R E L I A N C E E L E C T R I C

AutoMate Programming System

Title Information

Name : Reliance Electric Co.

Location : Cleveland, OH (800) 241-2886

Revision : 1

Job No. : 1

Engineer : Don Smith

06/17/97 --- 15:54:57

Application program file	C:\C\APS\A30DEMO.APR 10/06/92 10:46		
Database file	C:\C\APS\A30DEMO.DB 06/17/97 15:52		
AutoMate type	A30E	Number of Sequences	49
Program Size	463 words	Number of Database Recs	906
Maximum Program Size	8192 words	Number of Names	329
Register Limit	20000-20000	Node Number	0
Program File Format	APR	Maximum No. of Nodes	0

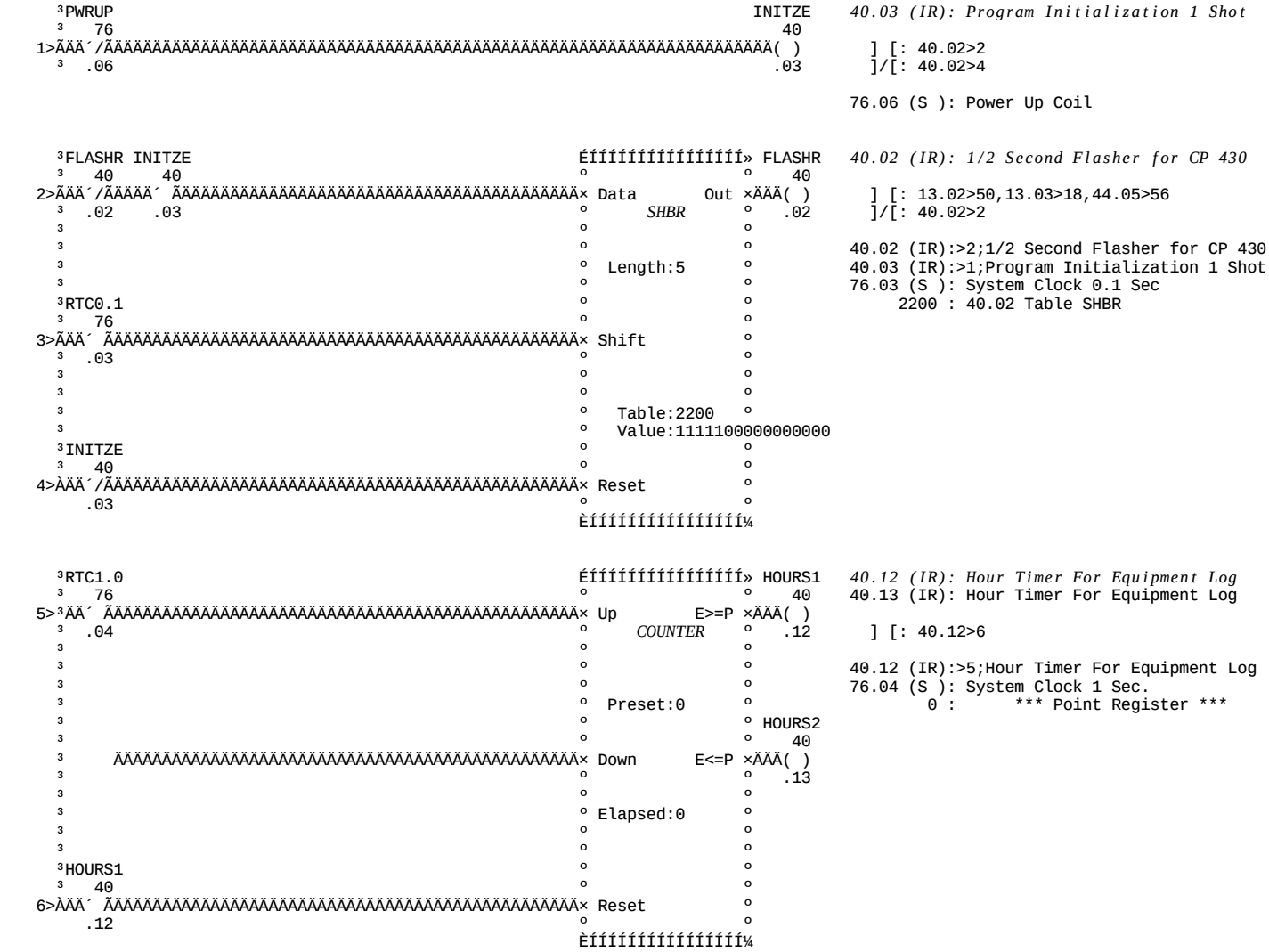
Sequence Listing

Program size = 463 words
Register limit = 20000

Coils in program:

40.03>1	40.02>2	40.12>5	41.02>7	40.10>9	44.14>11	44.16>14
40.04>15	40.05>16	13.01>17	13.03>18	41.03>19	45.00>22	12.15>24
12.07>27	12.03>30	12.04>33	41.11>36	12.05>37	12.06>39	12.11>41
41.12>43	41.07>46	6.16>47	40.06>48	13.02>49	41.04>51	41.05>52
1.13>53	44.05>56	12.12>57	41.06>60	44.06>63	44.07>65	41.17>66
41.13>68	41.14>70	12.14>71	12.00>72	12.10>75	12.16>78	12.02>81
12.01>84	41.16>87	12.13>88	44.01>91	1.12>92	40.07>96	43.16>97

Ladder Listing



40.03 (IR): Program Initialization 1 Shot

```
  ] [: 40.02>2
  ]/[: 40.02>4

76.06 (S ): Power Up Coil
```

40.02 (IR): 1/2 Second Flasher for CP 430

```
  ] [: 13.02>50,13.03>18,44.05>56
  ]/[: 40.02>2

40.02 (IR):>2;1/2 Second Flasher for CP 430
40.03 (IR):>1;Program Initialization 1 Shot
76.03 (S ): System Clock 0.1 Sec
     2200 : 40.02 Table SHBR
```

40.12 (IR): Hour Timer For Equipment Log

40.13 (IR): Hour Timer For Equipment Log

```
  ] [: 40.12>6

40.12 (IR):>5;Hour Timer For Equipment Log
76.04 (S ): System Clock 1 Sec.
       0 :      *** Point Register ***
```

Ladder Listing

```
                                    *     *     *     *     *     *     *     *     *     *     *     *
                                    *     Ahlstrom-Hansen Winder                                      *
                                    *     Manual/Automatic Cycle Sequence                             *
                                    *     *     *     *     *     *     *     *     *     *     *     *
     !
     !                                   Main System Run Relay
     !
    ³PB6017 PB6018 DESRON                                                  WNDRUN   41.02 (IR): Winder System Run
    ³   14     14     14                                                      41
  7>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )      ] [: 1.12>92,12.10>76,13.01>17,40.04>15,
    ³  .04 ³  .05    .00                                                     .02           40.05>16,40.10>9,40.10>10,41.02>8,
    ³WNDRUN³                                                                                   44.14>11,44.16>14
    ³   41 ³
  8>ÀÄÄ´ ÃÄÙ                                                                            14.00 (DI): Drive E Stop Relay ON
       .02                                                                              14.04 (DI): Winder System Start
                                                                                        14.05 (DI): Winder System Stop
                                                                                        41.02 (IR):>7;Winder System Run


     !
     !                                   Winder Tension Input
     !
    ³WNDRUN                                                 ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» WHITEN   40.10 (IR): Winder Web Tension > Setpoint
    ³   41                                                  º                º    40    40.11 (IR): Winder Web Tension < Setpoint
  9>³ÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Enable    High ×ÄÄÄ( )
    ³  .02                                                  º      SCALI     º   .10    41.02 (IR):>7;Winder System Run
    ³                                                       º  Source:4:0    º               2101 : 40.10 Destin SCALI
    ³                                                       º                º               2300 : 40.10 Hi Lim SCALI
    ³                                                       º                º               2301 : 40.10 Lo Lim SCALI
    ³                                                       º  SrcMax:32767  º
    ³WNDRUN                                                 º  SrcMin:0      º WLOTEN
    ³   41                                                  º                º    40
 10>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Limit      Low ×ÄÄÄ( )
    ³  .02                                                  º                º   .11
    ³                                                       º  Hi Lim:2300   º
    ³                                                       º  Lo Lim:2301   º
    ³                                                       º                º
    ³                                                       º  Destin:2101   º
    ³                                                       º   Value:100    º
    ³                                                       º                º
    ³    ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× No Scale       º
                                                            º                º
                                                            ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼


     !
     !                                   Winder Tension Control PID
     !
    ³WNDRUN                                                 ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» TNCLON   44.14 (IR): Winder Tension Control On
    ³   41                                                  º                º    44    44.15 (IR): Winder Tension Control Limit
 11>³ÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Enable  Active ×ÄÄÄ( )
    ³  .02                                                  º      PID       º   .14    41.02 (IR):>7;Winder System Run
    ³                                                       º PID No.:1      º          44.13 (IR): Web Break
    ³                                                       º   Input:2101   º               2101 : 40.10 Destin SCALI
    ³                                                       º  Output:2213   º               2213 : 44.14 Output PID
    ³                                                       º   SetPt:2302   º               2214 : 44.14 Error PID
    ³WEBBRK                                                 º   Error:2214   º WTCLIM        2302 : 44.14 SetPt PID
    ³   44                                                  º                º    44
 12>ÃÄÄ´/ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Auto     Limit ×ÄÄÄ( )
    ³  .13                                                  º                º   .15
    ³                                                       º   PGain:k1219  º
    ³                                                       º   IGain:k1220  º
    ³                                                       º   DGain:k1221  º
    ³                                                       º   DBand:k100   º
    ³WEBBRK                                                 º   ChgMx:k10    º
    ³   44                                                  º                º
 13>ÀÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Hold           º
       .13                                                  º                º
                                                            ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼
```

Ladder Listing

```
     !
     !                                 Winder Speed Reference Trim
     !
    ³WNDRUN                                               ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» WTRIML    44.16 (IR): Winder Trim Low Limit
    ³   41                                                º                º    44     44.17 (IR): Winder Trim High Limit
 14>³ÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Enable    High ×ÄÄÄ( )
    ³  .02                                                º      SCALO     º    .16    41.02 (IR):>7;Winder System Run
    ³                                                     º  Source:2214   º                2214 : 44.14 Error PID
    ³                                                     º   Value:0      º
    ³                                                     º                º
    ³                                                     º  Hi Lim:k9999  º
    ³                                                     º  Lo Lim:k-9999 º WTRIMH
    ³                                                     º                º    44
    ³     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Limit      Low ×ÄÄÄ( )
    ³                                                     º                º    .17
    ³                                                     º  DesMax:32767  º
    ³                                                     º  DesMin:-32768 º
    ³                                                     º                º
    ³                                                     º  Destin:5:0    º
    ³                                                     º                º
    ³                                                     º                º
    ³     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× No Scale       º
                                                          º                º
                                                          ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼


    ³WNDRUN KS6021                                                        WNDMAN    40.04 (IR): Winder Manual Control Enable
    ³   41     14                                                            40
 15>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )      ] [: 1.13>53,12.00>72,12.01>84,12.02>81,
    ³  .02    .10                                                            .04              12.03>31,12.04>34,12.05>38,12.06>40,
                                                                                              12.07>28,12.10>77,12.11>41,12.12>58,
                                                                                              12.15>25,12.16>79,13.03>18,41.06>62,
                                                                                              41.12>44

                                                                                         14.10 (DI): Winder System Manual Control
                                                                                         41.02 (IR):>7;Winder System Run


    ³WNDRUN KS6021                                                        WNDATO    40.05 (IR): Winder Automatic Cont Enable
    ³   41     14                                                            40
 16>ÃÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )      ] [: 13.02>49,41.03>19
    ³  .02    .10                                                            .05       ]/[: 6.16>47

                                                                                         14.10 (DI): Winder System Manual Control
                                                                                         41.02 (IR):>7;Winder System Run


    ³WNDRUN                                                               PL6001    13.01 (DO): Winder System ON
    ³   41                                                                   13
 17>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )    41.02 (IR):>7;Winder System Run
    ³  .02                                                                   .01


    ³WNDMAN FLASHR                                                        PL6003    13.03 (DO): Winder System Manual Op Enable
    ³   40     40                                                            13
 18>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )    40.02 (IR):>2;1/2 Second Flasher for CP 430
    ³  .04    .02                                                            .03    40.04 (IR):>15;Winder Manual Control Enable
```

Ladder Listing

```
   ³ROLEN1 SS6022 WAUTOK LS637  WNDATO RCHGCO                              WATRUN
   ³   40     14     40     13     40     41                                 41
 19>ÄÄÄ´ ÄÄÄÄÄ´ ÄÄÄÄÄ´ ÄÄÄÄÄ´ ÄÄÄÄÄ´ ÄÄÄÄÄ´/ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .00    .11 ³  .06    .07 ³  .05    .16                                .03
   ³PB6020       ³             ³
   ³   14        ³             ³
 20>ÄÄÄ´ ÄÄÄÄÄÄÄÄÄÙ            ³
   ³  .07                      ³
   ³WATRUN                     ³
   ³   41                      ³
 21>ÀÄÄ´ ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÙ
       .03
```

41.03 (IR): Winder Automatic Cycle Run

```
  ] [: 1.13>55,12.00>74,12.01>86,12.02>83,
       12.03>30,12.04>33,12.05>37,12.06>39,
       12.07>27,12.10>75,12.11>42,12.12>57,
       12.13>88,12.14>71,12.15>24,12.16>78,
       40.07>96,41.03>21,41.04>51,41.05>52,
       41.12>43,41.13>69,41.13>68,41.17>66,
       43.16>97,45.00>22
  ]/[: 12.10>76,13.02>49,45.00>23
```

```
13.07 (DI): MT Mandril In Loader
14.07 (DI): Run Air Blower
14.11 (DI): Range Roll Change Automatic
40.00 (IR): Range Roll Length > Preset
40.05 (IR):>16;Winder Automatic Cont Enable
40.06 (IR):>48;Winder Set Up OK for Auto Cyc
41.03 (IR):>19;Winder Automatic Cycle Run
41.16 (IR):>87;
           Winder Roll Change Cycle Compl
```

```
   ³WATRUN                                                 ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» WDRMON
   ³   41                                                  º    45
 22>³ÄÄ´ ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Enable Enabled ×ÄÄÄ( )
   ³  .03                                                  º     DRUMET     º   .00
   ³                                                       º  Length:20     º
   ³                                                       º   Clock:.1     º
   ³                                                       º Elapsed:2400   º
   ³                                                       º  Output:2430   º
   ³                                                       º   Event:2460   º WDRMFN
   ³                                                       º    Time:2520   º    45
   ³     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Step       End ×ÄÄÄ( )
   ³                                                       º                 º   .01
   ³                                                       º Pointer:2550   º
   ³                                                       º   Value:0      º
   ³                                                       º                 º
   ³                                                       º  Destin:52     º
   ³WATRUN                                                 º                 º
   ³   41                                                  º                 º
 23>ÀÄÄ´/ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Reset          º
       .03                                                 º                 º
                                                           ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼
```

45.00 (IR): Winder Drum Sequencer On
45.01 (IR): Winder Drum Sequencer Finished

```
41.03 (IR):>19;Winder Automatic Cycle Run
       52 :      *** Point Register ***
     2430 : 45.00 Output DRUMET 1/20
     2460 : 45.00 Event DRUMET 1/20
     2520 : 45.00 Time DRUMET 1/20
     2550 : 45.00 Pointer DRUMET
```

Step	Time	Event	Event Description	Output Value	³	Dest Bit	Dest Bit Desc
0	0	40.06	Winder Set Up OK for Auto Cyc	0000 0000 0000 0000	³	52.17	Mandril Stop 1 Lower
1	0	11.12	Transfer Arm Transfer Position	0000 0000 0001 0000	³	52.16	Raise Mandril Loader
2	0	11.12	Transfer Arm Transfer Position	0010 0000 0001 0000	³	52.15	Lower Mandril Loader
3	0	11.01	New Mandril Loader DOWN	0000 0000 0000 1000	³	52.14	Full Range Roll Mandril Brake
4	0	13.10	Mand Transfer Arm Lock Closed	0000 0000 1000 1000	³	52.13	Raise Roll Transfer Bridge
5	0	13.16	Thread Belt In Contact	0000 0000 1010 0000	³	52.12	Lower Roll Transfer Bridge
6	50	13.16	Thread Belt In Contact	0000 0000 1100 0000	³	52.11	Main Winding Arm Reverse
7	150	13.16	Thread Belt In Contact	0000 0000 0000 0000	³	52.10	Main Winding Arm Forward
8	0	13.17	Thread Belt Retracted	0000 1000 0000 0000	³	52.07	Lower Thread Belt to Mandril
9	0	10.16	Full Range Roll @ Bridge	0001 0000 0000 0000	³	52.06	Activate Web Tail Blower
10	150	10.16	Full Range Roll @ Bridge	0000 0000 0000 0001	³	52.05	Activate Web Cutter
11	0	11.13	Transfer Arm Idle Position	0000 0001 0000 0000	³	52.04	Lower Mandril Starter Belt
12	0	11.11	New Range Roll @ Dia D1	0000 0000 0000 0100	³	52.03	Close Mand Transfer Arm Lock
13	0	11.10	Mandril Transfer Arms Unload	0000 0000 0000 0010	³	52.02	Open Mandril Transfer Arm
14	0	13.11	Mand Transfer Arm Lock Open	0100 0000 0000 0000	³	52.01	Raise Mandril Transfer Arm
15	0	10.06	Range Roll @ Dia D2	1000 0000 0000 0000	³	52.00	Lower Mandril Transfer Arm
16	0	11.02	New Mandril Loader UP	1000 0000 0000 0000			
17	0	13.07	MT Mandril In Loader	0000 0000 0000 1001			
18	0	13.06	MT Mandril In Position 2	0000 0000 0000 1010			
19	0	13.05	MT Mandril In Position 1	0000 0000 0000 0000			

Ladder Listing

```
   ³DO628  WATRUN                                                              SV628    12.15 (DO): Lower Mandril Loader
   ³   52     41                                                                  12
24>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 12.15>26
   ³  .15    .03                         ³                                       .15
   ³PB6006 LS610  LS633  PB6007 WNDMAN³                                                 10.17 (DI): Lower New Mandril Loader
   ³   10     11     13     11     40 ³                                                 11.00 (DI): Raise New Mandril Loader
25>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÙ                                                  11.07 (DI): Mandril Transfer Arms Load
   ³  .17 ³  .07    .11    .00    .04                                                   12.15 (DO):>24;Lower Mandril Loader
   ³SV628 ³                                                                             13.11 (DI): Mand Transfer Arm Lock Open
   ³   12 ³                                                                             40.04 (IR):>15;Winder Manual Control Enable
26>ÀÄÄ´ ÃÄÙ                                                                             41.03 (IR):>19;Winder Automatic Cycle Run
      .15                                                                               52.15 (IR):>22;Lower Mandril Loader

   ³DO636  WATRUN                                                              SV636    12.07 (DO): Lower Thread Belt To Mandril
   ³   52     41                                                                  12
27>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 12.07>29
   ³  .07    .03        ³                                                        .07
   ³PB6015 PB6016 WNDMAN³                                                               12.07 (DO):>27;Lower Thread Belt To Mandril
   ³   13     13     40 ³                                                               13.14 (DI): Lower Thread Belt To Mandril
28>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÄÄÄ´ ÃÄÙ                                                                13.15 (DI): Retract Thread Belt
   ³  .14 ³  .15    .04                                                                 40.04 (IR):>15;Winder Manual Control Enable
   ³SV636 ³                                                                             41.03 (IR):>19;Winder Automatic Cycle Run
   ³   12 ³                                                                             52.07 (IR):>22;Lower Thread Belt to Mandril
29>ÀÄÄ´ ÃÄÙ
      .07

   ³DO619  WATRUN                                                              SV619    12.03 (DO): Close Mand Transfer Arm Lock
   ³   52     41                                                                  12
30>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 12.03>32
   ³  .03    .03               ³                                                 .03
   ³PB6011 PB6010 LS632  WNDMAN³                                                        11.14 (DI): Open Mand Transfer Arm Lock
   ³   11     11     13     40 ³                                                        11.15 (DI): Close Mand Transfer Arm Lock
31>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÙ                                                         12.03 (DO):>30;Close Mand Transfer Arm Lock
   ³  .15 ³  .14    .10    .04                                                          13.10 (DI): Mand Transfer Arm Lock Closed
   ³SV619 ³                                                                             40.04 (IR):>15;Winder Manual Control Enable
   ³   12 ³                                                                             41.03 (IR):>19;Winder Automatic Cycle Run
32>ÀÄÄ´ ÃÄÙ                                                                             52.03 (IR):>22;Close Mand Transfer Arm Lock
      .03

   ³DO620  WATRUN                                                              SV620    12.04 (DO): Lower Mandril Starter Belt
   ³   52     41                                                                  12
33>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 12.04>35
   ³  .04    .03        ³                                                        .04
   ³PB6013 PB6014 WNDMAN³                                                               12.04 (DO):>33;Lower Mandril Starter Belt
   ³   13     13     40 ³                                                               13.12 (DI): Lower New Mandril Starter
34>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄ´ ÃÄÙ                                                                13.13 (DI): Raise New Mandril Starter
   ³  .12 ³  .13    .04                                                                 40.04 (IR):>15;Winder Manual Control Enable
   ³SV620 ³                                                                             41.03 (IR):>19;Winder Automatic Cycle Run
   ³   12 ³                                                                             52.04 (IR):>22;Lower Mandril Starter Belt
35>ÀÄÄ´ ÃÄÙ
      .04

   ³WCUTDY                                               ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» CTONDY   41.11 (IR): Winder Cutter On Delay
   ³   41                                                º                º    41
36>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Data       Out ×ÄÄÄ( )      ] [: 41.12>43
   ³  .10                                                º       TON      º   .11
                                                         º                º             41.10 (IR): Winder Cutter Start Delay
                                                         º                º                  2103 : 41.11 Preset TON
                                                         º   Clock:1      º                  2204 : 41.11 Elapsed TON
                                                         º                º
                                                         º  Preset:2103   º
                                                         º   Value:5      º
                                                         º Elapsed:2204   º
                                                         º   Value:0      º
                                                         ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼
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Ladder Listing

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   ³DO621  WATRUN                                                       SV621     12.05 (DO): Activate Web Cutter
   ³   52      41                                                          12
37>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 12.06>39
   ³  .05    .03 ³                                                         .05
   ³PB6028 WNDMAN³                                                                14.17 (DI): Cut New Range Roll
   ³   14      40 ³                                                               40.04 (IR):>15;Winder Manual Control Enable
38>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÙ                                                                41.03 (IR):>19;Winder Automatic Cycle Run
      .17    .04                                                                  52.05 (IR):>22;Activate Web Cutter


   ³SV621  WATRUN                                  ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» SV622     12.06 (DO): Activate Web Tail Blower
   ³   12      41                                  º                º    12
39>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Data       Out ×ÄÄÄ( )    12.05 (DO):>37;Activate Web Cutter
   ³  .05    .03 ³                                 º      TON       º   .06     14.07 (DI): Run Air Blower
   ³PB6020 WNDMAN³                                 º                º         40.04 (IR):>15;Winder Manual Control Enable
   ³   14      40 ³                                º                º         41.03 (IR):>19;Winder Automatic Cycle Run
40>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÙ                                 º   Clock:.1     º              2104 : 12.06 Preset TON
      .07    .04                                   º                º              2205 : 12.06 Elapsed TON
                                                   º  Preset:2104   º
                                                   º   Value:5      º
                                                   º Elapsed:2205   º
                                                   º   Value:0      º
                                                   ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼


   ³PB6002 PB6001 WNDMAN                                                SV624     12.11 (DO): Main Winding Arm Reverse
   ³   10      10     40                                                   12
41>ÃÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )     10.04 (DI): Main Winding Arm Forward
   ³  .05    .04    .04 ³                                                  .11    10.05 (DI): Main Winding Arm Reverse
   ³DO624  WATRUN       ³                                                         40.04 (IR):>15;Winder Manual Control Enable
   ³   52      41       ³                                                         41.03 (IR):>19;Winder Automatic Cycle Run
42>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÙ                                                          52.11 (IR):>22;Main Winding Arm Reverse
      .11    .03


   ³CTONDY WATRUN                                                       RSTCTR    41.12 (IR): Web Cut Made - Reset Counter
   ³   41      41                                                          41
43>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 41.07>46,41.12>45,41.17>66,44.06>63
   ³  .11    .03 ³                                                         .12
   ³PB6028 WNDMAN³                                                                14.17 (DI): Cut New Range Roll
   ³   14      40 ³                                                               40.04 (IR):>15;Winder Manual Control Enable
44>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄ´                                                                41.03 (IR):>19;Winder Automatic Cycle Run
   ³  .17    .04 ³                                                                41.07 (IR):>46;Roll Metrage Counter Reset
   ³RSTCTR CNTRST³                                                                41.11 (IR):>36;Winder Cutter On Delay
   ³   41      41 ³                                                               41.12 (IR):>43;Web Cut Made - Reset Counter
45>ÀÄÄ´ ÃÄÄÄÄ´/ÃÄÙ
      .12    .07


   ³RSTCTR CNTRST                                                       CNTRST    41.07 (IR): Roll Metrage Counter Reset
   ³   41      41                                                          41
46>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )       ] [: 41.07>46
   ³  .12    .07                                                           .07      ]/[: 41.12>45

                                                                                  41.07 (IR):>46;Roll Metrage Counter Reset
                                                                                  41.12 (IR):>43;Web Cut Made - Reset Counter


   ³WNDATO MF7020 MR7020                                                DORLOK     6.16 (DO): Release Access Door Locks
   ³   40       2      2                                                    6
47>ÃÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )      2.04 (DO): Roll Storage Chain Forward
   ³  .05    .04    .05                                                    .16     2.05 (DO): Roll Storage Chain Reverse
                                                                                  40.05 (IR):>16;Winder Automatic Cont Enable
```

Ladder Listing

```
   ³LS607  LS610  PB6014 LS635  PB6002 LS637                                  WAUTOK
   ³   11     11     13     13     10     13                                   40
48>ÃÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .02    .07    .13    .17    .05    .07                                  .06
```

40.06 (IR): Winder Set Up OK for Auto Cyc

] [: 13.02>49,41.03>19

10.05 (DI): Main Winding Arm Reverse
11.02 (DI): New Mandril Loader UP
11.07 (DI): Mandril Transfer Arms Load
13.07 (DI): MT Mandril In Loader
13.13 (DI): Raise New Mandril Starter
13.17 (DI): Thread Belt Retracted

```
   ³ROLEN2 WNDATO WATRUN WAUTOK                                             PL6002
   ³   40     40     41     40                                               13
49>ÃÄÄ´ ÃÂÄÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .01 ³  .05    .03    .06                                              .02
   ³FLASHR³
   ³   40 ³
50>ÀÄÄ´ ÃÄÙ
      .02
```

13.02 (DO): Winder System 'Ready To Cut'

40.01 (IR): Range Roll Length < Preset
40.02 (IR):>2;1/2 Second Flasher for CP 430
40.05 (IR):>16;Winder Automatic Cont Enable
40.06 (IR):>48;Winder Set Up OK for Auto Cyc
41.03 (IR):>19;Winder Automatic Cycle Run

```
   ³WATRUN A1SAUX                                                           A1SCAN
   ³   41     41                                                            41
51>ÃÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .03    .05                                                           .04
```

41.04 (IR): Winder Auto Cycle 1 Scan

41.03 (IR):>19;Winder Automatic Cycle Run
41.05 (IR):>52;Winder Auto Cycle 1 Scan Aux

```
   ³WATRUN                                                                  A1SAUX
   ³   41                                                                    41
52>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .03                                                                   .05
```

41.05 (IR): Winder Auto Cycle 1 Scan Aux

]/[: 41.04>51

41.03 (IR):>19;Winder Automatic Cycle Run

```
   ³PB6026               PB6027 WNDMAN PB6018                               MS6020
   ³   14                   14     40     14                                  1
53>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÂÄÄ´ ÃÄÄÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .15                ³  .16    .04 ³  .05                               .13
   ³LS613  LS614  MS6020³              ³
   ³   11     11      1 ³              ³
54>ÃÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÙ             ³
   ³  .12    .13    .13                ³
   ³DO6020 WATRUN                      ³
   ³   53     41                       ³
55>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÙ
      .05    .03
```

1.13 (DO): Winder Transfer Arm Motor

] [: 1.13>54

1.13 (DO):>53;Winder Transfer Arm Motor
11.12 (DI): Transfer Arm Transfer Position
11.13 (DI): Transfer Arm Idle Position
14.05 (DI): Winder System Stop
14.15 (DI): Rotate Web Transfer Arm
14.16 (DI): Stop Web Transfer Arm
40.04 (IR):>15;Winder Manual Control Enable
41.03 (IR):>19;Winder Automatic Cycle Run
53.05 (IR): Winder Transfer Arm Motor

```
   ³LS635  LS639  FLASHR                                                    RARMOK
   ³   13     10     40                                                     44
56>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .17    .15    .02                                                    .05
```

44.05 (IR): OK To Rotate Web Transfer Arms

10.15 (DI): Mandril Starter Belt Retracted
13.17 (DI): Thread Belt Retracted
40.02 (IR):>2;1/2 Second Flasher for CP 430

```
   ³DO625  WATRUN               LS604  BRDNOK                              SV625
   ³   52     41                   10     41                                12
57>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÂÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .12    .03                ³  .14    .06                               .12
   ³PB6003 PB6005 PB6004 WNDMAN³
   ³   10     10     10     40 ³
58>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÙ
   ³  .10 ³  .12    .11    .04
   ³SV625 ³
   ³   12 ³
59>ÀÄÄ´ ÃÄÙ
      .12
```

12.12 (DO): Lower Roll Transfer Bridge

] [: 1.12>94,12.12>59

10.10 (DI): Lower Roll Transfer Bridge
10.11 (DI): Raise Roll Transfer Bridge
10.12 (DI): Stop Roll Transfer Bridge
10.14 (DI): Roll Transfer Bridge DOWN
12.12 (DO):>57;Lower Roll Transfer Bridge
40.04 (IR):>15;Winder Manual Control Enable
41.03 (IR):>19;Winder Automatic Cycle Run
41.06 (IR):>60;OK To Lower Transfer Bridge
52.12 (IR):>22;Lower Roll Transfer Bridge

Ladder Listing

```
   ³RL@WDR LS717  LS720A LS720B MF7020 MR7020                                BRDNOK
   ³   42      5      5      5      2      2                                    41
60>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÂÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .05 ³  .02 ³  .07    .10    .04    .05                                   .06
   ³STOAUT³LS723 ³
   ³   42 ³    6 ³
61>ÃÄÄ´/ÃÄÄÄÄ´/ÃÄÙ
   ³  .00 ³  .13
   ³WNDMAN³
   ³   40 ³
62>ÀÄÄ´ ÃÄÙ
      .04
```

41.06 (IR): OK To Lower Transfer Bridge

] [: 12.12>57

2.04 (DO): Roll Storage Chain Forward
2.05 (DO): Roll Storage Chain Reverse
5.02 (DI): Main Chain Saddle OK - Winder
5.07 (DI): Access Door Closed - Aisle
5.10 (DI): Access Door Closed - Wall
6.13 (DI): Main Chain Saddle OK - Slitter
40.04 (IR):>15;Winder Manual Control Enable
42.00 (IR): Roll Storage System Automatic
42.05 (IR): Roll Chain - Roll At Winder

```
   ³RSTCTR                                                                   UPDQUE
   ³   41                                                                       44
63>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .12        ³                                                             .06
   ³UPDQUE QUEUPD³
   ³   44     44 ³
64>ÀÄÄ´ ÃÄÄÄÄ´/ÃÄÙ
      .06    .07
```

44.06 (IR): Roll Finished - Update Queue

] [: 44.06>64,44.07>65

41.12 (IR):>43;Web Cut Made - Reset Counter
44.06 (IR):>63;Roll Finished - Update Queue
44.07 (IR):>65;Roll Storage Queue Updated

```
   ³UPDQUE QUEUPD                                                            QUEUPD
   ³   44     44                                                                44
65>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .06    .07                                                               .07
```

44.07 (IR): Roll Storage Queue Updated

] [: 44.07>65
]/[: 44.06>64

44.06 (IR):>63;Roll Finished - Update Queue
44.07 (IR):>65;Roll Storage Queue Updated

```
   ³RSTCTR WATRUN                                                            CUTMAD
   ³   41     41                                                                41
66>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .12 ³  .03                                                               .17
   ³CUTMAD³
   ³   41 ³
67>ÀÄÄ´ ÃÄÙ
      .17
```

41.17 (IR): Roll Cut Made Relay

] [: 41.16>87,41.17>67

41.03 (IR):>19;Winder Automatic Cycle Run
41.12 (IR):>43;Web Cut Made - Reset Counter
41.17 (IR):>66;Roll Cut Made Relay

```
   ³LS605  WATRUN LS611                                                      ROL@BR
   ³   10     41     11                                                         41
68>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .16 ³  .03    .10                                                        .13
   ³WATRUN³
   ³   41 ³
69>ÀÄÄ´ ÃÄÙ
      .03
```

41.13 (IR): Full Roll @ Transfer Bridge

] [: 41.14>70

10.16 (DI): Full Range Roll @ Bridge
11.10 (DI): Mandril Transfer Arms Unload
41.03 (IR):>19;Winder Automatic Cycle Run

```
   ³ROL@BR                                                ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ» RLBRTD
   ³   41                                                 º                º   41
70>ÃÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ× Data       Out ×ÄÄÄ( )
   ³  .13                                                 º       TON      º   .14
                                                          º                º
                                                          º                º
                                                          º   Clock:1      º
                                                          º                º
                                                          º  Preset:2105   º
                                                          º   Value:15     º
                                                          º Elapsed:2206   º
                                                          º   Value:0      º
                                                          ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ¼
```

41.14 (IR): Full Roll Brake On Delay

41.13 (IR):>68;Full Roll @ Transfer Bridge
2105 : 41.14 Preset TON
2206 : 41.14 Elapsed TON

```
   ³DO627  WATRUN                                                            SV627
   ³   52     41                                                                12
71>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .14    .03                                                               .14
```

12.14 (DO): Full Range Roll Mandril Brake

41.03 (IR):>19;Winder Automatic Cycle Run
52.14 (IR):>22;Full Range Roll Mandril Brake

Ladder Listing

```
   ³PB6024 PB6025 PB6023 LS611  WNDMAN                                      SV616
   ³   14     14     14     11     40                                          12
72>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .13 ³  .14    .12    .10    .04 ³                                        .00
   ³SV616 ³                           ³
   ³   12 ³                           ³
73>ÃÄÄ´ ÃÄÙ                           ³
   ³  .00                             ³
   ³DO616  WATRUN                     ³
   ³   52     41                      ³
74>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÙ
      .00    .03
```

12.00 (DO): Lower Mandril Transfer Arm

] [: 1.12>92,12.00>73

11.10 (DI): Mandril Transfer Arms Unload
12.00 (DO):>72;Lower Mandril Transfer Arm
14.12 (DI): Raise Mandril Transfer Arm
14.13 (DI): Lower Mandril Transfer Arm
14.14 (DI): Stop Mandril Transfer Arm
40.04 (IR):>15;Winder Manual Control Enable
41.03 (IR):>19;Winder Automatic Cycle Run
52.00 (IR):>22;Lower Mandril Transfer Arm

```
   ³DO623  WATRUN                                                           SV623
   ³   52     41                                                               12
75>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÂÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .10    .03 ³      ³                                                      .10
   ³WNDRUN WATRUN³      ³
   ³   41     41 ³      ³
76>ÃÄÄ´ ÃÄÄÄÄ´/ÃÄÙ      ³
   ³  .02    .03        ³
   ³PB6001 PB6002 WNDMAN³
   ³   10     10     40 ³
77>ÀÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÙ
      .04    .05    .04
```

12.10 (DO): Main Winding Arm Forward

10.04 (DI): Main Winding Arm Forward
10.05 (DI): Main Winding Arm Reverse
40.04 (IR):>15;Winder Manual Control Enable
41.02 (IR):>7;Winder System Run
41.03 (IR):>19;Winder Automatic Cycle Run
52.10 (IR):>22;Main Winding Arm Forward

```
   ³DO629  WATRUN                                                           SV629
   ³   52     41                                                               12
78>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .16    .03                ³                                              .16
   ³MF6030 PB6006 LS633  WNDMAN³
   ³    1     10     13     40 ³
79>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÙ
   ³  .00 ³  .17    .11    .04
   ³SV629 ³
   ³   12 ³
80>ÀÄÄ´ ÃÄÙ
      .16
```

12.16 (DO): Raise Mandril Loader

] [: 12.16>80

1.00 (DO): Winder Kicker - Wall Side FWD
10.17 (DI): Lower New Mandril Loader
12.16 (DO):>78;Raise Mandril Loader
13.11 (DI): Mand Transfer Arm Lock Open
40.04 (IR):>15;Winder Manual Control Enable
41.03 (IR):>19;Winder Automatic Cycle Run
52.16 (IR):>22;Raise Mandril Loader

```
   ³PB6010 PB6011 LS633  WNDMAN                                             SV618
   ³   11     11     13     40                                                 12
81>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .14 ³  .15    .11    .04 ³                                               .02
   ³SV618 ³                    ³
   ³   12 ³                    ³
82>ÃÄÄ´ ÃÄÙ                    ³
   ³  .02                      ³
   ³DO618  WATRUN              ³
   ³   52     41               ³
83>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÙ
      .02    .03
```

12.02 (DO): Open Mandril Transfer Arm Lock

] [: 12.02>82

11.14 (DI): Open Mand Transfer Arm Lock
11.15 (DI): Close Mand Transfer Arm Lock
12.02 (DO):>81;
Open Mandril Transfer Arm Lock
13.11 (DI): Mand Transfer Arm Lock Open
40.04 (IR):>15;Winder Manual Control Enable
41.03 (IR):>19;Winder Automatic Cycle Run
52.02 (IR):>22;Open Mandril Transfer Arm

```
   ³PB6023 PB6025 PB6024 LS610  WNDMAN                                      SV617
   ³   14     14     14     11     40                                          12
84>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÂÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .12 ³  .14    .13    .07    .04 ³                                        .01
   ³SV617 ³                           ³
   ³   12 ³                           ³
85>ÃÄÄ´ ÃÄÙ                           ³
   ³  .01                             ³
   ³DO617  WATRUN                     ³
   ³   52     41                      ³
86>ÀÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÙ
      .01    .03
```

12.01 (DO): Raise Mandril Transfer Arm

] [: 1.12>93,12.01>85

11.07 (DI): Mandril Transfer Arms Load
12.01 (DO):>84;Raise Mandril Transfer Arm
14.12 (DI): Raise Mandril Transfer Arm
14.13 (DI): Lower Mandril Transfer Arm
14.14 (DI): Stop Mandril Transfer Arm
40.04 (IR):>15;Winder Manual Control Enable
41.03 (IR):>19;Winder Automatic Cycle Run
52.01 (IR):>22;Raise Mandril Transfer Arm

Ladder Listing

```
   ³LS610  LS633  CUTMAD LS637  LS636                                          RCHGCO
   ³  11     13     41     13     13                                             41
87>ÃÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .07    .11    .17    .07    .06                                            .16
```

41.16 (IR): Winder Roll Change Cycle Compl

]/[: 41.03>19

11.07 (DI): Mandril Transfer Arms Load
13.06 (DI): MT Mandril In Position 2
13.07 (DI): MT Mandril In Loader
13.11 (DI): Mand Transfer Arm Lock Open
41.17 (IR):>66;Roll Cut Made Relay

```
   ³DO626  WATRUN        BRUPOK                                                SV626
   ³  52     41            44                                                    12
88>ÃÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÂÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .13    .03          ³  .01                                                 .13
   ³PB6004 PB6003 PB6005³
   ³  10     10     10 ³
89>ÃÄÄ´ ÃÄÂÄÄ´/ÃÄÄÄÄ´ ÃÄÙ
   ³  .11 ³  .10    .12
   ³SV626 ³
   ³  12 ³
90>ÀÄÄ´ ÃÄÙ
      .13
```

12.13 (DO): Raise Roll Transfer Bridge

] [: 1.12>95,12.13>90

10.10 (DI): Lower Roll Transfer Bridge
10.11 (DI): Raise Roll Transfer Bridge
10.12 (DI): Stop Roll Transfer Bridge
12.13 (DO):>88;Raise Roll Transfer Bridge
41.03 (IR):>19;Winder Automatic Cycle Run
44.01 (IR):>91;OK To Raise Transfer Bridge
52.13 (IR):>22;Raise Roll Transfer Bridge

```
   ³LS603  LS641  LS643  LS704A LS704B LS702                                   BRUPOK
   ³  10     10     10      4      4      4                                      44
91>ÃÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´/ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .13    .01    .03    .03    .04    .00                                     .01
```

44.01 (IR): OK To Raise Transfer Bridge

] [: 12.13>88

4.00 (DI): Roll In First Pos Main Chain
4.03 (DI): New Roll In Main Chain Saddle
4.04 (DI): New Roll In Main Chain Saddle
10.01 (DI): Kicker - Wall Side Retracted
10.03 (DI): Kicker - Aisle Side Retracted
10.13 (DI): Roll Transfer Bridge UP

```
   ³SV616  WNDRUN                                                              MS6010
   ³  12     41                                                                   1
92>ÃÄÄ´ ÃÄÂÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .00 ³  .02                                                                 .12
   ³SV617 ³
   ³  12 ³
93>ÃÄÄ´ ÃÄ´
   ³  .01 ³
   ³SV625 ³
   ³  12 ³
94>ÃÄÄ´ ÃÄ´
   ³  .12 ³
   ³SV626 ³
   ³  12 ³
95>ÀÄÄ´ ÃÄÙ
      .13
```

1.12 (DO): Winder Hydraulic System Pump

12.00 (DO):>72;Lower Mandril Transfer Arm
12.01 (DO):>84;Raise Mandril Transfer Arm
12.12 (DO):>57;Lower Roll Transfer Bridge
12.13 (DO):>88;Raise Roll Transfer Bridge
41.02 (IR):>7;Winder System Run

```
   ³MF7020 LS704A LS704B ROL/CH WATRUN                                         CHAIDX
   ³   2      4      4     43     41                                             40
96>ÃÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .04    .03    .04    .16    .03                                            .07
```

40.07 (IR): Roll Chain Indexed W/New Roll

2.04 (DO): Roll Storage Chain Forward
4.03 (DI): New Roll In Main Chain Saddle
4.04 (DI): New Roll In Main Chain Saddle
41.03 (IR):>19;Winder Automatic Cycle Run
43.16 (IR):>97;New Roll Loaded On Chain

```
   ³LS704A LS704B WATRUN                                                       ROL/CH
   ³   4      4     41                                                           43
97>ÃÄÄ´/ÃÄÄÄÄ´/ÃÄÄÄÄ´ ÃÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ( )
   ³  .03    .04    .03                                                          .16
```

43.16 (IR): New Roll Loaded On Chain

] [: 40.07>96

4.03 (DI): New Roll In Main Chain Saddle
4.04 (DI): New Roll In Main Chain Saddle
41.03 (IR):>19;Winder Automatic Cycle Run

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Contact & Coil Reference

Point Number	Name	Description	Card
52.05 (IR)	DO621	Activate Web Cutter] [: 12.05>37:7 ( ): 45.00>22:5	
52.06 (IR)	DO622	Activate Web Tail Blower ( ): 45.00>22:5	
52.07 (IR)	DO636	Lower Thread Belt to Mandril] [: 12.07>27:6 ( ): 45.00>22:5	
52.10 (IR)	DO623	Main Winding Arm Forward] [: 12.10>75:10 ( ): 45.00>22:5	
52.11 (IR)	DO624	Main Winding Arm Reverse] [: 12.11>42:7 ( ): 45.00>22:5	
52.12 (IR)	DO625	Lower Roll Transfer Bridge] [: 12.12>57:8 ( ): 45.00>22:5	
52.13 (IR)	DO626	Raise Roll Transfer Bridge] [: 12.13>88:11 ( ): 45.00>22:5	
52.14 (IR)	DO627	Full Range Roll Mandril Brake] [: 12.14>71:9 ( ): 45.00>22:5	
52.15 (IR)	DO628	Lower Mandril Loader] [: 12.15>24:6 ( ): 45.00>22:5	
52.16 (IR)	DO629	Raise Mandril Loader] [: 12.16>78:10 ( ): 45.00>22:5	
52.17 (IR)	DO630	Mandril Stop 1 Lower ( ): 45.00>22:5	
53.05 (IR)	DO6020	Winder Transfer Arm Motor] [: 1.13>55:8	
76.03 (S)	RTC0.1	System Clock 0.1 Sec] [: 40.02>3:2	
76.04 (S)	RTC1.0	System Clock 1 Sec.] [: 40.12>5:2	
76.06 (S)	PWRUP	Power Up Coil]/[: 40.03>1:2	

Register Crossreference

Register	Description	Note
0	*** Point Register *** 40.12>5:2 40.12>5:2	
52	*** Point Register *** 45.00>22:5	
2101	40.10 Destin SCALI 44.14>11:3 40.10>9:3	Winder Web Tension > Setpoint
2103	41.11 Preset TON 41.11>36:6	Winder Cutter On Delay
2104	12.06 Preset TON 12.06>39:7	Activate Web Tail Blower
2105	41.14 Preset TON 41.14>70:9	Full Roll Brake On Delay
2200	40.02 Table SHBR 40.02>2:2	1/2 Second Flasher for CP 430
2204	41.11 Elapsed TON 41.11>36:6	Winder Cutter On Delay
2205	12.06 Elapsed TON 12.06>39:7	Activate Web Tail Blower
2206	41.14 Elapsed TON 41.14>70:9	Full Roll Brake On Delay
2213	44.14 Output PID 44.14>11:3	Winder Tension Control On
2214	44.14 Error PID 44.16>14:4 44.14>11:3	Winder Tension Control On
2300	40.10 Hi Lim SCALI 40.10>9:3	Winder Web Tension > Setpoint
2301	40.10 Lo Lim SCALI 40.10>9:3	Winder Web Tension > Setpoint
2302	44.14 SetPt PID 44.14>11:3	Winder Tension Control On
2400	45.00>22:5	
2430-2453	45.00 Output DRUMET 1/20 45.00>22:5	Winder Drum Sequencer On
2460-2503	45.00 Event DRUMET 1/20 45.00>22:5	Winder Drum Sequencer On
2520-2543	45.00 Time DRUMET 1/20 45.00>22:5	Winder Drum Sequencer On
2550	45.00 Pointer DRUMET 45.00>22:5	Winder Drum Sequencer On

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Name	Number	Description	Note
A1SAUX	41.05	Winder Auto Cycle 1 Scan Aux	
A1SCAN	41.04	Winder Auto Cycle 1 Scan	
A30ERR	3775.02	A30E block in A30	
A30SER	3777.15	A30 Card Slot Decode Err	
BOOERR	3777.14	Boolean Proc Test Err	
BRDNOK	41.06	OK To Lower Transfer Bridge	
BRUPOK	44.01	OK To Raise Transfer Bridge	
C/O1ON	2.16	C/O 1 Saw Tooth Roll ON	Tellback for M 1630
C/O1OP	2.17	C/O 1 Opening Roll ON	Tellback for M 1640
C/O2ON	3.00	C/O 2 Saw Tooth Roll ON	Tellback for M 1730
C/O2OP	3.01	C/O 2 Opening Roll ON	Tellback for M 1740
C/OFON	3.15	C/Os Transport Fan ON	Tellback for M 1540
C2CYON	3.02	Card 2 Main Cylinder ON	Tellback for M 3120
C3CYON	3.03	Card 3 Main Cylinder ON	Tellback for M 3220
C4CYON	3.04	Card 4 Main Cylinder ON	Tellback for M 3320
CALSAT	*** Rack ***	TB Calendar Control Chassis	
CH>STR	43.14	Put Roll @ Slitter For Loading	
CH@WDR	42.15	Roll Chain @ Winder For Roll	
CHAIDX	40.07	Roll Chain Indexed W/New Roll	
CHAIXD	44.12	Roll Chain Index with New Roll	
CHAMT1	41.00	Roll Chain Empty Counter	
CHAMT2	41.01	Roll Chain Empty Counter	
CHU1ON	3.06	Chute 1 Opening Roll ON	Tellback for M 3010
CHU2ON	3.07	Chute 2 Opening Roll ON	Tellback for M 3110
CHU3ON	3.10	Chute 3 Opening Roll ON	Tellback for M 3210
CHU4ON	3.11	Chute 4 Opening Roll ON	Tellback for M 3010
CNTRST	41.07	Roll Metrage Counter Reset	
COMPER	3777.11	Compile Error	
CONERR	3775.00	Configuration Error	
CTONDY	41.11	Winder Cutter On Delay	
CUTMAD	41.17	Roll Cut Made Relay	
DARGER	3774.02	Data Reg. Checksum Err	
DECQUE	44.10	Roll On Hoist - Dec Queue	
DESRON	14.00	Drive E Stop Relay ON	Drive System - E 01
DO6020	53.05	Winder Transfer Arm Motor	M.C.C. Starter for M 6020
DO616	52.00	Lower Mandril Transfer Arm	X 6000 Solenoid Valve SV 616
DO617	52.01	Raise Mandril Transfer Arm	X 6000 Solenoid Valve SV 617
DO618	52.02	Open Mandril Transfer Arm	X 6000 Solenoid Valve SV 618
DO619	52.03	Close Mand Transfer Arm Lock	X 6000 Solenoid Valve SV 619
DO620	52.04	Lower Mandril Starter Belt	X 6000 Solenoid Valve SV 620
DO621	52.05	Activate Web Cutter	X 6000 Solenoid Valve SV 621
DO622	52.06	Activate Web Tail Blower	X 6000 Solenoid Valve SV 622
DO623	52.10	Main Winding Arm Forward	X 6000 Solenoid Valve SV 623
DO624	52.11	Main Winding Arm Reverse	X 6000 Solenoid Valve SV 624
DO625	52.12	Lower Roll Transfer Bridge	X 6000 Solenoid Valve SV 625
DO626	52.13	Raise Roll Transfer Bridge	X 6000 Solenoid Valve SV 626
DO627	52.14	Full Range Roll Mandril Brake	X 6000 Solenoid Valve SV 627
DO628	52.15	Lower Mandril Loader	X 6000 Solenoid Valve SV 628
DO629	52.16	Raise Mandril Loader	X 6000 Solenoid Valve SV 629
DO630	52.17	Mandril Stop 1 Lower	X 6000 Solenoid Valve SV 630
DO631	53.00	Mandril Stop 2 Lower	X 6000 Solenoid Valve SV 631
DO636	52.07	Lower Thread Belt to Mandril	X 6000 Solenoid Valve SV 636
DORLOK	6.16	Release Access Door Locks	X 7000 Electric Door Latch
EDIAOF	76.11	Expanded Diag. Disable	
EDIAON	76.10	Expanded Diag. Enable	
EPRERR	3777.12	EEPROM Burn Error	
EROERR	3774.00	Application EEROM Chks.	
EXEERR	3777.05	Executive Checksum Err	
EXKICK	42.04	Extend Roll Kickers Relay	
F/O1ON	1.15	Fine Opener 1 AC Motors ON	Tellback for M 2020,2110,2120
F/O2ON	3.16	Fine Opener 2 AC Motors ON	Tellback for M 2220,2310,2320
F/O3ON	3.17	Fine Opener 3 AC Motors ON	Tellback for M 2420,2510,2520
F/O4ON	1.14	Fine Opener 4 AC Motors ON	Tellback for M 2620\2710\2720
FLASHR	40.02	1/2 Second Flasher for CP 430	
HOURS1	40.12	Hour Timer For Equipment Log	
HOURS2	40.13	Hour Timer For Equipment Log	
HST<NR	43.07	Hoist Back To Clear New Roll	
HST>HM	43.11	MT Hoist Toward Slitter Home	
HST>ST	43.05	Hoist Toward Slitter With Roll	
HST>WD	42.14	Hoist Toward Winder Relay	
HSTDMT	43.00	Hoist Down To Pick Up Mandril	
HSTDNR	43.03	Hoist Down With MT For Roll	

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Name	Number	Description	Note
HSTDOK	44.02	OK To Lower Mandril Hoist	
HSTDUL	43.06	Hoist Down To Unload New Roll	
HSTHOM	43.12	Hoist Home Relay	
HSTUHM	43.10	MT Hoist Up To Home Position	
HSTUMT	43.01	Hoist Up With MT Mandril	
HSTUNR	43.04	Hoist Up With New Roll	
HYHRS1	40.14	Hydraulic Pump Running Hours	
HYHRS2	40.15	Hydraulic Pump Running Hours	
I/OCON	3774.01	I/O Conf. Checksum Err	
INITZE	40.03	Program Initialization 1 Shot	
KEYERR	3777.13	Key Switch Error	
KS6021	14.10	Winder System Manual Control	CP 600 Key Switch
LBHRS1	40.16	Lubrication Oil Running Hours	
LBHRS2	40.17	Lubrication Oil Running Hours	
LD1SCA	42.11	Slitter Load Cycle 1 Scan	
LDCYCO	71.13	Slitter Load Cycle Complete	
LHDFP0	3760.00	Port 0 Local Head Fail	
LHDFP1	3760.01	Port 1 Local Head Fail	
LHDFP2	3760.02	Port 2 Local Head Fail	
LHDFP3	3760.03	Port 3 Local Head Fail	
LHPARE	76.12	Local Head Parity Enable	
LOADCY	71.10	Slitter Load Cycle Started	
LOADST	42.07	Load New Roll On Slitter Cycle	
LOCKOP	71.04	Slitter Unwind Locks Open	
LS601	10.06	Range Roll @ Dia D2	X 6000 Limit Switch LS 601
LS602	10.07	Main Winding Arm @ Bridge	X 6000 Limit Switch LS 602
LS603	10.13	Roll Transfer Bridge UP	X 6000 Limit Switch LS 603a,b
LS604	10.14	Roll Transfer Bridge DOWN	X 6000 Limit Switch LS 604a,b
LS605	10.16	Full Range Roll @ Bridge	X 6000 Limit Switch LS 605
LS606	11.01	New Mandril Loader DOWN	X 6000 Limit Switch LS 606
LS607	11.02	New Mandril Loader UP	X 6000 Limit Switch LS 607
LS608	11.05	Mandril Stop 1 UP	X 6000 Limit Switch LS 608a,b
LS609	11.06	Mandril Stop 2 UP	X 6000 Limit Switch LS 609a,b
LS610	11.07	Mandril Transfer Arms Load	X 6000 Limit Switch LS 610
LS611	11.10	Mandril Transfer Arms Unload	X 6000 Limit Switch LS 611
LS612	11.11	New Range Roll @ Dia D1	X 6000 Limit Switch LS 612
LS613	11.12	Transfer Arm Transfer Position	X 6000 Limit Switch LS 613
LS614	11.13	Transfer Arm Idle Position	X 6000 Limit Switch LS 614
LS615	11.16	Main Winding Arm @ Drum	X 6000 Limit Switch LS 615
LS632	13.10	Mand Transfer Arm Lock Closed	X 6000 Limit Switch LS 632
LS633	13.11	Mand Transfer Arm Lock Open	X 6000 Limit Switch LS 633
LS634	13.16	Thread Belt In Contact	X 6000 Limit Switch LS 634
LS635	13.17	Thread Belt Retracted	X 6000 Limit Switch LS 635
LS636	13.06	MT Mandril In Position 2	X 6000 Limit Switch LS 636a,b
LS637	13.07	MT Mandril In Loader	X 6000 Limit Switch LS 637a,b
LS638	13.05	MT Mandril In Position 1	X 6000 Limit Switch LS 638a,b
LS639	10.15	Mandril Starter Belt Retracted	X 6000 Limit Switch LS 639
LS640	10.00	Kicker - Wall Side Extended	X 6000 Limit Switch LS 640
LS641	10.01	Kicker - Wall Side Retracted	X 6000 Limit Switch LS 641
LS642	10.02	Kicker - Aisle Side Extended	X 6000 Limit Switch LS 642
LS643	10.03	Kicker - Aisle Side Retracted	X 6000 Limit Switch LS 643
LS702	4.00	Roll In First Pos Main Chain	X 7000 Limit Switch LS 702
LS703A	4.01	Roll In Last Pos Main Chain	X 7000 Limit Switch LS 703A
LS703B	4.02	Roll In Last Pos Main Chain	X 7000 Limit Switch LS 703B
LS704A	4.03	New Roll In Main Chain Saddle	X 7000 Limit Switch LS 704A
LS704B	4.04	New Roll In Main Chain Saddle	X 7000 Limit Switch LS 704B
LS705A	5.13	Hoist Down Safety Limit	X 7000 Limit Switch LS 705A
LS705B	5.14	Hoist Down Safety Limit	X 7000 Limit Switch LS 705B
LS706A	4.05	Hoist @ Slitter - Aisle Side	X 7000 Limit Switch LS 706A
LS706B	4.06	Hoist @ Slitter - Wall Side	X 7000 Limit Switch LS 706B
LS708A	4.07	Hoist @ Conveyor - Aisle Side	X 7000 Limit Switch LS 708A
LS708B	4.10	Hoist @ Conveyor - Wall Side	X 7000 Limit Switch LS 708B
LS710A	4.11	Empty Mandril On Return Chain	X 7000 Limit Switch LS 710A
LS710B	4.12	Empty Mandril On Return Chain	X 7000 Limit Switch LS 710B
LS711	4.13	Ret Chain Saddle In Position	X 7000 Limit Switch LS 711
LS712	4.14	Hoist Up To Clear Slitter	X 7000 Limit Switch LS 712
LS713	4.15	Hoist In Unwind Load Position	X 7000 Limit Switch LS 713
LS714	4.16	Hoist Down To Clear New Roll	X 7000 Limit Switch LS 714
LS715A	4.17	Hoist High Limit - Aisle Side	X 7000 Limit Switch LS 715A
LS715B	5.00	Hoist High Limit - Wall Side	X 7000 Limit Switch LS 715B
LS716	5.01	Hoist Back From New Roll	X 7000 Limit Switch LS 716
LS717	5.02	Main Chain Saddle OK - Winder	X 7000 Limit Switch LS 717

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Name	Number	Description	Note
LS718A	5.03	Mandril Hooks In Position	X 7000 Limit Switch LS 718A
LS718B	5.04	Mandril Hooks In Position	X 7000 Limit Switch LS 718B
LS719A	5.05	Roll Hooks In Position	X 7000 Limit Switch LS 719A
LS719B	5.06	Roll Hooks In Position	X 7000 Limit Switch LS 719B
LS720A	5.07	Access Door Closed - Aisle	X 7000 Limit Switch LS 720A
LS720B	5.10	Access Door Closed - Wall	X 7000 Limit Switch LS 720B
LS722A	5.11	Mandril Magazine Full - Aisle	X 6000 Limit Switch LS 722A
LS722B	5.12	Mandril Magazine Full - Wall	X 6000 Limit Switch LS 722B
LS723	6.13	Main Chain Saddle OK - Slitter	X 7000 Limit Switch LS 723
LS724	5.15	Hoist Roll Safety Cable	X 7000 Limit Switch LS 724
MASTER	*** Rack ***	TB Line Master Chassis	
MB7040	6.14	Hoist Lift Motor Brake	X 7000 Electric Brake - M 7040
MEMERR	3777.00	Appl. Mem/ Checksum	
MEMTER	3777.10	R/W Appl Mem Test Err	
MF6030	1.00	Winder Kicker - Wall Side FWD	M.C.C. Starter for M 6030 F
MF6040	3.12	Winder Kicker - Aisle Side FWD	M.C.C. Starter for M 6040 F
MF7020	2.04	Roll Storage Chain Forward	M.C.C. Starter for M 7020 F
MF7040	2.00	Roll Storage Mandril Hoist UP	M.C.C. Starter for M 7040 F
MF7050	2.02	Roll Storage Mandril Hoist FWD	M.C.C. Starter for M 7050 F
MR6030	1.01	Winder Kicker - Wall Side REV	M.C.C. Starter for M 6030 R
MR6040	3.13	Winder Kicker - Aisle Side REV	M.C.C. Starter for M 6040 F
MR7020	2.05	Roll Storage Chain Reverse	M.C.C. Starter for M 7020 R
MR7040	2.01	Roll Storage Mandril Hoist DN	M.C.C. Starter for M 7040 R
MR7050	2.03	Roll Storage Mandril Hoist REV	M.C.C. Starter for M 7050 R
MS3070	0.00	Card 1 Dust Ventilator	M.C.C. Starter for M 3070
MS3170	0.01	Card 2 Dust Ventilator	M.C.C. Starter for M 3170
MS3270	0.02	Card 3 Dust Ventilator	M.C.C. Starter for M 3270
MS3370	0.03	Card 4 Dust Ventilator	M.C.C. Starter for M 3370
MS3550	0.04	Preheater Exhaust Fan	M.C.C. Starter for M 3550
MS4010	0.11	Calender 'Sunday Drive'	M.C.C. Starter for M 4010 A
MS4110	0.12	Hydr. System Circ. Pump	M.C.C. Starter for M 4110
MS4120	0.13	Hydr. System Press. Pump	M.C.C. Starter for M 4120
MS4130	0.14	Hydr. System Oil Heater	M.C.C. Contactor for H 4130
MS4140	0.06	Hydraulic System Cooling Fan	M.C.C. Starter for M 4140
MS4210	0.15	Lube Oil System Pump 1	M.C.C. Starter for M 4210 A
MS4220	0.16	Lube Oil System Pump 2	M.C.C. Starter for M 4220 A
MS4230	0.17	Lube Oil System Heater	M.C.C. Contactor for H 4230
MS4240	0.07	Lube System Cooling Fan	M.C.C. Starter for M 4240
MS4250	0.05	Lube Oil Circulating Pump	M.C.C. Starter for M 4250
MS4410	1.02	Hood System Exhaust Fan	M.C.C. Starter for M 4410
MS4420	0.10	Hood System Water Circ. Pump	M.C.C. Starter for M 4420
MS4430	1.17	Hood System Atomizer Motor	M.C.C. Starter for M 4430
MS4510	1.03	Chiller System Compressor 1	M.C.C. Starter for M 4510
MS4520	1.04	Chiller System Compressor 2	M.C.C. Starter for M 4520
MS4530	1.05	Chiller System Compressor 3	M.C.C. Starter for M 4530
MS4540	1.06	Chiller System Fan 1	M.C.C. Starter for M 4540
MS4550	1.07	Chiller System Fan 2	M.C.C. Starter for M 4550
MS4560	1.10	Chiller System Fan 3	M.C.C. Starter for M 4560
MS4570	1.11	Chiller System Water Pump	M.C.C. Starter for M 4570
MS6010	1.12	Winder Hydraulic System Pump	M.C.C. Starter for M 6010
MS6020	1.13	Winder Transfer Arm Motor	M.C.C. Starter for M 6020
MS7030	2.06	Roll Storage Mandril Return	M.C.C. Starter for M 7030
MTHKOP	42.13	Hooks Past MT Mandril	
MTHOOK	42.12	Hooks Closed By MT Mandril	
MULCER	3777.16	MULTIBUS Checkerboard Err	
MULERR	3777.17	MULTIBUS Error	
NOVERR	3774.03	NOVRAM Checksum Error	
NOVTER	3777.07	NOVRAM Memory Test Err	
NRHOOK	42.16	Hooks Closed By New Roll	
NRKHOP	42.17	Hooks Past New Roll	
OPLOCK	71.11	Open Slitter Unwind Locks	
P70111	6.11	Stop Main Roll Chain	CP 701 Pushbutton
P70112	6.12	Stop Empty Mandril Chain	CP 701 Pushbutton
PB6001	10.04	Main Winding Arm Forward	CP 600 Pushbutton
PB6002	10.05	Main Winding Arm Reverse	CP 600 Pushbutton
PB6003	10.10	Lower Roll Transfer Bridge	CP 600 Pushbutton
PB6004	10.11	Raise Roll Transfer Bridge	CP 600 Pushbutton
PB6005	10.12	Stop Roll Transfer Bridge	CP 600 Pushbutton - NC
PB6006	10.17	Lower New Mandril Loader	CP 600 Pushbutton
PB6007	11.00	Raise New Mandril Loader	CP 600 Pushbutton
PB6008	11.03	Lower Mandril Stop 1	CP 600 Pushbutton
PB6009	11.04	Lower Mandril Stop 2	CP 600 Pushbutton

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Name	Number	Description	Note
PB6010	11.14	Open Mand Transfer Arm Lock	CP 600 Pushbutton
PB6011	11.15	Close Mand Transfer Arm Lock	CP 600 Pushbutton
PB6012	13.04	Retract New Roll Kickers	CP 600 Pushbutton
PB6013	13.12	Lower New Mandril Starter	CP 600 Pushbutton
PB6014	13.13	Raise New Mandril Starter	CP 600 Pushbutton
PB6015	13.14	Lower Thread Belt To Mandril	CP 600 Pushbutton
PB6016	13.15	Retract Thread Belt	CP 600 Pushbutton
PB6017	14.04	Winder System Start	CP 600 Ill Pushbutton
PB6018	14.05	Winder System Stop	CP 600 Pushbutton
PB6019	14.06	Winder Section Slack Take Up	CP 600 Pushbutton
PB6020	14.07	Run Air Blower	CP 600 Pushbutton
PB6023	14.12	Raise Mandril Transfer Arm	CP 600 Pushbutton
PB6024	14.13	Lower Mandril Transfer Arm	CP 600 Pushbutton
PB6025	14.14	Stop Mandril Transfer Arm	CP 600 Pushbutton - NC
PB6026	14.15	Rotate Web Transfer Arm	CP 600 Pushbutton
PB6027	14.16	Stop Web Transfer Arm	CP 600 Pushbutton - NC
PB6028	14.17	Cut New Range Roll	CP 600 Ill Pushbutton
PB6029	11.17	Extend New Roll Kickers	CP 600 Pushbutton
PB7011	5.17	Stop Automatic Cycle	CP 701 Pushbutton
PB7012	6.00	Reset Automatic Cycle	CP 701 Illuminated Pushbutton
PB7013	6.01	Hoist Up	CP 701 Pushbutton
PB7014	6.02	Hoist Down	CP 701 Pushbutton
PB7015	6.03	Hoist Toward Slitter	CP 701 Pushbutton
PB7016	6.04	Hoist Toward Winder	CP 701 Pushbutton
PB7017	6.05	Start Mandril Chain	CP 701 Pushbutton
PB7018	6.06	Roll Chain Forward To Slitter	CP 701 Pushbutton
PB7019	6.07	Roll Chain Reverse To Winder	CP 701 Pushbutton
PL6001	13.01	Winder System ON	CP 600 Lamp
PL6002	13.02	Winder System 'Ready To Cut'	CP 600 IPB Lamp
PL6003	13.03	Winder System Manual Op Enable	CP 600 Lamp
PL7011	7.14	Interlock Fault	CP 701 Lamp
PL7012	7.05	Automatic Cycle Reset	CP 701 Lamp
PL7013	7.16	Automatic Cycle Run	CP 701 Lamp
PL7014	7.17	Manual System Run	CP 701
PRL@WD	42.03	Put Roll @ Winder To Start	
PROFLT	76.05	Programmable Fault	
PWRUP	76.06	Power Up Coil	
QUEDEC	44.11	Roll Storage Que Decremented	
QUEUPD	44.07	Roll Storage Queue Updated	
R/SAUT	71.00	Roll Storage System Automatic	
RALERR	76.01	Rail Error Contact	
RARMOK	44.05	OK To Rotate Web Transfer Arms	
RCHGCO	41.16	Winder Roll Change Cycle Compl	
RL@SLT	42.06	Roll Chain - Roll AT Slitter	
RL@WDR	42.05	Roll Chain - Roll At Winder	
RLBRTD	41.14	Full Roll Brake On Delay	
ROL/CH	43.16	New Roll Loaded On Chain	
ROL@BR	41.13	Full Roll @ Transfer Bridge	
ROLEN1	40.00	Range Roll Length > Preset	
ROLEN2	40.01	Range Roll Length < Preset	
RSTCTR	41.12	Web Cut Made - Reset Counter	
RTC.01	76.02	System Clock 0.01 Sec.	
RTC0.1	76.03	System Clock 0.1 Sec	
RTC1.0	76.04	System Clock 1 Sec.	
RTKICK	44.00	Retract New Roll Kickers Relay	
S1SCAX	42.02	Roll Storage System 1 Scan Aux	
S70110	6.10	Select Automatic Cycle	CP 701 Key Switch
SLDAER	3777.02	Data Register Chks. Err	
SLIOER	3777.01	I/O Conf. Checksum Err	
SLTRDY	71.01	Slitter Ready For Roll Change	
SLUWCT	71.03	Slitter Unwind Centered	
SMEMER	3777.06	Scatchpad Mem Test Err	
SPRFLT	3777.03	Programmable Fault	
SS6022	14.11	Range Roll Change Automatic	CP 600 Selector Switch
ST1SCA	42.01	Roll Storage System 1 Scan	
STLDCO	42.10	Slitter Load Cycle Complete	
STMTCH	43.15	Start MT Mandril Chain	
STOAUT	42.00	Roll Storage System Automatic	
STOROL	41.15	Roll To Storage - Index Chain	
STP1AX	43.17	Lower Stop 1 Auxiliary	
SUDRON	2.14	'Sunday Drive' Motor ON	Tellback for M 4010 A
SV616	12.00	Lower Mandril Transfer Arm	X 6000 Solenoid Valve SV 616

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Name	Number	Description	Note
SV617	12.01	Raise Mandril Transfer Arm	X 6000 Solenoid Valve SV 617
SV618	12.02	Open Mandril Transfer Arm Lock	X 6000 Solenoid Valve SV 618
SV619	12.03	Close Mand Transfer Arm Lock	X 6000 Solenoid Valve SV 619
SV620	12.04	Lower Mandril Starter Belt	X 6000 Solenoid Valve SV 620
SV621	12.05	Activate Web Cutter	X 6000 Solenoid Valve SV 621
SV622	12.06	Activate Web Tail Blower	X 6000 Solenoid Valve SV 622
SV623	12.10	Main Winding Arm Forward	X 6000 Solenoid Valve SV 623
SV624	12.11	Main Winding Arm Reverse	X 6000 Solenoid Valve SV 624
SV625	12.12	Lower Roll Transfer Bridge	X 6000 Solenoid Valve SV 625
SV626	12.13	Raise Roll Transfer Bridge	X 6000 Solenoid Valve SV 626
SV627	12.14	Full Range Roll Mandril Brake	X 6000 Solenoid Valve SV 627
SV628	12.15	Lower Mandril Loader	X 6000 Solenoid Valve SV 628
SV629	12.16	Raise Mandril Loader	X 6000 Solenoid Valve SV 629
SV630	12.17	Mandril Stop 1 Lower	X 6000 Solenoid Valve SV 630
SV631	13.00	Mandril Stop 2 Lower	X 6000 Solenoid Valve SV 631
SV636	12.07	Lower Thread Belt To Mandril	X 6000 Solenoid Valve SV 636
SYSERR	76.00	System Error Contact	
TEMAON	3.14	Temafa Leveling Roll ON	Tellback for M 1410
TNCLON	44.14	Winder Tension Control On	
TUBLON	2.15	Tuft Blender Opening Roll ON	Tellback for M 1510
UPDQUE	44.06	Roll Finished - Update Queue	
VECERR	3777.04	Illegal Interrupt Vect.	
WATERR	3775.01	System Watchdog Error	
WATRUN	41.03	Winder Automatic Cycle Run	
WAUTOK	40.06	Winder Set Up OK for Auto Cyc	
WCHIDX	43.13	Index Chain With New Roll	
WCUTDY	41.10	Winder Cutter Start Delay	
WDRMFN	45.01	Winder Drum Sequencer Finished	
WDRMON	45.00	Winder Drum Sequencer On	
WEBBRK	44.13	Web Break	
WHITEN	40.10	Winder Web Tension > Setpoint	
WLOTEN	40.11	Winder Web Tension < Setpoint	
WMANLD	43.02	Winder - New Mandril In Loader	
WNDATO	40.05	Winder Automatic Cont Enable	
WNDMAN	40.04	Winder Manual Control Enable	
WNDRUN	41.02	Winder System Run	
WTCLIM	44.15	Winder Tension Control Limit	
WTCMP>	44.03	Compare Winder Tension > SP	
WTCPM<	44.04	Compare Winder Tension < SP	
WTRIMH	44.17	Winder Trim High Limit	
WTRIML	44.16	Winder Trim Low Limit	

Point / Register List

Zone/ Offset	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
	0			*** Point Register ***				
	1			*** Point Register ***				
	2			*** Point Register ***				
	3			*** Point Register ***				
	4			*** Point Register ***				
	5			*** Point Register ***				
	6			*** Point Register ***				
	7			*** Point Register ***				
	10			*** Point Register ***				
	11			*** Point Register ***				
	12			*** Point Register ***				
	13			*** Point Register ***				
	14			*** Point Register ***				
	15							
	16							
	17							
	40			*** Point Register ***				
	41			*** Point Register ***				
	42			*** Point Register ***				
	43			*** Point Register ***				
	44			*** Point Register ***				
	45			*** Point Register ***				
	46							
	47							
	50							
	51							
	52			*** Point Register ***				
	53			*** Point Register ***				
	54							
	55							
	56							
	57							
	60							
	61							
	62							
	63							
	64							
	65							
	66							
	67							
	70							
	71			*** Point Register ***				
	72							
	73							
	74							
	75			Retentive Coils				
	76			System Coils				
	77			System Coils				
	2100							3600
	2101			40.10 Destin SCALI			Winder Web Tension > Setpoint	100
	2102							10
	2103			41.11 Preset TON			Winder Cutter On Delay	5
	2104			12.06 Preset TON			Activate Web Tail Blower	5
	2105			41.14 Preset TON			Full Roll Brake On Delay	15
	2106			41.00 Preset COUNTER			Roll Chain Empty Counter	12
	2107			42.14 Preset TON			Hoist Toward Winder Relay	50
	2110			43.05 Preset TON			Hoist Toward Slitter With Roll	50
	2111			43.11 Preset TON			MT Hoist Toward Slitter Home	75
	2112							0
	2113							0
	2114							0
	2115							0
	2116							0
	2117							0

Point / Register List

Zone/ REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
2200			40.02 Table SHBR			1/2 Second Flasher for CP 430	-2048
2201							10
2202							0
2203							0
2204			41.11 Elapsed TON			Winder Cutter On Delay	0
2205			12.06 Elapsed TON			Activate Web Tail Blower	0
2206			41.14 Elapsed TON			Full Roll Brake On Delay	0
2207			41.00 Elapsed COUNTER			Roll Chain Empty Counter	0
2210			42.14 Elapsed TON			Hoist Toward Winder Relay	0
2211			43.05 Elapsed TON			Hoist Toward Slitter With Roll	0
2212			43.11 Elapsed TON			MT Hoist Toward Slitter Home	0
2213			44.14 Output PID			Winder Tension Control On	0
2214			44.14 Error PID			Winder Tension Control On	0
2215							0
2216							0
2217							0
2300			40.10 Hi Lim SCALI			Winder Web Tension > Setpoint	2200
2301			40.10 Lo Lim SCALI			Winder Web Tension > Setpoint	1800
2302			44.14 SetPt PID			Winder Tension Control On	2000
2303							150
2304							90
2305							5
2306							0
2307							0
2310							0
2311							0
2312							0
2313							0
2314							0
2315							0
2316							0
2317							0
2420							0
2421							0
2422							0
2423							0
2424							0
2425							152
2426							185
2427							134
2430			45.00 Output DRUMET 1/20			Winder Drum Sequencer On	0
2431			45.00 Output DRUMET 2/20			Winder Drum Sequencer On	16
2432			45.00 Output DRUMET 3/20			Winder Drum Sequencer On	8208
2433			45.00 Output DRUMET 4/20			Winder Drum Sequencer On	8
2434			45.00 Output DRUMET 5/20			Winder Drum Sequencer On	136
2435			45.00 Output DRUMET 6/20			Winder Drum Sequencer On	160
2436			45.00 Output DRUMET 7/20			Winder Drum Sequencer On	192
2437			45.00 Output DRUMET 8/20			Winder Drum Sequencer On	0
2440			45.00 Output DRUMET 9/20			Winder Drum Sequencer On	2048
2441			45.00 Output DRUMET 10/20			Winder Drum Sequencer On	4096
2442			45.00 Output DRUMET 11/20			Winder Drum Sequencer On	1
2443			45.00 Output DRUMET 12/20			Winder Drum Sequencer On	256
2444			45.00 Output DRUMET 13/20			Winder Drum Sequencer On	4
2445			45.00 Output DRUMET 14/20			Winder Drum Sequencer On	2
2446			45.00 Output DRUMET 15/20			Winder Drum Sequencer On	16384
2447			45.00 Output DRUMET 16/20			Winder Drum Sequencer On	-32768
2450			45.00 Output DRUMET 17/20			Winder Drum Sequencer On	-32768
2451			45.00 Output DRUMET 18/20			Winder Drum Sequencer On	9
2452			45.00 Output DRUMET 19/20			Winder Drum Sequencer On	10
2453			45.00 Output DRUMET 20/20			Winder Drum Sequencer On	0
2454							0
2455							0
2456							0
2457							0

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
	2460			45.00 Event DRUMET 1/20			Winder Drum Sequencer On	518
	2461			45.00 Event DRUMET 2/20			Winder Drum Sequencer On	154
	2462			45.00 Event DRUMET 3/20			Winder Drum Sequencer On	154
	2463			45.00 Event DRUMET 4/20			Winder Drum Sequencer On	145
	2464			45.00 Event DRUMET 5/20			Winder Drum Sequencer On	184
	2465			45.00 Event DRUMET 6/20			Winder Drum Sequencer On	190
	2466			45.00 Event DRUMET 7/20			Winder Drum Sequencer On	190
	2467			45.00 Event DRUMET 8/20			Winder Drum Sequencer On	190
	2470			45.00 Event DRUMET 9/20			Winder Drum Sequencer On	191
	2471			45.00 Event DRUMET 10/20			Winder Drum Sequencer On	142
	2472			45.00 Event DRUMET 11/20			Winder Drum Sequencer On	142
	2473			45.00 Event DRUMET 12/20			Winder Drum Sequencer On	155
	2474			45.00 Event DRUMET 13/20			Winder Drum Sequencer On	153
	2475			45.00 Event DRUMET 14/20			Winder Drum Sequencer On	152
	2476			45.00 Event DRUMET 15/20			Winder Drum Sequencer On	185
	2477			45.00 Event DRUMET 16/20			Winder Drum Sequencer On	134
	2500			45.00 Event DRUMET 17/20			Winder Drum Sequencer On	146
	2501			45.00 Event DRUMET 18/20			Winder Drum Sequencer On	183
	2502			45.00 Event DRUMET 19/20			Winder Drum Sequencer On	182
	2503			45.00 Event DRUMET 20/20			Winder Drum Sequencer On	181
	2504							5
	2505							6
	2506							7
	2507							8
	2510							9
	2511							10
	2512							11
	2513							12
	2514							13
	2515							14
	2516							15
	2517							16
	2520			45.00 Time DRUMET 1/20			Winder Drum Sequencer On	0
	2521			45.00 Time DRUMET 2/20			Winder Drum Sequencer On	0
	2522			45.00 Time DRUMET 3/20			Winder Drum Sequencer On	0
	2523			45.00 Time DRUMET 4/20			Winder Drum Sequencer On	0
	2524			45.00 Time DRUMET 5/20			Winder Drum Sequencer On	0
	2525			45.00 Time DRUMET 6/20			Winder Drum Sequencer On	0
	2526			45.00 Time DRUMET 7/20			Winder Drum Sequencer On	50
	2527			45.00 Time DRUMET 8/20			Winder Drum Sequencer On	150
	2530			45.00 Time DRUMET 9/20			Winder Drum Sequencer On	0
	2531			45.00 Time DRUMET 10/20			Winder Drum Sequencer On	0
	2532			45.00 Time DRUMET 11/20			Winder Drum Sequencer On	150
	2533			45.00 Time DRUMET 12/20			Winder Drum Sequencer On	0
	2534			45.00 Time DRUMET 13/20			Winder Drum Sequencer On	0
	2535			45.00 Time DRUMET 14/20			Winder Drum Sequencer On	0
	2536			45.00 Time DRUMET 15/20			Winder Drum Sequencer On	0
	2537			45.00 Time DRUMET 16/20			Winder Drum Sequencer On	0
	2540			45.00 Time DRUMET 17/20			Winder Drum Sequencer On	0
	2541			45.00 Time DRUMET 18/20			Winder Drum Sequencer On	0
	2542			45.00 Time DRUMET 19/20			Winder Drum Sequencer On	0
	2543			45.00 Time DRUMET 20/20			Winder Drum Sequencer On	0
	2544							0
	2545							0
	2546							0
	2547							0
	2550			45.00 Pointer DRUMET			Winder Drum Sequencer On	0
	2551							0
	2552							0
	2553							0
	2554							0
	2555							0
	2556							0
	2557							0

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
				System Register Block				
	3700			PELSTS - Power Failure Count				
	3701			Ser. Comm. Output Byte Count				
	3702			System Clock - Hours				
	3703			System Clock - Minutes				
	3704			System Clock - Seconds				
	3705			System Clock - 100th Seconds				
	3706			System Register				
	3707			System Register				
	3710			System Register				
	3711			System Register				
	3712			System Register				
	3713			System Register				
	3714			System Register				
	3715			System Register				
	3716			System Register				
	3717			System Register				
				System Register Block				
	3720			System Register				
	3721			System Register				
	3722			System Register				
	3723			System Register				
	3724			System Register				
	3725			System Register				
	3726			System Register				
	3727			System Register				
	3730			System Register				
	3731			Error Statistics data				
	3732			Retries / CRC Errors				
	3733			Overruns / Framing Errors				
	3734			LAMDFB - Lamp Drop Fault Bits				
	3735			LAMDFB - Lamp Drop Fault Bits				
	3736			LAMDFB - Lamp Drop Fault Bits				
	3737			LAMDFB - Lamp Drop Fault Bits				
				System Register Block				
	3740			RDF - RIOP 1 drop faults				
	3741			RDF - RIOP 1 drop faults				
	3742			RIOP 2 drop faults				
	3743			RIOP 2 drop faults				
	3744			RIOP 3 drop faults				
	3745			RIOP 3 drop faults				
	3746			RIOP 4 drop faults				
	3747			RIOP 4 drop faults				
	3750			EBA - Register Errors				
	3751			EBA - Register Errors				
	3752			EBA - Register Errors				
	3753			EBA - Register Errors				
	3754			EBA - Register Errors				
	3755			EBA - Register Errors				
	3756			EBA - Register Errors				
	3757			EBA - Register Errors				
				System Register Block				
	3760			LHF - Local Head Faults				
	3761			ERPTRG - Pointer to Err Reg.				
	3762			ERCBIT - Bit # Last Err Coil				
	3763			ERCADR - Byte Addr Last Err				
	3764			FAPU - Cards Failed / Missing				
	3765			CFOPU - Cards Found on Power U				
	3766			Spare System Register				
	3767			Spare System Register				
	3770			ERRDAT - Add. Error Data				
	3771			ERRDAT - Add. Error Data				
	3772			ERRDAT - Add. Error Data				
	3773			Spare System Register				
	3774			Power Up Errors				
	3775			System Stop				
	3776			Spare system register				
	3777			SYSLCK - System Lock				

Point / Register List

Zone/	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
AO	0.00		MS3070	Card 1 Dust Ventilator	230VAC Out	45C62	M.C.C. Starter for M 3070	
AO	0.01		MS3170	Card 2 Dust Ventilator			M.C.C. Starter for M 3170	
AO	0.02		MS3270	Card 3 Dust Ventilator	230VAC Out	45C62	M.C.C. Starter for M 3270	
AO	0.03		MS3370	Card 4 Dust Ventilator			M.C.C. Starter for M 3370	
AO	0.04		MS3550	> Preheater Exhaust Fan Turns On 2 minutes before cycle starts	230VAC Out	45C62	M.C.C. Starter for M 3550	
AO	0.05		MS4250	Lube Oil Circulating Pump			M.C.C. Starter for M 4250	
AO	0.06		MS4140	Hydraulic System Cooling Fan	230VAC Out	45C62	M.C.C. Starter for M 4140	
AO	0.07		MS4240	Lube System Cooling Fan			M.C.C. Starter for M 4240	
AO	0.10		MS4420	Hood System Water Circ. Pump	230VAC Out	45C62	M.C.C. Starter for M 4420	
AO	0.11		MS4010	Calender 'Sunday Drive'			M.C.C. Starter for M 4010 A	
AO	0.12		MS4110	> Hydr. System Circ. Pump Must be ON during cycle	230VAC Out	45C62	M.C.C. Starter for M 4110	
AO	0.13		MS4120	Hydr. System Press. Pump			M.C.C. Starter for M 4120	
AO	0.14		MS4130	> Hydr. System Oil Heater ON during preheat cycle	230VAC Out	45C62	M.C.C. Contactor for H 4130	
AO	0.15		MS4210	Lube Oil System Pump 1			M.C.C. Starter for M 4210 A	
AO	0.16		MS4220	Lube Oil System Pump 2	230VAC Out	45C62	M.C.C. Starter for M 4220 A	
AO	0.17		MS4230	Lube Oil System Heater			M.C.C. Contactor for H 4230	
AO	1.00		MF6030	Winder Kicker - Wall Side FWD	230VAC Out	45C62	M.C.C. Starter for M 6030 F	
AO	1.01		MR6030	Winder Kicker - Wall Side REV			M.C.C. Starter for M 6030 R	
AO	1.02		MS4410	Hood System Exhaust Fan	230VAC Out	45C62	M.C.C. Starter for M 4410	
AO	1.03		MS4510	Chiller System Compressor 1			M.C.C. Starter for M 4510	
AO	1.04		MS4520	Chiller System Compressor 2	230VAC Out	45C62	M.C.C. Starter for M 4520	
AO	1.05		MS4530	Chiller System Compressor 3			M.C.C. Starter for M 4530	
AO	1.06		MS4540	Chiller System Fan 1	230VAC Out	45C62	M.C.C. Starter for M 4540	
AO	1.07		MS4550	Chiller System Fan 2			M.C.C. Starter for M 4550	
AO	1.10		MS4560	Chiller System Fan 3	230VAC Out	45C62	M.C.C. Starter for M 4560	
AO	1.11		MS4570	Chiller System Water Pump			M.C.C. Starter for M 4570	
AO	1.12		MS6010	Winder Hydraulic System Pump	230VAC Out	45C62	M.C.C. Starter for M 6010	
AO	1.13		MS6020	Winder Transfer Arm Motor			M.C.C. Starter for M 6020	
AI	1.14		F/O4ON	Fine Opener 4 AC Motors ON	230 VAC/DC In	45C43	Tellback for M 2620\2710\2720	
AI	1.15		F/O1ON	Fine Opener 1 AC Motors ON			Tellback for M 2020,2110,2120	
AO	1.16		_____	_____	230VAC Out	45C62	_____	
AO	1.17		MS4430	Hood System Atomizer Motor			M.C.C. Starter for M 4430	
AO	2.00		MF7040	Roll Storage Mandril Hoist UP	230VAC Out	45C62	M.C.C. Starter for M 7040 F	
AO	2.01		MR7040	Roll Storage Mandril Hoist DN			M.C.C. Starter for M 7040 R	
AO	2.02		MF7050	Roll Storage Mandril Hoist FWD	230VAC Out	45C62	M.C.C. Starter for M 7050 F	
AO	2.03		MR7050	Roll Storage Mandril Hoist REV			M.C.C. Starter for M 7050 R	
AO	2.04		MF7020	Roll Storage Chain Forward	230VAC Out	45C62	M.C.C. Starter for M 7020 F	
AO	2.05		MR7020	Roll Storage Chain Reverse			M.C.C. Starter for M 7020 R	
AO	2.06		MS7030	Roll Storage Mandril Return	230VAC Out	45C62	M.C.C. Starter for M 7030	
AO	2.07		_____	_____			_____	
A	2.10		_____	_____	_____	_____	_____	
A	2.11		_____	_____			_____	
	2.12		_____	_____	_____	_____	_____	
	2.13		_____	_____			_____	
AI	2.14		SUDRON	'Sunday Drive' Motor ON	230 VAC/DC In	45C43	Tellback for M 4010 A	
AI	2.15		TUBLON	Tuft Blender Opening Roll ON			Tellback for M 1510	
AI	2.16		C/O1ON	C/O 1 Saw Tooth Roll ON	230 VAC/DC In	45C43	Tellback for M 1630	
AI	2.17		C/O1OP	C/O 1 Opening Roll ON			Tellback for M 1640	

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
AI	3.00		C/O2ON	C/O 2 Saw Tooth Roll ON	230 VAC/DC In	45C43	Tellback for M 1730	
AI	3.01		C/O2OP	C/O 2 Opening Roll ON			Tellback for M 1740	
AI	3.02		C2CYON	Card 2 Main Cylinder ON	230 VAC/DC In	45C43	Tellback for M 3120	
AI	3.03		C3CYON	Card 3 Main Cylinder ON			Tellback for M 3220	
AI	3.04		C4CYON	Card 4 Main Cylinder ON	230 VAC/DC In	45C43	Tellback for M 3320	
AI	3.05							
AI	3.06		CHU1ON	Chute 1 Opening Roll ON	230 VAC/DC In	45C43	Tellback for M 3010	
AI	3.07		CHU2ON	Chute 2 Opening Roll ON			Tellback for M 3110	
AI	3.10		CHU3ON	Chute 3 Opening Roll ON	230 VAC/DC In	45C43	Tellback for M 3210	
AI	3.11		CHU4ON	Chute 4 Opening Roll ON			Tellback for M 3010	
AO	3.12		MF6040	Winder Kicker - Aisle Side FWD	230VAC Out	45C62	M.C.C. Starter for M 6040 F	
AO	3.13		MR6040	Winder Kicker - Aisle Side REV			M.C.C. Starter for M 6040 F	
AI	3.14		TEMAON	Temafa Leveling Roll ON	230 VAC/DC In	45C43	Tellback for M 1410	
AI	3.15		C/OFON	C/Os Transport Fan ON			Tellback for M 1540	
AI	3.16		F/O2ON	Fine Opener 2 AC Motors ON	230 VAC/DC In	45C43	Tellback for M 2220,2310,2320	
AI	3.17		F/O3ON	Fine Opener 3 AC Motors ON			Tellback for M 2420,2510,2520	
MI	4.00		LS702	Roll In First Pos Main Chain	24 VAC/DC In	45C44	X 7000 Limit Switch LS 702	
MI	4.01		LS703A	Roll In Last Pos Main Chain			X 7000 Limit Switch LS 703A	
MI	4.02		LS703B	Roll In Last Pos Main Chain	24 VAC/DC In	45C44	X 7000 Limit Switch LS 703B	
MI	4.03		LS704A	New Roll In Main Chain Saddle			X 7000 Limit Switch LS 704A	
MI	4.04		LS704B	New Roll In Main Chain Saddle	24 VAC/DC In	45C44	X 7000 Limit Switch LS 704B	
MI	4.05		LS706A	Hoist @ Slitter - Aisle Side			X 7000 Limit Switch LS 706A	
MI	4.06		LS706B	Hoist @ Slitter - Wall Side	24 VAC/DC In	45C44	X 7000 Limit Switch LS 706B	
MI	4.07		LS708A	Hoist @ Conveyor - Aisle Side			X 7000 Limit Switch LS 708A	
MI	4.10		LS708B	Hoist @ Conveyor - Wall Side	24 VAC/DC In	45C44	X 7000 Limit Switch LS 708B	
MI	4.11		LS710A	Empty Mandril On Return Chain			X 7000 Limit Switch LS 710A	
MI	4.12		LS710B	Empty Mandril On Return Chain	24 VAC/DC In	45C44	X 7000 Limit Switch LS 710B	
MI	4.13		LS711	Ret Chain Saddle In Position			X 7000 Limit Switch LS 711	
MI	4.14		LS712	Hoist Up To Clear Slitter	24 VAC/DC In	45C44	X 7000 Limit Switch LS 712	
MI	4.15		LS713	Hoist In Unwind Load Position			X 7000 Limit Switch LS 713	
MI	4.16		LS714	Hoist Down To Clear New Roll	24 VAC/DC In	45C44	X 7000 Limit Switch LS 714	
MI	4.17		LS715A	Hoist High Limit - Aisle Side			X 7000 Limit Switch LS 715A	
MI	5.00		LS715B	Hoist High Limit - Wall Side	24 VAC/DC In	45C44	X 7000 Limit Switch LS 715B	
MI	5.01		LS716	Hoist Back From New Roll			X 7000 Limit Switch LS 716	
MI	5.02		LS717	Main Chain Saddle OK - Winder	24 VAC/DC In	45C44	X 7000 Limit Switch LS 717	
MI	5.03		LS718A	Mandril Hooks In Position			X 7000 Limit Switch LS 718A	
MI	5.04		LS718B	Mandril Hooks In Position	24 VAC/DC In	45C44	X 7000 Limit Switch LS 718B	
MI	5.05		LS719A	Roll Hooks In Position			X 7000 Limit Switch LS 719A	
MI	5.06		LS719B	Roll Hooks In Position	24 VAC/DC In	45C44	X 7000 Limit Switch LS 719B	
MI	5.07		LS720A	Access Door Closed - Aisle			X 7000 Limit Switch LS 720A	
MI	5.10		LS720B	Access Door Closed - Wall	24 VAC/DC In	45C44	X 7000 Limit Switch LS 720B	
MI	5.11		LS722A	Mandril Magazine Full - Aisle			X 6000 Limit Switch LS 722A	
MI	5.12		LS722B	Mandril Magazine Full - Wall	24 VAC/DC In	45C44	X 6000 Limit Switch LS 722B	
MI	5.13		LS705A	Hoist Down Safety Limit			X 7000 Limit Switch LS 705A	
MI	5.14		LS705B	Hoist Down Safety Limit	24 VAC/DC In	45C44	X 7000 Limit Switch LS 705B	
MI	5.15		LS724	Hoist Roll Safety Cable			X 7000 Limit Switch LS 724	
MI	5.16				24 VAC/DC In	45C44		
MI	5.17		PB7011	Stop Automatic Cycle			CP 701 Pushbutton	
MI	6.00		PB7012	Reset Automatic Cycle	24 VAC/DC In	45C44	CP 701 Illuminated Pushbutton	
MI	6.01		PB7013	Hoist Up			CP 701 Pushbutton	
MI	6.02		PB7014	Hoist Down	24 VAC/DC In	45C44	CP 701 Pushbutton	
MI	6.03		PB7015	Hoist Toward Slitter			CP 701 Pushbutton	
MI	6.04		PB7016	Hoist Toward Winder	24 VAC/DC In	45C44	CP 701 Pushbutton	
MI	6.05		PB7017	Start Mandril Chain			CP 701 Pushbutton	
MI	6.06		PB7018	Roll Chain Forward To Slitter	24 VAC/DC In	45C44	CP 701 Pushbutton	
MI	6.07		PB7019	Roll Chain Reverse To Winder			CP 701 Pushbutton	
MI	6.10		S70110	Select Automatic Cycle	24 VAC/DC In	45C44	CP 701 Key Switch	
MI	6.11		P70111	Stop Main Roll Chain			CP 701 Pushbutton	
MI	6.12		P70112	Stop Empty Mandril Chain	24 VAC/DC In	45C44	CP 701 Pushbutton	
MI	6.13		LS723	Main Chain Saddle OK - Slitter			X 7000 Limit Switch LS 723	
MO	6.14		MB7040	Hoist Lift Motor Brake	230VAC Out	45C62	X 7000 Electric Brake - M 7040	
MO	6.15							
MO	6.16		DORLOK	Release Access Door Locks	Contact Out(NO)	45C66	X 7000 Electric Door Latch	
MO	6.17							

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
M	7.00							
M	7.01							
M	7.02							
M	7.03							
MO	7.04				24VAC Out	45C67		
MO	7.05	PL7012		Automatic Cycle Reset			CP 701 Lamp	
M	7.06							
M	7.07							
M	7.10							
M	7.11							
M	7.12							
M	7.13							
MO	7.14	PL7011		Interlock Fault	24VAC Out	45C67	CP 701 Lamp	
MO	7.15							
MO	7.16	PL7013		Automatic Cycle Run	24VAC Out	45C67	CP 701 Lamp	
MO	7.17	PL7014		Manual System Run			CP 701	
LI	10.00	LS640		Kicker - Wall Side Extended	24 VAC/DC In	45C44	X 6000 Limit Switch LS 640	
LI	10.01	LS641		Kicker - Wall Side Retracted			X 6000 Limit Switch LS 641	
LI	10.02	LS642		Kicker - Aisle Side Extended	24 VAC/DC In	45C44	X 6000 Limit Switch LS 642	
LI	10.03	LS643		Kicker - Aisle Side Retracted			X 6000 Limit Switch LS 643	
LI	10.04	PB6001		Main Winding Arm Forward	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	10.05	PB6002		Main Winding Arm Reverse			CP 600 Pushbutton	
LI	10.06	LS601		Range Roll @ Dia D2	24 VAC/DC In	45C44	X 6000 Limit Switch LS 601	
LI	10.07	LS602		Main Winding Arm @ Bridge			X 6000 Limit Switch LS 602	
LI	10.10	PB6003		Lower Roll Transfer Bridge	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	10.11	PB6004		Raise Roll Transfer Bridge			CP 600 Pushbutton	
LI	10.12	PB6005		Stop Roll Transfer Bridge	24 VAC/DC In	45C44	CP 600 Pushbutton - NC	
LI	10.13	LS603		Roll Transfer Bridge UP			X 6000 Limit Switch LS 603a,b	
LI	10.14	LS604		Roll Transfer Bridge DOWN	24 VAC/DC In	45C44	X 6000 Limit Switch LS 604a,b	
LI	10.15	LS639		Mandril Starter Belt Retracted			X 6000 Limit Switch LS 639	
LI	10.16	LS605		Full Range Roll @ Bridge	24 VAC/DC In	45C44	X 6000 Limit Switch LS 605	
LI	10.17	PB6006		Lower New Mandril Loader			CP 600 Pushbutton	
LI	11.00	PB6007		Raise New Mandril Loader	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	11.01	LS606		New Mandril Loader DOWN			X 6000 Limit Switch LS 606	
LI	11.02	LS607		New Mandril Loader UP	24 VAC/DC In	45C44	X 6000 Limit Switch LS 607	
LI	11.03	PB6008		Lower Mandril Stop 1			CP 600 Pushbutton	
LI	11.04	PB6009		Lower Mandril Stop 2	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	11.05	LS608		Mandril Stop 1 UP			X 6000 Limit Switch LS 608a,b	
LI	11.06	LS609		Mandril Stop 2 UP	24 VAC/DC In	45C44	X 6000 Limit Switch LS 609a,b	
LI	11.07	LS610		Mandril Transfer Arms Load			X 6000 Limit Switch LS 610	
LI	11.10	LS611		Mandril Transfer Arms Unload	24 VAC/DC In	45C44	X 6000 Limit Switch LS 611	
LI	11.11	LS612		New Range Roll @ Dia D1			X 6000 Limit Switch LS 612	
LI	11.12	LS613		Transfer Arm Transfer Position	24 VAC/DC In	45C44	X 6000 Limit Switch LS 613	
LI	11.13	LS614		Transfer Arm Idle Position			X 6000 Limit Switch LS 614	
LI	11.14	PB6010		Open Mand Transfer Arm Lock	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	11.15	PB6011		Close Mand Transfer Arm Lock			CP 600 Pushbutton	
LI	11.16	LS615		Main Winding Arm @ Drum	24 VAC/DC In	45C44	X 6000 Limit Switch LS 615	
LI	11.17	PB6029		Extend New Roll Kickers			CP 600 Pushbutton	
LO	12.00	SV616		Lower Mandril Transfer Arm	24VAC Out	45C67	X 6000 Solenoid Valve SV 616	
LO	12.01	SV617		Raise Mandril Transfer Arm			X 6000 Solenoid Valve SV 617	
LO	12.02	SV618		Open Mandril Transfer Arm Lock	24VAC Out	45C67	X 6000 Solenoid Valve SV 618	
LO	12.03	SV619		Close Mand Transfer Arm Lock			X 6000 Solenoid Valve SV 619	
LO	12.04	SV620		Lower Mandril Starter Belt	24VAC Out	45C67	X 6000 Solenoid Valve SV 620	
LO	12.05	SV621		Activate Web Cutter			X 6000 Solenoid Valve SV 621	
LO	12.06	SV622		Activate Web Tail Blower	24VAC Out	45C67	X 6000 Solenoid Valve SV 622	
LO	12.07	SV636		Lower Thread Belt To Mandril			X 6000 Solenoid Valve SV 636	
LO	12.10	SV623		Main Winding Arm Forward	24VAC Out	45C67	X 6000 Solenoid Valve SV 623	
LO	12.11	SV624		Main Winding Arm Reverse			X 6000 Solenoid Valve SV 624	
LO	12.12	SV625		Lower Roll Transfer Bridge	24VAC Out	45C67	X 6000 Solenoid Valve SV 625	
LO	12.13	SV626		Raise Roll Transfer Bridge			X 6000 Solenoid Valve SV 626	
LO	12.14	SV627		Full Range Roll Mandril Brake	24VAC Out	45C67	X 6000 Solenoid Valve SV 627	
LO	12.15	SV628		Lower Mandril Loader			X 6000 Solenoid Valve SV 628	
LO	12.16	SV629		Raise Mandril Loader	24VAC Out	45C67	X 6000 Solenoid Valve SV 629	
LO	12.17	SV630		Mandril Stop 1 Lower			X 6000 Solenoid Valve SV 630	

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
LO	13.00		SV631	Mandril Stop 2 Lower	24VAC Out	45C67	X 6000 Solenoid Valve SV 631	
LO	13.01		PL6001	Winder System ON			CP 600 Lamp	
LO	13.02		PL6002	Winder System 'Ready To Cut'	24VAC Out	45C67	CP 600 IPB Lamp	
LO	13.03		PL6003	Winder System Manual Op Enable			CP 600 Lamp	
LI	13.04		PB6012	Retract New Roll Kickers	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	13.05		LS638	MT Mandril In Position 1			X 6000 Limit Switch LS 638a,b	
LI	13.06		LS636	MT Mandril In Position 2	24 VAC/DC In	45C44	X 6000 Limit Switch LS 636a,b	
LI	13.07		LS637	MT Mandril In Loader			X 6000 Limit Switch LS 637a,b	
LI	13.10		LS632	Mand Transfer Arm Lock Closed	24 VAC/DC In	45C44	X 6000 Limit Switch LS 632	
LI	13.11		LS633	Mand Transfer Arm Lock Open			X 6000 Limit Switch LS 633	
LI	13.12		PB6013	Lower New Mandril Starter	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	13.13		PB6014	Raise New Mandril Starter			CP 600 Pushbutton	
LI	13.14		PB6015	Lower Thread Belt To Mandril	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	13.15		PB6016	Retract Thread Belt			CP 600 Pushbutton	
LI	13.16		LS634	Thread Belt In Contact	24 VAC/DC In	45C44	X 6000 Limit Switch LS 634	
LI	13.17		LS635	Thread Belt Retracted			X 6000 Limit Switch LS 635	
LI	14.00		DESRON	Drive E Stop Relay ON	230 VAC/DC In	45C43	Drive System - E 01	
LI	14.01							
L	14.02							
L	14.03							
LI	14.04		PB6017	Winder System Start	24 VAC/DC In	45C44	CP 600 Ill Pushbutton	
LI	14.05		PB6018	Winder System Stop			CP 600 Pushbutton	
LI	14.06		PB6019	Winder Section Slack Take Up	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	14.07		PB6020	Run Air Blower			CP 600 Pushbutton	
LI	14.10		KS6021	Winder System Manual Control	24 VAC/DC In	45C44	CP 600 Key Switch	
LI	14.11		SS6022	Range Roll Change Automatic			CP 600 Selector Switch	
LI	14.12		PB6023	Raise Mandril Transfer Arm	24 VAC/DC In	45C44	CP 600 Pushbutton	
LI	14.13		PB6024	Lower Mandril Transfer Arm			CP 600 Pushbutton	
LI	14.14		PB6025	Stop Mandril Transfer Arm	24 VAC/DC In	45C44	CP 600 Pushbutton - NC	
LI	14.15		PB6026	Rotate Web Transfer Arm			CP 600 Pushbutton	
LI	14.16		PB6027	Stop Web Transfer Arm	24 VAC/DC In	45C44	CP 600 Pushbutton - NC	
LI	14.17		PB6028	Cut New Range Roll			CP 600 Ill Pushbutton	
*R	40.00		ROLEN1	Range Roll Length > Preset				
*R	40.01		ROLEN2	Range Roll Length < Preset				
*R	40.02		FLASHR	1/2 Second Flasher for CP 430				
*R	40.03		INITZE	Program Initialization 1 Shot				
*R	40.04		WNDMAN	Winder Manual Control Enable				
*R	40.05		WNDATO	Winder Automatic Cont Enable				
*R	40.06		WAUTOK	Winder Set Up OK for Auto Cyc				
*R	40.07		CHAIDX	Roll Chain Indexed W/New Roll				
*R	40.10		WHITEN	Winder Web Tension > Setpoint				
*R	40.11		WLOTEN	Winder Web Tension < Setpoint				
*R	40.12		HOURS1	Hour Timer For Equipment Log				
*R	40.13		HOURS2	Hour Timer For Equipment Log				
*R	40.14		HYHRS1	Hydraulic Pump Running Hours				
*R	40.15		HYHRS2	Hydraulic Pump Running Hours				
*R	40.16		LBHRS1	Lubrication Oil Running Hours				
*R	40.17		LBHRS2	Lubrication Oil Running Hours				
*R	41.00		CHAMT1	Roll Chain Empty Counter				
*R	41.01		CHAMT2	Roll Chain Empty Counter				
*R	41.02		WNDRUN	Winder System Run				
*R	41.03		WATRUN	Winder Automatic Cycle Run				
*R	41.04		A1SCAN	Winder Auto Cycle 1 Scan				
*R	41.05		A1SAUX	Winder Auto Cycle 1 Scan Aux				
*R	41.06		BRDNOK	OK To Lower Transfer Bridge				
*R	41.07		CNTRST	Roll Metrage Counter Reset				
*R	41.10		WCUTDY	Winder Cutter Start Delay				
*R	41.11		CTONDY	Winder Cutter On Delay				
*R	41.12		RSTCTR	Web Cut Made - Reset Counter				
*R	41.13		ROL@BR	Full Roll @ Transfer Bridge				
*R	41.14		RLBRTD	Full Roll Brake On Delay				
*R	41.15		STOROL	Roll To Storage - Index Chain				
*R	41.16		RCHGCO	Winder Roll Change Cycle Compl				
*R	41.17		CUTMAD	Roll Cut Made Relay				

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
*R	42.00		STOAUT	Roll Storage System Automatic				
*R	42.01		ST1SCA	Roll Storage System 1 Scan				
*R	42.02		S1SCAX	Roll Storage System 1 Scan Aux				
*R	42.03		PRL@WD	Put Roll @ Winder To Start				
*R	42.04		EXKICK	Extend Roll Kickers Relay				
*R	42.05		RL@WDR	Roll Chain - Roll At Winder				
*R	42.06		RL@SLT	Roll Chain - Roll AT Slitter				
*R	42.07		LOADST	Load New Roll On Slitter Cycle				
*R	42.10		STLDCO	Slitter Load Cycle Complete				
*R	42.11		LD1SCA	Slitter Load Cycle 1 Scan				
*R	42.12		MTHOOK	Hooks Closed By MT Mandril				
*R	42.13		MTHKOP	Hooks Past MT Mandril				
*R	42.14		HST>WD	Hoist Toward Winder Relay				
*R	42.15		CH@WDR	Roll Chain @ Winder For Roll				
*R	42.16		NRHOOK	Hooks Closed By New Roll				
*R	42.17		NRKHOP	Hooks Past New Roll				
*R	43.00		HSTDMT	Hoist Down To Pick Up Mandril				
*R	43.01		HSTUMT	Hoist Up With MT Mandril				
*R	43.02		WMANLD	Winder - New Mandril In Loader				
*R	43.03		HSTDNR	Hoist Down With MT For Roll				
*R	43.04		HSTUNR	Hoist Up With New Roll				
*R	43.05		HST>ST	Hoist Toward Slitter With Roll				
*R	43.06		HSTDUL	Hoist Down To Unload New Roll				
*R	43.07		HST<NR	Hoist Back To Clear New Roll				
*R	43.10		HSTUHM	MT Hoist Up To Home Position				
*R	43.11		HST>HM	MT Hoist Toward Slitter Home				
*R	43.12		HSTHOM	Hoist Home Relay				
*R	43.13		WCHIDX	Index Chain With New Roll				
*R	43.14		CH>STR	Put Roll @ Slitter For Loading				
*R	43.15		STMTCH	Start MT Mandril Chain				
*R	43.16		ROL/CH	New Roll Loaded On Chain				
*R	43.17		STP1AX	Lower Stop 1 Auxiliary				
*R	44.00		RTKICK	Retract New Roll Kickers Relay				
*R	44.01		BRUPOK	OK To Raise Transfer Bridge				
*R	44.02		HSTDOK	OK To Lower Mandril Hoist				
*R	44.03		WTCMP>	Compare Winder Tension > SP				
*R	44.04		WTCPM<	Compare Winder Tension < SP				
*R	44.05		RARMOK	OK To Rotate Web Transfer Arms				
*R	44.06		UPDQUE	Roll Finished - Update Queue				
*R	44.07		QUEUPD	Roll Storage Queue Updated				
*R	44.10		DECQUE	Roll On Hoist - Dec Queue				
*R	44.11		QUEDEC	Roll Storage Que Decremented				
*R	44.12		CHAIXD	Roll Chain Index with New Roll				
*R	44.13		WEBBRK	Web Break				
*R	44.14		TNCLON	Winder Tension Control On				
*R	44.15		WTCLIM	Winder Tension Control Limit				
*R	44.16		WTRIML	Winder Trim Low Limit				
*R	44.17		WTRIMH	Winder Trim High Limit				
*R	45.00		WDRMON	Winder Drum Sequencer On				
*R	45.01		WDRMFN	Winder Drum Sequencer Finished				
R	45.02							
R	45.03							
R	45.04							
R	45.05							
R	45.06							
R	45.07							
R	45.10							
R	45.11							
R	45.12							
R	45.13							
R	45.14							
R	45.15							
R	45.16							
R	45.17							

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
LR	52.00	DO616		Lower Mandril Transfer Arm			X 6000 Solenoid Valve SV 616	
LR	52.01	DO617		Raise Mandril Transfer Arm			X 6000 Solenoid Valve SV 617	
LR	52.02	DO618		Open Mandril Transfer Arm			X 6000 Solenoid Valve SV 618	
LR	52.03	DO619		Close Mand Transfer Arm Lock			X 6000 Solenoid Valve SV 619	
LR	52.04	DO620		Lower Mandril Starter Belt			X 6000 Solenoid Valve SV 620	
LR	52.05	DO621		Activate Web Cutter			X 6000 Solenoid Valve SV 621	
LR	52.06	DO622		Activate Web Tail Blower			X 6000 Solenoid Valve SV 622	
LR	52.07	DO636		Lower Thread Belt to Mandril			X 6000 Solenoid Valve SV 636	
LR	52.10	DO623		Main Winding Arm Forward			X 6000 Solenoid Valve SV 623	
LR	52.11	DO624		Main Winding Arm Reverse			X 6000 Solenoid Valve SV 624	
LR	52.12	DO625		Lower Roll Transfer Bridge			X 6000 Solenoid Valve SV 625	
LR	52.13	DO626		Raise Roll Transfer Bridge			X 6000 Solenoid Valve SV 626	
LR	52.14	DO627		Full Range Roll Mandril Brake			X 6000 Solenoid Valve SV 627	
LR	52.15	DO628		Lower Mandril Loader			X 6000 Solenoid Valve SV 628	
LR	52.16	DO629		Raise Mandril Loader			X 6000 Solenoid Valve SV 629	
LR	52.17	DO630		Mandril Stop 1 Lower			X 6000 Solenoid Valve SV 630	
R	53.00	DO631		Mandril Stop 2 Lower			X 6000 Solenoid Valve SV 631	
R	53.01							
R	53.02							
R	53.03							
R	53.04							
AR	53.05	DO6020		Winder Transfer Arm Motor			M.C.C. Starter for M 6020	
R	53.06							
R	53.07							
R	53.10							
R	53.11							
R	53.12							
R	53.13							
R	53.14							
R	53.15							
R	53.16							
R	53.17							
OR	71.00	R/SAUT		Roll Storage System Automatic				
IR	71.01	SLTRDY		Slitter Ready For Roll Change				
R	71.02							
IR	71.03	SLUWCT		Slitter Unwind Centered				
IR	71.04	LOCKOP		Slitter Unwind Locks Open				
R	71.05							
R	71.06							
R	71.07							
OR	71.10	LOADCY		Slitter Load Cycle Started				
OR	71.11	OPLOCK		Open Slitter Unwind Locks				
R	71.12							
OR	71.13	LDCYCO		Slitter Load Cycle Complete				
R	71.14							
R	71.15							
R	71.16							
R	71.17							
				System Error Block				
	76.00	SYSERR		System Error Contact				
	76.01	RALERR		Rail Error Contact				
	76.02	RTC.01		System Clock 0.01 Sec.				
	76.03	RTC0.1		System Clock 0.1 Sec				
	76.04	RTC1.0		System Clock 1 Sec.				
	76.05	PROFLT		Programmable Fault				
	76.06	PWRUP		Power Up Coil				
	76.07							
	76.10	EDIAON		Expanded Diag. Enable				
	76.11	EDIAOF		Expanded Diag. Disable				
	76.12	LHPARE		Local Head Parity Enable				
	76.13							
	76.14							
	76.15							
	76.16							
	76.17							

Point / Register List

Z oI n/ eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
				System Error Block				
	77.00			Reserved				
	77.01			Reserved				
	77.02			Reserved				
	77.03			Reserved				
	77.04			Reserved				
	77.05			Reserved				
	77.06			Reserved				
	77.07			Reserved				
	77.10			Reserved				
	77.11			Reserved				
	77.12			Reserved				
	77.13			Reserved				
	77.14			Reserved				
	77.15			Reserved				
	77.16			Reserved				
	77.17			Reserved				
				Local Head Faults				
	3760.00		LHDFP0	Port 0 Local Head Fail				
	3760.01		LHDFP1	Port 1 Local Head Fail				
	3760.02		LHDFP2	Port 2 Local Head Fail				
	3760.03		LHDFP3	Port 3 Local Head Fail				
	3760.04							
	3760.05							
	3760.06							
	3760.07							
	3760.10							
	3760.11							
	3760.12							
	3760.13							
	3760.14							
	3760.15							
	3760.16							
	3760.17							
				Power Up Errors				
	3774.00		EROERR	Application EEROM Chks.				
	3774.01		I/OCON	I/O Conf. Checksum Err				
	3774.02		DARGER	Data Reg. Checksum Err				
	3774.03		NOVERR	NOVRAM Checksum Error				
	3774.04							
	3774.05							
	3774.06							
	3774.07							
	3774.10							
	3774.11							
	3774.12							
	3774.13							
	3774.14							
	3774.15							
	3774.16							
	3774.17							
				System Stop				
	3775.00		CONERR	Configuration Error				
	3775.01		WATERR	System Watchdog Error				
	3775.02		A30ERR	A30E block in A30				
	3775.03							
	3775.04							
	3775.05							
	3775.06							
	3775.07							
	3775.10							
	3775.11							
	3775.12							
	3775.13							
	3775.14							
	3775.15							
	3775.16							
	3775.17							

Point / Register List

Zoln/eO	REG No.	I/O No.	Name	Description	Card Type	Part No.	Note	Contents
				System Lock				
	3777.00		MEMERR	Appl. Mem/ Checksum				
	3777.01		SLIOER	I/O Conf. Checksum Err				
	3777.02		SLDAER	Data Register Chks. Err				
	3777.03		SPRFLT	Programmable Fault				
	3777.04		VECERR	Illegal Interrupt Vect.				
	3777.05		EXEERR	Executive Checksum Err				
	3777.06		SMEMER	Scatchpad Mem Test Err				
	3777.07		NOVTER	NOVRAM Memory Test Err				
	3777.10		MEMTER	R/W Appl Mem Test Err				
	3777.11		COMPER	Compile Error				
	3777.12		EPRERR	EEPROM Burn Error				
	3777.13		KEYERR	Key Switch Error				
	3777.14		BOOERR	Boolean Proc Test Err				
	3777.15		A30SER	A30 Card Slot Decode Err				
	3777.16		MULCER	MULTIBUS Checkerboard Err				
	3777.17		MULERR	MULTIBUS Error				

Name: *Reliance Electric Co.* Location: *Cleveland, OH* *(800) 241-2886*
Eng.: *Don Smith* Job No.: *1* Rev.: *1*

Rack Configuration List

Rack: CALSAT Name: TB Calendar Control Chassis Type: 45C310(6)

Slot	Card	Part Number	Name	Note
PS1	20A Power Supply	45C321	Rack Power Supply	
PS2				
PS3				
1	Remote I/O Proc.	45C201	Calendar Control Communication	
2	Analog Out +/-10 VDC	45C364	Hydraulic System Logic Control	
3	Analog In 4-20ma	45C340	Benchboard TWS Inputs	

Rails: 0 Local Heads: 0 Remote Heads: 0

Rack: MASTER Name: TB Line Master Chassis Type: 45C316(19)

Slot	Card	Part Number	Name	Note
PS1	50A Power Supply	45C322	Rack Power Supply	
PS2				
PS3				
1	A30E 8K Processor	45C307	Main Processor	
2	Local I/O Processor	45C200	Calendar Temperature	
3	Local I/O Processor	45C200	Monitor Inputs	
4	Local I/O Processor	45C200	Condenser Pressure Inputs	
5	Analog In +/-5 VDC	45C343	General Drive Trim Inputs	
6	Analog Out +/-5 VDC	45C363	General Drive Trim Outputs	
7	Analog Out +/-5 VDC	45C363	Condenser Gate Position Output	
10	Register Output	45C381	Winder Control	
11	Remote I/O Proc.	45C201	Roll Storage Control Satellite	
12	Analog In 0-5 VDC	45C341	Hydraulic System Pressure In	
13	Analog Out 0-5 VDC	45C361	Hydraulic System Servo Outputs	
14				
15	Register Output	45C381	Calendar Control	
16				
17				
0				

Rails: 7 Local Heads: 0 Remote Heads: 0

Hardware Inventory List

I/O Modules

Module		*Used*	*10% Spares*	*Total*
230 VAC/DC In	(45C43)	11	1	12
24 VAC/DC In	(45C44)	50	5	55
230VAC Out	(45C62)	21	2	23
24VAC Out	(45C67)	13	1	14
Contact Out(NO)	(45C66)	1	1	2

Rack Cards

Card		*Used*	*10% Spares*	*Total*
20A Power Supply	(45C321)	1	1	2
50A Power Supply	(45C322)	1	1	2
A30E 8K Processor	(45C307)	1	1	2
Local I/O Processor	(45C200)	3	1	4
Remote I/O Proc.	(45C201)	2	1	3
Analog In 4-20ma	(45C340)	1	1	2
Analog In 0-5 VDC	(45C341)	1	1	2
Analog In +/-5 VDC	(45C343)	1	1	2
Analog Out 0-5 VDC	(45C361)	1	1	2
Analog Out +/-5 VDC	(45C363)	2	1	3
Analog Out +/-10 VDC	(45C364)	1	1	2
Register Output	(45C381)	2	1	3

Racks

Rack		*Used*
45C310	(6)	1
45C316	(19)	1

I/O Devices

Rails	(45C1)	7
Local Heads	(45C22)	0
Remote Heads	(45C37)	0

I/O Port Configuration

MSLT	DROP #	TYPE	RSLT	CARD	CHAN	I/O	REG

END