

## 7. GAUGES WITH AND WITHOUT INTEGRAL WARNING LIGHT (CHAPTER 7)

## 7.1. IP/GAUGE LIST, P. 1

[illegible]

### Figure 82 IP/Gauge List

## 7.2. WARNING LIGHT LIST, P. 2

INTERNATIONAL TRUCK AND ENGINE CORPORATION				ELECTRICAL CIRCUIT DIAGRAM				CHAPTER 7				
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.				WARNING LIGHTS LIST								
IP WARNING LIGHTS												
WARNING LIGHT TITLE				SIGNAL PATH				SENSOR LOCATION				
RANGE INHIBITED				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 ( )				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				SWITCH				
BRAKE FLUID				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				BRK RESEVOIR				
TRAC CTRL				TRUCK ABS CTRLR/DRIVE TRAIN J1939/CLUSTER								
CHECK TRANS				TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER								
TRAILER ABS				TRLR ABS CTRLR/DRIVE TRAIN J1939/CLUSTER								
WASHER FLUID				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				WASHER BOTTLE				
(LEFT TURN)				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				TURN SIG SW				
AIR BAG				DISCRETE NOT ON DATA BUS								
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 ( )				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				SWITCH				
CRUISE				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
ABS				TRUCK CTRLR/DRIVE TRAIN J1939/CLUSTER								
(RIGHT TURN)				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
WAIT TO START				ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER								
FASTEN BELTS				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
(HIGH BEAM IND)				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
COLD AMB PROTEC				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
RETARD OVERHEAT				TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER				TRANSMISSION				
CHECK AC				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
AUTO NEUTRAL				DISCRETE NOT ON DATA BUS				SWITCH				
ALTERNATOR				DISCRETE NOT ON DATA BUS								
PTO/THROTTLE				SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER								
OPTIMIZED IDLE				DISCRETE NOT ON DATA BUS								
SNOW VALVE				DISCRETE NOT ON DATA BUS				SNOW VALVE				
FR AXLE DIFF LOCK				DISCRETE NOT ON DATA BUS				FWD RR AXLE				
RR AXLE DIFF LOCK				DISCRETE NOT ON DATA BUS				RR RR AXLE				
MESSAGE WAIT				DISCRETE NOT ON DATA BUS								
PTO				DISCRETE NOT ON DATA BUS								
CONVERTER TEMP				DISCRETE NOT ON DATA BUS								
TOUCHLOC RELEASE				DISCRETE NOT ON DATA BUS								
PARK FLUID				SYSTEM CTRLR/DRIVE TRAIN								
FR AXLE ENGAGED				DISCRETE NOT ON DATA BUS				TRANSFER CASE				
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME						
CNA	29SEP03	ADDED FR AXLE ENGAGED.	B	58928U	U00JXP9	42/43/44/85/9600 & 73/74/7500 CIRC DIAGRAMS						
					RELEASE NO.	DATE	PART NO.		SHEET			
					P52778H	09AUG00	AE08-52371		02			

Figure 83 Warning Light List

### 7.3. WARNING LIGHTS CONTROLLED BY ENGINE, TRANSMISSION, ABS CONTROLLER, P. 3

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ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 7

WARNING LIGHTS CONTROLLED BY ENGINE, TRANSMISSION, ABS CONTROLLER

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

TRAILER ABS

CHECK ELECTR SYS

ABS

WAIT TO START

RETARD OVERHEAT

AUTO NEUTRAL (NOT ON DATA BUS TO CLUSTER)

OPTIMIZED IDLE (NOT ON DATA BUS TO CLUSTER)

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	20JUN00	AE08-52371	03

Figure 84 Warning Lights Controlled by Engine, Transmission, ABS Controller

## 7.4. ENGINE OIL PRESSURE AND TEMP, SPEEDOMETER, TACH, VOLTMETER AND WATER TEMP GAUGE CIRCUITS, P. 4

<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 7</p> <p>ENG OIL PRESS &amp; TEMP, SPEEDOMETER, TACH, VOLTMETER &amp; WATER TEMP GAUGE CIRCUITS</p>								
<p>REFER TO CONSOLIDATED ENGINE/VEHICLE CONTROLLER DIAGNOSTICS MANUAL EGES-175 (DT466), EGES-190 (V8-AVNT), FOR CIRCUIT DIAGRAMS SHOWING INPUT CIRCUITRY FOR THE FOLLOWING DATALINK DRIVEN SYSTEM:</p> <p>ENGINE OIL PRESSURE GAUGE</p> <p>ENGINE OIL TEMPERATURE GAUGE</p> <p>SPEEDOMETER GAUGE</p> <p>TACHOMETER GAUGE</p> <p>WATER TEMPERATURE GAUGE</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			
					P52778H	RELEASE NO.	DATE	PART NO.	SHEET
						20JUN00	AE08-52371	04	

**Figure 85** Engine Oil Pressure and Temp, Speedometer, Tach, Voltmeter and Water Temp Gauge Circuits

7.5. IP/GAUGES AND WARNING LIGHTS — GAUGE CLUSTER, P. 5

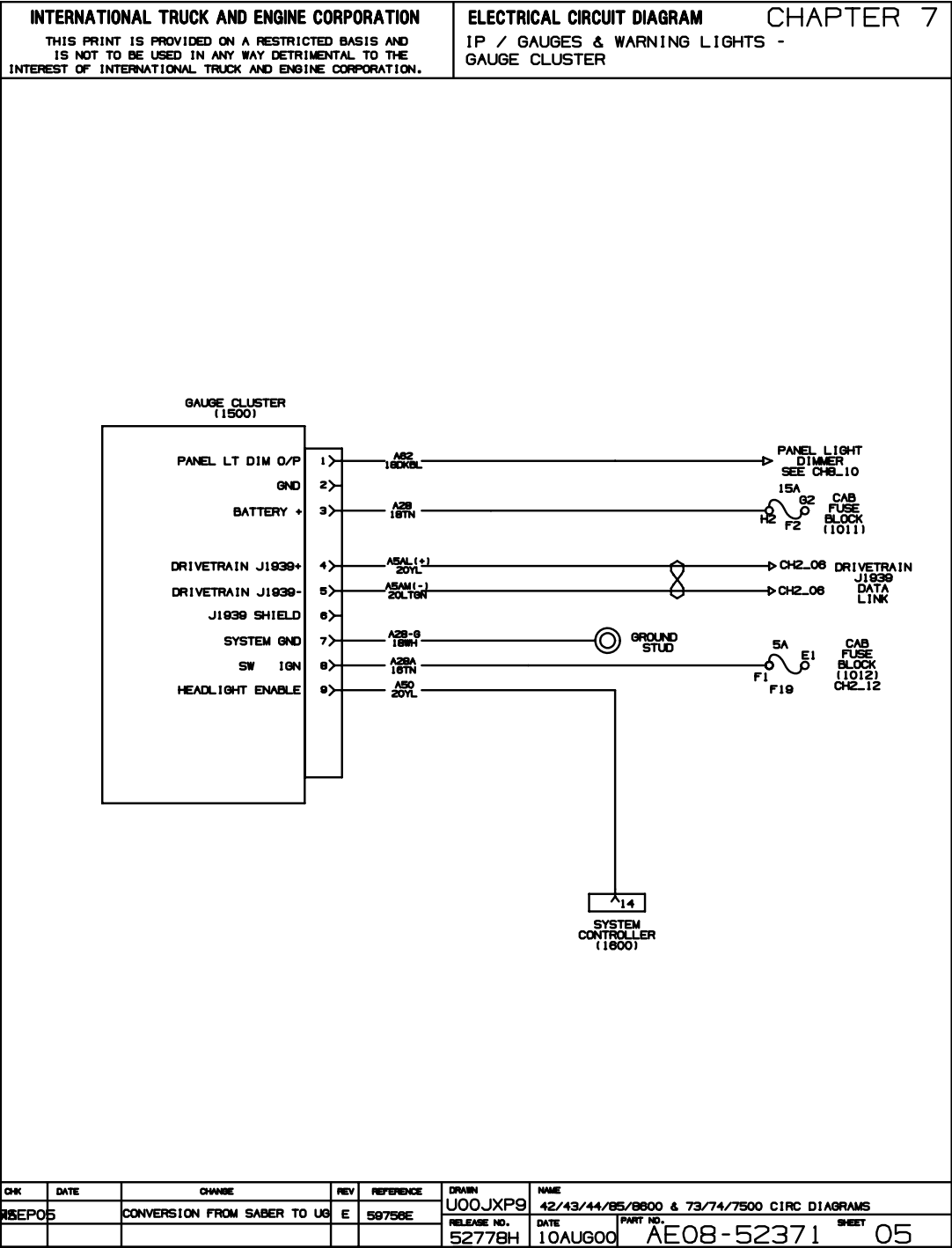


Figure 86 IP/Gauges and Warning Lights — Gauge Cluster

[illegible]

### Figure 87 Air Pressure Input Circuit

## 7.7. AXLE TEMPERATURE, FWD REAR AND REAR AXLES, GAUGE INPUT CIRCUIT, P. 7

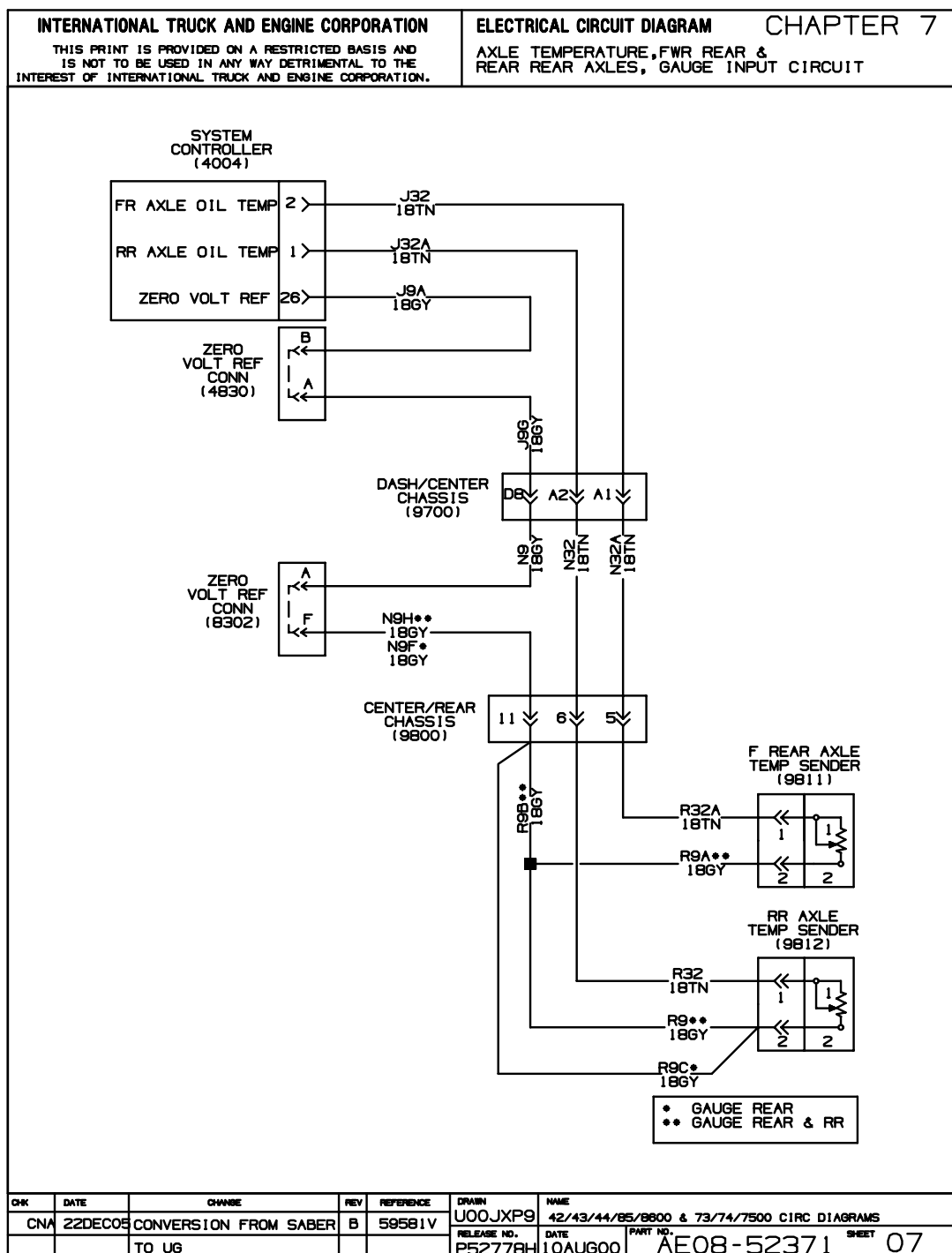


Figure 88 Axle Temperature, FWD Rear and Rear Axles, Gauge Input Circuit

## 7.8. FUEL GAUGE INPUT CIRCUIT (SINGLE TANK) DIFFERENTIAL LOCK WARNING LAMPS, P. 8

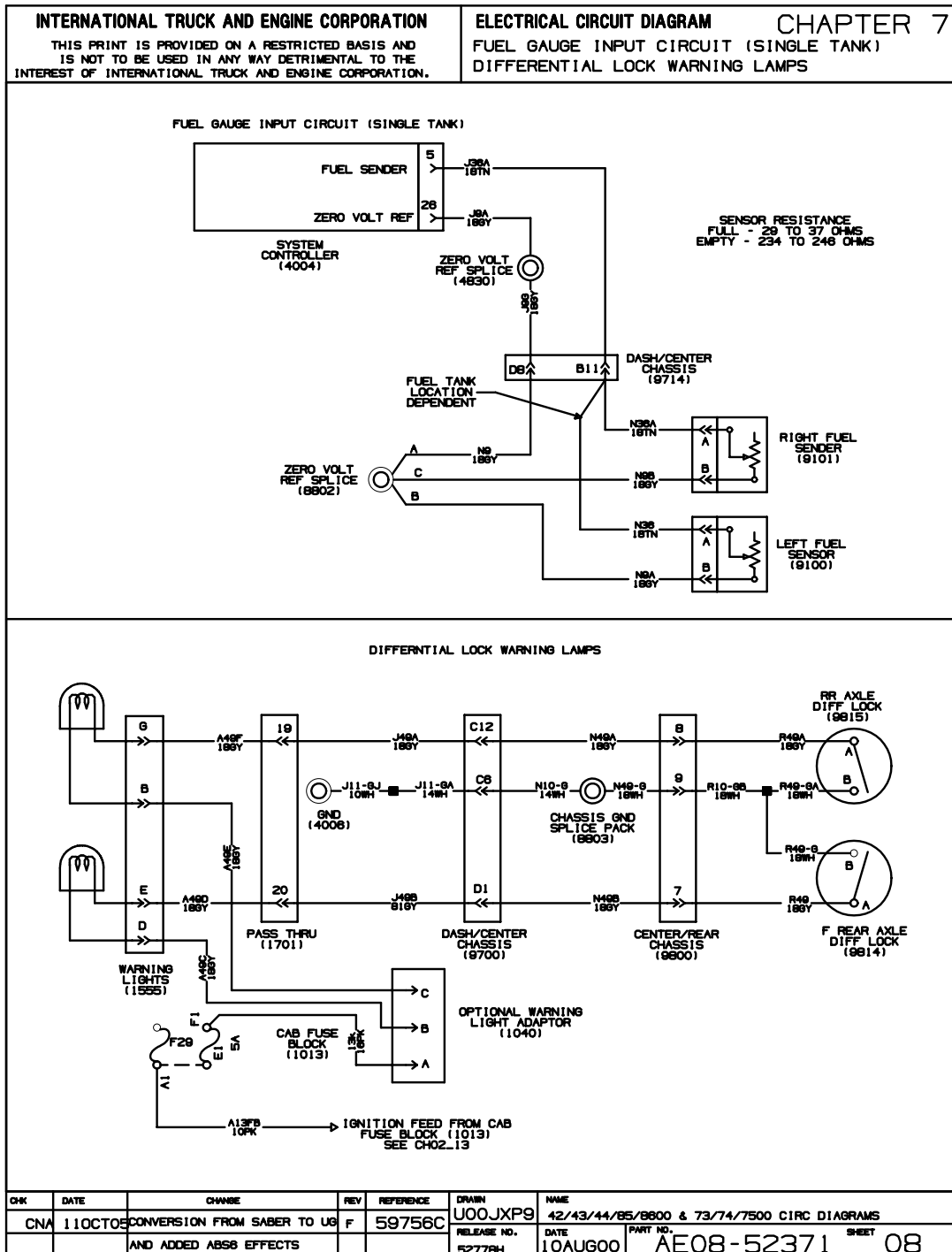


Figure 89 Fuel Gauge Input Circuit (Single Tank) Differential Lock Warning Lamps



7.9. GAUGES AND WARNING LIGHTS — FUEL FILTER RESTRICTION AND WATER IN FUEL LIGHTS, P. 9

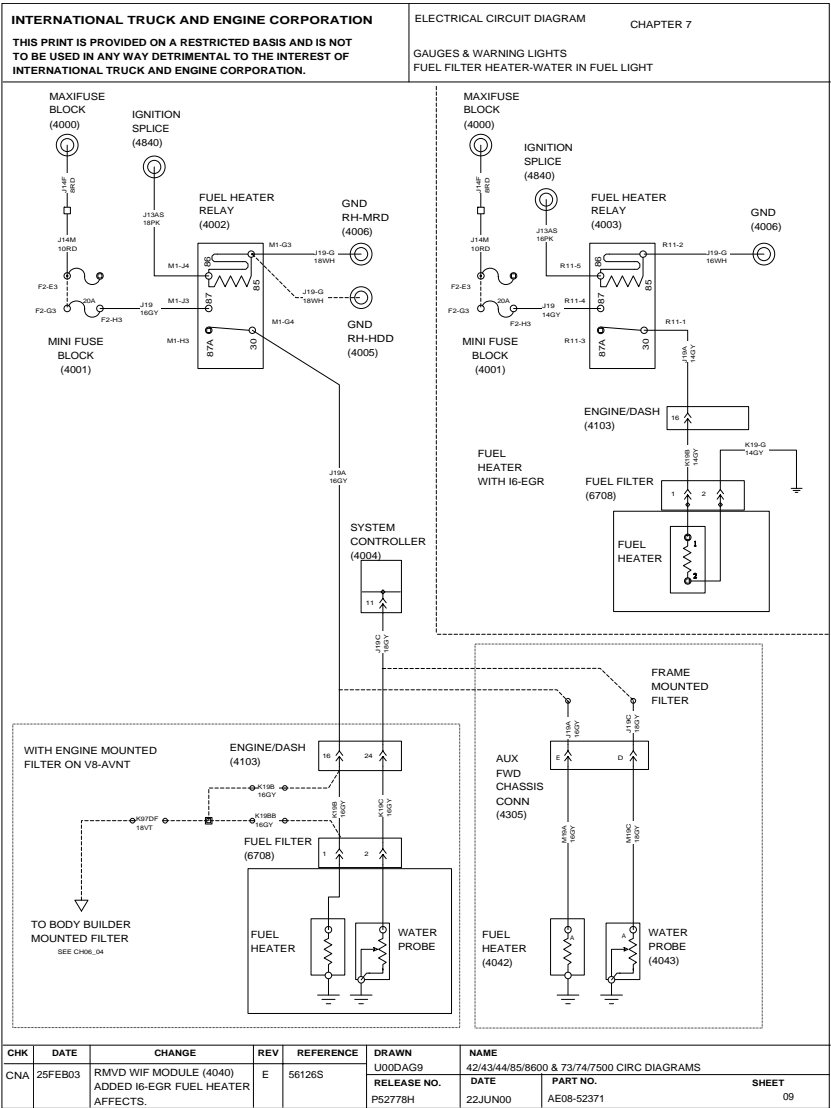


Figure 90 Gauges and Warning Lights — Fuel Filter Restriction and Water in Fuel Lights

## 7.10. GAUGES AND WARNING LIGHTS — PARK BRAKE LIGHT AND TRANSMISSION OIL TEMP. GAUGE, P. 10

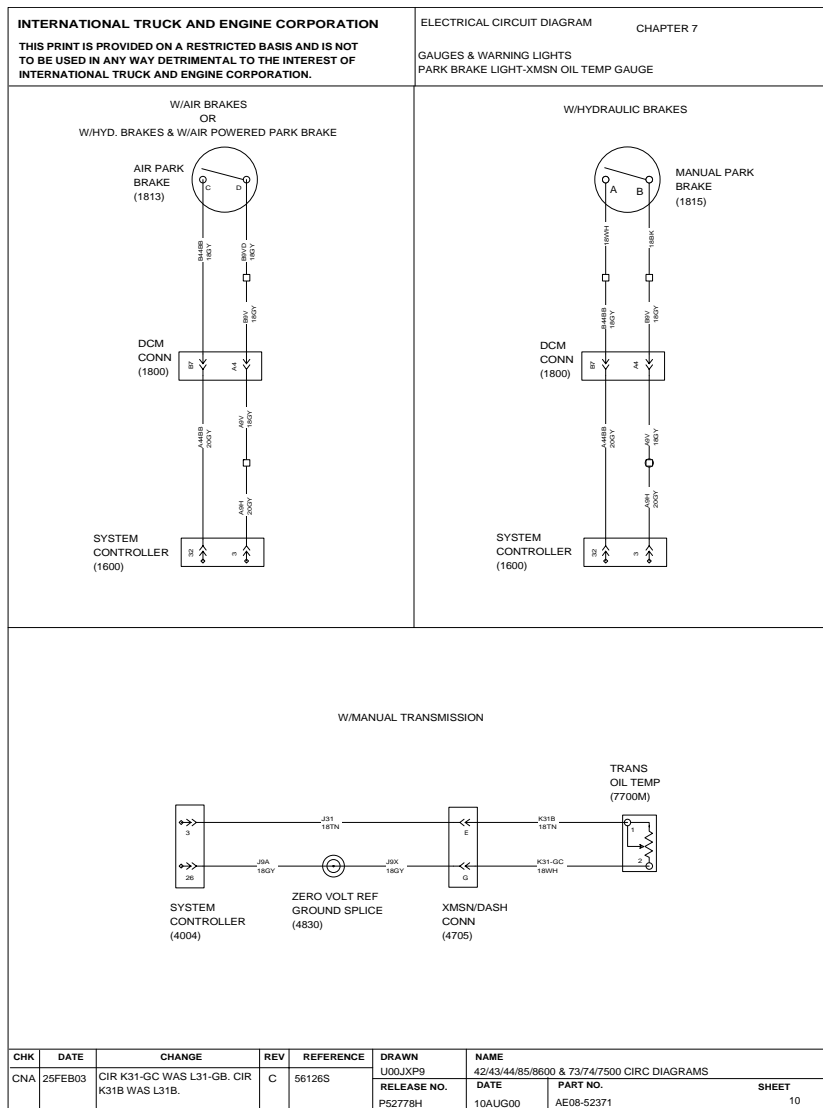


Figure 91 Gauges and Warning Lights — Park Brake Light and Transmission Oil Temp. Gauge

7.11. GAUGES AND WARNING LIGHTS — AMMETER, P. 11

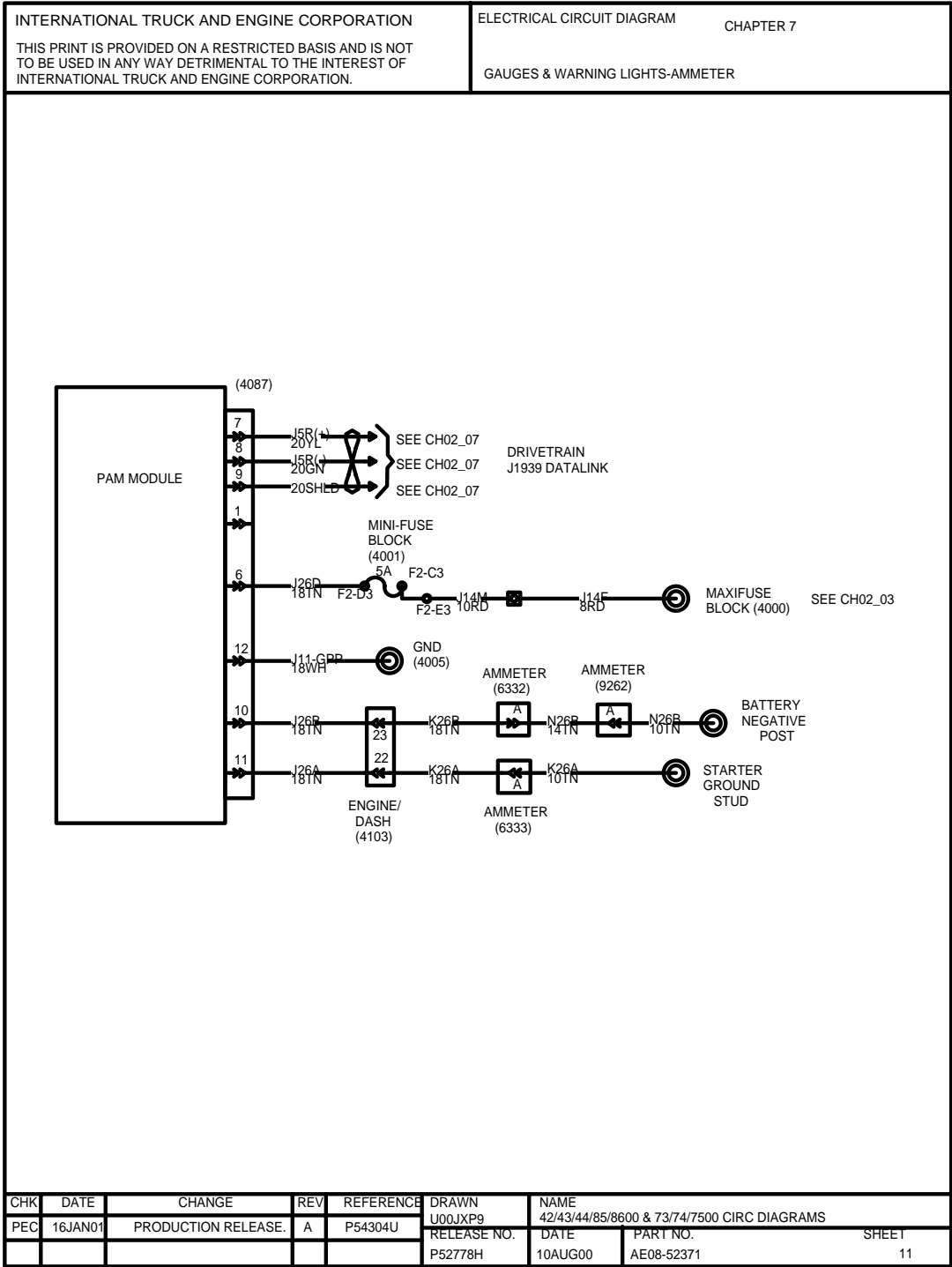


Figure 92 Gauges and Warning Lights — Ammeter

7.12. ENGINE OIL TEMPERATURE GAUGE WITH CATERPILLAR, P. 12

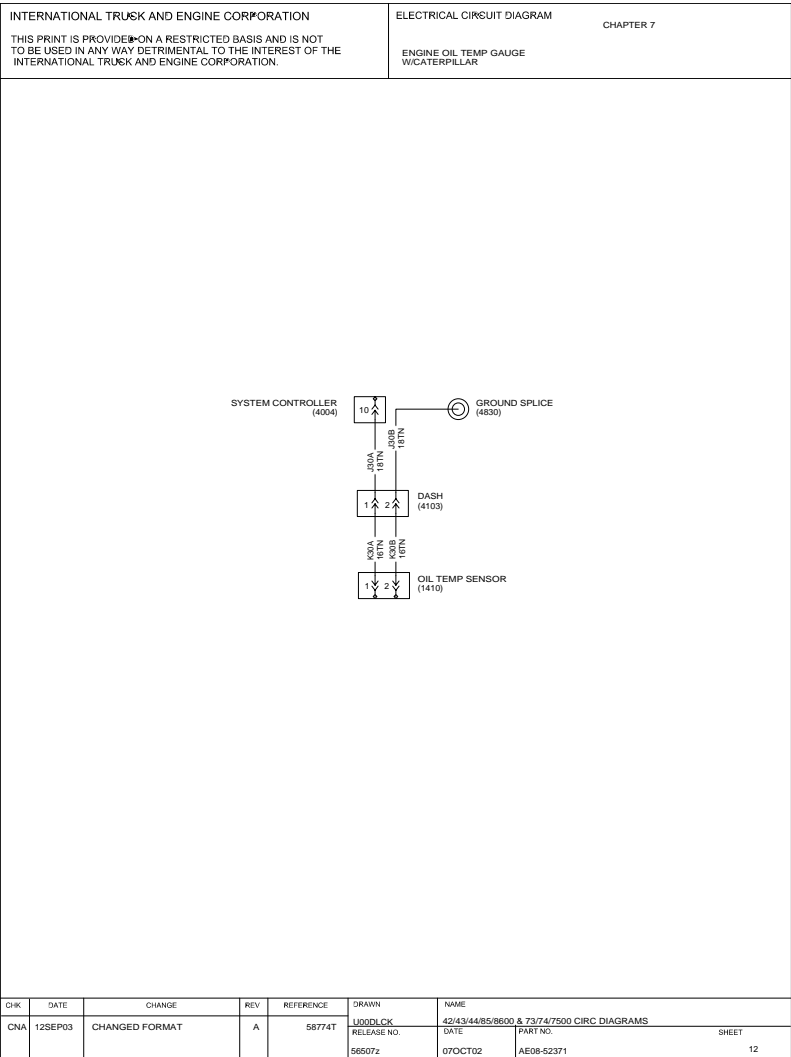


Figure 93 Engine Oil Temperature Gauge With Caterpillar

7.13. FRONT AXLE ENGAGEMENT LAMP, P. 13

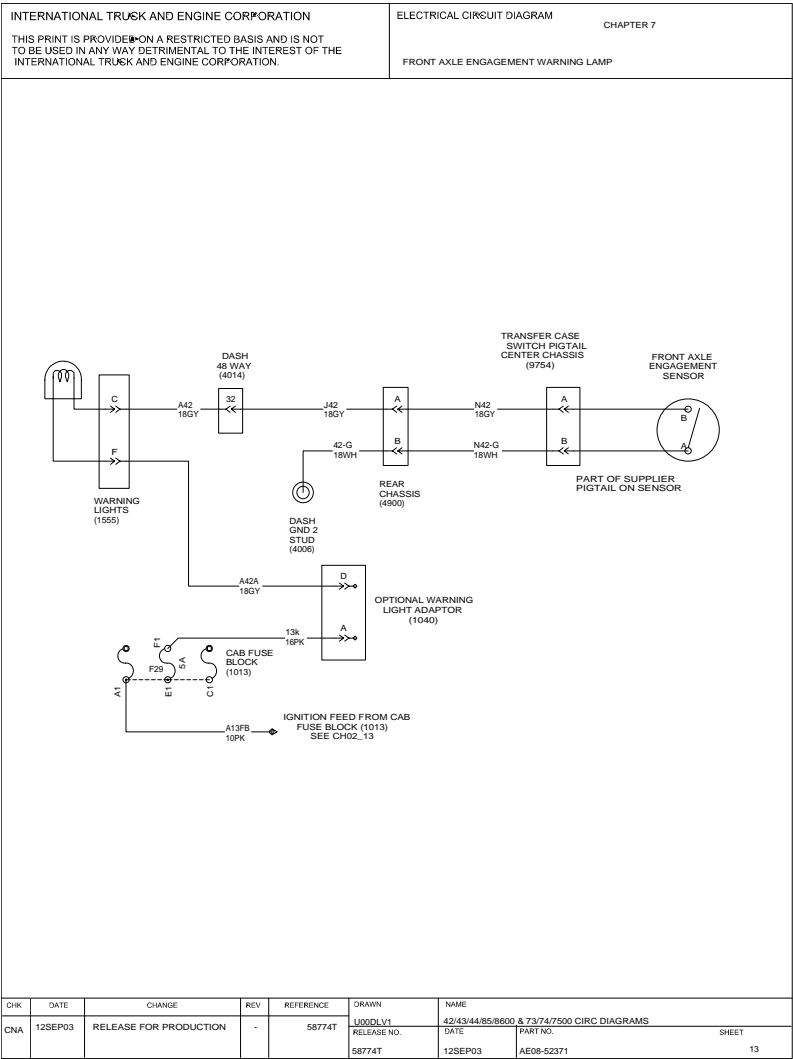


Figure 94 Front Axle Engagement Lamp

## 8. LIGHTS (CHAPTER 8)

### 8.1. BACKUP LIGHTS, P. 1

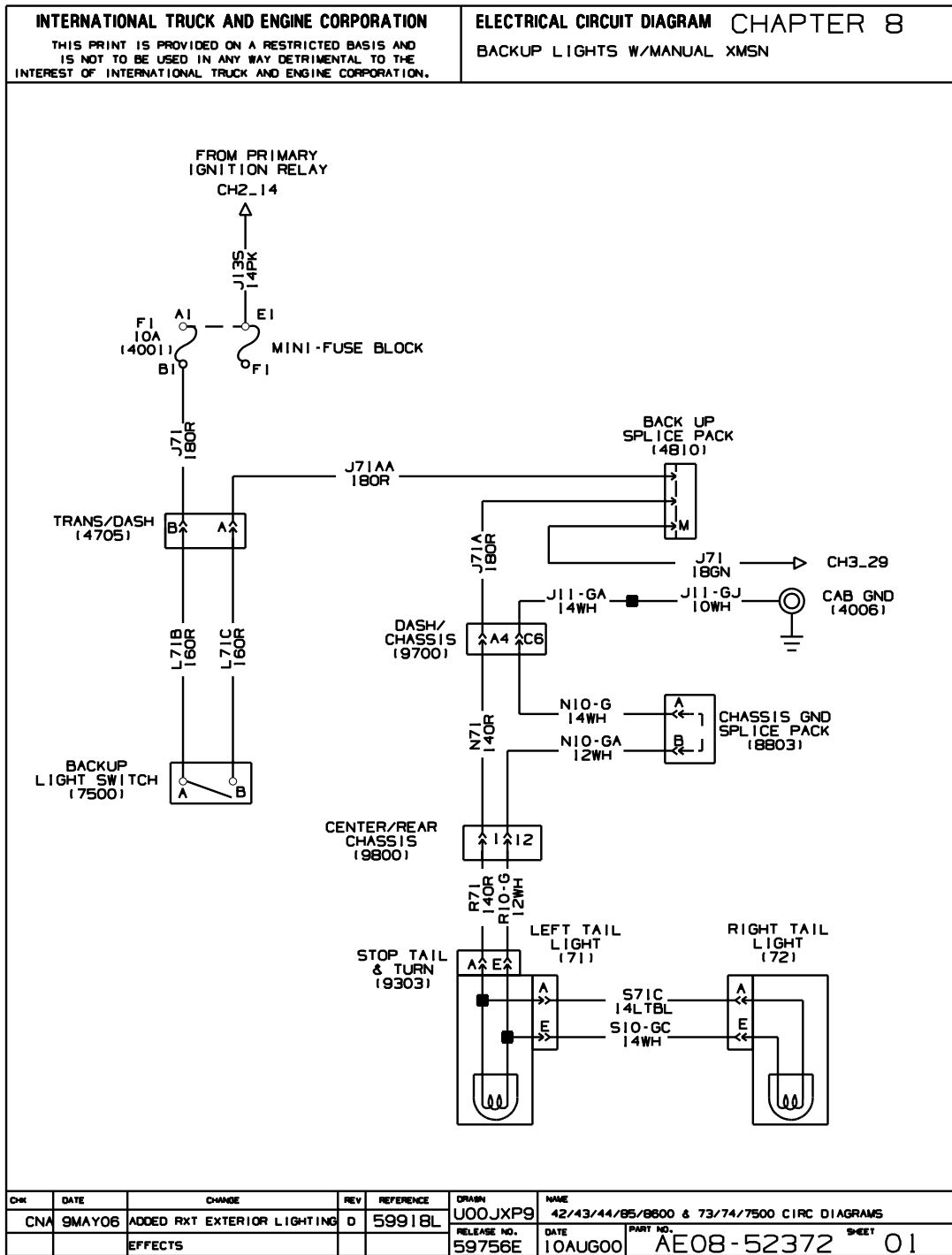


Figure 95 BackUp Lights

## 8.2. LIGHT SYSTEMS — CLEARANCE, MARKER, PARK, TAIL, TURN AND STOP LAMPS, P. 2

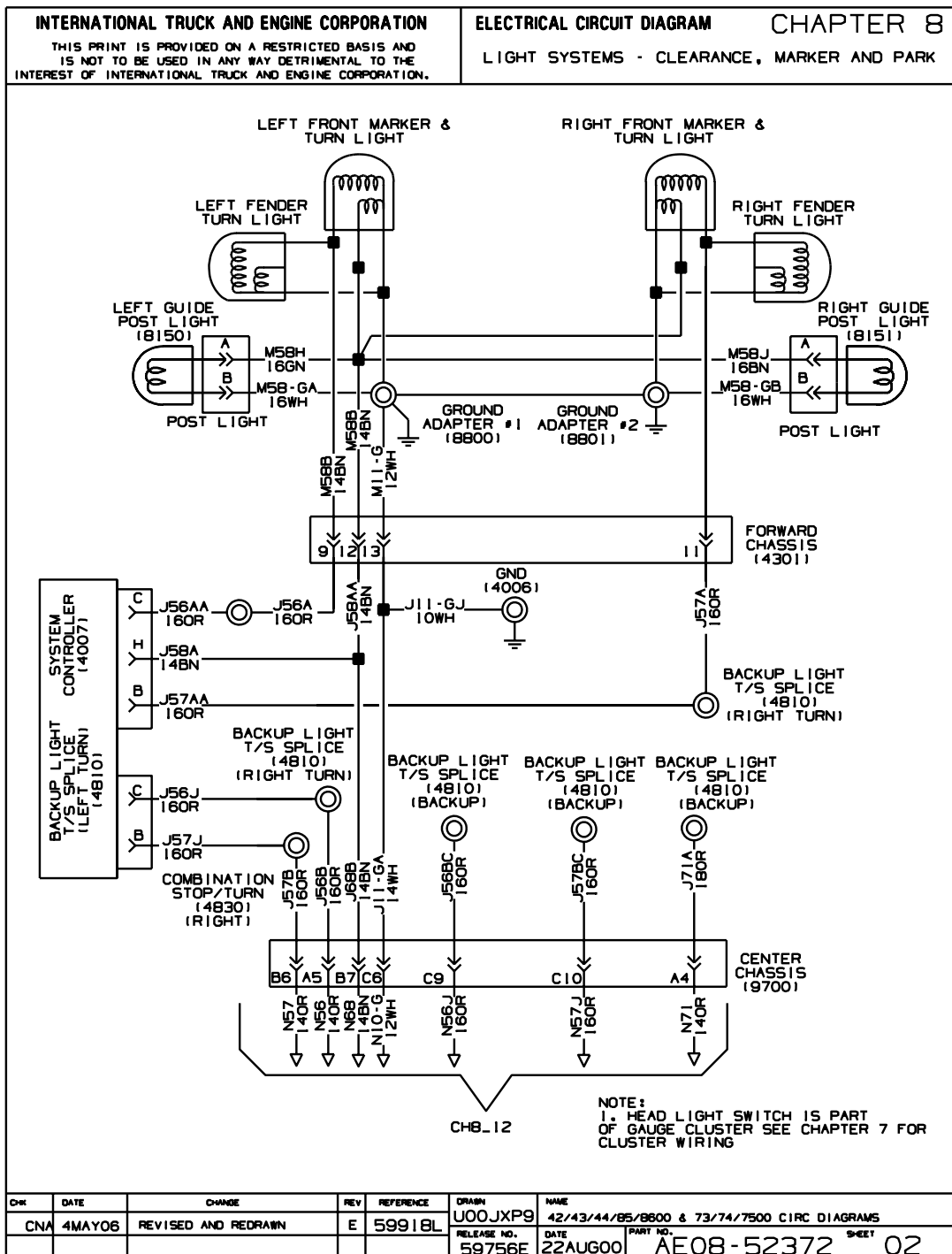


Figure 96 Light Systems — Clearance, Marker, Park, Tail, Turn and Stop Lamps

## 8.3. LIGHT SYSTEMS — CLEARANCE, MARKER, PARK, TAIL, TURN AND STOP LAMPS (CONT.), P. 3

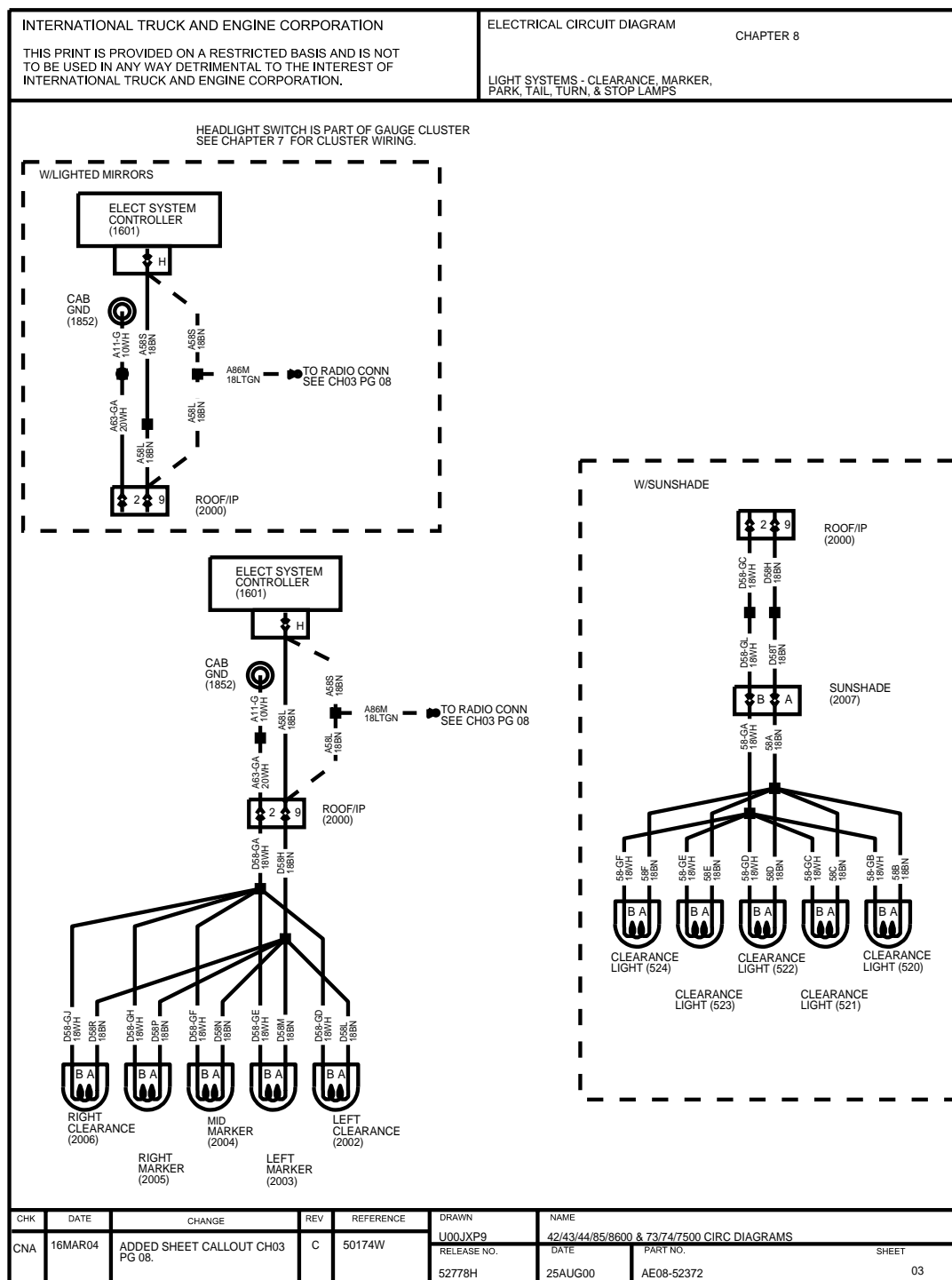


Figure 97 Light Systems — Clearance, Marker, Park, Tail, Turn and Stop Lamps (Cont.)



## 8.4. LIGHT SYSTEMS — TURN SIGNAL AND STOP SWITCHES, P. 4

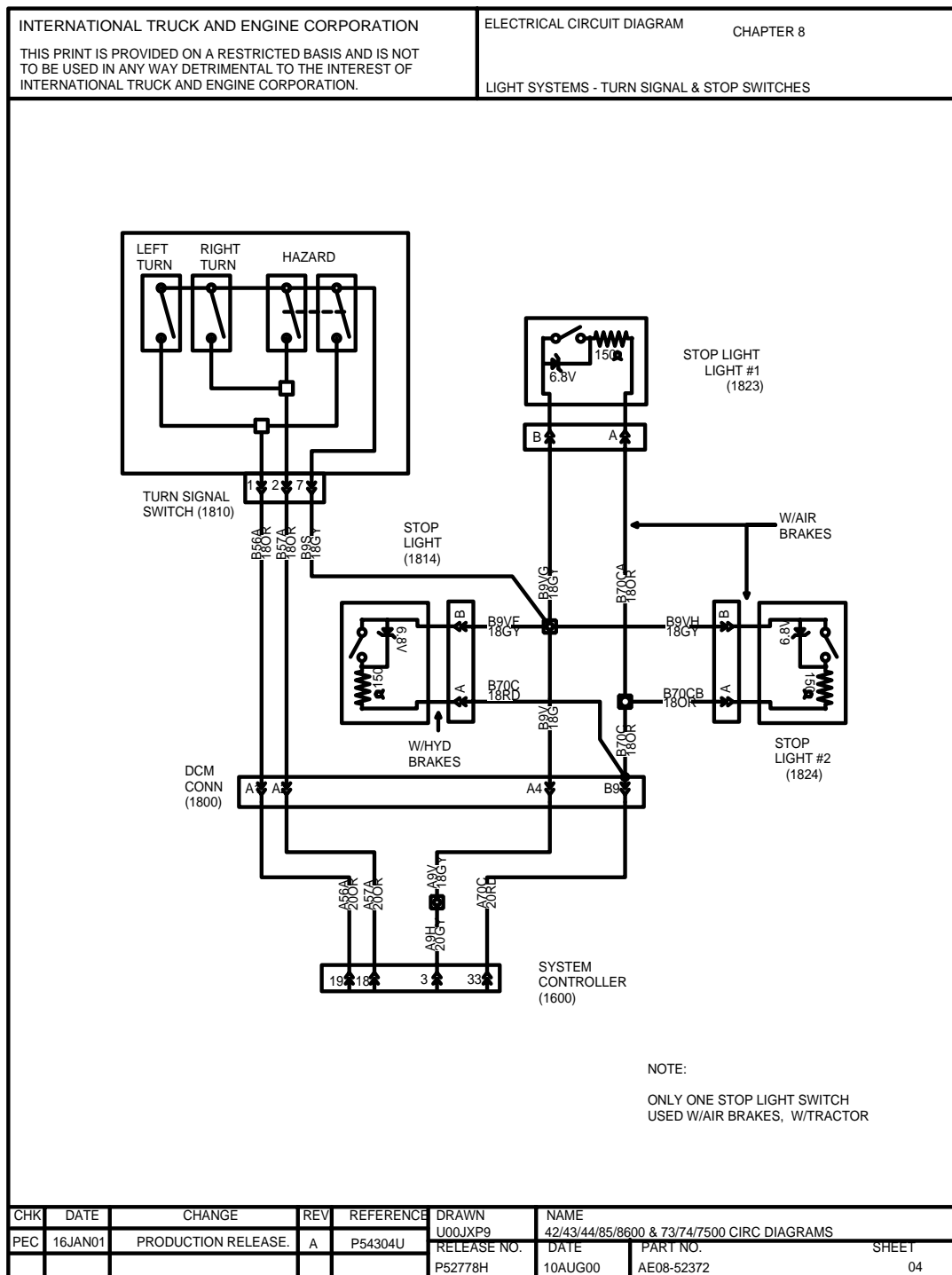


Figure 98 Light Systems — Turn Signal and Stop Switches

## 8.5. DOME LIGHT, MAP LIGHT, P. 5

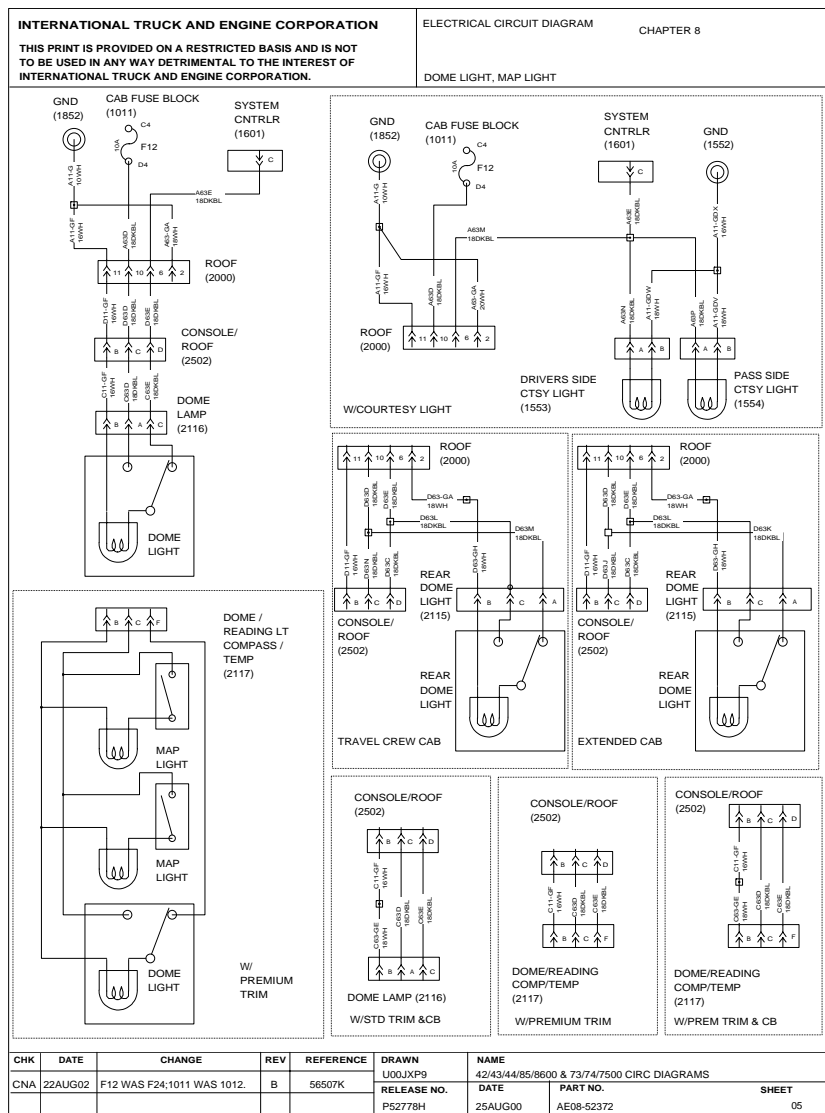
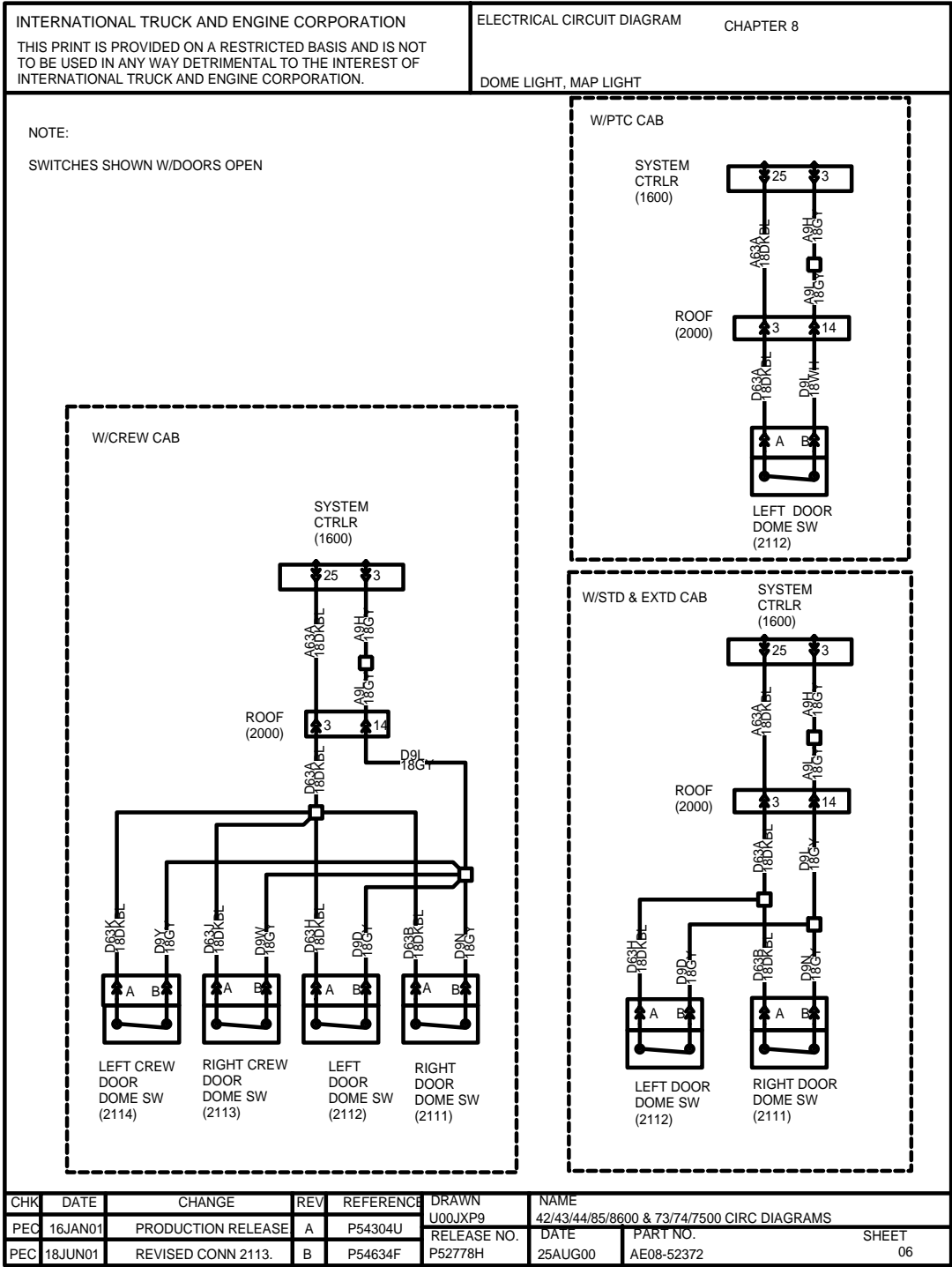


Figure 99 Dome Light, Map Light

8.6. DOME LIGHT, MAP LIGHT (CONT.), P. 6



## 8.7. FOG LIGHT AND WORK LIGHT, P. 7

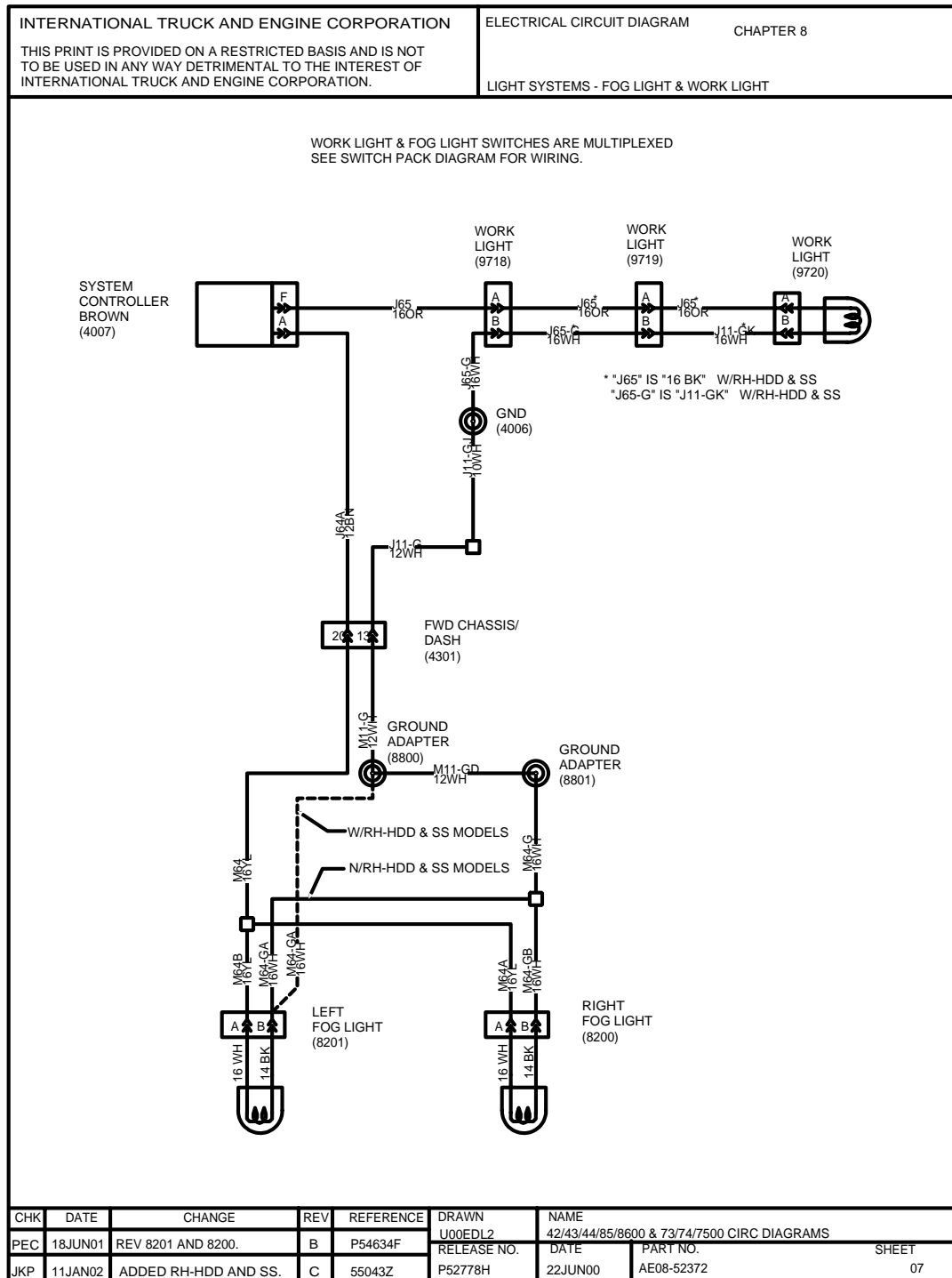


Figure 101 Fog Light and Work Light

INTERNATIONAL TRUCK AND ENGINE CORPORATION

ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 8

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HEADLIGHTS

NOTE:

HEADLIGHTS CONTROLLED BY SWITCH ON GAUGE CLUSTER THUOUGH DRIVETRAIN J1939 DATA LINK AND CLUSTER HEADLIGHT ENABLE PIN (SEE CH07\_05 FOR GAUGE CLUSTER WIRING)

The diagram illustrates the electrical circuit for the headlights. It begins with the **ELECT SYSTEM CONTROLLER BROWN (4007)**, which provides power to the **HI BEAM** and **LO BEAM** terminals. The circuit then passes through a **FWD CHASSIS/ DASH (4301)** before reaching the **GROUND ADAPTER (8800)** and **GROUND ADAPTER (8801)**. These adapters connect to the **LEFT HEADLIGHT T/S HARNESS (8001)** and **RT HEADLIGHT T/S HARNESS (8000)** respectively. The harnesses are shown with terminals for **A**, **C**, and **B**, which correspond to the **HI BEAM** and **LO BEAM** outputs.

This diagram shows the control circuitry for the headlights. The **TURN SIGNAL SWITCH (1810)** is connected to the **DIMMER** and **FTP** (Flash to Pass) functions. The switch has terminals for **3**, **4**, and **7**. The **SYSTEM CONTROLLER (1600)** provides power to the **HIGH BEAM**, **FLASH TO PASS**, and **ZERO VOLT REF** terminals. The circuit includes a **DCM CONN (1800)** and a **GROUND STUD (4006)** for reference.

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	DATE	PART NO.	SHEET
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00JXP9	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	10AUG00	AE08-52372	08
					P52778H				

### Figure 102 Headlights

[illegible]

**Figure 103** Aux. Headlights, Aux. Park, Aux Turn

8.10. PANEL LIGHTS, P. 10

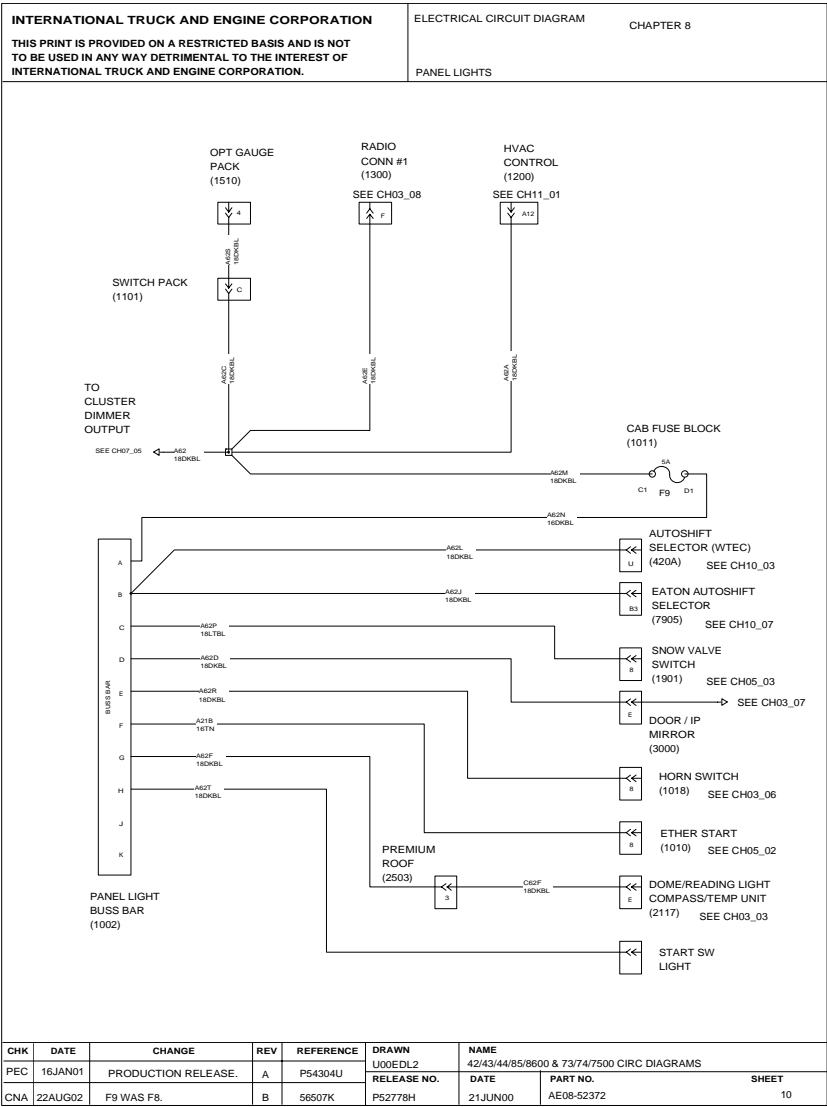


Figure 104 Panel Lights

## 8.11. RXT EXTERIOR LIGHTING, P. 11

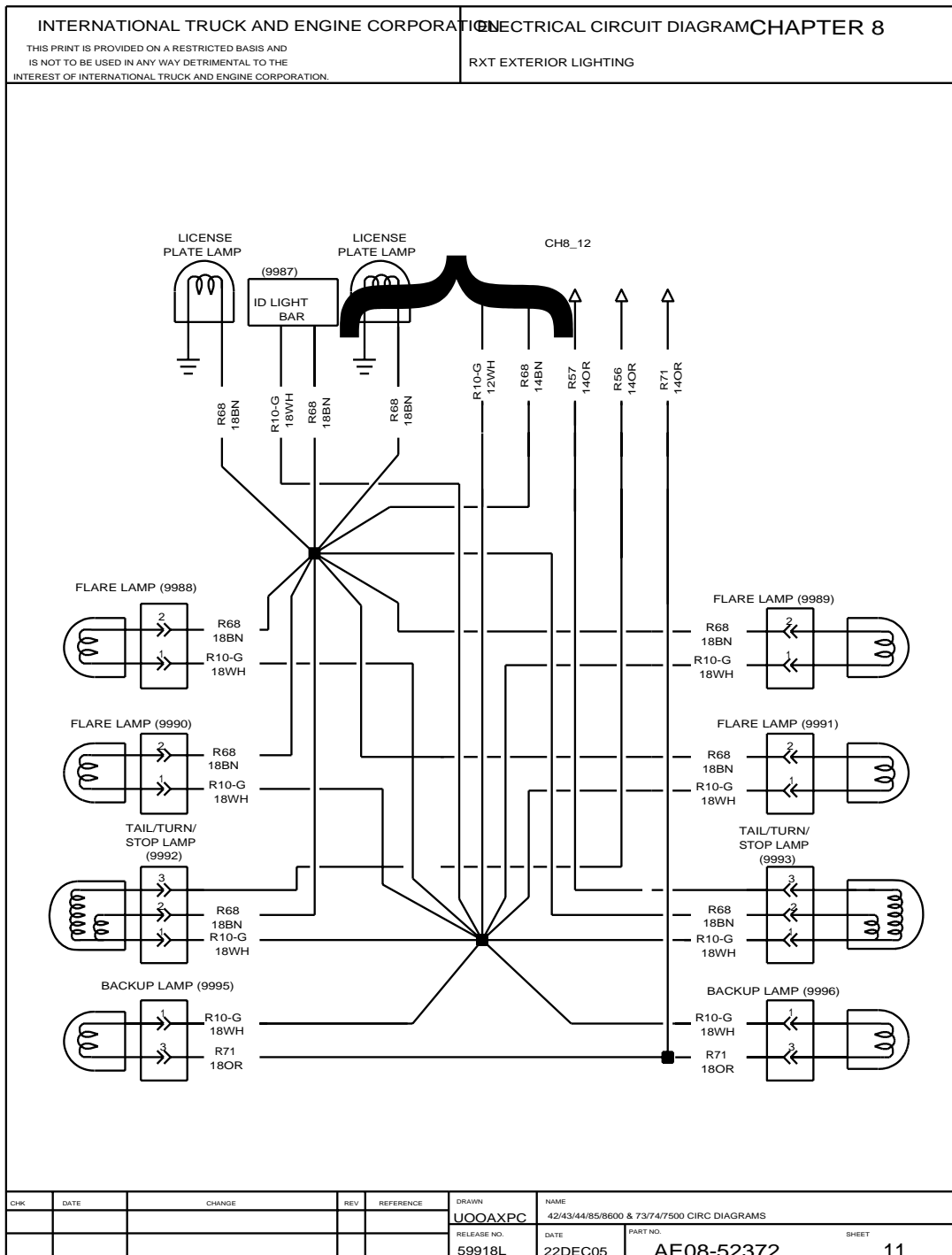


Figure 105 RXT Exterior Lighting



## 8.12. TAIL, TURN, AND STOP LAMPS, P. 12

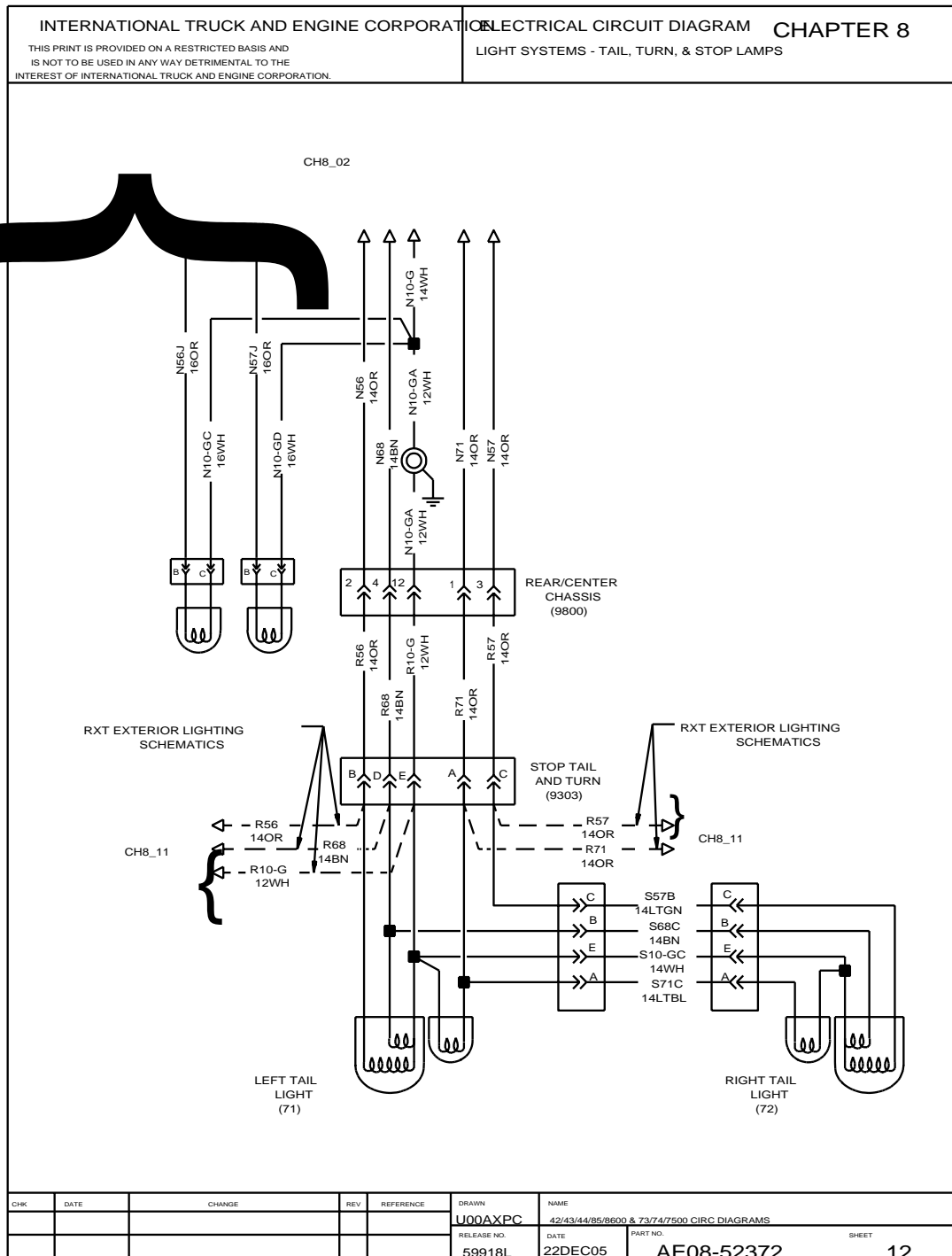


Figure 106 Tail, Turn, and Stop Lamps

## 9. CHASSIS ACCESSORIES (CHAPTER 9)

### 9.1. AIR DRYER AND HEATED DRAIN VALVE, P. 1

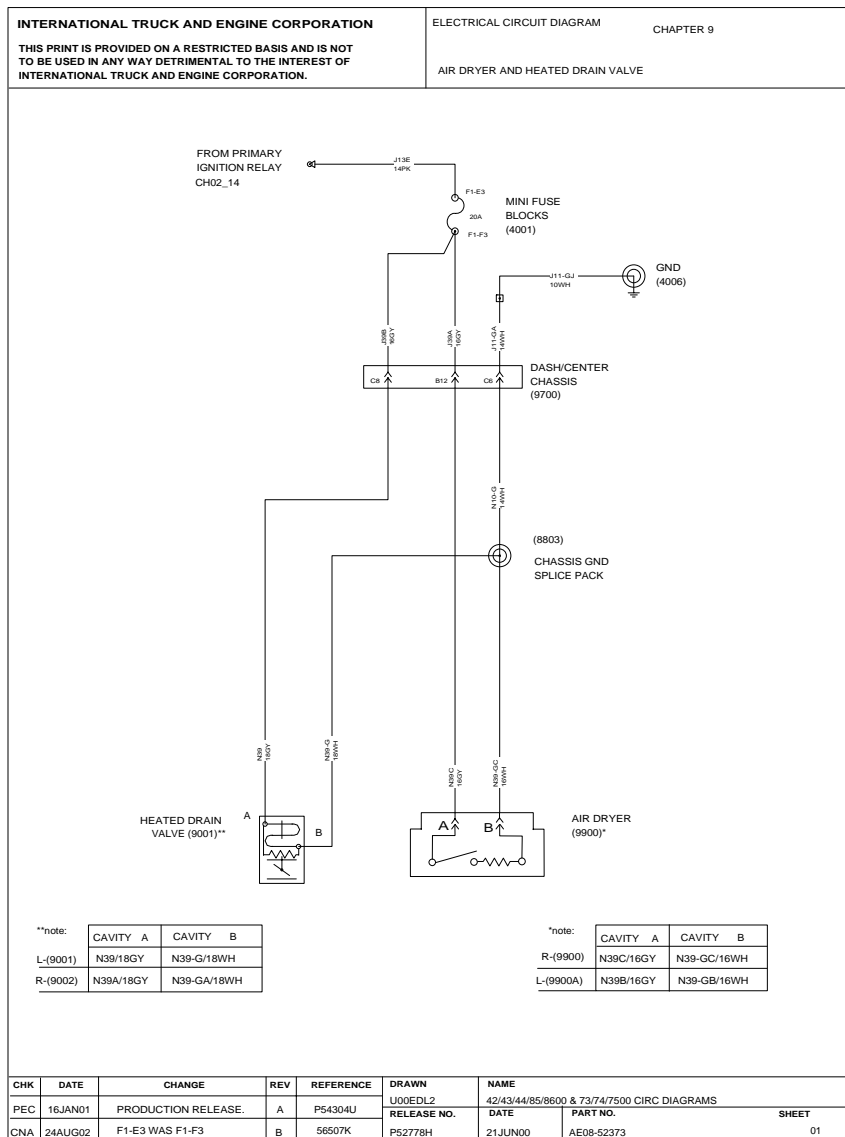


Figure 107 Air Dryer and Heated Drain Valve

## 9.2. ANTILOCK BRAKE SYSTEM (ABS), AIR, P. 2

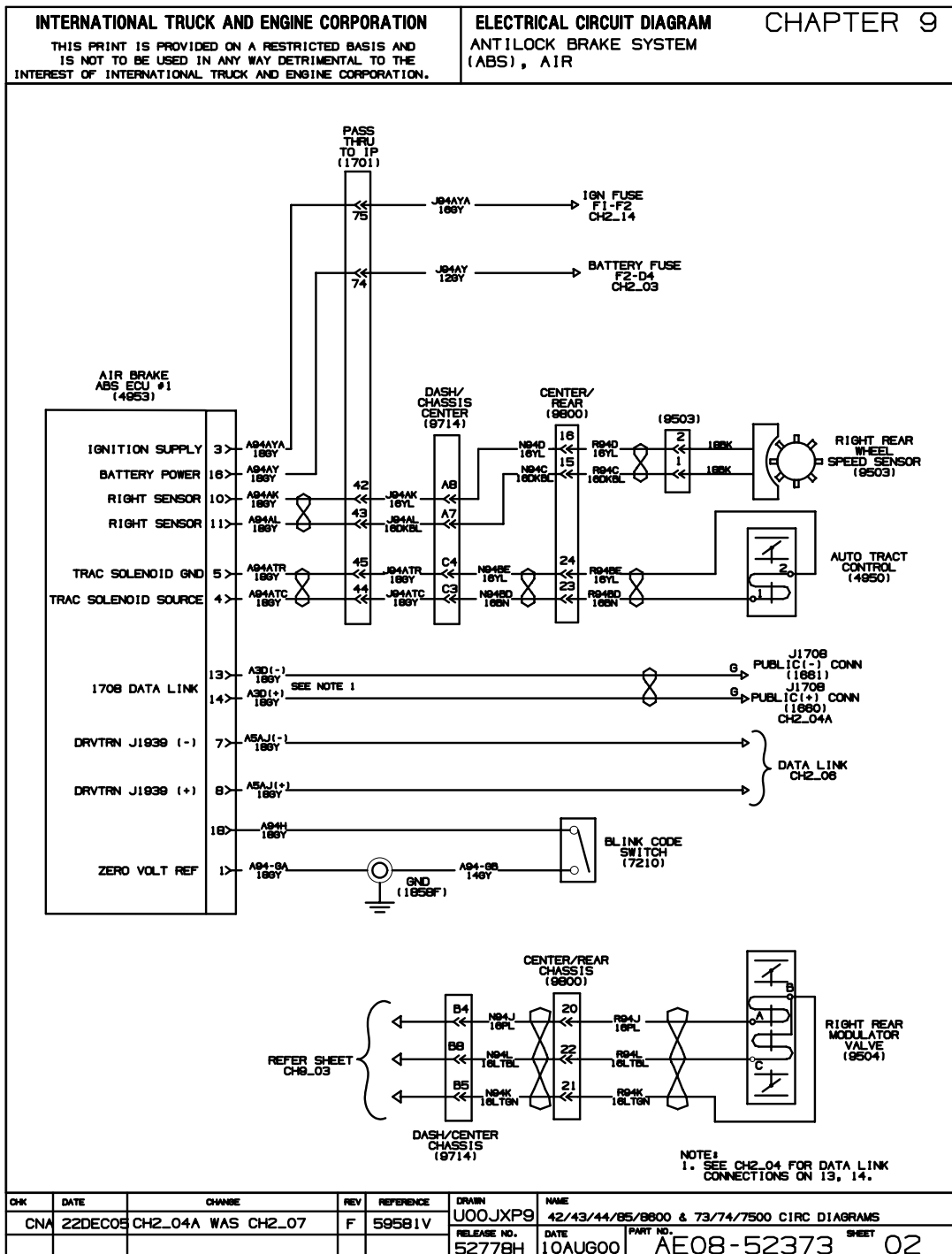


Figure 108 Antilock Brake System (ABS), Air

### 9.3. ANTILOCK BRAKE SYSTEM (ABS), AIR, TRACTION CONTROL, P. 3

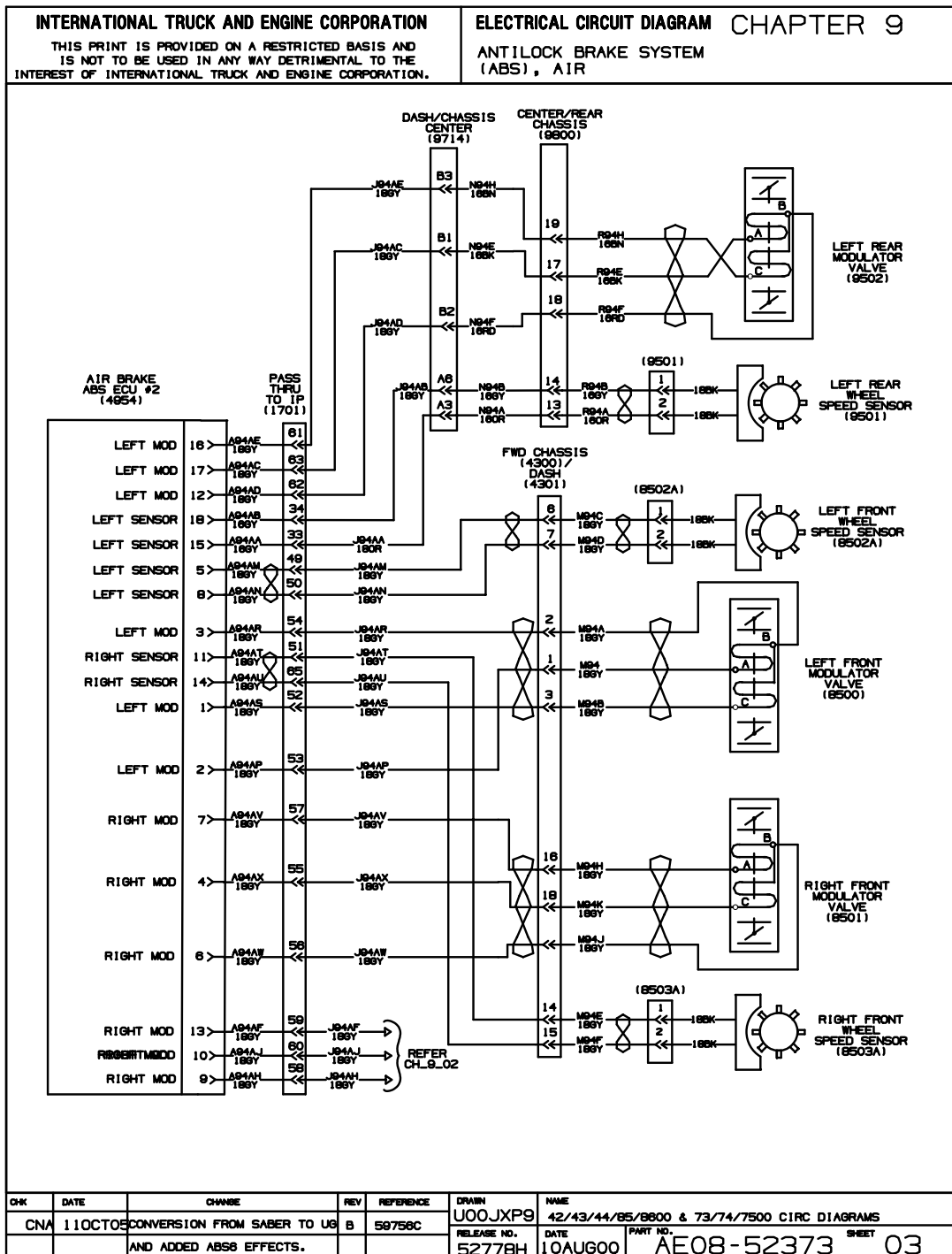


Figure 109 Antilock Brake System (ABS), Air, Traction Control

9.4. ANTILOCK BRAKE SYSTEM (ABS), HYDRAULIC, P. 4

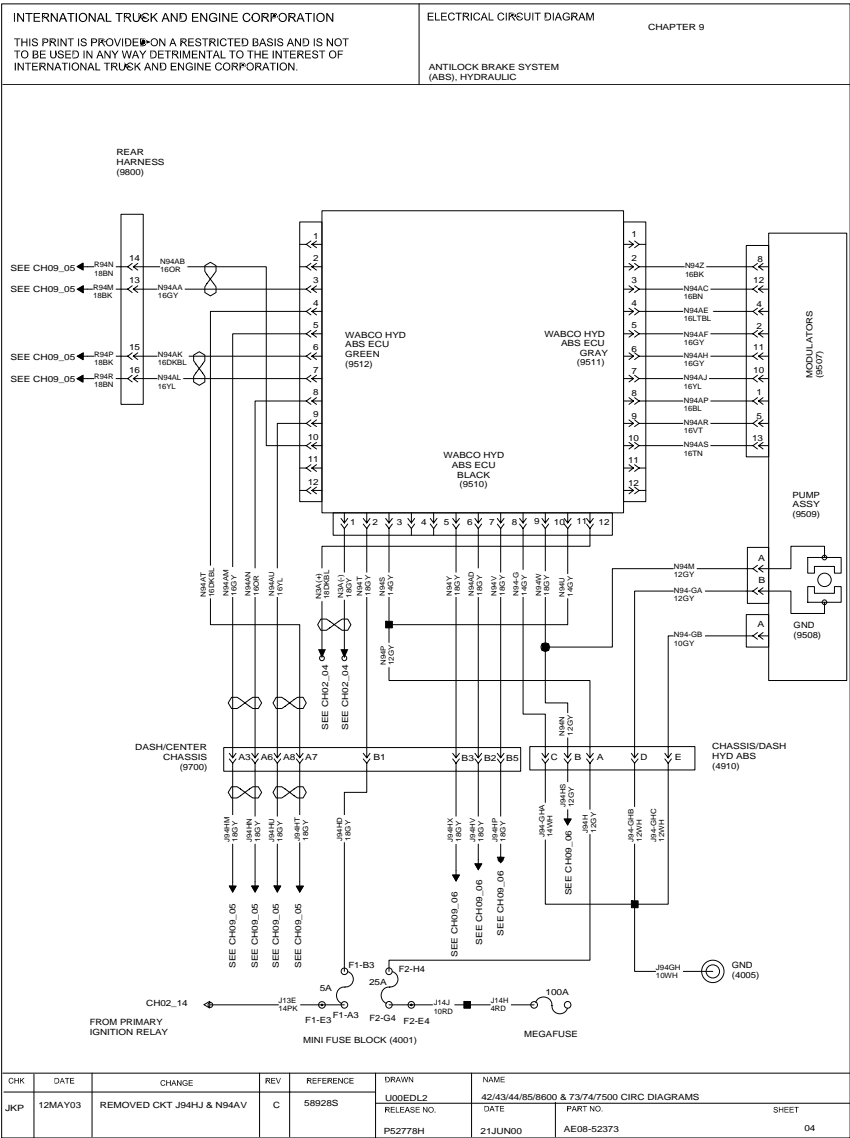


Figure 110 Antilock Brake System (ABS), Hydraulic

## 9.5. ANTILOCK BRAKE SYSTEM (ABS), HYDRAULIC (CONT.), P. 5

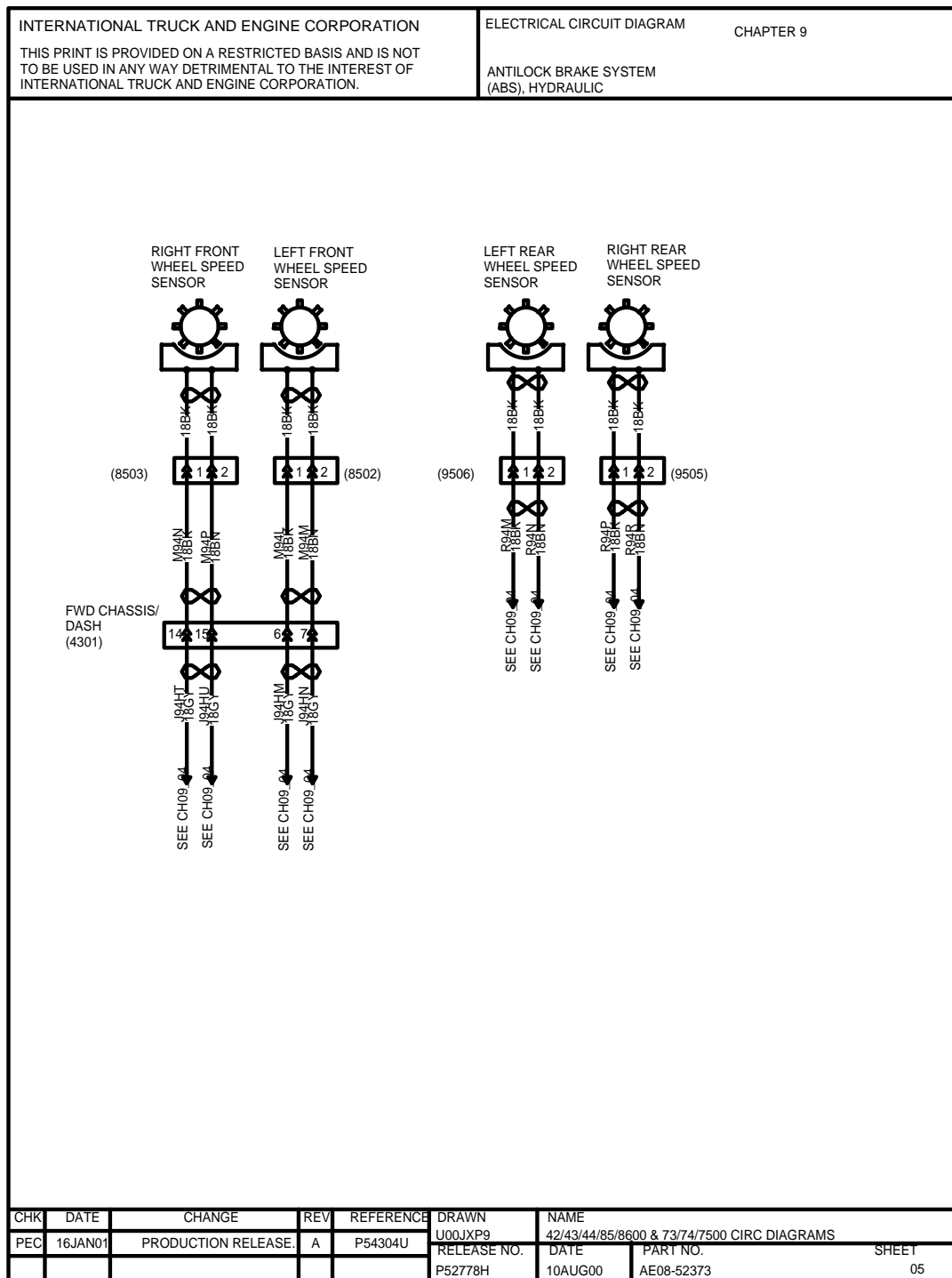


Figure 111 Antilock Brake System (ABS), Hydraulic (Cont.)

9.6. ANTILOCK BRAKE SYSTEM (ABS), HYDRAULIC (CONT.), P. 6

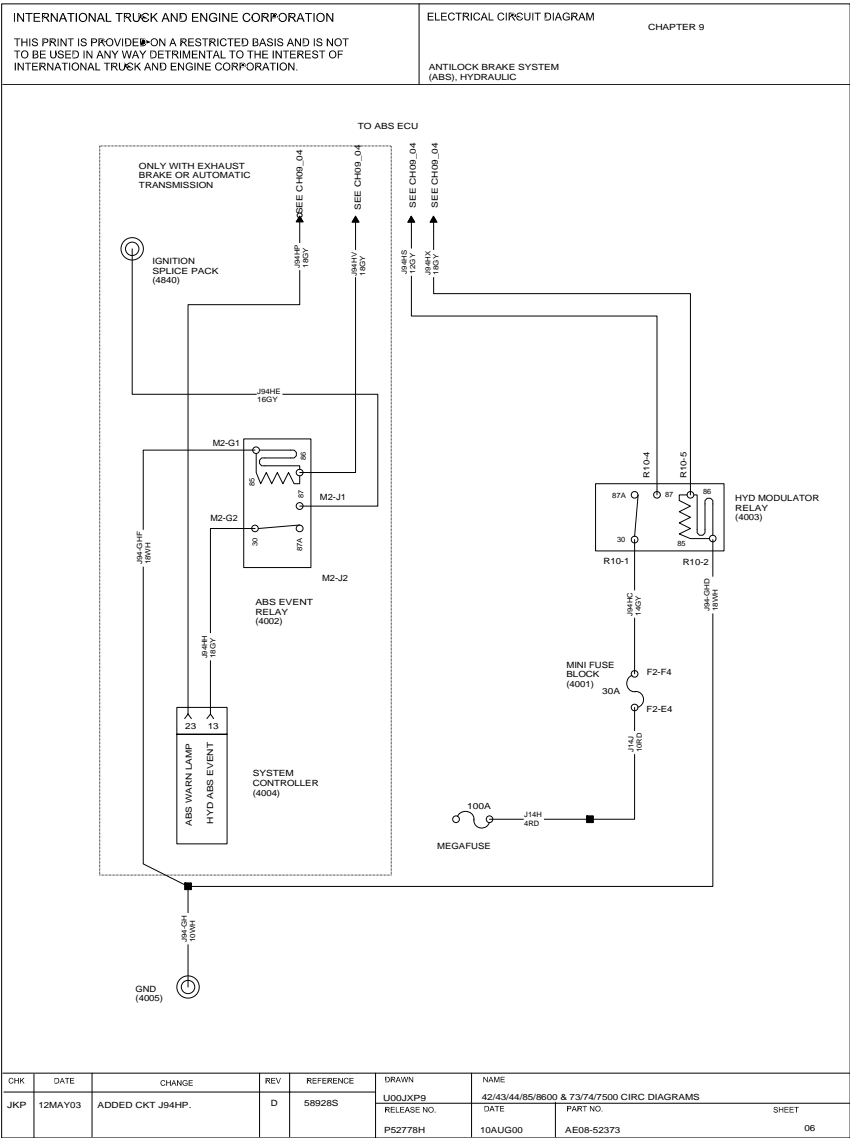


Figure 112 Antilock Brake System (ABS), Hydraulic (Cont.)

9.7. TWO SPEED AXLE SWITCH WITH MANUAL TRANSMISSION AND I6 HEUI FUEL  
HEATER N/WARN LIGHTS, P. 7

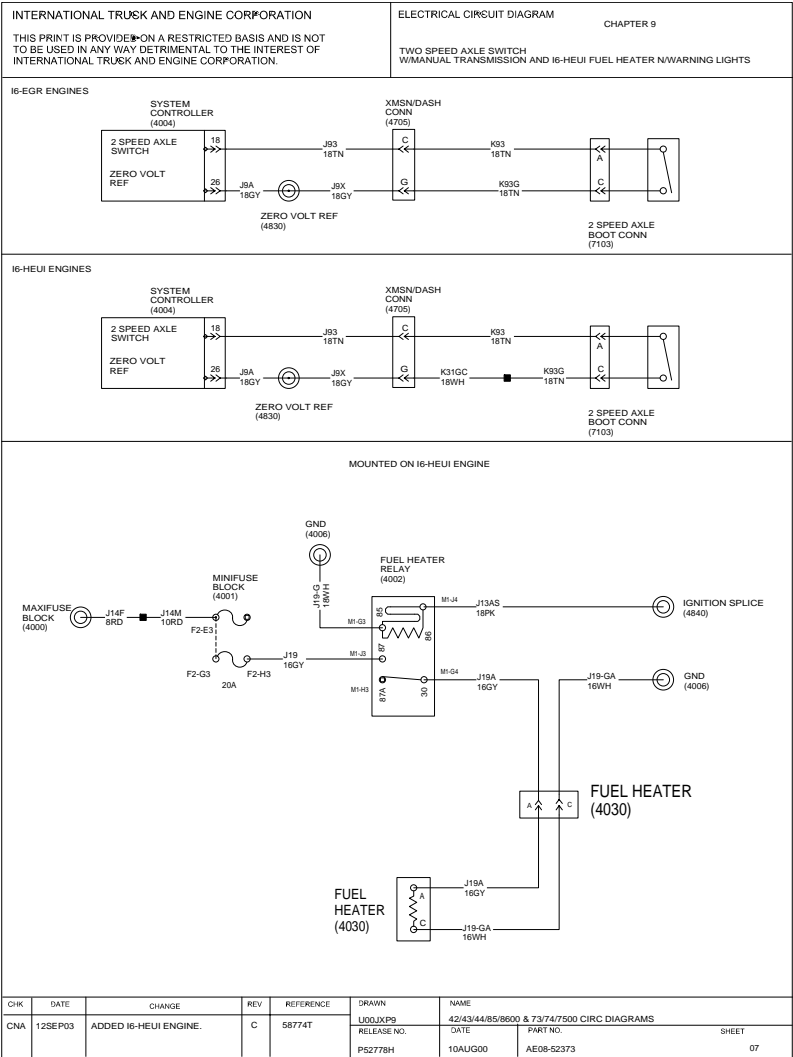


Figure 113 Two Speed Axle Switch With Manual Transmission and I6 HEUI Fuel Heater N/Warn Lights



## 9.8. BRAKE SYSTEM, HYDRAULIC, P. 8

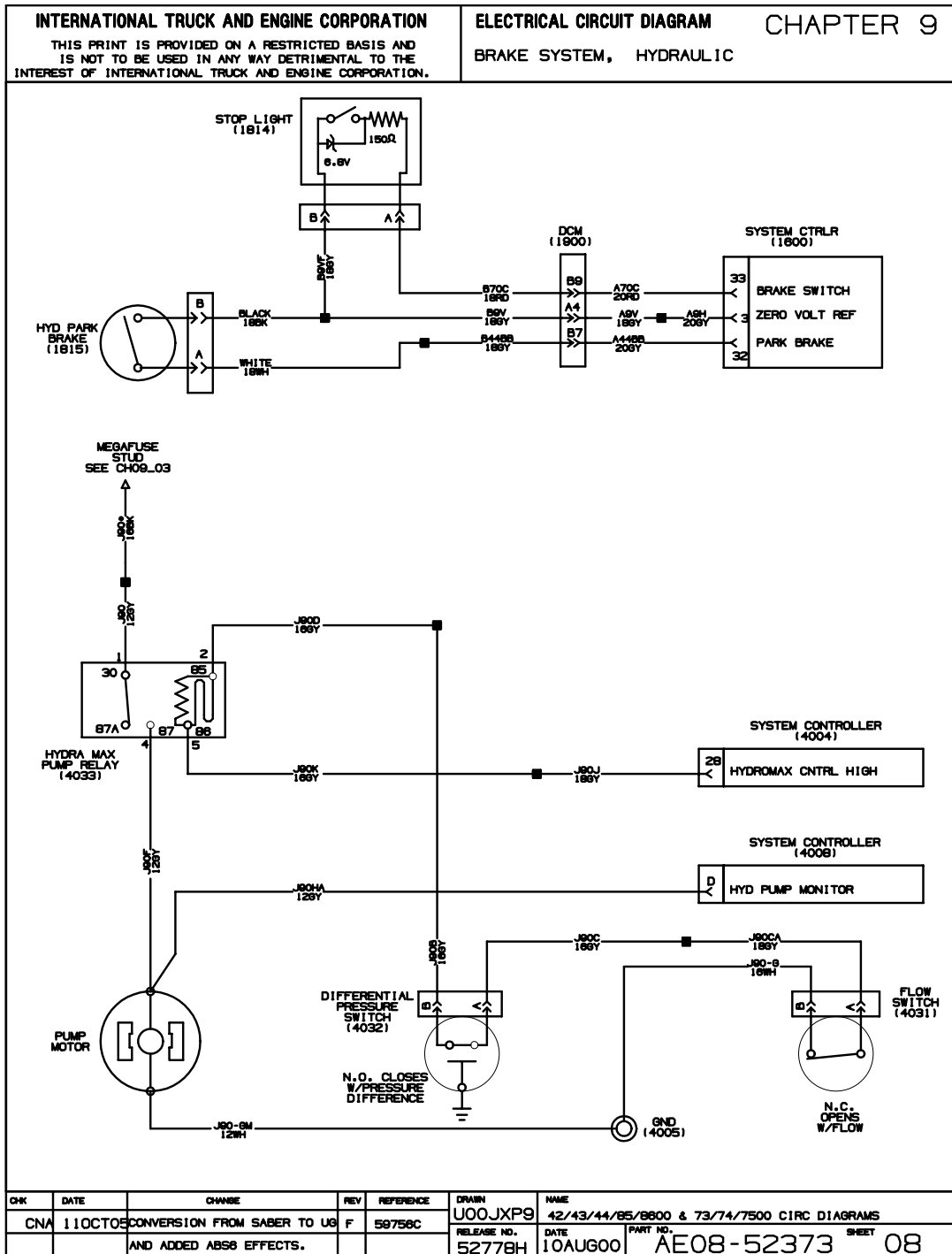


Figure 114 Brake System, Hydraulic

## 9.9. FUEL TRANSFER PUMP, P. 9

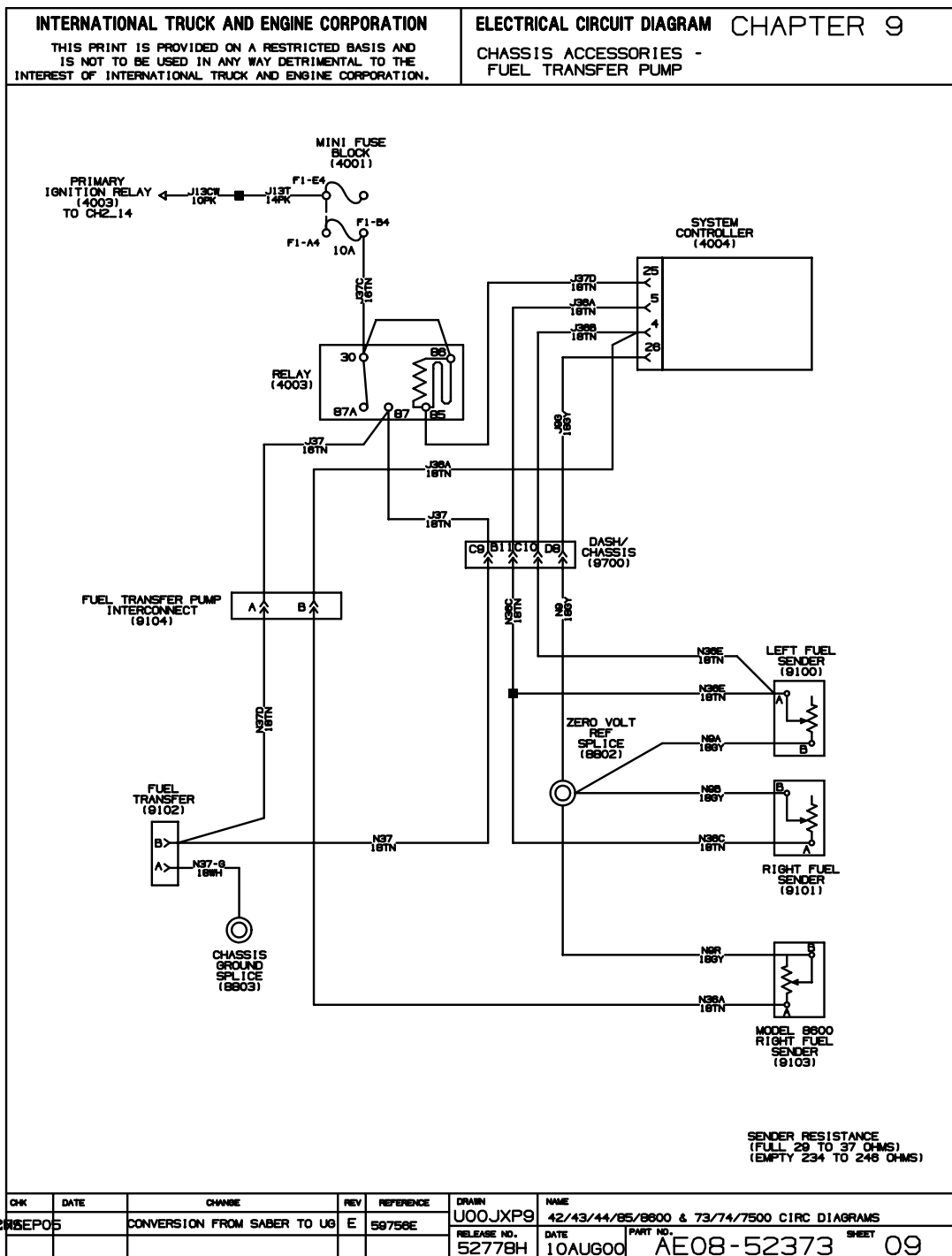


Figure 115 Fuel Transfer Pump

## 9.10. BACK OF CAB BODY BUILDER AND TRAILER STOP, TAIL, MARKER, P. 10

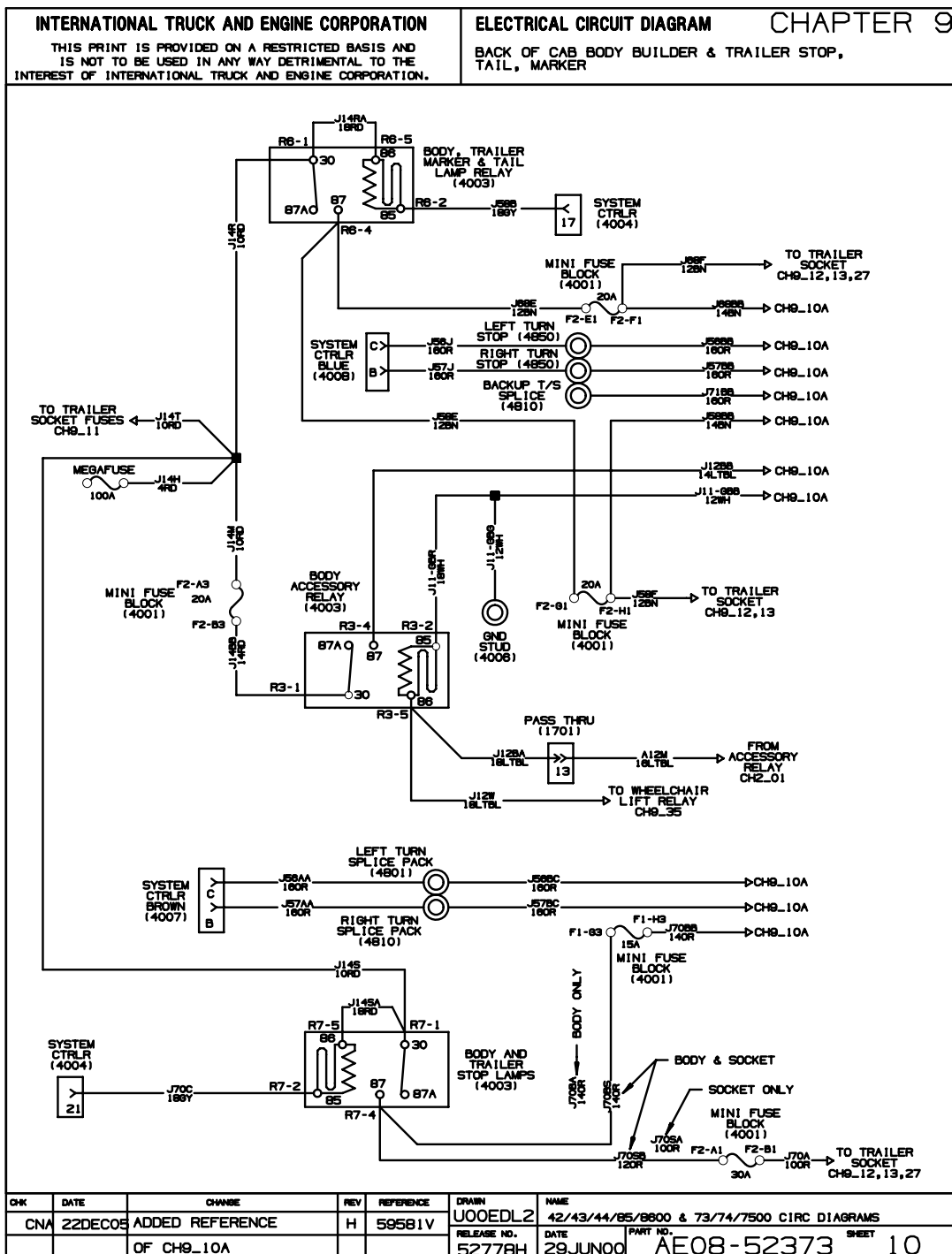


Figure 116 Back of Cab Body Builder and Trailer Stop, Tail, Marker

## 9.11. BACK OF CAB BODY BUILDER AND TRAILER STOP, TAIL, MARKER, P. 10A

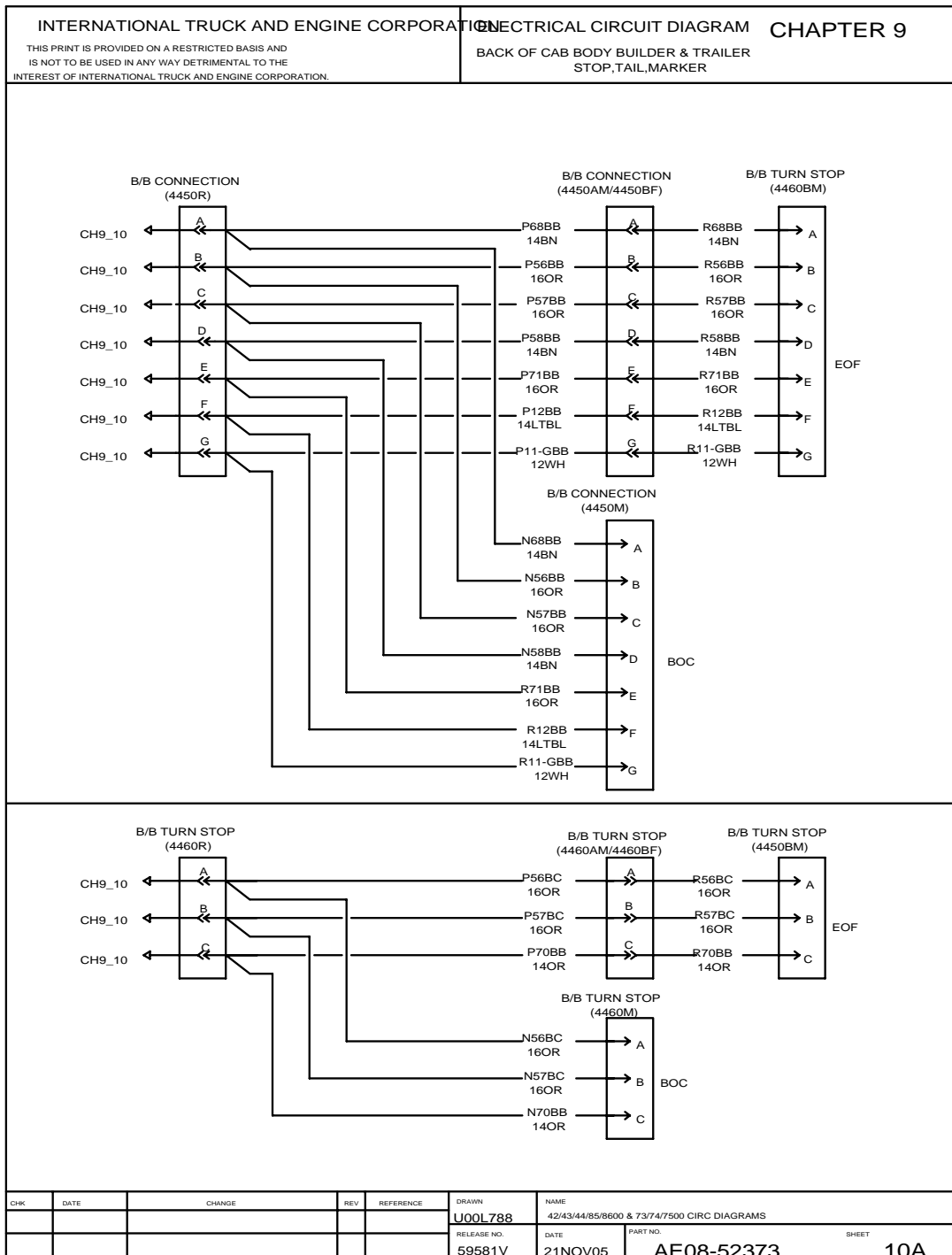


Figure 117 Back of Cab Body Builder and Trailer Stop, Tail, Marker

## 9.12. BODY BUILDER AND TRAILER TURNS, CENTER PIN ABS, CENTER PIN AUX, P. 11

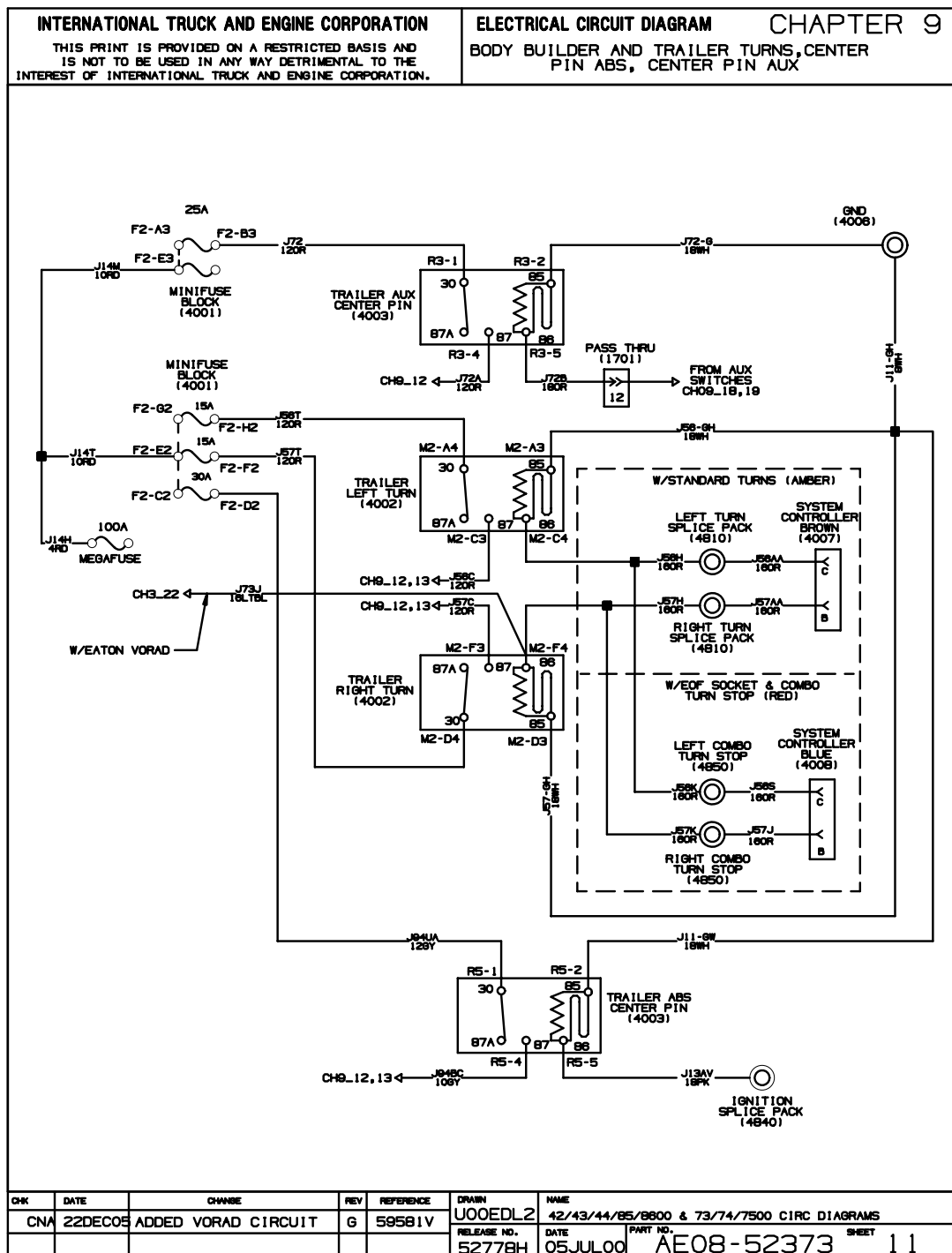


Figure 118 Body Builder and Trailer Turns, Center Pin ABS, Center Pin Aux

[illegible]

**Figure 119 Body Builder and Trailer Socket Back of Cab Sockets**



## 9.15. AIR SOLENOID 4-WAY PACK, P. 14

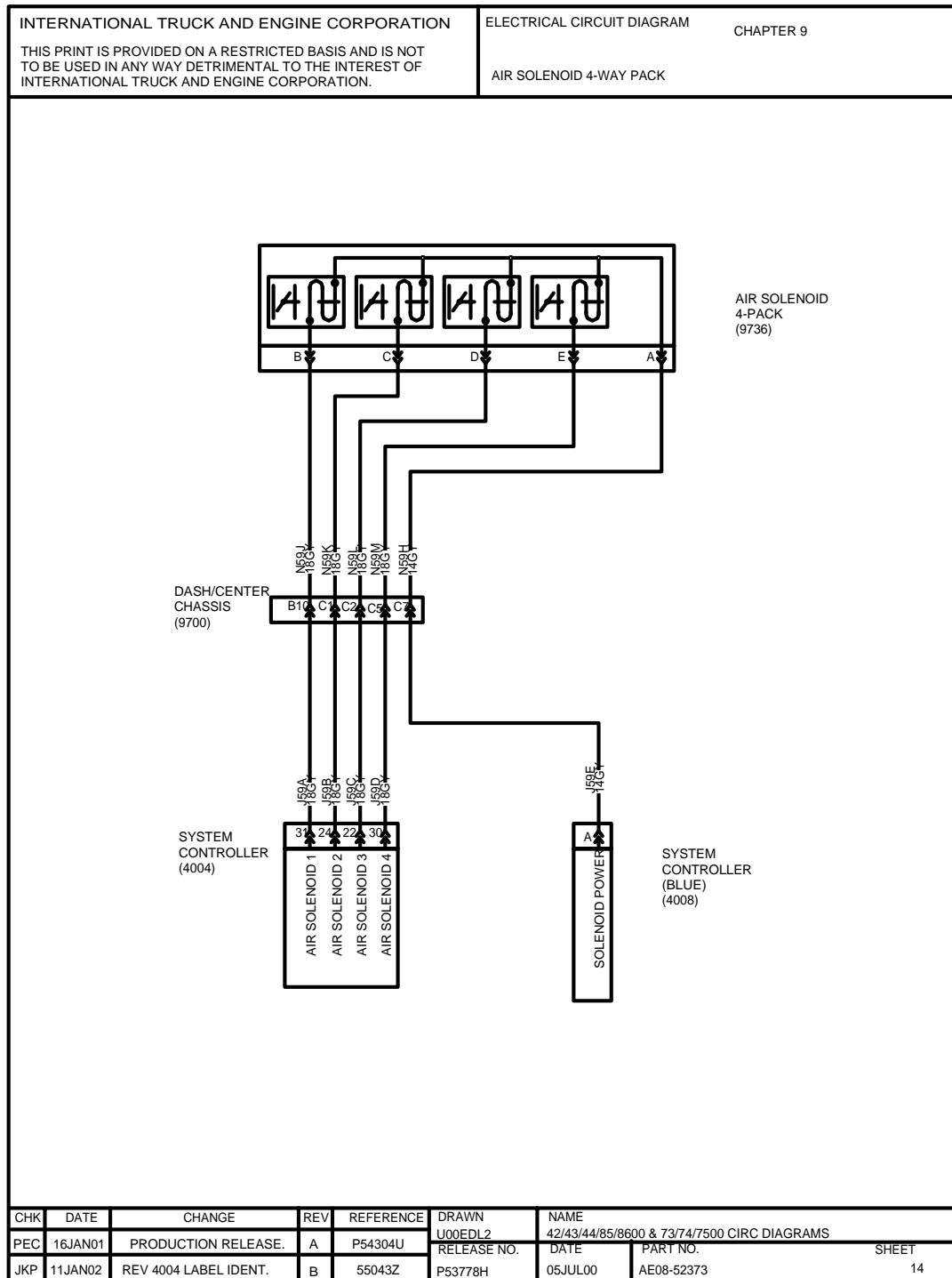


Figure 121 Air Solenoid 4-Way Pack



## 9.16. REMOTE POWER UNITS, SOLENOID PACKS, REMOTE ENGINE SPEED CONTROLLER, P. 15

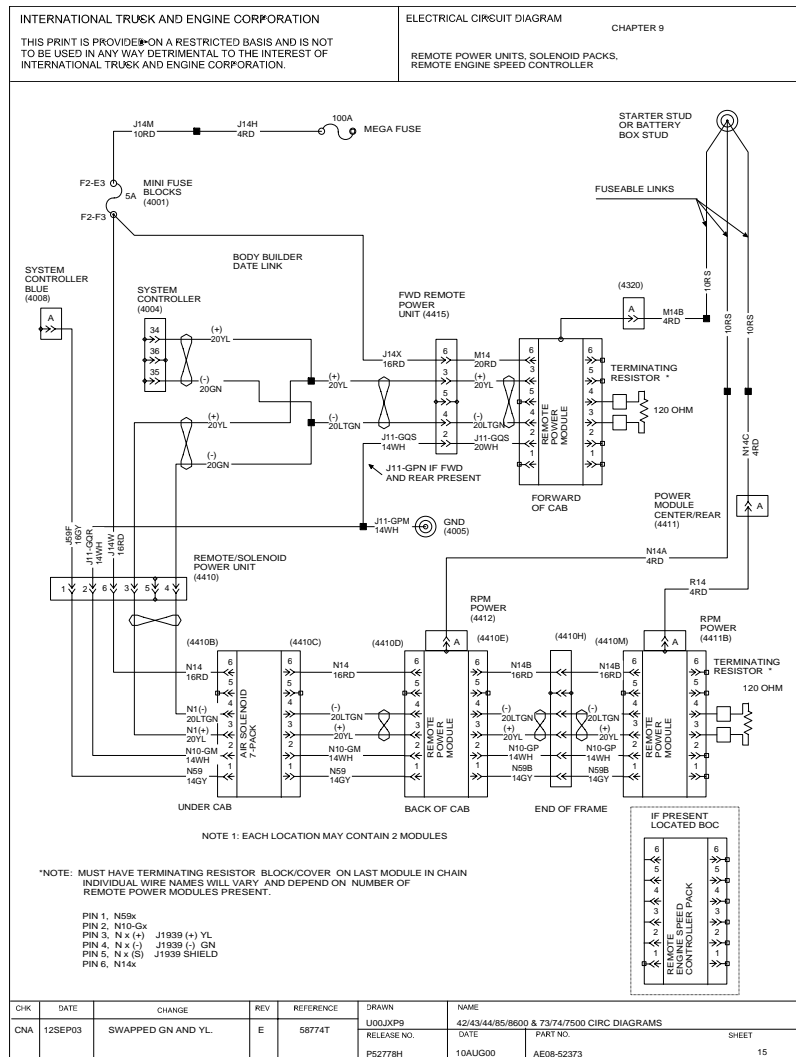


Figure 122 Remote Power Units, Solenoid Packs, Remote Engine Speed Controller

## 9.17. HYD POWER PARK, 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 INTERNATIONAL TRUCK AND ENGINE CORPORATION.	ELECTRICAL CIRCUIT DIAGRAM      CHAPTER 9  CHASSIS ACCESSORIES - HYD POWER PARK																																				
DIAGRAM NOT AVAILABLE																																					
<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: 15%;">DRAWN</td> <td colspan="3" style="width: 35%;">NAME</td> </tr> <tr> <td>PEC</td> <td>16JAN01</td> <td>PRODUCTION RELEASE.</td> <td>A</td> <td>P54304U</td> <td>U00EDL2</td> <td colspan="3">42/43/44/85/8600 &amp; 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> <td>PART NO.</td> <td>SHEET</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>P52778H</td> <td>10JUL00</td> <td>AE08-52373</td> <td>16</td> </tr> </table>		CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME			PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00EDL2	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS								RELEASE NO.	DATE	PART NO.	SHEET						P52778H	10JUL00	AE08-52373	16
CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME																															
PEC	16JAN01	PRODUCTION RELEASE.	A	P54304U	U00EDL2	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS																															
					RELEASE NO.	DATE	PART NO.	SHEET																													
					P52778H	10JUL00	AE08-52373	16																													

**Figure 123   HYD Power Park**

9.18. AIR SUSPENSION, P. 17

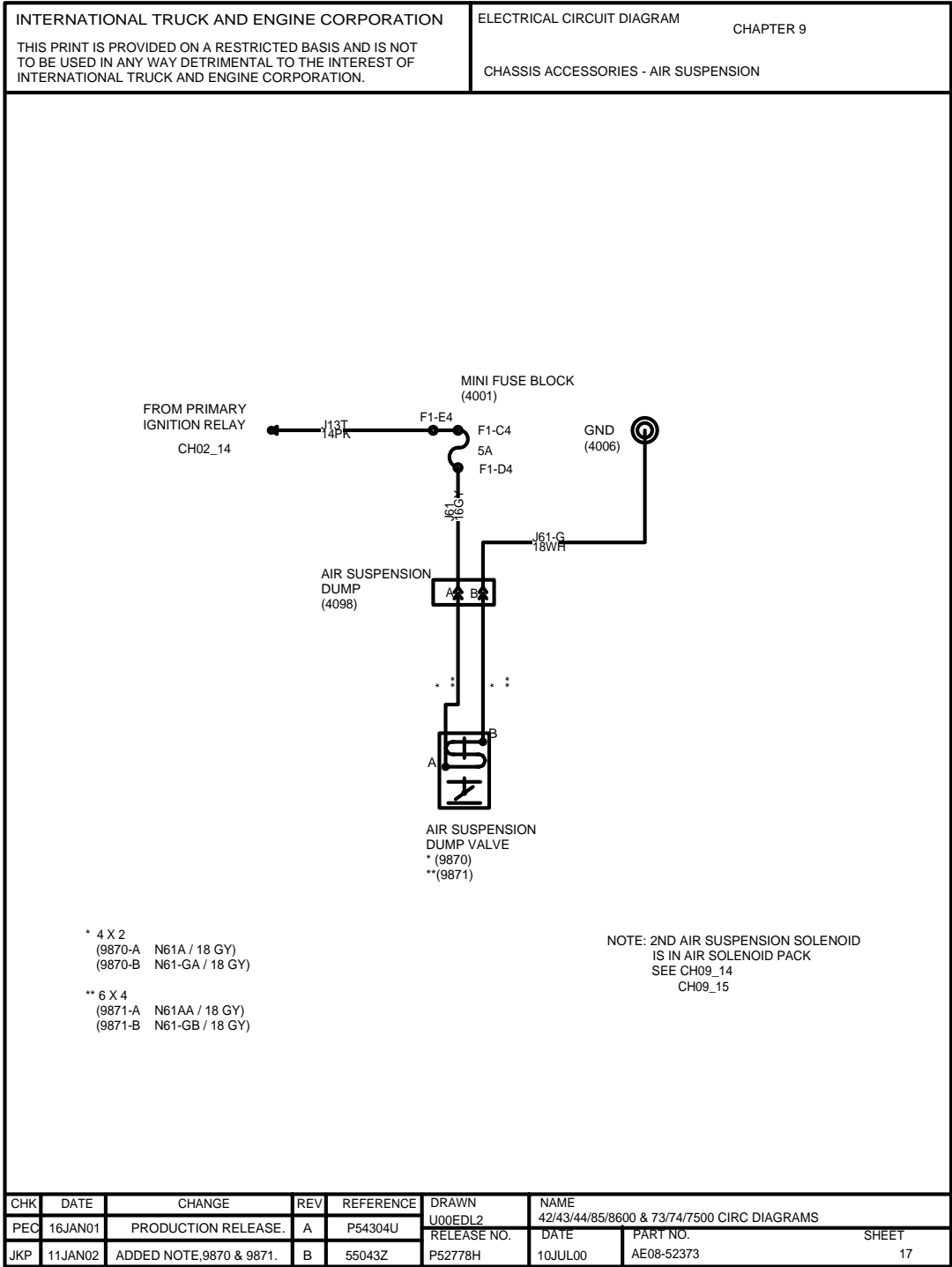


Figure 124 Air Suspension

### INTERNATIONAL TRUCK AND ENGINE CORPORATION

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### CHAPTER 9

#### AUX TRAILER, ACC CONTROLLED

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME
CNA	11OCT05	CONVERSION FROM SABER TO UG	C	59758C	UOODLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS
		AND ADDED ABS8 EFFECTS.			RELEASE NO.	DATE
					5277RH	16JAN01
					PART NO.	SHEET
					AE08-52373	18

**Figure 125 Aux. Trailer, Acc Controlled**

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---	---

**CAB FUSE BLOCK (1014)**

C1 5A D1

**AUX TRAILER SOCKET SWITCH CONNECTOR (1006)**

**PASS THRU (1701)**

CHOB\_11 ← 72S 160R

**PANEL LIGHT ADAPTER BUSS BAR (1002)  
SEE CHOB\_08**

**GROUND ADAPTER BUSS BAR (1003)**

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	RELEASE NO.	DATE	PART NO.	SHEET
CNA	11OCT05	CONVERSION FROM SABER TO UG	C	59756C	WOODLCK	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	5277RH	16JAN01	AE08-52373	19
		AND ADDED ABS EFFECTS.								

**Figure 126 Aux. Trailer, Btry Controlled**



## 9.22. LIFT AXLES (STEERABLE), P. 21

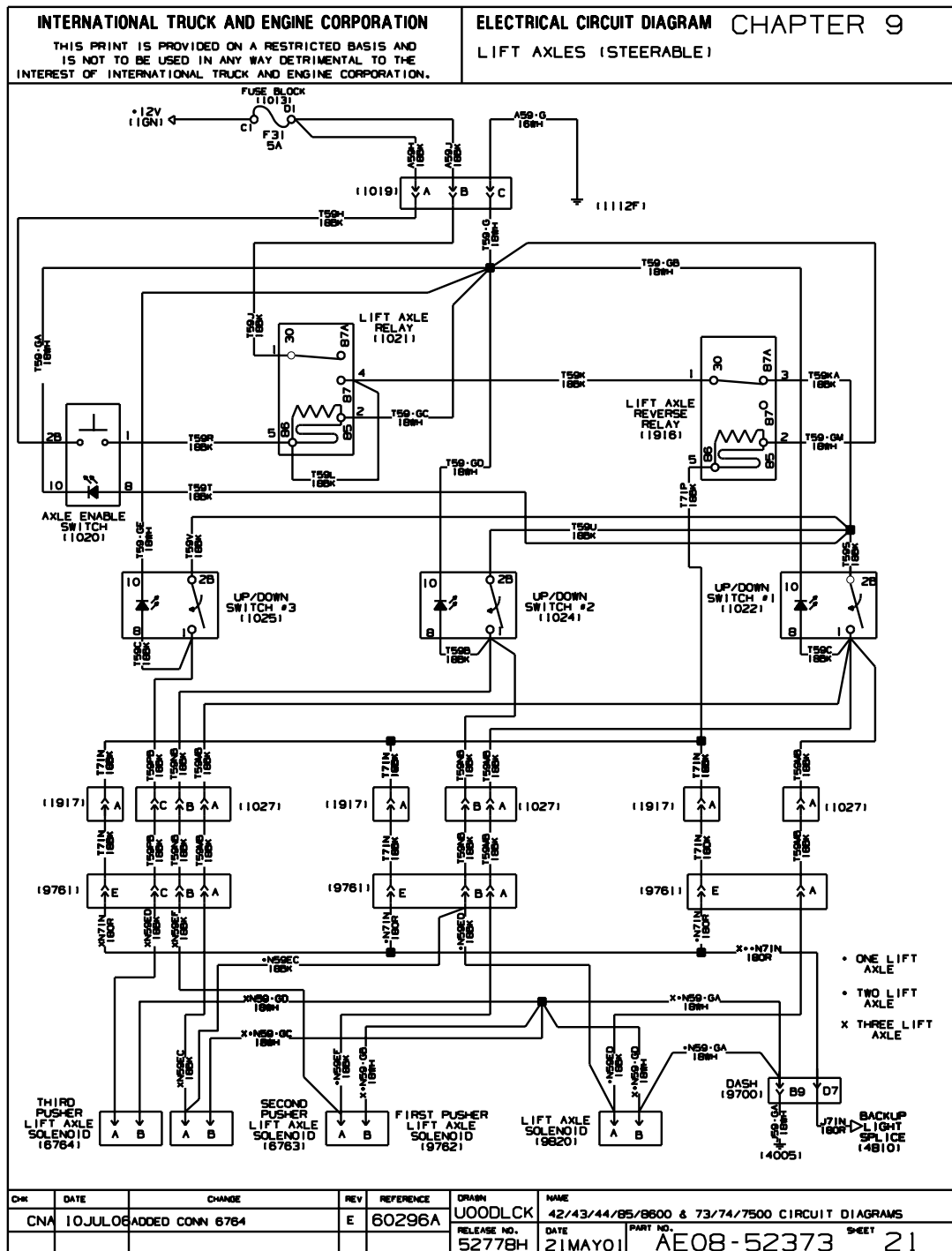


Figure 128 Lift Axles (Non-Steerable)

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### ELECTRICAL CIRCUIT DIAGRAM CHAPTER 9

#### AIR ACTUATED PARK BRAKE

#### AIR ACTUATED PARK BRAKE W/HYD CHASSIS

#### AUTO APPLY AIR ACTUATED PARK BRAKE W/HYD CHASSIS

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME
CNA	11OCT05	CONVERSION FROM SABER TO UG	B	59756C	U00ARW2	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS
		AND ADDED ABS EFFECTS.			RELEASE NO.	PART NO.
					52778H	19SEP01

AE08-52373
SHEET 22

### Figure 129 Air Actuated Park Brake



## 9.24. ANTILOCK BRAKE SYSTEM, WABCO AIR, P. 23

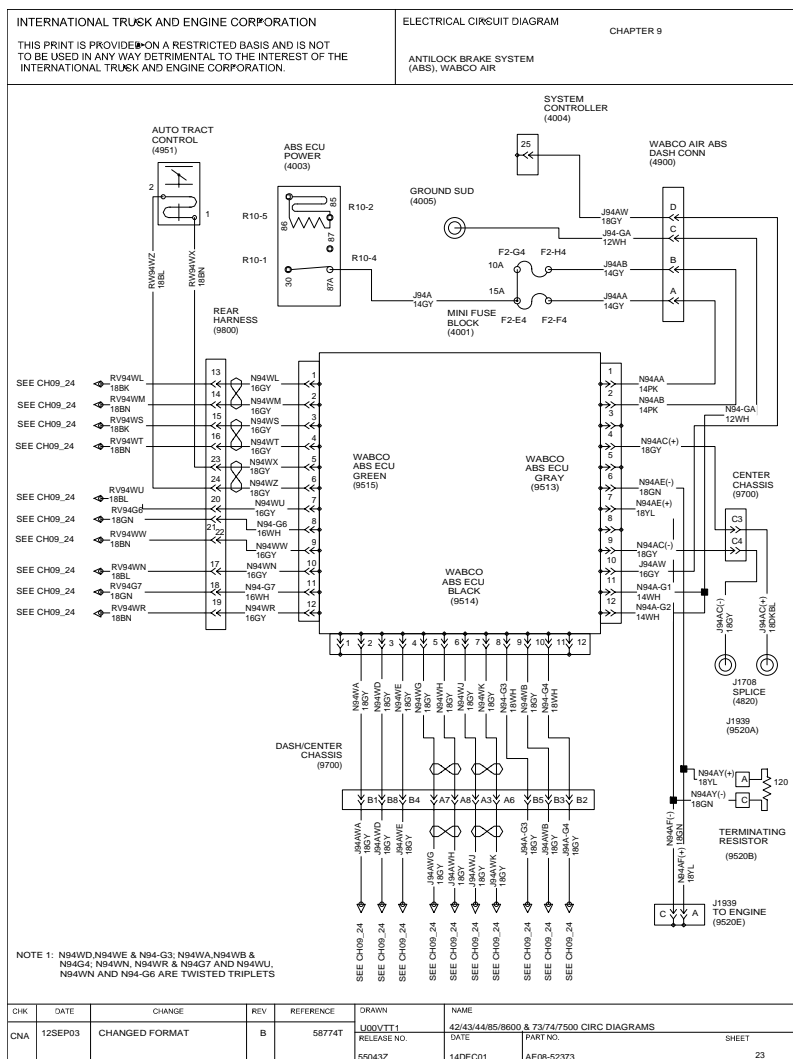


Figure 130 Antilock Brake System, WABCO Air

## 9.25. ANTILOCK BRAKE SYSTEM, WABCO AIR, P. 24

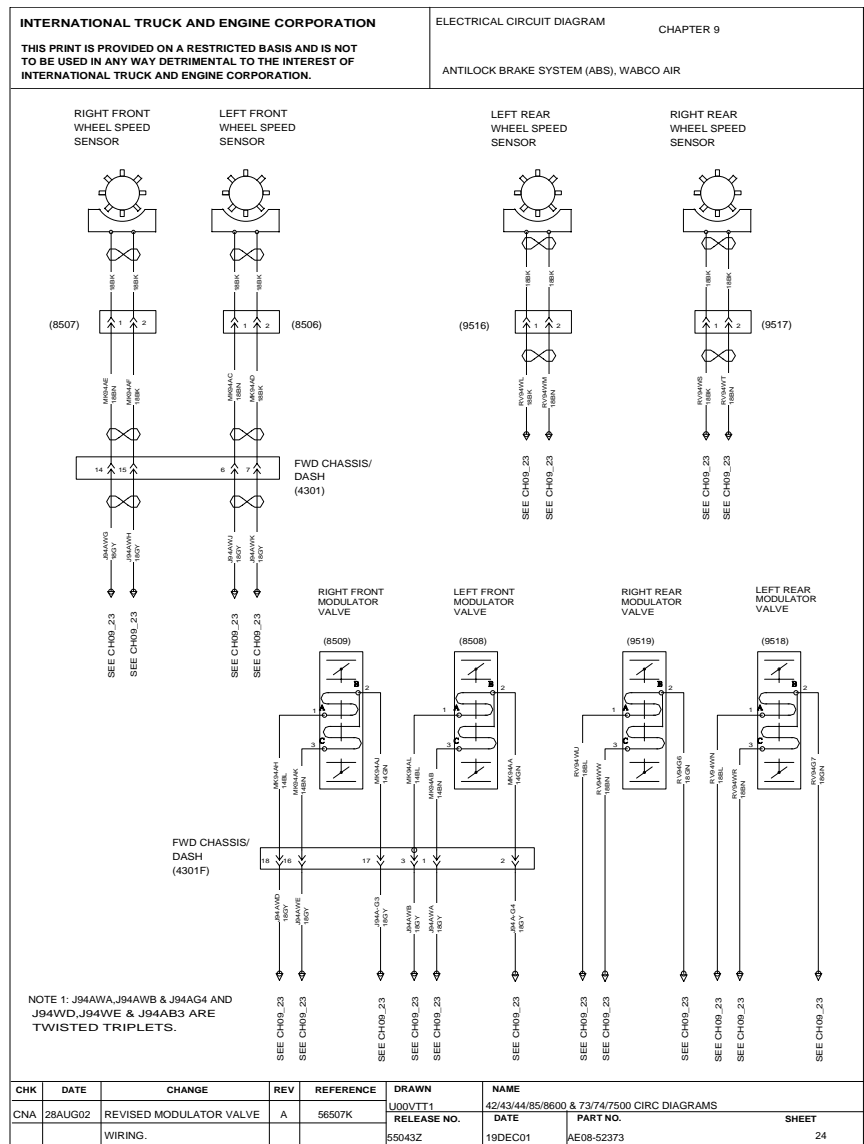


Figure 131 Antilock Brake System, WABCO Air

9.26. LIFT AXLES, WITH NON—STEERABLE FOR SS MODELS, P. 25

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INTENTIONALLY LEFT BLANK							
<b>CHG</b>	<b>DATE</b>	<b>CHANGE</b>	<b>REV</b>	<b>REFERENCE</b>	<b>DRAWN</b>	<b>NAME</b>	
CNA	10JUL08	GEOMETRY REMOVED	D	80296A	WOODLCK	42/43/44/65/8600 & 73/74/7500 CIRCUIT DIAGRAMS	
					<b>RELEASE NO.</b>	<b>DATE</b>	<b>PART NO.</b> <b>SHEET</b>
					52778H	15DEC01	AE08-52373      25

Figure 132    Lift Axles, With Non—Steerable for SS Models

## 9.27. FUEL / WATER SEPARATOR WITH 12VDC FUEL PREHEATER, P. 26

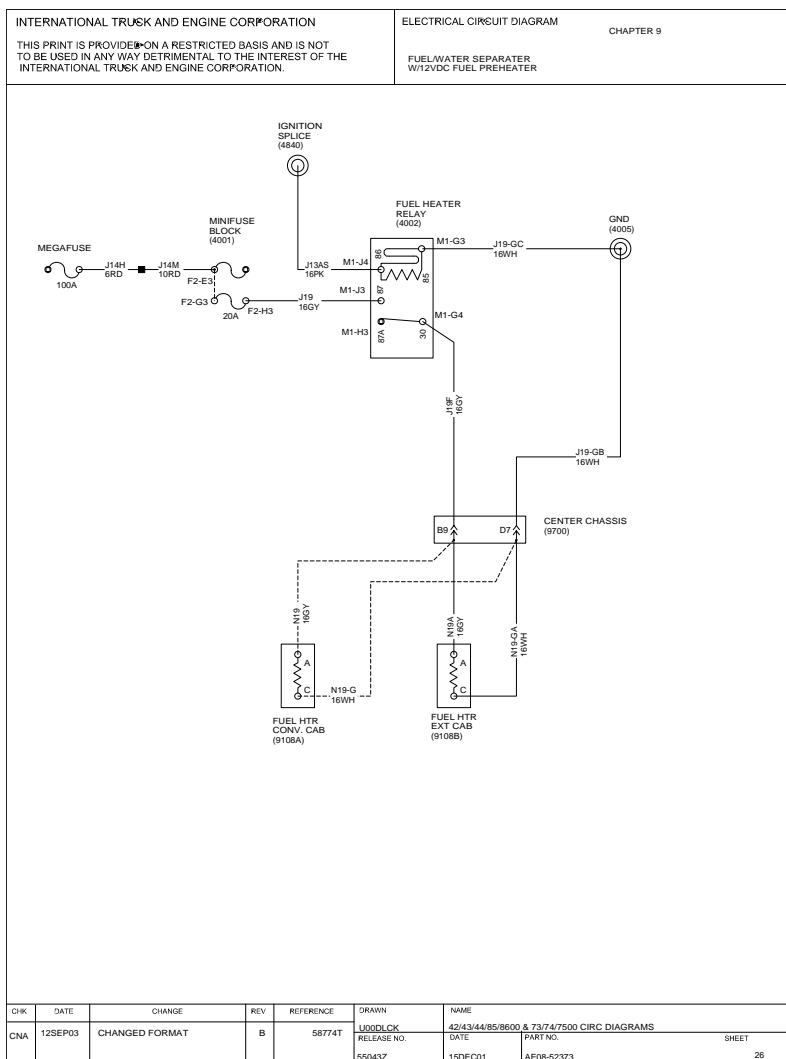


Figure 133 Fuel / Water Separator With 12VDC Fuel Preheater



## 9.29. LECTRASHIFT ACCOMMODATION, P. 28

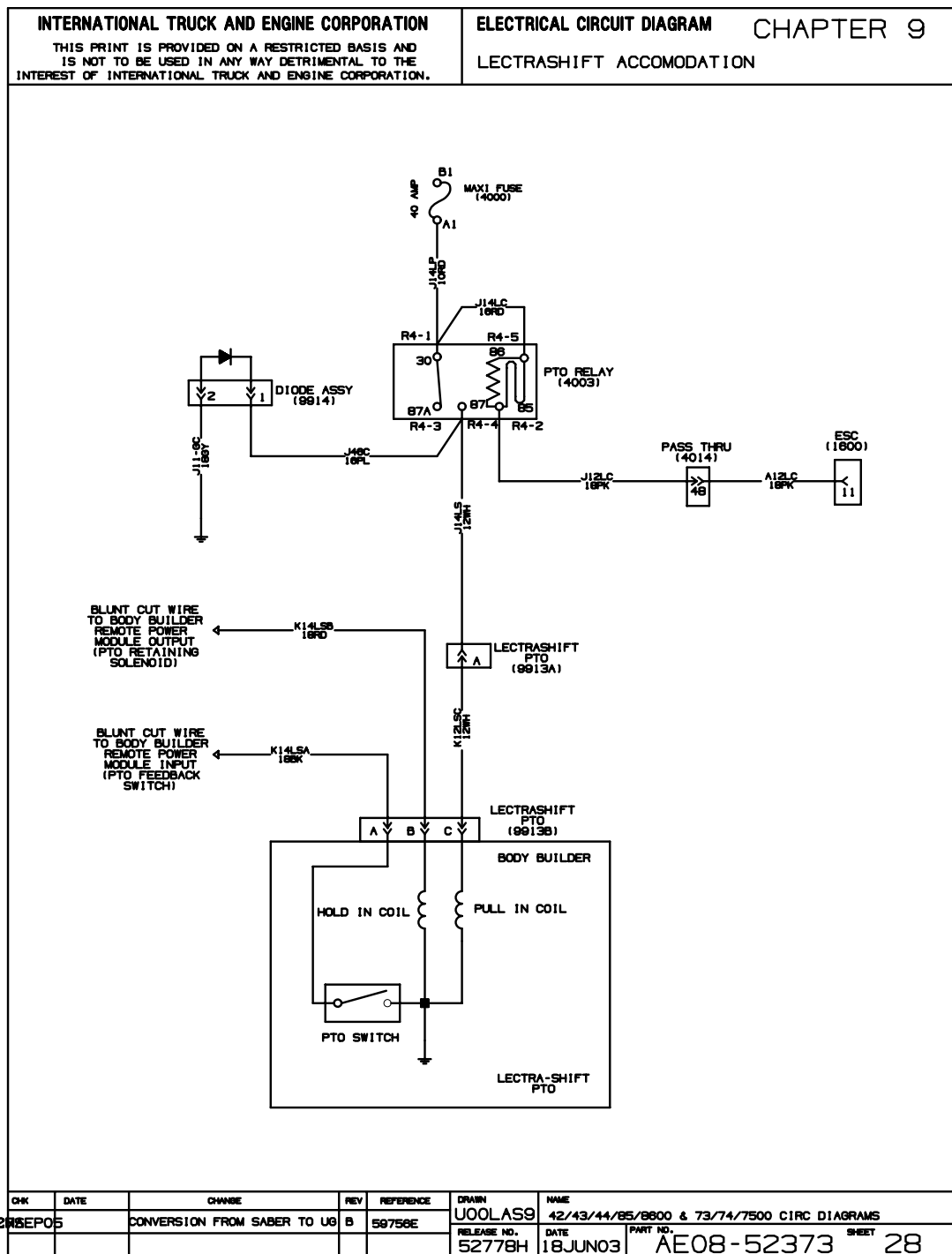


Figure 135 Lectrashift Accommodation

9.30. AUXILIARY 40 AMP CIRCUIT, P. 29

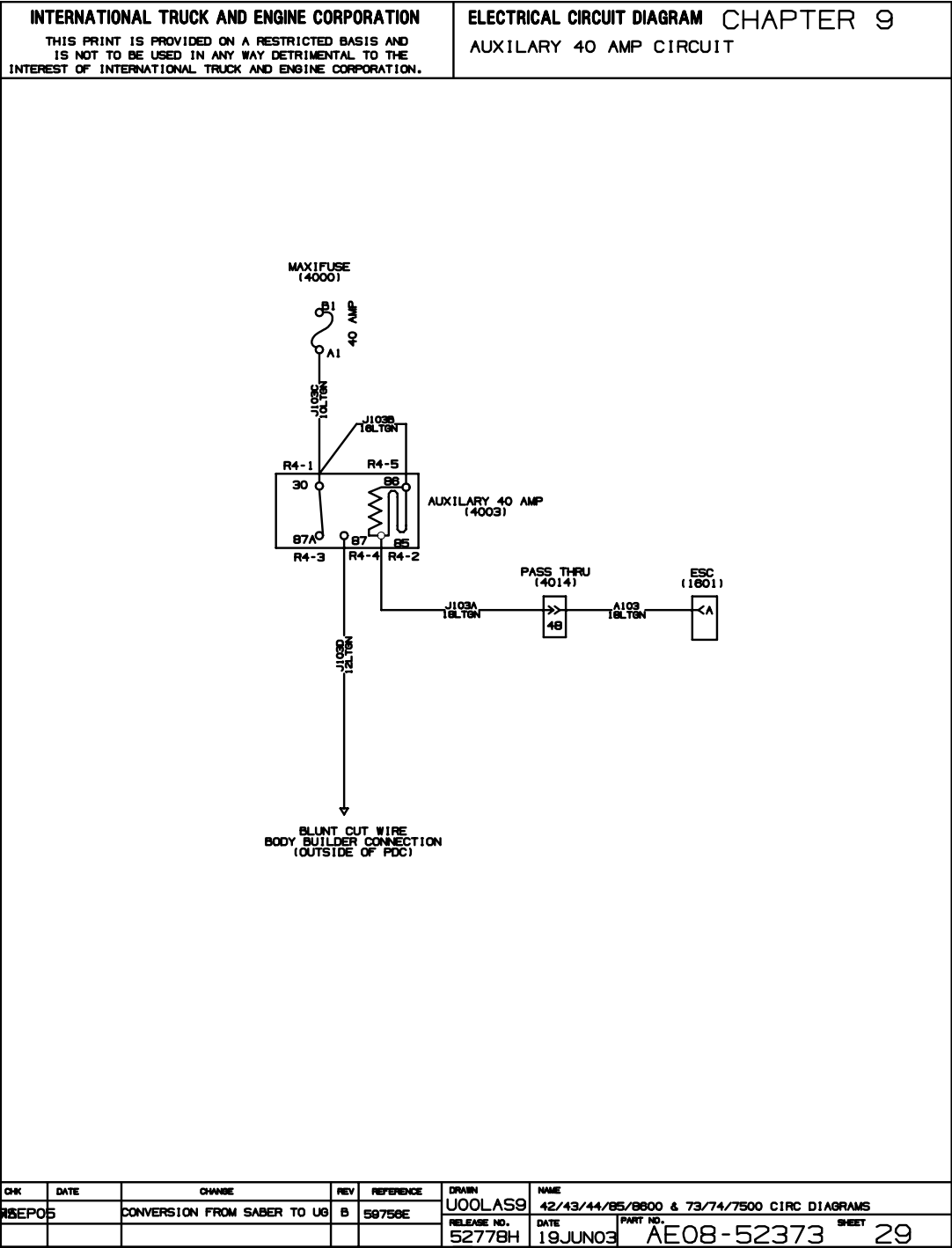


Figure 136 Auxiliary 40 Amp Circuit

## 9.31. HOURMETER, CUSTOMER MOUNTED PTO, P. 30

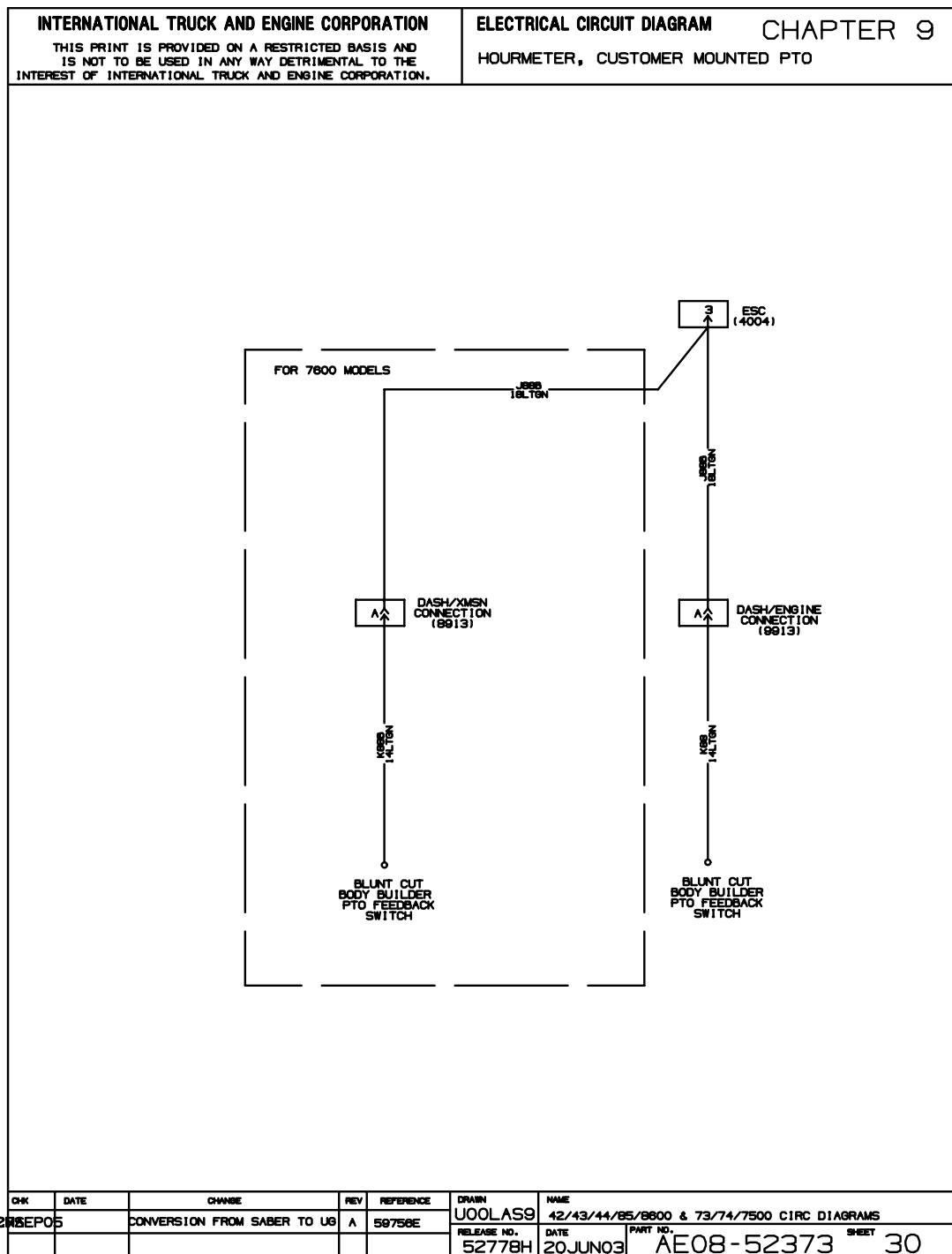


Figure 137 Hourmeter, Customer Mounted PTO



## 9.32. REMOTE START/ STOP, P. 31

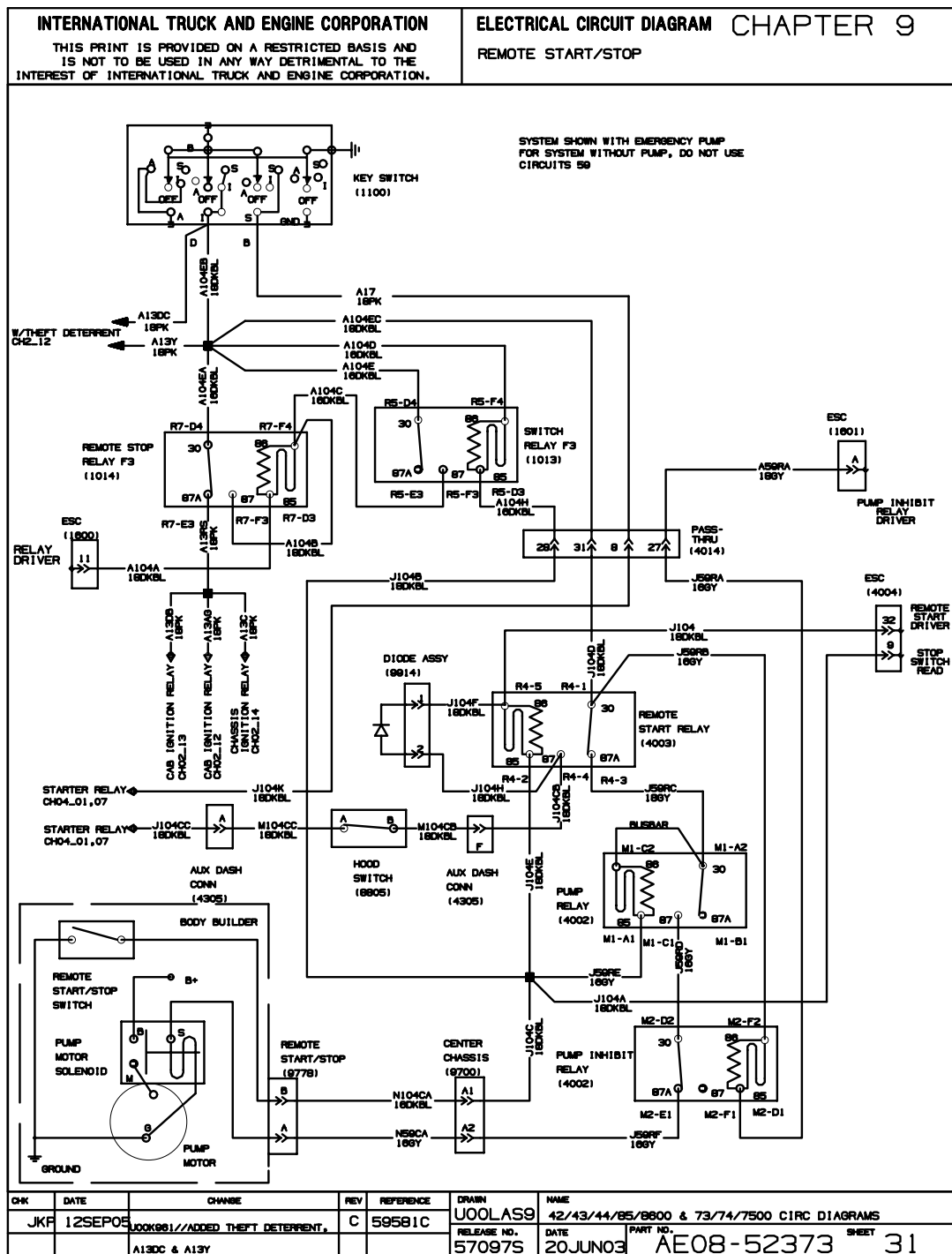


Figure 138 Remote Start/ Stop

### 9.33. LIFT AXLE WITH 14RAR, P. 32

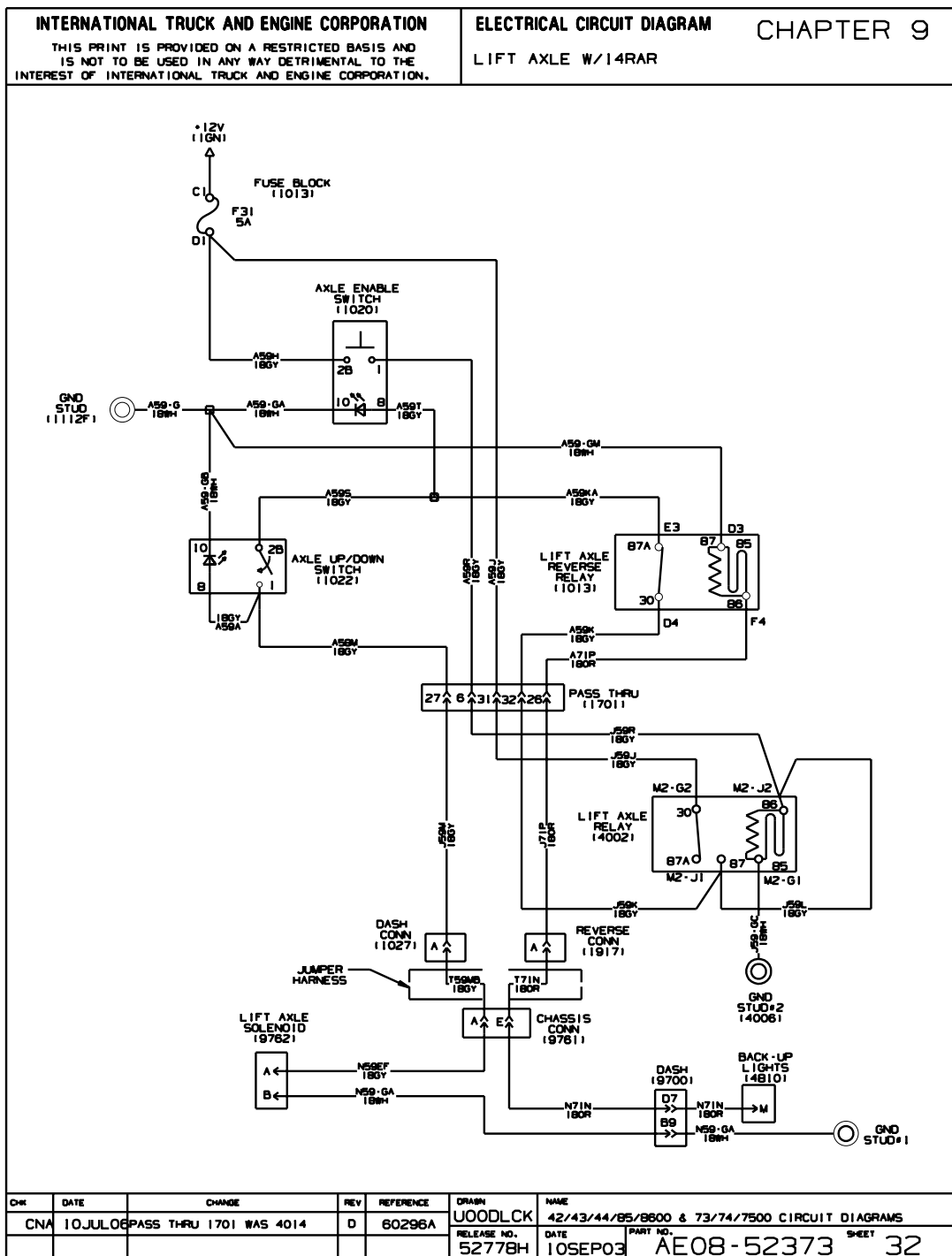


Figure 139 Lift Axle with 14RAR

[illegible]

### Figure 140 Lift Gate

[illegible]

### Figure 141 Lift Axle Multiplex

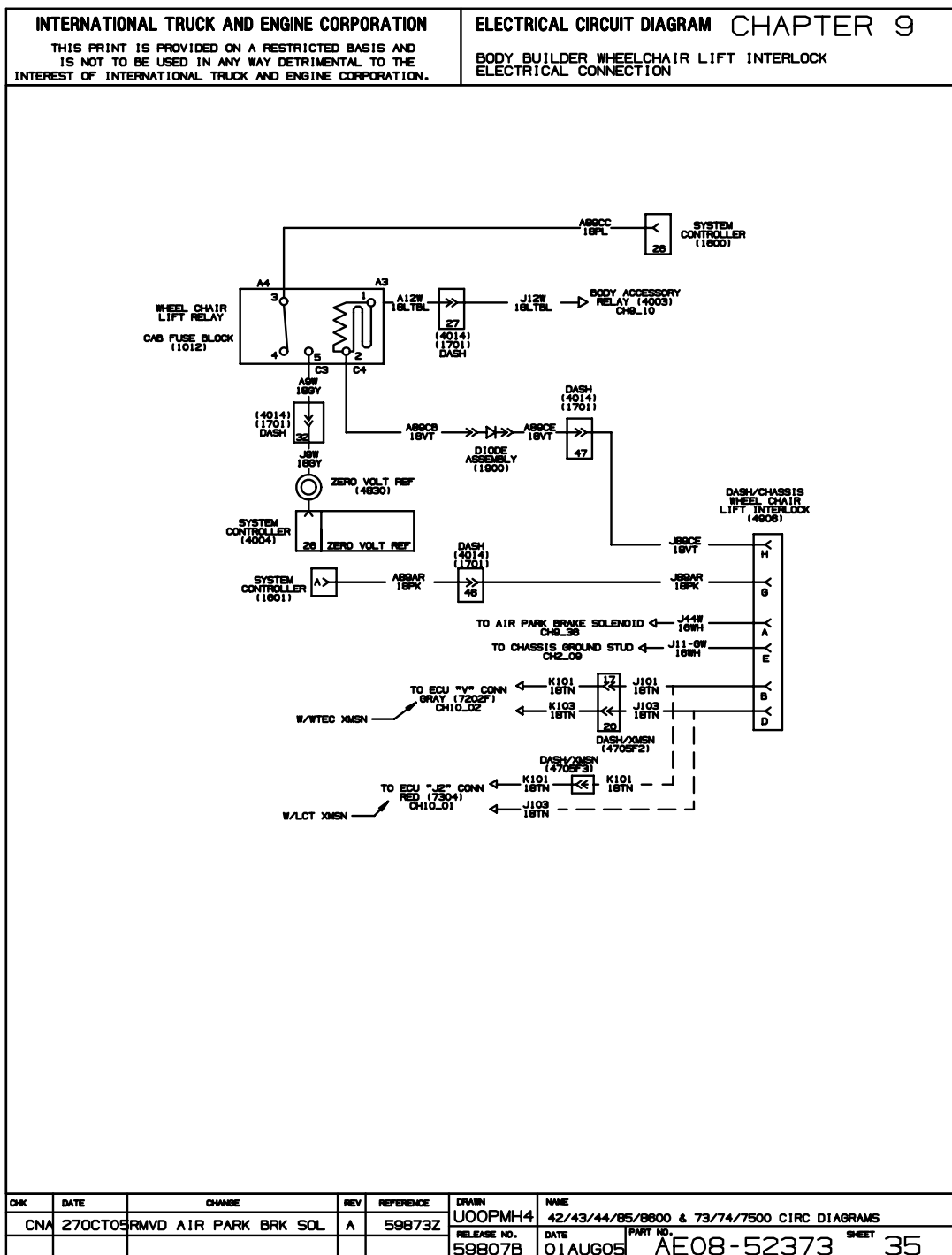
**9.36. BODY BUILDER WHEELCHAIR LIFT INTERLOCK ELECTRICAL CONNECTION,  
P. 35**

Figure 142 Body Builder Wheelchair Lift Interlock Electrical Connection

## 9.37. AIR PARK BRAKE INTERLOCK, P. 36

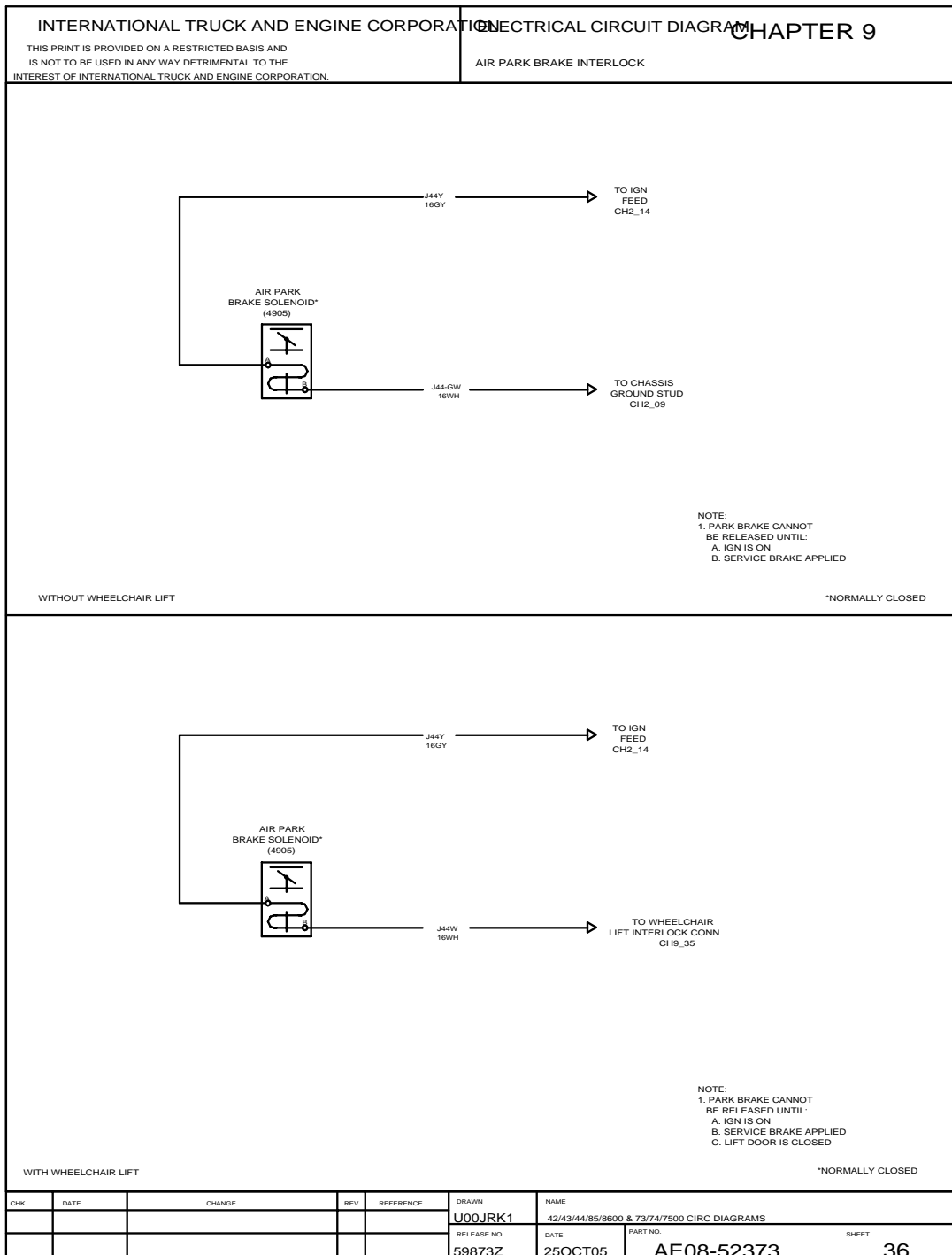
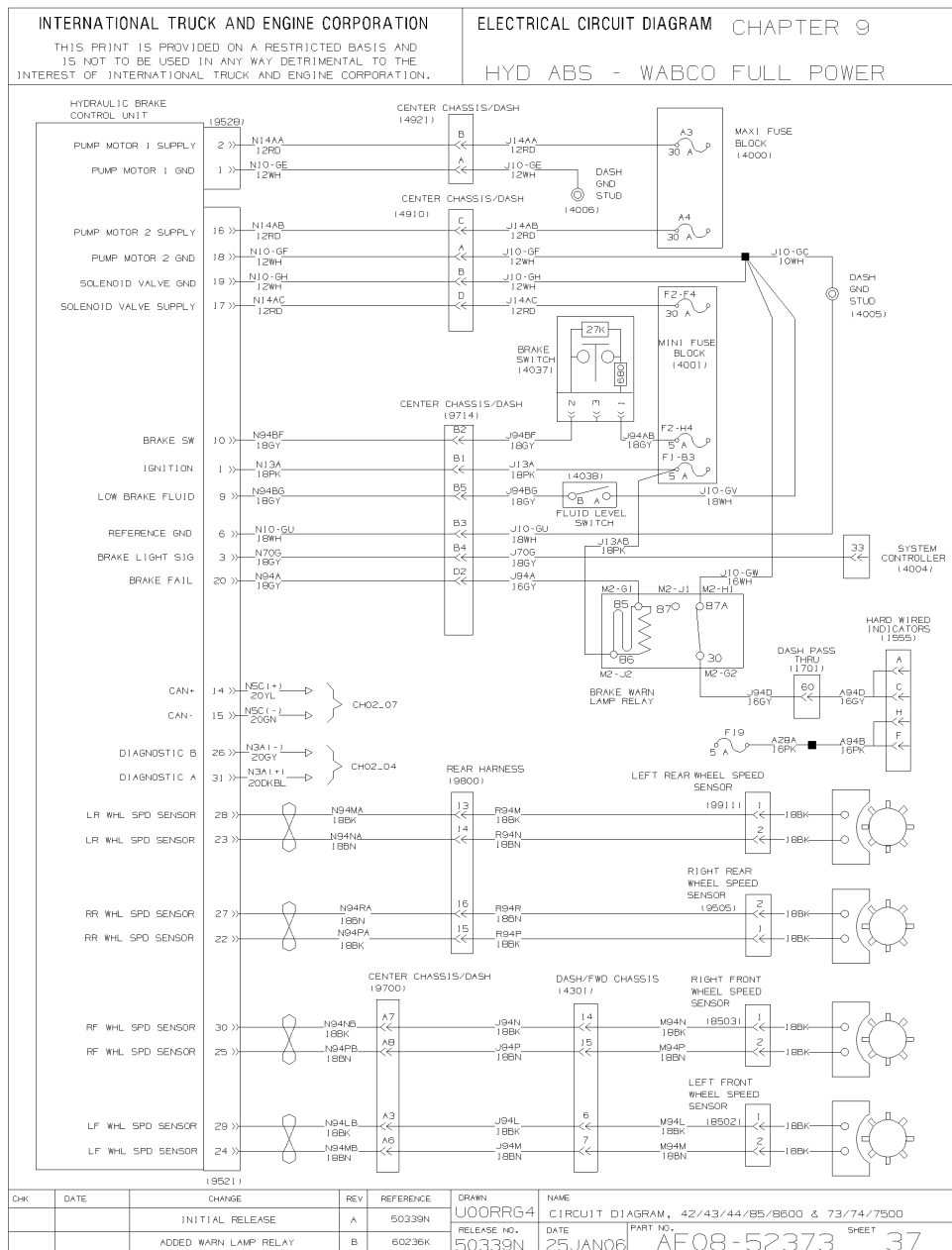


Figure 143 Air Park Brake Interlock

## 9.38. HYDRAULIC ABS — WABCO FULL POWER, P. 37



**Figure 144 Hydraulic ABS — Wabco Full Power**

### 9.39. CENTER PIN CIRCUIT, P. 38

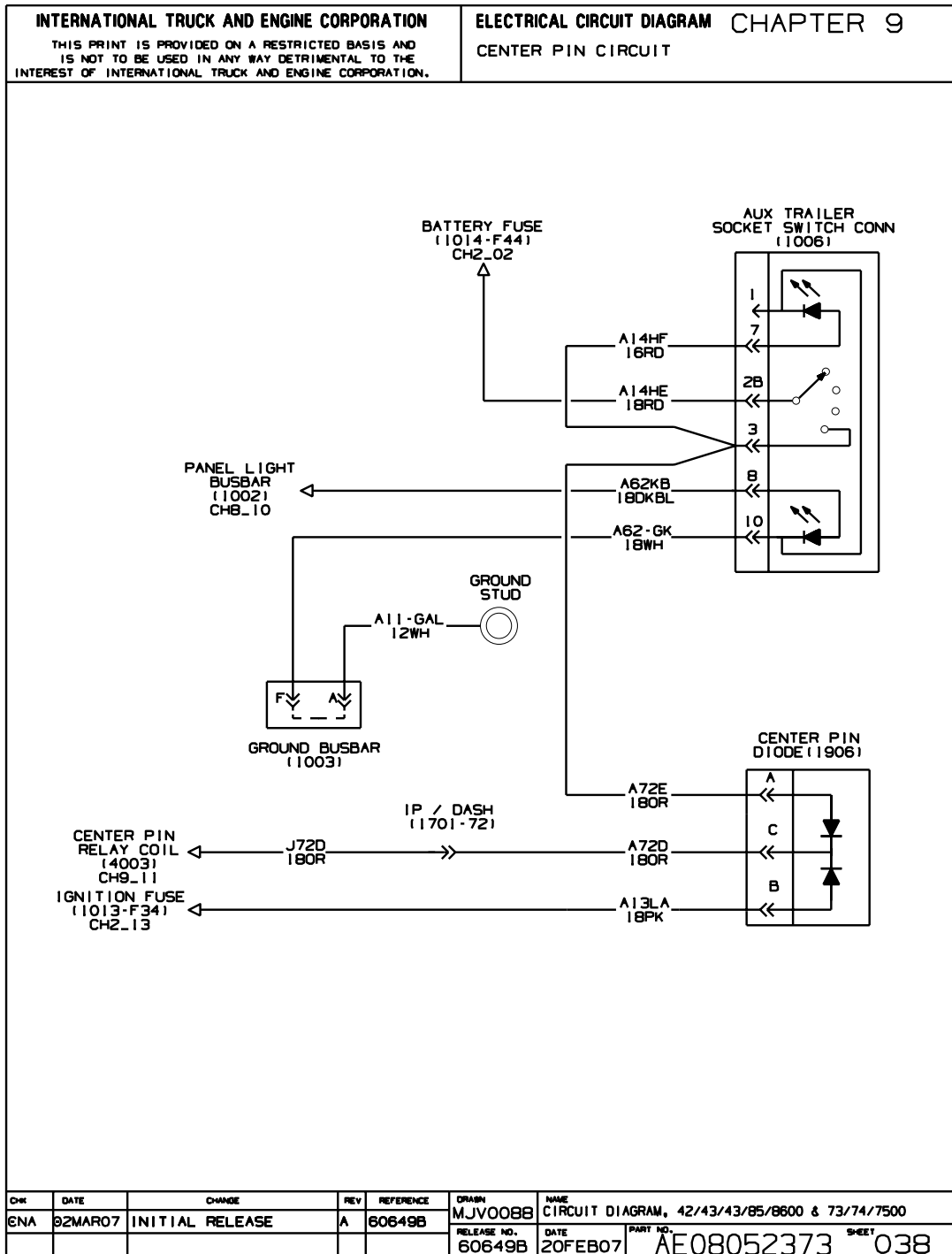


Figure 145 Center Pin Circuit



## 9.40. FIFTH WHEEL CIRCUIT, P. 39

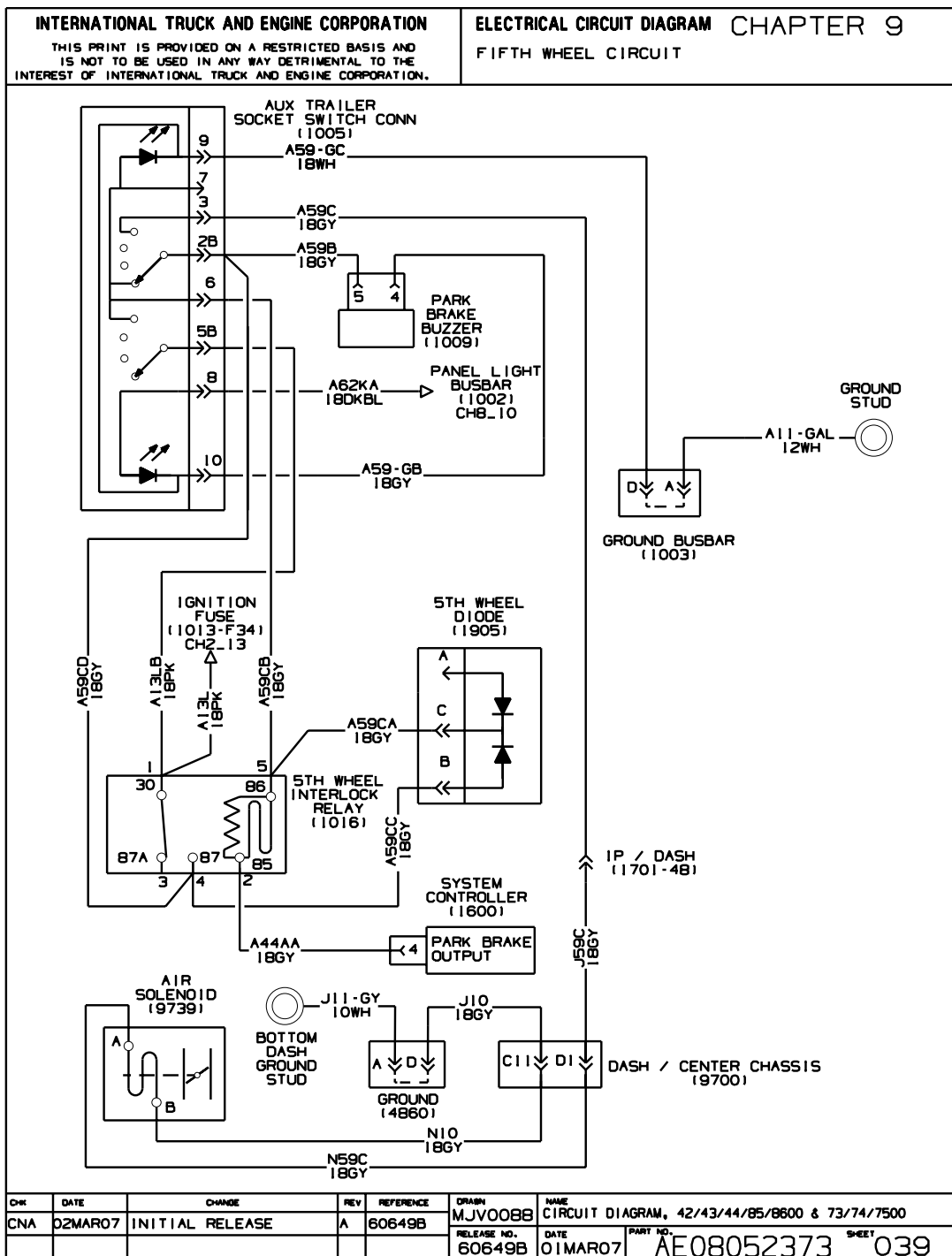


Figure 146 Fifth Wheel Circuit

## 10. TRANSMISSIONS (CHAPTER 10)

### 10.1. ALLISON GEN4 LCT TRANSMISSION OR ALLISON 1000, 2000, 2400, P. 1

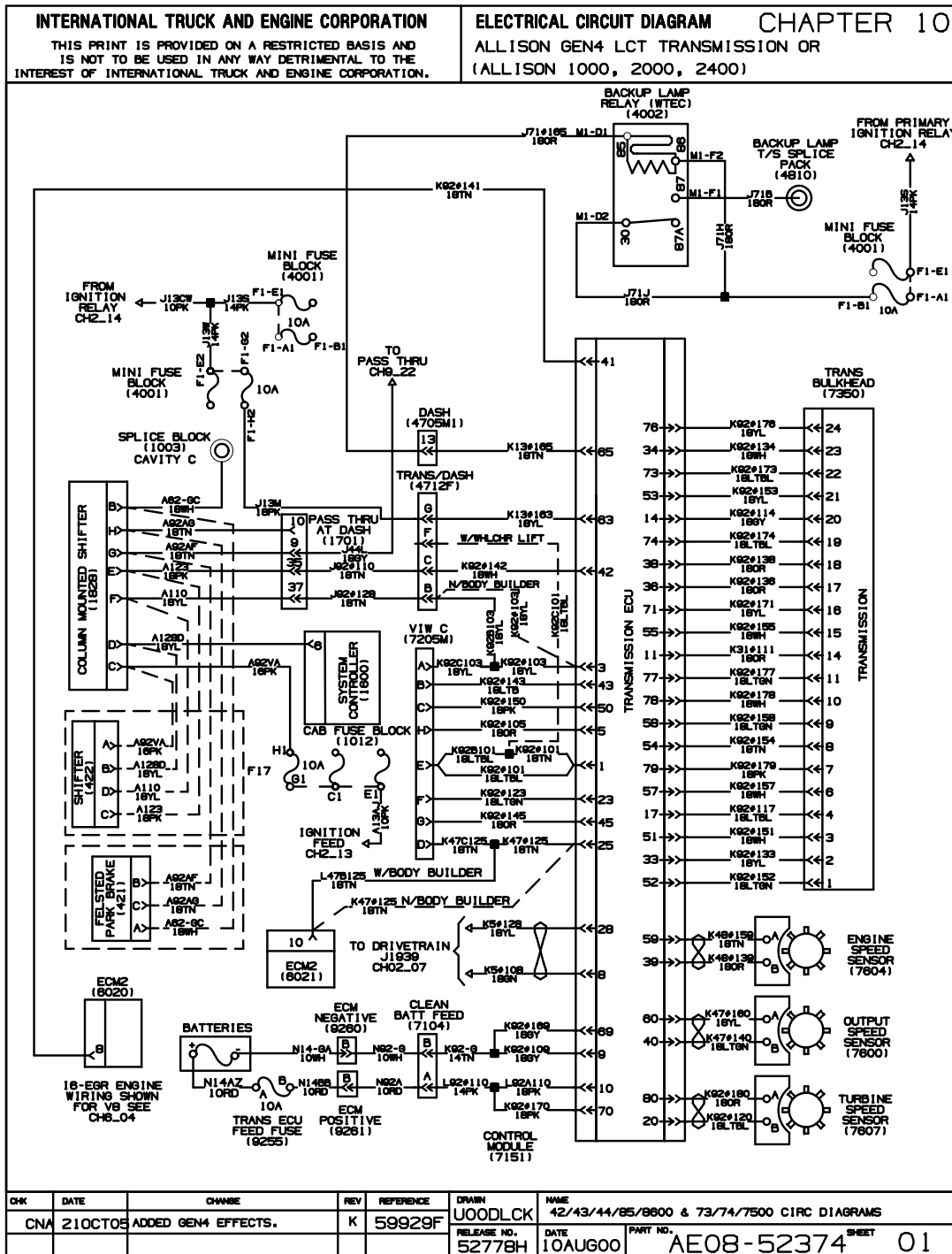


Figure 147 Allison GEN4 LCT Transmission or Allison 1000, 2000, 2400

10.2. TRANSMISSION, LCT WITH V8, P. 1A

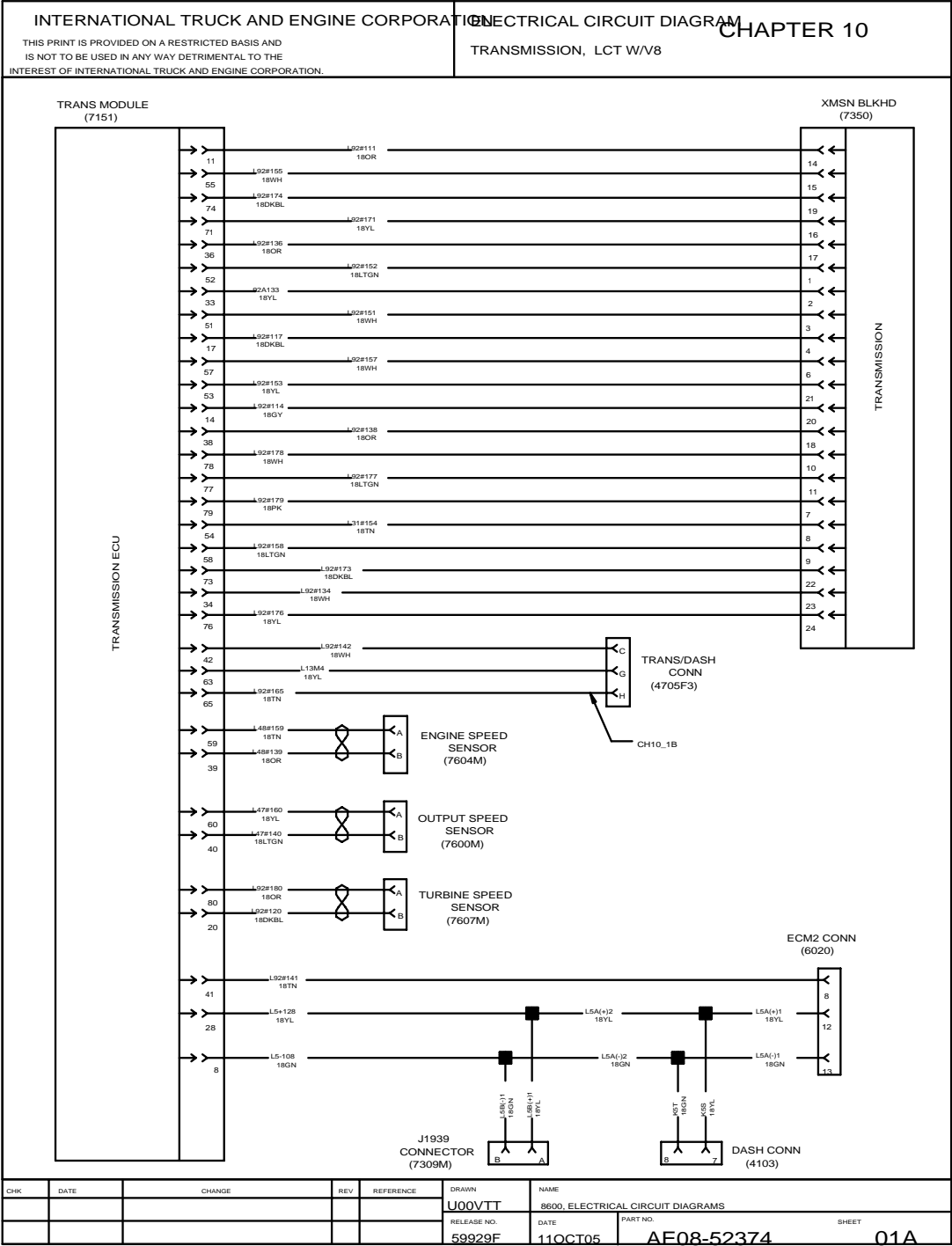


Figure 148 Transmission, LCT with V8

### 10.3. TRANSMISSION, LCT WITH V8, P. 1B

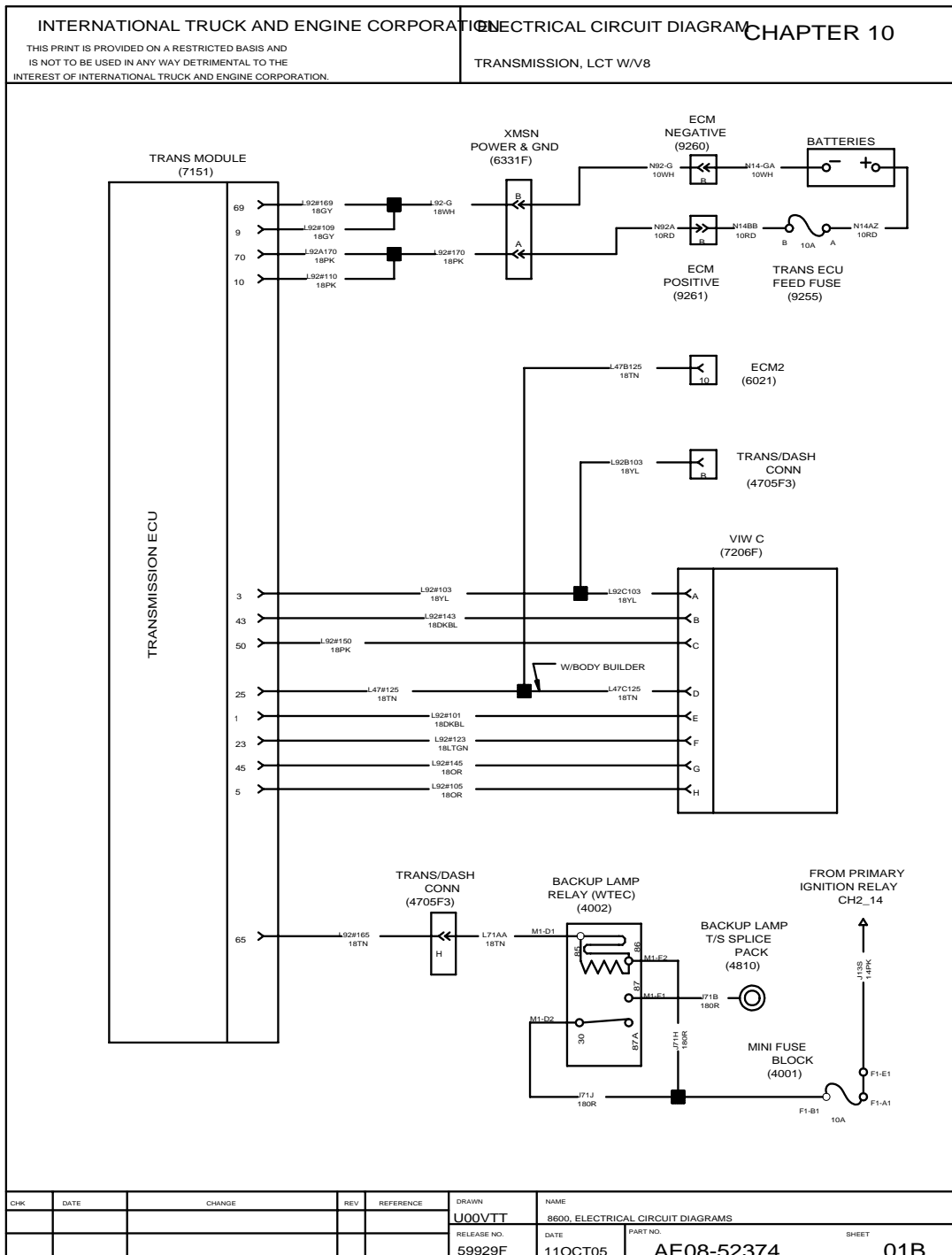


Figure 149 Transmission, LCT with V8

## 10.4. ALLISON MD TRANSMISSION, P. 2

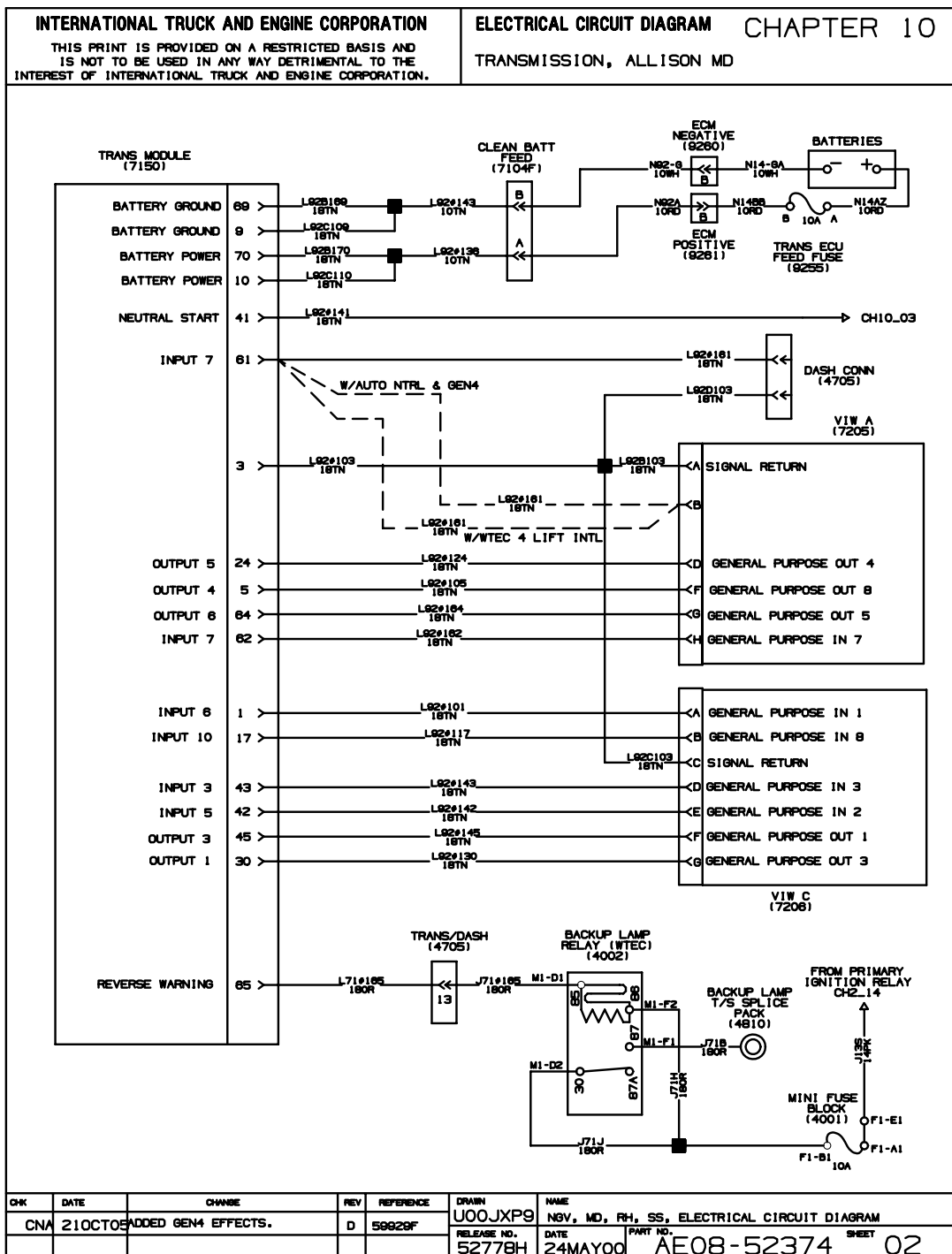


Figure 150 Allison MD Transmission

## 10.5. ALLISON GEN4 MD TRANSMISSION (WTEC), P. 3

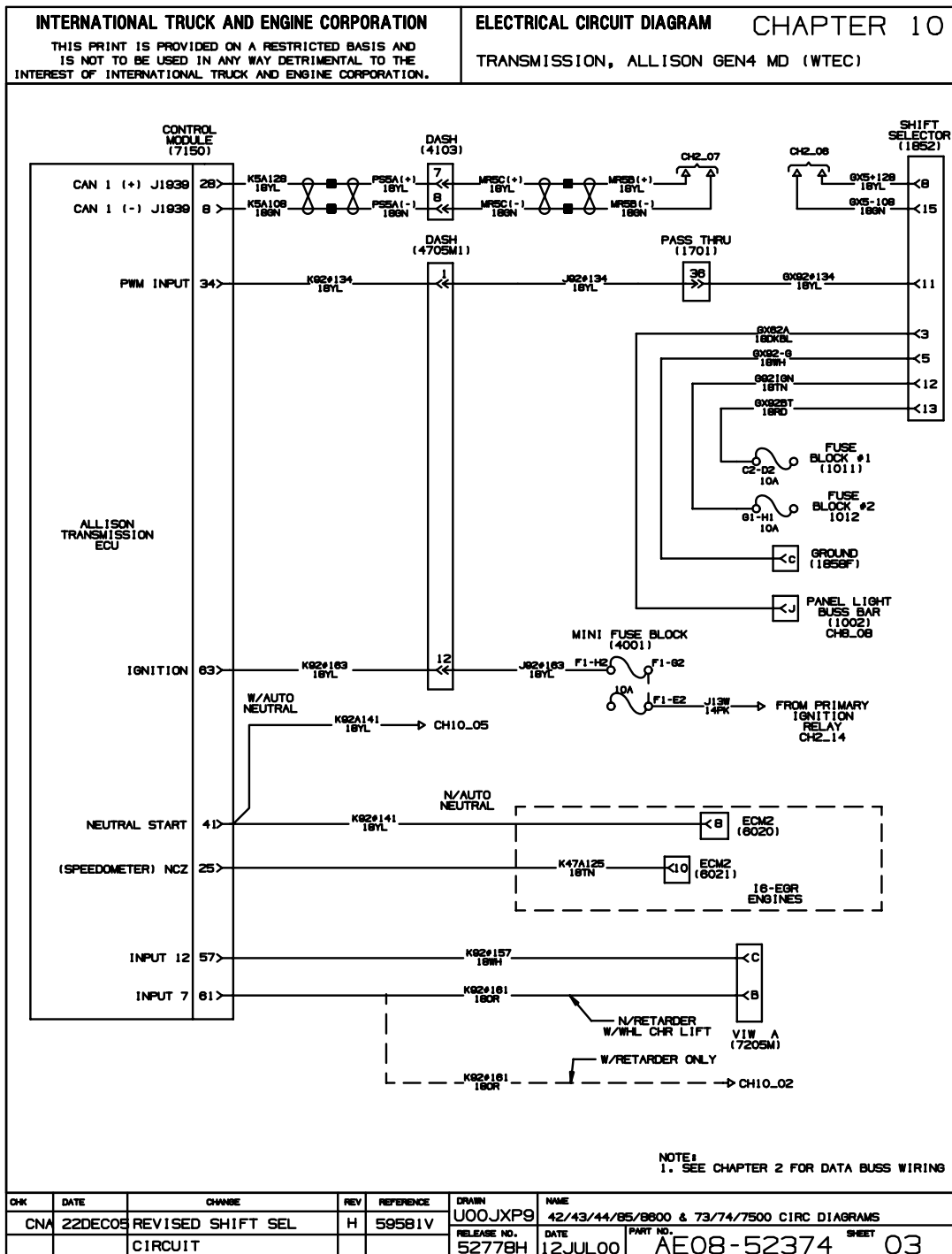


Figure 151 Allison MD Transmission (WTEC)

## 10.6. ALLISON MD TRANSMISSION (CONT.), P. 4

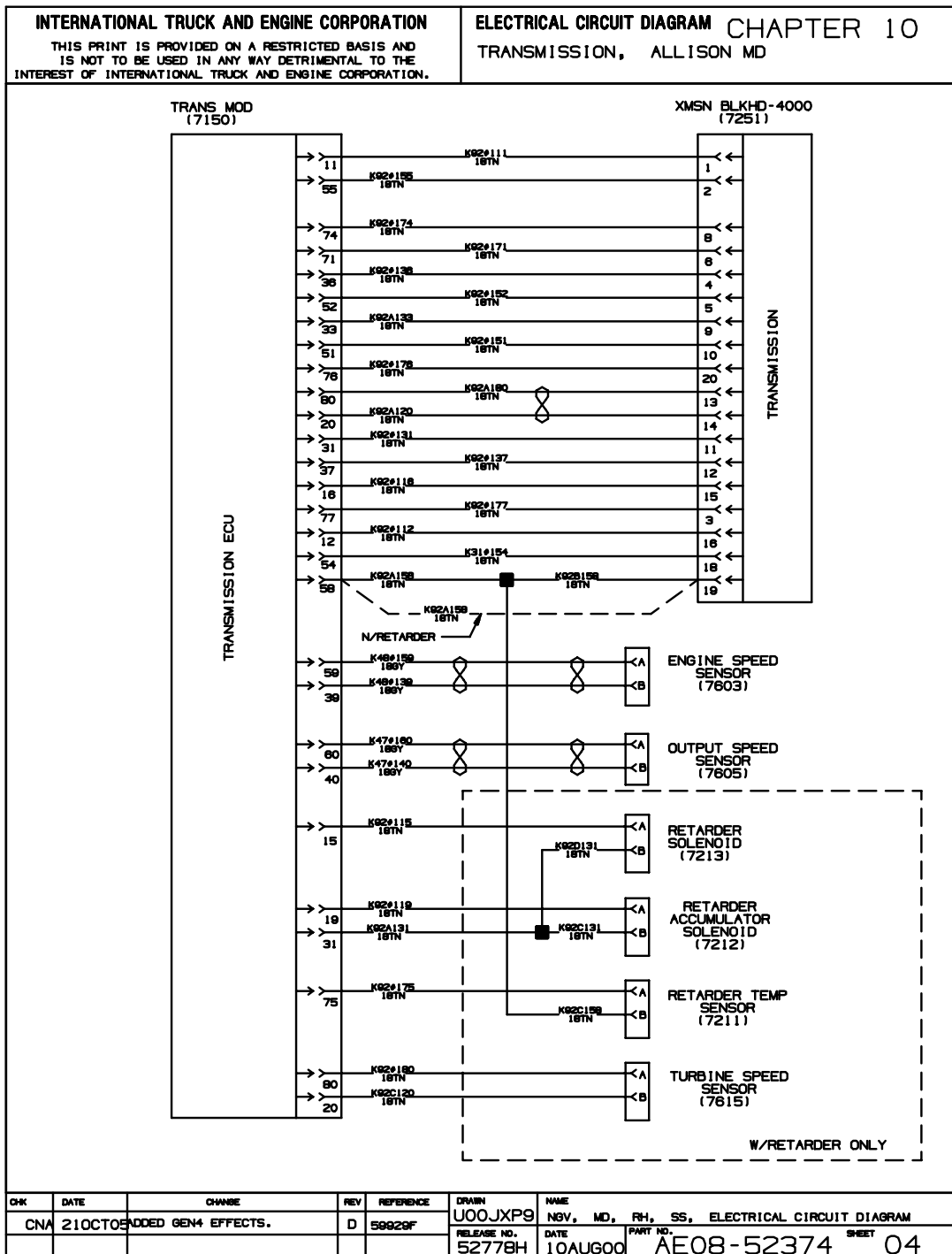
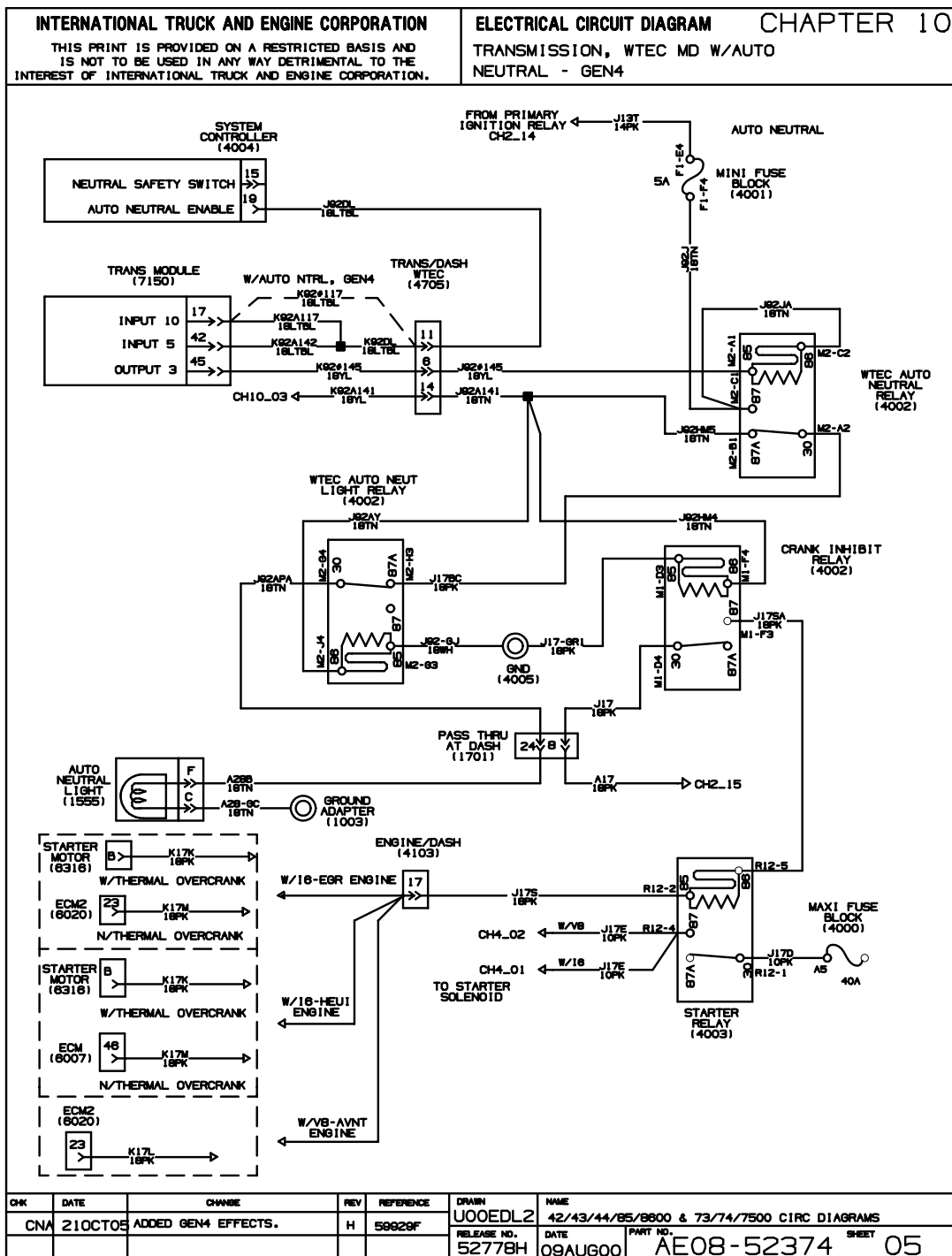


Figure 152 Allison MD Transmission (Cont.)

## 10.7. TRANSMISSION, WTEC MD W/AUTO NEUTRAL, P. 5



**Figure 153 Transmission, WTEC MD W/Auto Neutral**



## 10.8. TRANSMISSION, WTEC WITH V8, P. 5A

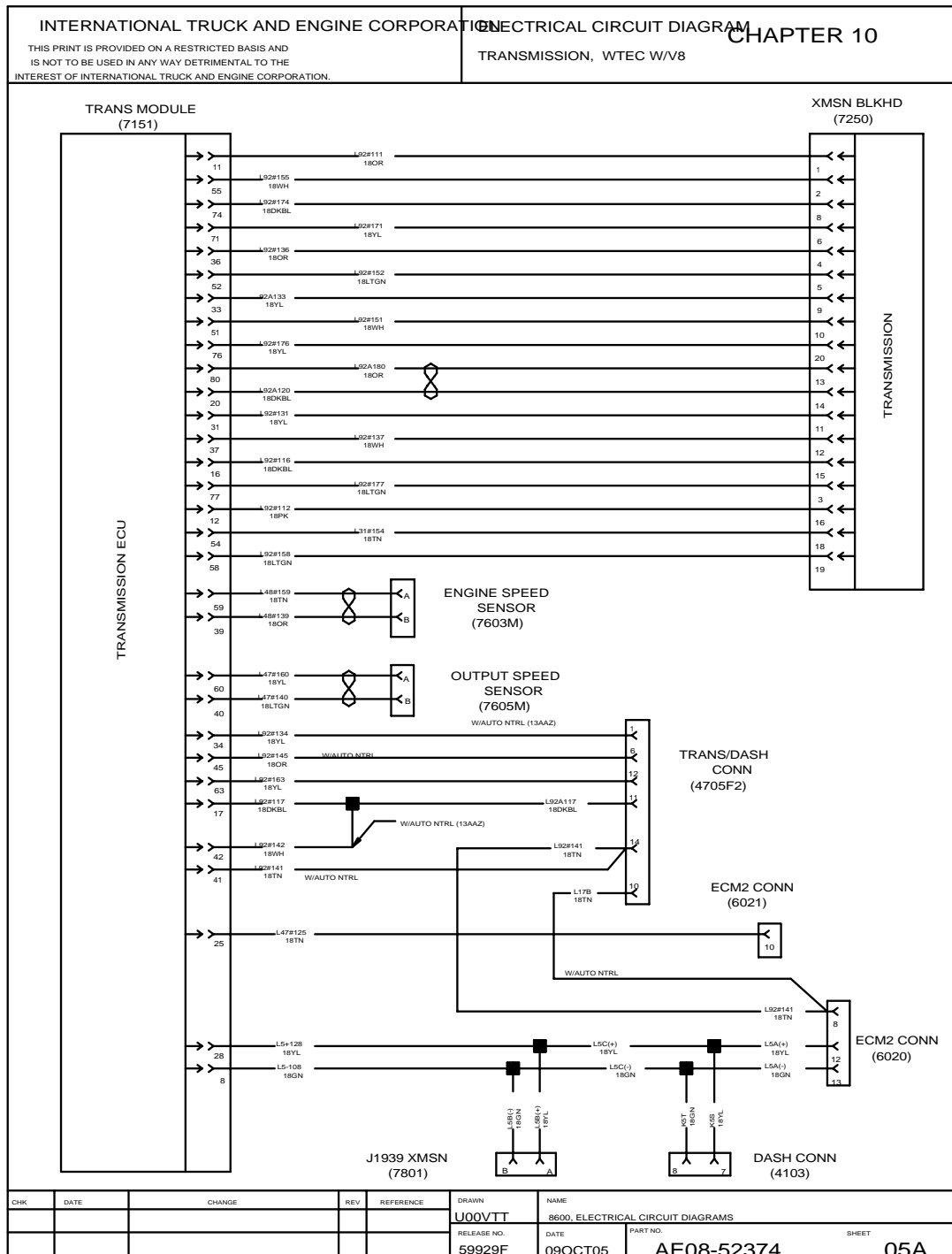


Figure 154 Transmission, WTEC with V8

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**ELECTRICAL CIRCUIT DIAGRAM**

**CHAPTER 10**

**TRANSMISSION, WTEC W/V8**

**TRANSMISSION ECU (7151)**

**TRANSMISSION MODULE (7151)**

**TRANSDASH (4705F2)**

**BACKUP LAMP RELAY (WTEC) (4002)**

**ECM NEGATIVE (9260)**

**ECM POSITIVE (9261)**

**TRANSMISSION ECU FEED FUSE (9255)**

**VIW A (7205M)**

**VIW C (7206F)**

**BATTERIES**

**WIRING DETAILS:**

- TRANSMISSION ECU (7151) to TRANSMISSION MODULE (7151):**
  - 69: L92#169 18CY to L92-G 18WH
  - 9: L92#109 18GY to L92#170 18PK
  - 70: L92#170 18PK
  - 10: L92#110 18PK
- TRANSMISSION MODULE (7151) to TRANSDASH (4705F2):**
  - 3: L92#103 18YL to L92B103 18TN
  - 61: L92#161 18TN
  - 57: L92#157 18WH
  - 24: L92#124 18WH
  - 5: L92#105 18OR
  - 64: L92#164 18DKBL
  - 62: L92#162 18YL
- TRANSDASH (4705F2) to BACKUP LAMP RELAY (WTEC) (4002):**
  - 1: L92#101 18DKBL to M1-D1
  - 17: L92#117 18DKBL to M1-D1
  - 43: L92#143 18DKBL to M1-D1
  - 42: L92#142 18WH to M1-D1
  - 45: L92#145 18OR to M1-D1
  - 30: L92#130 18WH to M1-D1
- BACKUP LAMP RELAY (WTEC) (4002) to TRANSMISSION ECU FEED FUSE (9255):**
  - M1-D1 to M1-E1
  - M1-E1 to M1-F1
  - M1-F1 to M1-G1
  - M1-G1 to M1-H1
  - M1-H1 to M1-I1
  - M1-I1 to M1-J1
  - M1-J1 to M1-K1
  - M1-K1 to M1-L1
  - M1-L1 to M1-M1
  - M1-M1 to M1-N1
  - M1-N1 to M1-O1
  - M1-O1 to M1-P1
  - M1-P1 to M1-Q1
  - M1-Q1 to M1-R1
  - M1-R1 to M1-S1
  - M1-S1 to M1-T1
  - M1-T1 to M1-U1
  - M1-U1 to M1-V1
  - M1-V1 to M1-W1
  - M1-W1 to M1-X1
  - M1-X1 to M1-Y1
  - M1-Y1 to M1-Z1
- TRANSMISSION ECU FEED FUSE (9255) to BATTERIES:**
  - N92-G 10WH to N14-GA 10WH
  - N92A 10RD to N14BB 10RD
  - N14GA 10WH to N14AZ 10RD
  - N14BB 10RD to N14AZ 10RD
- ECM NEGATIVE (9260) to BATTERIES:**
  - N92-G 10WH to N14-GA 10WH
  - N92A 10RD to N14BB 10RD
  - N14GA 10WH to N14AZ 10RD
  - N14BB 10RD to N14AZ 10RD
- ECM POSITIVE (9261) to BATTERIES:**
  - N92-G 10WH to N14-GA 10WH
  - N92A 10RD to N14BB 10RD
  - N14GA 10WH to N14AZ 10RD
  - N14BB 10RD to N14AZ 10RD
- VIW A (7205M) to VIW C (7206F):**
  - KA to KB
  - KB to KC
  - KC to KD
  - KD to KE
  - KE to KF
  - KF to KG
  - KG to KH
  - KH to KI
  - KI to KJ
  - KJ to KK
  - KK to KL
  - KL to KM
  - KM to KN
  - KN to KO
  - KO to KP
  - KP to KQ
  - KQ to KR
  - KR to KS
  - KS to KT
  - KT to KU
  - KU to KV
  - KV to KW
  - KW to KX
  - KX to KY
  - KY to KZ
- VIW C (7206F) to TRANSMISSION ECU FEED FUSE (9255):**
  - KA to KB
  - KB to KC
  - KC to KD
  - KD to KE
  - KE to KF
  - KF to KG
  - KG to KH
  - KH to KI
  - KI to KJ
  - KJ to KK
  - KK to KL
  - KL to KM
  - KM to KN
  - KN to KO
  - KO to KP
  - KP to KQ
  - KQ to KR
  - KR to KS
  - KS to KT
  - KT to KU
  - KU to KV
  - KV to KW
  - KW to KX
  - KX to KY
  - KY to KZ
- BATTERIES:**
  - N92-G 10WH to N14-GA 10WH
  - N92A 10RD to N14BB 10RD
  - N14GA 10WH to N14AZ 10RD
  - N14BB 10RD to N14AZ 10RD

CHK	DATE	CHANGE	REV	REFERENCE

DRAWN	NAME
U00VTT	8600, ELECTRICAL CIRCUIT DIAGRAMS
59929F	DATE
990CT05	PART NO.

RELEASE NO. 59929F

DATE 990CT05

PART NO. A508-52374

SHEET 05B

**Figure 155 Transmission, WTEC with V8**

10.10. EATON AUTOSHIFT TRANSMISSION, P. 6

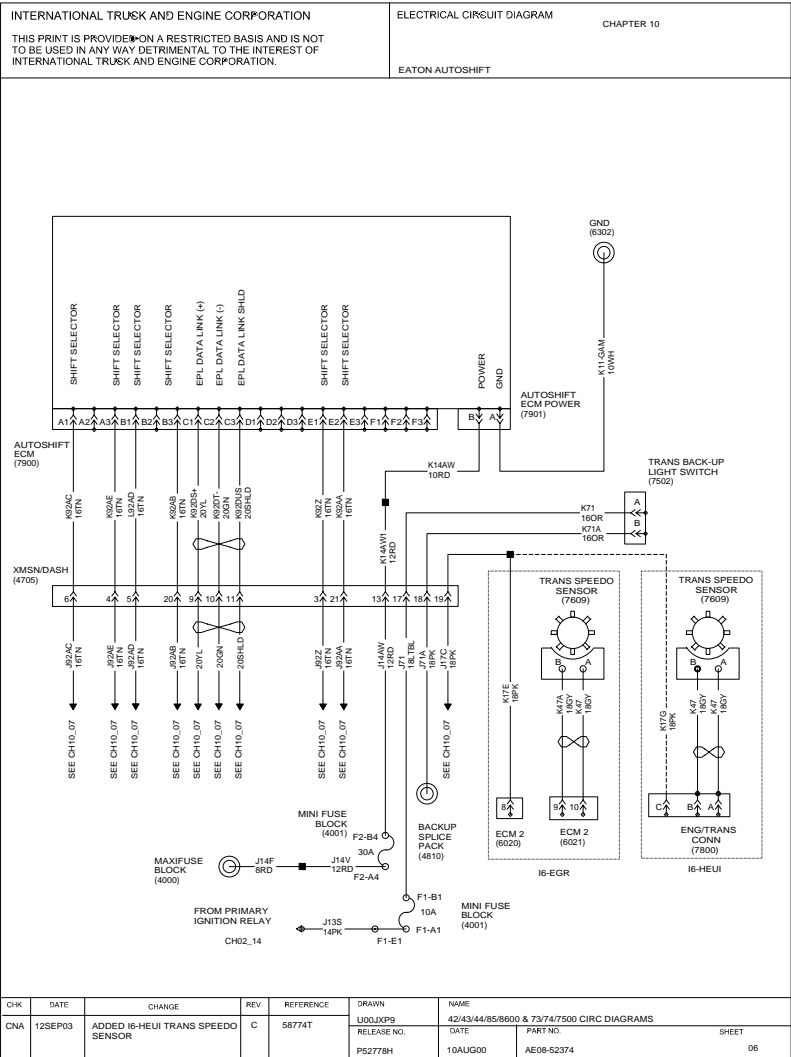
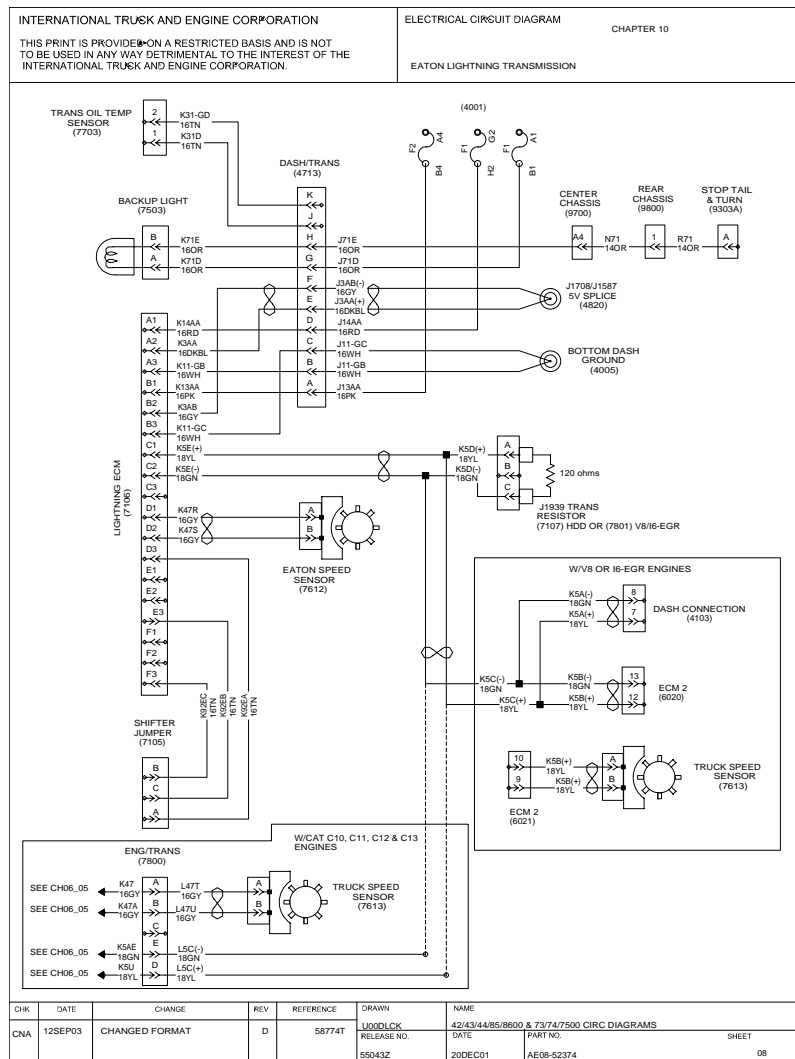


Figure 156 Eaton Autoshift Transmission

[illegible]

### Figure 157 Eaton Autoshift Transmission (Cont.)



### Figure 158 Eaton Lightning Transmission

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ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 10

TRANSMISSION, ALLISON HD

The diagram illustrates the electrical system for the Allison HD transmission. It shows the following components and their connections:

- ECU "V" CONN GRAY (7202F)**: Includes BATTERY GROUND, BATTERY POWER, SIGNAL RETURN, and GENERAL PURPOSE OUT 4, 8, 5, 7, IN 1, 8, 3, 2, OUT 1, 3.
- TCM BULKHEAD CONN (7214)**: Includes L92#143, L92#143, L92#136, L92#136, L92#161, L92#125, L92#167, L92#105, L92#137, L92#155, L92#117, L92#118, L92#153, L92#114, L92#112, L92#123, L71#113, L71#113.
- CLEAN BATT FEED (7104F)**: Includes B, A, B, A.
- ECM NEGATIVE (9260)**: Includes B, B.
- ECM POSITIVE (9261)**: Includes B, B.
- BATTERIES**: Includes N14-GA, N14A2, N14BB, N14A2, N14BB, N14A2, N14BB.
- VIW A (7205)**: Includes L92#161, L92#125, L92#167, L92#105, L92#137, L92#155, L92#117, L92#118, L92#153, L92#114, L92#112.
- VIW C (7206)**: Includes L92#161, L92#125, L92#167, L92#105, L92#137, L92#155, L92#117, L92#118, L92#153, L92#114, L92#112.
- ENG/XMSN (7800)**: Includes L71#113, L71#113.
- CRANK INHIBIT (4002)**: Includes M1-D3, M1-F4, M1-F3, M1-D4, M1-F2, M1-F1, M1-D2, M1-F1, M1-F2, M1-F1, M1-D2.
- NAUTO NEUTRAL**: Includes CH02\_15, CH02\_14, CH02\_13, CH02\_12, CH02\_11, CH02\_10, CH02\_9, CH02\_8, CH02\_7, CH02\_6, CH02\_5, CH02\_4, CH02\_3, CH02\_2, CH02\_1.
- REVERSE WARNING**: Includes L71#113, L71#113.
- TRANS/DASH (4705)**: Includes L71#113, L71#113.
- BACKUP LAMP RELAY (WTEC) (4002)**: Includes M1-D1, M1-F2, M1-F1, M1-D2, M1-F1, M1-F2, M1-F1, M1-D2.
- BACKUP LAMP T/S SPLICE PACK (4810)**: Includes M1-F2, M1-F1, M1-D2, M1-F1, M1-F2, M1-F1, M1-D2.
- MINI FUSE BLOCK (4001)**: Includes F1-B1, F1-A1.

**Figure 159 Allison HD Transmission**



10.15. ALLISON HD TRANSMISSION, P. 11

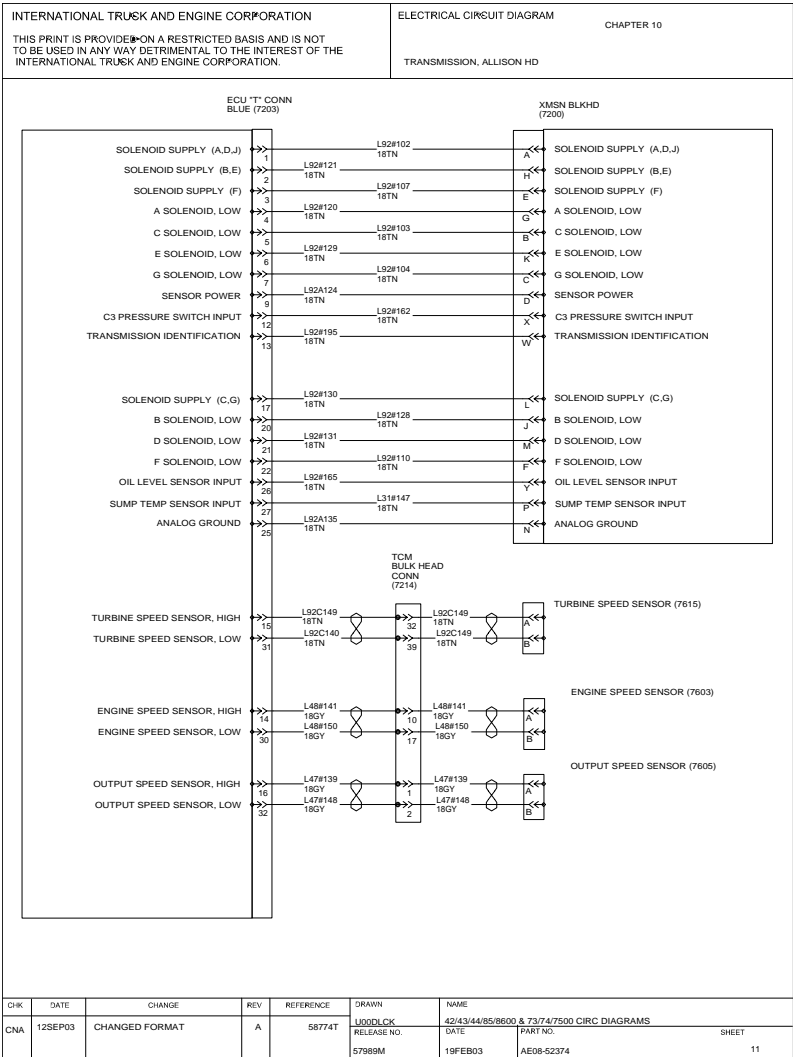


Figure 161 Allison HD Transmission (Cont.)



10.16. ALLISON HD TRANSMISSION WITH AUTO NEUTRAL, P. 12

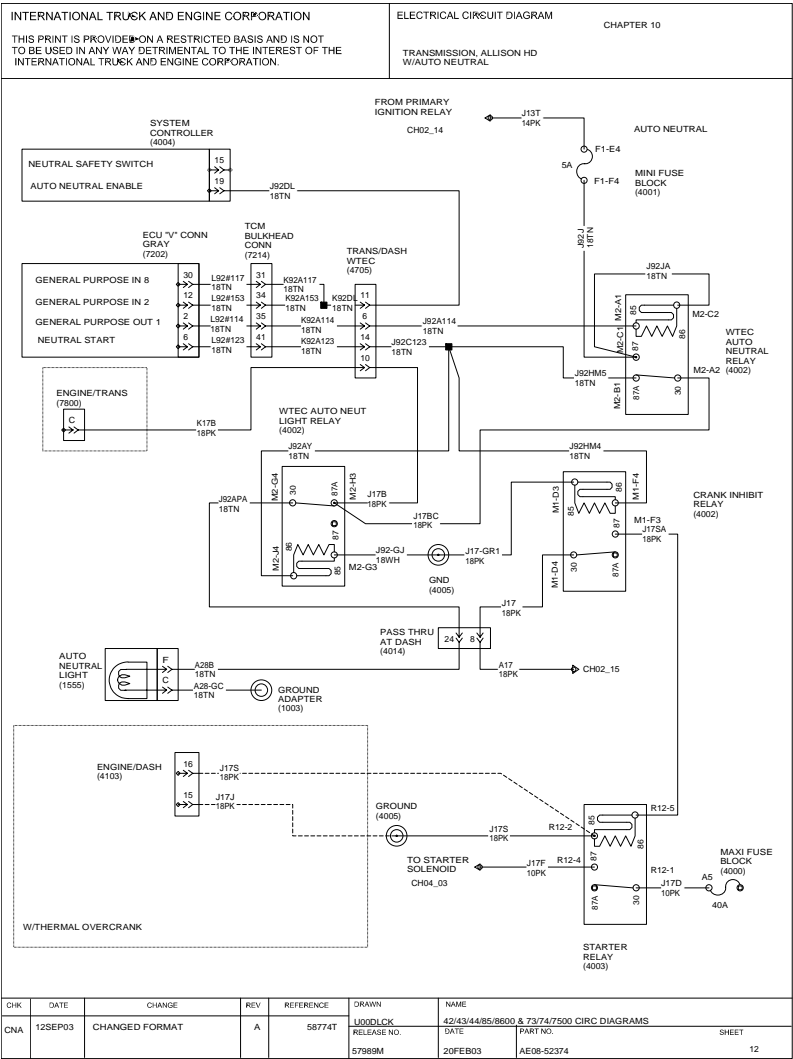


Figure 162 Allison HD Transmission With Auto Neutral

## 10.17. ALLISON HD TRANSMISSION WITH AUTO NEUTRAL — GEN4, P. 13

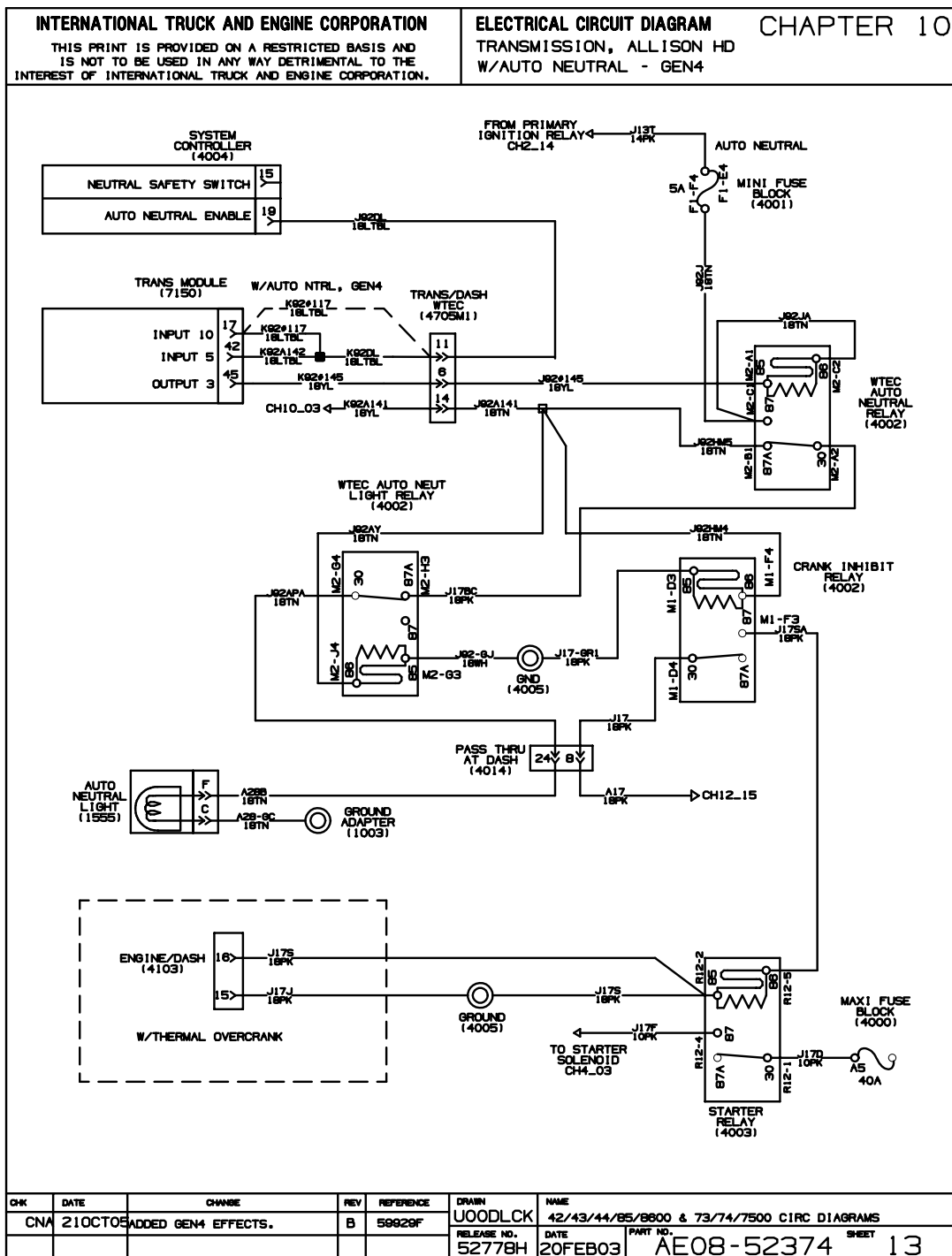
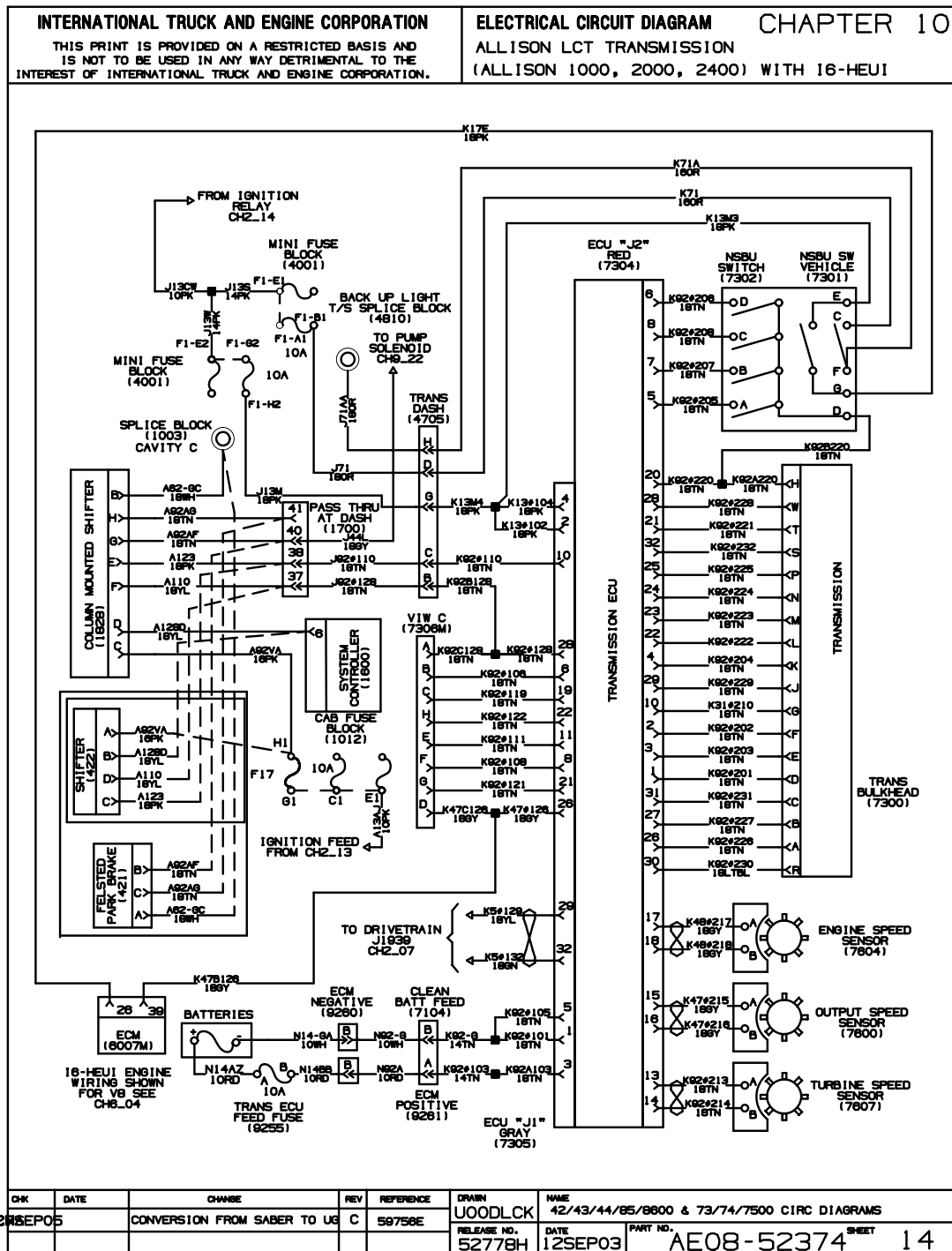


Figure 163 Allison HD Transmission With Auto Neutral — GEN4

## 10.18. ALLISON LCT TRANSMISSION (ALLISON 1000, 2000, 2400) WITH I6 HEUI, P. 14



**Figure 164 Allison LCT Transmission (Allison 1000, 2000, 2400) with I6 HEUI**

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ELECTRICAL CIRCUIT DIAGRAM

CHAPTER 10

TRANSMISSION RETARDER CONTROLS WIRING

W/MD XMSN, HARD WIRED EFFECTS

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME
CNA	06FEB04	RVSD CONN 4014, A92RA WAS A93RA, A92#125 WAS A92/125, A92#164 WAS A92/164.	A	59102U	U00DLV1	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS
					RELEASE NO.	DATE
					58928U	26SEP03
						PART NO.
						AE08-52374
						SHEET
						15

**Figure 165 Transmission Retarder Control Wiring with MD Transmission, Hard Wired Effects**

10.20. TRANSMISSION RETARDER CONTROL WIRING WITH MD XMSN, HARD WIRED EFFECTS, P. 16

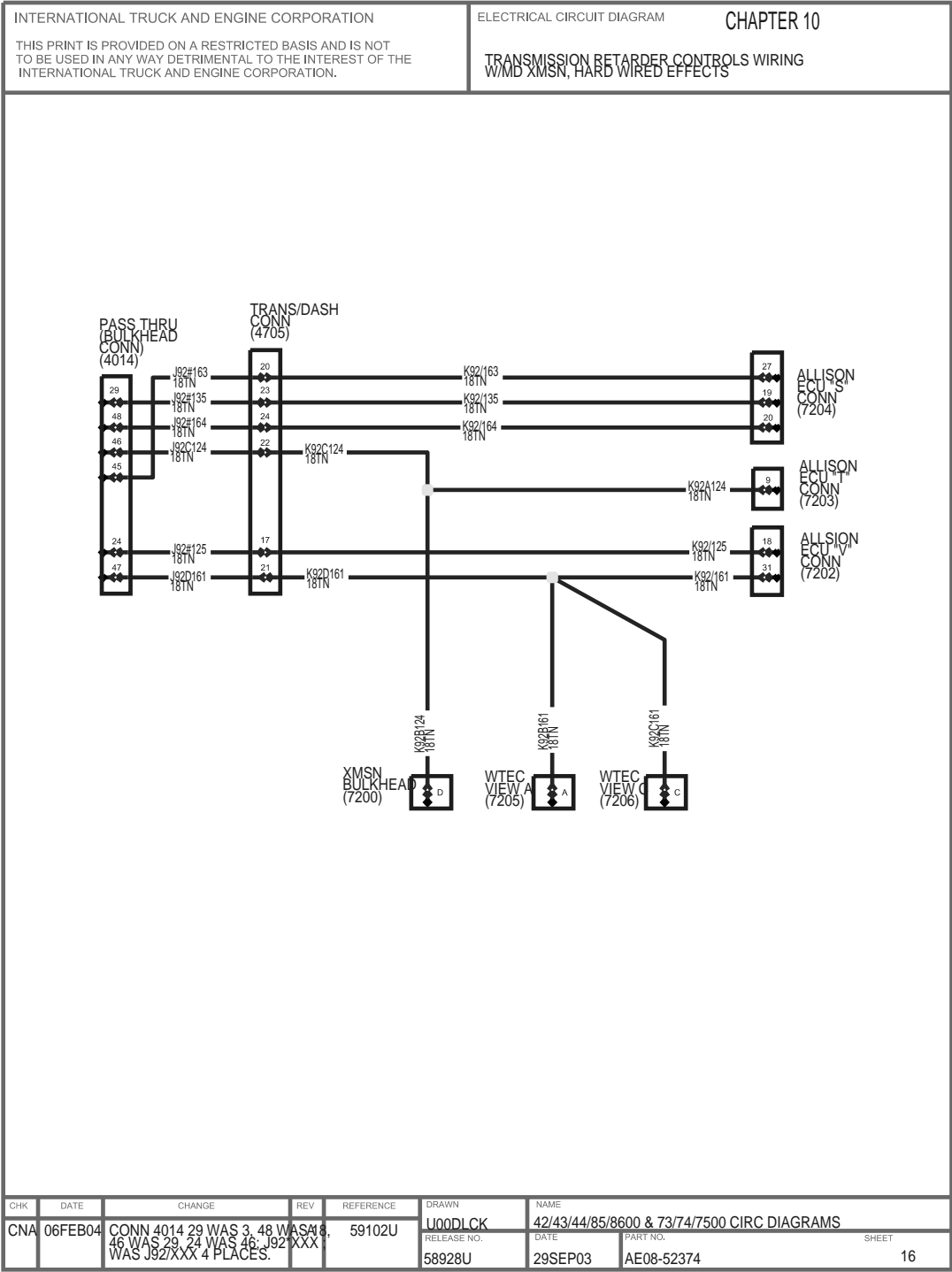


Figure 166 Transmission Retarder Control Wiring with MD Transmission, Hard Wired Effects

## 10.21. EATON ULTRASHIFT/DM2, P. 17

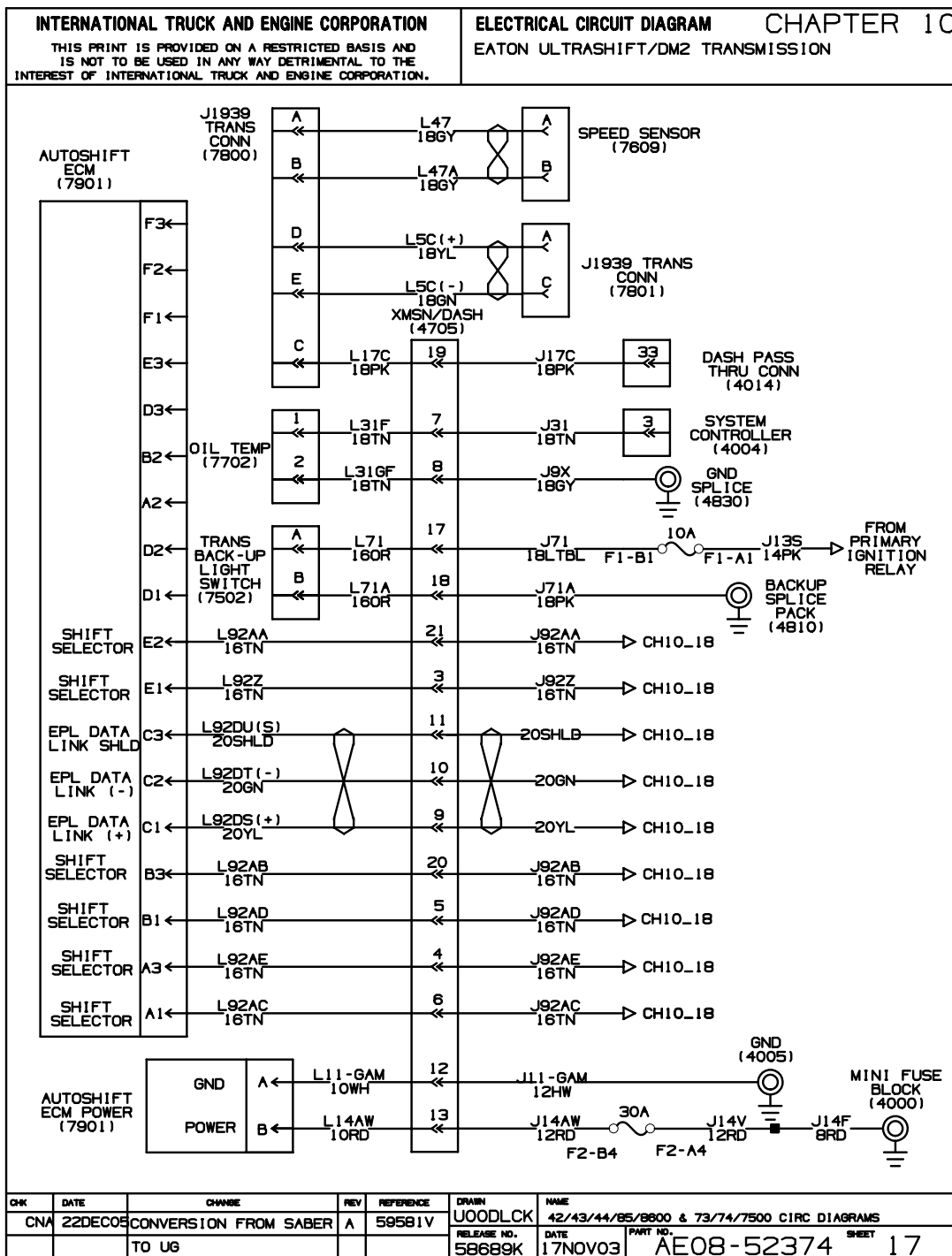


Figure 167 Eaton Ultrashift/DM2

## 10.22. EATON ULTRASHIFT/DM2 (CONT.), P. 18

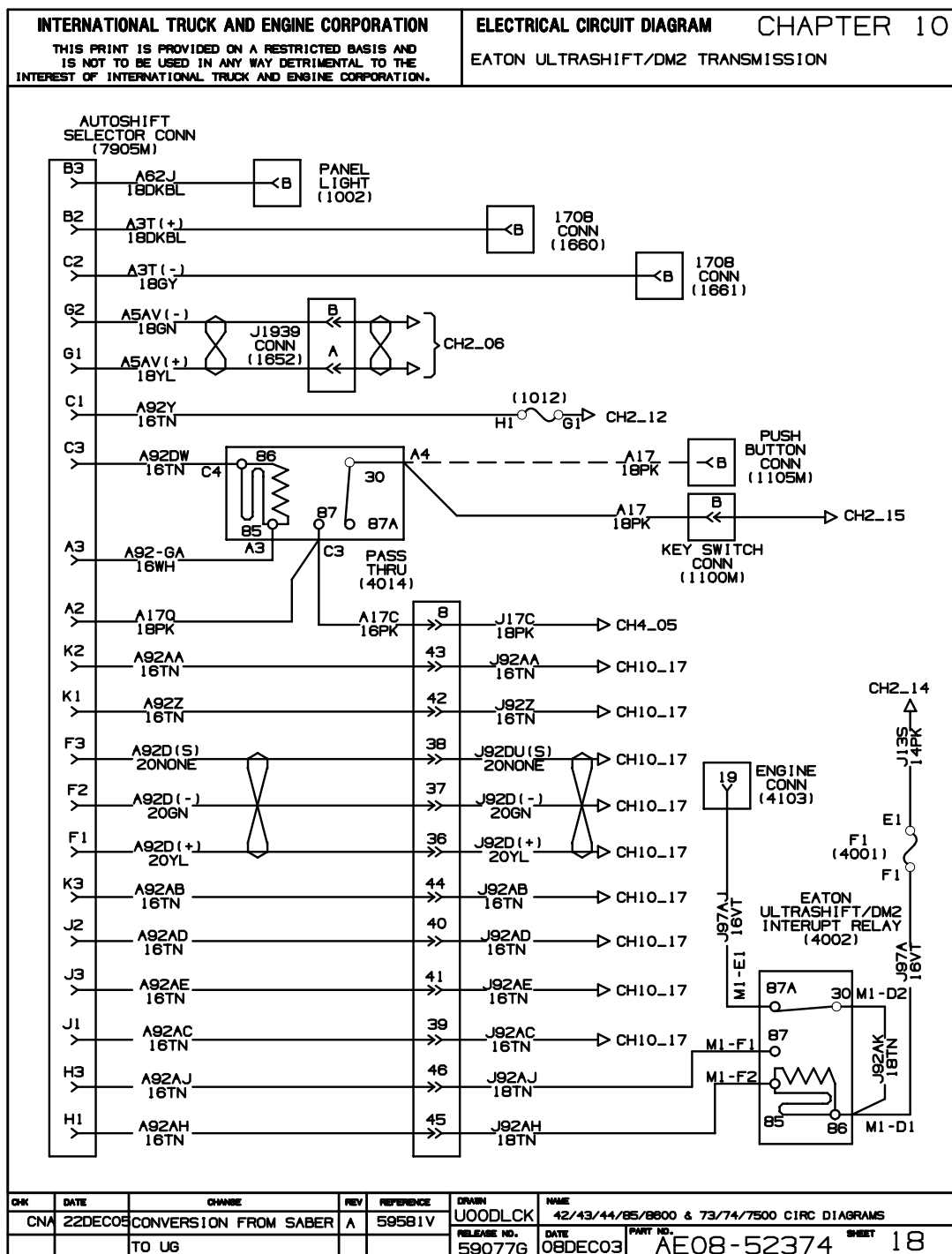


Figure 168 Eaton Ultrashift/DM2 (Cont.)

[illegible]

### Figure 169 WTEC MD Transmission with Auto Neutral



## 10.24. WTEC MD TRANSMISSION WITH AUTO NEUTRAL AND WITH 0013WUA, P. 19A

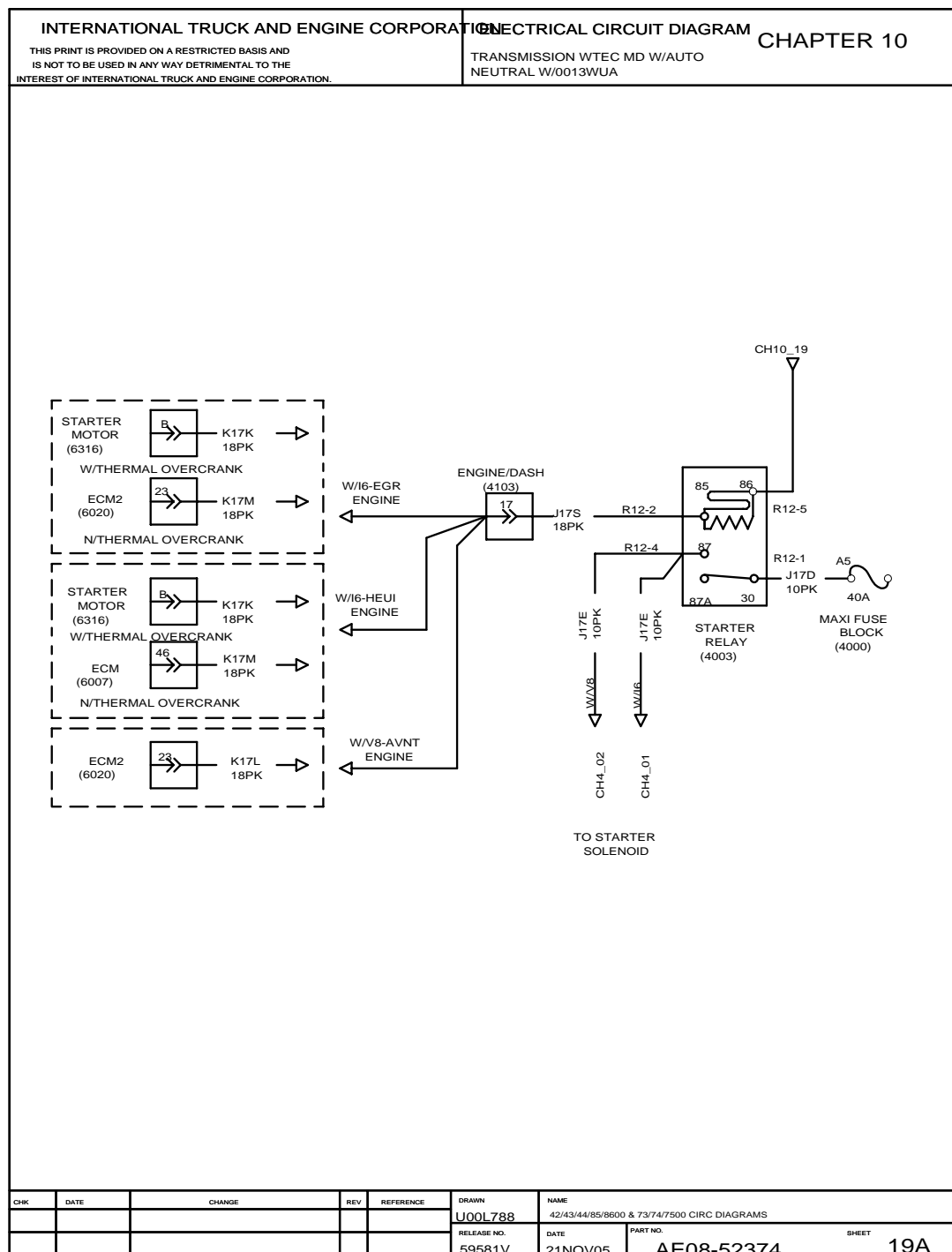


Figure 170 WTEC MD Transmission with Auto Neutral and with 0013WUA

# INTERNATIONAL TRUCK AND ENGINE CORPORATION EATON AUTOSHIFT / ULTRASHIFT TRANSMISSION (GEN 3)

**Wiring Diagram Details:**

- ECM (6007):** 39 (L47 18GY), 40 (L47A 18GY), 26 (L17E 16PK).
- ECM2 (6020):** 8 (L17E 16PK), 10 (L47 18GY), 9 (L47A 18GY).
- ECM2 (6021):** 10 (L47 18GY), 9 (L47A 18GY).
- TRAN SPEEDO SENSOR (7609):** 19 (XMSN/DASH 4705).
- OIL TEMP (7702):** 1 (L31F 18TN), 2 (L31GF 18TN).
- SYSTEM CONTROLLER (4004):** 3 (J31F 18TN), 2 (J31GF 18TN).
- GND SPICE PACK (4830):** 19 (XMSN/DASH 4705).
- MINI FUSE BLOCK (4001):** 10A, 30A, 10A, 30A.
- TRAN BACK-UP LIGHT SWITCH (7602N):** 11-GAM 12WH, 11-GAM 12WH.
- START MOTOR NEGATIVE (274):** 11-GAM 12WH.
- CAT/CUMMINS ONLY:** 35 (J92ET 12TN), 38 (J14AW 12RD), 26 (J17EM 16PK), 4 (J17-GA 16WH), 32 (J17EA 16PK).
- INTERNATIONAL ENGINES ONLY:** 17C 16PK.
- START ENABLE RELAY (4002):** 86, 87, 87A, 86, 87, 87A.
- DASH PASS THRU (1701):** 1701.
- KEYSWITCH (1100M):** 1100M.
- AUTOSHIFT SELECTOR (7905):** 7905.
- EATON GEAR DISPLAY (1240):** 1240.
- PANEL LIGHT BUSS BAR (1002):** 1002.
- CAB FUSE BLOCK (1012):** 1012.
- CAB FUSE BLOCK (1012):** 1012.
- CH2\_04A:** 04A.
- CAB GROUND (1003):** 1003.
- KILL CONFIRM:** 20 (J92EG 16TN), 21 (J92EH 16TN).
- IGN INTERRUPT -:** 20 (J92EG 16TN), 21 (J92EH 16TN).
- IGN INTERRUPT +:** 22 (J92EJ 16TN).

CHK	DATE	CHANGE	REV	REFERENCE	DRAWN	NAME	RELEASE NO.	DATE	PART NO.	SHEET
JKP	4JAN06	MOVED WIRE J17D FROM F1-F1 TO F1-H2	B	59924R	U00RRG4	42/43/44/85/8600 & 73/74/7500 CIRC DIAGRAMS	59R22S	26AUG05	AE08-52374	20

### Figure 171 Eaton Autoshift/Ultrashift Transmission (Gen 3)

11. AIR CONDITIONING (CHAPTER 11)

11.1. HVAC SYSTEMS, P. 1

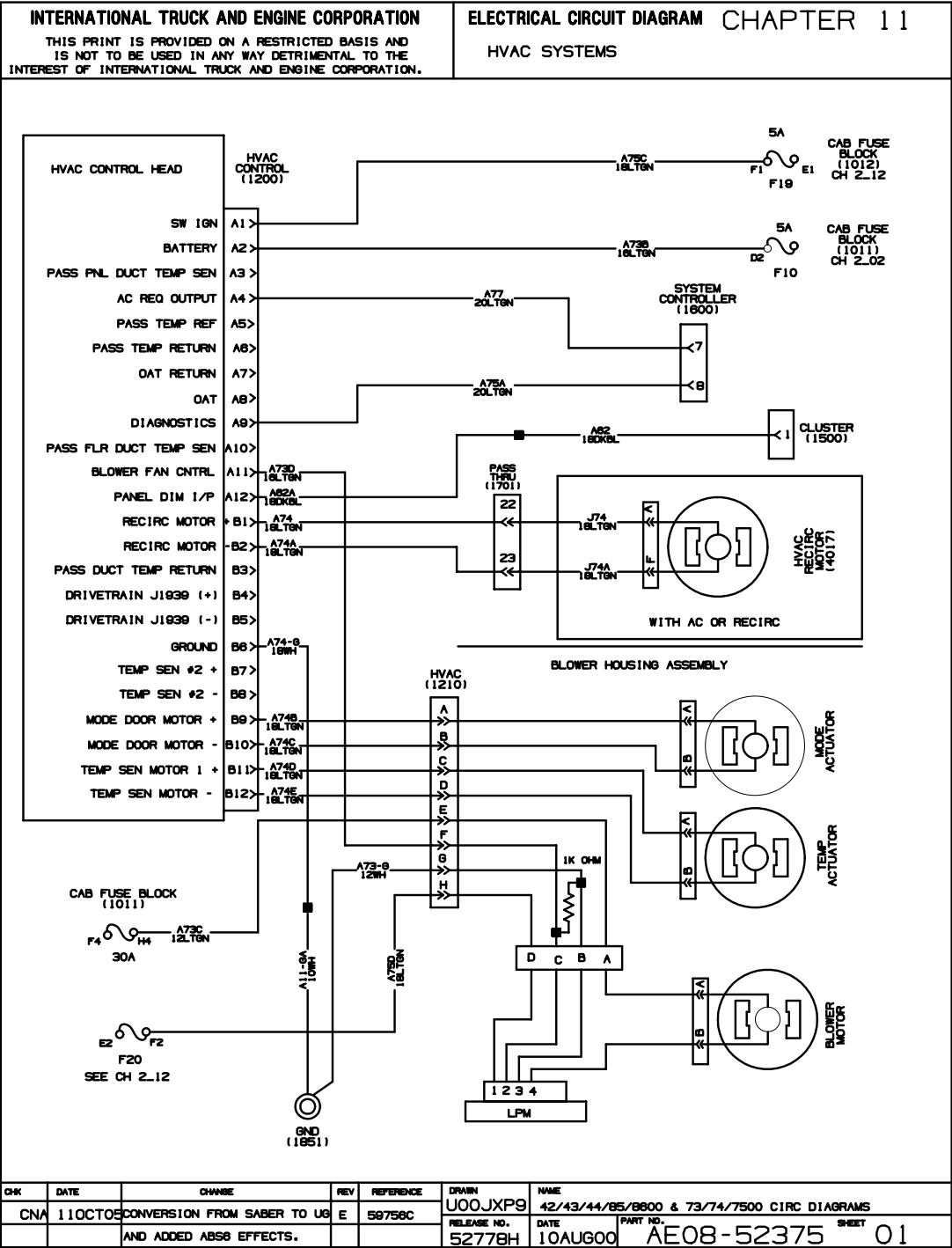


Figure 172 HVAC Systems

11.2. AIR CONDITIONING (ONLY), P. 2

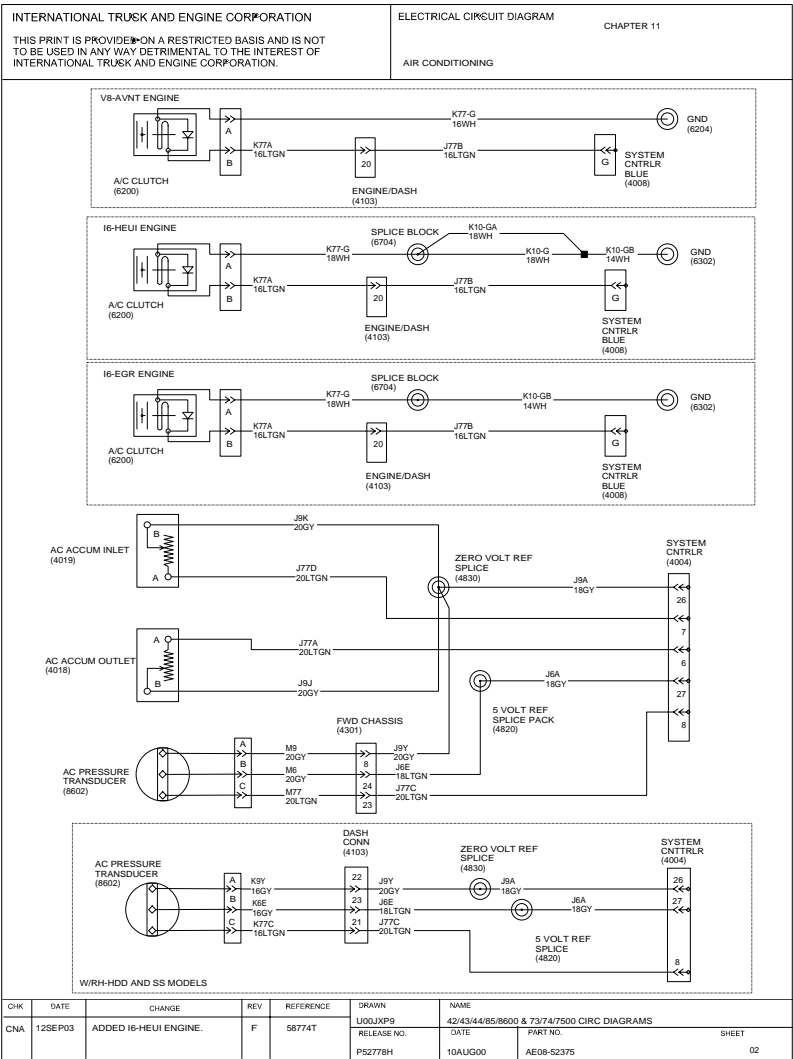


Figure 173 Air Conditioning (Only)

### 11.3. AUTOTHERM SYSTEMS, P. 3

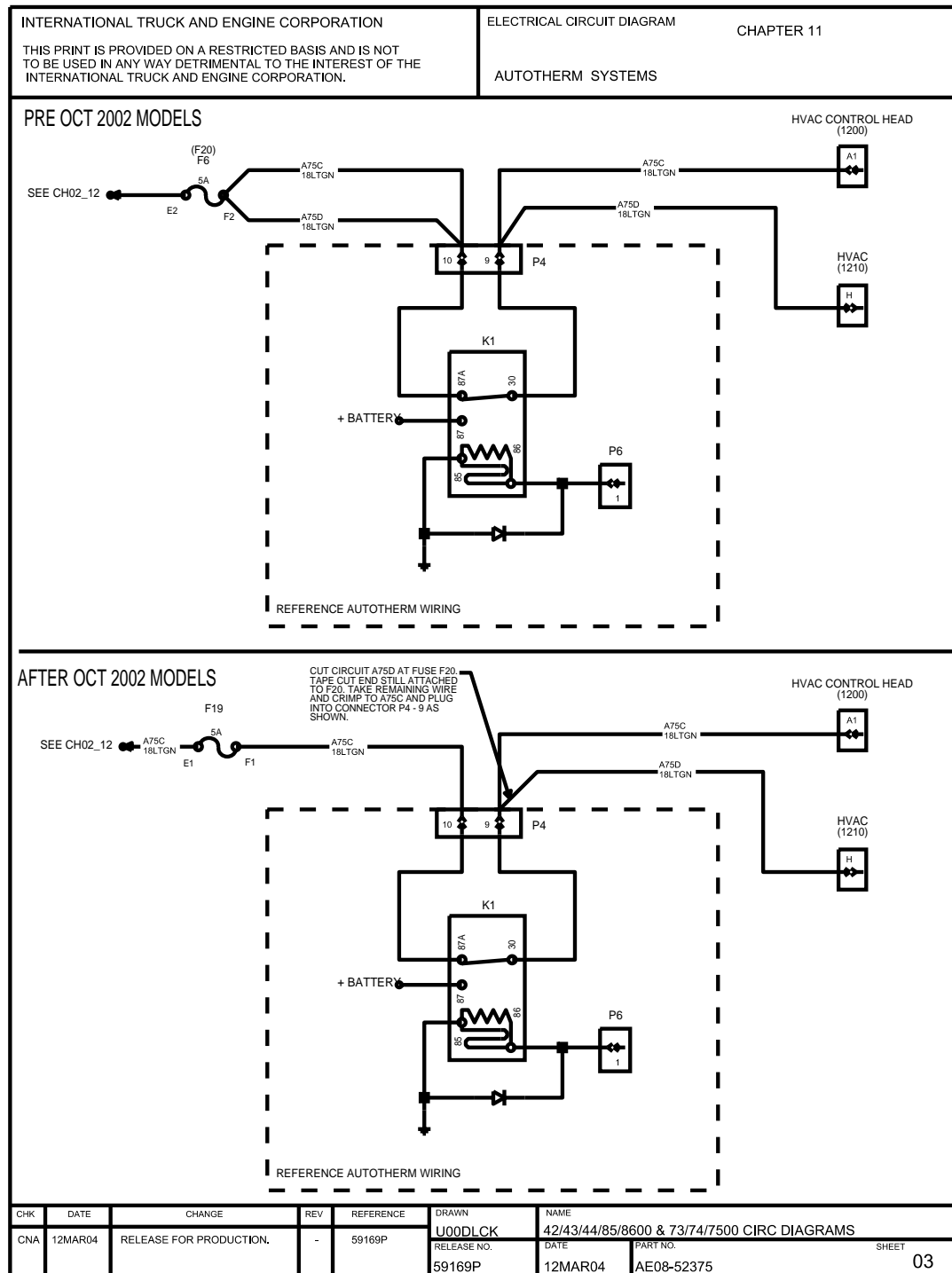


Figure 174 Air Conditioning (Only)