Figure 2-4  Get Status Command, Operational Sequence

GET STATUS

CONTROLLER SENDS STATUS REQUEST TO DISK DRIVE

DISK DRIVE SENDS STATUS TO CONTROLLER

INTERRUPT ENABLE

NO

YES

INTERRUPT REQUEST

TERMINATE COMMAND

END
Figure 4-4  S.t Status Command, Detailed Flow Chart

GET STATUS

LOAD OA

STATUS REQUEST

LOAD CS F<2:0>=2
SET BIT 7 OF CS
PC=08

SET
GO FF

INITIATE FUNCTION CONTROL
PC=18

START 200 MS TIMEOUT

GO FF STILL SET

NO

YES

END

NO

TIMEOUT UP

SET O/S & COMP ERR

CLEAR SISO AND OTHER CONTROLLER LOGIC
CLEAR ERROR BITS
PC=28
PC=38

ENABLE TRANSMIT STATUS
PC=48-128

TRANSMIT STATUS REQUEST FROM DA TO DRIVE OVER DRIVE COMMAND LINE

READ STATUS
PC=138

NO

IE SET

YES

SET INTR REQ
PC=168

SET BIT 7 OF CS
PC=173

END

READ MP REGISTER
Figure 4-5  Seek Command, Detailed Flow Chart

SEEK

LOAD DA CYLINDER DIFFERENCE

LOAD CS F<200> =3 CLEAR BIT 7 OF CS.

SET GO FF

INITIATE FUNCTION CONTROL PC=18

START 200 MS TIMEOUT

CLEAR SILO & OTHER CONTROLLER LOGIC CLEAR ERROR BITS

PC=28

DRIVE READY NO

YES

PC=38

SECTOR PULSE NO

YES

PC=48

1

2
Figure 4-9  Read Data Command, Function Control, Detailed Flow Chart (Sheet 1 of 2)
Figure 4-7  Write Data Command, Function Control, Detailed Flow Chart, 

DATA TRANSFER

WRITE
DATA

LOAD BA
LOAD DA
LOAD WC

LOAD CS
PC = 08
PC = 18

SET
PC

G0

INITIATE
FUNCTION
CONTROL

START
200 MS
TIMEOUT

GO FF
STILL
SET
NO

YES

END

TIMEOUT
UP

SET OPI
& COMP ERR

CLEAR SILO & OTHER
CONTROLLER
LOGIC, CLEAR
ERROR BITS

PC = 28
PC = 38
PC = 48

DRIVE
READY

EXECUTE
NPC BUS
CYCLE
(See Fig. 4-8)

PC = 58

SECTOR
PULSE

EXECUTE
NPC BUS
CYCLE
(See Fig. 4-8)

PC = 68

END

MA-0214

4-17
Figure 4-3 Write Data Command, Format Control and NPR, Detailed Flow Chart
Figure 4-6  Read Header Command, Detailed Flow Chart

READ HEADER

LOAD CS F<2:00>=4
CLEAR BIT 7 OF CS
PC=08

SET
GOFF

INITIATE
FUNCTION
CONTROL
PC=18

START
200 MS TIMEOUT

CLEAR SILO & OTHER
CONTROLLER LOGIC
CLEAR ERROR BITS
PC=28

NO
DRIVE
READY

YES
PC=38

NO
GO
BIT
SET

YES
PC=48

NO
SECTOR
PULSE

YES
PC=5

1

2

3

INITIATE
FORMAT CONTROL

CLEAR SECTOR
WORD COUNTER
WCNT=0

ENABLE PHASE
LOCK LOOP
PREAMBLE
O's

INCREMENT SECTOR
WORD COUNTER
WCNT=1

INCREMENT SECTOR
WORD COUNTER
WCNT=2

ENABLE
DATA SEPARATOR

PREAMBLE
MARKER
BIT

NO

YES

SHIFT 1ST HEADER
WORD INTO SILO
SHIFT 1ST HEADER
WORD INTO CRC

INCREMENT SECTOR
WORD COUNTER
WCNT=3

SHIFT 2ND HEADER
WORD INTO SILO
SHIFT 2ND HEADER
WORD INTO CRC

INCREMENT SECTOR
WORD COUNTER
WCNT=4

MA-0087

4-12
Figure 2-9  Read Data Without Header Check Command, Operational Sequence

READ DATA WITHOUT HEADER CHECK COMMAND

DRIVE READY

YES

SECTOR PULSE

NO

READ DATA FROM DRIVE INTO SILO

128 DATA WORDS

YES

INCREMENT CA REGISTER

NO

EXECUTE UNIBUS NPR TRANSFER

INCREMENT BUS ADDRESS REGISTER AND WORD COUNTER

NO

UNLOAD SILO

WORD COUNTER OVERFLOW

YES

STOP NPR

NO

NPR DONE

YES

INTERRUPT ENABLE SET

NO

SET INTERRUPT REQUEST

YES

TERMINATE COMMAND

END

2 /5
Figure 4-6  Read Header Command, Detailed Flow Chart (Cont)
RL01 SERVO DATA FORMAT

SECTOR PULSE - 62.5 µs

S1 BURST

S2 BURST

15 µs

OUTER GUARD BAND
24 TKS OF S1 BURSTS

DATA TX 0

DATA TX 1

DATA FIELD
256 TKS OF ALTERNATING S1 & S1 BURSTS
DATA TRX % ON AN S2 TRX

DATA TX 255

INNER GUARD BAND
17 TKS OF S2 BURSTS

(FIG. 10)