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

7.1. IP/GAUGE LIST, P. 1

ERNATIO	ONAL TRUCK AN	D ENGINE CO	RPORATION	ELECTR	RICAL CIRCUIT DIA	GRAM	CHAPTER 7
BE USED	S PROVIDED ON A F IN ANY WAY DETRII NAL TRUCK AND EN	MENTAL TO TH	E INTEREST OF	IP/GAU	GES		
			INSTRUMENT PA	NEL GAUGE	S		
G	AUGE	WARN			SENSOR		
LIGHT					LOCATION		
RPM (TA	ACH)	NO	ENGINE CTRLR/D	RIVE TRAIN	J1939/CLUSTER		ENGINE
MPH/KPI	H (SPD)	NO	ENGINE CTRLR/D				TRANSMISSION
FUEL		YES	SYSTEM CTRLR/D	RIVE TRAIN	J1939/CLUSTER		FUEL TANK
VOLT		YES	SYSTEM CTRLR/D	RIVE TRAIN	J1939/CLUSTER		
AIR 1 (P	PRES)	YES	SYSTEM CTRLR/D				INSIDE CAB - DASH PNL
AIR 2 (P	PRES)	YES	SYSTEM CTRLR/D	RIVE TRAIN	J1939/CLUSTER		STEERING COL AREA
WATER ((TEMP)	YES	ENGINE CTRLR/D	RIVE TRAIN	J1939/CLUSTER		ENGINE
ENG OIL	. (TEMP)	YES	ENGINE CTRLR/D	RIVE TRAIN	J1939/CLUSTER		ENGINE
OIL (PR	ES)	YES	ENGINE CTRLR/D	RIVE TRAIN	J1939/CLUSTER		ENGINE
TRANS	(TEMP)	YES	XMSN CTRLR/SYS	STEM CTRLF	R/DRIVE TRAIN J19:	39/CLUSTER	TRANSMISSION
AIR APP	PLICATION	NO	SYSTEM CTRLR/D	RIVE TRAIN	J1939/CLUSTER		FWD CHASSIS
REAR AX	XLE TEMP	YES	SYSTEM CTRLR/D	RIVE TRAIN	J1939/CLUSTER		AXLE
		1					
		1	İ				
		1	1				
		1					
		1					
		1					
		1					
NOTE		PART OF THE	GAUGES AND LOCATE	D IN THE GA	NUGE		
DATE	CHANG	GE RE		awn	NAME		
DATE 16JAN0		— <u> </u>	DE 420 411	AWN JXP9 EASE NO.	42/43/44/85/8600	& 73/74/7500 ART NO.	CIRC DIAGRAMS SHEET

Figure 62 IP/Gauge List

7.2. WARNING LIGHT LIST, P. 2

PRINT I	ONAL TRUCK AND ENGINE CO S PROVIDES ON A RESTRICTED IN ANY WAY DETRIMENTAL TO T NAL TRUCK AND ENGINE CORPC	BASIS HE IN	AND IS NOT TEREST OF			CAL CIRSUIT DIA	AGRAM	CHAPTER 7
			IP WARNING LIGHT	rs				
,	WARNING LIGHT		SIGNAL PATH					SENSOR
	TITLE RANGE INHIBITED FUEL FILTER ENGINE (YELLOW LED) ENGINE (RED LED)							LOCATION
RA			TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER					
FUE			SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER					FUEL FILTER
EN								
EN								
BR	AKE PRESSURE (①)		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					SWITCH
BR	BRAKE FLUID TRAC CTRL		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER TRUCK ABS CTRLR/DRIVE TRAIN J1939/CLUSTER					BRK RESEVOIR
TR								
СН	ECK TRANS		TRANS CTRLR/DR	IVE TRAIN J19	39/CL	USTER		
TRA	AILER ABS		TRLR ABS CTRLR	DRIVE TRAIN	J1939/	CLUSTER		
WA	SHER FLUID	I	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					WASHER BOTTLE
(LE	(LEFT TURN) AIR BAG WATER IN FUEL		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					TURN SIG SW
			DISCRETE NOT O					
WA			SYSTEM CTRLR/D					FUEL FILTER
	OLANT LEVEL		ENGINE CTRLR/DI					SURGE TANK
СН	ECK ELECT SYS		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					
PARK (P)			SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					SWITCH
			SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER TRUCK CTRLR/DRIVE TRAIN J1939/CLUSTER					
	ABS (RIGHT TURN) WAIT TO START							
_			SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					
			ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER					
_	STEN BELTS GH BEAM IND)	+	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					
	LD AMB PROTEC		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					
			SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER					
_	RETARD OVERHEAT CHECK AC AUTO NEUTRAL ALTERNATOR PTO/THROTTLE OPTIMZED IDLE SNOW VALVE		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER					TRANSMISSION
			DISCRETE NOT ON DATA BUS DISCRETE NOT ON DATA BUS SYSTEM CTRL/DRIVE TRAIN J1939/CLUSTER DISCRETE NOT ON DATA BUS DISCRETE NOT ON DATA BUS DISCRETE NOT ON DATA BUS					SWITCH
_								
-								
<u> </u>								SNOW VALVE
<u> </u>	AXLE DIFF LOCK	+	DISCRETE NOT ON DATA BUS				FWD RR AXLE	
RR	AXLE DIFF LOCK	+						RR RR AXLE
ME	SSAGE WAIT	\top						
PT	0	+						
СО	NVERTER TEMP	+						
то	UCHLOC RELEASE	\top						
PA	PARK FLUID FR AXLE ENGAGED		SYSTEM CTRLR/DRIVE TRAIN DISCRETE NOT ON DATA BUS					
FR								TRANSFER CASE
DATE	CHANGE	REV	REFERENCE	DRAWN		NAME		
29SEP03	ADDED FR AXLE ENGAGED.	В	58928U	U00JXP9 RELEASE NO.		42/43/44/85/8600 DATE	& 73/74/7500 CIF PART NO.	RC DIAGRAMS SHEET
		1		P52778H		09AUG00	AF08-52371	SHEE

Figure 63 Warning Light List

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

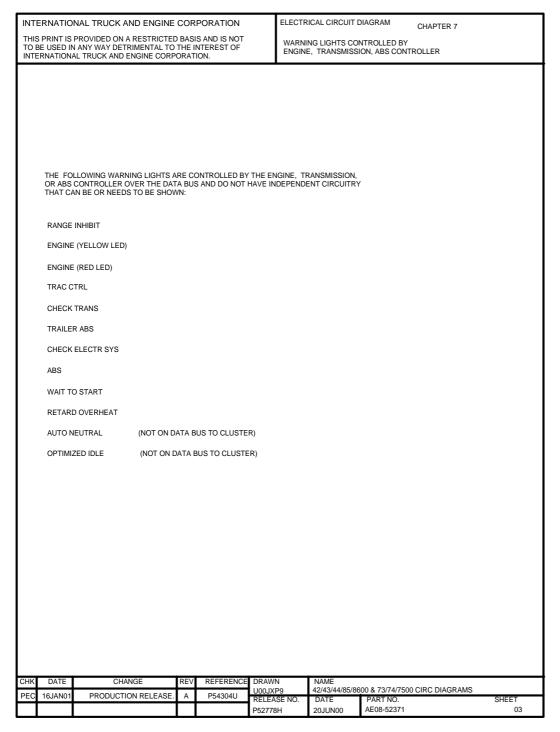


Figure 64 Warning Lights Controlled by Engine, Transmission, ABS Controller

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

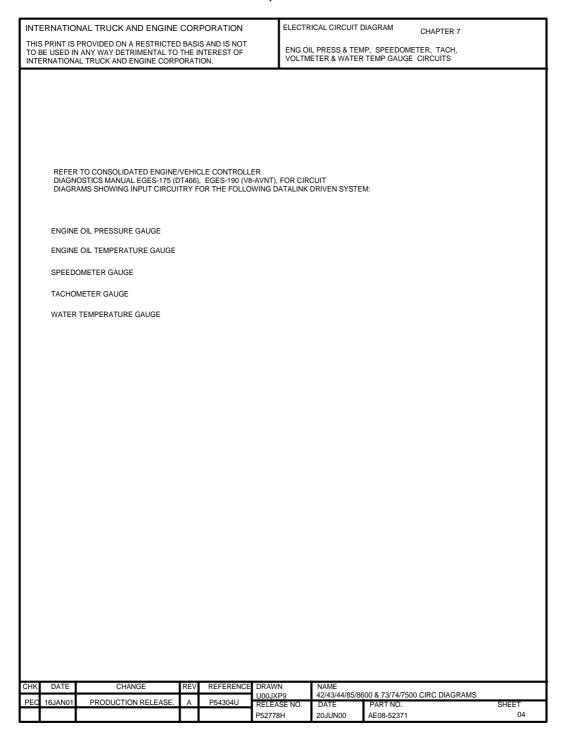


Figure 65 Engine Oil Pressure and Temp, Speedometer, Tach, Voltmeter and Water Temp Gauge Circuits

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

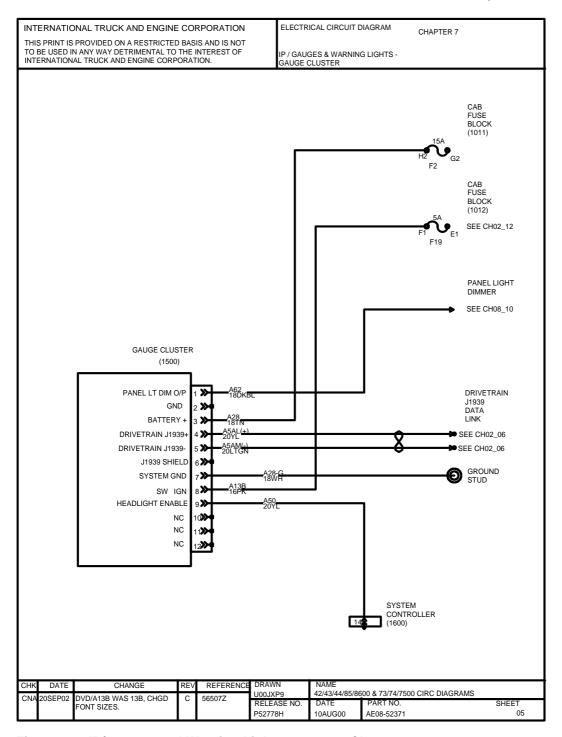


Figure 66 IP/Gauges and Warning Lights — Gauge Cluster

7.6. AIR PRESSURE INPUT CIRCUIT, P. 6

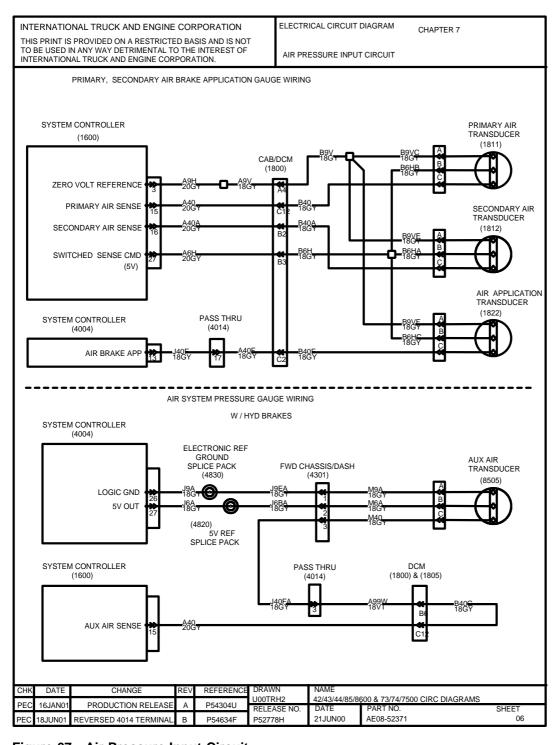


Figure 67 Air Pressure Input Circuit

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

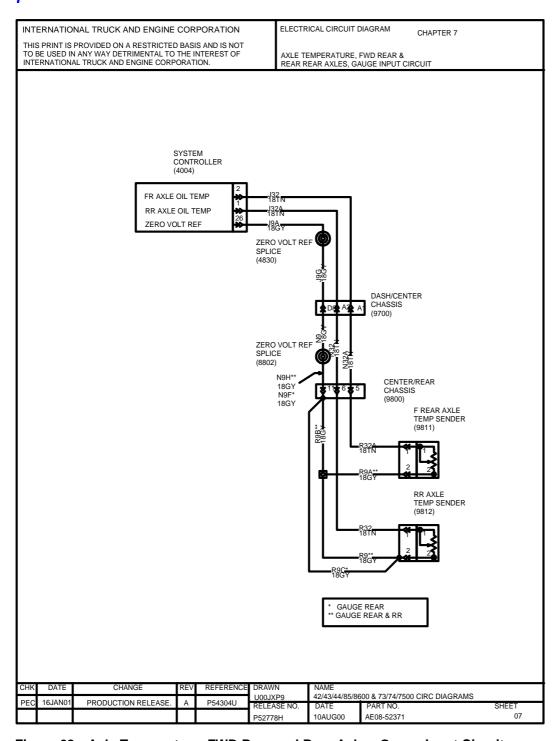


Figure 68 Axle Temperature, FWD Rear and Rear Axles, Gauge Input Circuit

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

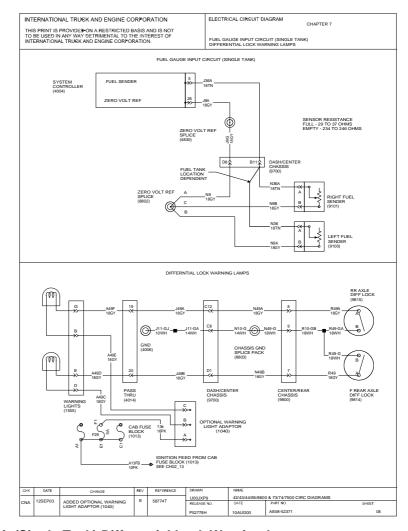


Figure 69 Fuel Gauge Input Circuit (Single Tank) Differential Lock Warning Lamps

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

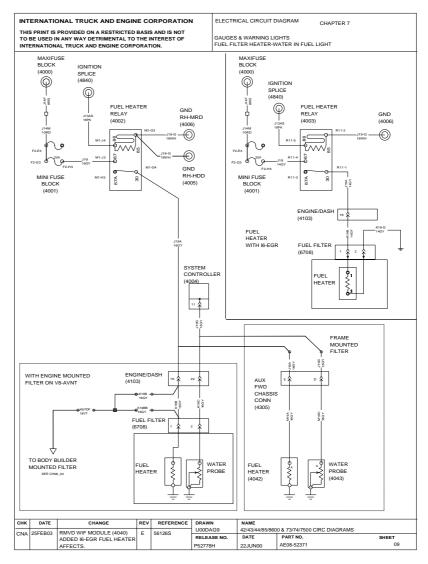


Figure 70 Gauges and Warning Lights — Fuel Filter Restriction and Water in Fuel Lights

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

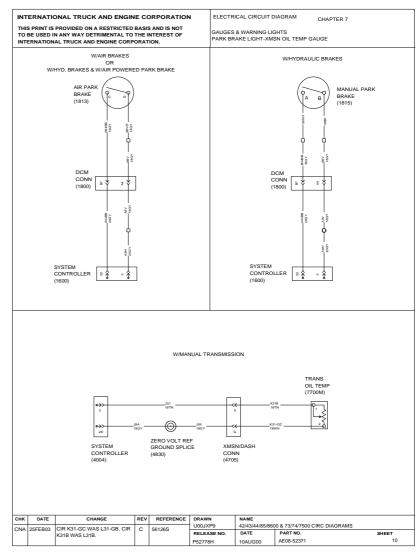


Figure 71 Gauges and Warning Lights — Park Brake Light and Transmission Oil Temp. Gauge

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

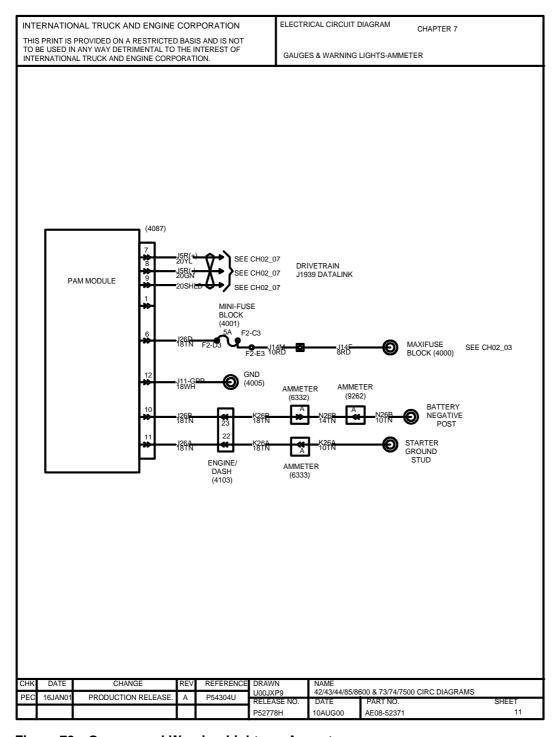


Figure 72 Gauges and Warning Lights — Ammeter

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

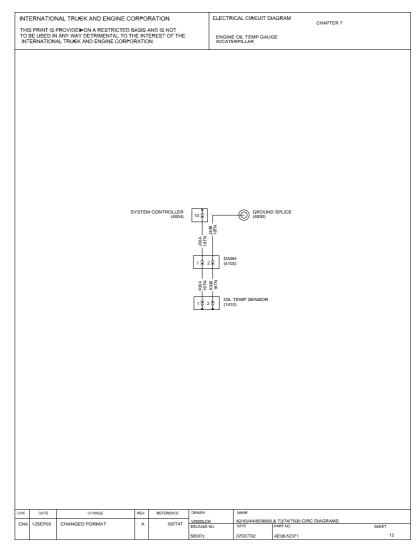


Figure 73 Engine Oil Temperature Gauge With Caterpillar

7.13. FRONT AXLE ENGAGEMENT LAMP, P. 13

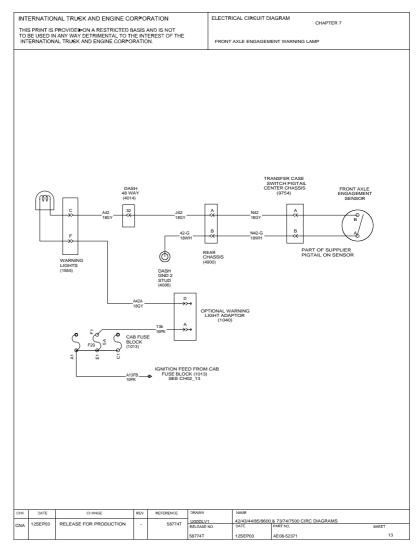


Figure 74 Front Axle Engagement Lamp

8. LIGHTS (CHAPTER 8)

8.1. BACK UP LIGHTS, P. 1

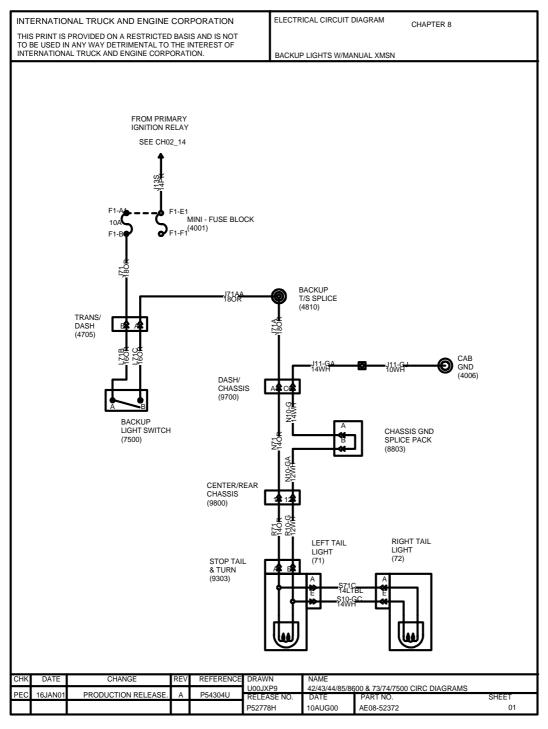


Figure 75 Back Up Lights

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

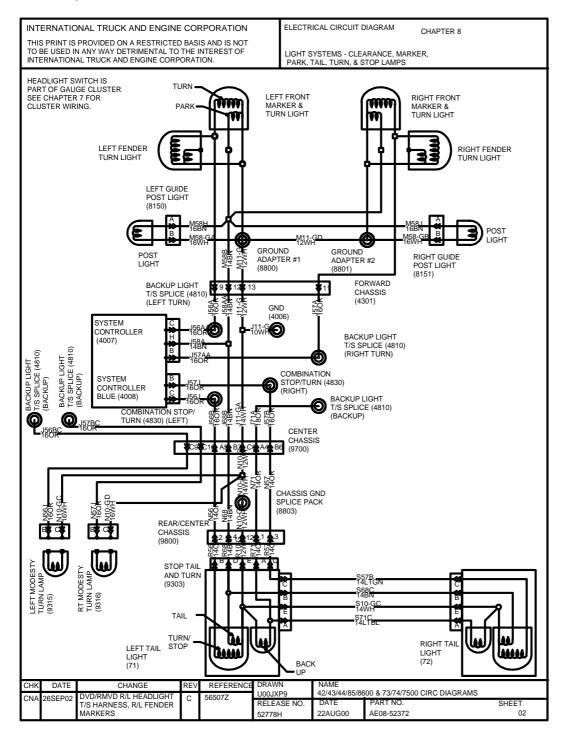


Figure 76 Light Systems — Clearance, Marker, Park, Tail, Turn and Stop Lamps

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

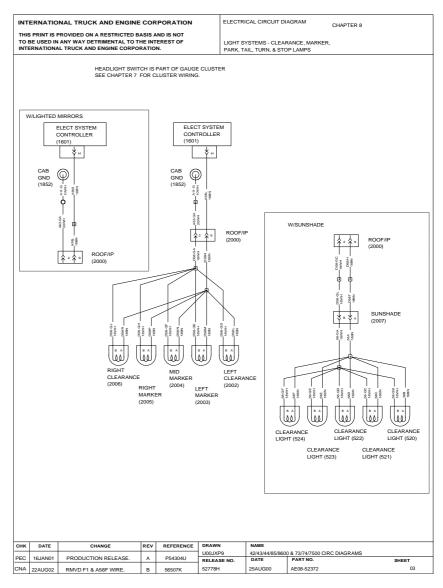


Figure 77 Light Systems — Clearance, Marker, Park, Tail, Turn and Stop Lamps (Cont.)

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

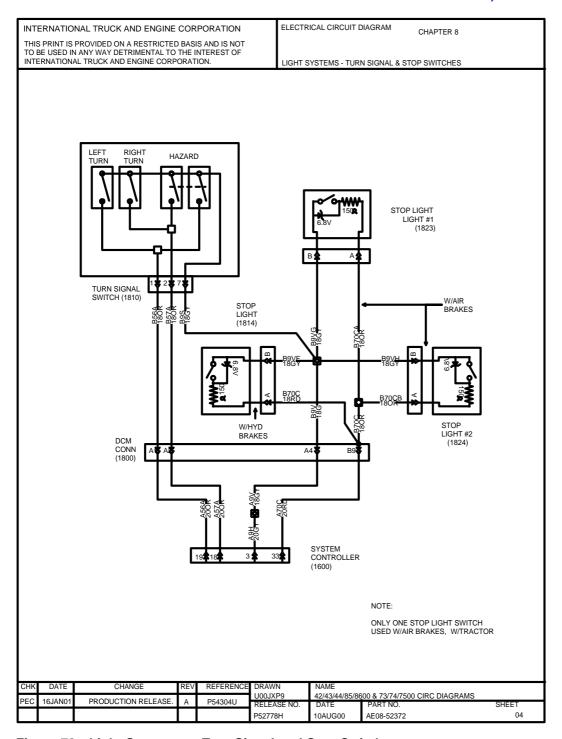


Figure 78 Light Systems — Turn Signal and Stop Switches

8.5. DOME LIGHT, MAP LIGHT, P. 5

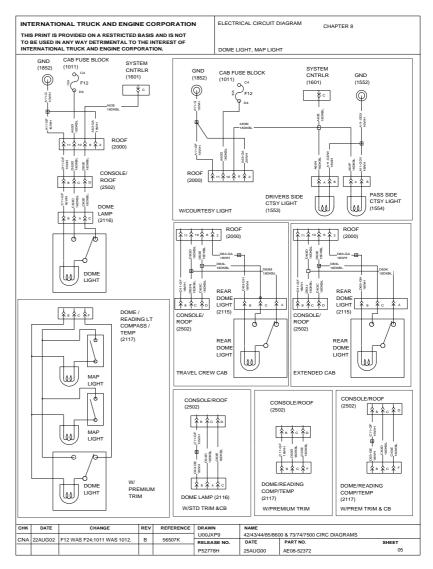


Figure 79 Dome Light, Map Light

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

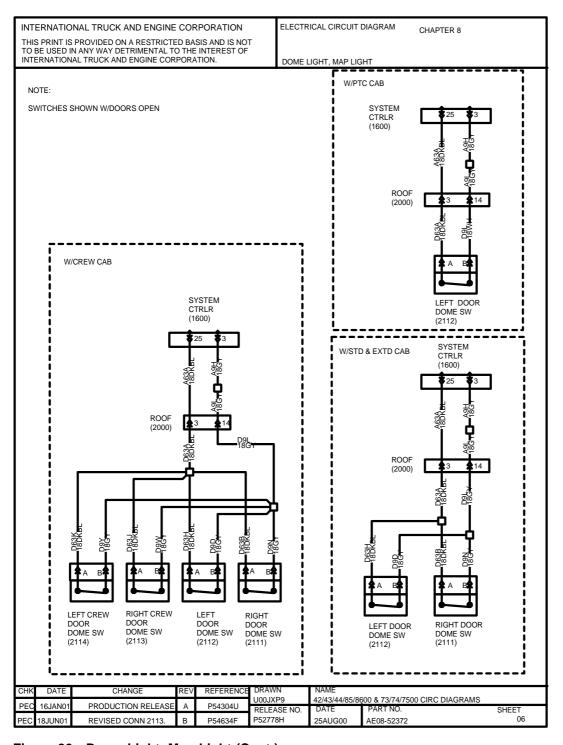


Figure 80 Dome Light, Map Light (Cont.)

8.7. FOG LIGHT AND WORK LIGHT, P. 7

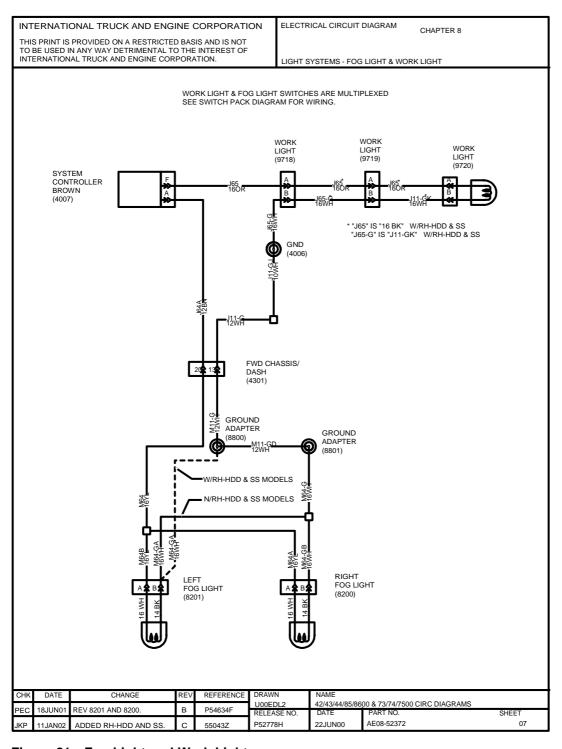


Figure 81 Fog Light and Work Light

8.8. HEADLIGHTS, P. 8

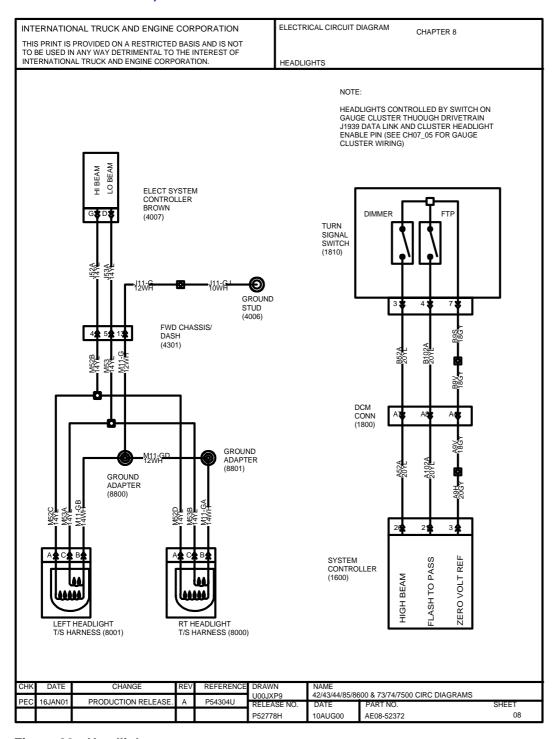


Figure 82 Headlights

8.9. AUX. HEADLIGHTS, AUX. PARK, AUX TURN, P. 9

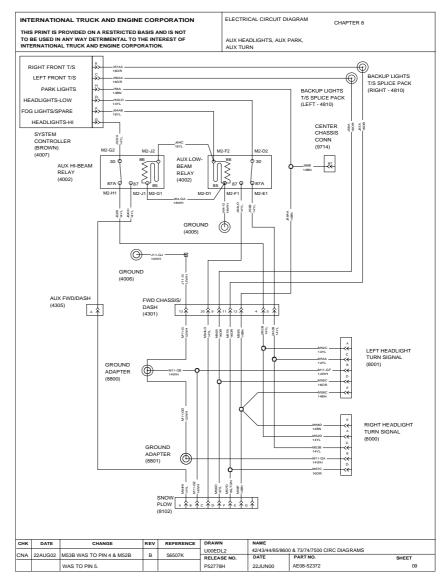


Figure 83 Aux. Headlights, Aux. Park, Aux Turn

8.10. PANEL LIGHTS, P. 10

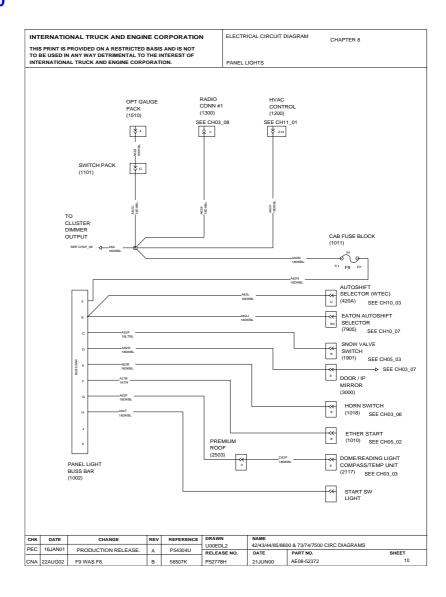


Figure 84 Panel Lights

9. CHASSIS ACCESSORIES (CHAPTER 9)

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

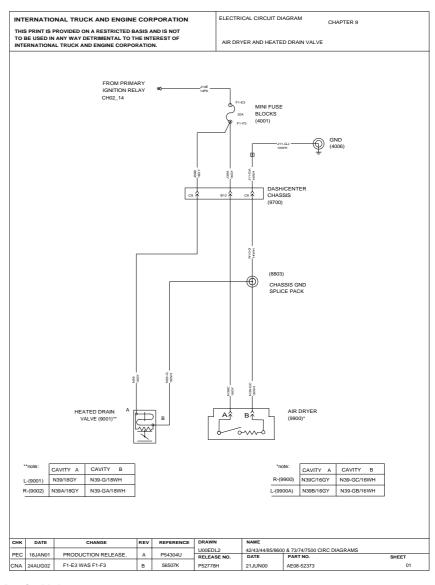


Figure 85 Air Dryer and Heated Drain Valve

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

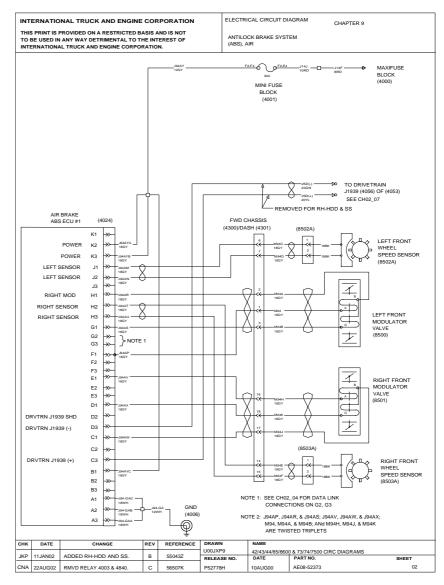


Figure 86 Antilock Brake System (ABS), Air

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

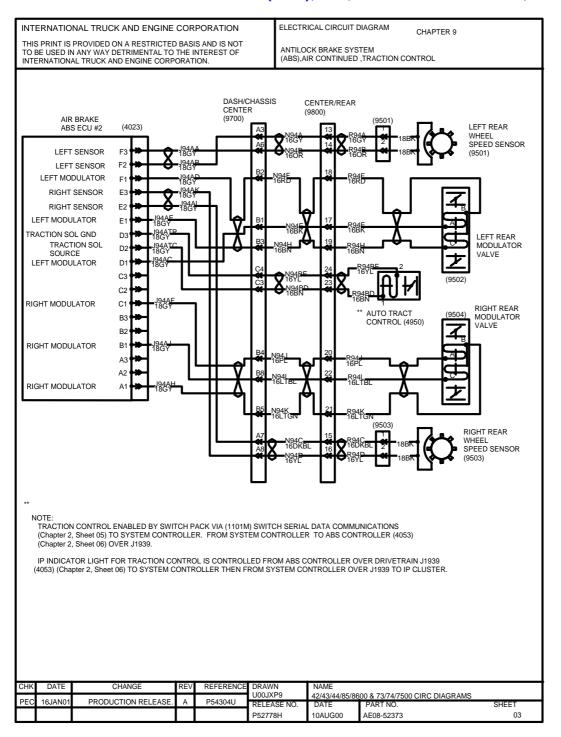


Figure 87 Antilock Brake System (ABS), Air, Traction Control

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

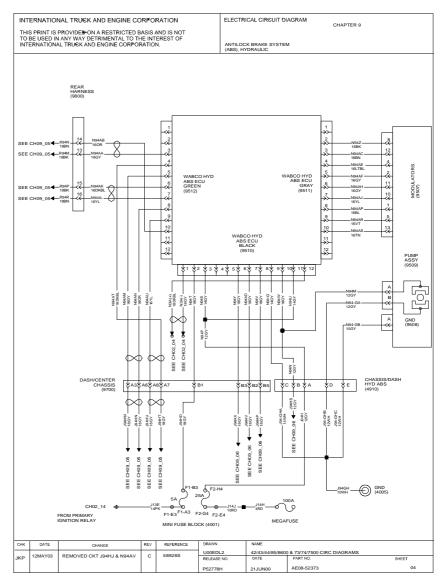


Figure 88 Antilock Brake System (ABS), Hydraulic

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

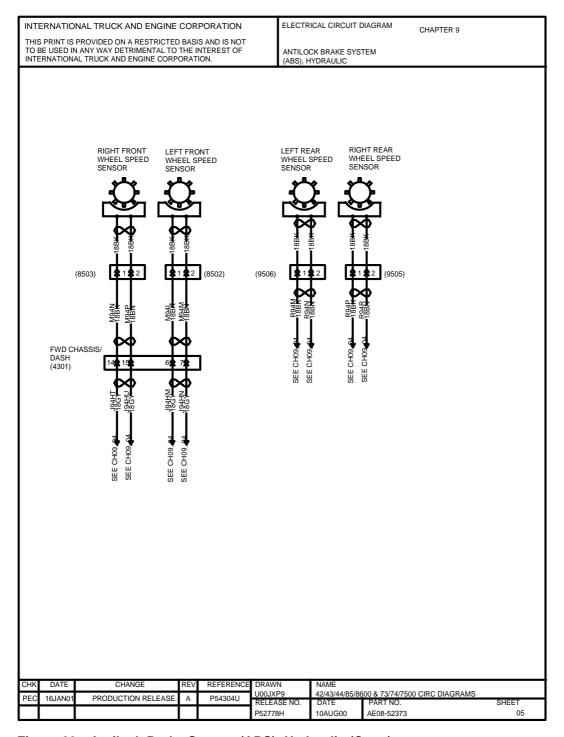


Figure 89 Antilock Brake System (ABS), Hydraulic (Cont.)

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

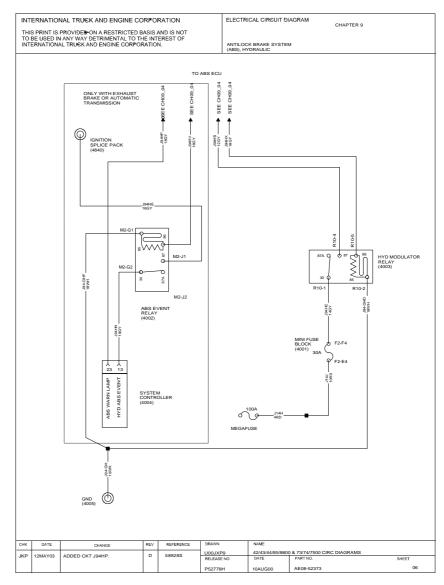


Figure 90 Antilock Brake System (ABS), Hydraulic (Cont.)

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

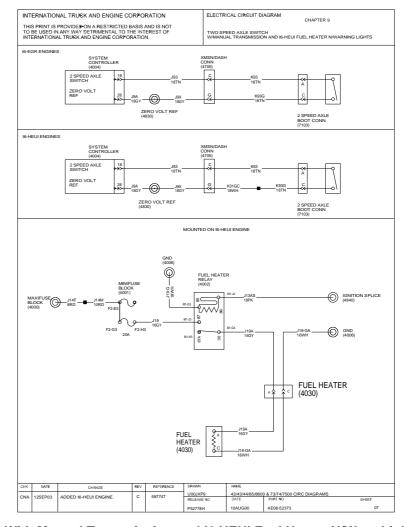


Figure 91 Two Speed Axle Switch With Manual Transmission and I6 HEUI Fuel Heater N/Warn Lights

9.8. BRAKE SYSTEM, HYDRAULIC, P. 8

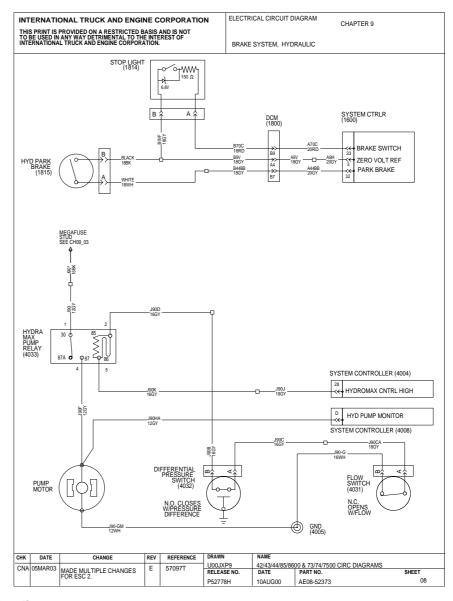


Figure 92 Brake System, Hydraulic

9.9. FUEL TRANSFER PUMP, P. 9

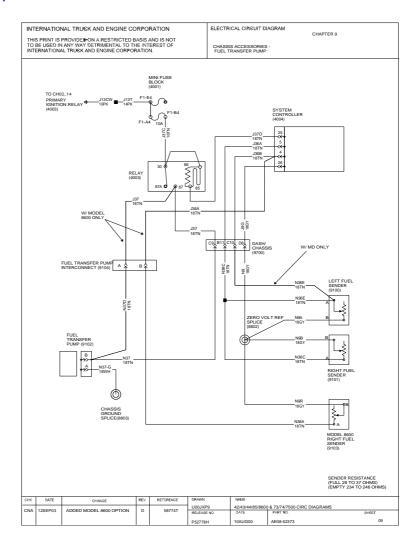


Figure 93 Fuel Transfer Pump

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

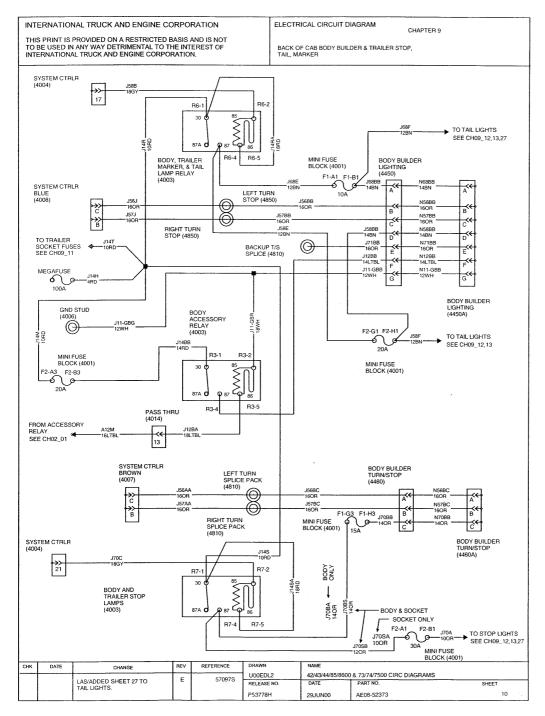


Figure 94 Back of Cab Body Builder and Trailer Stop, Tail, Marker

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

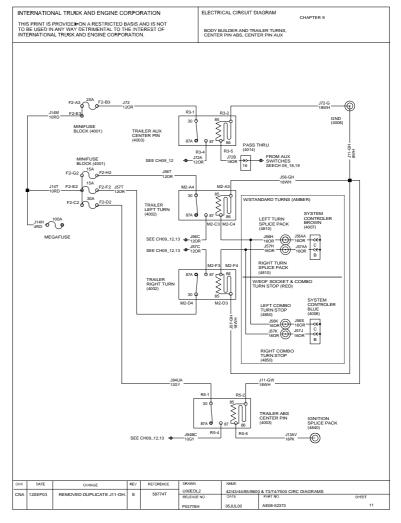


Figure 95 Body Builder and Trailer Turns, Center Pin ABS, Center Pin Aux

9.12. BODY BUILDER AND TRAILER SOCKET BACK OF CAB SOCKETS, P. 12

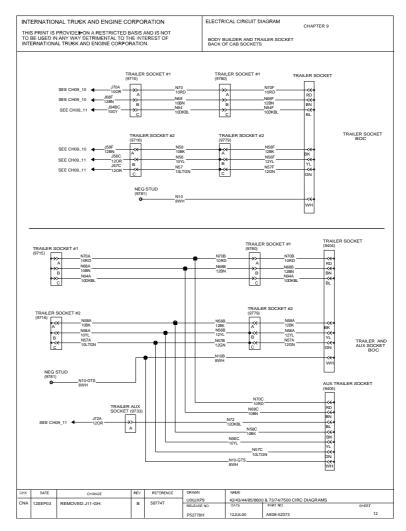


Figure 96 Body Builder and Trailer Socket Back of Cab Sockets

9.13. BODY BUILDER AND TRAILER SOCKET END OF FRAME (EOF) SOCKET AND BODY BUILDER, P. 13

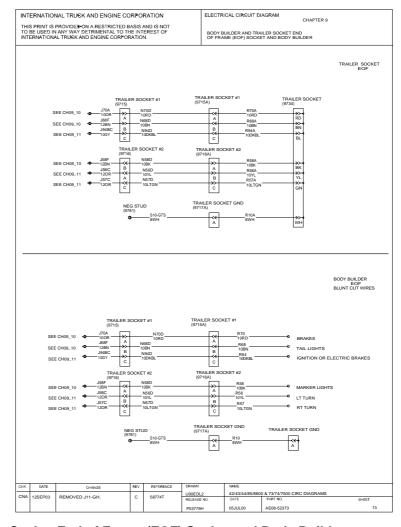


Figure 97 Body Builder and Trailer Socket End of Frame (EOF) Socket and Body Builder

9.14. AIR SOLENOID 4-WAY PACK, P. 14

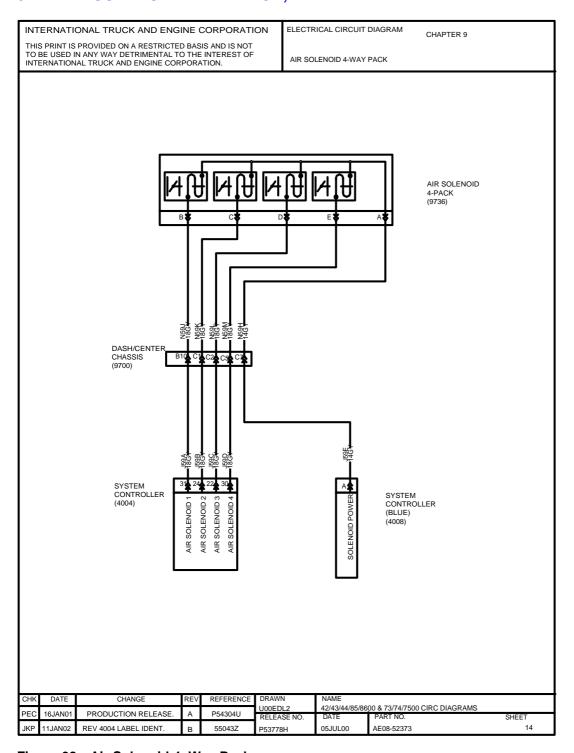


Figure 98 Air Solenoid 4-Way Pack

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

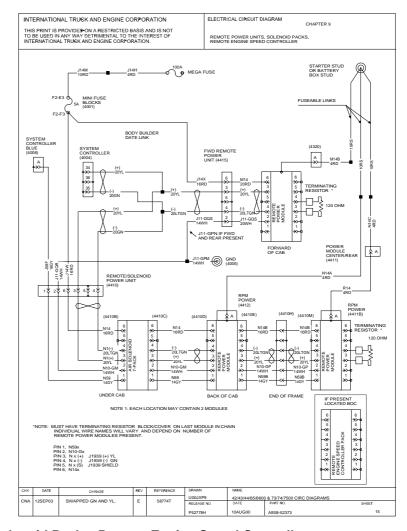


Figure 99 Remote Power Units, Solenoid Packs, Remote Engine Speed Controller

9.16. HYD POWER PARK, P. 16

INTERNATIONAL TRUCK AND ENGINE CORPORATION			ELECTR	ELECTRICAL CIRCUIT DIAGRAM CHAPTER 9		
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.			CHASS	CHASSIS ACCESSORIES - HYD POWER PARK		
INTERNATION	AL TROOK AND ENGINE CORT	OKATION.				
DIAGRAM NOT AVAILABLE						
CHK DATE	CHANGE	REV REFERENCE		NAME	0000 0 70/74/7500 OIDO DIAODANO	
PEC 16JAN01	PRODUCTION RELEASE.	A P54304U	U00EDL2 RELEASE NO.	DATE	9600 & 73/74/7500 CIRC DIAGRAMS PART NO.	SHEET
			P52778H	10JUL00	AE08-52373	16

Figure 100 HYD Power Park

9.17. AIR SUSPENSION, P. 17

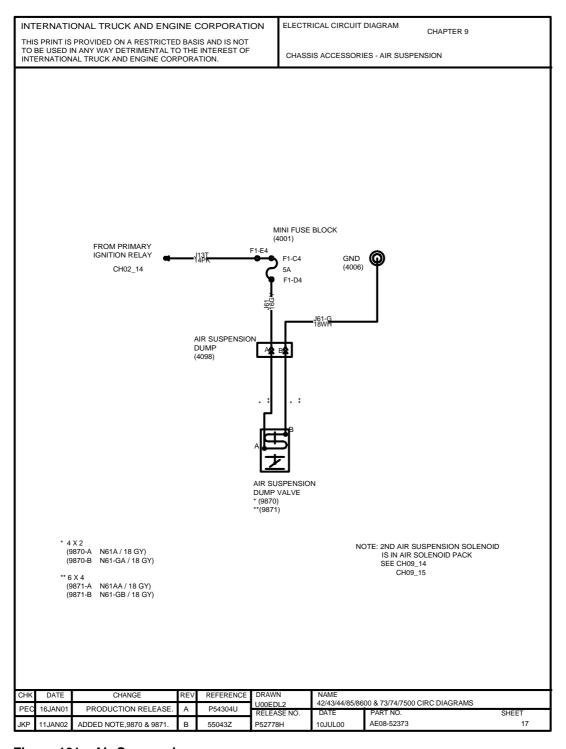


Figure 101 Air Suspension

9.18. AUX. TRAILER, ACC CONTROLLED, P. 18

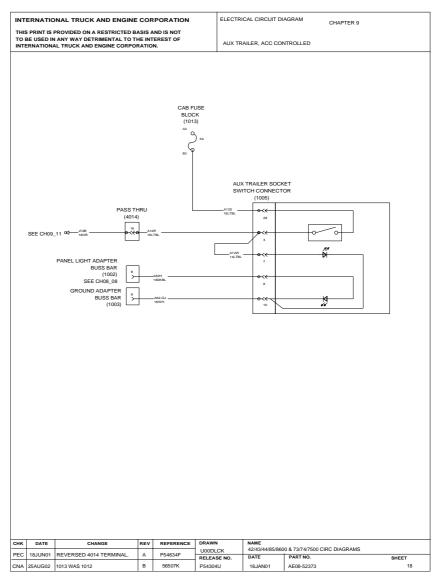


Figure 102 Aux. Trailer, Acc Controlled

9.19. AUX. TRAILER, BTRY CONTROLLED, P. 19

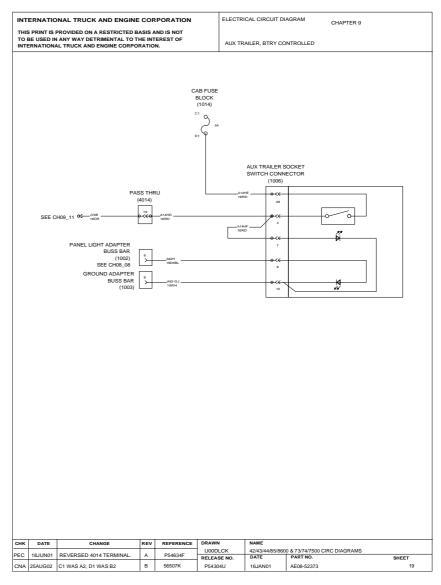


Figure 103 Aux. Trailer, Btry Controlled

9.20. LIFT AXLES (NON-STEERABLE), P. 20

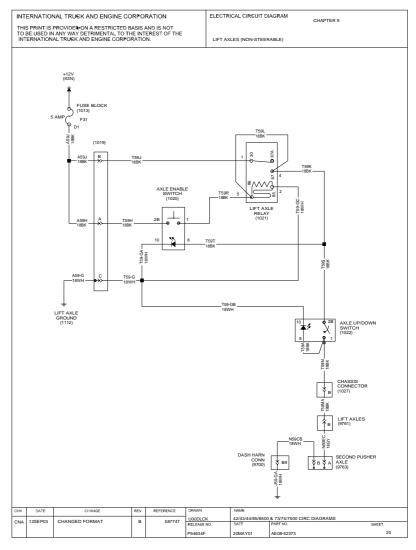


Figure 104 Lift Axles (Non-Steerable)

9.21. LIFT AXLES (STEERABLE), P. 21

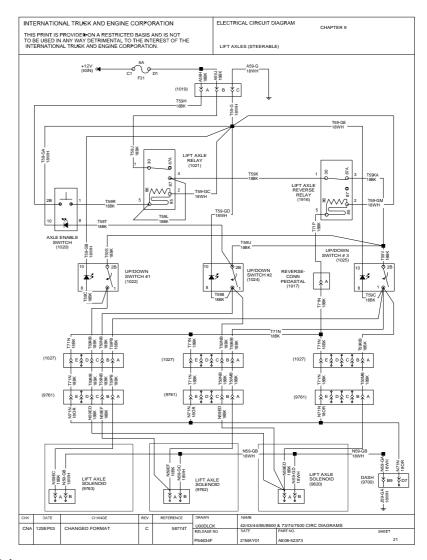


Figure 105 Lift Axles (Non-Steerable)

9.22. AIR ACTUATED PARK BRAKE, P. 22

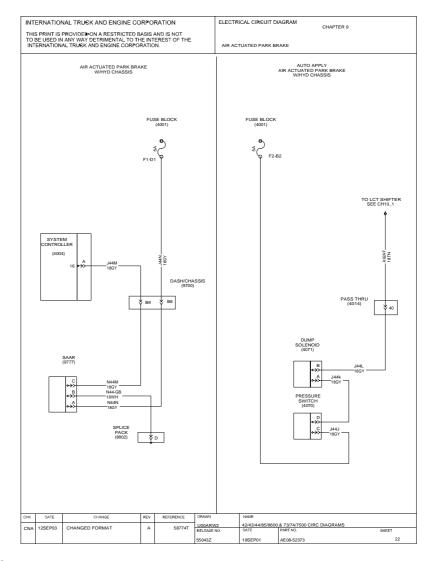


Figure 106 Air Actuated Park Brake

9.23. ANTILOCK BRAKE SYSTEM, WABCO AIR, P. 23

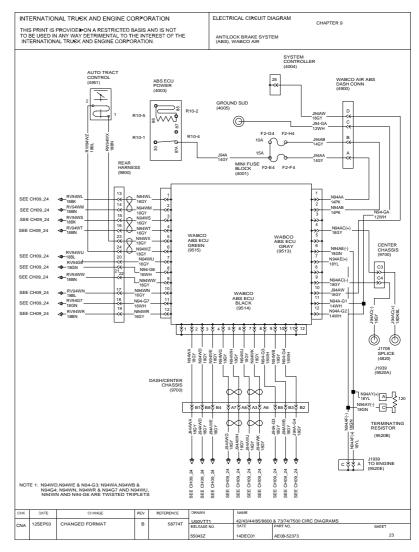


Figure 107 Antilock Brake System, WABCO Air

9.24. ANTILOCK BRAKE SYSTEM, WABCO AIR, P. 24

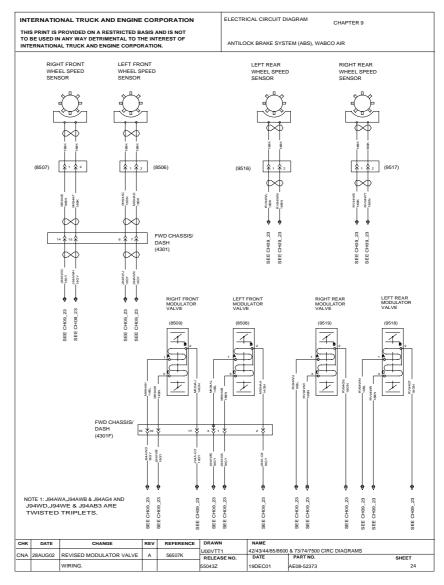


Figure 108 Antilock Brake System, WABCO Air

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

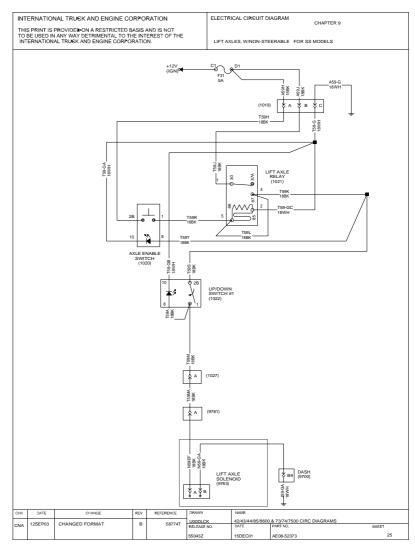


Figure 109 Lift Axles, With Non—Steerable for SS Models

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

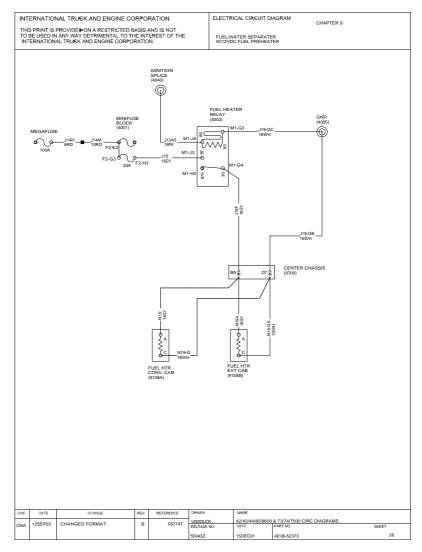


Figure 110 Fuel / Water Separator With 12VDC Fuel Preheater

9.27. ELECTRONIC TRAILER BRAKE ACCOMMODATION, P. 27

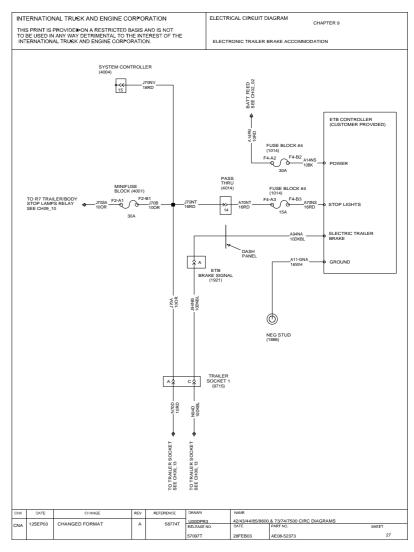


Figure 111 Electronic Trailer Brake Accommodation

9.28. LECTRASHIFT ACCOMMODATION, P. 28

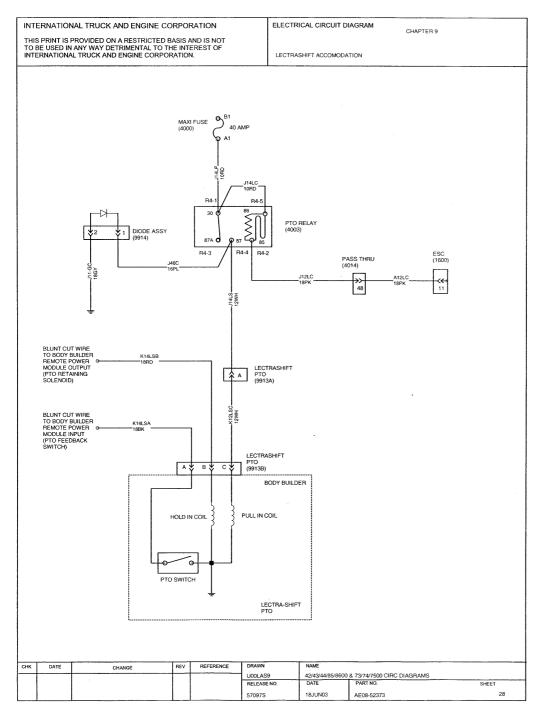


Figure 112 Lectrashift Accommodation

9.29. AUXILIARY 40 AMP CIRCUIT, P. 29

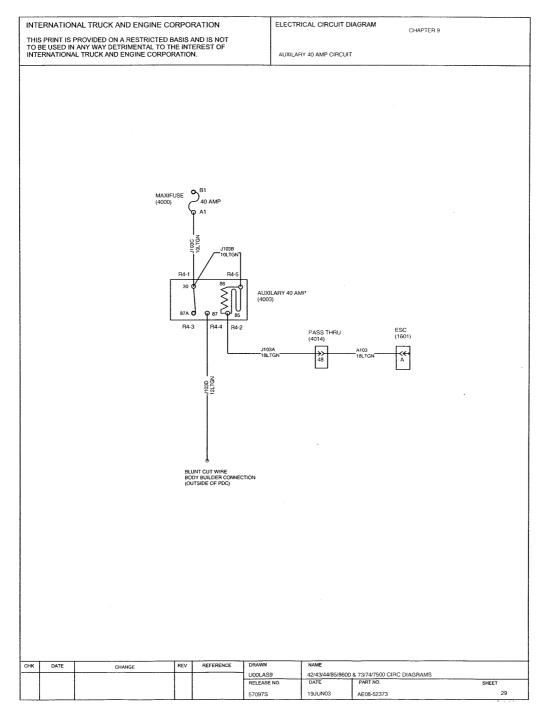


Figure 113 Auxiliary 40 Amp Circuit

9.30. HOURMETER, CUSTOMER MOUNTED PTO, P. 30

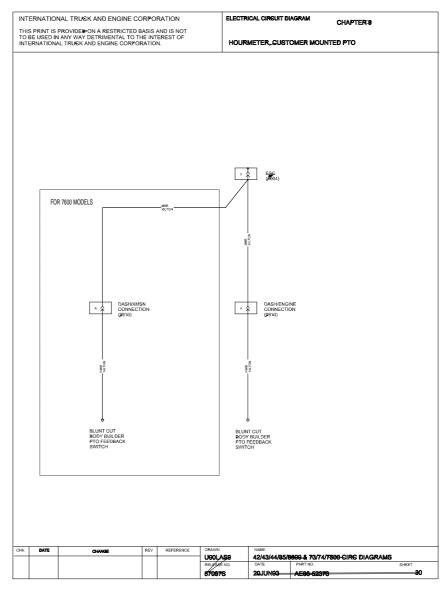


Figure 114 Hourmeter, Customer Mounted PTO

9.31. REMOTE START/ STOP, P. 31

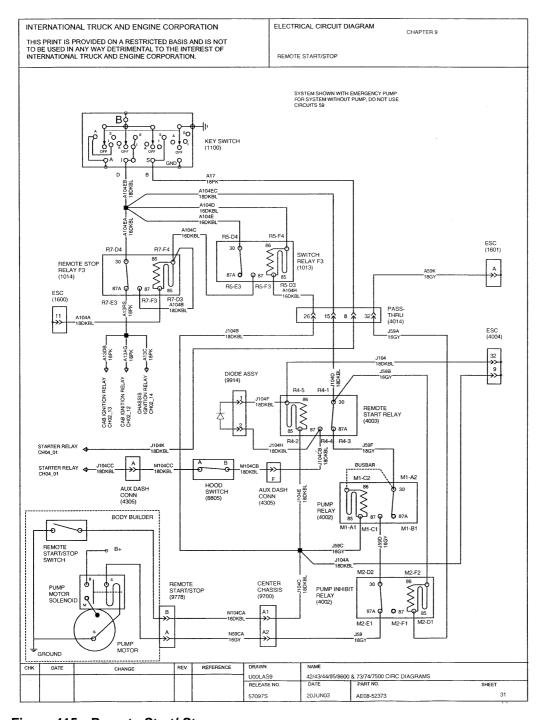


Figure 115 Remote Start/ Stop

9.32. LIFT AXLE WITH 14RAR, P. 32

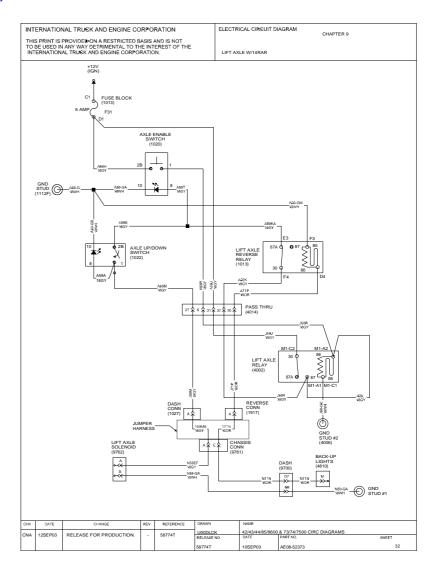


Figure 116 Lift Axle with 14RAR

9.33. LIFT GATE, P. 33

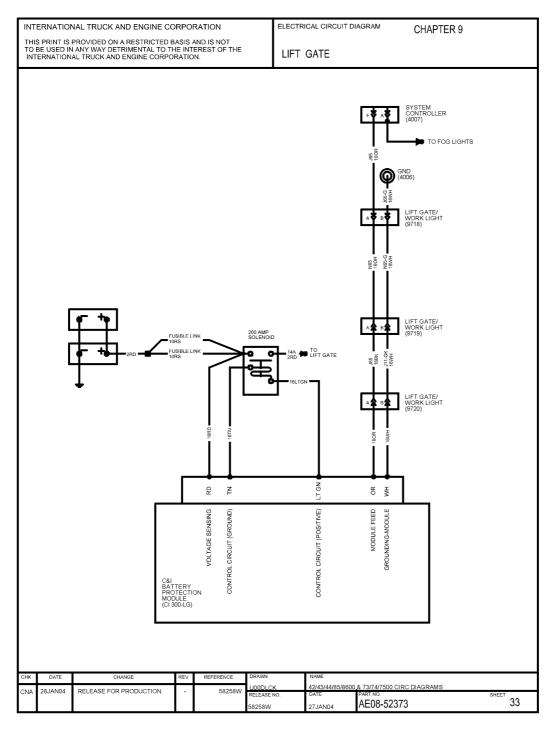


Figure 117 Lift Gate

10. TRANSMISSIONS (CHAPTER 10)

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

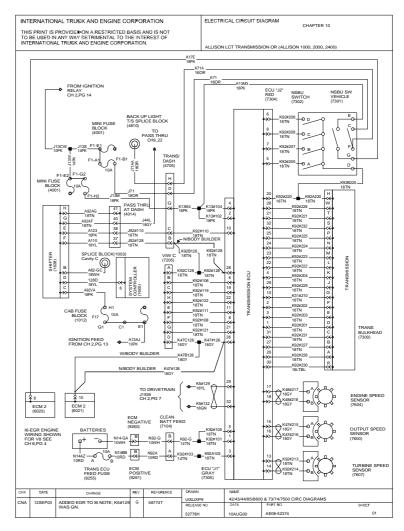


Figure 118 Allison LCT Transmission or Allison 1000, 2000, 2400

10.2. ALLISON MD TRANSMISSION, P. 2

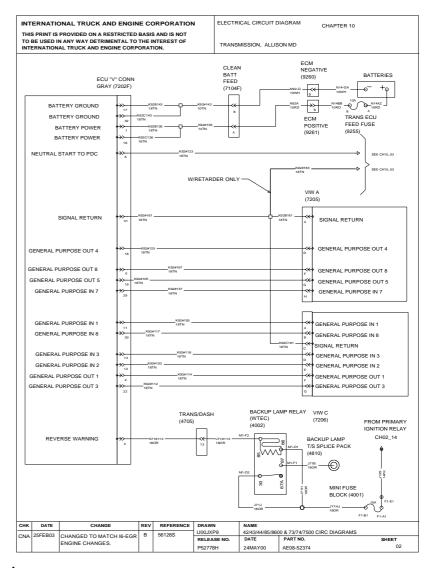


Figure 119 Allison MD Transmission

10.3. ALLISON MD TRANSMISSION (WTEC), P. 3

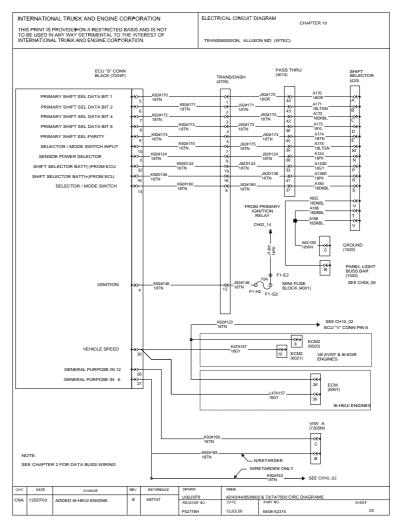


Figure 120 Allison MD Transmission (WTEC)

10.4. ALLISON MD TRANSMISSION (CONT.), P. 4

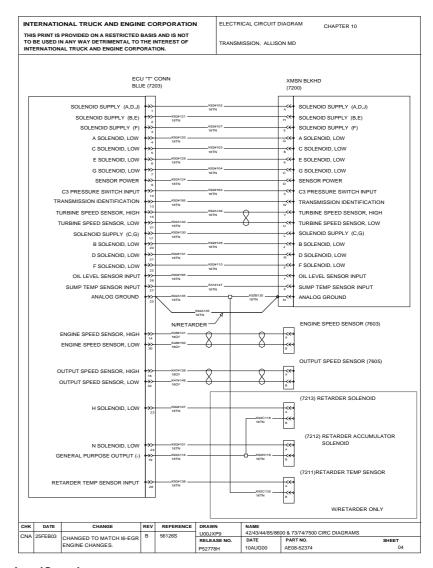


Figure 121 Allison MD Transmission (Cont.)

10.5. TRANSMISSION, WTEC MD W/AUTO NEUTRAL, P. 5

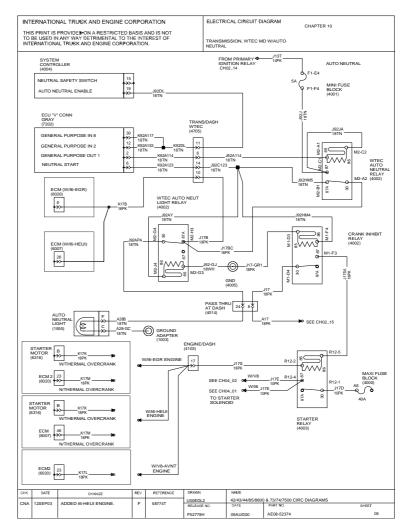


Figure 122 Transmission, WTEC MD W/Auto Neutral

10.6. EATON AUTOSHIFT TRANSMISSION, P. 6

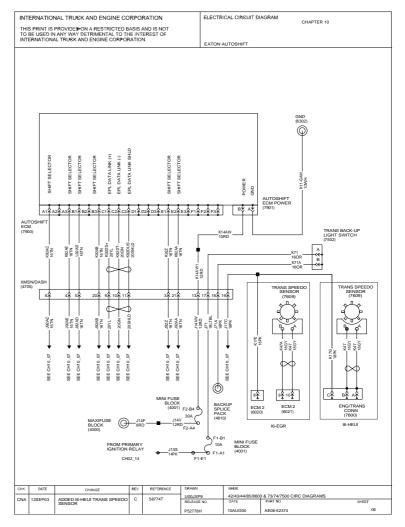


Figure 123 Eaton Autoshift Transmission

10.7. EATON AUTOSHIFT TRANSMISSION (CONT.), P. 7

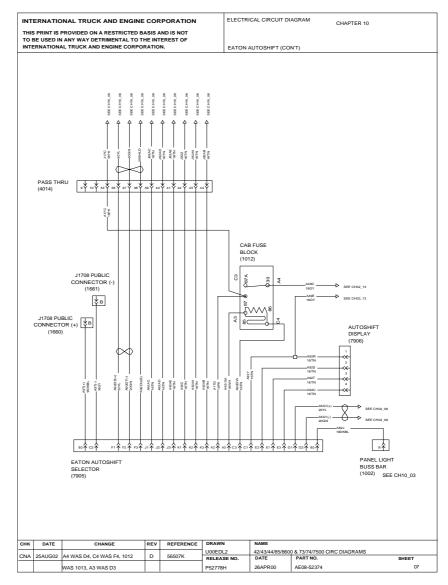


Figure 124 Eaton Autoshift Transmission (Cont.)

10.8. EATON LIGHTNING TRANSMISSION, P. 8

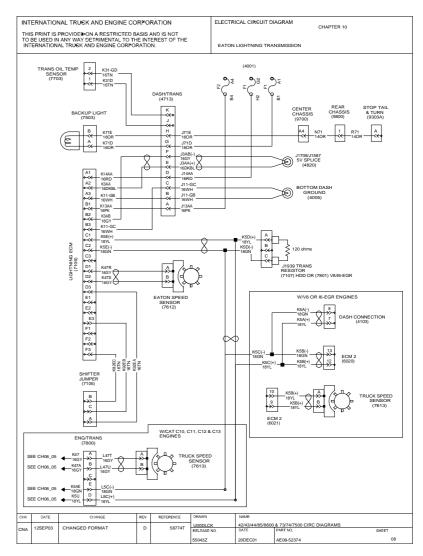


Figure 125 Eaton Lightning Transmission

10.9. ALLISON HD TRANSMISSION, P. 9

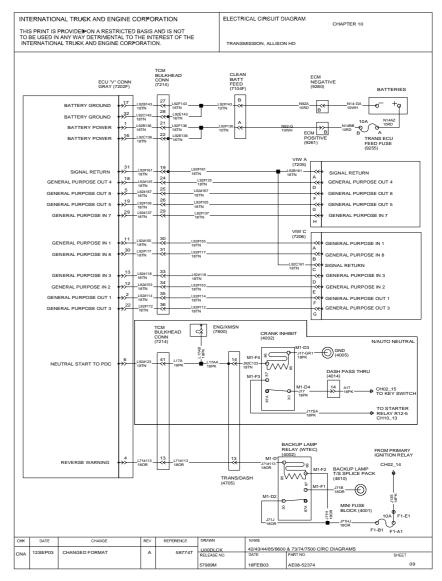


Figure 126 Allison HD Transmission

10.10. ALLISON HD TRANSMISSION, P. 10

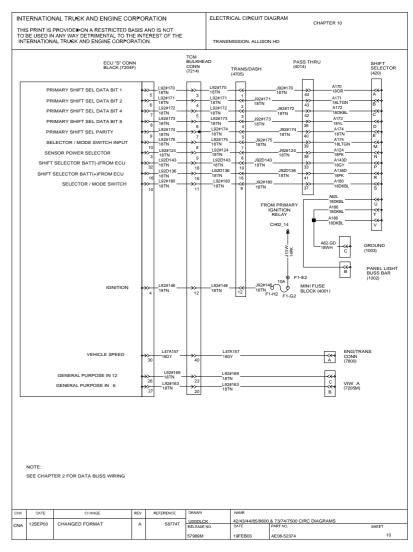


Figure 127 Allison HD Transmission (Cont.)

10.11. ALLISON HD TRANSMISSION, P. 11

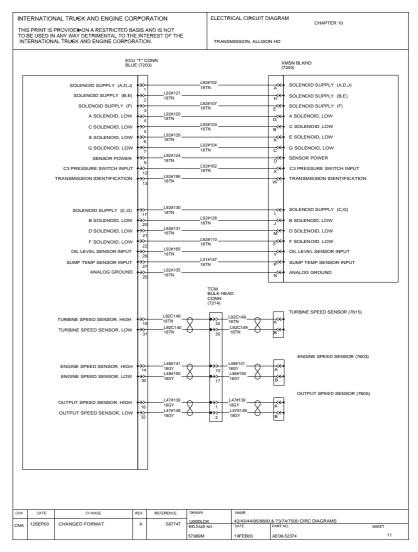


Figure 128 Allison HD Transmission (Cont.)

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

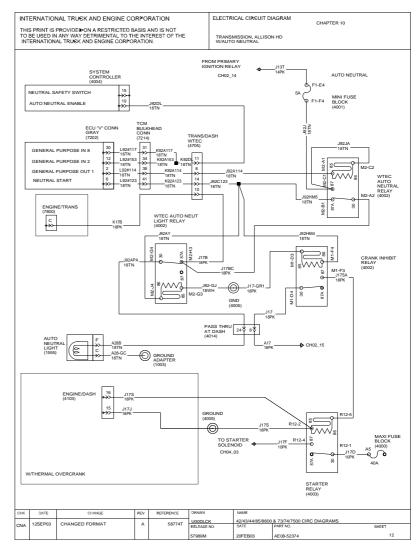


Figure 129 Allison HD Transmission With Auto Neutral

10.13. ALLISON HD TRANSMISSION WITH AUTO NEUTRAL AND WITH 0013WUA, P. 13

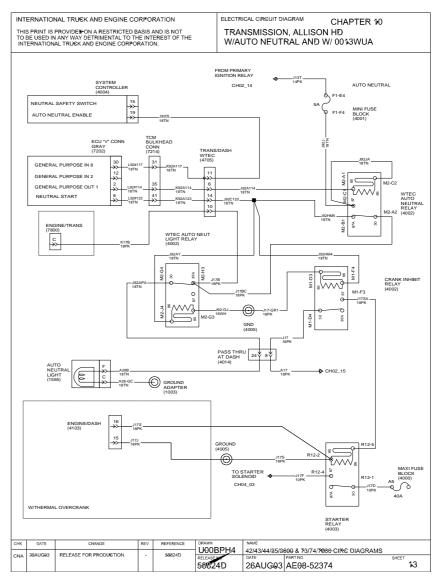


Figure 130 Allison HD Transmission With Auto Neutral and with 0013WUA

10.14. ALLISON LCT TRANSMISSION (ALLISON 1000, 2000, 2400) WITH 16 HEUI, P. 14

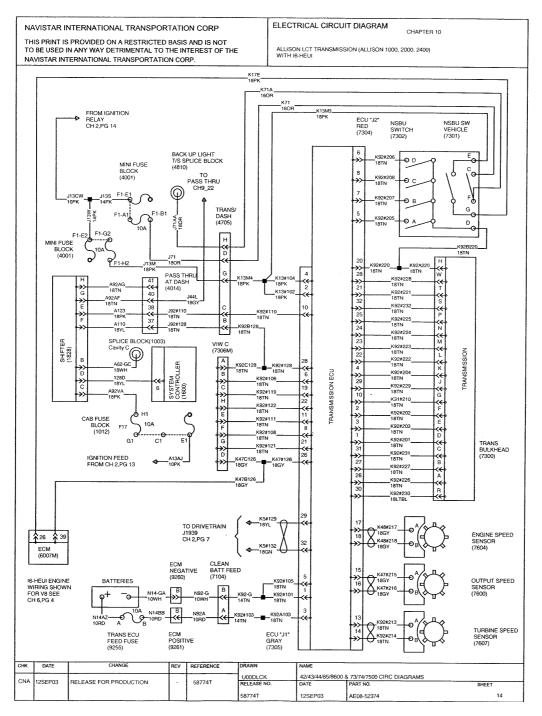


Figure 131 Allison LCT Transmission (Allison 1000, 2000, 2400) with I6 HEUI

10.15. TRANSMISSION RETARDER CONTROL WIRING WITH MD XMSN, HARD WIRED EFFECTS, P. 15

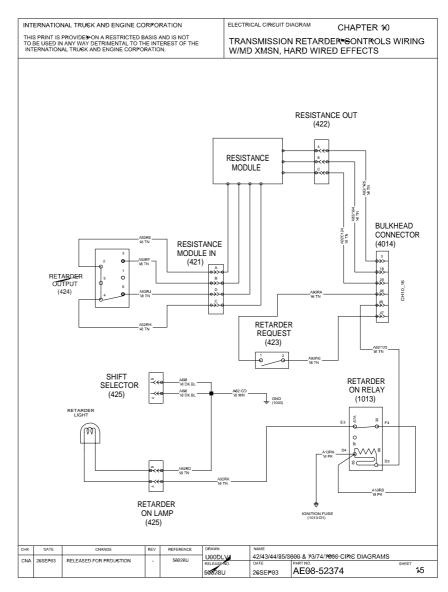


Figure 132 Transmission Retarder Control Wiring with MD Transmission, Hard Wired Effects

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

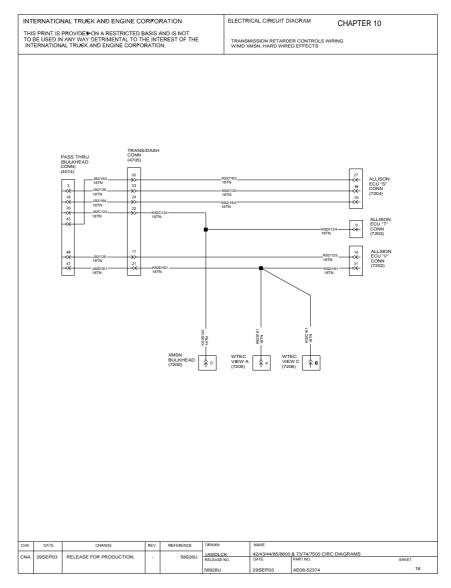


Figure 133 Transmission Retarder Control Wiring with MD Transmission, Hard Wired Effects

11. AIR CONDITIONING (CHAPTER 11)

11.1. HVAC SYSTEMS, P. 1

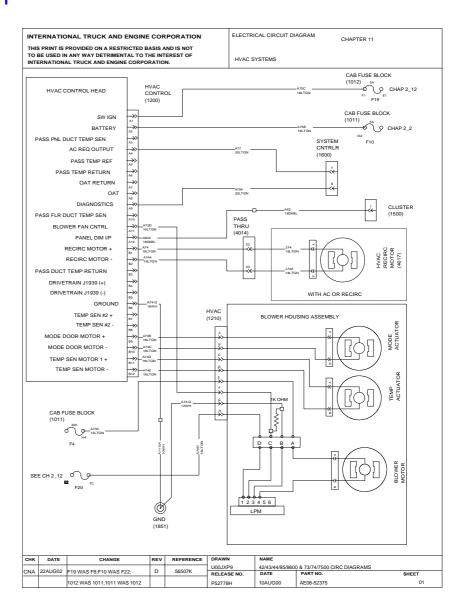


Figure 134 HVAC Systems

11.2. AIR CONDITIONING (ONLY), P. 2

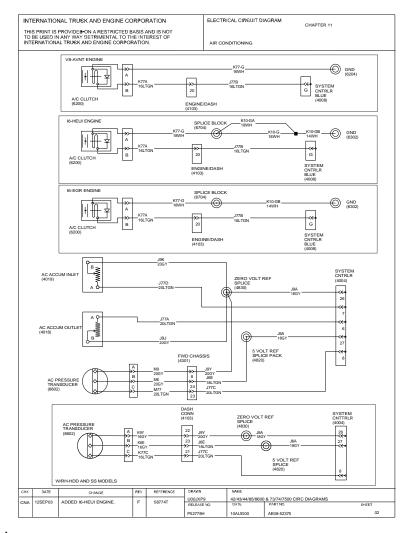


Figure 135 Air Conditioning (Only)