

SERVICE MANUAL

SERVICE MANUAL SECTION

3300 Model From March, 2004 to December, 2006 — ELECTRICAL CIRCUIT DIAGRAMS

Model: 3300

Start Date: 03/01/2004 End Date: 12/31/2006

S08299

01/30/2007

Table of Contents

1. INSTRUCTIONS AND CHARTS (CHAPTER 1).....	1
1.1. CIRCUIT NUMBER IDENTIFICATION CHART, P. 1.....	1
1.2. CIRCUIT NUMBER IDENTIFICATION CHART, P. 2.....	2
1.3. CIRCUIT NUMBER IDENTIFICATION CHART, P. 3.....	3
1.4. CIRCUIT NUMBER IDENTIFICATION CHART, P. 4.....	4
1.5. CIRCUIT NUMBER IDENTIFICATION CHART, P. 5.....	5
1.6. CIRCUIT DIAGRAM INSTRUCTIONS, P. 6.....	6
1.7. CIRCUIT NUMBER IDENTIFICATION AND LOCATION, P. 7.....	7
1.8. SCHEMATIC SYMBOL CHART, P. 8.....	8
1.9. CIRCUIT NUMBER IDENTIFICATION AND LOCATION, P. 9.....	9
1.10. LAMP BULB CHART, P. 10.....	10
2. 12 VOLT POWER DISTRIBUTION AND DATA LINK (CHAPTER 2).....	11
2.1. ACCESSORY, P. 1.....	11
2.2. BATTERY, P. 2.....	12
2.3. IGNITION, P. 3.....	13
2.4. IGNITION, P. 4.....	14
2.5. GROUND, P. 5.....	15
2.6. DRIVETRAIN J1939 DATA LINK (CAB), P. 6.....	16
2.7. DRIVETRAIN J1939 DATA LINK (CHASSIS), P. 7.....	17
2.8. J1708 DATA LINK DIAGNOSTIC, P. 8.....	18
2.9. DIAGNOSTICS AND PROGRAMMABLE CONNECTOR, P. 9.....	19
2.10. J1708 DATALINK DIAGNOSTIC W/ABS6, P. 10.....	20
2.11. DRIVETRAIN J1939 DATALINK W/ABS6, W/LCT, W/WTEC XMSN, P. 11.....	21
2.12. DRIVETRAIN J1939 DATALINK W/ABS6, W/AMMETER, W/LCT, W/WTEC XMSN, P. 12...	22
2.13. DRIVETRAIN J1939 DATALINK W/ABS6, W/ALLISON GEN IV, W/MANUAL XMSN, P. 13...	23
2.14. DRIVETRAIN J1939 DATALINK W/ABS6, W/AMMETER, W/ALLISON GEN IV, P. 14.....	24
3. 12V CHARGING AND CRANKING SYSTEM (CHAPTER 3).....	25
3.1. KEY SWITCH START CIRCUIT, P. 1.....	25
3.2. CHARGING AND CRANKING, P. 2.....	26
4. CAB ACCESSORIES (CHAPTER 4).....	27
4.1. HORN, DUAL ELECTRIC, P. 1.....	27
4.2. STEERING WHEEL SWITCHES, P. 2.....	28
4.3. SWITCH PACKS, P. 3.....	29
4.4. WINDSHIELD WIPER AND WASHER SYSTEMS, P. 4.....	30
4.5. DRIVER'S AIR CONDITIONING, P. 5.....	31
5. ENGINE ELECTRONICS (CHAPTER 5).....	32
5.1. ELECTRONIC ENGINE CONTROLS — V8 ENGINE, P. 1.....	32
5.2. ELECTRONIC ENGINE CONTROLS — I6 ENGINE, P. 2.....	33
5.3. I6 FAN AND SHUTTER WIRING, P. 3.....	34
5.4. V8 FAN AND SHUTTER WIRING, P. 4.....	35
5.5. V8 FAN AND SHUTTER WIRING, P. 5.....	36
6. GAUGES AND WARNING LIGHTS (CHAPTER 6).....	37

6.1. IP GAUGES, P. 1.....	37
6.2. WARNING LIGHTS, P. 2.....	38
6.3. WARNING LIGHTS CONTROLLED BY ENGINE, TRANSMISSION, ABS CONTROLLERS, P. 3.....	39
6.4. ENG. OIL PRESS. AND TEMP., SPEEDOMETER, TACH., VOLTMETER AND WATER TEMP. GAUGE CIRCUITS, P. 4.....	40
6.5. GAUGES AND WARNING LIGHTS — INSTRUMENT CLUSTER, P. 5.....	41
6.6. GAUGES AND WARNING LIGHTS — AMMETER, P. 6.....	42
6.7. GAUGES AND WARNING LIGHTS — COOLANT TANK LEVEL, P. 7.....	43
6.8. GAUGES AND WARNING LIGHTS — FUEL GAUGE WITH AIR BRAKE CHASSIS, P. 8.....	44
6.9. GAUGES AND WARNING LIGHTS — FUEL GAUGE WITH HYDRAULIC BRAKE CHASSIS, P. 9.....	45
6.10. GAUGES AND WARNING LIGHTS — PARK BRAKE LIGHT, P. 10.....	46
6.11. GAUGES AND WARNING LIGHTS — AIR PRESSURE INPUT CIRCUIT AND ZERO VOLT REFERENCE SPLICE, P. 11.....	47
6.12. GAUGES AND WARNING LIGHTS — CHANGE TRANSMISSION FILTER LIGHT, P. 12.....	48
7. CHASSIS ACCESSORIES (CHAPTER 7).....	49
7.1. AIR DRYER AND DRAIN VALVE, P. 1.....	49
7.2. FUEL FILTER WIRING SYSTEM, P. 2.....	50
7.3. AIR PARK BRAKE INTERLOCK, P. 3.....	51
7.4. PARK BRAKE / SHIFTER INTERLOCK — WITH LCT TRANSMISSION ONLY, P. 4.....	52
7.5. ANTILOCK BRAKE SYSTEM (ABS), AIR, P. 5.....	53
7.6. ANTILOCK BRAKE SYSTEM (ABS), AIR, P. 6.....	54
7.7. AIR SOLENOID MODULE, P. 7.....	55
7.8. HYDRAULIC ANTILOCK BRAKES, P. 8.....	56
7.9. HYDRAULIC ANTILOCK BRAKES, P. 9.....	57
7.10. HYDRAULIC ANTILOCK BRAKES, P. 10.....	58
7.11. ALLISON WTEC MD TRANSMISSION, P. 11.....	59
7.12. ALLISON WTEC MD TRANSMISSION, P. 12.....	60
7.13. ALLISON WTEC MD TRANSMISSION, P. 13.....	61
7.14. ALLISON LCT TRANSMISSION, P. 14.....	62
7.15. CROSSING GATE, P. 15.....	63
7.16. BRAKE MONITOR, P. 16.....	64
7.17. MANUAL TRANSMISSION, P. 17.....	65
7.18. TWO SPEED AXLE, P. 18.....	66
7.19. CHASSIS ACCESSORIES W/ABS6 — BENDIX AIR — ECU PIN OUT, P. 19.....	67
7.20. CHASSIS ACCESSORIES W/ABS6 — BENDIX AIR — ECU PIN OUT, P. 20.....	68
7.21. CHASSIS ACCESSORIES W/ABS6 — BENDIX AIR ECM POWER, P. 21.....	69
8. LIGHT SYSTEMS (CHAPTER 8).....	70
8.1. BACK-UP LIGHTS / EXTERIOR LIGHT CHECK, P. 1.....	70
8.2. FOG LIGHTS, P. 2.....	71
8.3. HIGH BEAM, FLASH TO PASS, TURN SIGNAL, AND AIR BRAKE STOP SWITCHES, P. 3.....	72
8.4. HEADLIGHTS, MARKER, PARK, TURN, AND STOP RELAY — WITHOUT FENDER MOUNT LIGHTS, P. 4.....	73
8.5. HEADLIGHTS, MARKER, PARK, TURN, AND STOP RELAY — WITH FENDER MOUNT LIGHTS, P. 5.....	74
8.6. EXPORT STOP, TURN, TAIL AND BACK-UP LIGHTS, P. 6.....	75
9. BODY BUILDER CONNECTION DATA (CHAPTER 9).....	76
9.1. BODY BUILDER ELECTRICAL CONNECTION DATA FOR ALL MODELS, P. 1.....	76
9.2. BODY BUILDER ELECTRICAL CONNECTION DATA FOR CE MODEL, P. 2.....	77

9.3. STOP ARM AND RED / AMBER LIGHTS, P. 3.....	78
9.4. EMERGENCY EXIT BUZZER AND POST TRIP INSPECTION, P. 4.....	79
9.5. DOOR OPEN / CLOSE WITH ELEC. CONTROL, P. 5.....	80
9.6. DOOR OPEN / CLOSE WITH AIR CONTROL FOR CE MODEL, P. 6.....	81
9.7. WHEELCHAIR LIFT INTERLOCK, P. 7.....	82
9.8. FLASHER SWITCHES FOR CE MODEL, P. 8.....	83
9.9. PARK BRAKE STATUS, P. 9.....	84
9.10. DUAL WIPER MOTORS FOR PT / MEXICO AND EXPORT MODELS, P. 10.....	85
9.11. MEXICO AND EXPORT BUS WINDSHIELD WASHER PUMP, P. 11.....	86
9.12. CE BUS REDUNDANT DOOR CONTROLS, P. 12.....	87
9.13. MANUAL DOOR FOR CE BUS, P. 13.....	88
10. CONNECTOR COMPOSITES (CHAPTER 10).....	89
10.1. CONNECTOR COMPOSITES (701), (702), (1002), (1003), (1004), (1005), P. 1.....	89
10.2. CONNECTOR COMPOSITES (1006), (1007), (1008F), (1008M), (1009), (1010), (1012), P. 2.....	90
10.3. CONNECTOR COMPOSITE (1011), P. 3.....	91
10.4. CONNECTOR COMPOSITE (1011) FUSE / CIRCUIT BREAKER CHART, P. 4.....	92
10.5. CONNECTOR COMPOSITES (1011), (1013), (1014) FUSE BLOCK CONNECTIONS, P. 5.....	93
10.6. CONNECTOR COMPOSITES (1015), (1016), (1017), (1018), (1019), (1020), (1021), (1023), P. 6.....	94
10.7. CONNECTOR COMPOSITES (1100), (1101), (1104), (1105), (1106), (1107), (1107F), (1108), P. 7.....	95
10.8. CONNECTOR COMPOSITES (1400), (1401), (1402), (1403), (1404), (1500), (1501), (1555), P. 8.....	97
10.9. CONNECTOR COMPOSITES (1600), (1601), (1602), (1603), P. 9.....	98
10.10. CONNECTOR COMPOSITES (1604), (1650), (1657), (1804), (1807), (1808), (1809), P. 10.....	99
10.11. CONNECTOR COMPOSITES (1810), (1811), (1812), (1823), (1824), (1828), (1829), (1830), P. 11.....	100
10.12. CONNECTOR COMPOSITES (4003), (4005), (4006), (4009), (4010), (4011), P. 12.....	101
10.13. CONNECTOR COMPOSITE (4013M), P. 13.....	102
10.14. CONNECTOR COMPOSITE (4013), P. 14.....	103
10.15. CONNECTOR COMPOSITE (4014), P. 15.....	104
10.16. CONNECTOR COMPOSITE (4014M), P. 16.....	105
10.17. CONNECTOR COMPOSITES (4016), (4017), (4018), (4019), (4020), (4034), (4036), P. 17.....	106
10.18. CONNECTOR COMPOSITES (4039), (4040), (4041), (4046), (4087), P. 18.....	107
10.19. CONNECTOR COMPOSITES (4301), (4302), (4303), (4500), P. 19.....	108
10.20. CONNECTOR COMPOSITE (4705), P. 20.....	109
10.21. CONNECTOR COMPOSITES (4705M), (4905), (6011), P. 21.....	110
10.22. CONNECTOR COMPOSITES (6020), (6021), P. 22.....	111
10.23. CONNECTOR COMPOSITES (6316), (6323F), (6323M), (6332F), (6332M), (6333M), (6350), P. 23.....	112
10.24. CONNECTOR COMPOSITES (6400), (6407), (6703), (6708), P. 24.....	113
10.25. CONNECTOR COMPOSITES (6709), (6715), (7104M), (7104F), (7104FA), P. 25.....	114
10.26. CONNECTOR COMPOSITE (7150), P. 25A.....	115
10.27. CONNECTOR COMPOSITES (7200), (7202), P. 26.....	116
10.28. CONNECTOR COMPOSITES (7203), (7204), P. 27.....	117
10.29. CONNECTOR COMPOSITES (7250), (7300), (7303), P. 28.....	118
10.30. CONNECTOR COMPOSITES (7304), (7305), (7500), P. 29.....	119
10.31. CONNECTOR COMPOSITES (7350), (7500), P. 29A.....	120
10.32. CONNECTOR COMPOSITES (7600), (7601), (7603), (7604), (7605), (7607), (7701), (8000), P. 30.....	121

10.33. CONNECTOR COMPOSITES (8000F), (8001), (8001F), (8002R), (8002L), (8003), P. 31...	122
10.34. CONNECTOR COMPOSITES (8003), (8100R), (8100L), (8152R), (8152L), (8155R), (8155L), P. 32.....	123
10.35. CONNECTOR COMPOSITES (8310), (8311), (8450), (9100), P. 33.....	124
10.36. CONNECTOR COMPOSITES (9101), (9254), (9255), (9257), (9258), (9260), (9261), P. 34.....	125
10.37. CONNECTOR COMPOSITES (9261), (9262F), (9262M), (9301), (9500M), P. 35.....	126
10.38. CONNECTOR COMPOSITES (9500F), (9500M), (9501), P. 36.....	127
10.39. CONNECTOR COMPOSITES (9503), (9506), (9507), (9508), (9510), (9511), P. 37.....	128
10.40. CONNECTOR COMPOSITES (9512), (9513F), (9513M), (9514), P. 38.....	129
10.41. CONNECTOR COMPOSITES (9515), (9516), (9517), (9518), (9519), (9520), (9521), (9522), P. 39.....	130
10.42. CONNECTOR COMPOSITES (9523F), (9523M), (9524), (9526), P. 40.....	131
10.43. CONNECTOR COMPOSITES (9527), (9530), (9532F), (9532M), (9533), (9534), (9535), (9536), P. 41.....	132
10.44. CONNECTOR COMPOSITES (9537M), (9537F), (9538), (9539), (9540), (9541M), P. 42....	133
10.45. CONNECTOR COMPOSITES (9541M), (9541F), (9736), (9737), (9777), (9778), (9801), P. 43.....	134

1. INSTRUCTIONS AND CHARTS (CHAPTER 1)

1.1. CIRCUIT NUMBER IDENTIFICATION CHART, P. 1

INTERNATIONAL TRUCK AND ENGINE CORPORATION THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.	ELECTRICAL CIRCUIT DIAGRAM CHAPTER 1 INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION																																																	
<p>PREFIX DESIGNATIONS</p> <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <th style="width: 10%;">PREFIX</th> <th>LOCATION</th> </tr> <tr><td>A</td><td>CAB-INSTRUMENT PANEL</td></tr> <tr><td>K</td><td>ENGINE/TRANSMISSION</td></tr> <tr><td>L</td><td>DRIVE TRAIN DATA LINK/FAN SOLENOID</td></tr> <tr><td>M</td><td>HORN</td></tr> <tr><td>N</td><td>CHASSIS, FRONT SECTION</td></tr> <tr><td>R</td><td>CHASSIS, REAR SECTION</td></tr> <tr><td>U</td><td>HOOD HARNESS</td></tr> </table> <p>CIRCUIT NUMBER AND IDENTIFICATIONS</p> <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <th style="width: 15%;">CIRCUIT NUMBER</th> <th style="width: 10%;">COLOR</th> <th>DESCRIPTION</th> </tr> <tr><td>1</td><td>LTBL</td><td>ALTERNATOR-FIELD</td></tr> <tr><td>2</td><td>RD</td><td>ALTERNATOR-CHARGE</td></tr> <tr><td>3</td><td>DKBL</td><td>J1708 DATALINK, SWITCH DATA LINK (+)</td></tr> <tr><td></td><td>GY</td><td>J1708 DATALINK, SWITCH DATA LINK (-)</td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>5</td><td>YL</td><td>DRIVE TRAIN J1939 DATA LINK (+)</td></tr> <tr><td></td><td>GN</td><td>DRIVE TRAIN J1939 DATA LINK (-)</td></tr> <tr><td>6</td><td>GY</td><td>LOW VOLTAGE ELECTRONIC FEED (LESS THAN 9 VOLTS)</td></tr> <tr><td>7</td><td>RD</td><td>ALTERNATOR-RESISTANCE</td></tr> <tr><td>8</td><td></td><td></td></tr> </table>		PREFIX	LOCATION	A	CAB-INSTRUMENT PANEL	K	ENGINE/TRANSMISSION	L	DRIVE TRAIN DATA LINK/FAN SOLENOID	M	HORN	N	CHASSIS, FRONT SECTION	R	CHASSIS, REAR SECTION	U	HOOD HARNESS	CIRCUIT NUMBER	COLOR	DESCRIPTION	1	LTBL	ALTERNATOR-FIELD	2	RD	ALTERNATOR-CHARGE	3	DKBL	J1708 DATALINK, SWITCH DATA LINK (+)		GY	J1708 DATALINK, SWITCH DATA LINK (-)	4			5	YL	DRIVE TRAIN J1939 DATA LINK (+)		GN	DRIVE TRAIN J1939 DATA LINK (-)	6	GY	LOW VOLTAGE ELECTRONIC FEED (LESS THAN 9 VOLTS)	7	RD	ALTERNATOR-RESISTANCE	8		
PREFIX	LOCATION																																																	
A	CAB-INSTRUMENT PANEL																																																	
K	ENGINE/TRANSMISSION																																																	
L	DRIVE TRAIN DATA LINK/FAN SOLENOID																																																	
M	HORN																																																	
N	CHASSIS, FRONT SECTION																																																	
R	CHASSIS, REAR SECTION																																																	
U	HOOD HARNESS																																																	
CIRCUIT NUMBER	COLOR	DESCRIPTION																																																
1	LTBL	ALTERNATOR-FIELD																																																
2	RD	ALTERNATOR-CHARGE																																																
3	DKBL	J1708 DATALINK, SWITCH DATA LINK (+)																																																
	GY	J1708 DATALINK, SWITCH DATA LINK (-)																																																
4																																																		
5	YL	DRIVE TRAIN J1939 DATA LINK (+)																																																
	GN	DRIVE TRAIN J1939 DATA LINK (-)																																																
6	GY	LOW VOLTAGE ELECTRONIC FEED (LESS THAN 9 VOLTS)																																																
7	RD	ALTERNATOR-RESISTANCE																																																
8																																																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>CHK</th> <th>DATE</th> <th>CHANGE</th> <th>REV</th> <th>REFERENCE</th> <th>DRWH</th> <th>NAME</th> </tr> <tr> <td>CNA</td> <td>28FEB06</td> <td>CONVERTED FROM SABER</td> <td>C</td> <td>59968M</td> <td>U00JLH3</td> <td>DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS</td> </tr> <tr> <td></td> <td></td> <td>TO UG.</td> <td></td> <td></td> <td>55806A</td> <td>DATE 19JUL02 PART NO. AE08-54425 SHEET 01</td> </tr> </table>		CHK	DATE	CHANGE	REV	REFERENCE	DRWH	NAME	CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS			TO UG.			55806A	DATE 19JUL02 PART NO. AE08-54425 SHEET 01																												
CHK	DATE	CHANGE	REV	REFERENCE	DRWH	NAME																																												
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS																																												
		TO UG.			55806A	DATE 19JUL02 PART NO. AE08-54425 SHEET 01																																												

Figure 1 Circuit Number Identification Chart

1.2. CIRCUIT NUMBER IDENTIFICATION CHART, P. 2

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 1

INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION (CONT.)

CIRCUIT NUMBER AND IDENTIFICATION (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
9	GY	ZERO VOLT REFERENCE (ZVR)
10	WH	CHASSIS/ENGINE GROUND
11	WH	CAB GROUND
12	LTBL	ACCESSORY FEED
13	PK BK	IGNITION FEED IGNITION FEED (BODY BUILDER CONNECTOR)
14	RD	BATTERY FEED
15	RD	KEY SWITCH FEED
16		
17	PK	STARTER CONTROL
18	PK	GLOW PLUG/PRE-HEATER
19	GY	ENGINE SHUTDOWN
20	LTGN	REMOTE POWER MODULE
21	TN	COLD START CONTROLS (ETHER)
22		
23	TN	ENGINE FAN/SHUTTERS
24	GY	ENGINE EXHAUST BRAKE
25	TN	PYROMETER
26	TN	AMMETER
27	TN	VOLTMETER
28	TN	INSTRUMENTS & GAUGES
29	TN	ENGINE WATER TEMPERATURE
30	TN	ENGINE OIL TEMPERATURE
31	TN	TRANSMISSION OIL TEMPERATURE
32	TN	AXLE OIL TEMPERATURE

CHK	DATE	CHANGE	REV	REFERENCE	ORIGIN	NAME
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS
		TO UG.			RELEASE NO. 55806A	DATE 19JUL02
					PART NO. AE08-54425	SHEET 02

Figure 2 Circuit Number Identification Chart (Cont.)

1.3. CIRCUIT NUMBER IDENTIFICATION CHART, P. 3

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 1

INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION (CONT.)

CIRCUIT NUMBER AND IDENTIFICATION (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
33	TN	ENGINE OIL LEVEL
34	TN	COOLANT LEVEL
35	TN	ENGINE OIL PRESSURE
36	TN	FUEL LEVEL
37	TN	FUEL PUMP
38		
39	GY	AIR DRYER HEATER
40	GY	LOW AIR PRESSURE WARNING
41	TN	AIR TEMPERATURE
42	GY	FRONT AXLE ENGAGED
43	GY	POWER DIVIDER LOCK (PDL) WARNING
44	GY	PARK BRAKE WARNING
45	LTGN	ANTI-THEFT WARNING
46	GY	POWER TAKE -OFF WARNING
47	GY	SPEEDOMETER
48	GY	TACHOMETER
49	GY	DIFFERENTIAL LOCK WARNING
50	YL	LIGHT SWITCH FEED
51	YL	DIMMER SWITCH FEED
52	YL	HEADLIGHT HI-BEAM
53	YL	HEADLIGHT LO-BEAM
54	BN	PARKING/MARKER LIGHTS
55	OR	TURN SIGNAL FEED
56	OR	TURN SIGNAL LIGHTS-LEFT
	YL	TURN SIGNAL LIGHTS-LEFT (BODY BUILDER CONNECTION)
57	OR	TURN SIGNAL LIGHTS-RIGHT
	LTGN	TURN SIGNAL LIGHTS-RIGHT (BODY BUILDER CONNECTION)

CHK	DATE	CHANGE	REV	REFERENCE	DRAGN	NAME
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS
		TO UG.			RELEASE NO. 55806A	DATE 19JUL02
						PART NO. AE08-54425
						SHEET 03

Figure 3 Circuit Number Identification Chart (Cont.)

1.4. CIRCUIT NUMBER IDENTIFICATION CHART, P. 4

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 1

INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION (CONT.)

CIRCUIT NUMBER AND IDENTIFICATION (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
58	BN	CLEARANCE IDENTIFICATION LIGHTS
59	GY	SOLENOID
60	OR	HAZARD LIGHTS
61	GY	AIR SUSPENSION
62	DKBL	PANEL LIGHTS
63	DKBL	COURTESY/DOME LIGHTS
64	YL	FOG/DRIVING LIGHTS
65	OR	CAB REAR FLOOD LIGHTS
66	YL	DAY TIME RUNNING LIGHTS
67		
68	BN	TAIL LIGHTS
69	BN	LICENSE PLATE LIGHT
70	OR	STOP LIGHTS
		STOP LIGHTS(BODY BUILDER CONNECTION)
71	OR	BACK-UP LIGHTS
		BACK-UP LIGHTS(BODY BUILDER CONNECTION)
72	OR	TRAILER AUXILIARY FEED -BATTERY
73		
74	LTGN	HEATER RECIRC MOTOR
75	LTGN	HEATER BLOWER MOTOR
76	LTGN	AUXILIARY FAN
77	LTGN	AIR CONDITIONER
78	LTGN	MIRRORS-HEATED,MOTORIZED
79	GY	SEAT BELTS
80	BK	SLEEPER BOX RELAY-FEED
81	LTGN	POWER DOOR LOCKS

CHK	DATE	CHANGE	REV	REFERENCE	DRWING	NAME
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS
		TO UG.			RELEASE NO. 55806A	DATE 19JUL02
					PART NO. AE08-54425	SHEET 04

Figure 4 Circuit Number Identification Chart (Cont.)

1.5. CIRCUIT NUMBER IDENTIFICATION CHART, P. 5

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

CIRCUIT NUMBER AND IDENTIFICATIONS (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
82	GY	WINDSHIELD WIPER
83	LTGN	POWER WINDOWS
84	LTGN	CIGAR LIGHTER
85	GY	HORN
86	LTGN	RADIO-ENTERTAINMENT
87	GY	WINDSHIELD WASHER
88	LTGN	CLOCK/HOURMETER
89	VT	AIR BAG
90	GY	HYDRAULIC BRAKE PUMP
91	VT	INTERCOMMUNICATIONS
92	TN	TRANSMISSION CONTROLS-ELECTRONICS
93	TN	AXLE SHIFT CONTROL
94	GY	ANTILOCK BRAKE SYSTEM
95	TN	EXHAUST EMISSION
96	YL	SNOW PLOW LIGHTS
97	VT	ENGINE CONTROLS-ELECTRONIC
98	BK	DATALINK AND DIAGNOSTICS
99	VT	ACCELERATOR POSITION SENSOR (APS)
100	GY	AIR HORN (ELECTRIC SOLENOID ACTUATED)
101	TN	BRAKE APPLICATION AIR
102	YL	FLASH TO PASS

ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 1

INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION (CONT.)

Chg

DATE

CHANGE

REV

REFERENCE

DRAWN

NAME

CNA

28FEB06

CONVERTED FROM SABER

C

59968M

U00JLH3

DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS

TO UG.

RELEASE NO.

DATE

PART NO.

SHEET

55806A

19JUL02

AE08-54425

05

Figure 5 Circuit Number Identification Chart (Cont.)

1.6. CIRCUIT DIAGRAM INSTRUCTIONS, P. 6

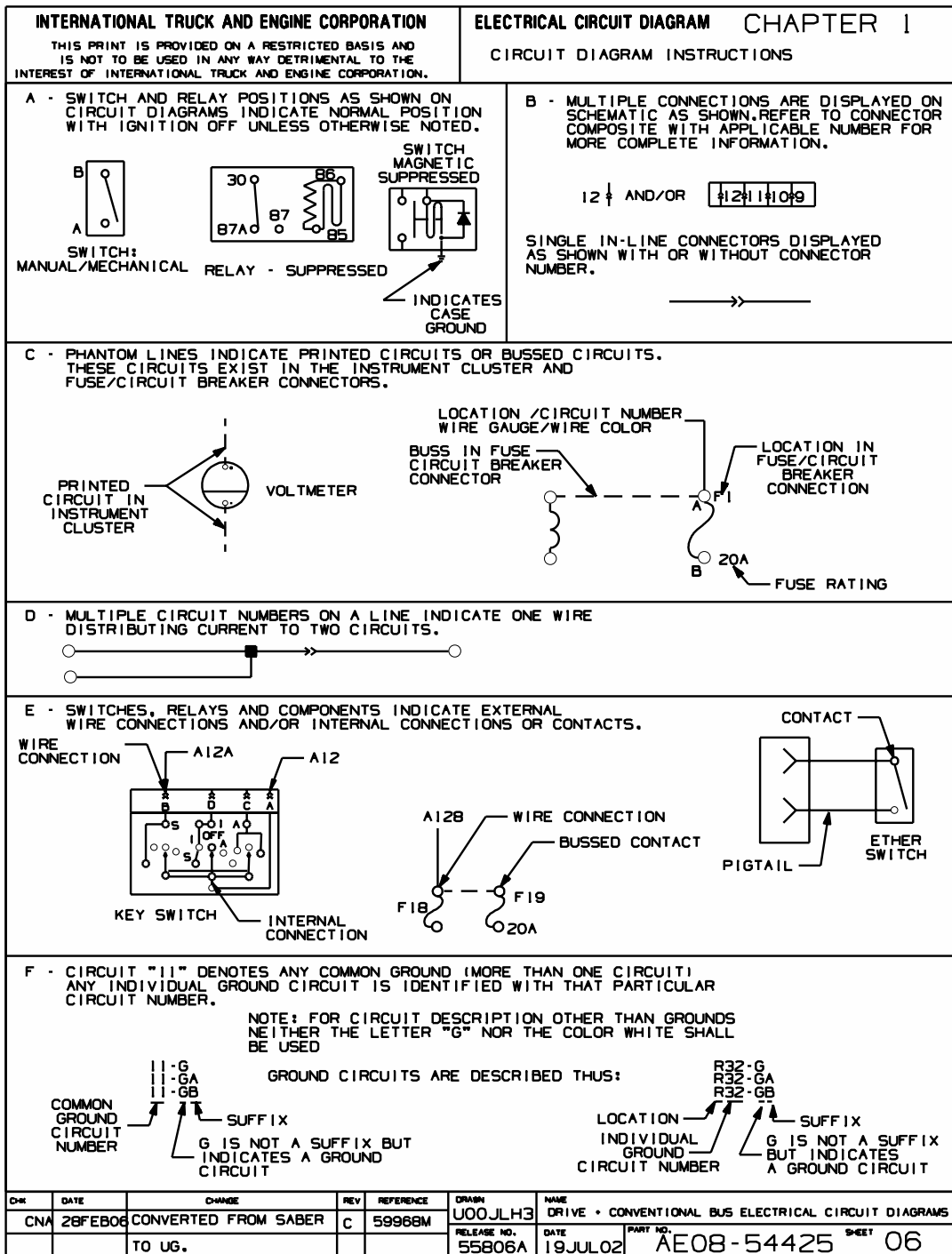


Figure 6 Circuit Diagram Instructions

1.7. CIRCUIT NUMBER IDENTIFICATION AND LOCATION, P. 7

INTERNATIONAL TRUCK AND ENGINE CORPORATION <small>THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.</small>				ELECTRICAL CIRCUIT DIAGRAM CHAPTER 1 INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION																																																																																																							
<p>G - ABBREVIATIONS: COLOR, NOUN AND ENGINE</p> <p style="margin-top: 20px;">COLOR ABBREVIATION</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <th style="width: 25%;">ABBREVIATION</th> <th style="width: 25%;">COLOR</th> <th style="width: 25%;">ABBREVIATION</th> <th style="width: 25%;">COLOR</th> </tr> <tr><td>AO</td><td>AQUA</td><td>LTGN</td><td>LIGHT GREEN</td></tr> <tr><td>BK</td><td>BLACK</td><td>OR</td><td>ORANGE</td></tr> <tr><td>BL</td><td>BLUE</td><td>PK</td><td>PINK</td></tr> <tr><td>BN</td><td>BROWN</td><td>PL</td><td>PURPLE</td></tr> <tr><td>DKGN</td><td>DARK GREEN</td><td>RD</td><td>RED</td></tr> <tr><td>GD</td><td>GOLD</td><td>SIL</td><td>SILVER</td></tr> <tr><td>GY</td><td>GRAY</td><td>TN</td><td>TAN</td></tr> <tr><td>GN</td><td>GREEN</td><td>VT</td><td>VOILET</td></tr> <tr><td>LTBL</td><td>LIGHT BLUE</td><td>WH</td><td>WHITE</td></tr> <tr><td></td><td></td><td>YL</td><td>YELLOW</td></tr> </table> <p style="margin-top: 20px;">NOUN ABBREVIATION</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <th style="width: 25%;">ABBREVIATION</th> <th style="width: 25%;">DESCRIPTION</th> <th style="width: 25%;">ABBREVIATION</th> <th style="width: 25%;">DESCRIPTION</th> </tr> <tr><td>A</td><td>ACCESSORY</td><td>G</td><td>GROUND</td></tr> <tr><td>ACC</td><td></td><td>GND</td><td></td></tr> <tr><td>AC</td><td>AIR CONDITIONER</td><td>I</td><td>IGNITION</td></tr> <tr><td>AUX</td><td>AUXILIARY</td><td>IGN</td><td></td></tr> <tr><td>AWG</td><td>AMERICAN WIRE GAUGE</td><td>IND</td><td>INDICATOR</td></tr> <tr><td>B</td><td>BATTERY</td><td>L</td><td>LEFT</td></tr> <tr><td>BAT</td><td></td><td>LT</td><td>LIGHT</td></tr> <tr><td>CONN</td><td>CONNECTION OR CONNECTOR</td><td>W/O</td><td>WITHOUT</td></tr> <tr><td>DRL</td><td>DAYTIME RUNNING LIGHTS</td><td>OPT</td><td>OPTIONAL</td></tr> <tr><td>ENG</td><td>ENGINE</td><td>R</td><td>RIGHT</td></tr> <tr><td>FWD</td><td>FORWARD</td><td>S</td><td>STARTER OR SENDER</td></tr> <tr><td>GA</td><td>GAUGE</td><td>THERMO</td><td>THERMOSTAT</td></tr> <tr><td></td><td></td><td>W/</td><td>WITH</td></tr> </table> <p style="margin-top: 20px;">ENGINE ABBREVIATION :</p> <p>VB- MFG (INTERNATIONAL) VB 6.0 LITER ELECTRONIC ENGINE CONTROL</p> <p>16- MFG (INTERNATIONAL) NGD 16 DT466 & DT/HT530 ELECTRONIC ENGINE CONTROL</p> <p>IDM- MFG (INTERNATIONAL) INJECTOR DRIVE MODULE</p>								ABBREVIATION	COLOR	ABBREVIATION	COLOR	AO	AQUA	LTGN	LIGHT GREEN	BK	BLACK	OR	ORANGE	BL	BLUE	PK	PINK	BN	BROWN	PL	PURPLE	DKGN	DARK GREEN	RD	RED	GD	GOLD	SIL	SILVER	GY	GRAY	TN	TAN	GN	GREEN	VT	VOILET	LTBL	LIGHT BLUE	WH	WHITE			YL	YELLOW	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	A	ACCESSORY	G	GROUND	ACC		GND		AC	AIR CONDITIONER	I	IGNITION	AUX	AUXILIARY	IGN		AWG	AMERICAN WIRE GAUGE	IND	INDICATOR	B	BATTERY	L	LEFT	BAT		LT	LIGHT	CONN	CONNECTION OR CONNECTOR	W/O	WITHOUT	DRL	DAYTIME RUNNING LIGHTS	OPT	OPTIONAL	ENG	ENGINE	R	RIGHT	FWD	FORWARD	S	STARTER OR SENDER	GA	GAUGE	THERMO	THERMOSTAT			W/	WITH
ABBREVIATION	COLOR	ABBREVIATION	COLOR																																																																																																								
AO	AQUA	LTGN	LIGHT GREEN																																																																																																								
BK	BLACK	OR	ORANGE																																																																																																								
BL	BLUE	PK	PINK																																																																																																								
BN	BROWN	PL	PURPLE																																																																																																								
DKGN	DARK GREEN	RD	RED																																																																																																								
GD	GOLD	SIL	SILVER																																																																																																								
GY	GRAY	TN	TAN																																																																																																								
GN	GREEN	VT	VOILET																																																																																																								
LTBL	LIGHT BLUE	WH	WHITE																																																																																																								
		YL	YELLOW																																																																																																								
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION																																																																																																								
A	ACCESSORY	G	GROUND																																																																																																								
ACC		GND																																																																																																									
AC	AIR CONDITIONER	I	IGNITION																																																																																																								
AUX	AUXILIARY	IGN																																																																																																									
AWG	AMERICAN WIRE GAUGE	IND	INDICATOR																																																																																																								
B	BATTERY	L	LEFT																																																																																																								
BAT		LT	LIGHT																																																																																																								
CONN	CONNECTION OR CONNECTOR	W/O	WITHOUT																																																																																																								
DRL	DAYTIME RUNNING LIGHTS	OPT	OPTIONAL																																																																																																								
ENG	ENGINE	R	RIGHT																																																																																																								
FWD	FORWARD	S	STARTER OR SENDER																																																																																																								
GA	GAUGE	THERMO	THERMOSTAT																																																																																																								
		W/	WITH																																																																																																								
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME																																																																																																					
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS																																																																																																					
		TO UG.			55806A	DATE	PART NO.																																																																																																				
						19JUL02	AE08-54425																																																																																																				
							SHEET 07																																																																																																				

Figure 7 Circuit Number Identification and Location

1.8. SCHEMATIC SYMBOL CHART, P. 8


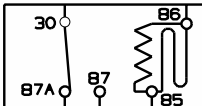



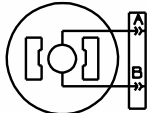















INTERNATIONAL TRUCK AND ENGINE CORPORATION					ELECTRICAL CIRCUIT DIAGRAM		CHAPTER 1				
THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.					SCHEMATIC SYMBOL CHART						
SYMBOL		DESCRIPTION			DESCRIPTION		SYMBOL				
		MALE/FEMALE IN-LINE CONNECTION			RELAY - SUPPRESSED						
		FEMALE TERMINAL			SOLENOID GENERAL USAGE						
		MALE TERMINAL			MOTOR - ELECTRIC						
		GROUND			HORN						
		FUSE			SPEAKER - SOUND SYSTEM						
		LIGHT EMITTING DIODE			MAGNETIC SWITCH						
		RESISTOR			LIGHT - SINGLE FILMENT						
		SWITCH CONTACT NORMALLY OPEN			LIGHT - DOUBLE FILAMENT						
		SWITCH CONTACT NORMALLY CLOSED			SENDER - OIL, WATER, FUEL, TEMPERATURE						
		SPLICE									
		SWITCH - PRESSURE									
		SWITCH MANUAL/MECHANICAL									
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME					
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JLH3	DRIVE - CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS					
		TO UG.			RELEASE NO.	DATE	PART NO.	SHEET			
					55806A	19JUL02	AE08-54425	08			

Figure 8 Schematic Symbol Chart

1.9. CIRCUIT NUMBER IDENTIFICATION AND LOCATION, P. 9

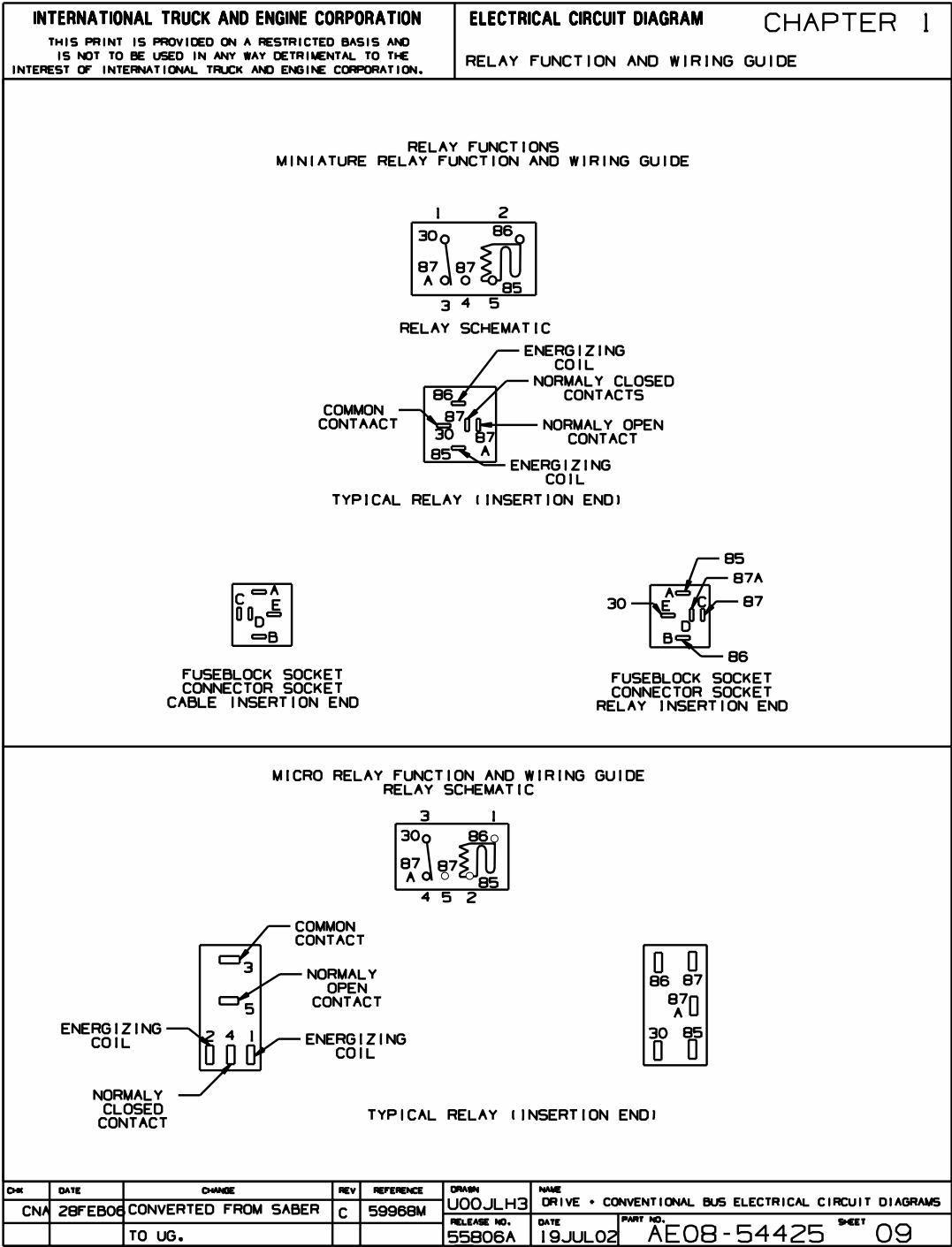


Figure 9 Circuit Number Identification and Location

INTERNATIONAL TRUCK AND ENGINE CORPORATION THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.				ELECTRICAL CIRCUIT DIAGRAM LAMP BULB CHART				CHAPTER 1																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">BULB APPLICATION</th> <th style="width: 30%;">BULB CANDLE POWER OR WATTS</th> <th style="width: 30%;">BULB TRACE NUMBER</th> </tr> </thead> <tbody> <tr> <td>FOG LIGHTS</td> <td>121 CANDLE POWER</td> <td>H355</td> </tr> <tr> <td>HEAD LIGHTS</td> <td></td> <td></td> </tr> <tr> <td>LOW BEAMS</td> <td>65 WATTS</td> <td>9007</td> </tr> <tr> <td>HIGH BEAMS</td> <td>55 WATTS</td> <td>9007</td> </tr> <tr> <td>MISC LIGHTS</td> <td></td> <td></td> </tr> <tr> <td>SIDE MARKER</td> <td>3.8 WATTS</td> <td>194NA</td> </tr> <tr> <td>TURN SIGNAL MARKER (FENDER)</td> <td>27/8 WATTS</td> <td>3157</td> </tr> <tr> <td>TURN SIGNAL & FRONT MARKER LIGHT</td> <td>27/8 WATTS</td> <td>3157NA</td> </tr> </tbody> </table>										BULB APPLICATION	BULB CANDLE POWER OR WATTS	BULB TRACE NUMBER	FOG LIGHTS	121 CANDLE POWER	H355	HEAD LIGHTS			LOW BEAMS	65 WATTS	9007	HIGH BEAMS	55 WATTS	9007	MISC LIGHTS			SIDE MARKER	3.8 WATTS	194NA	TURN SIGNAL MARKER (FENDER)	27/8 WATTS	3157	TURN SIGNAL & FRONT MARKER LIGHT	27/8 WATTS	3157NA
BULB APPLICATION	BULB CANDLE POWER OR WATTS	BULB TRACE NUMBER																																		
FOG LIGHTS	121 CANDLE POWER	H355																																		
HEAD LIGHTS																																				
LOW BEAMS	65 WATTS	9007																																		
HIGH BEAMS	55 WATTS	9007																																		
MISC LIGHTS																																				
SIDE MARKER	3.8 WATTS	194NA																																		
TURN SIGNAL MARKER (FENDER)	27/8 WATTS	3157																																		
TURN SIGNAL & FRONT MARKER LIGHT	27/8 WATTS	3157NA																																		
DATE	CHANGE	REV	REFERENCE	DRAWN	NAME																															
CNA	28FEB06		59968M	U00JAHF	DRIVE + CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS																															
	TO UG.			RELEASE NO. 55806A	DATE 23APR02	PART NO. AE08-54425	SHEET 10																													

Figure 10 Lamp Bulb Chart

2. 12 VOLT POWER DISTRIBUTION AND DATA LINK (CHAPTER 2)

2.1. ACCESSORY, P. 1

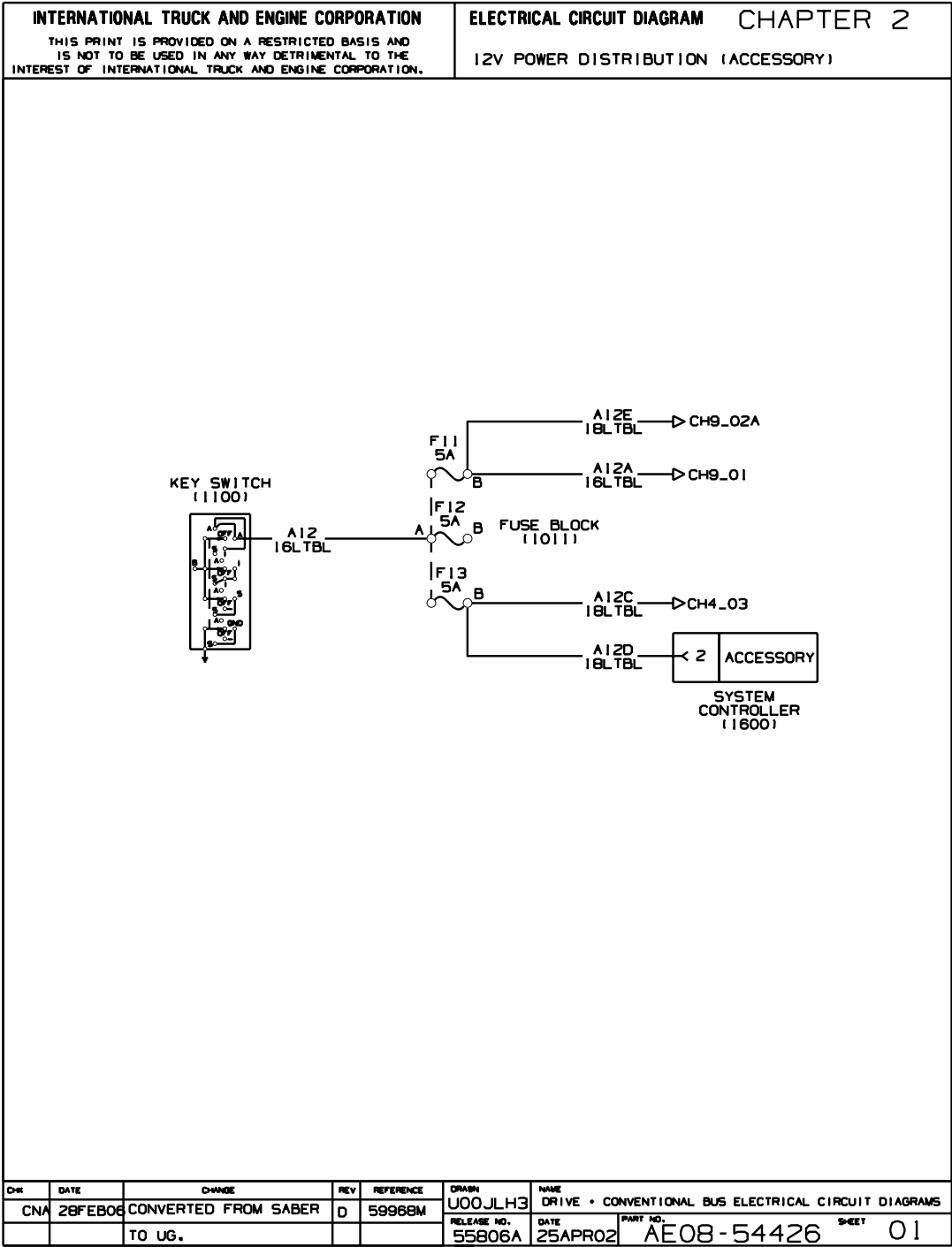


Figure 11 Accessory

2.2. BATTERY, P. 2

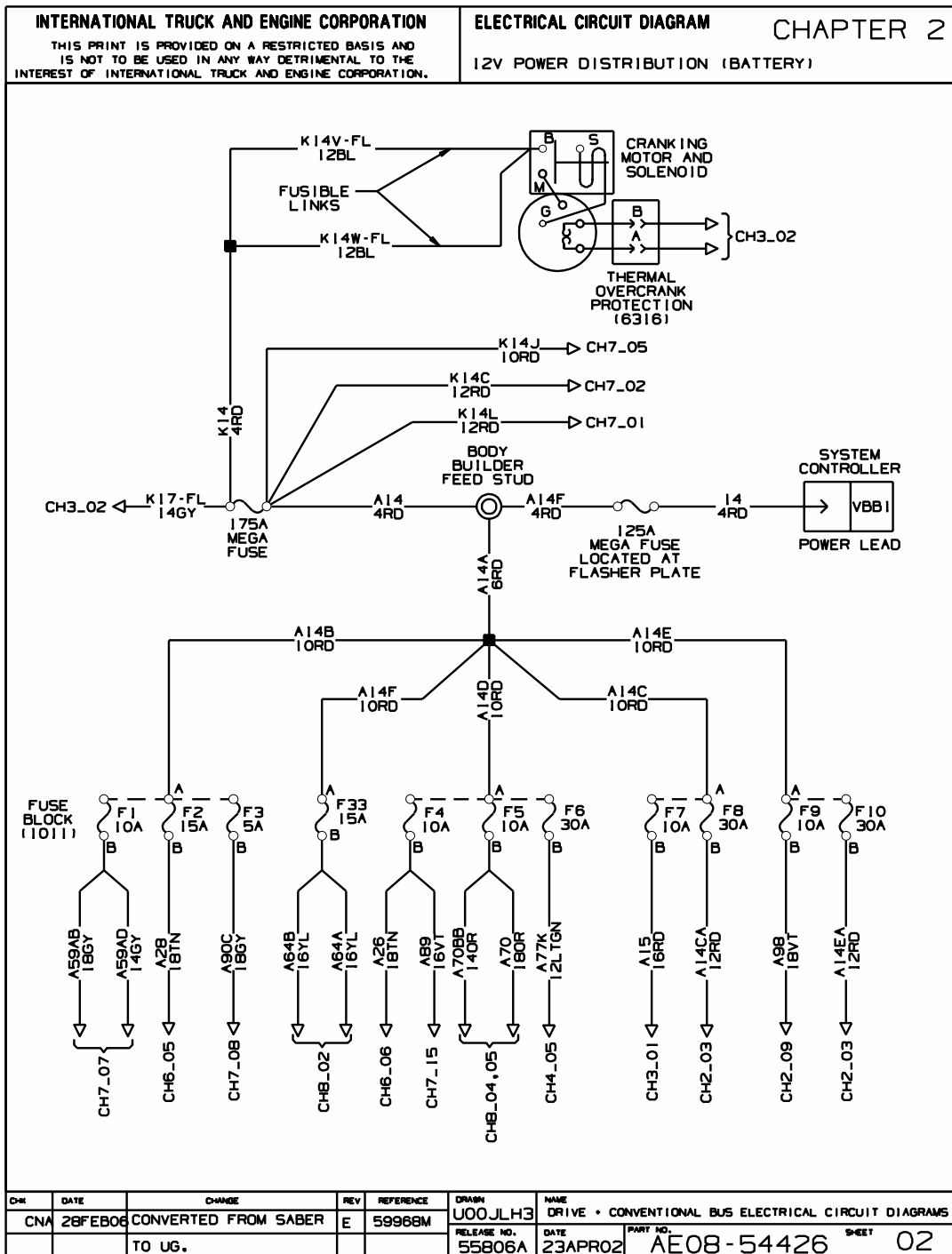


Figure 12 Battery

2.4. IGNITION, P. 4

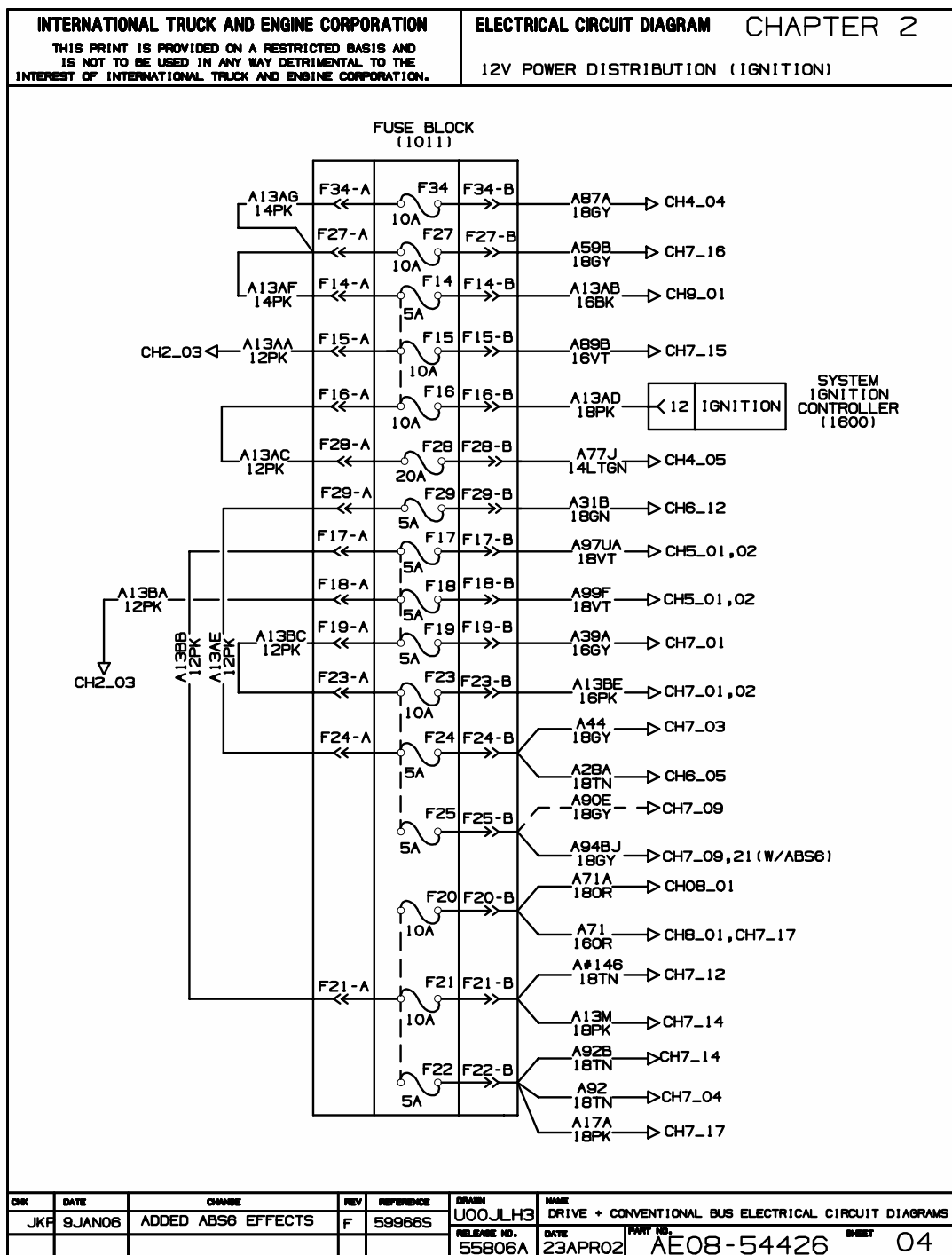


Figure 14 Ignition (Cont.)

2.5. GROUND, P. 5

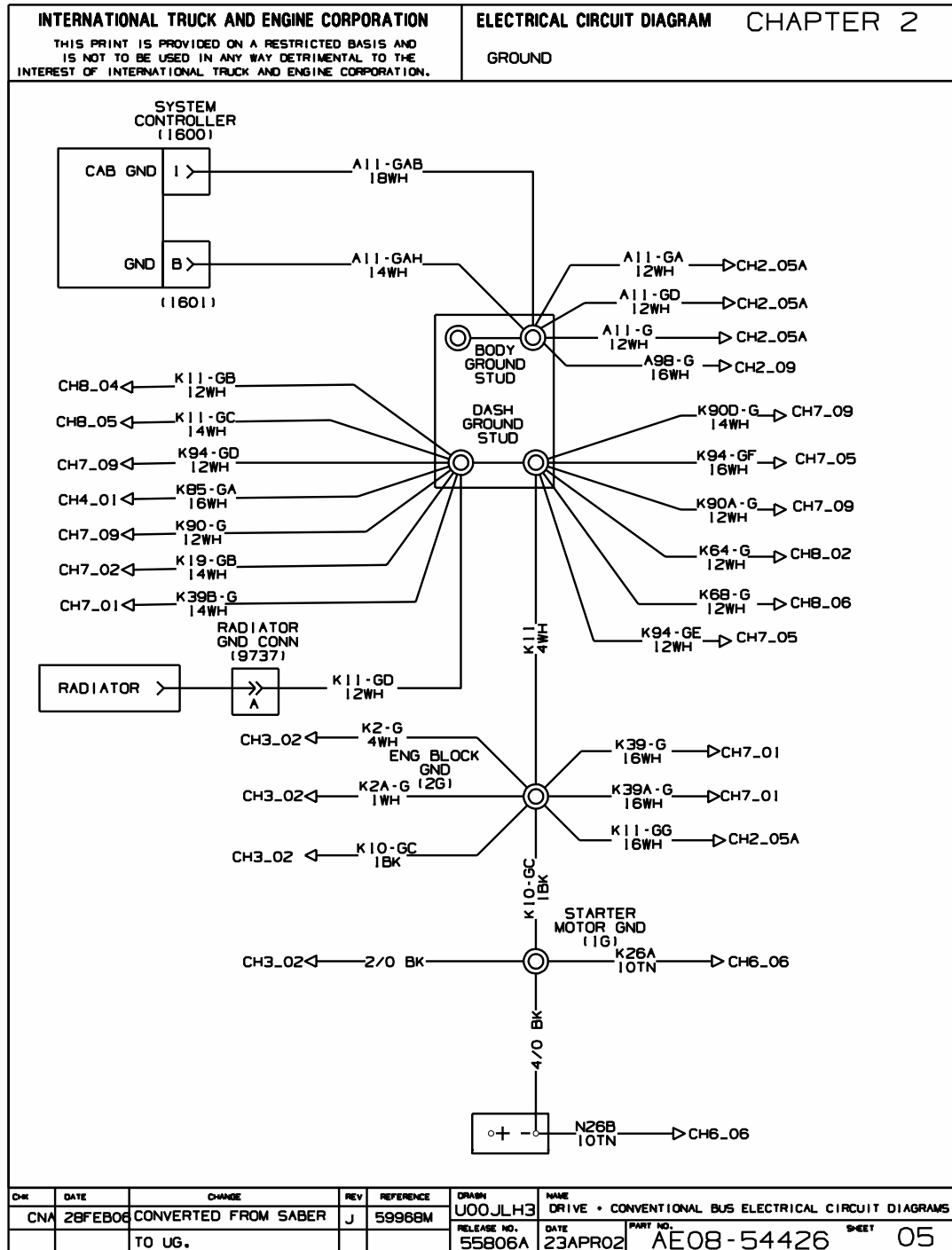


Figure 15 Ground

2.6. DRIVETRAIN J1939 DATA LINK (CAB), P. 6

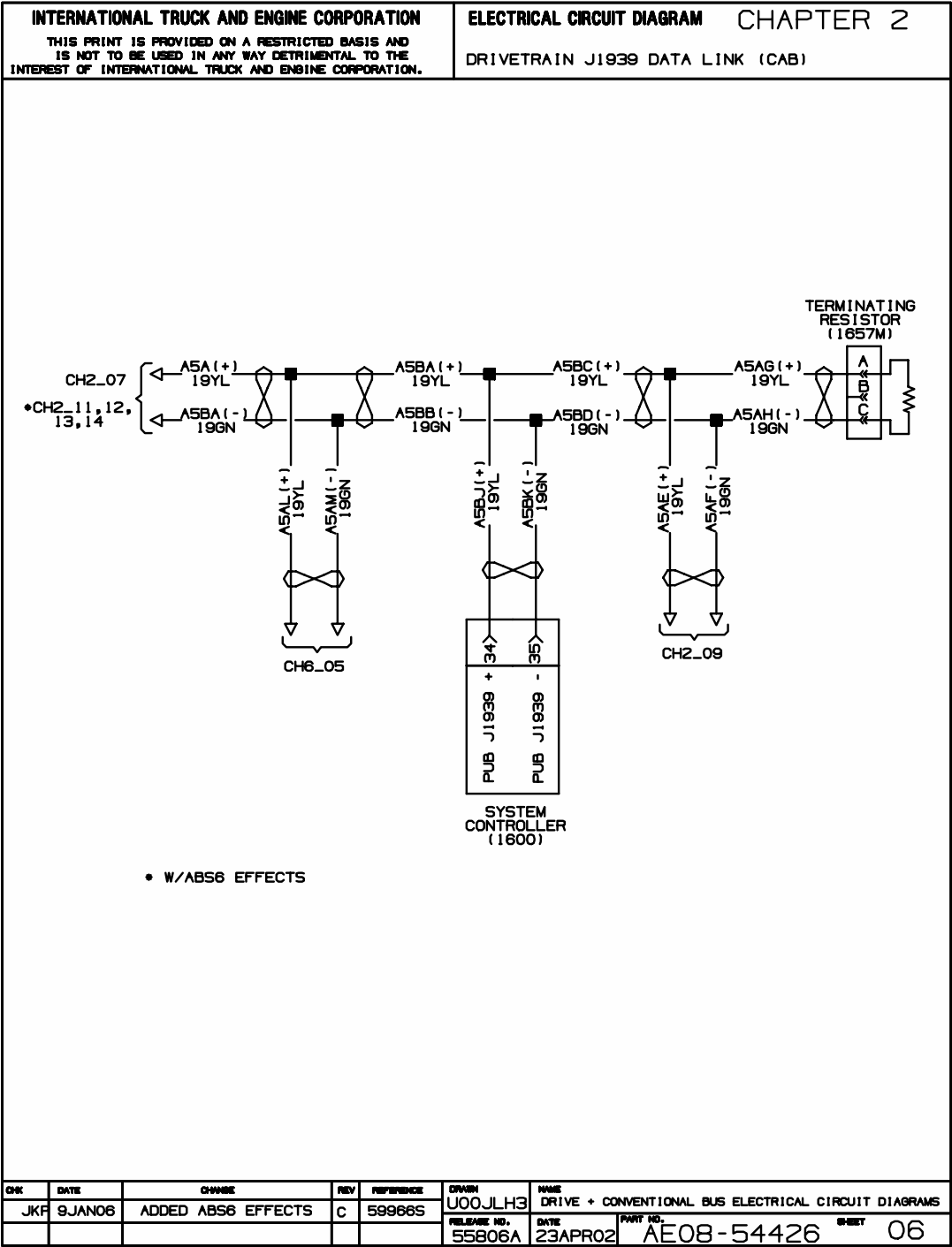


Figure 16 Drivetrain J1939 Data Link (Cab)

2.7. DRIVETRAIN J1939 DATA LINK (CHASSIS), P. 7

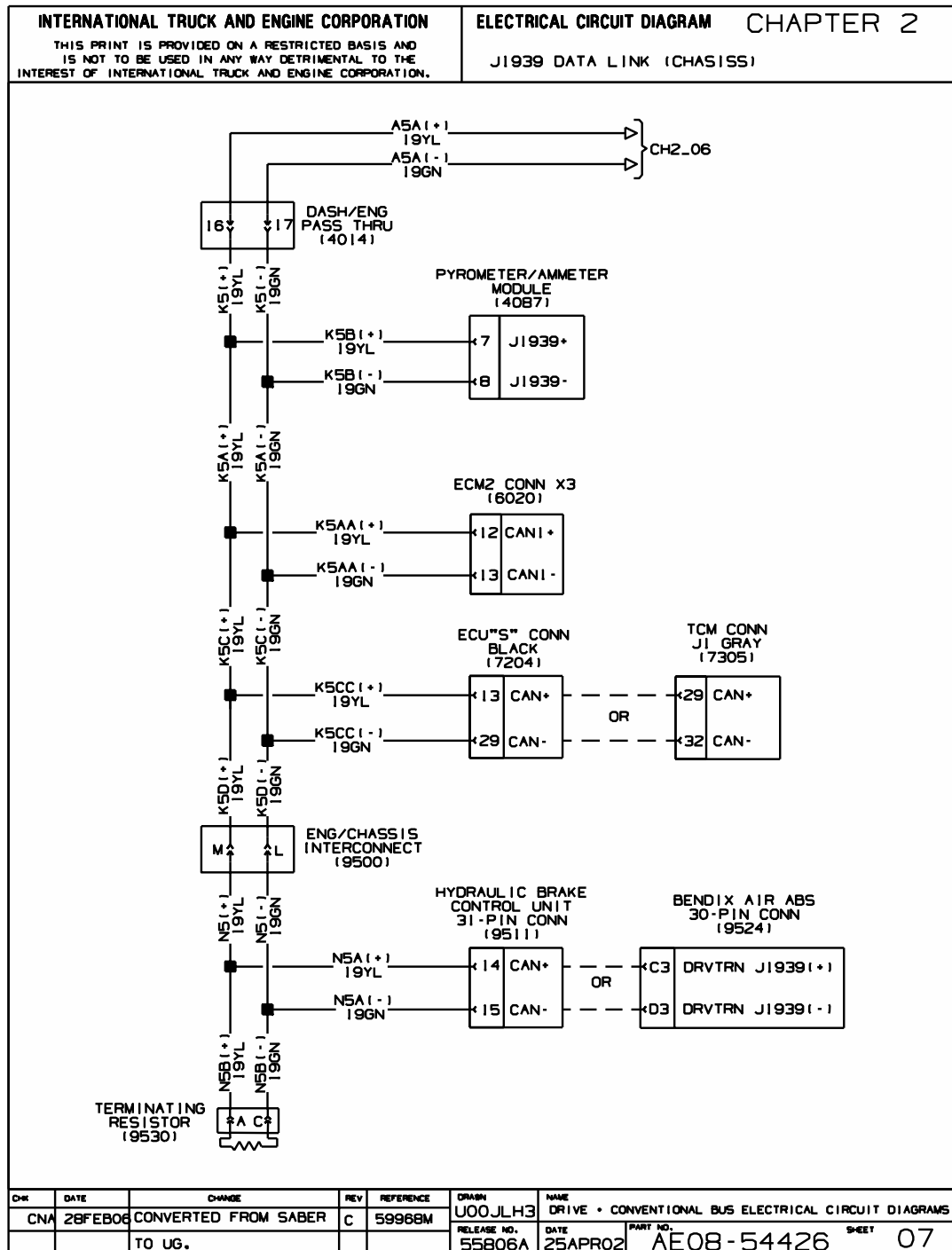


Figure 17 Drivetrain J1939 Data Link (Chassis)

2.8. J1708 DATA LINK DIAGNOSTIC, P. 8

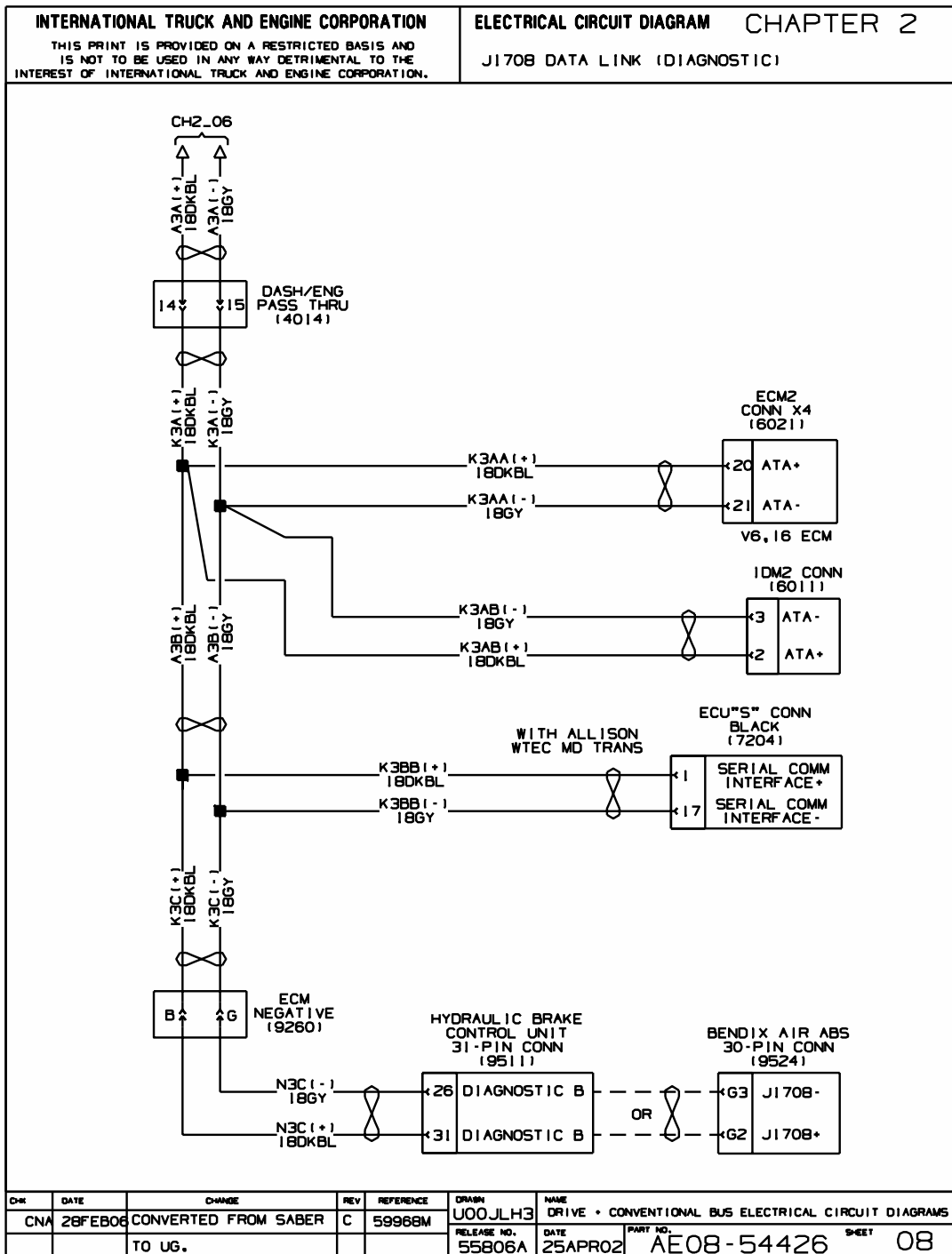


Figure 18 J1708 Data Link Diagnostic

2.9. DIAGNOSTICS AND PROGRAMMABLE CONNECTOR, P. 9

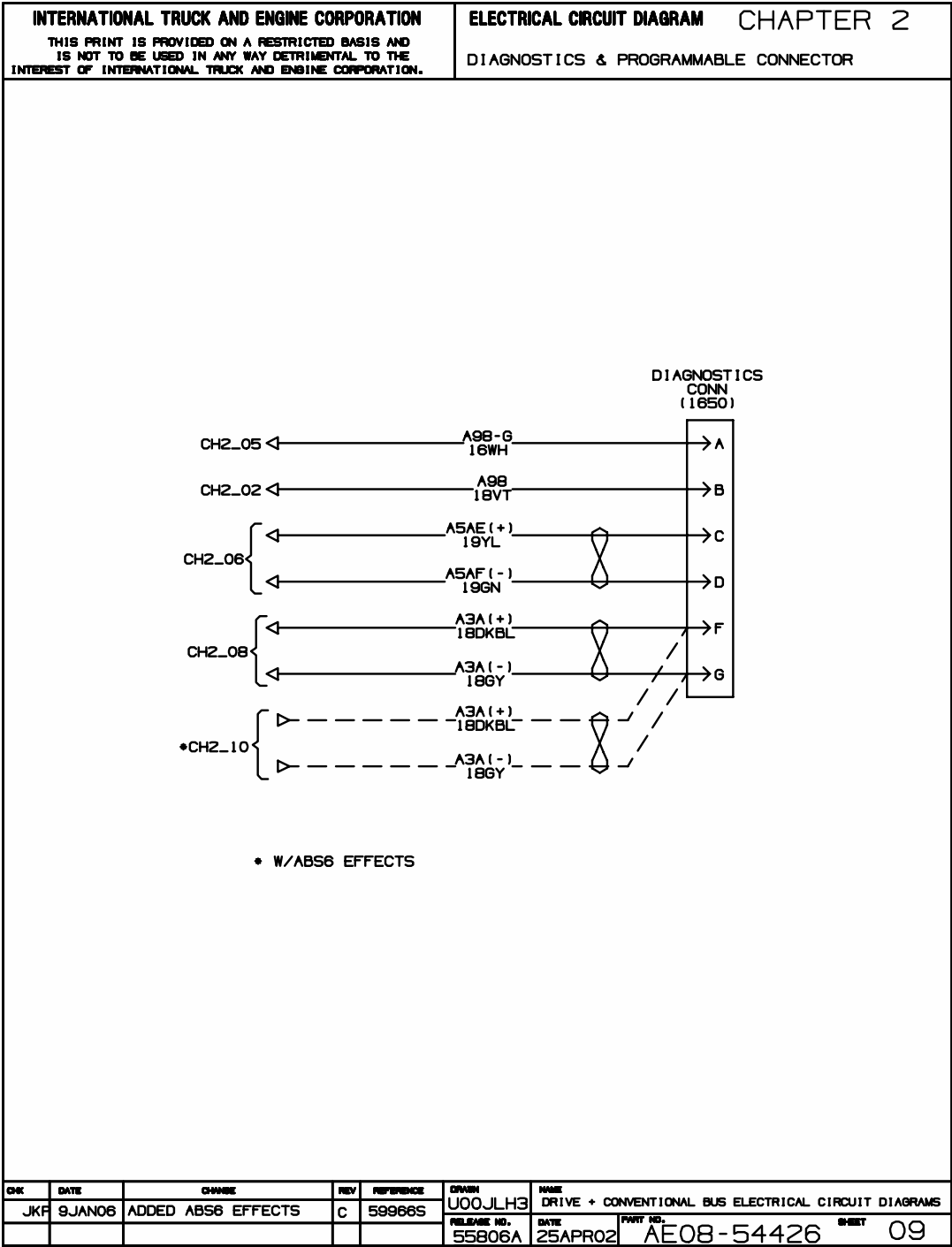


Figure 19 Diagnostics and Programmable Connector

2.10. J1708 DATALINK DIAGNOSTIC W/ABS6, P. 10

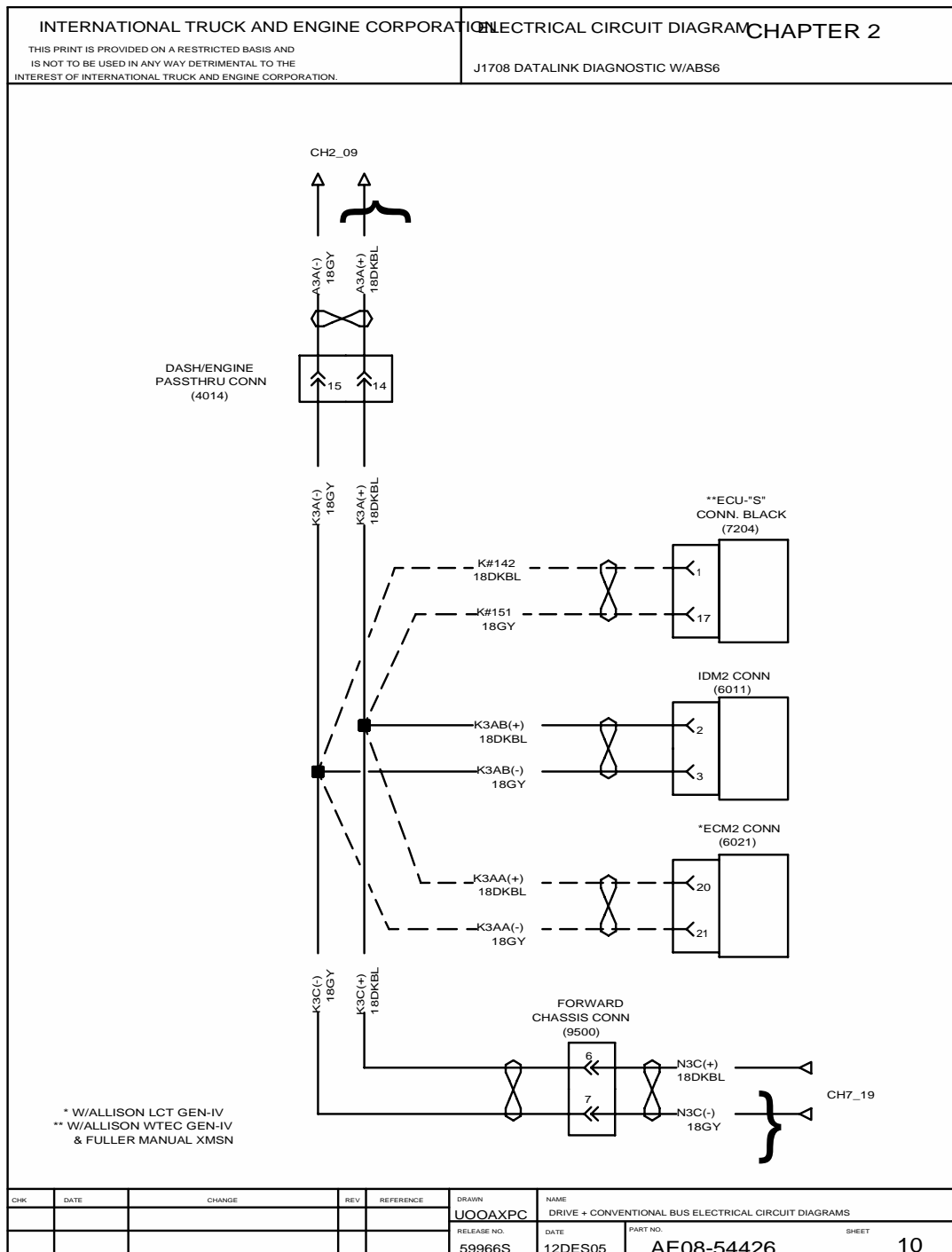


Figure 20 J1708 Datalink Diagnostic W/ABS6

2.11. DRIVETRAIN J1939 DATALINK W/ABS6, W/LCT, W/WTEC XMSN, P. 11

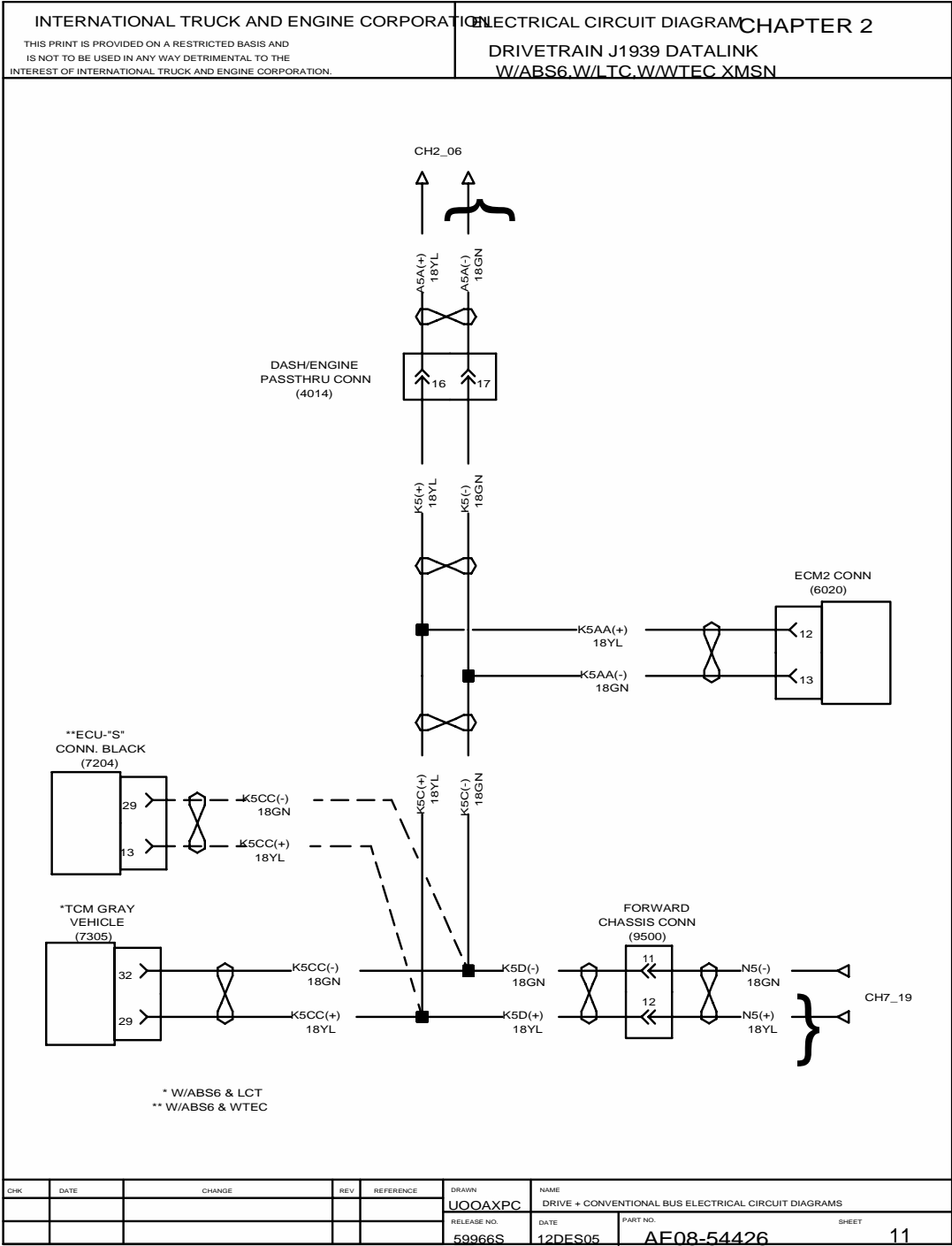


Figure 21 Drivetrain J1939 Datalink W/ABS6, W/LCT, W/WTEC XMSN

2.12. DRIVETRAIN J1939 DATALINK W/ABS6, W/AMMETER, W/LCT, W/WTEC XMSN, P. 12

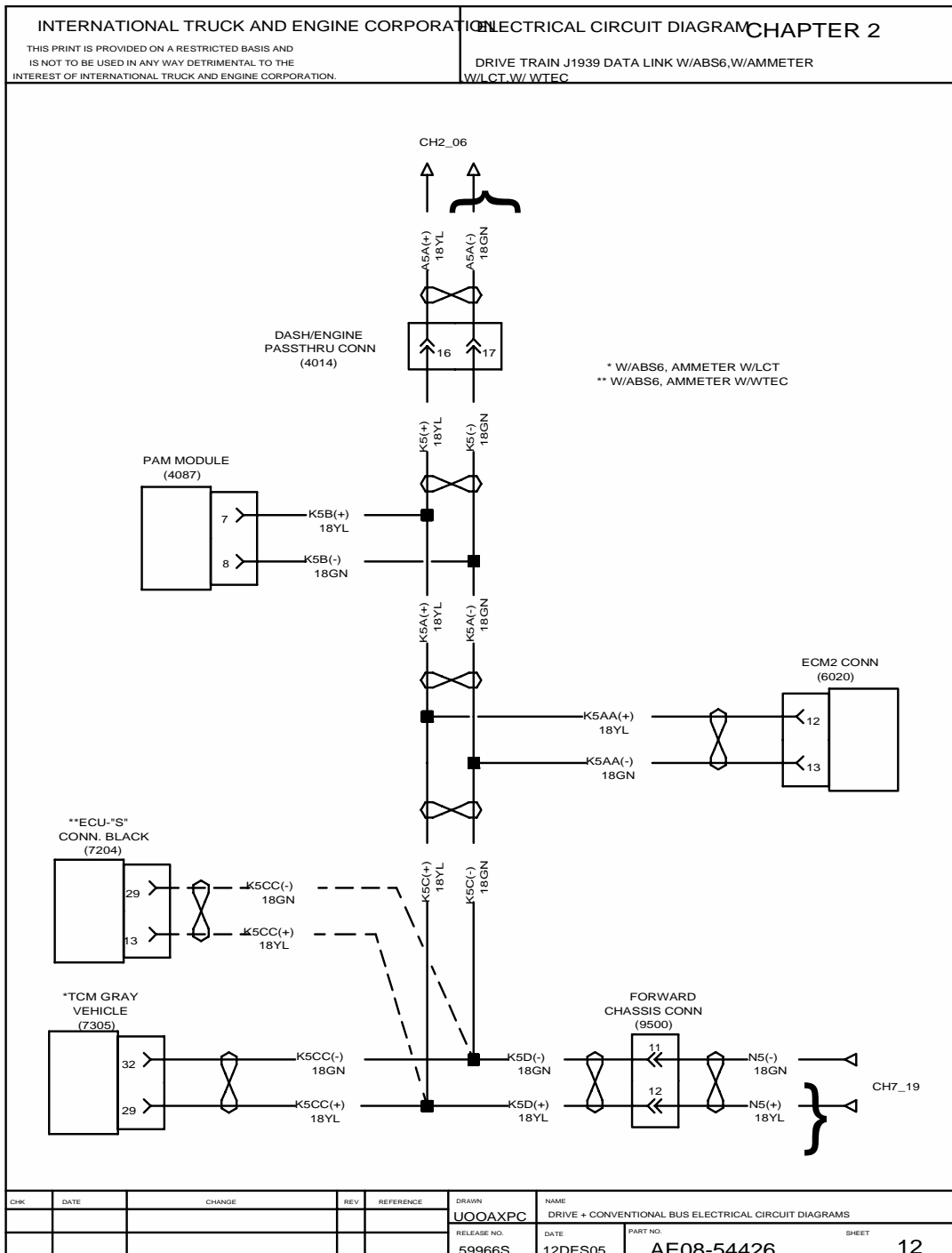


Figure 22 Drivetrain J1939 Datalink W/ABS6, W/Ammeter, W/LCT, W/WTEC XMSN

2.13. DRIVETRAIN J1939 DATALINK W/ABS6, W/ALLISON GEN IV, W/MANUAL XMSN, P. 13

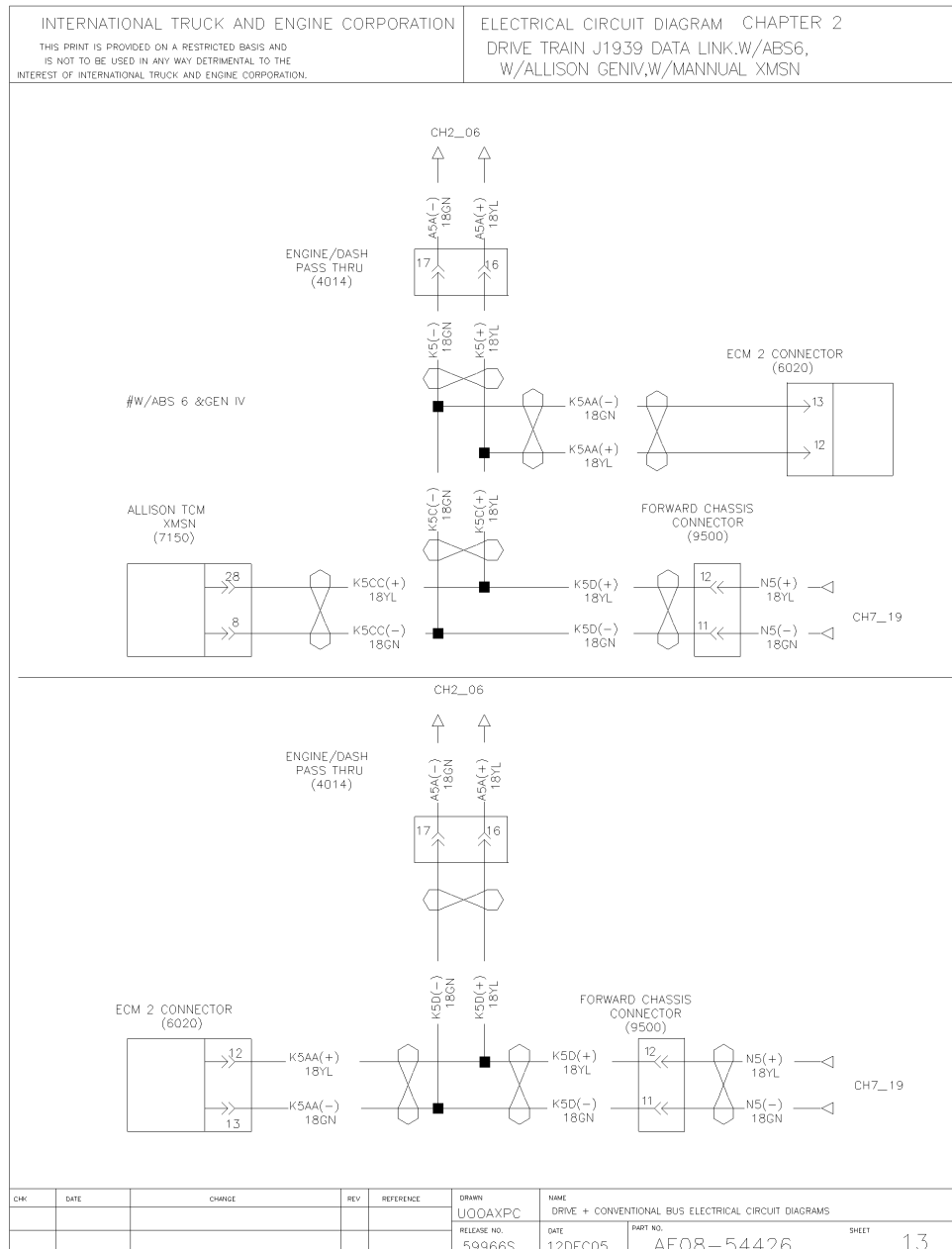


Figure 23 Drivetrain J1939 Datalink W/ABS6, W/Allison Gen IV, W/Manual XMSN

2.14. DRIVETRAIN J1939 DATALINK W/ABS6, W/AMMETER, W/ALLISON GEN IV, P. 14

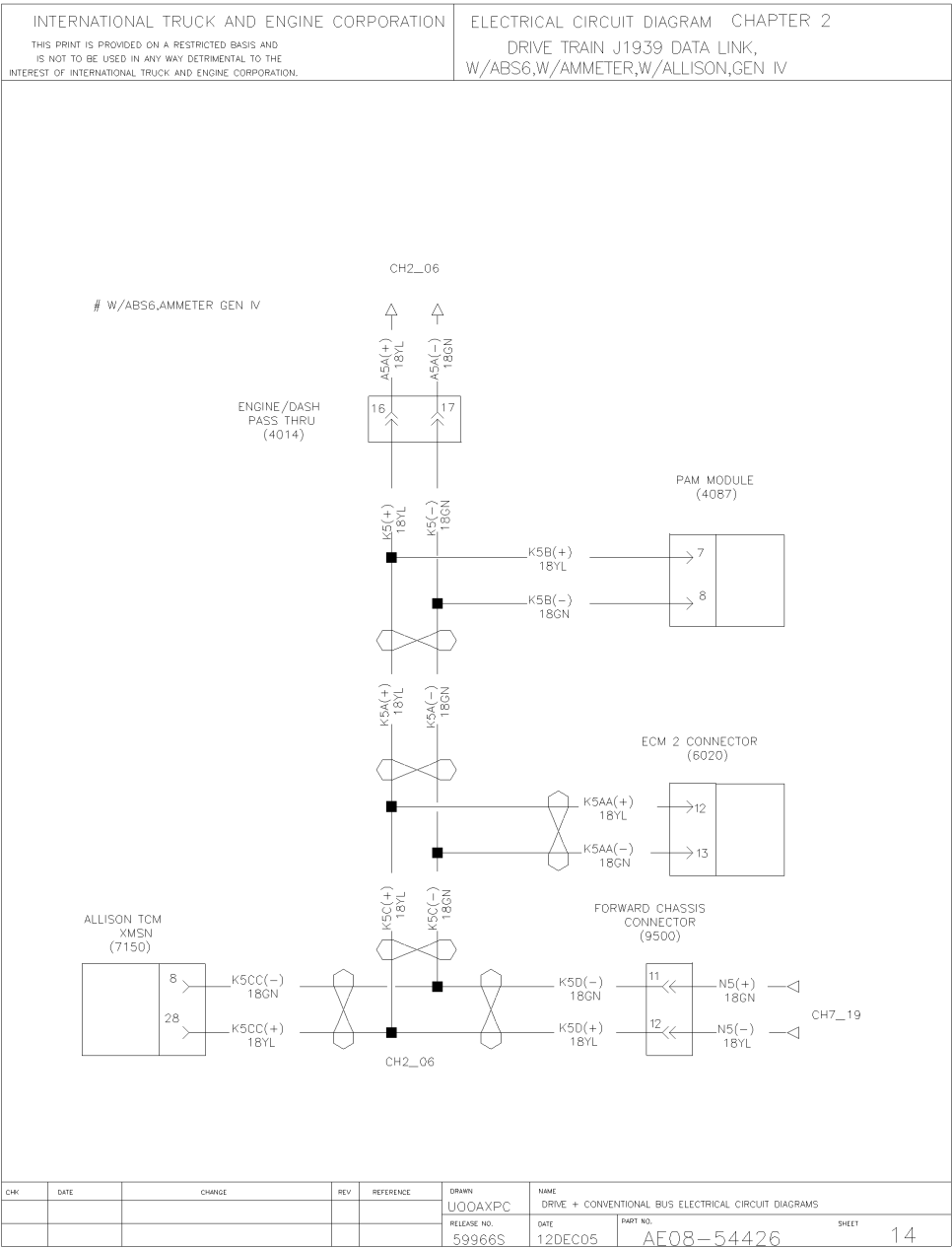


Figure 24 Drivetrain J1939 Datalink W/ABS6, W/Ammeter, W/Allison Gen IV

3. 12V CHARGING AND CRANKING SYSTEM (CHAPTER 3)

3.1. KEY SWITCH START CIRCUIT, P. 1

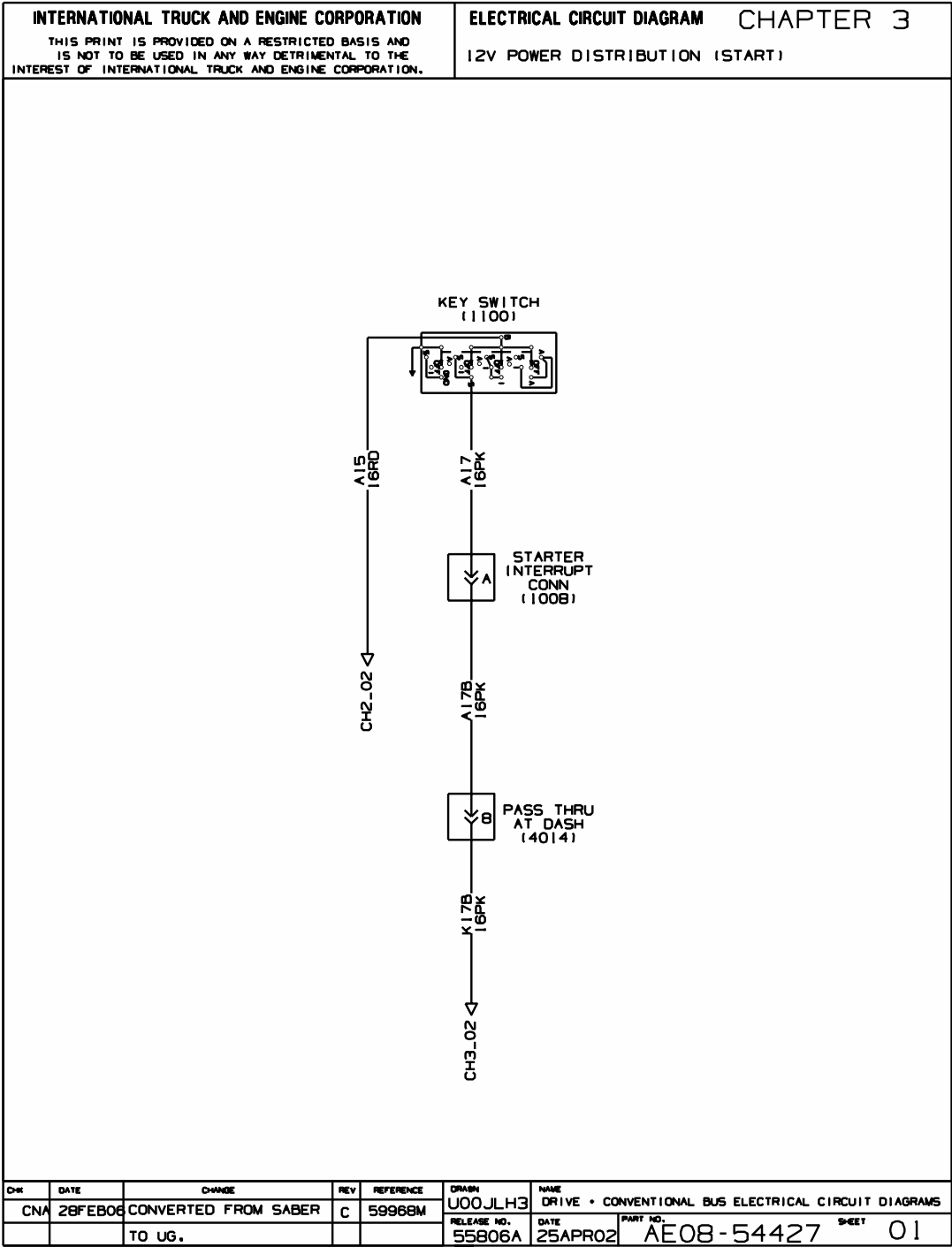


Figure 25 Key Switch Start Circuit

3.2. CHARGING AND CRANKING, P. 2

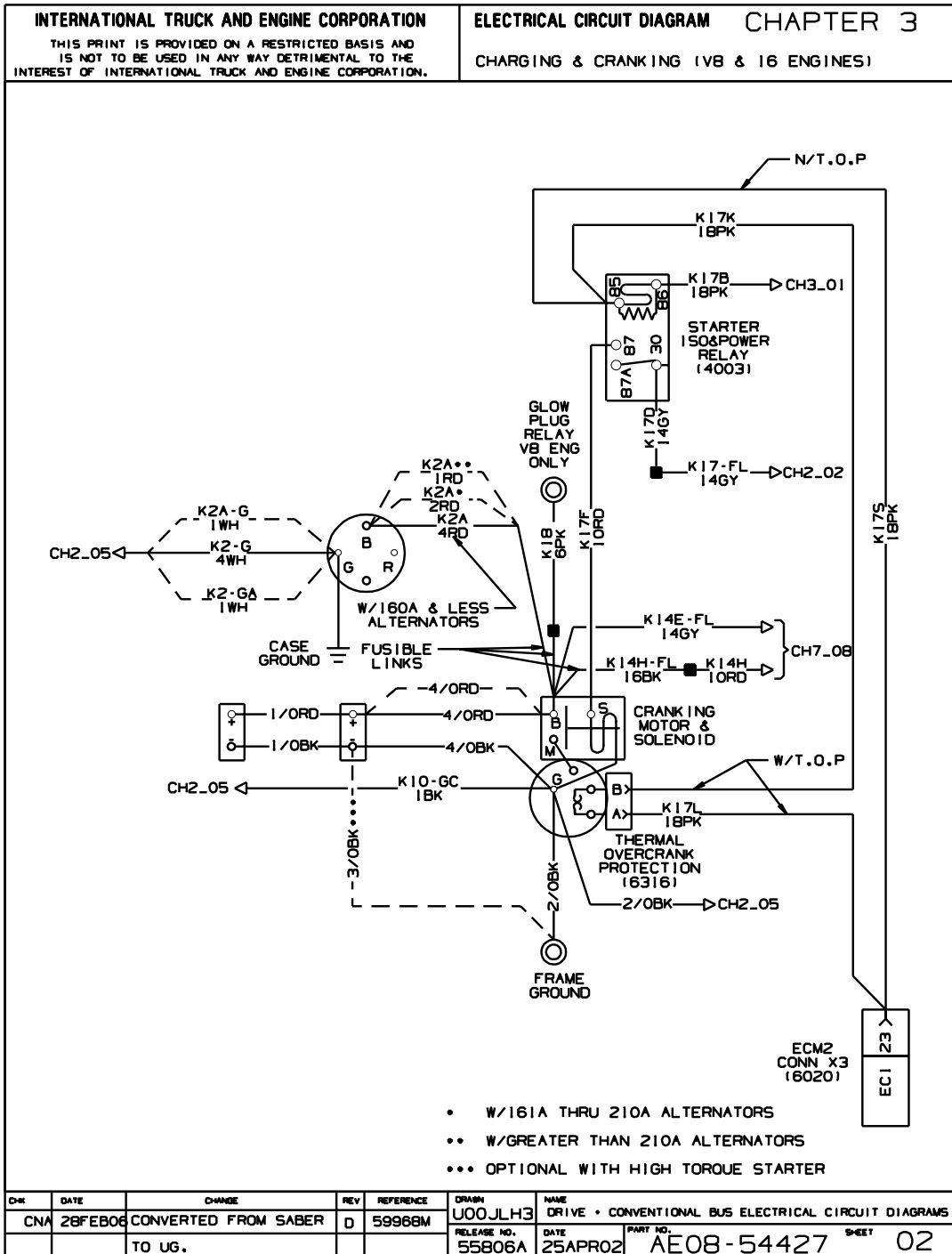


Figure 26 Charging and Cranking

4. CAB ACCESSORIES (CHAPTER 4)

4.1. HORN, DUAL ELECTRIC, P. 1

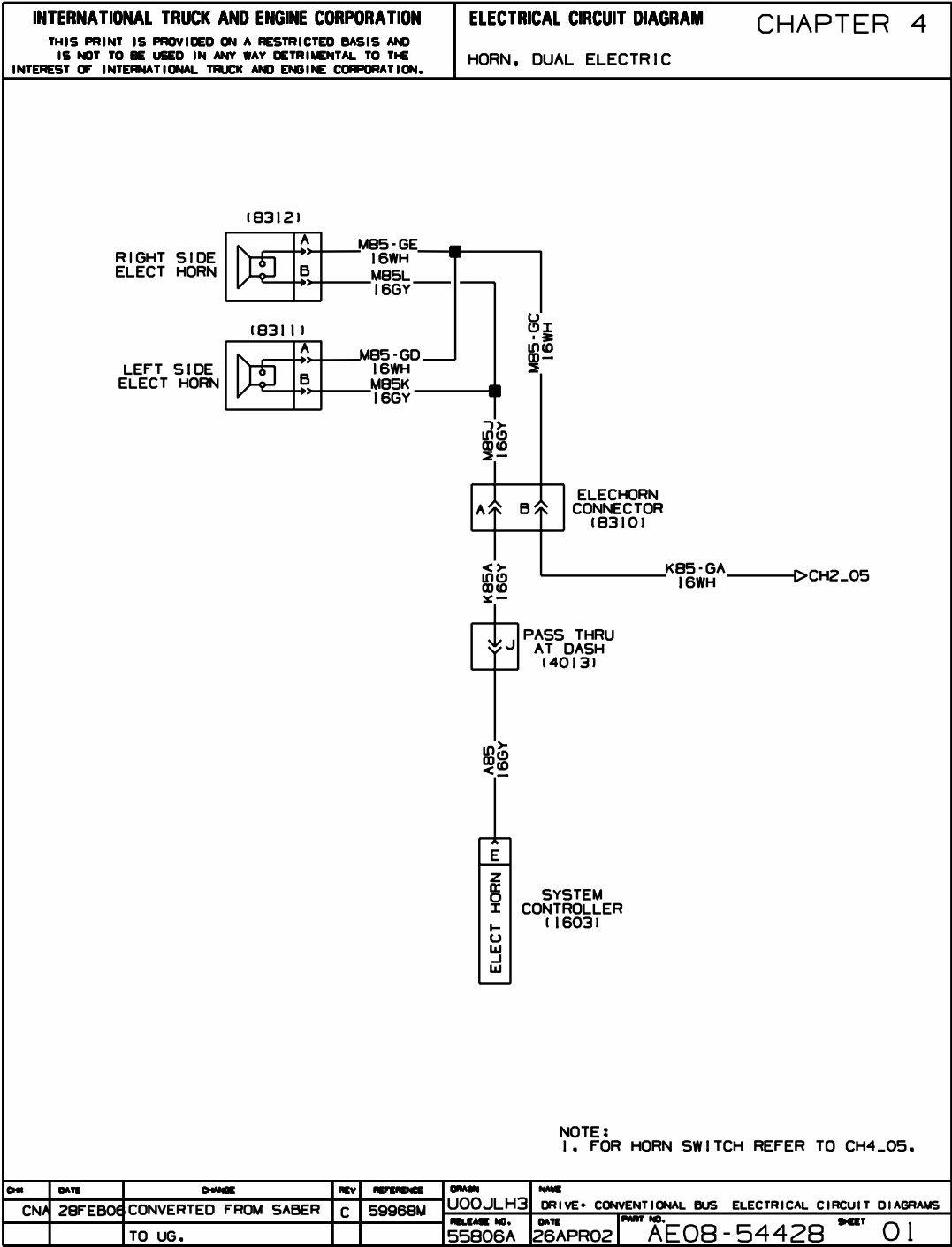


Figure 27 Horn, Dual Electric

4.2. STEERING WHEEL SWITCHES, P. 2

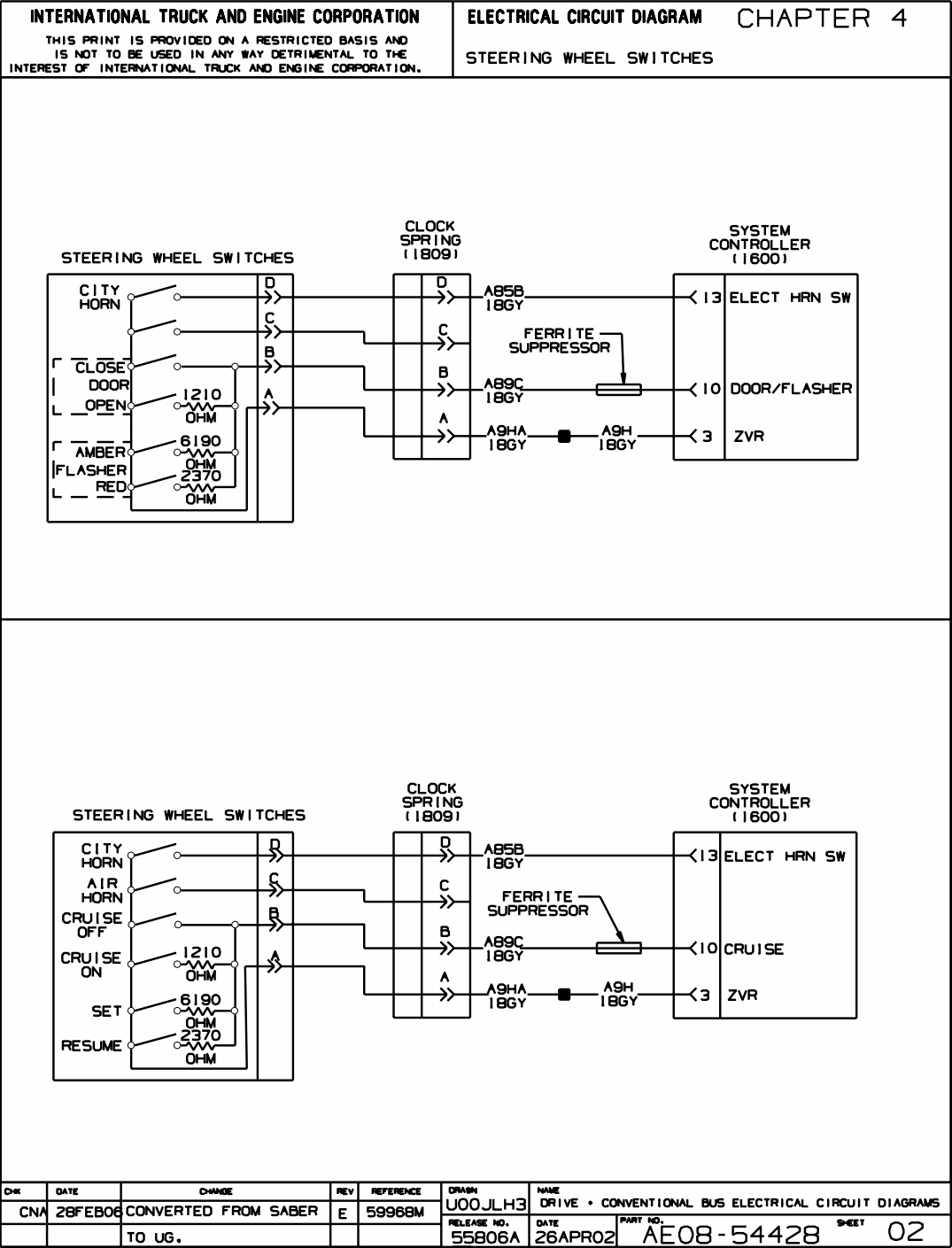


Figure 28 Steering Wheel Switches

4.3. SWITCH PACKS, P. 3

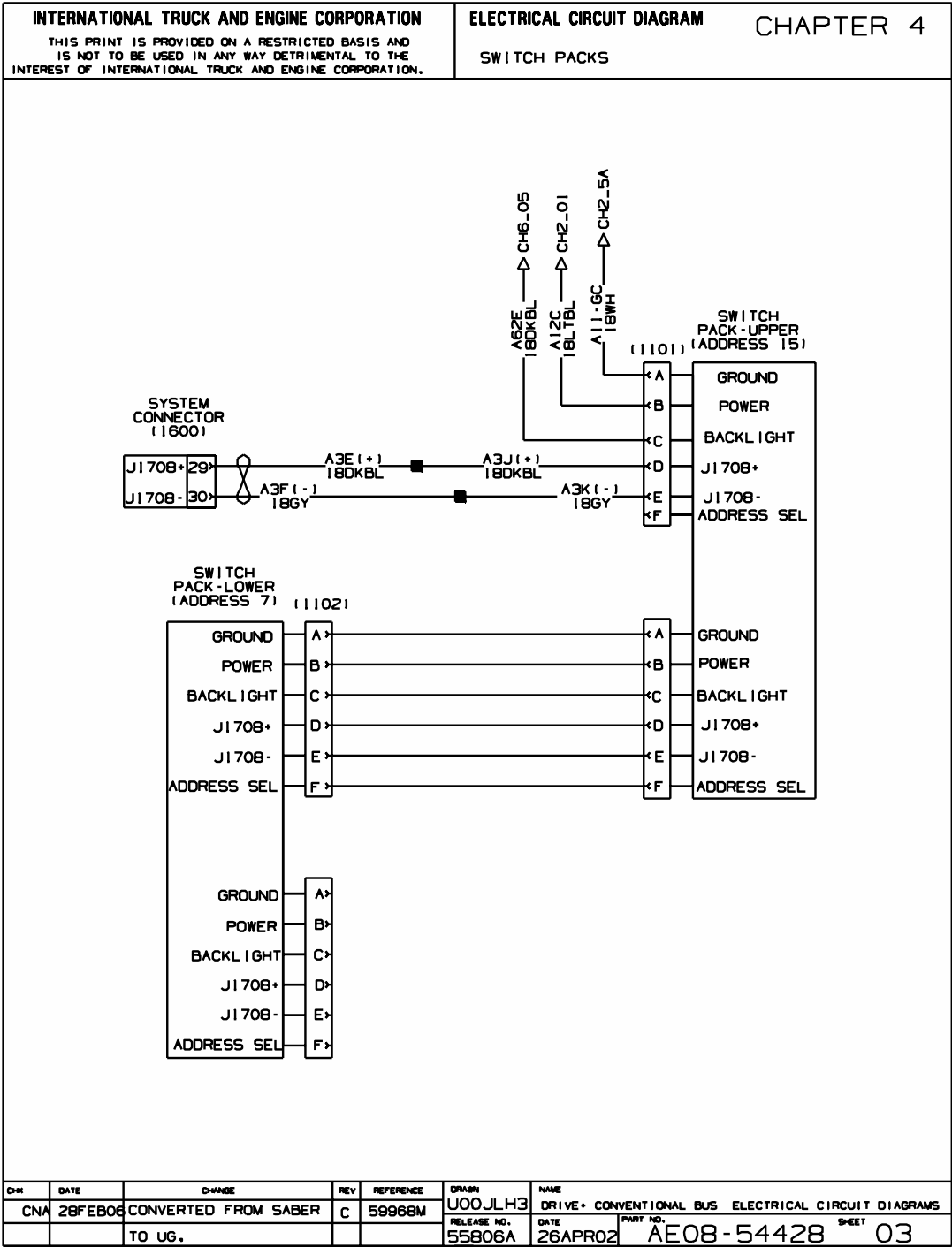


Figure 29 Switch Packs

4.4. WINDSHIELD WIPER AND WASHER SYSTEMS, P. 4

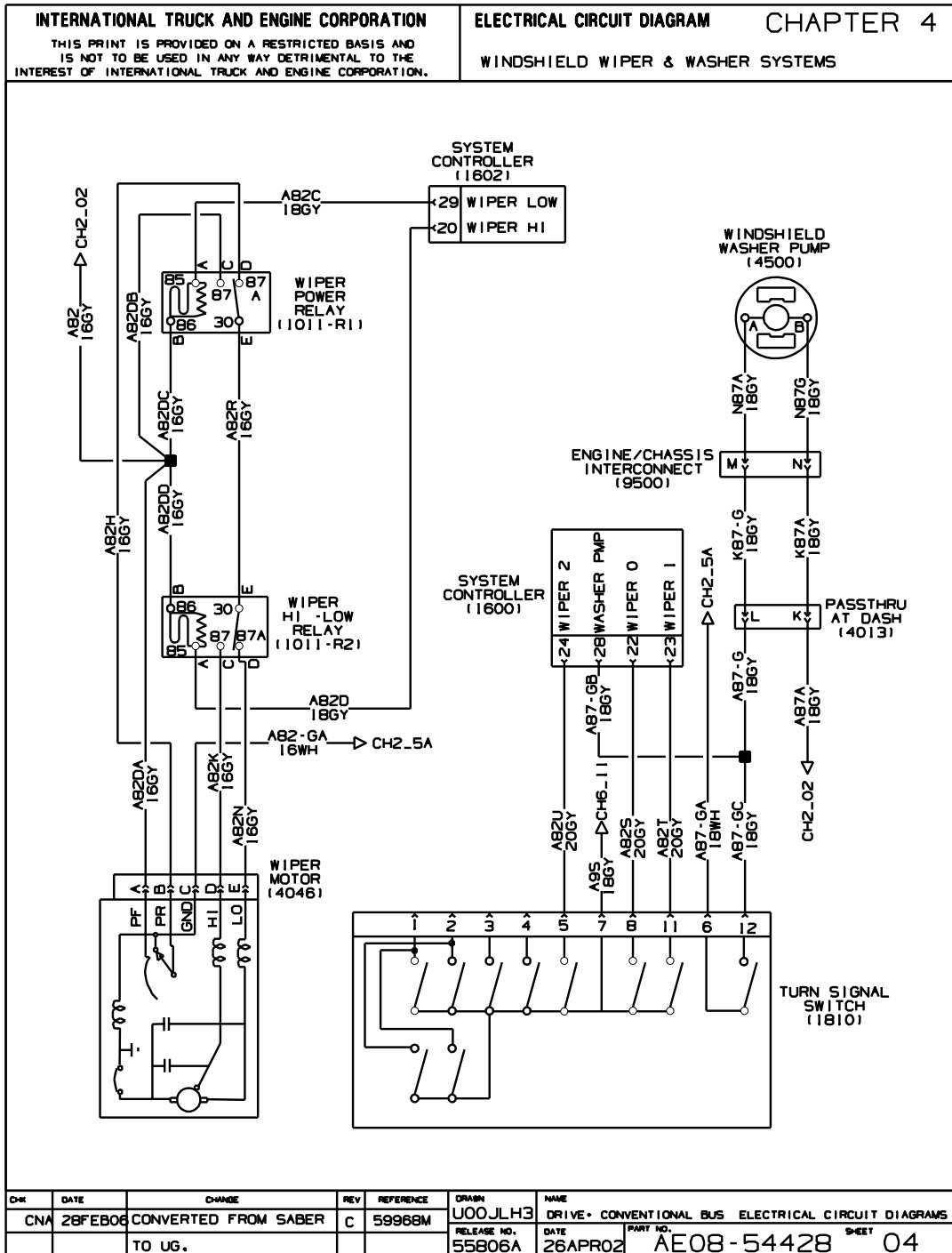


Figure 30 Windshield Wiper and Washer Systems

4.5. DRIVER'S AIR CONDITIONING, P. 5

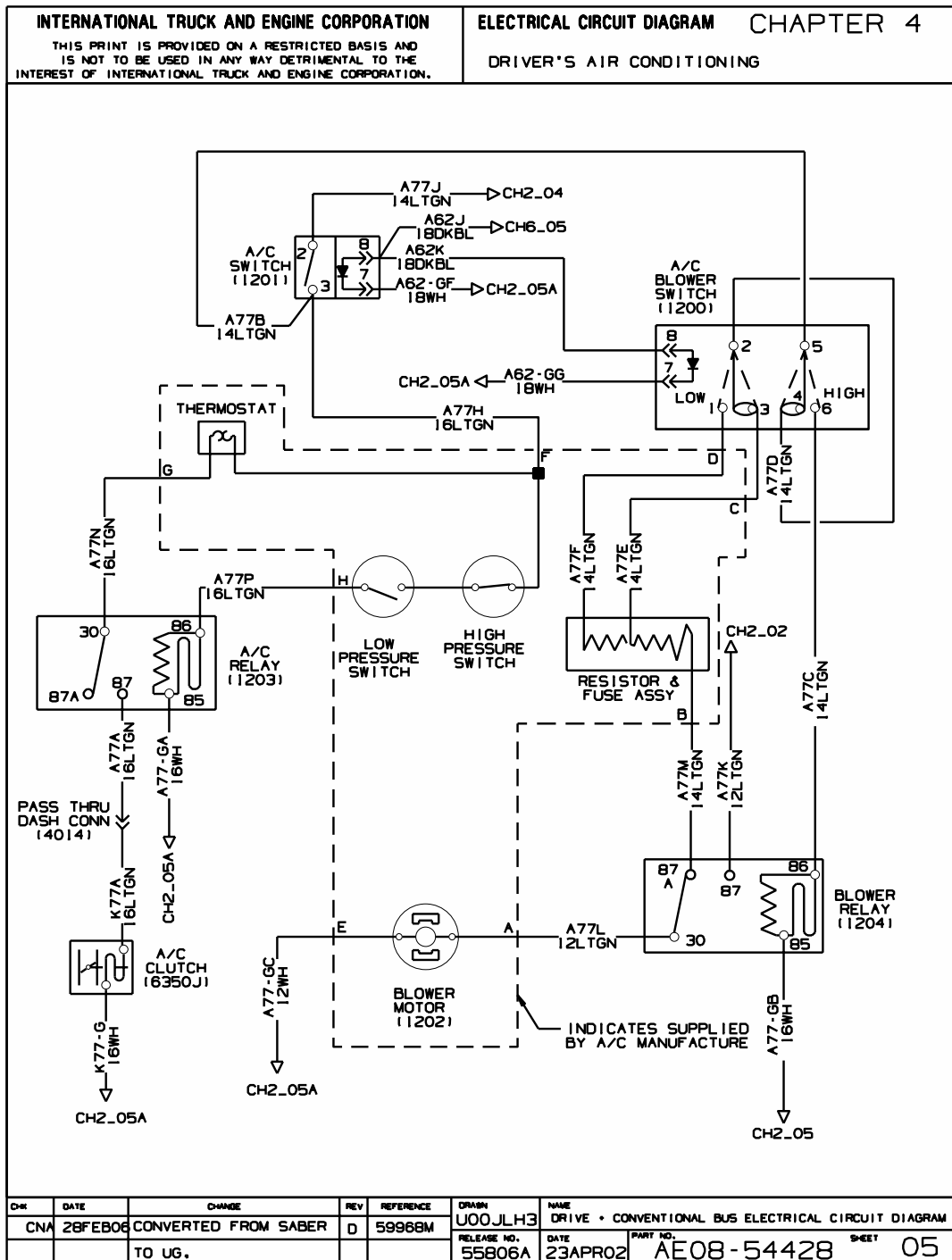


Figure 31 Driver's Air Conditioning

5. ENGINE ELECTRONICS (CHAPTER 5)

5.1. ELECTRONIC ENGINE CONTROLS — V8 ENGINE, P. 1

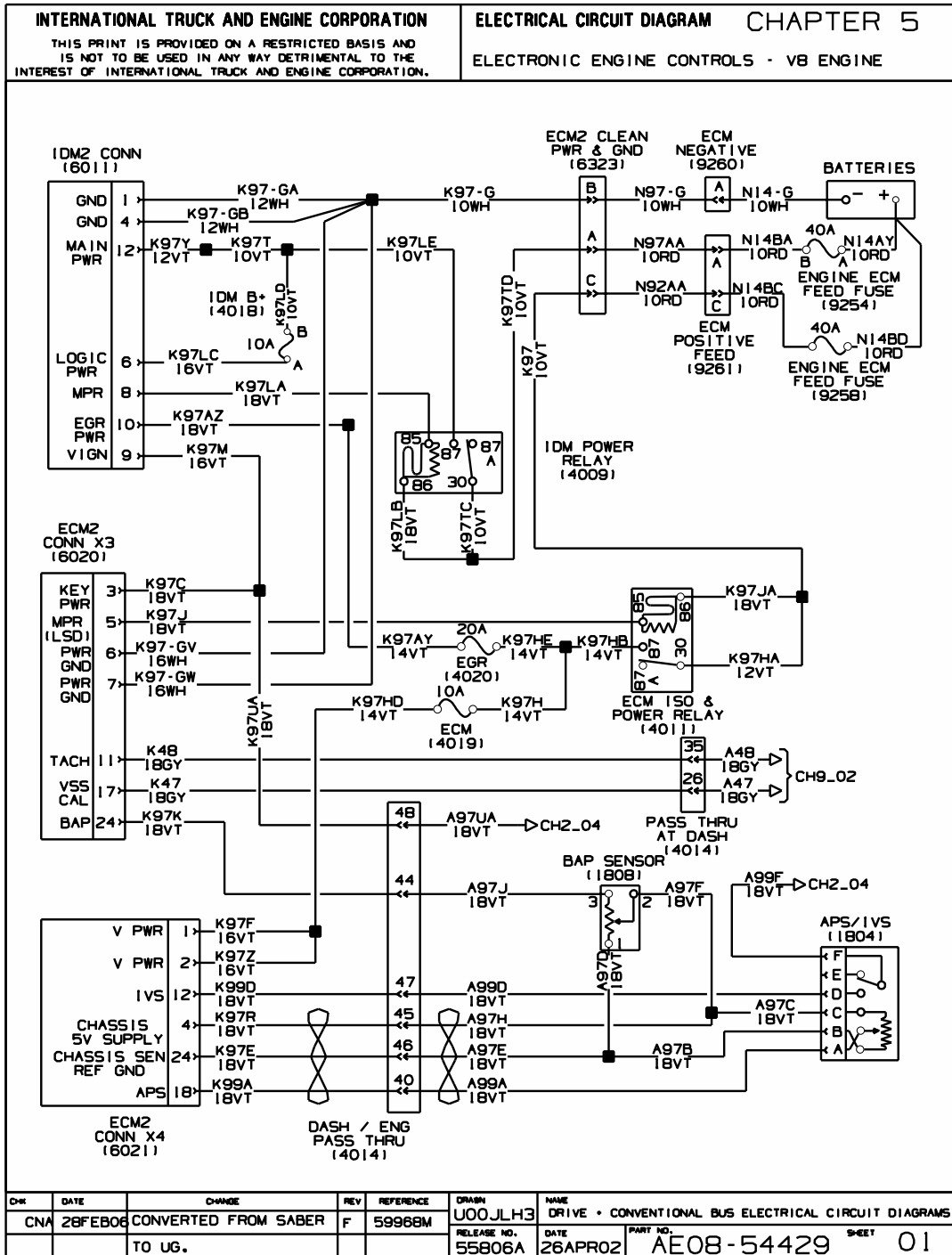


Figure 32 Electronic Engine Controls — V8 Engine

5.2. ELECTRONIC ENGINE CONTROLS — I6 ENGINE, P. 2

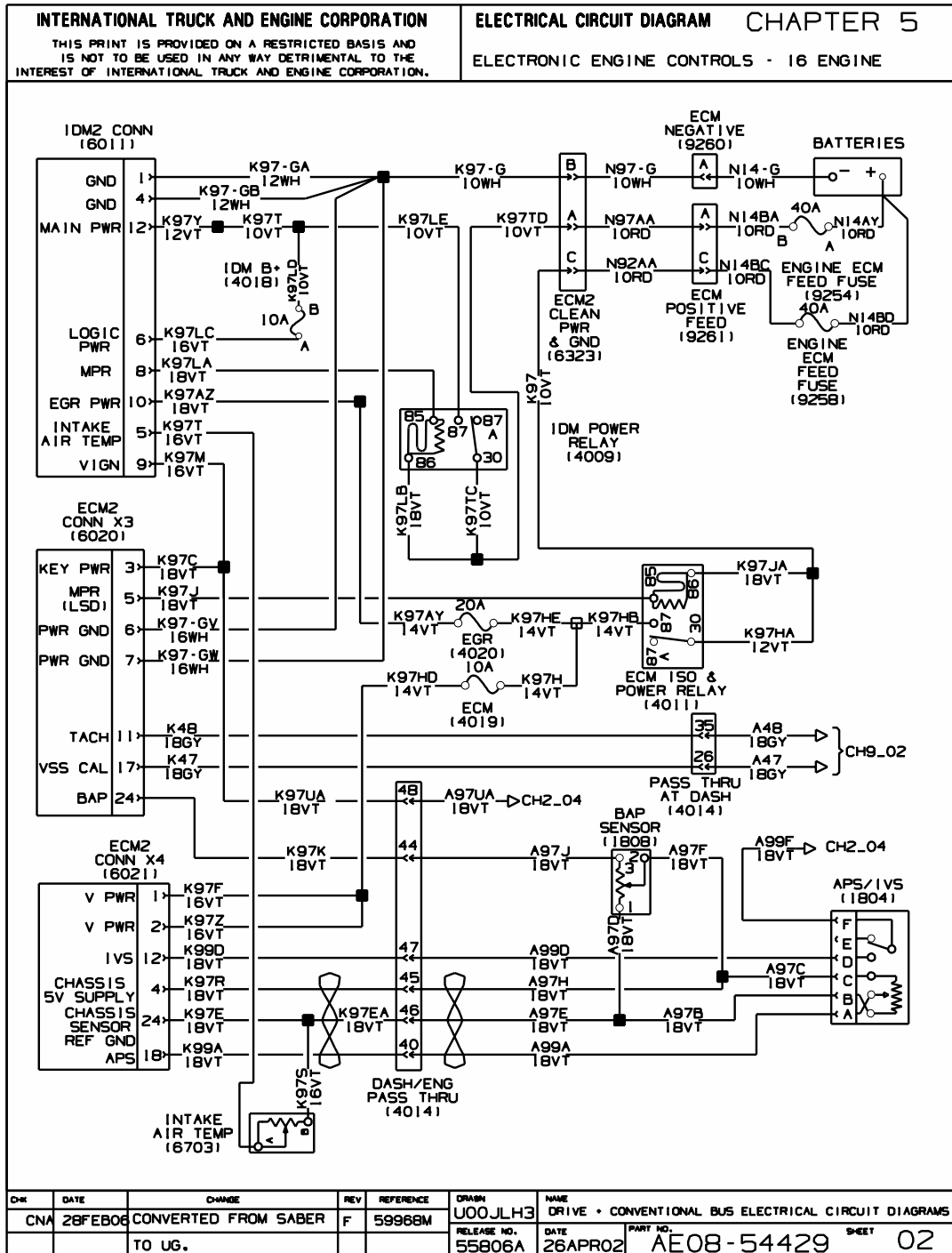


Figure 33 Electronic Engine Controls — I6 Engine

5.3. I6 FAN AND SHUTTER WIRING, P. 3

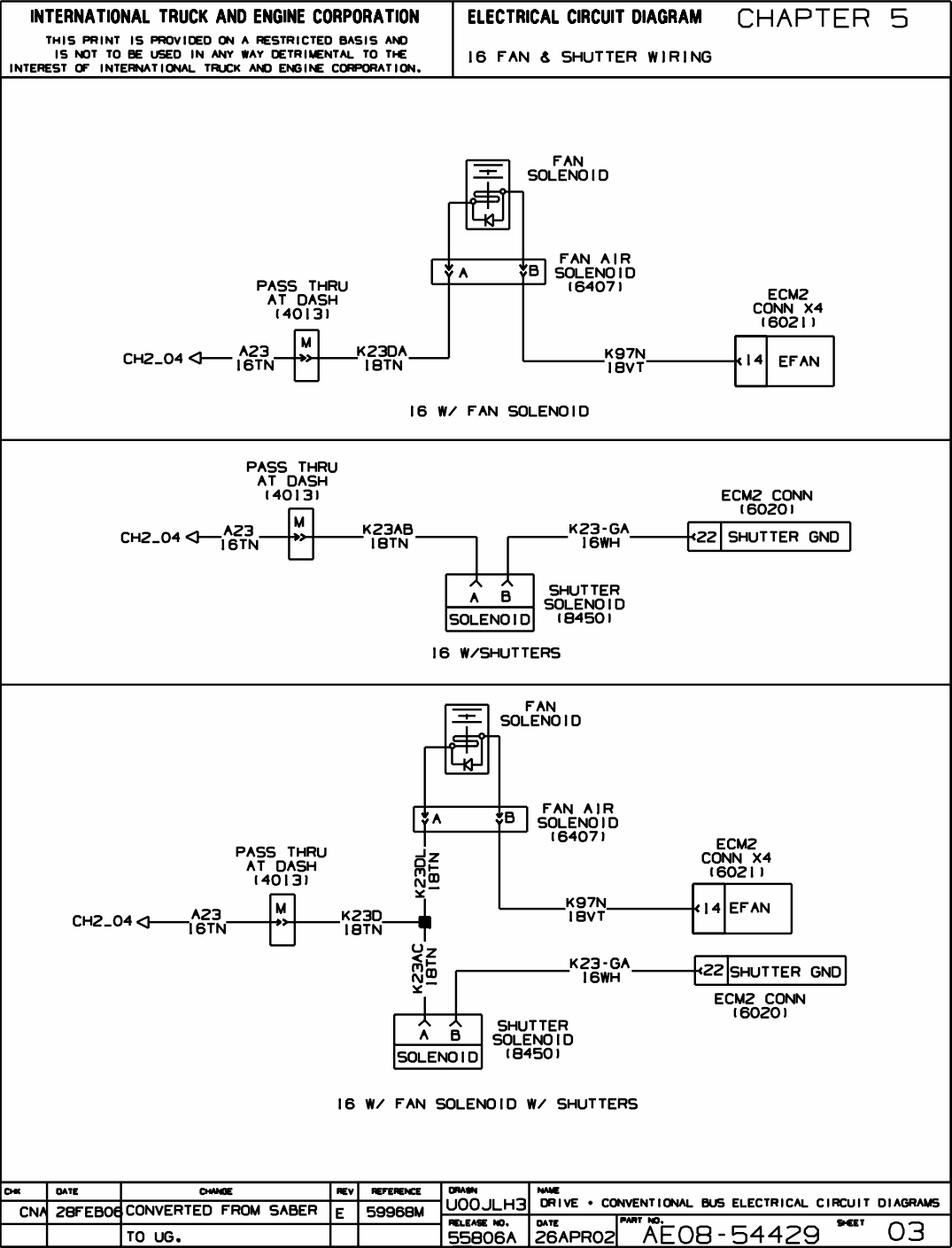


Figure 34 I6 Fan and Shutter Wiring

5.4. V8 FAN AND SHUTTER WIRING, P. 4

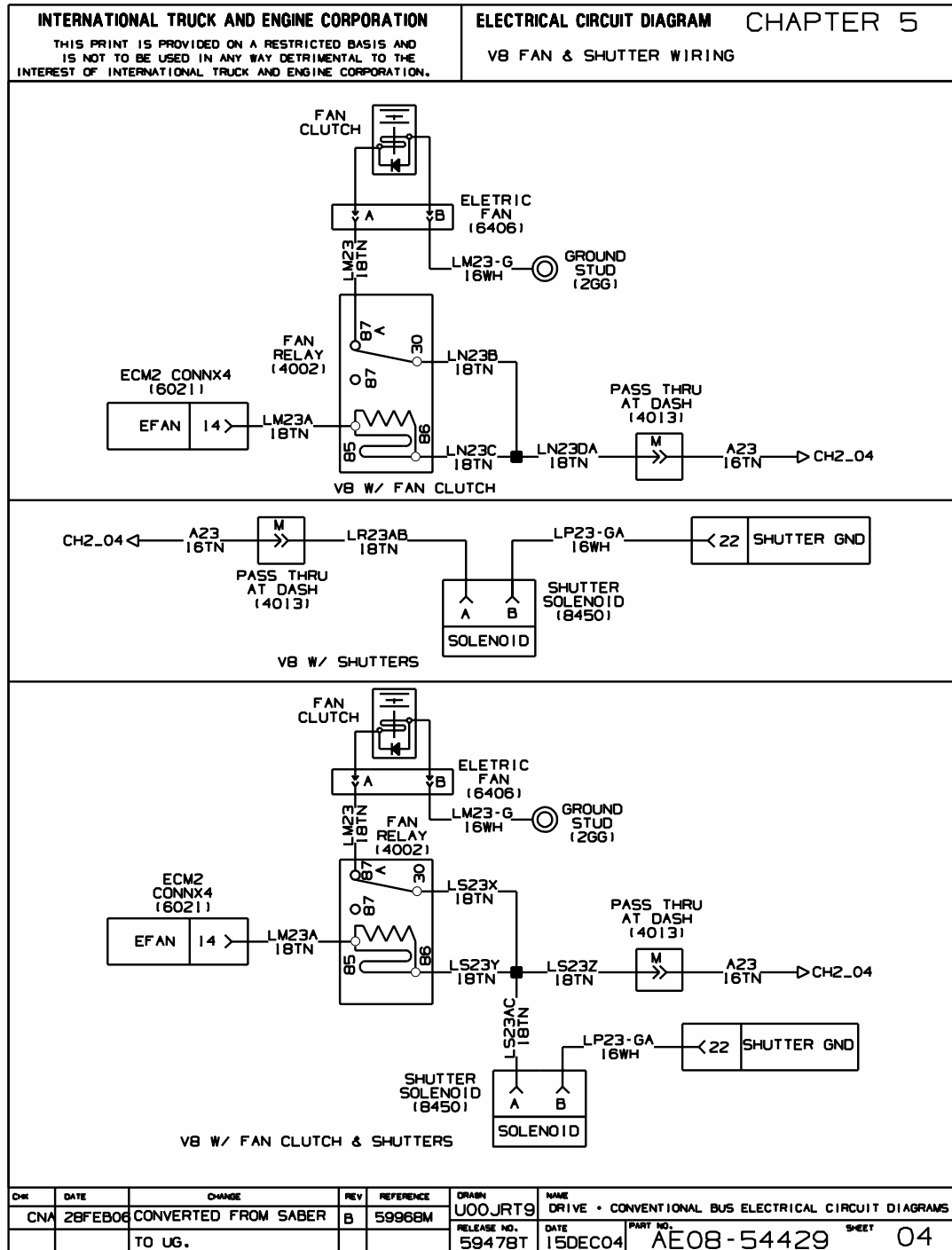


Figure 35 V8 Fan and Shutter Wiring

5.5. V8 FAN AND SHUTTER WIRING, P. 5

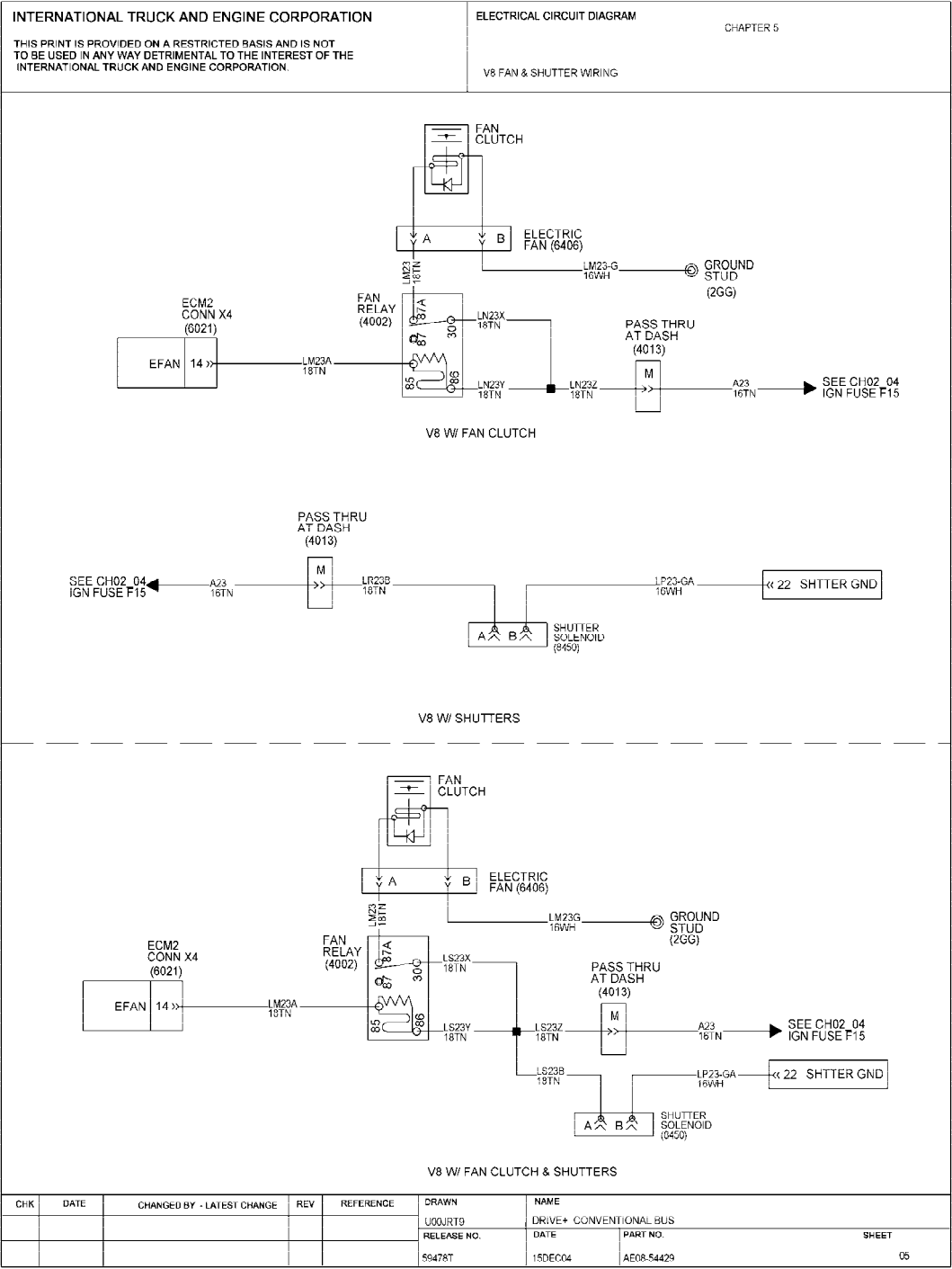


Figure 36 V8 Fan and Shutter Wiring

6. GAUGES AND WARNING LIGHTS (CHAPTER 6)

6.1. IP GAUGES, P. 1

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM

IP/GAUGES

CHAPTER 6

INSTRUMENT PANEL GAUGES			
GAUGE	WARNING LIGHT	SIGNAL PATH	SENSOR LOCATION
RPM (TACH)	NO	ENGINE CTRL/DRIVE TRAIN J1939 CLUSTER	ENGINE
MPH/KPH (SPD)	NO	ENGINE CTRL/DRIVE TRAIN J1939 CLUSTER	TRANSMISSION
FUEL	YES	SYSTEM CTRL/DRIVE TRAIN J1939 CLUSTER	FUEL TANK
VOLT	YES	SYSTEM CTRL/DRIVE TRAIN J1939 CLUSTER	-
AIR1 (PRES)	YES	SYSTEM CTRL/DRIVE TRAIN J1939 CLUSTER	INSIDE CAB- DASH PNL
AIR2 (PRES)	YES	SYSTEM CTRL/DRIVE TRAIN J1939 CLUSTER	STEERING COL AREA
WATER (TEMP)	YES	ENGINE CTRL/DRIVE TRAIN J1939 CLUSTER	ENGINE
ENGINE OIL (TEMP)	YES	ENGINE CTRL/DRIVE TRAIN J1939 CLUSTER	ENGINE
OIL (PRES)	YES	ENGINE CTRL/DRIVE TRAIN J1939 CLUSTER	ENGINE
TRANS (TEMP)	YES	XMSN CTRLR/SYSTEM CTRLR/DRIVE TRAIN J1939 CLUSTER	TRANSMISSION
AMMETER	NO	PAM MODULE/DRIVE TRAIN J1939 CLUSTER	ENGINE

NOTE :

1) WARNING LIGHTS ARE PART OF THE GAUGES AND LOCATED IN THE GAUGE CLUSTER

CHK	DATE	CHANGE	REV	REFERENCE	ORIGIN	NAME
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JAHP	DRIVE - CONVENTIONAL ELECTRICAL CIRCUIT DIAGRAMS
		TO UG.			RELEASE NO. 55806A	DATE 23APR02
					PART NO. AE08-54430	SHEET 01

Figure 37 IP Gauges

6.2. WARNING LIGHTS, P. 2

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM

WARNING LIGHTS

CHAPTER 6

IP WARNING LIGHTS		
WARNING LIGHT TITLE	SIGNAL PATH	SENSOR LOCATION
RANGE INHIBITED LCT	TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER	
FUEL FILTER	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	FUEL FILTER
ENGINE (YELLOW LED)	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	
ENGINE (RED LED)	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	
BRAKE PRESSURE (AIR)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	SWITCH
BRAKE PRESSURE (HYD)	HYD BRK ECU CTRLR/DRIVE TRAIN J1939/CLUSTER	SWITCH
BRAKE/PARK/BRAKE FLUID	HYD BRK ECU CTRLR/DRIVE TRAIN J1939/CLUSTER	
PARK (HYD BRAKE) (PI)	HYD BRK ECU CTRLR/DRIVE TRAIN J1939/CLUSTER	SAHR TRAVEL SW
BRAKE FLUID HYD BRK	HYD BRK ECU CTRLR/DRIVE TRAIN J1939/CLUSTER	BRK RESERVOIR
TRAC CTRL	TRUCK ABS CTRLR/DRIVE TRAIN J1939/CLUSTER	
CHECK TRANS	TRUCK ABS CTRLR/DRIVE TRAIN J1939/CLUSTER	
(LEFT TURN)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	TURN SIG SW
WATER IN FUEL	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	FUEL FILTER
COOLANT LEVEL	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	SURGE TANK
CHECK ELECT SYS	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
PARK (AIR BRAKE) (PI)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	PARK BRAKE VALVE
ABS	TRUCK CTRLR/DRIVE TRAIN J1939/CLUSTER	
(RIGHT TURN)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
WAIT TO START	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	
(HIGH BEAM IND)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
COLD AMB PROTEC	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
THROTTLE	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	
LIFT DOOR	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	LIFT DOOR SWITCH
ECON	TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER	
SERVICE (PI)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
AMBER FLASHER	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
RED FLASHER	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
EMERG EXIT	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME
CNA	28FEB06	CONVERTED FROM SABER	D	59968M	U00JAHF	DRIVE • CONVENTIONAL BUS ELECTRICAL CIRCUIT DIAGRAMS
		TO UG.			RELEASE NO. 55806A	DATE 23APR02
						PART NO. AE08-54430
						SHEET 02

Figure 38 Warning Lights

6.3. WARNING LIGHTS CONTROLLED BY ENGINE, TRANSMISSION, ABS CONTROLLERS, P. 3

INTERNATIONAL TRUCK AND ENGINE CORPORATION

THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND
IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE
INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 6

WARNING LIGHTS CONTROLLED BY ENGINE
TRANSMISSION, ABS CONTROLLERS

THE FOLLOWING WARNING LIGHTS ARE CONTROLLED BY THE ENGINE, TRANSMISSION
OR ABS CONTROLLER OVER THE DATA BUS AND DO NOT HAVE INDEPENDENT CIRCUITRY
THAT CAN BE OR NEEDS TO BE SHOWN:

RANGE INHIBIT
ENGINE (YELLOW LED)
ENGINE (RED LED)
TRAC CTRL
CHECK TRANS
CHECK ELECTR SYS
ABS
WAIT TO START
PARK (HYD BRK), BRAKE PRESSURE (HYD BRK), BRAKE FLUID (HYD BRK): ALL ON SAME LIGHT

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	
CNA	28FEB06	CONVERTED FROM SABER	C	59968M	U00JAHF	DRIVE + CONVENTIONAL ELECTRICAL CIRCUIT DIAGRAMS	
		TO UG.			RELEASE NO. 55806A	DATE 23APR02	PART NO. AE08-54430
						SHEET	03

Figure 39 Warning Lights Controlled by Engine, Transmission, ABS Controller

6.4. ENG. OIL PRESS. AND TEMP., SPEEDOMETER, TACH., VOLTMETER AND WATER TEMP. GAUGE CIRCUITS, P. 4

INTERNATIONAL TRUCK AND ENGINE CORPORATION THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.				ELECTRICAL CIRCUIT DIAGRAM CHAPTER 6 ENGINE OIL PRESS & TEMP, SPEEDOMETER, TACH, VOLTMETER & WATER TEMP GAUGE CIRCUITS			
<p>REFER TO CONSOLIDATED ENGINE/VEHICLE CONTROLLER DIAGNOSTICS MANUAL EGES-175 (DT466), EGES-190 (V8-AVNY), FOR CIRCUIT DIAGRAMS SHOWING INPUT CIRCUITRY FOR THE FOLLOWING DATALINK DRIVEN SYSTEMS:</p> <p>ENGINE OIL PRESSURE GAUGE ENGINE OIL TEMPERATURE GAUGE SPEEDOMETER GAUGE TACHOMETER GAUGE WATER TEMPERATURE GAUGE</p>							
Date	DATE	CHANGE	REV	REFERENCE	ORIGIN	NAME	
	CNA 28FEB08	CONVERTED FROM SABER	C	59968M	U00JAHP	DRIVE • CONVENTIONAL ELECTRICAL CIRCUIT DIAGRAMS	
		TO UG.			RELEASE NO. 55806A	DATE 23APR02	PART NO. AE08-54430 SHEET 04

Figure 40 Eng. Oil Press. and Temp., Speedometer, Tach., Voltmeter and Water Temp. Gauge Circuits

6.5. GAUGES AND WARNING LIGHTS — INSTRUMENT CLUSTER, P. 5

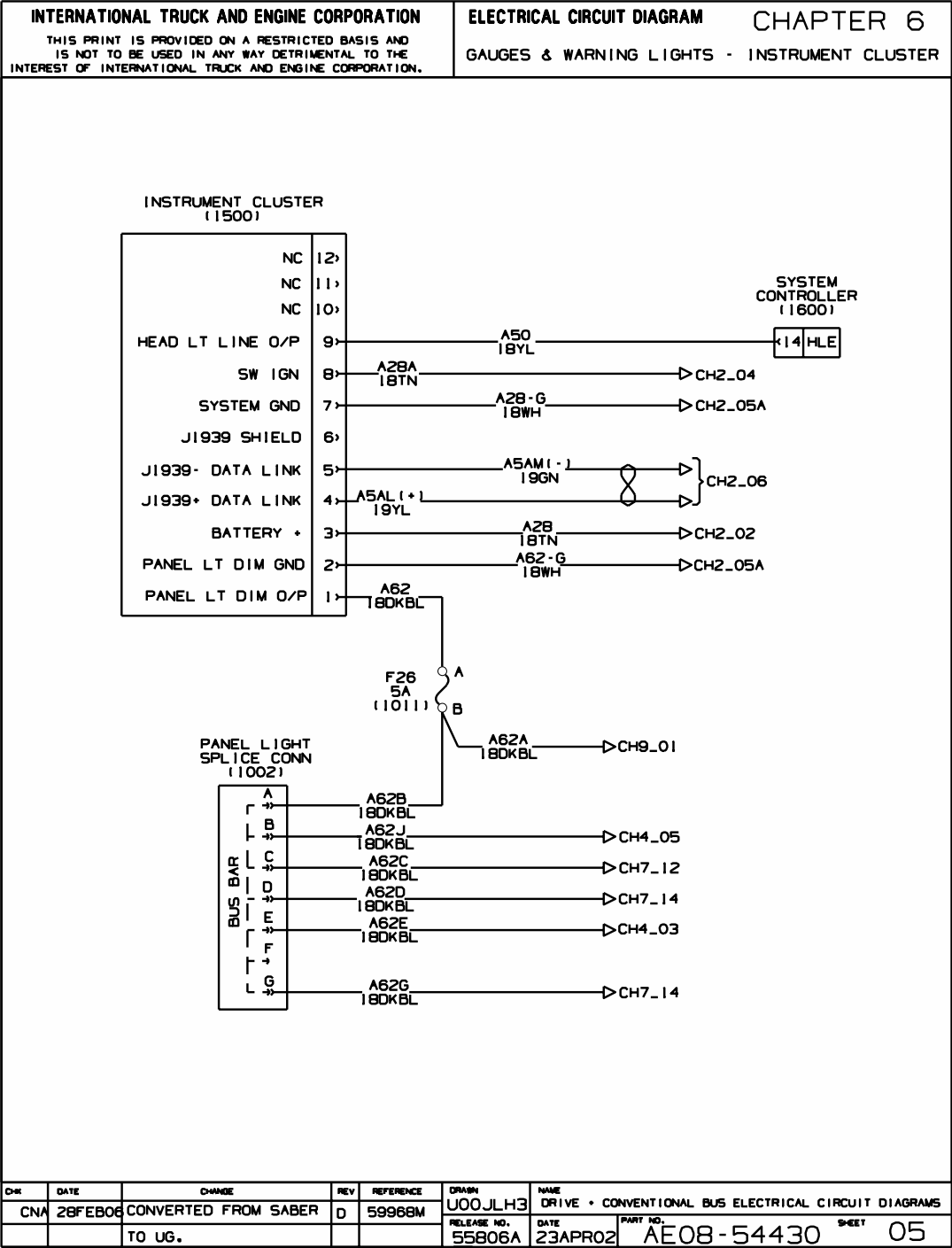


Figure 41 Gauges and Warning Lights — Instrument Cluster

6.6. GAUGES AND WARNING LIGHTS — AMMETER, P. 6

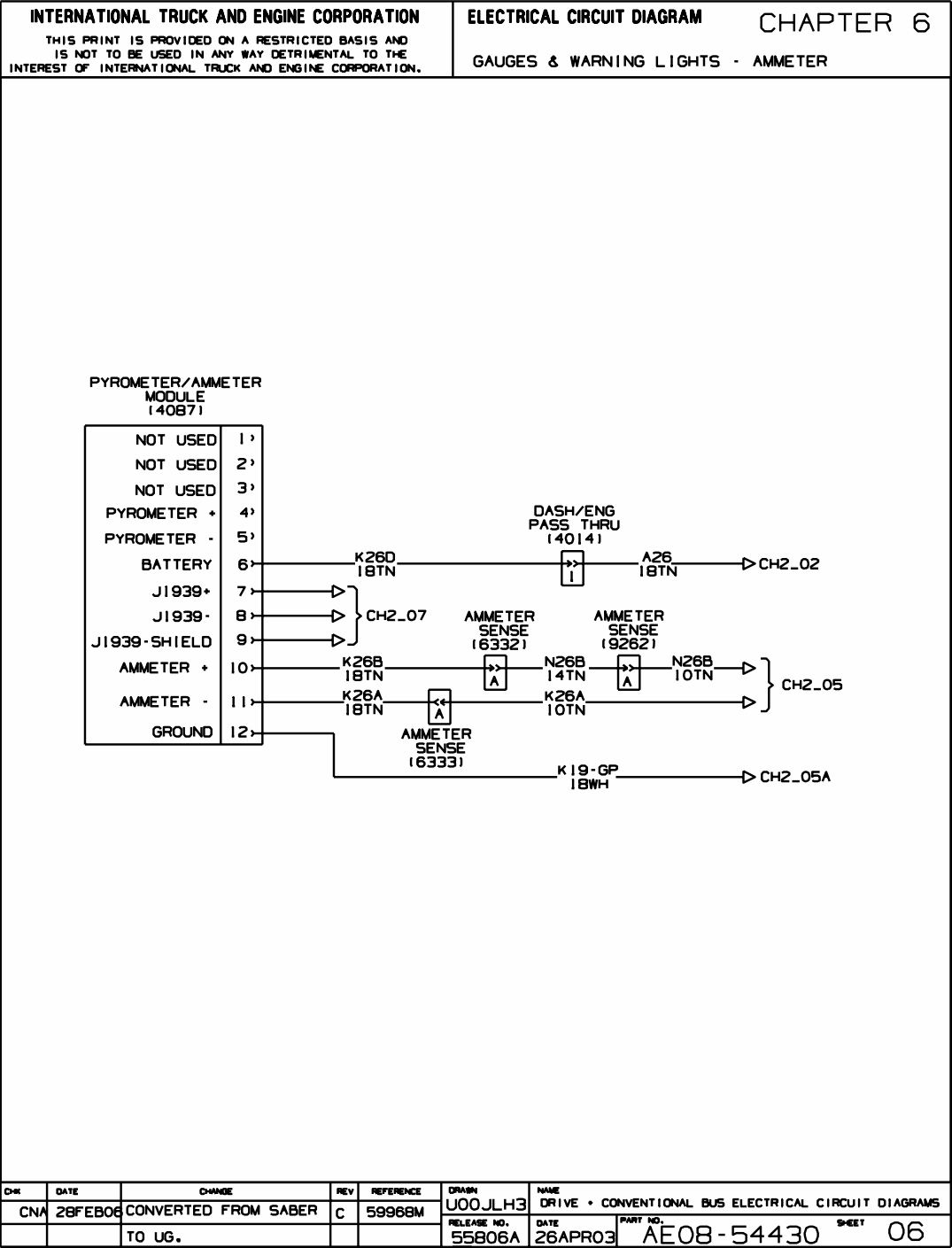


Figure 42 Gauges and Warning Lights — Ammeter

6.7. GAUGES AND WARNING LIGHTS — COOLANT TANK LEVEL, P. 7

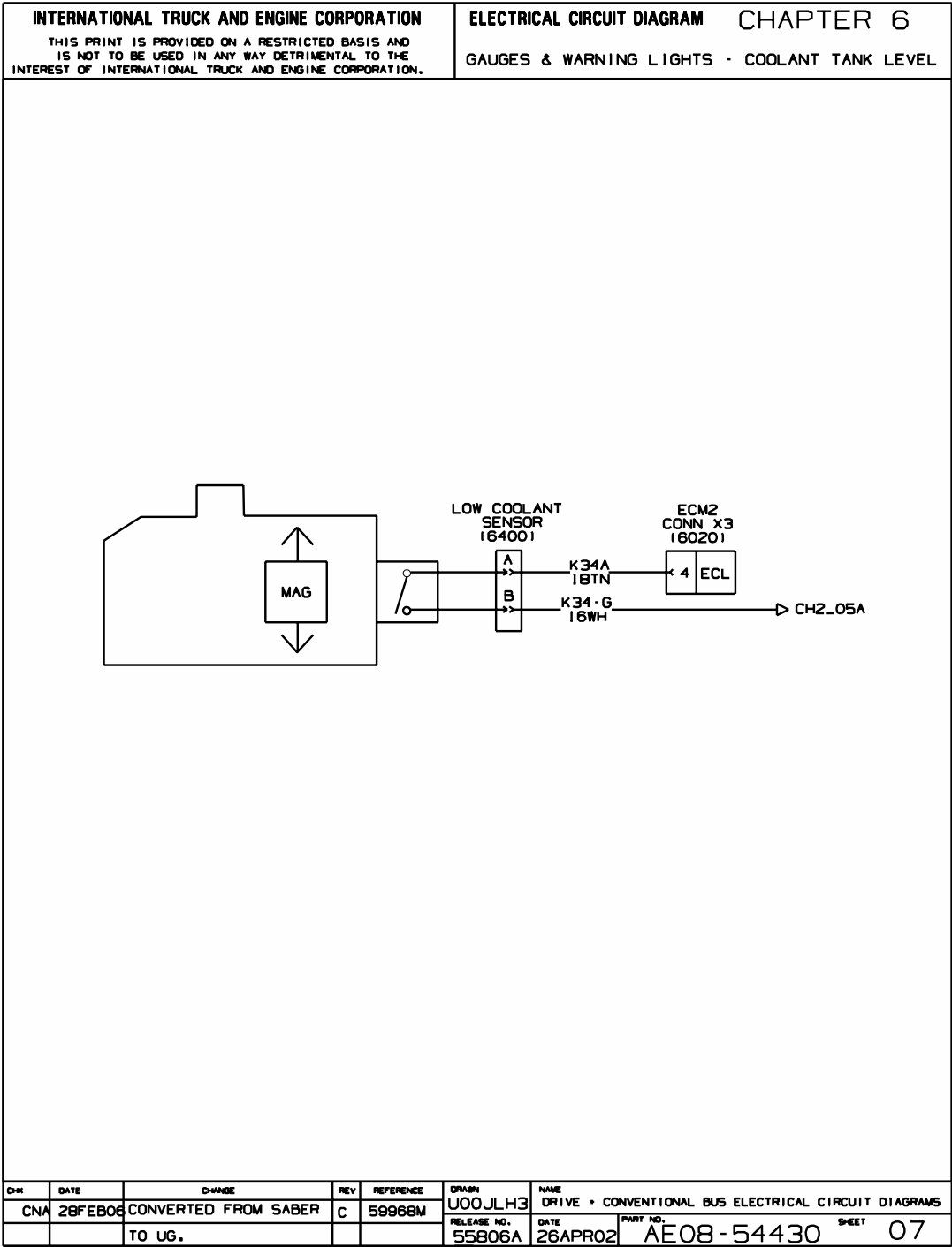


Figure 43 Gauges and Warning Lights — Coolant Tank Level

6.8. GAUGES AND WARNING LIGHTS — FUEL GAUGE WITH AIR BRAKE CHASSIS, P. 8

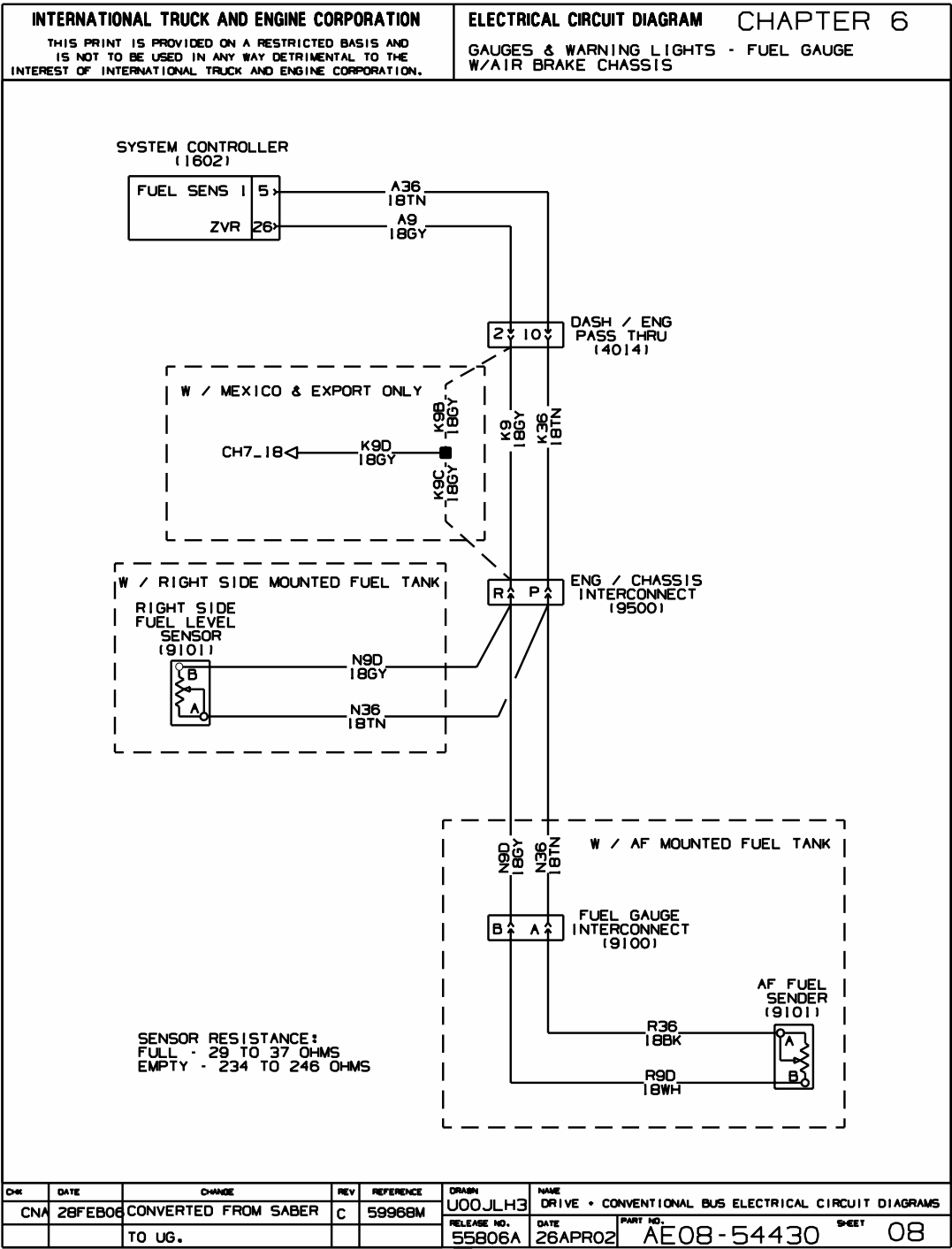
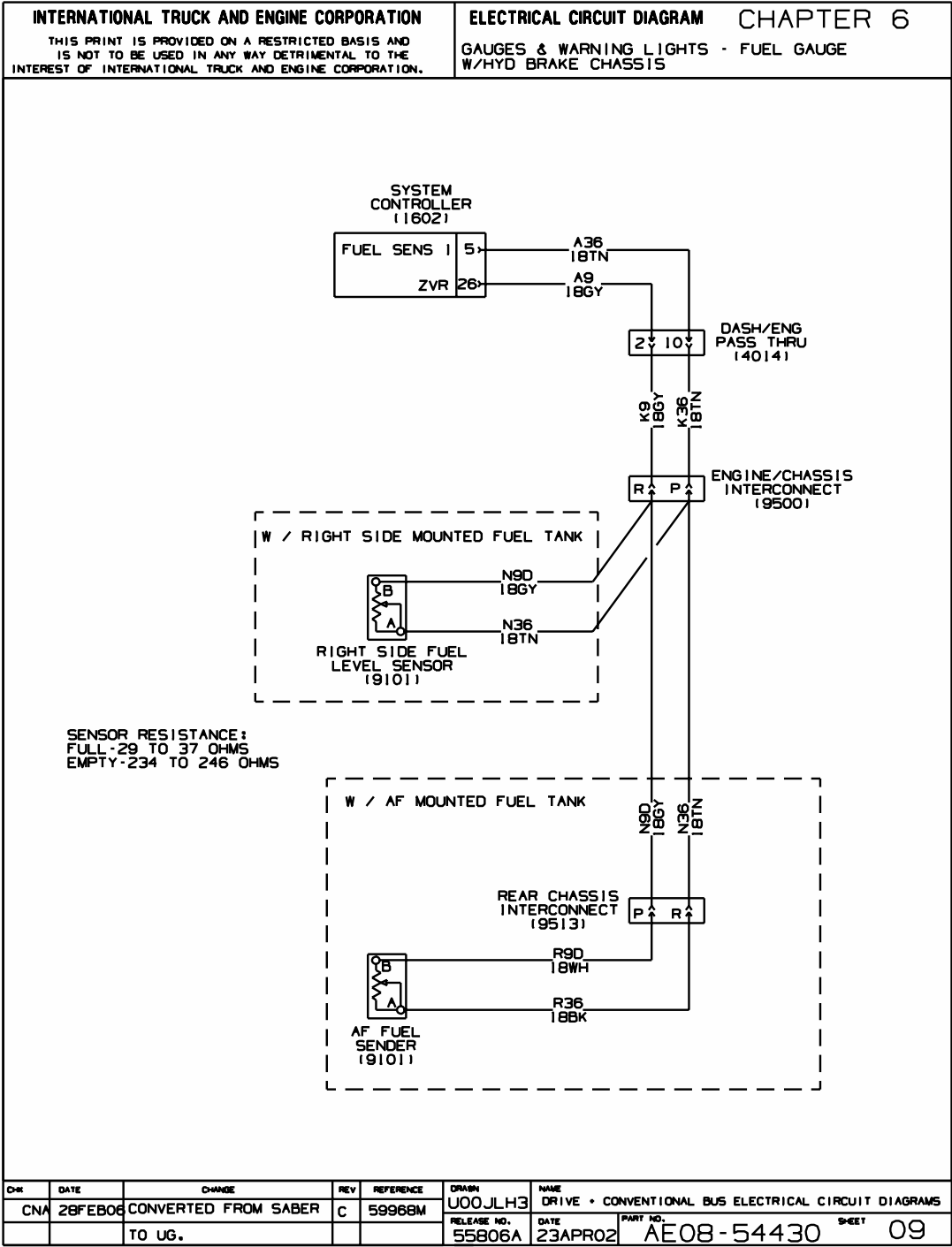


Figure 44 Gauges and Warning Lights — Fuel Gauge with Air Brake Chassis

6.9. GAUGES AND WARNING LIGHTS — FUEL GAUGE WITH HYDRAULIC BRAKE CHASSIS, P. 9



6.10. GAUGES AND WARNING LIGHTS — PARK BRAKE LIGHT, P. 10

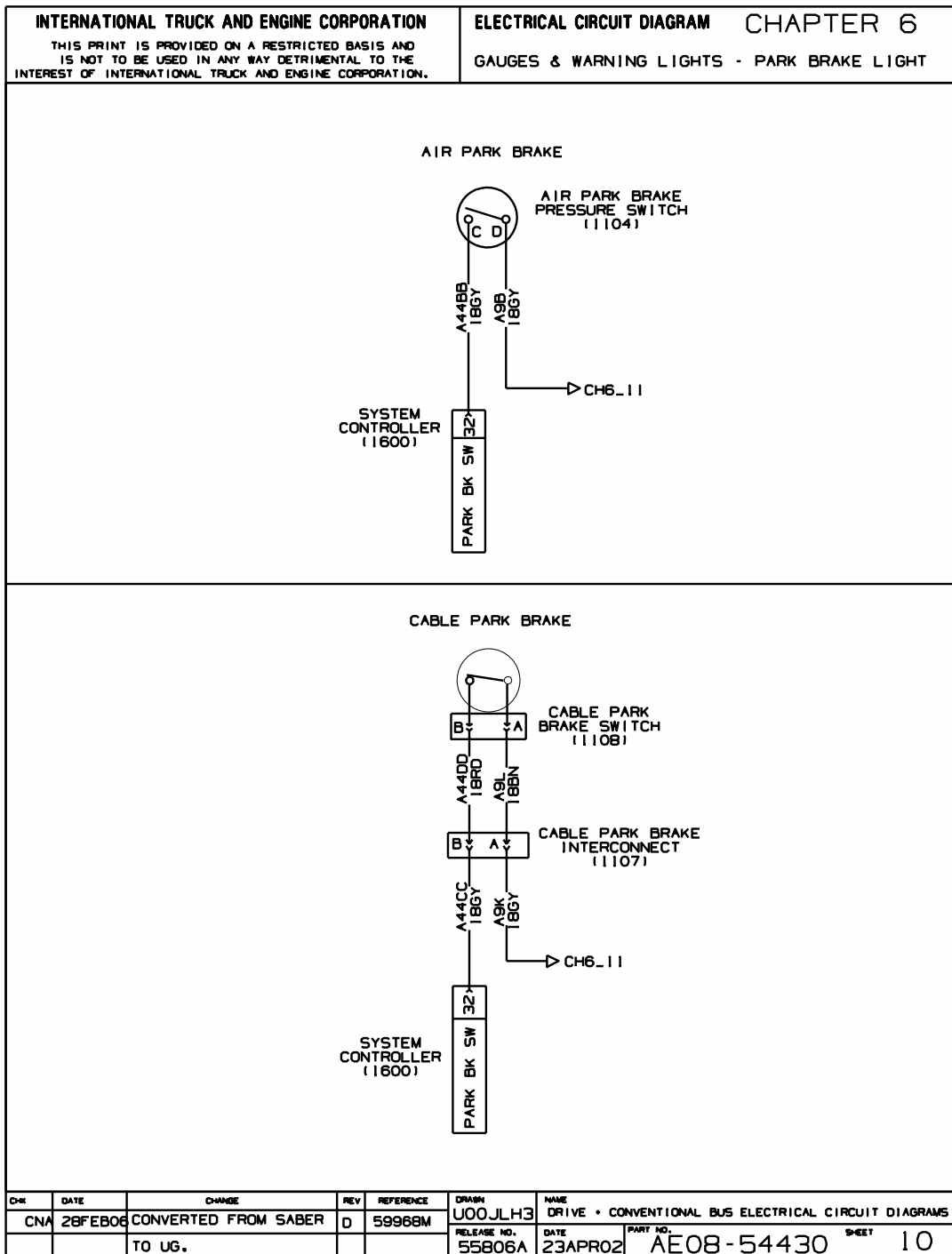


Figure 46 Gauges and Warning Lights — Park Brake Light

6.11. GAUGES AND WARNING LIGHTS — AIR PRESSURE INPUT CIRCUIT AND ZERO VOLT REFERENCE SPLICE, P. 11

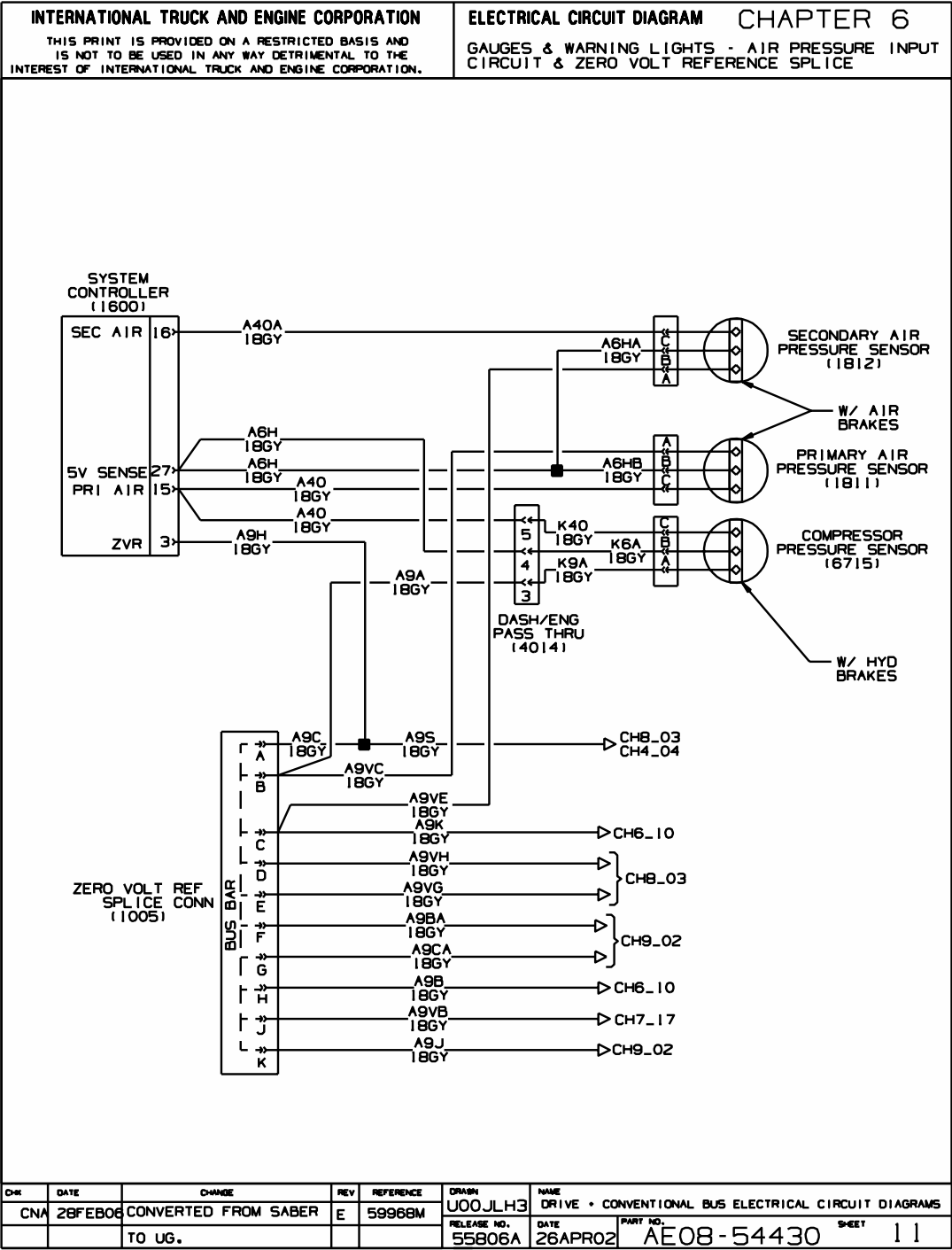


Figure 47 Gauges and Warning Lights — Air Pressure Input Circuit and Zero Volt Reference Splice

6.12. GAUGES AND WARNING LIGHTS — CHANGE TRANSMISSION FILTER LIGHT, P. 12

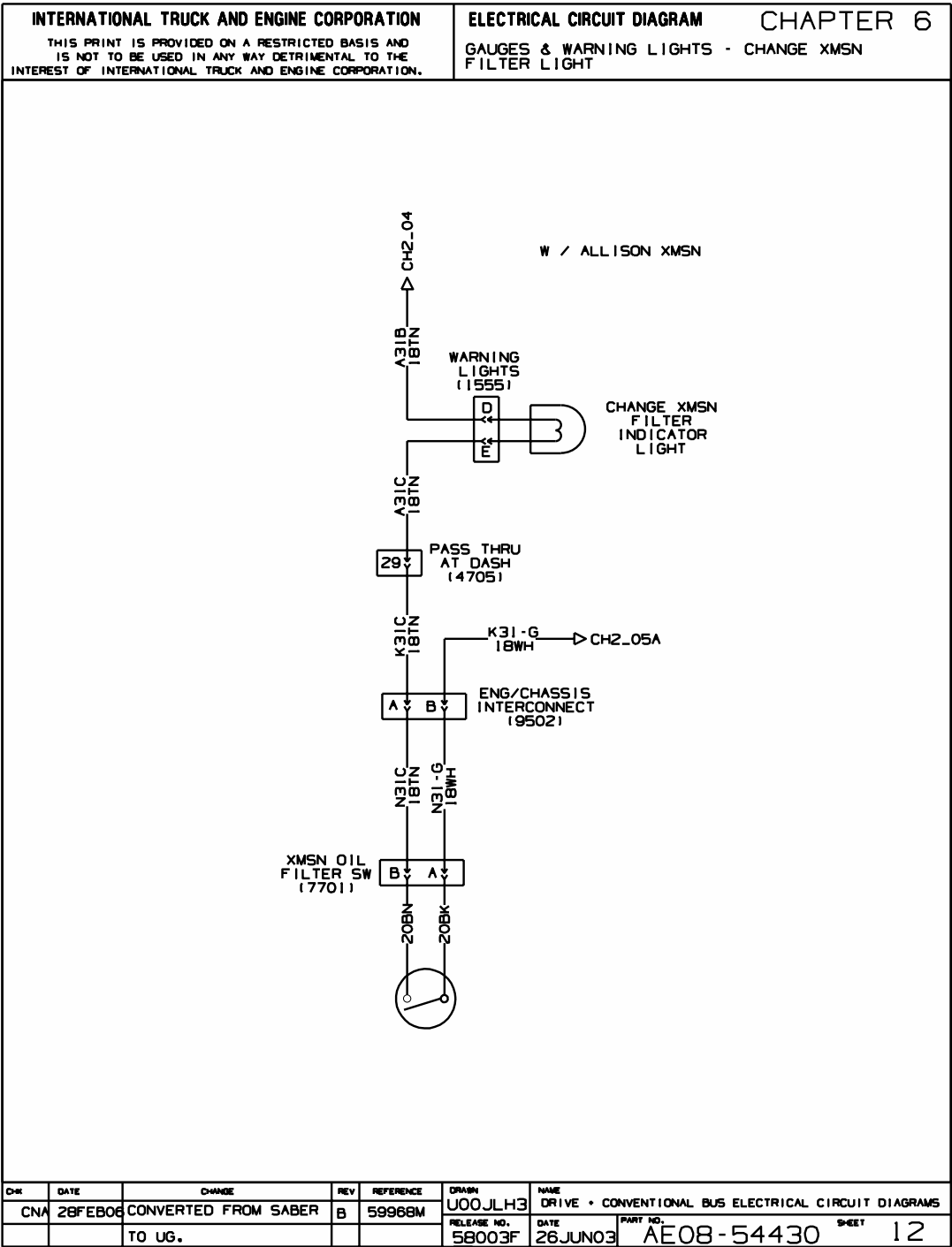


Figure 48 Gauges and Warning Lights — Change Transmission Filter Light

7. CHASSIS ACCESSORIES (CHAPTER 7)

7.1. AIR DRYER AND DRAIN VALVE, P. 1

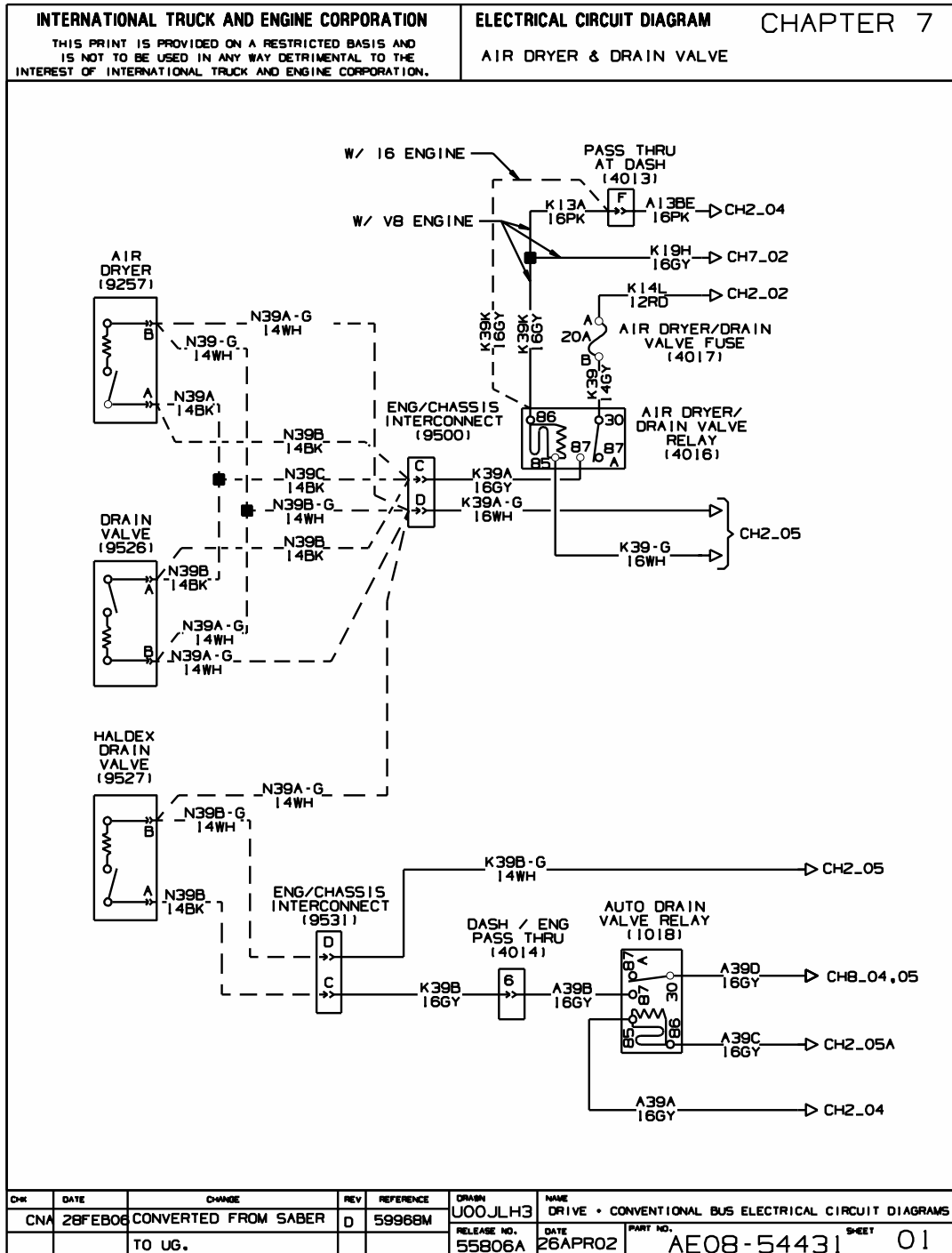


Figure 49 Air Dryer and Drain Valve

7.2. FUEL FILTER WIRING SYSTEM, P. 2

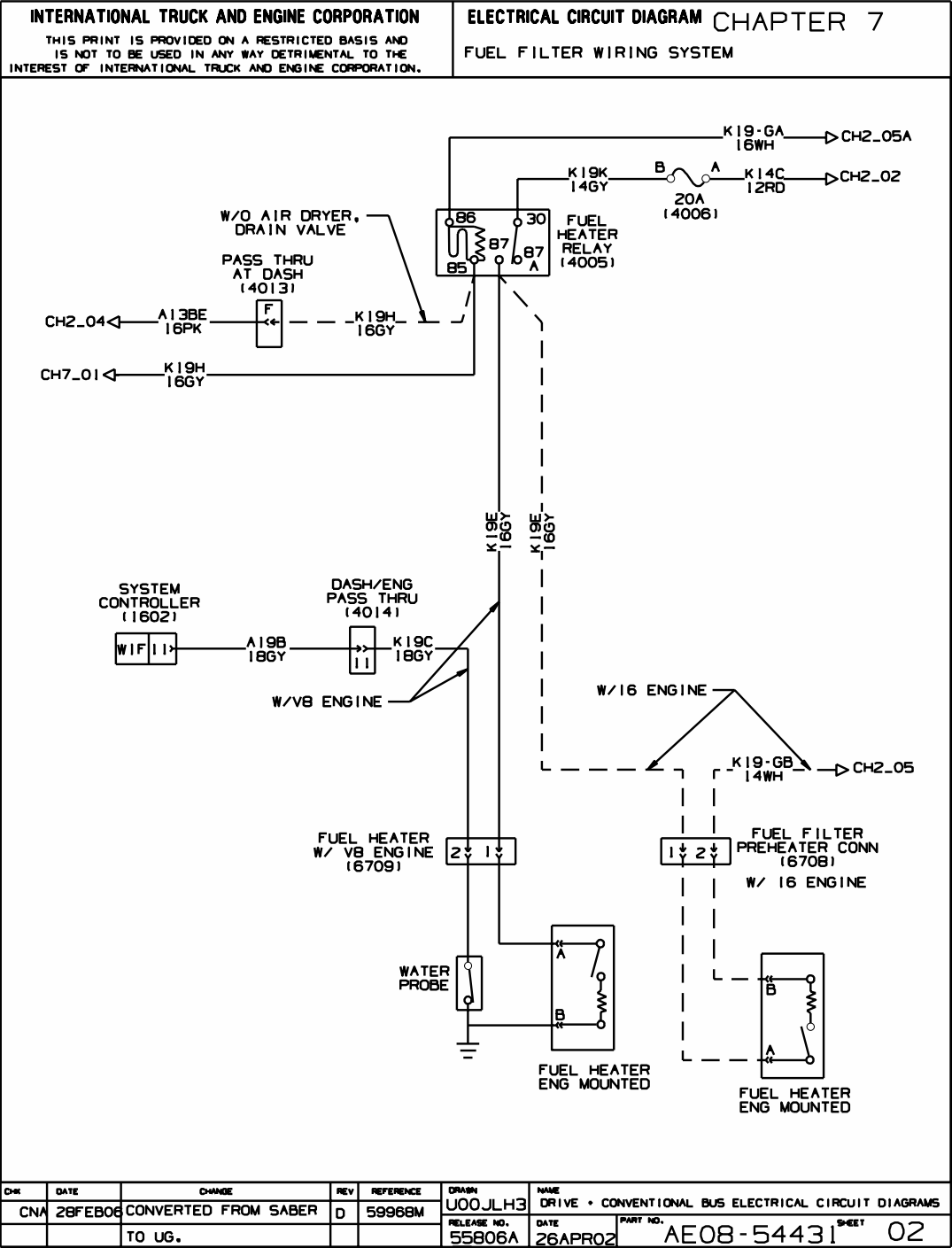


Figure 50 Fuel Filter Wiring System

7.3. AIR PARK BRAKE INTERLOCK, P. 3

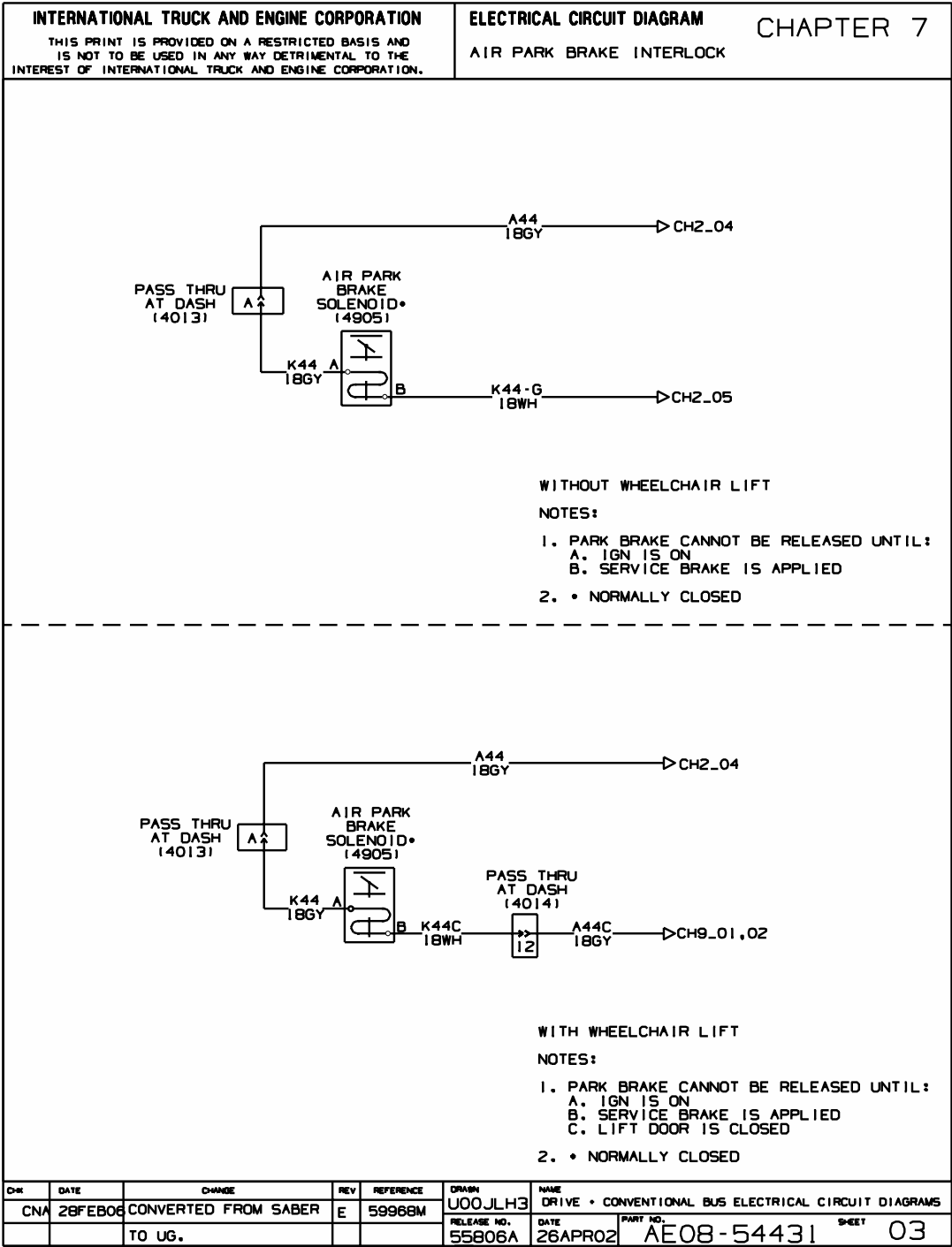


Figure 51 Air Park Brake Interlock

7.4. PARK BRAKE / SHIFTER INTERLOCK — WITH LCT TRANSMISSION ONLY, P. 4

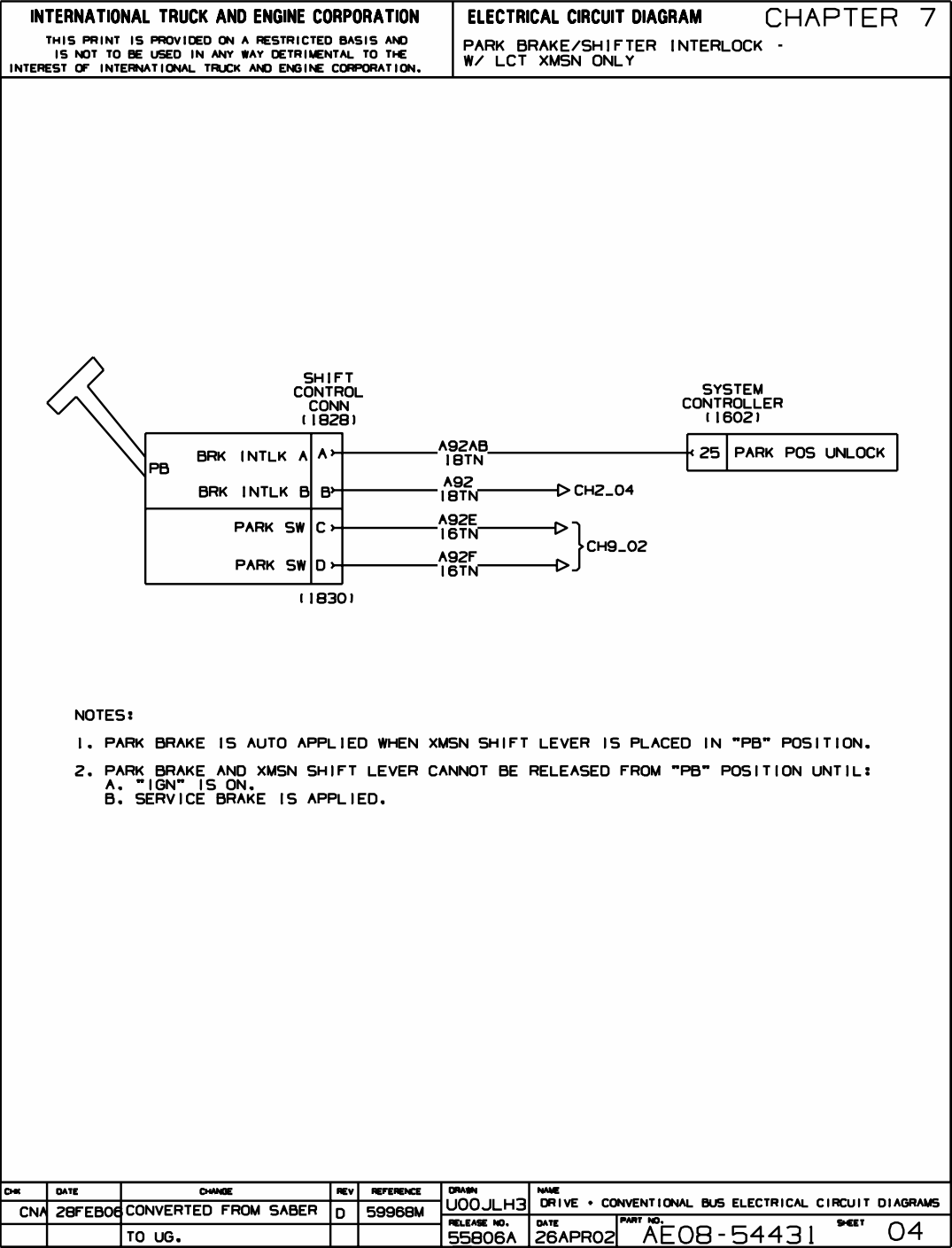


Figure 52 Park Brake / Shifter Interlock — with LCT Transmission Only

7.5. ANTILOCK BRAKE SYSTEM (ABS), AIR, P. 5

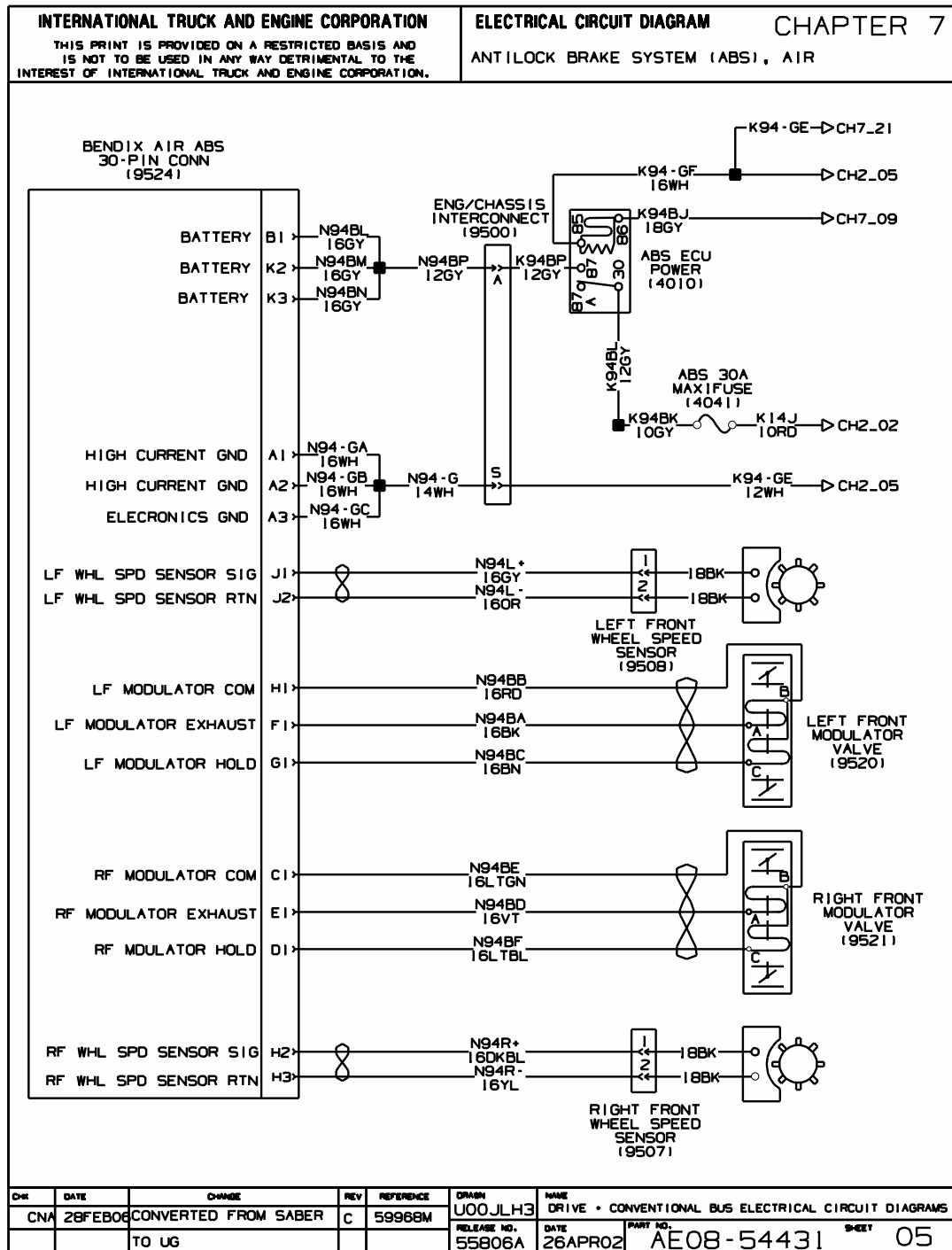


Figure 53 Antilock Brake System (ABS), Air

7.6. ANTILOCK BRAKE SYSTEM (ABS), AIR, P. 6

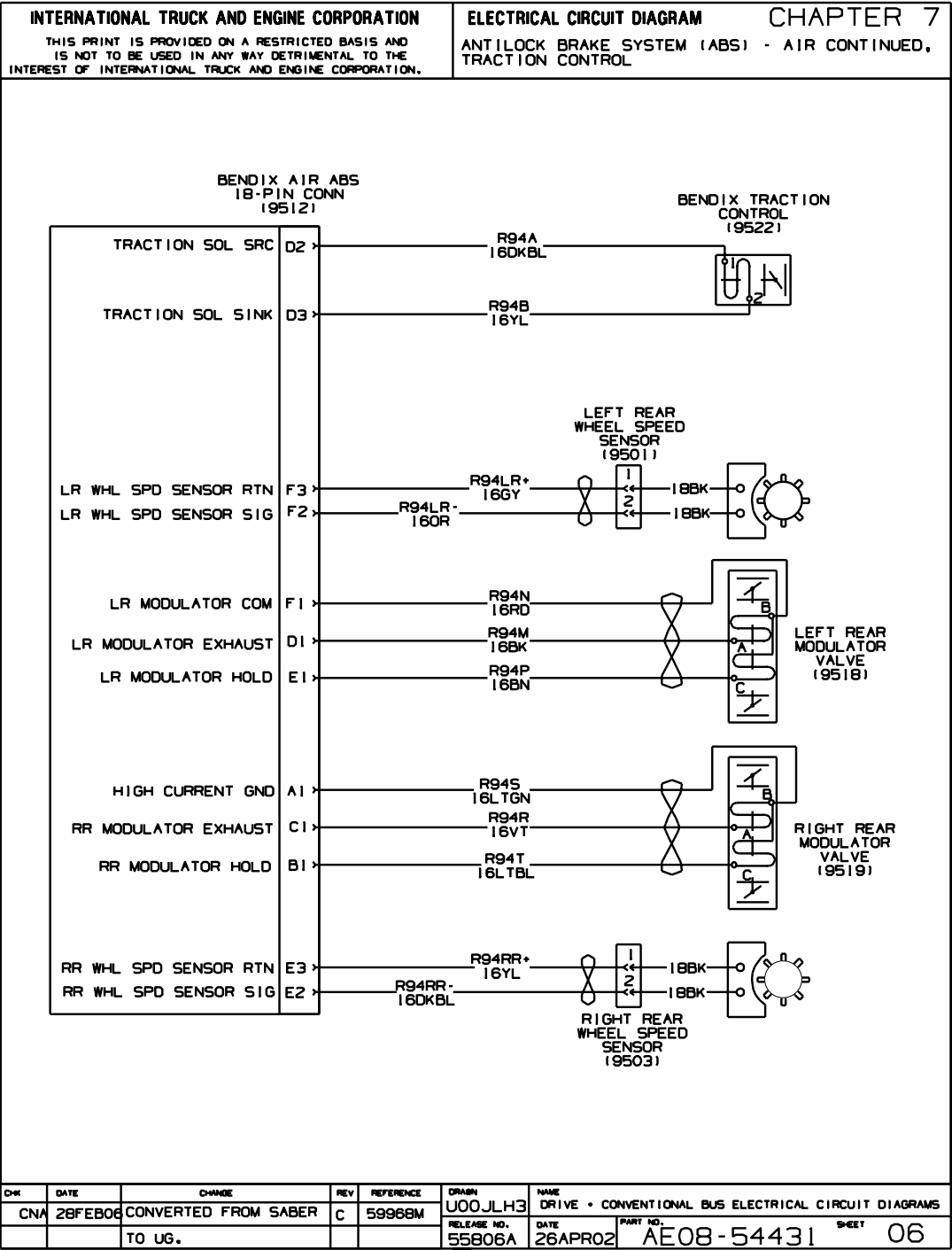


Figure 54 Antilock Brake System (ABS), Air (Cont.)

7.7. AIR SOLENOID MODULE, P. 7

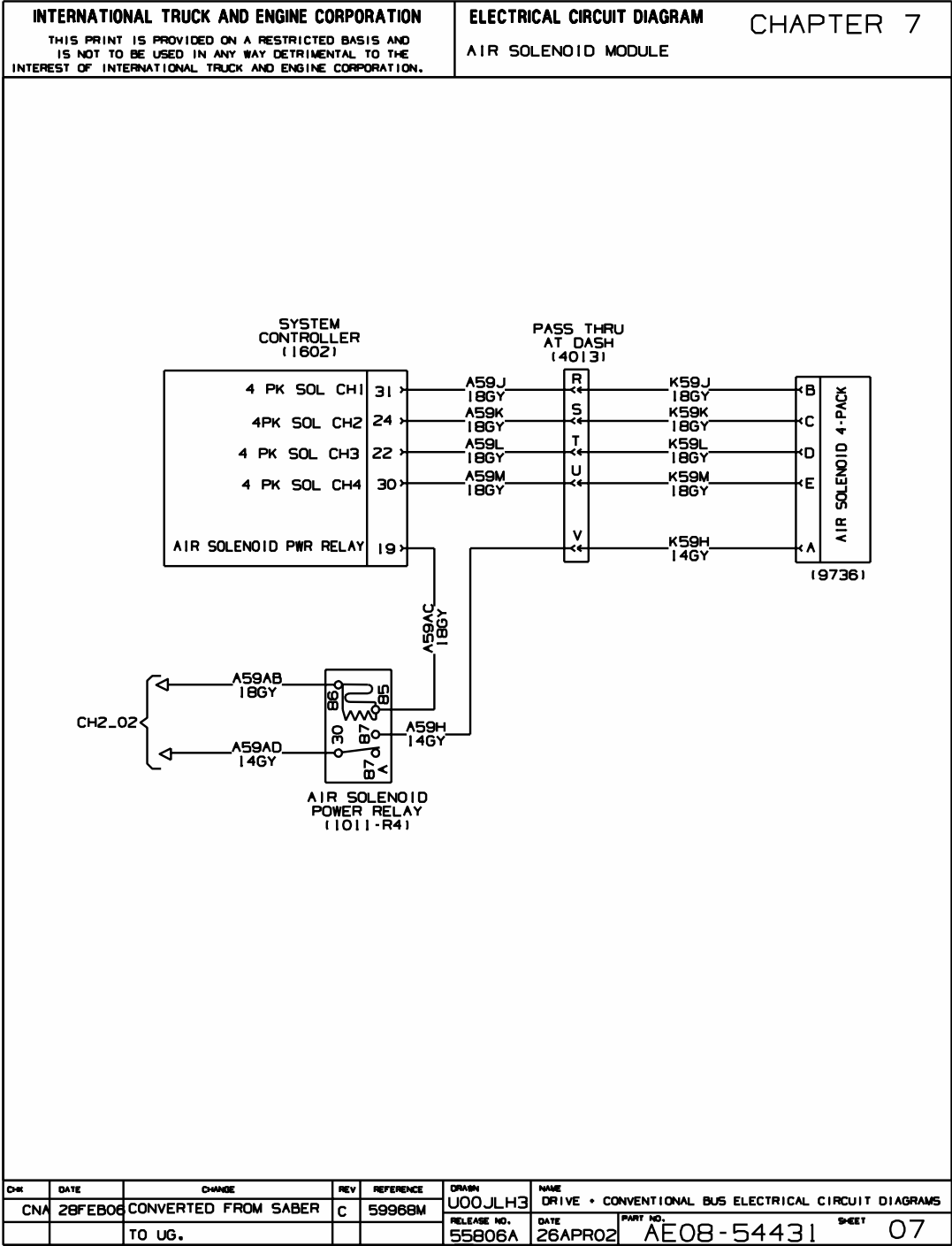


Figure 55 Air Solenoid Module

7.8. HYDRAULIC ANTILOCK BRAKES, P. 8

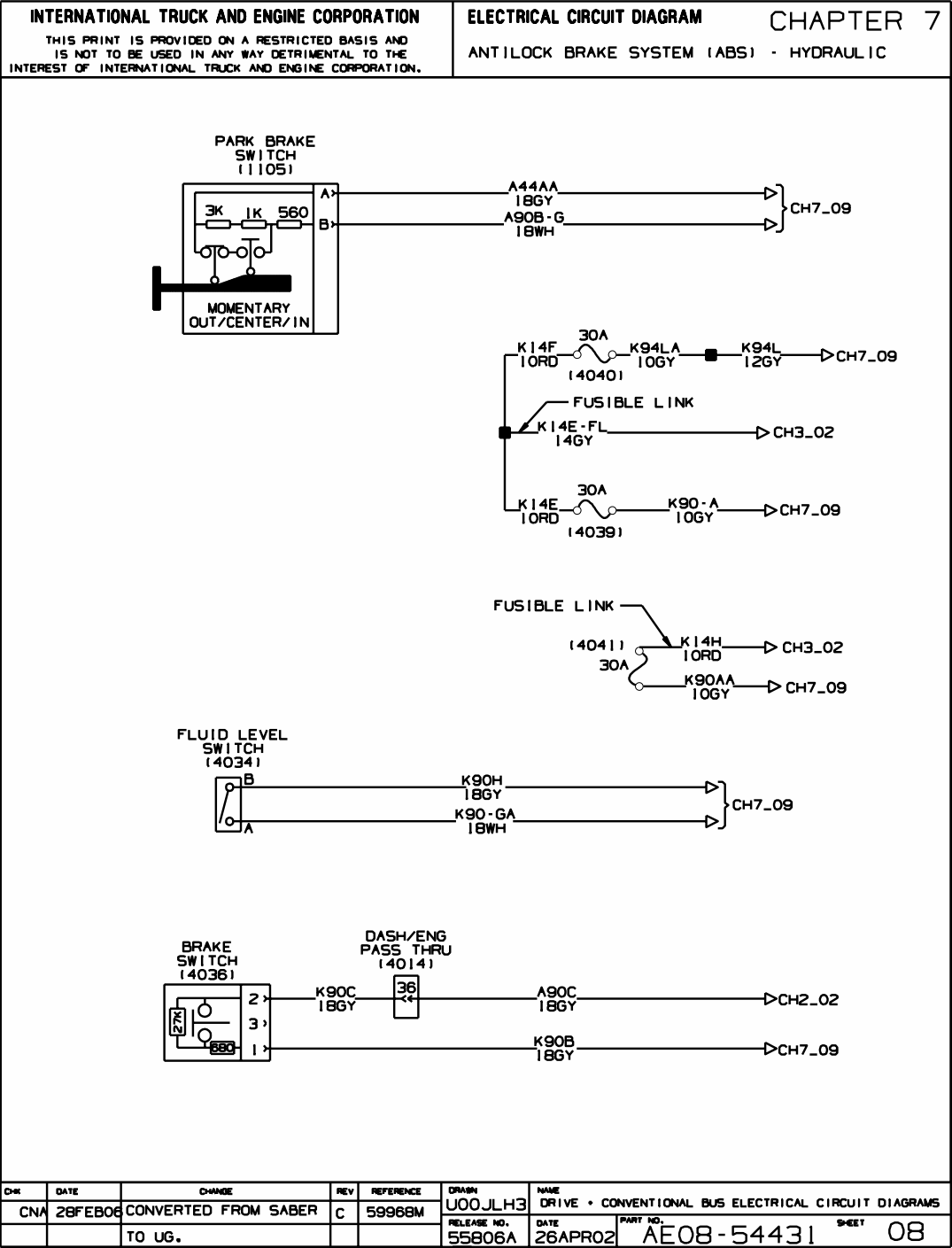


Figure 56 Hydraulic Antilock Brakes

7.9. HYDRAULIC ANTILOCK BRAKES, P. 9

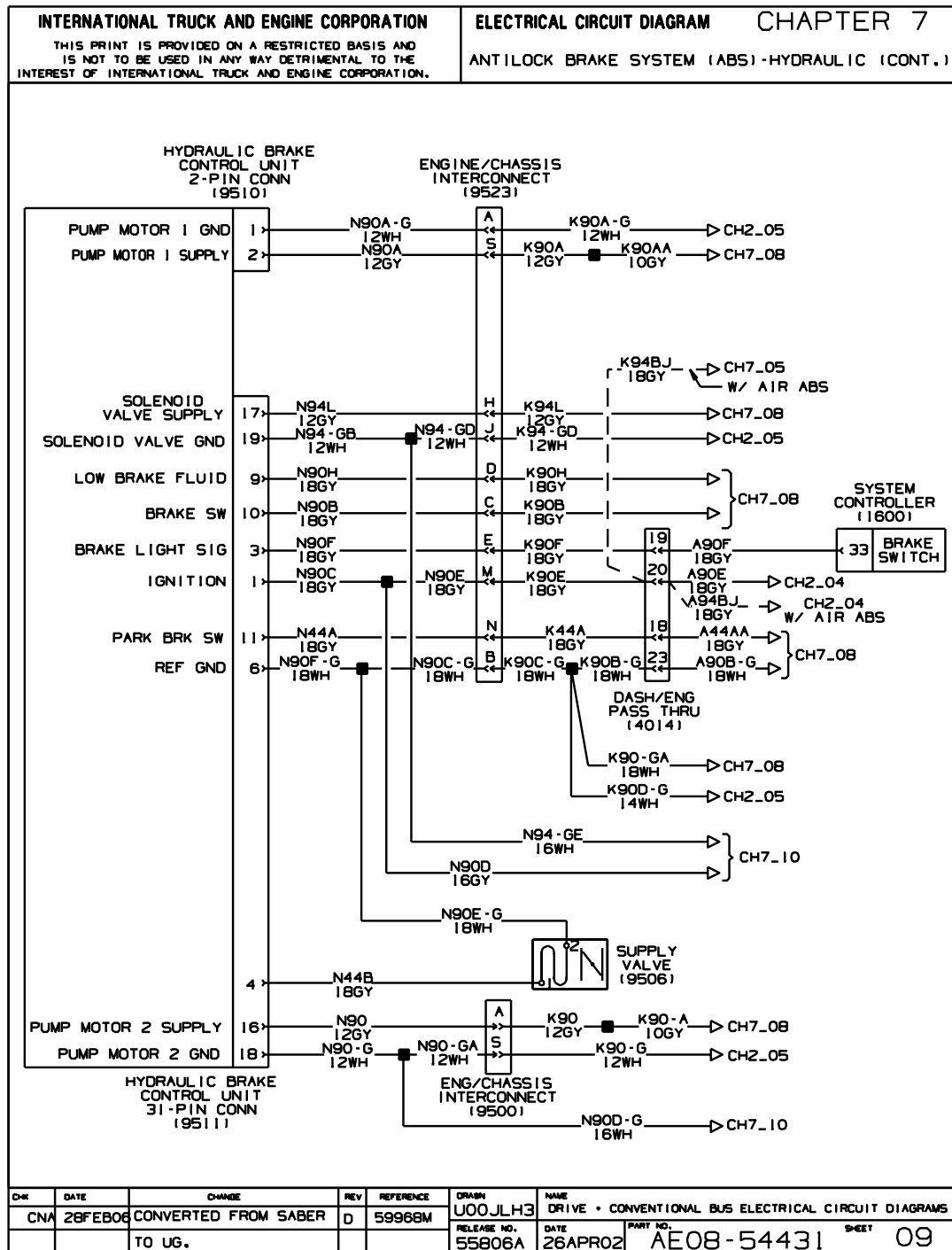


Figure 57 Hydraulic Antilock Brakes (Cont.)

7.10. HYDRAULIC ANTILOCK BRAKES, P. 10

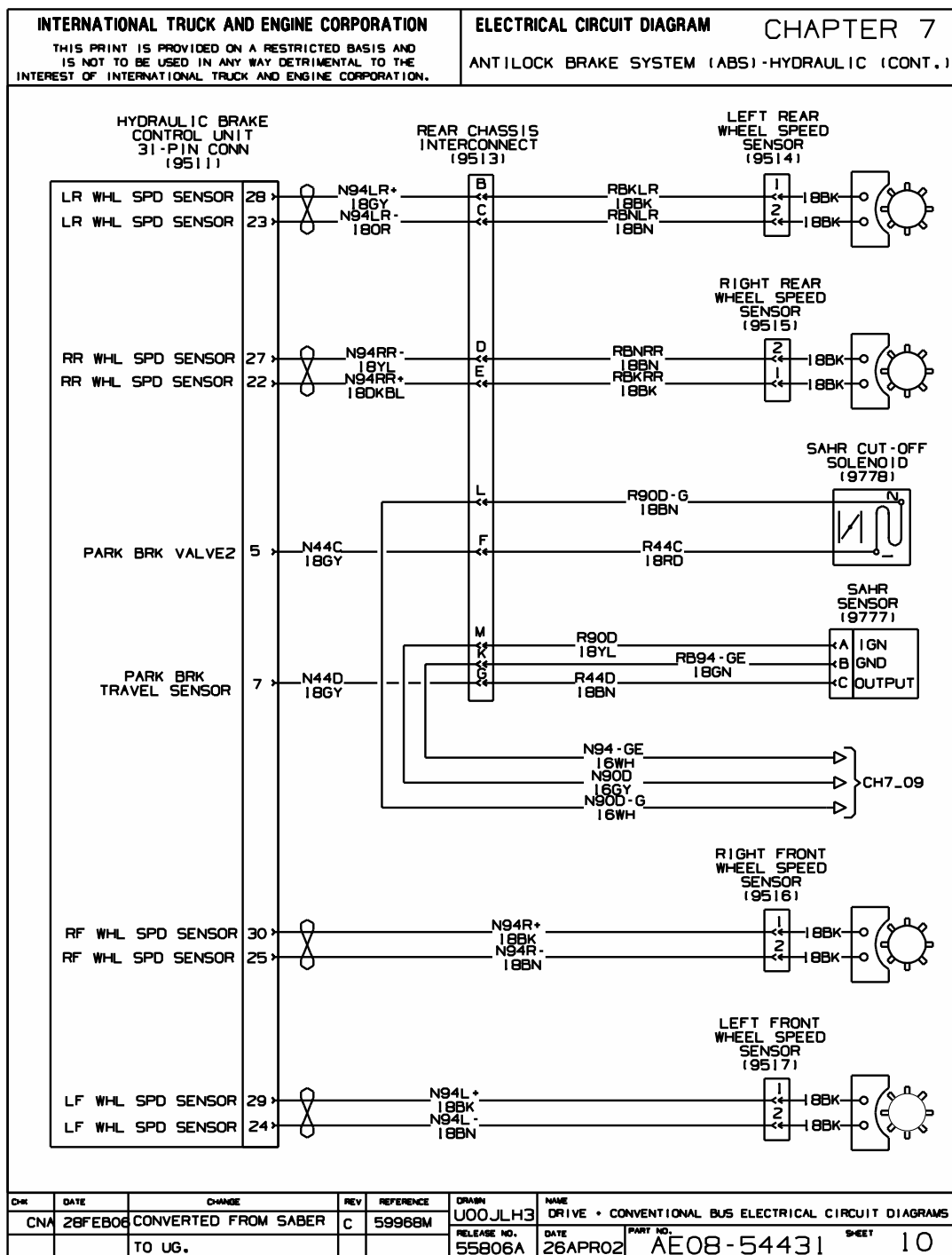


Figure 58 Hydraulic Antilock Brakes (Cont.)

7.11. ALLISON WTEC MD TRANSMISSION, P. 11

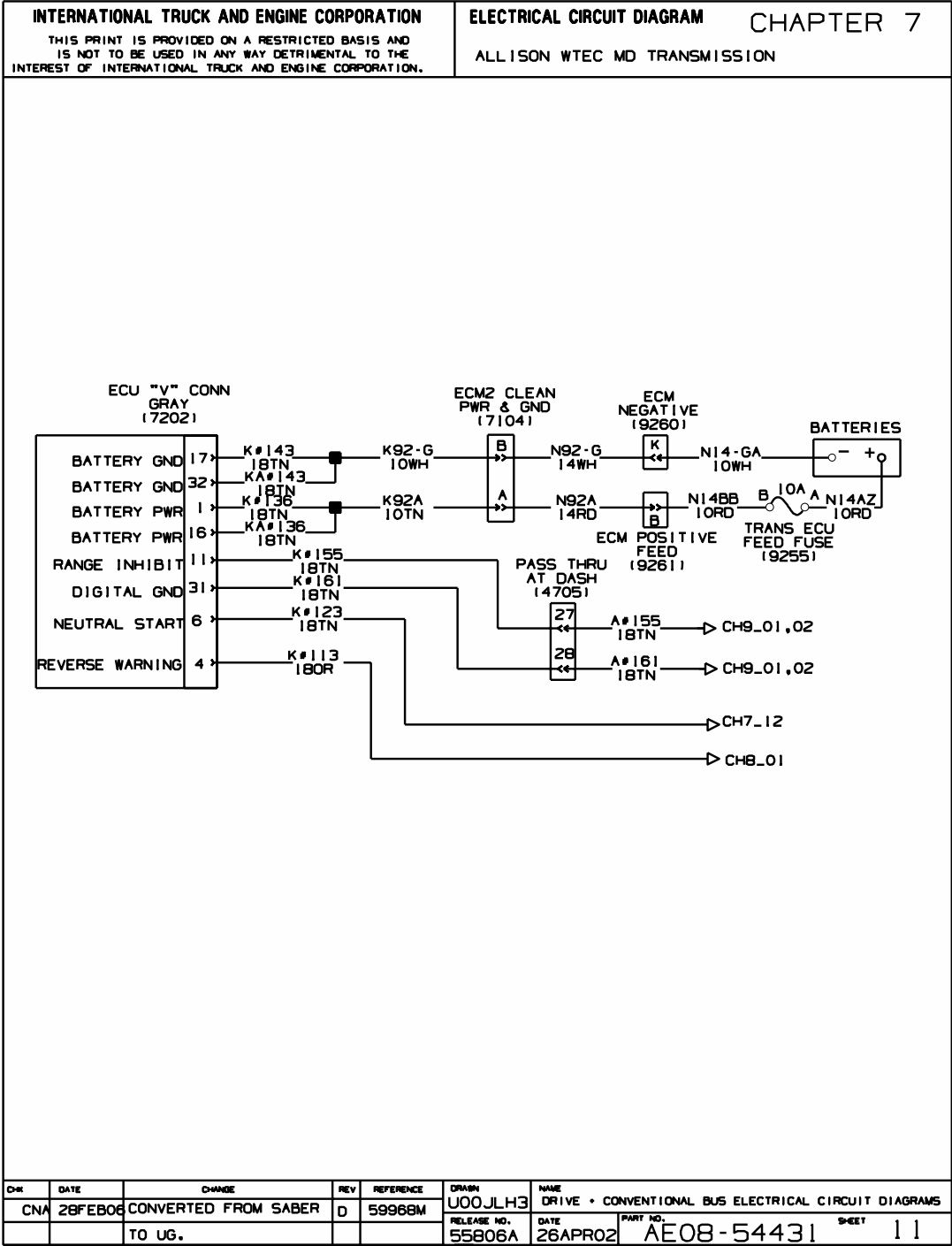


Figure 59 Allison WTEC MD Transmission

7.12. ALLISON WTEC MD TRANSMISSION, P. 12

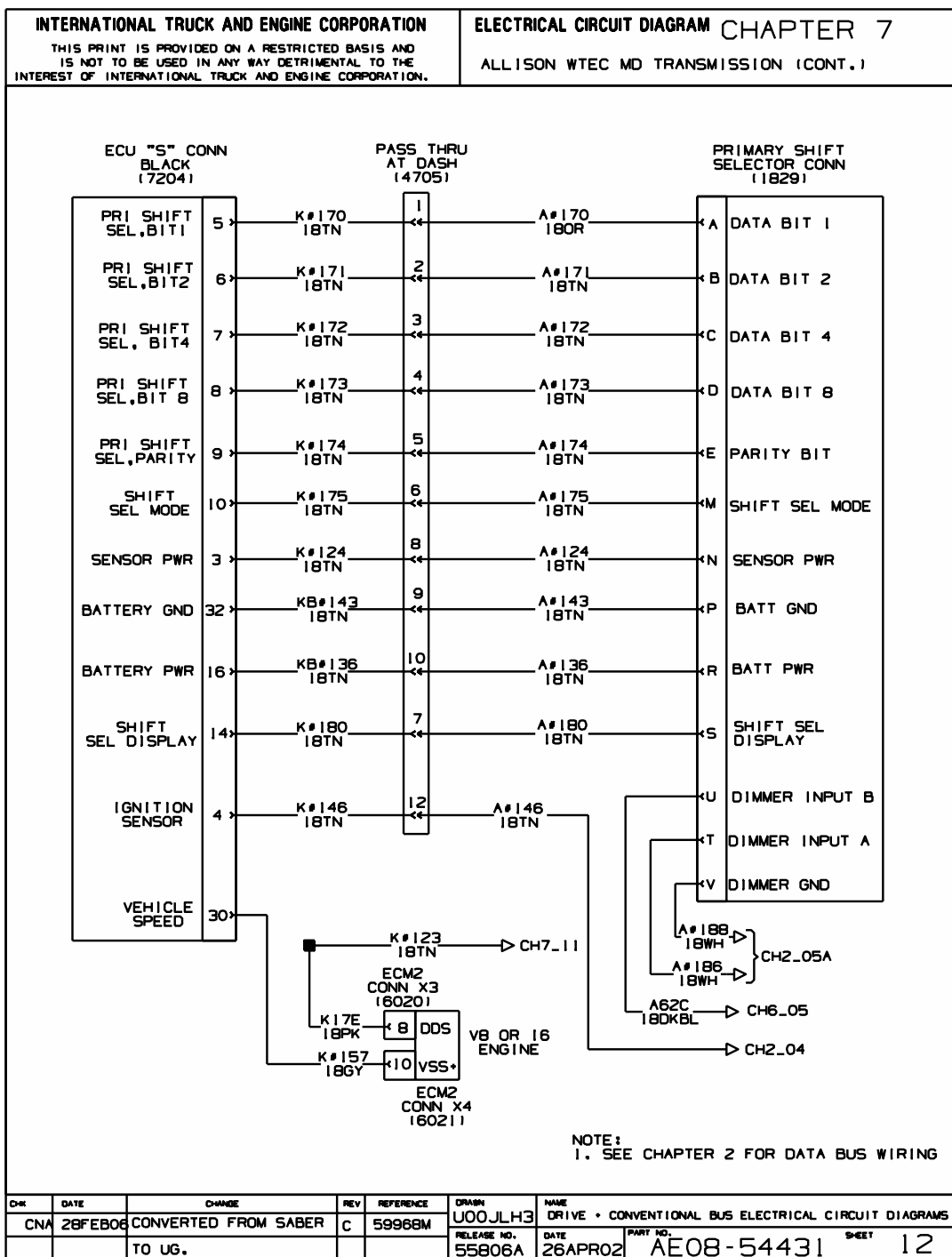


Figure 60 Allison WTEC MD Transmission (Cont.)

7.13. ALLISON WTEC MD TRANSMISSION, P. 13

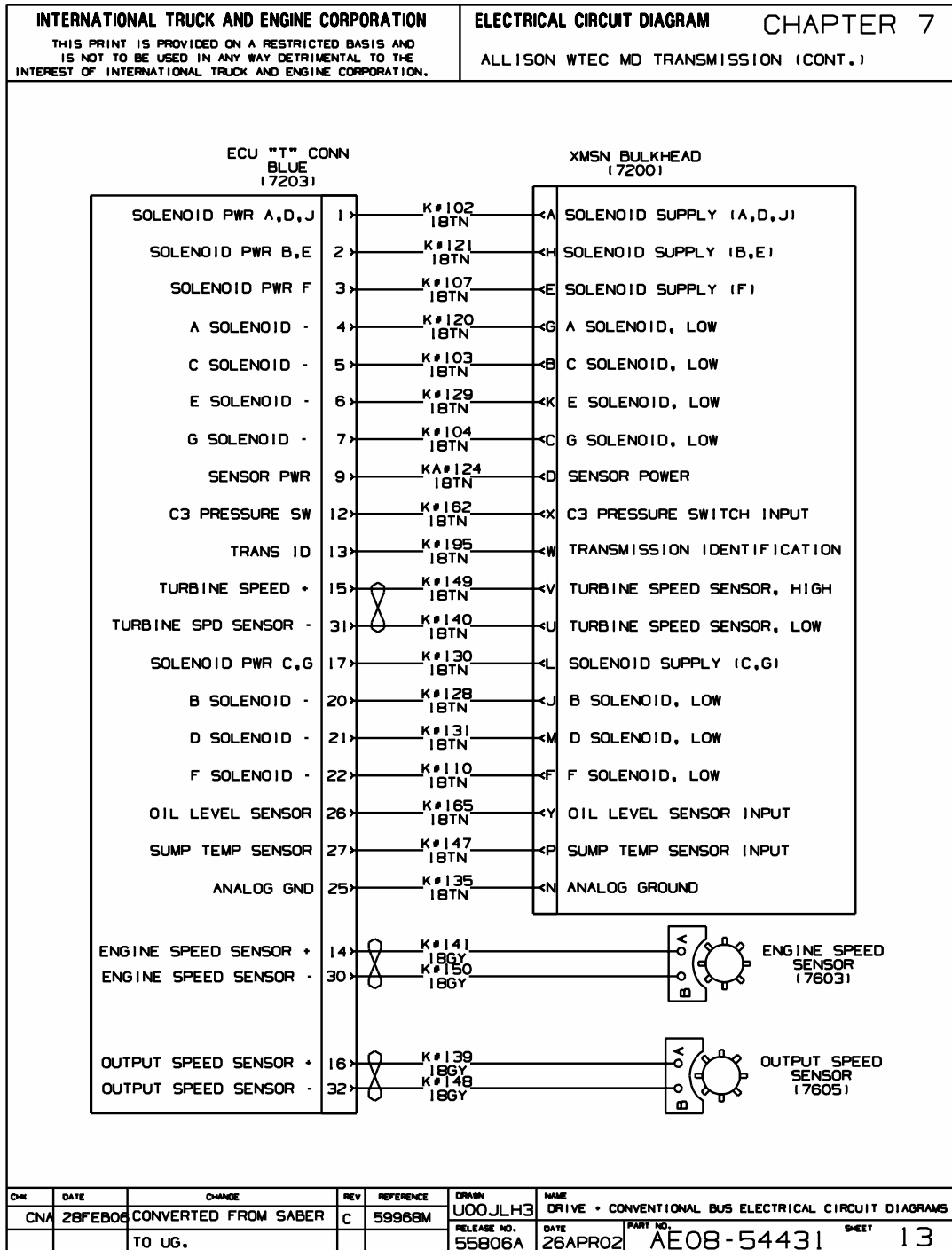


Figure 61 Allison WTEC MD Transmission (Cont.)

7.14. ALLISON LCT TRANSMISSION, P. 14

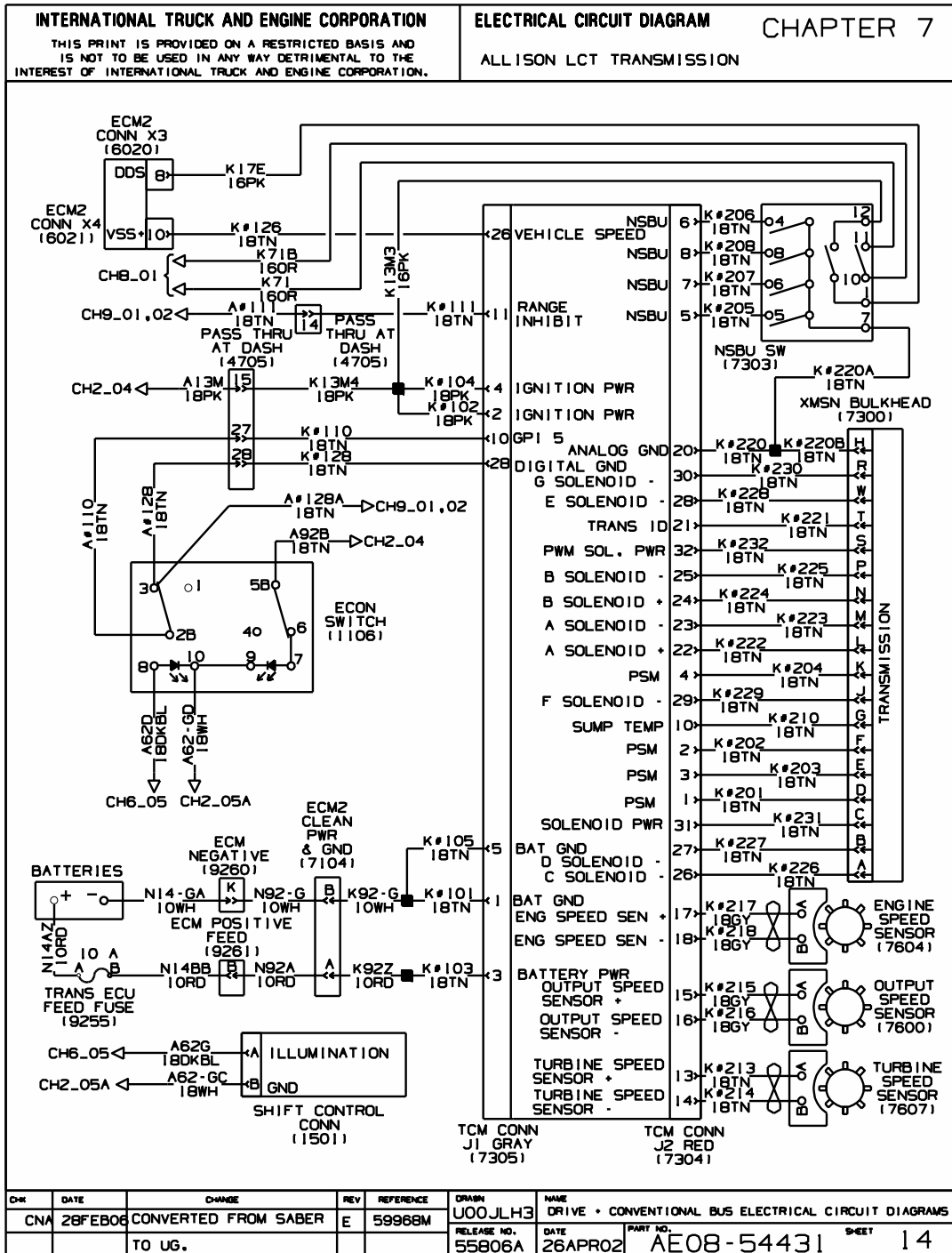


Figure 62 Allison LCT Transmission

7.15. CROSSING GATE, P. 15

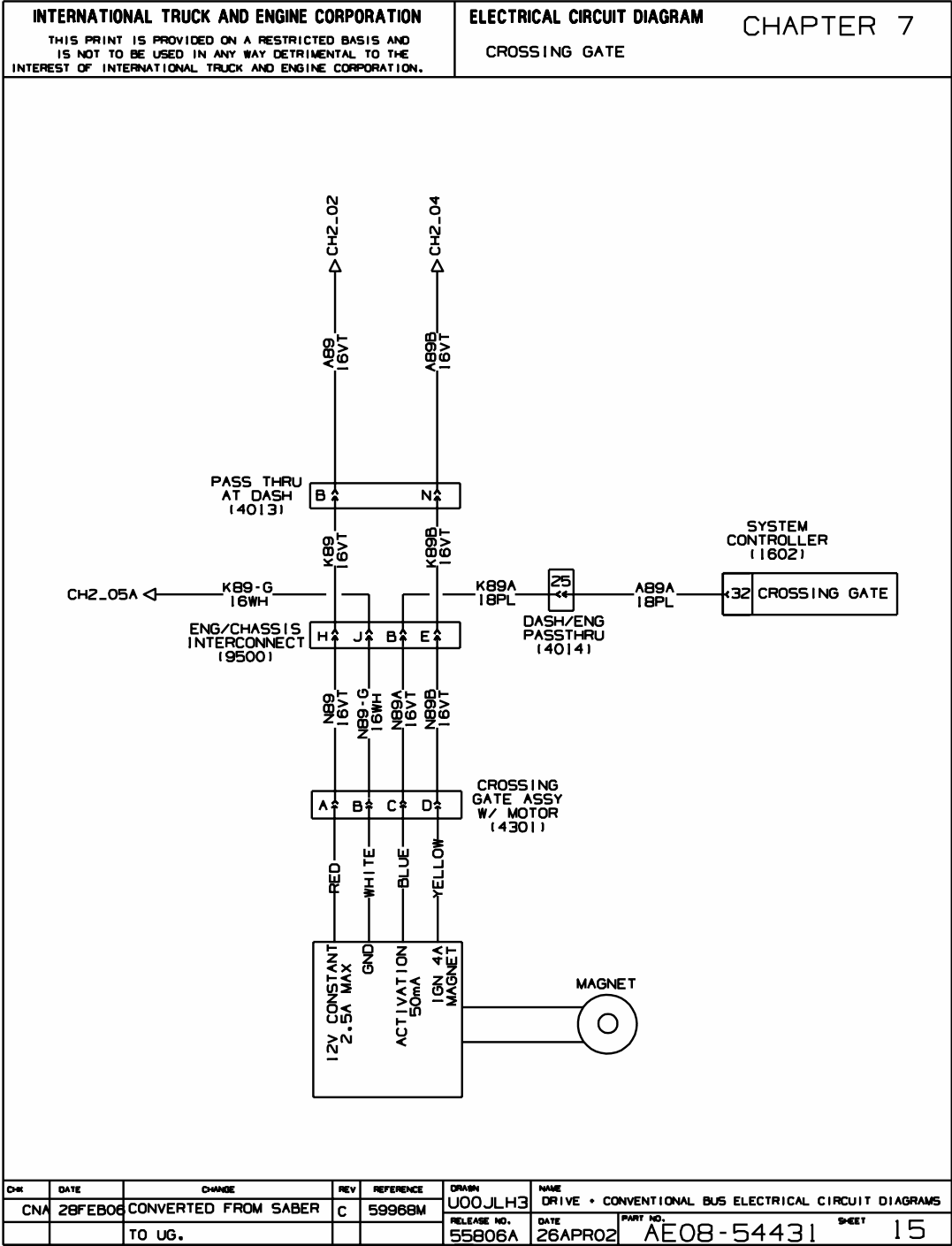


Figure 63 Crossing Gate

7.16. BRAKE MONITOR, P. 16

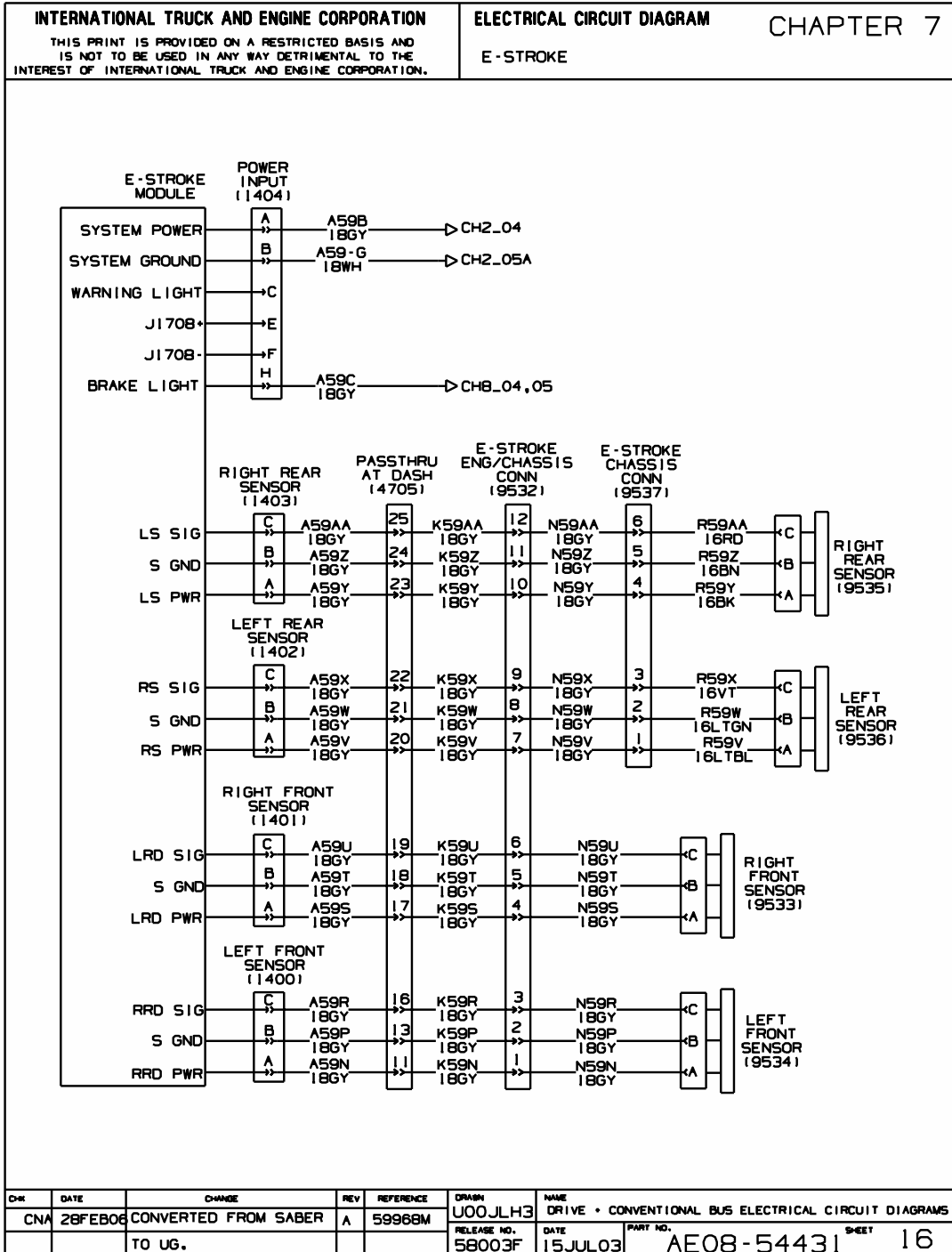


Figure 64 Brake Monitor

7.17. MANUAL TRANSMISSION, P. 17

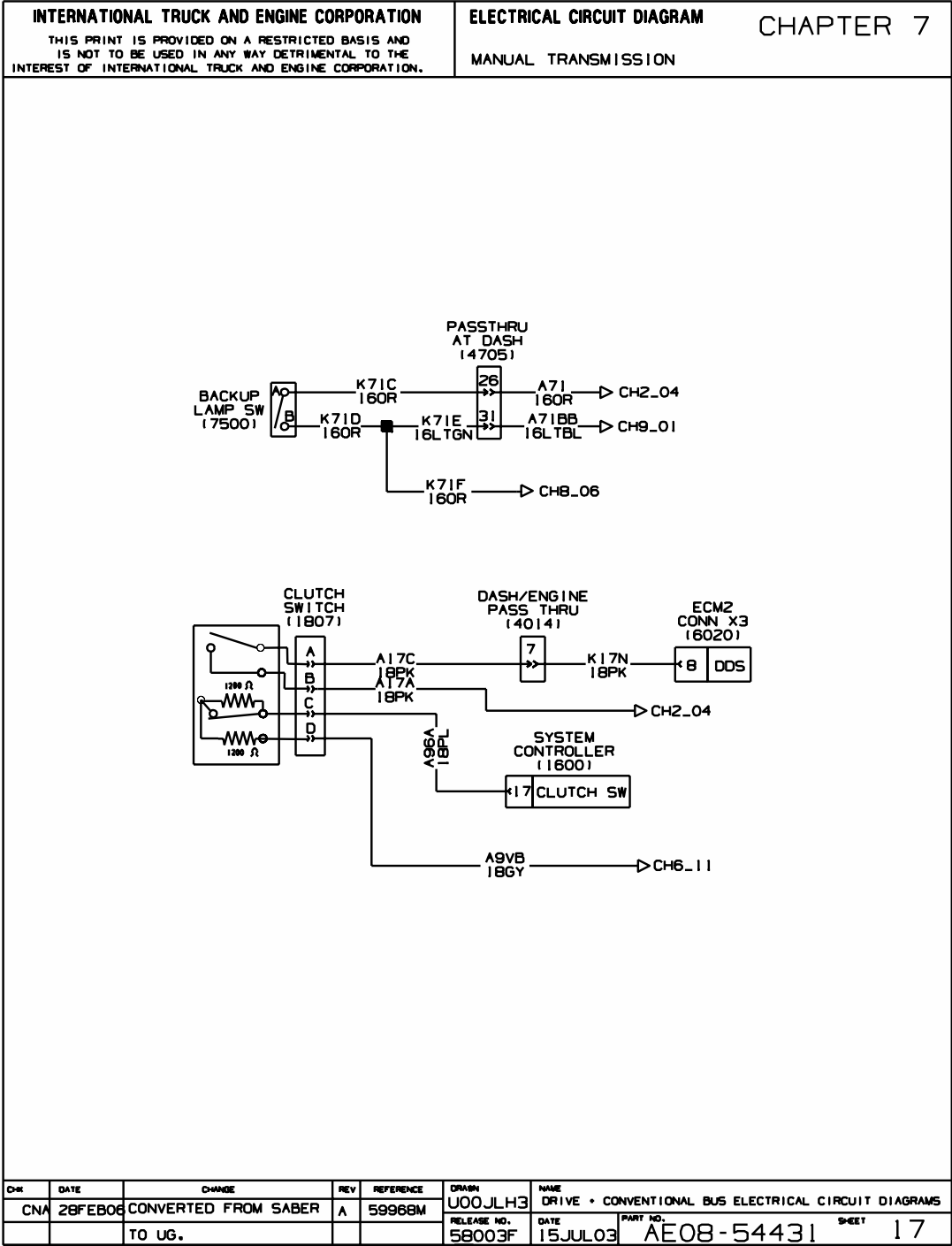


Figure 65 Manual Transmission

7.18. TWO SPEED AXLE, P. 18

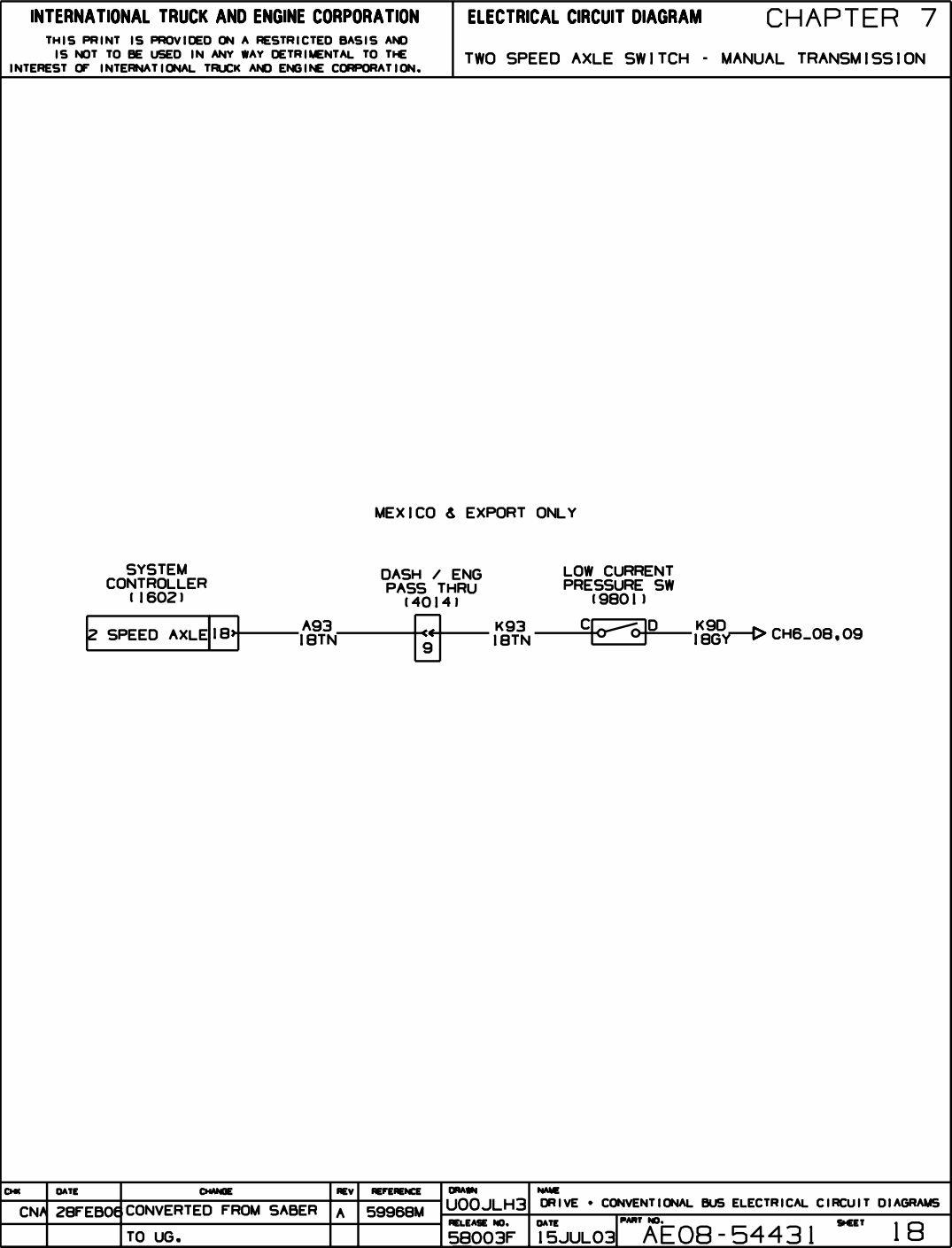
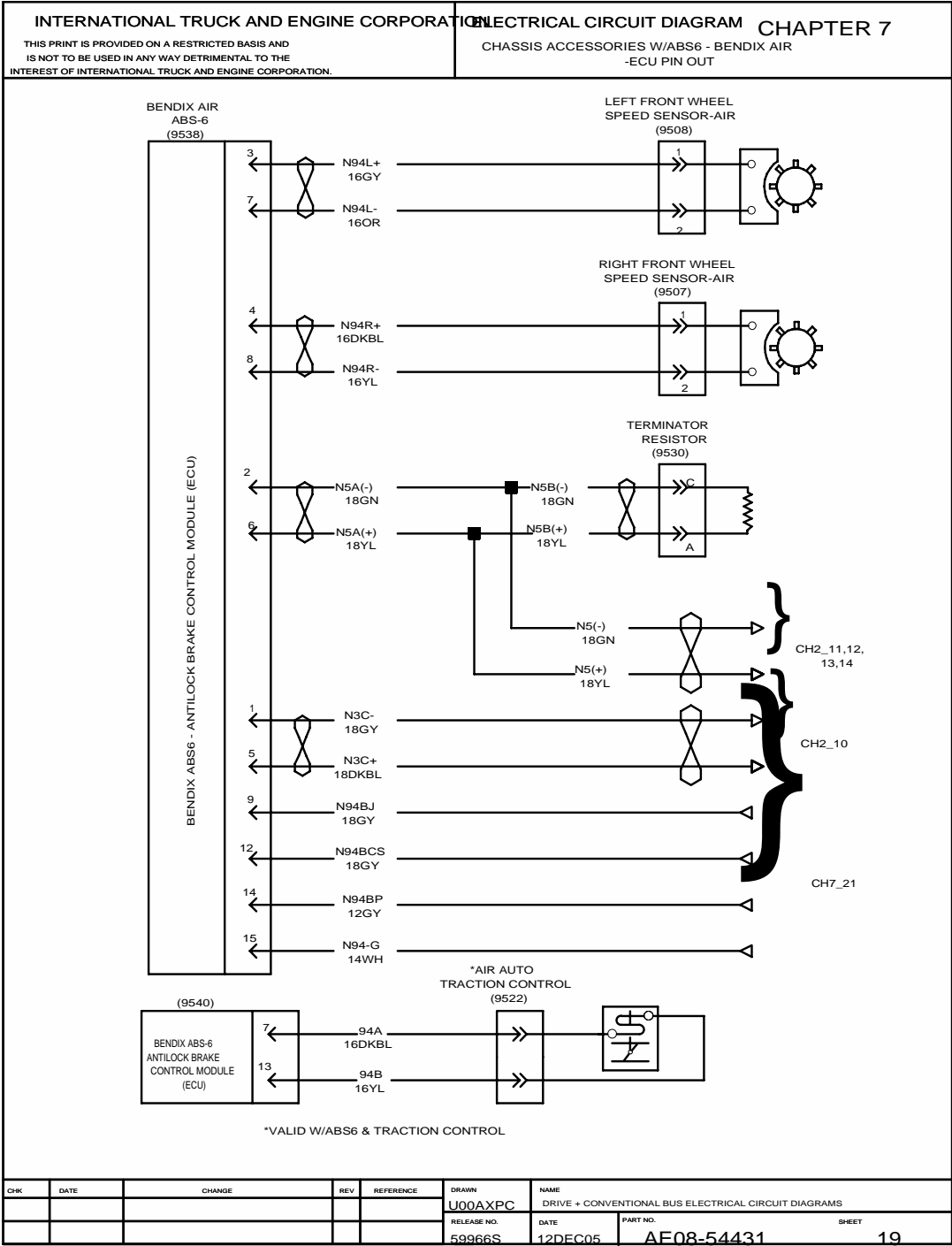


Figure 66 Two Speed Axle

7.19. CHASSIS ACCESSORIES W/ABS6 — BENDIX AIR — ECU PIN OUT, P. 19



7.20. CHASSIS ACCESSORIES W/ABS6 — BENDIX AIR — ECU PIN OUT, P. 20

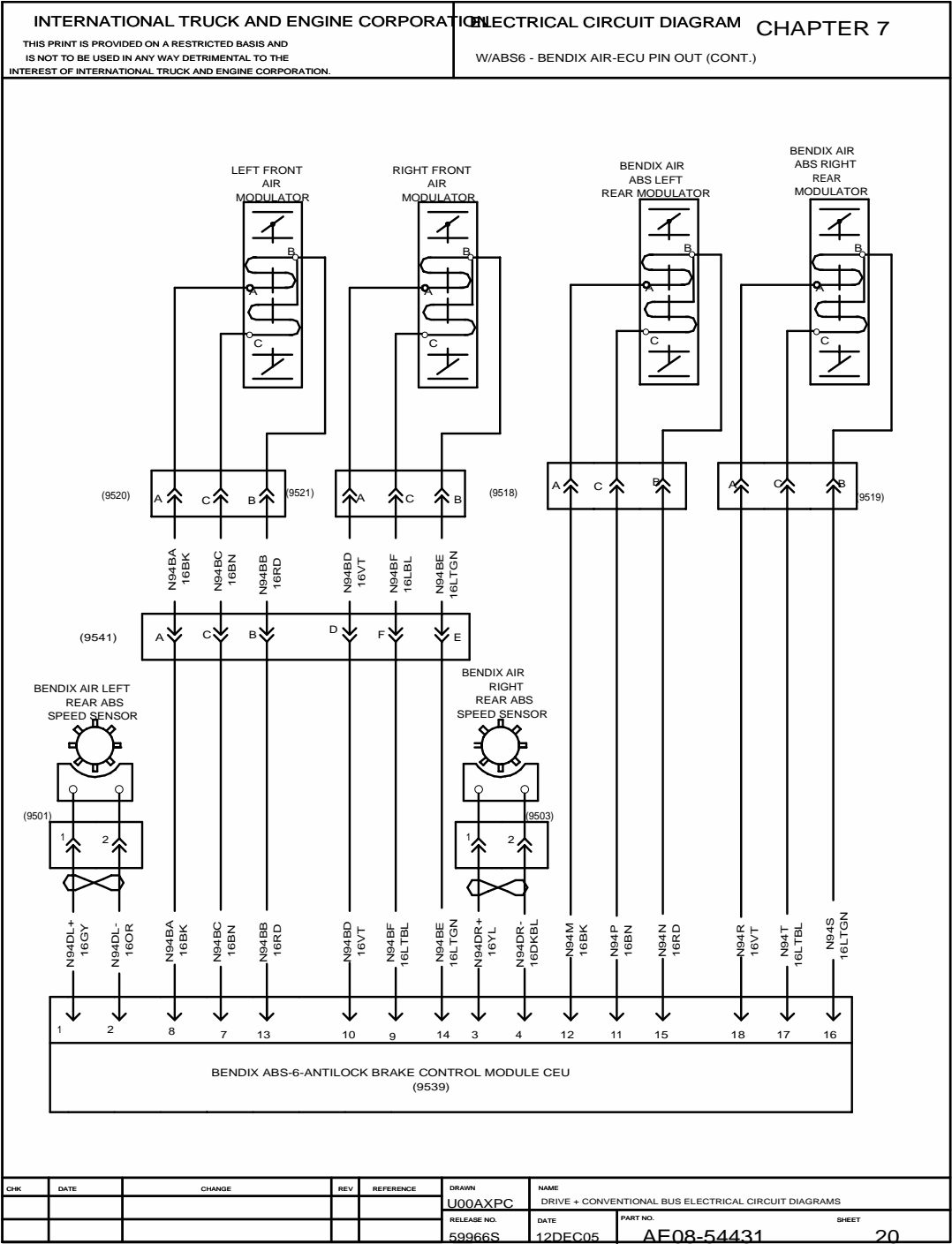


Figure 68 Chassis Accessories W/ABS6 — Bendix Air — ECU Pin Out (Cont.)

Figure 69 Chassis Accessories W/ABS6 — Bendix Air ECM Power

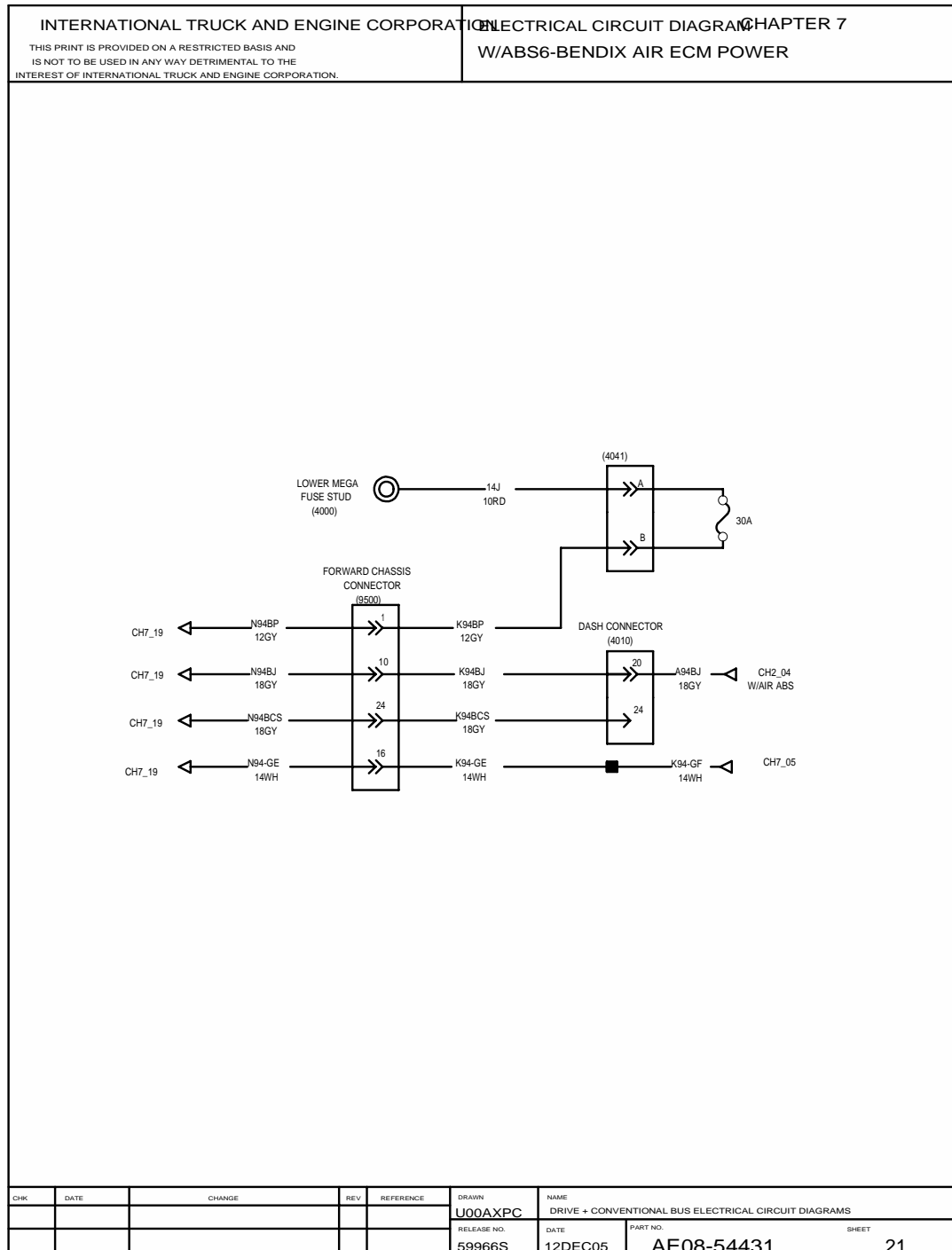


Figure 69 Chassis Accessories W/ABS6 — Bendix Air ECM Power

8. LIGHT SYSTEMS (CHAPTER 8)

8.1. BACK-UP LIGHTS / EXTERIOR LIGHT CHECK, P. 1

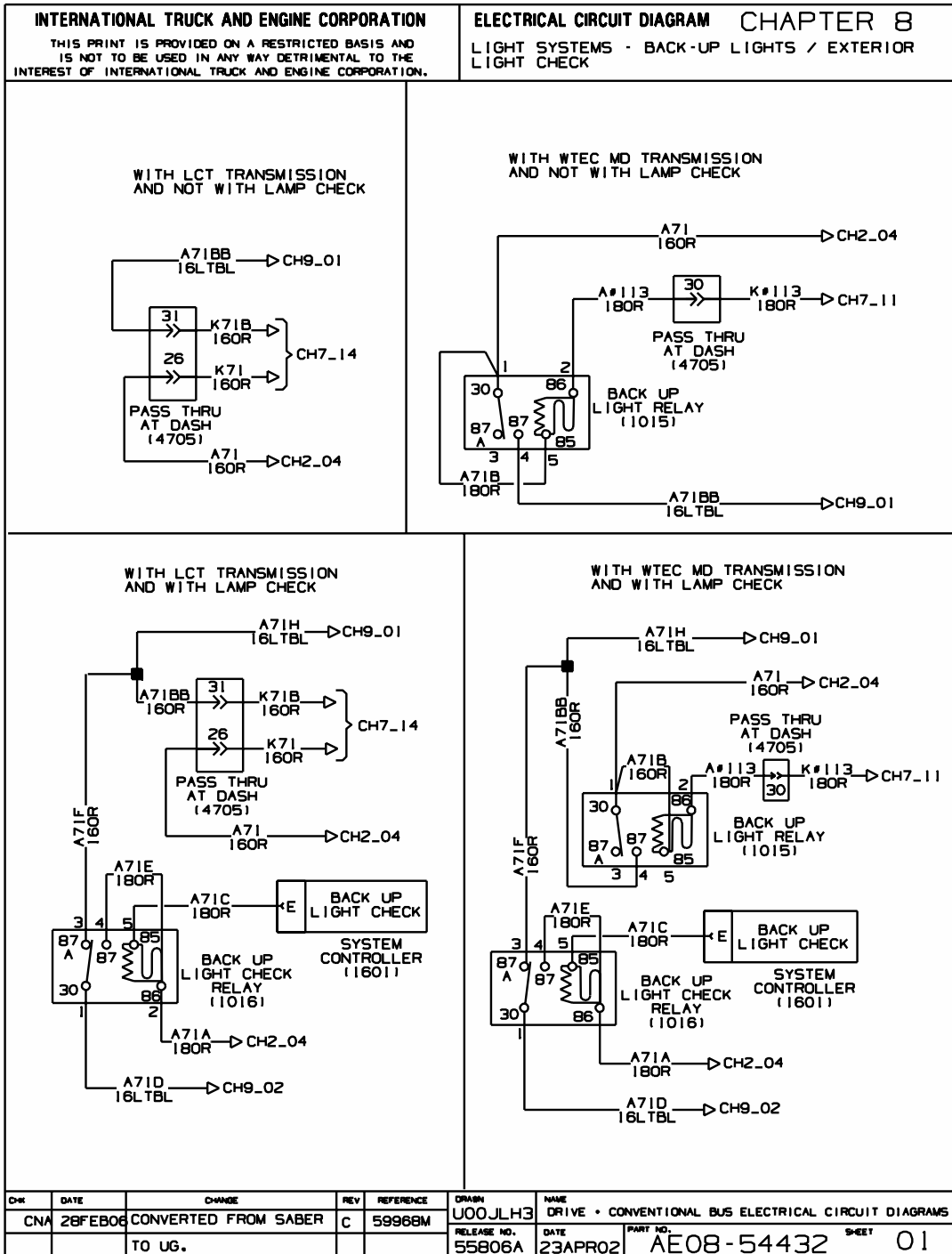


Figure 70 Back-Up Lights / Exterior Light Check

8.2. FOG LIGHTS, P. 2

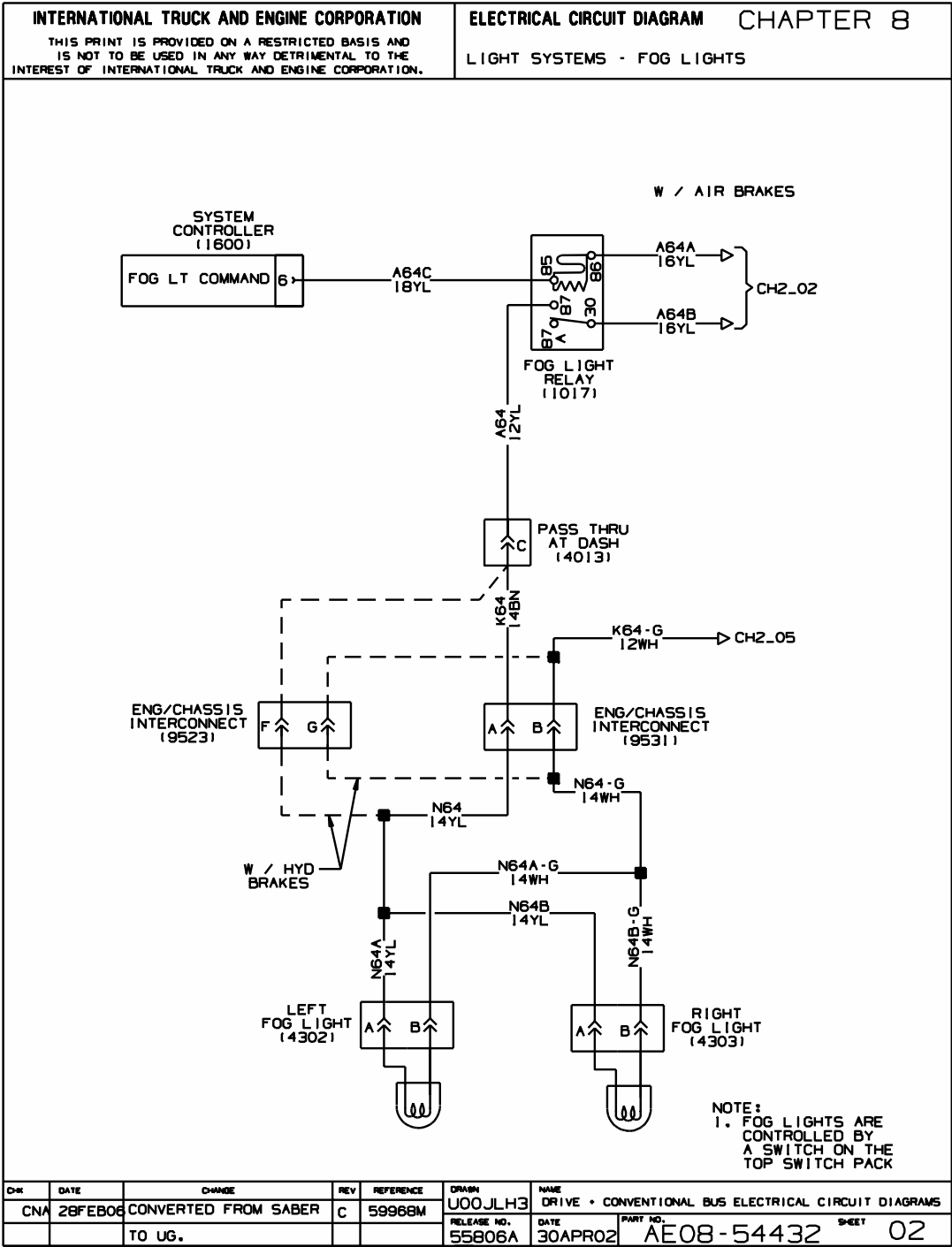


Figure 71 Fog Lights

8.3. HIGH BEAM, FLASH TO PASS, TURN SIGNAL, AND AIR BRAKE STOP SWITCHES, P. 3

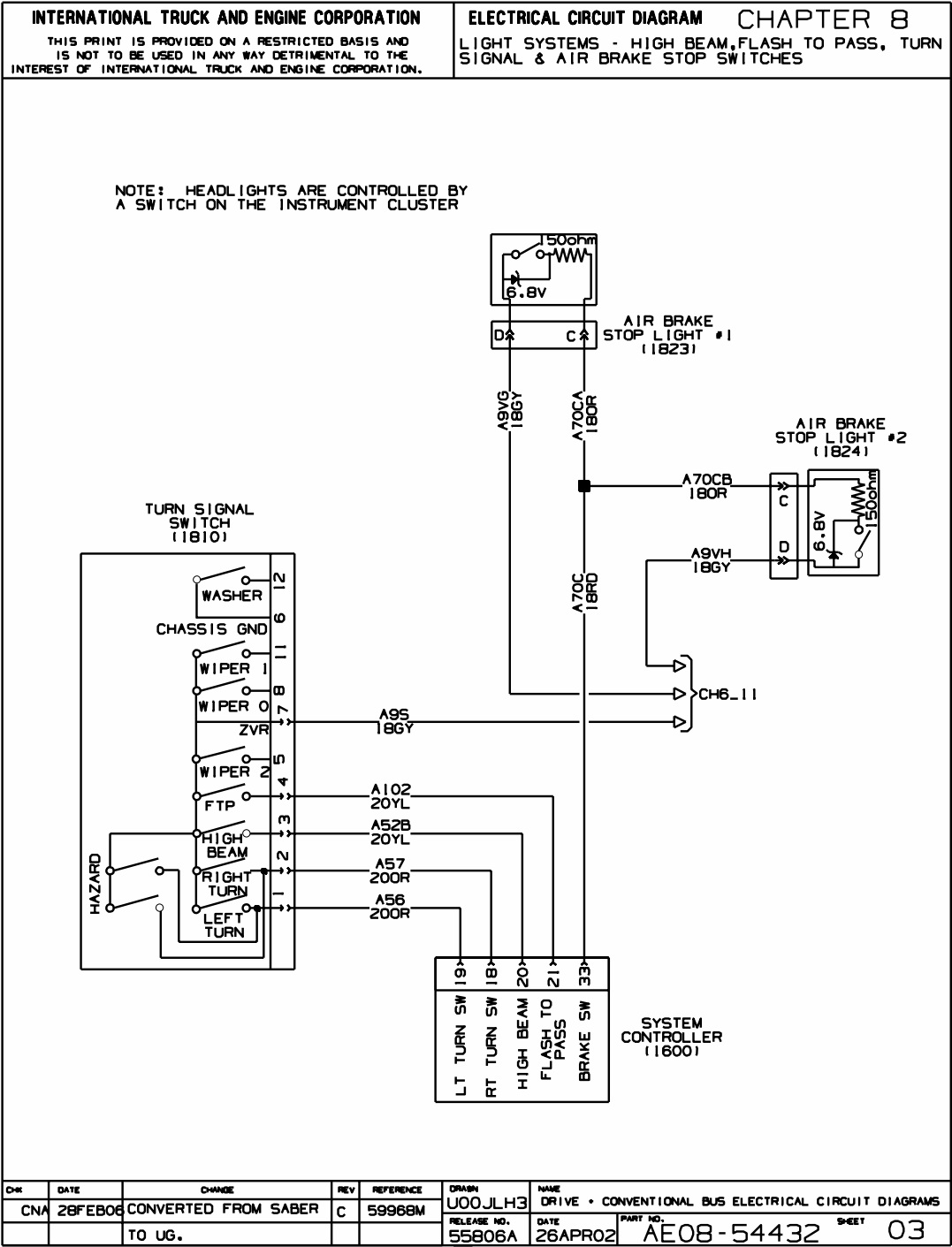


Figure 72 High Beam, Flash to Pass, Turn Signal, and Air Brake Stop Switches

8.4. HEADLIGHTS, MARKER, PARK, TURN, AND STOP RELAY — WITHOUT FENDER MOUNT LIGHTS, P. 4

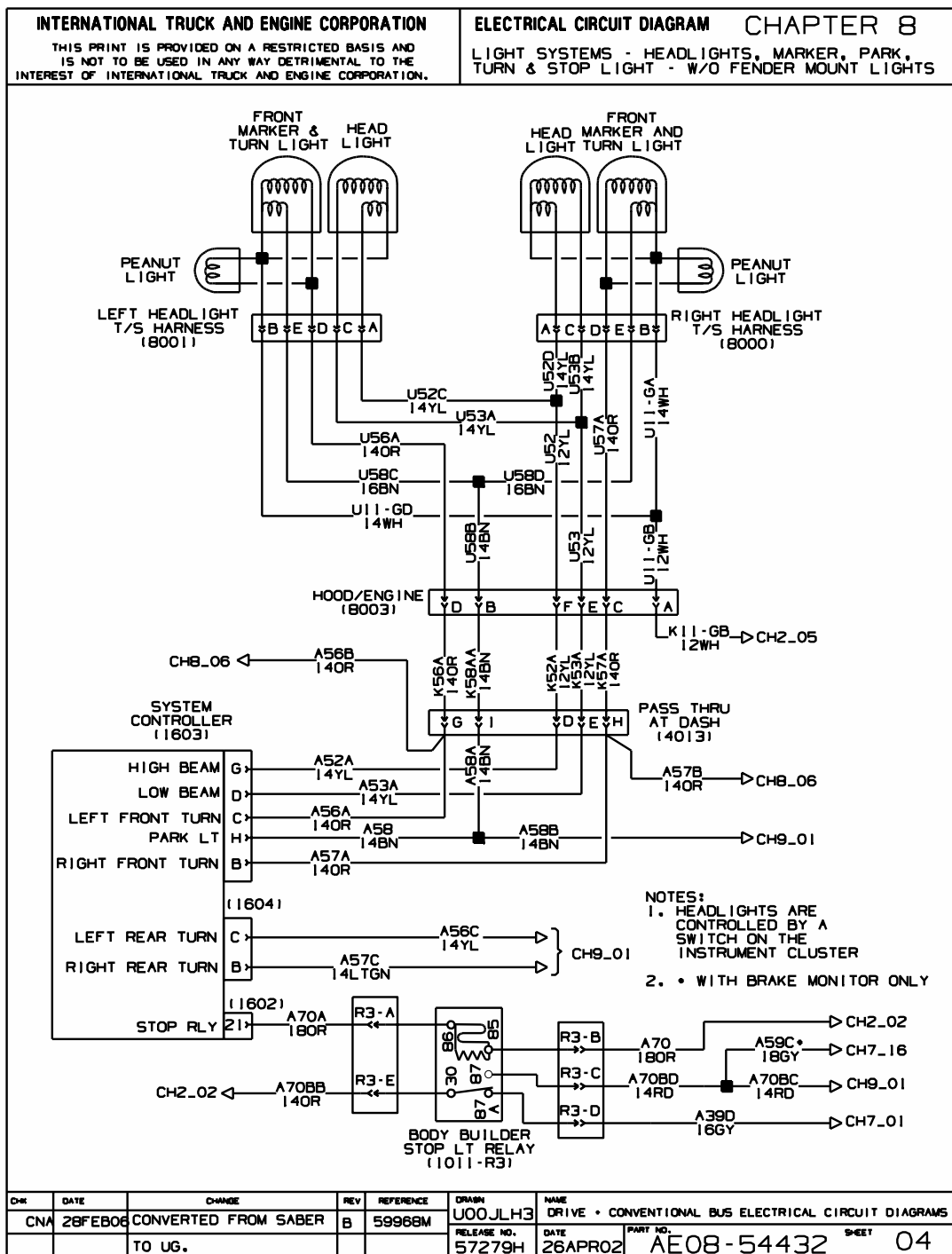


Figure 73 Headlights, Marker, Park, Turn, and Stop Relay — Without Fender Mount Lights

8.5. HEADLIGHTS, MARKER, PARK, TURN, AND STOP RELAY — WITH FENDER MOUNT LIGHTS, P. 5

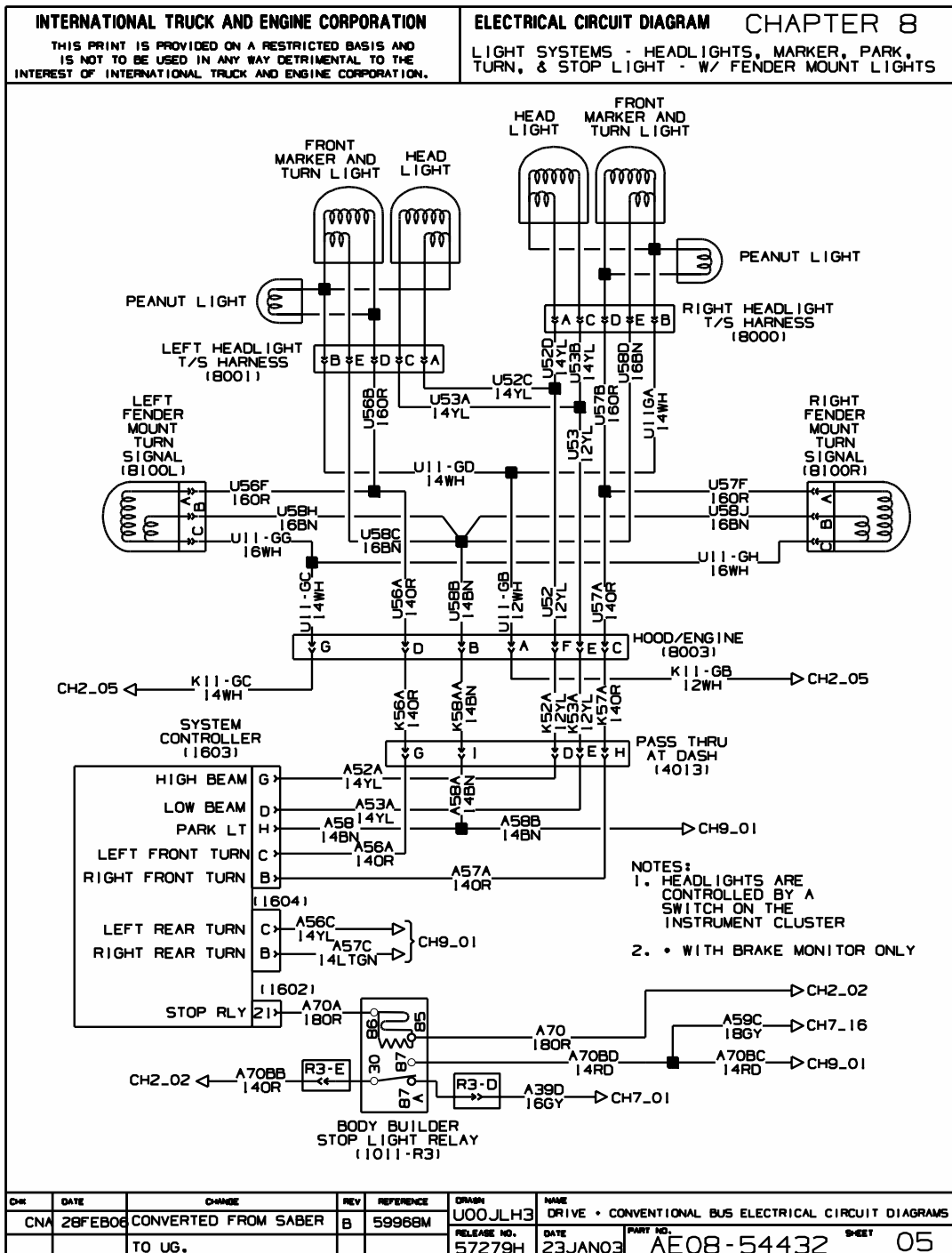


Figure 74 Headlights, Marker, Park, Turn, and Stop Relay — With Fender Mount Lights

8.6. EXPORT STOP, TURN, TAIL AND BACK-UP LIGHTS, P. 6

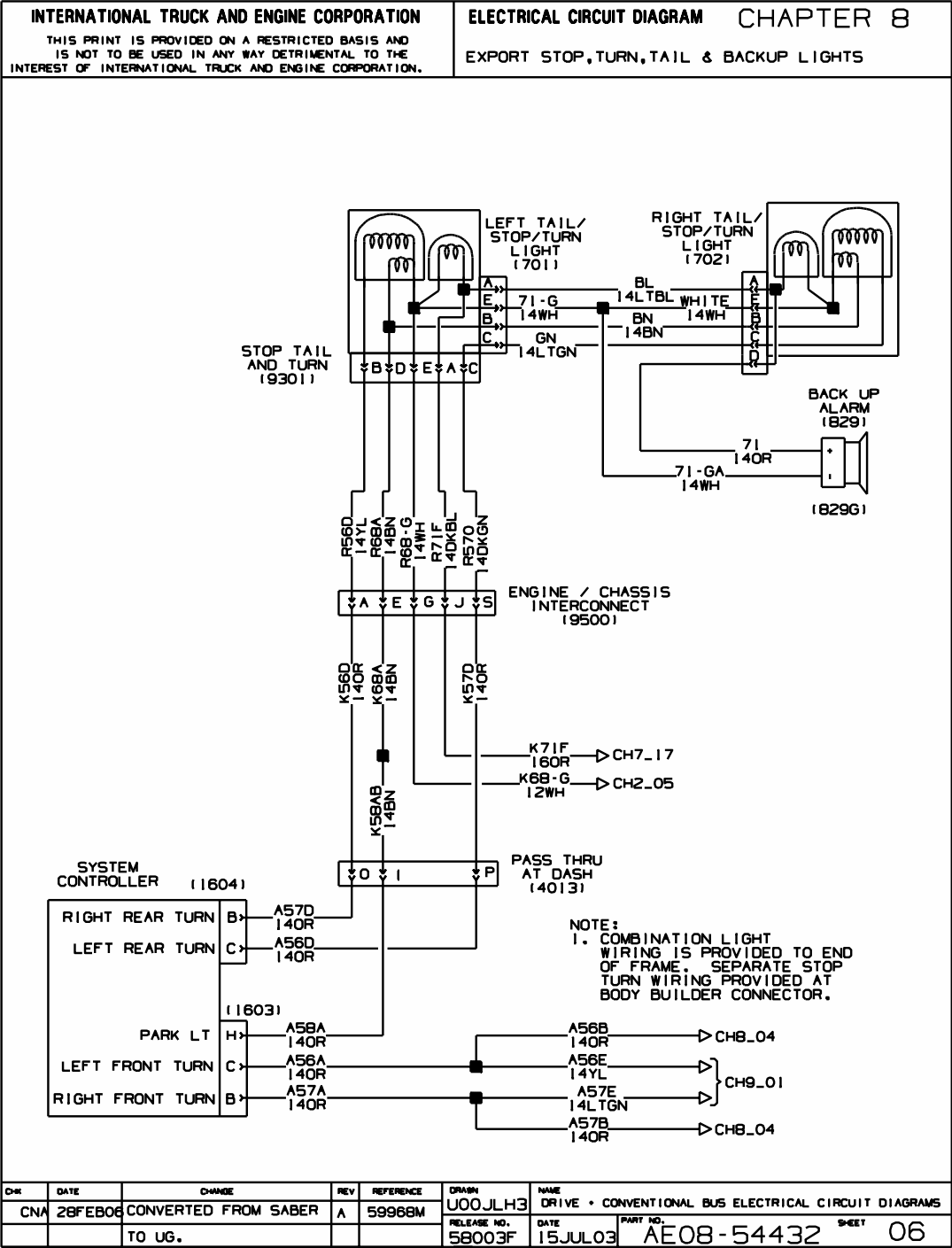


Figure 75 Export Stop, Turn, Tail, and Back-Up Lights

9. BODY BUILDER CONNECTION DATA (CHAPTER 9)

9.1. BODY BUILDER ELECTRICAL CONNECTION DATA FOR ALL MODELS, P. 1

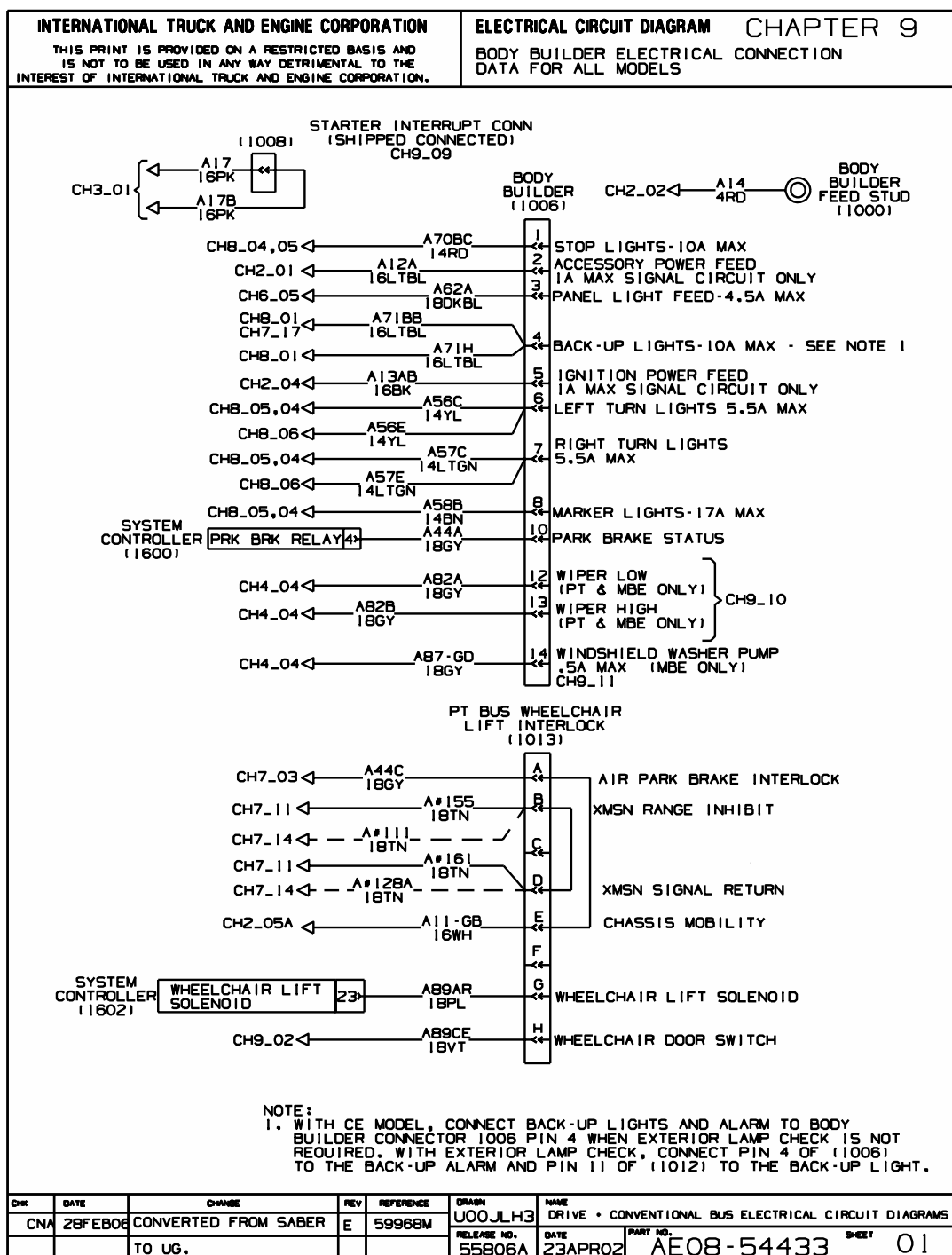


Figure 76 Body Builder Electrical Connection Data for All Models

9.2. BODY BUILDER ELECTRICAL CONNECTION DATA FOR CE MODEL, P. 2

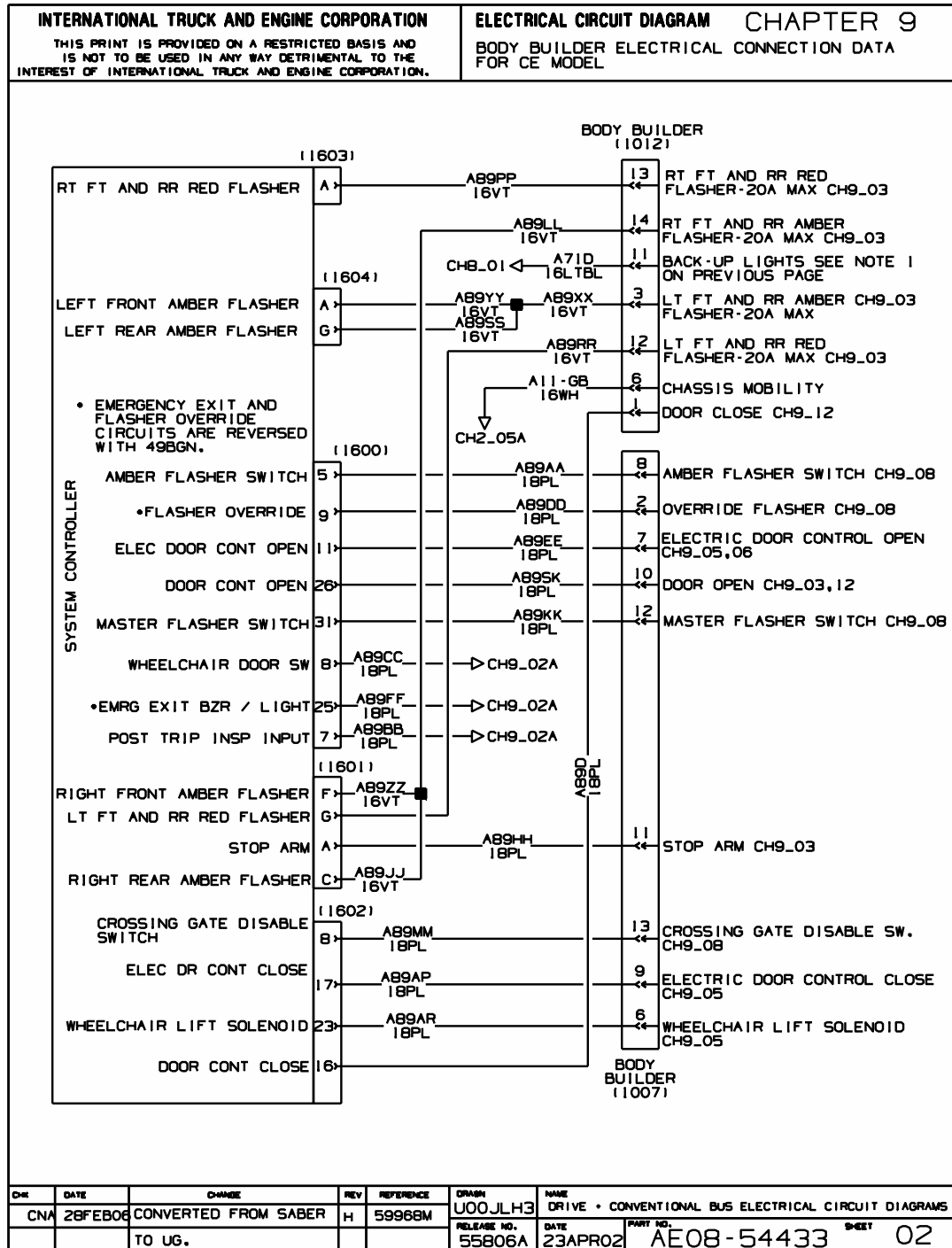


Figure 77 Body Builder Electrical Connection Data for CE Model

9.3. STOP ARM AND RED / AMBER LIGHTS, P. 3

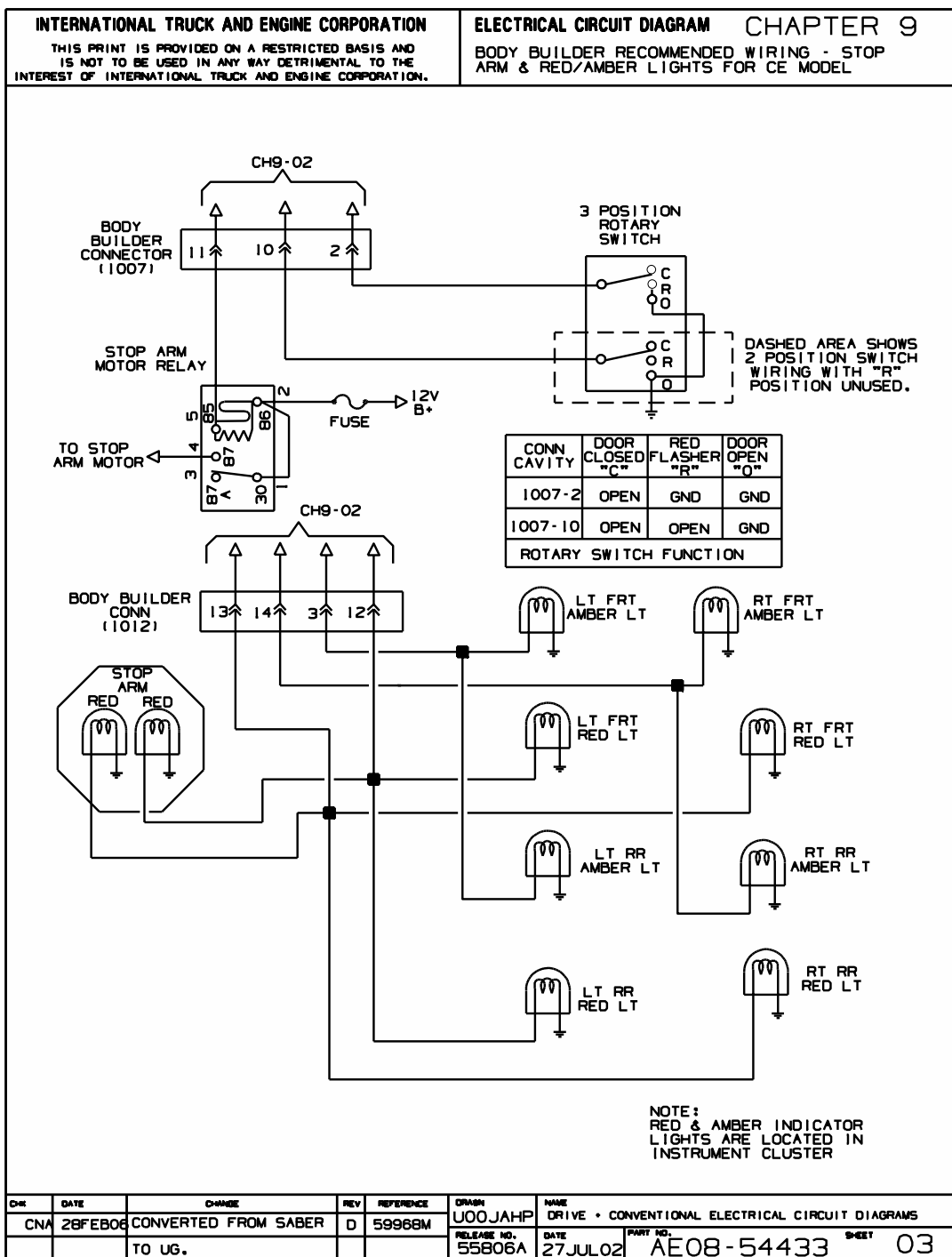


Figure 78 Stop Arm and Red / Amber Lights

9.4. EMERGENCY EXIT BUZZER AND POST TRIP INSPECTION, P. 4

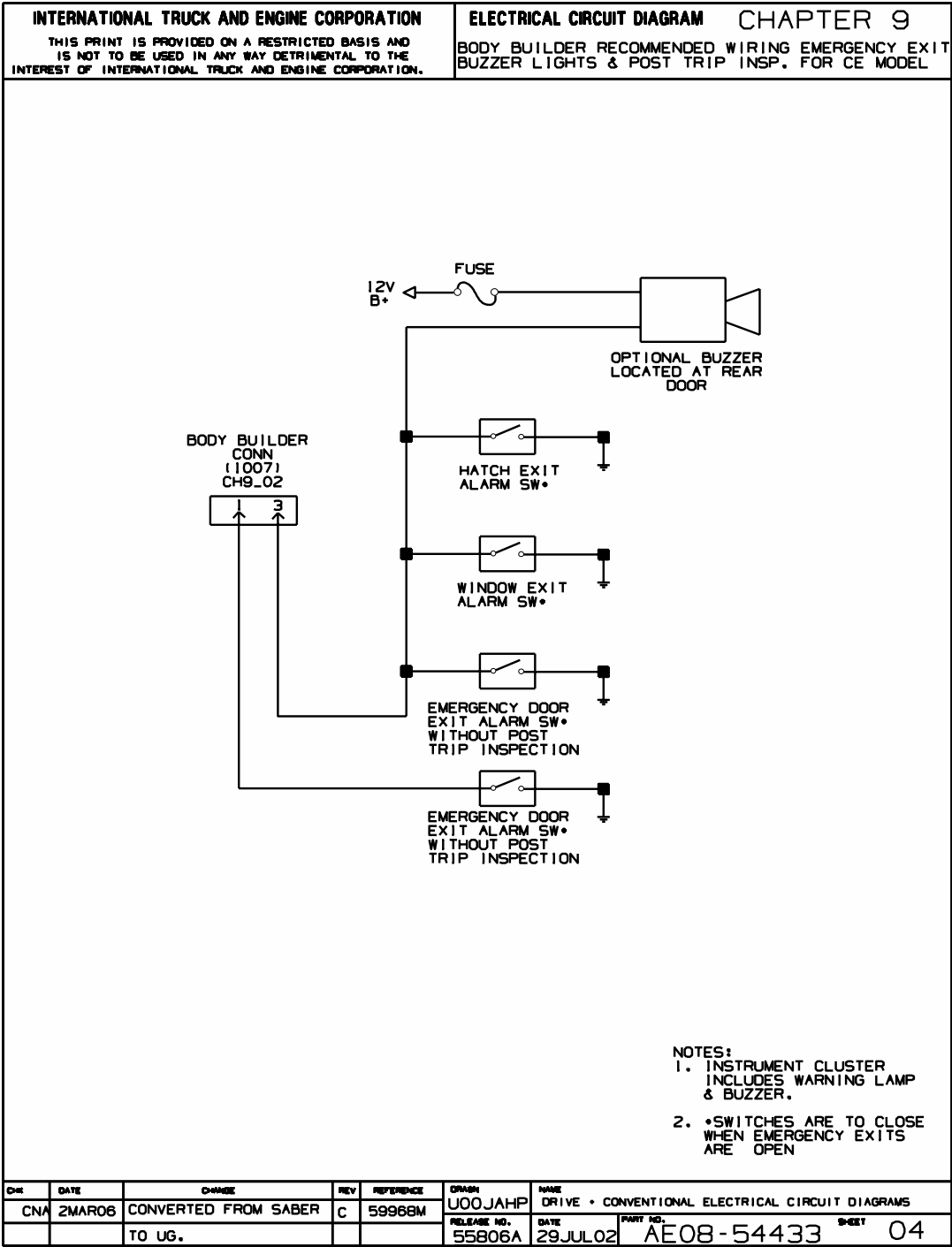


Figure 79 Emergency Exit Buzzer and Post Trip Inspection

9.5. DOOR OPEN / CLOSE WITH ELEC. CONTROL, P. 5

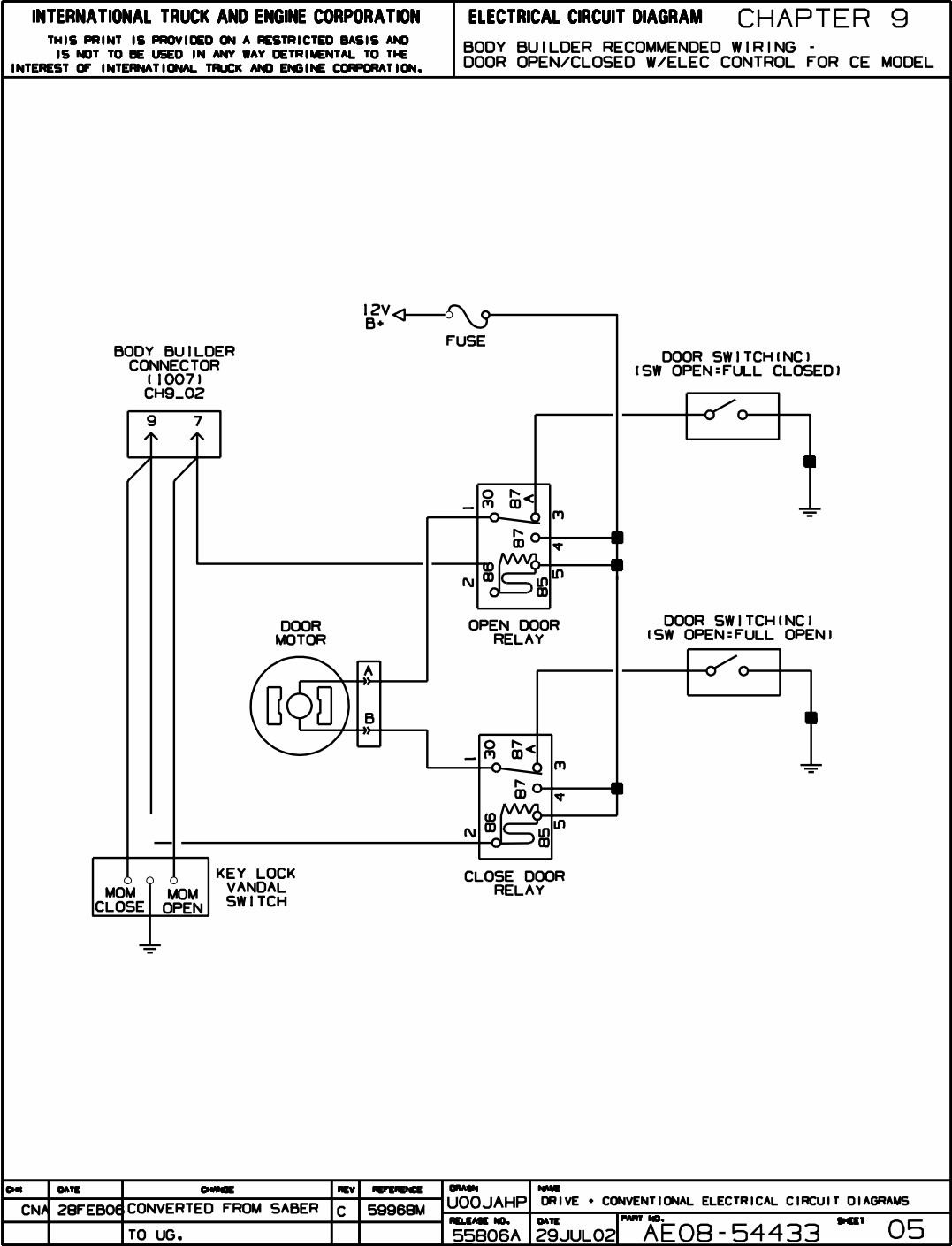


Figure 80 Door Open / Close with Elec. Control

9.6. DOOR OPEN / CLOSE WITH AIR CONTROL FOR CE MODEL, P. 6

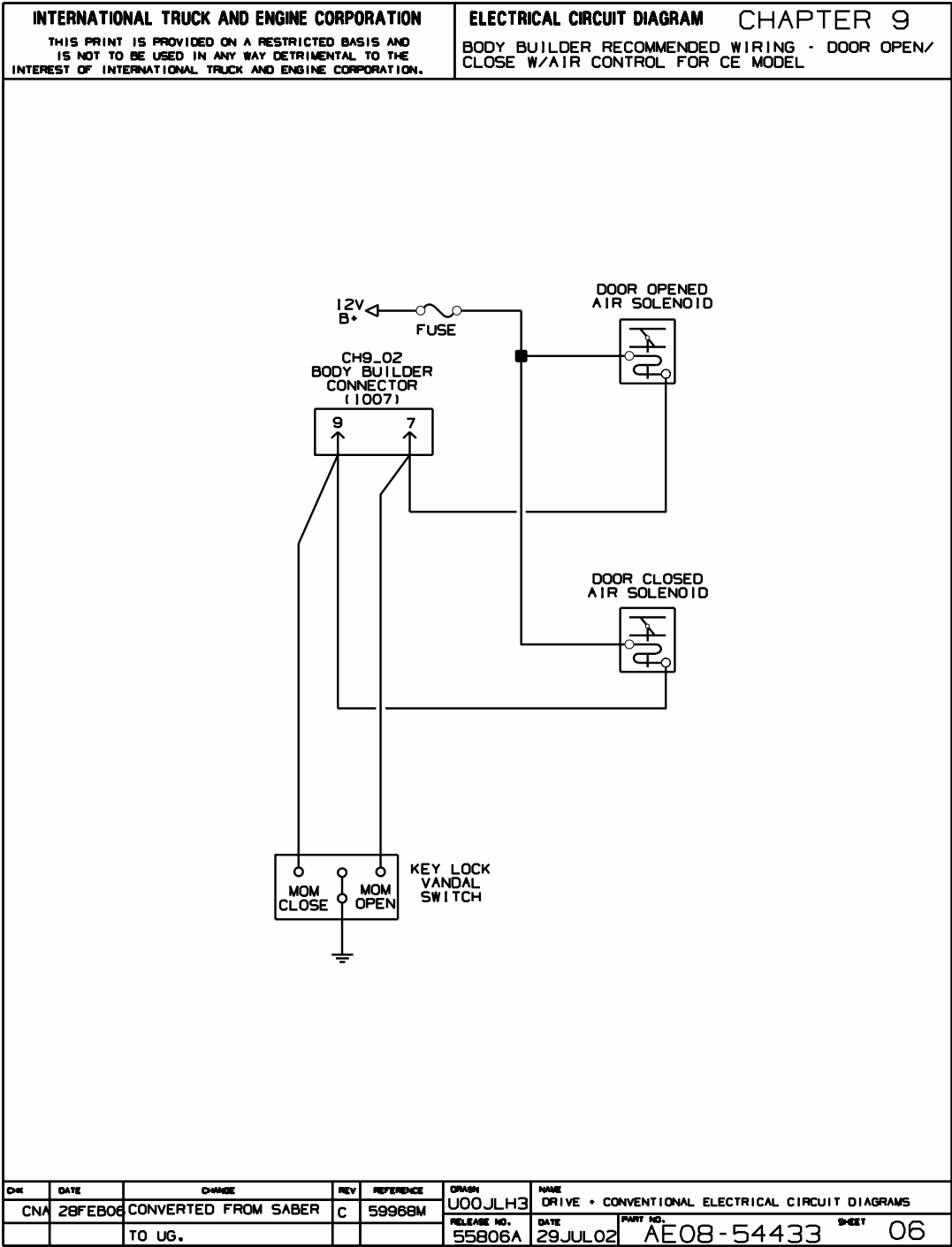


Figure 81 Door Open / Close with Air Control for CE Model

9.7. WHEELCHAIR LIFT INTERLOCK, P. 7

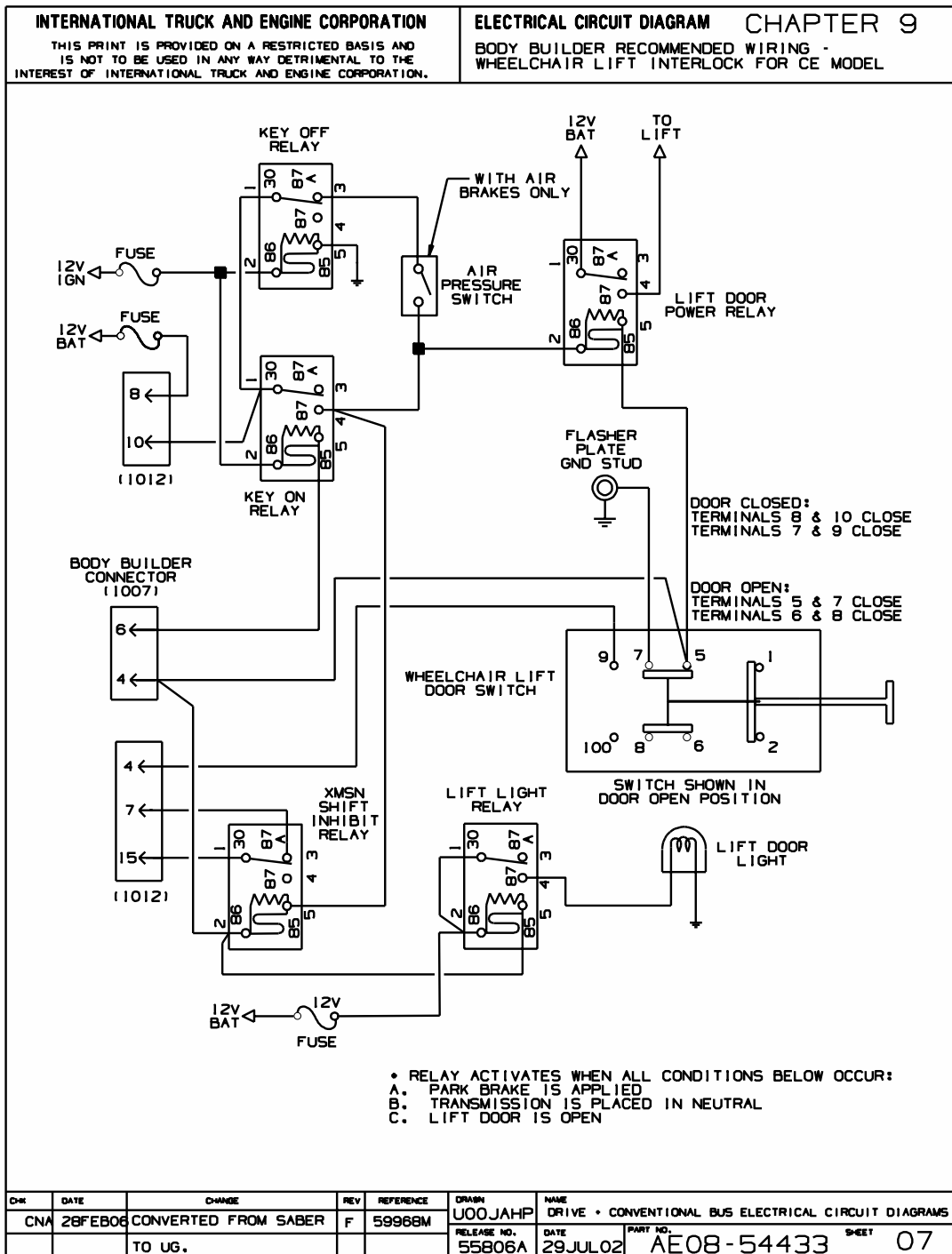


Figure 82 Wheelchair Lift Interlock

9.8. FLASHER SWITCHES FOR CE MODEL, P. 8

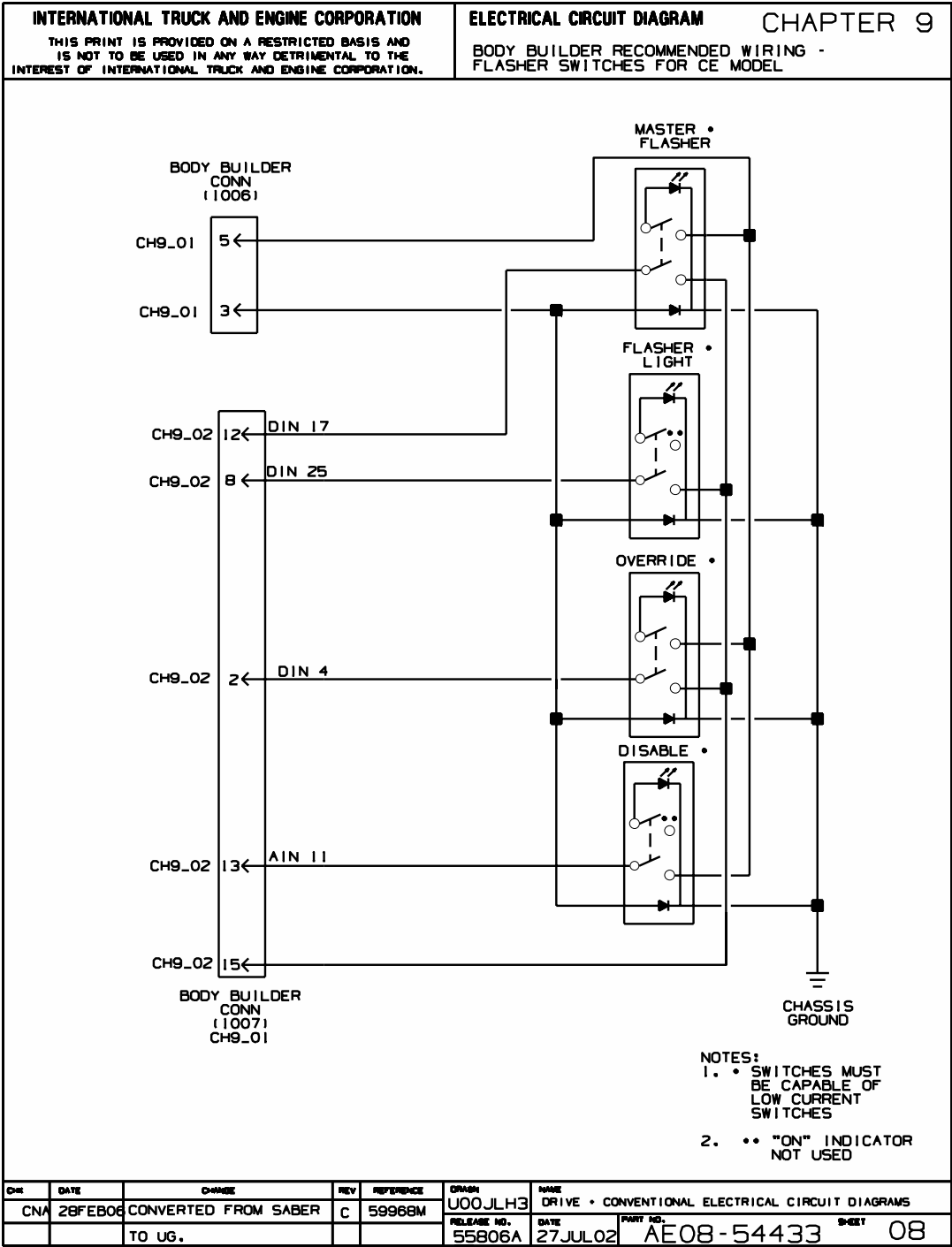


Figure 83 Flasher Switches for CE Model

9.9. PARK BRAKE STATUS, P. 9

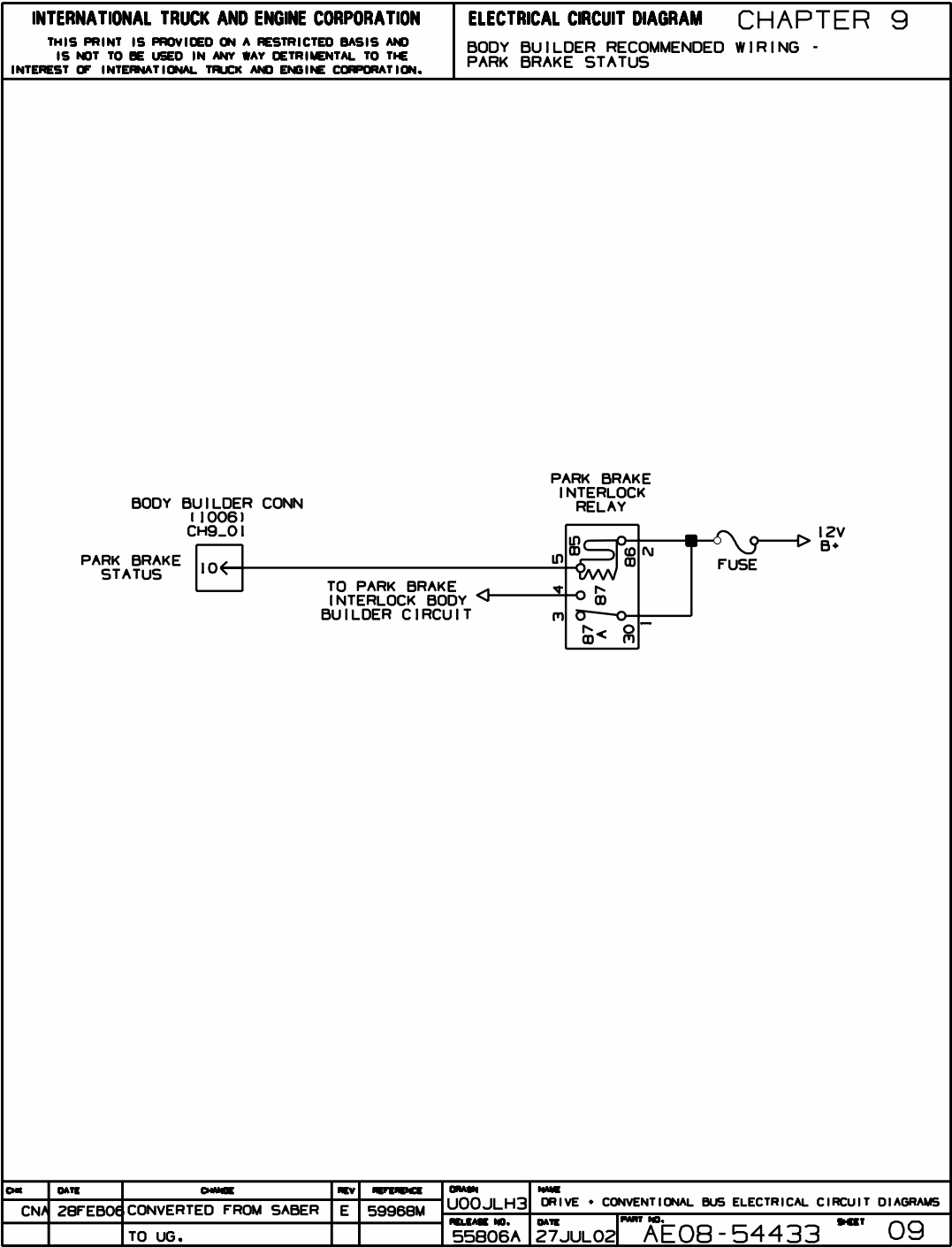


Figure 84 Park Brake Status

9.10. DUAL WIPER MOTORS FOR PT / MEXICO AND EXPORT MODELS, P. 10

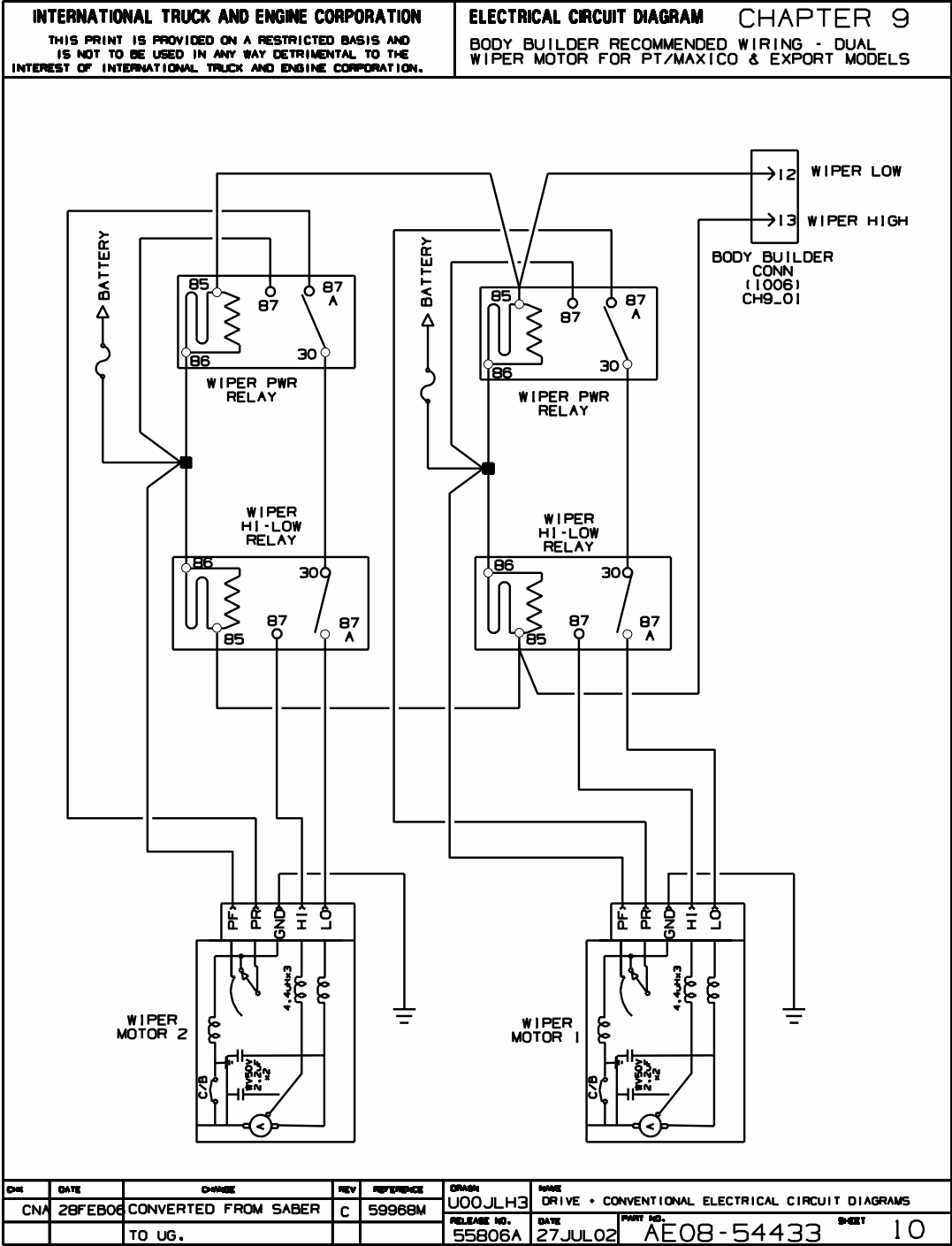


Figure 85 Dual Wiper Motors for PT / Mexico and Export Models

9.11. MEXICO AND EXPORT BUS WINDSHIELD WASHER PUMP, P. 11

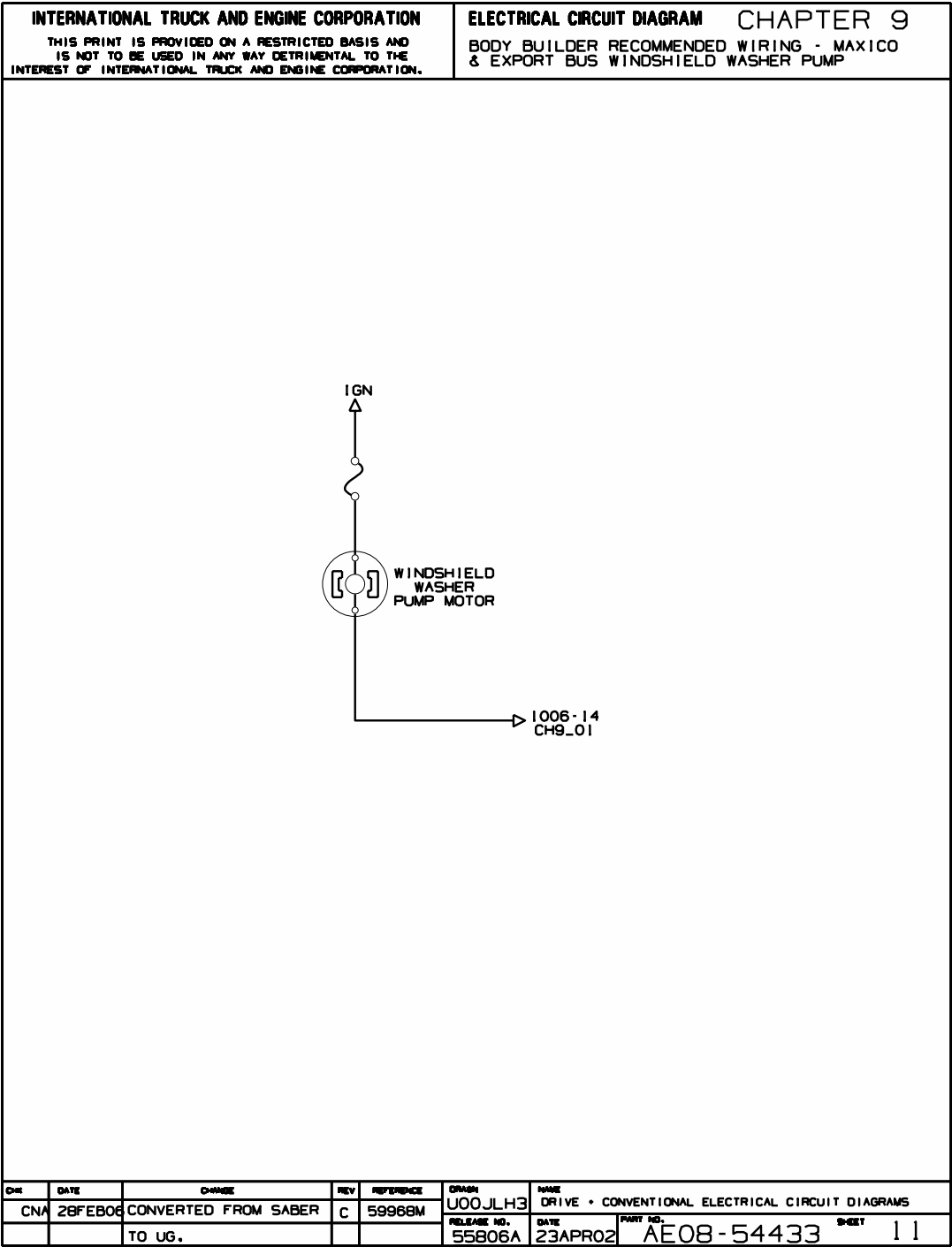


Figure 86 Mexico and Export Bus Windshield Washer Pump

9.12. CE BUS REDUNDANT DOOR CONTROLS, P. 12

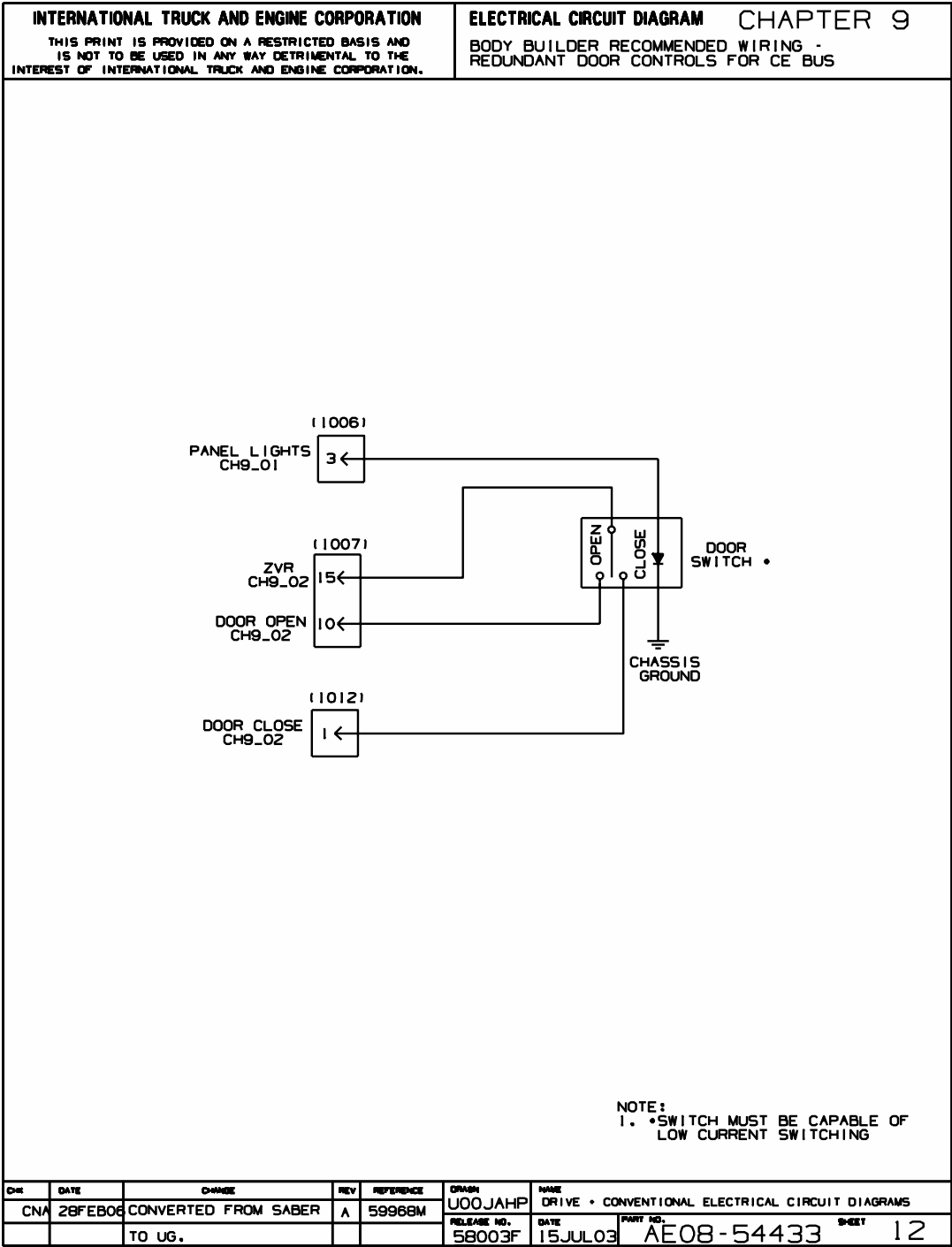


Figure 87 CE Bus Redundant Door Controls

9.13. MANUAL DOOR FOR CE BUS, P. 13

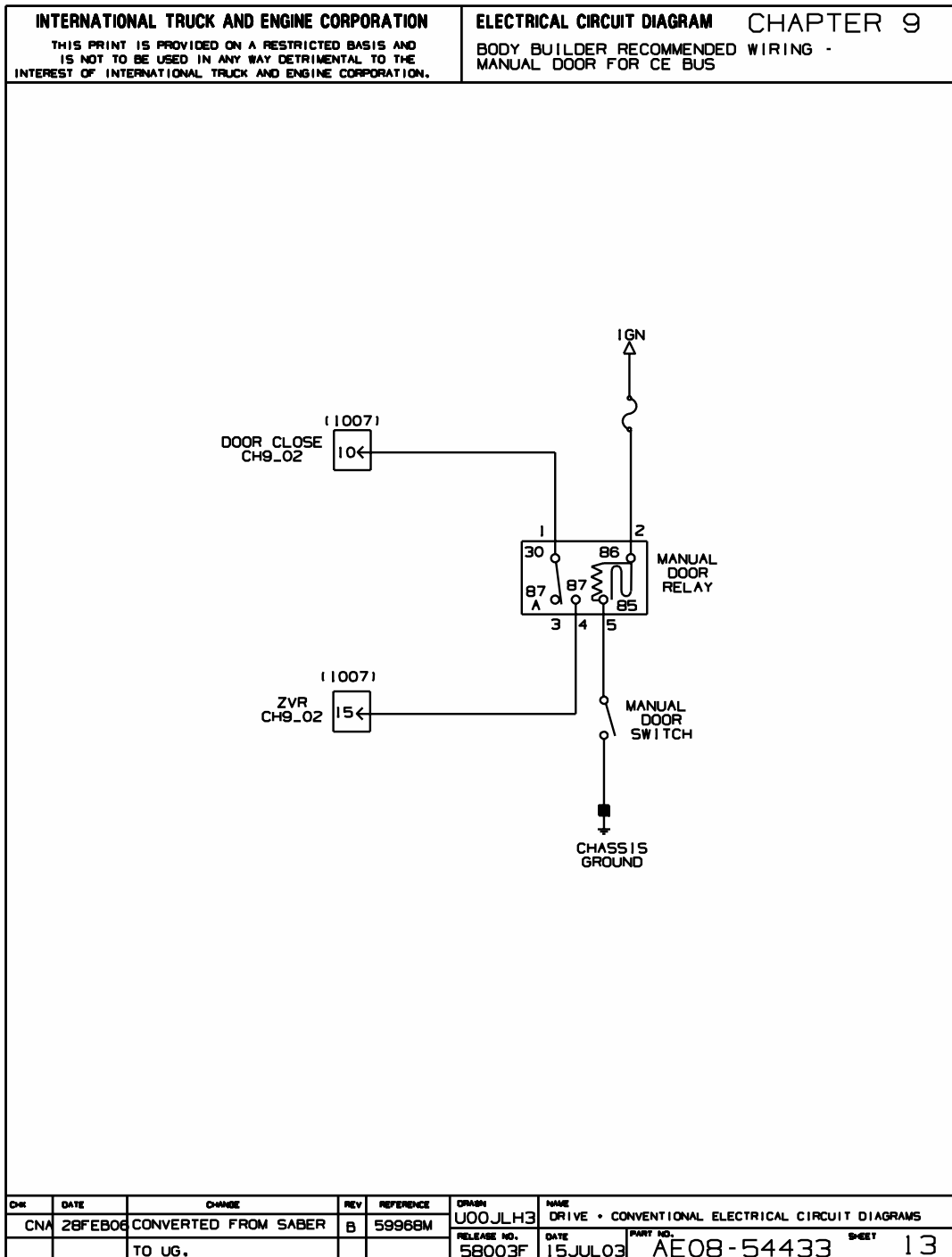


Figure 88 Manual Door for CE Bus