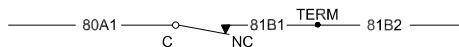


GENERAL NOTES:

1 THIS SCHEMATIC SHOWS THE CIRCUITRY IN A TRUCK 24 VOLT ELECTRICAL SYSTEM. THE CIRCUIT IS ILLUSTRATED USING SYMBOLS EXPLAINED IN THE FOLLOWING NOTES. THIS DOCUMENT IS FOR TRACING CURRENT FLOW AND TROUBLE SHOOTING.

2 INDIVIDUAL NUMBERS ARE ASSIGNED TO EACH WIRE AND ARE SHOWN AS FOLLOWS:



3 ZONE NUMBERS ARE USED TO LOCATE CIRCUITS AND ARE SHOWN IN THE LEFT HAND MARGIN OF EACH SHEET. THE FIRST ONE OR TWO DIGITS OF THE ZONE NUMBER REFERS TO THE SHEET NUMBER, THE LAST TWO DIGITS ARE THE LINE NUMBERS OF THE CIRCUITS
EXAMPLE: 321 REFERS TO SHEET 3, LINE 21.

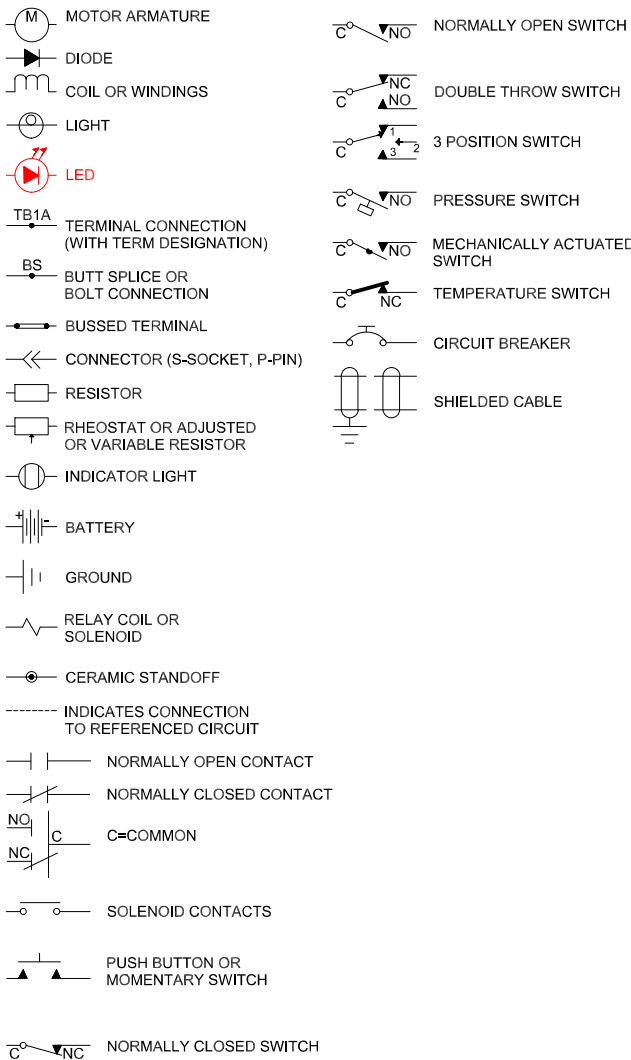
4 A CIRCUIT CONTINUATION IS SHOWN BY A ZONE NUMBER IN A HEXAGON.

5 ALL DEVICES ARE SHOWN IN THEIR NORMAL OR DE-ENERGIZED POSITION

6 A COMMON CHASSIS GROUND SYSTEM IS USED. ALL GROUND WIRES BEGIN WITH "X" AND ARE CONNECTED TO SPECIFIC GROUND POINT OR A "NEAREST" GROUND POINT. "NEAREST" DEFINES THE CLOSEST MOST DEPENDABLE CHASSIS GROUND POINT TO THE COMPONENT.

COMPONENTS:

NAME	DESCRIPTION	SCHEMATIC	LOCATION
AB F5W	AXLE BOX PRESSURE SWITCH	435	TRUCK
ALT	ALTERNATOR	203	AXLE BOX
BM1	BLOWER MOTOR 1 (GRID BOX)	249	ENGINE
BM2	BLOWER MOTOR 2	250	SUPERSTRUCTURE
...		3 --6 --	SUPERSTRUCTURE
CB8	CIRCUIT BREAKER 8	622	AXLE BOX
CNX	CONNECTOR X1 TO X5--CONTROL GROUP	3 --6 --	SUPERSTRUCTURE
DBU SW	DUMP BODY UP SWITCH	433	AIR DUCT
DID	DIAGNOSTIC INFORMATION DISPLAY	410	CAB
ESS	ENGINE SPEED SENSOR	305	ALTERNATOR
M SW	MASTER SWITCH	612	CAB
MBI SW	MASTER BATTERY ISOLATION SWITCH	602	FRAME
MTU ECU9	MTU 16V4000 TIER IV ELECTRONIC CONTROL UNIT 9	502	ENGINE
PSSC1	PROPULSION SYSTEM SERIAL CONNECTOR 1	403	CAB
PSSC2	PROPULSION SYSTEM SERIAL CONNECTOR 2	407	CAB
RG	RETARDING GRIDS	245	SUPERSTRUCTURE
RTN18	RETURN BUS (GROUND)-SHIFTER CONSOLE	646	CAB
SS1	SPEED SENSOR 1-LEFT REAR MOTOR	311	AXLE BOX
SS2	SPEED SENSOR 2-RIGHT REAR MOTOR	319	AXLE BOX
SS3	SPEED SENSOR 3-LEFT FRONT WHEEL	328	FRONT AXLE
SS4	SPEED SENSOR 4-RIGHT FRONT WHEEL	335	FRONT AXLE
TB18	TERMINAL BOARD 18--SHIFTER CONSOLE	631	CAB
TB61	TERMINAL BOARD 61	651	AXLE BOX
TM1	TRACTION MOTOR 1 (LEFT)	254	AXLE BOX
TM2	TRACTION MOTOR 2 (RIGHT)	254	AXLE BOX



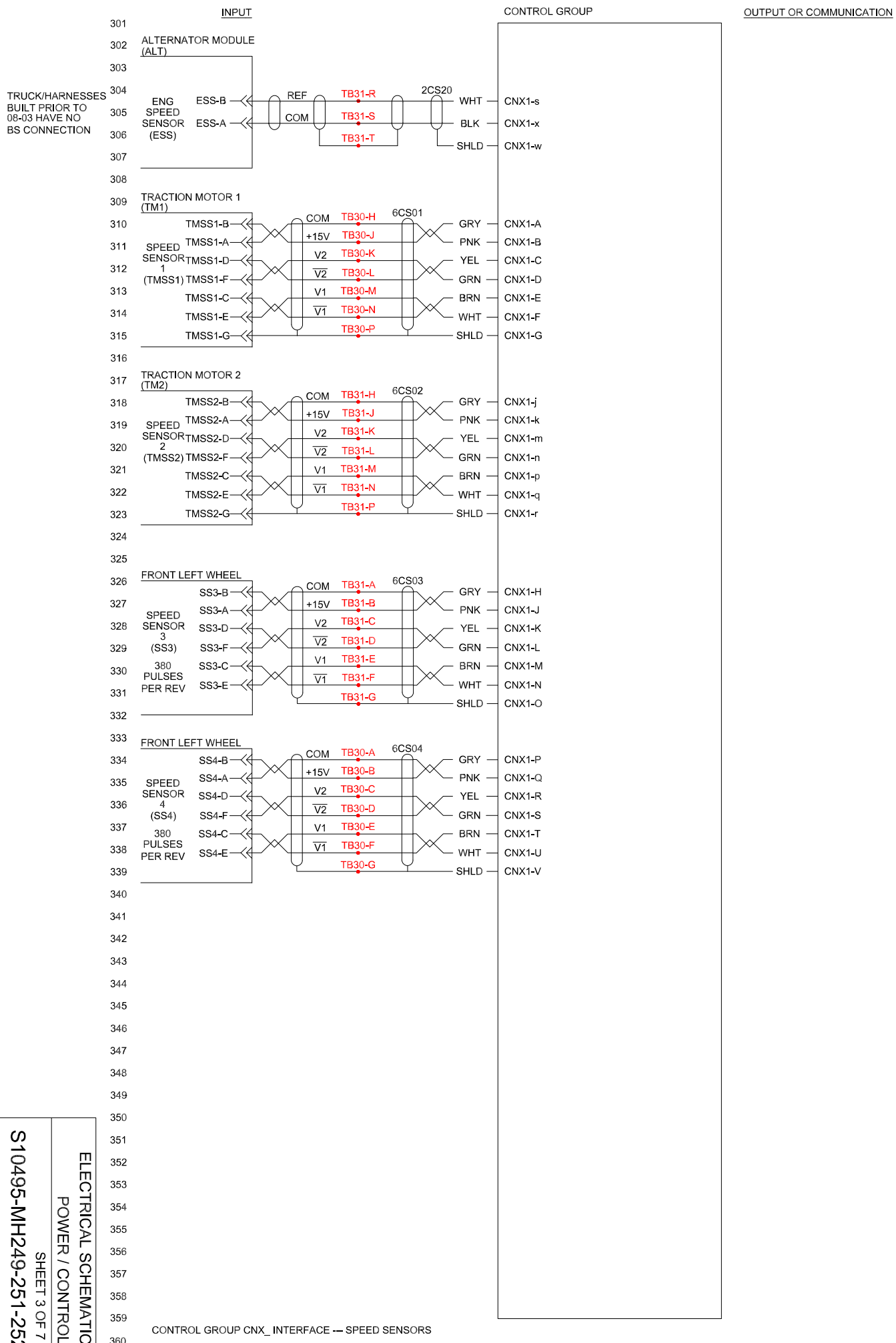
REFERENCE:

- SEE GE SCHEMATIC 84B522336 FOR IGBT CONTROL GROUP INTERNAL WIRING.
- THE CNX_ CONNECTORS PROVIDE THE EASIEST CONNECTION BETWEEN THIS SCHEMATIC AND THE GE SCHEMATIC. SEE SHEET 7 FOR "CNX_ CONNECTOR CROSS REFERENCE" ON THIS SCHEMATIC. SEE SHEET 70 THROUGH 74 FOR "CNX_ CONNECTOR CHARTS" ON GE SCHEMATIC.

INDEX

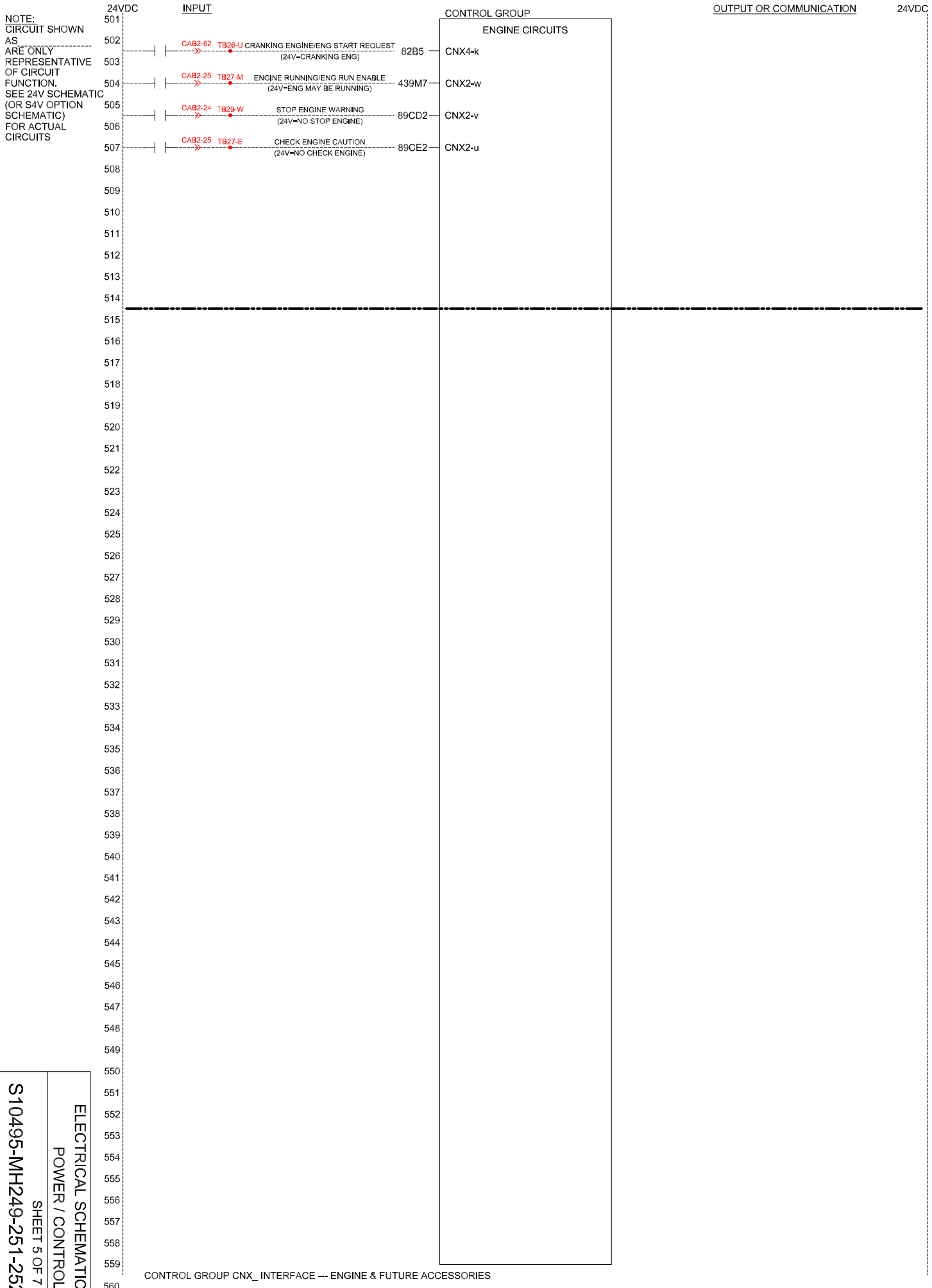
SHEET	CONTENT
1	NOTES AND REFERENCE DATA
2	POWER CIRCUITS W/IGBT CONTROL GROUP (NON CNX_ CONNECTIONS)
3	CONTROL GROUP CNX_ INTERFACE--SPEED SENSORS
4	CONTROL GROUP CNX_ INTERFACE--TRUCK SYSTEMS
5	CONTROL GROUP CNX_ INTERFACE--ENGINE & FUTURE ACCESSORIES
6	POWER SUPPLIES-- 24V, +15V, -15V, 10V, 5V
7	CNX_ CONNECTOR CROSS REFERENCE

S10495-MH249-251-252
 SHEET 1 OF 7
 ELECTRICAL SCHEMATIC
 POWER / CONTROL
 MT4400 AC DRIVE SYSTEM



S10495-MH249-251-252
 SHEET 3 OF 7
 ELECTRICAL SCHEMATIC
 POWER / CONTROL

CONTROL GROUP CNX_INTERFACE --- SPEED SENSORS



NOTE:
CIRCUIT SHOWN
AS
ARE ONLY
REPRESENTATIVE
OF CIRCUIT
FUNCTION.
SEE 24V SCHEMATIC
(OR S4V OPTION
SCHEMATIC)
FOR ACTUAL
CIRCUITS

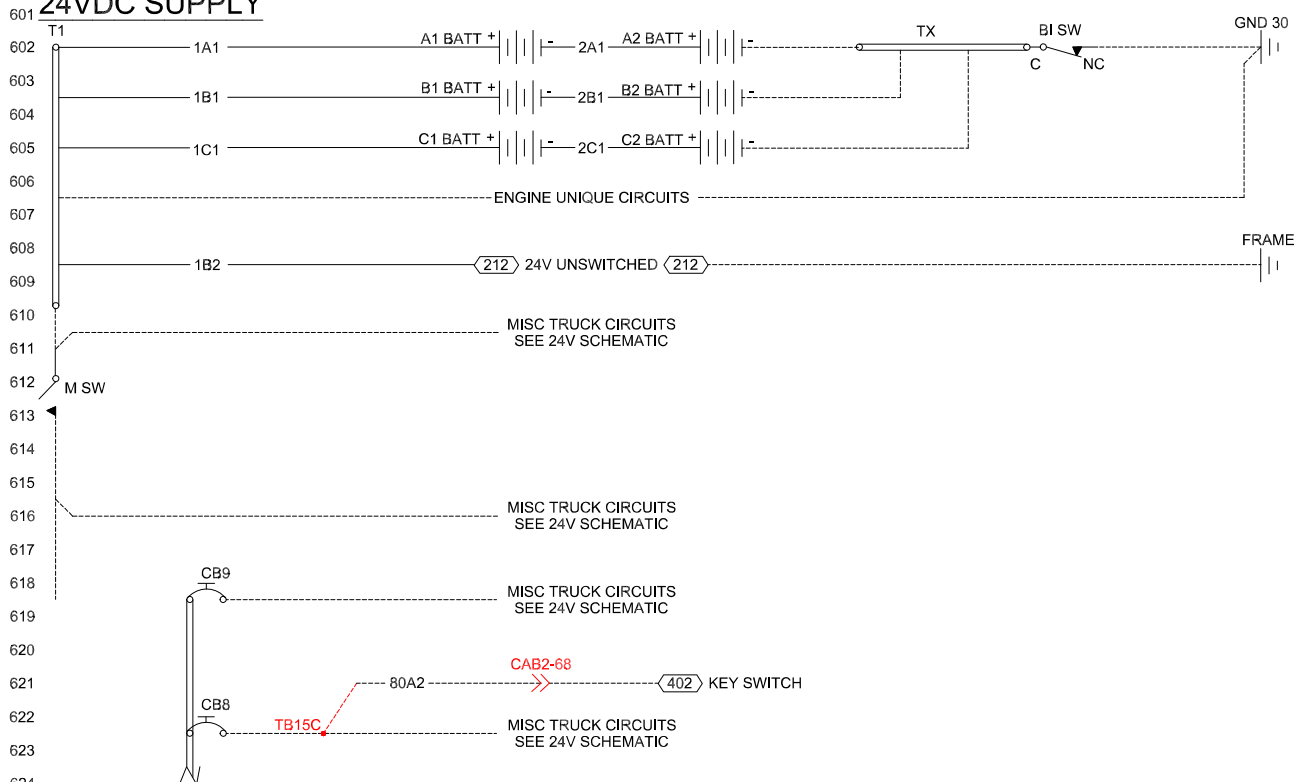
ELECTRICAL SCHEMATIC
 POWER / CONTROL
 SHEET 5 OF 7
 S10495-MH249-251-252

24VDC SUPPLY

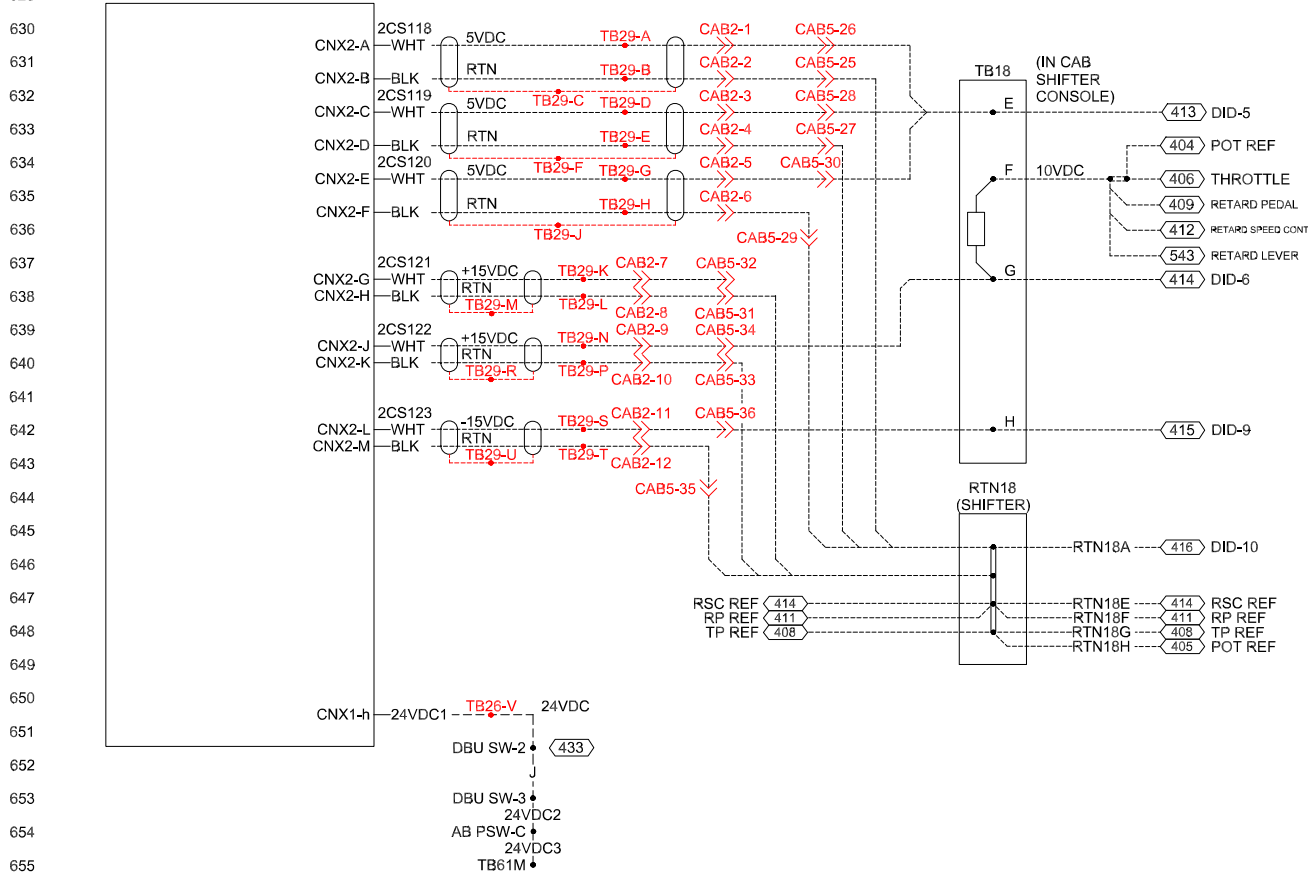
BATTERIES
BATTERY ISOLATION SWITCH

MASTER SWITCH

NOTE:
CIRCUITS SHOWN AS ARE ONLY REPRESENTATIVE OF CIRCUIT FUNCTION. SEE 24V SCHEMATIC (OR 24V OPTION SCHEMATIC) FOR ACTUAL CIRCUITS.



CONTROL GROUP



S10495-MH249-251-252
ELECTRICAL SCHEMATIC
POWER / CONTROL
SHEET 6 OF 7

NOTES:

CNX1 TO CNX5 ARE LOCATED BEHIND THE LOW VOLTAGE COMPARTMENT OF THE 'CONTROL GROUP' ABOVE THE AIR DUCT.

- NOT WIRED ON GE DR OR SIDE
- * NOT WIRED ON UR SIDE
- ** WIRED ON UR SIDE AS OPTION ONLY

- 1d ANALOG INPUT (SPARE)
- 12 FREQUENCY INPUT (SPARE)
- 20 ANALOG INPUT (HYD BRAKE FLUID TEMP)
- 2U SHEILD CONNECTION WHERE WE USED SINGLE CONDUCTOR WIRE
- 2g PWM INPUT (REF VOLTAGE NOT USED)
- 2h ANALOG INPUT (ENGINE LOAD SIG NOT USED)
- 2q WIRE # 2CS111 DR 3CS22
- 2w WIRE # 439M7 DR 51K9

- 3E ANALOG INPUT (SPARE)
- 3G DIGITAL INPUT (SPARE)
- 3J SHEILD CONNECTION WHERE WE USED SINGLE CONDUCTOR WIRE
- 3P DIGITAL INPUT (RESERVED)
- 3T ANALOG OUTPUT (SPARE)
- 3U ANALOG OUTPUT (HYD TEMP)
- 3e 24V SUPPLY (SPARE)
- 3h ANALOG OUTPUT (PROPULSION SYS TEMP)
- 3p ANALOG OUTPUT (SPARE)

- 4A DIGITAL OUTPUT (CRANK BATTERY)
- 4C DIGITAL OUTPUT (BATTERY SEP RELAY)
- 4D DIGITAL OUTPUT (NO PROPULSION)
- 4E DIGITAL OUTPUT (CRANK ENGINE)
- 4K DIGITAL INPUT (PARK BRAKE REQUEST)
- 40 DIGITAL INPUT (REST REQUEST)
- 4S DIGITAL OUTPUT (REVERSE MODE)
- 4X DIGITAL OUTPUT (HYDBOHLT)
- 4Z DIGITAL OUTPUT (PROP SYS OVER TEMP)
- 4d DIGITAL INPUT (TRUCK 70% LOADED)
- 4e DIGITAL OUTPUT (PARK BRAKE SOL)
- 4g DIGITAL INPUT (LAMP TEST)
- 4q FREQUENCY INPUT (SPARE)
- 4u SHEILD CONNECTION WHERE WE USED SINGLE CONDUCTOR WIRE
- 4v ANALOG INPUT (CRANK BATTERY)

- 5B DIGITAL INPUT (SPARE)
- 5C DIGITAL INPUT (SPARE)
- 5D DIGITAL OUTPUT (SPARE)
- 5F DIGITAL OUTPUT (SPARE)
- 5H ANALOG INPUT (SPARE)
- 5N STATUS (CONTROL POWER DN)
- 50 ANALOG INPUT (SPARE)
- 5R ANALOG INPUT (SPARE)
- 5U ANALOG INPUT (SPARE)
- 5X ANALOG INPUT (SPARE)
- 5a DIGITAL INPUT (SPARE)
- 5b DIGITAL INPUT (SPARE)
- 5e WIRE # 563M1 DR EWMC1
- 5f WIRE # 542M1 DR 034A
- 5g DIGITAL OUTPUT (SPARE)
- 5j DIGITAL OUTPUT (SPARE)
- 5h DIGITAL OUTPUT (SET ENG SPEED)
- 5q STATUS (CONTROL POWER SWITCH DN)
- 5u SERIAL PORT (SPARE)

CNX1			CNX1		
PIN	WIRE #	LINE #	PIN	WIRE #	LINE #
A	6CS01	310	a	NOTE 1Z	*
B	6CS01	310	b	NOTE 1Z	*
C	6CS01	310	c	83B1	436
D	6CS01	310	d	NOTE 1d	*
E	6CS01	310	e	NOTE 1d	*
F	6CS01	310	f	NOTE 1a	*
G	6CS01	310	g	NOTE 1a	*
H	6CS03	327	h	24VDC1	650
J	6CS03	327	j	6CS02	318
K	6CS03	327	k	6CS02	318
L	6CS03	327	m	6CS02	318
M	6CS03	327	n	6CS02	318
N	6CS03	327	p	6CS02	318
O	6CS03	327	q	6CS02	318
P	6CS04	334	r	6CS02	318
Q	6CS04	334	s	2CS20	304
R	6CS04	334	t	89BN1	435
S	6CS04	334	u	-	-
T	6CS04	334	v	89AV1	433
U	6CS04	334	w	2CS20	304
V	6CS04	334	x	2CS20	304
W	-	-	y	BP24V210	439
X	-	-	z	BP24V210	438
Y	-	-			
Z	NOTE 1Z	*			

CNX2			CNX2		
PIN	WIRE #	LINE #	PIN	WIRE #	LINE #
A	2CS118	630	a	**	546
B	2CS118	630	b	**	548
C	2CS119	632	c	**	548
D	2CS119	632	d	-	-
E	2CS120	634	e	024A	520
F	2CS120	634	f	2CS125	509/522
G	2CS121	637	g	NOTE 2g	*
H	2CS121	637	h	NOTE 2h	*
J	2CS122	639	j	NOTE 2h	*
K	2CS122	639	k	NOTE 2h	*
L	2CS123	642	m	2CS08	419
M	2CS123	642	n	2CS08	419
N	-	-	p	2CS125	509/522
O	-	-	q	NOTE 2q	503/516
P	89BF2	410	r	NOTE 2q	503/516
Q	NOTE 20	*	s	3CS22	516
R	NOTE 20	*	t	2CS08	420
S	**	544	u	89CE2	507/520
T	**	545	v	89CD2	505/518
U	NOTE 2U	*	w	NOTE 2w	504/517
V	RTN18F	411	x	NOTE 2q	503/516
W	NOTE 2U	*	y	**	549
X	NOTE 20	*	z	-	-
Y	2CS125	509/522			
Z	BP24V190	440			

CNX3			CNX3		
PIN	WIRE #	LINE #	PIN	WIRE #	LINE #
A	89BC2	413	a	NOTE 3T	*
B	22K5	426	b	NOTE 3T	*
C	3CS42	410	c	NOTE 3U	*
D	3CS42	410	d	3CS41	406
E	NOTE 3E	*	e	NOTE 3e	*
F	-	-	f	2CS07	422
G	NOTE 3G	*	g	-	-
H	3CS42	410	h	NOTE 3h	*
J	NOTE 3J	*	j	NOTE 3h	*
K	RTN18E	414	k	3CS20	402
L	NOTE 3E	*	m	RTN18H	405
M	-	-	n	NOTE 3J	*
N	-	-	p	NOTE 3p	*
O	3CS42	410	q	3CS20	402
P	NOTE 3P	*	r	3CS20	402
Q	-	-	s	3CS20	402
R	2CS07	422	t	89BB2	404
S	NOTE 3E	*	u	NOTE 3p	*
T	NOTE 3T	*	v	NOTE 3p	*
U	NOTE 3U	*	w	3CS43	456
V	3CS41	406	x	3CS43	456
W	3CS41	406	y	3CS43	456
X	3CS41	406	z	3CS43	456
Y	2CS07	424			
Z	BP24V190	423			

CNX4			CNX4		
PIN	WIRE #	LINE #	PIN	WIRE #	LINE #
A	NOTE 4A	*	a	PE01	445
B	89W2	453	b	-	-
C	NOTE 4C	*	c	25A11	427
D	NOTE 4D	*	d	NOTE 4d	*
E	NOTE 4E	*	e	NOTE 4e	*
F	**	552	f	8FA1	428
G	**	549	g	NOTE 4g	*
H	89BL2	424	h	89AW4	420
J	89BJ2	418	j	-	-
K	NOTE 4K	*	k	82B5	502/515
L	**	544	n	-	-
M	89B2	424	n	PU01	448
N	**	554	p	89BK2	422
O	NOTE 4D	*	q	NOTE 4q	*
P	89BA2	416	r	NOTE 4q	*
Q	-	-	s	NOTE 4q	*
R	89CR2	429	t	8EK2	407
S	NOTE 4S	*	u	NOTE 4u	*
T	**	555	v	NOTE 4v	*
U	-	-	w	NOTE 4v	*
V	-	-	x	NOTE 4v	*
W	89D2	426	y	RTN18G	408
X	NOTE 4X	*	z	BP24V170	442
Y	**	551			
Z	NOTE 4Z	*			

CNX5			CNX5		
PIN	WIRE #	LINE #	PIN	WIRE #	LINE #
A	-	-	a	NOTE 5a	*
B	NOTE 5B	*	b	NOTE 5b	*
C	NOTE 5C	*	c	P2C03	445
D	NOTE 5D	*	d	PB01	449
E	NOTE 5D	*	e	NOTE 5e	512/528
F	NOTE 5F	*	f	NOTE 5f	512/528
G	NOTE 5F	*	g	NOTE 5g	*
H	NOTE 5H	*	h	NOTE 5g	*
J	NOTE 5H	*	j	NOTE 5j	*
K	NOTE 5H	*	k	NOTE 5j	*
L	-	-	m	NOTE 5h	*
M	PP01	448	n	NOTE 5h	*
N	NOTE 5N	*	p	-	-
O	NOTE 5O	*	q	NOTE 5q	*
P	NOTE 5O	*	r	80A2	402
Q	NOTE 5O	*	s	P2C03	445
R	NOTE 5R	*	t	-	-
S	NOTE 5R	*	u	NOTE 5u	*
T	NOTE 5R	*	v	NOTE 5u	*
U	NOTE 5U	*	w	NOTE 5u	*
V	NOTE 5U	*	x	P2C03	445
W	NOTE 5U	*	y	NOTE 5u	*
X	NOTE 5X	*	z	BP24V170	442
Y	NOTE 5X	*			
Z	NOTE 5X	*			