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

7.1. IP/GAUGE LIST, P. 1

BE USED IN A	ROVIDED ON A REST ANY WAY DETRIMENT TRUCK AND ENGINE	TAL TO THE I	NTEREST OF	IP/GAI	JGES		CHAPTER 7	
			INSTRUMENT	PANEL GAUGE	ES .			
GAUGE		WARN		SIGNAL PATH			SENSOR	
		LIGHT					LOCATION	
RPM (TACH))	NO	ENGINE CTRL	R/DRIVE TRAIN	J1939/CLUSTER		ENGINE	
MPH/KPH (S	SPD)	NO			J1939/CLUSTER		TRANSMISSION	
FUEL		YES	SYSTEM CTRI	LR/DRIVE TRAII	J1939/CLUSTER		FUEL TANK	
VOLT		YES	SYSTEM CTRI	LR/DRIVE TRAII	J1939/CLUSTER			
AIR 1 (PRE	S)	YES	SYSTEM CTRI	LR/DRIVE TRAII	J1939/CLUSTER		INSIDE CAB - DASH PNL	
AIR 2 (PRE	S)	YES	SYSTEM CTRL	LR/DRIVE TRAII	N J1939/CLUSTER		STEERING COL AREA	
WATER (TEI	MP)	YES	ENGINE CTRL	R/DRIVE TRAIN	J1939/CLUSTER		ENGINE	
ENG OIL (TE	MP)	YES	ENGINE CTRL	R/DRIVE TRAIN	J1939/CLUSTER		ENGINE	
OIL (PRES)		YES	ENGINE CTRL	R/DRIVE TRAIN	J1939/CLUSTER		ENGINE	
TRANS (TE	MP)	YES	XMSN CTRLR/	SYSTEM CTRL	R/DRIVE TRAIN J1939/C	CLUSTER	TRANSMISSION	
AIR APPLIC	ATION	NO	SYSTEM CTRI	LR/DRIVE TRAII	N J1939/CLUSTER		FWD CHASSIS	
REAR AXLE	TEMP	YES	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				AXLE	
NOTES: 1) WARN	ING LIGHTS ARE PAR	T OF THE G	AUGES AND LOCA	ATED IN THE G	AUGE			
DATE 16JAN01	CHANGE PRODUCTION RELE	REV		DRAWN U00JXP9	NAME 42/43/44/85/8600 & 7:	3/74/7500 (CIRC DIAGRAMS	

Figure 51 IP/Gauge List

7.2. WARNING LIGHT LIST, P. 2

NATIONAL TRUCK AND ENGINE BINT IS PROVIDED ON A RESTRICTE USED IN ANY WAY DETRIMENTAL TO	D BASIS AND IS NOT THE INTEREST OF		RICAL CIRCUIT DIAGE		CHAPTER 7	
ATIONAL TRUCK AND ENGINE COR	PORATION.	WARN	ING LIGITI'S LIGI			
	IP WARNING LIGHTS				Γ	
	IF WARNING LIGHTS					
WARNING LIGHT	SIGNAL PATH				SENSOR	
TITLE			LOCATION			
RANGE INHIBITED	TPANS CTPL P/DPI\/F	TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER				
FUEL FILTER	SYSTEM CTRLR/DRIV				EUEL EUTED	
ENGINE (YELLOW LED)	ENGINE CTRLR/DRIV				FUEL FILTER	
ENGINE (RED LED)	ENGINE CTRLR/DRIV					
BRAKE PRESSURE (①)	SYSTEM CTRLR/DRIV				SWITCH	
BRAKE FLUID					BRK RESEVOIR	
TRAC CTRL	TRUCK ABS CTRLR/I	ORIVE TRAIN	J1939/CLUSTER			
CHECK TRANS	TRANS CTRLR/DRIVE	E TRAIN J19	39/CLUSTER			
TRAILER ABS	TRLR ABS CTRLR/DR	TRLR ABS CTRLR/DRIVE TRAIN J1939/CLUSTER				
WASHER FLUID	SYSTEM CTRLR/DRIV	VE TRAIN J1	939/CLUSTER		WASHER BOTTLE	
(LEFT TURN)	SYSTEM CTRLR/DRIV	VE TRAIN J1	939/CLUSTER		TURN SIG SW	
AIR BAG	DISCRETE NOT ON D	DATA BUS				
WATER IN FUEL	SYSTEM CTRLR/DRIV	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				
COOLANT LEVEL	ENGINE CTRLR/DRIV	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER				
CHECK ELECT SYS	SYSTEM CTRLR/DRIV					
PARK (P)	SYSTEM CTRLR/DRIV		SWITCH			
CRUISE	SYSTEM CTRLR/DRIV					
ABS	TRUCK CTRLR/DRIVE					
(RIGHT TURN)	SYSTEM CTRLR/DRIV					
WAIT TO START	ENGINE CTRLR/DRIV					
FASTEN BELTS		SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER				
(HIGH BEAM IND)	SYSTEM CTRLR/DRIV					
COLD AMB PROTEC	SYSTEM CTRLR/DRIV					
RETARD OVERHEAT	TRANS CTRLR/DRIVE		TRANSMISSION			
CHECK AC AUTO NEUTRAL	SYSTEM CTRLR/DRIV					
	DISCRETE NOT ON D		SWITCH			
ALTERNATOR DTO/THROTTLE	DISCRETE NOT ON D					
PTO/THROTTLE OPTIMIZED IDLE	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER DISCRETE NOT ON DATA BUS					
SNOW VALVE	-		SNOW VALVE			
FR AXLE DIFF LOCK		DISCRETE NOT ON DATA BUS DISCRETE NOT ON DATA BUS				
RR AXLE DIFF LOCK		DISCRETE NOT ON DATA BUS				
MESSAGE WAIT	DISCRETE NOT ON D			RR RR AXLE		
PTO	_	DISCRETE NOT ON DATA BUS				
CONVERTER TEMP	DISCRETE NOT ON D					
TOUCHLOC RELEASE	DISCRETE NOT ON D					
PARK FLUID		SYSTEM CTRLR/DRIVE TRAIN				
DATE CHANGE	REV REFERENCE DRA	AWN	NAME			
	U00	JXP9	42/43/44/85/8600 &			
JAN01 PRODUCTION RELEASE	. A P54304U REL	EASE NO.	DATE PAR	RT NO.	SHE	

Figure 52 Warning Light List

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

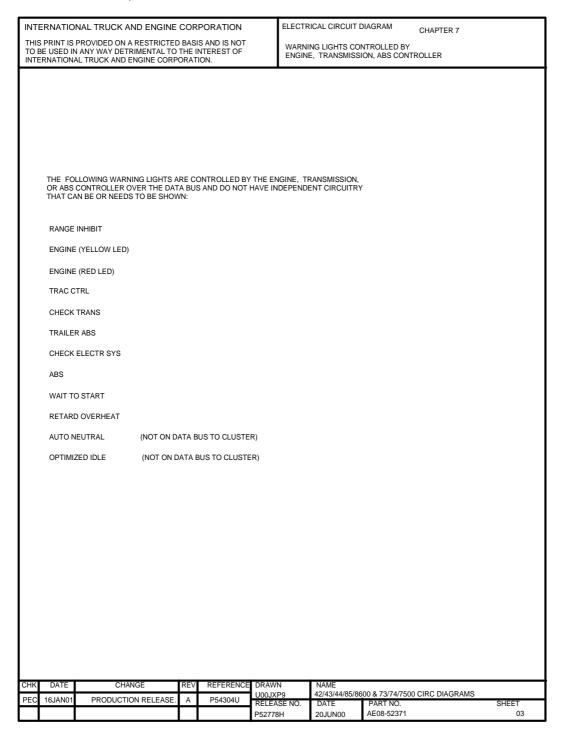


Figure 53 Warning Lights Controlled by Engine, Transmission, ABS Controller

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

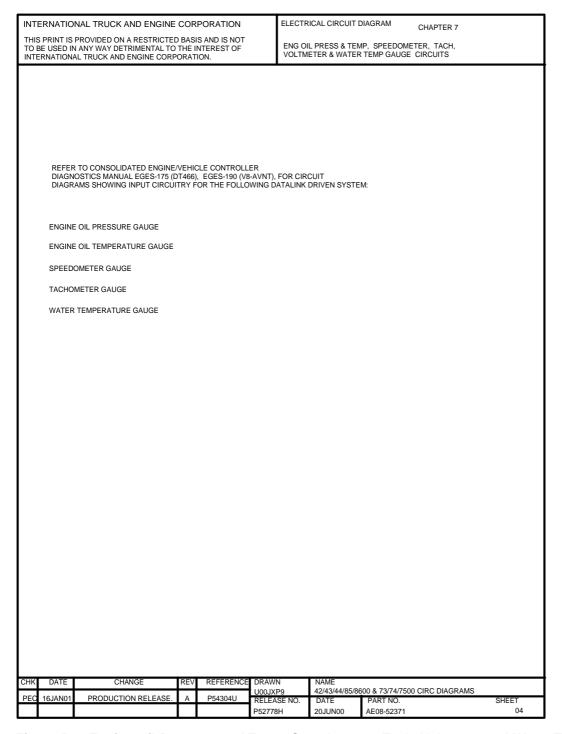


Figure 54 Engine Oil Pressure and Temp, Speedometer, Tach, Voltmeter and Water Temp Gauge Circuits

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

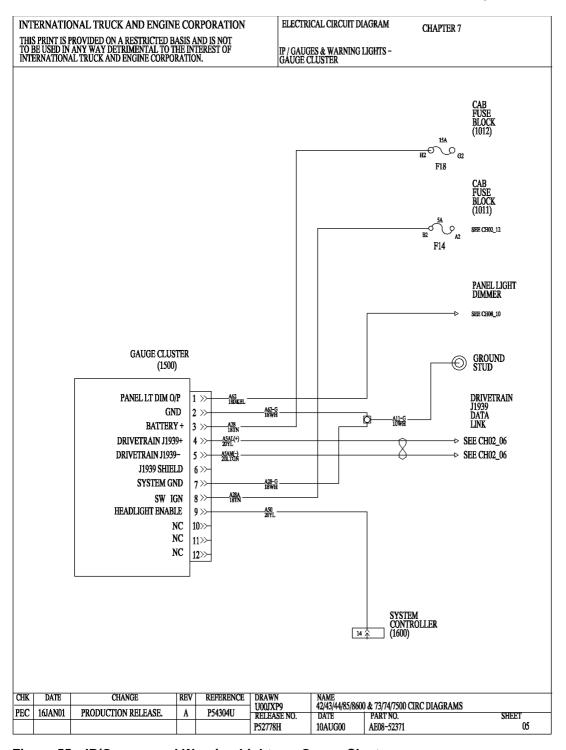


Figure 55 IP/Gauges and Warning Lights — Gauge Cluster

7.6. AIR PRESSURE INPUT CIRCUIT, P. 6

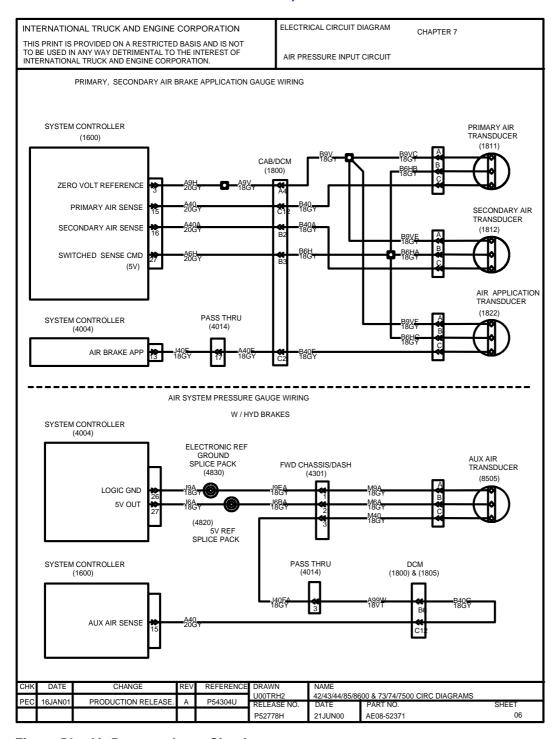


Figure 56 Air Pressure Input Circuit

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

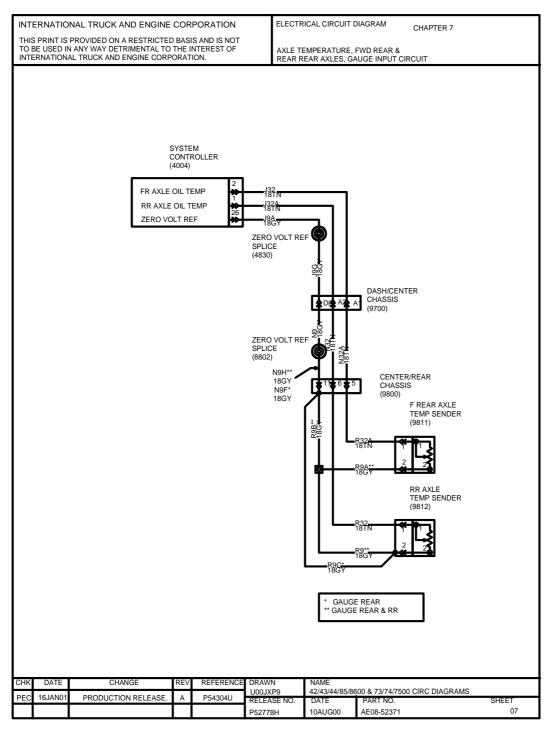


Figure 57 Axle Temperature, FWD Rear and Rear Axles, Gauge Input Circuit

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

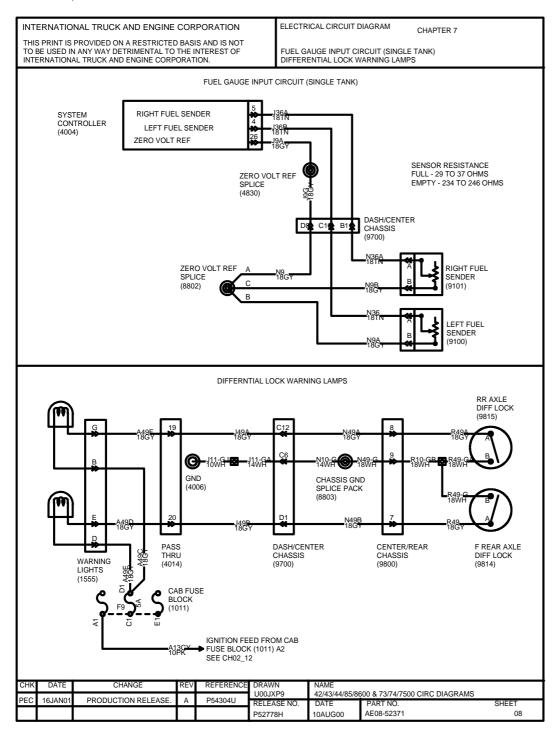


Figure 58 Fuel Gauge Input Circuit (Single Tank) Differential Lock Warning Lamps

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

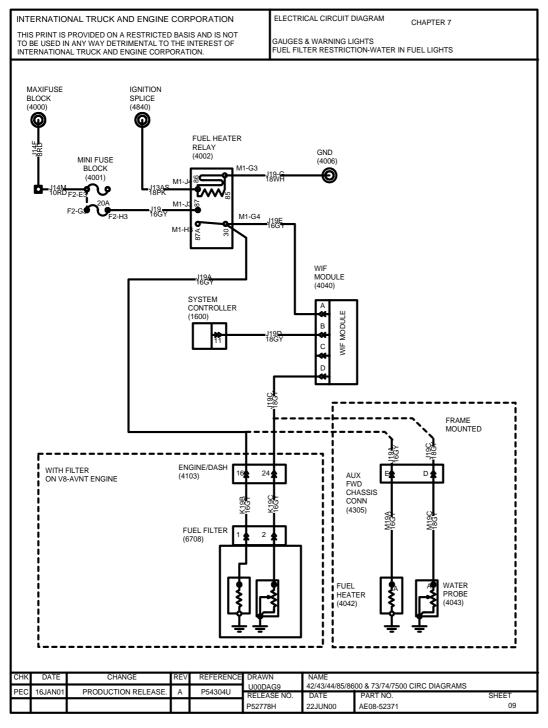


Figure 59 Gauges and Warning Lights — Fuel Filter Restriction and Water in Fuel Lights

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

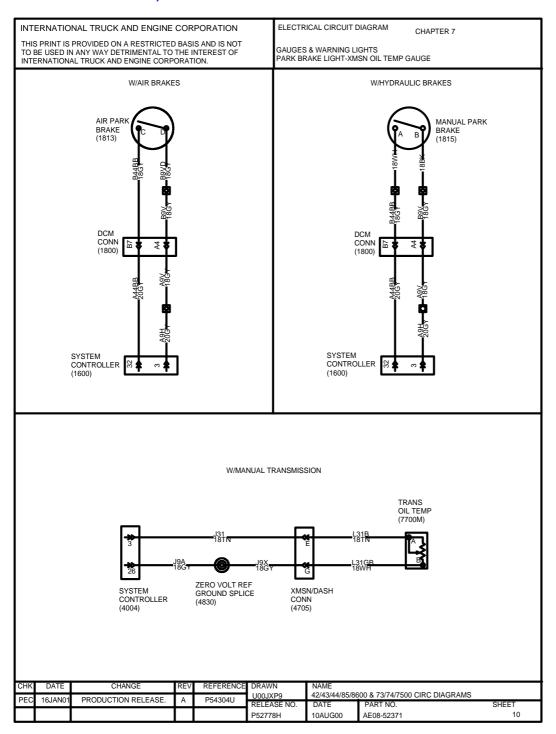


Figure 60 Gauges and Warning Lights — Park Brake Light and Transmission Oil Temp. Gauge

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

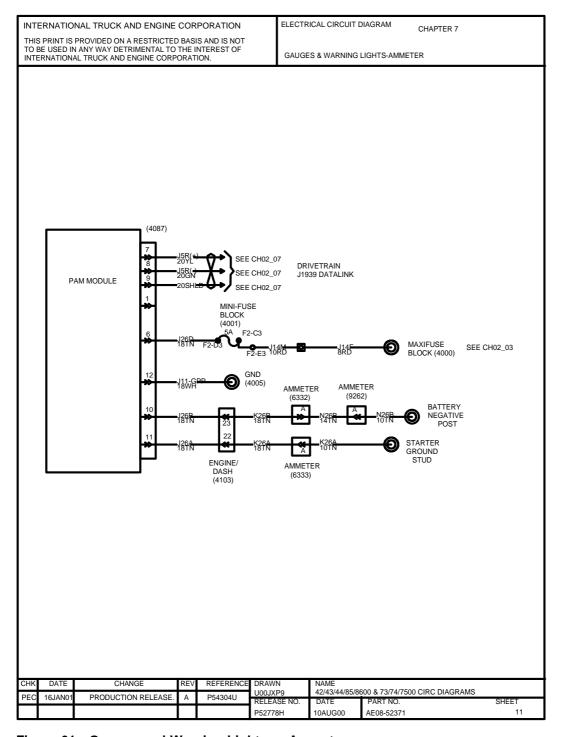


Figure 61 Gauges and Warning Lights — Ammeter

8. LIGHTS (CHAPTER 8)

8.1. BACK UP LIGHTS, P. 1

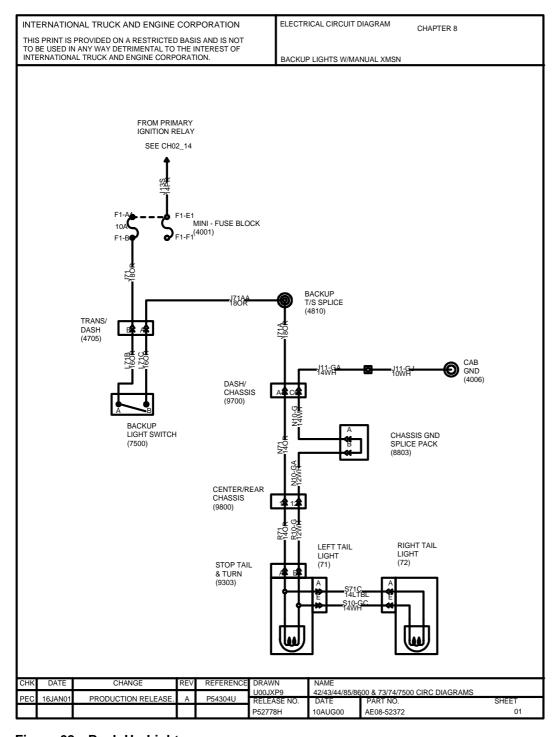


Figure 62 Back Up Lights

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

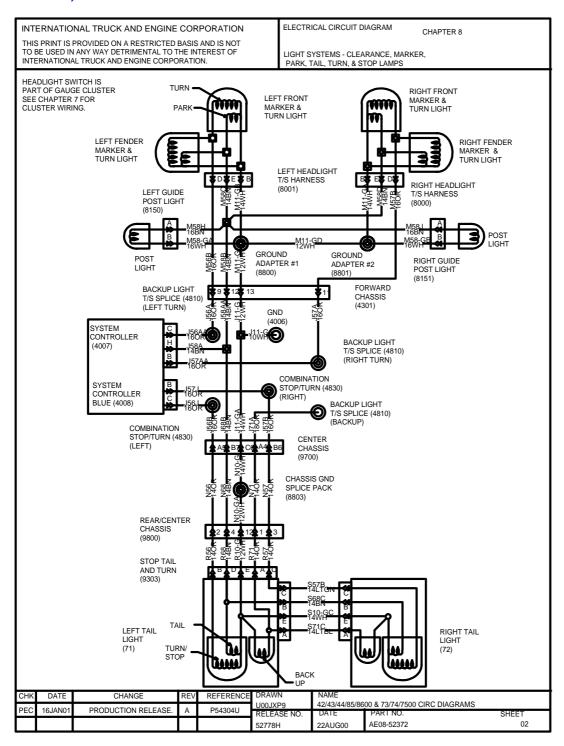


Figure 63 Light Systems — Clearance, Marker, Park, Tail, Turn and Stop Lamps

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

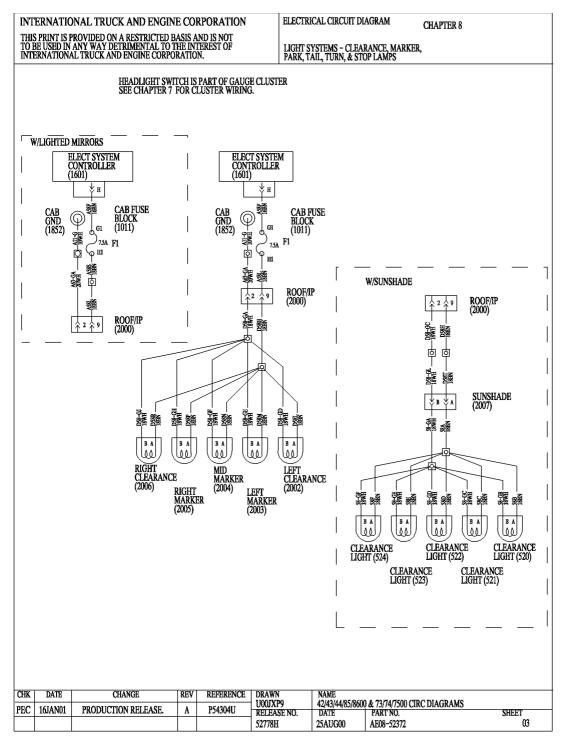


Figure 64 Light Systems — Clearance, Marker, Park, Tail, Turn and Stop Lamps (Cont.)

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

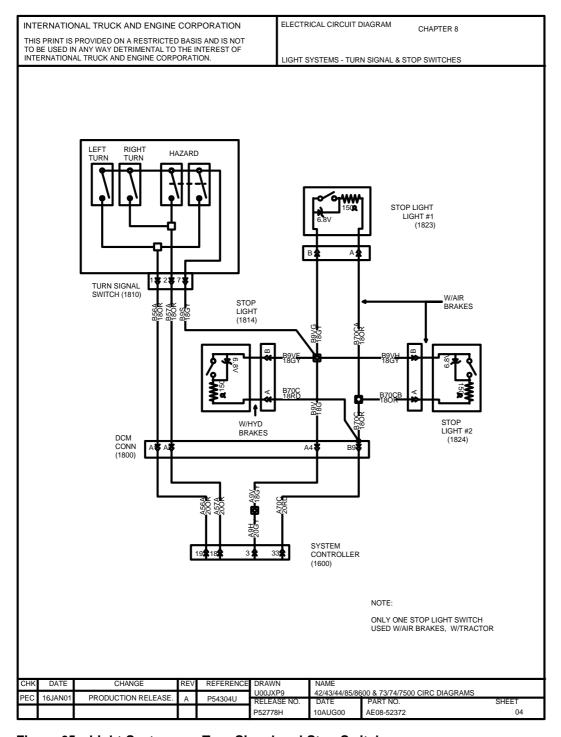


Figure 65 Light Systems — Turn Signal and Stop Switches

8.5. DOME LIGHT, MAP LIGHT, P. 5

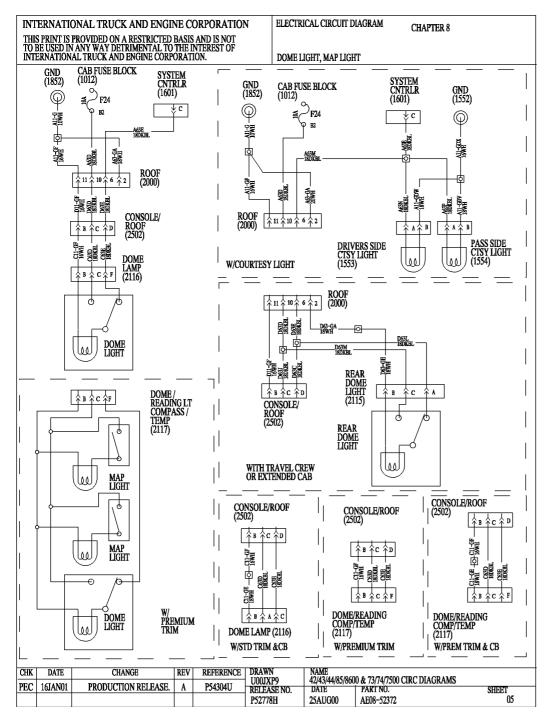


Figure 66 Dome Light, Map Light

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

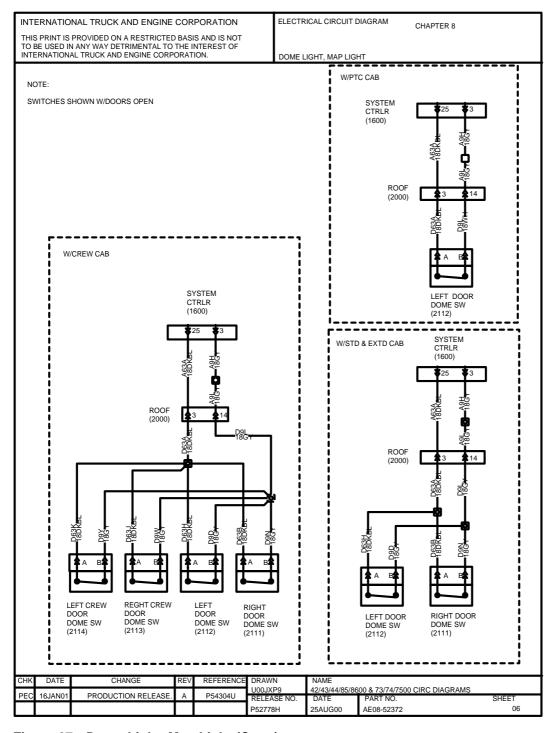


Figure 67 Dome Light, Map Light (Cont.)

8.7. FOG LIGHT AND WORK LIGHT, P. 7

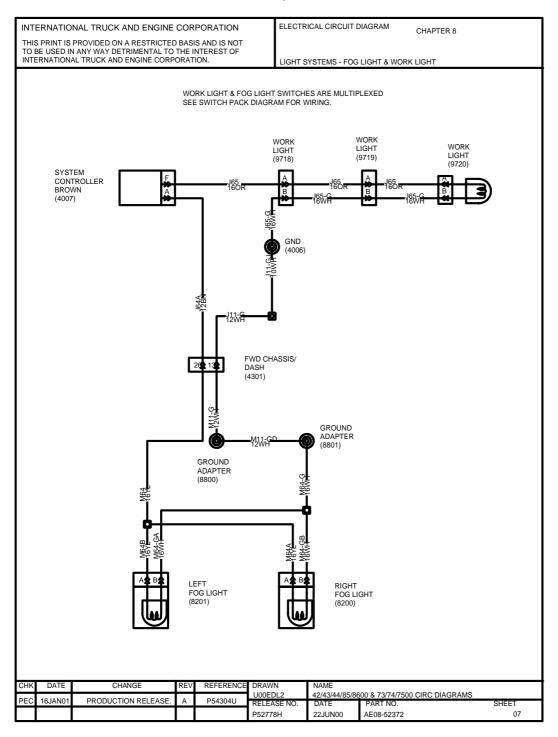


Figure 68 Fog Light and Work Light

8.8. HEADLIGHTS, P. 8

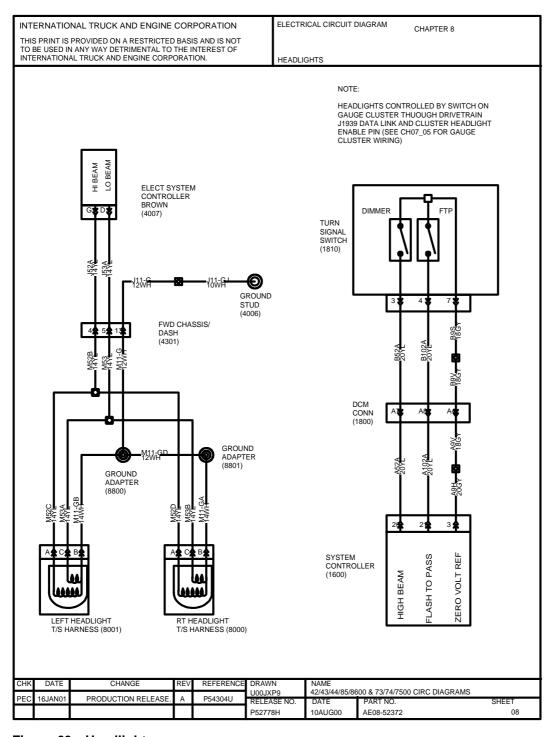


Figure 69 Headlights

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

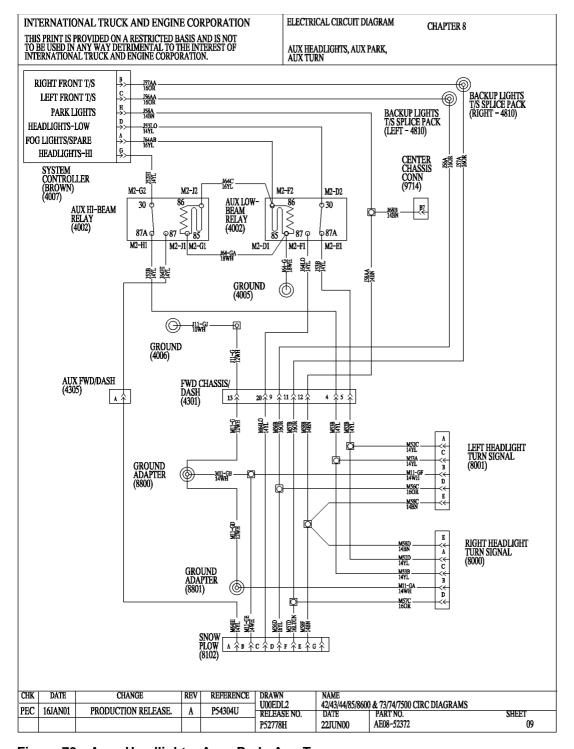


Figure 70 Aux. Headlights, Aux. Park, Aux Turn

8.10. PANEL LIGHTS, P. 10

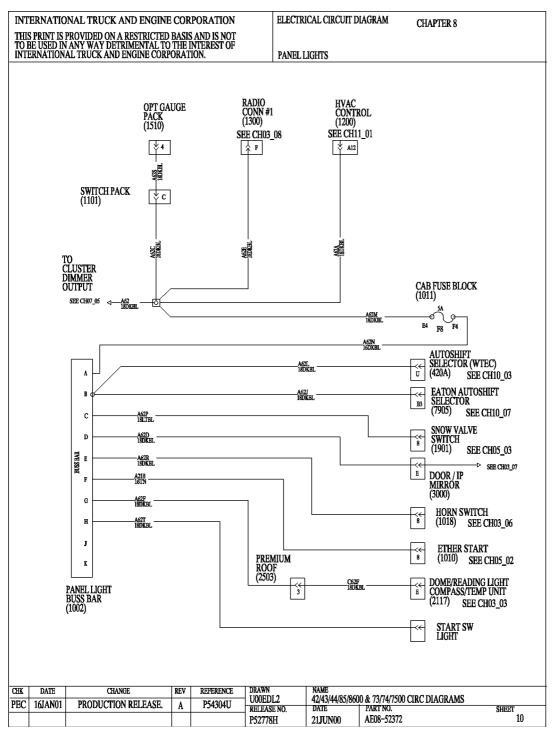


Figure 71 Panel Lights

9. CHASSIS ACCESSORIES (CHAPTER 9)

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

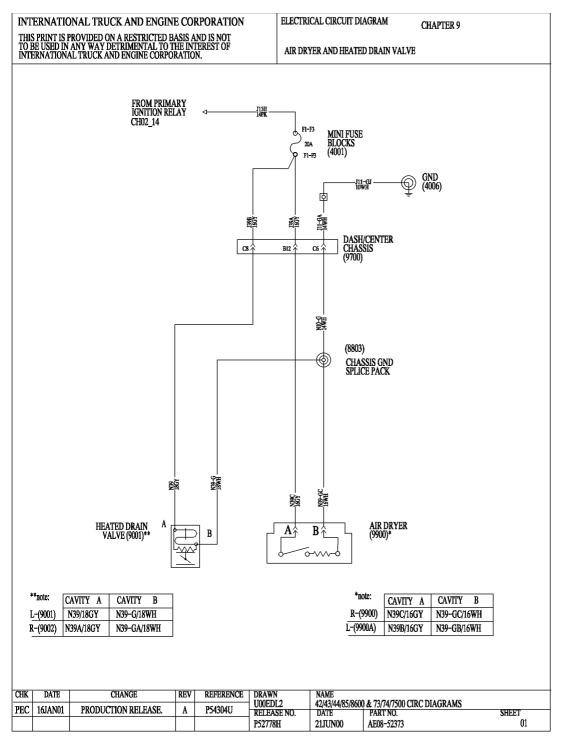


Figure 72 Air Dryer and Heated Drain Valve

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

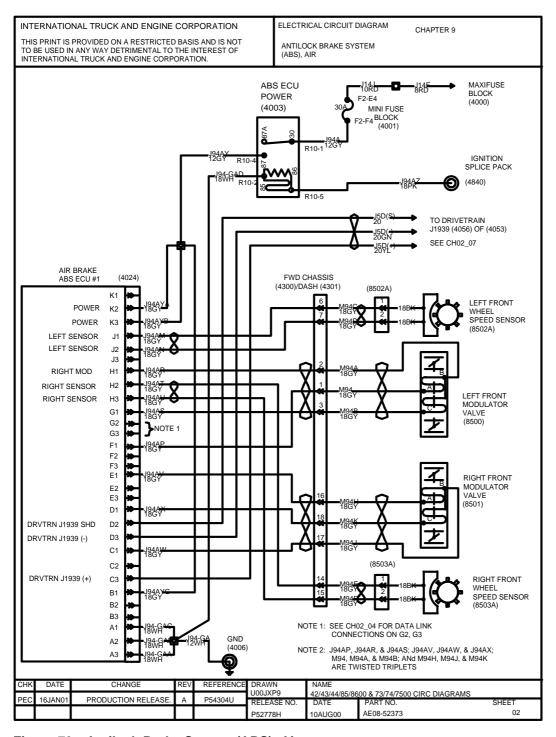


Figure 73 Antilock Brake System (ABS), Air

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

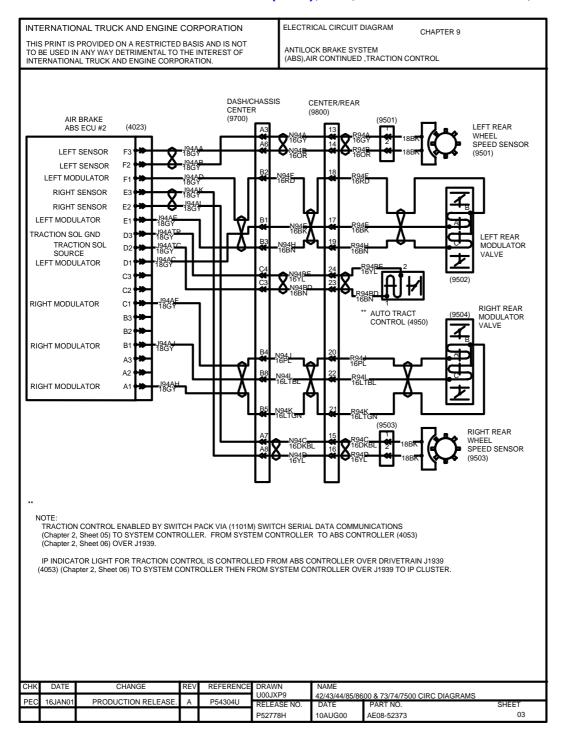


Figure 74 Antilock Brake System (ABS), Air, Traction Control

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

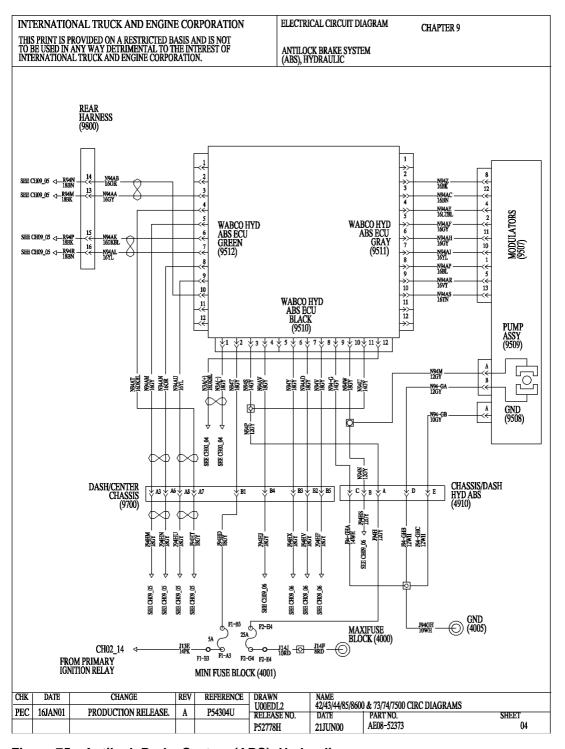


Figure 75 Antilock Brake System (ABS), Hydraulic

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

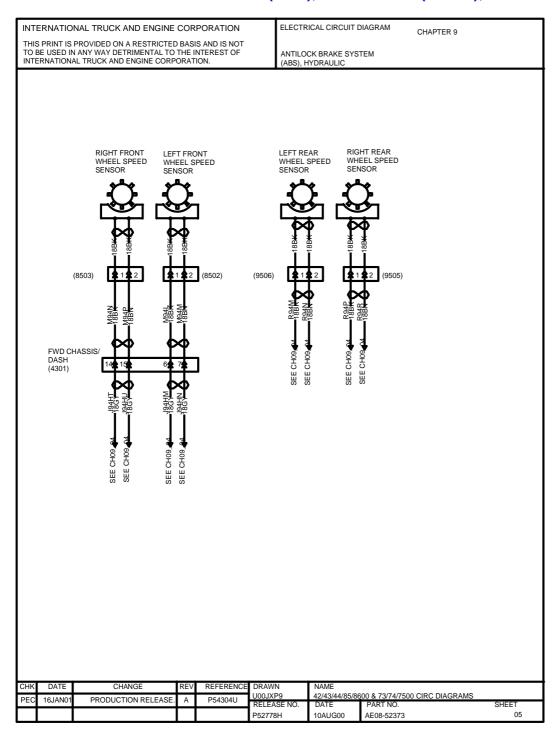


Figure 76 Antilock Brake System (ABS), Hydraulic (Cont.)

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

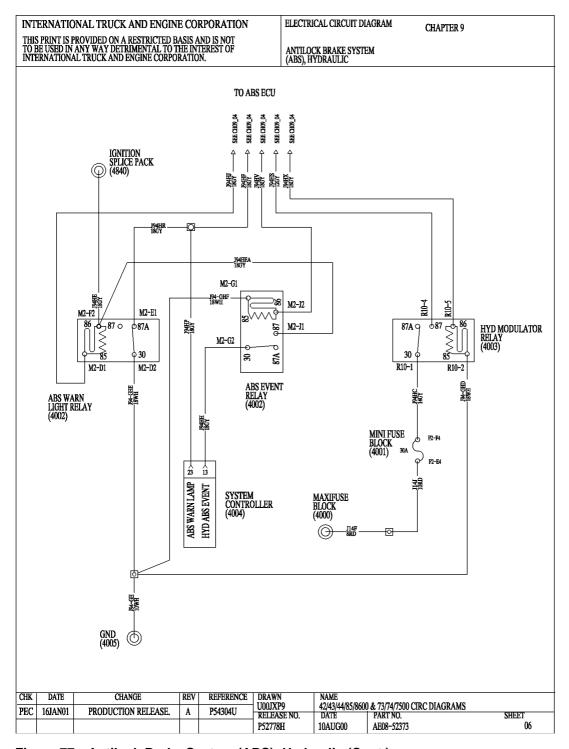


Figure 77 Antilock Brake System (ABS), Hydraulic (Cont.)

9.7. TWO SPEED AXLE SWITCH W/MANUAL TRANSMISSION FUEL HEATER N/WARN LIGHTS, P. 7

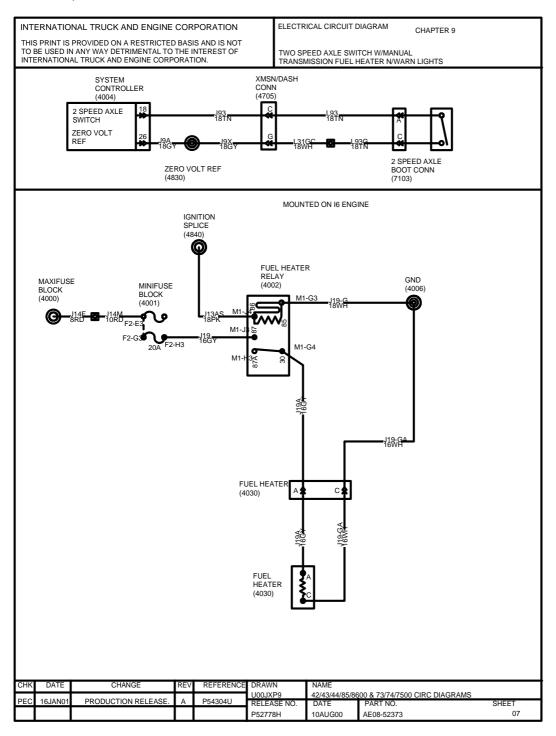


Figure 78 Two Speed Axle Switch W/Manual Transmission Fuel Heater N/Warn Lights

9.8. BRAKE SYSTEM, HYDRAULIC, P. 8

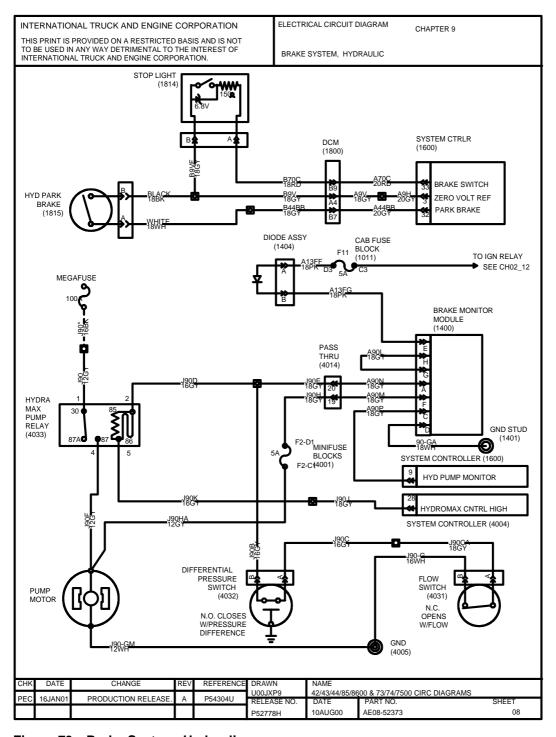


Figure 79 Brake System, Hydraulic

9.9. FUEL TRANSFER PUMP, P. 9

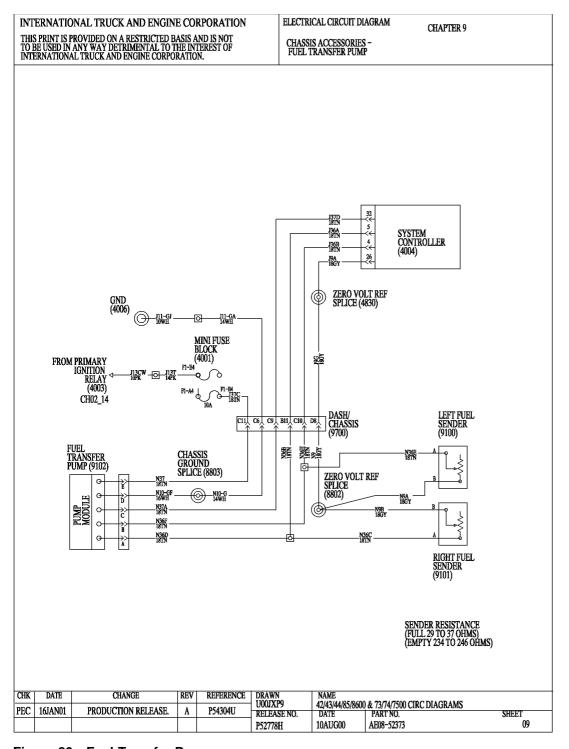


Figure 80 Fuel Transfer Pump

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

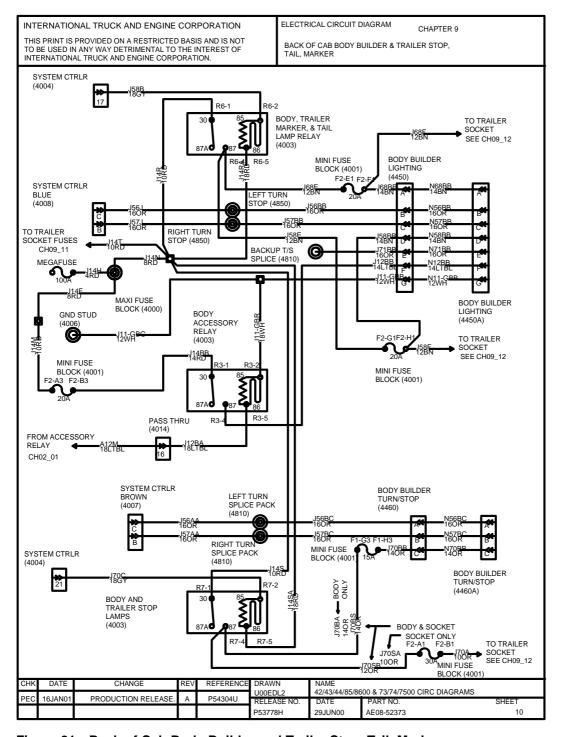


Figure 81 Back of Cab Body Builder and Trailer Stop, Tail, Marker

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

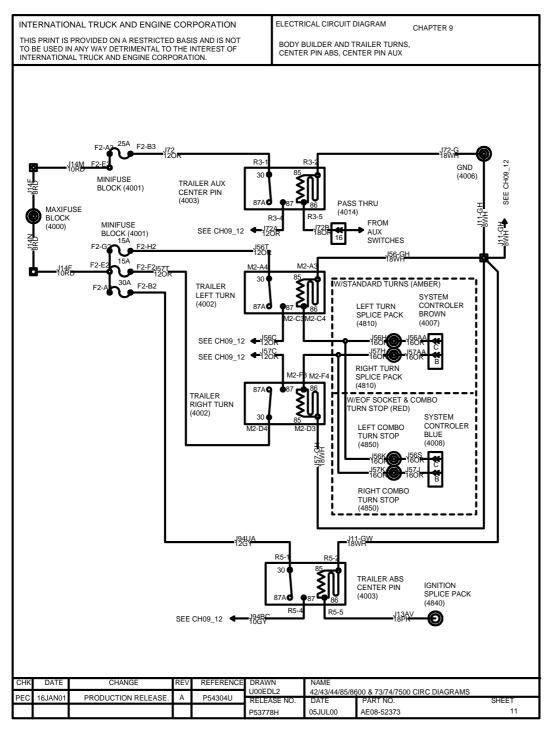


Figure 82 Body Builder and Trailer Turns, Center Pin ABS, Center Pin Aux

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

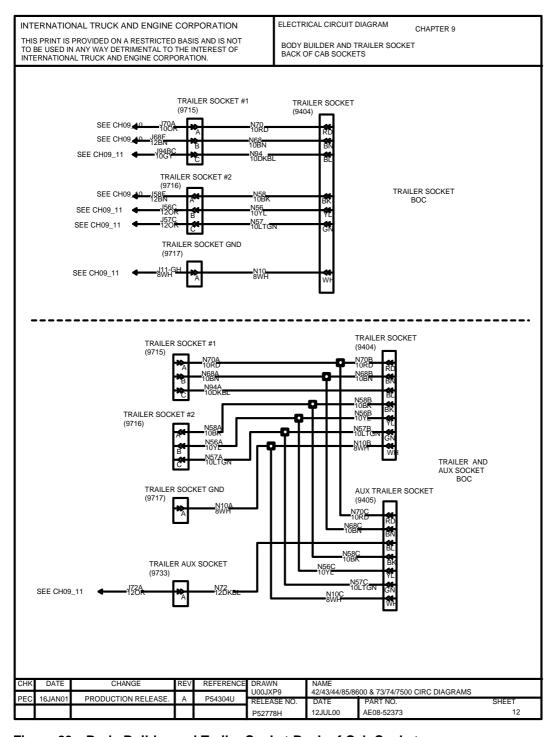


Figure 83 Body Builder and Trailer Socket Back of Cab Sockets

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

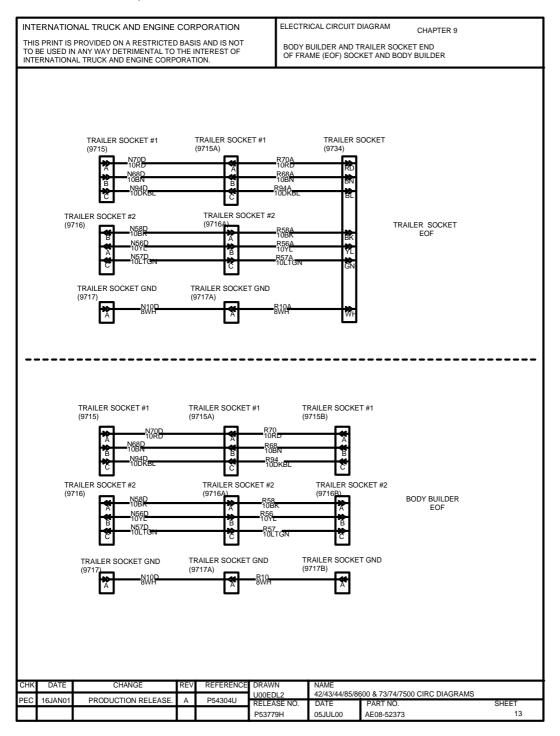


Figure 84 Body Builder and Trailer Socket End of Frame (EOF) Socket and Body Builder

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

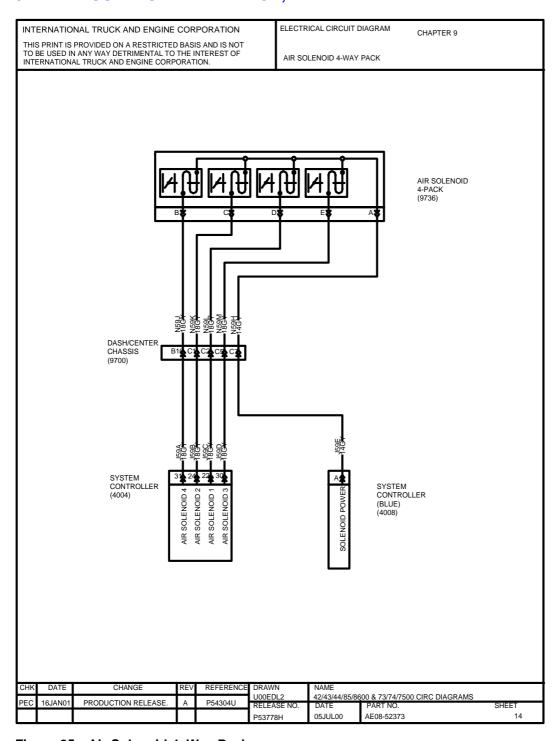


Figure 85 Air Solenoid 4-Way Pack

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

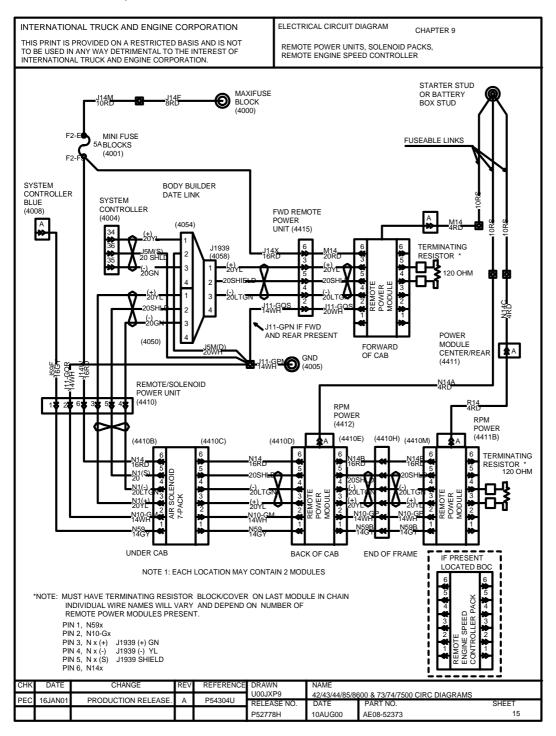


Figure 86 Remote Power Units, Solenoid Packs, Remote Engine Speed Controller

9.16. HYD POWER PARK, P. 16

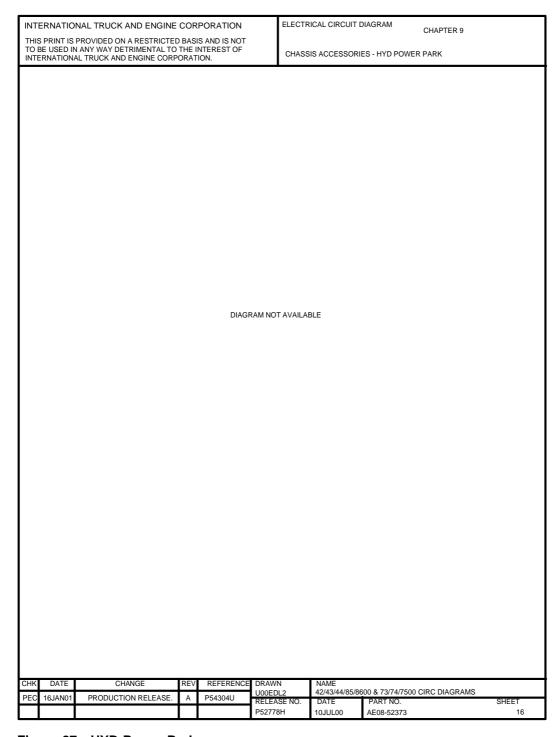


Figure 87 HYD Power Park

9.17. AIR SUSPENSION, P. 17

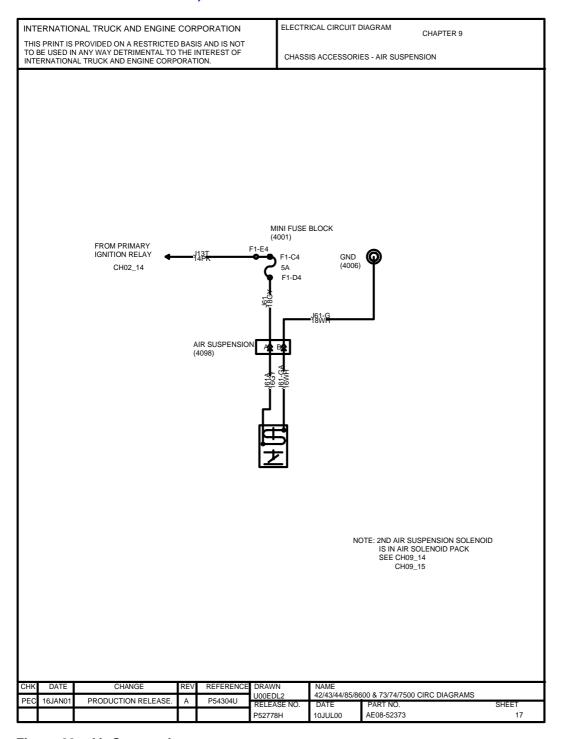


Figure 88 Air Suspension

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

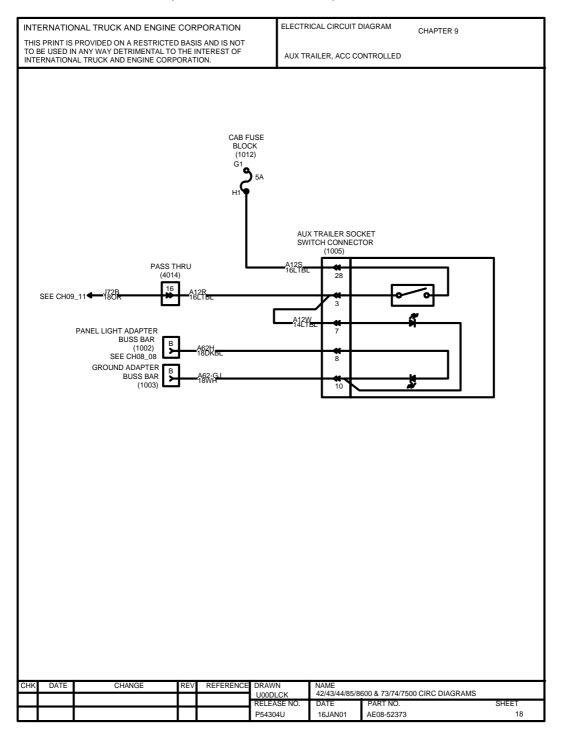


Figure 89 Aux. Trailer, Acc Controlled

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

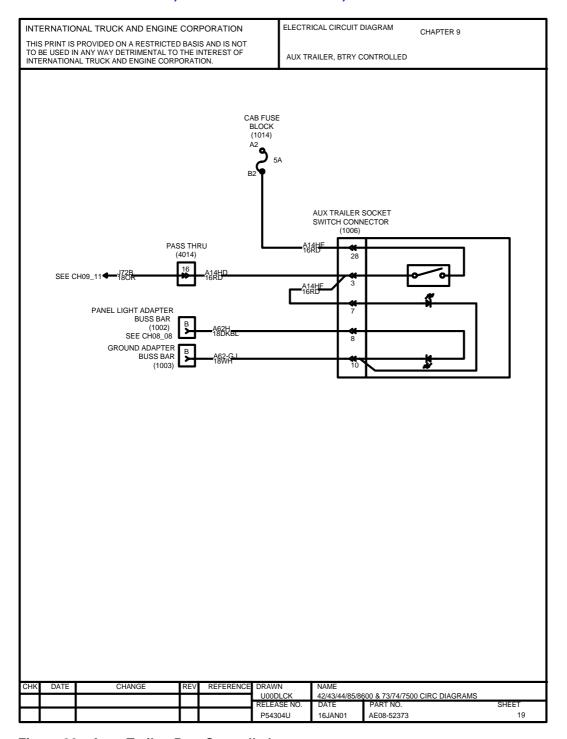


Figure 90 Aux. Trailer, Btry Controlled

10. TRANSMISSIONS (CHAPTER 10)

10.1. ALLISON LCT TRANSMISSION, P. 1

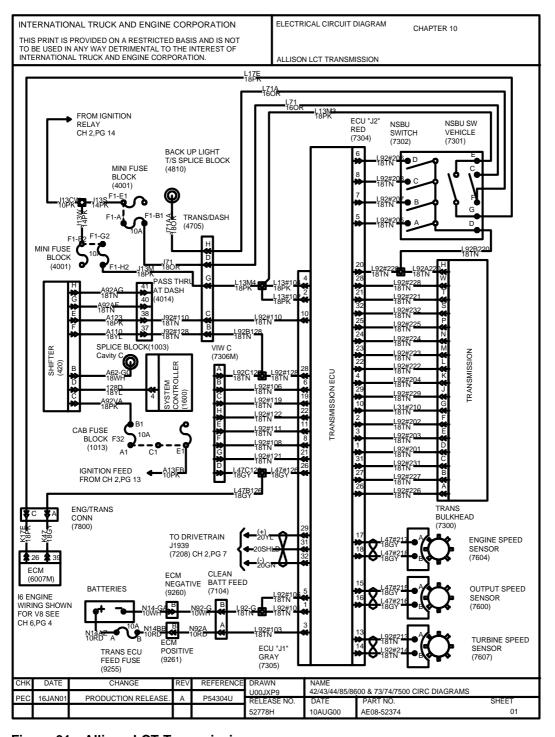


Figure 91 Allison LCT Transmission

10.2. ALLISON MD TRANSMISSION, P. 2

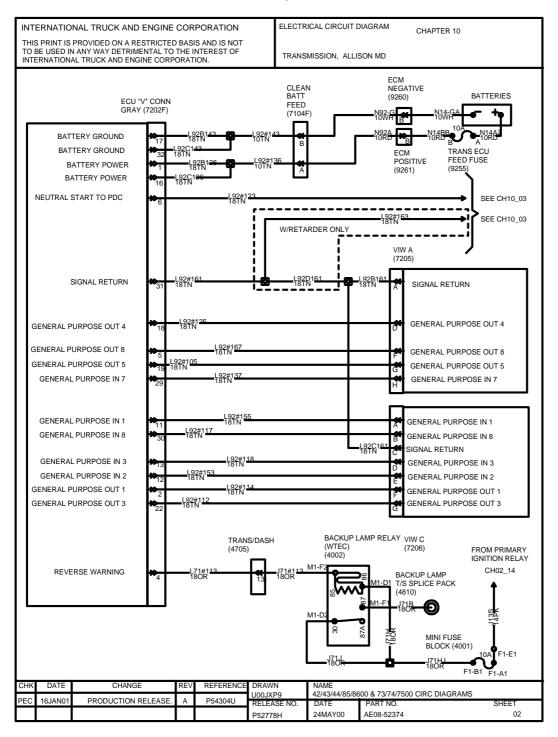


Figure 92 Allison MD Transmission

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

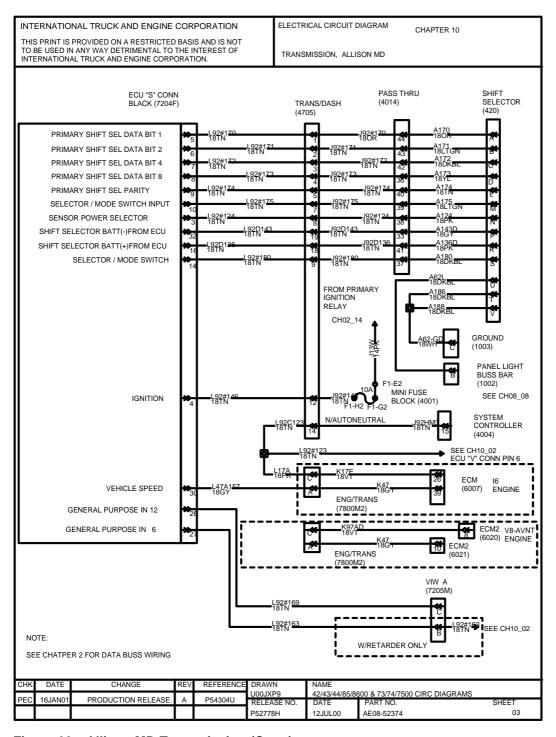


Figure 93 Allison MD Transmission (Cont.)

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

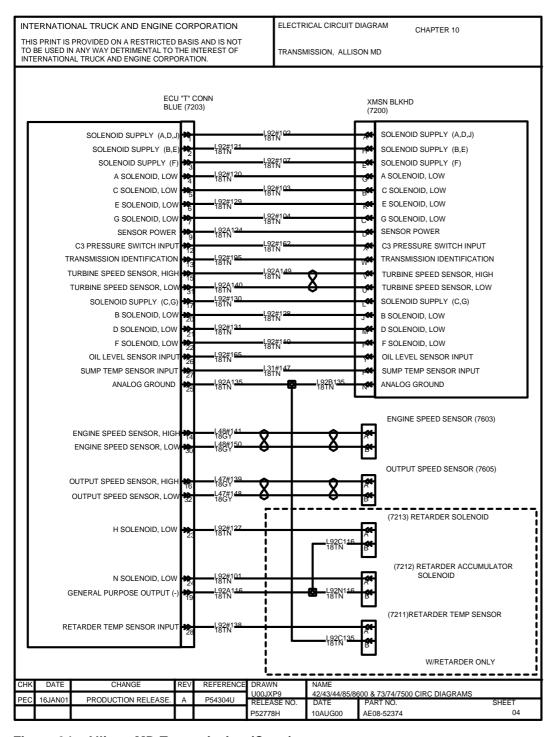


Figure 94 Allison MD Transmission (Cont.)

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

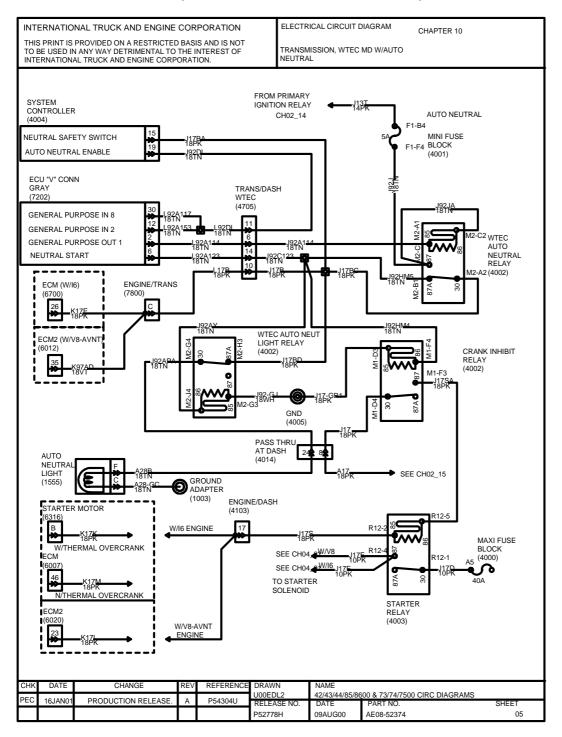


Figure 95 Transmission, WTEC MD W/Auto Neutral

10.6. EATON AUTOSHIFT TRANSMISSION, P. 6

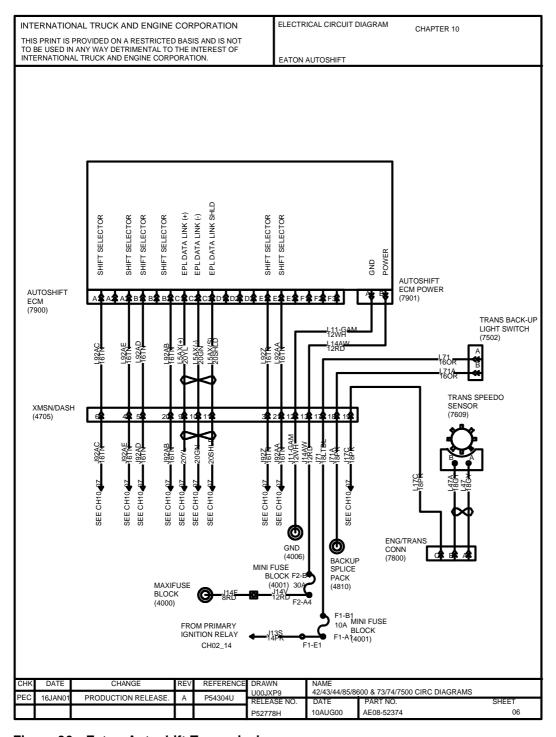


Figure 96 Eaton Autoshift Transmission

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

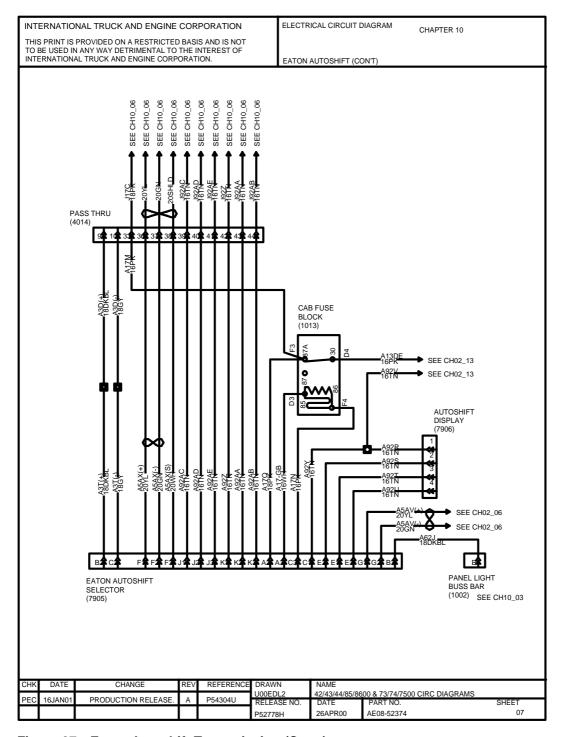


Figure 97 Eaton Autoshift Transmission (Cont.)

11. AIR CONDITIONING (CHAPTER 11)

11.1. HVAC SYSTEMS, P. 1

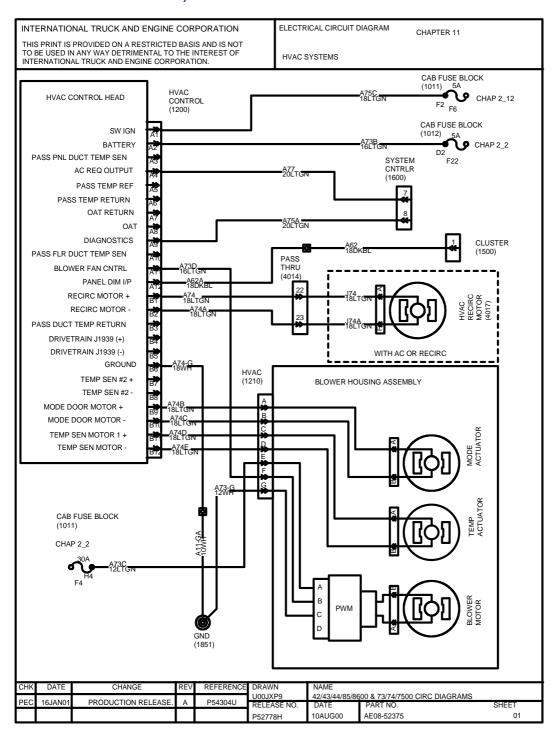


Figure 98 HVAC Systems

11.2. AIR CONDITIONING (ONLY), P. 2

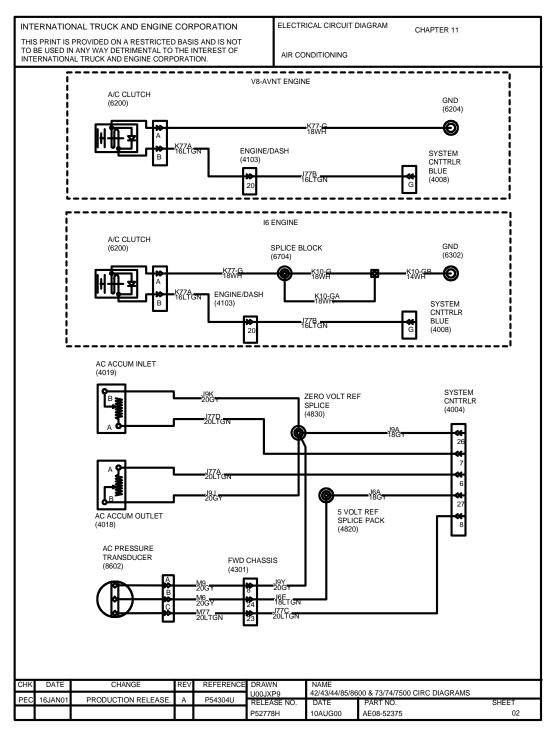


Figure 99 Air Conditioning (Only)