```
FB102                                          LEN=76       ABS
********************************************************************************
* Program  : take telescope body temperatures average
* Externals: DW4, TM
* Bit-Flags: 11.1,41.0,41.1,41.2,41.4,59.0, 64.0...64.7, 65.0...65.3
********************************************************************************

SEGMENT  1                MAKE AVERAGES
NAME :EX MEDIE

0005      :C   DB10                    ;call datablock
0006      :R   F 59.0                  ;any temperature alarm present
0007      :AN  F 11.1                  ;signal to VME 'NORMAL MODE'
0008      :JU  M002
0009      :
000A      :L   KF+0
000B      :T   DW4
000C      :JU  FB110                   ;calculate average of rotating part
000D NAME :MEDIA 4T
000E T1   :    DW18
000F T2   :    DW20
0010 T3   :    DW24
0011 T4   :    DW32
0012 TM   :    DW17
0013 TMAL :    F 41.0                 ;alarm aver. temp. (ALLARMRE 12)
0014 T1AL :    F 64.0                 ;alarm TH1 rotating part out of range
0015 T2AL :    F 64.1                 ;alarm TH2 rotating part out of range
0017 T3AL :    F 64.2                 ;alarm TH3 rotating part out of range
0018 T4AL :    F 64.3                 ;alarm TH4 rotating part out of range
0019      :
001A M002 :L   KF+0
001B      :T   DW4
001C      :JU  FB110                   ;calculate avereage stationary part
001D NAME :MEDIA 4T
001E T1   :    DW34
001F T2   :    DW36
0020 T3   :    DW40
0021 T4   :    DW48
0022 TM   :    DW33
0023 TMAL :    F 41.1                 ;alarm aver. stat. part out of range
0024 T1AL :    F 64.4                 ;alarm TH1 stationary part out of range
0026 T2AL :    F 64.5                 ;alarm TH2 stationary part out of range
0027 T3AL :    F 64.6                 ;alarm TH3 stationary part out of range
0028 T4AL :    F 64.7                 ;alarm TH4 stationary part out of range
0029      :
002A      :L   KF+0
002B      :T   DW4
002C      :JU  FB110                   ;calculate average oil pads
002D NAME :MEDIA 4T
002E T1   :    DW66
002F T2   :    DW68
0030 T3   :    DW72
0031 T4   :    DW80
0032 TM   :    DW65
0033 TMAL :    F 41.2           alarm average of OIL PADS out of range ALARM 14
```

```
0034 T1AL :    F 65.0                    ;alarm TH1 oil pad out of range
0036 T2AL :    F 65.1                    ;alarm TH2 oil pad out of range
0037 T3AL :    F 65.2                    ;alarm TH3 oil pad out of range
0038 T4AL :    F 65.3                    ;alarm TH4 oil pad out of range
0039      :
003A      :JU  FB112                     ;calculate avereage oil tank
003B NAME :MEDIA 2T
003C      :A   F 59.0
003D      :=   F 41.4                    ;ALLARME 50
003E      :BE_____________________________________________________________
```

```
FB110                                          LEN=224      ABS
*******************************************************************************
* Program  : compare Thermistor temperatures, make average
* Externals: DW4, TM, T1, T2, T3, T4
* Bit-Flags: TMAL, T1AL, T2AL, T3AL, T4AL, F 59.0
*******************************************************************************
                                                 PAGE    1
SEGMENT  1                 TEMPERATURE AVERAGE
NAME :MEDIA 4T
DECL :T1        I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :T2        I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :T3        I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :T4        I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :TM         I/Q/D/B/T/C: Q  BI/BY/W/D: W
DECL :TMAL       I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T1AL       I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T2AL       I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T3AL       I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T4AL       I/Q/D/B/T/C: Q  BI/BY/W/D: BI

0023      :C   DB10                    ;call datablock to be used
0024      :L   KF+0
0026      :T   DW11                    ;erase all buffers
0027      :T   DW12
0028      :T   DW13
0029      :T   DW14
002A      :T   =TM
002B      :L   =T1                     ;transfer temperatures to user buffers
002C      :T   DW7                     ;user buffer for Temperature 1
002D      :L   =T2
002E      :T   DW8                     ;user buffer for Temperature 2
002F      :L   =T3
0030      :T   DW9                     ;user buffer for Temperature 3
0031      :L   =T4
0032      :T   DW10                    ;user buffer for Temperature 4
0033      :L   KH0004
0034      :T   DW4                     ;counter to know many temp. are good
0035      :
0036      :JU  FB111                   ;compare two temperatures
0037 NAME :CONFR.2T                          ;-------------------------------------
0038 TA   :    DW7                     ;temperature 1
0039 TB   :    DW8                     ;temperature 2
003A RTA  :    DW11
```

```
003B RTB  :   DW12
003C      :JU  FB111
003D NAME :CONFR.2T                    ;--------------------------------------
003E TA   :   DW7                      ;temperature 1
003F TB   :   DW9                      ;temperature 3
0040 RTA  :   DW11
0041 RTB  :   DW13
0042      :JU  FB111
0043 NAME :CONFR.2T                    ;--------------------------------------
0044 TA   :   DW7                      ;temperature 1
0045 TB   :   DW10                     ;temperature 4
0046 RTA  :   DW11
0047 RTB  :   DW14
0048      :JU  FB111
0049 NAME :CONFR.2T                    ;--------------------------------------
004A TA   :   DW8                      ;temperature 2
004B TB   :   DW9                      ;temperature 3
004C RTA  :   DW12
004D RTB  :   DW13
004E      :JU  FB111
004F NAME :CONFR.2T                    ;--------------------------------------
0050 TA   :   DW8                      ;temperature 2
0051 TB   :   DW10                     ;temperature 4
0052 RTA  :   DW12
0053 RTB  :   DW14
0054      :JU  FB111
0055 NAME :CONFR.2T                    ;--------------------------------------
0056 TA   :   DW9                      ;temperature 3
0057 TB   :   DW10                     ;temperature 4
0058 RTA  :   DW13
0059 RTB  :   DW14
005A      :L   DW11                    ;--------check all results-------------
005B      :L   DW12
005C      :+F
005D      :L   DW13
005E      :+F
0060      :L   DW14
0061      :+F
0062      :T   DW15                    ;transfer cuantitative value of comparations
0063      :                            ;--------------------------------------
0065      :RB  =T1AL
0066      :RB  =T2AL
0067      :RB  =T3AL
0068      :RB  =T4AL
006A      :RB  =TMAL                   ;reset all alarms
006B      :                            ;--------------------------------------
006C      :L   DW15
006D      :L   KF+12                   ;if all ok DW=12, if 3 ok DW=6, if 2 ok DW=2
006F      :!=F                         ;all ok ?
0070      :JC  =M010                   ;jump if all temperatures between range
0071      :L   DW15                    ;--------------------------------------
0072      :L   KF+1                    ;at least two temperatures have to be equals
0073      :>=F
0075      :JC  =M001                   ;--------------------------------------
0076      :L   KH0FFF                  ;be carefuly with FFF !! VME problems
0077      :T   =TM                     ;has to be checked
```

```
0078      :S   =TMAL                    ;set flagg
0079      :JU  =M011                    ;--------------------------------------
007A M001 :L   DW11                     ;load coefitient of TH1
007B      :L   KF+2                     ;check if TH1 agree with 2 others
007C      :>=F                          ;jump if 'ok' with other two
007D      :JC  =M002                    ;if not means has difference with other 3
007E      :S   =T1AL                    ;T1 alarm it desagree with rest of T's
007F      :L   DW4                      ;in FB 102 set to 4
0081      :D   1                  ;decrement one
0082      :T   DW4                      ;save it
0083      :JU  =M003                    ;TH1 was bad do not kare
0084 M002 :L   =TM                      ;add. value of TH1 to TM
0086      :L   DW7                      ;TH1
0087      :+F
0088      :T   =TM
0089 M003 :L   DW12                     ;load coefitient of TH2
008B      :L   KF+2                     ;check if TH2 agree with 2 others
008C      :>=F                          ;jump if 'ok' with other two
008D      :JC  =M004                    ;if not means has difference with other 3
008E      :S   =T2AL                    ;T1 alarm it desagree with rest of T's
0090      :L   DW4                      ;substract TH2
0091      :D   1
0092      :T   DW4
0093      :JU  =M005
0094 M004 :L   =TM
0095      :L   DW8
0096      :+F
0098      :T   =TM
0099 M005 :L   DW13                     ;load coefitient of TH3
009A      :L   KF+2                     ;check if TH3 agree with 2 others
009B      :>=F                          ;jump if 'ok' with other two
009D      :JC  =M006                    ;if not means has difference with other
009E      :S   =T3AL                    ;T1 alarm it desagree with rest of T's
009F      :L   DW4
00A0      :D   1
00A1      :T   DW4
00A2      :JU  =M007
00A3 M006 :L   =TM
00A5      :L   DW9
00A6      :+F
00A7      :T   =TM
00A8 M007 :L   DW14                     ;load coefitient of TH4
00AA      :L   KF+2                     ;check if TH4 agree with 2 others
00AB      :>=F                          ;jump if 'ok' with other two
00AC      :JC  =M008                    ;if not means has difference with other 3
00AD      :S   =T4AL                    ;T1 alarm it desagree with rest of T's
00AE      :L   DW4                      ;load count of TH's
00AF      :D   1                  ;decrement one
00B0      :T   DW4                      ;save it
00B2      :JU  =M009
00B3 M008 :L   =TM
00B4      :L   DW10
00B5      :+F
00B6      :T   =TM
00B7      :
00B8 M009 :L   =TM
```

```
00B9      :FDG                    ;convert fixed point, into floating
00BA      :L   DW4                ;load account of good temperatures
00BB      :FDG
00BC      ::G
00BD      :GFD
00BE      :T   =TM
00BF      :S   F 59.0
00C0      :JU  M011
00C1      :
00C2 M010 :L   DW7                ;TH1 value
00C3      :L   DW8                ;TH2 value
00C4      :+F                     ;sum
00C5      :L   DW9                ;TH3 value
00C6      :+F                     ;sum
00C7      :L   DW10               ;TH4 value
00C8      :+F                     ;sum
00C9      :FDG                    ;convert to floating point
00CB      :L   KF+4               ;load account
00CC      :FDG                    ;convert to floating point
00CD      ::G                     ;make average
00CE      :GFD                    ;convert floating point into a fixed point
00CF      :T   =TM                ;save as reference
00D0 M011 :BE
```

```
FB111                                   LEN=48      ABS
                                          PAGE   1
SEGMENT  1              COMPARE TWO TEMPERATURES
NAME :CONFR.2T
DECL :TA       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :TB       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :RTA      I/Q/D/B/T/C: Q  BI/BY/W/D: W
DECL :RTB      I/Q/D/B/T/C: Q  BI/BY/W/D: W

0011      :C   DB10               ;call datablock
0012      :L   =TA                ;if TA grater than TB
0013      :L   =TB                ;jump to M001
0014      :>F
0015      :JC  =M001              ;load allways grater first
0016      :L   =TB                ;to avoid negative cypher
0017      :L   =TA
0018      :
0019      :
001A      :
001B      :
001C      :
001D      :
001E      :
001F M001 :-F                     ;make the absolute difference
0020      :L   KF+10              ;compare difference  if grather than 1 deg.
0022      :>F                     ;if ACCU2>ACCU1 'RLO=1
0023      :BEC                    ;if 'RLO'=1
0024      :L   =RTA               ;temperatures are 'OK'
```

```
0025      :I    1
0026      :T   =RTA
0027      :L   =RTB
0028      :I    1
0029      :T   =RTB
002A      :BE
```

```
FB130                                        LEN=158      ABS
                                               PAGE    1
SEGMENT  1              ABILITAZIONI DA TEMPERATURE
NAME :ABTE

0005      :C   DB10                          ;call datablock
0006      :***
SEGMENT  2              DIFF.MAX AMMESSA  PATT.E VASCA
0007      :L   DW65
0008      :L   DW129
0009      :-F
000A      :L   KF+100                        10C--- DA STABILIRE -----
000C      :<F
000D      :=   F 42.1                       1 = OK
000E      :***
SEGMENT  3              DIFFERENCE PER CICLO DI AVVIAMENTO
000F      :A   F 11.1           ;signal ti VME 'NORMAL MODE'
0010      :AN  F 21.1           test mode selected ?
0011      :L   DW17
0012      :JC  =M001
0013      :AN  F 21.1           test mode selected ?
0014      :L   DW33
0015      :JC  =M001
0016      :L   DW101
0017 M001 :T   DW35
0018      :L   DW35
0019      :L   DW129
001A      :-F
001B      :L   DW125                          ----DA STABILIRE
001C      :-F
001D      :T   DW88                           DEVE TENDERE A 0
001E      :L   KF+10                          1C
0020      :>F
0021      :=   F 42.2           Diff. stationary/rotating tepm.>1C
0022      :L   DW88                                 Diff. stationary/rotating tepm.>1C
0023      :L   KF-10                        0.5C
0025      :<F
0026      :=   F 42.3           Diff. stationary/rotating tepm.<1C
0027      :L   DW35
0028      :L   DW126                           0.5C
0029      :+F
002A      :L   DW65                           RAFFREDDO CON REGOLAZIONE
002B      :-F
002C      :T   DW86                           1C
002D      :L   DW86
```

```
002E    :L   KF+6                    RAFFREDDO RAPIDO  R=1
0030    :>F
0031    :=   F 42.4          Diff. stationary/rotating tepm.>+.6C
0032    :L   DW86
0033    :L   KF-6                  SOGLIA INF.DI REGOL.SUPERATA
0035    :<F
0036    :=   F 42.5          Diff. stationary/rotating tepm.<-.6C
0037    :L   DW86
0038    :L   KF+4                   SOGLIA SUP.DI REGOL.SUPERATA
003A    :>F
003B    :=   F 42.6          Diff. stationary/rotating tepm.>.+4C
003C    :L   DW86
003D    :L   KF-4
003F    :<F
0040    :=   F 42.7          Diff. stationary/rotating tepm.<.-4C
0041    :***
SEGMENT  4           ALL.20: TEMP.ACQUA TROPPO ALTA
0042    :L   DW35
0043    :L   KF+10                  10 C ---DA STABILIRE
0045    :-F
0046    :L   DW135                   SE T.H2O > [T.STRUTT.- 10 GRADI]
```



```
0047    :<F
0048    :=   F 40.3          max. temperature chilled water (warning 20)
0049    :***
SEGMENT  5           ALL.2: PRESSIONE ECCESSIVA
004A    :L   DW136
004B    :L   KF+800          80 BAR  --DA STABILIRE
004D    :<=F
004E    :=   F 40.4          max. pressure from feed pump (valle) 80 bar
004F    :***
SEGMENT  6           ALL.1 : PRESSIONE MINIMA
0050    :L   DW136
0051    :L   KF+350          SE PRESSIONE < 35 BAR SEGNALA
0053    :>F                  ALLARME 1
0054    :=   F 42.0          pressure at pads to low (35 bar)
0055    :***
SEGMENT  7           ALL.30:  RETROAZ.VALVOLA NON OK
0056    :A   F 11.0          SIMATIC signal to VME (1=warm-up activated)
0057    :A   F 10.6
0058    :L   DW139                  SE ABILITATA VALVOLA "1" LEGGI
0059    :JC  =M001
005A    :A   F 11.0          SIMATIC signal to VME (1=warm-up activated)
005B    :A   F 10.7          signal to VME (1=chilled water valve 2 selected)
005C    :L   DW140                  SE ABILITATA VALVOLA "2" LEGGI
005D    :JC  =M001
005E    :A   F 52.1
005F    :R   F 52.1
0060    :JU  =M002
```

```
0061 M001 :L   DW38                    CONFRONTA VALORE RIFERIMENTO
0062      :-F                          APERTURA VALVOLA CON RETRAZIONE
0063      :T   DW41                    E SCRIVI DIFFERENZA SU DW 41
0064      :L   KF+0
0066      :>=F                         DIFFERENZA POSITIVA = RIF.> RETR
0067      :JC  =M003
0068      :L   DW41
0069      :L   KF-200
006B      :<F                          DIFFERENZA NEGATIVA = RIF.< RETR
006C      :=   F 52.1                  1= DIFFERENZA SUPERIORE AL 10%
006D      :JU  =M002
006E M003 :L   DW41
006F      :L   KF+200
0071      :>F
0072      :=   F 52.1                  1= DIFFERENZA SUPERIORE AL 10%
0073 M002 :A   F 52.1
0074      :L   KT050.2
0076      :SR  T 23                    SE LA DIFFERENZA TRA RIFERIMENTO
0077      :A   T 23                    E RETROAZIONE PERDURA OLTRE 50"
0078      :=   F 40.6            SETTA ALLARME "30"
0079      :***
SEGMENT  8               ALL.21: OVERFLOW INGR.ANALOG.PLC
007A      :L   FW70
007B      :L   KH0000
007D      :><F
007E      :O   F 72.0
007F      :O   F 72.1
0080      :O   F 72.2
0081      :O   F 72.3
0082      :=   F 40.1
0083      :***
SEGMENT  9               ALL.22: SOGLIA MAX INGR.PLC
0084      :A(
0085      :A   F 55.3          01
0086      :O   F 55.4          01
0087      :O   F 55.5          01
0088      :O   F 55.6          01
```



```
0089      :)                 01
008A      :A   F 11.1             ;signal ti VME 'NORMAL MODE'
008B      :O   F 55.7             ;TH1 stationary part over upper limit
008C      :O   F 56.0             ;TH2 stationary part over upper limit
008D      :O   F 56.1             ;TH3 stationary part over upper limit
008E      :O   F 56.2             ;TH4 stationary part over upper limit
008F      :O   F 56.3             ;TH1 oil pad over upper limit
0090      :O   F 56.4             ;TH2 oil pad over upper limit
0091      :O   F 56.5             ;TH3 oil pad over upper limit
0092      :O   F 56.6             ;TH4 oil pad over upper limit
0093      :O   F 56.7             ;TH1 oil tank over upper limit
```

```
0094      :O   F 57.0          ;TH2 oil tank over upper limit
0095      :O   F 57.1          ;water over upper limit
0096      :O   F 57.2          ;oil pressure over upper limit
0097      :=   F 40.2          ;somewhere is to hot (stat. rot. pad...etc.) 'NORMAL NODE'
0098      :BE
```

```
FB135                                   LEN=66      ABS
                                          PAGE   1
SEGMENT  1              OIL COOLING VALVE REFERENCE
NAME :RIF.VALV

0005      :C   DB10           ;call datablock
0006      :A   F 11.0         ;SIMATIC signal to VME (1=warm-up activated)
0007      :A(
0008      :ON  F 20.5
0009      :ON  F 41.0         ;alarm average of rotating part out of range
000A      :)
000B      :A(
000C      :ON  F 20.6
000D      :ON  F 41.1         ;alarm average of stationary part out of range
000E      :)
000F      :A(
0010      :ON  F 10.5
0011      :ON  F 41.2         ;alarm average of OIL PADS out of range
0012      :)
0013      :AN  F 41.3
0014      :JC  =M001
0015      :L   KF+0
0017      :JU  =M002
0018 M001 :A   F 42.2         ;Diff. stationary/rotating tepm.>1C
0019      :AN  F 23.0         ;preparatory phase OK ?
001A      :L   KF+0
001C      :JC  =M002
001D      :A   F 42.3         ;Diff. stationary/rotating tepm.<1C
001E      :AN  F 23.0         ;preparatory phase OK ?
001F      :L   KF+2048
0021      :JC  =M002
0022      :L   DW38
0023 M002 :T   DW38
0024      :A   F 10.6
0025      :A   F 11.0         ;SIMATIC signal to VME (1=warm-up activated)
0026      :L   DW38
0027      :JC  =M003
0028      :A   F 10.6         ;enabled valve 1 ?
0029      :A   F 10.2         ;enabled reference from potentiometer for valve 1
002A      :L   DW137          ;load potentiometer value
002B      :JC  =M003
002C      :L   KF+0           ;valve 1
002E M003 :SLW   3
002F      :T   PW176
0030      :A   F 10.7         ;signal to VME (1=chilled water valve 2 selected)
0031      :A   F 11.0         ;SIMATIC signal to VME (1=warm-up activated)
0032      :L   DW38
```

```
0033      :JC  =M004
0034      :A   F 10.7          ;signal to VME (1=chilled water valve 2 selected)
0035      :A   F 10.3          ;enabled reference from poterntiometer for valve 2
0036      :L   DW137           ;load potentiometre value
0037      :JC  =M004
0038      :L   KF+0            ;valve 2
003A M004 :SLW   3             ;shift accu contents left 3 positions
003B      :T   PW178           ;valve 2
003C      :BE
```

```
FB135                                   LEN=66      ABS
                                          PAGE   1
SEGMENT  1              OIL COOLING VALVE REFERENCE
NAME :RIF.VALV

0005      :C   DB10          ;call datablock
0006      :A   F 11.0        ;SIMATIC signal to VME (1=warm-up activated)
0007      :A(
0008      :ON  F 20.5
0009      :ON  F 41.0        ;alarm average of rotating part out of range
000A      :)
000B      :A(
000C      :ON  F 20.6
000D      :ON  F 41.1        ;alarm average of stationary part out of range
000E      :)
000F      :A(
0010      :ON  F 10.5
0011      :ON  F 41.2        ;alarm average of OIL PADS out of range
0012      :)
0013      :AN  F 41.3
0014      :JC  =M001
0015      :L   KF+0
0017      :JU  =M002
0018 M001 :A   F 42.2        ;Diff. stationary/rotating tepm.>1C
0019      :AN  F 23.0        ;preparatory phase OK ?
001A      :L   KF+0
001C      :JC  =M002
001D      :A   F 42.3        ;Diff. stationary/rotating tepm.<1C
001E      :AN  F 23.0        ;preparatory phase OK ?
001F      :L   KF+2048
0021      :JC  =M002
0022      :L   DW38
0023 M002 :T   DW38
0024      :A   F 10.6
0025      :A   F 11.0        ;SIMATIC signal to VME (1=warm-up activated)
0026      :L   DW38
0027      :JC  =M003
0028      :A   F 10.6        ;enabled valve 1 ?
0029      :A   F 10.2        ;enabled reference from potentiometer for valve 1
002A      :L   DW137         ;load potentiometer value
002B      :JC  =M003
```

```
002C      :L   KF+0              ;valve 1
002E M003 :SLW   3
002F      :T   PW176
0030      :A   F 10.7            ;signal to VME (1=chilled water valve 2 selected)
0031      :A   F 11.0            ;SIMATIC signal to VME (1=warm-up activated)
0032      :L   DW38
0033      :JC  =M004
0034      :A   F 10.7            ;signal to VME (1=chilled water valve 2 selected)
0035      :A   F 10.3            ;enabled reference from poterntiometer for valve 2
0036      :L   DW137             ;load potentiometre value
0037      :JC  =M004
0038      :L   KF+0              ;valve 2
003A M004 :SLW   3               ;shift accu contents left 3 positions
003B      :T   PW178             ;valve 2
003C      :BE
```

HBHIDR

```
PB1                                   LEN=262
   ABS

   PAGE    1
SEGMENT  1              RESET INIZIALE
0000   :L   KH0000       ;lade hex vert null und uberschreibe
0002   :T   FW10         ;alle flag worte
0003   :T   FW12
0004   :T   FW14                  I
0005   :T   FW20                  I  RESET MERKER
RERTENTIVI
0006   :T   FW22                  I
0007   :T   FW40                  I
0008   :T   FW42                  I
0009   :T   FW50                  I
000A   :T   FW52                  I
000B   :T   FW54                  I
000C   :T   FW56                  I
000D   :T   FW58                  I
000E   :T   FW60                  I
000F   :T   FW64                  I
0010   :T   FW66                  I
0011   :T   FW68                  I
0012   :T   FW254                 I
0013   :***
SEGMENT  2              CARICAMENTO COSTANTI IN DB10
0014   :C   DB10
0015   :L   KF+0        ;lade 'INTEGER'
0017   :T   DW161        ;setze
0018   :L   KF+0
001A   :T   DW162                RTT2OFF
001B   :L   KF+0
001D   :T   DW163                RTT3OFF
```

```
001E   :L   KF+0
0020   :T   DW164                    RTT4OFF
0021   :L   KF+0
0023   :T   DW165                    STT1OFF
0024   :L   KF+0
0026   :T   DW166                    STT2OFF
0027   :L   KF+0
0029   :T   DW167                    STT3OFF
002A   :L   KF+0
002C   :T   DW168                    STT4OFF
002D   :L   KF+0
002F   :T   DW169                    PTT1OFF
0030   :L   KF+0
0032   :T   DW170                    PTT2OFF
0033   :L   KF+0
0035   :T   DW171                    PTT3OFF
0036   :L   KF+0
0038   :T   DW172                    PTT4OFF
0039   :L   KF+0
003B   :T   DW173                    TTT1OFF
003C   :L   KF+0
003E   :T   DW174                    TTT2OFF
003F   :L   KF+0
0041   :T   DW175                    WTOFF
0042   :L   KF+0
0044   :T   DW176                    PROLOFF
0045   :L   KF+0
0047   :T   DW177                    PHVVOFF
0048   :L   KF+0
004A   :T   DW178                    PHTUOFF
004B   :L   KF+0
004D   :T   DW179                    RN1OFF
004E   :L   KF+0
0050   :T   DW180                    RN2OFF
0051   :***
SEGMENT  3              DICHIARAZIONE COSTANTI PER DB11


 PB1
LEN=262      ABS

    PAGE    2
0052   :C   DB11
0053   :L   KF-803
0055   :T   DW1                     -10 GRADI
0056   :L   KF-731
0058   :T   DW2                     -9
0059   :L   KF-659
005B   :T   DW3                     -8
005C   :L   KF-586
005E   :T   DW4                     -7
005F   :L   KF-513
0061   :T   DW5                     -6
```

```
0062  :L  KF-439
0064  :T  DW6                -5
0065  :L  KF-365
0067  :T  DW7                -4
0068  :L  KF-292
006A  :T  DW8                -3
006B  :L  KF-218
006D  :T  DW9                -2
006E  :L  KF-144
0070  :T  DW10               -1
0071  :L  KF-70
0073  :T  DW11               0
0074  :L  KF+3
0076  :T  DW12               1
0077  :L  KF+76
0079  :T  DW13               2
007A  :L  KF+148
007C  :T  DW14               3
007D  :L  KF+220
007F  :T  DW15               4
0080  :L  KF+290
0082  :T  DW16               5
0083  :L  KF+361
0085  :T  DW17               6
0086  :L  KF+430
0088  :T  DW18               7
0089  :L  KF+517
008B  :T  DW19               8
008C  :L  KF+565
008E  :T  DW20               9
008F  :L  KF+631
0091  :T  DW21               10
0092  :L  KF+696
0094  :T  DW22               11
0095  :L  KF+760
0097  :T  DW23               12
0098  :L  KF+823
009A  :T  DW24               13
009B  :L  KF+884
009D  :T  DW25               14
009E  :L  KF+944
00A0  :T  DW26               15
00A1  :L  KF+1003
00A3  :T  DW27               16
00A4  :L  KF+1060
00A6  :T  DW28               17
00A7  :L  KF+1116
00A9  :T  DW29               18
00AA  :L  KF+1170
00AC  :T  DW30               19
00AD  :L  KF+1223
00AF  :T  DW31               20
00B0  :L  KF+1274
```

```
 PB1
LEN=262      ABS

    PAGE    3
00B2   :T   DW32                    21
00B3   :L   KF+1325
00B5   :T   DW33                    22
00B6   :L   KF+1373
00B8   :T   DW34                    23
00B9   :L   KF+1421
00BB   :T   DW35                    24
00BC   :L   KF+1466
00BE   :T   DW36                    25
00BF   :L   KF+1511
00C1   :T   DW37                    26
00C2   :L   KF+1554
00C4   :T   DW38                    27
00C5   :L   KF+1596
00C7   :T   DW39                    28
00C8   :L   KF+1636
00CA   :T   DW40                    29
00CB   :L   KF+1675
00CD   :T   DW41                    30
00CE   :L   KF+1713
00D0   :T   DW42                    31
00D1   :L   KF+1750
00D3   :T   DW43                    32
00D4   :L   KF+1785
00D6   :T   DW44                    33
00D7   :L   KF+1819
00D9   :T   DW45                    34
00DA   :L   KF+1852
00DC   :T   DW46                    35
00DD   :L   KF+1884
00DF   :T   DW47                    36
00E0   :L   KF+1914
00E2   :T   DW48                    37
00E3   :L   KF+1944
00E5   :T   DW49                    38
00E6   :L   KF+1973
00E8   :T   DW50                    39
00E9   :L   KF+2000
00EB   :T   DW51                    40
00EC   :***
SEGMENT  4              COSTANTI PER FORMULA REGOLAZIONE
00ED   :C   DB10
00EE   :L   KF+1
00F0   :T   DW121                   H0
00F1   :L   KF+1
00F3   :T   DW122                   H1
00F4   :L   KF+10
00F6   :T   DW123                   H2
00F7   :L   KF+1
00F9   :T   DW124                   H3
```

```
00FA   :L   KF+45                    2.6 GRADI
00FC   :T   DW125
00FD   :L   KF+0                     0.4 GRADI
00FF   :T   DW126
0100   :BE
```

```
 PB10
LEN=551      ABS

   PAGE    1
SEGMENT  1              RIPRISTINO ALLARMI


0000   :AN  F 255.0
0001   :A   F 255.0
0002   :=   F 255.0                  SEMPRE A "ZERO"
0003   :ON  F 255.0
0004   :O   F 255.0
0005   :=   F 255.1                  SEMPRE A "UNO"
0006   :A   F 255.1
0007   :AN  F 255.2
0008   :L   KT200.0
000A   :SF  T 42                     IMPULSO DI ACCENSIONE
APPAR.EL.
000B   :A   I 11.5       pushbutton general stop
000C   :L   KT200.0
000E   :SE  T 5                      IMPULSO DI COMANDI
INSERITI
000F   :A   I 14.0       mode selection by VME (1=alarms reset
command)
0010   :A   Q 16.3       SIMATIC signal to VME (1=remote mode
selected)
0011   :O   T 42
0012   :O   T 5
0013   :O   I 3.7        pushbutton to reset warning alarms
0014   :S   F 10.1       * RESETTATO IN FB 210 * ripristino alarmi
0015   :S   F 255.2                  IMPULSO DI ACCENSIONE
AVVENUTO
0016   :***
SEGMENT  2              ALL.1 : MINIMA PRESSIONE PATTINI
0017   :A   Q 9.6        Oil feed valve
0018   :L   KT150.0
001A   :SR  T 6
```

```
001B   :A(
001C   :A   I 6.3        low pressure switch at pads (35 bar)
001D   :A   F 42.0       pressure at pads to low (35 bar)
001E   :O   Q 9.7        Oil bypass valve
001F   :)
0020   :A   F 10.1       ripristino alarmi
0021   :R   F 0.0        pressure at pads to low flagg
0022   :A   T 6
0023   :A(
0024   :AN  I 6.3        low pressure switch at pads (35 bar)
0025   :ON  F 42.0       pressure at pads to low (35 bar)
0026   :)
0027   :S   F 0.0        pressuree at pads to low flagg
0028   :***
SEGMENT  3                ALL.2 : MAX.PRESS.PATTINI-VALLE
0029   :A   F 40.4       max. pressure from feed pump (valle) 80
bar
002A   :A   F 10.1       ripristino alarmi
002B   :R   F 0.1        pressuree at pads to high flagg (valle)
002C   :AN  F 40.4       max. pressure from feed pump (valle) 80
bar
002D   :S   F 0.1        pressuree at pads to high flagg (valle)
002E   :***
SEGMENT  4                ALL.3: MANCANZA ALIM.110 V C.A.
002F   :A   I 7.4
0030   :A   F 10.1       ripristino alarmi
0031   :R   F 0.2
0032   :AN  I 7.4
0033   :S   F 0.2
0034   :***
SEGMENT  5                ALL.4:MANCANZA ALIM. ELETTRONICA
0035   :A   I 7.3
0036   :A   F 10.1       ripristino alarmi
0037   :R   F 0.3
0038   :AN  I 7.3
0039   :S   F 0.3
003A   :***
SEGMENT  6                ALL.5 : MANCANZA ALIM. VALVOLE
```



```
003B   :A   I 7.5
003C   :A   F 10.1       ripristino alarmi
003D   :R   F 0.4
003E   :AN  I 7.5
003F   :S   F 0.4
0040   :***
SEGMENT  7                ALL.6 : PRESS. MIN.PATT.POMPA 1
0041   :A   Q 9.4        oil pump 1 relay
0042   :L   KT010.2
```

```
0044   :SR  T 1         COPRE DI 10" PER PERMETTERE LA CARICA del
ACCUMULATORE
0045   :A   F 10.1      ripristino alarmi
0046   :A(
0047   :A   I 6.0            01
0048   :ON  I 11.2             01
0049   :)                   01
004A   :R   F 0.5       pressuree at pads to low from pump 1 flagg
004B   :AN  I 6.0
004C   :A   T 1
004D   :S   F 0.5       pressuree at pads to low from pump 1 flagg
004E   :A   F 0.5       pressuree at pads to low from pump 1 flagg
004F   :O   I 3.5       pushbutton lamp test
0050   :=   Q 8.2       lamp low presure of oil from pump 1
0051   :***
SEGMENT  8               ALL.7:PRESS.MIN.PATTINI POMPA 2
0052   :A   Q 9.5       oil pump 2 relay
0053   :L   KT010.2     COPRE DI 10" PER PERMETTERE
0055   :SR  T 2         LA CARICA ACCUMULATORE
0056   :A   F 10.1      ripristino alarmi
0057   :A(
0058   :A   I 6.1            01
0059   :ON  I 11.2             01
005A   :)                   01
005B   :R   F 0.6       pressuree at pads to low from pump 2 flagg
005C   :AN  I 6.1
005D   :A   T 2
005E   :S   F 0.6       pressuree at pads to low from pump 2 flagg
005F   :A   F 0.6       pressuree at pads to low from pump 2 flagg
0060   :O   I 3.5       pushbutton lamp test
0061   :=   Q 8.3       lamp low presure of oil from pump 2
0062   :***
SEGMENT  9               ALL.9:MAX PRESS.PATTINI-MONTE
0063   :A   I 6.2       high pressure switch at pads
0064   :A   F 10.1      ripristino alarmi
0065   :R   F 1.0       pressuree at pads to high flagg (monte)
0066   :AN  I 6.2       high pressure switch at pads
0067   :S   F 1.0       pressuree at pads to high flagg (monte)
0068   :A   F 1.0       pressuree at pads to high flagg (monte)
0069   :O   I 3.5       pushbutton lamp test
006A   :=   Q 8.4       lamp overpresure in oil feed circuit
006B   :***
SEGMENT  10              ALL.10:LIVELLO MIN OLIO FILTRATO
006C   :A   I 6.4
006D   :A   F 10.1      ripristino alarmi
006E   :R   F 1.1       oil tank level to low flag
006F   :AN  I 6.4
0070   :S   F 1.1       oil tank level to low flag
0071   :A   F 1.1       oil tank level to low flag
0072   :O   I 3.5       pushbutton lamp test
0073   :=   Q 8.0       lamp low oil level main tank
0074   :***
SEGMENT  11              ALL.11 : TEMPERATURA MAX OLIO
0075   :A   I 7.0
0076   :A   F 10.1      ripristino alarmi
0077   :R   F 1.2       oil temperature to max. limit flagg
```

```
 PB10
LEN=551     ABS

   PAGE    3
0078   :AN  I 7.0
0079   :S   F 1.2       oil temperature to max. limit flagg
007A   :A   F 1.2       oil temperature to max. limit flagg
007B   :O   I 3.5       pushbutton lamp test
007C   :=   Q 8.1       lamp overtemperature oil tank
007D   :***
SEGMENT  12              ALL.12:ERRATA MEDIA STRUTT.ROTAN
007E   :AN  F 41.0      alarm average of rotating part out of
range
007F   :A   F 10.1      ripristino alarmi
0080   :O   F 20.6      CONTROLLO "DEGRADATO"(STR.FISSA)
0081   :R   F 1.3
0082   :A   F 41.0      alarm average of rotating part out of
range
0083   :A   F 20.5      CONTROLLO "NORMALE"(STRUT.ROT.)
0084   :S   F 1.3
0085   :***
SEGMENT  13              ALL.13:ERRATA MEDIA STRUTT.FISSA
0086   :AN  F 41.1      alarm average of stationary part out of
range
0087   :A   F 10.1      ripristino alarmi
0088   :R   F 1.4
0089   :A   F 41.1      alarm average of stationary part out of
range
008A   :S   F 1.4
008B   :***
SEGMENT  14              ALL.14 : ERRATA MEDIA PATTINI
008C   :AN  F 41.2      alarm average of OIL PADS out of range
008D   :A   F 10.1      ripristino alarmi
008E   :R   F 1.5
008F   :A   F 41.2      alarm average of OIL PADS out of range
0090   :S   F 1.5
0091   :***
SEGMENT  15              ALL.15:ERRATA MEDIA VASCA OLIO
0092   :AN  F 41.3
0093   :A   F 10.1      ripristino alarmi
0094   :R   F 1.6
0095   :A   F 41.3
0096   :S   F 1.6
0097   :***
SEGMENT  16              ALL.17:ERRATA SELEZ.POMPA ALIMEN
0098   :A(
0099   :A   I 6.6          01
009A   :O   I 6.7          01
009B   :)                  01
009C   :A   F 10.1      ripristino alarmi
009D   :R   F 2.0
```

```
009E   :AN  I 6.6
009F   :AN  I 6.7
00A0   :O
00A1   :AN  I 6.6
00A2   :A   I 11.2
00A3   :O
00A4   :AN  I 6.7
00A5   :A   I 11.3
00A6   :S   F 2.0
00A7   :***
SEGMENT  17              ALL.18 : GUASTO POMPA ALIM.1
00A8   :A   Q 9.4        oil pump 1 relay
00A9   :L   KT010.1
00AB   :SP  T 37
00AC   :AN  Q 9.4        oil pump 1 relay
00AD   :A   F 10.1       ripristino alarmi
00AE   :R   F 2.1
00AF   :AN  I 11.2
00B0   :A   Q 9.4        oil pump 1 relay
00B1   :AN  T 37
00B2   :S   F 2.1
```



```
00B3   :***
SEGMENT  18              ALL.19 : GUASTO POMPA ALIM.2
00B4   :A   Q 9.5        oil pump 2 relay
00B5   :L   KT010.1
00B7   :SP  T 38
00B8   :AN  Q 9.5        oil pump 2 relay
00B9   :A   F 10.1       ripristino alarmi
00BA   :R   F 2.2
00BB   :AN  I 11.3
00BC   :A   Q 9.5
00BD   :AN  T 38
00BE   :S   F 2.2
00BF   :***
SEGMENT  19              ALL.20 : TEMPERATURA MAX H2O
00C0   :AN  F 40.3       max. temperature chilled water
00C1   :A   F 10.1       ripristino alarmi
00C2   :R   F 2.3
00C3   :A   F 40.3       max. temperature chilled water
00C4   :S   F 2.3
00C5   :A   F 2.3        T.H20 > (T.ST.-10C)
00C6   :O   I 3.5        pushbutton lamp test
00C7   :=   Q 3.3        lamp over temperature of chilled water
00C8   :***
SEGMENT  20              ALL.21 : OVERFLOW INGRESSI PLC
00C9   :AN  F 40.1
00CA   :A   F 10.1       ripristino alarmi
```

```
00CB   :R   F 2.4
00CC   :A   F 40.1
00CD   :S   F 2.4
00CE   :***
SEGMENT  21                ALL.22 : SOGLIA MAX INGRESSI PLC
00CF   :AN  F 40.2       ;somewhere is to hot (stat. rot.
pad...etc.) 'NORMAL NODE'
00D0   :A   F 10.1       ripristino alarmi
00D1   :R   F 2.5
00D2   :A   F 40.2       ;somewhere is to hot (stat. rot.
pad...etc.) 'NORMAL NODE'
00D3   :S   F 2.5
00D4   :***
SEGMENT  22                ALL.23:SOGLIA MIN/MAX HW TERMISTDA
ELETTRONICA
00D5   :A   F 40.5
00D6   :A   F 10.1       ripristino alarmi
00D7   :R   F 2.6
00D8   :AN  F 40.5
00D9   :S   F 2.6
00DA   :***
SEGMENT  23                ALL.24:FLUSSOSTATO OLIO FILTRATO
00DB   :A   Q 9.2
00DC   :L   KT050.0
00DE   :SR  T 3
00DF   :A   Q 9.3
00E0   :L   KT050.0
00E2   :SR  T 4
00E3   :A(
00E4   :AN  I 11.0              01
00E5   :AN  I 11.1              01
00E6   :O   I 6.5              01
00E7   :)                     01
00E8   :A   F 10.1       ripristino alarmi
00E9   :R   F 2.7
00EA   :AN  I 6.5
00EB   :A(
00EC   :A   T 3                 01
00ED   :O   T 4                 01
00EE   :)                     01
00EF   :S   F 2.7
```

```
 PB10
LEN=551      ABS

   PAGE    5
00F0   :A   F 2.7
00F1   :O   I 3.5        pushbutton lamp test
00F2   :=   Q 3.5        lamp insufficient flow of conditioned oil
00F3   :***
SEGMENT  24                ALL.25: GUASTO POMPA RICIRCOLO 1
00F4   :A   Q 9.2
```

```
00F5   :L   KT010.1
00F7   :SP  T 39
00F8   :AN  Q 9.2
00F9   :A   F 10.1      ripristino alarmi
00FA   :R   F 3.0
00FB   :A   Q 9.2
00FC   :AN  I 11.0
00FD   :AN  T 39
00FE   :S   F 3.0
00FF   :***
SEGMENT  25             ALL.26: GUASTO POMPA RICIRCOLO 2
0100   :A   Q 9.3
0101   :L   KT010.1
0103   :SP  T 40
0104   :AN  Q 9.3
0105   :A   F 10.1      ripristino alarmi
0106   :R   F 3.1
0107   :A   Q 9.3
0108   :AN  I 11.1
0109   :AN  T 40
010A   :S   F 3.1
010B   :***
SEGMENT  26             ALL.27:SELEZIONE POMPA RICIRCOLO
010C   :A(
010D   :A   I 5.6          01
010E   :O   I 5.7          01
010F   :)                 01
0110   :A   F 10.1      ripristino alarmi
0111   :R   F 3.2
0112   :AN  I 5.6
0113   :AN  I 5.7
0114   :O
0115   :AN  I 5.6
0116   :A   I 11.0
0117   :O
0118   :AN  I 5.7
0119   :A   I 11.1
011A   :S   F 3.2
011B   :***
SEGMENT  27             ALL.28: LIVELLO MIN.OLIO RICIRC.
011C   :AN  I 4.4
011D   :L   KT060.2
011F   :SR  T 10
0120   :A   I 4.3
0121   :AN  T 10
0122   :A   F 10.1      ripristino alarmi
0123   :R   F 3.3
0124   :AN  I 4.3
0125   :O   T 10
0126   :S   F 3.3
0127   :A   F 3.3
0128   :O   I 3.5      pushbutton lamp test
0129   :=   Q 3.6      lamp high oil level in recovery tank
012A   :***
SEGMENT  28             ALL.29: LIVELLO MAX.OLIO RICIRC.
012B   :A   I 4.5
```

```
012C   :A   F 10.1       ripristino alarmi
012D   :R   F 3.4




 PB10
LEN=551      ABS

   PAGE    6
012E   :AN  I 4.5
012F   :S   F 3.4
0130   :A   F 3.4
0131   :O   I 3.5        pushbutton lamp test
0132   :=   Q 3.7        lamp low oil level in recovery tank
0133   :***
SEGMENT  29                ALL.30: REGOLAZ.VALV.NON AVVENUT
0134   :AN  F 40.6
0135   :A   F 10.1       ripristino alarmi
0136   :R   F 3.5
0137   :A   F 40.6
0138   :S   F 3.5
0139   :***
SEGMENT  30                ALL.31: FILTRO 1 INTASATO
013A   :AN  I 4.6
013B   :L   KT600.2      10 MINUTI
013D   :SR  T 11
013E   :AN  T 11
013F   :A   F 10.1       ripristino alarmi
0140   :R   F 3.6
0141   :A   T 11
0142   :S   F 3.6
0143   :A   F 3.6
0144   :O   I 3.5        pushbutton lamp test
0145   :=   Q 2.4        lamp inlet filter 1 in clogged condition
0146   :A(
0147   :A   I 11.0             01
0148   :O   I 11.1             01
0149   :)                    01
014A   :A   I 4.6
014B   :A   I 5.0
014C   :O   I 3.5        pushbutton lamp test
014D   :=   Q 2.3        lamp inlet filter 1 in operation
014E   :***
SEGMENT  31                ALL.32: FILTRO 2 INTASATO
014F   :AN  I 4.7
0150   :L   KT600.2
0152   :SR  T 12
0153   :AN  T 12
0154   :A   F 10.1       ripristino alarmi
0155   :R   F 3.7
0156   :A   T 12
0157   :S   F 3.7
0158   :A   F 3.7
0159   :O   I 3.5        pushbutton lamp test
```

```
015A   :=   Q 2.6        lamp inlet filter 2 in clogged condition
015B   :A(
015C   :A   I 11.0              01
015D   :O   I 11.1              01
015E   :)                    01
015F   :A   I 4.7
0160   :A   I 5.1
0161   :O   I 3.5        pushbutton lamp test
0162   :=   Q 2.5        lamp inlet filter 2 in operation
0163   :***
SEGMENT  32                ALL.33: FILTRO 3 INTASATO
0164   :AN  I 5.2
0165   :L   KT600.2
0167   :SR  T 13
0168   :AN  T 13
0169   :A   F 10.1       ripristino alarmi
016A   :R   F 4.0
016B   :A   T 13
016C   :S   F 4.0
```



```
016D   :A   F 4.0
016E   :O   I 3.5        pushbutton lamp test
016F   :=   Q 3.0        lamp feed filter 1 in clogged condition
0170   :A(
0171   :A   I 11.0             01
0172   :O   I 11.1             01
0173   :)                    01
0174   :A   I 5.2
0175   :A   I 5.4
0176   :O   I 3.5        pushbutton lamp test
0177   :=   Q 2.7        lamp feed filter 1 in operation
0178   :***
SEGMENT  33                ALL.34: FILTRO 4 INTASATO
0179   :AN  I 5.3
017A   :L   KT600.2
017C   :SR  T 14
017D   :AN  T 14
017E   :A   F 10.1       ripristino alarmi
017F   :R   F 4.1
0180   :A   T 14
0181   :S   F 4.1
0182   :A   F 4.1
0183   :O   I 3.5        pushbutton lamp test
0184   :=   Q 3.2        lamp feed filter 2 in clogged condition
0185   :A(
0186   :A   I 11.0             01
0187   :O   I 11.1             01
0188   :)                    01
```

```
0189   :A   I 5.3
018A   :A   I 5.5
018B   :O   I 3.5        pushbutton lamp test
018C   :=   Q 3.1        lamp feed filter 2 in operation
018D   :***
SEGMENT  34
018E   :A   F 11.0
018F   :L   KT600.0
0191   :SR  T 24
0192   :A   I 4.2        flowmeter chilled water
0193   :A   F 10.1       ripristino alarmi
0194   :R   F 4.2
0195   :A   T 24
0196   :AN  I 4.2        flowmeter chilled water
0197   :S   F 4.2
0198   :A   F 4.2
0199   :O   I 3.5        pushbutton lamp test
019A   :=   Q 3.4        lamp insufficient flow of chilled water
019B   :***
SEGMENT  35                ALL.36: ERRATA SELEZ.VALV.H20
019C   :A(
019D   :A   I 4.0             01
019E   :O   I 4.1             01
019F   :)                   01
01A0   :A   F 10.1       ripristino alarmi
01A1   :R   F 4.3        wrong water valve selected
01A2   :AN  I 4.0
01A3   :AN  I 4.1
01A4   :O
01A5   :AN  I 4.0
01A6   :A   Q 16.7       SIMATIC signal to VME (1=chilled water
valve 1 selected)
01A7   :O
01A8   :AN  I 4.1
01A9   :A   Q 17.0       SIMATIC signal to VME (1=chilled water
valve 2 selected)
01AA   :S   F 4.3        wrong water valve selected
01AB   :***
```



```
SEGMENT  36                37 : TRASMISSIONE DATI VERSO ESO
01AC   :AN  F 41.5
01AD   :A   F 10.1       ripristino alarmi
01AE   :R   F 4.4
01AF   :A   I 14.4
01B0   :A   F 41.5
01B1   :S   F 4.4
01B2   :***
SEGMENT  37                38 : CONNESSIONI ARMADIO BSC
```

```
01B3   :A   I 7.6
01B4   :A   F 10.1      ripristino alarmi
01B5   :R   F 4.5
01B6   :AN  I 7.6
01B7   :S   F 4.5
01B8   :***
SEGMENT  38             39 : CONNESSIONI INTERFACCIA ESO
01B9   :A   I 14.4
01BA   :A   F 10.1      ripristino alarmi
01BB   :R   F 4.6
01BC   :AN  I 14.4
01BD   :S   F 4.6
01BE   :***
SEGMENT  39             40:REGOLAZIONE OLIO NON AVVENUTA
01BF   :AN  T 20
01C0   :AN  T 21
01C1   :AN  F 23.2
01C2   :A   F 10.1      ripristino alarmi
01C3   :R   F 4.7
01C4   :A(
01C5   :A   T 20          01
01C6   :O   T 21          01
01C7   :O   F 23.2         01
01C8   :)                01
01C9   :A   F 21.4      no VME RESET or LOCAL comm. ENABLED
01CA   :S   F 4.7
01CB   :***
SEGMENT  40             43:AVVERT.FILTRO 1 ASPIR.INTASAT
01CC   :AN  I 4.6
01CD   :L   KT300.0
01CF   :SR  T 15
01D0   :A   I 4.6
01D1   :A   F 10.1      ripristino alarmi
01D2   :R   F 5.2
01D3   :A   T 15
01D4   :S   F 5.2
01D5   :***
SEGMENT  41             44:AVVERT.FILTRO 2 ASPIR.INTASAT
01D6   :AN  I 4.7
01D7   :L   KT300.0
01D9   :SR  T 16
01DA   :A   I 4.7
01DB   :A   F 10.1      ripristino alarmi
01DC   :R   F 5.3
01DD   :A   T 16
01DE   :S   F 5.3
01DF   :***
SEGMENT  42             45:AVVERT.FILTRO 3 MANDATA INTAS
01E0   :AN  I 5.2
01E1   :L   KT300.0
01E3   :SR  T 17
01E4   :A   I 5.2
01E5   :A   F 10.1      ripristino alarmi
01E6   :R   F 5.4
01E7   :A   T 17
```

```
 PB10
LEN=551     ABS

   PAGE    9
01E8   :S   F 5.4
01E9   :***
SEGMENT  43              46:AVVERT.FILTRO 4 MANDATA INTAS
01EA   :AN  I 5.3
01EB   :L   KT300.0
01ED   :SR  T 18
01EE   :A   I 5.3
01EF   :A   F 10.1       ripristino alarmi
01F0   :R   F 5.5
01F1   :A   T 18
01F2   :S   F 5.5
01F3   :***
SEGMENT  44              ALL.47:ERRATA SELEZ.FILTRO ASPIR
01F4   :A(
01F5   :A   I 5.0          01
01F6   :O   I 5.1          01
01F7   :)                 01
01F8   :A   F 10.1       ripristino alarmi
01F9   :R   F 5.6
01FA   :AN  I 5.0
01FB   :AN  I 5.1
01FC   :S   F 5.6
01FD   :***
SEGMENT  45              ALL.48:ERRATA SELEZ. FILTRO MAND
01FE   :A(
01FF   :A   I 5.4          01
0200   :O   I 5.5          01
0201   :)                 01
0202   :A   F 10.1       ripristino alarmi
0203   :R   F 5.7
0204   :AN  I 5.4
0205   :AN  I 5.5
0206   :S   F 5.7
0207   :***
SEGMENT  46              ALL.49: MANCANZA VENTIL. ARMADIO
0208   :A   I 7.2
0209   :A   F 10.1       ripristino alarmi
020A   :R   F 6.0
020B   :AN  I 7.2
020C   :S   F 6.0
020D   :***
SEGMENT  47              50:AVVERT.MEDIA PARZIALE TEMPER.
020E   :AN  F 41.4
020F   :A   F 10.1       ripristino alarmi
0210   :R   F 6.1
0211   :A   F 41.4
0212   :S   F 6.1
0213   :***
```

```
SEGMENT  48              RESET ALLARMI INIZIALE
0214   :AN  T 42
0215   :BEC
0216   :L   KH0000
0218   :T   FW0
0219   :T   FW2
021A   :T   FW4
021B   :A   F 255.1
021C   :R   F 6.0
021D   :R   F 6.1
021E   :R   F 6.2
021F   :R   F 6.3
0220   :R   F 6.4
0221   :BE
```

```
 PB15
LEN=392      ABS

   PAGE    1
SEGMENT  1               POMPE FERME
0000   :AN  I 11.0
0001   :AN  I 11.1
0002   :AN  I 11.2
0003   :AN  I 11.3
0004   :=   F 20.0       set=oil pumps off
0005   :***
SEGMENT  2               LAMPEGGIATORE
0006   :AN  T 32
0007   :L   KT030.0
0009   :SR  T 33
000A   :A   T 33
000B   :L   KT030.0
000D   :SF  T 32
000E   :A   T 32
000F   :=   F 20.1
0010   :***
SEGMENT  3               ATTIVAZIONE COMANDI
0011   :AN  I 14.2       mode selection by VME (0=general stop)
0012   :A   Q 16.3       SIMATIC signal to VME (1=remote mode
selected)
0013   :ON  I 14.1       mode selection by VME (0=emergency stop)
0014   :O   I 3.5        pushbutton lamp test
0015   :=   Q 8.5        lamp Main computer emergency
0016   :A   I 14.2       mode selection by VME (0=general stop)
0017   :A   I 14.1       mode selection by VME (0=emergency stop)
0018   :A   I 0.0        selector switch to enable the PLC
0019   :S   F 20.2       COMANDI ABILITATI
001A   :AN  I 14.2       mode selection by VME (0=general stop)
001B   :A   Q 16.3       SIMATIC signal to VME (1=remote mode
selected)
```

```
001C   :ON  I 14.1       mode selection by VME (0=emergency stop)
001D   :O   I 0.1        selector switch in off mode
001E   :R   F 20.2                    RESET ABILITAZIONE
COMANDI
001F   :A   F 20.2
0020   :L   KT200.0
0022   :SF  T 34                     RITARDO
DISABILIT.COMANDI
0023   :A   T 34
0024   :O   I 3.5        pushbutton lamp test
0025   :=   Q 0.0                    LAMPADA COMANDI
ABILITATI
0026   :***
SEGMENT  4              SELEZIONE COMANDI LOCALI
0027   :A   I 0.2        selector switch in local mode
0028   :AN  F 20.4       enable remote command mode
0029   :A   F 20.2
002A   :A   I 3.1
002B   :S   F 20.3       enable local comands
002C   :A   I 0.3        selector switch in remote mode
002D   :A   I 3.1
002E   :ON  T 34
002F   :R   F 20.3       disable local comands
0030   :A   I 0.2        selector switch in local mode
0031   :A   F 20.2
0032   :A   F 20.1
0033   :O   F 20.3       local comands enabled ?
0034   :O   I 3.5        pushbutton lamp test
0035   :=   Q 0.1        LAMPADA COMANDI LOCALI
0036   :A   F 20.3       local comands enabled ?
0037   :=   Q 9.1        RELE'COMANDI LOCALI PER BY-PASSARGE
COMPUTER
0038   :***
SEGMENT  5              SELEZIONE COMANDI REMOTI
0039   :A   I 0.3        selector switch in remote mode
003A   :AN  F 20.3       local comands enabled ?
003B   :A   F 20.2
003C   :A   I 3.1
003D   :S   F 20.4            enable remote command mode
```



```
003E   :A   I 0.2        selector switch in local mode
003F   :A   I 3.1
0040   :ON  T 34
0041   :R   F 20.4       disable remote command mode
0042   :A   F 20.4       remote command mode enabled ?
0043   :=   Q 16.3       SIMATIC signal to VME (1=remote mode
selected)
0044   :A   I 0.3        selector switch in remote mode
```

```
0045   :A   F 20.2
0046   :A   F 20.1
0047   :O   F 20.4      remote command mode enabled ?
0048   :O   I 3.5       pushbutton lamp test
0049   :=   Q 0.2       LAMPADA COMANDI REMOTI ABILITATI
004A   :***
SEGMENT  6               SELEZIONE MODO NORMALE
004B   :A   F 20.6      CONTROLLO "DEGRADATO"(STR.FISSA)
004C   :O
004D   :A   I 13.7      mode selection by VME (1=reset command)
004E   :A   F 20.4      remote command mode enabled ?
004F   :ON  T 34
0050   :R   F 20.5      RESET CONTROLLO "NORMALE"(DEGRADATO)
0051   :A(
0052   :A   I 0.7       selector switch NORMAL mode selected (no
DEGRADATE)
0053   :AN  I 1.0       selector switch DEGRADATE mode selected
(no NORMAL)
0054   :A   I 3.1            01
0055   :A   F 20.3      local comands enabled ?
0056   :O                  01
0057   :A   I 13.3      mode selection by VME (1=normal,
0=degraded)
0058   :A   F 20.4      remote command mode enabled ?
0059   :)                  01
005A   :A   F 20.2
005B   :A   F 20.0      oil pumps off
005C   :S   F 20.5      CONTROLLO "NORMALE"(STRUT.ROT.)
005D   :A   F 20.5
005E   :AN  F 20.6      CONTROLLO "DEGRADATO"(STR.FISSA)
005F   :=   Q 16.4      SIMATIC signal to VME (1=normal
0=degraded)
0060   :***
SEGMENT  7               SELEZIONE MODO DEGRADATO
0061   :A   F 20.5      CONTROLLO "NORMALE"(STRUT.ROT.)
0062   :O
0063   :A   I 13.7      mode selection by VME (1=reset command)
0064   :A   F 20.4      remote command mode enabled ?
0065   :ON  T 34
0066   :R   F 20.6      RESET CONTROLLO "DEGRADATO"
0067   :A(
0068   :AN  I 0.7       selector switch NORMAL mode selected (no
DEGRADATE)
0069   :A   I 1.0       selector switch DEGRADATE mode selected
(no NORMAL)
006A   :A   I 3.1            01
006B   :A   F 20.3      local comands enabled ?
006C   :O                  01
006D   :AN  I 13.3      mode selection by VME (1=normal,
0=degraded)
006E   :A   F 20.4      remote command mode enabled ?
006F   :)                  01
0070   :A   F 20.2
0071   :A   F 20.0      oil pumps off
0072   :S   F 20.6      CONTROLLO "DEGRADATO"(STR.FISSA)
0073   :***
```

```
SEGMENT  8                LAMPADE NORMALE / DEGRADATO
0074   :A(
0075   :A   I 0.7       selector switch NORMAL mode selected (no
DEGRADATE)
0076   :A   F 20.3      local comands enabled ?
0077   :O
0078   :A   I 13.3      mode selection by VME (1=normal,
0=degraded)
0079   :A   F 20.4      remote command mode enabled ?
007A   :)                  01
```



```
007B   :A   F 20.1
007C   :O   F 20.5      CONTROLLO "NORMALE"(STRUT.ROT.)
007D   :O   I 3.5       pushbutton lamp test
007E   :=   Q 0.6       lamp NORMAL mode selected (no DEGRADATE)
007F   :A(
0080   :A   I 1.0       selector switch DEGRADATE mode selected
(no NORMAL)
0081   :A   F 20.3      local comands enabled ?
0082   :O                  01
0083   :AN  I 13.3      mode selection by VME (1=normal,
0=degraded)
0084   :A   F 20.4      remote command mode enabled ?
0085   :)                  01
0086   :A   F 20.1
0087   :O   F 20.6      CONTROLLO "DEGRADATO"(STR.FISSA)
0088   :O   I 3.5       pushbutton lamp test
0089   :=   Q 0.7       lamp DEGRADATE mode selected (no NORMAL)
008A   :***
SEGMENT  9                SELEZIONE MODO MANUALE
008B   :A(
008C   :A   F 21.1      test mode selected ?
008D   :O   F 21.2      automatic mode selected ?
008E   :)                  01
008F   :O
0090   :A   I 13.7      mode selection by VME (1=reset command)
0091   :A   F 20.4      remote command mode enabled ?
0092   :ON  T 34
0093   :R   F 21.0      reset test mode flagg
0094   :A(
0095   :A   I 0.4       selector switch in manual position (3
positions)
0096   :AN  I 0.5       selector switch in test position (3
positions)
0097   :AN  I 0.6       selector switch in automatic position (3
positions)
0098   :A   I 3.1           01
0099   :A   F 20.3      local comands enabled ?
```

```
009A   :O                  01
009B   :AN  I 13.2       mode selection by VME (1=automatic,
0=manual)
009C   :A   F 20.4       remote command mode enabled ?
009D   :)                  01
009E   :A   F 20.2
009F   :A   F 20.0       oil pumps off
00A0   :S   F 21.0       test mode flagg set ?
00A1   :***

SEGMENT  10              SELEZIONE MODO TEST

00A2   :A   I 13.7       mode selection by VME (1=reset command)
00A3   :A   F 20.4       remote command mode enabled ?
00A4   :O   F 21.0       test mode flagg set ?
00A5   :O   F 21.2       automatic mode selected ?
00A6   :ON  T 34
00A7   :R   F 21.1       reset test mode
00A8   :A(
00A9   :AN  I 0.4        selector switch in manual position (3
positions)
00AA   :A   I 0.5        selector switch in test position (3
positions)
00AB   :AN  I 0.6        selector switch in automatic position (3
positions)
00AC   :A   I 3.1           01
00AD   :A   F 20.3       local comands enabled ?
00AE   :)                  01
00AF   :A   F 20.2
00B0   :A   F 20.0       oil pumps off
00B1   :S   F 21.1       test mode selected ?
00B2   :***

SEGMENT  11              SELEZIONE MODO AUTOMATICO

00B3   :A   I 13.7       mode selection by VME (1=reset command)
00B4   :A   F 20.4       remote command mode enabled ?
00B5   :O   F 21.0       test mode flagg set ?
00B6   :O   F 21.1       test mode selected ?
00B7   :ON  T 34

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LEN=392     ABS

   PAGE    4
00B8   :R   F 21.2       reset automatic mode
00B9   :A(
00BA   :AN  I 0.4        selector switch in manual position (3
positions)
00BB   :AN  I 0.5        selector switch in test position (3
positions)
00BC   :A   I 0.6        selector switch in automatic position (3
positions)
00BD   :A   I 3.1           01
00BE   :A   F 20.3             local comands enabled ?
00BF   :O                  01
```

```
00C0   :A   I 13.2       mode selection by VME (1=automatic,
0=manual)
00C1   :A   F 20.4              remote command mode enabled ?
00C2   :)                    01
00C3   :A   F 20.2
00C4   :A   F 20.0       oil pumps off
00C5   :S   F 21.2       set flagg automatic mode selected
00C6   :***
SEGMENT  12                  SELEZIONI EFFETTUATE
00C7   :A   F 21.0       manual mode flagg set ?
00C8   :AN  F 21.1        test mode selected ?
00C9   :AN  F 21.2        automatic mode selected ?
00CA   :=   Q 16.0       SIMATIC signal to VME (1=manual mode
selected)
00CB   :AN  F 21.0        manual mode flagg set ?
00CC   :A   F 21.1       test mode selected ?
00CD   :AN  F 21.2        automatic mode selected ?
00CE   :=   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
00CF   :AN  F 21.0        manual mode flagg set ?
00D0   :AN  F 21.1        test mode selected ?
00D1   :A   F 21.2       automatic mode selected ?
00D2   :=   Q 16.2       SIMATIC signal to VME (1=automatic mode
selected)
00D3   :***
SEGMENT  13                  LAMPADE SELEZIONE EFFETTUATA
00D4   :A(
00D5   :A   I 0.4        selector switch in manual position (3
positions)
00D6   :A   F 20.3        local comands enabled ?
00D7   :O
00D8   :AN  I 13.2        mode selection by VME (1=automatic,
0=manual)
00D9   :A   F 20.4        remote command mode enabled ?
00DA   :)
00DB   :A   F 20.1
00DC   :O   Q 16.0        SIMATIC signal to VME (1=manual mode
selected)
00DD   :O   I 3.5         pushbutton lamp test
00DE   :=   Q 0.3         lamp MANUAL mode selected
00DF   :A   I 0.5        selector switch in test position (3
positions)
00E0   :A   F 20.3        local comands enabled ?
00E1   :A   F 20.1
00E2   :O   Q 16.1        SIMATIC signal to VME (1=test mode
selected)
00E3   :O   I 3.5        pushbutton lamp test
00E4   :=   Q 0.4         lamp TEST mode selected
00E5   :A   Q 0.4         lamp TEST mode selected
00E6   :O   I 3.5        pushbutton lamp test
00E7   :=   Q 1.6         LAMPADA "SELEZ.POTENZIOMETRI"
00E8   :A(
00E9   :A   I 0.6        selector switch in automatic position (3
positions)
00EA   :A   F 20.3        local comands enabled ?
00EB   :O
```

```
00EC   :A   I 13.2       mode selection by VME (1=automatic,
0=manual)
00ED   :A   F 20.4       remote command mode enabled ?
00EE   :)
00EF   :A   F 20.1
00F0   :O   Q 16.2       SIMATIC signal to VME (1=automatic mode
selected)
00F1   :O   I 3.5        pushbutton lamp test
00F2   :=   Q 0.5        lamp AUTOMATIC mode selected
00F3   :***
SEGMENT  14                 COMANDO AUTOMATICO
00F4   :A(
```

```
 PB15
LEN=392      ABS

    PAGE    5
00F5   :A   I 1.1        pushbutton to start automatic operation
00F6   :A   F 20.3       local comands enabled ?
00F7   :O
00F8   :A   I 13.4       mode selection by VME (1=start of aut.
sequence)
00F9   :A   F 20.4       remote command mode enabled ?
00FA   :O   F 21.3       macro comando operacion en automatico
00FB   :)
00FC   :A(
00FD   :A   I 1.2        pushbutton to stop automatic operation
00FE   :A   I 2.2        pushbutton to stop return pump 1
00FF   :A   I 2.4
0100   :A   I 2.6        pushbutton to stop feed pump 1
0101   :A   I 3.0
0102   :O   F 20.4       remote command mode enabled ?
0103   :)
0104   :A(
0105   :AN  I 13.5       mode selection by VME (1=stop of aut.
sequence)
0106   :O   F 20.3       local comands enabled ?
0107   :)
0108   :A   Q 16.2       SIMATIC signal to VME (1=automatic mode
selected)
0109   :=   F 21.3       macro comando operacion en automatico
010A   :A   F 21.3       macro comando operacion en automatico
010B   :=   Q 16.5       SIMATIC signal to VME (1=automatic cycle
in active)
010C   :***
SEGMENT  15                 LAMPADA COMANDO AUTOMATICO
010D   :A   F 21.3       macro comando operacion en automatico
010E   :A   F 20.1
010F   :O
0110   :A(
0111   :A   I 11.0
0112   :O   I 11.1
```

```
0113   :)
0114   :A(
0115   :A   I 11.2
0116   :O   I 11.3
0117   :)
0118   :A   Q 16.5      SIMATIC signal to VME (1=automatic cycle
in active)
0119   :O   I 3.5       pushbutton lamp test
011A   :=   Q 1.0       lamp to indicate automatic operation
011B   :***
SEGMENT  16              COMANDO MARCIA "WARM-UP"
011C   :A(
011D   :A   I 1.3       pushbutton start oil warm-up
011E   :A   F 20.3      local comands enabled ?
011F   :O
0120   :A   I 13.6      Start WARM-UP from VME
0121   :A   F 20.4      remote command mode enabled ?
0122   :O   F 21.4      no VME RESET or LOCAL comm. ENABLED
0123   :)
0124   :A(
0125   :A   I 1.4       pushbutton stop warm-up
0126   :O   F 20.4      remote command mode enabled ?
0127   :)
0128   :A(
0129   :AN  I 13.7      mode selection by VME (1=reset command)
012A   :O   F 20.3      local comands enabled ?
012B   :)
012C   :=   F 21.4      Local comm. enabled and no VME RESET
012D   :***
SEGMENT  17              SEGNALAZIONI "WARM-UP"
012E   :A   F 21.4      Local comm. enabled and no VME RESET
012F   :A   I 4.2       flowmeter chilled water
0130   :AN  F 40.3      max. temperature chilled water
0131   :AN  F 4.3       wrong water valve selected




 PB15
LEN=392     ABS

   PAGE    6
0132   :=   Q 16.6      SIMATIC signal to VME (1=warm-up
activated)
0133   :A   F 21.4      Local comm. enabled and no VME RESET
0134   :A   F 20.1
0135   :O   Q 16.6      SIMATIC signal to VME (1=warm-up
activated)
0136   :O   I 3.5       pushbutton lamp test
0137   :=   Q 1.1       lamp warm-up started
0138   :***
SEGMENT  18              ABILIT.MARCIA POMPE ALIMENTAZ.
0139   :AN  F 0.1       pressuree at pads to high flagg (valle)
013A   :AN  F 1.1       oil tank level to low flag
013B   :AN  F 3.3
```

```
013C   :=   F 21.5      ABILITAZIONE OK POMPE ALIMENT.
013D   :***
SEGMENT  19               ABILIT.MARCIA POMPE RICIRCOLO
013E   :A(
013F   :AN  F 3.6           01
0140   :A   I 5.0          01
0141   :O                  01
0142   :AN  F 3.7           01
0143   :A   I 5.1          01
0144   :)                  01
0145   :A(
0146   :AN  F 4.0           01
0147   :A   I 5.4          01
0148   :O                  01
0149   :AN  F 4.1           01
014A   :A   I 5.5          01
014B   :)                  01
014C   :AN  F 3.3
014D   :=   F 21.6      ABILITAZIONI OK POMPE RICIRCOLO
014E   :***
SEGMENT  20               COMANDO LOCALE POMPA 1 ALIM.
014F   :A(
0150   :A   Q 16.0      SIMATIC signal to VME (1=manual mode
selected)
0151   :O   Q 16.1      SIMATIC signal to VME (1=test mode
selected)
0152   :)
0153   :A(
0154   :A   I 2.5       pushbutton to start feed pump 1
0155   :O   F 22.0      flagg pump 1 started in test mode
0156   :)
0157   :A   F 20.3      local comands enabled ?
0158   :A   I 2.6       pushbutton to stop feed pump 1
0159   :A   I 6.6
015A   :=   F 22.0      flagg pump 1 started in test mode
015B   :***            "MANUALE" O "TEST"
SEGMENT  21               COMANDO LOCALE POMPA 2 ALIM.
015C   :A(
015D   :A   Q 16.0      SIMATIC signal to VME (1=manual mode
selected)
015E   :O   Q 16.1      SIMATIC signal to VME (1=test mode
selected)
015F   :)
0160   :A(
0161   :A   I 2.7       pushbutton to start feed pump 2
0162   :O   F 22.1      flagg pump 2 started in test mode
0163   :)
0164   :A   F 20.3      local comands enabled ?
0165   :A   I 3.0
0166   :A   I 6.7
0167   :=   F 22.1      flagg pump 2 started in test mode
0168   :***

SEGMENT  22               COMANDO LOCALE POMPA 1 RICIRCOLO

0169   :A(
```

```
016A   :A   Q 16.0       SIMATIC signal to VME (1=manual mode
selected)
016B   :O   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
016C   :)                  01


 PB15
LEN=392      ABS

   PAGE    7
016D   :A(
016E   :A   I 2.1        pushbutton to start return pump 1
016F   :O   F 22.2       flagg return pump 1 started in test mode
0170   :)                  01
0171   :A   F 20.3       local comands enabled ?
0172   :A   I 2.2        pushbutton to stop return pump 1
0173   :A   I 5.6
0174   :=   F 22.2       flagg return pump 1 started in test mode
0175   :***
SEGMENT  23              COMANDO LOCALE POMPA 2 RICIRCOLO
0176   :A(
0177   :A   Q 16.0       SIMATIC signal to VME (1=manual mode
selected)
0178   :O   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0179   :)                  01
017A   :A(
017B   :A   I 2.3        pushbutton to start return pump 2
017C   :O   F 22.3       flagg return pump 2 started in test mode
017D   :)
017E   :A   F 20.3       local comands enabled ?
017F   :A   I 2.4        pushbutton to stop feed pump 2
0180   :A   I 5.7
0181   :=   F 22.3       flagg return pump 2 started in test mode
0182   :BE
```

```
 PB16
LEN=316     ABS

   PAGE    1
SEGMENT  1              TELERUTT.POMPA 1 ALIMENTAZIONE
0000   :A(
0001   :A   Q 16.5      SIMATIC signal to VME (1=automatic cycle
in active)
0002   :O   F 22.0      flagg pump 1 started in test mode
0003   :)                 01
0004   :A   F 21.5
0005   :A   I 6.6
0006   :AN  Q 9.5       oil pump 2 relay
0007   :=   Q 9.4      oil pump 1 relay
0008   :***
SEGMENT  2              TELERUTT.POMPA 2 ALIMENTAZIONE
0009   :A(
000A   :A   Q 16.5      SIMATIC signal to VME (1=automatic cycle
in active)
000B   :O   F 22.1      flagg pump 2 started in test mode
000C   :)                 01
000D   :A   F 21.5
000E   :A   I 6.7
000F   :AN  Q 9.4       oil pump 1 relay
0010   :=   Q 9.5      oil pump 2 relay
0011   :***
SEGMENT  3              TELERUTT.POMPA 1 RICIRCOLO
0012   :A(
0013   :A   Q 16.5      SIMATIC signal to VME (1=automatic cycle
in active)
0014   :O   F 22.2      flagg return pump 1 started in test mode
0015   :)
0016   :A   F 21.6
0017   :A   I 5.6
0018   :AN  Q 9.3
0019   :=   Q 9.2      RELE' POMPA 1 RICIRCOLO
001A   :***
SEGMENT  4              TELERUTT.POMPA 2 RICIRCOLO
001B   :A(
001C   :A   Q 16.5      SIMATIC signal to VME (1=automatic cycle
in active)
001D   :O   F 22.3      flagg return pump 2 started in test mode
001E   :)
001F   :A   F 21.6
0020   :A   I 5.7
0021   :AN  Q 9.2
0022   :=   Q 9.3      RELE' POMPA 2 RICIRCOLO
0023   :***
SEGMENT  5              POMPE IN MOTO
0024   :A   I 11.0
0025   :=   Q 17.2      SIMATIC signal to VME (1=filter pump 1
activated)
0026   :A   I 11.1
0027   :=   Q 17.3      SIMATIC signal to VME (1=filter pump 2
activated)
0028   :A   I 11.2
```

```
0029   :=   Q 17.4       SIMATIC signal to VME (1=oil feed pump 1
activated)
002A   :A   I 11.3
002B   :=   Q 17.5       SIMATIC signal to VME (1=oil feed pump 2
activated)
002C   :***
SEGMENT  6                  LAMPADE POMPE ALIMENTAZIONE
002D   :A(
002E   :A   F 22.0       flagg pump 1 started in test mode
002F   :O   Q 16.5       SIMATIC signal to VME (1=automatic cycle
in active)
0030   :)                   01
0031   :A   F 20.1
0032   :A   I 6.6
0033   :O   Q 9.4        oil pump 1 relay
0034   :O   I 3.5        pushbutton lamp test
0035   :=   Q 2.1        LAMPADA POMPA 1 ALIMENT.IN MOTO
0036   :A(
0037   :A   F 22.1       flagg pump 2 started in test mode
0038   :O   Q 16.5       SIMATIC signal to VME (1=automatic cycle
in active)
0039   :)                   01




 PB16
LEN=316      ABS

    PAGE    2
003A   :A   F 20.1
003B   :A   I 6.7
003C   :O   Q 9.5        oil pump 2 relay
003D   :O   I 3.5        pushbutton lamp test
003E   :=   Q 2.2        LAMPADA POMPA 2 ALIMENT.IN MOTO
003F   :***
SEGMENT  7                  LAMPADE POMPE RICIRCOLO
0040   :A(
0041   :A   F 22.2       flagg return pump 1 started in test mode
0042   :O   Q 16.5       SIMATIC signal to VME (1=automatic cycle
in active)
0043   :)
0044   :A   F 20.1
0045   :A   I 5.6
0046   :O   Q 9.2
0047   :O   I 3.5        pushbutton lamp test
0048   :=   Q 1.7        LAMPADA POMPA 1 RICIRC.IN MOTO
0049   :A(
004A   :A   F 22.3       flagg return pump 2 started in test mode
004B   :O   Q 16.5       SIMATIC signal to VME (1=automatic cycle
in active)
004C   :)
004D   :A   F 20.1
004E   :A   I 5.7
004F   :O   Q 9.3
```

```
0050   :O   I 3.5        pushbutton lamp test
0051   :=   Q 2.0        LAMPADA POMPA 2 RICIRC.IN MOTO
0052   :***
SEGMENT  8                COMANDO VALVOLE REFRIGERANTE
0053   :A   I 1.5        selector switch position chilled water 1
valve
0054   :A   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0055   :O
0056   :A   F 21.4       Local comm. enabled and no VME RESET
0057   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0058   :=   F 22.4       COMANDO ABILITAZ. VALVOLA 1 H2O
0059   :A   I 1.6        selector switch position chilled water 2
valve
005A   :A   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
005B   :O
005C   :A   F 21.4       Local comm. enabled and no VME RESET
005D   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
005E   :=   F 22.5       COMANDO ABILITAZ. VALVOLA 2 H2O
005F   :A   F 22.4
0060   :A   I 4.0
0061   :=   Q 16.7       SIMATIC signal to VME (1=chilled water
valve 1 selected)
0062   :A   F 22.5
0063   :A   I 4.1
0064   :=   Q 17.0       SIMATIC signal to VME (1=chilled water
valve 2 selected)
0065   :A   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0066   :A(
0067   :A   F 22.4              01
0068   :A   F 20.1              01
0069   :O   Q 16.7       SIMATIC signal to VME (1=chilled water
valve 1 selected)
006A   :)                   01
006B   :O
006C   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
006D   :A   Q 16.7       SIMATIC signal to VME (1=chilled water
valve 1 selected)
006E   :O   I 3.5        pushbutton lamp test
006F   :=   Q 1.2        lamp position chilled water 1 valve
0070   :A   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0071   :A(
0072   :A   F 22.5              01
0073   :A   F 20.1              01
0074   :O   Q 17.0       SIMATIC signal to VME (1=chilled water
valve 2 selected)
0075   :)
0076   :O
0077   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
```

```
 PB16
LEN=316      ABS

   PAGE    3
0078   :A   Q 17.0       SIMATIC signal to VME (1=chilled water
valve 2 selected)
0079   :O   I 3.5        pushbutton lamp test
007A   :=   Q 1.3        lamp position chilled water 2 valve
007B   :***
SEGMENT  9                 ALLARMI MANCATA REGOLAZIONE
007C   :AN  F 23.0       preparatory phase OK ?
007D   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
007E   :A   F 21.4       no VME RESET or LOCAL comm. enabled
007F   :A(                              I
0080   :A   F 42.2       Diff. stationary/rotating tepm.>1C
0081   :O   F 42.3       Diff. stationary/rotating tepm.<1C
0082   :)                   01          I SE IL TEMPO
NECESSARIO PER COM
                         I PLETARE FASE PREPARATORIA SUPE
0083   :L   KT120.3                      I RA 20 MINUTI SETTA
ALLARME 40
0085   :SR  T 20
--------------------------------
0086   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0087   :A   F 23.0       preparatory phase OK ?
0088   :AN  F 23.1       operative phase OK ?
0089   :A(                              I SE IL TEMPO
NECESSARIO PER COM
008A   :A   F 42.4       T*>+.6PT  I PLETARE FASE OPERATIVA 1 SUPER
008B   :O   F 42.5       T*<-.6PT  I 30 MINUTI SETTA ALLARME 40
008C   :)                   01          I
008D   :L   KT180.3                       I
008F   :SR  T 21
--------------------------------
0090   :A   F 23.1                       I operative phase OK
?
0091   :L   KT600.2                      I
0093   :SR  T 22                         I
0094   :AN  Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0095   :A   F 23.1                       I SE IL TEMPO
NECESSARIO PER POR
0096   :A   T 22                         I TARE OLIO ENTRO +O-
0.4 GRADI
0097   :A(                              I SUPERA 10 MIN.SETTA
ALLARME 40
0098   :A   F 42.6       Diff. stationary/rotating tepm.>.+4C
0099   :O   F 42.7       Diff. stationary/rotating tepm.<.-4C
009A   :)                   01          I
009B   :=   F 23.2
I--------------------------------
009C   :***
SEGMENT  10                TEMPERATURA OLIO ENTRO TOLLERANZ
```

```
009D   :A   F 21.4       Local comm. enabled and no VME RESET
009E   :A   F 23.0       preparatory phase OK ?
009F   :A   F 23.1       operative phase OK ?
00A0   :A   T 22
00A1   :AN  F 42.6       Diff. stationary/rotating tepm.>.+4C
00A2   :AN  F 42.7       Diff. stationary/rotating tepm.<.-4C
00A3   :=   Q 17.7       SIMATIC signal to VME (1=oil adjustment in
tolerance)
00A4   :***              +O- 0.4 GRADI T.PATTINI
SEGMENT  11                    COMANDO DE ALIMENTAZIONE DE VALVULE
00A5   :A(               (if one of both oil pumps is on)
00A6   :A   Q 9.4        if oil pump 1 relay active
00A7   :O   Q 9.5        or oil pump 2 relay active
00A8   :)
00A9   :L   KT020.2      RITARDO ABILITAZIONE PRESSIONE PER CARICA
ACCUMULATORE
00AB   :SR  T 26         set timer 26
00AC   :A   T 26         if time out
00AD   :AN  F 42.2       and not Diff. stationary/rotating tepm.>1C
00AE   :AN  F 42.3       and not Diff. stationary/rotating tepm.<1C
00AF   :A   Q 16.6       SIMATIC signal to VME (1=warm-up
activated)
00B0   :AN  Q 16.1       if not SIMATIC signal to VME (1=test mode
selected)
00B1   :O           or !!
00B2   :A   Q 9.6        and Oil feed valve
00B3   :A   F 21.4       and Local comm. enabled and no VME RESET
00B4   :O           or !!
00B5   :A   Q 16.1       if SIMATIC signal to VME (1=test mode
selected)
00B6   :A   I 1.7        and selector switch in oil feed position
00B7   :=   Q 9.6        activate Oil feed valve
00B8   :AN  Q 9.6        if oil feed valve is not active
```



```
00B9   :AN  Q 16.1       and Test mode is not selected  (SZTP)
00BA   :O           or !!
00BB   :A   Q 16.1       if SIMATIC signal to VME (1=test mode
selected)
00BC   :A   I 2.0        if selector switch in oil bypass position
00BD   :=   Q 9.7        activate oil bypass valve
00BE   :A   Q 9.6        Oil feed valve
00BF   :=   Q 17.1       SIMATIC signal to VME (1=oil feed valve
active)
00C0   :A   Q 9.6        Oil feed valve
00C1   :O   I 3.5        pushbutton lamp test
00C2   :=   Q 1.4        lamp to indicate oil feed
00C3   :A   Q 9.7        Oil bypass valve
00C4   :O   I 3.5        pushbutton lamp test
```

```
00C5  :=  Q 1.5       lamp to indicate oil bypass (no feed)
00C6  :***
SEGMENT  12               ALLARMI ISTANTANEI
00C7  :L  FW0
00C8  :L  KH0000
00CA  :><F
00CB  :O
00CC  :L  FW2
00CD  :L  KH0000
00CF  :><F
00D0  :O
00D1  :L  FY4             ;FLAG BYTE
00D2  :L  KB0
00D3  :><F
00D4  :O  F 5.0
00D5  :O  F 5.1
00D6  :=  Q 18.0      SIMATIC signal to VME (1=normal oper.
inmediate alarms)
00D7  :***
SEGMENT  13               ALLARMI RITARDATI
00D8  :A  F 5.2
00D9  :O  F 5.3
00DA  :O  F 5.4
00DB  :O  F 5.5
00DC  :O  F 5.6
00DD  :O  F 5.7
00DE  :O  F 6.0
00DF  :O  F 6.1
00E0  :=  Q 18.1      SIMATIC signal to VME (1=normal oper.
delayed alarms)
00E1  :***
SEGMENT  14               ARRESTI VERSO ESO
00E2  :A  I 11.4      pushbutton emergency stop
00E3  :ON  F 20.2
00E4  :=  Q 18.3      SIMATIC signal to VME (0=emergency stop)
00E5  :A  I 11.5      pushbutton general stop
00E6  :ON  F 20.2
00E7  :=  Q 18.4      SIMATIC signal to VME (0=general stop)
00E8  :AN  F 0.0      pressuree at pads to low flagg
00E9  :AN  F 0.1      pressuree at pads to high flagg (valle)
00EA  :AN  F 0.5      pressuree at pads to low from pump 1 flagg
00EB  :AN  F 0.6      pressuree at pads to low from pump 2 flagg
00EC  :AN  F 1.1      oil tank level to low flag
00ED  :AN  F 1.2      oil temperature to max. limit flagg
00EE  :=  Q 18.5      SIMATIC signal to VME (0=instantaneous
stop acknowledge)
00EF  :***
SEGMENT  15               ARRESTI VERSO BSC
00F0  :A  Q 18.4      SIMATIC signal to VME (0=general stop)
00F1  :L  KT200.0
00F3  :SF  T 28
00F4  :A  T 28
00F5  :=  Q 8.7
00F6  :A  Q 18.5      SIMATIC signal to VME (0=instantaneous
stop acknowledge)
00F7  :L  KT100.0
```

```
PB16                                    LEN=316
   ABS

   PAGE    5
00F9   :SF  T 25
00FA   :A   T 25
00FB   :=   Q 7.4                    1=OK
00FC   :A   Q 18.3      SIMATIC signal to VME (0=emergency stop)
00FD   :L   KT050.0                    1=OK
00FF   :SF  T 27
0100   :A   T 27
0101   :=   Q 9.0
0102   :A   I 14.3      mode selection by VME (1=telescope in
motion)
0103   :=   Q 10.6
0104   :***
SEGMENT  16              TEMPERATURE DIFFERENCE
0105   :A(
0106   :AN  F 42.2      Diff. stationary/rotating tepm.>1C
0107   :AN  F 42.3      Diff. stationary/rotating tepm.<1C
0108   :O
0109   :A   F 23.0      preparatory phase OK ?
010A   :)
010B   :A   F 21.4      Local comm. enabled and no VME RESET
010C   :AN  Q 16.1      SIMATIC signal to VME (1=test mode
selected)
010D   :A   Q 9.6       Oil feed valve
010E   :=   F 23.0      fase preparatoria OK
010F   :A(
0110   :AN  F 42.4      Diff. stationary/rotating tepm.>+.6C
0111   :AN  F 42.5      Diff. stationary/rotating tepm.<-.6C
0112   :O
0113   :A   F 23.1      operative phase OK ?
0114   :)
0115   :A   F 21.4      Local comm. enabled and no VME RESET
0116   :AN  Q 16.1      SIMATIC signal to VME (1=test mode
selected)
0117   :A   F 23.0      preparatory phase OK ?
0118   :=   F 23.1      fase operativa OK !
0119   :***
SEGMENT  17              ABILITAZIONI VERSO PROCESSORE R
011A   :A   I 1.5       selector switch position chilled water 1
valve
011B   :A   Q 16.1      SIMATIC signal to VME (1=test mode
selected)
011C   :A   I 4.0       FINECORSA ALIM. H2O A VALVOLA RGHORN1
011D   :=   F 10.2      enabled reference from potentiometer for
valve 1
011E   :A   I 1.6       selector switch position chilled water 2
valve
011F   :A   Q 16.1      SIMATIC signal to VME (1=test mode
```

```
selected)
0120   :A   I 4.1
0121   :=   F 10.3       enabled reference from poterntiometer for
valve 2
0122   :A   Q 16.1       SIMATIC signal to VME (1=test mode
selected)
0123   :=   F 10.4
0124   :A   Q 9.6        Oil feed valve
0125   :=   F 10.5
0126   :A   Q 16.7       SIMATIC signal to VME (1=chilled water
valve 1 selected)
0127   :=   F 10.6       enable servovalve 1
0128   :A   Q 17.0       SIMATIC signal to VME (1=chilled water
valve 2 selected)
0129   :=   F 10.7       signal to VME (1=chilled water valve 2
selected)
012A   :A   Q 16.6       SIMATIC signal to VME (1=warm-up
activated)
012B   :=   F 11.0
012C   :A   Q 16.4       SIMATIC signal to VME (1=normal
0=degraded)
012D   :=   F 11.1       ;signal ti VME 'NORMAL MODE'
012E   :L   IB4
012F   :T   FY17             ;FLAG BYTE
0130   :L   IB5
0131   :T   FY16
0132   :L   IB6
0133   :T   FY19
0134   :L   IB7
0135   :T   FY18
0136   :BE




PB20                                        LEN=191
   ABS

   PAGE    1
SEGMENT  1                 VIS.TEMP.STRUTTURA ROTANTE
0000   :A(
0001   :A   I 14.7             01
0002   :AN  I 14.6               01
0003   :AN  I 15.0               01
0004   :AN  I 15.1               01
0005   :AN  I 15.2               01
0006   :O                      01
0007   :A   F 14.4       rotating part selected ?
0008   :AN  F 14.5        stationary part selected ?
0009   :AN  F 14.6        hydrostatic pads selected ?
000A   :AN  F 14.7        oil tank selected ?
000B   :AN  F 15.0        chilled water selected ?
000C   :)                   01
000D   :A   F 20.5        CONTROLLO "NORMALE"(STRUT.ROT.)
```

```
000E   :=   F 14.4      rotating part selected ?
000F   :A   F 14.4      rotating part selected ?
0010   :O   I 3.5       pushbutton lamp test
0011   :=   Q 10.1
0012   :***
SEGMENT  2               VIS.TEMP.STRUTTURA FISSA
0013   :AN  I 14.7
0014   :A   I 14.6
0015   :AN  I 15.0
0016   :AN  I 15.1
0017   :AN  I 15.2
0018   :O
0019   :AN  F 14.4      rotating part selected ?
001A   :A   F 14.5      stationary part selected ?
001B   :AN  F 14.6      hydrostatic pads selected ?
001C   :AN  F 14.7      oil tank selected ?
001D   :AN  F 15.0      chilled water selected ?
001E   :=   F 14.5      stationary part selected ?
001F   :A   F 14.5      stationary part selected ?
0020   :O   I 3.5       pushbutton lamp test
0021   :=   Q 10.0
0022   :***
SEGMENT  3               VIS.TEMP.OLIO PATTINI
0023   :AN  I 14.7
0024   :AN  I 14.6
0025   :A   I 15.0
0026   :AN  I 15.1
0027   :AN  I 15.2
0028   :O
0029   :AN  F 14.4      rotating part selected ?
002A   :AN  F 14.5      stationary part selected ?
002B   :A   F 14.6      hydrostatic pads selected ?
002C   :AN  F 14.7      oil tank selected ?
002D   :AN  F 15.0      chilled water selected ?
002E   :=   F 14.6      hydrostatic pads selected ?
002F   :A   F 14.6      hydrostatic pads selected ?
0030   :O   I 3.5       pushbutton lamp test
0031   :=   Q 10.2
0032   :***
SEGMENT  4               VIS.TEMP.VASCA OLIO
0033   :AN  I 14.7
0034   :AN  I 14.6
0035   :AN  I 15.0
0036   :A   I 15.1
0037   :AN  I 15.2
0038   :O
0039   :AN  F 14.4      rotating part selected ?
003A   :AN  F 14.5      stationary part selected ?
003B   :AN  F 14.6      hydrostatic pads selected ?
```

```
003C  :A   F 14.7      oil tank selected ?
003D  :AN  F 15.0       chilled water selected ?
003E  :=   F 14.7      oil tank selected ?
003F  :A   F 14.7
0040  :O   I 3.5       pushbutton lamp test
0041  :=   Q 10.3
0042  :***
SEGMENT  5              VIS.TEMP.ACQUA RAFFREDDAMENTO
0043  :AN  I 14.7
0044  :AN  I 14.6
0045  :AN  I 15.0
0046  :AN  I 15.1
0047  :A   I 15.2
0048  :O
0049  :AN  F 14.4      rotating part selected ?
004A  :AN  F 14.5       stationary part selected ?
004B  :AN  F 14.6       hydrostatic pads selected ?
004C  :AN  F 14.7       oil tank selected ?
004D  :A   F 15.0      chilled water selected ?
004E  :=   F 15.0      chilled water selected
004F  :A   F 15.0      chilled water selected ?
0050  :O   I 3.5       pushbutton lamp test
0051  :=   Q 10.4
0052  :***
SEGMENT  6              VIS.TEMPERATURA MEDIA
0053  :AN  F 15.0      chilled water selected ?
0054  :A(
0055  :A   I 15.7          01
0056  :AN  I 15.3           01
0057  :AN  I 15.4           01
0058  :AN  I 15.5           01
0059  :AN  I 15.6           01
005A  :O                  01
005B  :A   F 13.0          01
005C  :AN  F 13.1           01
005D  :AN  F 13.2           01
005E  :AN  F 13.3           01
005F  :AN  F 13.4           01
0060  :)                  01
0061  :=   F 13.0
0062  :A   F 13.0
0063  :O   I 3.5       pushbutton lamp test
0064  :=   Q 11.4
0065  :***
SEGMENT  7              VIS.TEMP.TERMOSONDA 1
0066  :A(
0067  :AN  I 15.7           01
0068  :A   I 15.3          01
0069  :AN  I 15.4           01
006A  :AN  I 15.5           01
006B  :AN  I 15.6           01
006C  :O                  01
006D  :AN  F 13.0           01
006E  :A   F 13.1           01
```

```
006F   :AN  F 13.2              01
0070   :AN  F 13.3              01
0071   :AN  F 13.4              01
0072   :)                   01
0073   :=   F 13.1
0074   :A   F 13.1
0075   :O   I 3.5        pushbutton lamp test
0076   :=   Q 11.0
0077   :***
SEGMENT  8                VIS.TEMP.TERMOSONDA 2




PB20                                          LEN=191
   ABS

   PAGE    3
0078   :AN  F 15.0       chilled water selected ?
0079   :A(
007A   :AN  I 15.7              01
007B   :AN  I 15.3              01
007C   :A   I 15.4             01
007D   :AN  I 15.5              01
007E   :AN  I 15.6              01
007F   :O                   01
0080   :AN  F 13.0              01
0081   :AN  F 13.1              01
0082   :A   F 13.2             01
0083   :AN  F 13.3              01
0084   :AN  F 13.4              01
0085   :)                   01
0086   :=   F 13.2
0087   :A   F 13.2
0088   :O   I 3.5        pushbutton lamp test
0089   :=   Q 11.1
008A   :***
SEGMENT  9                VIS.TEMP.TERMOSONDA 3
008B   :AN  F 15.0       chilled water selected ?
008C   :AN  F 14.7       oil tank selected ?
008D   :A(
008E   :AN  I 15.7              01
008F   :AN  I 15.3              01
0090   :AN  I 15.4              01
0091   :A   I 15.5             01
0092   :AN  I 15.6              01
0093   :O                   01
0094   :AN  F 13.0              01
0095   :AN  F 13.1              01
0096   :AN  F 13.2              01
0097   :A   F 13.3             01
0098   :AN  F 13.4              01
0099   :)                   01
009A   :=   F 13.3
009B   :A   F 13.3
```

```
009C   :O   I 3.5        pushbutton lamp test
009D   :=   Q 11.2
009E   :***
SEGMENT  10                VIS.TEMP.TERMOSONDA 4
009F   :AN  F 15.0       chilled water selected ?
00A0   :AN  F 14.7       oil tank selected ?
00A1   :A(
00A2   :AN  I 15.7              01
00A3   :AN  I 15.3              01
00A4   :AN  I 15.4              01
00A5   :AN  I 15.5              01
00A6   :A   I 15.6             01
00A7   :O                     01
00A8   :AN  F 13.0              01
00A9   :AN  F 13.1              01
00AA   :AN  F 13.2              01
00AB   :AN  F 13.3              01
00AC   :A   F 13.4              01
00AD   :)                     01
00AE   :=   F 13.4
00AF   :A   F 13.4
00B0   :O   I 3.5        pushbutton lamp test
00B1   :=   Q 11.3
00B2   :***
SEGMENT  11                ANNULLA SELEZIONE (PER VISUALIZZAZIONE
ERRORE DI REGOLAZIONE
00B3   :AN  F 21.1       test mode selected ?
00B4   :A   I 3.5        pushbutton lamp test




PB20                                        LEN=191
   ABS

   PAGE    4
00B5   :A   I 3.6        pushbutton to silence horn
00B6   :S   F 11.2
00B7   :A   I 3.7        pushbutton to reset warning alarms
00B8   :R   F 11.2
00B9   :BE
```

```
FB102                                   LEN=76
    ABS

   PAGE    1
SEGMENT  1              ESECUZIONE MEDIE TEMPERATURE
NAME :EX MEDIE

0005   :C   DB10          ;call datablock
0006   :A   F 59.0
0007   :R   F 59.0        ;RESETTA BIT APPOGGIO
0008   :A   F 11.1        ;signal ti VME 'NORMAL MODE'
0009   :JC  =M001
000A   :A   F 41.0        ;alarm average of rotating part out
of range
000B   :R   F 41.0
000C   :A   F 64.0        ;alarm Thermistor 1 (rot) out of
range
000D   :R   F 64.0
000E   :A   F 64.1        ;alarm Thermistor 2 (rot) out of
range
000F   :R   F 64.1
0010   :A   F 64.2        ;alarm Thermistor 3 (rot) out of
range
0011   :R   F 64.2
0012   :A   F 64.3        ;alarm Thermistor 4 (rot) out of
range
0013   :R   F 64.3
0014   :JU  =M002
0015 M001 :L   KF+16
0017   :T   DW4
0018   :JU  FB110          ;calculate avereage rotating part
0019 NAME :MEDIA 4T
001A T1   :    DW18
001B T2   :    DW20
001C T3   :    DW24
001D T4   :    DW32
001E TM   :    DW17
001F TMAL :    F 41.0      ;alarm averege temperatura
(ALLARMRE 12)
0020 T1AL :    F 64.0      ;alarm Thermistor 1 (rot) out of
range
0021 T2AL :    F 64.1      ;alarm Thermistor 2 (rot) out of
range
0022 T3AL :    F 64.2      ;alarm Thermistor 3 (rot) out of
range
0023 T4AL :    F 64.3      ;alarm Thermistor 4 (rot) out of
range
0024 M002 :L   KF+32
0026   :T   DW4
0027   :JU  FB110          ;calculate avereage stationary part
0028 NAME :MEDIA 4T
0029 T1   :    DW34
002A T2   :    DW36
002B T3   :    DW40
002C T4   :    DW48
002D TM   :    DW33
```

```
002E TMAL :    F 41.1              ;alarm average of stationary
part out of range ALARM 13
002F T1AL :    F 64.4
0030 T2AL :    F 64.5
0031 T3AL :    F 64.6
0032 T4AL :    F 64.7
0033   :L   KF+64
0035   :T   DW4
0036   :JU  FB110            ;calculate avereage oil pads
0037 NAME :MEDIA 4T
0038 T1   :    DW66
0039 T2   :    DW68
003A T3   :    DW72
003B T4   :    DW80
003C TM   :    DW65
003D TMAL :    F 41.2         alarm average of OIL PADS out of
range ALARM 14
003E T1AL :    F 65.0
003F T2AL :    F 65.1
0040 T3AL :    F 65.2
0041 T4AL :    F 65.3
0042   :JU  FB112            ;calculate avereage oil tank
0043 NAME :MEDIA 2T
0044   :A   F 59.0




FB102                                        LEN=76
     ABS

   PAGE    2
0045   :=   F 41.4                    ALLARME 50
0046   :BE
```

```
FB103                                   LEN=42
    ABS

   PAGE    1
SEGMENT  1              VISUALIZZAZIONE TEMPERATURE
NAME :VIS.TEMP

0005   :C   DB10          ;call datablock
0006   :A   F 13.1
0007   :A   F 15.0      chilled water selected ?
0008   :=   F 55.0
0009   :AN  F 55.0
000A   :JC  =M001
000B   :L   KF+135                  INDIRIZZO DI WT
000D   :T   DW105
000E   :JU  =M002
000F M001 :L   FY13        ;flagg byte
0010   :L   KH0000
0012   :!=F
0013   :JC  =M003
0014   :L   FY14          ;flagg byte
0015   :L   KH0000
0017   :!=F
0018   :JC  =M003
0019   :L   FY13          ;flagg byte
001A   :L   FY14
001B   :+F
001C   :T   DW105
001D M002 :DO  DW105
001E   :L   DW0
001F   :T   DW102
0020   :JU  =M004
0021 M003 :L   KH0FFF
0023   :T   DW102
0024 M004 :BE
```

```
FB104                                   LEN=150
   ABS

   PAGE    1
SEGMENT  1              VISUALIZZAZIONE DI 4 NUMERI
NAME :VISUAL.

0005   :C   DB10        ;call datablock
0006   :L   DW106
0007   :L   KF+0
0009   :!=F
000A   :JC  =M001
000B   :L   DW106
000C   :L   KF+1
000E   :!=F
000F   :JC  =M002
0010   :L   DW106
0011   :L   KF+2
0013   :!=F
0014   :JC  =M003
0015   :L   DW106
0016   :L   KF+3
0018   :!=F
0019   :JC  =M004
001A   :L   KF+0
001C   :T   DW106
001D M001 :AN  F 10.4                   1'NUMERO DA
VISUALIZZARE
001E   :R   Q 7.5                     =RIFERIMENTO
TEMPERATURA
001F   :L   KH0FFF                      DA POTENZ.-10/25 GRADI
C.
0021   :JC  =M005
0022   :L   DW138                      2100 = +25 GRADI
0023   :L   KF+6
0025   ::F
0026   :L   KF+100
0028   :-F
0029 M010 :T   DW101
002A   :L   KF+0
002C   :<F
002D   :=   Q 7.5
002E   :JC  =M006
002F   :JU  =M007
0030 M006 :L   DW101
0031   :CSW
0032   :T   DW101
0033 M007 :L   DW101
0034   :DUF                           ABILITAZIONE STROBE =0
0035   :JU  =M008
0036 M005 :AN  F 11.2
0037   :JC  =M008
0038   :A   F 54.0                     2'NUMERO DA
VISUALIZZARE
0039   :R   F 54.0                     =TEMPERATURA
SELEZIONATA
```

```
003A   :JC  =M009
003B   :AN  F 54.0
003C   :S   F 54.0
003D   :JU  =M008
003E M009 :L   DW86
003F   :JU  =M010
0040 M008 :L   KHE000
0042   :OW
0043   :T   QW4
0044   :JU  =M011
0045 M002 :L   DW102
0046   :L   KF+0
0048   :<F
0049   :=   Q 7.6                    3'NUMERO DA
VISUALIZZARE
004A   :JC  =M012                      =PRESSIONE PATTINI
004B   :JU  =M013
004C M012 :L   DW102




FB104                                    LEN=150
   ABS

   PAGE    2
004D   :CSW
004E   :T   DW102
004F M013 :L   DW102                     4'NUMERO DA
VISUALIZZARE
0050   :DUF                           =RIFERIMENTO VALVOLE
DA
0051   :L   KHD000                      POTENZIOMETRO 0/100%
0053   :OW
0054   :T   QW4
0055   :JU  =M011
0056 M003 :L   DW136
0057   :DUF
0058   :L   KHB000
005A   :OW
005B   :T   QW4
005C   :JU  =M011
005D M004 :A   F 10.2         enabled reference from potentiometer
for valve 1
005E   :O   F 10.3       enabled reference from poterntiometer for
valve 2
005F   :JC  =M014
0060   :A   F 21.0       manual mode flagg set ?
0061   :O   F 21.2       automatic mode selected ?
0062   :JC  =M015
0063   :JU  =M016
0064 M015 :A   F 54.1
0065   :R   F 54.1
0066   :JC  =M017
0067   :AN  F 54.1
```

```
0068   :S   F 54.1
0069   :JU  =M016
006A M017 :A   F 10.6
006B   :L   DW139
006C   :T   DW134
006D   :JC  =M018
006E   :A   F 10.7       signal to VME (1=chilled water valve 2
selected)
006F   :L   DW140
0070   :T   DW134
0071   :JC  =M018
0072 M016 :L   KH0FFF
0074   :JU  =M019
0075 M014 :L   DW137
0076   :T   DW134
0077 M018 :L   DW134                    4'NUMERO DA
VISUALIZZARE
0078   :L   KF+2000
007A   :<=F
007B   :JC  =M020
007C   :L   KF+2000
007E   :T   DW134
007F M020 :L   DW134
0080   :SRW   1
0081   :L   KF+10
0083   ::F
0084   :DUF
0085 M019 :L   KH7000
0087   :OW
0088   :T   QW4
0089 M011 :L   QW4
008A   :T   PW4
008B   :L   QB7
008C   :T   PY7
008D   :L   DW106
008E   :I    1
008F   :T   DW106
0090   :BE
```

FB105 LEN=15
ABS

PAGE 1
SEGMENT 1
NAME :STR.VIS.

```
0005   :L   QB4
0006   :L   KB240
0007   :OW
0008   :T   PY4
0009   :BE
```

```
FB110                                   LEN=224
   ABS

   PAGE    1
SEGMENT  1              TEMPERATURE AVERAGE
NAME :MEDIA 4T
DECL :T1       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :T2       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :T3       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :T4       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :TM       I/Q/D/B/T/C: Q  BI/BY/W/D: W
DECL :TMAL     I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T1AL     I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T2AL     I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T3AL     I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :T4AL     I/Q/D/B/T/C: Q  BI/BY/W/D: BI

0023   :C   DB10            ;call datablock to be used
0024   :L   KF+0
0026   :T   DW11            ;erase all buffers
0027   :T   DW12
0028   :T   DW13
0029   :T   DW14
002A   :L   =T1             ;transfer temperatures to user
buffers
002B   :T   DW7             ;user buffer for Temperature 1
002C   :L   =T2
002D   :T   DW8             ;user buffer for Temperature 2
002E   :L   =T3
002F   :T   DW9             ;user buffer for Temperature 3
0030   :L   =T4
0031   :T   DW10            ;user buffer for Temperature 4
0032   :JU  FB111           ;compare two temperatures
0033 NAME :CONFR.2T
0034 TA   :    DW7          ;temperature 1
0035 TB   :    DW8          ;temperature 2
0036 RTA  :    DW11
0037 RTB  :    DW12
0038   :JU  FB111
0039 NAME :CONFR.2T
003A TA   :    DW7          ;temperature 1
003B TB   :    DW9          ;temperature 3
003C RTA  :    DW11
003D RTB  :    DW13
003E   :JU  FB111
003F NAME :CONFR.2T
0040 TA   :    DW7          ;temperature 1
0041 TB   :    DW10         ;temperature 4
0042 RTA  :    DW11
0043 RTB  :    DW14
0044   :JU  FB111
0045 NAME :CONFR.2T
0046 TA   :    DW8          ;temperature 2
0047 TB   :    DW9          ;temperature 3
0048 RTA  :    DW12
0049 RTB  :    DW13
```

```
004A   :JU  FB111
004B NAME :CONFR.2T
004C TA   :    DW8          ;temperature 2
004D TB   :    DW10         ;temperature 4
004E RTA  :    DW12
004F RTB  :    DW14
0050   :JU  FB111
0051 NAME :CONFR.2T
0052 TA   :    DW9          ;temperature 3
0053 TB   :    DW10         ;temperature 4
0054 RTA  :    DW13
0055 RTB  :    DW14
0056   :L   DW11            ;check all results
```

FB110 LEN=224

ABS

PAGE 2

```
0057   :L   DW12
0058   :+F
0059   :L   DW13
005A   :+F
005B   :L   DW14
005C   :+F
005D   :T   DW15            ;transfer cuantitative value of
comparations
005E   :
0060   :RB  =T1AL
0061   :RB  =T2AL
0062   :RB  =T3AL
0063   :RB  =T4AL
0065   :RB  =TMAL           ;reset all alarms
0066   :
0067   :L   DW15
0068   :L   KF+12           ;if all ok DW=12, if 3 ok DW=6, if 2
ok DW=2
006A   :!=F                ;all ok ?
006B   :JC  =M010           ;jump if all temperatures between
range
006C   :L   DW15
006D   :L   KF+1            ;at least two temperatures have to be
equals
006F   :>=F
0070   :JC  =M001
0071       :L   KH0FFF      ;be carefuly with FFF !! VME
problems
0072   :T   =TM             ;has to be checked
0073   :JU  =M011
0075   :
0076 M001 :L   DW11         ;load coefitient of TH1
0077       :L   KF+1         ;check if TH1 agree with 2
```

```
others
0078   :>=F                ;jump if 'ok' with other two
0079   :JC  =M002            ;if not means has difference with
other 3
007A   :S   =T1AL            ;T1 alarm it desagree with rest of
T's
007B   :L   DW4             ;in FB 102 set to 4
007C   :D   1           ;decrement one
007D   :T   DW4             ;save it
007E   :JU  =M003            ;TH1 was bad do not kare
007F M002 :L   TM
0081   :L   DW7             ;if TH1 good
0082   :+F
0083   :T   TM
0084 M003 :L   DW12          ;load coefitient of TH2
0086   :L   KF+1            ;check if TH2 agree with 2 others
0087   :>=F                ;jump if 'ok' with other two
0088   :JC  =M004            ;if not means has difference with
other 3
0089   :S   =T2AL            ;T1 alarm it desagree with rest of
T's
008B   :L   DW4             ;substract TH2
008C   :D   1
008D   :T   DW4
008E   :JU  =M005
0090 M004 :L   TM
0091   :L   DW8
0092   :+F
0093   :T   TM
0094 M005 :L   DW13          ;load coefitient of TH3
0095   :L   KF+1            ;check if TH3 agree with 2 others
0096   :>=F                ;jump if 'ok' with other two
0098   :JC  =M006            ;if not means has difference with
other
0099   :S   =T3AL            ;T1 alarm it desagree with rest of
T's
009A   :L   DW4
009B   :D   1
009D   :T   DW4
009E   :JU  =M007
009F M006 :L   TM
00A0   :L   DW9
00A1   :+F
00A2   :T   TM
00A3 M007 :L   DW14          ;load coefitient of TH4
00A5   :L   KF+2            ;check if TH4 agree with 2 others
00A6   :>=F                ;jump if 'ok' with other two
00A7   :JC  =M008            ;if not means has difference with
```

```
other 3
00A8   :S   =T4AL            ;T1 alarm it desagree with rest of
T's
00AA   :L   DW4              ;load count of TH's
00AB      :D   1            ;decrement one
00AC      :T   DW4           ;save it
00AD   :JU  =M009
00AE M008 :L   TM
00AF   :L   DW10
00B0   :+F
00B2   :T   TM
00B3      :
00B4 M009 :L   TM
00B5   :FDG                 ;convert fixed point, into floating
00B6   :L   DW4             ;load account of good temperatures
00B7   :FDG
00B8   ::G
00B9   :GFD
00BA   :T   TM
00BB   :S   F 59.0
00BC   :JU  M011
00BD   :
00BE M010 :L   DW7           ;TH1 value
00BF   :L   DW8             ;TH2 value
00C0   :+F                 ;sum
00C1   :L   DW9             ;TH3 value
00C2   :+F                 ;sum
00C3   :L   DW10            ;TH4 value
00C4   :+F                 ;sum
00C5   :FDG                 ;convert to floating point
00C6   :L   KF+4            ;load account
00C7   :FDG                 ;convert to floating point
00C8   ::G                 ;make average
00C9   :GFD                 ;convert floating point into a fixed
point
00CB   :T   =TM             ;save as reference
00CC M011 :BE
00CD
00CE
00CF
00D0
00D1
00D2
00D3
00D4
00D6
00D7
00D8
00D9
00DA
```

```
FB111                                   LEN=48
    ABS

   PAGE    1
SEGMENT  1              COMPARE TWO TEMPERATURES
NAME :CONFR.2T
DECL :TA       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :TB       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :RTA      I/Q/D/B/T/C: Q  BI/BY/W/D: W
DECL :RTB      I/Q/D/B/T/C: Q  BI/BY/W/D: W

0011   :C   DB10            ;call datablock
0012   :L   =TA             ;if TA different from TB
0013   :L   =TB             ;jump to M001
0014   :>F
0015   :JC  =M001            ;if equals
0016   :L   =TB             ;load 'TA'
0017   :L   =TA             ;load 'TB'
0018   :
0019   :
001A   :
001B   :
001C   :
001D M001 :-F               ;make the difference
001E   :
001F   :
0020   :L   KF+10           ;compare difference  if grather than
1 deg.
0022   :>F                 ;if ACCU2>ACCU1 'RLO=1
0023   :BEC                ;if 'RLO'=1
0024   :L   =RTA            ;temperatures are 'OK'
0025   :I    1
0026   :T   =RTA
0027   :L   =RTB
0028   :I    1
0029   :T   =RTB
002A   :BE
```

```
FB112                                   LEN=100
   ABS

   PAGE    1
SEGMENT  1              MEDIA TEMPERATURE VASCA OLIO
NAME :MEDIA 2T

0005   :C   DB10          ;call datablock
0006   :L   KF+0                    I
0008   :T   DW11                    I AZZERA I
CONTAT."CONFRONTI OK"
0009   :T   DW12
I------------------------------
000A   :L   DW130                   I
000B   :L   DW132                   I
000C   :>=F                         I FAI LA DIFFERENZA
DELLE TEMPE-
000D   :JC  =M001                   I RATURE DELLE DUE
SONDE E SCRI-
000E   :L   DW132                   I VILA SULLA DW2
000F   :L   DW130                   I
0010   :-F                        I
0011   :T   DW2                    I
0012   :JU  =M002                  I
0013 M001 :L   DW130                      I
0014   :L   DW132                   I
0015   :-F                        I
0016   :T   DW2
--------------------------------
0017 M002 :A   F 10.6                    I
0018   :L   DW139                   I LEGGI LA RETROAZIONE
DELLA VAL
0019   :JC  =M003                   I VOLA IN FUNZIONE E
SCRIVILA
001A   :A   F 10.7                  I SULLA DW183
001B   :L   DW140                   I
001C M003 :T   DW183
--------------------------------
001D   :L   DW183                   I
001E   :L   KF+400                  I
0020   :<F                         I SE LA VALVOLA
E'APERTA MENO DI
0021   :=   F 10.0                  I 20% PER 180" RESTA
ANCORA IN
0022   :A   F 10.0                  I ZONA
INDIVIDUAZ.ALLARME T>3GR.
0023   :L   KT180.2                 I POI VAI IN ZONA
INDIVIDUAZIONE
0025   :SE  T 43                    I ALLARME T>1 GR.
0026   :A   T 43                   I
0027   :JC  =XXX
I------------------------------
0028   :L   DW183                    2048= 100%= MAX
APERTURA VALVOL
0029   :L   KF+400                  I SE LA VALVOLA
E'APERTA MENO DI
```

```
002B   :<F                          I 20% VAI IN ZONA
INDIVIDUAZIONE
002C   :JC  =M004                    I ALLARME "T>1
GR."RITARDATA
002D XXX  :L   DW2
I------------------------------
002E   :L   KF+30                    I ZONA INDIVIDUAZ.
ALLARME T>3GR
0030   :>F
I------------------------------
0031   :JC  =M005                     SALTA IN ZONA SETTA
ALLARMI
0032   :JU  =M006                     ALTRIMENTI VAI IN
ZONA OK
0033 M004 :L   DW2                     I
0034   :L   KF+10                    I ZONA
INDIVIDUAZ.ALLARME T>1 GR
0036   :>F
I------------------------------
0037   :JC  =M005                     SALTA IN ZONA "SETTA
ALLARMI"
0038 M006 :L   DW11
I------------------------------
0039   :I     1                  I
003A   :T   DW11                    I ZONA ALLARMI "OK"
NON PRESENTI
003B   :L   DW12                    I
003C   :I     1                  I
003D   :T   DW12
I------------------------------
003E M005 :L   DW11                    I
003F   :L   KF+0                    I ZONA SETTAGGIO
ALLARMI PRESENT
0041   :>F                          I
0042   :JC  =M007
I------------------------------
0043   :AN  F 41.3
0044   :S   F 41.3                   1= ALLARME 15
"ERRATA MEDIA"
0045   :AN  F 65.4
0046   :S   F 65.4                   ERRATA MISURA SONDA
"1"
0047   :AN  F 65.5
0048   :S   F 65.5                   ERRATA MISURA SONDA
"2"
```



```
0049   :L   KH0FFF                    I
```

```
004B   :T   DW129                      I BLANK TEMP.MEDIA
VASCA OLIO
004C   :JU  =M008
--------------------------------
004D M007 :A   F 41.3                       I
004E   :R   F 41.3                     I
004F   :A   F 65.4                     I ZONA RESET ALLARMI
0050   :R   F 65.4                     I
0051   :A   F 65.5                     I
0052   :R   F 65.5
I-------------------------------
0053   :L   DW130                       I
0054   :L   DW132                       I
0055   :+F                           I
0056   :T   DW129                       I ZONA RILIEVO
TEMPERATURA MEDIA
0057   :FDG                           I  E SCRITTA SU DW129
0058   :L   KF+2                        I
005A   :FDG                           I  TM= (T1+T2)/2
005B   ::G                           I
005C   :GFD                           I
005D   :T   DW129
I-------------------------------
005E M008 :BE
```

```
FB120                                   LEN=134
   ABS

   PAGE    1
SEGMENT  1              SCHEDA 1
NAME :ANACICLI

0005   :C   DB10          ;call datablock
0006   :JU  FB121
0007 NAME :IN.ANA
0008 IN   :   PW128          ;thermistor 1 rotating structure
0009 GUAS :   F 51.1
000A OVF  :   F 70.0
000B OUT  :   DW141            ;rotating structure TH1 readed
value
000C   :JU  FB121
000D NAME :IN.ANA
000E IN   :   PW130          ;thermistor 2 rotating structure
000F GUAS :   F 51.1
0010 OVF  :   F 70.1
0011 OUT  :   DW142            ;rotating structure TH2 readed
value
0012   :JU  FB121
0013 NAME :IN.ANA
0014 IN   :   PW132          ;thermistor 3 rotating structure
0015 GUAS :   F 51.1
0016 OVF  :   F 70.2
0017 OUT  :   DW143            ;rotating structure TH3 readed
value
0018   :JU  FB121
0019 NAME :IN.ANA
001A IN   :   PW134          ;thermistor 4 rotating structure
001B GUAS :   F 51.1
001C OVF  :   F 70.3
001D OUT  :   DW144            ;rotating structure TH4 readed
value
001E   :JU  FB121
001F NAME :IN.ANA
0020 IN   :   PW136          ;thermistor 1 stationary
structure
0021 GUAS :   F 51.1
0022 OVF  :   F 70.4
0023 OUT  :   DW145            ;stationary structure TH1 readed
value
0024   :JU  FB121
0025 NAME :IN.ANA
0026 IN   :   PW138          ;thermistor 2 stationary
structure
0027 GUAS :   F 51.1
0028 OVF  :   F 70.5
0029 OUT  :   DW146            ;stationary structure TH2 readed
value
002A   :JU  FB121
002B NAME :IN.ANA
```

```
002C IN   :    PW140              ;thermistor 3 stationary
structure
002D GUAS :    F 51.1
002E OVF  :    F 70.6
002F OUT  :    DW147              ;stationary structure TH3 readed
value
0030   :JU  FB121
0031 NAME :IN.ANA
0032 IN   :    PW142              ;thermistor 4 stationary
structure
0033 GUAS :    F 51.1
0034 OVF  :    F 70.7
0035 OUT  :    DW148              ;stationary structure TH4 readed
value
0036   :***
SEGMENT  2                SCHEDA 2
0037   :JU  FB121
0038 NAME :IN.ANA
0039 IN   :    PW144              ;thermistor 1 oil pads
003A GUAS :    F 51.4
003B OVF  :    F 71.0
003C OUT  :    DW149              ;oil pads TH1 readed value
003D   :JU  FB121
003E NAME :IN.ANA
003F IN   :    PW146              ;thermistor 2 oil pads
0040 GUAS :    F 51.4
```

```
FB120                                    LEN=134
   ABS

   PAGE    2
0041 OVF  :    F 71.1
0042 OUT  :    DW150              ;oil pads TH2 readed value
0043   :JU  FB121
0044 NAME :IN.ANA
0045 IN   :    PW148              ;thermistor 3 oil pads
0046 GUAS :    F 51.4
0047 OVF  :    F 71.2
0048 OUT  :    DW151              ;oil pads TH3 readed value
0049   :JU  FB121
004A NAME :IN.ANA
004B IN   :    PW150              ;thermistor 4 oil pads
004C GUAS :    F 51.4
004D OVF  :    F 71.3
004E OUT  :    DW152              ;oil pads TH4 readed value
004F   :JU  FB121
0050 NAME :IN.ANA
0051 IN   :    PW152              ;thermistor 1 oil tank
0052 GUAS :    F 51.4
0053 OVF  :    F 71.4
0054 OUT  :    DW153              ;oil tank TH1 readed value
```

```
0055   :JU  FB121
0056 NAME :IN.ANA
0057 IN   :    PW154              ;thermistor 2 oil tank
0058 GUAS :    F 51.4
0059 OVF  :    F 71.5
005A OUT  :    DW154                ;oil tank TH2 readed value
005B   :JU  FB121
005C NAME :IN.ANA
005D IN   :    PW156              ;thermistor cooling water
005E GUAS :    F 51.4
005F OVF  :    F 71.6
0060 OUT  :    DW155                ;cooling water TH readed value
0061   :JU  FB121
0062 NAME :IN.ANA
0063 IN   :    PW158              ;oil presure sensor
0064 GUAS :    F 51.4
0065 OVF  :    F 71.7
0066 OUT  :    DW156                ;oil presure readed value
0067   :***
SEGMENT  3                SCHEDA 3
0068   :JU  FB121
0069 NAME :IN.ANA
006A IN   :    PW160              ;potentiometer for valve
aperture
006B GUAS :    F 51.7
006C OVF  :    F 72.0
006D OUT  :    DW157
006E   :JU  FB121
006F NAME :IN.ANA
0070 IN   :    PW162              ;potentiometer for temperature
0071 GUAS :    F 51.7
0072 OVF  :    F 72.1
0073 OUT  :    DW158
0074   :JU  FB121
0075 NAME :IN.ANA
0076 IN   :    PW164              ;valve 1 position
0077 GUAS :    F 51.7
0078 OVF  :    F 72.2
0079 OUT  :    DW159
007A   :JU  FB121
007B NAME :IN.ANA
007C IN   :    PW166              ;valve 2 position
007D GUAS :    F 51.7
007E OVF  :    F 72.3
007F OUT  :    DW160




FB120                                    LEN=134
   ABS

   PAGE    3
0080   :BE
```

```
FB121                                   LEN=65
   ABS

  PAGE   1
SEGMENT  1              LETTURA DI 1 INGRESSO ANALOCICO
NAME :IN.ANA
DECL :IN      I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :GUAS    I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :OVF     I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :OUT     I/Q/D/B/T/C: Q  BI/BY/W/D: W

0011  :L   =IN            ;load PWXXX
0012  :T   DW184          ;store in DW184
0013  :A   D 184.1
0015  :=   =GUAS          ;flagg 50.1
0016  :BEC
0017  :AN  D 184.0
0019  :JC  =M001
001A  :AN  =OVF
001B  :S   =OVF
001C  :JU  =M002
001D M001 :A   =OVF
001E  :RB  =OVF
001F  :A   D 184.15
0021  :S   F 50.2         ;AD conversion sign (only here
used!!)
0022  :AN  D 184.15
0024  :R   F 50.2         ;AD conversion sign
0025  :L   DW184
0026  :SLW   1           ;shift accu left
0027  :SRW   4           ;shift right
0028  :T   DW185
0029  :A   F 50.4         ;binary-bcd flagg
002A  :JC  =M003
002B  :AN  F 50.2         ;AD conversion sign
002C  :JC  =M003
002D  :L   DW185
002E  :CSW                ;form two complement of ACCU
002F  :T   DW185
0030  :L   KF+0
0032  :+F
0033  :T   DW185
0034 M003 :AN  F 50.4
0035  :JC  =M004
0036  :L   DW185
0037  :DUD                ;convert something
0038  :T   DW185
0039 M004 :L   DW185
003A  :T   =OUT
003B M002 :BE
```

```
FB126                                   LEN=180
   ABS

   PAGE    1
SEGMENT  1              FORMAZIONE VALORI
NAME :FORM.VAL

0005   :C   DB10          ;call datablock
0006   :JU  FB127
0007 NAME :MIN-MAX
0008 IN   :   DW141           ;rotating structure TH1 readed
value
0009 OFF  :   DW161
000A OUT  :   DW191
000B MAX  :   F 55.3
000C L    :   KF-802          ;lower limit (13 deg> aprox.)
000D H    :   KF+2000          ;upper limit 40 deg.
000E   :JU  FB127
000F NAME :MIN-MAX
0010 IN   :   DW142           ;rotating structure TH2 readed
value
0011 OFF  :   DW162
0012 OUT  :   DW192
0013 MAX  :   F 55.4
0014 L    :   KF-802
0015 H    :   KF+2000
0016   :JU  FB127
0017 NAME :MIN-MAX
0018 IN   :   DW143           ;rotating structure TH3 readed
value
0019 OFF  :   DW163
001A OUT  :   DW193
001B MAX  :   F 55.5
001C L    :   KF-802
001D H    :   KF+2000
001E   :JU  FB127
001F NAME :MIN-MAX
0020 IN   :   DW144           ;rotating structure TH4 readed
value
0021 OFF  :   DW164
0022 OUT  :   DW194
0023 MAX  :   F 55.6
0024 L    :   KF-802
0025 H    :   KF+2000
0026   :JU  FB127
0027 NAME :MIN-MAX
0028 IN   :   DW145           ;stationary structure TH1 readed
value
0029 OFF  :   DW165
002A OUT  :   DW195
002B MAX  :   F 55.7
002C L    :   KF-802
002D H    :   KF+2000
002E   :JU  FB127
002F NAME :MIN-MAX
0030 IN   :   DW146           ;stationary structure TH2 readed
```

```
value
0031 OFF  :    DW166
0032 OUT  :    DW196
0033 MAX  :    F 56.0
0034 L    :    KF-802
0035 H    :    KF+2000
0036   :JU  FB127
0037 NAME :MIN-MAX
0038 IN   :    DW147          ;stationary structure TH3 readed
value
0039 OFF  :    DW167
003A OUT  :    DW197
003B MAX  :    F 56.1
003C L    :    KF-802
003D H    :    KF+2000
003E   :JU  FB127
003F NAME :MIN-MAX
0040 IN   :    DW148          ;stationary structure TH4 readed
value
0041 OFF  :    DW168
```

```
FB126                                  LEN=180
   ABS

   PAGE    2
0042 OUT  :    DW198
0043 MAX  :    F 56.2
0044 L    :    KF-802
0045 H    :    KF+2000
0046   :JU  FB127
0047 NAME :MIN-MAX
0048 IN   :    DW149          ;oil pads TH1 readed value
0049 OFF  :    DW169
004A OUT  :    DW199
004B MAX  :    F 56.3
004C L    :    KF-802
004D H    :    KF+2000
004E   :JU  FB127
004F NAME :MIN-MAX
0050 IN   :    DW150          ;oil pads TH2 readed value
0051 OFF  :    DW170
0052 OUT  :    DW200
0053 MAX  :    F 56.4
0054 L    :    KF-802
0055 H    :    KF+2000
0056   :JU  FB127
0057 NAME :MIN-MAX
0058 IN   :    DW151          ;oil pads TH3 readed value
0059 OFF  :    DW171
005A OUT  :    DW201
005B MAX  :    F 56.5
```

```
005C L    :    KF-802
005D H    :    KF+2000
005E   :JU  FB127
005F NAME :MIN-MAX
0060 IN   :    DW152              ;oil pads TH4 readed value
0061 OFF  :    DW172
0062 OUT  :    DW202
0063 MAX  :    F 56.6
0064 L    :    KF-802
0065 H    :    KF+2000
0066   :JU  FB127
0067 NAME :MIN-MAX
0068 IN   :    DW153              ;oil tank TH1 readed value
0069 OFF  :    DW173
006A OUT  :    DW203
006B MAX  :    F 56.7
006C L    :    KF-802
006D H    :    KF+2000
006E   :JU  FB127
006F NAME :MIN-MAX
0070 IN   :    DW154              ;oil tank TH2 readed value
0071 OFF  :    DW174
0072 OUT  :    DW204
0073 MAX  :    F 57.0
0074 L    :    KF-802
0075 H    :    KF+2000
0076   :JU  FB127
0077 NAME :MIN-MAX
0078 IN   :    DW155              ;cooling water TH readed value
0079 OFF  :    DW175
007A OUT  :    DW205
007B MAX  :    F 57.1
007C L    :    KF-802
007D H    :    KF+2000
007E   :L   DW156           ;oil presure readed value
007F   :L   KF+0
0081   :>=F
0082   :JC  =M001
```

```
FB126                                   LEN=180
   ABS

   PAGE    3
0083   :L   KF+0
0085   :T   DW156           ;oil presure readed value
0086 M001 :JU  FB127
0087 NAME :MIN-MAX
0088 IN   :    DW156              ;oil presure readed value
0089 OFF  :    DW176
008A OUT  :    DW136
008B MAX  :    F 57.2
```

008C L : KF+0
008D H : KF+1000 NON USARE COME ALLARME
008E :JU FB127
008F NAME :MIN-MAX
0090 IN : DW157
0091 OFF : DW177
0092 OUT : DW137
0093 MAX : F 57.3
0094 L : KF+0
0095 H : KF+2048 NON USARE COME ALLARME
0096 :JU FB127
0097 NAME :MIN-MAX
0098 IN : DW158
0099 OFF : DW178
009A OUT : DW138
009B MAX : F 57.4
009C L : KF+0
009D H : KF+2100 NON USARE COME ALLARME
009E :JU FB127
009F NAME :MIN-MAX
00A0 IN : DW159
00A1 OFF : DW179
00A2 OUT : DW139
00A3 MAX : F 57.5
00A4 L : KF+0
00A5 H : KF+2048 NON USARE COME ALLARME
00A6 :JU FB127
00A7 NAME :MIN-MAX
00A8 IN : DW160
00A9 OFF : DW180
00AA OUT : DW140
00AB MAX : F 57.6
00AC L : KF+0
00AD H : KF+2048
00AE :BE

```
FB127                                          LEN=51
    ABS

   PAGE    1
SEGMENT  1                 CONTROLLO VALORI MIN - MAX
NAME :MIN-MAX
DECL :IN        I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :OFF       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :OUT       I/Q/D/B/T/C: Q  BI/BY/W/D: W
DECL :MAX       I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :L         I/Q/D/B/T/C: D  KM/KH/KY/KC/KF/KT/KZ/KG: KF
DECL :H         I/Q/D/B/T/C: D  KM/KH/KY/KC/KF/KT/KZ/KG: KF

0017   :L   =IN
0018   :L   =OFF
0019   :-F
001A   :T   =OUT
001B   :LW  =L          ;lower limit -10 deg.
001C   :<F
001D   :=   F 55.1          ;max lower limit flag
001E   :JC  =M001
001F   :L   =OUT             ;if not below lower limit recover
value
0020   :LW  =H          ;upper limit 40 deg.
0021   :>F
0022   :=   F 55.2          ;max upper limit flagg
0023   :JC  =M002
0024   :JU  =M003            ;value between limits
0025 M002 :LW  =H             ;if over upper limit set at limit
0026   :T   =OUT
0027   :JU  =M003
0028 M001 :LW  =L             ;if below lower limit set at limit
0029   :T   =OUT
002A M003 :A   F 55.1
002B   :O   F 55.2
002C   :=   =MAX
002D   :BE
```

```
FB128                                   LEN=140
   ABS

   PAGE    1
SEGMENT  1              LINEARIZZAZ.VALORE TEMPERATURA
NAME :LIN.
DECL :IN       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :OUT      I/Q/D/B/T/C: Q  BI/BY/W/D: W

000B   :C   DB10          ;call datablock
000C   :L   =IN
000D   :C   DB11          ;call datablock
000E   :T   DW90                TEMPERATURA DA
ANALIZZARE
000F   :L   DW1                 T = -10 GRADI
0010   :>=F
0011   :JC  =M001
0012   :L   DW1
0013   :T   DW90
0014 M001 :L   DW90
0015   :L   DW51                T = +40 GRADI
0016   :<=F
0017   :JC  =M002
0018   :L   DW51
0019   :T   DW90
001A M002 :L   DW90
001B   :L   DW1
001C   :><F
001D   :JC  =M003
001E   :L   KF-100
0020   :JU  =M004
0021 M003 :L   KF+1
0023   :T   DW91
0024 M007 :DO  DW91
0025   :L   DW0
0026   :T   DW93                VALORE DEL 1'PUNTO
0027   :L   DW91
0028   :I    1
0029   :T   DW92
002A   :L   DW90
002B   :L   DW93
002C   :>F
002D   :JC  =M005
002E   :JU  =M006
002F M005 :L   DW91
0030   :I    1
0031   :T   DW91
0032   :JU  =M007
0033 M006 :L   DW91
0034   :D    1
0035   :T   DW91                1' INDIRIZZO
0036   :DO  DW91
0037   :L   DW0
0038   :T   DW93                VALORE DEL 1' PUNTO
0039   :L   DW92
003A   :D    1
```

```
003B   :T   DW92                    2' INDIRIZZO
003C   :DO  DW92
003D   :L   DW0
003E   :T   DW94                    VALORE DEL 2' PUNTO
003F   :L   DW91
0040   :L   KF+10
0042   :-F
0043   :T   DW95                    VALORE PARTE INTERA
GRADI
0044   :L   DW95
0045   :L   KF+10
0047   :XF
0048   :T   DW95
0049   :L   DW94                    2' VALORE
```

```
FB128                                   LEN=140
   ABS

   PAGE    2
004A   :L   DW93                    1' VALORE
004B   :-F
004C   :T   DW96                    DIFFERENZA TRA I DUE
PUNTI
004D   :L   DW90
004E   :L   KF+0
0050   :>=F
0051   :=   F 58.2
0052   :JC  =M008
0053   :L   DW94
0054   :L   DW90
0055   :-F
0056   :JU  =M009
0057 M008 :L   DW90
0058   :L   DW93
0059   :-F
005A M009 :FDG
005B   :L   KF+100
005D   :FDG
005E   :XG
005F   :L   DW96
0060   :FDG
0061   ::G
0062   :GFD
0063   :T   DW97
0064   :L   DW97
0065   :DUF
0066   :T   DW97
0067   :SLW   12
0068   :SRW   12
0069   :L   KF+5                    ARROTONDAMENTO
006B   :<=F
```

```
006C   :JC  =M010
006D   :L   DW97
006E   :L   KF+10
0070   :+F
0071   :T   DW97
0072 M010 :L   DW97
0073   :SRW   4
0074   :DED
0075   :T   DW97
0076   :A   F 58.2
0077   :JC  =M011
0078   :L   DW95
0079   :L   DW97
007A   :-F
007B   :C   DB10            ;call datablock
007C   :T   =OUT
007D   :JU  =M012
007E M011 :L   DW95
007F   :L   KF+10
0081   :-F
0082   :L   DW97
0083   :+F
0084 M004 :C   DB10          ;call datablock
0085   :T   =OUT
0086 M012 :BE
```

```
FB129                                   LEN=73
    ABS

   PAGE    1
SEGMENT  1              VALORI DI TEMPERATURA
NAME :TEMPERAT

0005   :JU  FB128
0006 NAME :LIN.
0007 IN   :    DW191
0008 OUT  :    DW18
0009   :JU  FB128
000A NAME :LIN.
000B IN   :    DW192
000C OUT  :    DW20
000D   :JU  FB128
000E NAME :LIN.
```

000F IN : DW193
0010 OUT : DW24
0011 :JU FB128
0012 NAME :LIN.
0013 IN : DW194
0014 OUT : DW32
0015 :JU FB128
0016 NAME :LIN.
0017 IN : DW195
0018 OUT : DW34
0019 :JU FB128
001A NAME :LIN.
001B IN : DW196
001C OUT : DW36
001D :JU FB128
001E NAME :LIN.
001F IN : DW197
0020 OUT : DW40
0021 :JU OB222
0022 :JU FB128
0023 NAME :LIN.
0024 IN : DW198
0025 OUT : DW48 AZZERAMENTO TEMPO DI CICLO
0026 :JU FB128
0027 NAME :LIN.
0028 IN : DW199
0029 OUT : DW66
002A :JU FB128
002B NAME :LIN.
002C IN : DW200
002D OUT : DW68
002E :JU FB128
002F NAME :LIN.
0030 IN : DW201
0031 OUT : DW72
0032 :JU OB222
0033 :JU FB128
0034 NAME :LIN.
0035 IN : DW202
0036 OUT : DW80
0037 :JU FB128
0038 NAME :LIN.
0039 IN : DW203
003A OUT : DW130
003B :JU FB128
003C NAME :LIN.
003D IN : DW204
003E OUT : DW132
003F :JU FB128
0040 NAME :LIN.
0041 IN : DW205

FB129 LEN=73
ABS

PAGE 2
0042 OUT : DW135
0043 :BE

```
FB130                                   LEN=158
   ABS

   PAGE    1
SEGMENT  1              ABILITAZIONI DA TEMPERATURE
NAME :ABTE

0005   :C   DB10          ;call datablock
0006   :***
SEGMENT  2              DIFF.MAX AMMESSA  PATT.E VASCA
0007   :L   DW65
0008   :L   DW129
0009   :-F
000A   :L   KF+100                  10C--- DA STABILIRE
-----
000C   :<F
000D   :=   F 42.1                  1 = OK
000E   :***
SEGMENT  3              DIFFERENCE PER CICLO DI AVVIAMENTO
000F   :A   F 11.1     ;signal ti VME 'NORMAL MODE'
0010   :AN  F 21.1      test mode selected ?
0011   :L   DW17
0012   :JC  =M001
0013   :AN  F 21.1      test mode selected ?
0014   :L   DW33
0015   :JC  =M001
0016   :L   DW101
0017 M001 :T   DW35
0018   :L   DW35
0019   :L   DW129
001A   :-F
001B   :L   DW125                   ----DA STABILIRE
001C   :-F
001D   :T   DW88                    DEVE TENDERE A 0
001E   :L   KF+10                   1C
0020   :>F
0021   :=   F 42.2      Diff. stationary/rotating tepm.>1C
0022   :L   DW88              Diff. stationary/rotating
tepm.>1C
0023   :L   KF-10                  0.5C
0025   :<F
0026   :=   F 42.3      Diff. stationary/rotating tepm.<1C
0027   :L   DW35
0028   :L   DW126                   0.5C
0029   :+F
002A   :L   DW65                    RAFFREDDO CON
REGOLAZIONE
002B   :-F
002C   :T   DW86                    1C
002D   :L   DW86
002E   :L   KF+6                    RAFFREDDO RAPIDO  R=1
0030   :>F
0031   :=   F 42.4      Diff. stationary/rotating tepm.>+.6C
0032   :L   DW86
0033   :L   KF-6                   SOGLIA INF.DI
REGOL.SUPERATA
```

```
0035   :<F
0036   :=   F 42.5       Diff. stationary/rotating tepm.<-.6C
0037   :L   DW86
0038   :L   KF+4                        SOGLIA SUP.DI
REGOL.SUPERATA
003A   :>F
003B   :=   F 42.6       Diff. stationary/rotating tepm.>.+4C
003C   :L   DW86
003D   :L   KF-4
003F   :<F
0040   :=   F 42.7       Diff. stationary/rotating tepm.<.-4C
0041   :***
SEGMENT  4                ALL.20: TEMP.ACQUA TROPPO ALTA
0042   :L   DW35
0043   :L   KF+10                      10 C ---DA STABILIRE
0045   :-F
0046   :L   DW135                       SE T.H2O > [T.STRUTT.-
10 GRADI]
```

```
FB130                                    LEN=158
   ABS

   PAGE    2
0047   :<F
0048   :=   F 40.3       max. temperature chilled water (warning
20)
0049   :***
SEGMENT  5                ALL.2: PRESSIONE ECCESSIVA
004A   :L   DW136
004B   :L   KF+800       80 BAR  --DA STABILIRE
004D   :<=F
004E   :=   F 40.4       max. pressure from feed pump (valle) 80
bar
004F   :***
SEGMENT  6                ALL.1 : PRESSIONE MINIMA
0050   :L   DW136
0051   :L   KF+350       SE PRESSIONE < 35 BAR SEGNALA
0053   :>F              ALLARME 1
0054   :=   F 42.0       pressure at pads to low (35 bar)
0055   :***
SEGMENT  7                ALL.30:  RETROAZ.VALVOLA NON OK
0056   :A   F 11.0       SIMATIC signal to VME (1=warm-up
activated)
0057   :A   F 10.6
0058   :L   DW139           SE ABILITATA VALVOLA "1" LEGGI
0059   :JC  =M001
005A   :A   F 11.0       SIMATIC signal to VME (1=warm-up
activated)
005B   :A   F 10.7       signal to VME (1=chilled water valve 2
selected)
005C   :L   DW140           SE ABILITATA VALVOLA "2" LEGGI
```

```
005D   :JC  =M001
005E   :A   F 52.1
005F   :R   F 52.1
0060   :JU  =M002
0061 M001 :L   DW38          CONFRONTA VALORE RIFERIMENTO
0062   :-F                 APERTURA VALVOLA CON RETRAZIONE
0063   :T   DW41             E SCRIVI DIFFERENZA SU DW 41
0064   :L   KF+0
0066   :>=F                DIFFERENZA POSITIVA = RIF.> RETR
0067   :JC  =M003
0068   :L   DW41
0069   :L   KF-200
006B   :<F                 DIFFERENZA NEGATIVA = RIF.< RETR
006C   :=   F 52.1           1= DIFFERENZA SUPERIORE AL 10%
006D   :JU  =M002
006E M003 :L   DW41
006F   :L   KF+200
0071   :>F
0072   :=   F 52.1           1= DIFFERENZA SUPERIORE AL 10%
0073 M002 :A   F 52.1
0074   :L   KT050.2
0076   :SR  T 23             SE LA DIFFERENZA TRA RIFERIMENTO
0077   :A   T 23            E RETROAZIONE PERDURA OLTRE 50"
0078   :=   F 40.6               SETTA ALLARME "30"
0079   :***
SEGMENT  8                  ALL.21: OVERFLOW INGR.ANALOG.PLC
007A   :L   FW70
007B   :L   KH0000
007D   :><F
007E   :O   F 72.0
007F   :O   F 72.1
0080   :O   F 72.2
0081   :O   F 72.3
0082   :=   F 40.1
0083   :***
SEGMENT  9                  ALL.22: SOGLIA MAX INGR.PLC
0084   :A(
0085   :A   F 55.3             01
0086   :O   F 55.4             01
0087   :O   F 55.5             01
0088   :O   F 55.6             01
```

```
FB130                                   LEN=158
   ABS

   PAGE    3
0089   :)                   01
008A   :A   F 11.1       ;signal ti VME 'NORMAL MODE'
008B   :O   F 55.7       ;TH1 stationary part over upper limit
008C   :O   F 56.0       ;TH2 stationary part over upper limit
008D   :O   F 56.1       ;TH3 stationary part over upper limit
```

```
008E   :O   F 56.2       ;TH4 stationary part over upper limit
008F   :O   F 56.3       ;TH1 oil pad over upper limit
0090   :O   F 56.4       ;TH2 oil pad over upper limit
0091   :O   F 56.5       ;TH3 oil pad over upper limit
0092   :O   F 56.6       ;TH4 oil pad over upper limit
0093   :O   F 56.7       ;TH1 oil tank over upper limit
0094   :O   F 57.0       ;TH2 oil tank over upper limit
0095   :O   F 57.1       ;water over upper limit
0096   :O   F 57.2       ;oil pressure over upper limit
0097   :=   F 40.2       ;somewhere is to hot (stat. rot.
pad...etc.) 'NORMAL NODE'
0098   :BE
```

```
FB131                                   LEN=195
   ABS

   PAGE    1
SEGMENT  1              VISCOSITA' OLIO
NAME :M0/M

0005   :C   DB10        ;call datablock
0006   :L   DW35
0007   :L   KF-100
0009   :>F
000A   :JC  =M001
000B   :L   KF+71                  M0/M A -10 GRADI
000D   :T   DW110
000E   :L   DW110
000F   :!=F
0010   :BEC
0011 M001 :L   DW35                    PER T= -9,9 A -5
GRADI
0012   :L   KF-50
0014   :>F
0015   :JC  =M002
0016   :L   KF+71                  M0/M A -10 GRADI
0018   :T   DW107
0019   :L   KF+100                  M0/M A -5 GRADI
001B   :T   DW108
001C   :L   KF-100
001E   :T   DW109
001F   :JU  =M003
0020 M002 :L   DW35                    PER T=-4,9 A 0
GRADI
0021   :L   KF+0
0023   :>F
0024   :JC  =M004
0025   :L   KF+100                  M0/M A -5 GRADI
0027   :T   DW107
0028   :L   KF+131                  M0/M A 0 GRADI
002A   :T   DW108
002B   :L   KF-50
002D   :T   DW109
002E   :JU  =M005
002F M004 :L   DW35                    PER T = 0.1 A 5
GRADI
0030   :L   KF+50
0032   :>F
0033   :JC  =M006
0034   :L   KF+131                  M0/M A 0 GRADI
0036   :T   DW107
0037   :L   KF+173                  M0/M A 5 GRADI
0039   :T   DW108
003A   :L   KF+0
003C   :T   DW109
003D   :JU  =M005
003E M006 :L   DW35                    PER T = 5.1 A 10
GRADI
003F   :L   KF+100
```

```
0041   :>F
0042   :JC  =M007
0043   :L   KF+173                    M0/M A 5 GRADI
0045   :T   DW107
0046   :L   KF+206                    M0/M A 10 GRADI
0048   :T   DW108
0049   :L   KF+50
004B   :T   DW109
004C M003 :JU  =M005
004D M007 :L   DW35                        PER T = 10.1 A 15
GRADI
004E   :L   KF+150
0050   :>F
0051   :JC  =M008
0052   :L   KF+206
0054   :T   DW107
0055   :L   KF+256
```

```
FB131                                      LEN=195
   ABS

   PAGE    2
0057   :T   DW108
0058   :L   KF+100
005A   :T   DW109
005B   :JU  =M005
005C M008 :L   DW35                        PER T = 15.1 A 20
GRADI
005D   :L   KF+200
005F   :>F
0060   :JC  =M009
0061   :L   KF+256
0063   :T   DW107
0064   :L   KF+312
0066   :T   DW108
0067   :L   KF+150
0069   :T   DW109
006A   :JU  =M005
006B M009 :L   DW35                        PER T = 20.1 A 25
GRADI
006C   :L   KF+250
006E   :>F
006F   :JC  =M010
0070   :L   KF+312
0072   :T   DW107
0073   :L   KF+376
0075   :T   DW108
0076   :L   KF+200
0078   :T   DW109
0079   :JU  =M005
007A M010 :L   DW35                        PER T = 25.1 A 30
```

```
GRADI
007B   :L   KF+300
007D   :>F
007E   :JC  =M011
007F   :L   KF+376
0081   :T   DW107
0082   :L   KF+441
0084   :T   DW108
0085   :L   KF+250
0087   :T   DW109
0088   :JU  =M005
0089 M011 :L   DW35                    PER T = 30.1 A 35
GRADI
008A   :L   KF+350
008C   :>F
008D   :JC  =M012
008E   :L   KF+441
0090   :T   DW107
0091   :L   KF+533
0093   :T   DW108
0094   :L   KF+300
0096   :T   DW109
0097   :JU  =M005
0098 M012 :L   DW35                    PER T = 35.1 A 40
GRADI
0099   :L   KF+400
009B   :>F
009C   :JC  =M013
009D   :L   KF+533
009F   :T   DW107
00A0   :L   KF+640
00A2   :T   DW108
00A3   :L   KF+350
00A5   :T   DW109
00A6   :JU  =M005
00A7 M013 :L   KF+640
00A9   :T   DW110
00AA   :L   DW110
00AB   :!=F
00AC   :BEC
```

```
FB131                                  LEN=195
   ABS

   PAGE    3
00AD M005 :***
SEGMENT  2              CALCOLO DEL RAPPORTO DI PORTATA
00AE   :L   DW35
00AF   :L   DW109
00B0   :-F
00B1   :T   DW109
```

```
00B2  :L  DW108
00B3  :L  DW107
00B4  :-F
00B5  :L  DW109
00B6  :XF
00B7  :L  KF+50
00B9  ::F
00BA  :L  DW107
00BB  :+F
00BC  :T  DW110
00BD  :BE
```

FB133 LEN=116
ABS

PAGE 1
SEGMENT 1 CALCOLO RIFERIMENTO PER VALVOLE

##########

R = R0 + K1 * DT1 + K2 * DT2 + K3 * INT DT2

MO/M MO/M
R0 = H0 * --------- K1 = H1 * ---------
TC - TH TC - TH

M0/M M0/M
K2 = H2 * --------- K3 = H3 * ---------
TC - TH TC - TH

##########

NAME :RIF.VV

0005 :C DB10 ;call datablock
0006 :L DW35
0007 :L DW125 -----DA STABILIRE
0008 :-F
0009 :T DW22
000A :L DW129
000B :L DW22
000C :-F
000D :T DW23 SE 1 AZZERARE
RIFERIMENTO
000E :L DW35
000F :L DW126
0010 :+F
0011 :T DW25
0012 :L DW65
0013 :L DW25
0014 :-F
0015 :T DW26
0016 :L DW135
0017 :L DW129 -----DA STABILIRE
0018 :>=F
0019 := F 60.3
001A :JC =M001
001B :L DW129
001C :L DW135
001D :-F SE 1 AZZERARE
RIFERIMENTO
001E :T DW27

```
001F   :L   DW110
0020   :L   KF+10
0022   :XF
0023   :FDG
0024   :L   DW27
0025   :FDG
0026   ::G
0027   :GFD
0028   :T   DW28
0029   :JU  =M002
002A M001 :L   KF+0
002C   :T   DW28
002D M002 :***
SEGMENT  2
002E   :L   KF+150
```

```
FB133                                   LEN=116
   ABS

   PAGE    2
0030   :T   DW29
0031   :L   DW122
0032   :L   DW28
0033   :XF
0034   :L   DW23
0035   :XF
0036   :T   DW30
0037   :A   F 10.5
0038   :JC  =M001
0039   :L   KF+0
003B   :T   DW31
003C   :T   DW37
003D   :JU  =M002
003E M001 :L   DW123
003F   :L   DW28                  ------ DA STABILIRE
0040   :XF
0041   :L   DW26
0042   :XF
0043   :T   DW31
0044   :AN  F 60.5
0045   :L   KT100.0
0047   :SR  T 35
0048   :A   T 35
0049   :L   KT100.0
004B   :SF  T 36
004C   :A   T 36
004D   :=   F 60.5
004E   :A   F 60.5                ------ DA STABILIRE
004F   :JC  FB134
0050 NAME :INTEGRAZ
0051 IN   :    DW26
```

```
0052   :L   DW124
0053   :L   DW39
0054   :XF
0055   :T   DW37
0056 M002 :***
SEGMENT  3                R=2048= APERTURA 100% VALVOLA
0057   :L   DW29
0058   :L   DW30
0059   :+F
005A   :L   DW31
005B   :+F
005C   :L   DW37
005D   :+F
005E   :T   DW38
005F   :L   KF+2048
0061   :<=F
0062   :JC  =M001
0063   :L   KF+2048
0065   :T   DW38
0066 M001 :L   DW38
0067   :L   KF+0
0069   :>=F
006A   :JC  =M002
006B   :L   KF+0
006D   :T   DW38
006E M002 :BE
```

FB134 LEN=105
ABS

PAGE 1
SEGMENT 1 AZZERAMENTO INIZIALE

INTEGRAZIONE DI 30 VALORI, COLLOCATI IN DB11 DA DW101 A DW130.
OGNI VALORE E' AGGIORNATO OGNI 30 SECONDI; T35 = TEMPO CLOCK.

```
NAME :INTEGRAZ
DECL :IN       I/Q/D/B/T/C: I  BI/BY/W/D: W
```

```
0008   :L   =IN
0009   :C   DB11            ;call datablock
000A   :T   DW89
000B   :A   F 60.4                    A 1 ALL'ACCENSIONE IN
PB1
000C   :JC  =M001
000D   :L   KF+101                     INIZIO
000F   :T   DW100
0010 M002 :L   KF+0                        RESET
0012   :DO  DW100
0013   :T   DW0
0014   :L   DW100
0015   :L   KF+1
0017   :+F
0018   :T   DW100
0019   :L   KF+130                     FINE
001B   :<=F
001C   :JC  =M002
001D   :AN  F 60.4
001E   :S   F 60.4
001F   :L   KF+100
0021   :T   DW100
0022 M001 :***
SEGMENT  2                ACQUISIZ. 30 VALORI NEL REGISTO
0023   :A   F 60.5
0024   :R   F 60.5
0025   :L   DW89
0026   :L   KF+0
0028   :<=F
0029   :JC  =M001
002A   :L   DW89
002B   :L   KF+2000
002D   :<=F
002E   :JC  =M002
002F   :L   KF+2000
0031   :T   DW89
0032   :JU  =M002
0033 M001 :L   KF+0
0035   :C   DB10            ;call datablock
0036   :T   DW39
0037   :JU  =M003
0038 M002 :L   DW100
0039   :I     1
003A   :T   DW100
003B   :L   KF+130
003D   :>F
003E   :JC  =M004
003F   :L   DW89
0040   :DO  DW100
0041   :T   DW0
0042   :JU  =M005
0043 M004 :L   KF+100
0045   :T   DW100
```

```
FB134                                   LEN=105
   ABS

   PAGE    2
0046   :JU  =M003
0047 M005 :L   KF+0
0049   :T   DW98
004A   :L   KF+101
004C   :T   DW99
004D M006 :DO  DW99
004E   :L   DW0
004F   :L   DW98
0050   :+F
0051   :T   DW98
0052   :L   DW99
0053   :I    1
0054   :T   DW99
0055   :L   DW99
0056   :L   KF+130
0058   :<=F
0059   :JC  =M006
005A   :L   DW98
005B   :FDG
005C   :L   KF+30
005E   :FDG
005F   ::G
0060   :GFD
0061   :C   DB10              ;call datablock
0062   :T   DW39
0063 M003 :BE
```

```
FB135                                   LEN=66
    ABS

   PAGE    1
SEGMENT  1              RIFERIMENTO VERSO LE VALVOLE
NAME :RIF.VALV

0005   :C   DB10            ;call datablock
0006   :A   F 11.0      SIMATIC signal to VME (1=warm-up
activated)
0007   :A(
0008   :ON  F 20.5
0009   :ON  F 41.0       alarm average of rotating part out of
range
000A   :)
000B   :A(
000C   :ON  F 20.6
000D   :ON  F 41.1       alarm average of stationary part out of
range
000E   :)
000F   :A(
0010   :ON  F 10.5
0011   :ON  F 41.2       alarm average of OIL PADS out of range
0012   :)
0013   :AN  F 41.3
0014   :JC  =M001
0015   :L   KF+0
0017   :JU  =M002
0018 M001 :A   F 42.2         Diff. stationary/rotating tepm.>1C
0019   :AN  F 23.0       preparatory phase OK ?
001A   :L   KF+0
001C   :JC  =M002
001D   :A   F 42.3       Diff. stationary/rotating tepm.<1C
001E   :AN  F 23.0       preparatory phase OK ?
001F   :L   KF+2048
0021   :JC  =M002
0022   :L   DW38
0023 M002 :T   DW38
0024   :A   F 10.6
0025   :A   F 11.0      SIMATIC signal to VME (1=warm-up
activated)
0026   :L   DW38
0027   :JC  =M003
0028   :A   F 10.6              ENABLE SERVOVALVE 1 ?
0029   :A   F 10.2      enabled reference from potentiometer for
valve 1
002A   :L   DW137              LOAD POTENTIOMETER VALUE
002B   :JC  =M003
002C   :L   KF+0               VALVULA 1
002E M003 :SLW   3
002F   :T   PW176
0030   :A   F 10.7      signal to VME (1=chilled water valve 2
selected)
0031   :A   F 11.0      SIMATIC signal to VME (1=warm-up
activated)
0032   :L   DW38
```

```
0033   :JC  =M004
0034   :A   F 10.7       signal to VME (1=chilled water valve 2
selected)
0035   :A   F 10.3       enabled reference from poterntiometer for
valve 2
0036   :L   DW137              LOAD POTENTIOMETER VALUE
0037   :JC  =M004
0038   :L   KF+0              VALVULA 2
003A M004 :SLW   3           ;shift accu contents left 3 positions
003B   :T   PW178             VALVULA 2
003C   :BE
```

```
FB200                                   LEN=199
   ABS

   PAGE    1
SEGMENT  1              TRASFERIM.BIT DI ALLARME NELLE
NAME :SENTINEL                      -PAROLE DI
CONTROLLO

0005   :C   DB20          ;call datablock
0006   :L   FY0           ;flagg byte
0007   :T   DL221
0008   :L   FY1
0009   :T   DR221
000A   :L   FY2
000B   :T   DL222          ;data word left hand byte
000C   :L   FY3
000D   :T   DR222          ;data word right hand byte
000E   :L   FY4
000F   :T   DL223
0010   :L   FY5
0011   :T   DR223
0012   :L   FY6
0013   :L   KB31                  SOLO I BIT 4.3.2.1.0
0014   :AW
0015   :T   DL224
0016   :L   KB0
0017   :T   DR224
0018   :L   KH0000
001A   :T   DW225                  GRUPPO NON UTILIZZATI
001B   :T   DW226                    "          "
001C   :T   DW227                    "          "
001D   :***
SEGMENT  2              TACITAZIONE SIRENA
001E   :L   DW221                  I
001F   :L   KH0000                 I SE PRESENTE ALLARME
SALTA
0021   :><F                      I
0022   :JC  =M001
0023   :L   DW222                 I
```

```
0024   :L   KH0000                    I SE PRESENTE ALLARME
SALTA
0026   :><F                          I
0027   :JC  =M001
0028   :L   DW223                     I
0029   :L   KH0000                    I SE PRESENTE ALLARME
SALTA
002B   :><F                          I
002C   :JC  =M001
002D   :L   DW224                      I
002E   :L   KH0000                     I SE PRESENTE ALLARME
SALTA
0030   :><F                          I
0031   :JC  =M001
0032   :A   F 40.0
0033   :R   F 40.0                    SE NON C'E'ALLARME
RESETTA
0034   :JU  =M002
0035 M001 :AN  F 40.0
0036   :S   F 40.0                    SE PRESENTE ALLARME
SETTA
0037 M002 :A   F 40.0
0038   :AN  F 59.1
0039   :=   Q 8.6        warnings horn
003A   :A(
003B   :O   F 59.1             01
003C   :O   I 3.6        pushbutton to silence horn
003D   :O   F 20.4       remote command mode enabled ?
003E   :)
003F   :A   F 40.0
0040   :=   F 59.1
0041   :A   I 14.0       mode selection by VME (1=alarms reset
command)
0042   :A   Q 16.3       SIMATIC signal to VME (1=remote mode
selected)
0043   :O   T 42
0044   :O   T 5
0045   :O   I 3.7        pushbutton to reset warning alarms




FB200                                      LEN=199
   ABS

   PAGE    2
0046   :=   Q 7.3
0047   :AN  I 3.5        pushbutton lamp test
0048   :=   Q 7.7
0049   :***
SEGMENT  3                 FORMAZIONE NUMERO ALLARME
004A   :A   F 50.0
004B   :JC  =M001
004C   :A   Q 7.3
```

```
004D   :JC  =M003
004E   :L   KB1
004F   :T   DW255
0050   :T   DW251
0051   :L   KF+16
0053   :T   DW252
0054   :L   DW221
0055   :L   KF+0
0057   :><F
0058   :JC  =M002
0059 M009 :L   KB2
005A   :T   DW255
005B   :L   KF+32
005D   :T   DW252
005E   :L   DW222
005F   :L   KF+0
0061   :><F
0062   :JC  =M002
0063 M010 :L   KB3
0064   :T   DW255
0065   :L   KF+48
0067   :T   DW252
0068   :L   DW223
0069   :L   KF+0
006B   :><F
006C   :JC  =M002
006D M011 :L   KB4
006E   :T   DW255
006F   :L   KF+64
0071   :T   DW252
0072   :L   DW224
0073   :L   KF+0
0075   :><F
0076   :JC  =M002
0077 M012 :L   KB5
0078   :T   DW255
0079   :L   KF+80
007B   :T   DW252
007C   :L   DW225
007D   :L   KF+0
007F   :><F
0080   :JC  =M002
0081 M013 :L   KB6
0082   :T   DW255
0083   :L   KF+96
0085   :T   DW252
0086   :L   DW226
0087   :L   KF+0
0089   :><F
008A   :JC  =M002
008B M014 :L   KB7
008C   :T   DW255
008D   :L   KF+112
008F   :T   DW252
0090   :L   DW227
0091   :L   KF+0
```

```
FB200                                   LEN=199
   ABS

   PAGE    3
0093   :><F
0094   :JC  =M002
0095   :JU  =M003
0096 M002 :L   KB0
0097   :T   DW0
0098   :DO  DW251
0099   :L   DW0
009A   :T   DW253
009B   :L   DR253
009C   :L   KF+0
009E   :!=F
009F   :JC  =M004
00A0   :A   D 253.15                ALLARME GIA'TRASMESSO
00A2   :JC  =M005                         -A 0 ALLA
1'CHIAMATA
00A3 M001 :JU  FB201
00A4 NAME :TR.NR.AL
00A5 M004 :A   F 50.0
00A6   :JC  =M003
00A7 M005 :L   DW251
00A8   :I     1
00A9   :T   DW251
00AA   :L   DW251
00AB   :L   DW252
00AC   :>F
00AD   :JC  =M006
00AE   :JU  =M007
00AF M006 :L   DW255
00B0   :T   DW0
00B1   :DO  DW0
00B2 M008 :JU  =M008
00B3   :JU  =M009                   1
00B4   :JU  =M010                   2
00B5   :JU  =M011                   3
00B6   :JU  =M012                   4
00B7   :JU  =M013                   5
00B8   :JU  =M014                   6
00B9 M007 :L   DW251
00BA   :L   KF+60
00BC   :>=F
00BD   :JC  =M003
00BE   :JU  =M002
00BF M003 :L   KB0
00C0   :T   DW0
00C1   :BE
```

```
FB201                                   LEN=73
    ABS

   PAGE    1
SEGMENT  1              TRASMISS.NUMERO ALLAR.A SENTINEL
NAME :TR.NR.AL

0005   :L   DW250
0006   :L   KF+0
0008   :!=F
0009   :JC  =M001                TRASMISSIONE NUMERO
ALLARME
000A   :L   DW250
000B   :L   KF+1
000D   :!=F
000E   :JC  =M002                ATTESA
000F   :L   DW250
0010   :L   KF+2
0012   :!=F
0013   :JC  =M003                SET STROBE
0014   :L   DW250
0015   :L   KF+3
0017   :!=F
0018   :JC  =M002                ATTESA
0019   :L   DW250
001A   :L   KF+4
001C   :!=F
001D   :JC  =M004                RESET STROBE
001E   :L   DW250
001F   :L   KF+5
0021   :!=F
0022   :JC  =M005                FINE CICLO
0023   :L   KF+0
0025   :T   DW250
0026   :JU  =M006
0027 M001 :AN  F 50.0                 TRASMISSIONE NUMERO
ALLARME
0028   :S   F 50.0
0029   :L   DR253
002A   :T   PY6
002B   :JU  =M002
002C M003 :AN  Q 7.0                  SET STROBE ALLARME
002D   :S   Q 7.0
002E   :JU  =M002
002F M004 :A   Q 7.0                  RESET STROBE
ALLARME
0030   :R   Q 7.0
0031   :JU  =M002
0032 M005 :A   F 50.0
0033   :R   F 50.0
0034   :L   KF+0
0036   :T   DW250
0037   :L   DW253
0038   :L   KH8000
003A   :OW
003B   :T   DW254                 A 1 IL BIT 15
```

```
DELL'ALLARME
003C   :L   DW254
003D   :DO  DW253
003E   :T   DW0
003F   :JU  =M006
0040 M002 :L   DW250
0041   :I     1
0042   :T   DW250
0043 M006 :BE
```

```
FB202                                   LEN=177
   ABS

   PAGE    1
SEGMENT  1
NAME :NUMEAL

0005   :C   DB20            ;call datablock
0006   :L   KF+1
0008   :T   DW248
0009   :JU  FB203
000A NAME :GENUAL
000B ALL  :    F 0.0        pressuree at pads to low flagg
000C   :JU  FB203
000D NAME :GENUAL
000E ALL  :    F 0.1        pressuree at pads to high flagg
(valle)
000F   :JU  FB203
0010 NAME :GENUAL
0011 ALL  :    F 0.2
0012   :JU  FB203
0013 NAME :GENUAL
0014 ALL  :    F 0.3
0015   :JU  FB203
0016 NAME :GENUAL
0017 ALL  :    F 0.4
0018   :JU  FB203
0019 NAME :GENUAL
001A ALL  :    F 0.5        pressuree at pads to low from pump 1
flagg
001B   :JU  FB203
001C NAME :GENUAL
001D ALL  :    F 0.6        pressuree at pads to low from pump 2
flagg
```

```
001E   :JU  FB203
001F NAME :GENUAL
0020 ALL  :    F 0.7
0021   :JU  FB203
0022 NAME :GENUAL
0023 ALL  :    F 1.0        pressuree at pads to high flagg
(monte)
0024   :JU  FB203
0025 NAME :GENUAL
0026 ALL  :    F 1.1        oil tank level to low flag
0027   :JU  FB203
0028 NAME :GENUAL
0029 ALL  :    F 1.2        oil temperature to max. limit flagg
002A   :JU  FB203
002B NAME :GENUAL
002C ALL  :    F 1.3
002D   :JU  FB203
002E NAME :GENUAL
002F ALL  :    F 1.4              signal oil feed (feed)
0030   :JU  FB203
0031 NAME :GENUAL
0032 ALL  :    F 1.5              signal oil bypass (no feed)
0033   :JU  FB203
0034 NAME :GENUAL
0035 ALL  :    F 1.6
0036   :JU  FB203
0037 NAME :GENUAL
0038 ALL  :    F 1.7              Status Oil feed valve
0039   :***
SEGMENT  2
003A   :JU  FB203
003B NAME :GENUAL
003C ALL  :    F 2.0               Status Oil bypass valve
003D   :JU  FB203
003E NAME :GENUAL
003F ALL  :    F 2.1
0040   :JU  FB203
0041 NAME :GENUAL
```



```
0042 ALL  :    F 2.2
0043   :JU  FB203
0044 NAME :GENUAL
0045 ALL  :    F 2.3
0046   :JU  FB203
0047 NAME :GENUAL
0048 ALL  :    F 2.4
0049   :JU  FB203
```

```
004A NAME :GENUAL
004B ALL  :    F 2.5
004C   :JU  FB203
004D NAME :GENUAL
004E ALL  :    F 2.6
004F   :JU  FB203
0050 NAME :GENUAL
0051 ALL  :    F 2.7
0052   :JU  FB203
0053 NAME :GENUAL
0054 ALL  :    F 3.0
0055   :JU  FB203
0056 NAME :GENUAL
0057 ALL  :    F 3.1
0058   :JU  FB203
0059 NAME :GENUAL
005A ALL  :    F 3.2
005B   :JU  FB203
005C NAME :GENUAL
005D ALL  :    F 3.3
005E   :JU  FB203
005F NAME :GENUAL
0060 ALL  :    F 3.4
0061   :JU  FB203
0062 NAME :GENUAL
0063 ALL  :    F 3.5
0064   :JU  FB203
0065 NAME :GENUAL
0066 ALL  :    F 3.6
0067   :JU  FB203
0068 NAME :GENUAL
0069 ALL  :    F 3.7
006A   :***
SEGMENT  3
006B   :JU  FB203
006C NAME :GENUAL
006D ALL  :    F 4.0
006E   :JU  FB203
006F NAME :GENUAL
0070 ALL  :    F 4.1
0071   :JU  FB203
0072 NAME :GENUAL
0073 ALL  :    F 4.2
0074   :JU  FB203
0075 NAME :GENUAL
0076 ALL  :    F 4.3          wrong water valve selected
0077   :JU  FB203
0078 NAME :GENUAL
0079 ALL  :    F 4.4
007A   :JU  FB203
007B NAME :GENUAL
007C ALL  :    F 4.5
007D   :JU  FB203
007E NAME :GENUAL
007F ALL  :    F 4.6
0080   :JU  FB203
```

FB202 LEN=177
ABS

PAGE 3
0081 NAME :GENUAL
0082 ALL : F 4.7
0083 :JU FB203
0084 NAME :GENUAL
0085 ALL : F 5.0
0086 :JU FB203
0087 NAME :GENUAL
0088 ALL : F 5.1
0089 :JU FB203
008A NAME :GENUAL
008B ALL : F 5.2
008C :JU FB203
008D NAME :GENUAL
008E ALL : F 5.3
008F :JU FB203
0090 NAME :GENUAL
0091 ALL : F 5.4
0092 :JU FB203
0093 NAME :GENUAL
0094 ALL : F 5.5
0095 :JU FB203
0096 NAME :GENUAL
0097 ALL : F 5.6
0098 :JU FB203
0099 NAME :GENUAL
009A ALL : F 5.7
009B :***
SEGMENT 4
009C :JU FB203
009D NAME :GENUAL
009E ALL : F 6.0
009F :JU FB203
00A0 NAME :GENUAL
00A1 ALL : F 6.1
00A2 :JU FB203
00A3 NAME :GENUAL
00A4 ALL : F 6.2
00A5 :JU FB203
00A6 NAME :GENUAL
00A7 ALL : F 6.3
00A8 :JU FB203
00A9 NAME :GENUAL
00AA ALL : F 6.4
00AB :BE

FB203 LEN=30
ABS

PAGE 1
SEGMENT 1 GENERAZIONE NUMERO DI ALLARME
NAME :GENUAL
DECL :ALL I/Q/D/B/T/C: I BI/BY/W/D: BI

```
0008  :AN  =ALL
0009  :JC  =M001
000A  :DO  DW248
000B  :L   DW0
000C  :T   DW247
000D  :L   DW247
000E  :L   KF+0
0010  :><F
0011  :JC  =M001
0012  :L   DW248
0013  :DO  DW248
0014  :T   DW0
0015 M001 :L   DW248
0016  :I    1
0017  :T   DW248
0018  :BE
```

```
FB204                                   LEN=50
    ABS

   PAGE    1
SEGMENT  1              MEMORIZZ. ALLARMI TERMISTORI
NAME :ALL.HW

0005   :C   DB10        ;call datablock
0006   :L   IB8
0007   :T   DR5
0008   :L   IB9
0009   :T   DL5
000A   :A   F 11.1                ALLARMI MIN/MAX HW
000B   :JC  =M001
000C   :L   DW5
000D   :L   KH000F                  ALL. 23  0=OK
000F   :OW
0010   :T   DW5
0011 M001 :AN  D 5.15
0013   :S   D 5.15
0015   :JU  FB205
0016 NAME :MEM.ALL
0017 MEAL :    FW68                 SEGN. ERRATA MISUR.
TEMPER.
0018 BIAL :    F 40.5
0019   :L   FW64
001A   :CFW             ;form one's complement (negate)
001B   :T   FW74
001C   :L   FY74         ;flagg byte
001D   :T   DR5
001E   :L   FY75
001F   :T   DL5
0020   :AN  D 5.14
0022   :S   D 5.14
0024   :AN  D 5.15
0026   :S   D 5.15
0028   :JU  FB205
0029 NAME :MEM.ALL
002A MEAL :    FW66
002B BIAL :    F 59.2
002C   :BE
```

```
FB205                                   LEN=38
   ABS

  PAGE    1
SEGMENT  1


    QUESTA ROUTINE PERMETTE DI MEMORIZZARE LA PRESENZA DEGLI
ALLARMI
    IN INGRESSO AGENDO DIRETTAMENTE SULLA PAROLA.
    GLI ALLARMI VENGONO RESETTATI SOLO SE E' PRESENTE IL COMANDO
DI
    RIPRISTINO ( RPAL ) E VI E' ASSENZA DI SEGNALE.

NAME :MEM.ALL
DECL :MEAL      I/Q/D/B/T/C: Q  BI/BY/W/D: W
DECL :BIAL      I/Q/D/B/T/C: Q  BI/BY/W/D: BI

000B   :C   DB10            ;call datablock
000C   :L   DW5                      INGRESSI ALLARMI
000D   :L   KHFFFF                    MASCHERA MAMCANZA
ALLARMI
000F   :!=F
0010   :JC  =M001
0011   :A   =BIAL
0012   :RB  =BIAL                    (0 = PRSENZA ALLARME)
0013   :A   F 10.1       ripristino alarmi
0014   :JC  =M002
0015   :L   DW5
0016   :L   =MEAL
0017   :AW
0018   :T   =MEAL                    USCITA ALLARMI
MEMORIZZATI
0019   :JU  =M003
001A M001 :AN  =BIAL
001B   :S   =BIAL                    1 = OK
001C   :AN  F 10.1       ripristino alarmi
001D   :BEC
001E M002 :L   DW5
001F   :T   =MEAL
0020 M003 :BE
```

```
FB206                                   LEN=28
    ABS

   PAGE    1
SEGMENT  1              AZZERAMENTO NUMERO ALLARMI
NAME :RESET

0005   :C   DB20         ;call datablock
0006   :L   KF+1                  DA DW1
0008   :T   DW249
0009 M001 :L   KF+0
000B   :DO  DW249
000C   :T   DW0
000D   :L   DW249
000E   :L   KF+1
0010   :+F
0011   :T   DW249
0012   :L   KF+60                  A DW60 (PER 60 PAROLE)
0014   :<=F
0015   :JC  =M001
0016   :BE
```

```
FB210                                   LEN=127
   ABS

   PAGE    1
SEGMENT  1


##########################################################################
QUESTA FB TRASMETTE UN NUMERO DI ALLARME ,PRELEVATO DAL DB20,NELLA
PAROLA DW30 DEL DB12 ( RISERVATO AI DATI DA TRASMETTERE AL COMPUTER
ESO ) LA TRASMISSIONE AVVIENE SOLO SE DW30 E' VUOTA E SE QUEL
NUMERO NON E' GIA' STATO TRASMESSO.
FB211 PROVVEDE A TRASMETTERE (SU RICHIESTA DEL COMPUTER) IL
CONTENUTO DI DW30 AL COMPUTER E AD AZZERARE DW30,DOPO AVER ESEGUITO
LA TRASMISSIONE
##########################################################################

NAME :AL ESO

0005   :C   DB20             ;call datablock
0006   :L   DW221
0007   :T   DW231
0008   :L   DW222
0009   :T   DW232
000A   :L   DW223
000B   :T   DW233
000C   :L   DW224
000D   :T   DW234
000E   :***
SEGMENT  2
000F   :C   DB12             ;call datablock
0010   :AN  F 10.1       ripristino alarmi
0011   :JC  =M001
0012   :L   KF+0
0014   :T   DW30
0015   :R   F 10.1       ripristino alarmi
0016 M001 :L   DW30
0017   :L   KF+0
0019   :><F
001A   :BEC                 ;conditional block end
001B   :C   DB20             ;call datablock
001C   :L   KB1
001D   :T   DW245
001E   :T   DW241
001F   :L   KF+16
0021   :T   DW242
0022   :L   DW231
0023   :L   KF+0
0025   :><F
0026   :JC  =M002
0027 M007 :L   KB2
0028   :T   DW245
0029   :L   KF+17
002B   :T   DW241
002C   :L   KF+32
```

```
002E   :T   DW242
002F   :L   DW232
0030   :L   KF+0
0032   :><F
0033   :JC  =M002
0034 M008 :L   KB3
0035   :T   DW245
0036   :L   KF+33
0038   :T   DW241
0039   :L   KF+48
003B   :T   DW242
003C   :L   DW233
```

```
FB210                                   LEN=127
   ABS

   PAGE    2
003D   :L   KF+0
003F   :><F
0040   :JC  =M002
0041 M009 :L   KB4
0042   :T   DW245
0043   :L   KF+49
0045   :T   DW241
0046   :L   KF+64
0048   :T   DW242                      NUMERO DELL'ALLARME DA
ANALIZZAR
0049   :L   DW234
004A   :L   KF+0
004C   :><F
004D   :JC  =M002
004E   :JU  =M003
004F M002 :L   KB0
0050   :T   DW0
0051   :DO  DW241
0052   :L   DW0
0053   :T   DW243                      A 1 IL 14'BIT
DELL'ALLARME
0054   :L   DR243
0055   :L   KF+0
0057   :!=F
0058   :O   D 243.14
005A   :JC  =M004
005B   :L   DR243          ;data right byte from a DB
005C   :C   DB12           ;call datablock
005D   :T   DW30
005E   :C   DB20           ;call datablock
005F   :L   DW243
0060   :L   KH4000
0062   :OW
0063   :T   DW244
```

```
0064   :L   DW244
0065   :DO  DW243
0066   :T   DW0
0067   :JU  =M003
0068 M004 :L   DW241                    1
0069   :I    1                  2
006A   :T   DW241                3
006B   :L   DW241
006C   :L   DW242
006D   :>F
006E   :JC  =M005                  E' SETTATO IN FB 215
006F   :JU  =M002
0070 M005 :L   DW245
0071   :T   DW0
0072   :DO  DW0
0073 M006 :JU  =M006
0074   :JU  =M007
0075   :JU  =M008
0076   :JU  =M009
0077 M003 :L   KB0
0078   :T   DW0
0079   :BE
```

```
FB211                                   LEN=126
   ABS

   PAGE    1
SEGMENT  1              TRASMISSIONE AL COMPUTER ESO
NAME :TR.ESO

0005   :C   DB20          ;call datablock
0006   :A   Q 14.2
0007   :S   F 61.5
0008   :A   I 13.1
0009   :R   F 61.5
000A   :A   F 61.5
000B   :L   KT500.0
000D   :SR  T 31
000E   :A   T 31
000F   :=   F 41.5                 ALLARME 37
0010   :A   Q 14.2                  STROBE DATO A ESO
```

```
0011   :AN  I 13.1                    DATO RICEVUTO DA ESO
0012   :BEC
0013   :AN  Q 14.2
0014   :JC  =M001
0015   :C   DB12            ;call datablock
0016   :L   FW100
0017   :L   KF+30
0019   :><F
001A   :JC  =M001
001B   :L   KF+0
001D   :T   DW30
001E   :T   FW100
001F M001 :C   DB20          ;call datablock
0020   :A   I 13.1                  -----  DA VERIFICARE
0021   :R   Q 14.2
0022   :L   KH0000
0024   :T   QW12                    STROBE INDIRIZZO
0025   :T   FW102                   STROBE DATO
0026   :A   I 13.0                  INDIRIZZO RICONOSCIUTO
0027   :JC  =M002
0028   :A   Q 14.3
0029   :JC  =M003
002A   :BEC
002B M002 :L   PY12
002C   :T   FW100
002D   :L   PY13                    1 SE DISPARI  1=OK
002E   :T   IB13                    NON USATO
002F   :A   I 13.0
0030   :AN  Q 14.2                  INDIRIZZO RICEVUTO
0031   :AN  Q 14.3
0032   :=   F 61.0
0033   :AN  F 61.0
0034   :JC  =M004                   ELIMINAZIONE BIT
PARITA'
0035   :AN  Q 14.4
0036   :JC  =M005
0037   :AN  F 61.6
0038   :S   F 61.6                  ATTESA CHE ESO AZZERI
LO STROBE
0039   :L   FW100
003A   :L   KH00FF
003C   :><F
003D   :JC  =M006
003E   :AN  F 61.1
003F   :S   F 61.1
0040   :JU  =M006
0041 M005 :JU  FB212
0042 NAME :PARITA'
0043 PAR  :    FW100
0044 PARL :    F 61.1
0045 PARH :    F 61.2
0046 M006 :AN  Q 14.3
```

```
FB211                                   LEN=126
   ABS

   PAGE    2
0047   :S   Q 14.3
0048   :AN  F 61.1
0049   :=   Q 14.4
004A M004 :A   F 61.6
004B   :JC  =M003
004C   :L   FW100
004D   :L   KH007F
004F   :AW
0050   :T   FW100
0051 M003 :A   I 13.0
0052   :BEC
0053   :A   Q 14.3
0054   :R   Q 14.3                    DATO RICEVUTO DA ESO
0055   :L   FW100
0056   :L   KH00FF
0058   :><F
0059   :JC  =M007
005A   :A   F 61.6
005B   :R   F 61.6
005C   :JU  =M008
005D M007 :AN  Q 14.4                    STROBE INDIRIZZI
005E   :JC  =M009                      STROBE DATO
005F   :L   FY101            ;flagg byte
0060   :T   FY102
0061   :T   FY103
0062   :JU  =M010
0063 M009 :C   DB12           ;call datablock
0064   :DO  FW100             ;following operation is executed with
0065   :L   DW0              ;the parameter specified in the flag
word
0066   :T   FW102            ;sapralott!!!
0067 M010 :C   DB20
0068   :JU  FB212
0069 NAME :PARITA'
006A PAR  :    FW102
006B PARL :    F 61.3
006C PARH :    F 61.4
006D   :L   FY103
006E   :T   PY12
006F   :L   FY102
0070   :T   PY13
0071   :AN  F 61.3
0072   :=   Q 14.0
0073   :AN  F 61.4
0074   :=   Q 14.1
0075   :AN  I 13.1
0076   :AN  Q 14.3
0077   :S   Q 14.2
0078 M008 :BE
```

```
FB212                                   LEN=61
   ABS

  PAGE    1
SEGMENT  1


       PARL E PARH RISULTANO = 1 SE IL RISPETTIVO BYTE
ANALIIZZATO
                        E' DISPARI (VA AD 1 SE IL NUMERO
DEI
                        FLAGS A 1 DELLA PAROLA IN ANALISI
E'
                        DISPARI)

NAME :PARITA'
DECL :PAR       I/Q/D/B/T/C: I  BI/BY/W/D: W
DECL :PARL      I/Q/D/B/T/C: Q  BI/BY/W/D: BI
DECL :PARH      I/Q/D/B/T/C: Q  BI/BY/W/D: BI

000E   :L   =PAR
000F   :T   DW239
0010   :RB  =PARL
0011   :RB  =PARH
0012   :L   KF+0
0014   :T   DW240
0015 M007 :AN  D 239.0
0017   :JC  =M001
0018   :L   KF+8
001A   :L   DW240
001B   :>F
001C   :JC  =M002
001D   :AN  =PARH
001E   :JC  =M003
001F   :A   =PARH
0020   :RB  =PARH
0021   :JU  =M001
0022 M003 :S   =PARH
0023   :JU  =M001
0024 M002 :AN  =PARL
0025   :JC  =M004
0026   :A   =PARL
0027   :RB  =PARL
0028   :JU  =M001
0029 M004 :S   =PARL
002A M001 :L   DW240
002B   :L   KF+15
002D   :<F
002E   :JC  =M005
002F   :JU  =M006
0030 M005 :L   DW239
0031   :SRW   1
0032   :T   DW239
0033   :L   DW240
0034   :I    1
0035   :T   DW240
```

```
0036   :JU  =M007
0037 M006 :BE
```

FB213 LEN=37
ABS

PAGE 1
SEGMENT 1

```
####################################################################
IL RITARDO MASSIMO IMPOSTABILE E' DI 5 MILLISECONDI (DEL=50)
A CAUSA DEL "CANE DI GUARDIA" DEL CONTROLLORE
####################################################################

NAME :DELAY
DECL :DEL       I/Q/D/B/T/C: D  KM/KH/KY/KC/KF/KT/KZ/KG: KF

0008   :LW  =DEL
0009   :L   KF+50
000B   :>=F
000C   :JC  =M001
000D   :JU  =M002
000E M001 :L   KF+50
0010   :JU  =M003
0011 M002 :LW  =DEL
0012 M003 :L   KB5
0013   :XF
0014   :T   DW237
0015   :L   KB0
0016   :T   DW238
0017 M004 :L   DW238
0018   :L   DW237
0019   :>F
001A   :BEC
001B   :L   DW238
001C   :I     1
001D   :T   DW238
001E   :JU  =M004
001F   :BE
```

```
FB214                                   LEN=123
   ABS

   PAGE    1
SEGMENT  1              VERIFICA PRESENZA DI PIU'ALLARMI
NAME :CONT ALL

0005   :C   DB20          ;call datablock
0006   :L   KF+1
0008   :T   DW245
0009   :T   DW241
000A   :L   KF+16
000C   :T   DW242
000D   :L   KF+0
000F   :T   DW246
0010   :L   DW231
0011   :L   KF+0
0013   :><F
0014   :JC  =M001
0015 M008 :L   KF+2
0017   :T   DW245
0018   :L   KF+17
001A   :T   DW241
001B   :L   KF+32
001D   :T   DW242
001E   :L   DW232
001F   :L   KF+0
0021   :><F
0022   :JC  =M001
0023 M009 :L   KF+3
0025   :T   DW245
0026   :L   KF+33
0028   :T   DW241
0029   :L   KF+48
002B   :T   DW242
002C   :L   DW233
002D   :L   KF+0
002F   :><F
0030   :JC  =M001                  RESETTATO IN FB210
0031 M010 :L   KF+4
0033   :T   DW245
0034   :L   KF+49
0036   :T   DW241
0037   :L   KF+64
0039   :T   DW242
003A   :L   DW234
003B   :L   KF+0
003D   :><F
003E   :JC  =M001
003F   :JU  =M002
0040 M001 :L   KF+0
0042   :T   DW0
0043   :DO  DW241
0044   :L   DW0
0045   :T   DW243
0046   :L   DR243
```

```
0047   :L   KF+0
0049   :!=F
004A   :O   D 243.14
004C   :JC  =M003
004D   :L   DW246
004E   :I    1
004F   :T   DW246
0050   :C   DB12            ;call datablock
0051   :L   DW30
0052   :L   KF+0
0054   :!=F
0055   :JC  =M004
```

```
FB214                                    LEN=123
   ABS

   PAGE    2
0056   :C   DB20            ;call datablock
0057   :L   DW246
0058   :I    1
0059   :T   DW246
005A M004 :C   DB20          ;call datablock
005B   :L   DW246
005C   :L   KF+1
005E   :<=F
005F   :JC  =M003
0060   :S   Q 18.2       SIMATIC signal to VME (1=multiple alarms
present)
0061   :JU  =M005
0062 M003 :L   DW241
0063   :I    1
0064   :T   DW241
0065   :L   DW241
0066   :L   DW242
0067   :>F
0068   :JC  =M006
0069   :JU  =M001
006A M006 :L   DW245
006B   :T   DW0
006C   :DO  DW0
006D M007 :JU  =M007
006E   :JU  =M008
006F   :JU  =M009
0070   :JU  =M010
0071 M002 :R   Q 18.2        SIMATIC signal to VME (1=multiple
alarms present)
0072 M005 :L   KF+0
0074   :T   DW0
0075   :BE
```

```
FB215                                   LEN=42
    ABS

   PAGE    1
SEGMENT  1              ANNULLA GLI ZERI A DESTRA
NAME :SCIVOLA
DECL :IN       I/Q/D/B/T/C: I  BI/BY/W/D: W

0008   :L   =IN
0009   :L   KF+0
000B   :><F
000C   :JC  =M001
000D   :L   KF+0
000F   :T   FW104
0010   :JU  =M002
0011 M001 :L   =IN
0012   :T   FW104
0013   :L   KF+1
0015   :T   FW106
0016 M003 :A   F 105.0
0017   :BEC
0018   :L   FW104
0019   :SRW   1
001A   :T   FW104
001B   :L   FW106
001C   :L   KF+16
001E   :>=F
001F   :BEC
0020   :L   FW106
0021   :I    1
0022   :T   FW106
0023   :JU  =M003
0024 M002 :BE
```

FB216 LEN=171
ABS

PAGE 1
SEGMENT 1 TRASFERIMENTO VALORI AL DB12
NAME :TRA.DB12

```
0005  :C  DB10        ;call datablock
0006  :L  DW18              RT-T1
0007  :C  DB12        ;call datablock
0008  :T  DW1
0009  :C  DB10
000A  :L  DW20              RT-T2
000B  :C  DB12
000C  :T  DW2
000D  :C  DB10
000E  :L  DW24              RT-T3
000F  :C  DB12
0010  :T  DW3
0011  :C  DB10
0012  :L  DW32              RT-T4
0013  :C  DB12
0014  :T  DW4
0015  :C  DB10
0016  :L  DW34              ST-T1
0017  :C  DB12
0018  :T  DW5
0019  :C  DB10
001A  :L  DW36              ST-T2
001B  :C  DB12
001C  :T  DW6
001D  :C  DB10
001E  :L  DW40              ST-T3
001F  :C  DB12
0020  :T  DW7
0021  :C  DB10
0022  :L  DW48              ST-T4
0023  :C  DB12
0024  :T  DW8
0025  :C  DB10
0026  :L  DW66              PT-T1
0027  :C  DB12
0028  :T  DW9
0029  :C  DB10
002A  :L  DW68              PT-T2
002B  :C  DB12
002C  :T  DW10
002D  :C  DB10
002E  :L  DW72              PT-T3
002F  :C  DB12
0030  :T  DW11
0031  :C  DB10
0032  :L  DW80              PT-T4
0033  :C  DB12
0034  :T  DW12
0035  :C  DB10
```

```
0036   :L   DW130                    TT-T1
0037   :C   DB12
0038   :T   DW13
0039   :C   DB10
003A   :L   DW132                    TT-T2
003B   :C   DB12
003C   :T   DW14
003D   :C   DB10
003E   :L   DW135                    WT
003F   :C   DB12
0040   :T   DW15
0041   :C   DB10
```

FB216 LEN=171
ABS


```
0042   :L   DW17                     RT-TM
0043   :C   DB12
0044   :T   DW16
0045   :C   DB10
0046   :L   DW33                     ST-TM
0047   :C   DB12
0048   :T   DW17
0049   :C   DB10
004A   :L   DW65                     PT-TM
004B   :C   DB12
004C   :T   DW18
004D   :C   DB10
004E   :L   DW129                    TT-TM
004F   :C   DB12
0050   :T   DW19
0051   :C   DB10
0052   :L   DW138                    PHTU
0053   :L   KF+6
0055   ::F
0056   :L   KF+100
0058   :-F                          PHVV
0059   :C   DB12
005A   :T   DW20
005B   :C   DB10
005C   :L   DW137                    PROL
005D   :L   KF+2000
005F   :<=F
0060   :JC  =M001
0061   :L   KF+2000                 RN1
0063   :T   DW137
0064 M001 :L   DW137
0065   :SRW   1
0066   :L   KF+10                   RN2
0068   ::F
```

```
0069   :C   DB12
006A   :T   DW21
006B   :C   DB10                    CKELTU
006C   :L   DW136
006D   :C   DB12                    OVF1
006E   :T   DW22
006F   :C   DB10
0070   :L   DW139
0071   :L   KF+2000                  OVF2
0073   :<=F
0074   :JC  =M002                   FTRNOL
0075   :L   KF+2000
0077   :T   DW139                   PWOLID
0078 M002 :L   DW139
0079   :SRW   1                     TUMI
007A   :L   KF+10
007C   ::F                      0
007D   :C   DB12
007E   :T   DW23                    1
007F   :C   DB10
0080   :L   DW140
0081   :L   KF+2000
0083   :<=F
0084   :JC  =M003
0085   :L   KF+2000
0087   :T   DW140
0088 M003 :L   DW140
0089   :SRW   1
008A   :L   KF+10
008C   ::F
```

FB216 LEN=171
ABS

PAGE 3

```
008D   :C   DB12
008E   :T   DW24
008F   :L   FW68
0090   :T   DW31
0091   :L   FY70          ;flagg byte
0092   :T   DR32          ;data word right hand byte
0093   :L   FY71
0094   :T   DL32
0095   :L   FY72          ;load FY72 in accu 1
0096   :L   KB15          ;load constant 1 byte in accu 2
0097   :AW                ;digital anding of accus 1 and 2
0098   :T   DW33
0099   :L   FW16
009A   :T   DW34
009B   :L   FW18
```

```
009C   :T   DW35
009D   :L   FW66
009E   :T   DW36
009F   :L   KH0000
00A1   :T   DW40
00A2   :L   KHFFFF
00A4   :T   DW50
00A5   :BE
```

```
OB1                                        LEN=49
   ABS

  PAGE    1
SEGMENT  1              LANCIO PROGRAMMA
0000   :JU  PB10
0001   :JU  PB15
0002   :JU  PB16
0003   :JU  PB20
0004   :JU  OB222
0005   :JU  FB120                  SCANSIONE INGRESSI
ANALOGICI
0006 NAME :ANACICLI
0007   :JU  FB126                  FORMAZIONE VALORI NON
LINEARIZZ.
0008 NAME :FORM.VAL
0009   :JU  OB222
000A   :AN  F 10.1      ripristino alarmi
000B   :JC  FB129                  FORMAZIONE VALORI
LINEARIZZATI
000C NAME :TEMPERAT
000D   :JU  OB222                   AZZERAMENTO TEMPO DI
CICLO
000E   :AN  F 10.1      ripristino alarmi
000F   :JC  FB102       calcule average values
0010 NAME :EX MEDIE
0011   :A   F 10.1      ripristino alarmi
0012   :JC  FB206                  AZZERAMENTO DB20
0013 NAME :RESET
0014   :JU  FB103                  VISUALIZZAZIONE
TEMPERATURE
0015 NAME :VIS.TEMP
0016   :JU  FB130
0017 NAME :ABTE
0018   :JU  FB131
0019 NAME :M0/M
001A   :JU  FB133
001B NAME :RIF.VV
001C   :JU  FB135
001D NAME :RIF.VALV
001E   :JU  FB204
001F NAME :ALL.HW
0020   :JU  FB202                  FORMAZIONE NUMERO
ALLARME
0021 NAME :NUMEAL
0022   :JU  OB222
0023   :JU  FB210
0024 NAME :AL ESO
0025   :JU  FB214
0026 NAME :CONT ALL
0027   :JU  FB216
0028 NAME :TRA.DB12
0029   :AN  Q 19.7
002A   :=   Q 19.7                 PER CONTROLLO TEMPO DI
CICLO
002B   :BE
```

OB13 Time base .1s LEN=15 ABS

PAGE 1
SEGMENT 1
0000 :JU FB105 AZZERAMENTO STROBE
VISUALIZZATOR
0001 NAME :STR.VIS.
0002 :JU OB222 TRASMISSIONE ALLARME
A SENTINEL
0003 :JU FB200
0004 NAME :SENTINEL VISUALIZZAZIONE
TEMPERATURE
0005 :JU FB104
0006 NAME :VISUAL. TRASMISSIONE VERSO
ESO
0007 :JU FB211
0008 NAME :TR.ESO
0009 :BE

OB20 LEN=7
ABS

PAGE 1
SEGMENT 1
0000 :JU PB1
0001 :BE

OB21 LEN=7
ABS

PAGE 1
SEGMENT 1
0000 :JU PB1
0001 :BE

```
OB22                                    LEN=7
   ABS

  PAGE    1
SEGMENT  1
0000   :JU  PB1
0001   :BE
```

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```
FB133

DIF_ST_A     =     DW     212     ;difference of TH stationary part 'A'
DIF_ST_B     =     DW     213     ;difference of TH stationary part 'B'
DIF_RO_A     =     DW     214     ;difference of TH rotating part 'A'
DIF_RO_B     =     DW     215     ;difference of TH rotating part 'B'
AVE_ST_A     =     DW
AVE_ST_B     =
AVE_RO_A     =     DW
AVE_RO_B     =
TH_ST_A_1    =     DW     216
TH_ST_A_2    =     DW     217
TH_ST_B_1    =     DW     216
TH_ST_B_2    =     DW     217
TH_RO_A_1    =     DW     216
TH_RO_A_2    =     DW     217
TH_RO_B_1    =     DW     216
TH_RO_B_2    =     DW     217
DIFF_ST_A    =     F
DIFF_ST_B    =     F
DIFF_RO_A    =     F
DIFF_RO_B    =     F

        :C      DB10            ;load DB10
        :L      KF+0
        :T      DIF_ST_A
        :T      DIF_ST_B
        :T      DIF_RO_A
        :T      DIF_RO_B

;---------------------ROTATING PART SIDE 'A'----------------------------
        :L      PW128           ;load Thermistor 1 rotating part side 'A'
        :T      TH_RO_A_1
        :L      PW130           ;load Thermistor 2 rotating part side 'A'
        :T      TH_RO_A_2
        :-F                     ;substract 2 from 1
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                    ;compare difference if greater than 2 deg.
        :JC     TH1_BAD
```

```
        :=      DIFF_RO_A
        :T      DIF_RO_A        ;difference between TH1 and TH2 ok
        :L      TH_RO_A_1
        :L      TH_RO_A_2       ;build average
        :+F
        :L      KF+2
        ::F
        :T      AVE_RO_A        ;average from rotating side 'A'

;---------------------ROTATING PART SIDE 'B'----------------------------
TH1_BAD :L      PW132           ;load Thermistor 3 rotating part side 'B'
        :T      TH_RO_B_1
        :L      PW134           ;load Thermistor 4 rotating part side 'B'
        :T      TH_RO_B_2
        :-F                     ;substract 4 from 3
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                    ;compare difference if greater than 2 deg.
        :JC     TH2_BAD
        :=      DIFF_RO_B
        :T      DIF_RO_B        ;difference between TH3 and TH4 ok
        :L      TH_RO_B_1
        :L      TH_RO_B_2       ;buid average
        :+F
        :L      KF+2
        ::F
        :T      AVE_RO_B        ;average from rotating side 'B'

;---------------------STATIONARY PART SIDE 'A'----------------------------
TH2_BAD :L      PW136           ;load Thermistor 1 stationary part side 'A'
        :T      TH_ST_A_1
        :L      PW138           ;load Thermistor 2 stationary part side 'A'
        :T      TH_ST_A_2
        :-F                     ;substract 2 from 1
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                    ;compare difference if greater than 2 deg.
        :JC     TH3_BAD
        :=      DIFF_ST_A
        :T      DIF_ST_A        ;difference between TH1 and TH2 ok
        :L      TH_ST_A_1
        :L      TH_ST_A_2       ;buid average
        :+F
        :L      KF+2
        ::F
        :T      AVE_ST_A        ;average from stationary side 'A'

;---------------------STATIONARY PART SIDE 'B'----------------------------
TH3_BAD :L      PW140           ;load Thermistor 3 stationary part side 'B'
        :T      TH_ST_B_1
        :L      PW142           ;load Thermistor 4 stationary part side 'B'
        :T      TH_ST_B_1
        :-F                     ;substract 4 from 3
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                    ;compare difference if greater than 2 deg.
        :JC     TH4_BAD
        :=      DIFF_ST_B
        :T      DW DIF_RO_B ;difference between TH3 and TH4 ok
```

```
        :L      TH_ST_B_1
        :L      TH_ST_B_2     ;buid average
        :+F
        :L      KF+2
        ::F
        :T      AVE_ST_A      ;average from stationary side 'B'

;---------------------check if in range ROTATING PART SIDE 'A'----------------
TH4_BAD :L      AVE_RO_A      ;average value rotating part side 'A'
        :L      KF+2000               ;value for more or less 40 deg.
        :-F                   ;differnce to 40 deg. in Accu. 1
        :L      KF+2740               ;value for working area -10 deg. to +40 deg.
        :>F
        :JC     KAESE         ;means greater than 50 deg.(+40...-10)

        :L      AVE_RO_A
        :L      KF+2000
        :-F
        :L      KF+0          ;value for working area -10 deg. to +40 deg.
        :<F
        :JC     KAESE
        :=      INS_LI_RO_A   ;set flagg rot.part side 'A' temp. are in range

;---------------------check if in range ROTATING PART SIDE 'B'----------------
KAESE :L        AVE_RO_B      ;average value rotating part side 'B'
        :L      KF+2000               ;value for more or less 40 deg.
        :-F                   ;differnce to 40 deg. in Accu. 1
        :L      KF+2740               ;value for working area -10 deg. to +40 deg.
        :>F
        :JC     KAESE1                ;means greater than 50 deg.(+40...-10)

        :L      AVE_RO_B
        :L      KF+2000
        :-F
        :L      KF+0          ;value for working area -10 deg. to +40 deg.
        :<F
        :JC     KAESE1
        :=      INS_LI_RO_B   ;set flag rot. part side 'B' temp. are in range

;--------------------check if in range STATIONARY PART SIDE 'A'----------------
KAESE1  :L      AVE_ST_A      ;average value stationary part side 'A'
        :L      KF+2000               ;value for more or less 40 deg.
        :-F                   ;differnce to 40 deg. in Accu. 1
        :L      KF+2740               ;value for working area -10 deg. to +40 deg.
        :>F
        :JC     KAESE2                ;means greater than 50 deg.(+40...-10)

        :L      AVE_ST_A
        :L      KF+2000
        :-F
        :L      KF+0          ;value for working area -10 deg. to +40 deg.
        :<F
        :JC     KAESE2
        :=      INS_LI_ST_A   ;set flag stat. part side 'A' temp. are in range

;--------------------check if in range STATIONARY PART SIDE 'B'----------------
```

```
KAESE2      :L      AVE_ST_B    ;average value stationary part side 'B'
        :L      KF+2000             ;value for more or less 40 deg.
        :-F                 ;differnce to 40 deg. in Accu. 1
        :L      KF+2740             ;value for working area -10 deg. to +40 deg.
        :>F
        :JC     KAESE3              ;means greater than 50 deg.(+40...-10)

        :L      AVE_ST_B
        :L      KF+2000
        :-F
        :L      KF+0            ;value for working area -10 deg. to +40 deg.
        :<F
        :JC     KAESE3
        :=      INS_LI_ST_B ;set flagg rot. part side 'B' temp. are in range

KAESE3
        :L      AVE_RO_A    ;compare averages
        :L      AVE_RO_B
        :-F                 ;substract 2 from 1
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                ;compare difference if greater than 2 deg.
        :JC     DEGRADED
        :=      AVE_RO              ;set only if no diff. >2 deg
        :L      AVE_RO_A    ;calculate reference for normal modus
        :L      AVE_RO_B
        :+F
        :L      KF+2
        ::F
        :T      AVERAGE             ;reference value for normal modus
        :JU     ENDE
DEGRADED
        :L      AVE_ST_A
        :L      AVE_ST_B
        :-F                 ;substract 2 from 1
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                ;compare difference if greater than 2 deg.
        :JC     MARGIN
        :=      AVE_ST              ;set only if no diff. >2 deg
        :L      AVE_ST_A    ;calculate reference for degrated
        :L      AVE_ST_B
        :+F
        :L      KF+2
        ::F
        :T      AVERAGE             ;reference value for normal modus
        :JU     ENDE

MARGIN      :L      AVE_RO_A
        :L      AVE_ST_A
        :-F                 ;substract 2 from 1
        :L      KF+140          ;equivalent value for 2deg.
        :!=G                ;compare difference if greater than 2 deg.
        :JC     MARGIN1
        :=      AVE_RS1             ;set only if no diff. >2 deg
        :L      AVE_RO_A    ;calculate reference for degrated
        :L      AVE_ST_A
        :+F
```

```
        :L      KF+2
        ::F
        :T      AVERAGE             ;reference value for normal modus
        :JU     ENDE
MARGIN1
        :L      AVE_RO_B
        :L      AVE_ST_A
        :-F                 ;substract 2 from 1
        :L      KF+140      ;equivalent value for 2deg.
        :!=G                ;compare difference if greater than 2 deg.
        :JC     MARGIN2
        :=      AVE_RS2             ;set only if no diff. >2 deg
        :L      AVE_RO_B    ;calculate reference for degrated
        :L      AVE_ST_A
        :+F
        :L      KF+2
        ::F
        :T      AVERAGE             ;reference value for normal modus
        :JU     ENDE

MARGIN2     :L      AVE_RO_B
        :L      AVE_ST_B
        :-F                 ;substract 2 from 1
        :L      KF+140      ;equivalent value for 2deg.
        :!=G                ;compare difference if greater than 2 deg.
        :JC     MARGIN3
        :=      AVE_RS3             ;set only if no diff. >2 deg
        :L      AVE_RO_B    ;calculate reference for degrated
        :L      AVE_ST_B
        :+F
        :L      KF+2
        ::F
        :T      AVERAGE             ;reference value for normal modus
        :JU     ENDE

MARGIN3     :L      AVE_RO_A
        :L      AVE_ST_B
        :-F                 ;substract 2 from 1
        :L      KF+140      ;equivalent value for 2deg.
        :!=G                ;compare difference if greater than 2 deg.
        :JC     MARGIN4
        :=      AVE_RS4             ;set only if no diff. >2 deg
        :L      AVE_RO_A    ;calculate reference for degrated
        :L      AVE_ST_B
        :+F
        :L      KF+2
        ::F
        :T      AVERAGE             ;reference value for normal modus

MARGIN4     :L      KF+500      ;valve should be 100% open
        :T      AVERAGE
ENDE    :BE
```