393)
%M0137	H019	Single pack.infeed -() 93 FBIO (393)
%M0138	H020	(X*1) infeed -() 94 FBIO (393)
%M0139	H021	spare FBIO (393)
%M0140		FBIO (393)
%M0141		FBIO (393)
%M0142	H024	Package pattern width -() 121 FBIO (393)
%M0143	H025	Package pattern width -() 122

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%M0144		FBIO (393)
%M0145	H01S	FBIO (393) Step up -] [- 17 -() 26
%M0146	H02S	FBIO (394) Step down -() 25
%M0147	H03S	FBIO (394) Reset/ Lampt. -() 385
%M0148	H04S	FBIO (394) Manual empty. -() 287
%M0149		FBIO (394)
%M0150		FBIO (394)
%M0151	H006	FBIO (394) Alarm em.stop -] [- 312,378 -() 314
%M0152	H007	FBIO (394) Alarm doors -] [- 317,378 -() 319
%M0153	H008	FBIO (394) Alarm overlo.protec. -] [- 320,378 -() 322
%M0154	H009	FBIO (394) Alarm air press. -] [- 326,378,381 -() 328
%M0155	H010	FBIO (394) Alarm servo -] [- 332,378 -() 334
%M0156	H011	FBIO (394) Alarm freq. contr. -] [- 337,378 -() 339
%M0157	H027	FBIO (394) Alarm fallen package -] [- 182,341,378 -() 343
%M0158	H028	FBIO (394) Alarm crush after div. -] [- 182,347,378 -() 349
%M0159	H029	FBIO (394) Alarm blank magaz. -] [- 354 -] [- 355,375,379 -() 357
%M0160	H030	FBIO (394) Alarm cru. in pusher -] [- 371,379 -() 373
%M0161	H031	FBIO (394) Al. no blank pack. pos. -] [- 379 -() 362
%M0162	H032	FBIO (394) Alarm hotmelt -] [- 367,379 -() 369
%M0163	H033	FBIO (394) Alarm queue outfeed -] [- 364,379 -() 366
%M0164		FBIO (394)
%M0165		FBIO (394)

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%M0166		FBIO (394)
%M0167		FBIO (394)
%M0168		FBIO (394)
%M0169	H035	Package pattern X*5 -() 110 FBIO (394),395
%M0170	H036	Package pattern X*6 -() 111 FBIO (394),(395)
%M0171	H037	Package pattern X*7 -() 112 FBIO (394),(395)
%M0172	H038	Package pattern X*8 -() 113 FBIO (394),(395)
%M0173	H039	Package pattern X*9 -() 114 FBIO (394),(395)
%M0174	H040	Package pattern X*10 -() 115 FBIO (394),(395)
%M0175		FBIO (394),(395)
%M0176		FBIO (394),(395)
%M0177		FBIO (395)
%M0178		FBIO (395)
%M0179		FBIO (395)
%M0180		FBIO (395)
%M0181		FBIO (395)
%M0182		FBIO (395)
%M0183		FBIO (395)
%M0184		FBIO (395)
%M0185		FBIO (395)
%M0186		FBIO (395)
%M0187		FBIO (395)
%M0188		FBIO (395)
%M0189		FBIO (395)
%M0190		FBIO (395)
%M0191		FBIO (395)
%M0192		FBIO (395)
%M0193		FBIO (395)
%M0194		FBIO (395)
%M0195		FBIO (395)
%M0196		FBIO (395)
%M0197		FBIO (395)
%M0198		FBIO (395)
%M0199		FBIO (395)
%M0200		FBIO (395)
%M0203		Start line divider -] [- 207 -() 206
%M0204		Reset distrib in line 2 -] [- 189,190 -() 191
%M0205		Distribution ready -] [- 189,191,194,290 -] [- 197,198,200,202,203 -() 189
%M0206		Reset distrib line 1 -] [- 189,193 -() 194
%M0207		Cond. for distr. line 1 -] [- 163,190,194,195,197,199,202,207 -] [- 198 -() 197
%M0208		Cond. for distr. line 2 -] [- 176,191,193,196,198,199 -] [- 197 -() 198
%M0209		Compen. after startup ready -] [- 190 -() 190
%M0210		Space line 1> space line 2

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		-] [- 197
		-]/[- 198
		-() 179
%M0211		Compen. after startup ready
		-] [- 193
		-() 193
%M0212		Preset space in line 1
		-] [- 153,155,156,163,165,197
		-]/[- 198
		-() 155
%M0213		Preset space in line 2
		-] [- 168,170,171,176,178,198
		-]/[- 197
		-() 170
%M0214		Free space in line 1
		-] [- 197
		-() 165
%M0215		Free space in line 2
		-] [- 198
		-() 178
%M0216		Add to free space line 1
		-] [- 151,152
		-() 151
%M0217		No max. queue in line 1
		-] [- 155,197
		-() 154
%M0218		No max. queue in line 2
		-] [- 170,198
		-() 169
%M0220		Condit. belt brake
		-] [- 200
		-() 199
%M0221		Add to free space line 2
		-] [- 166,167
		-() 166
%M0225		Line 1 ready for startup
		-] [- 195
		-]/[- 197
		-() 195
%M0226		Line 2 ready for startup
		-] [- 196
		-]/[- 198
		-() 196
%M0230		Max. queue line 1-2
		-] [- 212
		-() 209
%M0231		Min. queue line 1-2
		-] [- 211,212,220,224
		-() 211
%M0232		Start ready
		-] [- 155,170,179,195,196,212,215,224
		-() 212
%M0233		Long infeed ready
		-] [- 215,218,224
		-]/[- 224
		-() 215
%M0234		Short infeed ready
		-] [- 220,233,294
		-]/[- 224,226
		-() 220
%M0235		Cond. short infeed
		-] [- 155,170,220,268,296
		-() 218
%M0236		Delay off min queue 1-2
		-]/[- 211
		-() 210
%M0237		Long infeed brake 2
		-] [- 213,214
		-() 213
%M0238		Condit. brake 2 open
		-] [- 225
		-]/[- 218

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%M0239		-() 217 Condit. brake 2 open -] [- 216,217 -() 216
%M0241		Condit. pusher short -] [- 234,239,370 -] / [- 330 -() 233
%M0242		Cond. memory long stroke -] [- 244 -() 243
%M0244		Memory long pusher stroke -] [- 148,244,245,246,252,259,279,301 -] / [- 222,234,239,253,274,277,278 -() 244
%M0245		No blank group. pos. -] [- 243,358 -() 241
%M0246		Cond. pusher long stroke -] [- 239,240,370 -] / [- 330 -() 239
%M0248		Reset pusher strokes -] [- 237 -] / [- 216,220 -() 235
%M0249		Reset pusher counter -] [- 236,237 -() 236
%M0250		Cond. long pusher stroke -] [- 222 -() 221
%M0252		Cond. long pusher stroke -] [- 222,239,301 -] / [- 234 -() 222
%M0253		Prevent fast restart servo -] [- 230 -() 229
%M0254		Infeed stop out -] [- 226,227 -() 226
%M0255		Pusher in zero pos. -] [- 223,224,226,245 -] / [- 278 -() 223
%M0260		Blank in group. pos. -] [- 139,266,267,274 -] / [- 245 -() 266
%M0261		Stop blank motor -] / [- 265 -() 264
%M0262		Reset ejector blanks -] / [- 271 -() 269
%M0263		Blow after cover closed -] / [- 271 -() 270
%M0264		Blank remov. fr.pack.pos. -] [- 235 -] / [- 266 -() 267
%M0265		Start blank magaz. motor -] [- 262,265 -() 261
%M0266		Stop blank magaz. motor -] [- 261 -() 262
%M0267		Delay off, magaz. photoc. -] [- 265 -() 263

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%M0270		Cond. s.speed feeding motor -] [- 256 -() 255
%M0273		Reached synch. stop pos. -] [- 24,238,239,241,243,253,256,259,300 -]/[- 245 -() 238
%M0276		Cond. s.speed main shaft -] [- 253 -() 248
%M0278		Allow main shaft start -] [- 253 -() 252
%M0279		Slow speed home search -] [- 257 -]/[- 258 -() 257
%M0280		Pulse step 2 -] [- 207,250,253,256 -() 250
%M0283		Cond. stop inf. conv. -] [- 149 -() 148
%M0284		Stop single inf. conv. -]/[- 146 -() 149
%M0300		Bypass hotmelt -] [- 19 -() 18
%M0303		Minimum q. into belt brake -] [- 183 -]/[- 181 -() 182
%M0304		Delay off min q. belt brake -]/[- 183 -() 181
%M0310		Minimum q. into belt brake -] [- 183,200 -]/[- 149 -() 183
%M0400		Distrib. ready -] [- 204 -() 185
%M0401		Reset distrib. -] [- 185,189 -]/[- 200 -() 204
%M0402		Distrib. ready -] [- 205 -() 188
%M0403		Reset distrib. -] [- 188,189 -]/[- 200 -() 205
%M0404		Stop divider after 1 turn -] [- 204,205 -]/[- 203 -() 202
%M0405		Single pack.at pack. counter -] [- 203,206 -]/[- 206 -() 203
%M0406		Pack. counter free, multi -] [- 187 -() 186
%M0417		1:st pusher stroke -] [- 220,234 -]/[- 294 FBIO 237
%M0418		2:nd pusher stroke -] [- 148,216,268 FBIO (237)

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%M0419		3:rd pusher stroke -] [- 221 FBIO (237)
%M0420		4:th pusher stroke -] [- 221 FBIO (237)
%M0421		5:th pusher stroke -] [- 221 FBIO (237)
%M0422		6:th pusher stroke FBIO (237)
%M0423		FBIO (237)
%M0424		FBIO (237)
%M0425		FBIO (237)
%M0426		FBIO (237)
%M0427		FBIO (237)
%M0428		FBIO (237)
%M0429		FBIO (237)
%M0430		FBIO (237)
%M0431		FBIO (237)
%M0432		FBIO (237)
%M0450		Card board in WA station -] [- 139,274,275,276,278 -]/[- 279 -() 274
%M0451		Hotmelt in WA station done -] [- 276,277 -]/[- 275 -() 276
%M0452		Flap folder off -]/[- 274,277 -() 280
%M0453		WA squeez. started -] [- 281 -(S) 279 -(R) 282
%M0454		WA ready next cardb. -] [- 252 -() 281
%M0455		Hotmelt unit not ready -] [- 276 -() 275
%M0456		Long stroke done -] [- 273,274 -() 273
%M0600		Manual empty. -] [- 286 -() 284
%M0601		Bypass min.q. belt brake -] [- 182 -() 288
%M0603		No more pack.in belt brake -] [- 292 -() 289
%M0604		Belt brake empty -] [- 286,292,293 -() 292
%M0605		Bypass min.q. line 1-2 -] [- 211,212,294,295 -() 293
%M0606		Infeed brake empty 1-2 -] [- 225,296 -]/[- 234,240,268 -() 295
%M0607		Brake at pusher empty -] [- 241,296,297 -]/[- 211,212,220,224,268,293 -() 296
%M0608		Delay off distr. ready -]/[- 189 -() 290
%M0609		Reset long infeed man.emp

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		-J/[- 215
		-() 291
%M0610		Manual empty. lamp
		-J [- 161,189,207,212,286,287,288,289,290,291,292
		-J/[- 162,195,196,203,268,295
		-() 286
%M0611		Remove tray in fold. station
		-J [- 297,298
		-() 297
%M0612		Long stroke man. empty.
		-J [- 222
		-() 294
%M0620		Reset stop outfeed
		-J/[- 303
		-() 302
%M0621		Stop outfeed
		-J [- 303
		-J/[- 252,297
		-() 303
%M0761		Bit 1 a.e. Feeding motor
		-() 35
		FBIO 36
%M0762		Bit 2 a.e. Feeding motor
		-J [- 35
		-J/[- 35
		-() 34
		FBIO (36)
%M0763		Bit 3 a.e. Feeding motor
		-J [- 34
		-J/[- 34
		-() 33
		FBIO (36)
%M0764		Bit 4 a.e. Feeding motor
		-J [- 33
		-J/[- 33
		-() 32
		FBIO (36)
%M0765		Bit 5 a.e. Feeding motor
		-J [- 32
		-J/[- 32
		-() 31
		FBIO (36)
%M0766		Bit 6 a.e. Feeding motor
		-J [- 31
		-J/[- 31
		-() 30
		FBIO (36)
%M0767		Bit 7 a.e. Feeding motor
		-J [- 30
		-J/[- 30
		-() 29
		FBIO (36)
%M0768		Bit 8 a.e. Feeding motor
		-J [- 29
		-J/[- 29
		-() 28
		FBIO (36)
%M0769		Bit 1 a.e. Main shaft
		-() 44
		FBIO (36),45
%M0770		Bit 2 a.e. Main shaft
		-J [- 44
		-J/[- 44
		-() 43
		FBIO (36),(45)
%M0771		Bit 3 a.e. Main shaft
		-J [- 43
		-J/[- 43
		-() 42
		FBIO (36),(45)
%M0772		Bit 4 a.e. Main shaft
		-J [- 42

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
		-I/I- 42 -() 41 FBIO (36),(45)
%M0773		Bit 5 a.e. Main shaft -I/I- 41 -I/I- 41 -() 40 FBIO (36),(45)
%M0774		Bit 6 a.e. Main shaft -I/I- 40 -I/I- 40 -() 39 FBIO (36),(45)
%M0775		Bit 7 a.e. Main shaft -I/I- 39 -I/I- 39 -() 38 FBIO (36),(45)
%M0776		Bit 8 a.e. Main shaft -I/I- 38 -I/I- 38 -() 37 FBIO (36),(45)
%M0777		Synch stop feeding motor -I/I- 47,48,238,258,266,267,275,278 -I/I- 51,52,53,54,55,56,140,250,255,256,274,282 -() 46 FBIO (45)
%M0778		Stop pos. feeding motor -I/I- 255 -I/I- 256 -() 49 FBIO (45)
%M0779		Slow speed feeding motor -I/I- 258,266 -() 50 FBIO (45)
%M0780		Hotmelt 1:st dot -I/I- 52,139,140 -I/I- 244,273 -() 51 FBIO (45)
%M0781		Hotmelt 2:nd dot, lower -I/I- 54,139 -I/I- 246 -() 53 FBIO (45)
%M0782		FBIO (45)
%M0783		Hotmelt 2:nd dot, upper -I/I- 56,139 -() 55 FBIO (45)
%M0784		Slow speed main shaft -I/I- 254 -() 57 FBIO (45)
%M0785		Synch. stop main shaft -I/I- 24,59,60,253,254,271 -I/I- 248,250,253 -() 58
%M0786		Stop pos. main shaft -I/I- 248 -I/I- 253 -() 61
%M0787		Start feeding motor -I/I- 256,257 -() 62
%M0788		Ejector blanks -I/I- 268,298 -I/I- 269,271 -() 63
%M0789		Hotmelt WAIF/ WASF gun

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
		-] [- 275
		-() 64
%M0790		1:st lower hotmelt done
		-] [- 52
		-]/[- 51
		-() 52
%M0791		2:nd lower hotmelt done
		-] [- 54
		-]/[- 53
		-() 54
%M0792		1:st upper hotmelt done
		-] [- 140
		-]/[- 139
		-() 140
%M0793		2:nd upper hotmelt done
		-] [- 56
		-]/[- 55
		-() 56
%M0794		DC brake main shaft
		-]/[- 60
		-() 59
%M0795		DC brake feeding motor
		-]/[- 48
		-() 47
%M0890		Tray
		-] [- 79,81,124,125,130,132,281
		-]/[- 131,274,277,278,279,280
		-(M) 130
%M0891		Card board type 2
		-] [- 83,85,125,126,129,133,135,136
		-]/[- 131
		-(M) 129
%M0892		Tray OF
		-] [- 79,81,124,126,128,134
		-]/[- 131
		-(M) 128
%M0893		Select card board type 2
		-] [- 129
		-() 124
%M0894		Select Tray OF
		-] [- 128
		-() 125
%M0895		Select Tray
		-] [- 130
		-() 126
%M0896		Narrow pusher width 2*X
		-] [- 75,79,83,118,119,121
		-]/[- 120
		-(M) 119
%M0897		Wide pusher width 3*X
		-] [- 76,81,85,118,119,122
		-]/[- 119,120
		-(M) 118
%M0900		Single pack infeed
		-] [- 87,88,91,93,161,162,185,189,200,203,206,207,211,340,344
		-]/[- 92,162,188,189,200,206,207
		-(M) 91
%M0901		Multi pack (X*1) infeed
		-] [- 87,88,90,94
		-]/[- 92
		-(M) 90
%M0904		Select (X*1) infeed
		-] [- 90
		-() 87
%M0907		Select single infeed
		-] [- 91
		-() 88
%M0911		Package pattern X*5
		-] [- 96,97,98,99,100,108,110,217,221
		-]/[- 109
		-(M) 108
%M0912		Package pattern X*6

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
		-] [- 97,98,99,100,101,107,111,217,221
		-]/[- 109
		-(M) 107
%M0913		Package pattern X*7
		-] [- 96,98,99,100,101,106,112,217,221
		-]/[- 109
		-(M) 106
%M0914		Package pattern X*8
		-] [- 96,97,99,100,101,105,113,217,221
		-]/[- 109
		-(M) 105
%M0915		Package pattern X*9
		-] [- 96,97,98,100,101,104,114,217,221
		-]/[- 109
		-(M) 104
%M0916		Package pattern X*10
		-] [- 96,97,98,99,101,103,115,217,221
		-]/[- 109
		-(M) 103
%M0917		No package pattern choosen
		-] [- 103,104,105,106,107,108
		-() 109
%M0918		No infeed type choosen
		-] [- 90,91
		-() 92
%M0919		No pusher width choosen
		-] [- 118,119
		-() 120
%M0920		No tray type choosen
		-] [- 128,129,130
		-() 131
%M0921		Select X*6
		-] [- 107
		-() 96
%M0922		Select X*7
		-] [- 106
		-() 97
%M0923		Select X*8
		-] [- 105
		-() 98
%M0924		Select X*9
		-] [- 104
		-() 99
%M0925		Select X*10
		-] [- 103
		-() 100
%M0926		Select X*5
		-] [- 108
		-() 101
%M0929		Cond. for X*5
		-] [- 108
		-]/[- 96,97,98,99,103,104,105,106,107
		FBIO 67
%M0930		Cond. for X*6
		-] [- 107
		-]/[- 97,98,99,100,103,104,105,106
		FBIO (67)
%M0931		Cond. for X*7
		-] [- 106
		-]/[- 98,99,100,101,103,104,105
		FBIO (67)
%M0932		Cond. for X*8
		-] [- 105
		-]/[- 96,99,100,101,103,104
		FBIO (67)
%M0933		Cond. for X*9
		-] [- 104
		-]/[- 96,97,100,101,103
		FBIO (67)
%M0934		Cond. for X*10
		-] [- 103
		-]/[- 96,97,98,101

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
		FBIO (67)
%M0935		FBIO (67)
%M0936		FBIO (67)
%M0937		FBIO (67)
%M0938		FBIO (67)
%M0939		FBIO (67)
%M0940		FBIO (67)
%M0941		FBIO (67)
%M0942		FBIO (67)
%M0943		FBIO (67)
%M0944		FBIO (67)
%M0945		Cond. for single infeed -J [- 91 -J/[- 87,90 FBIO 69
%M0946		Cond. for (X*1) infeed -J [- 90 -J/[- 88 FBIO (69)
%M0947		Cond. for (X*2) infeed FBIO (69)
%M0948		Cond. for (X*3) infeed FBIO (69)
%M0949		FBIO (69)
%M0950		FBIO (69)
%M0951		FBIO (69)
%M0952		FBIO (69)
%M0953		FBIO (69)
%M0954		FBIO (69)
%M0955		FBIO (69)
%M0956		FBIO (69)
%M0957		FBIO (69)
%M0958		FBIO (69)
%M0959		FBIO (69)
%M0960		FBIO (69)
%M0961		Cond. for narrow pusher -J [- 119 -J/[- 118 FBIO 71
%M0962		Cond. for wide pusher -J [- 118 -J/[- 119 FBIO (71)
%M0963		FBIO (71)
%M0964		FBIO (71)
%M0965		FBIO (71)
%M0966		FBIO (71)
%M0967		FBIO (71)
%M0968		FBIO (71)
%M0969		FBIO (71)
%M0970		FBIO (71)
%M0971		FBIO (71)
%M0972		FBIO (71)
%M0973		FBIO (71)
%M0974		FBIO (71)
%M0975		FBIO (71)
%M0976		FBIO (71)
%M0977		Cond. for tray -J [- 130 -J/[- 124,128,129 FBIO 73
%M0978		Cond. for WA inside flap -J [- 129,135,275 -J/[- 125,128,275 FBIO (73)
%M0979		Cond. for WA meeting flap -J [- 129,133,277 -J/[- 125,128 FBIO (73)
%M0980		Cond. for WA side flap -J [- 129,136,275,278,281 -J/[- 125,128,275,277,278

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%M0981		FBIO (73) Cond. for tray OF -] [- 128,277 -] [- 126 FBIO (73)
%M0982		FBIO (73)
%M0983		FBIO (73)
%M0984		FBIO (73)
%M0985		FBIO (73)
%M0986		FBIO (73)
%M0987		FBIO (73)
%M0988		FBIO (73)
%M0989		FBIO (73)
%M0990		FBIO (73)
%M0991		FBIO (73)
%M0992		FBIO (73)

===== TEMPORARY (%T) CROSS REFERENCES

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%T0001		Pulse step up -] [- 11,14,16,19,22 -() 8
%T0002		Pulse step down -] [- 12 -] [- 19,22 -(^) 9
%T0003		Pulse step up push button -] [- 8 -(^) 7
%T0004		Pulse alarm reset -] [- 313,318,321,327,333,338,342,348,356,360,365,368,372 -] [- 312,317,320,324,325,326,329,330,332,337,341,347,355,359,364,367,371 -(^) 387
%T0006		Pulse end multipl.train -] [- 6,393,394,395,397,398,399 -] [- 6 -(^) 392
%T0007		Pulse preset line 2 -] [- 172,174 -(^) 171
%T0009		Pulse add to free space -] [- 153 -(^) 152
%T0010		Pulse add to free space -] [- 168 -(^) 167
%T0013		Pulse sub. from line 1 -] [- 164 -(^) 163
%T0014		Pulse sub. from line 2 -] [- 177 -(^) 176
%T0015		Pulse v. low level blanks -] [- 355 -(^) 354
%T0016		Pulse step 2 -] [- 250,257 -(^) 249
%T0017		Pulse short stroke ready -(^) 219
%T0018		Pulse divider 1 in pos. -] [- 202 -] [- 207 -(^) 201
%T0019		Pulse long stroke ready -] [- 244 -(^) 242
%T0020		Pulse long infeed brake 2 -] [- 215

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%T0021		-(`) 214 Pulse preset line 1 -J [- 157,159 -(`) 156
%T0022		Pulse package counter -J [- 185,203,207 -J/[- 289 -(`) 184
%T0023		Pulse man. empty. finish. -J [- 295 -J/[- 286 -(v) 285
%T0024		Pulse select infeed pack. -J [- 90,91 -J/[- 90,91 -(`) 89
%T0025		Pulse select package pattern -J [- 103,104,105,106,107,108 -J/[- 103,104,105,106,107,108 -(`) 102
%T0026		Pulse man. empty. finish. -J [- 237,285,358 -J/[- 19,296,297 -(`) 298
%T0027		Pulse package counter -J [- 188,207 -(`) 187
%T0028		Pulse select cardb. type -J [- 128,129,130 -J/[- 128,129,130 -(`) 127
%T0029		Pulse select pusher width -J [- 118,119 -J/[- 118 -(`) 117
%T0030		Pulse f.motor synch. pos. -J/[- 301 -(`) 300

===== REGISTER (%R) CROSS REFERENCES

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%R0001		Bypass hotmelt in step 1 FBIO 18
%R0002		FBIO (18)
%R0003		FBIO (18)
%R0004		Max. queue line 1-2 FBIO 209
%R0005		FBIO (209)
%R0006		FBIO (209)
%R0007		Lamp test FBIO 386
%R0008		FBIO (386)
%R0009		FBIO (386)
%R0010		Extern. brake queue length FBIO 308
%R0011		FBIO (308)
%R0012		FBIO (308)
%R0013		Extern. brake space betw.q. FBIO 309
%R0014		FBIO (309)
%R0015		FBIO (309)
%R0016		Extern. brake queue to DE FBIO 307
%R0017		FBIO (307)
%R0018		FBIO (307)
%R0025		Start line divider FBIO 206
%R0026		FBIO (206)
%R0027		FBIO (206)

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%R0028		Delay step down FBIO 10
%R0029		FBIO (10)
%R0030		FBIO (10)
%R0031		Check air press. step 2 FBIO 323
%R0032		FBIO (323)
%R0033		FBIO (323)
%R0034		Superv. air press. FBIO 324
%R0035		FBIO (324)
%R0036		FBIO (324)
%R0037		Check no air press. FBIO 325
%R0038		FBIO (325)
%R0039		FBIO (325)
%R0040		Reset ejector blanks blow FBIO 269
%R0041		FBIO (269)
%R0042		FBIO (269)
%R0043		Long infeed time FBIO 215
%R0044		FBIO (215)
%R0045		FBIO (215)
%R0046		Short infeed time FBIO 218
%R0047		FBIO (218)
%R0048		FBIO (218)
%R0049		Delay off, magaz. photoc. FBIO 263
%R0050		FBIO (263)
%R0051		FBIO (263)
%R0052		Stop blank motor FBIO 264
%R0053		FBIO (264)
%R0054		FBIO (264)
%R0055		No blank in grp.pos FBIO 241
%R0056		FBIO (241)
%R0057		FBIO (241)
%R0058		Reset distrib in line 2 FBIO 191
%R0059		FBIO (191)
%R0060		FBIO (191)
%R0067		Reset distrib. FBIO 194
%R0068		FBIO (194)
%R0069		FBIO (194)
%R0070		Min. queue line 1-2 FBIO 211
%R0071		FBIO (211)
%R0072		FBIO (211)
%R0073		Manual empty. FBIO 284
%R0074		FBIO (284)
%R0075		FBIO (284)
%R0076		No more pack.in belt brake FBIO 289
%R0077		FBIO (289)
%R0078		FBIO (289)
%R0079		Bypass min.q. line 1-2 FBIO 293
%R0080		FBIO (293)
%R0081		FBIO (293)
%R0082		Min.q. into belt brake FBIO 182
%R0083		FBIO (182)
%R0084		FBIO (182)
%R0088		Cond. slow speed main s. FBIO 248
%R0089		FBIO (248)
%R0090		FBIO (248)

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%R0091		Delay off min.q. beltbr. FBIO 181
%R0092		FBIO (181)
%R0093		FBIO (181)
%R0094		Reset distr. ready man.emp FBIO 290
%R0095		FBIO (290)
%R0096		FBIO (290)
%R0097		Delay off min.q. 1-2 FBIO 210
%R0098		FBIO (210)
%R0099		FBIO (210)
%R0100		Alarm K011, K012 FBIO 315
%R0101		FBIO (315)
%R0102		FBIO (315)
%R0103		Fallen package FBIO 340
%R0104		FBIO (340)
%R0105		FBIO (340)
%R0106		Blow after cover closed FBIO 270
%R0107		FBIO (270)
%R0108		FBIO (270)
%R0115		Crush guard infeed conv. FBIO 345
%R0116		FBIO (345)
%R0117		FBIO (345)
%R0118		Queue outfeed conv. FBIO 363
%R0119		FBIO (363)
%R0120		FBIO (363)
%R0121		Stop single inf. conv. FBIO 149
%R0122		FBIO (149)
%R0123		FBIO (149)
%R0124		Prevent fast restart servo FBIO 229
%R0125		FBIO (229)
%R0126		FBIO (229)
%R0127		No max. queue line 1 FBIO 154
%R0128		FBIO (154)
%R0129		FBIO (154)
%R0130		No max. queue line 2 FBIO 169
%R0131		FBIO (169)
%R0132		FBIO (169)
%R0136		Stop outfeed FBIO 302
%R0137		FBIO (302)
%R0138		FBIO (302)
%R0139		1:st lower hotmelt lenght FBIO 52
%R0140		FBIO (52)
%R0141		FBIO (52)
%R0142		2:nd lower hotmelt lenght FBIO 54
%R0143		FBIO (54)
%R0144		FBIO (54)
%R0145		WA hotmelt FBIO 276
%R0146		FBIO (276)
%R0147		FBIO (276)
%R0148		1:st upper hotmelt lenght FBIO 140
%R0149		FBIO (140)
%R0150		FBIO (140)
%R0151		2:nd upper hotmelt lenght FBIO 56
%R0152		FBIO (56)
%R0153		FBIO (56)

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%R0154		Delay check safety clutch FBIO 335
%R0155		FBIO (335)
%R0156		FBIO (335)
%R0160		Delay off, pack. counter FBIO 186
%R0161		FBIO (186)
%R0162		FBIO (186)
%R0163		Stop blank magaz. FBIO 262
%R0164		FBIO (262)
%R0165		FBIO (262)
%R0166		Crush at divider FBIO 346
%R0167		FBIO (346)
%R0168		FBIO (346)
%R0169		Servo enable FBIO 231
%R0170		FBIO (231)
%R0171		FBIO (231)
%R0172		Servo search home FBIO 232
%R0173		FBIO (232)
%R0174		FBIO (232)
%R0175		Servo not synchr. FBIO 329
%R0176		FBIO (329)
%R0177		FBIO (329)
%R0178		Alarm doors FBIO 316
%R0179		FBIO (316)
%R0180		FBIO (316)
%R0181		Check K002 FBIO 336
%R0182		FBIO (336)
%R0183		FBIO (336)
%R0184		Low level blanks FBIO 350
%R0185		FBIO (350)
%R0186		FBIO (350)
%R0187		Very low level blanks FBIO 352
%R0188		FBIO (352)
%R0189		FBIO (352)
%R0190		Fallen pack. in line FBIO 344
%R0191		FBIO (344)
%R0192		FBIO (344)
%R0193		Check K004 FBIO 331
%R0194		FBIO (331)
%R0195		FBIO (331)
%R0208		DC brake main shaft FBIO 59
%R0209		FBIO (59)
%R0210		FBIO (59)
%R0211		Cond. slow speed feed.m. FBIO 255
%R0212		FBIO (255)
%R0213		FBIO (255)
%R0214		Delay off slow speed FBIO 255
%R0215		FBIO (255)
%R0216		FBIO (255)
%R0217		DC brake feeding motor FBIO 47
%R0218		FBIO (47)
%R0219		FBIO (47)
%R0301		Pack. count. single infeed FBIO 185
%R0302		FBIO (185)
%R0303		FBIO (185)

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%R0304		Pack. count. multi infeed FBIO 188
%R0305		FBIO (188)
%R0306		FBIO (188)
%R0310		Number of pusher stroke FBIO 237
%R0311		FBIO (237)
%R0312		FBIO (237)
%R0313		Start blank magaz. motor FBIO 261
%R0314		FBIO (261)
%R0315		FBIO (261)
%R0316		Line 1-2 empty man. empty. FBIO 295
%R0317		FBIO (295)
%R0318		FBIO (295)
%R0322		No blank in pack pos. FBIO 358
%R0323		FBIO (358)
%R0324		FBIO (358)
%R0334		Length synch pulse train FBIO 389,391,400
%R0335		FBIO (391)
%R0336		FBIO (391)
%R0340		Very low level blanks FBIO 351
%R0341		FBIO (351)
%R0342		FBIO (351)
%R0401		Angle encoder value Feed.m. FBIO 36,46,49,50,51,53,55,64
%R0404		Angle encoder value Main m. FBIO 45,57,58,61,62,63,65
%R0411		Free space line 1 FBIO 153,157,159,164,165,179
%R0412		Free space line 2 FBIO 168,172,174,177,178,179
%R0414		Sub. from free space FBIO 161,162,164,177,185
%R0415		No. of pack.at pusher FBIO 75,76,153,168
%R0501		1:st hotmelt dot, start FBIO 51,79,81,83,85
%R0502		2:nd hotmelt start, lower FBIO 53,(79),(81),(83),(85)
%R0503		2:nd hotmelt start, upper FBIO 55,(79),(81),(83),(85)
%R0504		Lower hotmelt length, time FBIO 52,54,(79),(81),(83),(85)
%R0505		Upper hotmelt length, time FBIO 56,(79),(81),(83),(85),140
%R0506		Infeed time FBIO (79),(81),(83),(85),218
%R0507		Reset distrib FBIO (79),(81),(83),(85),194
%R0701		Copy of data word 1 FBIO 393,396,397,402
%R0702		FBIO (396),(397),(402)
%R0703		Copy of data word 2 FBIO 394,(396),398,403
%R0704		FBIO (394),(396),(398),(403)
%R0705		Copy of data word 3 FBIO 395,(396),399,404
%R0706		FBIO (395),(396),(399),(404)

===== SYSTEM REFERENCE (%S) CROSS REFERENCES

REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%S0001	FST_SCN	-] [- 389 -]/[- 16
%S0007	ALW_ON	-] [- 36,45,46,49,50,57,58,61,62,63,64,237,400

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REF.	NICKNAME	REF. DESCRIPTION / CROSS REFERENCES
%S0008	ALW_OFF	-] [- 397,398,399,402,403,404

RACK 0										
PS/CPU	1	2	3	4	5	6	7	8	9	10
PROGRAMMED					CONFIGURATION					
PWR321	MDL646	MDL646	MDL646	MDL646	MDL646	MDL742	MDL742	MDL742	MDL742	
CPU 30	I DC16	I DC16	I DC16	I DC16	I DC16	Q DC16	Q DC16	Q DC16	Q DC16	
	RefAdr %I0001	RefAdr %I0017	RefAdr %I0033	RefAdr %I0049	RefAdr %I0065	RefAdr %Q0001	RefAdr %Q0017	RefAdr %Q0033	RefAdr %Q0049	

SERIES 90-30 MODULE IN RACK 0 SLOT 0

SOFTWARE CONFIGURATION	
SLOT 0	Catalog #: IC693PWR321 POWER SUPPLY 120/240 VAC 30 W
PWR321	
CPU 30	

SERIES 90-30 MODULE IN RACK 0 SLOT 0

SOFTWARE CONFIGURATION	
SLOT 0	Catalog #: IC693CPU323 BASE 10-SLOT WITH CPU 313
CPU323	
10 MHZ	IOScan-Stop: NO Baud Rate : 19200 Pwr Up Mode: LAST Parity : ODD Logic/Cfg : RAM Stop Bits : 1 Registers : RAM Modem TT : 0 1/100 Second / Count Passwords : ENABLED Idle Time : 10 Seconds Chksum Wrds: 8 Sweep Mode : NORMAL Tmr Faults : DISABLED Sweep Tmr : N/A msec

SERIES 90-30 MODULE IN RACK 0 SLOT 1

SOFTWARE CONFIGURATION	
SLOT 1	Catalog #: IC693MDL646 INPUT 24 VDC 16PT POS/NEG FAST
MDL646	Ref Addr : %I0001 Size : 16
I DC16	
RefAdr %I0001	

02-19-96 14:13

GE FANUC SERIES 90-30/90-20/MICRO (v6.01)
Tetra Cardboard Packer 70, MED
47796-01:05 960214 MRO ECN:24437

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SERIES 90-30 MODULE IN RACK 0 SLOT 2

SOFTWARE CONFIGURATION	
SLOT 2	Catalog #: IC693MDL646 INPUT 24 VDC 16PT POS/NEG FAST Ref Addr : %I0017 Size : 16
MDL646	
I DC16	
RefAdr %I0017	

SERIES 90-30 MODULE IN RACK 0 SLOT 3

SOFTWARE CONFIGURATION	
SLOT 3	Catalog #: IC693MDL646 INPUT 24 VDC 16PT POS/NEG FAST Ref Addr : %I0033 Size : 16
MDL646	
I DC16	
RefAdr %I0033	

SERIES 90-30 MODULE IN RACK 0 SLOT 4

SOFTWARE CONFIGURATION	
SLOT 4	Catalog #: IC693MDL646 INPUT 24 VDC 16PT POS/NEG FAST Ref Addr : %I0049 Size : 16
MDL646	
I DC16	
RefAdr %I0049	

02-19-96 14:13

GE FANUC SERIES 90-30/90-20/MICRO (v6.01)
Tetra Cardboard Packer 70, MED
47796-01:05 960214 MRO ECN:24437

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SERIES 90-30 MODULE IN RACK 0 SLOT 5

SOFTWARE CONFIGURATION	
SLOT 5	Catalog #: IC693MDL646 INPUT 24 VDC 16PT POS/NEG FAST Ref Addr : %I0065 Size : 16
MDL646	
I DC16	
RefAdr %I0065	

SERIES 90-30 MODULE IN RACK 0 SLOT 6

SOFTWARE CONFIGURATION	
SLOT 6	Catalog #: IC693MDL742 OUTPUT 12/24 VDC 1A 16PT POS Ref Addr : %Q0001 Size : 16
MDL742	
Q DC16	
RefAdr %Q0001	

SERIES 90-30 MODULE IN RACK 0 SLOT 7

SOFTWARE CONFIGURATION	
SLOT 7	Catalog #: IC693MDL742 OUTPUT 12/24 VDC 1A 16PT POS Ref Addr : %Q0017 Size : 16
MDL742	
Q DC16	
RefAdr %Q0017	

02-19-96 14:13

GE FANUC SERIES 90-30/90-20/MICRO (v6.01)
Tetra Cardboard Packer 70, MED
47796-01:05 960214 MRO ECN:24437

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SERIES 90-30 MODULE IN RACK 0 SLOT 8

SLOT	Catalog #:	SOFTWARE	CONFIGURATION
8	1C693MDL742		OUTPUT 12/24 VDC 1A 16PT POS
	Ref Addr : %Q0033		Size : 16
MDL742			
Q DC16			
RefAdr			
%Q0033			

This drawing must not without the consent of Tetra Pak, be copied, transmitted or disclosed to any third party.

		VOLUME										
RUNG	REFERENCE DESCRIPTION	ADDRESS	180-300 330S, 375S	355 400, 500S	500, 568, 750, 1000, 1085, 1136	750S	1000S	1000SD	TR/ MINI			
67	PACKAGE PATTERN CHOICE	CONST IN	SEE SHEET 3	SEE SHEET 3	SEE SHEET 3	SEE SHEET 3	SEE SHEET 3	SEE SHEET 3	SEE SHEET 3			
69	INFEED CHOICE	CONST IN	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4			
71	PUSHER WIDTH CHOICE	CONST IN	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4			
73	CARDBOARD CHOICE	CONST IN	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4	SEE SHEET 4			
79	NARROW PUSHER, TRAY AND TRAY OF	CONST IN1	124		90		95					
		CONST IN2	174		169		169					
		CONST IN3	178		172		172					
		CONST IN4	2	3	3	3	3					
		CONST IN5	2	2	2	2	2					
		CONST IN6	50	60	65	65	65					
		CONST IN7	35	25	20	20	20					
81	WIDE PUSHER, TRAY AND TRAY OF	CONST IN1	92		90		95					
		CONST IN2	175		164		169					
		CONST IN3	176		168		172					
		CONST IN4	2		3	3	3					
		CONST IN5	2		2	2	2					
		CONST IN6	75	80	65	65	65					
		CONST IN7	20	25	20	20	20					

TETRA CARDBOARD PACKER 70

Tetra Pak	Designer MRD	Date	951105	Approved	MRD	Date	951105	Doc. class	-
	Machine	SEE ABOVE		Classification	VOLUME ADAPTION DOCUMENT				
	Company	Tetra Pak Distribution AB		Drawing No	47796-03:05		Page	1/2	

1) 200S AND 250S NOT INCLUDED

Drawing remarks

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.

RUNG	REFERENCE DESCRIPTION	ADDRESS	VOLUME														
			180-300 330S, 375S	355	400, 500S	500, 568 750, 1000 1250, 1260	750S	1000S	1000SD	TR/ MINI	WAIF	WAMF	WASF				
83 NARROW PUSHER, WAIF/ WAMF/ WASF	1:ST HOTMELT DOT, START	CONST IN1	124	124			94	105	96								
	2:ND HOTMELT DOT START, LOWER	CONST IN2	164	164		170	160	168									
	2:ND HOTMELT DOT START, UPPER	CONST IN3	166	166		172	162	170									
	LENGHT OF HOTMELT, LOWER	CONST IN4	3	3		3	3	3									
	LENGHT OF HOTMELT, UPPER	CONST IN5	3	3		3	3	3									
	INFEED TIME	CONST IN6	50	50		65	65	65									
	RESET DISTRIBUTION	CONST IN7	20	20		20	20	20									
85 WIDE PUSHER, WAIF/ WAMF/ WASF	1:ST HOTMELT DOT, START	CONST IN1	92	92		94	105	96									
	2:ND HOTMELT DOT START, LOWER	CONST IN2	161	161		170	160	168									
	2:ND HOTMELT DOT START, UPPER	CONST IN3	163	163		172	162	170									
	LENGHT OF HOTMELT, LOWER	CONST IN4	3	3		3	3	3									
	LENGHT OF HOTMELT, UPPER	CONST IN5	3	3		3	3	3									
	INFEED TIME	CONST IN6	75	75		65	65	65									
	RESET DISTRIBUTION	CONST IN7	20	20		20	20	20									
157	PV AT MIN. QUEUE, LINE 1	CONST IN	9	9		7	8	7									
159	PV AT NO MIN. QUEUE, LINE 1	CONST IN	11	11		8	9	8									
172	PV AT MIN. QUEUE, LINE 2	CONST IN	9	9		7	8	7									
174	PV AT NO MIN. QUEUE, LINE 2	CONST IN	11	11		8	9	8									
191	RESET DISTRIB., LINE 2	CONST PV	5	5		4	4	4									

TETRA CARDBOARD PACKER 70

Notes	1) 200S AND 250S NOT INCLUDED		Designer MRO	Date	951105	Approved MRO Date	951105	Doc. class	-	
ECR No.	23134		Machine	SEE ABOVE		Description		VOLUME ADAPTION DOCUMENT		
Sign./Date	MRO/951105		Company	Tetra Pak Distribution AB		Drawing No.	47796-03:05		Page	2/3
Appr./Date	MRO/951105	Drawing remarks								

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.

THE CONSTANT SHOULD BE USED IN THE RUNG NUMBER REFERRED TO ON SHEET 1

PACKAGE PATTERN CHOICE	CONST.	PACKAGE PATTERN CHOICE	CONST.	PACKAGE PATTERN CHOICE	CONST.
X*5	1	X*5, X*6, X*7	7	X*5, X*6, X*7, X*8	15
X*6	2	X*5, X*6, X*8	11	X*5, X*6, X*7, X*9	23
X*7	4	X*5, X*6, X*9	19	X*5, X*6, X*7, X*10	39
X*8	8	X*5, X*6, X*10	35	X*5, X*6, X*8, X*9	27
X*9	16	X*5, X*7, X*8	13	X*5, X*6, X*8, X*10	43
X*10	32	X*5, X*7, X*9	21	X*5, X*6, X*9, X*10	51
		X*5, X*7, X*10	37	X*5, X*7, X*8, X*9	29
X*5, X*6	3	X*5, X*8, X*9	25	X*5, X*7, X*8, X*10	45
X*5, X*7	5	X*5, X*8, X*10	41	X*5, X*7, X*9, X*10	53
X*5, X*8	9	X*5, X*9, X*10	49	X*5, X*8, X*9, X*10	57
X*5, X*9	17				
X*5, X*10	33	X*6, X*7, X*8	14	X*6, X*7, X*8, X*9	30
		X*6, X*7, X*9	22	X*6, X*7, X*8, X*10	46
X*6, X*7	6	X*6, X*7, X*10	38	X*6, X*7, X*9, X*10	54
X*6, X*8	10	X*6, X*8, X*9	26	X*6, X*8, X*9, X*10	58
X*6, X*9	18	X*6, X*8, X*10	42		
X*6, X*10	34	X*6, X*9, X*10	50	X*7, X*8, X*9, X*10	60
X*7, X*8	12	X*7, X*8, X*9	28	X*5, X*6, X*7, X*8, X*9	31
X*7, X*9	20	X*7, X*8, X*10	44	X*5, X*6, X*7, X*8, X*10	47
X*7, X*10	36	X*7, X*9, X*10	52	X*5, X*6, X*7, X*9, X*10	55
				X*5, X*6, X*8, X*9, X*10	59
X*8, X*9	24	X*8, X*9, X*10	56	X*5, X*7, X*8, X*9, X*10	61
X*8, X*10	40				
	XX			X*6, X*7, X*8, X*9, X*10	62
X*9, X*10	48				
				X*5, X*6, X*7, X*8, X*9, X*10	63

TETRA CARDBOARD PACKER 70

ENR No.	23134	Designer: MRO	Date: 951026	Approved: MRO	Date: 951026	Dr. class	-
Sign./Date	MRO/951026	Machine	SEE ABOVE	Destination	VOLUME ADAPTION DOCUMENT		
Appr./Date	MRO/951026	Company	Tetra Pak Distribution AB	Drawing No.	47796-03:05		
		Drawing remarks				Page	3/4

9. BE-List and CE-Lists

2.1TH-400027.en

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Standard Equipment (MED).....	CE-42161-050V	
Extra Equipment	CE-41993-030V	
Spare Part Kit	CE-41994-020V	

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 670272

ECN NUMBER: EC 23134
 DATE DISTRIBUTED 95-11-08

14:30 96.4.1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0601
I 0010	ELECTRICAL CABINET	CE-41988-060V	-	-	-	1
I 0020	PANEL	CE-41989-050V	-	-	-	1
0030	MACHINE	CE-41990-040V	-	-	-	1
I 0040	DOCUMENT	CE-41991-060V	-	-	-	1
I 0050	STANDARD EQUIPMENT	CE-41992-060V	-	-	-	1
0060	EXTRA EQUIPMENT	CE-41993-030V	-	-	-	1
0070	SPARE PART TETRA CARDB:70	CE-41994-020V	-	-	-	1

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 42156 42157 42158 42159 42317 679199

ECN NUMBER: EC 23134
DATE DISTRIBUTED 95-11-08

VARIANT DESCRIP:	GROUP	INFEED TYPE	INFEED	INFEED
-0601 1-LINE		Z-FORM		U-FORM
-0602 2-LINE		Z-FORM		U-FORM
-0603 3-LINE		Z-FORM		U-FORM
-0604 1-LINE		L-FORM		
-0605 MULTI		Z-FORM		U-FORM

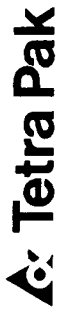
POS PART-TITLE / REMARKS PART-NUMBER R-SP UN 0601 0602 0603 0604 0605

C	MOUNTING DRAWING	4-	52496-05:16	X	-	-	X	-
C	MOUNTING DRAWING	4-	52496-05:17		X			
C	MOUNTING DRAWING	4-	52496-05:18			X		
C	MOUNTING DRAWING	4-	52496-05:19					X

I	0001 CABINET		C-1021902-0201		1	1	1	1
I	0004 SERVO MOTOR CABLE		C-1139098-0101			1		
I	* FOR G024							

0008	TERMINAL X002,X004		C- 582057-0101		1	1	1	1
0009	TERMINAL XL10,X003		C- 579441-0101		1	1	1	1
I	0130 RESOLVER CABLE		C-1139099-0101			1		
I	* FOR G024							

A001	INPUT MODULE 16-P FAST	2-	90031-0022	P	1	1	1	1
A002	INPUT MODULE 16-P FAST	2-	90031-0022	P	1	1	1	1
A003	INPUT MODULE 16-P FAST	2-	90031-0022	P	1	1	1	1
A004	INPUT MODULE 16-P FAST	2-	90031-0022	P	1	1	1	1
A005	INPUT MODULE 16-P FAST	2-	90031-0022	P	1	1	1	1
A006	OUTPUT MODULE 16-P	2-	90031-0023	P	1	1	1	1
A007	OUTPUT MODULE 16-P	2-	90031-0023	P	1	1	1	1



BILL-OF-MATERIAL "O"

DATE PRINTED: 95-11-08

14:30

POS PART TITLE / REMARKS PART NUMBER R SP UN 0601-0602-0603-0604-0605

CONSISTS OF / SPARE PART SP UN QTY
3- 90075-0313 AUXILIARY CONTACT S 1

96.4.1

K005 CONTACTOR 4KW COIL 24VDC 2- 90075-0124 S 1 1 - -
CONSISTS OF / SPARE PART SP UN QTY
3- 90075-0313 AUXILIARY CONTACT S 1

K005 CONTACTOR 4 KW COIL 24VDC 3- 90075-0141 S 1
K006 CONTACTOR 4 KW COIL 24VDC 3- 90075-0141 S 1
K007 CONTACTOR 4KW COIL 24VDC 2- 90075-0124 S 1
CONSISTS OF / SPARE PART SP UN QTY
3- 90075-0313 AUXILIARY CONTACT S 1

K009 CONTACTOR 4 KW COIL 24VDC 3- 90075-0141 S 1
K010 CONTACTOR 4 KW COIL 24VDC 3- 90075-0141 S 1
K011 CONTACTOR 3- 90075-0143 S 1
K012 CONTACTOR 3- 90075-0143 S 1
K016 SOLID-STATE RELAY H12WD 3- 90119-0067 C 1
K026 SOLID-STATE RELAY H12WD 3- 90119-0067 C 1
K099 CONTACTOR 4 KW COIL 24VDC 3- 90075-0141 S 1
M001 FAN 220V; 13W; 50/60HZ 90264-0025 S 1
P001 HOUR METER 3- 90178-0007 C 1
Q000 SWITCH 2- 90111-0132 C 1
Q000:2 SIGN "MAIN SWITCH" 359241-0124 C 1
Q000:3 "PE" SIGN 4- 90111-0344 C 1

I Q001 OVERLOAD PROTECTION 1,6 2- 90095-0073 S 1
I Q001:1 AUXILIARY CONTACT 3- 90259-0317 S 1
I Q004 OVERLOAD PROTECTION 1,6 2- 90095-0073 S 1
I Q004:1 OVERLOAD PROTECTION 1 2- 90095-0072 S 1
I Q004:2 OVERLOAD PROTECTION 4 2- 90095-0075 S 1
I Q004:3 OVERLOAD PROTECTION 1 3- 90259-0317 S 1
I Q005 OVERLPRPT.PKZQZM 0,4-0,63 2- 90095-0071 S 1
I Q005:1 OVERLOAD PROTECTION 1 2- 90095-0072 S 1
I Q005:2 OVERLOAD PROTECTION 1 3- 90259-0317 S 1
I Q006 OVERLOAD PROTECTION 1 2- 90095-0072 S 1
I Q006:1 AUXILIARY CONTACT 3- 90259-0317 S 1
I Q007 OVERLPRPT.PKZQZM 0,4-0,63 2- 90095-0071 S 1

POS	PART-TITLE / REMARKS	PART-NUMBER	R-SP-UN	0601	0602	0603	0604	0605
I 0007:1	AUXILIARY CONTACT	3-	90259-0317	S	-	-	1	-
W001	BRAKE		90432-0007	S	-	1	-	-
W002	BRAKE		90432-0007	S	-	1	-	-
I X007	WALL SOCKET OUTLET	3-	90001-0028	-	1	1	1	1
I Z001	EMI SUPPRESSION FERRITE	4-	90024-0047	-	-	-	-	1
I Z002	EMI SUPPRESSION FERRITE	4-	90024-0047	-	1	1	1	1
I Z003	EMI SUPPRESSION FERRITE	4-	90024-0047	-	1	1	1	1
I Z004	FILTER	4-	90024-0037	-	1	-	-	-
I Z010	EMI SUPPRESSION FERRITE	4-	90024-0047	-	1	1	1	1
I Z011	EMI SUPPRESSION FERRITE	4-	90024-0047	-	-	-	-	1
I Z012	EMI SUPPRESSION FERRITE	4-	90024-0047	-	1	1	1	1
I Z013	EMI SUPPRESSION FERRITE	4-	90024-0047	-	1	1	1	1
0010	SIGN "FLASH SIGN" 50X50MM		90194-0016	-	1	1	1	1
0020	SIGN "IDENTIF. OF WIRING"	3-	90194-0080	-	1	1	1	1
I 0030	SIGN "DELIVERED DESIGN"	4-	583852	-	1	-	-	-
I 0040	SIGN "DELIVERED DESIGN"	4-	583853	-	-	-	-	-
I 0050	SIGN "DELIVERED DESIGN"	4-	583854	-	-	-	-	-
I 0060	SIGN "DELIVERED DESIGN"	4-	583855	-	-	-	1	-
I 0070	SIGN "DELIVERED DESIGN"	4-	583856	-	-	-	-	1
I 0200	FUSE PANEL LABEL	4-	583848	-	1	-	-	1
I 0210	FUSE PANEL LABEL	4-	583849	-	-	1	-	-
I 0220	FUSE PANEL LABEL	4-	583850	-	-	-	1	-
I 0230	FUSE PANEL LABEL	4-	583851	-	-	-	-	1
1000	CABLE AWM DARKBLUE 0,75		351172-0102	-	MM	X	X	X
1010	CABLE AWM DARKBLUE 1,5		351172-0104	-	MM	X	X	X
1020	CABLE AWM LIGHTBLUE 1,5		351173-0104	-	MM	X	X	X
1030	CABLE AWM LIGHTBLUE 2,5		351173-0105	-	MM	X	X	X
1040	CABLE AWM YELL/GREEN 1,5		351175-0104	-	MM	X	X	X
1050	CABLE AWM YELL/GREEN 2,5		351175-0105	-	MM	X	X	X
1060	CABLE AWM BLACK 1,5		351179-0104	-	MM	X	X	X
1070	CABLE AWM BLACK 2,5		351179-0105	-	MM	X	X	X
1080	CABLE AWM ORANGE 0,75		351180-0102	-	MM	X	X	X

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 42156 42157 42158 42159 42317 679199

ECN NUMBER: EC 23134
DATE DISTRIBUTED 95-11-08

14:30 96.4.1

VARIANT DESCRIP.	GROUP	INFEED TYPE	INFEED	INFEED
-0501 1-LINE		Z-FORM		U-FORM
-0502 2-LINE		Z-FORM		U-FORM
-0503 3-LINE		Z-FORM		U-FORM
ALL VOLUMES EXCEPT 1255				
-0504 1-LINE		L-FORM		-
-0505 3-LINE		Z-FORM		U-FORM
1255				
-0506 MULTI		Z-FORM		U-FORM

PGS PART TITLE / REMARKS PART NUMBER R SP UN 0501-0502-0503-0504-0505-0506

C	MOUNTING DRAWING	4-	52496-08:16	X	-	-	-	-	-
C	MOUNTING DRAWING	4-	52496-08:17	X	-	-	-	-	-
C	MOUNTING DRAWING	4-	52496-08:18	-	X	-	-	-	-
C	MOUNTING DRAWING	4-	52496-08:19	-	-	-	X	-	-
C	MOUNTING DRAWING	4-	52496-08:20	-	-	X	-	-	-
C	MOUNTING DRAWING	4-	52496-08:21	-	-	-	-	X	-

I A071	PUSHBUTTON BOARD	C-	583399-0109A	C	1	1	1	1	1
I A072	MULTIPLEXER CARD 56LED	C-	68699-0101	S	1	1	1	1	1
I X010	TERMINAL X010	C-	583994-0101	-	1	1	1	1	1
I 0001	CABINET	C-	1021589-020V	C	1	1	1	1	1

H001	LIGHT BULB BA95 28V		90036-0057	P	1	1	1	1	1
H001:1	LAMP HOLDER BA95	3-	90124-0027	C	1	1	1	1	1
H002	LIGHT BULB BA95 28V		90036-0057	P	1	1	1	1	1
H002:1	LAMP HOLDER BA95	3-	90124-0027	C	1	1	1	1	1
H003	LIGHT BULB BA95 28V		90036-0057	P	1	1	1	1	1
H003:1	LAMP HOLDER BA95	3-	90124-0027	C	1	1	1	1	1
Q H014	LIGHT DIODE	3-	90038-0045	C	1	1	1	1	1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0501	0502	0503	0504	0505	0506
Q H015	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H016	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H017	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H018	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H019	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H020	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H021	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H022	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H024	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H025	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H026	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H027	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H028	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H029	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H030	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H031	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H032	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
Q H033	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
H035	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H036	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H037	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H038	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H039	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H040	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H041	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
I H042	LIGHT DIODE	3- 90038-0045	C			1	1	1	1	1	1
S001	EMERGENCY STOP BUTTON	3- 90064-0124	-			1	1	1	1	1	1
I 0010	DISPLAY	1- 583414	-			1	1	1	1	1	1
I 0020	DISPLAY	1- 583413	-			1	1	1	1	1	1
I 0030	DISPLAY	1- 583421	-			1	1	1	1	1	1
I 0040	DISPLAY	1- 583424	-			1	1	1	1	1	1
0100	SET OF NUMERALS	3- 577515	-			1	1	1	1	1	1
0110	PLATE	3- 975958	C			1	1	1	1	1	1
1000	CABLE AWM DARKBLUE 0.75	351172-0102	-			X	X	X	X	X	X
1010	CABLE AWM YELL/GREEN 1,5	351175-0104	-			X	X	X	X	X	X

C GENERAL REMARKS: TETRA CARDBOARD PACKER 70

CABLE 13, 23, 25, 26, 31, 32, 40, 41, 51-59, 61-68, 76-79, 82-88, 92-96, 112-117, 121-123, 902-906 ARE SUPPLIED WITH THEIR COMPONENTS.
 CABLE 4 AND 130 AT MED INFEED BELONGS TO THE ELECTRICAL CABINET.
 CABLE 72-78, 80-84 ARE AT MIN INFEED ARE SUPPLIED WITH THEIR COMPONENTS.
 CABLE 72-85 ARE AT L-INFEED SUPPLIED WITH THEIR COMPONENTS.
 CABLE 98-101 AT MED INFEED AND MAX INFEED BELONGS TO S-1124062-0101.
 CABLE 33, 69-75, 106-111 AND 129 AT MULTI INFEED ARE SUPPLIED WITH THEIR COMPONENTS.

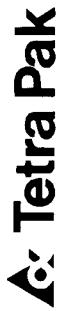
USED IN ASSEMB. 42156 42157 42158 42159 42317 679199

ECN NUMBER: EC 21817
 DATE DISTRIBUTED 95-05-04

VARIANT DESCRIP:	GROUP	INFEED TYPE	INFEED	INFEED
-0401 1-LINE	Z-FORM			U-FORM
-0402 Z-LINE	Z-FORM			U-FORM
-0403 3-LINE	Z-FORM			U-FORM
-0404 1-LINE	L-FORM			
-0405 MULTI	Z-FORM			U-FORM

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0401	0402	0403	0404	0405
C	MOUNTING DRAWING	4-	52496-07:06			X				X
C	MOUNTING DRAWING	4-	52496-07:07				X			
C	MOUNTING DRAWING	4-	52496-07:08					X		
C	MOUNTING DRAWING	4-	52496-07:09							X

I 0001	CABLE FKK 4X1,5		351123-0164			M	X			X
I 0001	CABLE	4-	90220-0104			M				X
0002	CABLE	4-	90220-0104			M	X			X
0003	CABLE	4-	90220-0104			M	X			X
0004	CABLE FKK 4X1,5		351123-0164			M				X
0005	CABLE FKK,5X1,5		351123-0184			M		X		
I 0005	CABLE FKK 4X1,5		351123-0164			M				X
0006	CABLE FKK 4X1,5		351123-0164			M				X



POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0401	0402	0403	0404	0405
0007	CABLE FKK, 5X1,5	351123-0184	-	M		-		X		-
0009	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	X	X	X
0010	CABLE FKK 4X1,5	351123-0164	-	M		X	X	X	X	X
0014	CABLE OILFLEX 12X0,75	351150-0407	-	M		X	X	X	X	X
0015	CABLE OILFLEX 7X0,75	351150-0406	-	M		X	X	X	X	X
0016	CABLE OILFLEX 7X0,75	351150-0406	-	M		X	X	X	X	X
I 0017	CABLE OILFLEX 3X0,75	351150-0403	-	M		-	X	X	X	X
I 0018	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	X	X	X
0019	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	X	X	X
0020	CABLE OILFLEX 27X0,75	351150-0409	-	M		X	X	X	X	X
I 0021	CABLE OILFLEX 16X0,75	351150-0408	-	M		X	X	X	X	-
I 0021	CABLE OILFLEX 12X0,75	351150-0407	-	M		-		-		X
I 0022	CABLE OILFLEX 12X0,75	351150-0407	-	M		-	X	X	-	-
I 0022	CABLE OILFLEX 16X0,75	351150-0408	-	M		-	-	-	-	X
I 0027	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	X	X	X
I 0029	CABLE OILFLEX 7X0,75	351150-0406	-	M		X	X	X	X	X
I 0030	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	X	X	X
I 0033	CABLE OILFLEX 7X0,75	351150-0406	-	M		X	-	-	X	-
I 0034	CABLE OILFLEX 12X0,75	351150-0407	-	M		X	X	X	X	-
I 0034	CABLE OILFLEX 3X0,75	351150-0403	-	M		-	-	-	-	X
I 0035	CABLE OILFLEX 12X0,75	351150-0407	-	M		X	X	X	X	X
I	* ONLY AT WRAP AROUND									
I 0036	CABLE OILFLEX 5X0,75	351150-0405	-	M		X	X	X	X	X
I	* ONLY AT WRAP AROUND									
I 0037	CABLE OILFLEX 5X0,75	351150-0405	-	M		X	X	X	X	X
I 0042	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	X
I 0043	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	-
I 0044	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	-
I 0045	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	-
I 0046	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	-
I 0047	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	X
I 0048	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	X
I 0049	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	X
I 0050	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	X	X	X
I 0059	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X



BILL-OF-MATERIAL "O"

DATE PRINTED: 95-05-04

14:30 96.4.1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0401	0402	0403	0404	0405
I 0060	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	-	-	X	-
I 0061	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	X	-
I 0069	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	X	-	-	-
Q 0080	CABLE OILFLEX N2X0,75	351150-0122	-	M		X	X	-	X	X
I 0102	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	-	-	X	-
I 0103	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	-	-	X	-
I 0104	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	-	-	X	-
I 0105	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	-	-	X	-
I 0112	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0113	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0114	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0115	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0116	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0117	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0118	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0119	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
Q 0120	CABLE OILFLEX N2X0,75	351150-0122	-	M		-	-	-	-	X
I 0127	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	-	X	X
I	* ONLY AT WRAP AROUND									
I 0128	CABLE OILFLEX 3X0,75	351150-0403	-	M		X	X	-	X	X
I	* ONLY AT WRAP AROUND									
0901	CABLE OILFLEX 7X0,75	351150-0406	-	M		X	X	-	X	X
I 0999	CABLE AWM YELL/GREEN 2,5	351175-0105	-	M		X	X	-	X	X



BILL-OF-MATERIAL "0"

DATE PRINTED: 95-11-08

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 679199

ECN NUMBER: EC 23134
DATE DISTRIBUTED 95-11-08

14:30 96.4.1

VARIANT DESCRIPT	GROUP	INFEED TYPE	INFEED	INFEED
-0601 1-LINE		Z-FORM		U-FORM
-0602 2-LINE		Z-FORM		U-FORM
-0603 3-LINE		Z-FORM		U-FORM
-0604 1-LINE		L-FORM		
-0605 MULTI		Z-FORM		U-FORM

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0601	0602	0603	0604	0605
I 0010	DOCUMENT	CE-	42156	-	050V	-	1	-	-	-
I 0020	DOCUMENT	CE-	42157	-	050V	-	1	-	-	-
I 0030	DOCUMENT	CE-	42158	-	050V	-	-	1	-	-
I 0040	DOCUMENT	CE-	42159	-	050V	-	-	-	1	-
I 0050	DOCUMENT	CE-	42317	-	020V	-	-	-	-	1

C GENERAL REMARKS: TETRA CARDBOARD PACKER 70
 BE-LIST 679199-060V AND CE-LIST 41991-060V, 42157-050V ARE TO BE INCLUDED
 IN THE ELECTRICAL DOCUMENT.

USED IN ASSEMB. 41991

ECN NUMBER: EC 23134

DATE DISTRIBUTED 95-11-08

GROUP

VARIANT DESCRIP: -0501 MED INFEEED, VOLUMES >=500B
 -0502 MED INFEEED, VOLUMES <=500S EXCEPT 125S, 200S AND 250S

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0501	0502
I 0010	ELECTRICAL CABINET	CE- 41988-060V	-			1	1
I 0020	PANEL	CE- 41989-050V	-			1	1
I 0030	MACHINE	CE- 41990-040V	-			1	1
I 0040	STANDARD EQUIPMENT	CE- 41992-060V	-			1	1
0050	EXTRA EQUIPMENT	CE- 41993-030V	-			1	1
0060	SPARE PART TETRA CARDB.70	CE- 41994-020V	-			1	1
I 0070	STANDARD EQUIPMENT	CE- 42161-050V	-			1	1
0075	TERMINAL X002,X004	C- 582057-010V	-			1	1
0080	TERMINAL XL10,X003	C- 579441-010V	-			1	1
I 0090	TERMINAL X010	C- 583994-010V	-			1	1
0091	==ASSEMBLY DRAWING==	S3- 582057-0001	-			1	1
0092	==ASSEMBLY DRAWING==	S3- 579441-0001	-			1	1
I 0093	==ASSEMBLY DRAWING==	S3- 583994-0001	-			1	1
I 0100	CIRCUIT DIAGRAM POS.SUMM.	4- 44161-02+21	-			1	1
I 0110	CIRCUIT DIAGRAM	4- 44161-05:07	-			1	1
I 0120	CIRCUIT DIAGRAM	4- 44161-06:14	-			1	1
I 0130	CIRCUIT DIAGRAM	4- 44161-07+02	-			1	1
I 0140	CIRCUIT DIAGRAM	4- 44161-08:07	-			1	1
I 0150	CIRCUIT DIAGRAM	4- 44161-10:18	-			1	1
I 0160	CIRCUIT DIAGRAM	4- 44161-12+16	-			1	1
I 0170	CIRCUIT DIAGRAM	4- 44161-13:16	-			1	1
0180	CIRCUIT DIAGRAM	4- 44161-14:04	-			1	1

POS	PART TITLE / REMARKS	PART NUMBER	R 9P UN 0501 0502
I 0190	CIRCUIT DIAGRAM	4- 44161-15:05	1 1
I 0200	CIRCUIT DIAGRAM	4- 44161-16:13	1 1
I 0210	CIRCUIT DIAGRAM	4- 44161-17:15	1 1
I 0220	CIRCUIT DIAGRAM	4- 44161-18:10	1 1
I 0230	CIRCUIT DIAGRAM	4- 44161-19:13	1 1
I 0240	CIRCUIT DIAGRAM	4- 44161-20:06	1 1
I 0250	CIRCUIT DIAGRAM	4- 44161-22:14	1 1
I 0270	CIRCUIT DIAGRAM	4- 44161-23:16	1 1
I 0280	CIRCUIT DIAGRAM	4- 44161-24:17	1 1
I 0290	CIRCUIT DIAGRAM	4- 44161-25:10	1 1
I 0300	CIRCUIT DIAGRAM	4- 44161-26:13	1 1
I 0310	CIRCUIT DIAGRAM	4- 44161-27:06	1 1
I 0320	CIRCUIT DIAGRAM	4- 44161-28:05	1 1
I 0330	CIRCUIT DIAGRAM	4- 44161-29:03	1 1
I 0360	CIRCUIT DIAGRAM	4- 44161-32:10	1 1
I 0370	CIRCUIT DIAGRAM	4- 44161-33:08	1 1
I 0380	CIRCUIT DIAGRAM	4- 44161-34:09	1 1
I 0385	CIRCUIT DIAGRAM	4- 44161-35:02	1 1
I 0386	CIRCUIT DIAGRAM	4- 44161-36:02	1 1
I 0387	CIRCUIT DIAGRAM	4- 44161-37:01	1 1
I 0389	CIRCUIT DIAGRAM	4- 44161-39:01	1 1
I 0390	CIRCUIT DIAGRAM	4- 44161-40:01	1 1
I 0400	CIRCUIT DIAGRAM-EARTHING	4- 44161-89:11	1 1
I 0410	CIRCUIT DIAGRAM LINE SUMM	4- 44161-90:21	1 1
I 0420	CIRCUIT DIAGRAM TERM. SUMM	4- 44161-91:21	1 1
I 0430	ALTERATIONS MESSAGES	4- 44161-99:06	1 1
I 0510	GE FANUC PROGRAMME LIST	4- 47796-01:05	1 1
I 0520	GE FANUC PROGRAMME LIST	4- 47796-03:05	1 1
I 0600	MOUNTING DRAWING	4- 52496-05:17	1 1
I 0610	MOUNTING DRAWING	4- 52496-07:07	1 1
I 0630	MOUNTING DRAWING	4- 52496-08:17	1 1
I 0685	MOUNTING DRAWING	4- 52496-20:02	1 1
I 0686	MOUNTING DRAWING	4- 52496-21:06	1 1
I 0688	MOUNTING DRAWING	4- 52496-25:02	1 1
I 0689	MOUNTING DRAWING	4- 52496-26:06	1 1
I 0691	MOUNTING DRAWING	4- 52496-30:02	1 1
I 0692	MOUNTING DRAWING	4- 52496-31:06	1 1

POS	PART TITLE / REMARKS	PART NUMBER	R	SF	UN	0501	0502
I 0694	MOUNTING DRAWING	4- 52496-35:02	-	1	1	1	1
I 0695	MOUNTING DRAWING	4- 52496-36:06	-	1	1	1	1
I 0700	CONNECTION DRAWING	4- 61350-05:10	-	1	1	1	1
I 0710	CONNECTION DRAWING	4- 61350-06:11	-	1	1	1	1
I 0720	CONNECTION DRAWING	4- 61350-07:03	-	1	1	1	1
I 0730	CONNECTION DRAWING	4- 61350-08:05	-	1	1	1	1
I 0740	CONNECTION DRAWING	4- 61350-09:06	-	1	1	1	1
I 0750	CONNECTION DRAWING	4- 61350-10:07	-	1	1	1	1
I 0760	CONNECTION DRAWING	4- 61350-11:06	-	1	1	1	1
I 0770	CONNECTION DRAWING	4- 61350-12:13	-	1	1	1	1
I 0780	CONNECTION DRAWING	4- 61350-13:10	-	1	1	1	1
I 0790	CONNECTION DRAWING	4- 61350-14:06	-	1	1	1	1
I 0800	CONNECTION DRAWING	4- 61350-15:05	-	1	1	1	1
I 0810	CONNECTION DRAWING	4- 61350-16:15	-	1	1	1	1
I 0820	CONNECTION DRAWING	4- 61350-17:09	-	1	1	1	1
I 0840	CONNECTION DRAWING	4- 61350-19:14	-	1	1	1	1
I 0850	CONNECTION DRAWING	4- 61350-20:05	-	1	1	1	1
I 0860	CONNECTION DRAWING	4- 61350-21:03	-	1	1	1	1
I 0870	CONNECTION DRAWING	4- 61350-22:02	-	1	1	1	1
I 1000	CONNECTION DRAWING	4- 61351-05:09	-	1	1	1	1
I 1010	CONNECTION DRAWING	4- 61351-06:03	-	1	1	1	1
I 1110	FUSE PANEL LABEL	4- 583849	-	1	1	1	1
I 1130	INDEX DE	4- 575260	-	1	1	1	1
I 1140	LABEL FILE	4- 575257	-	1	1	1	1

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 42156 42157 42158 42159 42317 679199

ECN NUMBER: EC 23134
 DATE DISTRIBUTED 95-11-08

GROUP	INFEED TYPE	INFEED	INFEED
-0601	1-LINE	Z-FORM	U-FORM
-0602	2-LINE	Z-FORM	U-FORM
-0603	3-LINE	Z-FORM	U-FORM
-0604	1-LINE	L-FORM	
-0605	MULTI	Z-FORM	U-FORM

POS PART TITLE / REMARKS PART NUMBER R SP UN 0601 0602 0603 0604 0605

I 0010	STANDARD EQUIPMENT	CE-	42160-050V	-	1	-	-	-
I 0020	STANDARD EQUIPMENT	CE-	42161-050V	-	1	-	-	-
I 0030	STANDARD EQUIPMENT	CE-	42162-050V	-	-	1	-	-
I 0040	STANDARD EQUIPMENT	CE-	42163-050V	-	-	-	1	-
I 0050	STANDARD EQUIPMENT	CE-	42318-020V	-	-	-	-	1

14:30

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 41992 42157

ECN NUMBER: EC 23134
DATE DISTRIBUTED 95-11-08

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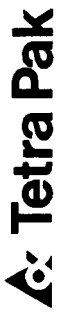
GROUP

VARIANT DESCRIP: -0501 MED INFEED, VOLUMES >=500B
-0502 MED INFEED, VOLUMES <=500S EXCEPT 125S, 200S AND 250S

POS PART TITLE / REMARKS PART NUMBER R SP UN 0501 0502

I	G004:1	EPRM FOR VOLUME >=500B	4-	47846-00:13	-	1	-
I	G004:2	EPRM FOR VOLUME <=500S	4-	47846-00:14	-	1	-
I	0010	GE FANUC DISCETTE	4-	47796-00:05	-	1	1
I	0010:1	FLOPPY DISKETT		90025-0041	-	1	1
I	0010:2	LABEL ELECTRICAL EQUIPM.	4-	575453	-	1	1

* TO BE FILLED IN ACCORDING TO DS202.55



BILL-OF-MATERIAL "O"

DATE PRINTED: 95-01-09

14:30 96.4.1

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 42156 42157 42158 42159 679199

ECN NUMBER: EC 20915
DATE DISTRIBUTED 95-01-09

GROUP VOLTAGE VOLTAGE

VARIANT DESCRIP: -0301 400/230V 380/220V
-0302 SPEC. MAINS

POS PART TITLE / REMARKS PART NUMBER R SP UN 0301 0302

Q 0010 TRANSFORMER 2- 90245-0022 - - 1



BILL-OF-MATERIAL "O"

DATE PRINTED: 95-01-09

14:30 96.4.1

GENERAL REMARKS: TETRA CARDBOARD PACKER 70

USED IN ASSEMB. 42156 42157 42158 42159 679199

ECN NUMBER: EC 20918
DATE DISTRIBUTED 95-01-09

GROUP INFEED TYPE INFEED TYPE

C VARIANT DESCRIP: -0201 1-LINE -
I -0202 2-LINE 3-LINE

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	0201	0202
0010	LIGHT BULB BA9S 28V	90036-0057	-	-	-	2	2
I 0020	LIGHT DIODE	3- 90038-0045	-	-	-	2	2
I 0030	FUSE 10A	4- 90233-0028	-	-	-	-	1

 Tetra Pak