OPENING PERMISSIVES

A. Traffic signals RED permissive
   Do not allow continuation of cycle until traffic lights RED and 15 second timer times out or TRAFFIC LIGHT BYPASS engaged.

B. On-coming traffic gates DOWN permissive
   Do not allow continuation of cycle until on-coming traffic gates are DOWN or ON-COMING TRAFFIC GATES BYPASS engaged.

C. Off-going traffic gates DOWN permissive
   Do not allow continuation of cycle until off-going traffic gates are DOWN or OFF-GOING TRAFFIC GATES BYPASS engaged.

D. Traffic barriers DOWN permissive
   Do not allow continuation of cycle until traffic barriers are DOWN or TRAFFIC BARRIERS BYPASS engaged.

E. Sidewalk gates CLOSED permissive
   Do not allow continuation of cycle until sidewalk gates are CLOSED or SIDEWALK GATES BYPASS engaged.

F. Span locks PULLED permissive
   Do not allow continuation of cycle until span locks are PULLED or SPAN LOCKS BYPASS engaged.

G. Leaf(s) fully OPEN permissive
   Do not allow channel clearance lights GREEN until all leaves are fully OPEN.

---

FLOWCHART LEGEND

- Continue a process, start, stop
- Enable a process device or routine, iteration
- Action or process
- Decision
- Logical OR’s
- Logical AND’s
- Timer, delay
- Connector lines, data flow
- Insert flag
- Input, switch
CLOSING PERMISSIVES

A'  N/A

B'  On-coming gates RAISED permissive
   Do not allow continuation of cycle until on-coming traffic gates are RAISED.

C'  Off-going gates RAISED permissive
   Do not allow continuation of cycle until off-going traffic gates are RAISED.

D'  Traffic barriers RAISED permissive
   Do not allow continuation of cycle until traffic barriers are RAISED.

E'  Sidewalk gates OPEN permissive
   Do not allow continuation of cycle until sidewalk gates are OPEN.

F'  Span locks DRIVEN permissive
   Do not allow continuation of cycle until span locks are DRIVEN.

G'  Leaf(s) fully SEATED permissive
   Do not allow continuation of cycle until leaf(s) are FULLY SEATED.

Enable span locks DRIVE

Enable traffic signals GREEN

Enable traffic barriers raise and sidewalk gates OPEN

Enable off-going traffic gates RAISE

Enable on-coming traffic gates RAISE
TRAFFIC SIGNALS - OPENING

START OPENING SEQUENCE

TRAFFIC SIGNALS TO RED
PUSH AND RELEASE

CONTROL CONSOLE
PUSHBUTTON

TURN GREEN
LIGHTS OFF
AND ENERGIZE
YELLOW LIGHTS

DE-ENERGIZE
GONGS

ALL GATE ARMS
DOWN/CLOSED?

ENERGIZE
FLASHING
GATE ARM
LIGHTS

ANY BURNED
YELLOW LAMP?

THESE LAMPS ARE
BURNT OUT?

5 SEC.
TIMER

TO MESSAGE
SUBROUTINE

FROM MESSAGE
SUBROUTINE

TIMER ADJUSTABLE
1-10 SECONDS

DISPLAY MESSAGE
IF ANY LAMP IS
BURNT OUT

Y

N

ANY BURNED
RED LAMP?

TRAFFIC LIGHTS
RED?

TRAFFIC
LIGHTS RED?

15 SEC
TIMER

ENERGIZE
YELLOW
LIGHTS

ANY
BURNED
YELLOW
LAMP?

AN-15:
ADVANCE WARNING
SIGNALS TROUBLE

5 SEC.
TIMER

TRAFFIC LIGHTS
RED?

TRAFFIC LIGHTS
RED PERMISSIVE

OR

AN-24:
TRAFFIC SIGNALS
BYPASSED

PUSH AND RELEASE

RECORD DATE AND
TIME OF BYPASS

BYPASS WILL ALSO
BYPASS 15 SECOND
TIMER

TO MESSAGE
SUBROUTINE

FROM MESSAGE
SUBROUTINE

TRAFFIC LIGHT
BYPASS

ENERGIZE
GONGS

ALL GATE ARMS
DOWN/CLOSED

ENERGIZE
GONGS

THESE LAMPS ARE
BURNT OUT?

Y

N

ALARMS THIS SHEET:

1. TRAFFIC SIGNALS BYPASSED (AN-24)
2. ADVANCE WARNING SIGNALS TROUBLE (AN-15)
TRAFFIC SIGNALS - CLOSING

START MESSAGE SUBROUTINE

NEAR OR FAR SIGNAL?

NEAR

FAR

AN-13: NEAR TRAFFIC SIGNAL TROUBLE
AN-14: FAR TRAFFIC SIGNAL TROUBLE

MESSAGE SUBROUTINE (TRAFFIC SIGNAL TROUBLE)

END MESSAGE SUBROUTINE

ALARMS THIS SHEET:
1. TRAFFIC SIGNALS TROUBLE (AN-13, AN-14)

TRAFFIC SIGNALS - CLOSING

TURN RED LIGHTS OFF AND ENERGIZE GREEN LIGHTS

ANY BURNT GREEN LAMP?

Y

TRAFFIC SIGNAL TROUBLE

N

BRIDGE CLOSED

DISPLAY MESSAGE IF ANY LAMP IS BURNT OUT

AND

FROM MESSAGE SUBROUTINE

TO MESSAGE SUBROUTINE

DE-ENERGIZE FLASHING LIGHT CONTACTOR

DE-ENERGIZE FLASHING GATE ARM LIGHTS

WARNING DRAWBRIDGE AHEAD SIGN

START MESSAGE SUBROUTINE

NEAR OR FAR SIGNAL?

NEAR

FAR

AN-13: NEAR TRAFFIC SIGNAL TROUBLE
AN-14: FAR TRAFFIC SIGNAL TROUBLE

MESSAGE SUBROUTINE (TRAFFIC SIGNAL TROUBLE)

END MESSAGE SUBROUTINE

ALARMS THIS SHEET:
1. TRAFFIC SIGNALS TROUBLE (AN-13, AN-14)
ON-COMING TRAFFIC GATES - OPENING

ALARMS THIS SHEET:
1. ON-COMING TRAFFIC GATES BYPASSED (AN-25)
ON-COMING TRAFFIC GATES

ALARMS THIS SHEET:
1. TRAFFIC GATE OPERATOR TROUBLE (AN-46, AN-52)
2. TRAFFIC GATE LIMIT SWITCH FAILURE (AN-49, AN-55)
3. TRAFFIC GATE OPERATOR DOOR OPEN (AN-51, AN-57)
4. TRAFFIC GATE HANDCRANK INSERTED (AN-50, AN-56)
ON-COMING TRAFFIC GATES - CLOSING

NOTE: SEE SHEET 5 – "ON-COMING TRAFFIC GATES" FOR MESSAGE SUBROUTINES.

ALARMS THIS SHEET:
1. ON-COMING TRAFFIC GATES BYPASSED (AN-25)
OFF-GOING TRAFFIC GATES - OPENING

NOTE: SEE SHEET 12 – "OFF-GOING TRAFFIC GATES" FOR MESSAGE SUBROUTINES.

ALARMS THIS SHEET:
1. OFF-GOING TRAFFIC GATES BYPASSED (AN-26)
OFF-GOING TRAFFIC GATES

MESSAGE A SUBROUTINE (OFF-GOING TRAFFIC GATE OPERATOR TROUBLE)

MESSAGE B SUBROUTINE (OFF-GOING TRAFFIC GATE HANDCRANK INSERTED)

MESSAGE C SUBROUTINE (OFF-GOING TRAFFIC GATE OPERATOR DOOR OPEN)

MESSAGE D SUBROUTINE (OFF-GOING TRAFFIC GATE LIMIT SWITCH FAILURE)

ALARMS THIS SHEET:
1. TRAFFIC GATE OPERATOR TROUBLE (AN-58, AN-64)
2. TRAFFIC GATE LIMIT SWITCH FAILURE (AN-61, AN-67)
3. TRAFFIC GATE OPERATOR DOOR OPEN (AN-63, AN-69)
4. TRAFFIC GATE HANDCRANK INSERTED (AN-62, AN-68)
OFF-GOING TRAFFIC GATES - CLOSING

NOTE: SEE SHEET 12 – “OFF-GOING TRAFFIC GATES” FOR MESSAGE SUBROUTINES.

ALARMS THIS SHEET:
1. OFF-GOING TRAFFIC GATES BYPASSED (AN-26)
NOTE: SEE SHEET 15 "SIDEWALK GATES – 1 OF 2" AND SHEET 16 "SIDEWALK GATES – 2 OF 2" FOR MESSAGE SUBROUTINES.
MESSAGE A SUBROUTINE
(SIDEWALK GATE OPERATOR TROUBLE)

MESSAGE B SUBROUTINE
(SIDEWALK GATE HANDCRANK INSERTED)

ALARMS THIS SHEET:
1. SIDEWALK GATE OPERATOR TROUBLE (AN-71, AN-77, AN-83, AN-89)
2. SIDEWALK GATE HANDCRANK INSERTED (AN-75, AN-81, AN-87, AN-93)
SIDEWALK GATES - 2 OF 2

START MESSAGE C SUBROUTINE

NEAR OR FAR SIDEWALK GATE?

NEAR

FAR

MESSAGE C SUBROUTINE (SIDEWALK GATE OPERATOR DOOR OPEN)

AN-82: NOC SIDEWALK GATE OPERATOR DOOR OPEN

ON-COMING OR OFF-GOING SIDEWALK GATE?

ON-COMING

OFF-GOING

MESSAGE C SUBROUTINE (SIDEWALK GATE OPERATOR DOOR OPEN)

AN-88: FOG SIDEWALK GATE OPERATOR DOOR OPEN

END MESSAGE C SUBROUTINE

START MESSAGE D SUBROUTINE

NEAR OR FAR SIDEWALK GATE?

NEAR

FAR

MESSAGE D SUBROUTINE (SIDEWALK GATE LIMIT SWITCH FAILURE)

AN-80: NOC SIDEWALK GATE LIMIT SWITCH FAILURE

AN-92: NOG SIDEWALK GATE LIMIT SWITCH FAILURE

ON-COMING OR OFF-GOING SIDEWALK GATE?

ON-COMING

OFF-GOING

MESSAGE D SUBROUTINE (SIDEWALK GATE LIMIT SWITCH FAILURE)

AN-94: NOG SIDEWALK GATE OPERATOR DOOR OPEN

AN-76: FOC SIDEWALK GATE OPERATOR DOOR OPEN

END MESSAGE D SUBROUTINE

ALARMS THIS SHEET:
1. SIDEWALK GATE OPERATOR DOOR OPEN (AN-76, AN-82, AN-88, AN-94)
2. SIDEWALK GATE LIMIT SWITCH FAILURE (AN-74, AN-80, AN-86, AN-92)
SIDEWALK GATES - CLOSING

NOTE: SEE SHEET 15 "SIDEWALK GATES – 1 OF 2" AND SHEET 16 "SIDEWALK GATES – 2 OF 2" FOR MESSAGE SUBROUTINES.

ALARMS THIS SHEET:
1. SIDEWALK GATES BYPASSED (AN-27)
TRAFFIC BARRIERS - OPENING

NOTE: SEE SHEET 19 "TRAFFIC BARRIERS – 1 OF 2" AND SHEET 20 "TRAFFIC BARRIERS – 2 OF 2" FOR MESSAGE SUBROUTINES.
TRAFFIC BARRIERS - 1 OF 2

**MESSAGE A SUBROUTINE**
(Traffic Barrier Operator Trouble)

**MESSAGE B SUBROUTINE**
(Traffic Barrier Handcrank Inserted)

**ALARMS THIS SHEET:**
1. Traffic Barrier Operator Trouble (AN-96, AN-102, AN-114)
2. Traffic Barrier Handcrank Inserted (AN-100, AN-106, AN-112, AN-118)
TRAFFIC BARRIERS - 2 OF 2

MESSAGE C SUBROUTINE
(TRAFFIC BARRIER OPERATOR DOOR OPEN)

START MESSAGE C SUBROUTINE

FAR

NEAR OR FAR:
TRAFFIC BARRIER?

OG

NEAR

OG

COMMUN. OR OFF-GOING:
TRAFFIC BARRIER?

OC

ČOMMUN. OR OFF-GOING:
TRAFFIC BARRIER?

START MESSAGE D SUBROUTINE

END MESSAGE C SUBROUTINE

END MESSAGE D SUBROUTINE

MESSAGE D SUBROUTINE
(TRAFFIC BARRIER LIMIT SWITCH FAILURE)

START MESSAGE D SUBROUTINE

FAR

NEAR OR FAR:
TRAFFIC BARRIER?

OG

NEAR

OG

COMMUN. OR OFF-GOING:
TRAFFIC BARRIER?

OC

ČOMMUN. OR OFF-GOING:
TRAFFIC BARRIER?

AN-105: NOC TRAFFIC BARRIER LIMIT SWITCH FAILURE

ALARMS THIS SHEET:
1. TRAFFIC BARRIER OPERATOR DOOR OPEN (AN-101, AN-107, AN-113, AN-119)
2. TRAFFIC BARRIER LIMIT SWITCH FAILURE (AN-99, AN-105, AN-111, AN-117)
TRAFFIC BARRIERS - CLOSING

NOTE: SEE SHEET 19 “TRAFFIC BARRIERS – 1 OF 2” AND SHEET 20 “TRAFFIC BARRIERS – 2 OF 2” FOR MESSAGE SUBROUTINES.
SPAN LOCKS - OPENING

NOTE: SEE SHEET 23 "SPAN LOCKS" FOR MESSAGE SUBROUTINES.

ALARMS THIS SHEET:
1. SPAN LOCKS BYPASSED (AN-29)
SPAN LOCKS

START MESSAGE A SUBROUTINE

END MESSAGE A SUBROUTINE

START MESSAGE B SUBROUTINE

END MESSAGE B SUBROUTINE

START MESSAGE C SUBROUTINE

END MESSAGE C SUBROUTINE

START MESSAGE D SUBROUTINE

END MESSAGE D SUBROUTINE

MESSAGE A SUBROUTINE (SPAN LOCK OPERATOR TROUBLE)

MESSAGE B SUBROUTINE (SPAN LOCK HANDCRANK INSERTED)

MESSAGE C SUBROUTINE (SPAN LOCK OVERPRESSURE)

MESSAGE D SUBROUTINE (SPAN LOCK LIMIT SWITCH FAILURE)

ALARMS THIS SHEET:
1. SPAN LOCK OPERATOR TROUBLE (AN-121, AN-126, AN-131, AN-136)
2. SPAN LOCK HANDCRANK INSERTED OR OVERPRESSURE (AN-125, AN-130, AN-135, AN-140)
3. SPAN LOCK LIMIT SWITCH FAILURE (AN-124, AN-129, AN-134, AN-139)
NOTE: SEE SHEET 23 "SPAN LOCKS" FOR MESSAGE SUBROUTINES.
DO NOT ALLOW CONTINUATION OF CYCLE UNTIL BRAKES NOT MANUALLY RELEASED

DO NOT ALLOW CONTINUATION OF CYCLE UNTIL DISCONNECT COUPLING IS DISENGAGED

DO NOT ALLOW CONTINUATION OF CYCLE UNTIL SPAN LOCKS ARE PULLED

DO NOT ALLOW CONTINUATION OF CYCLE UNTIL DRIVE TROUBLE IS CLEARED

DO NOT ALLOW CONTINUATION OF CYCLE UNTIL BRAKES ARE RELEASED

DO NOT ALLOW CONTINUATION OF CYCLE UNTIL BRAKE TROUBLE IS CLEARED

NOTE: SEE SHEETS 27 THRU 35 "LEAFS – 1 OF 9" THRU "LEAFS - 9 OF 9" FOR MESSAGE SUBROUTINES.
NOTE: SEE SHEETS 27 THRU 35 "LEAFS – 1 OF 9" THRU "LEAFS - 9 OF 9" FOR MESSAGE SUBROUTINES.
START MESSAGE A SUBROUTINE

NEAR OR FAR LEAF?

NEAR

OPPOSITE OR ADJACENT LEAF?

O

Y

MOTOR A BRAKE?

Y

N

MOTOR B BRAKE?

Y

N

AN-211: NO LEAF MOTOR A BRAKE MANUALLY RELEASED

AN-217: NO LEAF MACHINERY BRAKE A MANUALLY RELEASED

AN-227: NO LEAF MACHINERY BRAKE A MANUALLY RELEASED

AN-207: NO LEAF MACHINERY BRAKE B MANUALLY RELEASED

AN-175: NA LEAF MOTOR A BRAKE MANUALLY RELEASED

AN-178: NA LEAF MOTOR B BRAKE MANUALLY RELEASED

AN-181: NA LEAF MACHINERY BRAKE A MANUALLY RELEASED

AN-184: NA LEAF MACHINERY BRAKE B MANUALLY RELEASED

AN-193: FA LEAF MOTOR A BRAKE MANUALLY RELEASED

AN-196: FA LEAF MOTOR B BRAKE MANUALLY RELEASED

AN-199: FA LEAF MACHINERY BRAKE A MANUALLY RELEASED

AN-202: FA LEAF MACHINERY BRAKE B MANUALLY RELEASED

AN-229: FO LEAF MOTOR A BRAKE MANUALLY RELEASED

AN-232: FO LEAF MOTOR B BRAKE MANUALLY RELEASED

AN-235: FO LEAF MACHINERY BRAKE A MANUALLY RELEASED

AN-238: FO LEAF MACHINERY BRAKE B MANUALLY RELEASED

END MESSAGE A SUBROUTINE

MESSAGE A SUBROUTINE
(BRAKE MANUALLY RELEASED)

ALARMS THIS SHEET:
1. MOTOR A BRAKE MANUALLY RELEASED
   (AN-175, AN-193, AN-211, AN-229)
2. MOTOR B BRAKE MANUALLY RELEASED
   (AN-178, AN-196, AN-214, AN-232)
3. MACHINERY BRAKE A MANUALLY RELEASED
   (AN-181, AN-199, AN-217, AN-235)
4. MACHINERY BRAKE B MANUALLY RELEASED
   (AN-184, AN-202, AN-220, AN-238)
ALARMS THIS SHEET:

1. EMERGENCY DRIVE ENGAGED (AN-173, AN-191, AN-209, AN-227)
2. LEAF DRIVE A FAULT (AN-171, AN-189, AN-207, AN-225)
3. LEAF DRIVE B FAULT (AN-172, AN-190, AN-208, AN-226)
A
LARMS THIS SHEET:
1. MOTOR A BRAKE NOT RELEASED
   (AN-176, AN-194, AN-212, AN-230)
2. MOTOR B BRAKE NOT RELEASED
   (AN-179, AN-197, AN-215, AN-233)
3. MACHINERY BRAKE A NOT RELEASED
   (AN-182, AN-200, AN-218, AN-236)
4. MACHINERY BRAKE B NOT RELEASED
   (AN-185, AN-203, AN-221, AN-239)
START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

START MESSAGE E  
SUBROUTINE

NEAR OR FAR LEAF?

MOTOR A BRAKE TROUBLE

MOTOR B BRAKE?

MACHINERY BRAKE A?

MACHINERY BRAKE B?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?

MACHINERY BRAKE A?
MESSAGE F SUBROUTINE
(MOTOR OVERSPEED)

ALARMS THIS SHEET:
1. MOTOR A OVERSPEED (AN-242, AN-244, AN-246, AN-248)
2. MOTOR B OVERSPEED (AN-243, AN-245, AN-247, AN-249)
ALARMS THIS SHEET:
1. MOTOR A HIGH TEMPERATURE (AN-186, AN-204, AN-222, AN-240)
2. MOTOR B HIGH TEMPERATURE (AN-187, AN-205, AN-223, AN-241)
LEAFS - 7 OF 9

ALARMS THIS SHEET:
1. LOCKS NOT PULLED (AN-165)
2. FULL OPEN LIMIT SWITCH FAILURE (AN-145, AN-151, AN-157, AN-163)
3. NEAR OPEN LIMIT SWITCH FAILURE (AN-144, AN-150, AN-156, AN-162)
MESSAGE K SUBROUTINE
(FULL CLOSED LIMIT SWITCH FAILURE)

START MESSAGE K SUBROUTINE

NEAR OR FAR LEAF?

NEAR

OPPOSITE OR ADJACENT LEAF?

O

AN-148: FA LEAF FULL CLOSED LIMIT SWITCH FAILURE

A

AN-160: FO LEAF FULL CLOSED LIMIT SWITCH FAILURE

AN-142: NA LEAF FULL CLOSED LIMIT SWITCH FAILURE

END MESSAGE K SUBROUTINE

MESSAGE L SUBROUTINE
(NEAR CLOSED LIMIT SWITCH FAILURE)

START MESSAGE L SUBROUTINE

NEAR OR FAR LEAF?

NEAR

OPPOSITE OR ADJACENT LEAF?

O

AN-155: NO LEAF NEAR CLOSED LIMIT SWITCH FAILURE

A

AN-143: NA LEAF NEAR CLOSED LIMIT SWITCH FAILURE

AN-149: FA LEAF NEAR CLOSED LIMIT SWITCH FAILURE

AN-161: FO LEAF NEAR CLOSED LIMIT SWITCH FAILURE

END MESSAGE L SUBROUTINE

ALARMS THIS SHEET:
1. FULL CLOSED LIMIT SWITCH FAILURE (AN-142, AN-148, AN-154, AN-160)
2. NEAR CLOSED LIMIT SWITCH FAILURE (AN-143, AN-149, AN-155, AN-161)
MESSAGE M SUBROUTINE
(FULL SEATED LIMIT SWITCH FAILURE)

START MESSAGE M SUBROUTINE

NEAR OR FAR LEAF?

NEAR OR ADJACENT LEAF?

AN-141: NA LEAF FULL SEATED LIMIT SWITCH FAILURE

AN-147: FA LEAF FULL SEATED LIMIT SWITCH FAILURE

AN-153: NO LEAF FULL SEATED LIMIT SWITCH FAILURE

AN-159: FO LEAF FULL SEATED LIMIT SWITCH FAILURE

END MESSAGE M SUBROUTINE

MESSAGE N SUBROUTINE
(POSITION TRANSDUCER FAILURE)

START MESSAGE N SUBROUTINE

NEAR OR FAR LEAF?

NEAR OR ADJACENT LEAF?

AN-146: NA LEAF POSITION TRANSDUCER FAILURE

AN-152: FA LEAF POSITION TRANSDUCER FAILURE

AN-164: FO LEAF POSITION TRANSDUCER FAILURE

END MESSAGE N SUBROUTINE

ALARMS THIS SHEET:
1. FULL SEATED LIMIT SWITCH FAILURE (AN-141, AN-147, AN-153, AN-159)
2. POSITION TRANSDUCER FAILURE (AN-146, AN-152, AN-158, AN-164)
NOTE: SEE SHEETS 27 THRU 35 "LEAFS – 1 OF 9" THRU "LEAFS - 9 OF 9" FOR MESSAGE SUBROUTINES.
LEAFS - CLOSING - 2 OF 2

FROM PREVIOUS SHEET

ACCELERATE PER ACCELERATION RAMP

LOCK DRIVEN (NOT PULLED)?

Y

ISSUE REDUCED (CREEP) SPEED COMMAND

N

FULL CLOSED LIMIT SWITCH MADE?

Y

REMOVE LOWER (REVERSE) DIRECTION COMMAND

N

SET BRAKES (REMOVE BRAKE RELEASE SIGNAL)

STOP BUTTON PRESSED?

Y

TO MESSAGE H SUBROUTINE

FROM MESSAGE H SUBROUTINE

N

TO NEXT SHEET

OVERSPEED?

Y

TO MESSAGE F SUBROUTINE

FROM MESSAGE F SUBROUTINE

N

OVERSPEED?

N

MOTOR HIGH TEMPERATURE?

Y

TO MESSAGE G SUBROUTINE

FROM MESSAGE G SUBROUTINE

N

MOTOR HIGH TEMPERATURE?

N

DRIVE TROUBLE?

Y

TO MESSAGE C SUBROUTINE

FROM MESSAGE C SUBROUTINE

N

DRIVE TROUBLE?

N

POSITION TRANSDUCER FAILURE?

Y

TO MESSAGE N SUBROUTINE

FROM MESSAGE N SUBROUTINE

N

POSITION TRANSDUCER FAILURE?

N

NEAR CLOSED LIMIT SWITCH MADE?

Y

TO MESSAGE K SUBROUTINE

FROM MESSAGE K SUBROUTINE

N

TO MESSAGE L SUBROUTINE

FROM MESSAGE L SUBROUTINE

N

NEAR CLOSED LIMIT SWITCH MADE?

TO MESSAGE H SUBROUTINE

FROM MESSAGE H SUBROUTINE

N

STOP BUTTON PRESSED?

N

TO NEXT SHEET

NEAR CLOSED LIMIT SWITCH MADE?

FROM PREVIOUS SHEET

NOTE: SEE SHEETS 27 THRU 35 "LEAFS – 1 OF 9" THRU "LEAFS – 9 OF 9" FOR MESSAGE SUBROUTINES.
LEAFS - SEATED

MAIN ROUTINE

FROM PREVIOUS SHEET

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?

FULLY SEATED LIMIT SWITCH MADE?
AN-32: TRAFFIC GATE LIMIT SWITCH BUS FUSE OPEN

CONTINUE

AN-33: SPAN LOCK LIMIT SWITCH BUS FUSE OPEN

CONTINUE

AN-34: LEAF LIMIT SWITCH BUS FUSE OPEN

CONTINUE

AN-35: SIDEWALK GATE LIMIT SWITCH BUS FUSE OPEN

CONTINUE

AN-36: TRAFFIC BARRIER LIMIT SWITCH BUS FUSE OPEN

CONTINUE

AN-37: BRAKE LIMIT SWITCH BUS FUSE OPEN

CONTINUE

AN-38: SAFETY INTERLOCKS BUS FUSE OPEN

CONTINUE

AN-39: TRAFFIC GATE BUS FUSE OPEN

CONTINUE

AN-40: TRAFFIC BARRIER BUS FUSE OPEN

CONTINUE