

SERVICE MANUAL

SERVICE MANUAL SECTION

**3200, 4200, 4300, 4400, 7300, 7400, 7500, 7600, 8500, 8600 SERIES Built
After September 15, 2003 — ELECTRICAL CIRCUIT DIAGRAMS**

**Truck Model: 3200
Start Date: 03/01/2002**

**Truck Model: 4200
Start Date: 10/01/2002**

**Truck Model: 4300
Start Date: 10/01/2002**

**Truck Model: 4400
Start Date: 10/01/2002**

**Truck Model: 7300
Start Date: 10/01/2002**

**Truck Model: 7400
Start Date: 10/01/2002**

**Truck Model: 7500
Start Date: 10/01/2002**

**Truck Model: 7600
Start Date: 12/01/2001**

**Truck Model: 8500
Start Date: 10/01/2002**

**Truck Model: 8600
Start Date: 10/01/2002**

S082853

09/15/2003

Table of Contents

1. INSTRUCTIONS AND CHARTS (CHAPTER 1)	1
1.1. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 1.....	1
1.2. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 2.....	2
1.3. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 3.....	3
1.4. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 4.....	4
1.5. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 5.....	5
1.6. NAVPAK/ECM I6 ENGINE CONTROLLER CONNECTOR PIN NUMBER IDENTIFICATION, P. 6.....	6
1.7. CIRCUIT DIAGRAM INSTRUCTIONS, P. 7.....	7
1.8. CIRCUIT DIAGRAM INSTRUCTIONS, P. 8.....	8
1.9. SCHEMATIC SYMBOL CHART, P. 9.....	9
1.10. RELAY FUNCTIONS, P. 10.....	10
1.11. LAMP BULB CHART, P. 11.....	11
1.12. INTERNATIONAL V8 AND I6 ECM CONTROLLER CONNECTORS PIN NUMBER IDENTIFICATION, P.12.....	12
2. 12 VOLT POWER DISTRIBUTION CIRCUIT DIAGRAMS (CHAPTER 2)	13
2.1. ACCESSORY, P. 1.....	13
2.2. BATTERY FEEDS, CAB, P. 2.....	14
2.3. BATTERY, P. 3.....	15
2.4. 1708 DATA LINK, P. 4.....	16
2.5. SWITCH DATA LINK, P. 5.....	17
2.6. DRIVETRAIN 1939 DATA LINK (CAB), P. 6.....	18
2.7. DRIVETRAIN 1939 DATA LINK (CHASSIS), P. 7.....	19
2.8. GROUNDS CHASSIS, P. 8.....	20
2.9. GROUNDS CHASSIS, P. 9.....	21
2.10. GROUNDS IP, P. 10.....	22
2.11. GROUNDS IP, P. 11.....	23
2.12. IGNITION CAB, P. 12.....	24
2.13. IGNITION CAB, P. 13.....	25
2.14. IGNITION FEEDS, CHASSIS, P. 14.....	26
2.15. START, P. 15.....	27
3. CAB ACCESSORIES (CHAPTER 3)	28
3.1. CIGAR LIGHTER AND POWER FEEDS, P. 1.....	28
3.2. CB POWER, P. 2.....	29
3.3. COMPASS AND TEMPERATURE DISPLAY, P. 3.....	30
3.4. FRONT DOORS WINDOWS AND LOCKS (POWER), P. 4.....	31
3.5. CREW DOORS WINDOWS AND LOCKS (POWER), P. 5.....	32
3.6. HORN, DUAL ELECTRIC, P. 6.....	33
3.7. MIRRORS (HEATED, LIGHTED AND POWER), P. 7.....	34
3.8. RADIO (ENTERTAINMENT), SPEAKERS, P. 8.....	35
3.9. WINDSHIELD WIPER AND WASHER PUMP, P. 9.....	36
3.10. 2-WAY RADIO, P. 10.....	37
3.11. SWITCH PACK, OPTIONAL GAUGE PACK, P. 11.....	38
3.12. LIGHTED AIR SHIELD, P. 12.....	39
3.13. ROOF AUX. LOAD, P. 13.....	40

3.14. SATELLITE COMMUNICATION QUALCOMM-MCT AND IMCT SYSTEMS, P. 14.....	41
3.15. SELF CONTAINED AIR SEAT, P. 15.....	42
3.16. DIGITAL CLOCK PTC, P. 16.....	43
3.17. TRANSMISSION ALLISON LCT COLUMN SHIFTER, P. 17.....	44
3.18. HEATED SEATS FOR 7700 MODELS ONLY, P. 18.....	45
4. 12V CHARGING + CRANKING SYSTEM (CHAPTER 4).....	46
4.1. I6 EGR ENGINES, P. 1.....	46
4.2. V8 AVNT ENGINES, P. 2.....	47
4.3. CATERPILLAR, CUMMINS ISM ENGINES, P. 3.....	48
4.4. I6 HEUI ENGINES, P. 4.....	49
5. FANS AND ENGINE ACCESSORIES (CHAPTER 5).....	50
5.1. FAN WIRING, P. 1.....	50
5.2. ETHER START, P. 2.....	51
5.3. SNOW VALVE, P. 3.....	52
5.4. FAN WIRING, CATERPILLAR AND CUMMINS, P. 4.....	53
6. ELECTRONIC ENGINES (CHAPTER 6).....	54
6.1. ELECTRONIC ENGINE CONTROLS, I6-EGR ENGINES, P. 1.....	54
6.2. ELECTRONIC ENGINE CONTROLS, I6-EGR ENGINE CRUISE CONTROL AND BODY BUILDER CONNECTIONS, P. 2.....	55
6.3. ELECTRONIC ENGINE CONTROLS, (V8-AVNT) ENGINES, P. 3.....	56
6.4. ELECTRONIC ENGINE CONTROLS, V8-AVNT ENGINE CRUISE CONTROL AND BODY BUILDER CONNECTIONS, P. 4.....	57
6.5. CATERPILLAR C10, C11, C12, AND C13 ENGINES, P. 5.....	58
6.6. CUMMINS ISM ENGINE, P. 6.....	59
6.7. I6 HEUI ENGINE, P. 7.....	60
6.8. I6 HEUI ENGINE CRUISE CONTROL AND BODY BUILDER CONNECTIONS WITH MANUAL TRANSMISSION, P. 8.....	61
7. GAUGES WITH AND WITHOUT INTEGRAL WARNING LIGHT (CHAPTER 7).....	62
7.1. IP/GAUGE LIST, P. 1.....	62
7.2. WARNING LIGHT LIST, P. 2.....	63
7.3. WARNING LIGHTS CONTROLLED BY ENGINE, TRANSMISSION, ABS CONTROLLER, P. 3.....	64
7.4. ENGINE OIL PRESSURE AND TEMP, SPEEDOMETER, TACH, VOLTMETER AND WATER TEMP GAUGE CIRCUITS, P. 4.....	65
7.5. IP/GAUGES AND WARNING LIGHTS — GAUGE CLUSTER, P. 5.....	66
7.6. AIR PRESSURE INPUT CIRCUIT, P. 6.....	67
7.7. AXLE TEMPERATURE, FWD REAR AND REAR AXLES, GAUGE INPUT CIRCUIT, P. 7.....	68
7.8. FUEL GAUGE INPUT CIRCUIT (SINGLE TANK) DIFFERENTIAL LOCK WARNING LAMPS, P. 8.....	69
7.9. GAUGES AND WARNING LIGHTS — FUEL FILTER RESTRICTION AND WATER IN FUEL LIGHTS, P. 9.....	70
7.10. GAUGES AND WARNING LIGHTS — PARK BRAKE LIGHT AND TRANSMISSION OIL TEMP. GAUGE, P. 10.....	71
7.11. GAUGES AND WARNING LIGHTS — AMMETER, P. 11.....	72
7.12. ENGINE OIL TEMPERATURE GAUGE WITH CATERPILLAR, P. 12.....	73
7.13. FRONT AXLE ENGAGEMENT LAMP, P. 13.....	74
8. LIGHTS (CHAPTER 8).....	75
8.1. BACK UP LIGHTS, P. 1.....	75

8.2. LIGHT SYSTEMS — CLEARANCE, MARKER, PARK, TAIL, TURN AND STOP LAMPS, P. 2.....	76
8.3. LIGHT SYSTEMS — CLEARANCE, MARKER, PARK, TAIL, TURN AND STOP LAMPS (CONT.), P. 3.....	77
8.4. LIGHT SYSTEMS — TURN SIGNAL AND STOP SWITCHES, P. 4.....	78
8.5. DOME LIGHT, MAP LIGHT, P. 5.....	79
8.6. DOME LIGHT, MAP LIGHT (CONT.), P. 6.....	80
8.7. FOG LIGHT AND WORK LIGHT, P. 7.....	81
8.8. HEADLIGHTS, P. 8.....	82
8.9. AUX. HEADLIGHTS, AUX. PARK, AUX TURN, P. 9.....	83
8.10. PANEL LIGHTS, P. 10.....	84
9. CHASSIS ACCESSORIES (CHAPTER 9).....	85
9.1. AIR DRYER AND HEATED DRAIN VALVE, P. 1.....	85
9.2. ANTILOCK BRAKE SYSTEM (ABS), AIR, P. 2.....	86
9.3. ANTILOCK BRAKE SYSTEM (ABS), AIR, TRACTION CONTROL, P. 3.....	87
9.4. ANTILOCK BRAKE SYSTEM (ABS), HYDRAULIC, P. 4.....	88
9.5. ANTILOCK BRAKE SYSTEM (ABS), HYDRAULIC (CONT.), P. 5.....	89
9.6. ANTILOCK BRAKE SYSTEM (ABS), HYDRAULIC (CONT.), P. 6.....	90
9.7. TWO SPEED AXLE SWITCH WITH MANUAL TRANSMISSION AND I6 HEUI FUEL HEATER N/WARN LIGHTS, P. 7.....	91
9.8. BRAKE SYSTEM, HYDRAULIC, P. 8.....	92
9.9. FUEL TRANSFER PUMP, P. 9.....	93
9.10. BACK OF CAB BODY BUILDER AND TRAILER STOP, TAIL, MARKER, P. 10.....	94
9.11. BODY BUILDER AND TRAILER TURNS, CENTER PIN ABS, CENTER PIN AUX, P. 11.....	95
9.12. BODY BUILDER AND TRAILER SOCKET BACK OF CAB SOCKETS, P. 12.....	96
9.13. BODY BUILDER AND TRAILER SOCKET END OF FRAME (EOF) SOCKET AND BODY BUILDER, P. 13.....	97
9.14. AIR SOLENOID 4-WAY PACK, P. 14.....	98
9.15. REMOTE POWER UNITS, SOLENOID PACKS, REMOTE ENGINE SPEED CONTROLLER, P. 15.....	99
9.16. HYD POWER PARK, P. 16.....	100
9.17. AIR SUSPENSION, P. 17.....	101
9.18. AUX. TRAILER, ACC CONTROLLED, P. 18.....	102
9.19. AUX. TRAILER, BTRY CONTROLLED, P. 19.....	103
9.20. LIFT AXLES (NON-STEERABLE), P. 20.....	104
9.21. LIFT AXLES (STEERABLE), P. 21.....	105
9.22. AIR ACTUATED PARK BRAKE, P. 22.....	106
9.23. ANTILOCK BRAKE SYSTEM, WABCO AIR, P. 23.....	107
9.24. ANTILOCK BRAKE SYSTEM, WABCO AIR, P. 24.....	108
9.25. LIFT AXLES, WITH NON—STEERABLE FOR SS MODELS, P. 25.....	109
9.26. FUEL / WATER SEPARATOR WITH 12VDC FUEL PREHEATER, P. 26.....	110
9.27. ELECTRONIC TRAILER BRAKE ACCOMMODATION, P. 27.....	111
9.28. LECTRASHIFT ACCOMMODATION, P. 28.....	112
9.29. AUXILIARY 40 AMP CIRCUIT, P. 29.....	113
9.30. HOURMETER, CUSTOMER MOUNTED PTO, P. 30.....	114
9.31. REMOTE START/ STOP, P. 31.....	115
9.32. LIFT AXLE WITH 14RAR, P. 32.....	116
9.33. LIFT GATE, P. 33.....	117
10. TRANSMISSIONS (CHAPTER 10).....	118
10.1. ALLISON LCT TRANSMISSION OR ALLISON 1000, 2000, 2400, P. 1.....	118
10.2. ALLISON MD TRANSMISSION, P. 2.....	119

10.3. ALLISON MD TRANSMISSION (WTEC), P. 3.....	120
10.4. ALLISON MD TRANSMISSION (CONT.), P. 4.....	121
10.5. TRANSMISSION, WTEC MD W/AUTO NEUTRAL, P. 5.....	122
10.6. EATON AUTOSHIFT TRANSMISSION, P. 6.....	123
10.7. EATON AUTOSHIFT TRANSMISSION (CONT.), P. 7.....	124
10.8. EATON LIGHTNING TRANSMISSION, P. 8.....	125
10.9. ALLISON HD TRANSMISSION, P. 9.....	126
10.10. ALLISON HD TRANSMISSION, P. 10.....	127
10.11. ALLISON HD TRANSMISSION, P. 11.....	128
10.12. ALLISON HD TRANSMISSION WITH AUTO NEUTRAL, P. 12.....	129
10.13. ALLISON HD TRANSMISSION WITH AUTO NEUTRAL AND WITH 0013WUA, P. 13.....	130
10.14. ALLISON LCT TRANSMISSION (ALLISON 1000, 2000, 2400) WITH I6 HEUI, P. 14.....	131
10.15. TRANSMISSION RETARDER CONTROL WIRING WITH MD XMSN, HARD WIRED EFFECTS, P. 15.....	132
10.16. TRANSMISSION RETARDER CONTROL WIRING WITH MD XMSN, HARD WIRED EFFECTS, P. 16.....	133
11. AIR CONDITIONING (CHAPTER 11).....	134
11.1. HVAC SYSTEMS, P. 1.....	134
11.2. AIR CONDITIONING (ONLY), P. 2.....	135
12. CONNECTOR COMPOSITES (CHAPTER 12).....	136
12.1. CONNECTOR COMPOSITES (10M), (71), (72), (345F), P. 1.....	136
12.2. CONNECTOR COMPOSITES (420F), (420M), (520), (521), (522), (523), (524), P. 2.....	137
12.3. CONNECTOR COMPOSITES (1002), (1003), (1010), P. 3.....	138
12.4. CONNECTOR COMPOSITE (1011), P. 4.....	139
12.5. CONNECTOR COMPOSITE (1012), P. 5.....	140
12.6. CONNECTOR COMPOSITE (1013), P. 6.....	141
12.7. CONNECTOR COMPOSITE (1014), P. 7.....	142
12.8. CONNECTOR COMPOSITES (1018), (1019M), (1020M), (1021M), (1022M), P. 8.....	143
12.9. CONNECTOR COMPOSITES (1027M, F), (1100), (1101A), (1101), (1102), P. 9.....	144
12.10. CONNECTOR COMPOSITES (1104), (1106), (1200), (1210), P. 10.....	145
12.11. CONNECTOR COMPOSITES (1300), (1301), (1400), (1402), (1410), (1500), (1510), P. 11.....	146
12.12. CONNECTOR COMPOSITES (1553), (1554F), (1555), (1600), (1601), (1650), P. 12.....	147
12.13. CONNECTOR COMPOSITES (1652), (1657M), (1658), (1659), (1800), P. 13.....	148
12.14. CONNECTOR COMPOSITES (1804), (1807), (1808), (1809), (1810), (1811), (1812), (1813), (1814), (1815), P. 14.....	149
12.15. CONNECTOR COMPOSITES (1820), (1822), (1823), (1824), (1828), (1860), (1861), (1901M), (1915), P. 15.....	150
12.16. CONNECTOR COMPOSITES (1918), (1935), (1920), (2000), (2002M), (2003M), (2004M), (2005M), P. 16.....	151
12.17. CONNECTOR COMPOSITES (2006M), (2007F), (2021F), (2021M), (2022F), (2022M), (2111M), (2112M), (2113M), (2114M), (2115M), (2116M), (2117M), (2301M), (2302M), (2303M), P. 17.....	152
12.18. CONNECTOR COMPOSITES (2304M), (2305M), (2306M), (2307F), (2308F), (2502F), (2502M), (2503F, M), (2600F, M), P. 18.....	153
12.19. CONNECTOR COMPOSITES (2601M, F), (2602M, F), (3000M), (3000F), (3002M), (3003), (3100M), (3200F, M), (3201M), (3202), (3203M), P. 19.....	154
12.20. CONNECTOR COMPOSITES (3204M, F), (3209), (3210M), (3211M), (4000), P. 20.....	155
12.21. CONNECTOR COMPOSITE (4001), P. 21.....	156
12.22. CONNECTOR COMPOSITE (4002), P. 22.....	157
12.23. CONNECTOR COMPOSITE (4003), P. 23.....	158

12.24. CONNECTOR COMPOSITES (4004), (4007), (4008), P. 24.....	159
12.25. CONNECTOR COMPOSITE (4014), P. 25.....	160
12.26. CONNECTOR COMPOSITE (4014/1700), P. 26.....	161
12.27. CONNECTOR COMPOSITES (4015), (4017), (4018), (4019), (4020), (4021), (4022), (4023), P. 27.....	162
12.28. CONNECTOR COMPOSITES (4024), (4030), (4031), (4032), (4033), (4040), (4041), P. 28.....	163
12.29. CONNECTOR COMPOSITES (4070), (4071), (4087), (4098), (4101), P. 29.....	164
12.30. CONNECTOR COMPOSITE (4103), P. 30.....	165
12.31. CONNECTOR COMPOSITES (4105), (4111), (4120), (4301), P. 31.....	166
12.32. CONNECTOR COMPOSITES (4305), (4410), (4410B), (4410C), (4410D), (4410E), (4410H), (4410M), (4411), P. 32.....	167
12.33. CONNECTOR COMPOSITES (4411A), (4411B), (4412), (4415), (4450), (4450A), (4460A), (4460), P. 33.....	168
12.34. CONNECTOR COMPOSITE (4705), P. 34.....	169
12.35. CONNECTOR COMPOSITES (4810), (4712F), (4820), (4713F), (4830), (4840), (4850), P. 35.....	170
12.36. CONNECTOR COMPOSITES (4900), (4910), (4950), (4951), P. 36.....	171
12.37. CONNECTOR COMPOSITES (6007), (6011), P. 37.....	172
12.38. CONNECTOR COMPOSITES (6013M), (6014), P. 38.....	173
12.39. CONNECTOR COMPOSITES (6015), (6020), (6021), P. 39.....	174
12.40. CONNECTOR COMPOSITES (6200), (6316), (6323), (6332), (6333), (6334), (6400), (6401M), (6401), (6406), (6407), (6407D), (6409), (6500), P. 40.....	175
12.41. CONNECTOR COMPOSITES (6550), (6703), (6704), (6708), (7103), (7104), (7104A), (7105), (7106), (7111), P. 41.....	176
12.42. CONNECTOR COMPOSITES (7200), (7202), (7203), P. 42.....	177
12.43. CONNECTOR COMPOSITES (7204), (7205), (7206), (7211), (7212), (7213), P. 43.....	178
12.44. CONNECTOR COMPOSITES (7214), (7300), (7301), P. 44.....	179
12.45. CONNECTOR COMPOSITES (7302), (7304), (7305), (7306), (7500), (7502), (7600), (7601), P. 45.....	180
12.46. CONNECTOR COMPOSITES (7603), (7604), (7605), (7606), (7607), (7608), (7609), (7610), (7611), (7612), (7613), (7615), (7700), (7702), (7703), (7703A), P. 46.....	181
12.47. CONNECTOR COMPOSITES (7800), (7801M), (7803), (7900), (7901), P. 47.....	182
12.48. CONNECTOR COMPOSITES (7905), (7906), (8000), (8001), (8102), (8150), (8151), (8200), P. 48.....	183
12.49. CONNECTOR COMPOSITES (8201), (8301), (8310), (8311), (8312), (8400), (8500), (8501), (8502), (8502A), P. 49.....	184
12.50. CONNECTOR COMPOSITES (8503), (8503A), (8505), (8506), (8507), (8508), (8509), (8600), (8601), (8602), P. 50.....	185
12.51. CONNECTOR COMPOSITES (8700), (8701), (8800), (8801), (8802), (8803), (8805), P. 51.....	186
12.52. CONNECTOR COMPOSITES (9001), (9002), (9100), (9101), (9102), (9103), (9104), (9254), (9255), P. 52.....	187
12.53. CONNECTOR COMPOSITES (9260), (9261), (9262), (9263), (9264), (9265), (9303A), P. 53.....	188
12.54. CONNECTOR COMPOSITES (9405), (9501), (9502), (9503), (9504), (9505), (9506), P. 54.....	189
12.55. CONNECTOR COMPOSITES (9507), (9508), (9509), (9510), (9511), (9512), (9513), (9514), (9515), P. 55.....	190
12.56. CONNECTOR COMPOSITES (9516), (9517), (9518), (9519), P. 56.....	191
12.57. CONNECTOR COMPOSITE (9700), P. 57.....	192
12.58. CONNECTOR COMPOSITE (9700), P. 58.....	193
12.59. CONNECTOR COMPOSITES (9715), (9715A), (9715B), P. 59.....	194

12.60. CONNECTOR COMPOSITES (9716), (9716A), (9716B), P. 60.....	195
12.61. CONNECTOR COMPOSITES (9717A), (9717B), P. 61.....	196
12.62. CONNECTOR COMPOSITES (9718), (9719), (9720), (9733), (9734), (9736), (9754), (9762), (9763), P. 62.....	197
12.63. CONNECTOR COMPOSITES (9777), (9778), (9800), P. 63.....	198
12.64. CONNECTOR COMPOSITES (9870), (9871), (9811), (9812), (9814), (9815), (9850), (9900), (9900A), (9913A), (9913B), (9914), P. 64.....	199
12.65. CONNECTOR COMPOSITES (4100), (4109), (4112), (6502), (7107), (7208), (7615), P. 65.....	200

1. INSTRUCTIONS AND CHARTS (CHAPTER 1)

1.1. CIRCUIT NUMBER IDENTIFICATION AND LOCATION 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						
PREFIX DESIGNATIONS								
PREFIX	LOCATION							
A	Cab-Instrument Panel Module							
B	Cab-Driver Control Module							
C	Cab-Header/Clearance Lights							
D	Cab-Roof/Rear Panel							
E	Cab-Left Door/Doors							
F	Cab-Right Door/Doors							
H	Cab-Sleeper							
J	Cab-Dash(outside)							
K	Engine/Radiator							
L	Transmission							
M	Chassis/Front End (Cab Dash Panel Forward)							
N	Chassis/Center Section (Cab Dash Panel to Cab RR Xmbr)							
P	Chassis/Wheel Base Section							
R	Chassis/Suspension/Rear Axle/Axles							
S	Chassis/AF Section/Stop/Tail/Turn Lights							
CIRCUIT NUMBER AND IDENTIFICATIONS								
CIRCUIT NUMBER	COLOR	DESCRIPTION						
1	LTBL	ALTERNATOR - FIELD						
2	RD	ALTERNATOR - CHARGE						
3	DKBL GY	1708 DATA LINK, SWITCH DATA LINK (+) 1708 DATA LINK, SWITCH DATA LINK (-)						
4		SERIAL/DATA COMMUNICATION J1922						
5	YL GN	DRIVE TRAIN J1939 DATA LINK (+) DRIVE TRAIN J1939 DATA LINK (-)						
6	GY	LOW VOLTAGE ELECTRONIC FEED (< 9 VOLTS)						
7	RD	ALTERNATOR - RESISTANCE						
8								
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME		
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS		
					RELEASE NO.	DATE	PART NO.	SHEET
					P52778H	09AUG00	AE08-52365	01

Figure 1 Circuit Number Identification and Location Chart

1.2. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 2

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.				INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION (CONT.)			
CIRCUIT NUMBER AND IDENTIFICATIONS (CONT.)							
CIRCUIT NUMBER	COLOR	DESCRIPTION					
9	GY	ZERO VOLT REFERENCE (ZVR)					
10	WH	CHASSIS/ENGINE GROUND					
11	WH	CAB/SLEEPER 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 AND 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	DRAWN	NAME	
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00JXP9	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	
					RELEASE NO.	DATE	PART NO.
					P52778H	09AUG00	AE08-52365
							SHEET 02

Figure 2 Circuit Number Identification and Location Chart (Cont.)

1.3. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 3

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.		INTERNATIONAL CIRCUIT NUMBER IDENTIFICATION AND LOCATION (CONT.)						
CIRCUIT NUMBER AND IDENTIFICATIONS (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						
	LT GN	TURN SIGNAL LIGHTS - RIGHT (BODY BUILDER CONNECTION)						
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME		
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS		
					RELEASE NO.	DATE	PART NO.	SHEET
					P52778H	15 MAY 00	AE08-52365	03

Figure 3 Circuit Number Identification and Location Chart (Cont.)

1.4. CIRCUIT NUMBER IDENTIFICATION AND LOCATION 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 IDENTIFICATIONS (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 LIGHT						
66	YL	DAYTIME RUNNING LIGHTS						
67								
68	BN	TAIL LIGHTS						
69	BN	LICENSE PLATE LIGHT						
70	OR RD	STOP LIGHTS STOP LIGHTS (BODY BUILDER CONNECTION)						
71	OR LTBL	BACK - UP LIGHTS BACK - UP LIGHTS (BODY BUILDER CONNECTION)						
72	OR	TRAILER AUXILIARY FEED - BATTERY						
73	LTGN	PWM						
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	DRAWN	NAME		
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS		
					RELEASE NO.	DATE	PART NO.	SHEET
					P52778H	15MAY00	AE08-52365	04

Figure 4 Circuit Number Identification and Location Chart (Cont.)

1.5. CIRCUIT NUMBER IDENTIFICATION AND LOCATION CHART, P. 5

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 THE
INTERNATIONAL TRUCK AND ENGINE CORPORATION.

INTERNATIONAL CIRCUIT NUMBER
IDENTIFICATION AND LOCATION (CONT.)

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/CLOCK
87	GY	WINDSHIELD WASHER
88	LTGN	CLOCK/HOURMETER
89	VT	AIR BAG
90	GY	HYDRAULIC BRAKE PUMP
91	VT	INTERCOMMUNICATIONS
92	TN	TRANSMISSION CONTROLS - ELECTRONIC
93	TN	AXLE SHIFT CONTROL
94	GY	ANTILOCK BRAKE SYSTEM
95	TN	EXHAUST EMISSION
96	YL	SNOW PLOW LIGHTS/CRUISE CONTROL
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
103	LTGN	BODY BUILDER AUX. FEED
104	DKBL	REMOTE START/STOP
105	LTGN	HEATED SEATS

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME		
JKP	30MAY03	ADDED 103, 104, 105 & COLOR TO 100, 101, 102.	C	58205F	U00DLCK RELEASE NO.	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	DATE	PART NO.
					P52778H	15MAY00	AE08-52365	SHEET 05

Figure 5 Circuit Number Identification and Location Chart (Cont.)

1.6. NAVPAK/ECM I6 ENGINE CONTROLLER CONNECTOR PIN NUMBER IDENTIFICATION, P. 6

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.			INTERNATIONAL NAVPAK/ECM I6 ENGINE CONTROLLER CONNECTOR PIN NUMBER IDENTIFICATION		
ECM PIN #	TERM	DESCRIPTION	ECM PIN #	TERM	DESCRIPTION
12	AAT	AMBIENT AIR TEMP. SENSOR	27	IVS	IDLE VALIDATION SWITCH
33	ACD	A/C DEMAND	54	OWL	OIL/WATER WARNING LIGHT
8	APS	ACCELERATOR POS. SENSOR	25	PWR RLY	CEC MAIN POWER RELAY SIGNAL
16	ATA(+)	J1708 DATALINK (+)	31	RAS	RESUME/ACCELERATE
17	ATA(-)	J1708 DATALINK (-)	37	RPRF	PRESET SPEED
29	BAP	BAROMETRIC AIR PRESS. SENSOR	30	RPS	REMOTE ACCELERATOR POS. SENS. SIG.
43	BN01	BRAKE STATUS #1	6	RPS_RTN	REMOTE ACCELERATOR POS. SENS RTN.
44	BN02	BRAKE STATUS #2	36	RVAR	VARIABLE SPEED SWITCH
18	CAN SHLD	DRIVETRAIN J1939 DATALINK SHLD	32	SCS	SET/COAST
19	CAN(+)	DRIVETRAIN J1939 DATALINK (+)	45	SIL	SERVICE INTERVAL LIGHT
20	CAN(-)	DRIVETRAIN J1939 DATALINK (-)	34	STI	SELF TEST INPUT
15	CBE_SEL1	RETARDER/EXHAUST BRAKE REQUEST	48	SUL	SHIFT UP LIGHT
10	CLS	COOLANT LEVEL SENSOR	59	TACA	TACHOMETER A
35	COD	CRUISE ON/OFF	60	TACB	TACHOMETER B
21	DC (+)	POWER	38	TCSS	TORQUE CURVE SELECTION INPUT
22	DC (+)	POWER	28	TSA	TWO SPEED AXLE
1	DC (-)	GROUND	3	VBREF(5V)	ACCELERATOR SENSOR SUPPLY
2	DC (-)	GROUND	11	VBREF GND	ACCELERATOR SENSOR GROUND
26	DDS	DRIVELINE DISENGAGED INPUT	5	VCREF(5V)	REMOTE ACCELERATOR SENS. SUPPLY
42	DPS	GROUND	7	VCREF GND	REMOTE ACCELERATOR SENSOR GND
46	ECl	ENGINE CRANK INHIBIT	24	VIGN	IGNITION FEED
56	EDL	TRANSMISSION KICKDOWN	47	VRE	RETARDER/EXHAUST BRAKE ENABLE
53	GPL	GLOW PLUG LIGHT	39	VSS(+)	VEHICLE SPEED SENSOR (+)
4	HGE	HYD. PRESS GOVERNOR ENABLE	40	VSS(-)	VEHICLE SPEED SENSOR (-)
49	HMI	HYDRAULIC PRESS GOVERNOR IND. LT	58	VSSCALA	SPEEDOMETER SIGNAL A
13	HPS	HYDRAULIC PRESSURE SENSOR	57	VSSCALB	SPEEDOMETER SIGNAL B
41	HSO (+)	POWER	55	WARN	ENGINE WARNING LIGHT
23	HSO (-)	GROUND			

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	
CNA	12SEP03	ADDED PIN # CHART.	C	58774T	U00JXP9	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	
					RELEASE NO.	DATE	PART NO.
					P52778H	09AUG00	AE08-52365
							SHEET 06

Figure 6 NAVPAK/ECM I6 Engine Controller Connector Pin Number Identification

1.7. CIRCUIT DIAGRAM INSTRUCTIONS, P. 7


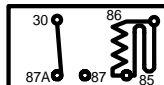


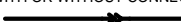
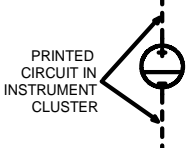
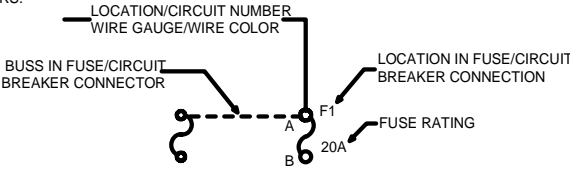
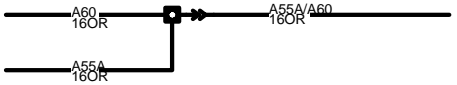
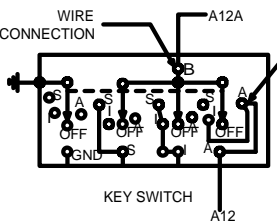
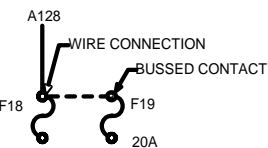
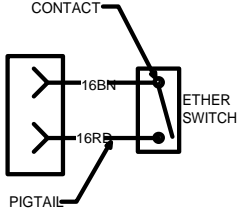
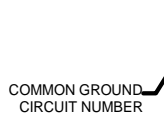
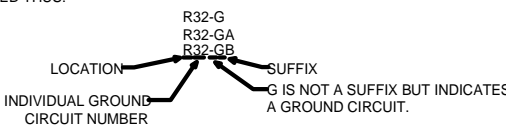
<p>INTERNATIONAL TRUCK AND ENGINE CORPORATION</p> <p>THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION.</p>	<p>ELECTRICAL CIRCUIT DIAGRAM CHAPTER 1</p> <p>CIRCUIT DIAGRAM INSTRUCTIONS</p>																																																								
<p>A - SWITCH AND RELAY POSITIONS AS SHOWN ON CIRCUIT DIAGRAMS INDICATE NORMAL POSITION WITH IGNITION OFF UNLESS OTHERWISE NOTED.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>SWITCH: MANUAL/MECHANICAL</p> </div> <div style="text-align: center;">  <p>RELAY - SUPPRESSED</p> </div> <div style="text-align: center;">  <p>INDICATES CASE MAGNETIC GROUND SUPPRESSED</p> </div> </div>	<p>B - MULTIPLE CONNECTIONS ARE DISPLAYED ON SCHEMATIC AS SHOWN. REFER TO CONNECTOR COMPOSITE WITH APPLICABLE NUMBER FOR MORE COMPLETE INFORMATION.</p> <div style="text-align: center;">  <p>12 AND/OR 12</p> <p>SINGLE IN-LINE CONNECTORS DISPLAYED AS SHOWN WITH OR WITHOUT CONNECTOR NUMBER.</p>  </div>																																																								
<p>C - PHANTOM LINES INDICATE PRINTED CIRCUITS OR BUSSED CIRCUITS. THESE CIRCUITS EXIST IN THE INSTRUMENT CLUSTERS AND FUSE/CIRCUIT BREAKER CONNECTORS.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>PRINTED CIRCUIT IN INSTRUMENT CLUSTER</p> <p>VOLTMETER</p> </div> <div style="text-align: center;">  <p>LOCATION/CIRCUIT NUMBER WIRE GAUGE/WIRE COLOR</p> <p>BUSS IN FUSE/CIRCUIT BREAKER CONNECTOR</p> <p>LOCATION IN FUSE/CIRCUIT BREAKER CONNECTION</p> <p>F1 A B 20A FUSE RATING</p> </div> </div>																																																									
<p>D - MULTIPLE CIRCUIT NUMBERS ON A LINE INDICATE ONE WIRE DISTRIBUTING CURRENT TO TWO CIRCUITS.</p> <div style="text-align: center;">  <p>A60 18OR</p> <p>A55A/A60 18OR</p> </div>																																																									
<p>E - SWITCHES, RELAYS AND COMPONENTS INDICATE EXTERNAL WIRE CONNECTIONS AND/OR INTERNAL CONNECTIONS OR CONTACTS.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>WIRE CONNECTION</p> <p>INTERNAL CONNECTION</p> <p>KEY SWITCH</p> </div> <div style="text-align: center;">  <p>WIRE CONNECTION</p> <p>BUSSED CONTACT</p> <p>F18</p> <p>F19</p> <p>20A</p> </div> <div style="text-align: center;">  <p>CONTACT</p> <p>16B1</p> <p>16B2</p> <p>ETHER SWITCH</p> <p>PIGTAIL</p> </div> </div>																																																									
<p>F - CIRCUIT "11" DENOTES ANY COMMON GROUND, (MORE THAN ONE CIRCUIT). ANY INDIVIDUAL GROUND CIRCUIT IS IDENTIFIED WITH THAT PARTICULAR CIRCUIT NUMBER. (E.G CIRCUIT 97 CRUISE CONTROL, IS IDENTIFIED PER EXAMPLE).</p> <p>NOTE: FOR CIRCUIT DESCRIPTION OTHER THAN GROUNDS, NEITHER THE LETTER "G" NOR THE COLOR WHITE SHALL BE USED.</p> <p style="text-align: center;">GROUND CIRCUITS ARE DESCRIBED THIS:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>COMMON GROUND CIRCUIT NUMBER</p> <p>11-G 11-GA 11-GB</p> <p>SUFFIX G IS NOT A SUFFIX BUT INDICATES A GROUND CIRCUIT.</p> </div> <div style="text-align: center;">  <p>INDIVIDUAL GROUND CIRCUIT NUMBER</p> <p>R32-G R32-GA R32-GB</p> <p>LOCATION</p> <p>SUFFIX G IS NOT A SUFFIX BUT INDICATES A GROUND CIRCUIT.</p> </div> </div>																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">CHK</td> <td style="width: 10%;">DATE</td> <td style="width: 20%;">CHANGE</td> <td style="width: 5%;">REV</td> <td style="width: 10%;">REFERENCE</td> <td style="width: 10%;">DRAWN</td> <td style="width: 40%;">NAME</td> </tr> <tr> <td>PEC</td> <td>16JAN01</td> <td>PRODUCTION RELEASE.</td> <td>A</td> <td>P54304U</td> <td>U00DLCK</td> <td>42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>RELEASE NO.</td> <td>DATE</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>P52778H</td> <td>15MAY00</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>PART NO.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>AE08-52365</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>SHEET</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>07</td> </tr> </table>		CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS						RELEASE NO.	DATE						P52778H	15MAY00							PART NO.							AE08-52365							SHEET							07
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME																																																			
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS																																																			
					RELEASE NO.	DATE																																																			
					P52778H	15MAY00																																																			
						PART NO.																																																			
						AE08-52365																																																			
						SHEET																																																			
						07																																																			

Figure 7 Circuit Diagram Instructions

1.8. CIRCUIT DIAGRAM INSTRUCTIONS, P. 8

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 CIRCUIT DIAGRAM INSTRUCTIONS						
<p>G - ABBREVIATIONS: COLOR, NOUN AND ENGINE</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <p>COLOR ABBREVIATION</p> <p>AQ - AQUA BK - BLACK BL - BLUE BN - BROWN DK GN - DARK GREEN GD - GOLD GY - GRAY GN - GREEN LT BL - LIGHT BLUE</p> </td> <td style="width: 33%; vertical-align: top;"> <p>NOUN ABBREVIATION</p> <p>LT GN - LIGHT GREEN OR - ORANGE PK - PINK PL - PURPLE RD - RED SIL - SILVER TN - TAN VT - VIOLET WH - WHITE YL - YELLOW</p> </td> <td style="width: 33%; vertical-align: top;"> <p>NOUN ABBREVIATION</p> <p>A ACCESSORY ACC AIR CONDITIONER AC - AIR CONDITIONER AUX - AUXILIARY AWG - AMERICAN WIRE GAUGE B BATTERY BAT CONNECTION OR CONNECTOR CONN- CONNECTION OR CONNECTOR DRL - DAYTIME RUNNING LIGHTS ENG - ENGINE FWD - FORWARD GA - GAUGE</p> </td> <td style="width: 33%; vertical-align: top;"> <p>G GROUND GND GROUND I IGNITION IGN IGNITION IND - INDICATOR L - LEFT LT - LIGHT W/O - WITHOUT DRL - DAYTIME RUNNING LIGHTS OPT - OPTIONAL R - RIGHT S - START OR SENDER THERMO - THERMOSTAT W/ - WITH</p> </td> </tr> </table> <p>ENGINE ABBREVIATION</p> <p>ISM - MFG (CUMMINS) 10.8 LITER ELECTRONIC ENGINE CONTROL</p> <p>N14E PLUS - MFG (CUMMINS) 14 LITER ELECTRONIC ENGINE CONTROL</p> <p>C-10,C-12 - MFG (CATERPILLAR) 10.3 LITER ELECTRONIC ENGINE CONTROL</p> <p>V8-AVNT - MFG (INTERNATIONAL) V8 6.0 LITER ELECTRONIC ENGINE CONTROL</p> <p>I6-HEUI - MFG (INTERNATIONAL) NGD I6 DT466 & DT/HT530 ELECTRONIC ENGINE CONTROL</p>				<p>COLOR ABBREVIATION</p> <p>AQ - AQUA BK - BLACK BL - BLUE BN - BROWN DK GN - DARK GREEN GD - GOLD GY - GRAY GN - GREEN LT BL - LIGHT BLUE</p>	<p>NOUN ABBREVIATION</p> <p>LT GN - LIGHT GREEN OR - ORANGE PK - PINK PL - PURPLE RD - RED SIL - SILVER TN - TAN VT - VIOLET WH - WHITE YL - YELLOW</p>	<p>NOUN ABBREVIATION</p> <p>A ACCESSORY ACC AIR CONDITIONER AC - AIR CONDITIONER AUX - AUXILIARY AWG - AMERICAN WIRE GAUGE B BATTERY BAT CONNECTION OR CONNECTOR CONN- CONNECTION OR CONNECTOR DRL - DAYTIME RUNNING LIGHTS ENG - ENGINE FWD - FORWARD GA - GAUGE</p>	<p>G GROUND GND GROUND I IGNITION IGN IGNITION IND - INDICATOR L - LEFT LT - LIGHT W/O - WITHOUT DRL - DAYTIME RUNNING LIGHTS OPT - OPTIONAL R - RIGHT S - START OR SENDER THERMO - THERMOSTAT W/ - WITH</p>	
<p>COLOR ABBREVIATION</p> <p>AQ - AQUA BK - BLACK BL - BLUE BN - BROWN DK GN - DARK GREEN GD - GOLD GY - GRAY GN - GREEN LT BL - LIGHT BLUE</p>	<p>NOUN ABBREVIATION</p> <p>LT GN - LIGHT GREEN OR - ORANGE PK - PINK PL - PURPLE RD - RED SIL - SILVER TN - TAN VT - VIOLET WH - WHITE YL - YELLOW</p>	<p>NOUN ABBREVIATION</p> <p>A ACCESSORY ACC AIR CONDITIONER AC - AIR CONDITIONER AUX - AUXILIARY AWG - AMERICAN WIRE GAUGE B BATTERY BAT CONNECTION OR CONNECTOR CONN- CONNECTION OR CONNECTOR DRL - DAYTIME RUNNING LIGHTS ENG - ENGINE FWD - FORWARD GA - GAUGE</p>	<p>G GROUND GND GROUND I IGNITION IGN IGNITION IND - INDICATOR L - LEFT LT - LIGHT W/O - WITHOUT DRL - DAYTIME RUNNING LIGHTS OPT - OPTIONAL R - RIGHT S - START OR SENDER THERMO - THERMOSTAT W/ - WITH</p>					
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME		
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00JXP9	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS		
					RELEASE NO.	DATE	PART NO.	SHEET
					P52778H	10AUG00	AE08-52365	08

Figure 8 Circuit Diagram Instructions (Cont.)

1.9. SCHEMATIC SYMBOL CHART, P. 9

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		HORN			
		FEMALE TERMINAL		SPEAKER - SOUND SYSTEM			
		MALE TERMINAL		MAGNETIC SWITCH			
		GROUND		LIGHT - SINGLE FILAMENT			
		FUSE		LIGHT - DOUBLE FILAMENT			
		LIGHT EMITTING DIODE		SENDER - OIL, WATER, FUEL, TEMPERATURE			
		RESISTOR					
		SWITCH CONTACT, NORMALLY OPEN					
		SWITCH CONTACT, NORMALLY CLOSED					
		JUNCTION POINT					
		SPLICE					
		SWITCH-PRESSURE					
		SWITCH-MANUAL/MECHANICAL					
		RELAY-SUPPRESSED					
		SOLENOID - GENERAL USAGE					
		MOTOR - ELECTRIC					
		CIGAR LIGHTER					

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	
					RELEASE NO.	DATE	PART NO.
					P52778H	19MAY00	AE08-52365
							SHEET 09

Figure 9 Schematic Symbol Chart

1.10. RELAY FUNCTIONS, P. 10

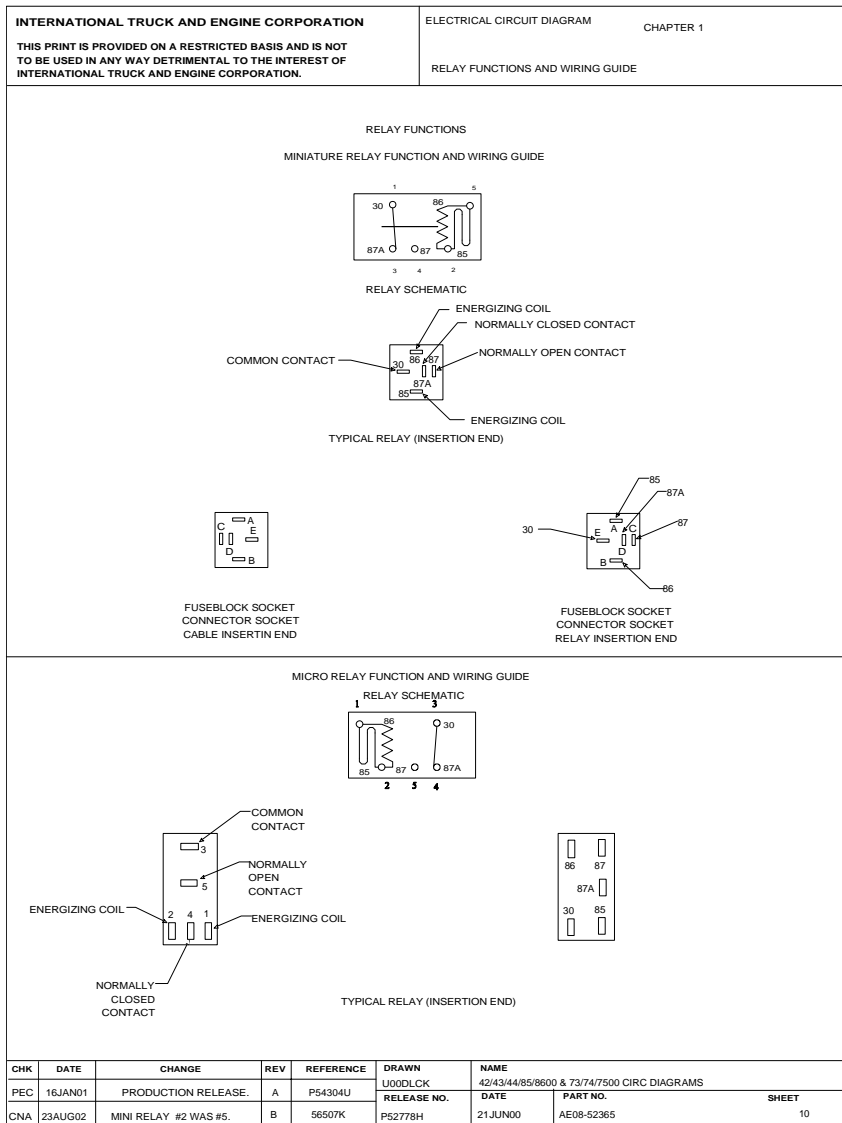


Figure 10 Relay Functions

1.11. LAMP BULB CHART, P. 11

INTERNATIONAL TRUCK AND ENGINE CORPORATION				ELECTRICAL CIRCUIT DIAGRAM		
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.				CHAPTER 1		
				LAMP BULB CHART		
BULB APPLICATION	CANDLEPOWER OR WATTS		BULB TRADE NUMBER			
BACK-UP LIGHTS	32 CANDLEPOWER		GE1156			
CLEARANCE & IDENTIFICATION	3 CANDLEPOWER		GE193			
COURTESY LIGHT	3 CANDLEPOWER		GE168			
DOVE LIGHTS	12 CANDLEPOWER		GE561			
FOG LIGHTS	55 CANDLEPOWER		VH550			
HEAD LIGHTS:						
LOW BEAMS	65 WATTS		GE9007			
HIGH BEAMS	65 WATTS		GE9007			
INSTRUMENT CLUSTER:						
GAUGE BACK LIGHT			082S270538-3			
GAUGE WARNING LED (RED)			082S272109-3			
RANGE INHIBIT LED (YELLOW)			082S272109-4			
COLD AMBIENT PROTECTION LED (YELLOW)			082S272109-4			
FUEL FILTER LED (YELLOW)			082S272109-4			
WARN ENGINE LED (YELLOW)			082S272109-4			
STOP ENGINE LED (RED)			082S272109-3			
BRAKE PRESSURE LED (RED)			082S272109-3			
BRAKE FLUID LED (RED)			082S272109-3			
WAIT TO START LED (YELLOW)			082S272109-4			
CHECK TRANSMISSION LED (YELLOW)			082S272109-4			
TRAILER ABS LED (YELLOW)			082S272109-4			
WASHER FLUID LED (YELLOW)			082S272109-4			
LEFT TURN SIGNAL LED (GREEN)			082S272109-2			
TRACTION CONTROL LED (GREEN)			082S272109-2			
WATER IN FUEL LED (YELLOW)			082S272109-4			
PARK FLUID LED LIGHT (RED)			082S272109-3			
CHECK ELECTRICAL SYSTEMS LED (YELLOW)			082S272109-4			
PARK BRAKE LED (RED)			082S272109-3			
CRUISE CTRL ACTIVE LED (GREEN)			082S272109-2			
ANTILOCK BRAKING SYSTEM LED (YELLOW)			082S272109-4			
RIGHT TURN LED (GREEN)			082S272109-2			
COOLANT LEVEL LED (RED)			082S272109-3			
SEAT BELT LED (RED)			082S272109-3			
HIGH BEAM ICON LED (BLUE)			082S272109-5			
CHECK AIR CONDITIONER LED (YELLOW)			082S272109-4			
RETARD OVER HEAT LED (RED)			082S272109-3			
PTO/THROTTLE LED (RED)			082S272109-3			
MAP LIGHT	3 CANDLEPOWER		1816			
SIDE MARKER			2458			
STOP & TURN/TAIL & LICENSE PLATE	32/3 CANDLEPOWER		1157			
TURN SIGNAL/MARKER (FENDER)			3157			
TURN SIGNAL & MARKER LIGHT			2356			
WORK (TRAILER HOOK-UP) LIGHT			4411			
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME
PEC	16JAN01	PRODUCTION RELEASE	A	P54304U	U00DLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS
PEC	18JUN01	REVISED DRWG SHEET.	B	P54634F	RELEASE NO.	DATE
					P52778H	20JUN00
						PART NO.
						AE08-52365
						SHEET
						11

Figure 11 Lamp Bulb Chart

1.12. INTERNATIONAL V8 AND I6 ECM CONTROLLER CONNECTORS PIN NUMBER IDENTIFICATION, P.12

INTERNATIONAL TRUSK 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 TRUSK AND ENGINE CORPORATION.					ELECTRICAL CIRCUIT DIAGRAM CHAPTER 1 INTERNATIONAL V8 & I6 ECM CONTROLLER CONNECTORS PIN NUMBER IDENTIFICATION.					
CONNECTOR X3 REFERENCE (6020)					CONNECTOR X4 REFERENCE (6021)					
ECM PIN #	TERM	DESCRIPTION				ECM PIN #	TERM	DESCRIPTION		
1	FPM	FUEL PUMP MONITOR				1	KL.87	BATTERY POWER		
2	FLI	FUEL LEVEL INDICATOR				2	KL.87	BATTERY POWER		
3	KL.15	IGNITION FEED				3		NOT POPULATED		
4	ECL	ENGINE COOLANT LEVEL				4	VBREF	SENSOR REFERENCE VOLTAGE		
5	MPR	MAIN POWER RELAY				5		NOT POPULATED		
6	KL.31	GROUND				6	LSI_SPARE2	LOW SPEED INPUT 2		
7	KL.31	GROUND				7		NOT POPULATED		
8	DDS	DRIVELINE DISENGAGE SWITCH				8		NOT POPULATED		
9	FPC	FUEL PUMP CONTROL				9	VSS-	VEHICLE SPEED SENSOR-		
10	TCSS	TORQUE CURVE SELECT SWITCH				10	VSS+	VEHICLE SPEED SENSOR+		
11	TACH	TACHOMETER CONTROL				11		NOT POPULATED		
12	CAN1+	DRIVETRAIN J1939 DATALINK +				12	IVS	IDLE VALIDATION SWITCH		
13	CAN1-	DRIVETRAIN J1939 DATALINK -				13		NOT POPULATED		
14	RAS	RESUME/ACCELERATE				14	EFAN	ELECTRIC FAN CONTROL		
15	CAN1-SHLD	DRIVETRAIN 1939 DATALINK SHLD				15	LSO_SPARE4	LOW SIDE OUTPUT 4		
16		NOT POPULATED				16		NOT POPULATED		
17	VSS_CAL	VEHICLE SPEED SENSOR CALIBRATION				17		NOT POPULATED		
18	VRE	VEHICLE RETARDER ENABLE				18	APS	ACCELERATION POSITION SENSOR		
19	RPRE	REMOTE PRESET PTO ENABLE				19		NOT POPULATED		
20	RVAR	REMOTE VARIABLE PTO ENABLE				20	ATA+	J1708 DATALINK +		
21	SCS	SET/COAST				21	ATA-	J1708 DATALINK -		
22	ESHTR	ELECTRONIC SHUTTER RELAY				22		NOT POPULATED		
23	ECI	ENGINE CRANK INHIBIT				23	GSC	GENSET SPEED CONTROL		
24	BAP	BAROMETRIC AIR PRESSURE				24	KL.31B	SENSOR REFERENCE GROUND		

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME		
CNA	25FEB03	PIN 6 OF CONN X4 INOUT CHANGED TO INPUT	B	58928S	LU00DLCK RELEASE NO. P54304U	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS		
						DATE	PART NO.	SHEET
						16JAN01	AE08-52365	12

Figure 12 International V8 and I6 ECM Controller Connectors Pin Number Identification

2. 12 VOLT POWER DISTRIBUTION CIRCUIT DIAGRAMS (CHAPTER 2)

2.1. ACCESSORY, P. 1

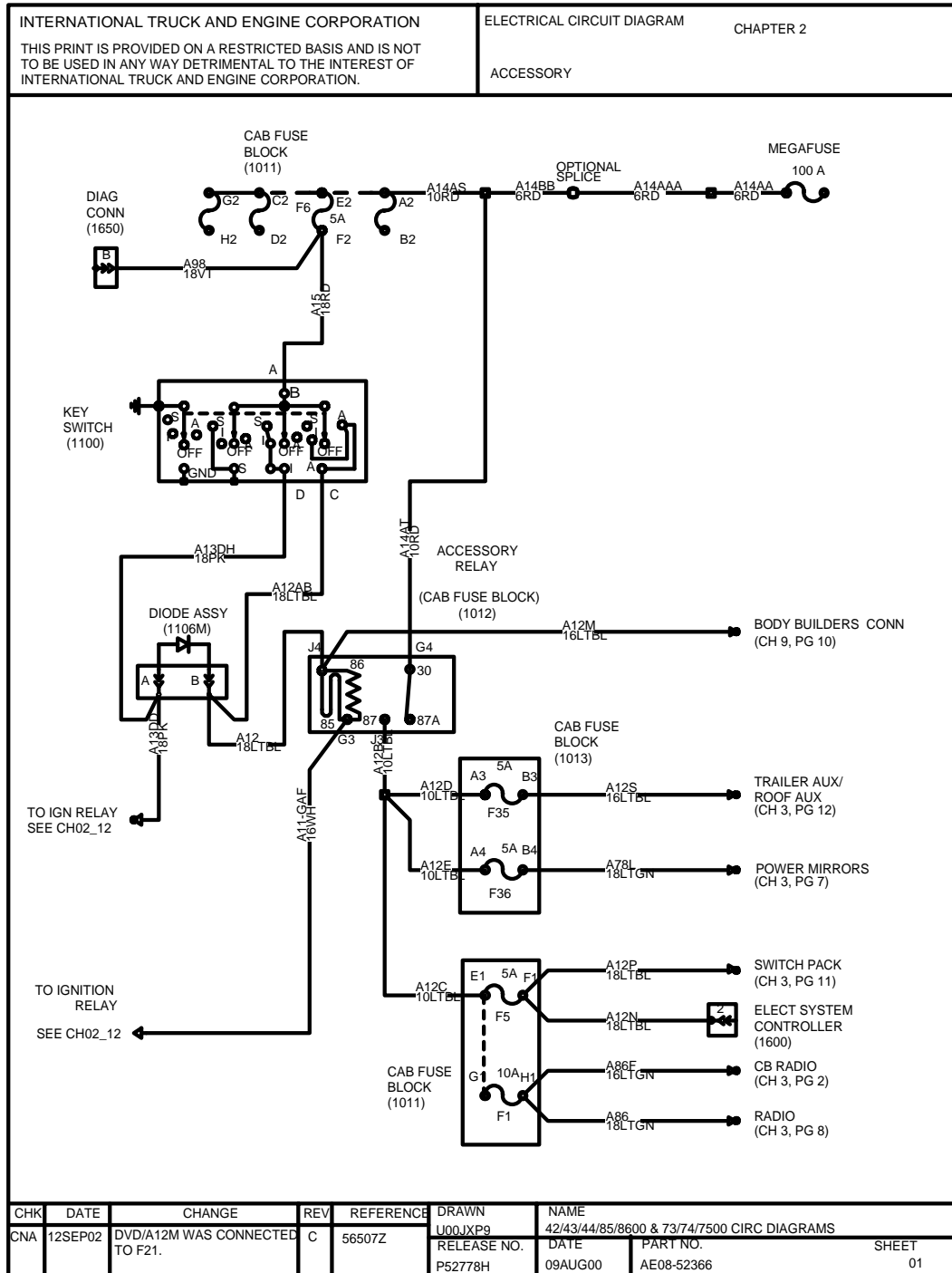


Figure 13 Accessory

2.2. BATTERY FEEDS, CAB, P. 2

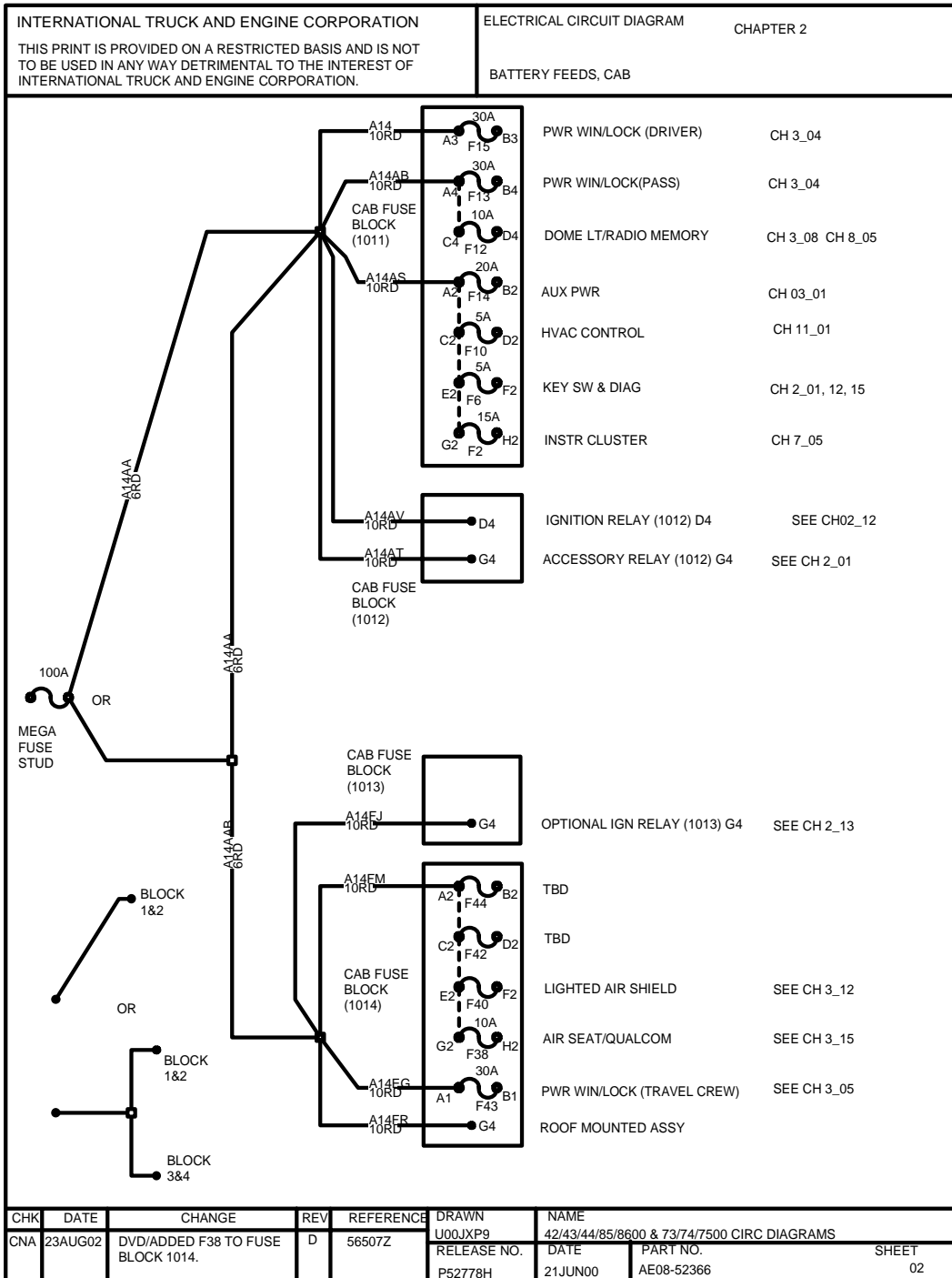


Figure 14 Battery Feeds, Cab

2.3. BATTERY, P. 3

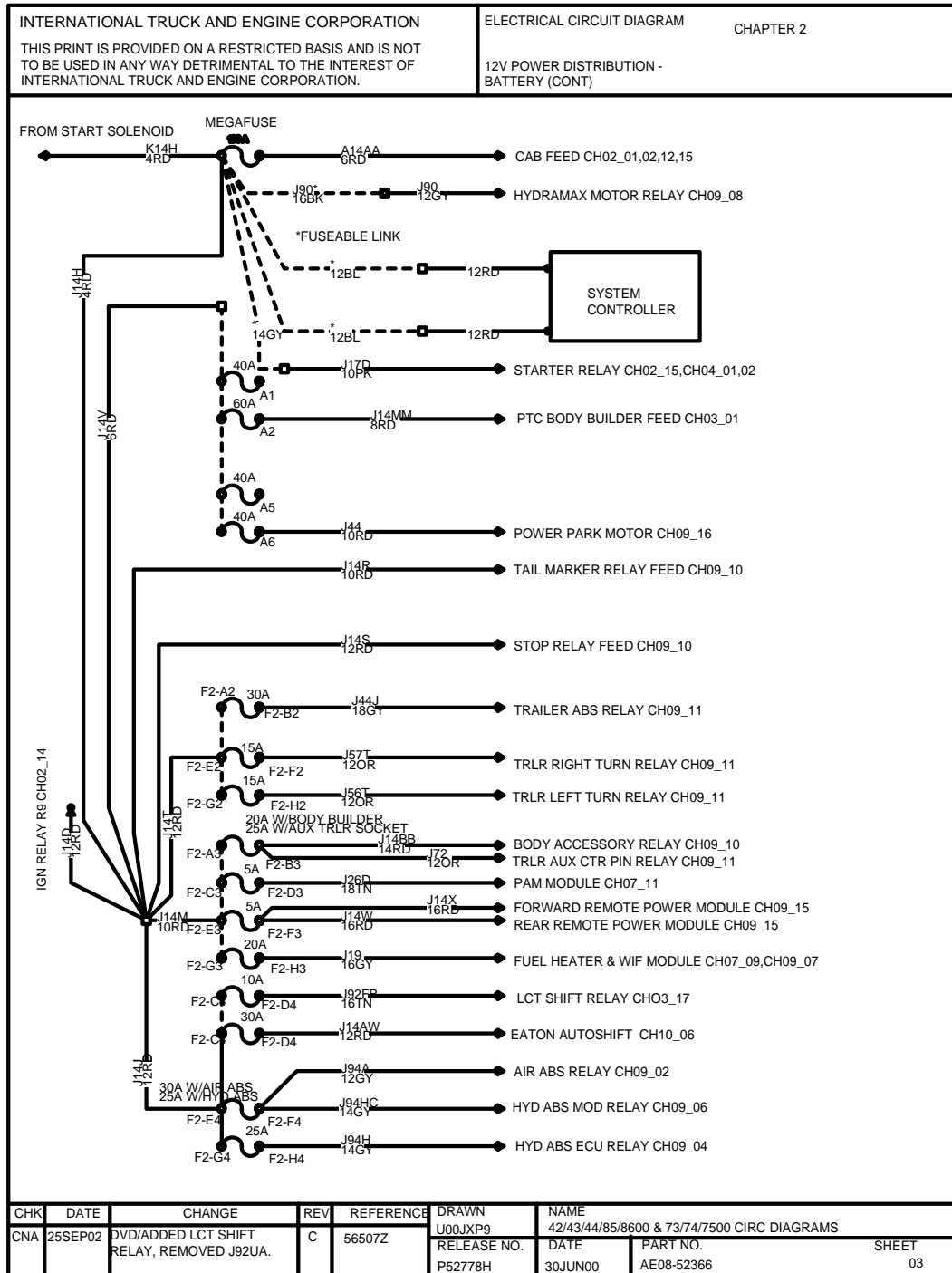


Figure 15 Battery

2.4. 1708 DATA LINK, P. 4

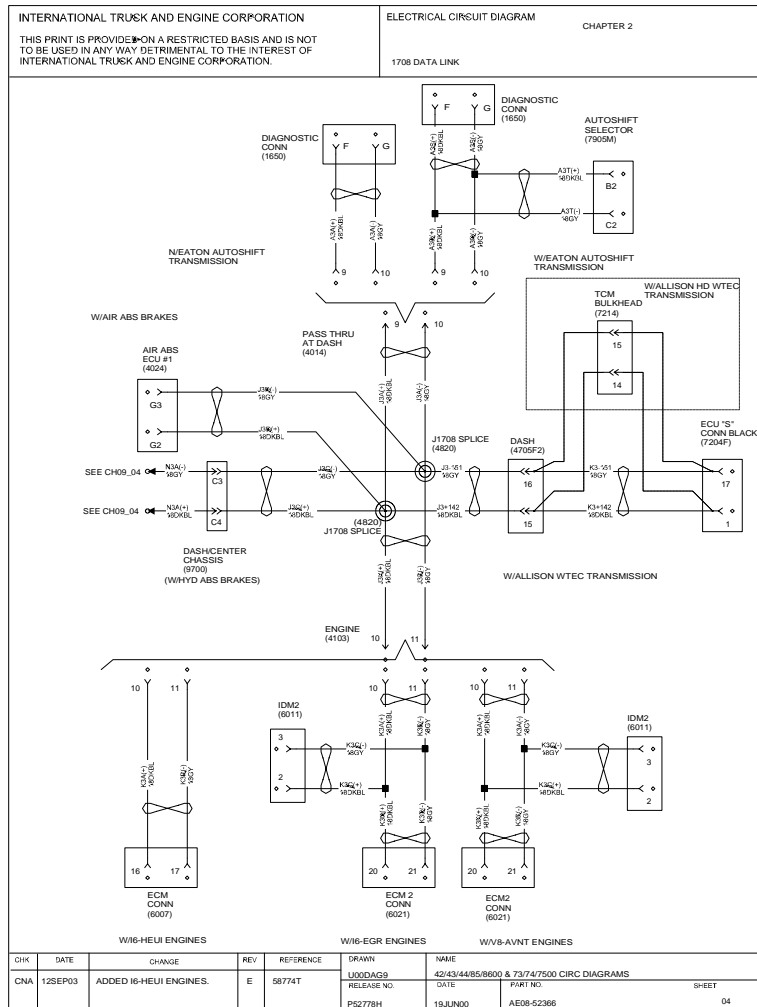


Figure 16 1708 Data Link

2.6. DRIVETRAIN 1939 DATA LINK (CAB), P. 6

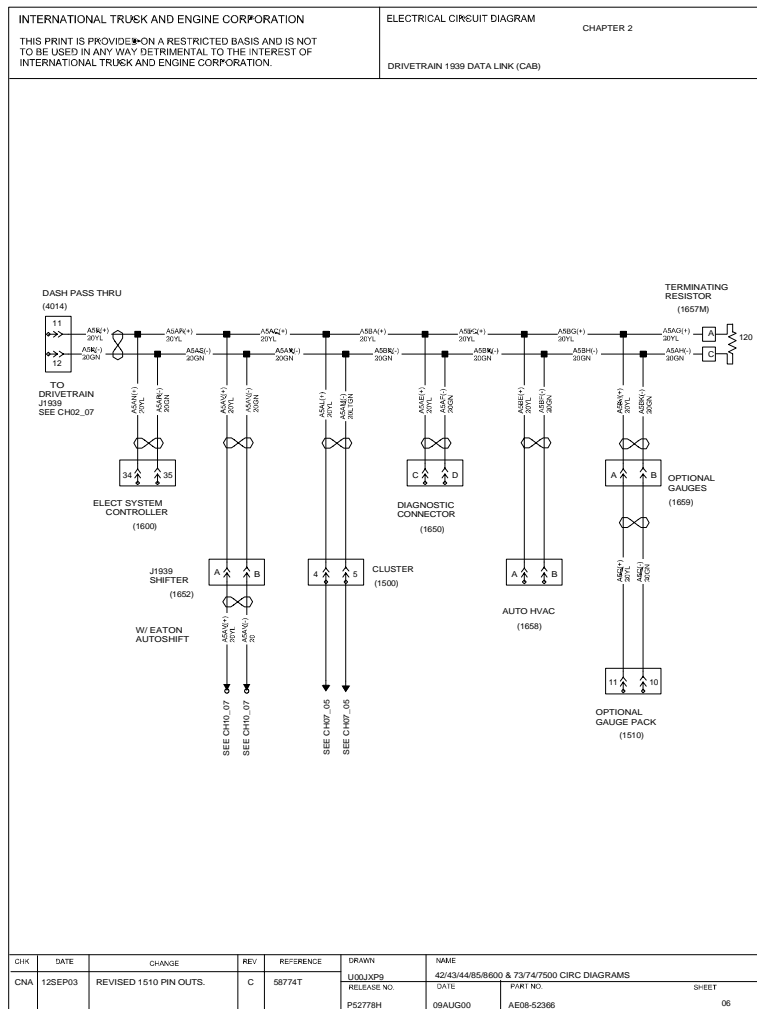


Figure 18 Drivetrain 1939 Data Link (Cab)

2.7. DRIVETRAIN 1939 DATA LINK (CHASSIS), P. 7

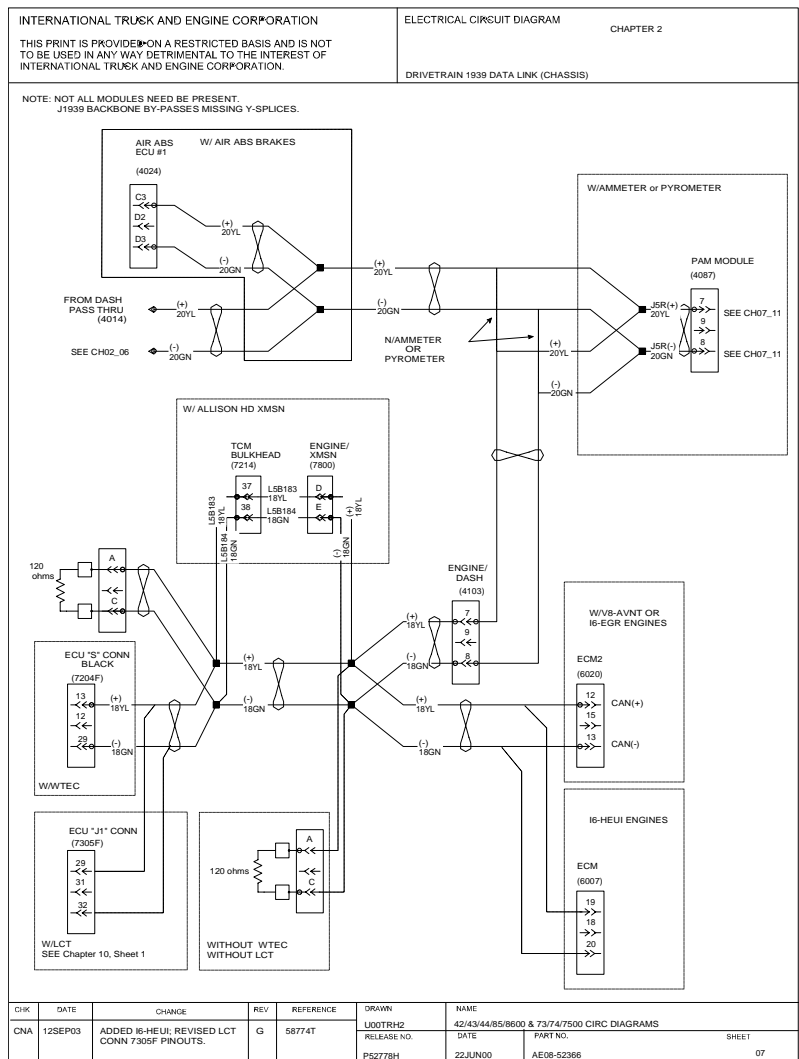


Figure 19 Drivetrain 1939 Data Link (Chassis)

2.8. GROUNDS CHASSIS, P. 8

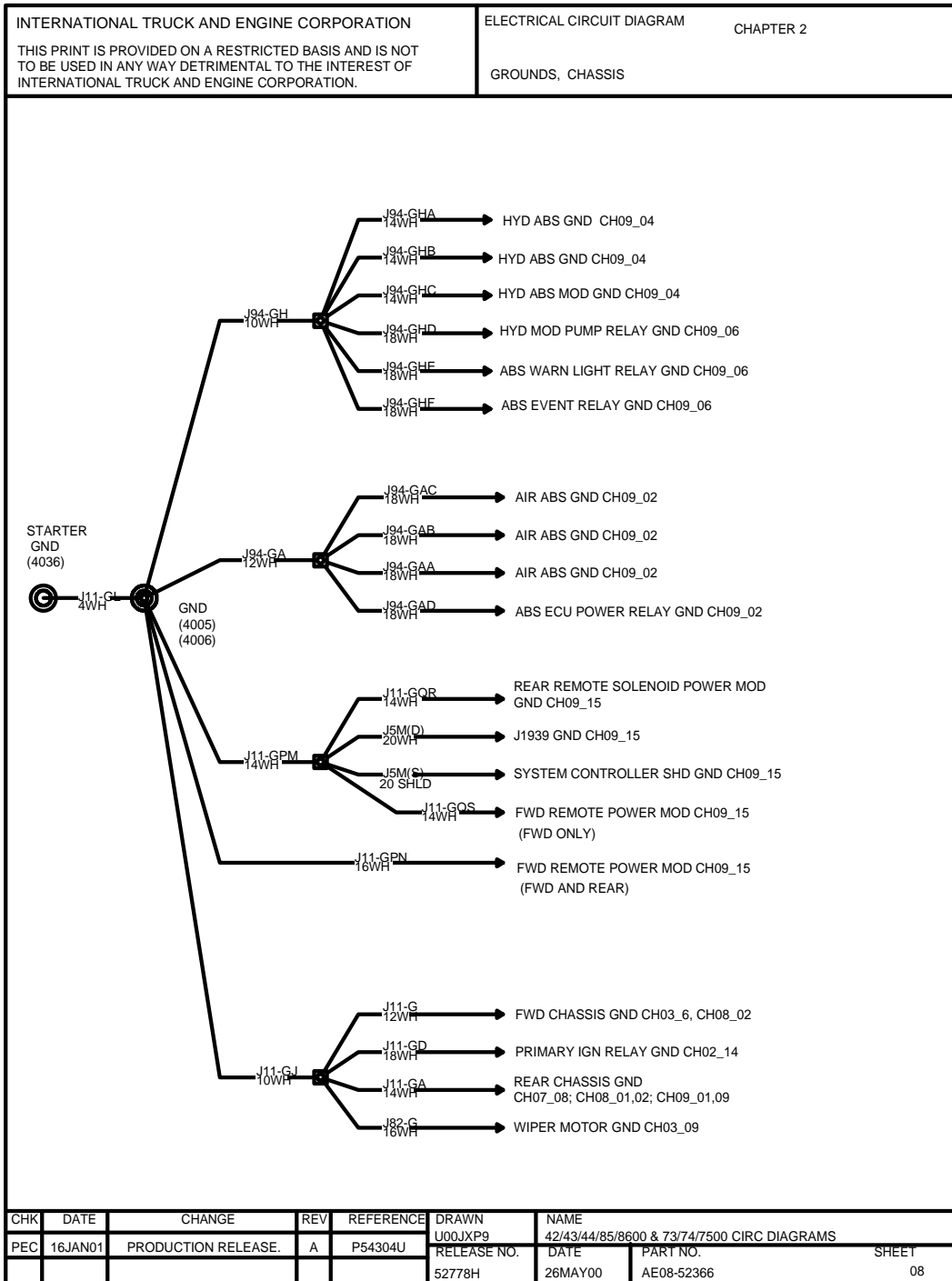


Figure 20 Grounds Chassis

2.9. GROUNDS CHASSIS, P. 9

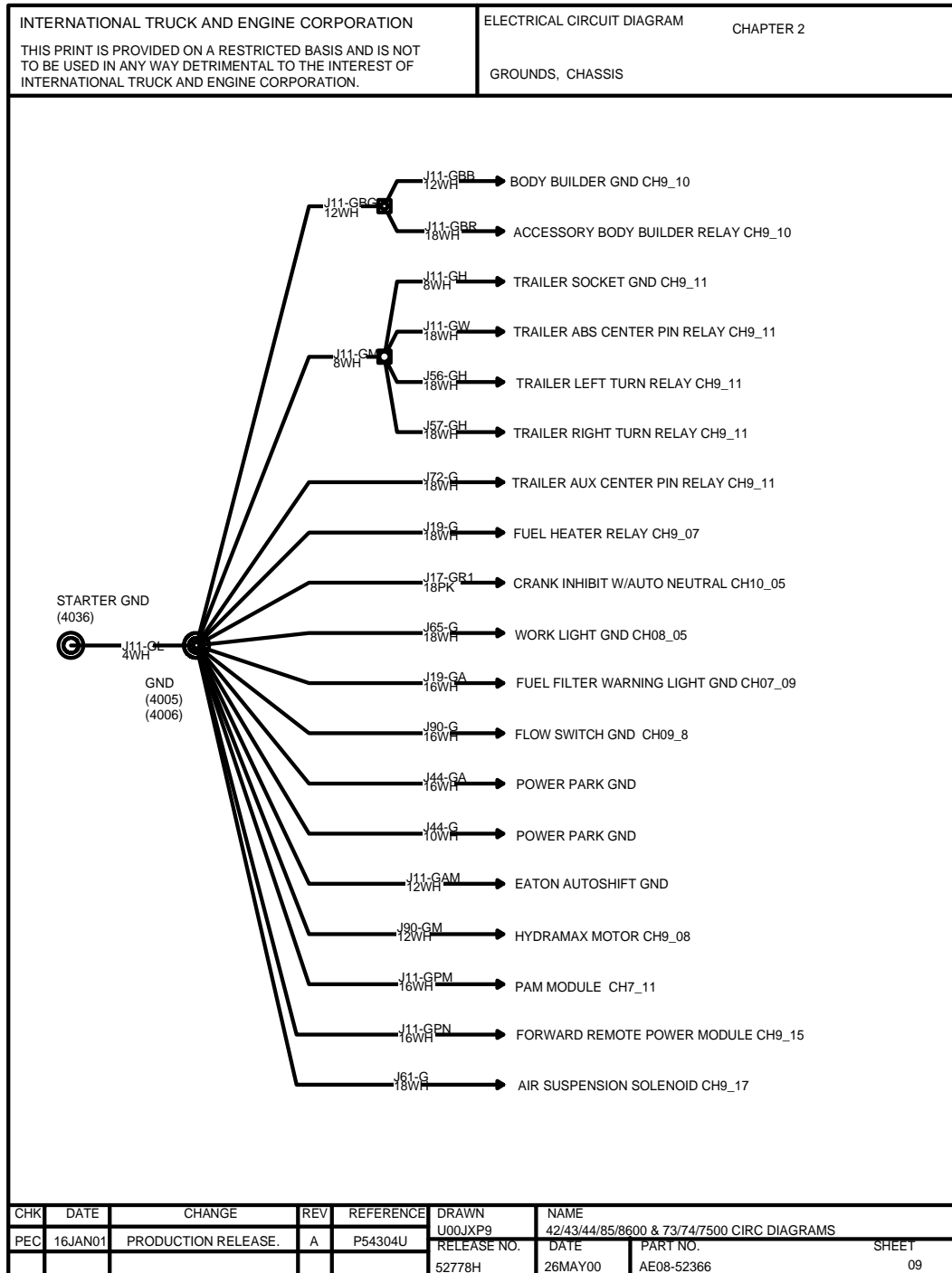


Figure 21 Grounds Chassis (Cont.)

2.10. GROUNDS IP, P. 10

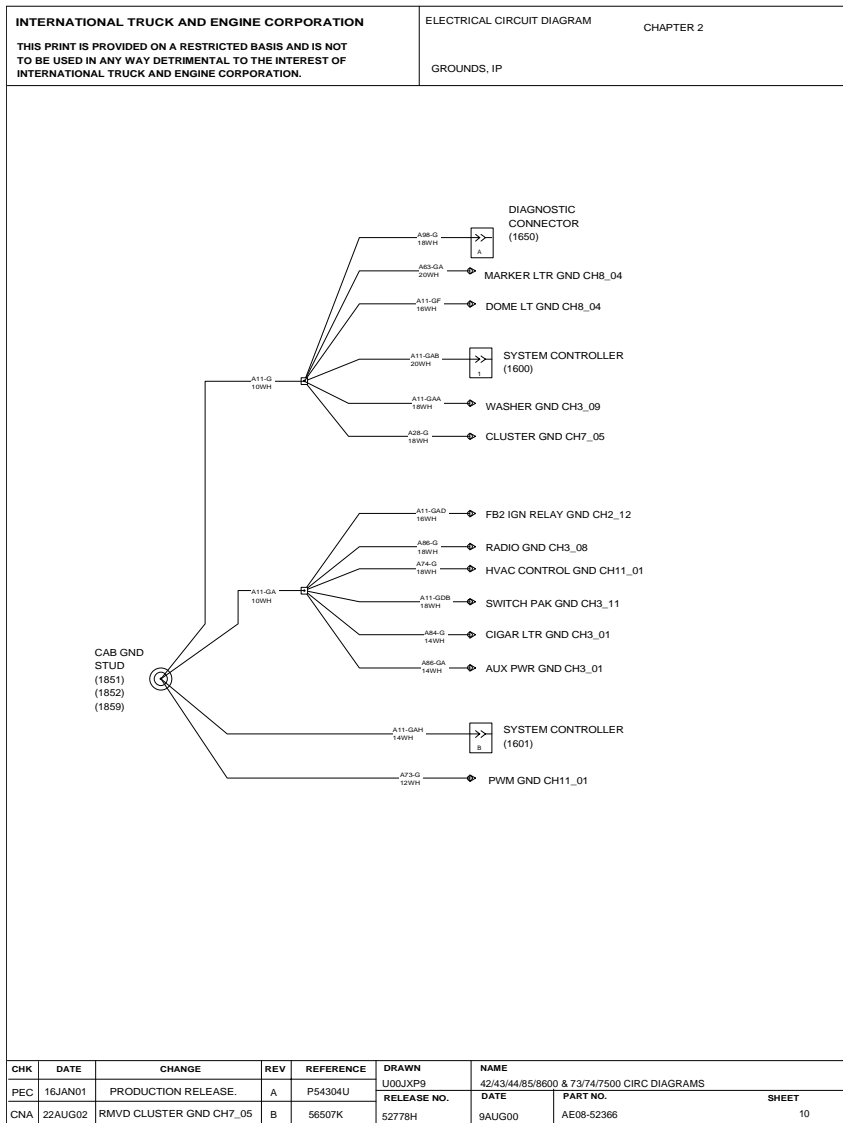


Figure 22 Grounds IP

2.11. GROUNDS IP, P. 11

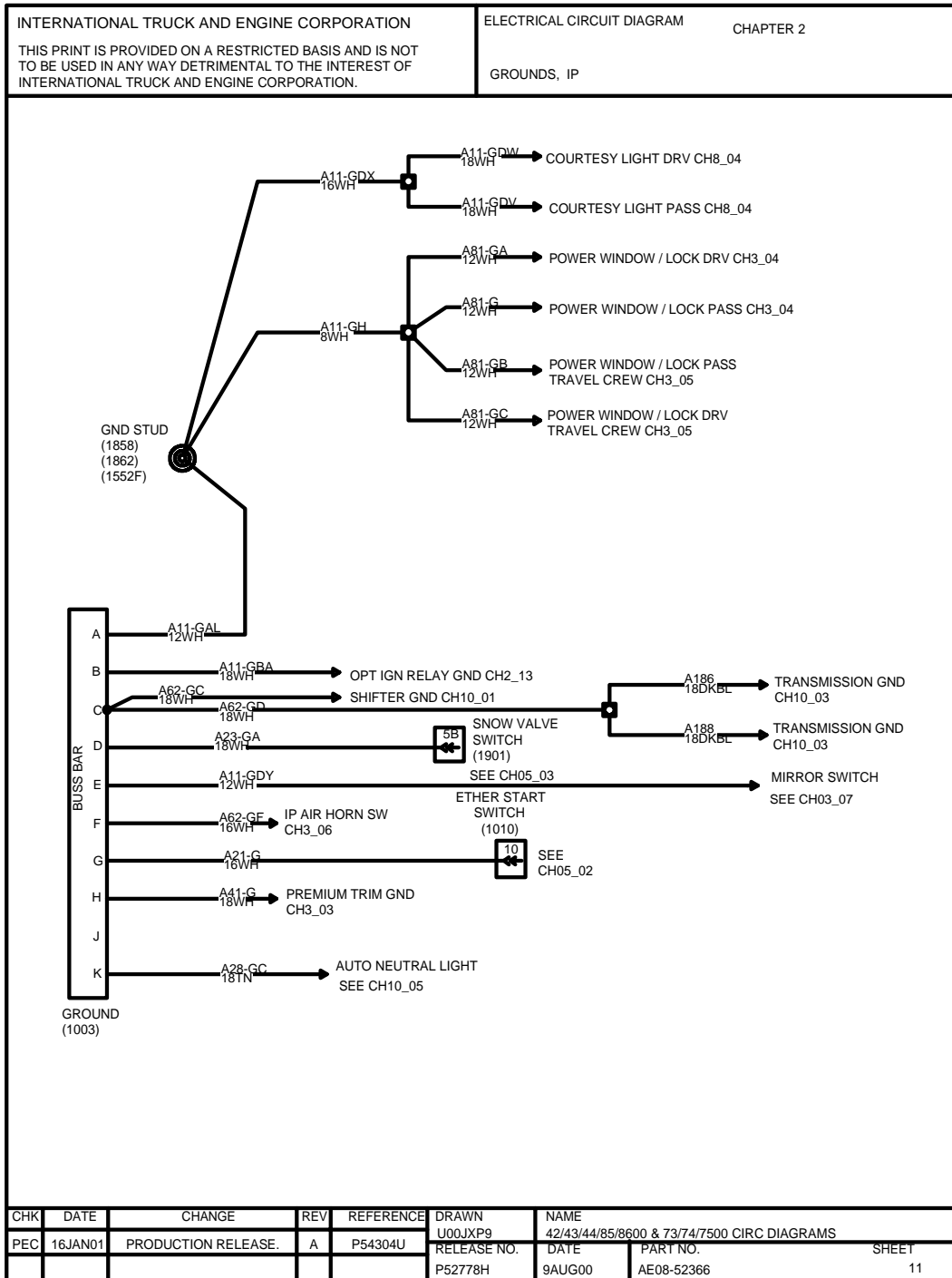


Figure 23 Grounds IP

2.12. IGNITION CAB, P. 12

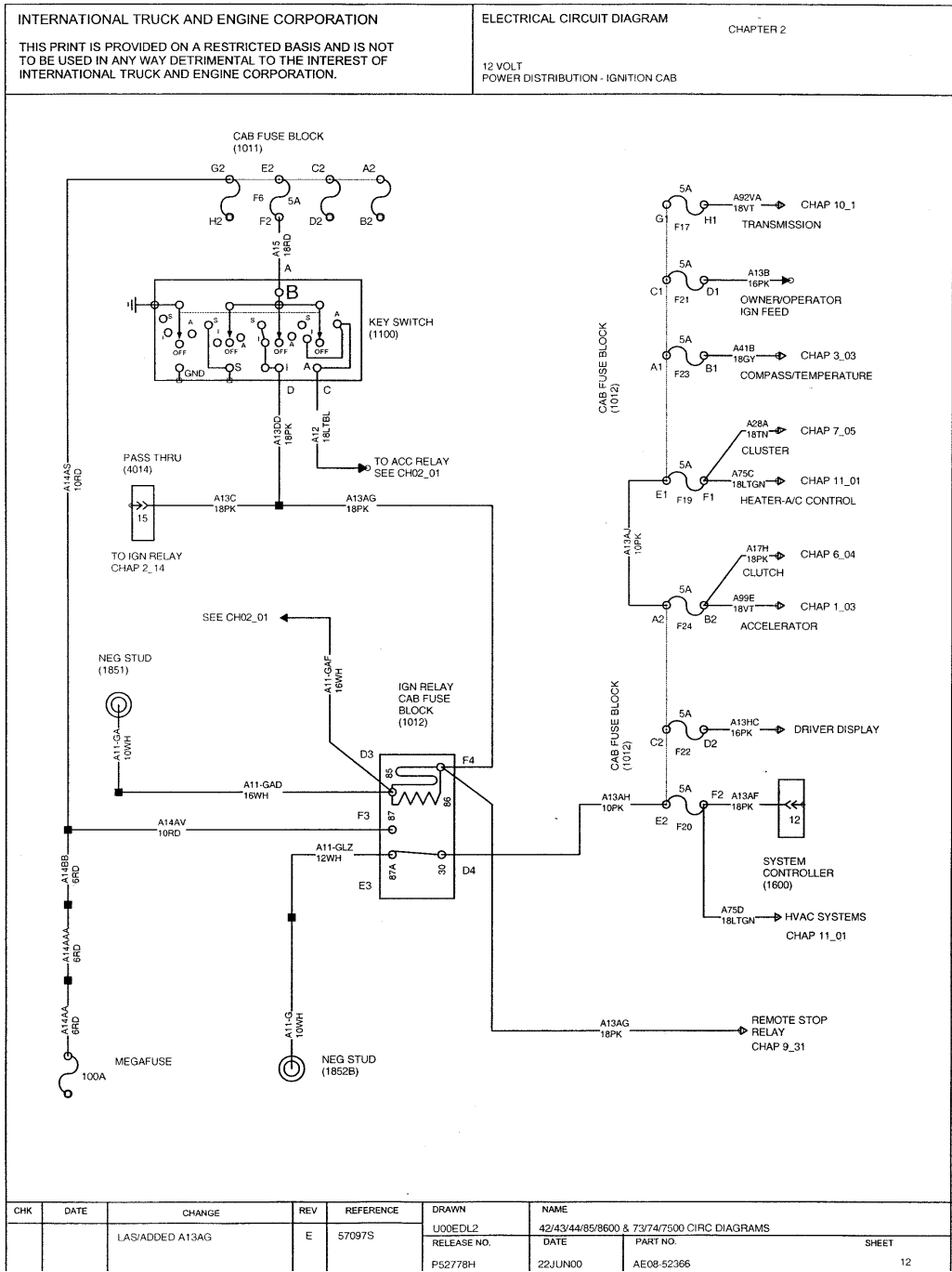


Figure 24 Ignition Cab

2.13. IGNITION CAB, P. 13

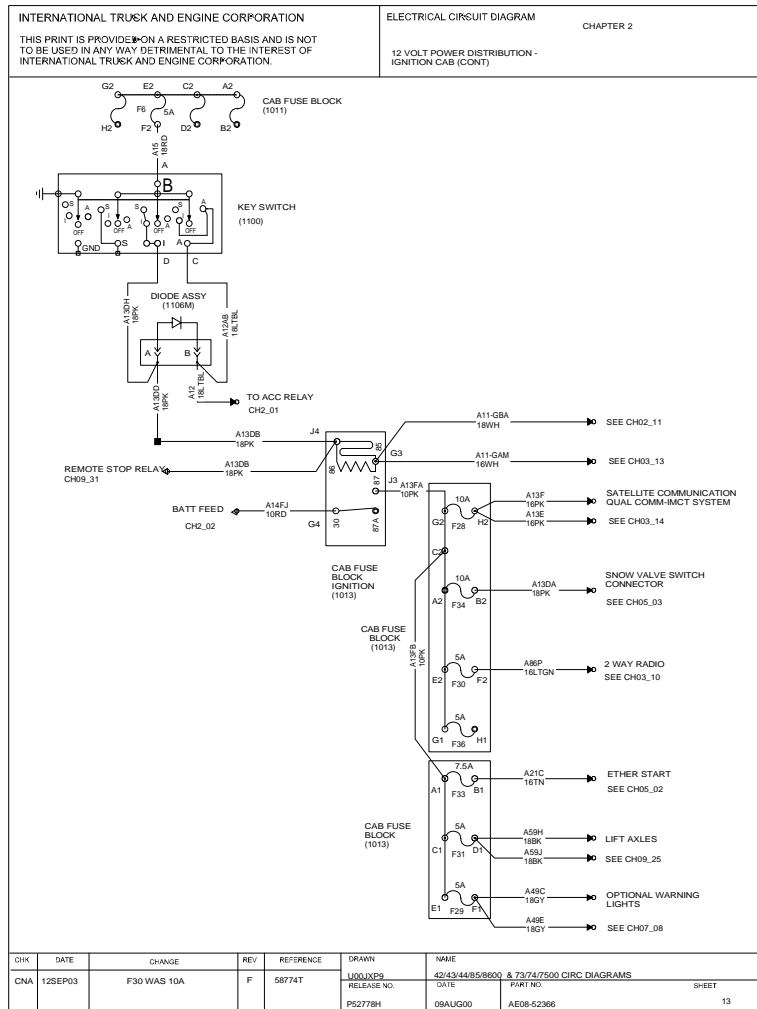


Figure 25 Ignition Cab (Cont.)

2.14. IGNITION FEEDS, CHASSIS, P. 14

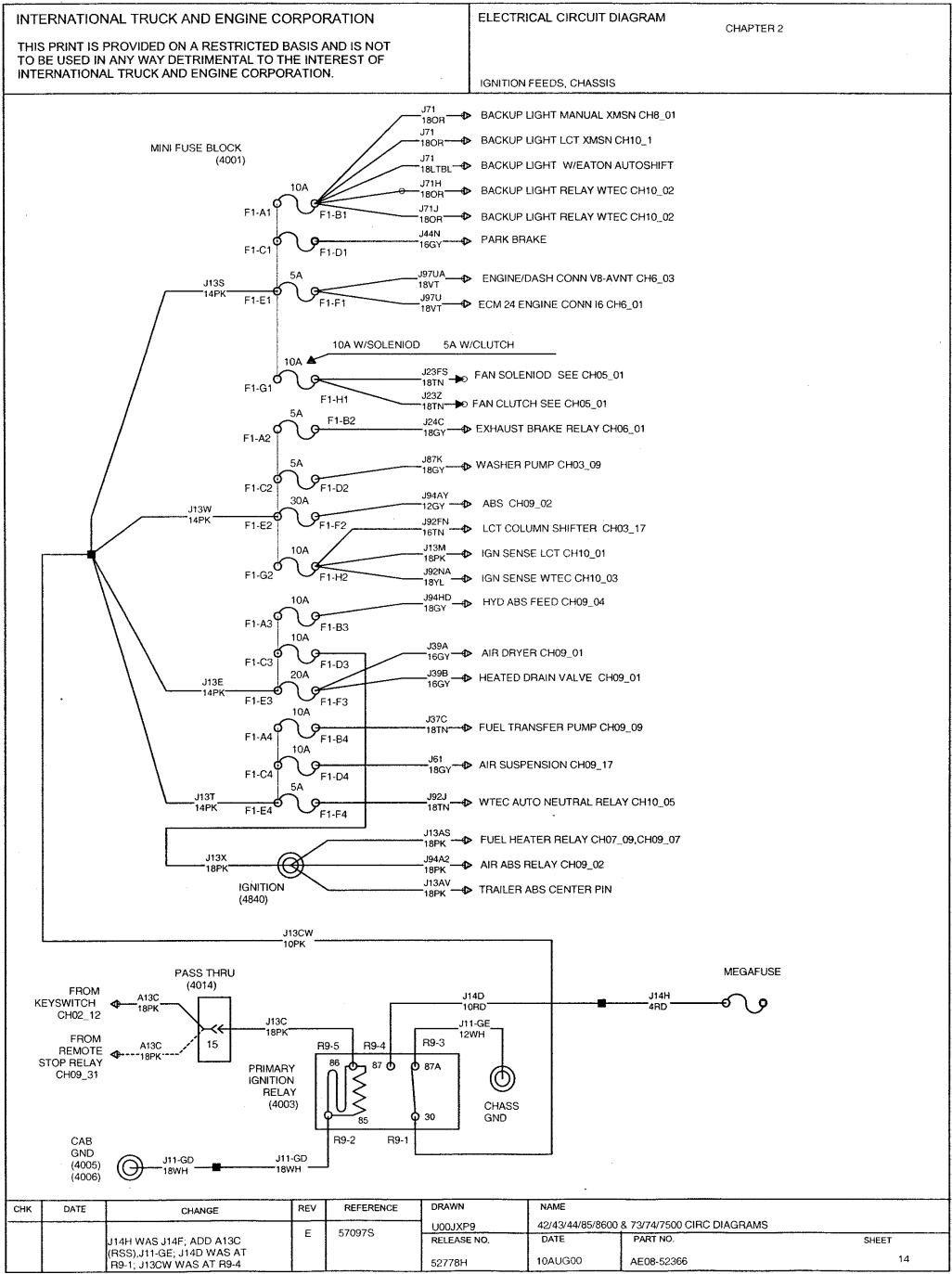


Figure 26 Ignition Feeds, Chassis

2.15. START, P. 15

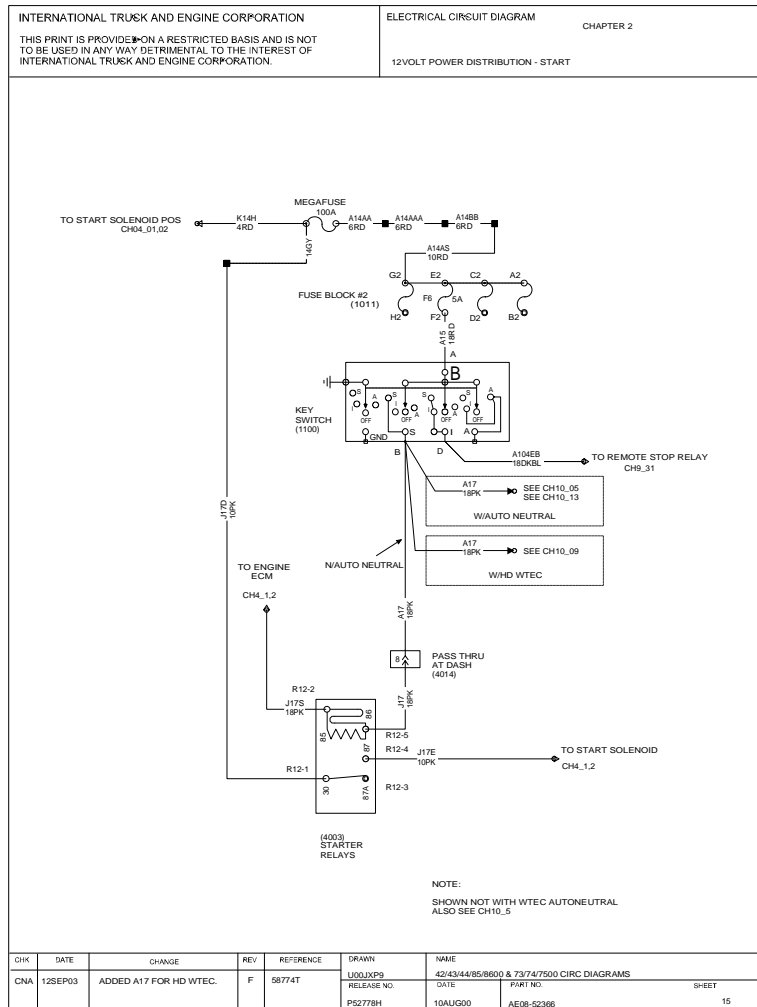


Figure 27 Start

3. CAB ACCESSORIES (CHAPTER 3)

3.1. CIGAR LIGHTER AND POWER FEEDS, P. 1

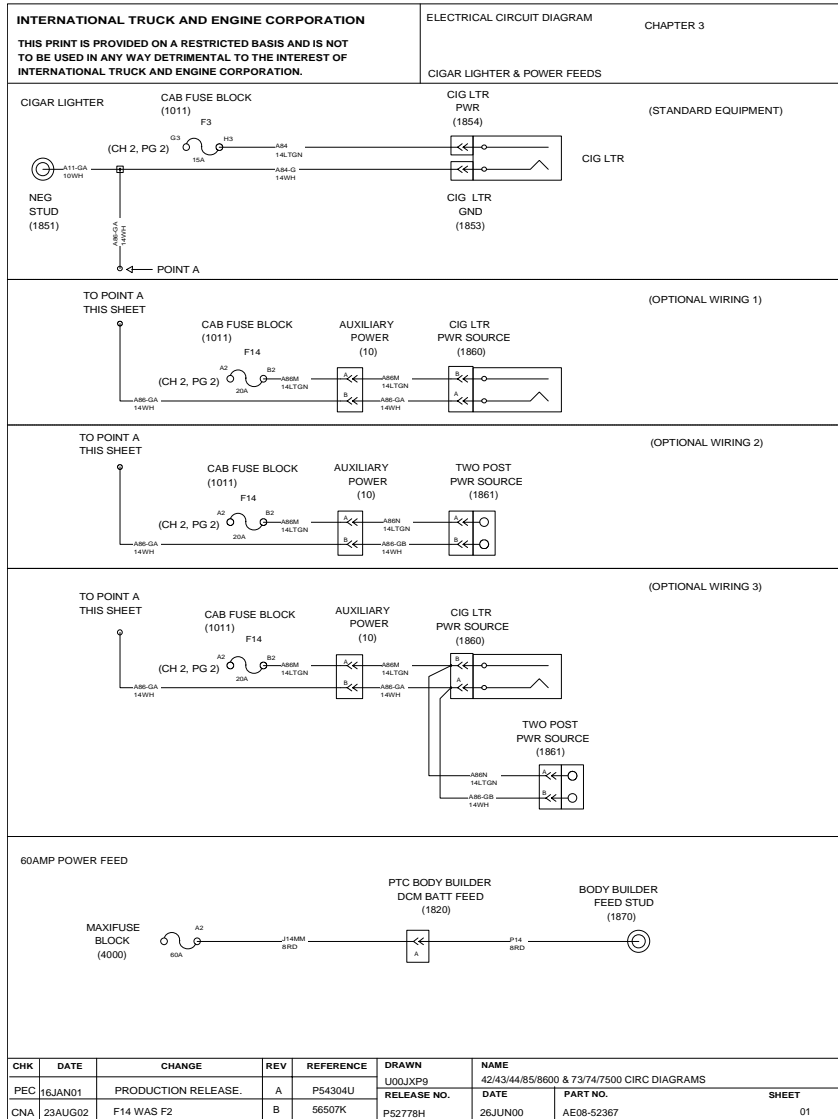


Figure 28 Cigar Lighter and Power Feeds

3.2. CB POWER, P. 2

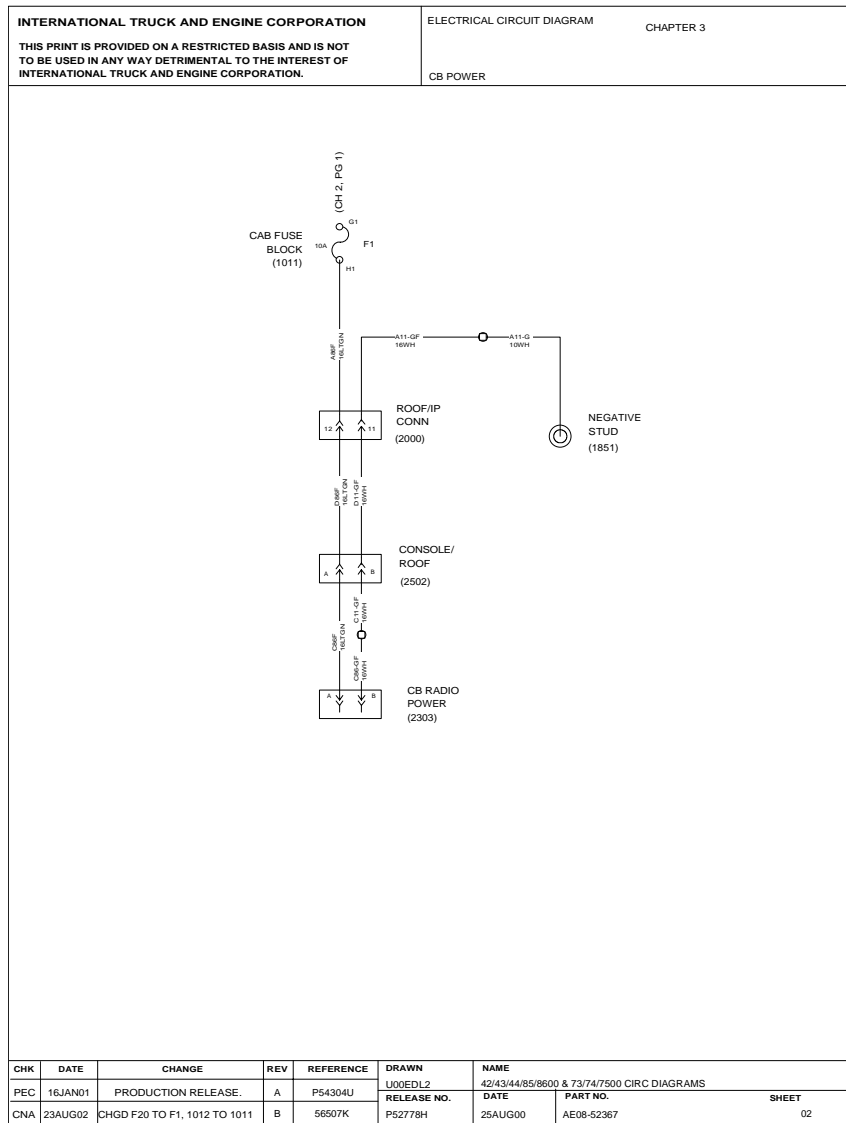


Figure 29 CB Power

3.3. COMPASS AND TEMPERATURE DISPLAY, P. 3

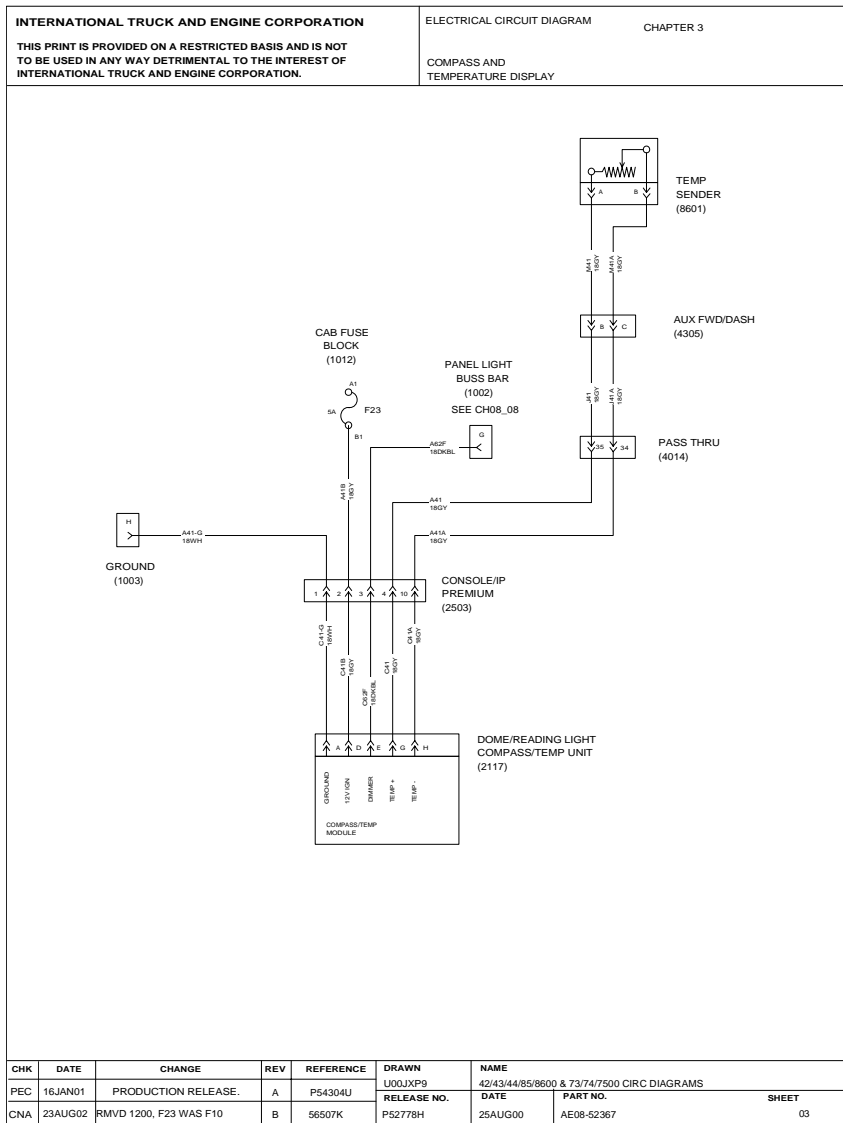


Figure 30 Compass and Temperature Display

3.4. FRONT DOORS WINDOWS AND LOCKS (POWER), P. 4

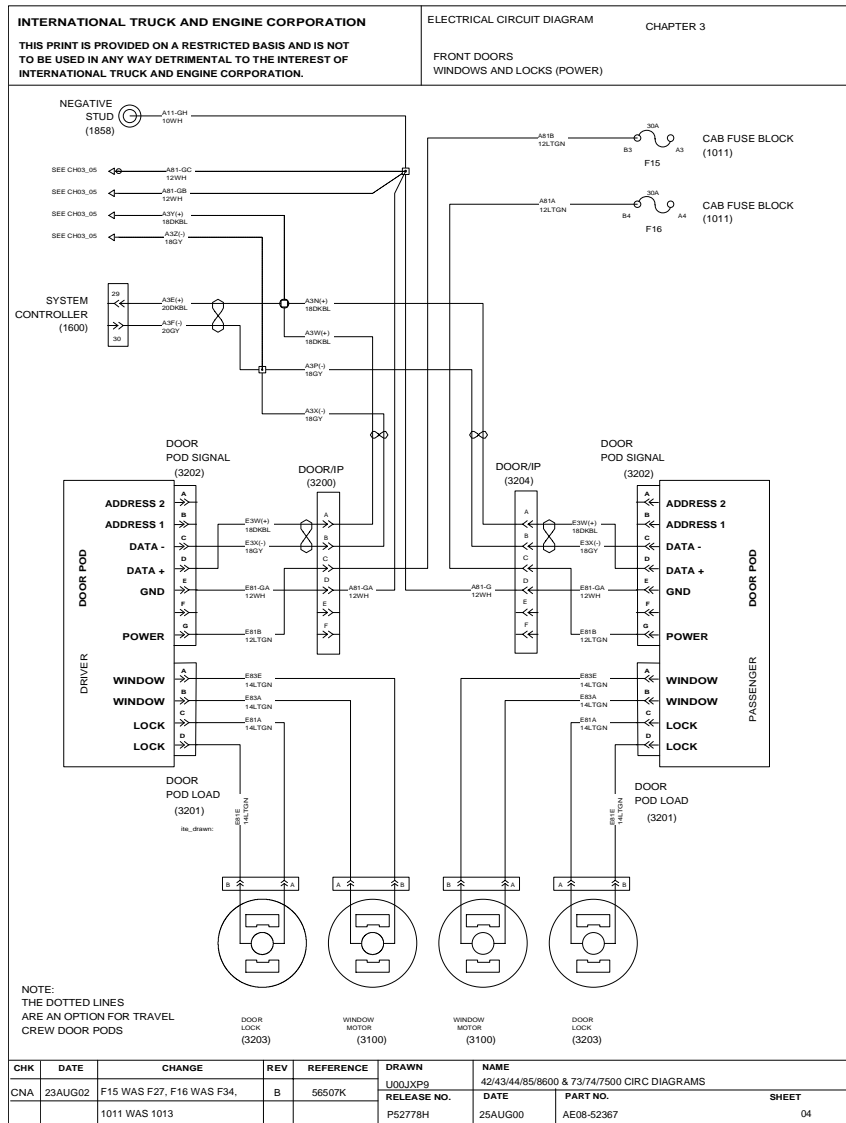


Figure 31 Front Doors Windows and Locks (Power)

3.5. CREW DOORS WINDOWS AND LOCKS (POWER), P. 5

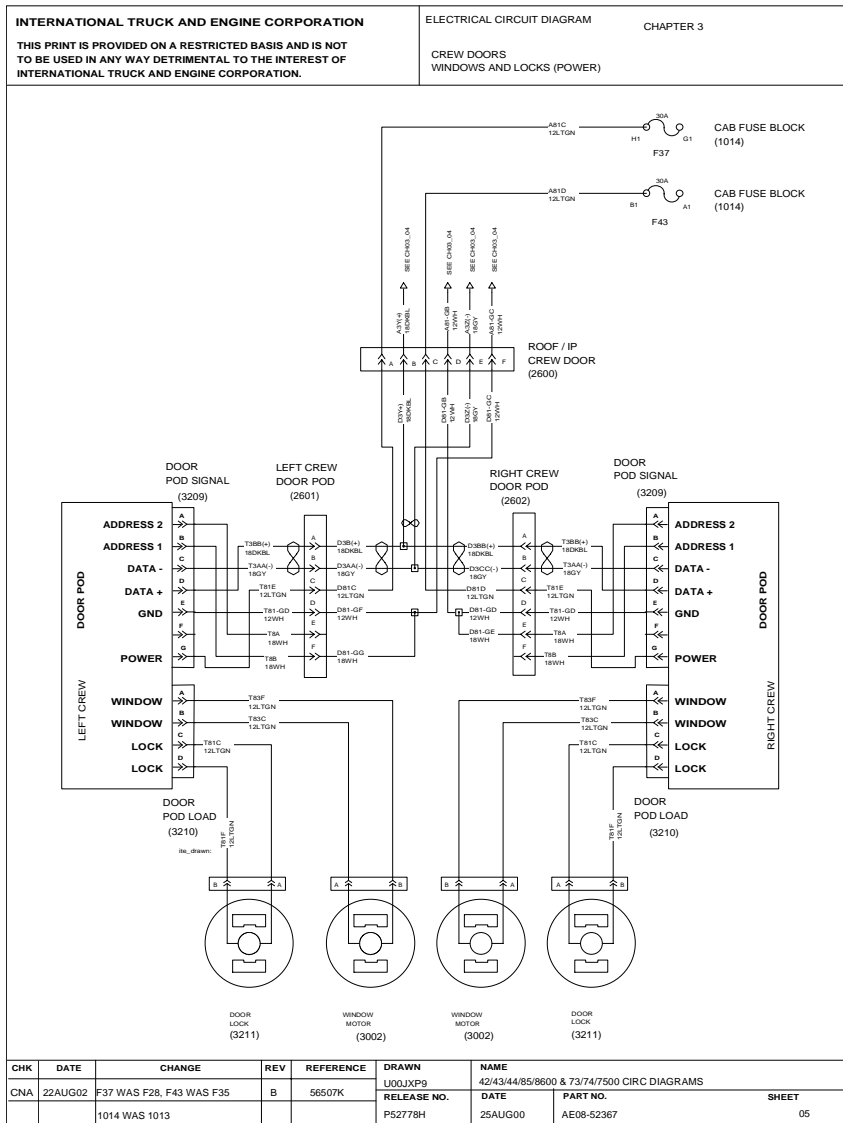


Figure 32 Crew Doors Windows and Locks (Power)

3.6. HORN, DUAL ELECTRIC, P. 6

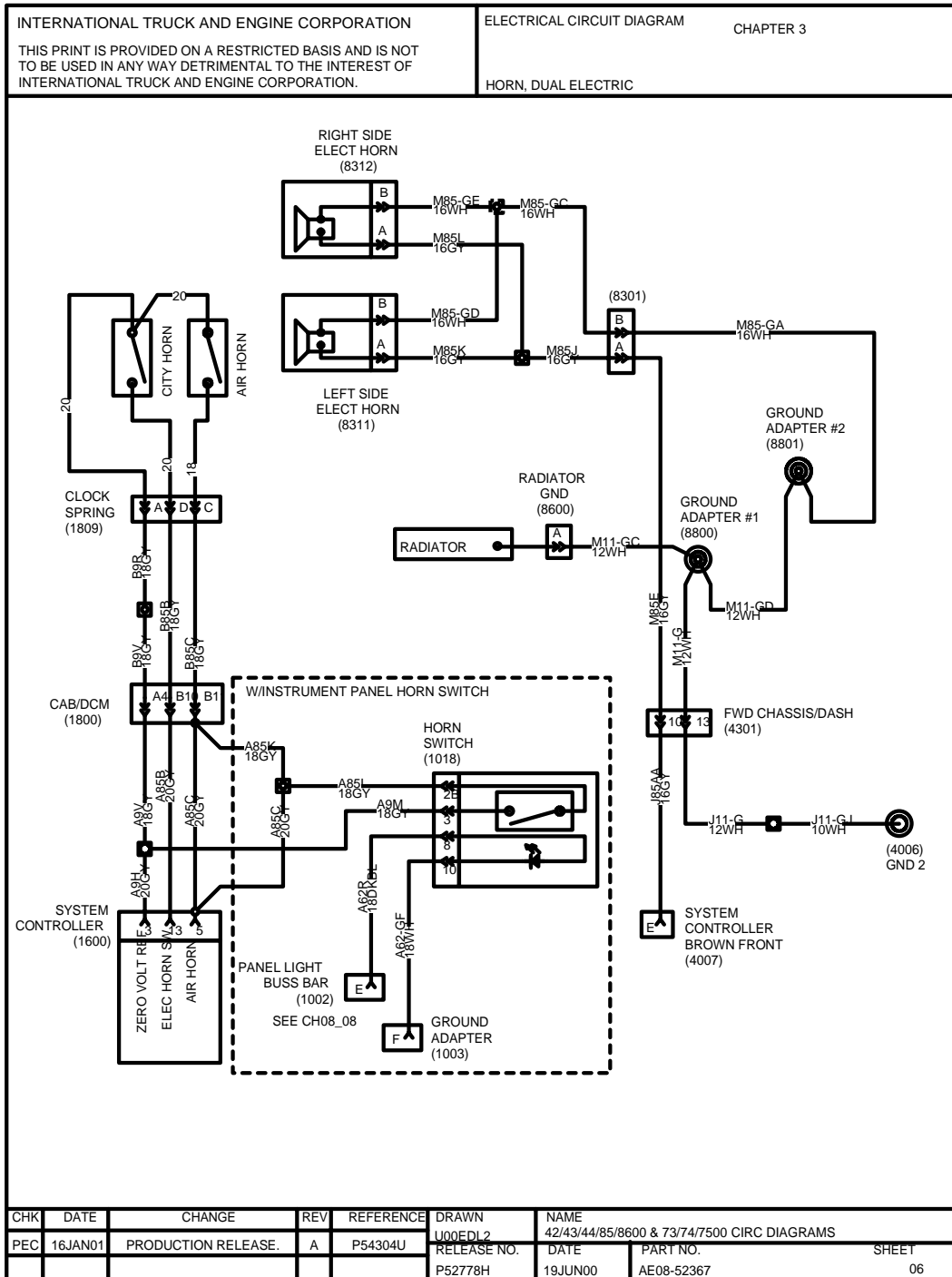


Figure 33 Horn, Dual Electric

3.7. MIRRORS (HEATED, LIGHTED AND POWER), P. 7

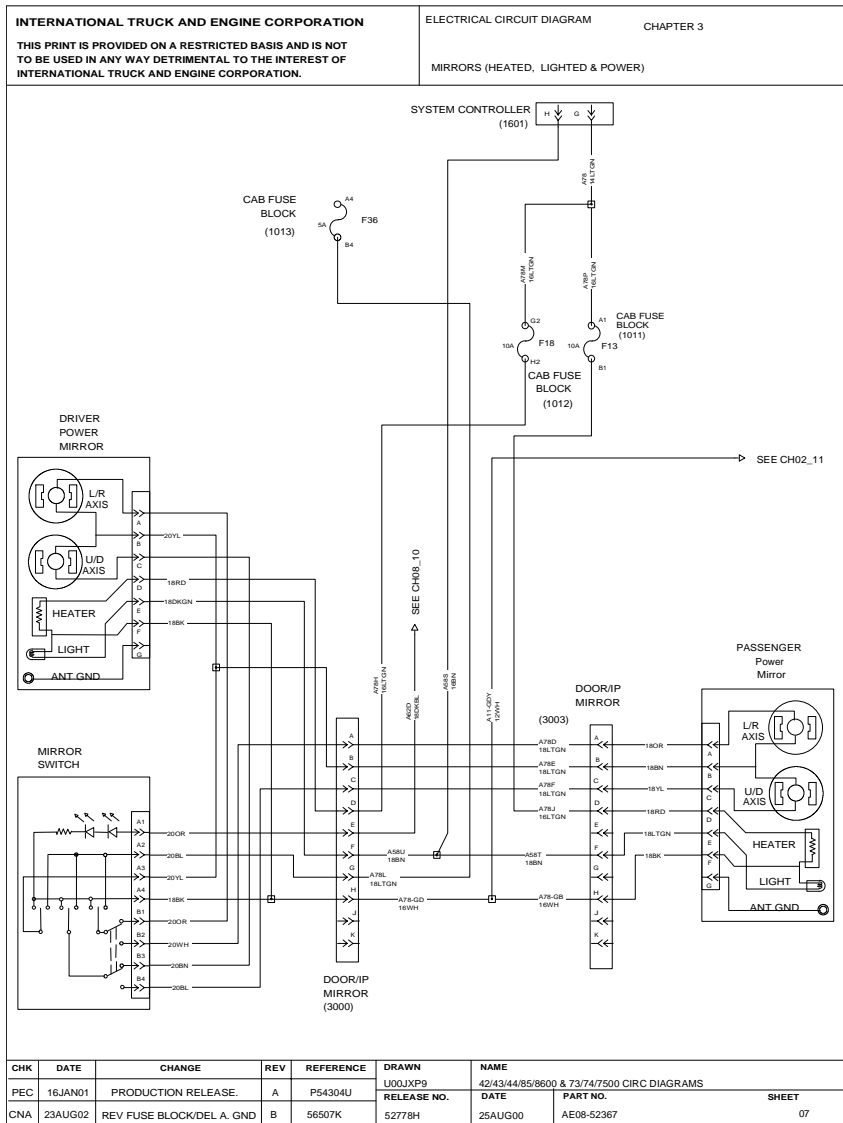


Figure 34 Mirrors (Heated, Lighted and Power)

3.8. RADIO (ENTERTAINMENT), SPEAKERS, P. 8

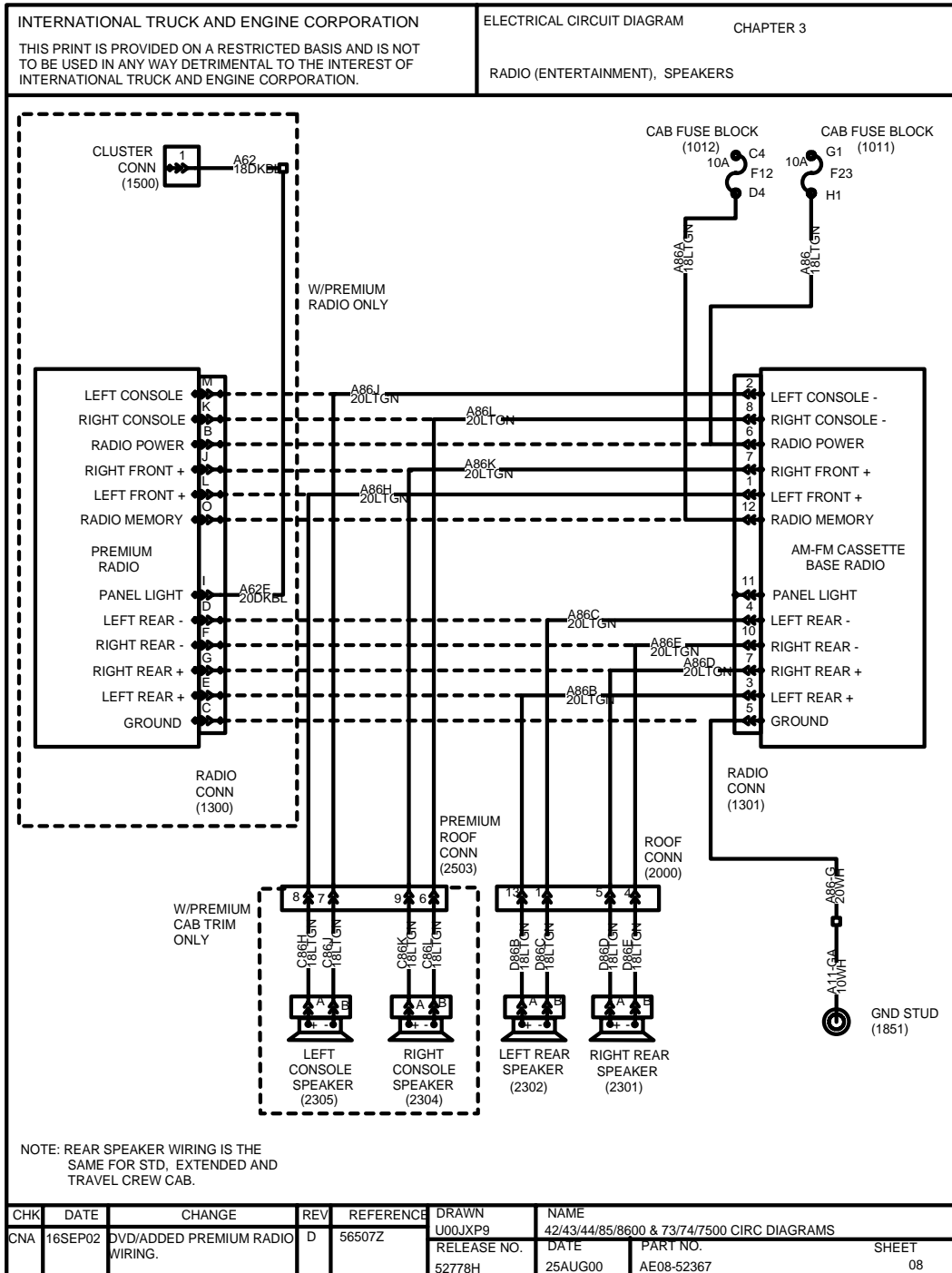


Figure 35 Radio (Entertainment), Speakers

3.9. WINDSHIELD WIPER AND WASHER PUMP, P. 9

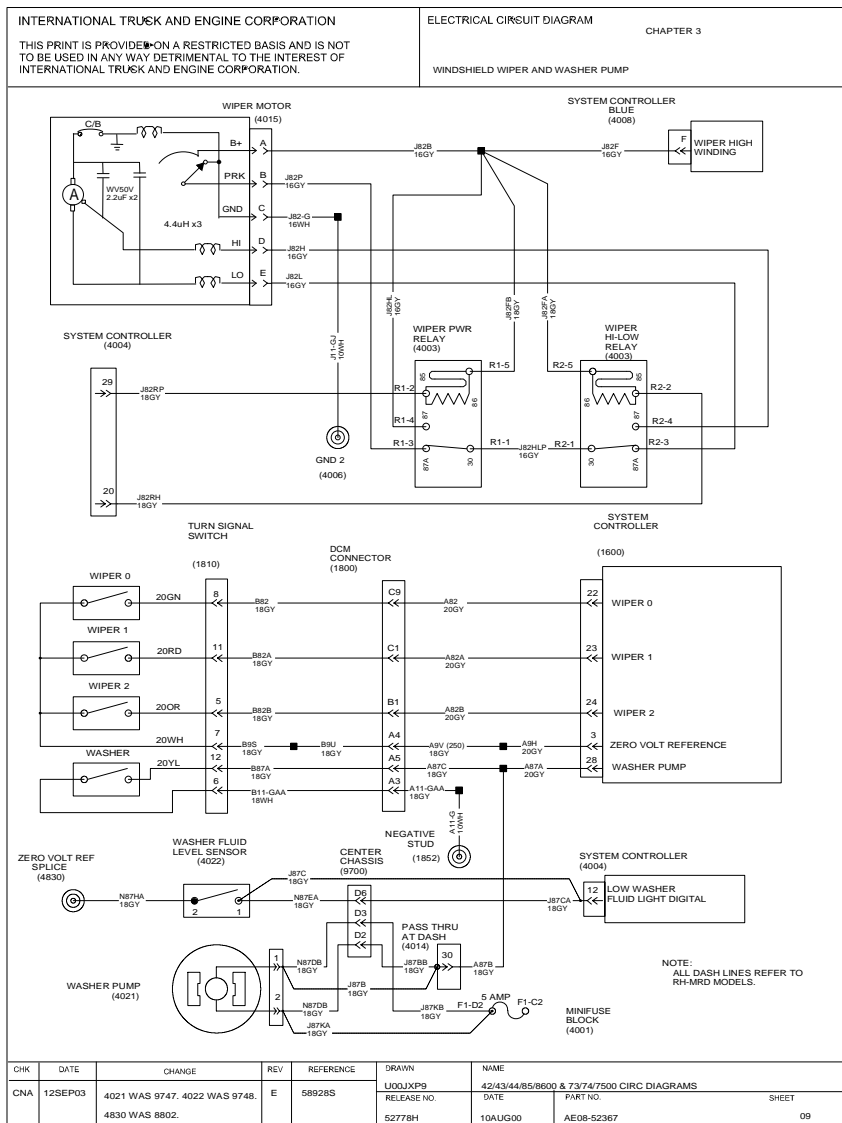


Figure 36 Windshield Wiper and Washer Pump

3.10. 2-WAY RADIO, P. 10

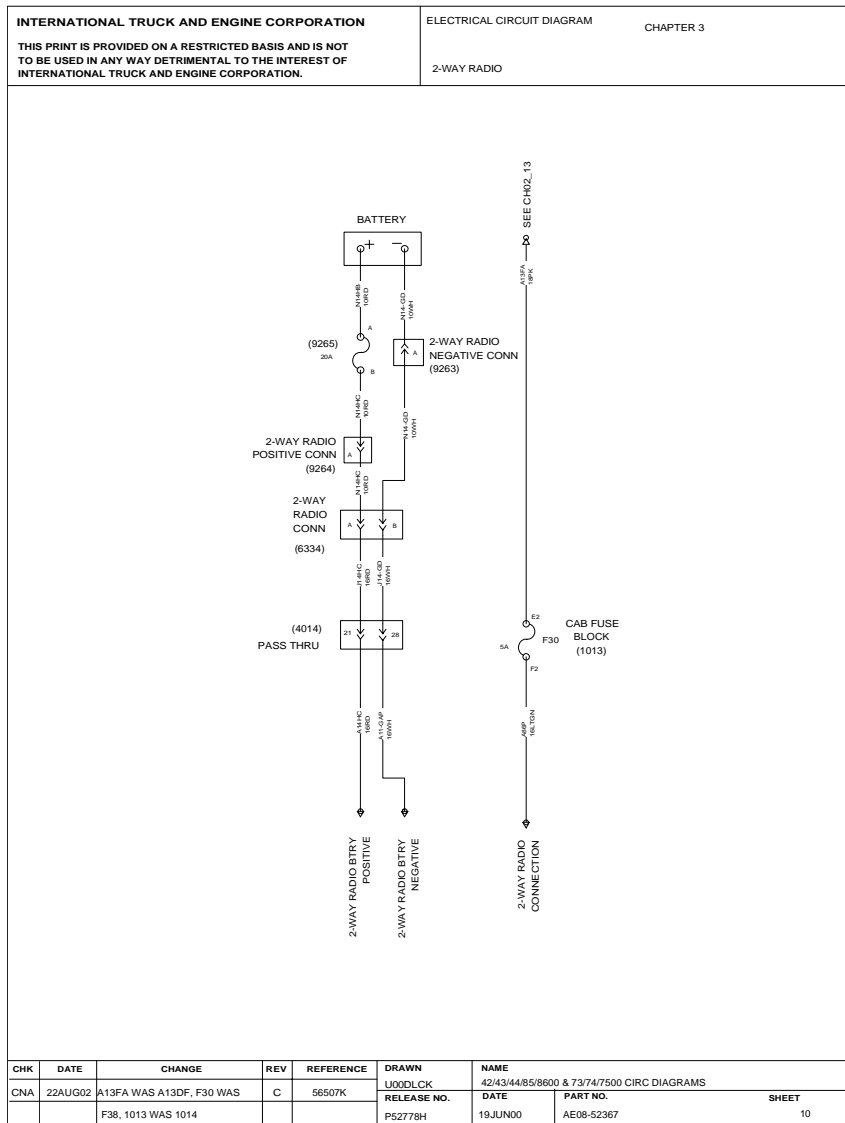


Figure 37 2-Way Radio

3.11. SWITCH PACK, OPTIONAL GAUGE PACK, P. 11

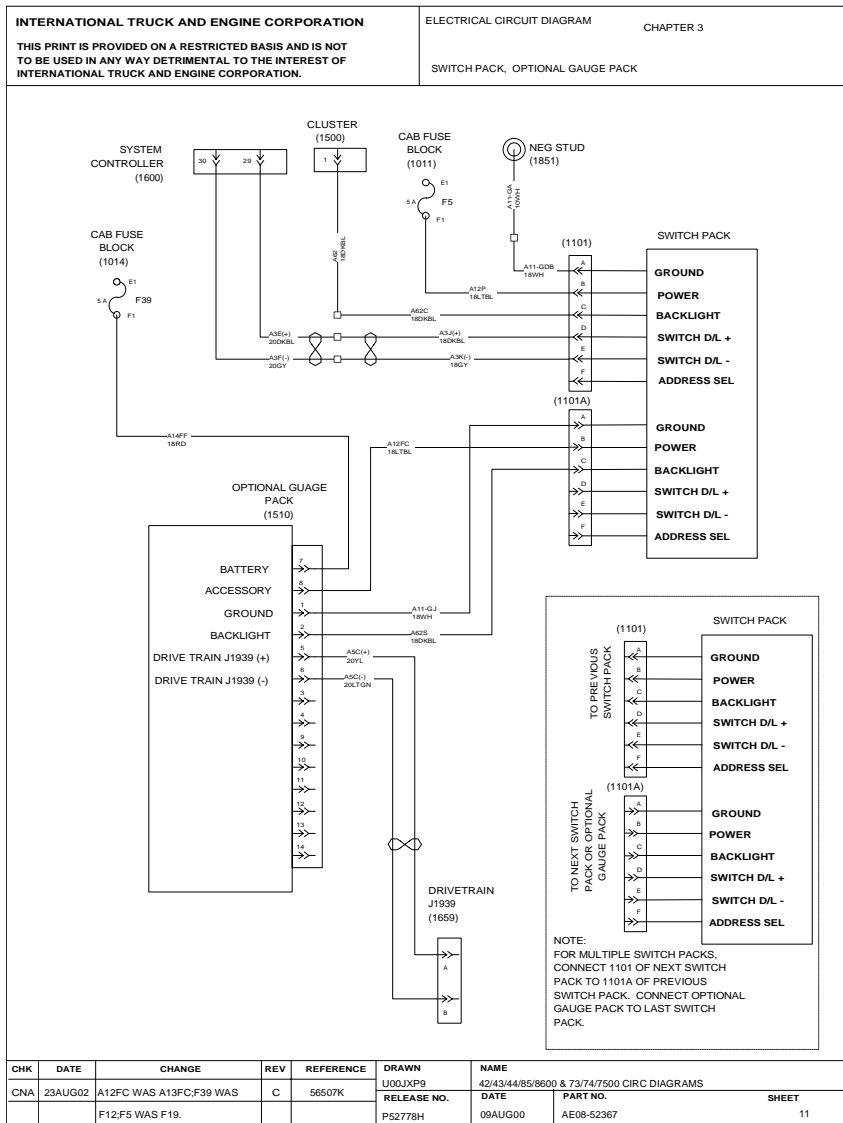


Figure 38 Switch Pack, Optional Gauge Pack

3.12. LIGHTED AIR SHIELD, P. 12

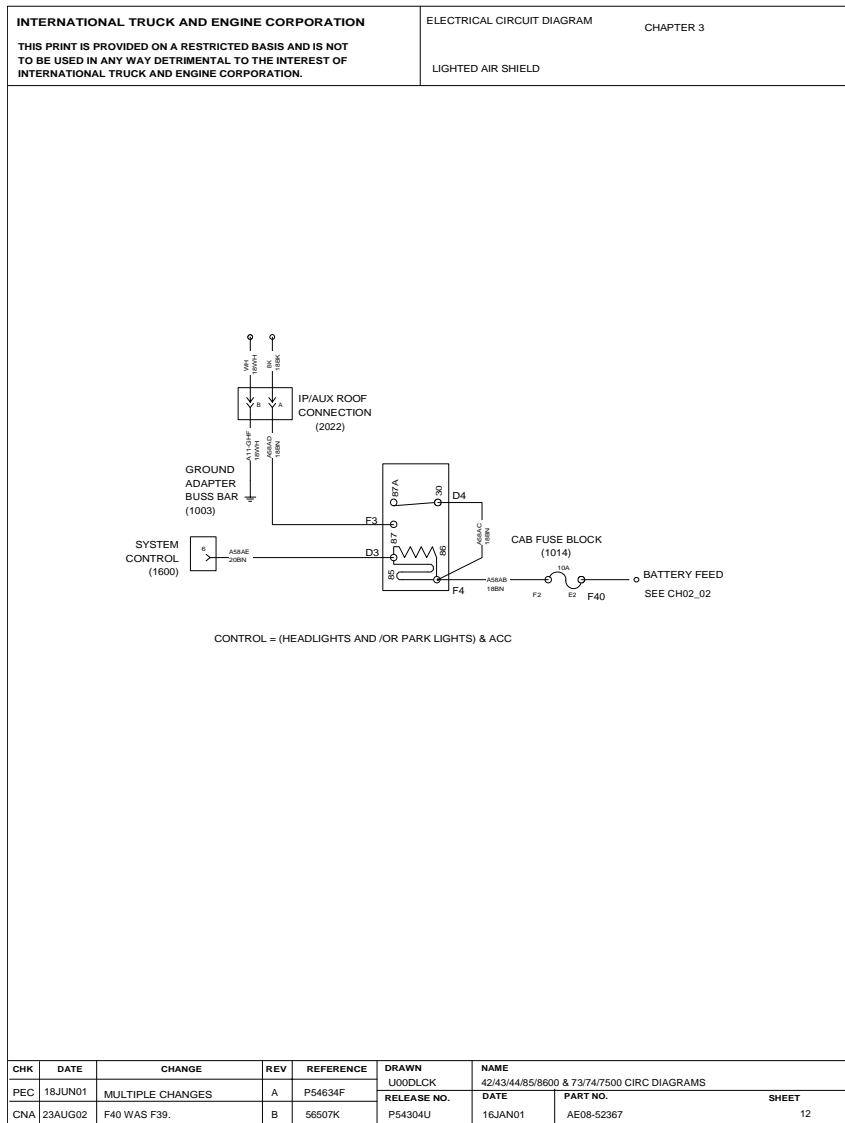


Figure 39 Lighted Air Shield

3.13. ROOF AUX. LOAD, P. 13

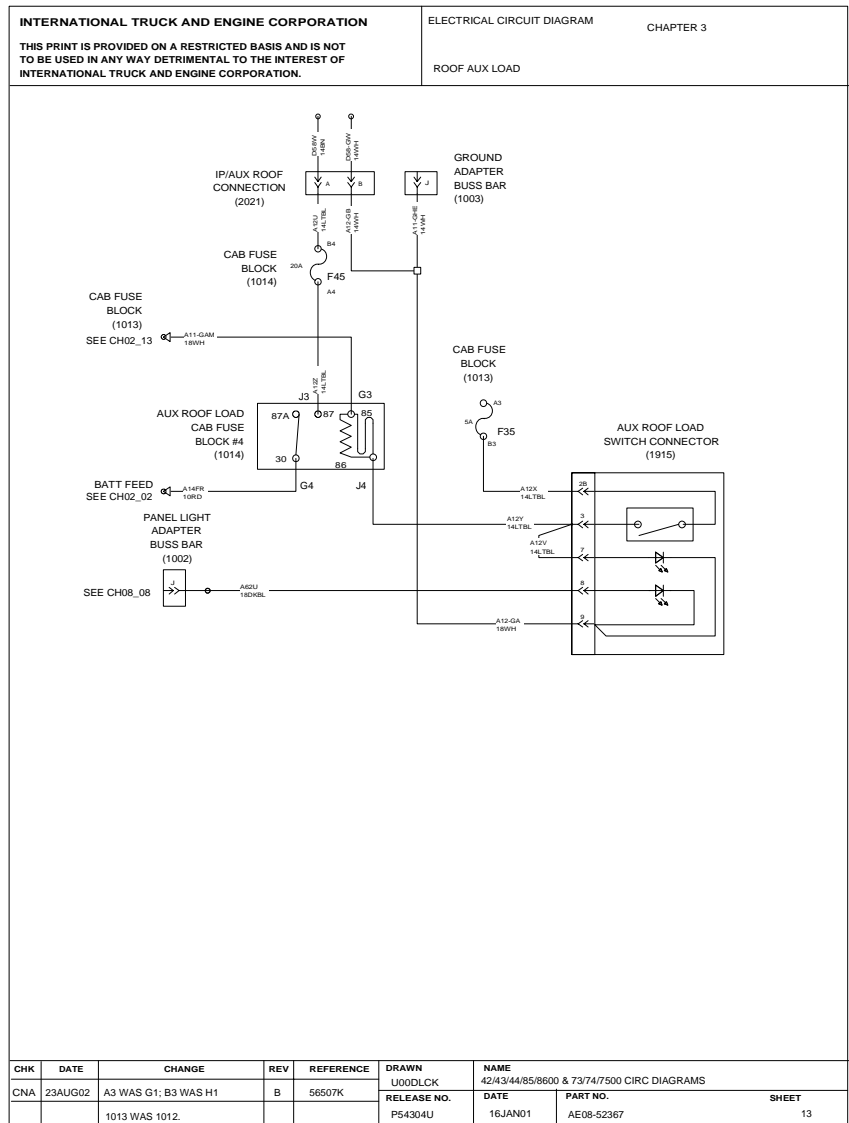


Figure 40 Roof Aux. Load

3.14. SATELLITE COMMUNICATION QUALCOMM-MCT AND IMCT SYSTEMS, P. 14

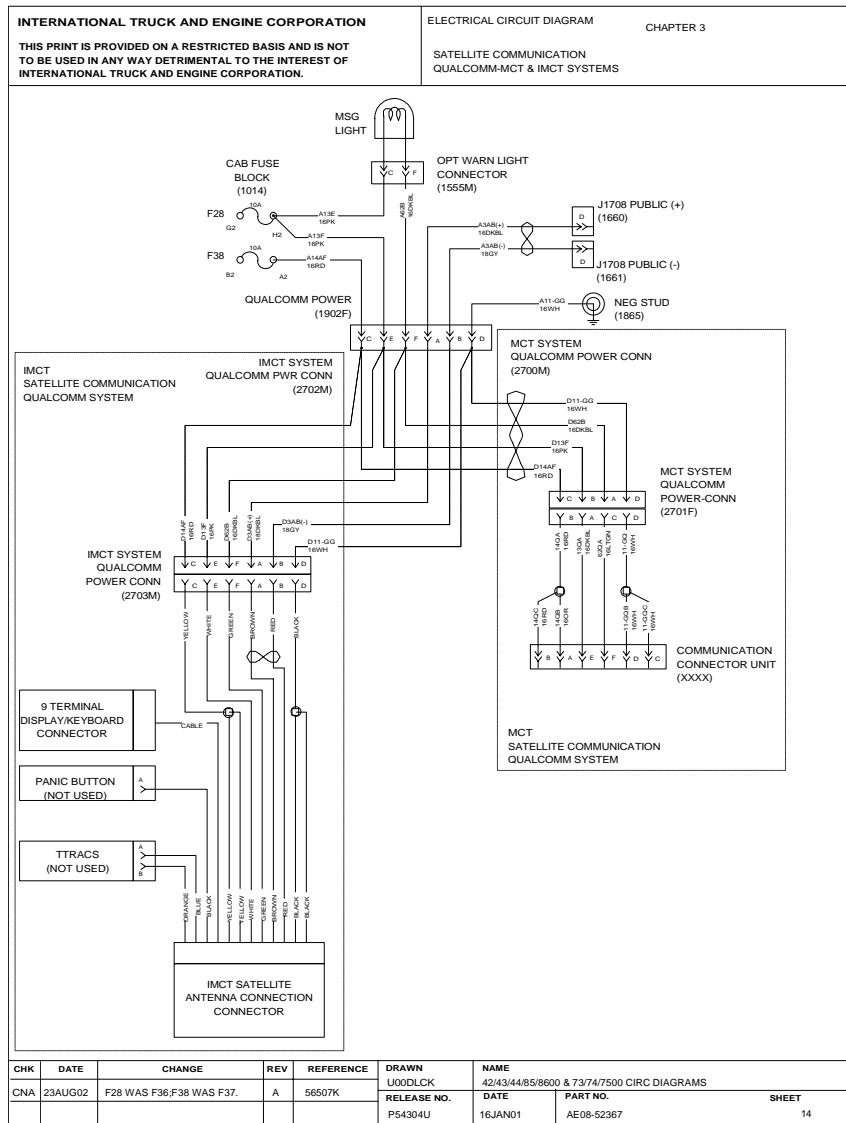


Figure 41 Satellite Communication Qualcomm-MCT and IMCT Systems

3.15. SELF CONTAINED AIR SEAT, P. 15

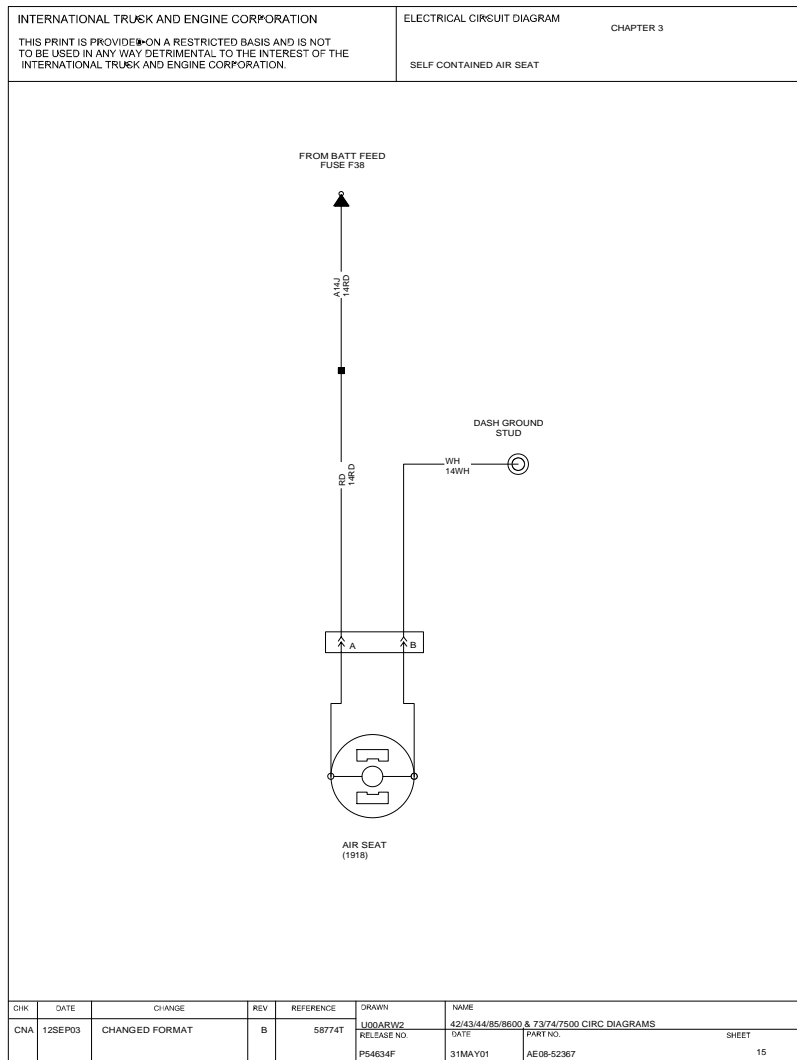


Figure 42 Self Contained Air Seat

3.16. DIGITAL CLOCK PTC, P. 16

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 THE INTERNATIONAL TRUCK AND ENGINE CORPORATION.					ELECTRICAL CIRCUIT DIAGRAM CHAPTER 3 DIGITAL CLOCK PTC		
<p>GEOMETRY WAS REMOVED</p>							
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	
CNA	12SEP03	CHANGED FORMAT	B	58774T	U00DLCK	42/43/44/85/8600 & 73747500 CIRC DIAGRAMS	
					RELEASE NO.	DATE	PART NO.
					P54834F	05MAY01	AE08-52387
							SHEET 16

Figure 43 Digital Clock PTC

3.17. TRANSMISSION ALLISON LCT COLUMN SHIFTER, P. 17

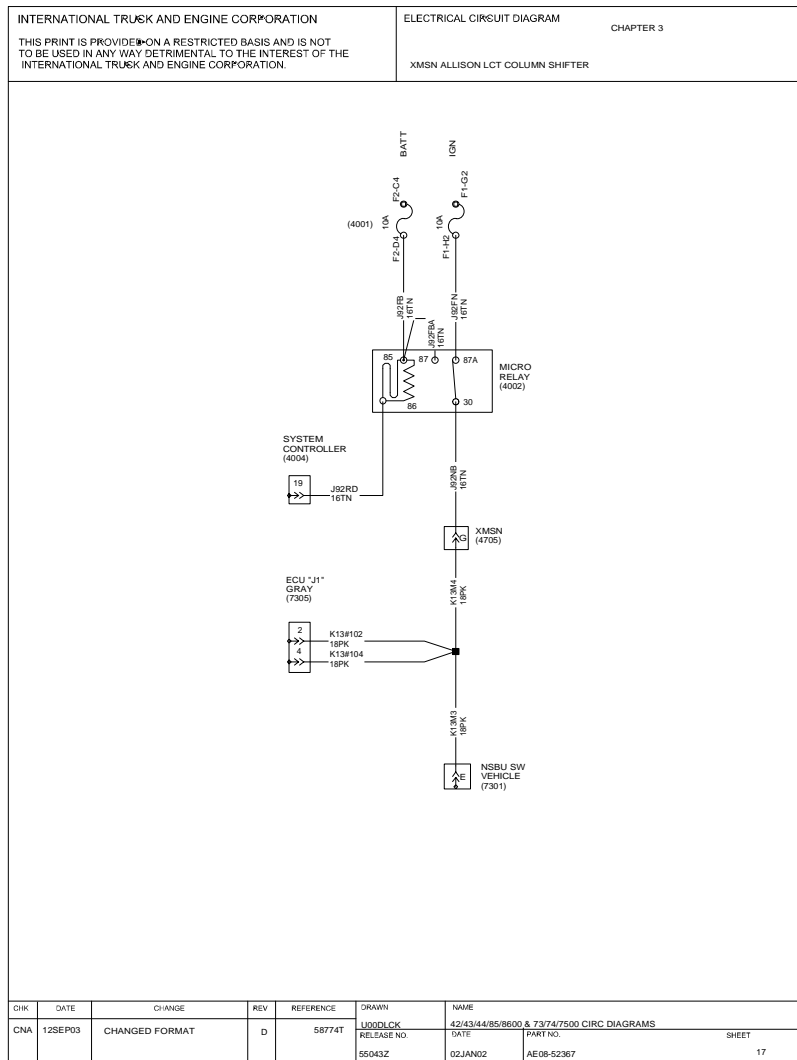
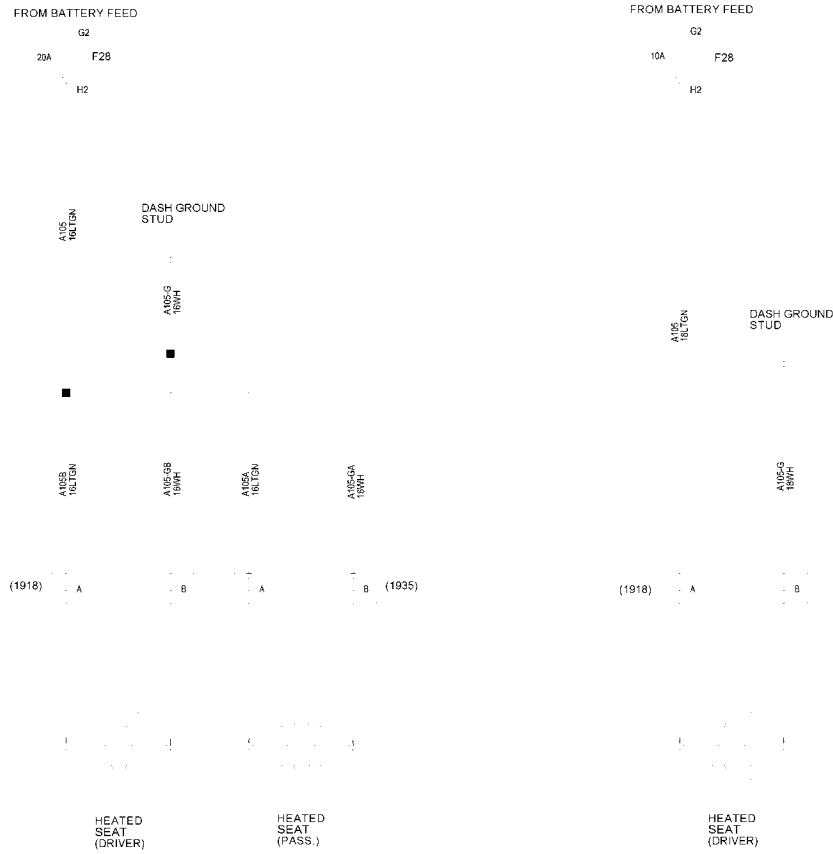


Figure 44 Transmission Allison LCT Column Shifter

3.18. HEATED SEATS FOR 7700 MODELS ONLY, P. 18

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 THE
INTERNATIONAL TRUCK AND ENGINE CORPORATION.

ELECTRICAL CIRCUIT DIAGRAM CHAPTER 3
HEATED SEATS FOR 7700 MODELS ONLY



CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME
JKP	30MAY03	RELEASE FOR PRODUCTION		58205F	UOODLCK	42/43/44/85/8800 & 73/74/7500 CIRC DIAGRAMS
					58205F	DATE: 28MAY03 PART NO: AE08-52367

Figure 45 Heated Seats for 7700 Models Only

4.2. V8 AVNT ENGINES, P. 2

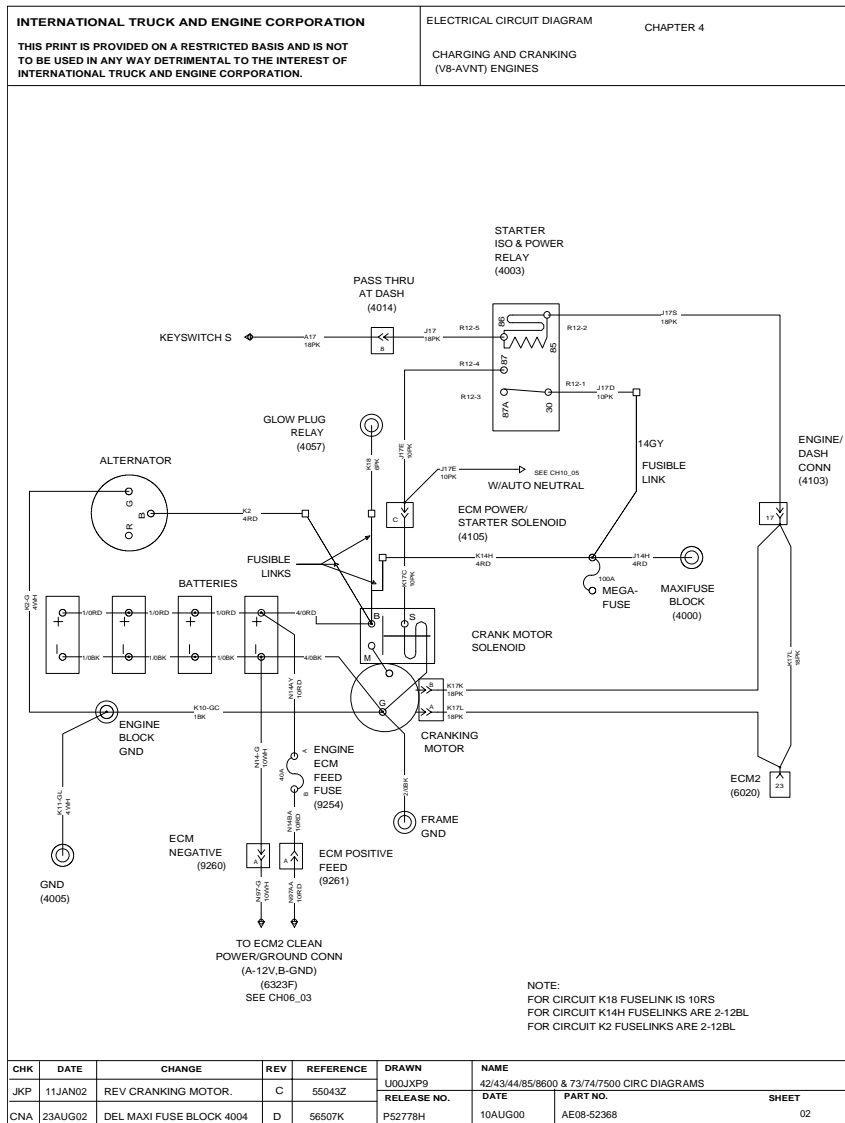


Figure 47 V8 AVNT Engines

4.3. CATERPILLAR, CUMMINS ISM ENGINES, P. 3

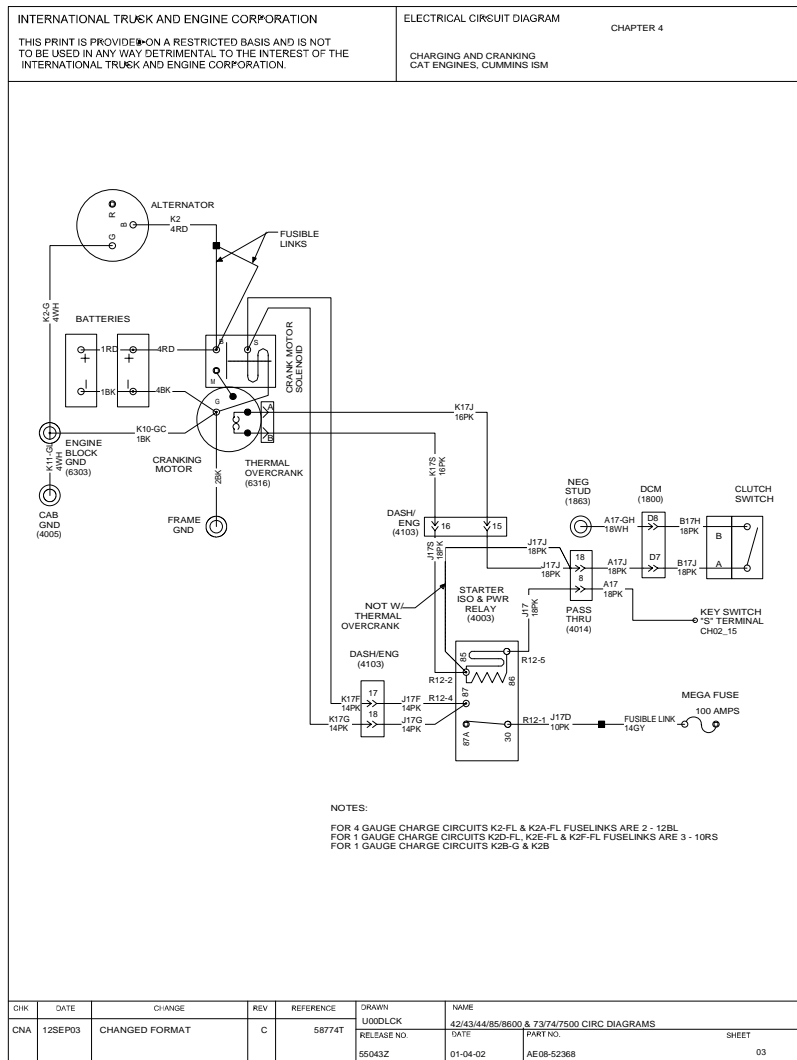


Figure 48 Caterpillar, Cummins ISM Engines

4.4. I6 HEUI ENGINES, P. 4

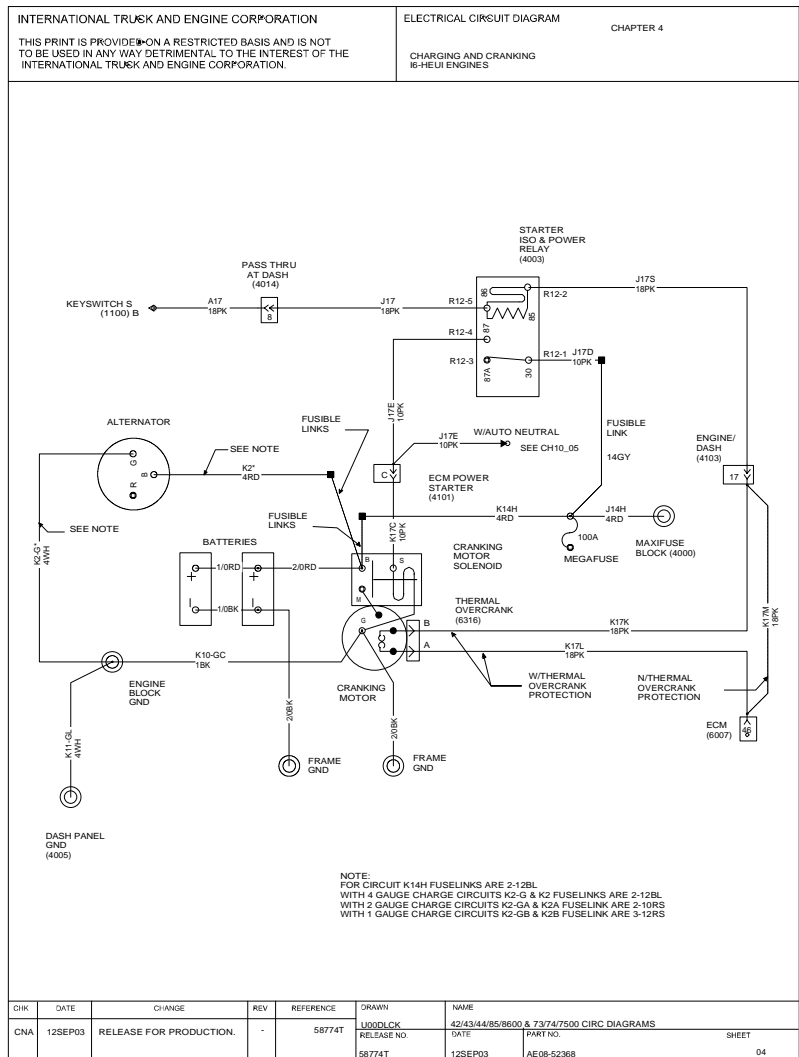


Figure 49 I6 HEUI Engines

5. FANS AND ENGINE ACCESSORIES (CHAPTER 5)

5.1. FAN WIRING, P. 1

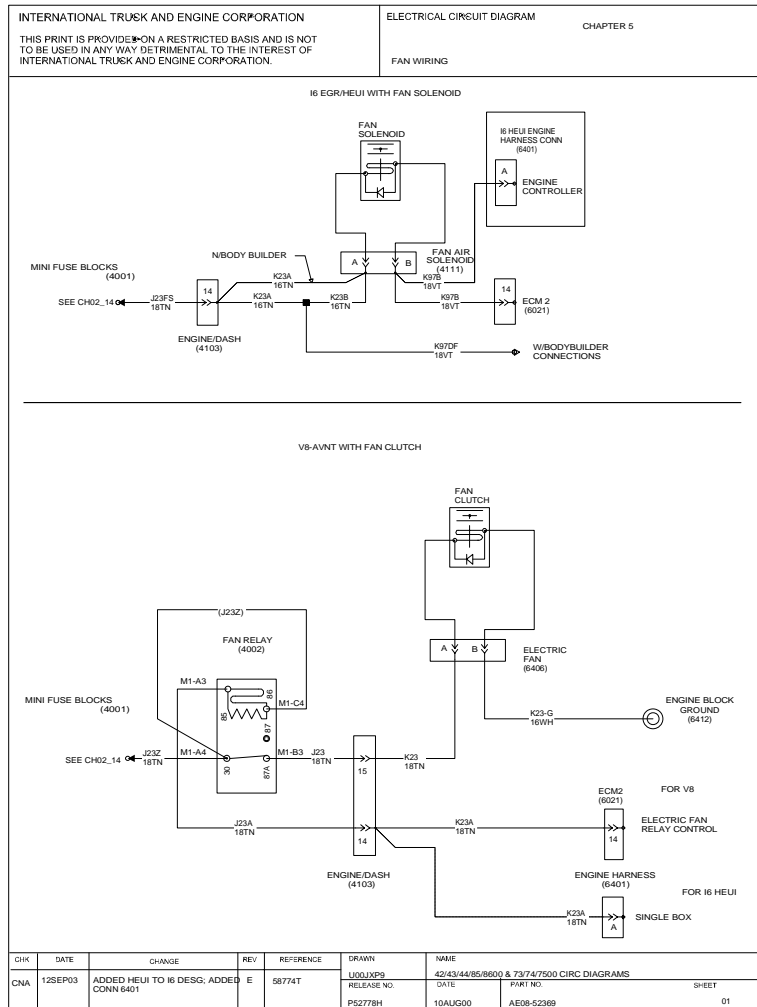


Figure 50 Fan Wiring

5.2. ETHER START, P. 2

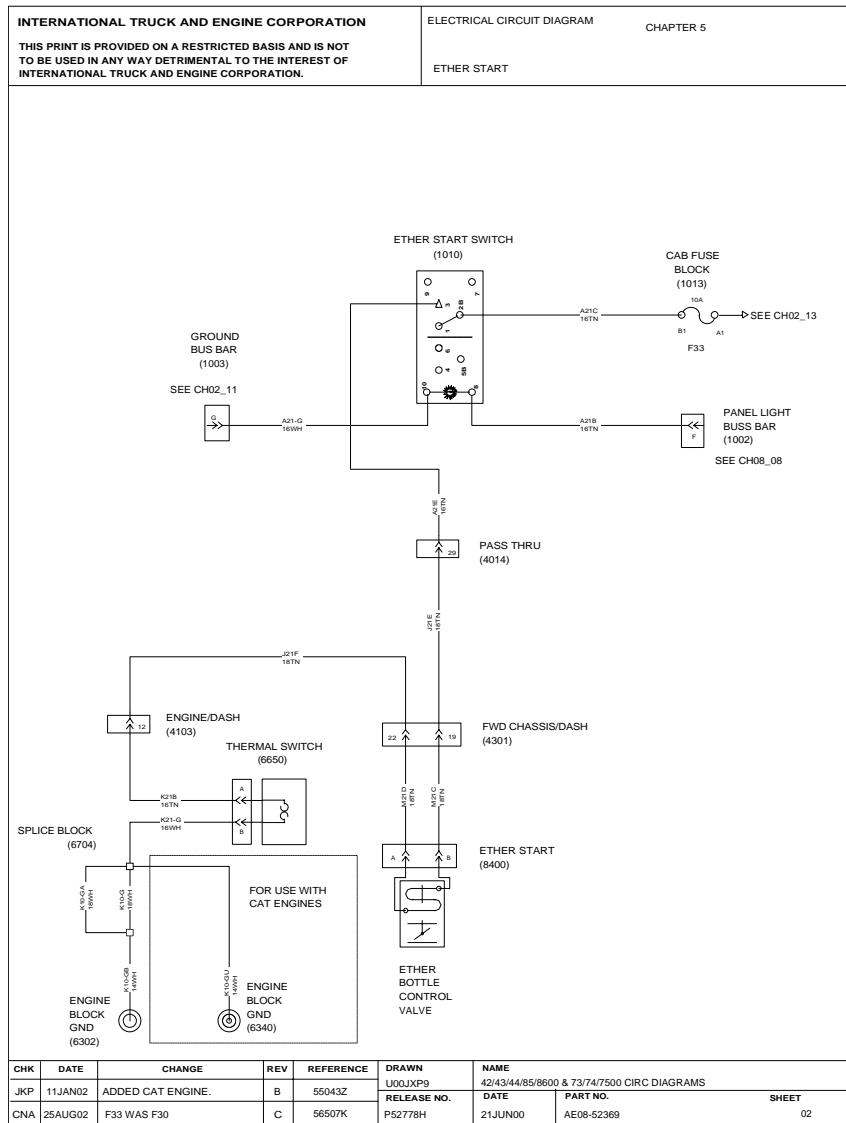


Figure 51 Ether Start

5.3. SNOW VALVE, P. 3

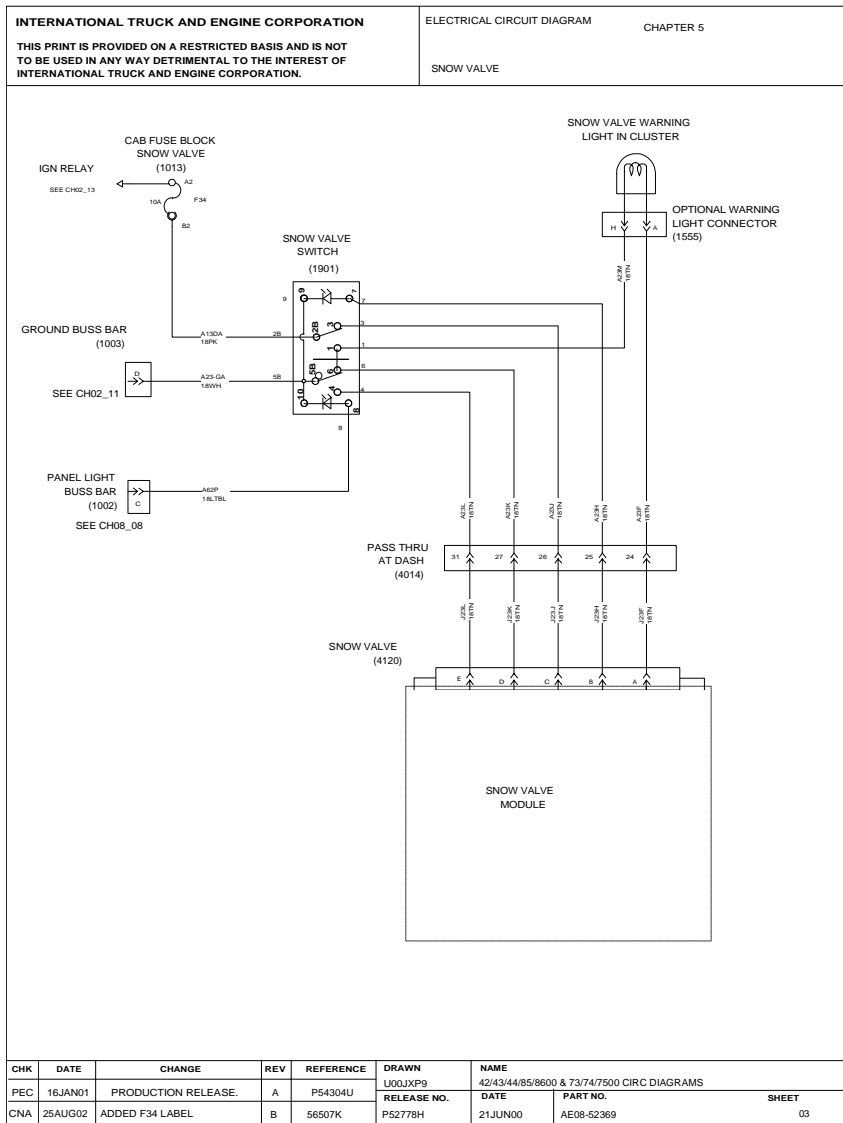


Figure 52 Snow Valve

5.4. FAN WIRING, CATERPILLAR AND CUMMINS, P. 4

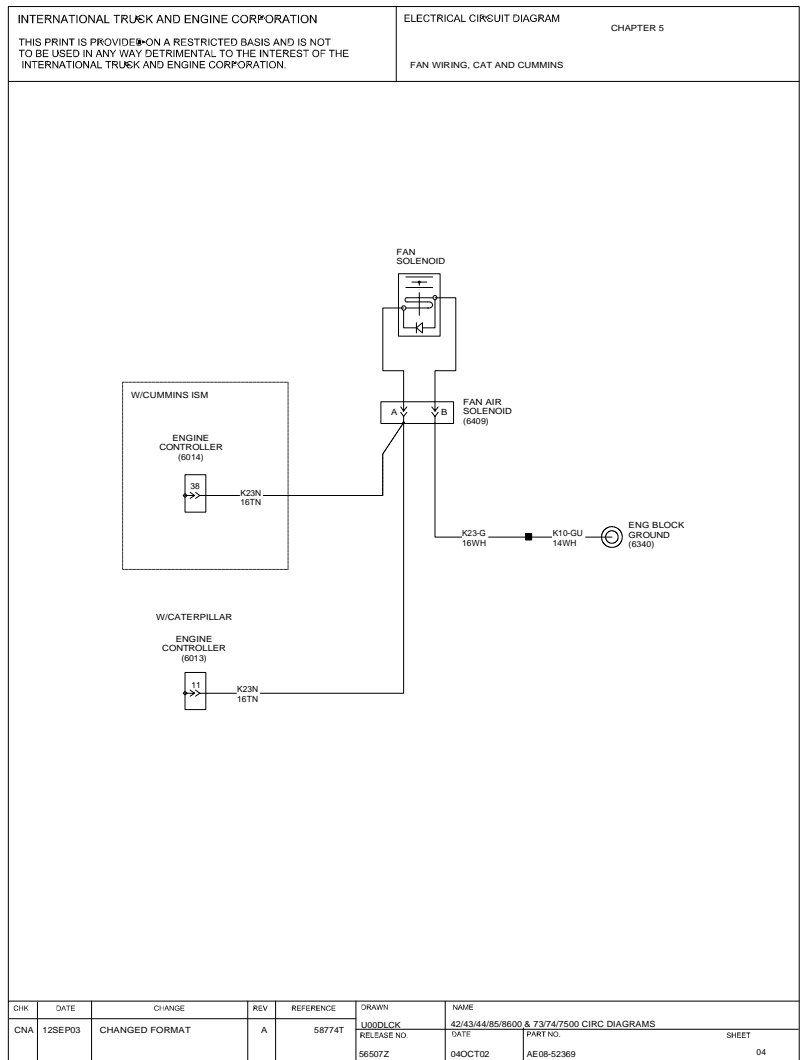


Figure 53 Fan Wiring, Caterpillar and Cummins

6. ELECTRONIC ENGINES (CHAPTER 6)

6.1. ELECTRONIC ENGINE CONTROLS, I6-EGR ENGINES, P. 1

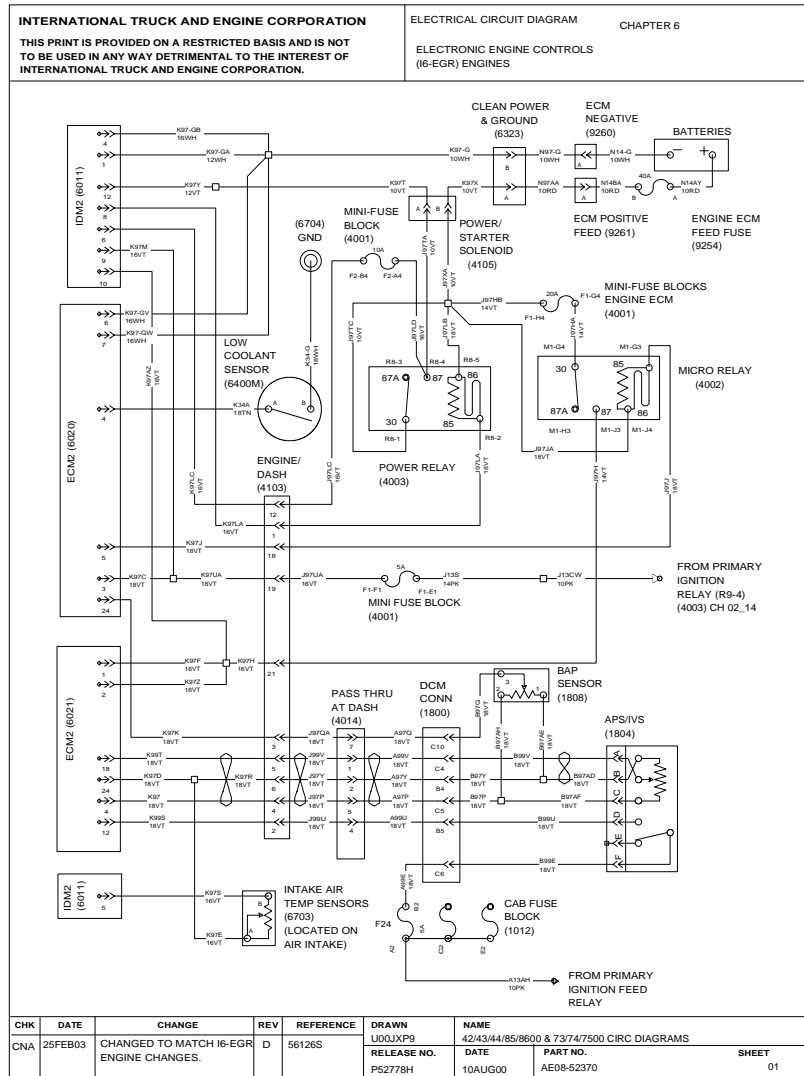


Figure 54 Electronic Engine Controls, I6-EGR Engines

6.2. ELECTRONIC ENGINE CONTROLS, I6-EGR ENGINE CRUISE CONTROL AND BODY BUILDER CONNECTIONS, P. 2

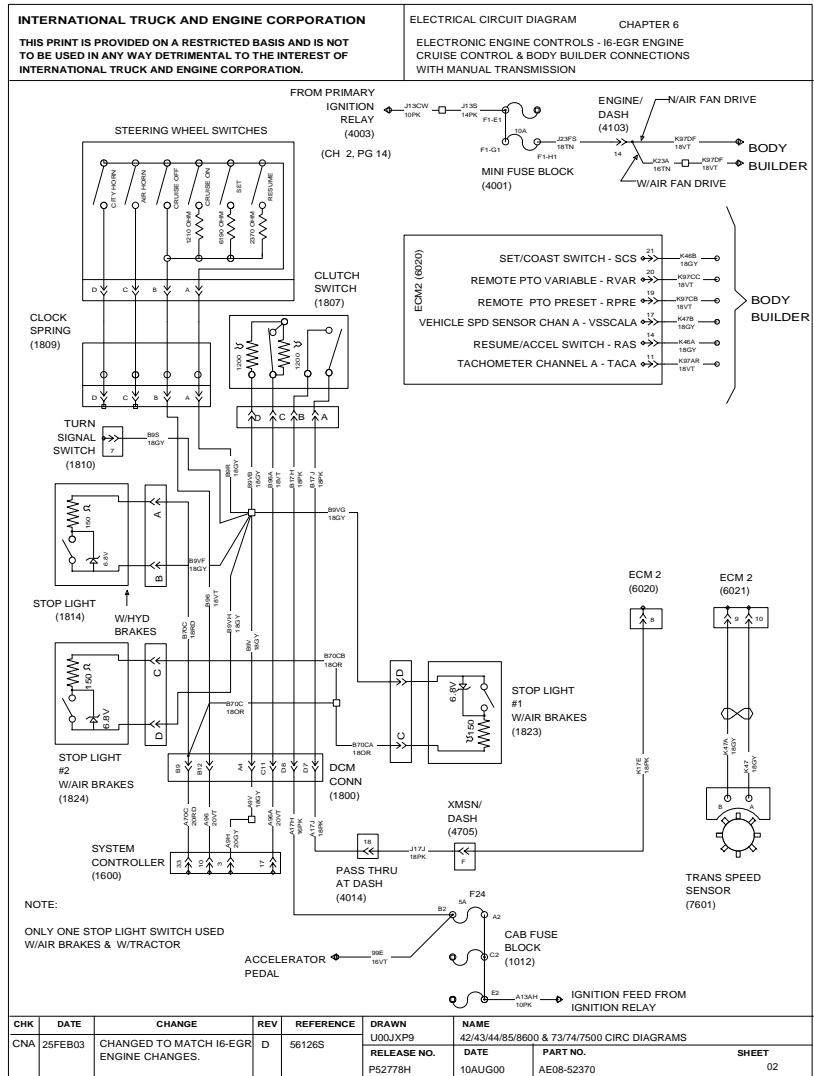


Figure 55 Electronic Engine Controls, I6-EGR Engine Cruise Control and Body Builder Connections

6.3. ELECTRONIC ENGINE CONTROLS, (V8-AVNT) ENGINES, P. 3

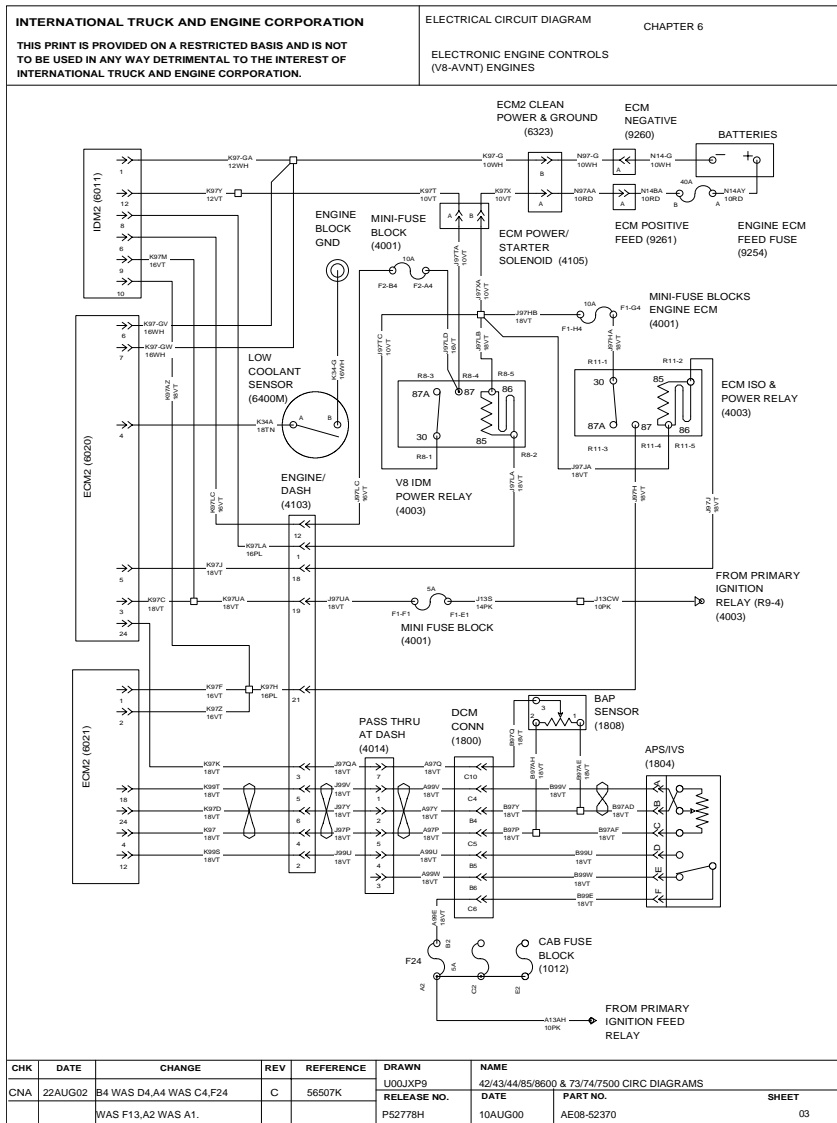


Figure 56 Electronic Engine Controls, (V8-AVNT) Engines

6.4. ELECTRONIC ENGINE CONTROLS, V8-AVNT ENGINE CRUISE CONTROL AND BODY BUILDER CONNECTIONS, P. 4

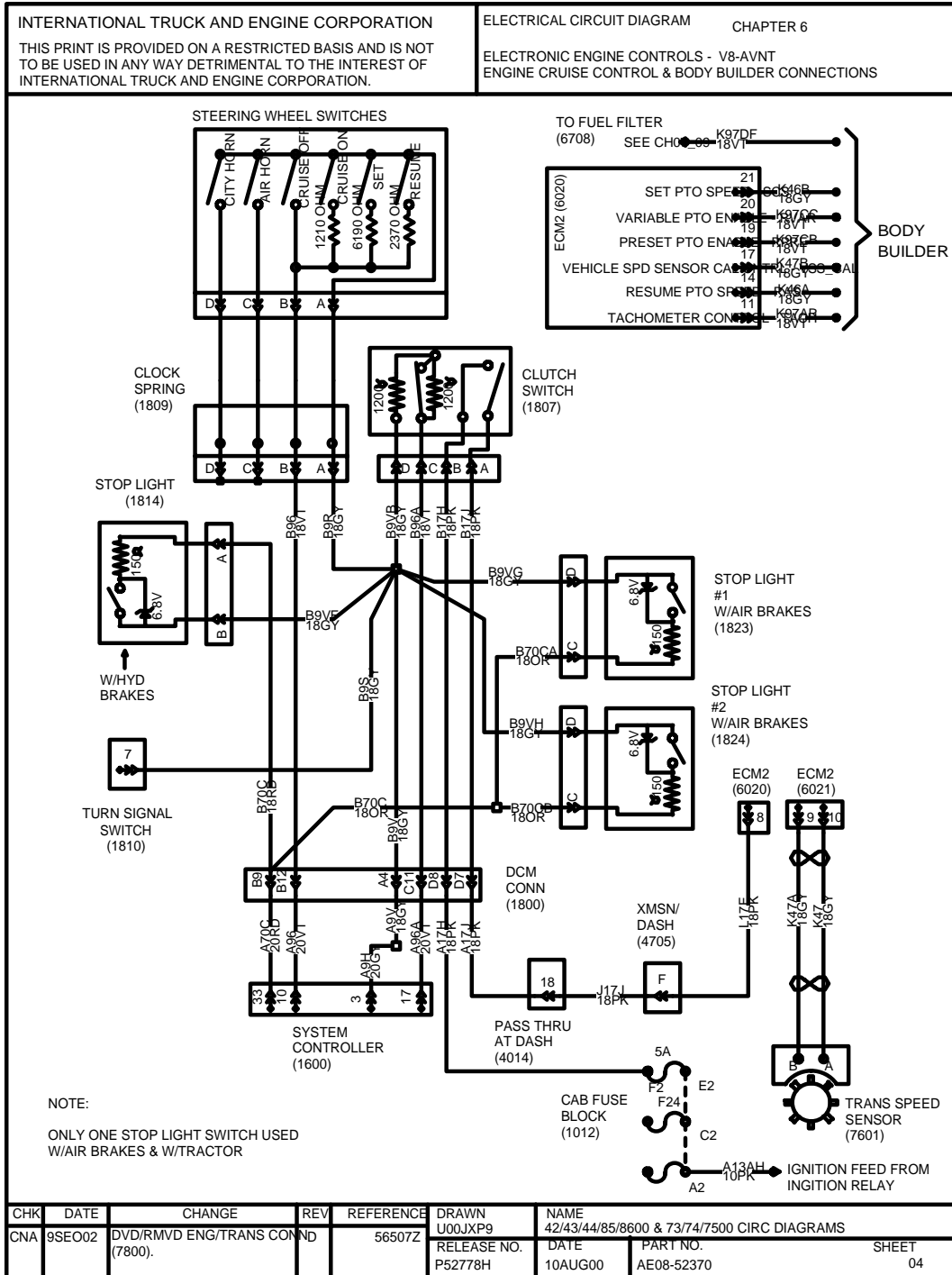


Figure 57 Electronic Engine Controls, V8-AVNT Engine Cruise Control and Body Builder Connections

6.5. CATERPILLAR C10, C11, C12, AND C13 ENGINES, P. 5

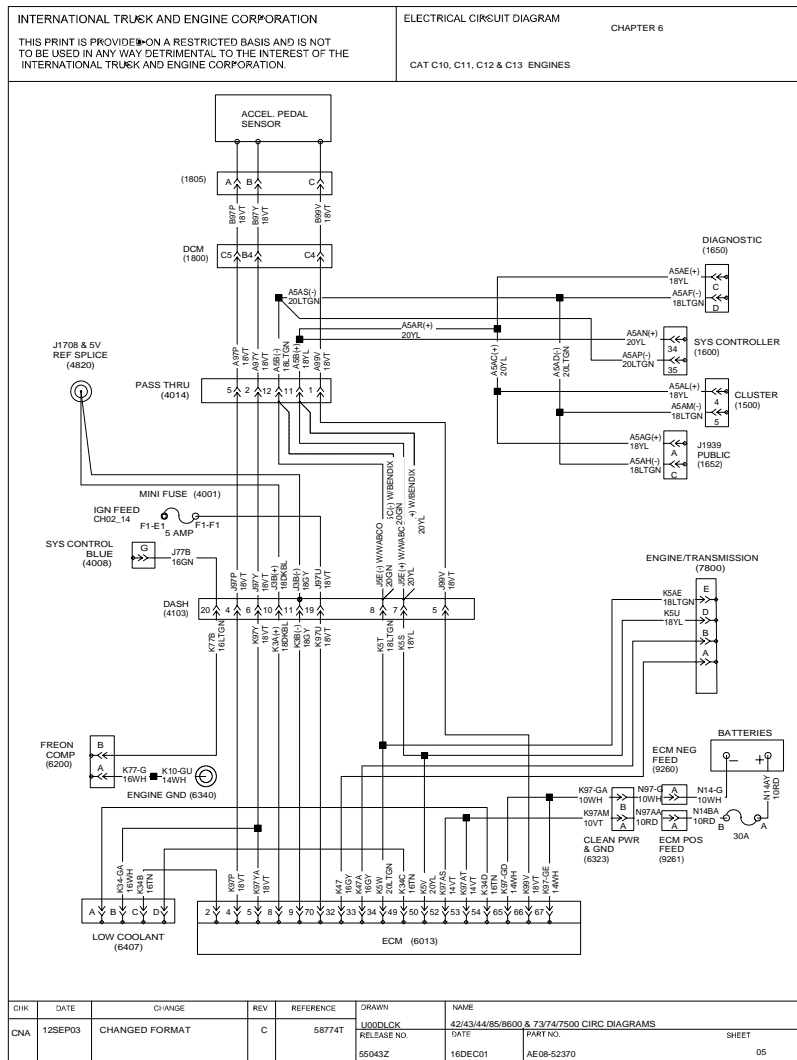


Figure 58 Caterpillar C10, C11, C12, and C13 Engines

6.6. CUMMINS ISM ENGINE, P. 6

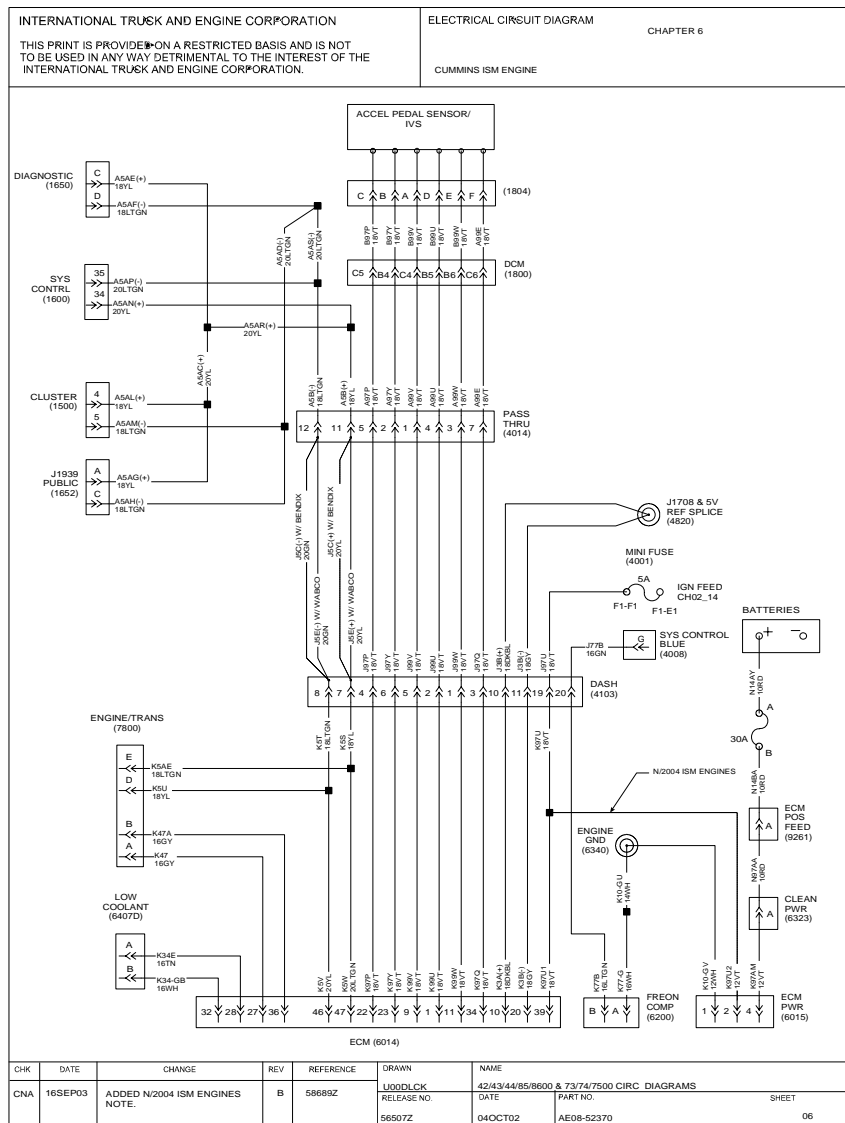


Figure 59 Cummins ISM Engine

6.7. I6 HEUI ENGINE, P. 7

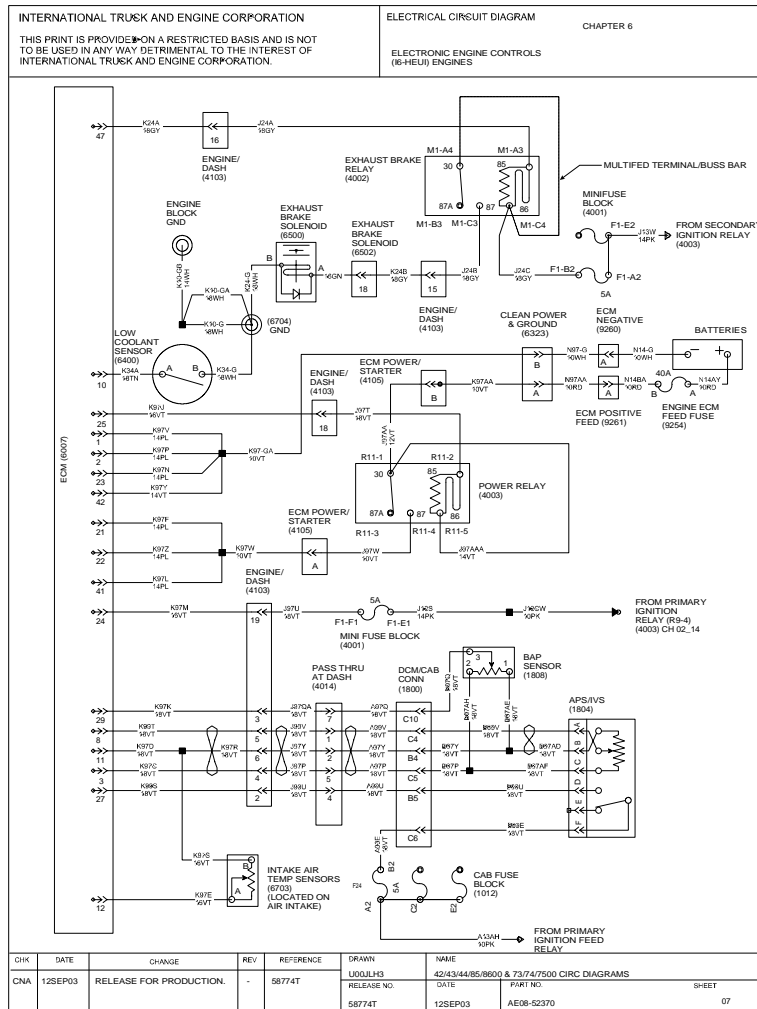


Figure 60 I6 HEUI Engine

6.8. I6 HEUI ENGINE CRUISE CONTROL AND BODY BUILDER CONNECTIONS WITH MANUAL TRANSMISSION, P. 8

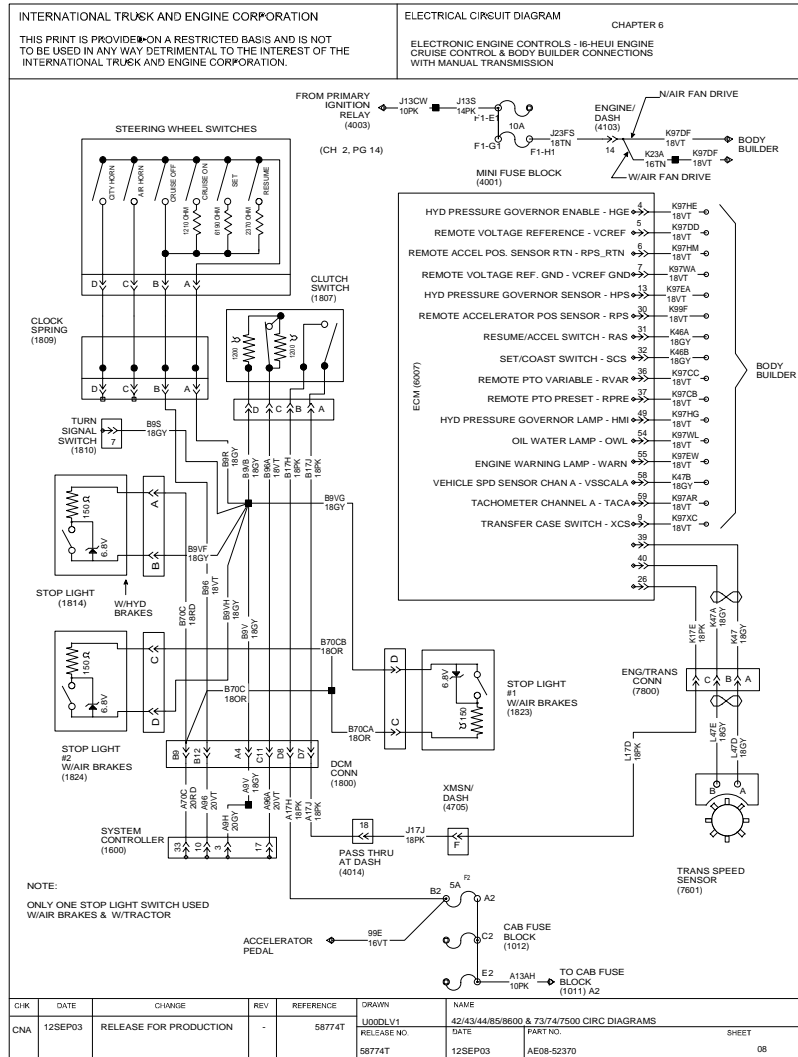


Figure 61 I6 HEUI Engine Cruise Control and Body Builder Connections with Manual Transmission