

TABLE OF CONTENTS:		
DIP SWITCH SELECTIONS:	SECTION:	PAGE:
TABLE OF CONTENTS		1-2
NORMAL RUN DIP SWITCHES	<i>Normal Run Dip Switches</i>	3
TWIN ENGINE QUICK CONFIGURATION MODE	<i>Quick Configuration</i>	4
SINGLE ENGINE QUICK CONFIGURATION MODE	<i>Quick Configuration</i>	4
ACTUATOR CALIBRATION MODE	<i>Actuator Calibration</i>	5
CS CUSTOM OPTIONS MODE	<i>CS Custom Options</i>	6
SELECTING STATION COUNT	<i>CS Custom Options</i>	6
SELECTING STD / PLUG-IN HANDLE	<i>CS Custom Options</i>	6
GEAR CUSTOM OPTIONS MODE	<i>Gear Custom Options</i>	7
SELECTING GEAR CABLE DIRECTION	<i>Gear Custom Options</i>	7
SELECTING GEAR DELAY	<i>Gear Custom Options</i>	7
SELECTING NEUTRAL DELAY	<i>Gear Custom Options</i>	7
THROTTLE CUSTOM OPTIONS MODE	<i>Throttle Custom Options</i>	8
SELECTING THROTTLE CABLE DIRECTION	<i>Throttle Custom Options</i>	8
SELECTING THROTTLE DELAY	<i>Throttle Custom Options</i>	8
SELECTING LEAD SYNC ENGINE	<i>Throttle Custom Options</i>	8
TROLL CUSTOM OPTIONS MODE	<i>Troll Custom Options</i>	9
SELECTING TROLL / NO TROLL	<i>Troll Custom Options</i>	9
SELECTING TROLL CABLE DIRECTION	<i>Troll Custom Options</i>	9
SELECTING THROTTLE ON TOP OF TROLL	<i>Troll Custom Options</i>	9
SELECTING GEAR TO TROLL DELAY	<i>Troll Custom Options</i>	9
SELECTING TROLL TO GEAR DELAY	<i>Troll Custom Options</i>	9
SELECTING TROLL TO THROTTLE DELAY	<i>Troll Custom Options</i>	10
SELECTING THROTTLE TO TROLL DELAY	<i>Troll Custom Options</i>	10
OTHER CUSTOM OPTIONS MODES	<i>Other Custom Options</i>	11
SELECTING THROTTLE / TROLL BUMP COUNT	<i>Other Custom Options</i>	11
SELECTING THROTTLE / TROLL BUMP SIZE	<i>Other Custom Options</i>	11
SELECTING HI IDLE STEP SIZE	<i>Other Custom Options</i>	12
SELECTING STARTUP OPTIONS	<i>Other Custom Options</i>	13

CONTINUED ON NEXT PAGE

NBS-08 DIP SWITCH SETTINGS

MODE SELECTION:		SECTION:	PAGE:
CP TROUBLE SHOOT MODE		<i>CP Trouble shoot</i>	14
	TROUBLE SHOOT 16 MOST RECENT ALARMS	<i>CP Trouble shoot</i>	14
	TROUBLE SHOOT SPECIFIC ALARM COUNT	<i>CP Trouble shoot</i>	14
HANDLE TROUBLE SHOOT MODE		<i>Handle Trouble shoot</i>	15
	TROUBLE SHOOT 16 MOST RECENT ALARMS	<i>Handle Trouble shoot</i>	15

DIP SWITCH FUNCTIONS IN NORMAL RUN (AT STARTUP):								
DIP S1								
DISABLE DIAGNOSTICS SECTION:	1	2	3	4	5	6	7	8
DISABLE ACTUATOR DIAGNOSTICS	OFF	OFF	OFF	OFF	ON			
DISABLE CS DIAGNOSTICS	OFF	OFF	OFF	OFF		ON		
DISABLE ANALOG DIAGNOSTICS	OFF	OFF	OFF	OFF			ON	
DISABLE SOLENOID DIAGNOSTICS	OFF	OFF	OFF	OFF				ON
ENTER ACTUATOR CALIBRATE MODE	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
DIP S2								
SYNC GAINS:	1	2	3	4	5	6	7	8
GAIN FOR < 20 RPM DIFFERENTIAL		ON						
GAIN FOR < 100 RPM DIFFERENTIAL				ON				
GAIN FOR > 100 RPM DIFFERENTIAL						ON		
DEFAULT SYNC GAIN: 2, 4, 6 ON.								
DIP S2								
DISPLAY ACTIVE STATION COM ERROR CNT:	1	2	3	4	5	6	7	8
DON'T DISPLAY COM ERRORS								OFF
DISPLAY COM ERRORS								ON

DIP SWITCH FUNCTIONS IN TWIN / SINGLE ENGINE QUICK CONFIGURATION MODE:

DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
QUICK CONFIGURATION	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DIP S2								
TWIN / SINGLE ENGINE QUICK CONFIG SETTINGS:	1	2	3	4	5	6	7	8
1 CS	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2 CS	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3 CS	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
PORT GEAR PUSH TO AHEAD			OFF	OFF	OFF	OFF	OFF	OFF
PORT GEAR PULL TO AHEAD			ON	OFF	OFF	OFF	OFF	OFF
STBD GEAR PUSH TO AHEAD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
STBD GEAR PULL TO AHEAD	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
PORT/STBD THROTTLE PUSH TO OPEN					OFF	OFF	OFF	OFF
PORT/STBD THROTTLE PULL TO OPEN					ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO STORE SETTING!!								S
NOTE: ALL CUSTOM SETTINGS WILL REVERT TO DEFAULT SETTINGS WHEN ENTERING QUICK CONFIGURATION MODE!!!								
DEFAULT VALUES STORED DURING QUICK CONFIGURATION:								
CS DEFAULTS:	SELECTED CS COUNT / STD CONNECTION (NO HAND-HELD).							
THROTTLE DEFAULTS:	SELECTED CABLE DIRECTION / 0.5 SEC THROTTLE DELAY.							
GEAR DEFAULTS:	SELECTED CABLE DIRECTIONS / 1 SEC GEAR DELAY.							
TROLL DEFAULTS:	NO TROLL / NO THROTTLE ON TOP / ALL TROLL DELAYS 0.5 SEC.							
THROTTLE / TROLL BUMP DEFAULTS:	20 BUMPS / SIZE 10 (about 1% of throttle/troll range).							
HI IDLE DEFAULTS:	5 STEPS / SIZE 2% (of throttle range).							
NEUTRAL DELAY DEFAULTS:	0 SEC.							
LEAD SYNC ENGINE:	STBD							
STARTUP CONFIGURATION:	STARTUP IN WARM.							

DIP SWITCH FUNCTIONS IN ACTUATOR CALIBRATION MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
ACTUATOR CALIBRATION	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
DIP S2								
ACTUATOR CALIBRATION SELECTION	1	2	3	4	5	6	7	8
CALIBRATE ALL ACTUATORS IN SEQUENCE	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CALIBRATE PORT THROTTLE ONLY	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CALIBRATE STBD THROTTLE ONLY	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
CALIBRATE PORT GEAR ONLY	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
CALIBRATE STBD GEAR ONLY	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
CALIBRATE PORT TROLL ONLY	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
CALIBRATE STBD TROLL ONLY	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF

DIP SWITCH FUNCTIONS IN CS CUSTOM OPTIONS MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
CONTROL STATIONS	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
DIP S2								
CS OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SET STATION COUNT	OFF	OFF	OFF	OFF				
1 CS	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
2 CSs	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
3 CSs	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
4 CSs	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
5 CSs	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
6 CSs	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
NOTE: FOR ALL THE FOLLOWING CS CONFIGURATIONS, DIP S1: 6-8 SELECTS CS TO BE CONFIGURED!								
DIP S1								
	1	2	3	4	5	6	7	8
CS TO BE CONFIGURED:	ON	ON	OFF	OFF	OFF			
CS1	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
CS2	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
CS3	ON	ON	OFF	OFF	OFF	ON	ON	OFF
CS4	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
CS5	ON	ON	OFF	OFF	OFF	ON	OFF	ON
CS6	ON	ON	OFF	OFF	OFF	OFF	ON	ON
DIP S2								
CS OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SELECT STD/PLUG-IN CONNECTION	ON	ON	OFF	OFF				
STANDARD CONNECTION	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
PLUG-IN CONNECTION (REMOTE CS)	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN GEAR CUSTOM OPTIONS MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
GEAR SETTINGS:	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
DIP S2								
GEAR OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SELECT GEAR CABLE DIRECTIONS	OFF	OFF	OFF					
PORT PUSH TO AHEAD	OFF	OFF	OFF	OFF		OFF	OFF	OFF
PORT PULL TO AHEAD	OFF	OFF	OFF	ON		OFF	OFF	OFF
STBD PUSH TO AHEAD	OFF	OFF	OFF		OFF	OFF	OFF	OFF
STBD PULL TO AHEAD	OFF	OFF	OFF		ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
GEAR OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SELECT GEAR DELAY	ON	OFF	OFF					
NO GEAR DELAY	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
GEAR DELAY 1.0 SEC	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
GEAR DELAY 2.0 SEC	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
GEAR DELAY 3.0 SEC	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
GEAR DELAY 4.0 SEC	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
GEAR DELAY 6.0 SEC	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
GEAR DELAY 8.0 SEC	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
GEAR DELAY 10.0 SEC	ON	OFF	OFF	ON	ON	ON	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
GEAR SETTINGS:	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
DIP S2								
GEAR OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SELECT NEUTRAL DELAY	OFF	ON	OFF					
NO NEUTRAL DELAY	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
NEUTRAL DELAY 0.5 SEC	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
NEUTRAL DELAY 1.0 SEC	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
NEUTRAL DELAY 1.5 SEC	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
NEUTRAL DELAY 2.0 SEC	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
NEUTRAL DELAY 2.5 SEC	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
NEUTRAL DELAY 3.0 SEC	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN THROTTLE CUSTOM OPTIONS MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
THROTTLE SETTINGS:	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
DIP S2								
THROTTLE SETTING TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SELECT THROTTLE CABLE DIRECTIONS	OFF	OFF	OFF					
PORT PUSH TO OPEN	OFF	OFF	OFF	OFF		OFF	OFF	OFF
PORT PULL TO OPEN	OFF	OFF	OFF	ON		OFF	OFF	OFF
STBD PUSH TO OPEN	OFF	OFF	OFF		OFF	OFF	OFF	OFF
STBD PULL TO OPEN	OFF	OFF	OFF		ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
THROTTLE SETTING TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SELECT THROTTLE DELAY	ON	OFF	OFF					
NO THROTTLE DELAY	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
THROTTLE DELAY 0.5 SEC	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
THROTTLE DELAY 1.0 SEC	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
THROTTLE DELAY 1.5 SEC	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
THROTTLE SETTING TO CUSTOMIZE:	1	2	3	4	5	6	7	8
SYNC LEAD ENGINE SELECTION	OFF	ON	OFF					
PORT IS LEAD ENGINE	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
STBD IS LEAD ENGINE	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN TROLL CUSTOM OPTIONS MODE:

DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
TROLL SETTINGS:	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
CONFIGURE FOR TROLL:	OFF	OFF	OFF					
SYSTEM DOES NOT HAVE TROLL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SYSTEM HAS TROLL	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
TROLL CABLE DIRECTIONS:	ON	OFF	OFF					
PORT PUSH TO FULL LOCKUP	ON	OFF	OFF	OFF		OFF	OFF	OFF
PORT PULL TO FULL LOCKUP	ON	OFF	OFF	ON		OFF	OFF	OFF
STBD PUSH TO FULL LOCKUP	ON	OFF	OFF		OFF	OFF	OFF	OFF
STBD PULL TO FULL LOCKUP	ON	OFF	OFF		ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
THROTTLE IN TROLL:	OFF	ON	OFF					
NO THROTTLE ON TOP OF TROLL	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
THROTTLE ON TOP OF TROLL	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
GEAR TO TROLL DELAY:	ON	ON	OFF					
NO DELAY	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
0.5 SEC	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
1.0 SEC	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
1.5 SEC	ON	ON	OFF	ON	ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
TROLL TO GEAR DELAY:	OFF	OFF	ON					
NO DELAY	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
0.5 SEC	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
1.0 SEC	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
1.5 SEC	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

CONTINUED ON NEXT PAGE

DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
TROLL SETTINGS:	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
TROLL TO THROTTLE DELAY:	ON	OFF	ON					
NO DELAY	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
0.5 SEC	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
1.0 SEC	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
1.5 SEC	ON	OFF	ON	ON	ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
DIP S2								
TROLL OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
THROTTLE TO TROLL DELAY:	OFF	ON	ON					
NO DELAY	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
0.5 SEC	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
1.0 SEC	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
1.5 SEC	OFF	ON	ON	ON	ON	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN THROTTLE / TROLL BUMP CUSTOM OPTIONS MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
THROTTLE/TROLL BUMP SETTINGS:	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
DIP S2								
BUMP SELECTION:	1	2	3	4	5	6	7	8
NUMBER OF BUMPS (UP/DN):	OFF	OFF	OFF					
10 BUMPS	OFF	OFF	OFF	ON	OFF	OFF	OFF	
20 BUMPS	OFF	OFF	OFF	OFF	ON	OFF	OFF	
30 BUMPS	OFF	OFF	OFF	OFF	OFF	ON	OFF	
40 BUMPS	OFF	OFF	OFF	OFF	OFF	OFF	ON	
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S
SIZE OF EACH BUMP:	ON	OFF	OFF					
5 (.5%)	ON	OFF	OFF	ON	OFF	OFF	OFF	
10 (1%)	ON	OFF	OFF	OFF	ON	OFF	OFF	
15 (1.5%)	ON	OFF	OFF	OFF	OFF	ON	OFF	
20 (2%)	ON	OFF	OFF	OFF	OFF	OFF	ON	
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN HIGH IDLE CUSTOM OPTIONS MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
HI IDLE SETTINGS:	OFF	ON	OFF	ON	ON	ON	OFF	OFF
DIP S2								
HI IDLE STEP TO MODIFY (S2, SW 1-3):	1	2	3	4	5	6	7	8
SELECT ALL 7 HI IDLE STEPS	OFF	OFF	OFF					
HI IDLE STEP 1	ON	OFF	OFF					
HI IDLE STEP 2	OFF	ON	OFF					
HI IDLE STEP 3	ON	ON	OFF					
HI IDLE STEP 4	OFF	OFF	ON					
HI IDLE STEP 5	ON	OFF	ON					
HI IDLE STEP 6	OFF	ON	ON					
HI IDLE STEP 7	ON	ON	ON					
SIZE OF EACH HI IDLE STEP(S2, SW 4-7):	1	2	3	4	5	6	7	8
0% OF THROTTLE RANGE				OFF	OFF	OFF	OFF	OFF
0.5% OF THROTTLE RANGE				ON	OFF	OFF	OFF	OFF
1% OF THROTTLE RANGE				OFF	ON	OFF	OFF	OFF
2% OF THROTTLE RANGE				ON	ON	OFF	OFF	OFF
3% OF THROTTLE RANGE				OFF	OFF	ON	OFF	OFF
4% OF THROTTLE RANGE				ON	OFF	ON	OFF	OFF
5% OF THROTTLE RANGE				OFF	ON	ON	OFF	OFF
6% OF THROTTLE RANGE				ON	ON	ON	OFF	OFF
8% OF THROTTLE RANGE				OFF	OFF	OFF	ON	OFF
10% OF THROTTLE RANGE				ON	OFF	OFF	ON	OFF
15% OF THROTTLE RANGE				OFF	ON	OFF	ON	OFF
20% OF THROTTLE RANGE				ON	ON	OFF	ON	OFF
25% OF THROTTLE RANGE				OFF	OFF	ON	ON	OFF
30% OF THROTTLE RANGE				ON	OFF	ON	ON	OFF
40% OF THROTTLE RANGE				OFF	ON	ON	ON	OFF
50% OF THROTTLE RANGE				ON	ON	ON	ON	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN STARTUP CUSTOM OPTIONS MODE:								
DIP S1								
OPTION TO CUSTOMIZE:	1	2	3	4	5	6	7	8
STARTUP SETTINGS:	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
DIP S2								
STARTUP SELECTION:	1	2	3	4	5	6	7	8
STARTUP MODE:	OFF	OFF	OFF					
SYSTEM WILL START UP IN NORMAL RUN	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SYSTEM WILL START UP IN WARM MODE	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
TURN ON SW 8 ON S2 UNTIL ALL LEDs ARE LIT TO ACTIVATE SETTING!!								S

DIP SWITCH FUNCTIONS IN CP TROUBLE SHOOT MODE:

TROUBLE SHOOT 16 MOST RECENT ALARMS								
DIP S1								
TROUBLE SHOOT OPTION:	1	2	3	4	5	6	7	8
16 MOST RECENT ALARMS	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
DIP S2								
TROUBLE SHOOT OPTION:	1	2	3	4	5	6	7	8
DISPLAY ALARM COUNT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DISPLAY ALARMS (STARTING WITH MOST RECENT)	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DISPLAY NEXT PREVIOUS ALARM	TOGGLE SWITCH 2 ON S2 ON AND OFF.							
DELETE ALARMS	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
NOTE: LEDS WILL SCROLL AFTER ALL THE ALARMS HAVE BEEN DELETED.								
TROUBLE SHOOT SPECIFIC ALARM COUNT								
DIP S1								
TROUBLE SHOOT OPTION:	1	2	3	4	5	6	7	8
SPECIFIC ALARM COUNT	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
DIP S2								
TROUBLE SHOOT OPTION:	1	2	3	4	5	6	7	8
DISPLAY COUNT FOR SPECIFIC ALARM CODE	ENTER SPECIFIC ALARM/WARNING CODE ON S2 SWITCHES 1-8.							
DELETE ALL SPECIFIC ALARM COUNTS								
DIP S1								
TROUBLE SHOOT OPTION:	1	2	3	4	5	6	7	8
DEL COUNT FOR ALL SPECIFIC ALARMS	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
NOTE: LEDS WILL SCROLL AFTER COUNT FOR ALL SPECIFIC ALARMS HAVE BEEN DELETED.								

HANDLE SWITCH FUNCTIONS IN HANDLE TROUBLE SHOOT MODE:**TO ENTER HANDLE TROUBLE SHOOT:**

1. MOVE HANDLES OUT OF NEUTRAL.
2. POWER UP THE SYSTEM.
3. PRESS THE TWO OUTER BUTTONS ON THE HANDLE.

AFTER ENTERING HANDLE TROUBLE SHOOT, THE FOLLOWING OPTIONS ARE AVAILABLE:

1. THE CONTROL HANDLE WILL AUTOMATICALLY SHOW THE ALARM COUNT WHEN ENTERING:

- A. BUZZER WILL BEEP AT A 4HZ RATE WHILE DISPLAYING THE 4MSBs OF THE ALARM COUNT.
- B. BUZZER WILL BEEP AT A 1HZ RATE WHILE DISPLAYING THE 4LSBs OF THE ALARM COUNT.

IT WILL KEEP ALTERNATING BETWEEN A AND B UNTIL THE FOLLOWING BUTTON IS PRESSED:

1. LEFT-MOST BUTTON: THE SYSTEM WILL ENTER ALARM DISPLAY STATE.

2. ALARM DISPLAY STATE:

- A. THE BUZZER WILL BEEP AT A 4HZ RATE WHILE DISPLAYING THE 4MSBs OF THE ALARM CODE.
- B. THE BUZZER WILL BEEP AT A 1HZ RATE WHILE DISPLAYING THE 4LSBs OF THE ALARM CODE.

IT WILL KEEP ALTERNATING BETWEEN A AND B UNTIL THE FOLLOWING BUTTONS ARE PRESSED:

1. LEFT-MOST BUTTON: THE SYSTEM WILL RETRIEVE THE NEXT PREVIOUS ALARM AND REPEAT A AND B.
2. TWO RIGHT-MOST BUTTONS: THE SYSTEM WILL ENTER DELETE ALARMS STATE:

3. DELETE ALARMS STATE:

A: ALL THE LEDS WILL FLASH WHEN THE ALARMS ARE DELETED (NO BUZZER).

THE SYSTEM WILL RE-ENTER HANDLE TROUBLE SHOOT MODE IF THE LEFT-MOST BUTTON IS PRESSED.



nbs08 dips 4-12-04A
REVISION TRACKING & SIGNATURE PAGE

REVISIONS	ECN #	CHANGES	By	DATE
1	2279Pn	Initial release	BL	03-15-05

Owner:	Date:
Management Representative:	Date: